

Supplemental Table 1. List of histones in zebrafish sperm identified from mass spectrometry.

	Histone	Number of peptides identified	Accession number and description
Band 1	H1	18	Q6DH38, human orthologue, HIST1H1C
	H1	6	human orthologue, HIST1H1D
	H1FX	2	Q802U8, H1 member X (H1 variant)
Band 2	H1	6	human orthologue, HIST1H1E
	H1F0	5	H1F0 (H1 family member 0)
Band 3	H2B	10	H2B 1/2, H2B1_BRARE, ENSDARP00000055902
	H2AFX	12	H2AFX, H2A member X (H2A variant)
	H2AFV	4	H2AFV, H2A member V (H2A variant), orthologue HTZ1
Band 4	H4	26	zgc:165555, H4 (Histone cluster 1, H4-like, HIST1H4F)

Supplemental Table 2. H3K27me3 GO

HYPERLINKED GO CATEGORY	TOTAL GENES	CHANGED	ENRICHMENT	FALSE DISCOVERY RATE
GO:0021575_hindbrain_morphogenesis	6	6	13.253566	0
GO:0030878_thyroid_gland_development	9	8	11.780947	0
GO:0021546_rhombomere_development	6	5	11.044638	0
GO:0048663_neuron_fate_commitment	11	8	9.638957	0
GO:0048732_gland_development	21	15	9.466833	0
GO:0048665_neuron_fate_specification	7	5	9.466833	0
GO:0048709_oligodendrocyte_differentiation	7	5	9.466833	0
GO:0043049_otic_placode_formation	15	10	8.835711	0
GO:0035270_endocrine_system_development	31	20	8.550688	0
GO:0030901_midbrain_development	14	9	8.520149	0
GO:0015669_gas_transport	17	10	7.796215	0
GO:0015671_oxygen_transport	17	10	7.796215	0
GO:0030916_otic_vesicle_formation	17	10	7.796215	0
GO:0042063_gliogenesis	17	10	7.796215	0
GO:0042127_regulation_of_cell_proliferation	12	7	7.731247	0
GO:0042472_inner_ear_morphogenesis	28	16	7.573466	0
GO:0010001_glial_cell_differentiation	16	9	7.455131	0
GO:0045165_cell_fate_commitment	47	26	7.33176	0
GO:0030902_hindbrain_development	38	21	7.324339	0
GO:0042471_ear_morphogenesis	29	16	7.312312	0
GO:0007420_brain_development	100	55	7.289461	0
GO:0021532_neural_tube_patterning	20	11	7.289461	0
GO:0021903_rostrocaudal_neural_tube_patterning	20	11	7.289461	0
GO:0001708_cell_fate_specification	30	16	7.068568	0
GO:0030917_midbrain-hindbrain_boundary_development	15	8	7.068568	0
GO:0007422_peripheral_nervous_system_development	17	9	7.016594	0
GO:0007417_central_nervous_system_development	137	71	6.868636	0
GO:0021510_spinal_cord_development	14	7	6.626783	0
GO:0021515_cell_differentiation_in_spinal_cord	14	7	6.626783	0
GO:0030900_forebrain_development	27	13	6.381346	0
GO:0021915_neural_tube_development	25	11	5.831569	0
GO:0009952_anterior_posterior_pattern_formation	83	35	5.588853	0
GO:0033339_pectoral_fin_development	19	8	5.580449	0
GO:0048646_anatomical_structure_formation	82	34	5.495381	0
GO:0007399_nervous_system_development	236	96	5.391281	0
GO:0048839_inner_ear_development	45	18	5.301426	0
GO:0048598_embryonic_morphogenesis	83	33	5.26949	0
GO:0043583_ear_development	46	18	5.186178	0
GO:0030903_notochord_development	23	9	5.186178	0
GO:0003002_regionalization	128	50	5.177174	0
GO:0035050_embryonic_heart_tube_development	34	13	5.06754	0
GO:0051216_cartilage_development	37	14	5.014863	0
GO:0001704_formation_of_primary_germ_layer	24	9	4.970087	0
GO:0006355_regulation_of_transcription_DNA-dependen	747	272	4.82593	0
GO:0051252_regulation_of_RNA_metabolic_process	748	272	4.819478	0
GO:0008283_cell_proliferation	25	9	4.771284	0
GO:0045595_regulation_of_cell_differentiation	28	10	4.733416	0
GO:0006351_transcription_DNA-dependent	766	273	4.723529	0
GO:0032774_RNA_biosynthetic_process	769	273	4.705102	0
GO:0009953_dorsal_ventral_pattern_formation	48	17	4.693971	0
GO:0045449_regulation_of_transcription	833	290	4.614087	0
GO:0035295_tube_development	46	16	4.609936	0
GO:0007389_pattern_specification_process	170	59	4.599767	0
GO:0019219_regulation_of_nucleobase_nucleoside_nu	837	290	4.592036	0
GO:0006353_transcription_termination	310	106	4.531864	0
GO:0031554_regulation_of_transcription_termination	310	106	4.531864	0
GO:0031555_transcriptional_attenuation	310	106	4.531864	0
GO:0031564_transcription_antitermination	310	106	4.531864	0
GO:0043244_regulation_of_protein_complex_disassembly	310	106	4.531864	0
GO:0016055_Wnt_receptor_signaling_pathway	41	14	4.525608	0
GO:0022411_cellular_component_disassembly	312	106	4.502814	0
GO:0032984_macromolecular_complex_disassembly	312	106	4.502814	0
GO:0043241_protein_complex_disassembly	312	106	4.502814	0
GO:0043624_cellular_protein_complex_disassembly	312	106	4.502814	0
GO:0010468_regulation_of_gene_expression	857	291	4.500336	0
GO:0001501_skeletal_development	56	19	4.496746	0
GO:0006350_transcription	859	291	4.489858	0
GO:0031323_regulation_of_cellular_metabolic_process	865	291	4.458714	0
GO:0007507_heart_development	81	27	4.417855	0
GO:0009880_embryonic_pattern_specification	33	11	4.417855	0
GO:0007498_mesoderm_development	37	12	4.298454	0
GO:0032268_regulation_of_cellular_protein_metabolic_prc	331	107	4.284385	0
GO:0007423_sensory_organ_development	130	42	4.281921	0
GO:0019222_regulation_of_metabolic_process	908	291	4.247563	0
GO:0009887_organ_morphogenesis	172	55	4.238059	0
GO:0007156_homophilic_cell_adhesion	44	14	4.217044	0
GO:0022008_neurogenesis	104	33	4.205458	0
GO:0048592_eye_morphogenesis	38	12	4.185337	0
GO:0043010_camera-type_eye_development	61	19	4.12816	0
GO:0001654_eye_development	87	27	4.113176	0

GO:0009790_embryonic_development	255	79	4.106007	0
GO:0009792_embryonic_development_ending_in_birth_or	84	26	4.102294	0
GO:0043009_chordate_embryonic_development	84	26	4.102294	0
GO:0051128_regulation_of_cellular_component_organizat	349	108	4.10139	0
GO:0048513_organ_development	482	149	4.097057	0
GO:0035282_segmentation	55	17	4.096557	0
GO:0048731_system_development	571	175	4.061951	0
GO:0016070_RNA_metabolic_process	905	276	4.041971	0
GO:0030182_neuron_differentiation	82	25	4.040721	0
GO:0009888_tissue_development	110	33	3.97607	0
GO:0048699_generation_of_neurons	98	29	3.921974	0
GO:0001756_somitogenesis	51	15	3.898108	0
GO:0002520_immune_system_development	51	15	3.898108	0
GO:0048534_hemopoietic_or_lymphoid_organ_developme	51	15	3.898108	0
GO:0030097_hemopoiesis	48	14	3.865623	0
GO:0009799_determination_of_symmetry	55	16	3.855583	0
GO:0009855_determination_of_bilateral_symmetry	55	16	3.855583	0
GO:0048856_anatomical_structure_development	627	182	3.847128	0
GO:0007368_determination_of_left_right_symmetry	45	13	3.828808	0
GO:0051246_regulation_of_protein_metabolic_process	373	107	3.801961	0
GO:0007275_multicellular_organismal_development	725	207	3.784122	0
GO:0048568_embryonic_organ_development	53	15	3.751009	0
GO:0051093_negative_regulation_of_developmental_proc	53	15	3.751009	0
GO:0050794_regulation_of_cellular_process	1269	346	3.613659	0
GO:0048514_blood_vessel_morphogenesis	49	13	3.516252	0
GO:0050789_regulation_of_biological_process	1345	352	3.468591	0
GO:0009653_anatomical_structure_morphogenesis	347	90	3.437524	0
GO:0010467_gene_expression	1143	296	3.432245	0
GO:0032501_multicellular_organismal_process	844	217	3.407611	0
GO:0016337_cell-cell_adhesion	55	14	3.373635	0
GO:0006139_nucleobase_nucleoside_nucleotide_and_r	1221	302	3.278114	0
GO:0032502_developmental_process	869	214	3.263824	0
GO:0001568_blood_vessel_development	65	16	3.262416	0
GO:0001944_vasculature_development	66	16	3.212986	0
GO:0065007_biological_regulation	1594	377	3.134626	0
GO:0030154_cell_differentiation	394	83	2.791995	0
GO:0048869_cellular_developmental_process	394	83	2.791995	0
GO:0048522_positive_regulation_of_cellular_process	100	20	2.650713	0
GO:0050793_regulation_of_developmental_process	141	27	2.537917	0
GO:0048519_negative_regulation_of_biological_process	299	57	2.526599	0
GO:0048523_negative_regulation_of_cellular_process	289	55	2.522305	0
GO:0009968_negative_regulation_of_signal_transduction	204	38	2.468801	0
GO:0043283_biopolymer_metabolic_process	1699	307	2.394847	0
GO:0006816_calcium_ion_transport	176	31	2.334435	0
GO:0048468_cell_development	277	47	2.2488	0
GO:0009966_regulation_of_signal_transduction	277	44	2.10526	0
GO:0016043_cellular_component_organization_and_bioge	876	132	1.997113	0
GO:0015674_di-_tri-valent_inorganic_cation_transport	313	47	1.990152	0
GO:0043170_macromolecule_metabolic_process	2338	331	1.87636	0
GO:0007166_cell_surface_receptor_linked_signal_transdu	427	58	1.80025	0
GO:0044237_cellular_metabolic_process	2799	372	1.76146	0
GO:0044238_primary_metabolic_process	2744	363	1.753296	0
GO:0008152_metabolic_process	3336	387	1.537509	0
GO:0030001_metal_ion_transport	940	105	1.480451	0
GO:0009987_cellular_process	4369	488	1.480371	0
GO:0044267_cellular_protein_metabolic_process	1486	152	1.355681	0
GO:0019538_protein_metabolic_process	1572	159	1.340532	0
GO:0044260_cellular_macromolecule_metabolic_process	1504	152	1.339456	0
GO:0006811_ion_transport	1076	114	1.404188	0.000071
GO:0006812_cation_transport	982	106	1.430629	0.000072
GO:0033333_fin_development	40	11	3.644731	0.000139
GO:0048736_appendage_development	40	11	3.644731	0.000139
GO:0021536_diencephalon_development	12	6	6.626783	0.000141
GO:0003007_heart_morphogenesis	27	9	4.417855	0.000142
GO:0035108_limb_morphogenesis	18	7	5.154164	0.000323
GO:0035136_forelimb_morphogenesis	18	7	5.154164	0.000323
GO:0035138_pectoral_fin_morphogenesis	18	7	5.154164	0.000323
GO:0060173_limb_development	18	7	5.154164	0.000323
GO:0030326_embryonic_limb_morphogenesis	13	6	6.11703	0.000331
GO:0035113_embryonic_appendage_morphogenesis	13	6	6.11703	0.000331
GO:0035115_embryonic_forelimb_morphogenesis	13	6	6.11703	0.000331
GO:0035118_embryonic_pectoral_fin_morphogenesis	13	6	6.11703	0.000331
GO:0048518_positive_regulation_of_biological_process	110	20	2.409739	0.00034
GO:0007369_gastrulation	70	15	2.84005	0.000342
GO:0016331_morphogenesis_of_embryonic_epithelium	23	8	4.609936	0.000345
GO:0033334_fin_morphogenesis	36	10	3.681546	0.000382
GO:0035107_appendage_morphogenesis	36	10	3.681546	0.000382
GO:0050767_regulation_of_neurogenesis	30	9	3.97607	0.000506
GO:0007223_Wnt_receptor_signaling_pathway_calcium_	19	7	4.882893	0.000688
GO:0009967_positive_regulation_of_signal_transduction	19	7	4.882893	0.000688
GO:0031016_pancreas_development	25	8	4.241141	0.000807
GO:0021983_pituitary_gland_development	6	4	8.835711	0.000859

GO:0021984_adenohypophysis_development	6	4	8.835711	0.000859
GO:0001840_neural_plate_development	20	7	4.638748	0.001037
GO:0007418_ventral_midline_development	10	5	6.626783	0.001176
GO:0031076_embryonic_camera-type_eye_development	10	5	6.626783	0.001176
GO:0050768_negative_regulation_of_neurogenesis	10	5	6.626783	0.001176
GO:0051090_regulation_of_transcription_factor_activity	10	5	6.626783	0.001176
GO:0051098_regulation_of_binding	10	5	6.626783	0.001176
GO:0051101_regulation_of_DNA_binding	10	5	6.626783	0.001176
GO:0009798_axis_specification	15	6	5.301426	0.001453
GO:0048565_gut_development	15	6	5.301426	0.001453
GO:0007155_cell_adhesion	114	19	2.208928	0.002265
GO:0022610_biological_adhesion	114	19	2.208928	0.002265
GO:0001525_angiogenesis	28	8	3.786733	0.002291
GO:0002009_morphogenesis_of_an_epithelium	56	12	2.84005	0.002303
GO:0040007_growth	64	13	2.692131	0.002308
GO:0007492_endoderm_development	11	5	6.024348	0.002316
GO:0021522_spinal_cord_motor_neuron_differentiation	11	5	6.024348	0.002316
GO:0030334_regulation_of_cell_migration	11	5	6.024348	0.002316
GO:0048546_digestive_tract_morphogenesis	11	5	6.024348	0.002316
GO:0051270_regulation_of_cell_motility	11	5	6.024348	0.002316
GO:0009791_post-embryonic_development	7	4	7.573466	0.002781
GO:0009948_anterior_posterior_axis_specification	7	4	7.573466	0.002781
GO:0045743_positive_regulation_of_fibroblast_growth_fac	7	4	7.573466	0.002781
GO:0048483_autonomic_nervous_system_development	7	4	7.573466	0.002781
GO:0048484_enteric_nervous_system_development	7	4	7.573466	0.002781
GO:0016477_cell_migration	99	17	2.275865	0.003016
GO:0007167_enzyme_linked_receptor_protein_signaling_	82	15	2.424433	0.003032
GO:0021517_ventral_spinal_cord_development	12	5	5.522319	0.00342
GO:0042461_photoreceptor_cell_development	12	5	5.522319	0.00342
GO:0042462_eye_photoreceptor_cell_development	12	5	5.522319	0.00342
GO:0045596_negative_regulation_of_cell_differentiation	12	5	5.522319	0.00342
GO:0042692_muscle_cell_differentiation	30	8	3.534284	0.003557
GO:0048593_camera-type_eye_morphogenesis	18	6	4.417855	0.003744
GO:0007267_cell-cell_signaling	31	8	3.420275	0.003929
GO:0001706_endoderm_formation	8	4	6.626783	0.0045
GO:0043388_positive_regulation_of_DNA_binding	8	4	6.626783	0.0045
GO:0051091_positive_regulation_of_transcription_factor_ε	8	4	6.626783	0.0045
GO:0051099_positive_regulation_of_binding	8	4	6.626783	0.0045
GO:0001570_vasculogenesis	13	5	5.097525	0.004726
GO:0001707_mesoderm_formation	19	6	4.185337	0.005396
GO:0048666_neuron_development	55	11	2.650713	0.00601
GO:0051146_striated_muscle_cell_differentiation	26	7	3.568268	0.006127
GO:0000904_cellular_morphogenesis_during_differentiat	56	11	2.603379	0.006488
GO:0006928_cell_motility	108	17	2.086209	0.006555
GO:0051674_localization_of_cell	108	17	2.086209	0.006555
GO:0001754_eye_photoreceptor_cell_differentiation	14	5	4.733416	0.006618
GO:0046530_photoreceptor_cell_differentiation	14	5	4.733416	0.006618
GO:0021508_floor_plate_formation	9	4	5.890474	0.006651
GO:0021990_neural_plate_formation	9	4	5.890474	0.006651
GO:0030111_regulation_of_Wnt_receptor_signaling_pathw	9	4	5.890474	0.006651
GO:0007517_muscle_development	49	10	2.704809	0.006995
GO:0014706_striated_muscle_development	42	9	2.84005	0.008318
GO:0001710_mesodermal_cell_fate_commitment	5	3	7.952139	0.010274
GO:0021953_central_nervous_system_neuron_differentiat	5	3	7.952139	0.010274
GO:0032835_glomerulus_development	5	3	7.952139	0.010274
GO:0045446_endothelial_cell_differentiation	5	3	7.952139	0.010274
GO:0048333_mesodermal_cell_differentiation	5	3	7.952139	0.010274
GO:0008543_fibroblast_growth_factor_receptor_signaling_	15	5	4.417855	0.0105
GO:0007169_transmembrane_receptor_protein_tyrosine_k	51	10	2.598738	0.010995
GO:0031018_endocrine_pancreas_development	10	4	5.301426	0.011956
GO:0048547_gut_morphogenesis	10	4	5.301426	0.011956
GO:0048880_sensory_system_development	10	4	5.301426	0.011956
GO:0048925_lateral_line_system_development	10	4	5.301426	0.011956
GO:0006783_heme_biosynthetic_process	79	13	2.180967	0.013805
GO:0019748_secondary_metabolic_process	88	14	2.108522	0.013833
GO:0048332_mesoderm_morphogenesis	23	6	3.457452	0.014474
GO:0001889_liver_development	11	4	4.819478	0.015647
GO:0040036_regulation_of_fibroblast_growth_factor_rece	11	4	4.819478	0.015647
GO:0042659_regulation_of_cell_fate_specification	11	4	4.819478	0.015647
GO:0050769_positive_regulation_of_neurogenesis	11	4	4.819478	0.015647
GO:0048262_determination_of_dorsoventral_asymmetry	17	5	3.898108	0.01618
GO:0042168_heme_metabolic_process	81	13	2.127115	0.018099
GO:0001709_cell_fate_determination	6	3	6.626783	0.018133
GO:0008285_negative_regulation_of_cell_proliferation	6	3	6.626783	0.018133
GO:0022037_metencephalon_development	6	3	6.626783	0.018133
GO:0045597_positive_regulation_of_cell_differentiation	6	3	6.626783	0.018133
GO:0046849_bone_remodeling	6	3	6.626783	0.018133
GO:0048771_tissue_remodeling	6	3	6.626783	0.018133
GO:0048882_lateral_line_development	6	3	6.626783	0.018133
GO:0048884_neuromast_development	6	3	6.626783	0.018133
GO:0046148_pigment_biosynthetic_process	82	13	2.101175	0.018939
GO:0000902_cell_morphogenesis	91	14	2.03901	0.019016

GO:0032989_cellular_structure_morphogenesis	91	14	2.03901	0.019016
GO:0006779_porphyrin_biosynthetic_process	83	13	2.07586	0.01939
GO:0007219_Notch_signaling_pathway	18	5	3.681546	0.020405
GO:0002376_immune_system_process	121	17	1.862071	0.020444
GO:0008038_neuron_recognition	12	4	4.417855	0.021486
GO:0006778_porphyrin_metabolic_process	85	13	2.027016	0.022709
GO:0042440_pigment_metabolic_process	85	13	2.027016	0.022709
GO:0006766_vitamin_metabolic_process	19	5	3.48778	0.023651
GO:0007154_cell_communication	1120	104	1.230688	0.025402
GO:0009996_negative_regulation_of_cell_fate_specificatio	7	3	5.6801	0.025462
GO:0010453_regulation_of_cell_fate_commitment	7	3	5.6801	0.025462
GO:0010454_negative_regulation_of_cell_fate_commitme	7	3	5.6801	0.025462
GO:0021782_glial_cell_development	7	3	5.6801	0.025462
GO:0035121_tail_morphogenesis	7	3	5.6801	0.025462
GO:0042391_regulation_of_membrane_potential	7	3	5.6801	0.025462
GO:0042664_negative_regulation_of_endodermal_cell_fat	7	3	5.6801	0.025462
GO:0048752_semicircular_canal_morphogenesis	7	3	5.6801	0.025462
GO:0006873_cellular_ion_homeostasis	156	20	1.699175	0.028023
GO:0008037_cell_recognition	13	4	4.07802	0.028092
GO:0033014_tetrapyrrole_biosynthetic_process	88	13	1.957913	0.029167
GO:0055082_cellular_chemical_homeostasis	158	20	1.677667	0.030302
GO:0050801_ion_homeostasis	159	20	1.667115	0.030639
GO:0048729_tissue_morphogenesis	28	6	2.84005	0.031236
GO:0033013_tetrapyrrole_metabolic_process	90	13	1.914404	0.031791
GO:0031017_exocrine_pancreas_development	14	4	3.786733	0.032841
GO:0035272_exocrine_system_development	14	4	3.786733	0.032841
GO:0060042_retina_morphogenesis_in_camera-type_eye	14	4	3.786733	0.032841
GO:0035162_embryonic_hemopoiesis	21	5	3.155611	0.03326
GO:0040008_regulation_of_growth	21	5	3.155611	0.03326
GO:0048878_chemical_homeostasis	161	20	1.646406	0.035782
GO:0031214_biomaterial_formation	8	3	4.970087	0.035876
GO:0007165_signal_transduction	1056	97	1.21742	0.037464
GO:0016481_negative_regulation_of_transcription	22	5	3.012174	0.039025
GO:0000041_transition_metal_ion_transport	666	64	1.273616	0.045252
GO:0001714_endodermal_cell_fate_specification	9	3	4.417855	0.049464
GO:0042663_regulation_of_endodermal_cell_fate_specific	9	3	4.417855	0.049464
GO:0055001_muscle_cell_development	23	5	2.88121	0.050993
GO:0055002_striated_muscle_cell_development	23	5	2.88121	0.050993
GO:0014032_neural_crest_cell_development	24	5	2.76116	0.057193
GO:0045934_negative_regulation_of_nucleobase_nucleic_acid	24	5	2.76116	0.057193
GO:0051239_regulation_of_multicellular_organismal_process	24	5	2.76116	0.057193
GO:0003008_system_process	108	14	1.718055	0.057622
GO:0007601_visual_perception	41	7	2.262804	0.057639
GO:0050953_sensory_perception_of_light_stimulus	41	7	2.262804	0.057639
GO:0001763_morphogenesis_of_a_branching_structure	10	3	3.97607	0.062966
GO:0048705_skeletal_morphogenesis	10	3	3.97607	0.062966
GO:0030099_myeloid_cell_differentiation	17	4	3.118486	0.064983
GO:0048469_cell_maturation	25	5	2.650713	0.066633
GO:0048741_skeletal_muscle_fiber_development	25	5	2.650713	0.066633
GO:0048747_muscle_fiber_development	25	5	2.650713	0.066633
GO:0006826_iron_ion_transport	132	16	1.606493	0.069424
GO:0046483_heterocycle_metabolic_process	112	14	1.656696	0.070878
GO:0045445_myoblast_differentiation	18	4	2.945237	0.073244
GO:0048627_myoblast_development	18	4	2.945237	0.073244
GO:0048628_myoblast_maturation	18	4	2.945237	0.073244
GO:0001711_endodermal_cell_fate_commitment	11	3	3.614609	0.078567
GO:0065008_regulation_of_biological_quality	289	30	1.375803	0.078709
GO:0042074_cell_migration_involved_in_gastrulation	44	7	2.108522	0.078904
GO:0014031_mesenchymal_cell_development	27	5	2.454364	0.080621
GO:0014033_neural_crest_cell_differentiation	27	5	2.454364	0.080621
GO:0021700_developmental_maturation	27	5	2.454364	0.080621
GO:0060041_retina_development_in_camera-type_eye	27	5	2.454364	0.080621
GO:0051179_localization	1764	150	1.127004	0.089172
GO:0001503_ossification	5	2	5.301426	0.089231
GO:0001569_patterning_of_blood_vessels	5	2	5.301426	0.089231
GO:0003006_reproductive_developmental_process	5	2	5.301426	0.089231
GO:0006970_response_to_osmotic_stress	5	2	5.301426	0.089231
GO:0007194_negative_regulation_of_adenylate_cyclase_activity	5	2	5.301426	0.089231
GO:0007548_sex_differentiation	5	2	5.301426	0.089231
GO:0009651_response_to_salt_stress	5	2	5.301426	0.089231
GO:0021548_pons_development	5	2	5.301426	0.089231
GO:0030178_negative_regulation_of_Wnt_receptor_signaling	5	2	5.301426	0.089231
GO:0030325_adrenal_gland_development	5	2	5.301426	0.089231
GO:0030855_epithelial_cell_differentiation	5	2	5.301426	0.089231
GO:0030947_regulation_of_vascular_endothelial_growth_factor	5	2	5.301426	0.089231
GO:0031280_negative_regulation_of_cyclase_activity	5	2	5.301426	0.089231
GO:0045786_negative_regulation_of_cell_cycle	5	2	5.301426	0.089231
GO:0045926_negative_regulation_of_growth	5	2	5.301426	0.089231
GO:0048263_determination_of_dorsal_identity	5	2	5.301426	0.089231
GO:0048754_branching_morphogenesis_of_a_tube	5	2	5.301426	0.089231
GO:0050935_iridophore_differentiation	5	2	5.301426	0.089231
GO:0051350_negative_regulation_of_lyase_activity	5	2	5.301426	0.089231

GO:0001666_response_to_hypoxia	19	4	2.790224	0.092416
GO:0065009_regulation_of_molecular_function	75	10	1.767142	0.094573
GO:0006879_cellular_iron_ion_homeostasis	138	16	1.536645	0.094879
GO:0055072_iron_ion_homeostasis	138	16	1.536645	0.094879
GO:0008361_regulation_of_cell_size	28	5	2.366708	0.095723
GO:0016049_cell_growth	28	5	2.366708	0.095723
GO:0035239_tube_morphogenesis	12	3	3.313391	0.098358
GO:0048264_determination_of_ventral_identity	12	3	3.313391	0.098358
GO:0048840_otoolith_development	12	3	3.313391	0.098358
GO:0045935_positive_regulation_of_nucleobase_nucleoside_metabolic_process	37	6	2.149227	0.099377
GO:0045941_positive_regulation_of_transcription	37	6	2.149227	0.099377
GO:0019226_transmission_of_nerve_impulse	20	4	2.650713	0.102722
GO:0050877_neurological_system_process	77	10	1.721242	0.10469
GO:0031175_neurite_development	48	7	1.932812	0.110735
GO:0001655_urogenital_system_development	21	4	2.524489	0.113275
GO:0001822_kidney_development	21	4	2.524489	0.113275
GO:0006767_water-soluble_vitamin_metabolic_process	13	3	3.058515	0.117081
GO:0030510_regulation_of_BMP_signaling_pathway	13	3	3.058515	0.117081
GO:0045892_negative_regulation_of_transcription_DNA-dependent	13	3	3.058515	0.117081
GO:0051253_negative_regulation_of_RNA_metabolic_process	13	3	3.058515	0.117081
GO:0001508_regulation_of_action_potential	6	2	4.417855	0.127618
GO:0006721_terpenoid_metabolic_process	6	2	4.417855	0.127618
GO:0006775_fat-soluble_vitamin_metabolic_process	6	2	4.417855	0.127618
GO:0006776_vitamin_A_metabolic_process	6	2	4.417855	0.127618
GO:0007272_ensheathment_of_neurons	6	2	4.417855	0.127618
GO:0008366_axon_ensheathment	6	2	4.417855	0.127618
GO:0019228_regulation_of_action_potential_in_neuron	6	2	4.417855	0.127618
GO:0022414_reproductive_process	6	2	4.417855	0.127618
GO:0031279_regulation_of_cyclase_activity	6	2	4.417855	0.127618
GO:0042552_myelination	6	2	4.417855	0.127618
GO:0045761_regulation_of_adenylate_cyclase_activity	6	2	4.417855	0.127618
GO:0048702_embryonic_neurocranium_morphogenesis	6	2	4.417855	0.127618
GO:0048881_mechanosensory_lateral_line_system_development	6	2	4.417855	0.127618
GO:0048915_posterior_lateral_line_system_development	6	2	4.417855	0.127618
GO:0051339_regulation_of_lyase_activity	6	2	4.417855	0.127618
GO:0007519_skeletal_muscle_development	30	5	2.208928	0.132802
GO:0031324_negative_regulation_of_cellular_metabolic_process	30	5	2.208928	0.132802
GO:0048762_mesenchymal_cell_differentiation	30	5	2.208928	0.132802
GO:0051188_cofactor_biosynthetic_process	122	14	1.520901	0.134603
GO:0042592_homeostatic_process	223	23	1.36696	0.134973
GO:0009893_positive_regulation_of_metabolic_process	40	6	1.988035	0.135163
GO:0031325_positive_regulation_of_cellular_metabolic_process	40	6	1.988035	0.135163
GO:0009892_negative_regulation_of_metabolic_process	31	5	2.137672	0.139539
GO:0030003_cellular_cation_homeostasis	146	16	1.452446	0.139838
GO:0030005_cellular_divalent_inorganic_cation_homeostasis	146	16	1.452446	0.139838
GO:0051186_cofactor_metabolic_process	147	16	1.442565	0.145764
GO:0055066_divalent_inorganic_cation_homeostasis	147	16	1.442565	0.145764
GO:0001757_somite_specification	7	2	3.786733	0.162249
GO:0007379_segment_specification	7	2	3.786733	0.162249
GO:0035051_cardiac_cell_differentiation	7	2	3.786733	0.162249
GO:0042364_water-soluble_vitamin_biosynthetic_process	7	2	3.786733	0.162249
GO:0048010_vascular_endothelial_growth_factor_receptor_activity	7	2	3.786733	0.162249
GO:0006829_zinc_ion_transport	526	48	1.209451	0.163615
GO:0055080_cation_homeostasis	149	16	1.423202	0.165553
GO:0007218_neuropeptide_signaling_pathway	15	3	2.650713	0.169974
GO:0030218_erythrocyte_differentiation	15	3	2.650713	0.169974
GO:0030239_myofibril_assembly	15	3	2.650713	0.169974
GO:0034101_erythrocyte_homeostasis	15	3	2.650713	0.169974
GO:0048872_homeostasis_of_number_of_cells	15	3	2.650713	0.169974
GO:0051726_regulation_of_cell_cycle	15	3	2.650713	0.169974
GO:0051094_positive_regulation_of_developmental_process	43	6	1.849335	0.172661
GO:0007411_axon_guidance	24	4	2.208928	0.174175
GO:0007409_axonogenesis	44	6	1.807304	0.178226
GO:0045893_positive_regulation_of_transcription_DNA-dependent	16	3	2.485044	0.182941
GO:0051254_positive_regulation_of_RNA_metabolic_process	16	3	2.485044	0.182941
GO:0001839_neural_plate_morphogenesis	8	2	3.313391	0.19199
GO:0006633_fatty_acid_biosynthetic_process	8	2	3.313391	0.19199
GO:0006769_nicotinamide_metabolic_process	8	2	3.313391	0.19199
GO:0007187_G-protein_signaling_coupled_to_cyclic_nucleotide	8	2	3.313391	0.19199
GO:0007188_G-protein_signaling_coupled_to_cAMP	8	2	3.313391	0.19199
GO:0009110_vitamin_biosynthetic_process	8	2	3.313391	0.19199
GO:0019362_pyridine_nucleotide_metabolic_process	8	2	3.313391	0.19199
GO:0019933_cAMP-mediated_signaling	8	2	3.313391	0.19199
GO:0019935_cyclic-nucleotide-mediated_signaling	8	2	3.313391	0.19199
GO:0030514_negative_regulation_of_BMP_signaling_pathway	8	2	3.313391	0.19199
GO:0042398_amino_acid_derivative_biosynthetic_process	8	2	3.313391	0.19199
GO:0048667_neuron_morphogenesis_during_differentiation	45	6	1.767142	0.193614
GO:0048812_neurite_morphogenesis	45	6	1.767142	0.193614
GO:0003013_circulatory_system_process	26	4	2.03901	0.19697
GO:0008015_blood_circulation	26	4	2.03901	0.19697

Supplemental Table 3. H3K27me3 top 250 genes scores and other marks.

Enrichment of modifications are scored in proximal promoter region (-2 ~ +1 kb of TSS).

	K27me3 -2+1	fold	H2AFV -2+1	fold	K4me3 -2+1	fold	K4me2 -2+1	fold	K14ac -2+1	fold
foxb1.2	1.824	3.54	0.4587	1.37	1.1699	2.25	2.1309	4.38	0.3367	1.26
dlx1a	1.8205	3.53	0.6521	1.57	1.6015	3.03	2.025	4.07	0.402	1.32
hoxa11a	1.7721	3.42	0.5176	1.43	1.8448	3.59	2.1114	4.32	0.3162	1.25
flilb	1.7643	3.40	0.5282	1.44	1.5839	3.00	1.9529	3.87	0.5663	1.48
six2.1	1.7513	3.37	0.4871	1.40	1.6492	3.14	1.9268	3.80	0.6302	1.55
hoxc6a	1.7384	3.34	0.5132	1.43	1.4666	2.76	1.6821	3.21	0.3417	1.27
pax7	1.7248	3.31	0.5495	1.46	1.291	2.45	2.2619	4.80	0.2929	1.23
hoxa5a	1.7112	3.27	0.6255	1.54	1.6236	3.08	1.3117	2.48	0.2415	1.18
zic2a	1.7028	3.26	0.3771	1.30	1.3841	2.61	2.0741	4.21	0.4168	1.33
hoxd9a	1.701	3.25	0.5277	1.44	1.4831	2.80	1.7966	3.47	-0.0103	0.99
nkx2.9	1.6955	3.24	0.3211	1.25	1.1547	2.23	1.7986	3.48	0.1713	1.13
meis1	1.691	3.23	0.4309	1.35	1.6445	3.13	1.8639	3.64	0.5624	1.48
hoxa9a	1.6797	3.20	0.6559	1.58	1.6262	3.09	1.8388	3.58	0.5059	1.42
tfap2a	1.6777	3.20	0.4558	1.37	1.3402	2.53	1.5551	2.94	0.6934	1.62
hoxc12b	1.6774	3.20	0.59	1.51	1.6164	3.07	1.6378	3.11	0.4544	1.37
hoxd10a	1.6623	3.17	0.4599	1.38	1.2551	2.39	1.9172	3.78	0.0443	1.03
arx	1.6622	3.16	0.4758	1.39	1.4652	2.76	1.6412	3.12	0.558	1.47
zgc:114196	1.6501	3.14	0.533	1.45	1.4797	2.79	1.4827	2.79	0.3706	1.29
pax9	1.6493	3.14	0.2802	1.21	1.6	3.03	1.3559	2.56	0.3653	1.29
hoxb6a	1.6481	3.13	0.3174	1.25	0.9786	1.97	1.7742	3.42	0.0803	1.06
zgc:85811	1.6469	3.13	-0.5558	0.68	-1.9882	0.25	1.8179	3.53	0.5822	1.50
gad1	1.6345	3.10	0.4365	1.35	0.7745	1.71	1.7582	3.38	0.4875	1.40
hoxc8a	1.6235	3.08	0.4177	1.34	1.6202	3.07	1.7223	3.30	0.2757	1.21
zgc:154123 (zic4)	1.6182	3.07	0.5013	1.42	1.0991	2.14	1.7561	3.38	0.2719	1.21
foxc1b	1.6036	3.04	0.5472	1.46	1.3836	2.61	1.515	2.86	0.5625	1.48
evx2	1.6034	3.04	0.5796	1.49	1.1237	2.18	1.9135	3.77	0.1612	1.12
zic1	1.6033	3.04	0.3893	1.31	0.8695	1.83	1.9135	3.77	0.1833	1.14
six3a	1.6022	3.04	0.7201	1.65	1.7537	3.37	1.7701	3.41	0.5892	1.50
hoxc9a	1.5967	3.02	0.4231	1.34	1.4873	2.80	1.4838	2.80	0.2344	1.18
otx1	1.5949	3.02	0.5903	1.51	1.6573	3.15	1.6448	3.13	0.4973	1.41
ptf1a	1.5862	3.00	0.4763	1.39	1.2229	2.33	1.6448	3.13	0.3047	1.24
irx1a	1.5843	3.00	0.5812	1.50	0.6262	1.54	0.6427	1.56	0.0834	1.06
gsx2	1.5825	2.99	0.3712	1.29	1.0529	2.07	0.8543	1.81	-0.032	0.98
tfap2b	1.5775	2.98	0.5338	1.45	1.3748	2.59	0.6585	1.58	0.6125	1.53
commd3	1.5727	2.97	0.5868	1.50	1.6806	3.21	1.8207	3.53	0.7452	1.68
hoxc6b	1.5701	2.97	0.5765	1.49	1.7141	3.28	1.1413	2.21	0.5719	1.49
tbx1	1.5689	2.97	0.434	1.35	1.6579	3.16	1.4458	2.72	0.5986	1.51
pitx2a	1.562	2.95	0.6609	1.58	1.4642	2.76	1.6443	3.13	0.3211	1.25
hoxc5a	1.5593	2.95	0.4037	1.32	1.6057	3.04	0.7114	1.64	0.5655	1.48
hoxc13a	1.5542	2.94	0.5765	1.49	1.2305	2.35	1.4571	2.75	0.3203	1.25
evx1	1.5536	2.94	0.5218	1.44	1.3127	2.48	1.7666	3.40	0.0768	1.05
foxd1	1.552	2.93	0.651	1.57	1.5263	2.88	0.8421	1.79	0.155	1.11
coe2	1.5514	2.93	0.62	1.54	1.5609	2.95	1.3191	2.50	0.3779	1.30
dmrta2	1.5483	2.92	0.3236	1.25	1.3275	2.51	1.1206	2.17	0.2489	1.19
zgc:113499 (eng1b)	1.5473	2.92	0.3709	1.29	2.0144	4.04	1.6388	3.11	0.7664	1.70
tbx2b	1.5458	2.92	0.3099	1.24	1.4706	2.77	1.0524	2.07	0.1632	1.12
hoxb5a	1.5406	2.91	0.3821	1.30	1.1337	2.19	1.0226	2.03	0.0489	1.03
zic5	1.5401	2.91	0.4292	1.35	1.0799	2.11	1.5081	2.84	0.3581	1.28
hoxd4a	1.5399	2.91	0.5993	1.51	1.0537	2.08	1.6174	3.07	-0.0424	0.97
dlx3b	1.5381	2.90	0.5853	1.50	1.3068	2.47	1.4099	2.66	0.2307	1.17
hlx1	1.5317	2.89	0.415	1.33	1.0649	2.09	1.7724	3.42	-0.0283	0.98
zgc:112001	1.5302	2.89	0.697	1.62	0.6259	1.54	1.2767	2.42	0.5897	1.50
foxd3	1.5244	2.88	0.4813	1.40	1.617	3.07	1.6376	3.11	0.3255	1.25
her3	1.5236	2.88	0.6674	1.59	1.1447	2.21	1.3799	2.60	0.3473	1.27
vox	1.523	2.87	0.4939	1.41	1.8005	3.48	0.6196	1.54	0.4165	1.33
pax6a	1.5161	2.86	0.4201	1.34	1.114	2.16	0.522	1.44	0.4386	1.36
dlx6a	1.5154	2.86	0.3652	1.29	1.5084	2.84	1.5405	2.91	0.3339	1.26
tbx5	1.5144	2.86	0.3507	1.28	1.4126	2.66	1.4967	2.82	0.2203	1.16
hoxb8a	1.5144	2.86	0.5717	1.49	1.1146	2.17	1.2644	2.40	0.1919	1.14
gata3	1.5099	2.85	0.2313	1.17	1.032	2.04	0.157	1.11	0.1794	1.13
barhl2	1.5031	2.83	0.7296	1.66	1.4	2.64	1.0976	2.14	0.4231	1.34
nkx2.1b	1.5016	2.83	0.5319	1.45	1.057	2.08	1.287	2.44	0.2144	1.16
fgf3	1.4994	2.83	0.3976	1.32	1.1998	2.30	1.9648	3.90	0.0769	1.05
tbx2a	1.4967	2.82	0.4341	1.35	1.633	3.10	1.9648	3.90	0.3402	1.27
zgc:101606	1.4937	2.82	0.2094	1.16	0.9089	1.88	1.3508	2.55	-0.0263	0.98
msxe	1.4925	2.81	0.5525	1.47	1.1886	2.28	1.0514	2.07	0.1838	1.14
zgc:162280 (ccnd2)	1.4876	2.80	0.5365	1.45	1.6436	3.12	1.2884	2.44	0.2263	1.17
sox1a	1.4844	2.80	0.3945	1.31	1.1921	2.28	1.4409	2.71	0.0507	1.04
flh	1.484	2.80	0.489	1.40	1.1769	2.26	1.0867	2.12	0.4583	1.37
si:ch211-103o12.1	1.4795	2.79	0.5777	1.49	1.1625	2.24	1.5154	2.86	0.1404	1.10
tlx3b	1.479	2.79	0.6751	1.60	1.0683	2.10	1.837	3.57	0.0681	1.05
sp8l	1.478	2.79	0.4518	1.37	1.2486	2.38	1.5979	3.03	0.2482	1.19
nkx2.1a	1.4758	2.78	0.4227	1.34	1.0325	2.05	1.6083	3.05	0.0629	1.04
otpb	1.4753	2.78	0.4343	1.35	1.4349	2.70	1.3304	2.51	0.3533	1.28
otx2	1.4698	2.77	0.4219	1.34	1.5156	2.86	0.992	1.99	0.4173	1.34
hoxb3a	1.4643	2.76	0.3449	1.27	0.8607	1.82	1.5183	2.86	-0.02	0.99

	pcdh2ab12	1.4642	2.76	0.5148	1.43	0.9024	1.87	0.8321	1.78	0.0046	1.00
	irx3a	1.4596	2.75	0.4635	1.38	1.0532	2.08	1.385	2.61	0.0555	1.04
	foxi2	1.4588	2.75	0.2765	1.21	1.1104	2.16	1.2655	2.40	0.2257	1.17
	emx1	1.4582	2.75	0.5518	1.47	1.0519	2.07	0.6762	1.60	0.0596	1.04
	hoxa2b	1.4572	2.75	0.6904	1.61	1.3955	2.63	1.0458	2.06	0.4565	1.37
	pcdh2ab10	1.4552	2.74	0.4285	1.35	0.9024	1.87	1.1751	2.26	-0.0701	0.95
	pcdh2ab11	1.4552	2.74	0.4285	1.35	0.9024	1.87	1.1954	2.29	-0.0701	0.95
	si:rp71-45k5.2	1.4549	2.74	0.5009	1.42	1.2421	2.37	1.0101	2.01	0.5292	1.44
	neurog3	1.4526	2.74	0.44	1.36	0.9315	1.91	1.4919	2.81	0.5721	1.49
	sp9	1.4524	2.74	0.4251	1.34	1.1057	2.15	1.251	2.38	0.1364	1.10
	pou12	1.4514	2.73	0.367	1.29	1.3352	2.52	1.4161	2.67	0.185	1.14
	dlx2a	1.447	2.73	0.4454	1.36	1.4447	2.72	1.3507	2.55	-0.0453	0.97
	dbx1b	1.443	2.72	0.4465	1.36	1.367	2.58	0.6082	1.52	0.4201	1.34
	hoxd13a	1.4425	2.72	0.5528	1.47	0.9923	1.99	1.6103	3.05	-0.041	0.97
	hoxb4a	1.4411	2.72	0.3403	1.27	0.9331	1.91	1.2684	2.41	0.0806	1.06
	hoxb2a	1.4396	2.71	0.4865	1.40	1.1386	2.20	1.065	2.09	0.1654	1.12
	meis2.2	1.4394	2.71	0.5794	1.49	1.0577	2.08	1.0417	2.06	-0.2391	0.85
	hoxb1a	1.4374	2.71	0.394	1.31	1.0449	2.06	1.27	2.41	0.2329	1.18
	foxb1.1	1.4364	2.71	0.3724	1.29	1.0335	2.05	0.9462	1.93	0.3446	1.27
	nkx2.5	1.4362	2.71	0.308	1.24	0.9461	1.93	0.4934	1.41	0.6204	1.54
	hoxb1b	1.4349	2.70	0.2777	1.21	1.4793	2.79	1.1633	2.24	0.3143	1.24
	ets1b	1.4337	2.70	0.2516	1.19	1.1121	2.16	0.6625	1.58	0.2896	1.22
	dlx5a	1.4336	2.70	0.2788	1.21	1.0432	2.06	0.8976	1.86	0.194	1.14
	her6	1.4332	2.70	0.3014	1.23	1.0545	2.08	0.4924	1.41	0.3055	1.24
	zgc:110344 (six6b)	1.4294	2.69	0.5511	1.47	1.6616	3.16	0.493	1.41	0.3524	1.28
	pcdh2ab10	1.4292	2.69	0.4285	1.35	0.9024	1.87	0.9327	1.91	-0.0701	0.95
	pcdh2ab6	1.4292	2.69	0.2466	1.19	0.7662	1.70	1.3807	2.60	-0.2023	0.87
	pcdh2ab7	1.4292	2.69	0.2466	1.19	0.7662	1.70	-0.5159	0.70	-0.2023	0.87
	bhlhb5	1.4286	2.69	0.537	1.45	1.0541	2.08	1.1005	2.14	0.0332	1.02
	hoxa3a	1.426	2.69	0.5076	1.42	1.5662	2.96	0.4347	1.35	0.4341	1.35
	phox2a	1.4254	2.69	0.6704	1.59	1.3924	2.63	1.5677	2.96	-0.1188	0.92
	og9x	1.4246	2.68	0.6055	1.52	1.321	2.50	1.1665	2.24	0.2362	1.18
	wnt8-2	1.423	2.68	0.3562	1.28	1.1712	2.25	1.0698	2.10	0.4395	1.36
	pcdh2ab9	1.4206	2.68	0.4285	1.35	0.8384	1.79	1.1078	2.16	-0.166	0.89
	pcdh2ab3	1.4206	2.68	0.2465	1.19	0.7662	1.70	0.7549	1.69	-0.2022	0.87
	pcdh2ab5	1.4206	2.68	0.136	1.10	0.6701	1.59	0.5908	1.51	-0.2948	0.82
	nkx2.2b	1.4193	2.67	0.5264	1.44	1.2314	2.35	0.0321	1.02	0.0704	1.05
	pou4f2	1.4183	2.67	0.4065	1.33	1.01	2.01	1.2294	2.34	0.0941	1.07
	dlx4b	1.4174	2.67	0.3284	1.26	1.3252	2.51	0.6117	1.53	0.0937	1.07
	fezf2	1.405	2.65	0.3457	1.27	1.1583	2.23	0.6567	1.58	0.1494	1.11
	fgf4	1.4043	2.65	0.3727	1.29	0.8613	1.82	0.9119	1.88	0.0444	1.03
	sp8	1.4037	2.65	0.5956	1.51	1.1624	2.24	0.7415	1.67	0.0468	1.03
	LOC554876	1.3998	2.64	0.1596	1.12	1.2003	2.30	1.1	2.14	0.5808	1.50
	zgc:113424 (containing)	1.3998	2.64	0.1596	1.12	1.2003	2.30	1.095	2.14	0.5808	1.50
	atoh2b	1.3981	2.64	0.4271	1.34	1.4514	2.73	1.095	2.14	0.3135	1.24
	emx2	1.3976	2.63	0.4989	1.41	1.7486	3.36	0.7558	1.69	0.207	1.15
	hoxa13b	1.3956	2.63	0.6576	1.58	1.3925	2.63	0.8278	1.77	0.0628	1.04
	hoxa1a	1.3907	2.62	0.4832	1.40	1.7388	3.34	1.1144	2.17	0.4252	1.34
	mafb	1.3906	2.62	0.407	1.33	1.2951	2.45	1.3548	2.56	-0.2642	0.83
	nkx2.2a	1.3824	2.61	0.4368	1.35	0.9656	1.95	0.4559	1.37	0.4447	1.36
	tbx20	1.3814	2.61	0.433	1.35	1.4975	2.82	0.4559	1.37	0.1254	1.09
	foxf1	1.3799	2.60	0.4434	1.36	1.8608	3.63	1.0634	2.09	0.9114	1.88
	tbx4	1.3799	2.60	0.4832	1.40	1.3539	2.56	1.2627	2.40	0.3899	1.31
	dll4	1.3779	2.60	0.442	1.36	1.2466	2.37	1.0975	2.14	0.3974	1.32
	nkx2.3	1.377	2.60	0.3507	1.28	1.0156	2.02	1.1375	2.20	-0.2275	0.85
	slc17a6	1.3759	2.60	0.32	1.25	0.7077	1.63	0.6137	1.53	0.3129	1.24
	hoxa10b	1.3744	2.59	0.5792	1.49	1.3005	2.46	0.3361	1.26	0.062	1.04
	wnt10b	1.3738	2.59	0.0876	1.06	1.2079	2.31	0.5246	1.44	0.3119	1.24
	hoxb5b	1.3734	2.59	0.3117	1.24	1.2848	2.44	1.0795	2.11	0.3398	1.27
	pax3	1.3726	2.59	0.5818	1.50	1.6962	3.24	0.4765	1.39	0.1009	1.07
	nrn1	1.3726	2.59	0.4878	1.40	0.8623	1.82	0.9433	1.92	-0.0074	0.99
	tlx3a	1.3708	2.59	0.4585	1.37	0.9765	1.97	0.7838	1.72	-0.0041	1.00
	bsx	1.3694	2.58	0.2436	1.18	1.417	2.67	0.4258	1.34	0.7323	1.66
	zgc:64055 (prrx1a)	1.3649	2.58	0.3997	1.32	1.8427	3.59	0.8203	1.77	0.5217	1.44
	pax2a	1.3644	2.57	0.5169	1.43	1.6134	3.06	-0.4454	0.73	0.3688	1.29
	twist1a	1.364	2.57	0.5131	1.43	0.9937	1.99	0.0577	1.04	0.0872	1.06
	ccnd1	1.3605	2.57	0.4207	1.34	1.1791	2.26	0.5427	1.46	-0.0618	0.96
	neurod	1.3596	2.57	0.3782	1.30	1.4241	2.68	-0.4845	0.71	0.1391	1.10
	hoxa11b	1.3547	2.56	0.5021	1.42	1.6128	3.06	1.1464	2.21	0.1471	1.11
	lhx1a	1.3537	2.56	0.5066	1.42	1.3334	2.52	1.2607	2.40	0.434	1.35
	nkx2.7	1.3533	2.55	0.3455	1.27	1.0751	2.11	0.639	1.56	-0.03	0.98
	eomesa	1.353	2.55	0.7191	1.65	1.0435	2.06	0.7418	1.67	0.062	1.04
	foxa3	1.3511	2.55	0.3948	1.31	1.2401	2.36	0.41	1.33	0.6006	1.52
	znf503	1.351	2.55	0.4329	1.35	1.3606	2.57	0.9333	1.91	0.317	1.25
	nkx3.2	1.351	2.55	0.5502	1.46	1.2063	2.31	0.6849	1.61	-0.0449	0.97
	vsx2	1.3489	2.55	0.4556	1.37	1.7264	3.31	0.7	1.62	0.2711	1.21
	nrx1a	1.3456	2.54	0.1818	1.13	0.5568	1.47	0.9628	1.95	-0.1441	0.96
	zgc:136674	1.3456	2.54	0.1818	1.13	0.5568	1.47	0.9324	1.91	-0.1441	0.90
	gf11	1.3428	2.54	0.4328	1.35	1.4559	2.74	1.231	2.35	0.576	1.49

nr2f1	1.3391	2.53	0.2688	1.20	1.7332	3.32	1.3015	2.46	0.1513	1.11
neurog1	1.3363	2.53	0.2466	1.19	1.1503	2.22	1.1375	2.20	0.1925	1.14
zgc:92332 (six1a)	1.3351	2.52	0.5115	1.43	1.1739	2.26	1.0834	2.12	-0.1302	0.91
otx1l	1.3344	2.52	0.6244	1.54	1.5038	2.84	-0.1475	0.90	0.2996	1.23
gata2	1.3284	2.51	0.2216	1.17	1.3753	2.59	0.6709	1.59	0.1328	1.10
mmp14a	1.328	2.51	0.4948	1.41	0.9291	1.90	-0.2463	0.84	0.4303	1.35
bcor	1.3256	2.51	0.4957	1.41	1.6657	3.17	0.8209	1.77	0.4989	1.41
si:dkey-221h15.1	1.3244	2.50	0.5879	1.50	1.5138	2.86	0.6043	1.52	0.431	1.35
eng2a	1.3228	2.50	0.4419	1.36	2.1421	4.41	-0.712	0.61	0.4009	1.32
sox2	1.3212	2.50	0.5214	1.44	1.2098	2.31	0.6716	1.59	-0.1778	0.88
zgc:85869	1.3185	2.49	0.3547	1.28	1.1121	2.16	1.1133	2.16	0.051	1.04
foxd5	1.3178	2.49	0.4058	1.32	1.191	2.28	1.0868	2.12	-0.0439	0.97
zgc:153435 (btf3)	1.3153	2.49	0.4945	1.41	1.4613	2.75	-0.1712	0.89	0.3168	1.25
zgc:76875 (FoxD1)	1.3153	2.49	0.2917	1.22	1.4613	2.75	-0.1741	0.89	0.3168	1.25
sox21b	1.3148	2.49	0.3957	1.32	0.9882	1.98	0.6092	1.53	-0.0394	0.97
LOC567444	1.3144	2.49	0.4165	1.33	0.8281	1.78	0.3614	1.28	0.2313	1.17
zgc:77719 (hmga2)	1.3144	2.49	0.4165	1.33	0.8281	1.78	0.6206	1.54	0.2313	1.17
tfap2e	1.3142	2.49	0.3401	1.27	0.8285	1.78	0.225	1.17	0.1143	1.08
dmbx1a	1.3138	2.49	0.5816	1.50	1.5163	2.86	0.5265	1.44	0.0484	1.03
sim1	1.3118	2.48	0.5524	1.47	0.8353	1.78	0.7806	1.72	-0.0327	0.98
rx3	1.3113	2.48	0.741	1.67	1.4132	2.66	0.0072	1.01	0.3357	1.26
dlc	1.3111	2.48	0.2501	1.19	1.8667	3.65	0.0675	1.05	0.4792	1.39
cebpa	1.3077	2.48	0.4276	1.34	1.6488	3.14	0.5411	1.46	0.6425	1.56
cebpq	1.3077	2.48	0.4276	1.34	1.6488	3.14	0.5411	1.46	0.6425	1.56
lhx1	1.307	2.47	0.2778	1.21	0.8322	1.78	0.5411	1.46	-0.0937	0.94
eng2b	1.305	2.47	0.5097	1.42	2.0896	4.26	0.4188	1.34	0.4528	1.37
mab21l2	1.3048	2.47	0.4122	1.33	1.3015	2.46	-0.4899	0.71	0.2226	1.17
gata6	1.303	2.47	0.4751	1.39	1.1146	2.17	0.5452	1.46	-0.1968	0.87
fgf17b	1.3027	2.47	0.2281	1.17	0.4539	1.37	-0.0019	1.00	0.1941	1.14
hand2	1.3024	2.47	0.3822	1.30	1.5574	2.94	0.3244	1.25	0.1915	1.14
mab21l1	1.2996	2.46	0.4792	1.39	1.5223	2.87	0.3256	1.25	-0.1204	0.92
hoxc3a	1.2975	2.46	0.2861	1.22	1.3216	2.50	0.9285	1.90	0.3958	1.32
tlx1	1.2961	2.46	0.391	1.31	1.0162	2.02	1.3588	2.56	0.0103	1.01
hoxb9a	1.2935	2.45	0.3933	1.31	0.8522	1.81	1.168	2.25	-0.0562	0.96
gsc	1.2921	2.45	0.319	1.25	1.4291	2.69	-0.5004	0.71	0.2506	1.19
lhx9	1.2913	2.45	0.5529	1.47	1.1953	2.29	0.5277	1.44	-0.1053	0.93
six1	1.2896	2.44	0.2424	1.18	1.2879	2.44	0.778	1.71	-0.0442	0.97
meis4.1a	1.2893	2.44	0.617	1.53	1.4409	2.71	0.3013	1.23	0.0483	1.03
onecut1	1.2873	2.44	0.4605	1.38	1.2038	2.30	-0.1882	0.88	-0.0755	0.95
bmi1	1.2864	2.44	0.3825	1.30	2.2209	4.66	-0.1882	0.88	1.054	2.08
hoxa9b	1.2859	2.44	0.4903	1.40	1.3336	2.52	-0.1882	0.88	0.2592	1.20
lhx5	1.2852	2.44	0.4064	1.33	1.4434	2.72	-1.0105	0.50	0.0508	1.04
gata5	1.282	2.43	0.443	1.36	1.4113	2.66	0.1372	1.10	0.1476	1.11
zgc:158291 (containing)	1.2806	2.43	0.4237	1.34	1.0651	2.09	-0.0546	0.96	-0.0346	0.98
fgf18	1.2802	2.43	0.5022	1.42	0.2821	1.22	0.6391	1.56	0.1849	1.14
pdx1	1.2787	2.43	0.2683	1.20	1.1494	2.22	-0.1886	0.88	0.1911	1.14
mnx1	1.2781	2.43	0.4475	1.36	1.2295	2.34	-0.2424	0.85	0.4009	1.32
prox1	1.2697	2.41	0.4131	1.33	0.8634	1.82	-0.3734	0.77	0.2091	1.16
cdx4	1.2696	2.41	0.3822	1.30	0.9375	1.92	0.3507	1.28	0.1988	1.15
zgc:136976 (pitx1)	1.266	2.40	0.3261	1.25	1.0343	2.05	-0.3144	0.80	-0.284	0.82
shha	1.2639	2.40	0.2779	1.21	0.8596	1.81	-0.7612	0.59	0.0814	1.06
zgc:101766 (dmrt3)	1.2627	2.40	0.3871	1.31	1.2361	2.36	-0.4673	0.72	0.0317	1.02
ascl1a	1.262	2.40	0.4322	1.35	1.2496	2.38	0.4524	1.37	0.3363	1.26
lhx1b	1.2598	2.39	0.2683	1.20	1.2384	2.36	-0.0995	0.93	-0.0808	0.95
six3b	1.2596	2.39	0.3904	1.31	1.7777	3.43	0.1335	1.10	0.1968	1.15
zgc:77001 (tumor suppressor)	1.2549	2.39	0.506	1.42	0.8804	1.84	0.1335	1.10	0.4139	1.33
hbaa1	1.2542	2.39	0.5626	1.48	1.1054	2.15	-0.3029	0.81	0.1924	1.14
ba1	1.2542	2.39	0.5626	1.48	1.0056	2.01	-0.9812	0.51	0.1191	1.09
ba2	1.2542	2.39	0.5626	1.48	1.0056	2.01	-0.9812	0.51	0.1191	1.09
si:xx-by187g17.1	1.2542	2.39	0.5626	1.48	1.0056	2.01	-0.9812	0.51	0.1191	1.09
hoxa4a	1.2526	2.38	0.1487	1.11	1.5512	2.93	0.7361	1.67	-0.0897	0.94
zgc:158781 (pbx1)	1.2486	2.38	0.5005	1.41	1.4401	2.71	-0.9812	0.51	0.0731	1.05
nr5a1b	1.2482	2.38	0.4096	1.33	0.9666	1.95	-0.5926	0.66	-0.1884	0.88
hoxc4a	1.2479	2.37	0.4	1.32	1.072	2.10	-1.0209	0.49	0.4809	1.40
diras1	1.2466	2.37	0.517	1.43	0.5103	1.42	-0.2076	0.87	0.4243	1.34
hmx3	1.2465	2.37	0.301	1.23	1.4194	2.67	-0.4149	0.75	0.2628	1.20
zgc:85969 (foxg1b)	1.2363	2.36	0.3551	1.28	0.6296	1.55	-0.4149	0.75	0.069	1.05
wnt8a	1.2348	2.35	0.1947	1.14	1.0664	2.09	0.7351	1.66	0.311	1.24
trh	1.2348	2.35	0.5865	1.50	0.4877	1.40	-0.1903	0.88	0.3138	1.24
tbx15	1.2334	2.35	0.4766	1.39	1.8334	3.56	-0.3836	0.77	0.2877	1.22
bmi1b	1.2292	2.34	0.3645	1.29	1.8527	3.61	-0.7394	0.60	0.2843	1.22
bmp2b	1.2276	2.34	0.4559	1.37	1.0724	2.10	-2.7095	0.15	0.2643	1.20
	K27me3		H2AFV		K4me3		K4me2		k14ac	
Average	fold in log2	fold	fold in log2	fold	fold in log2	fold	fold in log2	fold	fold in log2	fold
Median	1.42849651	2.70	0.44488897	1.36	1.2870477	2.44	1.01093925	2.02	0.2460754	1.19
	1.4193	2.67	0.4343	1.35	1.2305	2.35	0.9462	1.93	0.2226	1.17

Supplemental Table 4. H2AFV enriched top 250 genes in sperm.

si:dkey-7c18.18	1.4433
LOC557392	1.1433
zgc:136778	1.1433
mhc2dab	0.9705
zgc:152682	0.9705
zgc:123077	0.9705
si:busm1-266f07.1	0.9705
c15orf15	0.916
ddx54	0.9014
cat	0.8636
zgc:76869	0.8093
npffl	0.7867
eng1a	0.7635
rx3	0.741
zgc:85882	0.7309
barhl2	0.7296
LOC568664	0.7279
zgc:77499	0.7202
six3a	0.7201
eomesa	0.7191
zgc:112001	0.697
hoxa2b	0.6904
zgc:92225	0.6861
zgc:103670	0.6843
tlx3b	0.6751
phox2a	0.6704
vsx1	0.67
her3	0.6674
sept5a	0.6621
pcdh2ac	0.6621
pitx2a	0.6609
myca	0.6597
hoxa13b	0.6576
bxdc1	0.6571
slc11a2	0.6567
zgc:136699	0.6567
hoxa9a	0.6559
agps	0.6524
dlx1a	0.6521
foxd1	0.651
si:dkeyp-53d3.3	0.6509
zgc:56292	0.6476
zgc:152779	0.6368
msgn1	0.6328
si:ch211-51e12.7	0.6328
hoxa5a	0.6255
otx1l	0.6244
zgc:85979	0.6222
coe2	0.62
meis4.1a	0.617
EIF2B1	0.6137
gtf2h3	0.6137
hoxa13a	0.6105
LOC566668	0.6104
zgc:136261	0.6104
zgc:112287	0.6104
og9x	0.6055
eno2	0.5995
hoxd4a	0.5993
zgc:92380	0.5981
sp8	0.5956
otx1	0.5903
hoxc12b	0.59
si:dkey-221h15.1	0.5879
rho	0.5878
commd3	0.5868
trh	0.5865
zgc:113324	0.5859
dlx3b	0.5853
zgc:64115	0.5847
tmcc3	0.5821
pax3	0.5818
dmbx1a	0.5816
dmbx1a	0.5816
irx1a	0.5812
irx1a	0.5812
evx2	0.5796
meis2.2	0.5794
hoxa10b	0.5792
ppp4r1	0.5783
si:ch211-103o12.1	0.5777
hoxc6b	0.5765
hoxc13a	0.5765
hoxc13a	0.5763

zgc:101598	0.5761
hoxb8a	0.5717
zgc:64213	0.5716
zgc:77397	0.5714
crygm4	0.5712
Tnni2	0.5664
tnni2	0.5664
si:xx-by187g17.1	0.5626
hbaa1	0.5626
ba2	0.5626
ba1	0.5626
zgc:110692	0.562
wbp2	0.5586
cbx8	0.557
zgc:63670	0.5549
zgc:77247	0.5543
zgc:101723	0.5539
zgc:55621	0.5533
lhx9	0.5529
lhx9	0.5529
hoxd13a	0.5528
zgc:111928	0.5525
msxe	0.5525
sim1	0.5524
emx1	0.5518
si:ch211-154o6.7	0.5516
zgc:110344	0.5511
nkx3.2	0.5502
rps9	0.5502
pax7	0.5495
pax7	0.5495
pax7	0.5495
pax7	0.5495
arpc1b	0.5489
lass5	0.5486
hel_dr3	0.5475
foxc1b	0.5472
rab13	0.5469
hspa4l	0.5461
zcchc10	0.5461
zgc:110567	0.5457
celsr2	0.5443
sox4a	0.5434
si:dkey-7c18.15	0.5422
LOC100003595	0.5411
zgc:63759	0.5405
zgc:103485	0.539
bhlhb5	0.537
zgc:63722	0.5368
zgc:162280	0.5365
vent	0.5345
pfdn5	0.5338
tfap2b	0.5338
tfap2b	0.5338
zgc:114196	0.533
nkx2.1b	0.5319
ppp2r2d	0.5302
zgc:92643	0.5292
rab14l	0.5292
fli1b	0.5282
zgc:173915	0.5279
zgc:77076	0.5279
zgc:171674	0.5279
serpinb1l3	0.5279
hoxd9a	0.5277
zgc:77816	0.5266
nkx2.2b	0.5264
pald	0.5244
zgc:66107	0.5241
pycard	0.5232
gnb2l1	0.5228
evx1	0.5218
sox2	0.5214
zgc:158376	0.5199
bysl	0.5194
slc25a10	0.5181
si:ch211-117l16.1	0.5181
hoxa11a	0.5176
diras1	0.517
pax2a	0.5169
zgc:171636	0.5153
zgc:92688	0.5153
pcdh2ab12	0.5148
zgc:73062	0.5145
hoxc6a	0.5132

hoxc6a	0.5132		
twist1a	0.5131		
si:ch211-153c20.4	0.5119		
zgc:92332	0.5115		
birc4	0.51		
zgc:91873	0.51		
eng2b	0.5097		
zgc:101130	0.509		
LOC554950	0.509		
hoxa3a	0.5076		
lhx1a	0.5066		
zgc:63960	0.5066		
zgc:77001	0.506		
LOC791723	0.503		
si:busm1-266f07.2	0.503		
fgf18	0.5022		
hoxa11b	0.5021		
zgc:154123	0.5013		
elovl1	0.5012		
si:rp71-45k5.2	0.5009		
zgc:158781	0.5005		
emx2	0.4989		
ldhd	0.498		
ppapdc1b	0.4962		
bcor	0.4957		
cdca8l	0.4951		
mmp14a	0.4948		
zgc:153435	0.4945		
vox	0.4939		
zgc:55418	0.4915		
si:dkey-7c18.11	0.4911		
hoxa9b	0.4903		
zgc:66036	0.4892		
flh	0.489		
robo2	0.489		
nrn1	0.4878		
aldoab	0.4876		
six2.1	0.4871		
lama4	0.4868		
hoxb2a	0.4865		
sox4b	0.4858		
zgc:63466	0.4854		
zgc:103479	0.4853		
si:ch211-223m11.2	0.4849		
zgc:92357	0.4847		
chys1	0.4842		
zgc:85889	0.4833		
tbx4	0.4832		
hoxa1a	0.4832		
si:ch211-237l4.5	0.4821		
slc10a4	0.482		
LOC100000756	0.4819		
ephb4a	0.4819		
foxd3	0.4813		
inhbbaa	0.4808		
esr1	0.4798		
irx7	0.4797		
mab21l1	0.4792		
zgc:92360	0.479		
hbba1	0.4777		
zgc:92429	0.4775		
zgc:92871	0.4773		
LOC566052	0.4773		
LOC566052	0.4773		
zgc:92871	0.4773		
tbx15	0.4766		
ptf1a	0.4763		
arx	0.4758		
pdyn	0.4752		
pdyn	0.4752		
gata6	0.4751		
zgc:92004	0.4743		
zgc:66442	0.4743		
chd	0.4741		
gnb1l	0.4738		
zgc:73144	0.4736		
LOC555053	0.4731		
zgc:63514	0.4731		
zgc:63721	0.4727		
rs1	0.4703		
zgc:91874	0.4688		
	fold in log2	fold	
Average	0.572124	1.48671	
Median	0.545	1.45902	

Supplemental Table 5. H2AFV GO

HYPERLINKED GO CATEGORY	TOTAL	GE	CHANG	ENRICHMI	FALSE DISCOVERY RATE
GO:0035270_endocrine_system_development	31	14	6.358314	0	
GO:0030902_hindbrain_development	38	15	5.557549	0	
GO:0007420_brain_development	100	35	4.927694	0	
GO:0007417_central_nervous_system_development	137	43	4.418995	0	
GO:0022411_cellular_component_disassembly	312	90	4.061286	0	
GO:0032984_macromolecular_complex_disassembly	312	90	4.061286	0	
GO:0043241_protein_complex_disassembly	312	90	4.061286	0	
GO:0043624_cellular_protein_complex_disassembly	312	90	4.061286	0	
GO:0006353_transcription_termination	310	89	4.042071	0	
GO:0031554_regulation_of_transcription_termination	310	89	4.042071	0	
GO:0031555_transcriptional_attenuation	310	89	4.042071	0	
GO:0031564_transcription_antitermination	310	89	4.042071	0	
GO:0043244_regulation_of_protein_complex_disassembly	310	89	4.042071	0	
GO:0048598_embryonic_morphogenesis	83	23	3.901444	0	
GO:0032268_regulation_of_cellular_protein_metabolic_process	331	90	3.828161	0	
GO:0051128_regulation_of_cellular_component_organization_and_b	349	91	3.671061	0	
GO:0006355_regulation_of_transcription_DNA-dependent	747	188	3.543341	0	
GO:0051252_regulation_of_RNA_metabolic_process	748	188	3.538604	0	
GO:0006351_transcription_DNA-dependent	766	189	3.473831	0	
GO:0032774_RNA_biosynthetic_process	769	189	3.460279	0	
GO:0048646_anatomical_structure_formation	82	20	3.433933	0	
GO:0051246_regulation_of_protein_metabolic_process	373	90	3.397108	0	
GO:0045449_regulation_of_transcription	833	197	3.329637	0	
GO:0019219_regulation_of_nucleobase_nucleoside_nucleotide_ar	837	197	3.313725	0	
GO:0007399_nervous_system_development	236	55	3.281152	0	
GO:0010468_regulation_of_gene_expression	857	199	3.269248	0	
GO:0006350_transcription	859	198	3.245246	0	
GO:0031323_regulation_of_cellular_metabolic_process	865	198	3.222736	0	
GO:0019222_regulation_of_metabolic_process	908	198	3.070117	0	
GO:0009887_organ_morphogenesis	172	37	3.028649	0	
GO:0016070_RNA_metabolic_process	905	193	3.002509	0	
GO:0048513_organ_development	482	100	2.92098	0	
GO:0048731_system_development	571	111	2.736923	0	
GO:0010467_gene_expression	1143	212	2.611351	0	
GO:0048856_anatomical_structure_development	627	116	2.60475	0	
GO:0050794_regulation_of_cellular_process	1269	232	2.573961	0	
GO:0009790_embryonic_development	255	46	2.539764	0	
GO:0007275_multicellular_organismal_development	725	129	2.505113	0	
GO:0050789_regulation_of_biological_process	1345	238	2.491325	0	
GO:0009653_anatomical_structure_morphogenesis	347	61	2.475005	0	
GO:0032501_multicellular_organismal_process	844	147	2.45217	0	
GO:0006139_nucleobase_nucleoside_nucleotide_and_nucleic_aci	1221	209	2.40994	0	
GO:0007389_pattern_specification_process	170	29	2.401733	0	
GO:0065007_biological_regulation	1594	263	2.322967	0	
GO:0032502_developmental_process	869	137	2.219609	0	
GO:0043283_biopolymer_metabolic_process	1699	225	1.86451	0	
GO:0016043_cellular_component_organization_and_biogenesis	876	115	1.848287	0	
GO:0043170_macromolecule_metabolic_process	2338	262	1.577729	0	
GO:0044237_cellular_metabolic_process	2799	295	1.483866	0	
GO:0044238_primary_metabolic_process	2744	288	1.477692	0	
GO:0008152_metabolic_process	3336	316	1.333634	0	
GO:0009987_cellular_process	4369	409	1.318005	0	
GO:0044267_cellular_protein_metabolic_process	1486	142	1.345381	0.000159	
GO:0002376_immune_system_process	121	22	2.559841	0.000161	
GO:0009888_tissue_development	110	21	2.687833	0.000164	
GO:0001708_cell_fate_specification	30	10	4.693042	0.000167	
GO:0030901_midbrain_development	14	7	7.039562	0.000169	
GO:0045165_cell_fate_commitment	47	13	3.894226	0.000172	
GO:0030326_embryonic_limb_morphogenesis	13	7	7.581067	0.000175	
GO:0035113_embryonic_appendage_morphogenesis	13	7	7.581067	0.000175	
GO:0035115_embryonic_forelimb_morphogenesis	13	7	7.581067	0.000175	
GO:0035118_embryonic_pectoral_fin_morphogenesis	13	7	7.581067	0.000175	
GO:0003002_regionalization	128	24	2.639836	0.000189	
GO:0048732_gland_development	21	8	5.363476	0.000312	
GO:0019538_protein_metabolic_process	1572	148	1.325516	0.000588	
GO:0033333_fin_development	40	11	3.871759	0.000597	
GO:0048736_appendage_development	40	11	3.871759	0.000597	
GO:0044260_cellular_macromolecule_metabolic_process	1504	143	1.33864	0.000615	
GO:0042471_ear_morphogenesis	29	9	4.369383	0.000667	
GO:0035295_tube_development	46	11	3.366747	0.000667	
GO:0030154_cell_differentiation	394	47	1.679489	0.000674	
GO:0048869_cellular_developmental_process	394	47	1.679489	0.000674	
GO:0007423_sensory_organ_development	130	22	2.382621	0.000676	

GO:0030097_hemopoiesis	48	12	3.519781	0.000685
GO:0031016_pancreas_development	25	8	4.50532	0.00069
GO:0015669_gas_transport	17	7	5.797287	0.000694
GO:0015671_oxygen_transport	17	7	5.797287	0.000694
GO:0033339_pectoral_fin_development	19	7	5.187046	0.000698
GO:0009952_anterior_posterior_pattern_formation	83	16	2.714048	0.000706
GO:0042472_inner_ear_morphogenesis	28	9	4.525433	0.000714
GO:0002520_immune_system_development	51	12	3.312735	0.000714
GO:0048534_hemopoietic_or_lymphoid_organ_development	51	12	3.312735	0.000714
GO:0035050_embryonic_heart_tube_development	34	10	4.140919	0.000725
GO:0030878_thyroid_gland_development	9	5	7.821736	0.000732
GO:0033334_fin_morphogenesis	36	10	3.910868	0.000741
GO:0035107_appendage_morphogenesis	36	10	3.910868	0.000741
GO:0035108_limb_morphogenesis	18	7	5.475215	0.000759
GO:0035136_forelimb_morphogenesis	18	7	5.475215	0.000759
GO:0035138_pectoral_fin_morphogenesis	18	7	5.475215	0.000759
GO:0060173_limb_development	18	7	5.475215	0.000759
GO:0031018_endocrine_pancreas_development	10	5	7.039562	0.000761
GO:0019882_antigen_processing_and_presentation	26	8	4.332038	0.000769
GO:0021575_hindbrain_morphogenesis	6	4	9.386083	0.000968
GO:0007507_heart_development	81	15	2.607245	0.001277
GO:0007422_peripheral_nervous_system_development	17	6	4.969103	0.002526
GO:0007186_G-protein_coupled_receptor_protein_signaling_pathwa	253	32	1.780759	0.003125
GO:0048592_eye_morphogenesis	38	9	3.33453	0.003402
GO:0001706_endoderm_formation	8	4	7.039562	0.004796
GO:0002009_morphogenesis_of_an_epithelium	56	11	2.765542	0.006364
GO:0035162_embryonic_hemopoiesis	21	6	4.022607	0.011
GO:0043049_otic_placode_formation	15	5	4.693042	0.012178
GO:0001654_eye_development	87	14	2.265606	0.012255
GO:0019748_secondary_metabolic_process	88	14	2.239861	0.01581
GO:0009611_response_to_wounding	44	9	2.879821	0.015865
GO:0030855_epithelial_cell_differentiation	5	3	8.447475	0.015922
GO:0048839_inner_ear_development	45	9	2.815825	0.017636
GO:0051216_cartilage_development	37	8	3.044135	0.017798
GO:0051090_regulation_of_transcription_factor_activity	10	4	5.63165	0.01787
GO:0051098_regulation_of_binding	10	4	5.63165	0.01787
GO:0051101_regulation_of_DNA_binding	10	4	5.63165	0.01787
GO:0043583_ear_development	46	9	2.754611	0.019279
GO:0007166_cell_surface_receptor_linked_signal_transduction	427	45	1.483748	0.020177
GO:0042060_wound_healing	38	8	2.964026	0.020357
GO:0001501_skeletal_development	56	10	2.514129	0.022174
GO:0030916_otic_vesicle_formation	17	5	4.140919	0.022193
GO:0001704_formation_of_primary_germ_layer	24	6	3.519781	0.02359
GO:0007492_endoderm_development	11	4	5.119682	0.023621
GO:0009953_dorsal_ventral_pattern_formation	48	9	2.639836	0.023644
GO:0006721_terpenoid_metabolic_process	6	3	7.039562	0.027317
GO:0006775_fat-soluble_vitamin_metabolic_process	6	3	7.039562	0.027317
GO:0006776_vitamin_A_metabolic_process	6	3	7.039562	0.027317
GO:0021546_rhombomere_development	6	3	7.039562	0.027317
GO:0022037_metencephalon_development	6	3	7.039562	0.027317
GO:0022008_neurogenesis	104	15	2.030643	0.027661
GO:0048514_blood_vessel_morphogenesis	49	9	2.585962	0.02768
GO:0048593_camera-type_eye_morphogenesis	18	5	3.910868	0.029206
GO:0033014_tetrapyrrole_biosynthetic_process	88	13	2.079871	0.033858
GO:0001666_response_to_hypoxia	19	5	3.705033	0.035
GO:0006783_heme_biosynthetic_process	79	12	2.138601	0.035271
GO:0009791_post-embryonic_development	7	3	6.033911	0.039769
GO:0003007_heart_morphogenesis	27	6	3.128694	0.040303
GO:0030900_forebrain_development	27	6	3.128694	0.040303
GO:0033013_tetrapyrrole_metabolic_process	90	13	2.033651	0.040451
GO:0048568_embryonic_organ_development	53	9	2.390795	0.041143
GO:0051093_negative_regulation_of_developmental_process	53	9	2.390795	0.041143
GO:0042168_heme_metabolic_process	81	12	2.085796	0.041667
GO:0007596_blood_coagulation	20	5	3.519781	0.041679
GO:0007599_hemostasis	20	5	3.519781	0.041679
GO:0050878_regulation_of_body_fluid_levels	20	5	3.519781	0.041679
GO:0007156_homophilic_cell_adhesion	44	8	2.559841	0.041866
GO:0009605_response_to_external_stimulus	82	12	2.06036	0.043077
GO:0046148_pigment_biosynthetic_process	82	12	2.06036	0.043077
GO:0001525_angiogenesis	28	6	3.016955	0.043404
GO:0050896_response_to_stimulus	348	36	1.456461	0.044
GO:0006779_porphyrin_biosynthetic_process	83	12	2.035536	0.044167
GO:0006631_fatty_acid_metabolic_process	21	5	3.352173	0.044589
GO:0031017_exocrine_pancreas_development	14	4	4.022607	0.04651
GO:0035272_exocrine_system_development	14	4	4.022607	0.04651

GO:0042445_hormone_metabolic_process	14	4	4.022607	0.04651
GO:0001568_blood_vessel_development	65	10	2.166019	0.050065
GO:0006633_fatty_acid_biosynthetic_process	8	3	5.279672	0.050195
GO:0042398_amino_acid_derivative_biosynthetic_process	8	3	5.279672	0.050195
GO:0043388_positive_regulation_of_DNA_binding	8	3	5.279672	0.050195
GO:0051091_positive_regulation_of_transcription_factor_activity	8	3	5.279672	0.050195
GO:0051099_positive_regulation_of_binding	8	3	5.279672	0.050195
GO:0006778_porphyrin_metabolic_process	85	12	1.987641	0.051019
GO:0042440_pigment_metabolic_process	85	12	1.987641	0.051019
GO:0050817_coagulation	22	5	3.199801	0.051835
GO:0001944_vasculature_development	66	10	2.133201	0.052767
GO:0007218_neuropeptide_signaling_pathway	15	4	3.754433	0.056125
GO:0050877_neurological_system_process	77	11	2.011304	0.057267
GO:0003008_system_process	108	14	1.825072	0.059383
GO:0016331_morphogenesis_of_embryonic_epithelium	23	5	3.060679	0.059877
GO:0006955_immune_response	68	10	2.070459	0.06061
GO:0002040_sprouting_angiogenesis	9	3	4.693042	0.064311
GO:0016053_organic_acid_biosynthetic_process	9	3	4.693042	0.064311
GO:0046394_carboxylic_acid_biosynthetic_process	9	3	4.693042	0.064311
GO:0065008_regulation_of_biological_quality	289	30	1.461501	0.06494
GO:0010001_glial_cell_differentiation	16	4	3.519781	0.06716
GO:0007601_visual_perception	41	7	2.403753	0.067719
GO:0050953_sensory_perception_of_light_stimulus	41	7	2.403753	0.067719
GO:0046483_heterocycle_metabolic_process	112	14	1.759891	0.071676
GO:0009880_embryonic_pattern_specification	33	6	2.559841	0.07186
GO:0043010_camera-type_eye_development	61	9	2.077248	0.072529
GO:0042063_gliogenesis	17	4	3.312735	0.075943
GO:0048547_gut_morphogenesis	10	3	4.223737	0.083977
GO:0015674_di-_tri-valent_inorganic_cation_transport	313	31	1.394418	0.099831
GO:0007368_determination_of_left_right_symmetry	45	7	2.190086	0.100955
GO:0001889_liver_development	11	3	3.839761	0.103132
GO:0030334_regulation_of_cell_migration	11	3	3.839761	0.103132
GO:0048546_digestive_tract_morphogenesis	11	3	3.839761	0.103132
GO:0051270_regulation_of_cell_motility	11	3	3.839761	0.103132
GO:0009799_determination_of_symmetry	55	8	2.047873	0.104649
GO:0009855_determination_of_bilateral_symmetry	55	8	2.047873	0.104649
GO:0016337_cell-cell_adhesion	55	8	2.047873	0.104649
GO:0006766_vitamin_metabolic_process	19	4	2.964026	0.109032
GO:0048699_generation_of_neurons	98	12	1.723974	0.129275
GO:0006308_DNA_catabolic_process	5	2	5.63165	0.129635
GO:0021548_pons_development	5	2	5.63165	0.129635
GO:0021953_central_nervous_system_neuron_differentiation	5	2	5.63165	0.129635
GO:0032835_glomerulus_development	5	2	5.63165	0.129635
GO:0045786_negative_regulation_of_cell_cycle	5	2	5.63165	0.129635
GO:0050935_iridophore_differentiation	5	2	5.63165	0.129635
GO:0007498_mesoderm_development	37	6	2.283101	0.130309
GO:0006826_iron_ion_transport	132	15	1.599901	0.134359
GO:0021536_diencephalon_development	12	3	3.519781	0.13731
GO:0042127_regulation_of_cell_proliferation	12	3	3.519781	0.13731
GO:0021532_neural_tube_patterning	20	4	2.815825	0.14005
GO:0021903_rostrocaudal_neural_tube_patterning	20	4	2.815825	0.14005
GO:0006873_cellular_ion_homeostasis	156	17	1.534264	0.140746
GO:0051188_cofactor_biosynthetic_process	122	14	1.615637	0.14075
GO:0048519_negative_regulation_of_biological_process	299	29	1.365534	0.14197
GO:0007600_sensory_perception	58	8	1.941948	0.14198
GO:0055082_cellular_chemical_homeostasis	158	17	1.514843	0.144902
GO:0048589_developmental_growth	21	4	2.681738	0.150439
GO:0050801_ion_homeostasis	159	17	1.505315	0.154757
GO:0006950_response_to_stress	160	17	1.495907	0.163961
GO:0006879_cellular_iron_ion_homeostasis	138	15	1.53034	0.183102
GO:0055072_iron_ion_homeostasis	138	15	1.53034	0.183102
GO:0007267_cell-cell_signaling	31	5	2.270827	0.184009
GO:0001505_regulation_of_neurotransmitter_levels	6	2	4.693042	0.184198
GO:0021983_pituitary_gland_development	6	2	4.693042	0.184198
GO:0021984_adenohypophysis_development	6	2	4.693042	0.184198
GO:0045597_positive_regulation_of_cell_differentiation	6	2	4.693042	0.184198
GO:0060030_dorsal_convergence	6	2	4.693042	0.184198
GO:0048878_chemical_homeostasis	161	17	1.486616	0.184346
GO:0030182_neuron_differentiation	82	10	1.716966	0.184789
GO:0021510_spinal_cord_development	14	3	3.016955	0.195045
GO:0021515_cell_differentiation_in_spinal_cord	14	3	3.016955	0.195045
GO:0060042_retina_morphogenesis_in_camera-type_eye	14	3	3.016955	0.195045
GO:0050793_regulation_of_developmental_process	141	15	1.497779	0.198054
GO:0030001_metal_ion_transport	940	78	1.168268	0.199955

Supplemental Table 6. DNA Hypomethylation GO

HYPERLINKED GO CATEGORY	TOTAL GE	CHANGED	ENRICHMI	FALSE DISCOVERY RATE
GO:0007417_central_nervous_system_development	157	32	3.015515	0
GO:0006355_regulation_of_transcription_DNA-dependent	539	85	2.333143	0
GO:0051252_regulation_of_RNA_metabolic_process	542	85	2.320229	0
GO:0032774_RNA_biosynthetic_process	563	88	2.31252	0
GO:0006351_transcription_DNA-dependent	561	87	2.294392	0
GO:0007399_nervous_system_development	282	43	2.255956	0
GO:0045449_regulation_of_transcription	719	105	2.160586	0
GO:0019219_regulation_of_nucleobase_nucleoside_nucleotide_and	731	106	2.145358	0
GO:0051171_regulation_of_nitrogen_compound_metabolic_process	733	106	2.139504	0
GO:0031326_regulation_of_cellular_biosynthetic_process	747	108	2.139018	0
GO:0010556_regulation_of_macromolecule_biosynthetic_process	741	107	2.136372	0
GO:0009889_regulation_of_biosynthetic_process	749	108	2.133306	0
GO:0006350_transcription	751	108	2.127625	0
GO:0010468_regulation_of_gene_expression	766	109	2.105275	0
GO:0031323_regulation_of_cellular_metabolic_process	788	112	2.102824	0
GO:0080090_regulation_of_primary_metabolic_process	809	114	2.084815	0
GO:0060255_regulation_of_macromolecule_metabolic_process	825	115	2.062315	0
GO:0019222_regulation_of_metabolic_process	855	118	2.041865	0
GO:0016070_RNA_metabolic_process	721	94	1.928874	0
GO:0007275_multicellular_organismal_development	909	118	1.920566	0
GO:0032502_developmental_process	984	122	1.834324	0
GO:0034961_cellular_biopolymer_biosynthetic_process	989	122	1.82505	0
GO:0048513_organ_development	600	74	1.824701	0
GO:0048856_anatomical_structure_development	714	88	1.823458	0
GO:0043284_biopolymer_biosynthetic_process	993	122	1.817698	0
GO:0048731_system_development	684	84	1.816914	0
GO:0032501_multicellular_organismal_process	995	120	1.784306	0
GO:0034645_cellular_macromolecule_biosynthetic_process	1044	122	1.728903	0
GO:0010467_gene_expression	1087	127	1.728564	0
GO:0009059_macromolecule_biosynthetic_process	1049	122	1.720662	0
GO:0006139_nucleobase_nucleoside_nucleotide_and_nucleic_acid	1181	136	1.703728	0
GO:0044249_cellular_biosynthetic_process	1270	139	1.619281	0
GO:0006807_nitrogen_compound_metabolic_process	1287	140	1.609388	0
GO:0009058_biosynthetic_process	1318	140	1.571534	0
GO:0050794_regulation_of_cellular_process	1663	165	1.467922	0
GO:0034960_cellular_biopolymer_metabolic_process	1785	176	1.458766	0
GO:0050789_regulation_of_biological_process	1747	172	1.456622	0
GO:0044260_cellular_macromolecule_metabolic_process	1805	176	1.442602	0
GO:0065007_biological_regulation	1833	176	1.420566	0
GO:0043283_biopolymer_metabolic_process	2010	185	1.361717	0
GO:0043170_macromolecule_metabolic_process	2035	186	1.352259	0
GO:0044237_cellular_metabolic_process	2289	201	1.299157	0
GO:0044238_primary_metabolic_process	2445	208	1.258623	0.000233
GO:0009790_embryonic_development	320	42	1.941827	0.000682
GO:0015669_gas_transport	16	7	6.472756	0.000816
GO:0015671_oxygen_transport	16	7	6.472756	0.000816
GO:0048598_embryonic_morphogenesis	174	27	2.295756	0.000851
GO:0009653_anatomical_structure_morphogenesis	392	48	1.811617	0.00087
GO:0009887_organ_morphogenesis	262	36	2.032883	0.000889
GO:0045165_cell_fate_commitment	50	12	3.550769	0.002353
GO:0009987_cellular_process	3734	292	1.156964	0.0024
GO:0048523_negative_regulation_of_cellular_process	114	19	2.465812	0.00434
GO:0048519_negative_regulation_of_biological_process	131	21	2.371697	0.004423
GO:0022008_neurogenesis	147	22	2.214198	0.00537
GO:0031076_embryonic_camera-type_eye_development	16	6	5.548077	0.005818
GO:0043010_camera-type_eye_development	97	16	2.440391	0.007679
GO:0001708_cell_fate_specification	38	9	3.504049	0.007759
GO:0021522_spinal_cord_motor_neuron_differentiation	12	5	6.16453	0.007895
GO:0007420_brain_development	118	18	2.256845	0.008136
GO:0048699_generation_of_neurons	138	20	2.144184	0.008333
GO:0008152_metabolic_process	2951	232	1.163135	0.00918
GO:0021517_ventral_spinal_cord_development	13	5	5.690335	0.009355
GO:0007423_sensory_organ_development	173	23	1.966948	0.011587
GO:0021915_neural_tube_development	34	8	3.481146	0.012188
GO:0001654_eye_development	125	18	2.130462	0.015385
GO:0051129_negative_regulation_of_cellular_component_organizatio	9	4	6.575499	0.017121
GO:0021532_neural_tube_patterning	21	6	4.227106	0.0175
GO:0021903_rostrocaudal_neural_tube_patterning	21	6	4.227106	0.0175

GO:0030917_midbrain-hindbrain_boundary_development	15	5	4.931624	0.019855
GO:0030154_cell_differentiation	342	37	1.600615	0.021
GO:0003007_heart_morphogenesis	37	8	3.198891	0.021268
GO:0048869_cellular_developmental_process	355	38	1.583676	0.025556
GO:0010721_negative_regulation_of_cell_development	10	4	5.917949	0.026757
GO:0050768_negative_regulation_of_neurogenesis	10	4	5.917949	0.026757
GO:0030182_neuron_differentiation	122	17	2.06158	0.028421
GO:0021515_cell_differentiation_in_spinal_cord	16	5	4.623397	0.028533
GO:0048468_cell_development	212	25	1.744678	0.030909
GO:0021510_spinal_cord_development	17	5	4.351433	0.03141
GO:0006913_nucleocytoplasmic_transport	18	5	4.109687	0.04
GO:0051169_nuclear_transport	18	5	4.109687	0.04
GO:0051301_cell_division	59	10	2.507605	0.04
GO:0007492_endoderm_development	25	6	3.550769	0.040127
GO:0042472_inner_ear_morphogenesis	33	7	3.138306	0.040375
GO:0042471_ear_morphogenesis	34	7	3.046003	0.045833
GO:0009952_anterior_posterior_pattern_formation	90	13	2.137037	0.046235
GO:0033339_pectoral_fin_development	19	5	3.893387	0.046628
GO:0048839_inner_ear_development	53	9	2.512337	0.049663
GO:0009968_negative_regulation_of_signal_transduction	27	6	3.287749	0.049773
GO:0010648_negative_regulation_of_cell_communication	27	6	3.287749	0.049773
GO:0043583_ear_development	54	9	2.465812	0.062778
GO:0033365_protein_localization_in_organelle	21	5	3.522589	0.070549
GO:0006979_response_to_oxidative_stress	14	4	4.227106	0.076129
GO:0030901_midbrain_development	14	4	4.227106	0.076129
GO:0003002_regionalization	140	17	1.79652	0.078617
GO:0009792_embryonic_development_ending_in_birth_or_egg_hatch	108	14	1.917854	0.089375
GO:0043009_chordate_embryonic_development	108	14	1.917854	0.089375
GO:0006606_protein_import_into_nucleus	15	4	3.945299	0.100505
GO:0034504_protein_localization_in_nucleus	15	4	3.945299	0.100505
GO:0051170_nuclear_import	15	4	3.945299	0.100505
GO:0035270_endocrine_system_development	31	6	2.863524	0.1013
GO:0017038_protein_import	23	5	3.216276	0.104653
GO:0051128_regulation_of_cellular_component_organization	41	7	2.525954	0.108641
GO:0006605_protein_targeting	32	6	2.774038	0.109118
GO:0007369_gastrulation	82	11	1.984678	0.123302
GO:0048729_tissue_morphogenesis	82	11	1.984678	0.123302
GO:0007507_heart_development	92	12	1.929766	0.123365
GO:0007049_cell_cycle	115	14	1.801115	0.123796
GO:0051093_negative_regulation_of_developmental_process	52	8	2.276134	0.124393
GO:0035136_forelimb_morphogenesis	17	4	3.481146	0.129636
GO:0035138_pectoral_fin_morphogenesis	17	4	3.481146	0.129636
GO:0009126_purine_nucleoside_monophosphate_metabolic_process	10	3	4.438462	0.132845
GO:0009127_purine_nucleoside_monophosphate_biosynthetic_process	10	3	4.438462	0.132845
GO:0009167_purine_ribonucleoside_monophosphate_metabolic_process	10	3	4.438462	0.132845
GO:0009168_purine_ribonucleoside_monophosphate_biosynthetic_process	10	3	4.438462	0.132845
GO:0043086_negative_regulation_of_catalytic_activity	10	3	4.438462	0.132845
GO:0048752_semicircular_canal_morphogenesis	10	3	4.438462	0.132845
GO:0050767_regulation_of_neurogenesis	35	6	2.536264	0.138814
GO:0051960_regulation_of_nervous_system_development	35	6	2.536264	0.138814
GO:0035108_limb_morphogenesis	18	4	3.287749	0.141333
GO:0060173_limb_development	18	4	3.287749	0.141333
GO:0002009_morphogenesis_of_an_epithelium	65	9	2.048521	0.141803
GO:0060429_epithelium_development	65	9	2.048521	0.141803
GO:0009888_tissue_development	228	23	1.492465	0.156508
GO:0048522_positive_regulation_of_cellular_process	110	13	1.748485	0.15752
GO:0040036_regulation_of_fibroblast_growth_factor_receptor_signaling	11	3	4.034965	0.15871
GO:0044092_negative_regulation_of_molecular_function	11	3	4.034965	0.15871
GO:0034621_cellular_macromolecular_complex_subunit_organization	100	12	1.775385	0.161473
GO:0033334_fin_morphogenesis	37	6	2.399168	0.161641
GO:0060284_regulation_of_cell_development	37	6	2.399168	0.161641
GO:0007169_transmembrane_receptor_protein_tyrosine_kinase_signaling	47	7	2.203492	0.163615
GO:0006166_purine_ribonucleoside_salvage	5	2	5.917949	0.194118
GO:0032984_macromolecular_complex_disassembly	5	2	5.917949	0.194118
GO:0034623_cellular_macromolecular_complex_disassembly	5	2	5.917949	0.194118
GO:0043174_nucleoside_salvage	5	2	5.917949	0.194118
GO:0043241_protein_complex_disassembly	5	2	5.917949	0.194118
GO:0043624_cellular_protein_complex_disassembly	5	2	5.917949	0.194118
GO:0035107_appendage_morphogenesis	38	6	2.336032	0.196569

Supplemental Table 7. DNA hypomethylated top 250 genes in sperm.

zgc:85811	2.1896
zgc:162824	2.177
zgc:113443	2.0973
rac3	2.087
dmrt1	2.0849
dmrt1	2.0849
acvr1	2.036
zgc:173585	2.0341
zgc:136308	2.0296
zgc:113102	2.0295
zgc:56418	2.0042
zgc:112185	2.0042
zgc:153686	1.9959
irx3a	1.9958
zgc:110241	1.9879
meis1	1.9769
srrm1	1.9549
zgc:92607	1.9436
cha	1.9389
tpma	1.9374
zgc:103525	1.9355
zgc:110014	1.9355
zgc:55327	1.935
zgc:92027	1.9334
LOC571606	1.9317
zgc:113449	1.9299
zgc:103747	1.9286
LOC555925	1.9236
si:dkey-15j16.4	1.9236
dvl3	1.918
dll4	1.9143
zgc:110672	1.9128
anp32a	1.9108
hoxc12b	1.9096
zgc:92201	1.9092
glula	1.9071
hoxd10a	1.9049
zgc:92901	1.9034
zgc:158517	1.9033
LOC100000024	1.9018
MGC173577	1.9015
six1	1.8984
nkx6.1	1.895
LOC796505	1.8939
p4ha2	1.8894
zgc:65997	1.8779
nkx2.2b	1.8681
lmo4l	1.8674
si:dkey-185l3.3	1.8596
zgc:101053	1.8594
nkx1.2la	1.8498
phf16	1.8494
wwox	1.848
slit2	1.8467
slco2a1	1.8421
LOC798622	1.8298
zgc:86753	1.8298
zc3hc1	1.8259
ppp6c	1.8235
zgc:158781	1.8233
serac1	1.821
cebpq	1.8149
cebpa	1.8149
fst	1.8142
oncutl	1.8115
oncutl	1.8115
zgc:154123	1.8102
epn1	1.8095
hoxd9a	1.8084
mapk14a	1.8073
zgc:110406	1.8059
zgc:113200	1.8055
zgc:91896	1.8008
kctd10	1.8007
aacs	1.7996
lmo4	1.7992
c20orf20	1.7988
tkf	1.7934
zgc:91857	1.7934
robo2	1.7931
zgc:110711	1.7922
zgc:158246	1.7922
wipi1	1.7898
si:ch211-10j20.3	1.7894
si:dkey-217m5.9	1.7894
bmi1b	1.7874
rpp38	1.786
si:busm1-132m23.3	1.7834
gata2	1.7807

si:ch211-260g14.3	1.7799
zgc:56152	1.7756
lgals1l1	1.7708
psme2	1.7697
zgc:55317	1.7697
sfrs8	1.7666
zgc:86658	1.7647
si:dkey-14a7.4	1.7617
zgc:92393	1.7612
si:ch211-222k6.3	1.7611
tram2	1.7605
tram2	1.7605
zgc:56703	1.7602
zgc:63556	1.7589
ankrd6	1.7582
gcm2	1.7505
zgc:66241	1.7503
pax9	1.7502
cdx4	1.7494
bmi1	1.7464
wsb1	1.7459
igfbp5	1.7433
hif1a	1.743
zgc:110561	1.7407
nutf2	1.7407
rrm2	1.7407
alkbh6	1.7399
ube2h	1.7395
hoxc3a	1.7389
hoxc3a	1.7389
zgc:77862	1.7381
rpl9	1.7348
zgc:66080	1.7348
zgc:64055	1.7347
zgc:110821	1.7342
rab34	1.7336
cpt2	1.7326
vamp1	1.7313
pdc8	1.7303
hoxa5a	1.7303
mtch2	1.7253
zgc:85611	1.7241
zgc:56409	1.7224
sec14l1	1.7209
snx9l	1.7207
LOC558917	1.7207
mc1r	1.7196
si:ch211-238e22.2	1.7183
zgc:92601	1.7176
dhps	1.7176
dhps	1.7176
wipi2	1.7175
dlx6a	1.7168
ddx39a	1.7165
zgc:101635	1.7139
zic5	1.7125
neurod	1.7117
igf1ra	1.7099
eif4a1b	1.7093
zgc:77593	1.701
anxa13	1.7002
zgc:55494	1.7
zgc:158437	1.7
zgc:113436	1.7
mapre1	1.698
zgc:101585	1.6965
rftn2	1.6929
tbx4	1.692
pbk	1.687
zgc:92115	1.6868
si:dkey-102f14.5	1.6842
sgta	1.682
thoc3	1.6809
si:dkey-183n20.16	1.6781
mrpl19	1.6781
glt8d3	1.678
zgc:92610	1.6778
ran	1.6778
etv5	1.675
hiat1a	1.6741
sec11a	1.6739
zgc:77449	1.6736
zgc:103474	1.6734
si:ch211-199m3.8	1.6727
si:dkey-222f8.3	1.6727
braf	1.6727
si:ch211-199m3.7	1.6727
eif5a	1.6721
rnf128	1.6702
lin9	1.6696

dlx2b	1.6689		
ss18	1.6686		
dmap1	1.6685		
si:ch211-63o20.5	1.6651		
LOC570343	1.6643		
mobkl1a	1.6642		
zgc:153305	1.6642		
si:ch211-215m21.11	1.664		
si:ch211-215m21.11	1.6639		
hspa9	1.6615		
zgc:92332	1.6613		
zgc:91951	1.6606		
foxl1	1.6602		
map1lc3b	1.66		
zgc:85736	1.6583		
zgc:73351	1.6581		
klf4	1.6577		
zgc:103639	1.6537		
thra	1.6526		
MGC173792	1.6525		
zgc:92822	1.6525		
plekhh1	1.6522		
usf2	1.652		
bcl2l	1.6501		
npc2	1.65		
zgc:91960	1.6498		
zgc:92662	1.6479		
zgc:101107	1.6467		
zgc:162630	1.6467		
zgc:112374	1.6464		
foxb1.2	1.6461		
kptn	1.6445		
rtn1a	1.6441		
cdc16	1.6432		
eng2b	1.6428		
hoxc6a	1.6406		
hoxc6a	1.6406		
par1	1.6402		
zgc:101867	1.64		
faf1	1.6386		
h3f3a	1.6373		
ptgs1	1.6369		
LOC558180	1.6369		
si:ch211-212d10.2	1.6367		
lhx9	1.6362		
lhx9	1.6362		
syncrpl	1.6356		
dhfr	1.633		
zgc:92871	1.6325		
LOC566052	1.6325		
LOC566052	1.6325		
zgc:92871	1.6325		
cnot8	1.6318		
zgc:113491	1.6318		
calm2b	1.6315		
evx1	1.6294		
th2	1.6284		
suz12	1.6275		
pcdh2ab11	1.6272		
pcdh2ab10	1.6272		
pcdh2ab12	1.6272		
acot7	1.6271		
dyrk2	1.6266		
zc3h10	1.6259		
zgc:162358	1.6254		
zgc:113397	1.6254		
zgc:100911	1.6251		
hlx1	1.6245		
mapkapk2	1.6244		
si:dkey-15h8.11	1.6243		
txndc9	1.624		
bactin1	1.6229		
snap25b	1.6217		
nkx2.1b	1.6216		
si:ch211-217g15.2	1.62		
lhx1a	1.6195		
onecut1	1.6179		
p2rx4a	1.6177		
zgc:103736	1.6176		
zgc:73273	1.6176		
abcf2	1.6169		
tpm3	1.6166		
bsk146	1.6164		
psme3	1.6157		
	fold in log2	fold	
Average	1.752216	3.368756	
Median	1.7224	3.299849	

Supplemental Table 8. DNA hypomethylated top 250 genes in sperm compared to muscle.

hoxb4a	2.9742
si:dkey-14a7.4	2.9002
six1	2.7385
LOC799904	2.7062
pax9	2.6507
si:dkey-202b22.4	2.6018
hoxa1a	2.5469
mab21l2	2.5157
hoxa3a	2.5061
dazl	2.4715
si:ch211-215m21.17	2.3837
hoxb1b	2.2627
hoxc1a	2.2473
hoxc1a	2.2473
hoxc1a	2.2473
zgc:92259	2.2343
hoxb5a	2.2267
tuba7l	2.2139
zgc:91918	2.2129
si:ch211-10j20.3	2.2078
si:dkey-217m5.9	2.2078
dvr1rbp	2.2063
hoxa5a	2.1857
si:ch211-215m21.11	2.1758
si:ch211-215m21.11	2.1754
hoxb5b	2.1709
hoxb1a	2.1695
zgc:92208	2.1416
tbx4	2.1205
dmrt1	2.0976
dmrt1	2.0976
pde6c	2.0759
zgc:86729	2.0092
irx3a	1.9949
hoxb2a	1.9909
si:ch211-51a19.5	1.9454
d4st1	1.9425
nr5a2	1.9372
pou5f1	1.9157
pdx1	1.9059
zar1	1.899
hoxc5a	1.8987
hoxc5a	1.8987
zgc:103502	1.8783
sox3	1.877
cdx4	1.8702
evx1	1.8626
bcor	1.8626
mao	1.8552
ldhd	1.8329
zic1	1.8165
zgc:162824	1.7856
hoxa11a	1.7786
cdkn1c	1.7633
hoxa4a	1.7425
foxd1	1.7371
LOC563808	1.7224
LOC100000024	1.7196
si:ch211-10j20.1	1.7078
efnb1	1.7053
rtn4r	1.6627
hoxc4a	1.657
hoxc4a	1.657
hoxc6a	1.6498
hoxc6a	1.6495
vox	1.6404
dmbx1a	1.6378
dmbx1a	1.6378
il1b	1.6372
brd8	1.6314
zgc:77439	1.585
tbx5	1.5639
gata2	1.5542
hoxd4a	1.5293
irx7	1.5216
pcdh2ab11	1.5174
pcdh2ab10	1.5174
pcdh2ab12	1.5174
rbp1b	1.5096
ntl	1.5066
cax1	1.5022
zgc:136271	1.5022
hoxb8a	1.4998
pcdh2ac	1.4998

zgc:85811	1.4756
zgc:113070	1.4733
zgc:110788	1.4526
zgc:56699	1.4353
irx1b	1.434
irx1b	1.4329
hoxc3a	1.4096
hoxc3a	1.4096
fam73a	1.4055
bmpr1a	1.4026
zgc:64055	1.4021
rbm35b	1.397
pias4l	1.3953
lft1	1.3931
zgc:64002	1.3913
zgc:77876	1.3906
zgc:66426	1.3884
zgc:111976	1.3884
rala	1.3884
hoxd9a	1.3838
disp2	1.3771
gfi1	1.3746
dharma	1.3722
LOC565439	1.3565
pcdh2ab10	1.3487
pcdh2ab9	1.3487
pcdh2ab11	1.3487
pcdh2ab9	1.3487
zgc:152667	1.3482
si:ch211-239e6.4	1.3482
ampd3	1.3275
twist1a	1.3177
zgc:114089	1.3171
zgc:110089	1.3163
tnrc4	1.3141
gata3	1.3008
gata3	1.3008
arrdc1	1.3008
fst	1.297
asz1	1.2942
bmi1	1.2889
foxe3	1.2889
hoxa2b	1.2842
hoxb6a	1.2649
foxi3b	1.2643
wnt11	1.2478
hoxa9a	1.2468
zgc:101674	1.2456
rtn1a	1.2405
igf2r	1.2404
tp53bp2	1.2351
meis1	1.2283
si:ch211-217g15.2	1.2273
cldnd	1.2256
entpd1	1.22
dll4	1.2055
zgc:63942	1.2038
zpcx	1.2038
LOC556137	1.1881
pou4f2	1.1861
hoxc8a	1.1821
hoxc8a	1.1816
zgc:103482	1.1805
zgc:101622	1.1799
ndr1	1.1798
foxi3a	1.1688
hey2	1.1685
gata5	1.1647
ccne	1.1596
zgc:162297	1.1596
snape1	1.1579
dvl3	1.139
her6	1.1355
tnfb	1.1343
si:dkeyp-114f9.3	1.1302
zgc:101715	1.1299
pcdh10a	1.1284
cth1	1.127
hoxa13b	1.1264
h1m	1.1217
si:dkey-231l1.3	1.1182
pcdh2ab2	1.1165
mapk1	1.1155
pdzk1ip1l	1.1109
si:busm1-105l16.2	1.1078

si:busm1-105l16.2	1.1078		
zgc:154123	1.1067		
zgc:162824	1.1045		
zgc:101639	1.1045		
foxd5	1.1019		
zgc:92332	1.1008		
slc10a4	1.0914		
zgc:77719	1.0795		
LOC567444	1.0795		
pvalb2	1.0702		
lgals1l1	1.0636		
tfap2b	1.0628		
tfap2b	1.0628		
zgc:77421	1.0594		
zgc:153733	1.0582		
cd2bp2	1.0582		
zgc:66432	1.0574		
fkbp9	1.054		
crtap	1.054		
zgc:113969	1.0539		
zgc:66024	1.0539		
zgc:92630	1.0506		
zgc:91922	1.0495		
zgc:55536	1.0437		
zgc:100871	1.0408		
mtr	1.04		
zgc:158351	1.039		
f11r	1.0336		
tbx15	1.0306		
zgc:122977	1.0302		
fzd2	1.0206		
arx	1.0195		
si:dkey-246e3.3	1.0033		
si:dkey-7c18.8	1.0033		
si:dkey-7c18.8	1.0033		
si:dkey-246e3.3	1.0033		
cdx1a	1.0017		
zgc:171679	0.9999		
LOC100000024	0.996		
MGC173425	0.996		
ccdc106	0.9839		
si:ch211-232m10.4	0.9839		
foxg1	0.9808		
fgf18	0.9743		
spint1l	0.9738		
zgc:123113	0.9711		
zgc:158781	0.9701		
gsx2	0.963		
zdhhc5	0.958		
zorba	0.9539		
ccna1	0.9517		
si:dkeyp-89c11.2	0.9428		
si:dkey-171o17.7	0.921		
LOC100003308	0.9178		
MGC173425	0.9178		
irx3b	0.9161		
zgc:77542	0.9131		
si:dkey-85n7.5	0.9124		
zgc:64112	0.9111		
neurog1	0.9057		
LOC100001110	0.9057		
LOC566773	0.9057		
pcdh2ab11	0.904		
pcdh2ab6	0.904		
pcdh2ab7	0.904		
pcdh2ab10	0.904		
pcdh2ab9	0.904		
pcdh2ab3	0.904		
zgc:66241	0.898		
sepw2b	0.897		
zgc:91823	0.8967		
si:dkey-88n24.5	0.8966		
cyp2j21	0.8946		
clic5	0.8942		
popdc3	0.894		
zgc:113924	0.8911		
itih3	0.8911		
tpr	0.89		
zgc:77118	0.8897		
zgc:101565	0.8864		
hoxa10b	0.8774		
	fold in log2	fold	
Average	1.410299	2.657923	
Median	1.2889	2.443417	

Supplemental Table 9. H3K4me3 enriched top 250 genes in sperm.

plk1	2.6097
zgc:55448	2.4867
hprt1	2.4717
ppp6c	2.4672
dvl3	2.4637
zfand5a	2.4625
zgc:158610	2.4369
eif1b	2.4092
capza1	2.4062
LOC562052	2.3938
zgc:56126	2.3914
chst5	2.3906
gabara2	2.3906
ccnb1	2.3864
zgc:77849	2.3852
prkab1	2.3842
plekhk1	2.3768
stka	2.3737
chmp5	2.3735
zgc:73373	2.3718
zgc:92629	2.3705
zgc:92067	2.3705
zgc:56223	2.3689
zgc:56324	2.3682
vcp	2.3642
ift57	2.3633
zgc:123078	2.3632
smc4	2.3521
ift80	2.3521
si:dkey-86e18.1	2.3512
invs	2.3508
txndc4	2.3508
zgc:111863	2.35
unc119.1	2.35
zgc:101601	2.3451
brd3b	2.3369
bop1	2.3364
hsf1	2.3364
si:ch211-63o20.7	2.3313
ppp4c	2.3286
zgc:63497	2.3285
zgc:101608	2.3285
zgc:65884	2.3277
zgc:85700	2.3277
crat	2.3202
hnrpkl	2.3175
plaa	2.3163
zgc:55396	2.3148
ier5	2.3142
ddx41	2.3137
si:dkey-172o10.5	2.3137
anp32e	2.3088
wdr82	2.3075
eif4a1b	2.3066
zgc:153961	2.3063
dpagt1	2.3063
ndufa10	2.3043
zgc:92723	2.3043
fam46c	2.3028
zgc:76905	2.3019
st13	2.3019
rhoac	2.3003
rpl12	2.2999
LOC562066	2.2999
zgc:158262	2.2998
zgc:92606	2.2998
zgc:114143	2.2986
zgc:153930	2.2986
si:rp71-1p14.7	2.298
zgc:153619	2.298
cnot6	2.2957
ss18	2.2948
si:dkey-14a7.4	2.2914
mastl	2.2887
gmbs	2.2881
gmbs	2.2881
mapre1l	2.2881
zgc:92354	2.2872
mgn1	2.2869
zgc:92858	2.2869
nek2	2.2838
cdc20	2.2836
zgc:162701	2.2832
eaf1	2.2832
usp25	2.2821
ck2a1	2.282
msh6	2.2818
eif6	2.2816

wdr51b	2.2811
tsga14	2.2811
epb41i5	2.2774
zgc:158424	2.2743
zgc:158424	2.2743
ccng2	2.2743
tm9sf2	2.2734
si:ch211-215m21.17	2.2715
bcat1	2.27
si:dkey-217m5.9	2.267
si:ch211-199i3.1	2.2664
rabgef1	2.2643
si:ch211-276e22.2	2.2637
zgc:152979	2.2637
sinup	2.2637
zgc:56005	2.2637
si:ch211-14a17.11	2.2615
zgc:92346	2.2613
snx9l	2.2603
LOC558917	2.2603
gmnn	2.2595
zgc:111986	2.2595
zgc:63654	2.2591
tex10	2.2583
si:dkey-121a11.2	2.2575
cacnb1	2.2573
foxm1l	2.256
cdc2	2.2557
zgc:113070	2.2554
csnk1dl	2.2553
uck2b	2.2543
zgc:55520	2.2542
LOC793774	2.2542
si:dkey-177p2.3	2.253
gpsm2	2.252
zgc:55461	2.2518
zgc:55664	2.2514
sfrs6	2.2505
zgc:76877	2.2493
arhgdia	2.2489
si:dkey-22i11.2	2.2471
zgc:91808	2.2455
kcnk5	2.2439
zgc:55327	2.2428
dlg7	2.2405
zgc:91918	2.2405
LOC563808	2.2405
trspap1	2.2401
trspap1	2.2401
zgc:100942	2.2399
hpri1l	2.2397
zgc:91814	2.2389
ncl1	2.2364
asb8	2.2363
taf3	2.2352
reep3	2.2332
tubb2c	2.232
zgc:101764	2.2302
zgc:66438	2.2288
suv420h1	2.2277
zgc:109719	2.2277
rgs12	2.2253
zgc:92169	2.2253
zgc:73223	2.2247
zgc:92867	2.224
zgc:123015	2.2225
zgc:153301	2.2225
bmi1	2.2209
katnb1	2.2207
zgc:56699	2.2192
dnah9	2.2181
zgc:63675	2.2178
zgc:113968	2.2174
zgc:77296	2.2169
cuedc2	2.216
strap	2.2158
zgc:73139	2.2153
zgc:112044	2.2153
zgc:77291	2.215
zgc:86657	2.2149
atp1b1a	2.2148
skiv2l2	2.2143
zgc:101711	2.2136
rsph3	2.2129
serinc1	2.2124
nono	2.2119
si:dkey-94n12.2	2.2113
zgc:65802	2.2112
actr2	2.2107

snip1	2.2104		
ube2h	2.2101		
rrm2	2.2095		
zgc:63640	2.209		
arl6ip1	2.2083		
zgc:103612	2.2077		
zgc:63557	2.2072		
bat3	2.2071		
hmmr	2.2069		
rc3h1	2.2069		
fbxl3a	2.2051		
casp3	2.2051		
zgc:92116	2.2041		
ift52	2.204		
vangl2	2.204		
zgc:73324	2.2034		
vrk1	2.2031		
zgc:55466	2.2031		
tdh	2.2031		
si:dkey-65m5.3	2.2031		
gtf2b	2.2027		
phf23a	2.2014		
atp6v1a1	2.2014		
zgc:92393	2.1996		
zgc:63992	2.1987		
tm2d1	2.1982		
klf2a	2.1977		
zgc:103692	2.1969		
rhoa	2.1969		
tnmem161b	2.1966		
atp6v1h	2.1965		
zgc:73347	2.1961		
zgc:101883	2.1948		
si:dkey-42i9.5	2.1948		
zgc:56418	2.1946		
zgc:112185	2.1946		
LOC571606	2.1937		
bactin1	2.1932		
bzw1	2.1931		
abcg2b	2.1929		
si:ch211-150c22.2	2.1928		
styx1	2.1926		
cab39	2.192		
zgc:92166	2.192		
alg3	2.192		
rpl18a	2.192		
ppm1a	2.1918		
ccna2	2.1916		
zgc:110750	2.1915		
si:ch211-240l14.1	2.1907		
zgc:56682	2.1902		
zgc:112182	2.1902		
prpf38b	2.1897		
hdac8	2.1879		
g3bp1	2.1875		
si:dkey-202b22.4	2.1864		
zgc:76940	2.1857		
pelo	2.1857		
arl13b	2.1856		
hspa5	2.1853		
zgc:101845	2.1837		
cul4a	2.1837		
zgc:92611	2.1821		
tardbp1	2.1814		
zgc:55870	2.1811		
tmf1	2.1804		
zgc:85857	2.1801		
zgc:63492	2.1798		
zgc:55661	2.1793		
yipf1	2.1783		
lrrc42	2.1783		
fam116b	2.1771		
si:dkey-159a18.3	2.1771		
mkks	2.1769		
zgc:64090	2.1769		
si:dkey-204f11.62	2.1762		
zgc:110046	2.1762		
zgc:154106	2.1757		
LOC559969	2.1757		
zgc:136620	2.1757		
si:xx-by187g17.8	2.1757		
prkar1a	2.1749		
fxr1	2.1747		
	fold in log2	fold	
Average	2.2591535	4.787105	
Median	2.2447	4.739385	

Supplemental Table 10. H3K4me2 enriched top 250 genes in sperm.

ppib	2.5982
arhgdia	2.5864
zgc:92354	2.5612
si:dkey-235d18.4	2.5498
fam53b	2.5479
hnrpk1	2.5382
zgc:112345	2.5193
tcerg1	2.5193
zfand5a	2.5119
cdkn1b	2.5114
rhoac	2.4923
invs	2.486
txndc4	2.486
zgc:66100	2.4859
alkbh5	2.4856
sgsm3	2.4817
zgc:101024	2.4815
zgc:77285	2.4798
si:dkey-63j12.5	2.4784
ncl1	2.4766
zgc:136229	2.4744
zgc:136229	2.4744
kcnk5	2.4742
si:ch211-199j3.1	2.4675
elf5a	2.4627
LOC792168	2.4588
ing5a	2.4588
zgc:103672	2.4588
zgc:92393	2.4552
stka	2.4433
gldc	2.4427
tardbp1	2.4424
crsp7	2.4381
tob1b	2.4381
id1	2.4368
tkt	2.4348
zgc:136888	2.4341
pdc6	2.4341
rpn1	2.428
fam76b	2.4269
zgc:92510	2.4269
zgc:101761	2.42
sp4	2.4198
zgc:114143	2.4167
zgc:153930	2.4167
ppp1r10	2.416
ier5	2.4143
klf2b	2.4109
zgc:91918	2.4097
LOC563808	2.4097
zgc:111863	2.4096
unc119.1	2.4096
zgc:101601	2.4087
zgc:56223	2.4083
stat1	2.4072
zgc:55520	2.4005
LOC793774	2.4005
zgc:153587	2.3985
zgc:65871	2.3985
pxk	2.3937
chst5	2.3935
gabara12	2.3935
plk1	2.3914
gtbp4	2.3913
zgc:101867	2.3907
si:ch211-20b12.1	2.3901
zgc:103487	2.3897
fbxl14a	2.3895
zgc:162630	2.3874
zgc:112069	2.3843
taf8	2.3843
gtf2a1	2.383
6-Sep	2.3829
dv13	2.3769
cdv3	2.3753
wrb	2.375
zgc:92169	2.3738
mrps18b	2.373
pgrrmc1	2.3701
raf1	2.365
golp3	2.365
zgc:65884	2.3645
zgc:85700	2.3645
cyb561d2	2.3607
upf1	2.3594
zgc:153607	2.3589
si:dkey-30h14.2	2.3577
zgc:101644	2.3562

zgc:77665	2.3522
hprt1	2.3518
zgc:158610	2.3517
zgc:136614	2.3501
zgc:111893	2.3501
acvr1	2.3469
zgc:55661	2.3469
zgc:92257	2.3469
LOC562123	2.3466
LOC562741	2.3466
zgc:114170	2.3454
pms1	2.3445
ormdl1	2.3445
zgc:152901	2.3444
si:ch211-14a17.11	2.3437
zgc:55746	2.3411
tmem126a	2.3405
mapre1l	2.3398
zgc:85981	2.3393
si:ch211-212d10.2	2.3388
zgc:56112	2.3365
ythdf1	2.3365
rbm38	2.3358
LOC562052	2.3357
ptenb	2.335
sox4a	2.3347
cldna	2.3341
zgc:55396	2.3339
zgc:56418	2.3297
zgc:112185	2.3297
dbr1	2.3285
ptpn11	2.3262
zgc:77725	2.3262
mapk4	2.3257
zgc:73223	2.325
tpm3	2.3244
LOC554960	2.323
ubxd1	2.323
hdgfrp2	2.323
dnm2l	2.3223
zgc:153255	2.3218
tjp3	2.3205
h2afx	2.3185
si:dkey-22l11.2	2.3179
zgc:66241	2.3176
zgc:101883	2.3172
si:dkey-42i9.5	2.3172
zgc:73347	2.3159
zgc:152921	2.3149
atp1a1	2.3118
zgc:77929	2.3112
zgc:64185	2.3106
dad1	2.3103
abhd4	2.3103
ck2a1	2.3098
ckap5	2.3096
zgc:92873	2.3096
zgc:92379	2.3095
zgc:73187	2.3084
mos	2.308
LOC795055	2.308
zgc:92355	2.3077
ociad1	2.3075
zgc:77052	2.3073
bambi	2.307
aes	2.3067
zgc:92882	2.3052
zgc:92882	2.3052
mta3	2.3036
LOC555925	2.3007
si:dkey-15j16.4	2.3007
smox	2.3006
rps5	2.3002
zgc:63466	2.2993
zgc:55870	2.2991
vamp2	2.299
plaa	2.2985
rpl12	2.2977
LOC562066	2.2977
g3bp1	2.2961
vamp1	2.2951
mgrn1	2.2943
zgc:92858	2.2943
si:ch211-191i18.1	2.2937
LOC566423	2.2932
wdfy2	2.293
rpp38	2.2928
zgc:63666	2.2928
bactin1	2.2917

phf17	2.2901		
zgc:92567	2.2891		
si:ch211-199o1.5	2.2891		
zgc:63675	2.289		
smc4	2.2885		
ift80	2.2885		
ahcy	2.2885		
si:busm1-79f24.1	2.2876		
zgc:92208	2.2872		
capza1	2.2869		
zgc:92034	2.2852		
ube2i2	2.2844		
eef2k	2.2843		
ube2g2	2.2842		
vti1b	2.284		
rdh12	2.284		
si:dkey-121a11.2	2.2836		
yipf1	2.2833		
lrrc42	2.2833		
zgc:55345	2.2812		
kpna4	2.2811		
gmfb	2.2804		
axin1	2.279		
anp32b	2.279		
efnb2a	2.277		
cbl	2.2766		
si:busm1-105l16.2	2.2759		
si:busm1-105l16.2	2.2759		
hnrpab	2.2753		
bop1	2.2748		
hsf1	2.2748		
crat	2.2745		
zgc:92148	2.2742		
yipf6	2.2733		
ophn1	2.2733		
scarb1	2.2732		
fam60a1	2.2729		
plekhk1	2.2717		
zgc:110561	2.2708		
nutf2	2.2708		
hprt1l	2.2706		
zgc:85741	2.2693		
ndufa10	2.269		
zgc:92723	2.269		
bcl2	2.2685		
znf207b	2.2677		
zgc:77306	2.2675		
zgc:56218	2.2672		
thoc2	2.2672		
h3f3a	2.2669		
bcat1	2.2668		
zgc:56126	2.2662		
cdk2	2.2661		
zgc:109957	2.2661		
wsb1	2.2655		
nrarpa	2.2651		
zgc:100871	2.2644		
zgc:136620	2.2643		
si:xx-by187g17.8	2.2643		
si:ch211-132p20.4	2.2643		
zgc:101650	2.2639		
snx5	2.2639		
zgc:154102	2.2623		
hdlbp	2.2622		
rap2c	2.262		
si:ch211-63o20.7	2.262		
bmi1b	2.2619		
zgc:112417	2.2614		
med14	2.2614		
wee1	2.261		
zgc:63470	2.2606		
stard10	2.2605		
p4ha2	2.2597		
gng5	2.2587		
atp6v1a1	2.2586		
rac1	2.2569		
si:dkey-172o10.5	2.2569		
anp32a	2.2564		
zgc:56219	2.2562		
zgc:101569	2.2559		
rngtt	2.2554		
si:dkey-77b17.2	2.2554		
mycbp2	2.2547		
tcf7l1a	2.2546		
	fold in log2	fold	
Average	2.3419536	5.069887168	
Median	2.3185	4.988133233	

Supplemental Table 11. H3K14ac enriched top 250 genes in sperm.

zgc:92354	1.8002
ppib	1.6787
pcf11	1.6155
zgc:113902	1.588
kpna2	1.588
zgc:85702	1.586
zgc:91808	1.5808
rab5a1	1.575
si:dkey-177p2.3	1.5455
mdm1	1.5313
calua	1.5313
si:rp71-1f1.7	1.5195
plekhk1	1.4979
zgc:100801	1.4793
zgc:101774	1.4674
zgc:113355	1.4667
zgc:110008	1.4667
ndufa10	1.4604
zgc:92723	1.4604
pafah1b3	1.4603
cacnb1	1.4599
ift57	1.4497
fzr1	1.4396
zgc:92520	1.4292
prkar1a	1.4266
zgc:153587	1.4256
zgc:65871	1.4256
zgc:85857	1.4247
plk1	1.4231
si:busm1-79f24.1	1.4228
zgc:153412	1.4196
poll	1.4196
memo1	1.4094
zgc:123251	1.4094
zgc:56112	1.4039
si:dkey-65b13.8	1.3976
fam46c	1.3935
si:dkey-172o10.5	1.3863
zgc:56141	1.3855
zgc:56141	1.3855
LOC563289	1.3824
zgc:91821	1.3824
bxdc1	1.3802
ccdc65	1.3795
traf3ip1	1.3687
si:dkey-11n6.4	1.3667
ck2a1	1.3606
arl13b	1.343
snip1	1.3421
rc3h1	1.3415
LOC571606	1.3369
LOC407652	1.3362
zgc:123116	1.3362
vcp	1.335
si:ch211-199m3.1	1.3346
tacc3	1.33
si:dkey-14a7.4	1.3156
zgc:158610	1.312
zgc:55461	1.3103
calm3b	1.3073
ddx27	1.3039
bcat1	1.3007
zgc:103412	1.2968
gmnn	1.2952
zgc:111986	1.2952
ttc25	1.2897
hpert1	1.2896
zgc:158640	1.2894
smn1	1.2894
cab39	1.2859
zgc:92629	1.2856
zgc:92067	1.2856
zgc:158666	1.2855
zgc:101111	1.2855
ubtd2	1.2838
zgc:55664	1.2831
zgc:56093	1.2818
si:ch211-257i19.2	1.2818
zgc:91834	1.2799
zgc:153686	1.2793
tubb2c	1.2777
maf1	1.2727
zgc:56235	1.2723
si:ch211-215m21.11	1.2636
si:ch211-215m21.11	1.2635
zgc:112945	1.2604
si:ch211-101n13.4	1.2604
terfa	1.2579

zgc:92405	1.2575
smc4	1.2564
ift80	1.2564
zgc:55870	1.2556
zgc:101063	1.2543
zgc:91844	1.2543
LOC561143	1.2543
kifc1	1.2543
capza1	1.2514
zmpste24	1.2512
zgc:56199	1.2411
xrcc6	1.2411
si:dkey-7c18.18	1.2362
mgrn1	1.2355
zgc:92858	1.2355
gtpbp4	1.2341
zgc:123265	1.2302
ruvbl1	1.2302
zgc:123211	1.2298
zgc:56424	1.2276
polr3f	1.2211
zgc:103658	1.2211
zgc:103658	1.2211
zgc:92212	1.2205
chst5	1.2175
gabaraapl2	1.2175
si:dkey-202b22.3	1.2162
zgc:73347	1.2074
zgc:55494	1.2066
ift52	1.2065
zgc:111863	1.2064
unc119.1	1.2064
zgc:101711	1.2035
rab5a	1.2032
zgc:100871	1.2023
LOC566423	1.2012
zgc:165341	1.1943
cdc20	1.192
mapre1l	1.1918
rsph3	1.191
zgc:153063	1.1891
nrarpa	1.1885
id1	1.1874
mospd1	1.1851
rcbtb1	1.1781
zgc:63648	1.1765
si:ch211-276e22.2	1.1764
zgc:152979	1.1764
sinup	1.1764
zgc:77052	1.1746
zgc:153219	1.1744
zgc:65845	1.1744
wdr51b	1.1731
tsga14	1.1731
sfrs5	1.1723
zgc:100912	1.1688
usp33	1.1661
tmem126a	1.164
rpl12	1.1639
LOC562066	1.1639
katnb1	1.1614
kif23	1.1592
abcb3l1	1.1583
arl6ip1	1.1563
mos	1.1546
LOC795055	1.1546
zgc:91814	1.1505
ube2h	1.1503
papolg	1.1473
rbm4l	1.1457
zgc:158262	1.1446
zgc:92606	1.1446
LOC100003308	1.1425
si:dkey-202b22.4	1.1422
riok3	1.142
fam116b	1.14
si:dkey-159a18.3	1.14
nphs2l	1.1373
zgc:55965	1.1353
ddx39b	1.1353
si:dkey-246a16.2	1.1322
zgc:92663	1.1322
zgc:153961	1.1321
dpagt1	1.1321
zgc:63497	1.1301
zgc:101608	1.1301
zgc:56418	1.1233
zgc:112185	1.1233
tkf	1.1222

zgc:110241	1.1221		
nono	1.1211		
zgc:101737	1.1207		
tdh	1.1194		
ddx26b	1.1163		
si:rp71-1c10.3	1.1149		
psmb9a	1.1144		
zgc:162701	1.1126		
eaf1	1.1126		
LOC100000024	1.112		
MGC173425	1.112		
slc2a8l	1.1116		
si:dkey-217m5.9	1.111		
zgc:110113	1.1103		
zgc:162824	1.1098		
zgc:101639	1.1098		
syncrpl	1.1069		
zgc:55327	1.1068		
wdr82	1.1059		
LOC565154	1.1055		
zgc:56141	1.1041		
hmmr	1.1038		
dvl3	1.1024		
fam60al	1.102		
csnk1dl	1.0994		
zgc:136474	1.0992		
zgc:158387	1.0992		
zgc:86657	1.0984		
si:ch211-194d6.5	1.0968		
rab5b	1.0968		
arih1	1.0948		
ift172	1.0948		
slc20a1b	1.0926		
otub1	1.0925		
zgc:113305	1.0925		
gmds	1.0918		
gmds	1.0918		
zgc:153910	1.0916		
zgc:56200	1.0916		
zgc:110741	1.0904		
zgc:92307	1.0896		
wee1	1.0868		
zgc:85972	1.0855		
mcm7	1.083		
zgc:92664	1.0825		
zgc:66474	1.0824		
mf113a	1.0814		
snrp70	1.0814		
zgc:56126	1.0812		
si:ch211-10j20.1	1.0788		
rbmx	1.0783		
tubgcp2	1.0783		
zgc:63666	1.0767		
gpsm2	1.0765		
zgc:66100	1.0763		
zgc:162789	1.0755		
zgc:154095	1.0739		
slc30a1	1.0735		
mapk15	1.0721		
hnrpab	1.0721		
rrm2	1.0707		
rcan3	1.0705		
ier5	1.0702		
LOC563855	1.0692		
zgc:154072	1.0672		
zgc:64085	1.0648		
cecr1	1.0645		
cecr1	1.0645		
calm2b	1.0609		
zgc:162318	1.0602		
cluap1	1.0602		
duzp7	1.0594		
clic4	1.0591		
zgc:64050	1.0572		
hel_dr1	1.0568		
zgc:152681	1.056		
dkfzp564o0523	1.056		
hnrmpa0	1.0558		
ccnb1	1.0552		
zgc:109924	1.0551		
polb	1.0551		
zgc:153115	1.0549		
si:ch211-215m21.17	1.0545		
bmi1	1.054		
psme3	1.0529		
	fold in log2	fold	
Average	1.22115649	2.331335	
Median	1.18625	2.275605	

Supplemental Table 12. H3K4me3 GO

HYPERLINKED GO CATEGORY

TOTAL GE CHANGED ENRICHMI FALSE DISCOVERY RATE

GO:0051301_cell_division	59	20	5.215819	0
GO:0007049_cell_cycle	115	22	2.943536	0
GO:0007018_microtubule-based_movement	31	10	4.963441	0
GO:0007017_microtubule-based_process	55	13	3.636848	0
GO:0000278_mitotic_cell_cycle	42	10	3.663492	0.01
GO:0022402_cell_cycle_process	49	11	3.45415	0.012
GO:0044257_cellular_protein_catabolic_process	113	17	2.314808	0.022
GO:0051603_proteolysis_involved_in_cellular_protein_catabolic_	113	17	2.314808	0.022
GO:0044267_cellular_protein_metabolic_process	817	75	1.412485	0.02375
GO:0048285_organelle_fission	32	8	3.846667	0.024167
GO:0022403_cell_cycle_phase	40	9	3.462	0.024615
GO:0019941_modification-dependent_protein_catabolic_process	101	16	2.437492	0.025455
GO:0043632_modification-dependent_macromolecule_catabolic_	101	16	2.437492	0.025455
GO:0016043_cellular_component_organization	373	41	1.691296	0.02625
GO:0000280_nuclear_division	30	8	4.103111	0.027143
GO:0000279_M_phase	39	9	3.550769	0.03
GO:0000087_M_phase_of_mitotic_cell_cycle	29	7	3.714023	0.048889
GO:0007067_mitosis	29	7	3.714023	0.048889
GO:0010970_microtubule-based_transport	5	3	9.232	0.059545
GO:0030705_cytoskeleton-dependent_intracellular_transport	5	3	9.232	0.059545
GO:0042073_intraflagellar_transport	5	3	9.232	0.059545
GO:0043064_flagellum_organization	5	3	9.232	0.059545
GO:0034962_cellular_biopolymer_catabolic_process	127	17	2.059633	0.07
GO:0051641_cellular_localization	169	21	1.911953	0.070435
GO:0051649_establishment_of_localization_in_cell	163	20	1.887935	0.076923
GO:0006996_organelle_organization	208	24	1.775385	0.078
GO:0044265_cellular_macromolecule_catabolic_process	131	17	1.996743	0.079259
GO:0051258_protein_polymerization	35	7	3.077333	0.119286
GO:0006413_translational_initiation	20	5	3.846667	0.137586
GO:0006974_response_to_DNA_damage_stimulus	65	10	2.367179	0.155
GO:0034984_cellular_response_to_DNA_damage_stimulus	65	10	2.367179	0.155
GO:0042384_cilium_assembly	13	4	4.734359	0.155667
GO:0043687_post-translational_protein_modification	372	36	1.489032	0.169091

Supplemental Table 13. H3K14ac GO

HYPERLINKED GO CATEGORY	TOTAL	GE CHANGED	ENRICHMI	FALSE DISCOVERY RATE
GO:0007017_microtubule-based_process	51	12	3.590812	0
GO:0046907_intracellular_transport	186	26	2.133251	0
GO:0051649_establishment_of_cellular_localization	217	30	2.109809	0
GO:0051641_cellular_localization	222	30	2.06229	0
GO:0006996_organelle_organization_and_biogenesis	246	32	1.985164	0
GO:0016043_cellular_component_organization_and_biogenesis	876	84	1.463379	0
GO:0006464_protein_modification_process	581	59	1.549735	0.007143
GO:0007067_mitosis	30	8	4.069586	0.01
GO:0000087_M_phase_of_mitotic_cell_cycle	31	8	3.938309	0.016667
GO:0000279_M_phase	39	9	3.521757	0.017273
GO:0022403_cell_cycle_phase	39	9	3.521757	0.017273
GO:0043412_biopolymer_modification	605	59	1.488258	0.025
GO:0043687_post-translational_protein_modification	455	46	1.542865	0.036923
GO:0006259_DNA_metabolic_process	121	17	2.1441	0.038125
GO:0007010_cytoskeleton_organization_and_biogenesis	102	15	2.244257	0.039412
GO:0007018_microtubule-based_movement	29	7	3.683677	0.04
GO:0030705_cytoskeleton-dependent_intracellular_transport	29	7	3.683677	0.04
GO:0010171_body_morphogenesis	5	3	9.156569	0.047778
GO:0022618_protein-RNA_complex_assembly	38	8	3.212831	0.051053
GO:0006974_response_to_DNA_damage_stimulus	57	10	2.677359	0.055217
GO:0019538_protein_metabolic_process	1572	128	1.242622	0.055909
GO:0051276_chromosome_organization_and_biogenesis	85	13	2.334027	0.058571
GO:0008104_protein_localization	217	25	1.758174	0.059583
GO:0006260_DNA_replication	39	8	3.130451	0.06
GO:0044267_cellular_protein_metabolic_process	1486	121	1.242648	0.060357
GO:0022402_cell_cycle_process	50	9	2.746971	0.061379
GO:0015031_protein_transport	207	24	1.769385	0.062222
GO:0045184_establishment_of_protein_localization	207	24	1.769385	0.062222
GO:0033036_macromolecule_localization	218	25	1.750109	0.0656
GO:0000278_mitotic_cell_cycle	42	8	2.906847	0.078065
GO:0022613_ribonucleoprotein_complex_biogenesis_and_assembly	60	10	2.543491	0.078667
GO:0044260_cellular_macromolecule_metabolic_process	1504	121	1.227776	0.089688
GO:0006281_DNA_repair	55	9	2.497246	0.130606
GO:0007049_cell_cycle	77	11	2.180136	0.148824
GO:0051258_protein_polymerization	30	6	3.05219	0.152
GO:0009719_response_to_endogenous_stimulus	69	10	2.211732	0.166842
GO:0006468_protein_amino_acid_phosphorylation	276	28	1.548212	0.170541
GO:0065003_macromolecular_complex_assembly	156	18	1.760879	0.173333
GO:0006183_GTP_biosynthetic_process	9	3	5.086983	0.191087
GO:0006228_UTP_biosynthetic_process	9	3	5.086983	0.191087
GO:0006241_CTP_biosynthetic_process	9	3	5.086983	0.191087
GO:0009208_purine_nucleoside_triphosphate_metabolic_process	9	3	5.086983	0.191087
GO:0009209_purine_nucleoside_triphosphate_biosynthesis	9	3	5.086983	0.191087
GO:0046036_CTP_metabolic_process	9	3	5.086983	0.191087
GO:0046039_GTP_metabolic_process	9	3	5.086983	0.191087
GO:0046051_UTP_metabolic_process	9	3	5.086983	0.191087
GO:0006413_translational_initiation	33	6	2.774718	0.198936

Supplemental Table 14. 137 genes located within 12 kb of H3K36me3 top 2400 enriched loci.

acbd3
admr
bmi1b
calb2l
chmp7
coe2
commd3
crygm2d4
d4st1
ddx39b
dlx1a
dlx3b
dmrta2
emx2
faah2a
fam73a
foxd3
foxg1
foxo3a
gbx1
gpm6ab
hand2
hoxa11a
hoxa11b
hoxa1a
hoxa2b
hoxa3a
hoxa4a
hoxa5a
hoxa9a
hoxb5a
hoxb5b
hoxb8a
hoxc12b
hoxc6b
hoxc8a
hoxd4a
hoxd9a
irx5a
isl2a
lamb1
LOC559969
LOC561579
LOC572755
LOC573017
LOC794589
mab21l1
max
meis1
meis4.1a
mpp1
mynn
ndr2
ndufa6
nitr10a
nkx2.1b
nkx2.2a
nkx6.1
nola3
nr2f1l
ntn1a
or115-14
or129-1
otx1
otx2
pcdh2ab10
phf5a
pitx2a

pou4f2
ptgs1
ptpn2
si:ch211-119b12.5
si:ch211-125e6.12
si:ch211-282j17.10
si:ch73-189n23.1
si:dkey-220f10.7
si:dkey-236e20.7
si:dkey-239i20.2
si:dkey-27p7.2
si:dkey-88n24.7
si:dkey-88n24.8
sim2
six2.1
slc25a28
snrpfl
sox3
sp8l
sppl2
tbx1
tbx15
tfap2a
tomm20
tuba2
vox
zgc:100865
zgc:100971
zgc:101705
zgc:101774
zgc:101815
zgc:103448
zgc:110011
zgc:110344
zgc:111928
zgc:112028
zgc:112318
zgc:112350
zgc:114196
zgc:123296
zgc:123339
zgc:136371
zgc:136814
zgc:153035
zgc:153168
zgc:153222
zgc:153596
zgc:153630
zgc:154014
zgc:154100
zgc:154123
zgc:158397
zgc:158463
zgc:158706
zgc:158781
zgc:163013
zgc:173706
zgc:55696
zgc:56020
zgc:56526
zgc:66178
zgc:77327
zgc:77415
zgc:85611
zgc:85936
zgc:86775
zgc:91964
zgc:92883
zic1

Supplemental Table 15. H3K36me3 GO

HYPERLINKED GO CATEGORY	TOTAL GE CHANGED ENRICHMI FALSE DISCOVERY RATE			
GO:0006355_regulation_of_transcription__DNA-dependent	539	45	6.149686	0
GO:0051252_regulation_of_RNA_metabolic_process	542	45	6.115647	0
GO:0006351_transcription__DNA-dependent	561	46	6.039823	0
GO:0032774_RNA_biosynthetic_process	563	46	6.018367	0
GO:0007417_central_nervous_system_development	157	11	5.160862	0
GO:0045449_regulation_of_transcription	719	50	5.122363	0
GO:0019219_regulation_of_nucleobase_nucleoside_nucleotide_and_nucleic	731	50	5.038275	0
GO:0051171_regulation_of_nitrogen_compound_metabolic_process	733	50	5.024528	0
GO:0006350_transcription	751	51	5.002181	0
GO:0010556_regulation_of_macromolecule_biosynthetic_process	741	50	4.970282	0
GO:0031326_regulation_of_cellular_biosynthetic_process	747	50	4.93036	0
GO:0009889_regulation_of_biosynthetic_process	749	50	4.917195	0
GO:0010468_regulation_of_gene_expression	766	50	4.808066	0
GO:0016070_RNA_metabolic_process	721	47	4.801664	0
GO:0031323_regulation_of_cellular_metabolic_process	788	50	4.673831	0
GO:0080090_regulation_of_primary_metabolic_process	809	50	4.552508	0
GO:0060255_regulation_of_macromolecule_metabolic_process	825	50	4.464217	0
GO:0019222_regulation_of_metabolic_process	855	50	4.307577	0
GO:0007399_nervous_system_development	282	15	3.918062	0
GO:0034961_cellular_biopolymer_biosynthetic_process	989	51	3.798421	0
GO:0043284_biopolymer_biosynthetic_process	993	51	3.78312	0
GO:0034645_cellular_macromolecule_biosynthetic_process	1044	51	3.598313	0
GO:0009059_macromolecule_biosynthetic_process	1049	51	3.581161	0
GO:0007275_multicellular_organismal_development	909	44	3.56548	0
GO:0010467_gene_expression	1087	52	3.523733	0
GO:0032502_developmental_process	984	45	3.368578	0
GO:0032501_multicellular_organismal_process	995	45	3.331338	0
GO:0006139_nucleobase_nucleoside_nucleotide_and_nucleic_acid_metabo	1181	52	3.243267	0
GO:0006807_nitrogen_compound_metabolic_process	1287	52	2.976144	0
GO:0044249_cellular_biosynthetic_process	1270	51	2.957983	0
GO:0009058_biosynthetic_process	1318	52	2.906144	0
GO:0048731_system_development	684	25	2.692236	0
GO:0048856_anatomical_structure_development	714	26	2.682281	0
GO:0050794_regulation_of_cellular_process	1663	57	2.524712	0
GO:0050789_regulation_of_biological_process	1747	59	2.487644	0
GO:0065007_biological_regulation	1833	59	2.37093	0
GO:0034960_cellular_biopolymer_metabolic_process	1785	54	2.228357	0
GO:0044260_cellular_macromolecule_metabolic_process	1805	54	2.203666	0
GO:0043283_biopolymer_metabolic_process	2010	54	1.978914	0
GO:0043170_macromolecule_metabolic_process	2035	54	1.954603	0
GO:0044237_cellular_metabolic_process	2289	54	1.737709	0
GO:0044238_primary_metabolic_process	2445	55	1.656964	0
GO:0045165_cell_fate_commitment	50	6	8.839149	0.000227
GO:0048513_organ_development	600	22	2.700851	0.000233
GO:0008152_metabolic_process	2951	58	1.447731	0.000667
GO:0030154_cell_differentiation	342	14	3.015304	0.001064
GO:0009987_cellular_process	3734	68	1.341417	0.001087
GO:0048869_cellular_developmental_process	355	14	2.904885	0.002083
GO:0048598_embryonic_morphogenesis	174	9	3.809978	0.004694
GO:0035270_endocrine_system_development	31	4	9.504461	0.0048
GO:0022008_neurogenesis	147	8	4.008684	0.004902
GO:0007420_brain_development	118	7	4.369636	0.005769
GO:0030182_neuron_differentiation	122	7	4.226369	0.006604
GO:0001501_skeletal_system_development	63	5	5.845998	0.007037
GO:0001708_cell_fate_specification	38	4	7.753639	0.007636
GO:0007422_peripheral_nervous_system_development	18	3	12.2766	0.008036
GO:0050935_iridophore_differentiation	5	2	29.46383	0.010526
GO:0009653_anatomical_structure_morphogenesis	392	13	2.442792	0.012881
GO:0048468_cell_development	212	9	3.127057	0.012931
GO:0048699_generation_of_neurons	138	7	3.736355	0.015333
GO:0051216_cartilage_development	43	4	6.852053	0.01541
GO:0009792_embryonic_development_ending_in_birth_or_egg_hatching	108	6	4.092199	0.022857
GO:0043009_chordate_embryonic_development	108	6	4.092199	0.022857
GO:0009790_embryonic_development	320	11	2.532048	0.027656

GO:0043583_ear_development	54	4	5.456265	0.03697
GO:0048839_inner_ear_development	53	4	5.559213	0.037385
GO:0021782_glial_cell_development	9	2	16.36879	0.040299
GO:0031018_endocrine_pancreas_development	10	2	14.73192	0.050588
GO:0009887_organ_morphogenesis	262	9	2.530291	0.053333
GO:0021915_neural_tube_development	34	3	6.499374	0.056486
GO:0042471_ear_morphogenesis	34	3	6.499374	0.056486
GO:0021508_floor_plate_formation	11	2	13.39265	0.056761
GO:0021990_neural_plate_formation	11	2	13.39265	0.056761
GO:0042472_inner_ear_morphogenesis	33	3	6.696325	0.056944
GO:0007418_ventral_midline_development	12	2	12.2766	0.058625
GO:0030318_melanocyte_differentiation	12	2	12.2766	0.058625
GO:0030326_embryonic_limb_morphogenesis	12	2	12.2766	0.058625
GO:0035113_embryonic_appendage_morphogenesis	12	2	12.2766	0.058625
GO:0035115_embryonic_forelimb_morphogenesis	12	2	12.2766	0.058625
GO:0035118_embryonic_pectoral_fin_morphogenesis	12	2	12.2766	0.058625
GO:0001839_neural_plate_morphogenesis	14	2	10.5228	0.081975
GO:0030902_hindbrain_development	44	3	5.022244	0.10622
GO:0035136_forelimb_morphogenesis	17	2	8.665832	0.108353
GO:0035138_pectoral_fin_morphogenesis	17	2	8.665832	0.108353
GO:0050931_pigment_cell_differentiation	17	2	8.665832	0.108353
GO:0035108_limb_morphogenesis	18	2	8.184397	0.117471
GO:0060173_limb_development	18	2	8.184397	0.117471
GO:0048646_anatomical_structure_formation_involved_in_morphogenesis	122	5	3.018835	0.118068
GO:0001840_neural_plate_development	19	2	7.753639	0.120778
GO:0033339_pectoral_fin_development	19	2	7.753639	0.120778
GO:0007423_sensory_organ_development	173	6	2.554667	0.126452
GO:0010001_glial_cell_differentiation	20	2	7.365957	0.1275
GO:0048066_pigmentation_during_development	20	2	7.365957	0.1275
GO:0035239_tube_morphogenesis	21	2	7.015198	0.134105
GO:0042063_gliogenesis	21	2	7.015198	0.134105
GO:0009888_tissue_development	228	7	2.261478	0.136146
GO:0035295_tube_development	55	3	4.017795	0.14732
GO:0031175_neuron_projection_development	56	3	3.946049	0.152449
GO:0048514_blood_vessel_morphogenesis	58	3	3.809978	0.161313
GO:0016331_morphogenesis_of_embryonic_epithelium	25	2	5.892766	0.1648
GO:0000904_cell_morphogenesis_involved_in_differentiation	59	3	3.745402	0.165446
GO:0002009_morphogenesis_of_an_epithelium	65	3	3.399673	0.193204
GO:0060429_epithelium_development	65	3	3.399673	0.193204
GO:0014032_neural_crest_cell_development	29	2	5.079971	0.195905
GO:0031016_pancreas_development	29	2	5.079971	0.195905

Supplemental Table 16. Transcripts detected in zebrafish mature sperm (enriched over background, >5.8-fold)

GeneName	Description	values in log2
wu:fk34f03	fk34f03.y1 zebrafish fin day1 regeneration Danio rerio cDNA 5' similar to SW:COX1	16.20651143
TC278986	XB28SRRNA X.borealis 28S ribosomal RNA gene for 28S rRNA, partial (7%) [TC2	12.71784185
TC279053	Q6Q414 (Q6Q414) Acidic ribosomal protein P1, partial (32%) [TC279053]	12.36596256
vangl2	Danio rerio vang-like 2 (van gogh, Drosophila), mRNA (cDNA clone MGC:76845 IM	12.28864706
TC279055	NFU34338 Neoceratodus forsteri 28S ribosomal RNA gene, partial sequence, parti	12.11796913
TC279068	NFU34338 Neoceratodus forsteri 28S ribosomal RNA gene, partial sequence, parti	12.08504846
TC290305	Cyprinus carpio intergenic spacer region, partial sequence; 5' external transcribed s	11.98875155
TC279168	PAU34339 Protopterus aethiopicus 28S ribosomal RNA gene, partial sequence, pa	11.88970193
TC279240	Q6Q419 (Q6Q419) Ribosomal protein S29, partial (91%) [TC279240]	11.74151349
zgc:85811	Danio rerio zgc:85811 (zgc:85811), mRNA [NM_213284]	11.74078694
apoeb	Danio rerio apolipoprotein Eb (apoeb), mRNA [NM_131098]	11.65435251
ef1a	Danio rerio elongation factor 1-alpha (ef1a), mRNA [NM_131263]	11.57296506
TC290238	Cyprinus carpio intergenic spacer region, partial sequence; 5' external transcribed s	11.50222786
bactin2	Danio rerio bactin2 (bactin2), mRNA [NM_181601]	11.49125194
apoeb	Danio rerio apolipoprotein Eb (apoeb), mRNA [NM_131098]	11.44965077
TC290087	COX1_BRARE (Q9MIY8) Cytochrome c oxidase polypeptide I , partial (53%) [TC2	11.41330112
TC290296	Cyprinus carpio intergenic spacer region, partial sequence; 5' external transcribed s	11.41214154
TC290244	ARU34342 Anguilla rostrata 28S ribosomal RNA gene, partial sequence, partial (4E	11.29023215
TC281691	BT007109 c-myc binding protein {Homo sapiens;} , partial (51%) [TC281691]	11.25933703
mtatp6	Danio rerio ATP synthase 6, mitochondrial (mtatp6), mRNA [NM_001007138]	11.21020909
vg1	Danio rerio vitellogenin 1 (vg1), mRNA [NM_170767]	11.0531073
vangl2	Danio rerio vang-like 2 (van gogh, Drosophila), mRNA (cDNA clone MGC:76845 IM	11.03916952
msh6	Danio rerio mutS homolog 6 (E. coli) (msh6), mRNA [NM_182860]	10.95421511
TC268919	Cyprinus carpio intergenic spacer region, partial sequence; 5' external transcribed s	10.65053642
TC290293	Cyprinus carpio intergenic spacer region, partial sequence; 5' external transcribed s	10.63585275
TC290346	Cyprinus carpio intergenic spacer region, partial sequence; 5' external transcribed s	10.55936394
zgc:66168	Danio rerio zgc:66168 (zgc:66168), mRNA [NM_200502]	10.54280423
TC268116	Q90YW4 (Q90YW4) Ribosomal protein L6 (Fragment), partial (37%) [TC268116]	10.24924744
TC290247	Cyprinus carpio intergenic spacer region, partial sequence; 5' external transcribed s	10.17216262
hnrbp	Danio rerio heterogeneous nuclear ribonucleoprotein K (hnrbp), mRNA [NM_21299	10.09217367
rpl7	Danio rerio ribosomal protein L7 (rpl7), mRNA [NM_213644]	10.07463679
zgc:66190	Danio rerio zgc:66190 (zgc:66190), mRNA [NM_213113]	10.02695572
rpl27	Danio rerio ribosomal protein L27 (rpl27), mRNA [NM_199724]	9.961406557
rpl7	Danio rerio ribosomal protein L7 (rpl7), mRNA [NM_213644]	9.954747664
psap	Danio rerio prosaposin (psap), mRNA [NM_131883]	9.943768408
zgc:76953	Danio rerio zgc:76953 (zgc:76953), mRNA [NM_214759]	9.943597699
bactin1	Danio rerio bactin1 (bactin1), mRNA [NM_131031]	9.939855428
TC267926	RLA2_HUMAN (P05387) 60S acidic ribosomal protein P2, partial (89%) [TC267926	9.931690723
tctp	Danio rerio translationally controlled tumor protein (tctp), mRNA [NM_198140]	9.918835396
fth1	Danio rerio ferritin, heavy polypeptide 1 (fth1), mRNA [NM_131585]	9.866069445
ckii	Danio rerio type II cyokeratin (ckii), mRNA [NM_131156]	9.802698575
rps8	Danio rerio ribosomal protein S8 (rps8), mRNA [NM_214793]	9.793445916
rps14	Danio rerio ribosomal protein S14 (rps14), mRNA [NM_200026]	9.77079477
zgc:66168	Danio rerio zgc:66168 (zgc:66168), mRNA [NM_200502]	9.763104825
zgc:85824	Danio rerio zgc:85824 (zgc:85824), mRNA [NM_213279]	9.723059979
zgc:92041	Danio rerio zgc:92041 (zgc:92041), mRNA [NM_001003737]	9.706642523
TC279257	Q9PUB5 (Q9PUB5) Type II cyokeratin, complete [TC279257]	9.697801009
wu:fa91f08	fa91f08.y1 zebrafish fin day1 regeneration Danio rerio cDNA 5' similar to gb:Y0036	9.625070963
rpl19	Danio rerio ribosomal protein L19 (rpl19), mRNA [NM_213208]	9.578269139
fth1	Danio rerio ferritin, heavy polypeptide 1 (fth1), mRNA [NM_131585]	9.573306304
hsp90b	Danio rerio heat shock protein hsp90beta mRNA, complete cds. [AF068772]	9.551634689
AI330993	fb04b10.y1 zebrafish fin day1 regeneration Danio rerio cDNA 5' similar to gb:Y0036	9.524620931
zgc:56640	Danio rerio zgc:56640 (zgc:56640), mRNA [NM_200028]	9.462725696
ckii	Danio rerio type II cyokeratin, mRNA (cDNA clone MGC:77647 IMAGE:6996972),	9.450076567
fau	Danio rerio Finkel-Biskis-Reilly murine sarcoma virus (FBR-MuSV) ubiquitously exp	9.416910292
eef2l	Danio rerio eukaryotic translation elongation factor 2, like (eef2l), mRNA [NM_2004	9.41021702
hspa8	Danio rerio heat shock 70kDa protein 8 (hspa8), mRNA [NM_131401]	9.403584485
BQ481378	faa75g05.y1 Gong zebrafish testis Danio rerio cDNA clone IMAGE:5899593 5', mR	9.39555488
zgc:92533	Danio rerio zgc:92533 (zgc:92533), mRNA [NM_001003445]	9.383152396
ns:zf-es43	AGENCOURT_22826715 NIH_ZGC_9 Danio rerio cDNA clone IMAGE:7279581 5'	9.36315197
hsp90b	Danio rerio heat shock protein 90-beta, mRNA (cDNA clone MGC:77433 IMAGE:69	9.331595195
rps15	Danio rerio ribosomal protein S15 (rps15), mRNA [NM_001001819]	9.284222292
TC280416	Q7ZV96 (Q7ZV96) Ribosomal protein L10, partial (98%) [TC280416]	9.263520077
rps15a	Danio rerio ribosomal protein S15a (rps15a), mRNA [NM_212762]	9.26177104
BC083506	Danio rerio cDNA clone IMAGE:6900534, partial cds. [BC083506]	9.246932676
rpl13a	Danio rerio ribosomal protein L13a (rpl13a), mRNA [NM_212784]	9.242820282
rps25	Danio rerio ribosomal protein S25 (rps25), mRNA [NM_200815]	9.224061846
rpl24	Danio rerio ribosomal protein L24 (rpl24), mRNA [NM_173235]	9.178023065
CO355067	DR_ATE_NRM04_B02 adult testis normalized (TLL) Danio rerio cDNA, mRNA seq	9.161356575
BC083506	Danio rerio cDNA clone IMAGE:6900534, partial cds. [BC083506]	9.156046662
rps3a	Danio rerio ribosomal protein S3A (rps3a), mRNA [NM_200059]	9.128794322
rpl7a	Danio rerio ribosomal protein L7a (rpl7a), mRNA [NM_200047]	9.105585447
zgc:92868	Danio rerio zgc:92868 (zgc:92868), mRNA [NM_001003434]	9.093861505
hsp90b	Danio rerio heat shock protein 90-beta (hsp90b), mRNA [NM_131310]	9.048797601
zgc:92076	Danio rerio zgc:92076 (zgc:92076), mRNA [NM_001005589]	9.045506876
BC091460	Q6Q418 (Q6Q418) Ribosomal protein L3, complete [TC279265]	9.03876314
rps9	Danio rerio ribosomal protein S9 (rps9), mRNA [NM_200852]	9.025226966
eef1b2	Danio rerio eukaryotic translation elongation factor 1 beta 2 (eef1b2), mRNA [NM_1	9.013436912
zgc:92371	Danio rerio zgc:92371 (zgc:92371), mRNA [NM_001002078]	9.005631189

zgc:92868	AGENCOURT_22402944 NIH_ZGC_9 Danio rerio cDNA clone IMAGE:7275020 5'	8.985647517
TC291444	RL39_ICTPU (Q90YS9) 60S ribosomal protein L39, complete [TC291444]	8.966029385
rpl23a	Danio rerio ribosomal protein L23a (rpl23a), mRNA [NM_001001593]	8.963941406
TC279348	Q6Y230 (Q6Y230) Ribosomal protein L18a (Fragment), partial (98%) [TC279348]	8.963060338
rps7	Danio rerio ribosomal protein S7 (rps7), mRNA [NM_200752]	8.93236208
wu:fb58g10	fb58g10.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:371613	8.91348495
iclp1	Danio rerio invariant chain-like protein 1 (iclp1), mRNA [NM_131590]	8.888496097
ctsd	Danio rerio cathepsin D (ctsd), mRNA [NM_131710]	8.879229885
zgc:92789	Danio rerio zgc:92789 (zgc:92789), mRNA [NM_001002545]	8.876665094
rps5	Danio rerio ribosomal protein S5 (rps5), mRNA [NM_173232]	8.848366108
rpl9	Danio rerio ribosomal protein L9 (rpl9), mRNA [NM_001003861]	8.847610866
zgc:92859	Danio rerio zgc:92859 (zgc:92859), mRNA [NM_001002487]	8.842158383
ctrb1	Danio rerio chymotrypsinogen B1 (ctrb1), mRNA [NM_212618]	8.824171971
zgc:66382	Danio rerio zgc:66382 (zgc:66382), mRNA [NM_199605]	8.795262283
zgc:101846	Danio rerio zgc:101846 (zgc:101846), mRNA [NM_001005967]	8.77800869
zgc:101846	Danio rerio zgc:101846 (zgc:101846), mRNA [NM_001005967]	8.770437932
rpl3	Danio rerio ribosomal protein L3 (rpl3), mRNA [NM_001001590]	8.764941218
zgc:73380	Danio rerio zgc:73380 (zgc:73380), mRNA [NM_200811]	8.739964835
CO355975	DR_ATE_NRM14_E12 adult testis normalized (TLL) Danio rerio cDNA, mRNA sequ	8.721320079
zgc:56455	Danio rerio zgc:56455 (zgc:56455), mRNA [NM_201122]	8.719744126
zgc:56642	Danio rerio zgc:56642 (zgc:56642), mRNA [NM_201191]	8.704137797
rpl23a	Danio rerio ribosomal protein L23a (rpl23a), mRNA [NM_001001593]	8.693965999
rps7	Danio rerio ribosomal protein S7 (rps7), mRNA [NM_200752]	8.675268885
rpl9	Danio rerio ribosomal protein L9 (rpl9), mRNA [NM_001003861]	8.670510207
zgc:101846	Danio rerio zgc:101846 (zgc:101846), mRNA [NM_001005967]	8.669139232
rps5	Danio rerio ribosomal protein S5 (rps5), mRNA [NM_173232]	8.663892354
rpl7	Danio rerio ribosomal protein L7 (rpl7), mRNA [NM_213644]	8.657419931
apoeb	Danio rerio apolipoprotein Eb (apoeb), mRNA [NM_131098]	8.638464298
zgc:56699	Danio rerio zgc:56699 (zgc:56699), mRNA [NM_212833]	8.62721538
ENSDART00C	END4_CHLTE (Q8KFL0) Probable endonuclease IV (Endodeoxyribonuclease IV)	8.614777723
zgc:92860	Danio rerio zgc:92860 (zgc:92860), mRNA [NM_001002486]	8.614154304
ctsc	Danio rerio cathepsin C (ctsc), mRNA [NM_214722]	8.603083534
CO355889	DR_ATE_NRM13_F06 adult testis normalized (TLL) Danio rerio cDNA, mRNA sequ	8.589466276
naca	Danio rerio nascent polypeptide-associated complex alpha polypeptide (naca), mR	8.586750329
rps3a	Danio rerio ribosomal protein S3A (rps3a), mRNA [NM_200059]	8.581599042
zgc:56699	Danio rerio cDNA clone IMAGE:6960324, partial cds. [BC067179]	8.579293199
zgc:91809	Danio rerio zgc:91809 (zgc:91809), mRNA [NM_001002079]	8.578205383
CO354313	DR_ATE_FL25_G03 adult testis full-length (TLL) Danio rerio cDNA, mRNA sequen	8.56023799
AW233060	fj27e11.y1 Zebrafish adult olfactory Danio rerio cDNA 5' similar to TR:O93238 O93:	8.529160694
zgc:92114	Danio rerio zgc:92114 (zgc:92114), mRNA [NM_001003447]	8.527923219
zgc:65996	Danio rerio zgc:65996 (zgc:65996), mRNA [NM_212760]	8.526568248
TC282169	Q7SYV3 (Q7SYV3) MGC64464 protein, partial (59%) [TC282169]	8.525507614
zgc:85824	Danio rerio zgc:85824 (zgc:85824), mRNA [NM_213279]	8.524309863
ppia	Danio rerio peptidylprolyl isomerase A (cyclophilin A) (ppia), mRNA [NM_212758]	8.517563646
apoeb	Danio rerio apolipoprotein Eb (apoeb), mRNA [NM_131098]	8.512013805
oaz2	Danio rerio ornithine decarboxylase antizyme 2 (oaz2), mRNA [NM_194432]	8.506938427
rpl18a	Danio rerio ribosomal protein L18a (rpl18a), mRNA [NM_201060]	8.50582331
rpl35	Danio rerio ribosomal protein L35 (rpl35), mRNA [NM_173233]	8.484405852
zgc:77758	Danio rerio zgc:77758 (zgc:77758), mRNA [NM_213204]	8.447053405
zgc:92067	Danio rerio zgc:92067 (zgc:92067), mRNA [NM_001002377]	8.434941242
rpl13	Danio rerio ribosomal protein L13 (rpl13), mRNA [NM_198143]	8.432509166
cd163	Danio rerio Cd63 antigen (cd163), mRNA [NM_199543]	8.429878578
ENSDART00C	fj24a07.y1 Zebrafish adult olfactory Danio rerio cDNA 5' similar to gb:K03002 60S F	8.429321658
BM572617	fx55e04.y1 Zebrafish SJD 5 day embryo Danio rerio cDNA clone IMAGE:5627238 !	8.417129694
dct	Danio rerio dopachrome tautomerase (dct), mRNA [NM_131555]	8.416877192
zgc:86669	Danio rerio zgc:86669 (zgc:86669), mRNA [NM_001002155]	8.397591811
TC290329	Q8JHI0 (Q8JHI0) Solute carrier family 25 member 5 protein (Solute carrier family 2	8.387262484
TC277142	BC055187 ribosomal protein L36A [Danio rerio;}, partial (69%) [TC277142]	8.374463064
zgc:91809	Danio rerio zgc:91809 (zgc:91809), mRNA [NM_001002079]	8.348538453
rps12	Danio rerio ribosomal protein S12 (rps12), mRNA [NM_200046]	8.317824982
TC290333	Q6Q418 (Q6Q418) Ribosomal protein L3, partial (27%) [TC290333]	8.307997225
zgc:101745	Danio rerio zgc:101745 (zgc:101745), mRNA [NM_001006061]	8.305199727
rpl11	Danio rerio ribosomal protein L11 (rpl11), mRNA [NM_001002139]	8.303710426
A1330415	fa92d08.x1 zebrafish fin day1 regeneration Danio rerio cDNA 3', mRNA sequence [	8.292232251
zgc:73262	Danio rerio zgc:73262 (zgc:73262), mRNA [NM_200765]	8.291774283
TC290310	AF021880 Ictalurus punctatus 18S small subunit ribosomal RNA gene, complete se	8.284372623
wu:fb58g10	fb58g10.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:371613	8.281906427
zgc:77702	Danio rerio zgc:77702 (zgc:77702), mRNA [NM_200845]	8.270123701
cox4i1	Danio rerio cytochrome c oxidase subunit IV isoform 1 (cox4i1), mRNA [NM_21470	8.268632863
rps5	Danio rerio ribosomal protein S5 (rps5), mRNA [NM_173232]	8.258012436
rplp0	Danio rerio ribosomal protein, large, P0 (rplp0), mRNA [NM_131580]	8.24368663
zgc:56493	Danio rerio zgc:56493 (zgc:56493), mRNA [NM_200023]	8.239690944
zgc:91997	Danio rerio zgc:91997 (zgc:91997), mRNA [NM_001004113]	8.231613229
zgc:103753	Danio rerio zgc:103753 (zgc:103753), mRNA [NM_205573]	8.228094989
zgc:86669	AGENCOURT_21855435 NIH_ZGC_8 Danio rerio cDNA clone IMAGE:7264014 5'	8.222954543
rpl9	Danio rerio ribosomal protein L9 (rpl9), mRNA [NM_001003861]	8.219411449
zgc:92533	Danio rerio zgc:92533 (zgc:92533), mRNA [NM_001003445]	8.213135582
zgc:91809	Danio rerio zgc:91809 (zgc:91809), mRNA [NM_001002079]	8.212743908
eef1g	Danio rerio eukaryotic translation elongation factor 1 gamma (eef1g), mRNA [NM_1	8.212649378
zgc:56493	Danio rerio zgc:56493 (zgc:56493), mRNA [NM_200023]	8.209738543
TC289321	APE_BRARE (O42364) Apolipoprotein E precursor (Apo-E), partial (62%) [TC2893	8.209077228

nme2	Danio rerio non-metastatic cells 2, protein (NM23B) expressed in (nme2), mRNA [N	8.20242414
ENSDART00C	IDLC_STRPU (Q26630) 33 kDa inner dynein arm light chain, axonemal (p33), parti	8.19686325
CN506336	AGENCOURT_22438073 NIH_ZGC_7 Danio rerio cDNA clone IMAGE:7267128 5'	8.19595558
TC267921	D86628 family-2 cystatin {Oncorhynchus keta;}, partial (61%) [TC267921]	8.188723665
zgc:65809	Danio rerio zgc:65809 (zgc:65809), mRNA [NM_213336]	8.175172814
zgc:66026	Danio rerio zgc:66026 (zgc:66026), mRNA [NM_200577]	8.172051845
zgc:66195	Danio rerio zgc:66195 (zgc:66195), mRNA [NM_200506]	8.15920183
iclp2	Danio rerio invariant chain-like protein 2 (iclp2), mRNA [NM_131372]	8.156712661
TC269177	BC044206 decorin {Danio rerio;}, complete [TC269177]	8.155292587
rps12	Danio rerio ribosomal protein S12 (rps12), mRNA [NM_200046]	8.155179624
rpl12	Danio rerio ribosomal protein L12 (rpl12), mRNA [NM_201584]	8.154179231
ENSDART00C	AGENCOURT_20193508 NIH_ZGC_14 Danio rerio cDNA clone IMAGE:7227504 5'	8.143160673
apoeb	Danio rerio apolipoprotein Eb (apoeb), mRNA [NM_131098]	8.137967238
zgc:91930	Danio rerio zgc:91930 (zgc:91930), mRNA [NM_001003993]	8.130253992
krt8	Danio rerio keratin 8 (krt8), mRNA [NM_200080]	8.127722882
apoeb	Danio rerio apolipoprotein Eb (apoeb), mRNA [NM_131098]	8.116258287
TC273265	Q9JKX4 (Q9JKX4) Traube (Apoptosis antagonizing transcription factor), partial (26	8.09614948
TC293406	Q8R4T8 (Q8R4T8) Guanine deaminase, partial (76%) [TC293406]	8.092748118
zgc:55554	Danio rerio zgc:55554 (zgc:55554), mRNA [NM_213461]	8.086507546
bsg	Danio rerio basigin, mRNA (cDNA clone MGC:65810 IMAGE:6792452), complete c	8.079342103
TC287093	Q804H0 (Q804H0) Annexin 1c, partial (18%) [TC287093]	8.079072187
zgc:101846	AGENCOURT_22403018 NIH_ZGC_9 Danio rerio cDNA clone IMAGE:7272561 5'	8.073758095
CO353753	DR_ATE_FL19_D07 adult testis full-length (TLL) Danio rerio cDNA, mRNA sequen	8.067486639
zgc:55554	Danio rerio zgc:55554 (zgc:55554), mRNA [NM_213461]	8.043937972
zgc:91930	Danio rerio zgc:91930 (zgc:91930), mRNA [NM_001003993]	8.039618209
cetn2	DR_ATE_NRM02_B08 adult testis normalized (TLL) Danio rerio cDNA, mRNA seq	8.035721071
zgc:73232	Danio rerio zgc:73232 (zgc:73232), mRNA [NM_200072]	8.034983273
BM141616	ZFT480 Zebrafish Testis Danio rerio cDNA 5', mRNA sequence [BM141616]	8.014326204
TC290231	Q6PQG4 (Q6PQG4) Kazal-like serine protease inhibitor EPI9, partial (25%) [TC290	8.002076833
TC268126	Q7R8P9 (Q7R8P9) Homeobox-containing protein (Fragment), partial (4%) [TC2681	7.990240621
slc25a5	Danio rerio solute carrier family 25 alpha, member 5 (slc25a5), mRNA [NM_173247	7.983852364
CO355235	DR_ATE_NRM06_E05 adult testis normalized (TLL) Danio rerio cDNA, mRNA seq	7.982490191
ENSDART00C	Unknown	7.966245138
mhc1uea	Danio rerio major histocompatibility complex class I UEA gene (mhc1uea), mRNA [	7.95603401
krt4	Danio rerio keratin 4 (krt4), mRNA [NM_131509]	7.952748861
TC296972	Q8BU53 (Q8BU53) Mus musculus 2 days pregnant adult female oviduct cDNA, RII	7.946265213
apoa	Danio rerio apolipoprotein A-I (apoa), mRNA [NM_131128]	7.939457408
apoeb	Danio rerio apolipoprotein Eb (apoeb), mRNA [NM_131098]	7.934680914
rpl12	Danio rerio ribosomal protein L12 (rpl12), mRNA [NM_201584]	7.925596706
ENSDART00C	fa96f07.y1 zebrafish fin day3 regeneration Danio rerio cDNA 5' similar to SW:RL22	7.906026658
CK397453	AGENCOURT_17391960 NIH_ZGC_4 Danio rerio cDNA clone IMAGE:7118686 5'	7.898333371
zgc:103753	Danio rerio zgc:103753 (zgc:103753), mRNA [NM_205573]	7.897051419
glula	Danio rerio glutamate-ammonia ligase (glutamine synthase) a (glula), mRNA [NM_	7.882136711
cirbp	Danio rerio cold inducible RNA binding protein (cirbp), mRNA [NM_200017]	7.869012268
TC268174	Q90YN8 (Q90YN8) Vitellogenin 1, partial (21%) [TC268174]	7.865084575
TC294291	Q71SZ1 (Q71SZ1) Cytochrome c oxidase subunit Vb, partial (75%) [TC294291]	7.852392927
zgc:92638	Danio rerio zgc:92638 (zgc:92638), mRNA [NM_001002438]	7.846564498
zgc:73149	Danio rerio zgc:73149 (zgc:73149), mRNA [NM_200732]	7.843827341
zgc:91813	Danio rerio zgc:91813 (zgc:91813), mRNA [NM_001002209]	7.841896062
zgc:101786	Danio rerio zgc:101786 (zgc:101786), mRNA [NM_001007398]	7.831365351
dtk	Danio rerio developmental receptor tyrosine kinase (dtk), mRNA [NM_131432]	7.820186873
TC269418	AY216591 phospholipid hydroperoxide glutathione peroxidase B {Danio rerio;}, cor	7.806846499
zgc:92638	Danio rerio zgc:92638 (zgc:92638), mRNA [NM_001002438]	7.804873134
b2m	Danio rerio beta-2-microglobulin (b2m), mRNA [NM_131163]	7.794512632
BE017569	fk79h08.x1 Zebrafish Research Genetics C32 fin Danio rerio cDNA 3', mRNA sequ	7.793211616
zgc:86681	Danio rerio zgc:86681 (zgc:86681), mRNA [NM_001001594]	7.782890623
mdh1a	Danio rerio malate dehydrogenase 1a, NAD (soluble) (mdh1a), mRNA [NM_199947	7.779907352
zgc:77877	Danio rerio zgc:77877 (zgc:77877), mRNA [NM_213011]	7.765008926
bysl	Danio rerio bystin-like (bysl), mRNA [NM_201106]	7.758858107
wu:fb11g12	Danio rerio wu:fb11g12 (wu:fb11g12), mRNA [NM_001001949]	7.757902796
zp2.3	Danio rerio zona pellucida glycoprotein 2.3 (zp2.3), mRNA [NM_131828]	7.752550111
TC290152	TCTP_BRARE (Q9DGK4) Translationally-controlled tumor protein (TCTP), partial (	7.734689633
rps8	Danio rerio ribosomal protein S8 (rps8), mRNA [NM_214793]	7.712634131
zgc:65840	Danio rerio zgc:65840 (zgc:65840), mRNA [NM_213133]	7.708379692
TC268079	NCS1_CHICK (P62167) Neuronal calcium sensor 1 (NCS-1) (Frequenin homolog)	7.708249827
coro1a	Danio rerio coronin, actin binding protein, 1A (coro1a), mRNA [NM_201114]	7.699407398
zgc:77449	Danio rerio zgc:77449 (zgc:77449), mRNA [NM_212899]	7.678217153
rps29	Danio rerio ribosomal protein S29 (rps29), mRNA [NM_212953]	7.677245324
rps3	Danio rerio ribosomal protein S3 (rps3), mRNA [NM_201153]	7.674124506
zgc:86828	Danio rerio zgc:86828 (zgc:86828), mRNA [NM_001002114]	7.66335775
fabp10	Danio rerio fatty acid binding protein 10, liver basic (fabp10), mRNA [NM_152960]	7.661474818
eef1g	Danio rerio eukaryotic translation elongation factor 1 gamma (eef1g), mRNA [NM_1	7.650683876
gstp1	Danio rerio glutathione S-transferase pi (gstp1), mRNA [NM_131734]	7.649412018
TC294969	Unknown	7.649025124
CO355783	DR_ATE_NRM12_E07 adult testis normalized (TLL) Danio rerio cDNA, mRNA seq	7.639879925
zgc:56640	AF401585 ribosomal protein L30 {Ictalurus punctatus;}, partial (98%) [TC279312]	7.633082555
b2m	Danio rerio beta-2-microglobulin (b2m), mRNA [NM_131163]	7.628166306
zgc:86681	Danio rerio zgc:86681 (zgc:86681), mRNA [NM_001001594]	7.621189727
zgc:66409	Danio rerio zgc:66409 (zgc:66409), mRNA [NM_212737]	7.61959762
ckb	Danio rerio creatine kinase, brain (ckb), mRNA [NM_173222]	7.618124757
TC268844	Q6PBZ5 (Q6PBZ5) Zgc:73179, complete [TC268844]	7.614651334

cndp2	Danio rerio CNDP dipeptidase 2 (metallopeptidase M20 family) (cndp2), mRNA [NM_199958]	7.600565759
TC280697	Q6PC06 (Q6PC06) S-adenosylhomocysteine hydrolase-like 2, complete [TC280697]	7.592505926
zgc:63985	Danio rerio zgc:63985 (zgc:63985), mRNA [NM_199958]	7.585715297
ccni	Danio rerio cyclin I (ccni), mRNA [NM_212971]	7.584123557
zgc:77877	Danio rerio zgc:77877 (zgc:77877), mRNA [NM_213011]	7.573951754
gstp1	Danio rerio glutathione S-transferase pi (gstp1), mRNA [NM_131734]	7.573897018
rpl4	Danio rerio ribosomal protein L4 (rpl4), mRNA [NM_213107]	7.564332192
zgc:101069	Danio rerio zgc:101069 (zgc:101069), mRNA [NM_001003570]	7.564295277
eef2l	Danio rerio eukaryotic translation elongation factor 2, like (eef2l), mRNA [NM_2004185]	7.55938014
tuba8l4	Danio rerio tubulin, alpha 8 like 4 (tuba8l4), mRNA [NM_200185]	7.555754026
zgc:56334	Danio rerio zgc:56334 (zgc:56334), mRNA [NM_199568]	7.554343275
zgc:91809	Danio rerio zgc:91809 (zgc:91809), mRNA [NM_001002079]	7.55082585
zgc:91845	Danio rerio zgc:91845 (zgc:91845), mRNA [NM_001002199]	7.539423934
CO355080	DR_ATE_NRM04_C03 adult testis normalized (TLL) Danio rerio cDNA, mRNA seq	7.530610658
ahcy	Danio rerio S-adenosylhomocysteine hydrolase (ahcy), mRNA [NM_199218]	7.529660419
cfl2l	Danio rerio cofilin 2, like (cfl2l), mRNA [NM_213641]	7.529561218
gnb2l1	Danio rerio guanine nucleotide binding protein (G protein), beta polypeptide 2-like 1 (gnb2l1), mRNA [NM_200080]	7.529424318
krt8	Danio rerio keratin 8 (krt8), mRNA [NM_200080]	7.522671805
TC271103	Q7SXE0 (Q7SXE0) Wu:fj09e08 protein, complete [TC271103]	7.521093793
ENSDART00C	Q8JH37 (Q8JH37) Vitellogenin 1 (Fragment), partial (39%) [TC268135]	7.512832941
zgc:91947	Danio rerio zgc:91947 (zgc:91947), mRNA [NM_212783]	7.50953857
ccng1	Danio rerio cyclin G1 (ccng1), mRNA [NM_199481]	7.509359075
cndp2	Danio rerio CNDP dipeptidase 2 (metallopeptidase M20 family) (cndp2), mRNA [NM_199958]	7.50577407
TC293858	BC001022 PP protein {Homo sapiens:}, partial (75%) [TC293858]	7.503517213
zgc:101880	Danio rerio zgc:101880 (zgc:101880), mRNA [NM_001005961]	7.488040512
cox7c	Danio rerio cytochrome c oxidase, subunit VIIc (cox7c), mRNA [NM_199995]	7.485046886
glulb	Danio rerio glutamate-ammonia ligase (glutamine synthase) b (glulb), mRNA [NM_213233]	7.475393146
zgc:85951	Danio rerio zgc:85951 (zgc:85951), mRNA [NM_213233]	7.469242235
myl9l	Danio rerio myosin, light polypeptide 9, like (myl9l), mRNA [NM_214699]	7.464102592
TC269128	CR457344 FLJ21827 {Homo sapiens:}, partial (84%) [TC269128]	7.460883716
TC291359	Q6JZV5 (Q6JZV5) Cathepsin Z, partial (97%) [TC291359]	7.460851452
CO355043	DR_ATE_NRM03_H01 adult testis normalized (TLL) Danio rerio cDNA, mRNA seq	7.459106241
atp5g	Danio rerio ATP synthase, H+ transporting, mitochondrial F0 complex, subunit c (atp5g), mRNA [NM_200025]	7.455681207
arl6ip	Danio rerio ADP-ribosylation factor-like 6 interacting protein (arl6ip), mRNA [NM_200025]	7.454628333
si:busm1-202l	Danio rerio si:busm1-202l16.3 (si:busm1-202l16.3), mRNA [NM_001002603]	7.446627827
oaz1	Danio rerio ornithine decarboxylase antizyme 1 (oaz1), mRNA [NM_194264]	7.443698701
ENSDART00C	DR_ATE_NRM02_G02 adult testis normalized (TLL) Danio rerio cDNA, mRNA seq	7.439344042
rpl3	Danio rerio ribosomal protein L3 (rpl3), mRNA [NM_001001590]	7.422672503
zgc:85774	Danio rerio zgc:85774 (zgc:85774), mRNA [NM_212688]	7.422333844
CK867885	AGENCOURT_19703640 NIH_ZGC_6 Danio rerio cDNA clone IMAGE:7218721 5'	7.409521701
rps26	Danio rerio ribosomal protein S26 (rps26), mRNA [NM_200025]	7.407632762
ppial	Danio rerio peptidylprolyl isomerase A, like (ppial), mRNA [NM_199957]	7.406609397
atp6v1g1	Danio rerio ATPase, H+ transporting, V1 subunit G isoform 1 (atp6v1g1), mRNA [NM_200025]	7.405335793
ndufb4	Danio rerio NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 4 (ndufb4), mRNA [NM_200025]	7.405028051
slc25a5	Danio rerio solute carrier family 25 alpha, member 5 (slc25a5), mRNA [NM_173247]	7.397650807
rpl8	Danio rerio ribosomal protein L8 (rpl8), mRNA [NM_200713]	7.389552103
TC279375	Q6Q421 (Q6Q421) Ribosomal protein S15, complete [TC279375]	7.384300202
etfb	Danio rerio electron-transfer-flavoprotein, beta polypeptide (etfb), mRNA [NM_212971]	7.369563171
ENSDART00C	DR_ATE_NRM02_G02 adult testis normalized (TLL) Danio rerio cDNA, mRNA seq	7.361591268
tfa	Danio rerio transferrin-a, mRNA (cDNA clone IMAGE:3815706), partial cds. [BC054185]	7.355454037
zgc:103420	Danio rerio zgc:103420 (zgc:103420), mRNA [NM_001006043]	7.349881251
arpc1b	Danio rerio actin related protein 2/3 complex, subunit 1B (arpc1b), mRNA [NM_213011]	7.337897356
zgc:64051	Danio rerio zgc:64051 (zgc:64051), mRNA [NM_200371]	7.331648431
ENSDART00C	TSR6_HUMAN (P59910) Testis spermatocyte apoptosis-related gene 6 protein (Tsr6), mRNA [NM_001003882]	7.317132725
ldhb	Danio rerio lactate dehydrogenase B4, mRNA (cDNA clone MGC:76941 IMAGE:652468)	7.309901452
zgc:92891	Danio rerio zgc:92891 (zgc:92891), mRNA [NM_001002468]	7.308628392
fbxo42	Danio rerio F-box protein 42 (fbxo42), mRNA [NM_212739]	7.307287735
wu:fe14c05	AGENCOURT_16619450 NIH_ZGC_7 Danio rerio cDNA clone IMAGE:7053065 5'	7.300719922
LOC402797	Danio rerio similar to synaptonemal complex protein 1, mRNA (cDNA clone IMAGE:7053065 5')	7.293649218
glulb	Danio rerio glutamate-ammonia ligase (glutamine synthase) b (glulb), mRNA [NM_213233]	7.28622772
zgc:103764	Danio rerio zgc:103764 (zgc:103764), mRNA [NM_001005593]	7.283186645
ENSDART00C	HG15_CHICK (P12902) Nonhistone chromosomal protein HMG-14A, partial (43%)	7.281950352
sars	Danio rerio seryl-tRNA synthetase (sars), mRNA [NM_001003882]	7.280098188
TC291549	BC045970 proteasome (prosome, macropain) subunit, alpha type, 4 {Danio rerio:}, partial (75%) [TC291549]	7.268960558
cdkn1bl	Danio rerio cyclin-dependent kinase inhibitor 1b, like, mRNA (cDNA clone IMAGE:652468)	7.267868883
zgc:56335	AGENCOURT_22422823 NIH_ZGC_9 Danio rerio cDNA clone IMAGE:7275163 5'	7.261141891
tubb2	Danio rerio tubulin, beta, 2 (tubb2), mRNA [NM_198809]	7.25670286
zgc:76908	Danio rerio zgc:76908 (zgc:76908), mRNA [NM_213094]	7.250424375
zgc:91810	Danio rerio zgc:91810 (zgc:91810), mRNA [NM_001003482]	7.248821044
atp5l	Danio rerio ATP synthase, H+ transporting, mitochondrial F0 complex, subunit g (atp5l), mRNA [NM_212996]	7.244978729
zgc:56193	Danio rerio zgc:56193 (zgc:56193), mRNA [NM_212996]	7.241896014
wu:fd55c07	AGENCOURT_16624123 NIH_ZGC_7 Danio rerio cDNA clone IMAGE:7052466 5'	7.234648341
hdlbp	Danio rerio high density protein-binding protein (vigilin) (hdlbp), mRNA [NM_200025]	7.234443228
mg:bb02h10	bb02h10_p1 ZF adult heart library Danio rerio cDNA 5 prime similar to 5' end of ribosomal protein L8	7.231667775
ndufa6	Danio rerio NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 6, 14kDa (ndufa6), mRNA [NM_200025]	7.229249696
TC291464	Q9W672 (Q9W672) CCHC zinc finger protein C3H-2, partial (75%) [TC291464]	7.227856472
BC067158	Danio rerio cDNA clone IMAGE:6525439. [BC067158]	7.220498902
ENSDART00C	IF35_HUMAN (O00303) Eukaryotic translation initiation factor 3 subunit 5 (eIF-3 epsilon), mRNA [NM_001003882]	7.216066238
rps8	Danio rerio ribosomal protein S8 (rps8), mRNA [NM_214793]	7.214014439
zgc:86773	Danio rerio zgc:86773 (zgc:86773), mRNA [NM_001002129]	7.213919222
wu:fb15g10	fj22h01.y1 Zebrafish adult olfactory Danio rerio cDNA 5', mRNA sequence [AW202101]	7.213887183

zgc:55524	Danio rerio zgc:55524 (zgc:55524), mRNA [NM_200960]	7.208739017
lcp1	Danio rerio lymphocyte cytosolic plastin 1 (lcp1), mRNA [NM_131320]	7.206161857
TC269495	STB1_BOVIN (P61763) Syntaxin binding protein 1 (Unc-18 homolog) (Unc-18A) (U	7.196711648
mylz2	Danio rerio myosin, light polypeptide 2, skeletal muscle (mylz2), mRNA [NM_13118	7.196404649
zgc:56090	Danio rerio zgc:56090 (zgc:56090), mRNA [NM_199693]	7.194858056
ywhab	Danio rerio tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation prc	7.191340008
zgc:77315	Danio rerio zgc:77315 (zgc:77315), mRNA [NM_205667]	7.190798488
TC293950	Q6NX86 (Q6NX86) High mobility group box 1, partial (70%) [TC293950]	7.190648992
TC291339	Unknown	7.181042504
mhc1uba	Danio rerio major histocompatibility complex class I UBA gene (mhc1uba), mRNA [	7.175709008
icn	Danio rerio ictacalcin (icn), mRNA [NM_212761]	7.174935668
pabpc1	Danio rerio poly A binding protein, cytoplasmic 1 (pabpc1), mRNA [NM_200882]	7.17346035
gpm6ba	Danio rerio glycoprotein M6Ba (gpm6ba), mRNA [NM_203427]	7.166654709
BQ479592	faa70b02.y1 Gong zebrafish testis Danio rerio cDNA clone IMAGE:5898962 5' simi	7.16652985
eif2b3	Danio rerio eukaryotic translation initiation factor 2B, subunit 3 gamma, 58kDa (eif2	7.163342361
ENSDART00C	AP001753 HES1 protein {Homo sapiens;} , partial (68%) [TC292484]	7.161203233
rps3a	Danio rerio ribosomal protein S3A (rps3a), mRNA [NM_200059]	7.144715049
ENSDART00C	AGENCOURT_22404247 NIH_ZGC_9 Danio rerio cDNA clone IMAGE:7272744 5'	7.139105473
zgc:86752	Danio rerio proto galectin Gal1-L2 (LOC405830), mRNA [NM_212894]	7.137271208
wu:fc19f04	fc19f04.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372185E	7.136043054
zgc:55489	Danio rerio zgc:55489 (zgc:55489), mRNA [NM_214714]	7.134489238
TC292167	NU93_BRARE (Q7ZU29) Nuclear pore complex protein Nup93 (Nucleoporin Nup93	7.133458858
oaz1	Danio rerio ornithine decarboxylase antizyme 1 (oaz1), mRNA [NM_194264]	7.132639372
nsep1	Danio rerio nuclease sensitive element binding protein 1, mRNA (cDNA clone MGC	7.132503026
slc25a3	Danio rerio solute carrier family 25 (mitochondrial carrier; phosphate carrier), memt	7.123011892
zgc:92523	Danio rerio zgc:92523 (zgc:92523), mRNA [NM_001003449]	7.122876127
zgc:92891	Danio rerio zgc:92891 (zgc:92891), mRNA [NM_001002468]	7.119406608
atp6ap2	Danio rerio ATPase, H+ transporting, lysosomal accessory protein 2 (atp6ap2), mR	7.117969658
zgc:56189	Danio rerio zgc:56189 (zgc:56189), mRNA [NM_199914]	7.117359376
TC291063	Q7ZU67 (Q7ZU67) Eukaryotic translation initiation factor 4A, isoform 1B, complete	7.116517326
cndp2	Danio rerio CNDP dipeptidase 2 (metallopeptidase M20 family) (cndp2), mRNA [NM	7.115807201
si:rp71-1o1.2	Danio rerio si:rp71-1o1.2 (si:rp71-1o1.2), mRNA [NM_001004643]	7.112942056
gnb1	Danio rerio guanine nucleotide binding protein (G protein), beta polypeptide 1 (gnb:	7.111334052
atp6ap2	Danio rerio ATPase, H+ transporting, lysosomal accessory protein 2 (atp6ap2), mR	7.106117933
zgc:73269	Danio rerio zgc:73269 (zgc:73269), mRNA [NM_200769]	7.105121999
TC269419	AY216591 phospholipid hydroperoxide glutathione peroxidase B {Danio rerio;} , cor	7.09716082
TC281969	BC021603 D11Bwg0434e protein {Mus musculus;} , partial (82%) [TC281969]	7.081716928
nsep1	Danio rerio nuclease sensitive element binding protein 1 (nsep1), mRNA [NM_131E	7.07976317
zgc:103482	Danio rerio zgc:103482 (zgc:103482), mRNA [NM_001006022]	7.07584671
zgc:92053	Danio rerio zgc:92053 (zgc:92053), mRNA [NM_205575]	7.075067171
eif3s8	Danio rerio eukaryotic translation initiation factor 3, subunit 8 (eif3s8), mRNA [NM_:	7.07320571
CN836761	AGENCOURT_25020868 NIH_ZGC_4 Danio rerio cDNA clone IMAGE:7289896 5'	7.06880374
zgc:73152	Danio rerio zgc:73152 (zgc:73152), mRNA [NM_212722]	7.065650067
cygb	Danio rerio cytoglobin (cygb), mRNA [NM_152952]	7.065357198
ndufb4	Danio rerio NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 4 (ndufb4), mF	7.063756896
zgc:101854	Danio rerio zgc:101854 (zgc:101854), mRNA [NM_001004674]	7.060495971
ucp4	Danio rerio uncoupling protein 4 (ucp4), mRNA [NM_199523]	7.057317236
zgc:100919	Danio rerio zgc:100919 (zgc:100919), mRNA [NM_001002748]	7.054557284
zgc:101682	Danio rerio zgc:101682 (zgc:101682), mRNA [NM_001006075]	7.050263772
zgc:73293	Danio rerio zgc:73293 (zgc:73293), mRNA [NM_213028]	7.048723246
zgc:103587	Danio rerio zgc:103587 (zgc:103587), mRNA [NM_001004682]	7.048385367
TC270083	BC023434 Stard8 protein {Mus musculus;} , partial (20%) [TC270083]	7.048107713
wu:fe37g01	Danio rerio wu:fe37g01 (wu:fe37g01), mRNA [NM_001003838]	7.048061447
rps26	Danio rerio ribosomal protein S26 (rps26), mRNA [NM_200025]	7.045897127
ndpkz2	Danio rerio nucleoside diphosphate kinase-Z2 (ndpkz2), mRNA [NM_130927]	7.044570811
zgc:56107	Danio rerio zgc:56107 (zgc:56107), mRNA [NM_201013]	7.042139773
rrm1	ribonucleotide reductase M1 polypeptide [Source:ZFIN;Acc:ZDB-GENE-990415-24	7.041409103
zgc:73161	Danio rerio zgc:73161 (zgc:73161), mRNA [NM_200043]	7.039019099
TC290974	Q7T3L6 (Q7T3L6) Cyclin A1, complete [TC290974]	7.036632947
CN023237	AGENCOURT_20193220 NIH_ZGC_14 Danio rerio cDNA clone IMAGE:7227486 E	7.035248628
zgc:92114	Danio rerio zgc:92114 (zgc:92114), mRNA [NM_001003447]	7.029122081
zgc:76908	Danio rerio zgc:76908 (zgc:76908), mRNA [NM_213094]	7.018683127
zgc:56107	Danio rerio zgc:56107 (zgc:56107), mRNA [NM_201013]	7.018552661
zgc:77704	Danio rerio zgc:77704, mRNA (cDNA clone MGC:56505 IMAGE:5913495), comple	7.014287534
thy1	Danio rerio Thy-1 cell surface antigen (thy1), mRNA [NM_198065]	7.013213667
zgc:77517	Danio rerio zgc:77517 (zgc:77517), mRNA [NM_200568]	7.009874822
slc25a3	Danio rerio solute carrier family 25 (mitochondrial carrier; phosphate carrier), memt	7.008850257
eno3	Danio rerio enolase 3, (beta, muscle) (eno3), mRNA [NM_214723]	7.007986857
tubb2	Danio rerio tubulin, beta, 2 (tubb2), mRNA [NM_198809]	7.004682831
ENSDART00C	Q6T3V3 (Q6T3V3) Activating transcription factor 4, partial (41%) [TC289897]	7.001287187
eif3s8	Danio rerio eukaryotic translation initiation factor 3, subunit 8 (eif3s8), mRNA [NM_:	6.999572577
wu:fw32f02	fw32f02.y1 Zebrafish C32 14 somite embryo Danio rerio cDNA clone IMAGE:5566E	6.999450417
s100a1	Danio rerio S100 calcium binding protein A1, mRNA (cDNA clone IMAGE:5411703,	6.994639474
fech	Danio rerio ferrochelatase (fech), mRNA [NM_131631]	6.992922539
zgc:92379	Danio rerio zgc:92379 (zgc:92379), mRNA [NM_001002077]	6.991155146
TC292993	1KTB_A Chain A, The Structure Of Alpha-N-Acetylgalactosaminidase. {Gallus gallu	6.988681372
zgc:64137	Danio rerio zgc:64137 (zgc:64137), mRNA [NM_199645]	6.985542736
zgc:85963	Danio rerio zgc:85963 (zgc:85963), mRNA [NM_214812]	6.985508029
zgc:55362	Danio rerio zgc:55362 (zgc:55362), mRNA [NM_199832]	6.984469109
zgc:77718	Danio rerio zgc:77718 (zgc:77718), mRNA [NM_200855]	6.984262546
CO355420	DR_ATE_NRM08_E07 adult testis normalized (TLL) Danio rerio cDNA, mRNA seq	6.982098911

BM181130	fv94f05.y1 Zebrafish SJD adult male II Danio rerio cDNA clone IMAGE:5544729 5',	6.794753383
c20orf149l	Danio rerio chromosome 20 open reading frame 149, like (c20orf149l), mRNA [NM_	6.79402055
wu:fj06d11	fj06d11.y1 Zebrafish adult olfactory Danio rerio cDNA 5', mRNA sequence [AW174]	6.79264853
ctsd	Danio rerio cathepsin D (ctsd), mRNA [NM_131710]	6.792605709
gpia	Danio rerio glucose phosphate isomerase a (gpia), mRNA [NM_144763]	6.791552922
zgc:101768	Danio rerio zgc:101768 (zgc:101768), mRNA [NM_001006055]	6.79003223
zgc:92744	Danio rerio zgc:92744 (zgc:92744), mRNA [NM_001002573]	6.789470819
TC290342	AF021880 Ictalurus punctatus 18S small subunit ribosomal RNA gene, complete se	6.788581001
fth1	Danio rerio ferritin, heavy polypeptide 1 (fth1), mRNA [NM_131585]	6.787610243
TC268871	Q9W7Q4 (Q9W7Q4) Chymotrypsinogen 1, partial (83%) [TC268871]	6.786673803
LOC402823	Danio rerio hypothetical protein LOC402823, mRNA (cDNA clone IMAGE:6789379)	6.784389227
elf3s7	Danio rerio eukaryotic translation initiation factor 3, subunit 7 zeta (elf3s7), mRNA [	6.784014695
mef2a	Danio rerio myocyte enhancer factor 2a (mef2a), mRNA [NM_131301]	6.783411959
wu:fb83a09	fb83a09.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:371845	6.783410189
pkm2	Danio rerio pyruvate kinase, muscle (pkm2), mRNA [NM_199333]	6.781108978
zgc:56053	Danio rerio zgc:56053 (zgc:56053), mRNA [NM_213050]	6.77582483
zgc:91805	Danio rerio zgc:91805 (zgc:91805), mRNA [NM_001002210]	6.775385594
ywhaq	Danio rerio tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation prc	6.772937248
BC091458	Q72165 (Q72165) TRNA pseudouridine synthase A , partial (7%) [TC269223]	6.769793779
zp2	Danio rerio zona pellucida glycoprotein 2 (zp2), mRNA [NM_131330]	6.761386414
wu:fk49e04	AGENCOURT_17388047 NIH_ZGC_4 Danio rerio cDNA clone IMAGE:7120001 5'	6.759928866
zgc:64125	Danio rerio zgc:64125 (zgc:64125), mRNA [NM_200380]	6.75980422
oazin	Danio rerio ornithine decarboxylase antizyme inhibitor (oazin), mRNA [NM_001007	6.755767313
CN326479	AGENCOURT_21848960 NIH_ZGC_8 Danio rerio cDNA clone IMAGE:7261479 5'	6.755646074
id6	Danio rerio inhibitor of DNA binding 6 (id6), mRNA [NM_131245]	6.751639611
itm2bl	Danio rerio integral membrane protein 2B, like (itm2bl), mRNA [NM_212976]	6.749882994
TC289098	Q8TB05 (Q8TB05) LOC124402, partial (48%) [TC289098]	6.747149944
ENSDART00C	Q7QTP3 (Q7QTP3) GLP_0_6355_7056, partial (37%) [TC293251]	6.745970063
ENSDART00C	AGENCOURT_16542615 NIH_ZGC_7 Danio rerio cDNA clone IMAGE:7037034 5'	6.743793851
zgc:56189	Danio rerio zgc:56189 (zgc:56189), mRNA [NM_199914]	6.743198269
15-Sep	Danio rerio selenoprotein, 15 kDa (sep15), mRNA [NM_178294]	6.74286413
zgc:92848	Danio rerio zgc:92848 (zgc:92848), mRNA [NM_001002495]	6.739319934
zgc:73107	Danio rerio zgc:73107 (zgc:73107), mRNA [NM_200714]	6.739237345
TC268327	Q90YN8 (Q90YN8) Vitellogenin 1, partial (20%) [TC268327]	6.737493197
BC061452	Danio rerio cDNA clone IMAGE:5603807, partial cds. [BC061452]	6.735594841
rdh1l	Danio rerio retinol dehydrogenase 1, like (rdh1l), mRNA [NM_199609]	6.733667796
ENSDART00C	Q9PW25 (Q9PW25) Pendulin, partial (17%) [TC275874]	6.733047583
BC067619	Danio rerio cDNA clone IMAGE:6960784, partial cds. [BC067619]	6.729489727
zgc:66068	Danio rerio zgc:66068 (zgc:66068), mRNA [NM_213093]	6.729143098
elf3s6	Danio rerio eukaryotic translation initiation factor 3, subunit 6 (elf3s6), mRNA [NM_	6.728187439
zgc:63495	Danio rerio zgc:63495 (zgc:63495), mRNA [NM_201133]	6.726519096
tuba8l	Danio rerio tubulin, alpha 8 like (tuba8l), mRNA [NM_212772]	6.725889851
smad5	Danio rerio MAD homolog 5 (Drosophila) (smad5), mRNA [NM_131368]	6.724855068
bcat2	Danio rerio branched chain aminotransferase 2, mitochondrial (bcat2), mRNA [NM_	6.711245709
zgc:73358	Danio rerio zgc:73358 (zgc:73358), mRNA [NM_213045]	6.709529731
TC294040	NTC1_BRARE (P46530) Neurogenic locus notch homolog protein 1 precursor, con	6.709498127
si:busm1-266f	Danio rerio si:busm1-266f07.1 (si:busm1-266f07.1), mRNA [NM_001007167]	6.704703245
ENSDART00C	Q9PVU3 (Q9PVU3) Alpha-2-macroglobulin-3 (Fragment), partial (22%) [TC267933	6.702736073
BC071456	Danio rerio cDNA clone IMAGE:6900672, partial cds. [BC071456]	6.702502472
TC279473	H2B_SALTR (P02282) Histone H2B, partial (98%) [TC279473]	6.700160679
TC268325	Q8JH37 (Q8JH37) Vitellogenin 1 (Fragment), partial (14%) [TC268325]	6.699000973
zgc:100829	Danio rerio zgc:100829 (zgc:100829), mRNA [NM_001003543]	6.698337049
mcm7	Danio rerio MCM7 minichromosome maintenance deficient 7 (S. cerevisiae) (mcm7	6.698066695
edf1	Danio rerio endothelial differentiation-related factor 1 (edf1), mRNA [NM_200745]	6.697938579
zgc:92848	Danio rerio zgc:92848 (zgc:92848), mRNA [NM_001002495]	6.697895802
zgc:77263	Danio rerio zgc:77263 (zgc:77263), mRNA [NM_199820]	6.69521658
zp3b	Danio rerio zona pellucida glycoprotein 3 b (zp3b), mRNA [NM_131696]	6.695002222
dlst	Danio rerio dihydrolipoamide S-succinyltransferase (dlst), mRNA [NM_201487]	6.692249573
TC272246	BC028164 ACK1 protein {Homo sapiens;}, partial (51%) [TC272246]	6.687594135
zgc:63803	Danio rerio zgc:63803 (zgc:63803), mRNA [NM_213441]	6.687541464
ENSDART00C	Q6IN37 (Q6IN37) GM2 ganglioside activator protein, partial (79%) [TC269235]	6.686933458
sb:cb653	STR00646 oligo dT primed shield stage Danio rerio cDNA clone CB653 5', mRNA s	6.686866093
zgc:56141	Danio rerio zgc:56141 (zgc:56141), mRNA [NM_213004]	6.685883779
zgc:55683	Danio rerio zgc:55683 (zgc:55683), mRNA [NM_213435]	6.685749968
zgc:86902	Danio rerio zgc:86902 (zgc:86902), mRNA [NM_001002677]	6.683488883
zgc:66448	Danio rerio zgc:66448 (zgc:66448), mRNA [NM_199800]	6.683357358
rnpc2	Danio rerio RNA-binding region (RNP1, RRM) containing 2 (rnpc2), mRNA [NM_00	6.683017322
poldip2	Danio rerio polymerase (DNA-directed), delta interacting protein 2 (poldip2), mRNA	6.681322751
zgc:73358	Danio rerio zgc:73358 (zgc:73358), mRNA [NM_213045]	6.677012443
zgc:55809	Danio rerio zgc:55809, mRNA (cDNA clone MGC:55809 IMAGE:3817677), comple	6.676907037
TC290100	BC006598 proline-rich nuclear receptor coactivator 2 {Mus musculus;}, partial (36%	6.67062339
TC293449	Q6PBF2 (Q6PBF2) Cell death-regulatory protein GRIM19, complete [TC293449]	6.668300319
zgc:64065	Danio rerio zgc:64065 (zgc:64065), mRNA [NM_201334]	6.667200132
zgc:103597	Danio rerio zgc:103597 (zgc:103597), mRNA [NM_001005976]	6.664999102
zgc:66488	Danio rerio zgc:66488 (zgc:66488), mRNA [NM_200431]	6.660347618
TC295809	Q7T1B0 (Q7T1B0) Embryonic globin beta e2, complete [TC295809]	6.659382736
zgc:55573	Danio rerio zgc:55573 (zgc:55573), mRNA [NM_213455]	6.658365112
zgc:55529	Danio rerio zgc:55529 (zgc:55529), mRNA [NM_200161]	6.658307793
zgc:56081	Danio rerio zgc:56081 (zgc:56081), mRNA [NM_200192]	6.657381057
CK361216	AGENCOURT_17114242 NIH_ZGC_4 Danio rerio cDNA clone IMAGE:7089227 5'	6.65728792
zgc:63631	Danio rerio zgc:63631 (zgc:63631), mRNA [NM_200468]	6.655768635

pa2g4a	Danio rerio proliferation-associated 2G4, a (pa2g4a), mRNA [NM_001002070]	6.655087068
TC279380	IR1902571 GLTSCR2, glioma tumor suppressor candidate region protein 2 (AF182	6.654754406
BC071456	Danio rerio cDNA clone IMAGE:6900672, partial cds. [BC071456]	6.654439188
zgc:55507	Danio rerio zgc:55507 (zgc:55507), mRNA [NM_199598]	6.653962681
tpd52l2	Danio rerio tumor protein D52-like 2 (tpd52l2), mRNA [NM_199582]	6.653926552
zgc:86686	Danio rerio zgc:86686 (zgc:86686), mRNA [NM_001002061]	6.653868109
hbbe2	Danio rerio hemoglobin beta embryonic-2 (hbbe2), mRNA [NM_212846]	6.652360748
AL916914	AL916914 PJR-Z1+Z2 Danio rerio cDNA clone 024-A11-2, mRNA sequence [AL91	6.645928013
zgc:56504	Danio rerio zgc:56504, mRNA (cDNA clone MGC:56504 IMAGE:5777534), comple	6.645833532
dap1a	Danio rerio death associated protein 1a (dap1a), mRNA [NM_131572]	6.645028056
stxbp3	Danio rerio syntaxin binding protein 3 (stxbp3), mRNA [NM_213471]	6.643294811
ssr1	Danio rerio signal sequence receptor, alpha (ssr1), mRNA [NM_201327]	6.642284033
si:ch211-14a1	Danio rerio si:ch211-14a1.7.7 (si:ch211-14a1.7.7), mRNA [NM_001007180]	6.64223803
TC282180	RT28_MOUSE (Q9CY16) Mitochondrial 28S ribosomal protein S28 (S28mt) (MRP-	6.641705079
ENSDART00C	AGENCOURT_21844715 NIH_ZGC_10 Danio rerio cDNA clone IMAGE:7260566	6.641375822
ddx39	Danio rerio DEAD (Asp-Glu-Ala-Asp) box polypeptide 39 (ddx39), mRNA [NM_212	6.640795797
pane1	proliferation associated nuclear element [Source:ZFIN;Acc:ZDB-GENE-040611-4] [	6.637651587
BC057521	Danio rerio cDNA clone IMAGE:5604666, partial cds. [BC057521]	6.631079681
ndufa4l	Danio rerio NADH dehydrogenase (ubiquinone) 1 alpha subcomplex 4, like (ndufa4	6.62936119
ENSDART00C	GIN4_YEAST (Q12263) Serine/threonine-protein kinase GIN4 , partial (9%) [TC29	6.629095458
zgc:85975	Danio rerio zgc:85975 (zgc:85975), mRNA [NM_213265]	6.628069043
zgc:86945	Danio rerio zgc:86945 (zgc:86945), mRNA [NM_001002335]	6.627300872
wu:fl24a12	AGENCOURT_20754282 NIH_ZGC_14 Danio rerio cDNA clone IMAGE:7229249	6.621306758
crabp1	Danio rerio cellular retinoic acid binding protein 1 (crabp1), mRNA [NM_182858]	6.620409581
TC268543	Q6TH32 (Q6TH32) Muscle cofilin 2, complete [TC268543]	6.620165438
TC269505	AF353634S2 bHLH transcription factor DEC1 {Homo sapiens;} , partial (46%) [TC2	6.62013572
zgc:56330	Danio rerio zgc:56330 (zgc:56330), mRNA [NM_199683]	6.618359002
zgc:77221	Danio rerio zgc:77221 (zgc:77221), mRNA [NM_205657]	6.617767664
arcn1l	Danio rerio archaen 1 like (arcn1l), mRNA [NM_201993]	6.617729417
TC290365	BC055209 zgc:63694 {Danio rerio;} , partial (43%) [TC290365]	6.616582978
atp6v1f	Danio rerio ATPase, H+ transporting, lysosomal 14kDa, V1 subunit F (atp6v1f), mR	6.615866935
zgc:64130	Danio rerio zgc:64130 (zgc:64130), mRNA [NM_201209]	6.614681162
ENSDART00C	Q91480 (Q91480) Apolipoprotein B (Fragment), partial (31%) [TC279319]	6.614338624
mcm7	Danio rerio MCM7 minichromosome maintenance deficient 7 (S. cerevisiae) (mcm7	6.61319628
sod1	Danio rerio superoxide dismutase 1, soluble (sod1), mRNA [NM_131294]	6.613060898
zgc:55795	Danio rerio zgc:55795 (zgc:55795), mRNA [NM_199585]	6.607454695
zgc:65913	Danio rerio zgc:65913 (zgc:65913), mRNA [NM_212655]	6.607224551
mapk14b	Danio rerio mitogen-activated protein kinase 14b (mapk14b), mRNA [NM_178223]	6.606004279
rab5c	Danio rerio RAB5C, member RAS oncogene family, mRNA (cDNA clone MGC:772	6.603418224
zgc:92848	Danio rerio zgc:92848 (zgc:92848), mRNA [NM_001002495]	6.603136372
zgc:85671	Danio rerio zgc:85671 (zgc:85671), mRNA [NM_212811]	6.601800965
zgc:64103	Danio rerio zgc:64103 (zgc:64103), mRNA [NM_200639]	6.60029737
ENSDART00C	Unknown	6.599794391
zgc:101895	Danio rerio zgc:101895 (zgc:101895), mRNA [NM_001005958]	6.599750074
ENSDART00C	IF39_HUMAN (P55884) Eukaryotic translation initiation factor 3 subunit 9 (eIF-3 et	6.599660987
uros	Danio rerio uroporphyrinogen III synthase (uros), mRNA [NM_212828]	6.599485255
BQ479659	faa71c12.y1 Gong zebrafish testis Danio rerio cDNA clone IMAGE:5899031 5', mR	6.596639076
zgc:56010	Danio rerio zgc:56010 (zgc:56010), mRNA [NM_201081]	6.595315986
pfn2l	Danio rerio profilin 2 like (pfn2l), mRNA [NM_201466]	6.591340169
ccnb1	Danio rerio cyclin B1 (ccnb1), mRNA [NM_131513]	6.590558566
ENSDART00C	Q6P7G4 (Q6P7G4) MGC68811 protein, partial (51%) [TC294705]	6.589379712
tegt	fb04h02.y1 zebrafish fin day1 regeneration Danio rerio cDNA 5', mRNA sequence [	6.588034058
zgc:86939	Danio rerio zgc:86939 (zgc:86939), mRNA [NM_205572]	6.587120116
TC268992	BC047800 zgc:55996 {Danio rerio;} , complete [TC268992]	6.586385816
zgc:56274	Danio rerio zgc:56274 (zgc:56274), mRNA [NM_200019]	6.584544701
zgc:56010	Danio rerio zgc:56010 (zgc:56010), mRNA [NM_201081]	6.584535321
TC269025	Q6NYM6 (Q6NYM6) Zgc:77481, complete [TC269025]	6.582101413
TC280762	DDR1_HUMAN (O95990) DDR1 protein (Down regulated in renal cell carcinoma 1)	6.580613692
ENSDART00C	IDLC_STRPU (Q26630) 33 kDa inner dynein arm light chain, axonemal (p33), parti	6.578897641
BQ262361	fz85c11.x1 Sugano SJD adult male Danio rerio cDNA clone IMAGE:5915156 3', mR	6.577175312
TC268461	BC053272 zgc:64133 {Danio rerio;} , complete [TC268461]	6.57705174
hig1	Danio rerio hypoxia induced gene 1 (hig1), mRNA [NM_200100]	6.575914054
ns:zf-e239	ZF-E239 zebrafish embryonic Danio rerio cDNA clone ZF-E239 5', mRNA sequenc	6.574852096
TC267994	TPP1_MOUSE (O89023) Tripeptidyl-peptidase I precursor (TPP-I) (Tripeptidyl ami	6.574293684
zgc:77279	Danio rerio zgc:77279 (zgc:77279), mRNA [NM_207072]	6.574242662
dldh	Danio rerio dihydrolipoamide dehydrogenase (dldh), mRNA [NM_201506]	6.573232319
LOC402883	Danio rerio hypothetical protein LOC402883, mRNA (cDNA clone IMAGE:4788333)	6.573082859
AI964259	EST269373 zebrafish T0315, Steve Ekker Danio rerio cDNA clone RZBDA55, mR	6.573048288
TC279701	Q7SZ52 (Q7SZ52) FXYP domain containing ion transport regulator 6, partial (35%)	6.572939231
zgc:92762	Danio rerio zgc:92762 (zgc:92762), mRNA [NM_001002561]	6.572370816
zgc:55307	Danio rerio zgc:55307 (zgc:55307), mRNA [NM_201129]	6.572051607
TC279409	Q7T2D1 (Q7T2D1) Retinol dehydrogenase 10, complete [TC279409]	6.57202539
zgc:85645	Danio rerio zgc:85645 (zgc:85645), mRNA [NM_213312]	6.571717442
LOC402883	Danio rerio hypothetical protein LOC402883, mRNA (cDNA clone IMAGE:4788333)	6.571688705
tpd52l2	Danio rerio tumor protein D52-like 2 (tpd52l2), mRNA [NM_199582]	6.571531031
vg1	Danio rerio vitellogenin 1 (vg1), mRNA [NM_170767]	6.571201157
zgc:101797	Danio rerio zgc:101797 (zgc:101797), mRNA [NM_001007397]	6.571119426
pgam1	Danio rerio phosphoglycerate mutase 1 (pgam1), mRNA [NM_198804]	6.571114019
BC076035	Danio rerio cDNA clone IMAGE:7046318, partial cds. [BC076035]	6.570863087
BI842184	fq82h05.x1 Zebrafish neuronal Danio rerio cDNA clone IMAGE:4887008 3', mRNA	6.566885247
BC076359	Danio rerio cDNA clone IMAGE:7119330, partial cds. [BC076359]	6.56658253

xbp1	Danio rerio X-box binding protein 1 (xbp1), mRNA [NM_131874]	6.479801431
wu:fl24a12	AGENCOURT_20754282 NIH_ZGC_14 Danio rerio cDNA clone IMAGE:7229249	6.479726613
zgc:55962	Danio rerio zgc:55962 (zgc:55962), mRNA [NM_199579]	6.47948053
TC279378	Unknown	6.478196167
TC268283	Q90YN8 (Q90YN8) Vitellogenin 1, partial (25%) [TC268283]	6.477932559
apoeb	Danio rerio apolipoprotein Eb (apoeb), mRNA [NM_131098]	6.476424079
eva1	epithelial V-like antigen 1 [Source:ZFIN;Acc:ZDB-GENE-030131-8774] [ENSDART00C	6.476031781
wu:fk66c03	fk66c03.y1 Zebrafish Research Genetics C32 fin Danio rerio cDNA 5', mRNA sequ	6.47451819
zgc:77891	Danio rerio zgc:77891 (zgc:77891), mRNA [NM_205693]	6.474266462
ENSDART00C	R18A_HUMAN (Q9NVS2) 28S ribosomal protein S18a, mitochondrial precursor (M	6.471989708
zgc:92784	Danio rerio zgc:92784 (zgc:92784), mRNA [NM_001002548]	6.467128634
bcl2l	Danio rerio bcl2-like (bcl2l), mRNA [NM_131807]	6.466683769
zgc:55842	Danio rerio zgc:55842 (zgc:55842), mRNA [NM_200988]	6.466338806
CO960157	AGENCOURT_30802604 NIH_ZGC_19 Danio rerio cDNA clone IMAGE:7427007	6.464296779
zgc:86940	Danio rerio zgc:86940 (zgc:86940), mRNA [NM_001002082]	6.463261471
ppp2r5e1	Danio rerio protein phosphatase 2, regulatory subunit B (B56) (ppp2r5e1), mRNA [I	6.462699005
rpn1	Danio rerio ribophorin I (rpn1), mRNA [NM_197934]	6.462088374
zgc:56451	Danio rerio zgc:56451 (zgc:56451), mRNA [NM_213110]	6.461992539
gng5	AGENCOURT_16540949 NIH_ZGC_10 Danio rerio cDNA clone IMAGE:7042809	6.461219417
TC279629	BC054585 zgc:63980 {Danio rerio;} , complete [TC279629]	6.460542366
hig1	Danio rerio hypoxia induced gene 1 (hig1), mRNA [NM_200100]	6.457860344
zgc:92707	Danio rerio zgc:92707 (zgc:92707), mRNA [NM_001002398]	6.454831078
adh8a	Danio rerio alcohol dehydrogenase 8a (adh8a), mRNA [NM_001001946]	6.454369636
zgc:63709	Danio rerio zgc:63709 (zgc:63709), mRNA [NM_199750]	6.45306758
zgc:103512	Danio rerio zgc:103512 (zgc:103512), mRNA [NM_001006016]	6.452800578
tpi1b	Danio rerio triosephosphate isomerase 1b (tpi1b), mRNA [NM_153668]	6.45251914
tlx3a	Danio rerio T-cell leukemia, homeobox 3a (tlx3a), mRNA [NM_153651]	6.452109208
anxa1a	Danio rerio annexin A1a (anxa1a), mRNA [NM_181758]	6.45176904
kars	Danio rerio lysyl-tRNA synthetase (kars), mRNA [NM_001002386]	6.45017774
BQ259133	f295g05.y1 zebrafish fin day1 regeneration Danio rerio cDNA clone IMAGE:590840	6.450162845
g12l	Danio rerio MID1 interacting protein 1 (mid1ip1), mRNA [NM_213439]	6.450133444
BQ093890	fz53a02.y1 zebrafish fin day1 regeneration Danio rerio cDNA clone IMAGE:590659	6.448846367
TC267911	Q9DFT6 (Q9DFT6) Beta tubulin, complete [TC267911]	6.448618763
ncl	Danio rerio nucleolin (ncl), mRNA [NM_001003839]	6.445865145
TC270569	S68134 cyclic AMP-responsive element modulator beta isoform {Homo sapiens;} , i	6.445836719
TC269191	ADR2_MOUSE (Q8BQS5) Adiponectin receptor protein 2, partial (38%) [TC269191	6.44486123
zgc:77650	Danio rerio zgc:77650 (zgc:77650), mRNA [NM_199876]	6.443062783
wu:fb12g11	fc43b09.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372412	6.442102007
zgc:100853	Danio rerio 6-phosphogluconolactonase (pgls), mRNA [NM_001004117]	6.441827523
TC268167	CR457185 LSM3 {Homo sapiens;} , complete [TC268167]	6.441503573
zgc:92665	Danio rerio zgc:92665 (zgc:92665), mRNA [NM_001002421]	6.438847511
smyd1	Danio rerio SET and MYND domain containing 1 (smyd1), mRNA [NM_205540]	6.438011168
mapk14a	Danio rerio mitogen-activated protein kinase 14a (mapk14a), mRNA [NM_131722]	6.437989885
zgc:77882	Danio rerio zgc:77882 (zgc:77882), mRNA [NM_199649]	6.437613448
psmd12	Danio rerio proteasome (prosome, macropain) 26S subunit, non-ATPase, 12 (psmc	6.437447515
zgc:63907	Danio rerio zgc:63907 (zgc:63907), mRNA [NM_201137]	6.437338335
zgc:56034	Danio rerio zgc:56034 (zgc:56034), mRNA [NM_199956]	6.436243184
ap1s1	Danio rerio adaptor-related protein complex 1, sigma 1 subunit (ap1s1), mRNA [NM	6.435924813
pgam1	Danio rerio phosphoglycerate mutase 1 (pgam1), mRNA [NM_198804]	6.435058417
tram	Danio rerio translocating chain-associating membrane protein (tram), mRNA [NM_1	6.433608901
rpn1	Danio rerio ribophorin I (rpn1), mRNA [NM_197934]	6.433082381
zgc:86762	Danio rerio zgc:86762 (zgc:86762), mRNA [NM_001002131]	6.433074811
zgc:92329	Danio rerio zgc:92329 (zgc:92329), mRNA [NM_001007313]	6.432684041
TC290166	Q804H0 (Q804H0) Annexin 1c, partial (74%) [TC290166]	6.432314217
jup	Danio rerio junction plakoglobin (jup), mRNA [NM_131177]	6.430903553
g10	Danio rerio maternal G10 transcript (g10), mRNA [NM_001003860]	6.430411825
hsp90b	Danio rerio heat shock protein 90-beta (hsp90b), mRNA [NM_131310]	6.429628937
calm1b	Danio rerio calmodulin 1b (calm1b), mRNA [NM_200082]	6.428523045
slc31a1	Danio rerio solute carrier family 31 (copper transporters), member 1 (slc31a1), mRf	6.428017501
CO354952	DR_ATE_NRM02_G08 adult testis normalized (TLL) Danio rerio cDNA, mRNA seq	6.427293445
rab5a	Danio rerio RAB5A, member RAS oncogene family (rab5a), mRNA [NM_201485]	6.427257866
ENSDART00C	AGENCOURT_22438073 NIH_ZGC_7 Danio rerio cDNA clone IMAGE:7267128 5'	6.426763575
sas	Danio rerio sarcoma amplified sequence (sas), mRNA [NM_200281]	6.424985206
AL922014	AL922014 PJR-Z1+Z2 Danio rerio cDNA clone 104-F02-2, mRNA sequence [AL92	6.421165966
ap1s1	Danio rerio adaptor-related protein complex 1, sigma 1 subunit (ap1s1), mRNA [NM	6.4202927
TC268487	BC055209 zgc:63694 {Danio rerio;} , partial (25%) [TC268487]	6.419332705
zgc:65772	Danio rerio zgc:65772 (zgc:65772), mRNA [NM_200533]	6.419208671
TC278192	PIM1_BOVIN (Q9N0P9) Proto-oncogene serine/threonine-protein kinase pim-1 , p	6.418871227
gnl2	Danio rerio guanine nucleotide binding protein-like 2 (nucleolar) (gnl2), mRNA [NM	6.418382539
stxbp3	Danio rerio syntaxin binding protein 3 (stxbp3), mRNA [NM_213471]	6.417899866
npm1	Danio rerio nucleophosmin 1 (npm1), mRNA [NM_199428]	6.417670261
zgc:92282	Danio rerio zgc:92282 (zgc:92282), mRNA [NM_001002609]	6.417569753
tmem32	Danio rerio transmembrane protein 32 (tmem32), mRNA [NM_205599]	6.413329336
TC292096	Q7ZXY7 (Q7ZXY7) Flj20436-prov protein, partial (72%) [TC292096]	6.412388206
TC290362	BC055209 zgc:63694 {Danio rerio;} , partial (43%) [TC290362]	6.412331404
fgfr2	Danio rerio fibroblast growth factor receptor 2 (fgfr2), mRNA [NM_178303]	6.41214383
ENSDART00C	BC004499 MOV10 protein {Homo sapiens;} , partial (37%) [TC271246]	6.411465458
zgc:66175	Danio rerio zgc:66175 (zgc:66175), mRNA [NM_213383]	6.411309065
ddx39	Danio rerio DEAD (Asp-Glu-Ala-Asp) box polypeptide 39 (ddx39), mRNA [NM_212	6.409671768
si:busm1-266f	Danio rerio si:busm1-266f07.2 (si:busm1-266f07.2), mRNA [NM_001004521]	6.409613322
cct8	Danio rerio chaperonin containing TCP1, subunit 8 (theta) (cct8), mRNA [NM_2010	6.409008021

serpina1	Danio rerio serine (or cysteine) proteinase inhibitor, clade A (alpha-1 antiproteinase	6.407173711
AW018556	fd48d09.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:373297	6.406927052
c4orf9	Danio rerio chromosome 4 open reading frame 9 (H. sapiens) (c4orf9), mRNA [NM_	6.406699129
TC279845	Q6N6YN6 (Q6N6YN6) Wu:fc22d10 protein, complete [TC279845]	6.405485394
TC271399	BC069228 phosphatidylinositol glycan class S {Homo sapiens;} , partial (57%) [TC2	6.403990774
snd1	Danio rerio staphylococcal nuclease domain containing 1 (snd1), mRNA [NM_1828	6.403205134
clic4	Danio rerio chloride intracellular channel 4 (clic4), mRNA [NM_201486]	6.402999614
zgc:63624	Danio rerio zgc:63624 (zgc:63624), mRNA [NM_200611]	6.402439434
zgc:56134	Danio rerio zgc:56134 (zgc:56134), mRNA [NM_200014]	6.402197037
ENSDART00C	AGENCOURT_21835355 NIH_ZGC_10 Danio rerio cDNA clone IMAGE:7257497 5'	6.400974364
zgc:92534	Danio rerio zgc:92534 (zgc:92534), mRNA [NM_001003444]	6.400202458
zff9	Danio rerio zinc finger protein 9 (zff9), mRNA [NM_199749]	6.39969946
ube2i	Danio rerio ubiquitin-conjugating enzyme E2I (ube2i), mRNA [NM_131351]	6.398852935
LOC402840	Danio rerio hypothetical protein LOC402840, mRNA (cDNA clone IMAGE:5605364)	6.397886607
zgc:66077	Danio rerio zgc:66077 (zgc:66077), mRNA [NM_200579]	6.395460025
wu:fk84g05	AGENCOURT_20186052 NIH_ZGC_15 Danio rerio cDNA clone IMAGE:7226726 5'	6.395419162
CK864691	AGENCOURT_19725966 NIH_ZGC_6 Danio rerio cDNA clone IMAGE:7219299 5'	6.394716305
zgc:64040	Danio rerio zgc:64040 (zgc:64040), mRNA [NM_200369]	6.3946739
CO354299	DR_ATE_FL25_E12 adult testis full-length (TLL) Danio rerio cDNA, mRNA sequen	6.394498617
pim1	Danio rerio pim-1 oncogene (pim1), mRNA [NM_131539]	6.394466629
zgc:55525	Danio rerio zgc:55525 (zgc:55525), mRNA [NM_213468]	6.394199823
tnnt3b	Danio rerio troponin T3b, skeletal, fast (tnnt3b), mRNA [NM_181653]	6.393620794
2-Sep	Danio rerio cDNA clone IMAGE:6996377, partial cds. [BC065465]	6.392836186
zgc:63796	Danio rerio zgc:63796 (zgc:63796), mRNA [NM_199922]	6.390695318
BM572257	fx08g03.y1 Gong zebrafish ovary Danio rerio cDNA clone IMAGE:5619269 5', mRN	6.390551604
TC283776	BC000219 MRPS5 protein {Homo sapiens;} , partial (42%) [TC283776]	6.389035094
zgc:66388	Danio rerio zgc:66388 (zgc:66388), mRNA [NM_201141]	6.388532118
hsp90b	Danio rerio heat shock protein 90-beta (hsp90b), mRNA [NM_131310]	6.388381063
zgc:92169	Danio rerio zgc:92169 (zgc:92169), mRNA [NM_001004553]	6.387991453
pafah1b3	Danio rerio platelet-activating factor acetylhydrolase, isoform Ib, gamma subunit (p	6.387681519
AJ245492	Danio rerio mRNA for hypothetical protein, clone sd50. [AJ245492]	6.386935135
zgc:92511	Danio rerio zgc:92511 (zgc:92511), mRNA [NM_001003450]	6.386932348
zgc:91894	Danio rerio zgc:91894 (zgc:91894), mRNA [NM_001004116]	6.386860733
rpl5	Danio rerio ribosomal protein L5 (rpl5), mRNA [NM_001002106]	6.386009398
TC293027	AKA1_HUMAN (P14550) Alcohol dehydrogenase [NADP+] (Aldehyde reductase) (	6.385183592
A_15_P11940	Unknown	6.384876211
slc6a9	Danio rerio GLYT1 mRNA for glycine transporter 1, partial cds. [AB183388]	6.384009707
AW777390	fk44b01.x1 Zebrafish 15-19hr embryonic cDNA Danio rerio cDNA 3', mRNA sequer	6.383053512
cdc42	Danio rerio cell division cycle 42 (cdc42), mRNA [NM_200632]	6.382154263
ENSDART00C	AY221262 selenoprotein N {Danio rerio;} , complete [TC270039]	6.381875342
zgc:86800	EST269390 zebrafish T0315, Steve Ekker Danio rerio cDNA clone RZBDA82 simil	6.381147143
fkbp4	Danio rerio FK506 binding protein 4 (fkbp4), mRNA [NM_201469]	6.380882103
sb:cb551	Danio rerio sb:cb551, mRNA (cDNA clone IMAGE:2601514), partial cds. [BC04456	6.380161204
zgc:92765	Danio rerio zgc:92765 (zgc:92765), mRNA [NM_001002559]	6.379882936
TC279489	Q6IA63 (Q6IA63) C6orf62 protein, complete [TC279489]	6.379287635
ENSDART00C	AF498951 small GTP binding protein RAB23 {Homo sapiens;} , partial (81%) [TC2	6.378606179
zgc:73376	Danio rerio zgc:73376 (zgc:73376), mRNA [NM_200809]	6.37841611
ctsla	Danio rerio cathepsin L, a (ctsla), mRNA [NM_212584]	6.378371097
BQ074893	fz23h04.y1 Gong zebrafish testis Danio rerio cDNA 5', mRNA sequence [BQ07489	6.377866491
zgc:65794	Danio rerio zgc:65794 (zgc:65794), mRNA [NM_213349]	6.37713839
copz2	Danio rerio zeta2-cop (copz2), mRNA [NM_131507]	6.374270993
nsep1	Danio rerio nuclease sensitive element binding protein 1 (nsep1), mRNA [NM_131	6.371742709
ENSDART00C	MMU92704 Olf-1/EBF-like-2(OS) transcription factor {Mus musculus;} , partial (51%	6.37139374
zgc:63926	Danio rerio zgc:63926 (zgc:63926), mRNA [NM_213351]	6.370904532
cpne3	Danio rerio copine III (cpne3), mRNA [NM_199699]	6.370589871
egr2b	Danio rerio early growth response 2b (egr2b), mRNA [NM_130997]	6.370390887
zgc:92022	Danio rerio zgc:92022 (zgc:92022), mRNA [NM_001002305]	6.369809334
zgc:92237	Danio rerio zgc:92237 (zgc:92237), mRNA [NM_001003728]	6.369771617
TC287937	Q9W3T5 (Q9W3T5) CG32736-PA (Cg32736-pb) (RE60462p), partial (35%) [TC28	6.368823875
TC270311	Q8CFK3 (Q8CFK3) Paraoxonase 2, partial (66%) [TC270311]	6.368791244
TC281853	FGL2_HUMAN (Q14314) Fibroleukin precursor (Fibrinogen-like protein 2) (pT49), p	6.366725049
glo1	Danio rerio glyoxalase 1 (glo1), mRNA [NM_213151]	6.366346463
TC291664	Q8QFS3 (Q8QFS3) H01CJC protein, partial (81%) [TC291664]	6.365842401
TC290492	MUSIGHV01B lg heavy chain precursor {Mus musculus;} , partial (34%) [TC29049	6.365808906
zgc:63910	Danio rerio zgc:63910 (zgc:63910), mRNA [NM_200686]	6.365473319
calm1b	Danio rerio calmodulin 1b (calm1b), mRNA [NM_200082]	6.365316899
zgc:56335	Danio rerio zgc:56335 (zgc:56335), mRNA [NM_201188]	6.364777128
zgc:77650	Danio rerio zgc:77650 (zgc:77650), mRNA [NM_199876]	6.362558792
TC291456	Q70Q12 (Q70Q12) Phospholemman-like protein precursor, partial (43%) [TC2914	6.362306644
TC296590	IF2M_BOVIN (P46198) Translation initiation factor IF-2, mitochondrial precursor (IF	6.361667819
BC071437	Danio rerio cDNA clone IMAGE:6899804, partial cds. [BC071437]	6.361268819
zgc:73206	Danio rerio zgc:73206 (zgc:73206), mRNA [NM_200748]	6.359914746
gabara	Danio rerio GABA(A) receptor-associated protein, mRNA (cDNA clone IMAGE:679	6.358074498
atp6v1c1	Danio rerio ATPase, H+ transporting, lysosomal, V1 subunit C, isoform 1 (atp6v1c1	6.357815729
u2af1	Danio rerio U2(RNU2) small nuclear RNA auxiliary factor 1 (u2af1), mRNA [NM_17	6.356039316
mfng	Danio rerio manic fringe homolog (mfng), mRNA [NM_001007788]	6.355841405
TC293078	E2BG_RAT (P70541) Translation initiation factor eIF-2B gamma subunit (eIF-2B G	6.355306577
ENSDART00C	zfshTOP10000080 Zebrafish shield stage whole embryo Danio rerio cDNA clone S	6.354011808
BC074029	Danio rerio cDNA clone IMAGE:7001722, partial cds. [BC074029]	6.353588638
psmb10	Danio rerio proteasome subunit beta 12 (PSMB12) mRNA, partial cds. [AF155577]	6.352716686
zgc:56708	Danio rerio zgc:56708 (zgc:56708), mRNA [NM_200310]	6.352612833

TC294394	Q803X5 (Q803X5) AMP deaminase 3, complete [TC294394]	6.352055559
AI584617	fb81c08.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:371828	6.351624199
was	Danio rerio Wiskott-Aldrich syndrome (eczema-thrombocytopenia) (was), mRNA [N	6.351438699
arl2l1	Danio rerio ADP-ribosylation factor-like 2-like 1 (arl2l1), mRNA [NM_173272]	6.35136373
TC291819	Q9QX82 (Q9QX82) Endolyn precursor, partial (26%) [TC291819]	6.350373147
zgc:56296	Danio rerio zgc:56296 (zgc:56296), mRNA [NM_213376]	6.350064344
ENSDART00C	Q7T0Q2 (Q7T0Q2) MGC69100 protein, partial (85%) [TC290370]	6.348727698
ENSDART00C	fab03g11.y1 Sugano SJD adult male Danio rerio cDNA clone IMAGE:6034388 5' si	6.348573608
tram	Danio rerio translocating chain-associating membrane protein (tram), mRNA [NM_1	6.34843049
zgc:92593	Danio rerio zgc:92593 (zgc:92593), mRNA [NM_001005929]	6.347719544
BM316101	fw69d04.x1 Gong zebrafish testis Danio rerio cDNA clone IMAGE:5615647 3', mR	6.346794522
TC291230	FRIM_SALSA (P49947) Ferritin, middle subunit (Ferritin M), partial (97%) [TC2912	6.346486483
TC279559	BI1_PAROL (Q9IA79) Probable Bax inhibitor-1 (BI-1), partial (70%) [TC279559]	6.345666108
gtbbp4	Danio rerio GTP binding protein 4 (gtbbp4), mRNA [NM_199851]	6.344955278
TC269175	Q7T2C2 (Q7T2C2) Wu:fb52d04 protein, complete [TC269175]	6.344945879
TC292799	BC066453 zgc:77417 protein {Danio rerio;}, complete [TC292799]	6.344648857
zgc:63986	Danio rerio zgc:63986 (zgc:63986), mRNA [NM_213332]	6.34387798
zgc:103594	Danio rerio zgc:103594 (zgc:103594), mRNA [NM_001004680]	6.342204456
TC269846	Q6P0G5 (Q6P0G5) Tfg protein, complete [TC269846]	6.340269207
slc31a1	Danio rerio solute carrier family 31 (copper transporters), member 1 (slc31a1), mR	6.340193202
zgc:77806	Danio rerio zgc:77806 (zgc:77806), mRNA [NM_205691]	6.339511172
zgc:73396	Danio rerio zgc:73396 (zgc:73396), mRNA [NM_200817]	6.336669979
tmed5	Danio rerio transmembrane emp24 protein transport domain containing 5 (tmed5),	6.335725662
rplp0	Danio rerio ribosomal protein, large, P0, mRNA (cDNA clone MGC:77791 IMAGE:7	6.335669724
zgc:92775	Danio rerio zgc:92775 (zgc:92775), mRNA [NM_001003424]	6.333505301
zgc:92282	Danio rerio zgc:92282 (zgc:92282), mRNA [NM_001002609]	6.332237202
cat	Danio rerio catalase (cat), mRNA [NM_130912]	6.332147132
rps3a	Danio rerio ribosomal protein S3A (rps3a), mRNA [NM_200059]	6.331882824
zgc:66058	Danio rerio zgc:66058 (zgc:66058), mRNA [NM_213137]	6.331183532
zgc:55813	Danio rerio zgc:55813 (zgc:55813), mRNA [NM_201514]	6.330448985
TC269084	CLH1_HUMAN (Q00610) Clathrin heavy chain 1 (CLH-17), complete [TC269084]	6.330012817
zgc:92893	Danio rerio zgc:92893 (zgc:92893), mRNA [NM_001002467]	6.329933872
CN510123	AGENCOURT_22403482 NIH_ZGC_9 Danio rerio cDNA clone IMAGE:7273369 5'	6.329249144
ENSDART00C	Q98TC8 (Q98TC8) XP8, partial (71%) [TC282051]	6.328855003
atp5c1	Danio rerio ATP synthase, H ⁺ transporting, mitochondrial F1 complex, gamma poly	6.326979176
BC067693	Danio rerio cDNA clone IMAGE:6960489, partial cds. [BC067693]	6.32546856
snd1	Danio rerio staphylococcal nuclease domain containing 1 (snd1), mRNA [NM_1828	6.325429276
zgc:92542	Danio rerio zgc:92542 (zgc:92542), mRNA [NM_001003442]	6.323814924
zgc:92355	Danio rerio zgc:92355 (zgc:92355), mRNA [NM_001007311]	6.323196429
BG305285	fm11b07.x1 Zebrafish adult retina cDNA Danio rerio cDNA clone IMAGE:4145988 :	6.323017898
zgc:63722	Danio rerio zgc:63722 (zgc:63722), mRNA [NM_201300]	6.322216483
tcp1	Danio rerio t-complex polypeptide 1 (tcp1), mRNA [NM_131230]	6.321645134
zorba	Danio rerio Orb/CPEB-related RNA-binding protein (zorba), mRNA [NM_131427]	6.320891961
im:7138714	ZF101-P00012-DEPE-F_D08 GISZF101 Danio rerio cDNA clone IMAGE:7138714	6.320478526
ENSDART00C	BOVNADHURA NADH dehydrogenase (ubiquinone) {Bos taurus;}, partial (81%) [T	6.320384718
zgc:73206	Danio rerio zgc:73206 (zgc:73206), mRNA [NM_200748]	6.318960703
LOC402861	Danio rerio hypothetical protein LOC402861, mRNA (cDNA clone IMAGE:5605410)	6.31815169
zgc:77778	Danio rerio zgc:77778 (zgc:77778), mRNA [NM_213203]	6.316694013
TC291927	AXU1_HUMAN (Q96S65) Axin-1 up-regulated gene 1 protein (TGF-beta induced a	6.316405817
zgc:92831	Danio rerio zgc:92831 (zgc:92831), mRNA [NM_001002505]	6.316243602
zgc:73355	Danio rerio zgc:73355 (zgc:73355), mRNA [NM_200803]	6.31553761
pepd	Danio rerio peptidase D (pepd), mRNA [NM_198912]	6.314366789
TC280445	Q90ZF4 (Q90ZF4) V-ATPase subunit A, complete [TC280445]	6.313167383
TC280392	Q803I8 (Q803I8) Wu:fk91f10 protein, complete [TC280392]	6.312441909
ppaa	Danio rerio F-box and leucine-rich repeat protein 14a (fbxl14a), mRNA [NM_20148	6.311853352
atp6v1c1	Danio rerio ATPase, H ⁺ transporting, lysosomal, V1 subunit C, isoform 1 (atp6v1c1	6.310573886
zgc:56537	Danio rerio zgc:56537 (zgc:56537), mRNA [NM_199950]	6.309681638
nedd5	Danio rerio neural precursor cell expressed, developmentally down-regulated 5, mF	6.308738041
15-Sep	Danio rerio selenoprotein, 15 kDa (sep15), mRNA [NM_178294]	6.306173764
zgc:77115	Danio rerio zgc:77115 (zgc:77115), mRNA [NM_213176]	6.305538366
zgc:64161	Danio rerio zgc:64161 (zgc:64161), mRNA [NM_213126]	6.305396018
TC290674	Q7ZX32 (Q7ZX32) Homer3-prov protein, partial (23%) [TC290660]	6.304207682
slc11a2	Danio rerio solute carrier family 11 (proton-coupled divalent metal ion transporters),	6.30395483
gosr2	Danio rerio golgi SNAP receptor complex member 2 (gosr2), mRNA [NM_199688]	6.302060937
zgc:92770	Danio rerio zgc:92770 (zgc:92770), mRNA [NM_001002556]	6.301799743
pl10	Danio rerio pl10 (pl10), mRNA [NM_130941]	6.301233379
TC297861	Q6W8Q3 (Q6W8Q3) Purkinje cell protein 4-like 1, partial (38%) [TC297861]	6.300180505
wu:fk18g10	fk18g10.y1 zebrafish fin day1 regeneration Danio rerio cDNA 5', mRNA sequence [	6.298878004
gabbbr1	Danio rerio gamma-aminobutyric acid B receptor mRNA, partial cds. [AY050509]	6.298332641
psmd7	Danio rerio proteasome (prosome, macropain) 26S subunit, non-ATPase, 7 (Mov34	6.298084906
hm13	Danio rerio histocompatibility (minor) 13 (hm13), mRNA [NM_212572]	6.296767766
TC281048	VE5_PAPVR (P21403) E5 protein, partial (30%) [TC281048]	6.296411305
rer1	Danio rerio RER1 retention in endoplasmic reticulum 1 homolog (S. cerevisiae), mF	6.294974807
TC267920	Q8AXN3 (Q8AXN3) Carboxypeptidase B (Fragment), partial (93%) [TC267920]	6.294578848
wu:fc51f04	fb55b02.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:371575	6.293945183
CK869940	AGENCOURT_19703459 NIH_ZGC_6 Danio rerio cDNA clone IMAGE:7218939 5'	6.292976422
zgc:77202	Danio rerio zgc:77202 (zgc:77202), mRNA [NM_214745]	6.292791779
TC290696	Q6NYR4 (Q6NYR4) Hsc70 protein, complete [TC290696]	6.292521793
gnb1	guanine nucleotide binding protein (G protein), beta polypeptide 1 [Source:ZFIN;Ac	6.292516786
ENSDART00C	Q7Z4H3 (Q7Z4H3) NS5ATP2, partial (79%) [TC281519]	6.291662305
calm2b	Danio rerio calmodulin 2, beta (phosphorylase kinase, delta) (calm2b), mRNA [NM_	6.291122199

TC290452	Q6NVT5 (Q6NVT5) MGC69489 protein, partial (28%) [TC290452]	6.290700769
smox	Danio rerio spermine oxidase, mRNA (cDNA clone MGC:77167 IMAGE:6961486),	6.290578391
BC061452	Danio rerio cDNA clone IMAGE:5603807, partial cds. [BC061452]	6.290455591
zgc:92091	Danio rerio zgc:92091 (zgc:92091), mRNA [NM_205720]	6.290192046
zgc:56603	Danio rerio zgc:56603 (zgc:56603), mRNA [NM_199946]	6.289898321
TC292616	DPM1_CRIGR (Q9WU83) Dolichol-phosphate mannosyltransferase (Dolichol-phos	6.28937154
zgc:92513	Danio rerio zgc:92513 (zgc:92513), mRNA [NM_001002363]	6.289341938
slc31a1	Danio rerio solute carrier family 31 (copper transporters), member 1 (slc31a1), mRf	6.289010094
zgc:92848	Danio rerio zgc:92848 (zgc:92848), mRNA [NM_001002495]	6.288832538
zgc:63980	Danio rerio zgc:63980 (zgc:63980), mRNA [NM_213335]	6.288719023
pim1	Danio rerio pim-1 oncogene (pim1), mRNA [NM_131539]	6.288348753
anxa11b	Danio rerio annexin A11b (anxa11b), mRNA [NM_181766]	6.288164441
pepd	Danio rerio peptidase D (pepd), mRNA [NM_198912]	6.287688379
zgc:73329	Danio rerio zgc:73329 (zgc:73329), mRNA [NM_200791]	6.287676761
TC294095	Q7ZT82 (Q7ZT82) RNA-binding protein, complete [TC294095]	6.286727672
wu:fb01d02	AGENCOURT_20193737 NIH_ZGC_14 Danio rerio cDNA clone IMAGE:7227944 5'	6.286362427
wu:fb16h02	AGENCOURT_22822120 NIH_ZGC_9 Danio rerio cDNA clone IMAGE:7280302 5'	6.286067399
hm13	Danio rerio histocompatibility (minor) 13 (hm13), mRNA [NM_212572]	6.285823562
scap2	Danio rerio src family associated phosphoprotein 2 (scap2), mRNA [NM_200628]	6.284750337
zgc:91981	Danio rerio zgc:91981 (zgc:91981), mRNA [NM_001002653]	6.283651133
zgc:77725	Danio rerio zgc:77725 (zgc:77725), mRNA [NM_199548]	6.281925073
zgc:56344	Danio rerio zgc:56344 (zgc:56344), mRNA [NM_212632]	6.281641175
wu:fc04a02	fc04a02.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372036	6.281140773
TC279018	Q9PWD8 (Q9PWD8) Type I cytokeratin, partial (98%) [TC279018]	6.281042152
zgc:92557	Danio rerio zgc:92557 (zgc:92557), mRNA [NM_001008573]	6.280791831
zgc:100815	Danio rerio zgc:100815 (zgc:100815), mRNA [NM_001003758]	6.278949176
cdk8	Danio rerio, Similar to cyclin-dependent kinase 8, clone IMAGE:3820094, mRNA. [f	6.277316322
zgc:101101	Danio rerio zgc:101101 (zgc:101101), mRNA [NM_214712]	6.276610221
rab14	Danio rerio RAB14, member RAS oncogene family (rab14), mRNA [NM_201495]	6.276157419
zgc:77741	Danio rerio zgc:77741 (zgc:77741), mRNA [NM_199644]	6.275835472
lmnb1	Danio rerio lamin B1 (lmnb1), mRNA [NM_152972]	6.275015216
Ubi-p63E	Danio rerio similar to ubiquitin C, mRNA (cDNA clone IMAGE:5913895), partial cds	6.274882967
txnlp	Danio rerio thioredoxin interacting protein (txnlp), mRNA [NM_200087]	6.274494059
hsp90a	Danio rerio heat shock protein 90-alpha (hsp90a), mRNA [NM_131328]	6.274476075
zgc:73350	Danio rerio zgc:73350 (zgc:73350), mRNA [NM_200800]	6.274047002
psmc1	Danio rerio proteasome (prosome, macropain) 26S subunit, ATPase, 1 (psmc1), m	6.273991437
zgc:85809	Danio rerio zgc:85809 (zgc:85809), mRNA [NM_213286]	6.273375942
zgc:55695	Danio rerio zgc:55695 (zgc:55695), mRNA [NM_201089]	6.273368214
AJ243959	Danio rerio mRNA for hypothetical protein, clone sd29. [AJ243959]	6.273156185
zgc:56504	Danio rerio zgc:56504, mRNA (cDNA clone MGC:56504 IMAGE:5777534), comple	6.272501269
casc3	Danio rerio cancer susceptibility candidate 3 (casc3), mRNA [NM_205716]	6.271649301
zgc:101101	Danio rerio zgc:101101 (zgc:101101), mRNA [NM_214712]	6.271475606
ENSDART00C	AGENCOURT_19459329 NIH_ZGC_16 Danio rerio cDNA clone IMAGE:7214692 5'	6.271232207
odc1	Danio rerio ornithine decarboxylase 1 (odc1), mRNA [NM_131801]	6.271137276
zgc:56134	Danio rerio zgc:56134 (zgc:56134), mRNA [NM_200014]	6.270887595
zgc:55902	Danio rerio zgc:55902 (zgc:55902), mRNA [NM_213068]	6.270054609
zgc:92362	Danio rerio zgc:92362 (zgc:92362), mRNA [NM_001002213]	6.269293213
TC281848	TAF4_HUMAN (Q12962) Transcription initiation factor TFIID subunit 10 (Transcript	6.269187684
zgc:103708	Danio rerio zgc:103708 (zgc:103708), mRNA [NM_001005941]	6.268777993
zgc:56330	Danio rerio zgc:56330 (zgc:56330), mRNA [NM_199683]	6.268614636
anxa1a	Danio rerio annexin A1a (anxa1a), mRNA [NM_181758]	6.268114241
ptplb	Danio rerio protein tyrosine phosphatase-like (proline instead of catalytic arginine),	6.2680131
hm13	Danio rerio histocompatibility (minor) 13 (hm13), mRNA [NM_212572]	6.267894802
TC292921	CU4B_HUMAN (Q13620) Cullin homolog 4B (CUL-4B), partial (95%) [TC292921]	6.26735142
dusp6	Danio rerio dual specificity phosphatase 6 (dusp6), mRNA [NM_194380]	6.26728961
cpvl	Danio rerio carboxypeptidase, vitellogenic-like (cpvl), mRNA [NM_199278]	6.264765224
TC281703	NISM_BOVIN (Q02380) NADH-ubiquinone oxidoreductase SGD subunit, mitoch	6.2646468
ndufb10	Danio rerio NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 10 (ndufb10), r	6.263266032
ENSDART00C	Q7T2W9 (Q7T2W9) Complement protein component C7, partial (48%) [TC271593]	6.262253799
TC290463	Q9PUK9 (Q9PUK9) High mobility group protein HMG1, partial (22%) [TC290463]	6.262037007
zgc:55580	Danio rerio zgc:55580 (zgc:55580), mRNA [NM_200918]	6.260605894
zgc:92432	Danio rerio zgc:92432 (zgc:92432), mRNA [NM_001002175]	6.260514277
zgc:73355	Danio rerio zgc:73355 (zgc:73355), mRNA [NM_200803]	6.260188913
wu:fb63g02	Danio rerio wu:fb63g02 (wu:fb63g02), mRNA [NM_212622]	6.260078772
zgc:73197	Danio rerio zgc:73197 (zgc:73197), mRNA [NM_200058]	6.259955405
ENSDART00C	AF086645 metastasis suppressor protein {Homo sapiens;} , partial (21%) [TC2835;	6.257999133
brd8	Danio rerio bromodomain containing 8 (brd8), mRNA [NM_212777]	6.257789603
zgc:55615	Danio rerio zgc:55615 (zgc:55615), mRNA [NM_200927]	6.257699417
zgc:63962	Danio rerio zgc:63962 (zgc:63962), mRNA [NM_199748]	6.256595708
evx1	Danio rerio even-skipped homeobox 1 (evx1), mRNA [NM_131249]	6.25642883
zp3b	Danio rerio zona pellucida glycoprotein 3 b (zp3b), mRNA [NM_131696]	6.256209639
BC056551	Danio rerio cDNA clone IMAGE:6794135, partial cds. [BC056551]	6.256183735
zgc:85807	Danio rerio zgc:85807 (zgc:85807), mRNA [NM_213289]	6.256075196
ENSDART00C	T00742 ubiquitin-binding protein homolog A-735G6.2 - human {Homo sapiens;} , p	6.255691357
CF543835	DRerAM-52400053 zebrafish late somitogenesis cDNA library ICRFp524 Danio rer	6.254798951
zgc:101532	Danio rerio zgc:101532 (zgc:101532), mRNA [NM_214718]	6.254737034
TC267956	Q8JH37 (Q8JH37) Vitellogenin 1 (Fragment), partial (83%) [TC267956]	6.251614131
zgc:56296	Danio rerio zgc:56296 (zgc:56296), mRNA [NM_213376]	6.251159545
wu:fi15g04	Danio rerio wu:fi15g04, mRNA (cDNA clone IMAGE:5915397), partial cds. [BC0574	6.251004507
zgc:92421	Danio rerio zgc:92421 (zgc:92421), mRNA [NM_001002076]	6.250580448
zgc:92757	Danio rerio zgc:92757 (zgc:92757), mRNA [NM_001002566]	6.249895093

ENSDART00C	Q719H9 (Q719H9) Potassium channel tetramerization domain-containing 1 (KCTD	6.203151169
ndrg3a	Danio rerio N-myc downstream regulated family member 3a (ndrg3a), mRNA [NM_	6.202468868
TC277748	Q6P3J5 (Q6P3J5) Eukaryotic translation elongation factor 2, like, partial (40%) [TC	6.20077006
mibp2	Danio rerio muscle-specific beta 1 integrin binding protein 2 (mibp2), mRNA [NM_1	6.20050632
psen2	Danio rerio presenilin2 (psen2), mRNA [NM_131514]	6.200206476
chordc1	Danio rerio cysteine and histidine-rich domain (CHORD)-containing, zinc binding pr	6.199869952
zgc:56225	AW202851 fj23b04.y1 Zebrafish adult olfactory Danio rerio cDNA 5', mRNA sequer	6.199726558
BC056779	Danio rerio cDNA clone IMAGE:3816160, partial cds. [BC056779]	6.19910273
zgc:103451	Danio rerio zgc:103451 (zgc:103451), mRNA [NM_001008614]	6.198879708
zgc:77637	Q8AVU5 (Q8AVU5) MGC52819 protein, partial (72%) [TC293116]	6.197833042
rac1	Danio rerio ras-related C3 botulinum toxin substrate 1 (rho family, small GTP bindir	6.197349996
atp6v0d1	Danio rerio ATPase, H+ transporting, V0 subunit D isoform 1 (atp6v0d1), mRNA [N	6.195683783
ENSDART00C	BTCIB8 NADH dehydrogenase {Bos taurus;} , partial (80%) [TC290547]	6.195361665
BI326630	fp37h02.x3 zebrafish gridded kidney Danio rerio cDNA clone IMAGE:4759130 3', r	6.194546225
zgc:77637	Danio rerio zgc:77637 (zgc:77637), mRNA [NM_199990]	6.193901043
zgc:77197	Danio rerio zgc:77197 (zgc:77197), mRNA [NM_207075]	6.192734187
zgc:64162	Danio rerio zgc:64162 (zgc:64162), mRNA [NM_200385]	6.192610239
zgc:64102	Danio rerio zgc:64102 (zgc:64102), mRNA [NM_201208]	6.192272358
han11l	Danio rerio HAN11-like (han11l), mRNA [NM_200069]	6.191976517
CO355761	DR_ATE_NRM12_C08 adult testis normalized (TLL) Danio rerio cDNA, mRNA seq	6.190921207
zgc:73214	Danio rerio zgc:73214 (zgc:73214), mRNA [NM_213019]	6.190104244
ENSDART00C	Q9VWW8 (Q9VWW8) CG10424-PA (GH09035p), partial (42%) [TC293617]	6.189501032
zgc:92864	Danio rerio zgc:92864 (zgc:92864), mRNA [NM_001005924]	6.189076475
zgc:77299	Danio rerio zgc:77299 (zgc:77299), mRNA [NM_205637]	6.18872924
LOC445395	Danio rerio RIKEN cDNA 2410004I17-like (LOC445395), mRNA [NM_001003872]	6.188429734
tnfsf5ip1	Danio rerio tumor necrosis factor superfamily, member 5-induced protein 1 (tnfsf5ip	6.187774098
zgc:56363	Danio rerio zgc:56363 (zgc:56363), mRNA [NM_201128]	6.187247293
tfpia	Danio rerio tissue factor pathway inhibitor a (tfpia), mRNA [NM_182872]	6.18714454
TC283697	Q91ZY6 (Q91ZY6) Nuclear receptor coactivator GT198, partial (36%) [TC283697]	6.186148341
zgc:103709	Danio rerio zgc:103709 (zgc:103709), mRNA [NM_001005940]	6.185994441
wu:fa18c12	fa18c12.s1 Ekkerearly gastrulation zebrafish embryo Danio rerio cDNA clone 1036f	6.185781399
her6	Danio rerio hairy-related 6 (her6), mRNA [NM_131079]	6.185768726
TC271295	HSEXP0RTI Exportin(tRNA) {Homo sapiens;} , partial (9%) [TC271295]	6.184140266
zgc:63767	Danio rerio zgc:63767, mRNA (cDNA clone MGC:63767 IMAGE:2641824), comple	6.184047544
pald	Danio rerio paladin (pald), mRNA [NM_198811]	6.182401083
zgc:56116	Danio rerio zgc:56116 (zgc:56116), mRNA [NM_200196]	6.181767886
uqcrfs1	Danio rerio ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1 (uq	6.181664324
znf207	Danio rerio zinc finger protein 207 (znf207), mRNA [NM_199665]	6.181216318
MAP3K7IP1	Danio rerio TAK1-binding protein 1, mRNA (cDNA clone IMAGE:6971404), partial c	6.179261369
zgc:56101	Danio rerio zgc:56101 (zgc:56101), mRNA [NM_213010]	6.178684672
CK703042	CK703042 ZF101-P00002-DEPE-R_D14 GISZF001_ra Danio rerio cDNA clone IM	6.178670391
zgc:77147	Danio rerio zgc:77147 (zgc:77147), mRNA [NM_205646]	6.17820926
rpl4	Danio rerio ribosomal protein L4 (rpl4), mRNA [NM_213107]	6.176572775
zgc:56471	Danio rerio zgc:56471 (zgc:56471), mRNA [NM_200291]	6.176514115
si:ch211-150c	Danio rerio si:ch211-150c22.2 (si:ch211-150c22.2), mRNA [NM_001006019]	6.175214782
bzw1	Danio rerio basic leucine zipper and W2 domains 1 (bzw1), mRNA [NM_199708]	6.174860678
zgc:77146	Danio rerio zgc:77146 (zgc:77146), mRNA [NM_213298]	6.174852134
sf3b5	Danio rerio splicing factor 3b, subunit 5 (sf3b5), mRNA [NM_001002478]	6.174133517
TC294699	Q8WVL7 (Q8WVL7) Fetal globin inducing factor, partial (69%) [TC294699]	6.171647092
zgc:92057	Danio rerio zgc:92057 (zgc:92057), mRNA [NM_001007323]	6.170797596
TC290737	SFR9_HUMAN (Q13242) Splicing factor, arginine/serine-rich 9 (Pre-mRNA splicing	6.170737666
arl2bp	Danio rerio ADP-ribosylation factor-like 2 binding protein (arl2bp), mRNA [NM_2010	6.170282177
zgc:86853	Danio rerio zgc:86853 (zgc:86853), mRNA [NM_001009896]	6.169028843
seh1l	Danio rerio SEH1-like (S. cerevisiae) (seh1l), mRNA [NM_199923]	6.168882719
zgc:103782	Danio rerio zgc:103782 (zgc:103782), mRNA [NM_001005592]	6.168796272
sdcbp	Danio rerio syndecan binding protein (syntenin) (sdcbp), mRNA [NM_212691]	6.16850043
TC279019	Unknown	6.167848757
zgc:85694	Danio rerio zgc:85694 (zgc:85694), mRNA [NM_214746]	6.167777128
h1m	Danio rerio linker histone H1M (h1m), mRNA [NM_183071]	6.166522368
rac1	Danio rerio ras-related C3 botulinum toxin substrate 1 (rho family, small GTP bindir	6.166347716
wu:fj61b01	fj61b01.x1 zebrafish adult brain Danio rerio cDNA 3', mRNA sequence [AW282020]	6.166161397
zgc:103488	Danio rerio zgc:103488 (zgc:103488), mRNA [NM_001007345]	6.164788553
CO920034	AGENCOURT_30419550 NIH_ZGC_17 Danio rerio cDNA clone IMAGE:7425636 5'	6.16454301
TC269288	Q8UVE6 (Q8UVE6) Transcription factor AP2 alpha 1, complete [TC269288]	6.164129602
CD605735	RK058A1E12.T7 Zebrafish Kidney Marrow cDNA library Danio rerio cDNA clone RI	6.163348952
pcbp2	Danio rerio poly(rC) binding protein 2 (pcbp2), mRNA [NM_201192]	6.163329129
psmb1	Danio rerio proteasome (prosome, macropain) subunit, beta type, 1 (psmb1), mRN	6.163279699
zgc:64222	Q6KCE3 (Q6KCE3) Histone H3.3, complete [TC291777]	6.160558112
TC272645	RT14_HUMAN (O60783) Mitochondrial 28S ribosomal protein S14 (S14mt) (MRP-5	6.159175527
CO920252	AGENCOURT_30429352 NIH_ZGC_17 Danio rerio cDNA clone IMAGE:7417404 5'	6.158854107
mg:ab04g06	ab04g06.p1 ZF adult heart library Danio rerio cDNA 5 prime, mRNA sequence [AIJ	6.158771592
LOC407641	Danio rerio hypothetical protein LOC407641, mRNA (cDNA clone IMAGE:5915890)	6.158308558
zgc:92671	Danio rerio zgc:92671 (zgc:92671), mRNA [NM_001003439]	6.158100768
LOC445395	Danio rerio RIKEN cDNA 2410004I17-like (LOC445395), mRNA [NM_001003872]	6.157859452
TC282119	ATTY_MOUSE (Q8QZR1) Tyrosine aminotransferase (L-tyrosine:2-oxoglutarate a	6.157736337
cct7	Danio rerio chaperonin containing TCP1, subunit 7 (eta) (cct7), mRNA [NM_173248	6.157513533
zgc:64050	Danio rerio zgc:64050 (zgc:64050), mRNA [NM_001007186]	6.157160629
zgc:55982	Danio rerio zgc:55982 (zgc:55982), mRNA [NM_213061]	6.156872364
zgc:77187	Danio rerio zgc:77187 (zgc:77187), mRNA [NM_205566]	6.156465008
zgc:55712	Danio rerio zgc:55712 (zgc:55712), mRNA [NM_199575]	6.155978182
TC287951	Q7PKG0 (Q7PKG0) ENSANGP00000024462 (Fragment), partial (30%) [TC287951]	6.1554919

itm1	Danio rerio integral membrane protein 1 (itm1), mRNA [NM_201458]	6.104281376
TC293668	Q9VLP7 (Q9VLP7) CG7818-PA (LD06016p), partial (67%) [TC293668]	6.103653325
arha	Danio rerio ras homolog gene family, member A (arha), mRNA [NM_212749]	6.103519222
ENSDART000	BC014051 small inducible cytokine subfamily E, member 1 {Homo sapiens;}, parti	6.103164732
cct6a	Danio rerio chaperonin containing TCP1, subunit 6A (zeta 1) (cct6a), mRNA [NM_2	6.102377113
pane1	proliferation associated nuclear element [Source:ZFIN;Acc:ZDB-GENE-040611-4] [	6.101739844
zgc:55970	Danio rerio zgc:55970 (zgc:55970), mRNA [NM_201176]	6.101585512
zgc:56055	Danio rerio zgc:56055 (zgc:56055), mRNA [NM_213049]	6.101082739
CN316175	AGENCOURT_21849026 NIH_ZGC_8 Danio rerio cDNA clone IMAGE:7261507 5'	6.100572453
hrmt1l2	Danio rerio HMT1 hnRNP methyltransferase-like 2 (S. cerevisiae) (hrmt1l2), mRNA	6.100443516
BC076043	Danio rerio cDNA clone IMAGE:7047554, partial cds. [BC076043]	6.099577673
TC290257	Q8JHI0 (Q8JHI0) Solute carrier family 25 member 5 protein (Solute carrier family 2	6.099481088
rtm4rl2a	Danio rerio reticulon 4 receptor-like 2 a (rtm4rl2a), mRNA [NM_203479]	6.099306384
hrmt1l2	Danio rerio HMT1 hnRNP methyltransferase-like 2 (S. cerevisiae) (hrmt1l2), mRNA	6.098334001
nfkiab	Danio rerio nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibi	6.097631749
TC281242	Q9SXQ6 (Q9SXQ6) FEN-1, partial (33%) [TC281242]	6.09698156
rpl3	Danio rerio ribosomal protein L3 (rpl3), mRNA [NM_001001590]	6.096964998
TC290321	Q8JHI0 (Q8JHI0) Solute carrier family 25 member 5 protein (Solute carrier family 2	6.096941329
fads2	Danio rerio fatty acid desaturase 2 (fads2), mRNA [NM_131645]	6.096138383
spag7	Danio rerio sperm associated antigen 7 (spag7), mRNA [NM_201125]	6.095015654
CK027852	AGENCOURT_16620228 NIH_ZGC_7 Danio rerio cDNA clone IMAGE:7053221 5'	6.094457943
zgc:101877	Danio rerio zgc:101877 (zgc:101877), mRNA [NM_001007376]	6.094419517
zgc:55553	Danio rerio zgc:55553 (zgc:55553), mRNA [NM_200163]	6.094357144
CO353882	DR_ATE_FL20_H10 adult testis full-length (TLL) Danio rerio cDNA, mRNA sequen	6.09398282
wu:fb13h08	AGENCOURT_17177074 NIH_ZGC_4 Danio rerio cDNA clone IMAGE:7086257 5'	6.092251116
zgc:55712	Danio rerio zgc:55712 (zgc:55712), mRNA [NM_199575]	6.092179852
zgc:73198	Danio rerio zgc:73198 (zgc:73198), mRNA [NM_200747]	6.091227335
CN022050	AGENCOURT_20754268 NIH_ZGC_14 Danio rerio cDNA clone IMAGE:7229320 5'	6.090722418
wu:fc59f06	AGENCOURT_16619446 NIH_ZGC_7 Danio rerio cDNA clone IMAGE:7053017 5'	6.09001876
TC283416	Q86YQ9 (Q86YQ9) Morn protein, partial (49%) [TC283416]	6.089696744
zgc:92576	Danio rerio zgc:92576 (zgc:92576), mRNA [NM_001002729]	6.089014563
wu:fb60g09	AGENCOURT_21057238 NIH_ZGC_8 Danio rerio cDNA clone IMAGE:7245278 5'	6.088741907
ENSDART000	Q8JHU8 (Q8JHU8) Calpain regulatory subunit, partial (90%) [TC289971]	6.088239486
zgc:101811	Danio rerio zgc:101811 (zgc:101811), mRNA [NM_001006049]	6.087873551
wdr1	Danio rerio WD repeat domain 1 (wdr1), mRNA [NM_201039]	6.087376021
zgc:100925	Danio rerio zgc:100925 (zgc:100925), mRNA [NM_001002746]	6.087182032
hnrbu	Danio rerio heterogeneous nuclear ribonucleoprotein U (hnrbu), mRNA [NM_00100	6.08717603
nfbk2	Danio rerio nuclear factor of kappa light polypeptide gene enhancer in B-cells 2, p4	6.086829927
nek2	Danio rerio NIMA (never in mitosis gene a)-related kinase 2 (nek2), mRNA [NM_20	6.086507489
acta1	Danio rerio actin, alpha 1, skeletal muscle (acta1), mRNA [NM_131591]	6.086239603
TC285326	O81126 (O81126) 9G8-like SR protein (RSZp22 splicing factor), partial (8%) [TC28	6.085995645
ENSDART000	BC017532 abhydrolase domain containing 4 {Mus musculus;}, partial (34%) [TC2	6.084823448
zgc:55569	Danio rerio zgc:55569 (zgc:55569), mRNA [NM_200935]	6.08471152
zgc:63555	Danio rerio zgc:63555 (zgc:63555), mRNA [NM_214766]	6.08418077
TC294112	Q9HB90 (Q9HB90) Rag C (Ras-related GTP binding C), partial (84%) [TC294112]	6.08313999
tcerg1	Danio rerio transcription elongation regulator 1 (CA150) (tcerg1), mRNA [NM_1983	6.083109053
malt1	Danio rerio mucosa associated lymphoid tissue lymphoma translocation gene 1 (m	6.081301385
hnrbu	Danio rerio heterogeneous nuclear ribonucleoprotein U (hnrbu), mRNA [NM_00100	6.081074529
caspa	caspase a [Source:ZFIN;Acc:ZDB-GENE-000616-3] [ENSDART00000034544]	6.079165294
Al626481	fc06g06.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372063	6.079018699
CN322300	AGENCOURT_21611959 NIH_ZGC_19 Danio rerio cDNA clone IMAGE:7256627 5'	6.07784421
vasa	Danio rerio vasa homolog (vasa), mRNA [NM_131057]	6.077682637
zgc:91863	Danio rerio zgc:91863 (zgc:91863), mRNA [NM_001003468]	6.077251279
sb:cb124	STR00147 gastrula stage cDNA library Danio rerio cDNA clone CB124 5', mRNA s	6.076669626
mapkapk2	Danio rerio mitogen-activated protein kinase-activated protein kinase 2 (mapkapk2)	6.076540459
CO350434	DR_AOV_FL10_G04 adult ovary full-length (TLL) Danio rerio cDNA, mRNA sequer	6.076519076
BM034698	fu34f03.y3 zebrafish adult brain Danio rerio cDNA clone IMAGE:5331580 5', mRNA	6.076366595
nras	Danio rerio N-ras oncogene p21 (nras), mRNA [NM_131145]	6.075073811
CV488868	AGENCOURT_33241172 NIH_ZGC_15 Danio rerio cDNA clone IMAGE:7449084 3'	6.073947084
zgc:101723	Danio rerio zgc:101723 (zgc:101723), mRNA [NM_001005600]	6.073665347
zgc:92851	Danio rerio zgc:92851 (zgc:92851), mRNA [NM_001002493]	6.073036963
TC269500	Q7ZY90 (Q7ZY90) Plod-prov protein, partial (65%) [TC269500]	6.072699594
hnrbp	Danio rerio heterogeneous nuclear ribonucleoprotein R (hnrbp), mRNA [NM_21342	6.072635138
TC282628	AVEN_MOUSE (Q9D9K3) Cell death regulator Aven, partial (22%) [TC282628]	6.072535027
ucp4	Danio rerio uncoupling protein 4 (ucp4), mRNA [NM_199523]	6.072442976
rbm4l	Danio rerio RNA binding motif protein 4, like (rbm4l), mRNA [NM_199677]	6.07159113
zgc:92687	Danio rerio zgc:92687 (zgc:92687), mRNA [NM_001004571]	6.071085361
siaf6	Danio rerio sialyltransferase 6 (N-acetylglucosaminide alpha 2,3-sialyltransferase) (s	6.070896547
zgc:92191	AGENCOURT_30540912 NIH_ZGC_19 Danio rerio cDNA clone IMAGE:7428255 5'	6.07059438
zgc:66438	Danio rerio zgc:66438 (zgc:66438), mRNA [NM_199788]	6.070349628
CN015256	AGENCOURT_21022563 NIH_ZGC_14 Danio rerio cDNA clone IMAGE:7227340 5'	6.069678723
wu:fb48d02	fi04g02.x1 Sugano Kawakami zebrafish DRA Danio rerio cDNA clone IMAGE:2600	6.069164194
zgc:92131	Danio rerio zgc:92131 (zgc:92131), mRNA [NM_001004594]	6.068983874
zgc:63526	Danio rerio zgc:63526 (zgc:63526), mRNA [NM_200433]	6.068813879
zgc:92471	Danio rerio zgc:92471 (zgc:92471), mRNA [NM_001002220]	6.06868319
sap18	Danio rerio sin3-associated polypeptide (sap18), mRNA [NM_200720]	6.068637895
zgc:101686	Danio rerio zgc:101686 (zgc:101686), mRNA [NM_001007432]	6.067701358
psmb1	AGENCOURT_20754132 NIH_ZGC_14 Danio rerio cDNA clone IMAGE:7229120 5'	6.06752433
dhfrs1	Danio rerio dehydrogenase/reductase (SDR family) member 1 (dhfrs1), mRNA [NM_	6.067367298
BC090798	Danio rerio cDNA clone MGC:113102 IMAGE:7152841, complete cds. [BC090798]	6.067276596
zgc:100934	Danio rerio zgc:100934 (zgc:100934), mRNA [NM_205618]	6.065852675

zgc:91862	Danio rerio zgc:91862 (zgc:91862), mRNA [NM_001003469]	6.065768418
vps28	Danio rerio vacuolar protein sorting 28 (yeast) (vps28), mRNA [NM_200590]	6.06534452
si:zf0s-47c12.	fc29d04.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372279	6.065102835
CN321581	AGENCOURT_21609287 NIH_ZGC_19 Danio rerio cDNA clone IMAGE:7256244	6.062658663
TC296080	BC067543 zgc:85610 protein {Danio rerio;} , partial (51%) [TC296080]	6.062146222
wu:fj10g10	fj10g10.x1 Zebrafish adult olfactory Danio rerio cDNA 3', mRNA sequence [AW203	6.061767274
TC286539	Q7SYC9 (Q7SYC9) Sb:cb39, partial (27%) [TC286539]	6.061380739
CK353164	AGENCOURT_17061379 NIH_ZGC_9 Danio rerio cDNA clone IMAGE:7071660 5'	6.060569415
irx6a	AGENCOURT_22402086 NIH_ZGC_9 Danio rerio cDNA clone IMAGE:7274722 5'	6.058856732
zgc:65847	Danio rerio zgc:65847 (zgc:65847), mRNA [NM_213124]	6.05798433
TC285489	MUSCAMC calmodulin {Mus musculus;} , partial (76%) [TC285489]	6.057927645
cops3	Danio rerio COP9 constitutive photomorphogenic homolog subunit 3 (cops3), mRN	6.057418252
zgc:56156	Danio rerio zgc:56156 (zgc:56156), mRNA [NM_200200]	6.056576767
TC283657	CLC2_CAVPO (Q9WU45) Chloride channel protein 2 (CIC-2), partial (29%) [TC283	6.056426176
zgc:101653	Danio rerio zgc:101653 (zgc:101653), mRNA [NM_001007441]	6.055972933
TC291958	Q7ZTM3 (Q7ZTM3) Slc7a8-prov protein, partial (40%) [TC291958]	6.055467254
TC269020	Q6NUU2 (Q6NUU2) Zgc:85935, partial (25%) [TC269020]	6.053848398
zgc:77591	Danio rerio zgc:77591 (zgc:77591), mRNA [NM_214702]	6.052530099
zgc:56708	Danio rerio zgc:56708 (zgc:56708), mRNA [NM_200310]	6.051856841
ap2b1	Danio rerio adaptor-related protein complex 2, beta 1 subunit (ap2b1), mRNA [NM_	6.051741798
c20orf11	STR00853 gastrula stage cDNA library Danio rerio cDNA clone CB482 5' similar to	6.051683932
anxa5	Danio rerio annexin A5 (anxa5), mRNA [NM_181757]	6.050203025
zgc:73265	Danio rerio zgc:73265 (zgc:73265), mRNA [NM_200766]	6.049259515
zgc:56023	Danio rerio zgc:56023 (zgc:56023), mRNA [NM_213054]	6.048707982
rplp0	Danio rerio ribosomal protein, large, P0, mRNA (cDNA clone MGC:77791 IMAGE:7	6.047714412
wu:fj46h05	fj46h05.y1 zebrafish adult brain Danio rerio cDNA 5' similar to gb:X07292_cds1 FR	6.047567815
zgc:103670	Danio rerio zgc:103670 (zgc:103670), mRNA [NM_001004664]	6.047190114
wdr21	Danio rerio WD repeat domain 21 (wdr21), mRNA [NM_200701]	6.046718627
ENSDART000	AE003479 CG11624-PC {Drosophila melanogaster;} , partial (29%) [TC268183]	6.046034773
CO354205	DR_ATE_FL24_E07 adult testis full-length (TLL) Danio rerio cDNA, mRNA sequen	6.045965873
ndrg3a	Danio rerio N-myc downstream regulated family member 3a (ndrg3a), mRNA [NM_	6.04575896
zgc:55407	Danio rerio zgc:55407 (zgc:55407), mRNA [NM_200236]	6.045282535
TC279982	Q8AVK1 (Q8AVK1) MGC53939 protein, partial (97%) [TC279982]	6.045082498
rpa2	Danio rerio replication protein A2 (rpa2), mRNA [NM_131711]	6.044868441
zgc:77816	Danio rerio zgc:77816 (zgc:77816), mRNA [NM_200869]	6.044692138
zgc:66325	Danio rerio zgc:66325 (zgc:66325), mRNA [NM_201041]	6.044359315
TC298250	Q8JZT2 (Q8JZT2) Solute carrier family 25 (Mitochondrial carrier; phosphate carrier	6.043342389
ak2	Danio rerio adenylate kinase 2 (ak2), mRNA [NM_212596]	6.043195011
zgc:92747	Danio rerio zgc:92747 (zgc:92747), mRNA [NM_001002571]	6.042722121
zgc:101038	Danio rerio zgc:101038 (zgc:101038), mRNA [NM_001003589]	6.042100459
zgc:92284	Danio rerio zgc:92284 (zgc:92284), mRNA [NM_001004583]	6.041197157
rpa2	Danio rerio replication protein A2 (rpa2), mRNA [NM_131711]	6.040747505
BI474280	fp56e05.x3 zebrafish gridded kidney Danio rerio cDNA clone IMAGE:4760553 3', m	6.040642115
tpma	Danio rerio alpha-tropomyosin (tpma), mRNA [NM_131105]	6.040603222
BQ449833	faa61a03.y1 Gong zebrafish testis Danio rerio cDNA clone IMAGE:5898125 5' simi	6.040377748
fgb	Danio rerio fibrinogen, B beta polypeptide (fgb), mRNA [NM_212774]	6.040279051
AI794623	fc46f10.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372445	6.03954934
wu:fc10g05	fc10g05.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372101	6.038340172
wu:fi33h01	AGENCOURT_20754544 NIH_ZGC_15 Danio rerio cDNA clone IMAGE:7224034	6.036287497
zgc:92608	Danio rerio zgc:92608 (zgc:92608), mRNA [NM_001002706]	6.035916205
ENSDART000	AGENCOURT_21030952 NIH_ZGC_8 Danio rerio cDNA clone IMAGE:7248997 5'	6.034950868
wu:fc22a07	Danio rerio wu:fc22a07 (wu:fc22a07), mRNA [NM_212669]	6.034750738
zgc:73293	Danio rerio zgc:73293 (zgc:73293), mRNA [NM_213028]	6.034355596
tcp1	Danio rerio t-complex polypeptide 1 (tcp1), mRNA [NM_131230]	6.034193178
TC297900	Q9QZ66 (Q9QZ66) Amino acid transporter y+LAT1, partial (22%) [TC297900]	6.034081465
wu:fj54e12	AGENCOURT_17517280 NIH_ZGC_4 Danio rerio cDNA clone IMAGE:7120599 5'	6.033718356
ldb3l	Danio rerio LIM domain binding 3 like (ldb3l), mRNA [NM_199858]	6.033398941
TC270041	CE05_HUMAN (Q9NYF5) Protein C5orf5 (GAP-like protein N61), partial (34%) [TC	6.033011817
scamp2	Danio rerio secretory carrier membrane protein 2 (scamp2), mRNA [NM_213378]	6.032855781
TC292314	Unknown	6.031590041
TC278021	GPXC_DIRIM (P52033) Glutathione peroxidase precursor (Di29) , partial (52%) [T	6.030652385
mp:zf637-1-0C	ZF637-1-000125 Zebrafish shield stage whole embryo cDNA library MPMGP637 Di	6.030292957
clndnd	Danio rerio claudin d (clndnd), mRNA [NM_180964]	6.030130028
ENSDART000	Q9BWT1 (Q9BWT1) C-Myc target JPO1 (Cell division cycle associated protein 7, is	6.029726367
zgc:92131	Danio rerio zgc:92131 (zgc:92131), mRNA [NM_001004594]	6.029493644
zgc:76953	Danio rerio zgc:76953 (zgc:76953), mRNA [NM_214759]	6.02925996
BC083442	Danio rerio cDNA clone IMAGE:7254682. [BC083442]	6.029224134
zgc:64123	Danio rerio zgc:64123 (zgc:64123), mRNA [NM_213135]	6.029172772
sfrs5	Danio rerio splicing factor, arginine/serine-rich 5 (sfrs5), mRNA [NM_200867]	6.028886694
terfa	Danio rerio telomeric repeat binding factor a (terfa), mRNA [NM_173243]	6.028734016
TC269859	2BCC_H Chain H, Stigmatellin-Bound Cytochrome Bc1 Complex From Chicken. {C	6.028373985
zgc:101865	Danio rerio zgc:101865 (zgc:101865), mRNA [NM_001007378]	6.028337972
exosc4	Danio rerio exosome component 4 (exosc4), mRNA [NM_200739]	6.028160818
ap2b1	Danio rerio adaptor-related protein complex 2, beta 1 subunit (ap2b1), mRNA [NM_	6.028153731
BG729087	fp04e02.x1 zebrafish gridded kidney Danio rerio cDNA clone IMAGE:4728651 3' s	6.027402786
TC297639	NIMM_MOUSE (O35683) NADH-ubiquinone oxidoreductase MWFE subunit (Corr	6.02738127
TC301431	O42444 (O42444) Chemokine receptor, partial (32%) [TC301431]	6.027124318
sfpq	Danio rerio splicing factor proline/glutamine rich (polypyrimidine tract binding protei	6.027076605
cth	Danio rerio cystathionase (cystathionine gamma-lyase) (cth), mRNA [NM_212604]	6.025860548
zgc:77377	Danio rerio zgc:77377 (zgc:77377), mRNA [NM_213272]	6.025635271
zgc:66321	Danio rerio zgc:66321 (zgc:66321), mRNA [NM_201118]	6.025567325

zgc:77542	Danio rerio zgc:77542 (zgc:77542), mRNA [NM_212636]	6.025472963
zgc:103472	Danio rerio zgc:103472 (zgc:103472), mRNA [NM_001008611]	6.025035205
ENSDART00C	Q9I932 (Q9I932) Complement C4-2, partial (29%) [TC295319]	6.02422265
CO356423	DR_ATE_NRM19_E08 adult testis normalized (TLL) Danio rerio cDNA, mRNA seq	6.023823256
CN500606	AGENCOURT_22440389 NIH_ZGC_9 Danio rerio cDNA clone IMAGE:7271251 5'	6.023821155
TC297755	Q812D6 (Q812D6) Lingerer protein-1, partial (23%) [TC297755]	6.023501507
scarb1	Danio rerio scavenger receptor class B, member 1 (scarb1), mRNA [NM_198921]	6.022737755
si:ch211-1011	fb67g03.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:371698	6.022516276
CN322300	AGENCOURT_21611959 NIH_ZGC_19 Danio rerio cDNA clone IMAGE:7256627 5'	6.022379586
cd9l	Danio rerio CD9 antigen, like (cd9l), mRNA [NM_213428]	6.022045602
zgc:56218	Danio rerio zgc:56218 (zgc:56218), mRNA [NM_199700]	6.021528907
TC284132	Q9UWD6 (Q9UWD6) Ac-type transposase homolog (Fragment), partial (39%) [TC2	6.020958813
TC275584	GB13_HUMAN (Q14344) Guanine nucleotide-binding protein, alpha-13 subunit (G	6.020086439
TC290051	Q8JHI0 (Q8JHI0) Solute carrier family 25 member 5 protein (Solute carrier family 2	6.019872932
BC076165	Danio rerio cDNA clone IMAGE:7073958, partial cds. [BC076165]	6.019153208
flj10613l	Danio rerio guanine nucleotide binding protein-like 3 (nucleolar)-like (gnl3l), mRNA	6.018627444
TC271513	BC054651 zgc:66137 {Danio rerio;} , complete [TC271513]	6.018197994
ENSDART00C	fb11a09.y1 zebrafish fin day0 regeneration Danio rerio cDNA 5' similar to gb:X6112	6.017567784
BC085675	Danio rerio cDNA clone MGC:92577 IMAGE:5912857, complete cds. [BC085675]	6.017147264
wu:fk84g05	AGENCOURT_20186052 NIH_ZGC_15 Danio rerio cDNA clone IMAGE:7226726 5'	6.01663277
zgc:55807	Danio rerio zgc:55807 (zgc:55807), mRNA [NM_212757]	6.016361797
wu:fi26g08	AGENCOURT_16392001 NIH_ZGC_7 Danio rerio cDNA clone IMAGE:7036272 5'	6.015767614
btg1	Danio rerio B-cell translocation gene 1 (btg1), mRNA [NM_200020]	6.015712471
zgc:85979	Danio rerio zgc:85979 (zgc:85979), mRNA [NM_213259]	6.014887256
gnai2l	Danio rerio guanine nucleotide binding protein (G protein), alpha inhibiting activity p	6.014795153
Gamt	Danio rerio guanidinoacetate N-methyltransferase (Gamt), mRNA [NM_205741]	6.014706845
zgc:66471	Danio rerio zgc:66471 (zgc:66471), mRNA [NM_212684]	6.013872411
BI865759	ft26f02.x1 Zebrafish neuronal Danio rerio cDNA clone IMAGE:5082747 3' similar to	6.013768792
stka	Danio rerio serine/threonine kinase a (stka), mRNA [NM_212566]	6.013538787
gstal	Danio rerio glutathione S-transferase, alpha-like (gstal), mRNA [NM_213394]	6.012452458
nola2	Danio rerio nucleolar protein family A, member 2 (H/ACA small nucleolar RNPs), m	6.012389194
dap1b	Danio rerio death associated protein 1b (dap1b), mRNA [NM_131573]	6.012314208
hic1l	Danio rerio hypermethylated in cancer zinc finger/POZ-domain 1 protein (hzip1) mR	6.01183075
zgc:66034	Danio rerio zgc:66034 (zgc:66034), mRNA [NM_199606]	6.011580347
zgc:56632	Danio rerio zgc:56632 (zgc:56632), mRNA [NM_213404]	6.011295542
zgc:56424	Danio rerio zgc:56424 (zgc:56424), mRNA [NM_200306]	6.011272432
zgc:56692	Danio rerio zgc:56692 (zgc:56692), mRNA [NM_213104]	6.011114054
zgc:85763	Danio rerio zgc:85763 (zgc:85763), mRNA [NM_212788]	6.010042402
zgc:77243	Danio rerio zgc:77243 (zgc:77243), mRNA [NM_205544]	6.009326688
CK401034	AGENCOURT_17518620 NIH_ZGC_4 Danio rerio cDNA clone IMAGE:7116651 5'	6.0091128
atad1b	AGENCOURT_10700583 NCI_CGAP_ZKId1 Danio rerio cDNA clone IMAGE:6796	6.008960277
BQ481013	faa73g09.x1 Gong zebrafish testis Danio rerio cDNA clone IMAGE:5899577 3', mR	6.00895105
TC293627	Q7L5N2 (Q7L5N2) LENG4 protein (Fragment), partial (41%) [TC293627]	6.008354308
BC076555	Danio rerio cDNA clone IMAGE:7044154, partial cds. [BC076555]	6.008225466
zgc:103522	Danio rerio zgc:103522 (zgc:103522), mRNA [NM_001005993]	6.007856317
titf1b	Danio rerio thyroid transcription factor 1b (titf1b), mRNA [NM_131776]	6.007807996
TC291286	BC055209 zgc:63694 {Danio rerio;} , partial (24%) [TC291286]	6.007788673
TC269295	Q80TY1 (Q80TY1) MKIAA0553 protein (Fragment), partial (35%) [TC269295]	6.007278399
zgc:55852	Danio rerio zgc:55852 (zgc:55852), mRNA [NM_199567]	6.006937956
zgc:85947	Danio rerio zgc:85947 (zgc:85947), mRNA [NM_214740]	6.006639545
wu:fc27f04	fc27f04.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:3722625	6.006456955
zgc:56252	Danio rerio zgc:56252 (zgc:56252), mRNA [NM_213387]	6.006063041
ENSDART00C	fl95c07.y1 Zebrafish adult retina cDNA Danio rerio cDNA clone IMAGE:4144501 5'	6.004828136
rplp0	Danio rerio ribosomal protein, large, P0, mRNA (cDNA clone MGC:77791 IMAGE:7	6.004451108
zgc:55345	Danio rerio zgc:55345 (zgc:55345), mRNA [NM_200128]	6.004237303
zgc:77739	Danio rerio zgc:77739 (zgc:77739), mRNA [NM_200896]	6.003723572
zgc:65964	Danio rerio zgc:65964 (zgc:65964), mRNA [NM_200584]	6.003406047
zgc:73343	Danio rerio zgc:73343 (zgc:73343), mRNA [NM_213021]	6.001634617
TC291062	BC066558 zgc:77429 protein {Danio rerio;} , complete [TC291062]	6.000476463
wu:fb99c01	fb99c01.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372000	5.999753007
zgc:66471	Danio rerio zgc:66471 (zgc:66471), mRNA [NM_212684]	5.999533804
seta	SET translocation (myeloid leukemia-associated) A [Source:ZFIN;Acc:ZDB-GENE-I	5.999435782
CK028474	CK028474 AGENCOURT_16620115 NIH_ZGC_7 Danio rerio cDNA clone IMAGE:	5.999327194
wu:fb66g07	AGENCOURT_20753534 NIH_ZGC_15 Danio rerio cDNA clone IMAGE:7222818 5'	5.999027044
ssb	Danio rerio Sjogren syndrome antigen B (autoantigen La) (ssb), mRNA [NM_19954	5.998145578
im:7140002	DR_ATE_ORE38_G11 adult testis ORESTES (TLL) Danio rerio cDNA, mRNA seq	5.997570716
zgc:56380	Danio rerio zgc:56380 (zgc:56380), mRNA [NM_200951]	5.996359023
TC269516	Q7Q517 (Q7Q517) AgCP6688 (Fragment), partial (7%) [TC269516]	5.996040003
wu:fc16a12	fc16a12.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372153	5.995866037
ivd	Danio rerio isovaleryl Coenzyme A dehydrogenase (ivd), mRNA [NM_201491]	5.995419012
gnai2l	Danio rerio guanine nucleotide binding protein (G protein), alpha inhibiting activity p	5.995189615
arf2	Danio rerio ADP-ribosylation factor 2 (arf2), mRNA [NM_201504]	5.994439035
TC272147	Q99MB3 (Q99MB3) Beta-amyloid binding protein, partial (57%) [TC272147]	5.99411764
zgc:73223	Danio rerio zgc:73223 (zgc:73223), mRNA [NM_200832]	5.993904103
sb:ch1058	AGENCOURT_19414472 NIH_ZGC_16 Danio rerio cDNA clone IMAGE:7212276 5'	5.993673664
TC286583	Q7TPA6 (Q7TPA6) Ab1-042, partial (33%) [TC286583]	5.992647983
zgc:63694	Danio rerio zgc:63694 (zgc:63694), mRNA [NM_213106]	5.991527667
hgd	Danio rerio homogentisate 1,2-dioxygenase (hgd), mRNA [NM_152966]	5.991356051
npc2	Danio rerio Niemann-Pick disease, type C2 (npc2), mRNA [NM_173224]	5.990875572
CN512008	AGENCOURT_22824380 NIH_ZGC_9 Danio rerio cDNA clone IMAGE:7277066 5'	5.990676595
zgc:65915	Danio rerio zgc:65915 (zgc:65915), mRNA [NM_200822]	5.990492912

zgc:55257	Danio rerio zgc:55257 (zgc:55257), mRNA [NM_200078]	5.990409955
zgc:77845	Danio rerio zgc:77845 (zgc:77845), mRNA [NM_213194]	5.990401004
zgc:55366	Danio rerio zgc:55366 (zgc:55366), mRNA [NM_199806]	5.990236997
psmd13	Danio rerio proteasome (prosome, macropain) 26S subunit, non-ATPase, 13 (psmd13)	5.989909845
rpl10a	Danio rerio ribosomal protein L10a (rpl10a), mRNA [NM_199636]	5.989827334
CN836645	AGENCOURT_25168842 NIH_ZGC_4 Danio rerio cDNA clone IMAGE:7295017 5'	5.989602798
hnrbp	Danio rerio heterogeneous nuclear ribonucleoprotein K (hnrbp), mRNA [NM_21299]	5.989503573
ENSDART00C	HSU79457 WW domain binding protein-1 {Homo sapiens:}, partial (22%) [TC2984]	5.989354837
zgc:101801	Danio rerio zgc:101801 (zgc:101801), mRNA [NM_001006052]	5.989285302
ack1	zgc:101801 Zebrafish adult olfactory Danio rerio cDNA 3' similar to TR:O54967 O54967	5.989205383
snrp70	Danio rerio small nuclear ribonucleoprotein 70kDa (snrp70), mRNA [NM_00100387]	5.988598453
zgc:92082	Danio rerio zgc:92082 (zgc:92082), mRNA [NM_001002374]	5.988327268
zgc:91794	Danio rerio zgc:91794 (zgc:91794), mRNA [NM_001002217]	5.988091078
atp6ap1	Danio rerio ATPase, H+ transporting, lysosomal accessory protein 1 (atp6ap1), mRNA	5.987893501
gas8	Danio rerio growth arrest-specific 8 (gas8), mRNA [NM_199634]	5.987434867
smc1l1	Danio rerio chromosome adhesion protein SMC1-like mRNA, complete cds. [AY648]	5.987396777
lyricl	Danio rerio lyric-like (lyricl), mRNA [NM_001007135]	5.98710293
ENSDART00C	VP36_HUMAN (Q12907) Vesicular integral-membrane protein VIP36 precursor (G12907)	5.986903682
BC085675	Danio rerio cDNA clone MGC:92577 IMAGE:5912857, complete cds. [BC085675]	5.986683816
zgc:77591	Danio rerio zgc:77591 (zgc:77591), mRNA [NM_214702]	5.98658165
ENSDART00C	Q93W25 (Q93W25) Cyclophilin A-3 (Cyclophilin A-1), partial (73%) [TC285677]	5.986379353
max	Danio rerio myc-associated factor X, mRNA (cDNA clone IMAGE:6795370), partial	5.986276156
ENSDART00C	Unknown	5.985036751
zgc:55877	Danio rerio zgc:55877 (zgc:55877), mRNA [NM_213070]	5.984891603
BC083472	Danio rerio cDNA clone IMAGE:7265391. [BC083472]	5.984656599
ttl1	Danio rerio tubulin tyrosine ligase-like family, member 1 (ttl1), mRNA [NM_201019]	5.984318326
TC296240	Q8VI63 (Q8VI63) Ovary-specific MOB-like protein, partial (86%) [TC296240]	5.984300931
TC291536	Unknown	5.984273793
tpi1a	Danio rerio triosephosphate isomerase 1a, mRNA (cDNA clone MGC:56599 IMAGE:7265391)	5.984024637
TC272179	Q6P424 (Q6P424) MGC68627 protein, partial (71%) [TC272179]	5.984016928
CK016848	AGENCOURT_16544339 NIH_ZGC_10 Danio rerio cDNA clone IMAGE:7043477 5'	5.98393166
TC268141	Q6NYT6 (Q6NYT6) LOC407660 protein (Fragment), complete [TC268141]	5.983790783
zgc:56195	Danio rerio zgc:56195 (zgc:56195), mRNA [NM_212995]	5.983337282
wu:fk48d07	AGENCOURT_30432586 NIH_ZGC_14 Danio rerio cDNA clone IMAGE:7409038 5'	5.983266638
flj106131	Danio rerio guanine nucleotide binding protein-like 3 (nucleolar)-like (gnl3l), mRNA	5.982778586
zgc:101814	Danio rerio zgc:101814 (zgc:101814), mRNA [NM_001006048]	5.98274273
zgc:76917	Danio rerio zgc:76917 (zgc:76917), mRNA [NM_200182]	5.982480258
rarg	Danio rerio retinoic acid receptor gamma (rarg), mRNA [NM_131339]	5.981361507
zgc:73333	Danio rerio zgc:73333 (zgc:73333), mRNA [NM_199932]	5.981100583
BM102193	zgc:73333 Zebrafish adult brain Danio rerio cDNA clone IMAGE:5386383 3', mRNA	5.980945343
CN023559	AGENCOURT_20191286 NIH_ZGC_15 Danio rerio cDNA clone IMAGE:7225601 5'	5.980898772
zgc:55709	Danio rerio zgc:55709 (zgc:55709), mRNA [NM_212715]	5.980831131
zgc:55648	Danio rerio zgc:55648 (zgc:55648), mRNA [NM_200138]	5.98083084
zgc:65996	AGENCOURT_21848961 NIH_ZGC_8 Danio rerio cDNA clone IMAGE:7261455 5'	5.980550286
zp2.3	Danio rerio zona pellucida glycoprotein 2.3 (zp2.3), mRNA [NM_131828]	5.980127035
zgc:56095	Danio rerio zgc:56095 (zgc:56095), mRNA [NM_213013]	5.979179109
zgc:85738	Danio rerio zgc:85738 (zgc:85738), mRNA [NM_214820]	5.978700846
ENSDART00C	O57397 (O57397) Nuclear pore complex glycoprotein p62, partial (46%) [TC26914]	5.978219848
TC281523	BC053221 zgc:64046 {Danio rerio:}, partial (98%) [TC281523]	5.977546889
zgc:92414	Danio rerio zgc:92414 (zgc:92414), mRNA [NM_001002332]	5.977541534
mfap1	Danio rerio microfilament-associated protein 1 (mfap1), mRNA [NM_201017]	5.977315813
zgc:77303	Danio rerio zgc:77303 (zgc:77303), mRNA [NM_205653]	5.977314125
sf3a1	Danio rerio splicing factor 3a, subunit 1 (sf3a1), mRNA [NM_200094]	5.976835104
zgc:65811	Danio rerio zgc:65811 (zgc:65811), mRNA [NM_200552]	5.975487456
gtf2b	Danio rerio general transcription factor IIB (gtf2b), mRNA [NM_199697]	5.975190553
AL726525	AL726525 Danio rerio embryonic inner ear subtracted cDNA Danio rerio cDNA clone	5.974892043
rab2	RAB2, member RAS oncogene family [Source:ZFIN;Acc:ZDB-GENE-011212-2] [E011212-2]	5.973077882
TC283786	Q6UX76 (Q6UX76) PP1665, partial (21%) [TC283786]	5.972771699
etv5	Danio rerio ets variant gene 5 (ets-related molecule) (etv5), mRNA [NM_214720]	5.97155337
zgc:77634	Danio rerio zgc:77634 (zgc:77634), mRNA [NM_200865]	5.970964485
wu:fi19h12	fi19h12.x1 Sugano Kawakami zebrafish DRA Danio rerio cDNA clone IMAGE:2601	5.970514488
Gamt	Danio rerio guanine nucleotide transferase (Gamt), mRNA [NM_205741]	5.970039453
BM572001	fx05g04.y1 Gong zebrafish ovary Danio rerio cDNA clone IMAGE:5619246 5', mRNA	5.969393671
zgc:56315	Danio rerio zgc:56315 (zgc:56315), mRNA [NM_201177]	5.968987289
vps35	fa66e03.s1 zebrafish fin day3 regeneration Danio rerio cDNA clone zbr2453 3', mRNA	5.968697739
ENSDART00C	SI:b21M12.3 (Novel protein similar to vertebrate junctophilins) (Fragment). [Source	5.968396821
TC281872	Q8AVC0 (Q8AVC0) Shmt1-prov protein, partial (40%) [TC281872]	5.967659196
prps1a	Danio rerio phosphoribosyl pyrophosphate synthetase 1A (prps1a), mRNA [NM_213013]	5.967317209
zgc:77225	Danio rerio zgc:77225 (zgc:77225), mRNA [NM_212785]	5.967109845
zfp361	AGENCOURT_16619068 NIH_ZGC_7 Danio rerio cDNA clone IMAGE:7053011 5'	5.966463614
ENSDART00C	Q98SS2 (Q98SS2) Egg envelope protein ZP2 variant B, partial (78%) [TC267946]	5.965917024
TC269857	Q6PCE6 (Q6PCE6) MGC69179 protein, partial (74%) [TC269857]	5.964857755
TC274241	Q7PI42 (Q7PI42) ENSANGP00000024316 (Fragment), partial (7%) [TC274241]	5.96403496
CF594979	AGENCOURT_15713286 NIH_ZGC_8 Danio rerio cDNA clone IMAGE:7015218 5'	5.963977707
CN316528	AGENCOURT_21844520 NIH_ZGC_10 Danio rerio cDNA clone IMAGE:7259378 5'	5.963840718
wu:fe14h10	fe14h10.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:373888	5.963479178
zgc:100812	Danio rerio zgc:100812 (zgc:100812), mRNA [NM_001003548]	5.963312495
TC267954	RBM8_HUMAN (Q9Y5S9) RNA-binding protein 8A (RNA binding motif protein 8A)	5.963227048
gpd1l	Danio rerio glycerol-3-phosphate dehydrogenase 1 (soluble), like (gpd1l), mRNA [NM_201013]	5.962791901
cct2	Danio rerio chaperonin containing TCP1, subunit 2 (beta) (cct2), mRNA [NM_201414]	5.962468812
mmp14b	Danio rerio matrix metalloproteinase 14 (membrane-inserted) beta (mmp14b), mRNA	5.962283559

zgc:92414	Danio rerio zgc:92414 (zgc:92414), mRNA [NM_001002332]	5.962008115
flj12949l	Danio rerio hypothetical protein FLJ12949-like (H. sapiens) (flj12949l), mRNA [NM_001002332]	5.961853094
TC291829	BC048055 NIMA (never in mitosis gene a)-related kinase 2 {Danio rerio;}, complete cds	5.961833456
atp5d	Danio rerio ATP synthase, H+ transporting, mitochondrial F1 complex, delta subunit	5.960488408
zgc:55280	Danio rerio zgc:55280 (zgc:55280), mRNA [NM_212621]	5.960390712
gna1l	Danio rerio guanine nucleotide binding protein (G protein), alpha inhibiting activity	5.96013317
TC280087	GOP3_MOUSE (Q9CRA5) Golgi phosphoprotein 3 (Coat-protein GPP34), partial (50%)	5.960010478
TC290427	Q7ZZR0 (Q7ZZR0) Methyl-CpG binding protein 3b, complete [TC290427]	5.959747549
zgc:103772	Danio rerio zgc:103772 (zgc:103772), mRNA [NM_001006005]	5.959284529
CK027543	AGENCOURT_16623603 NIH_ZGC_7 Danio rerio cDNA clone IMAGE:7053792 5'	5.958847788
zgc:92801	Danio rerio zgc:92801 (zgc:92801), mRNA [NM_001002535]	5.958733827
TC272553	Q8BYY5 (Q8BYY5) Mus musculus 6 days neonate skin cDNA, RIKEN full-length cDNA	5.957731095
yars	Danio rerio tyrosyl-tRNA synthetase (yars), mRNA [NM_201316]	5.957268845
hnpr	Danio rerio heterogeneous nuclear ribonucleoprotein R (hnpr), mRNA [NM_213421]	5.957043058
wbp2	Danio rerio WW domain binding protein 2 (wbp2), mRNA [NM_199710]	5.956997914
psmc3	Danio rerio proteasome (prosome, macropain) 26S subunit, ATPase, 3 (psmc3), mRNA	5.956468508
AL917199	AL917199 PJR-Z1+Z2 Danio rerio cDNA clone 028-E06-2, mRNA sequence [AL917199]	5.956297754
tardbp	Danio rerio TAR DNA binding protein (tardbp), mRNA [NM_201476]	5.956028613
zgc:65964	Danio rerio zgc:65964 (zgc:65964), mRNA [NM_200584]	5.955760312
hfe2	Danio rerio hemochromatosis type 2 (hfe2), mRNA [NM_213643]	5.955625936
ENSDART00C	AGENCOURT_21411257 NIH_ZGC_17 Danio rerio cDNA clone IMAGE:7236499 5'	5.955595115
fth1	Danio rerio ferritin, heavy polypeptide 1 (fth1), mRNA [NM_131585]	5.954437773
ywhaz	Danio rerio tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein	5.954116986
met	Danio rerio met proto-oncogene (hepatocyte growth factor receptor) (met), mRNA [NM_200584]	5.954079803
Gamt	Danio rerio guanidinoacetate N-methyltransferase (Gamt), mRNA [NM_205741]	5.953788547
zgc:64201	Danio rerio zgc:64201 (zgc:64201), mRNA [NM_200642]	5.953527628
zgc:65891	Danio rerio zgc:65891 (zgc:65891), mRNA [NM_200594]	5.953365165
AI959529	fd10f06.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:3730495	5.952622102
mef2c	Danio rerio myocyte enhancer factor 2c (mef2c), mRNA [NM_131312]	5.952043925
CK395556	AGENCOURT_17389578 NIH_ZGC_4 Danio rerio cDNA clone IMAGE:7120218 5'	5.951539962
TC283346	Q9KFR6 (Q9KFR6) BH0411 protein, partial (5%) [TC283346]	5.951496104
wu:fb55g09	AGENCOURT_16624119 NIH_ZGC_10 Danio rerio cDNA clone IMAGE:7050545 5'	5.951201989
wu:fb55a06	fb55a06.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:371576	5.950734095
ENSDART00C	Q78JW9 (Q78JW9) D7Wsu128e protein, partial (74%) [TC292735]	5.950321974
TC290699	CLDZ_BRARE (Q9YH90) Claudin-like protein ZF-A9, complete [TC290699]	5.949800799
wu:fb98h03	fb54c06.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:371569	5.949591045
zgc:64178	Danio rerio zgc:64178 (zgc:64178), mRNA [NM_199936]	5.949495119
zgc:77049	Danio rerio zgc:77049 (zgc:77049), mRNA [NM_212874]	5.949418546
zgc:101826	Danio rerio zgc:101826 (zgc:101826), mRNA [NM_001004677]	5.948764181
arpp19	Danio rerio cAMP-regulated phosphoprotein 19 (arpp19), mRNA [NM_200630]	5.948278954
zgc:56086	Danio rerio zgc:56086 (zgc:56086), mRNA [NM_200975]	5.947587355
TC279431	Q802U8 (Q802U8) H1 histone family, member X, complete [TC279431]	5.947412565
TC291559	Q6PBN6 (Q6PBN6) Inositol hexaphosphate kinase 2, complete [TC291559]	5.946907484
ENSDART00C	AE003479 CG11624-PC {Drosophila melanogaster;}, partial (29%) [TC268183]	5.946393091
TC292243	Q8AVK0 (Q8AVK0) Dars-prov protein, partial (61%) [TC292243]	5.94610707
zgc:92313	Danio rerio zgc:92313 (zgc:92313), mRNA [NM_001002596]	5.946055466
ift172	Danio rerio intraflagellar transport 172 (ift172), mRNA [NM_001002312]	5.945598965
TC288572	Q802C9 (Q802C9) Eukaryotic translation initiation factor 4A, isoform 1A, partial (40%)	5.94552598
TC273084	SYIM_YEAST (P48526) Isoleucyl-tRNA synthetase, mitochondrial (Isoleucine--tRNA synthetase)	5.945318466
cdk9	Danio rerio cyclin-dependent kinase 9 (CDC2-related kinase) (cdk9), mRNA [NM_200975]	5.94462955
CO350383	DR_AOV_FL10_B04 adult ovary full-length (TLL) Danio rerio cDNA, mRNA sequence	5.944594726
zgc:64178	Danio rerio zgc:64178 (zgc:64178), mRNA [NM_199936]	5.94443308
plp2	AL916381 PJR-Z1+Z2 Danio rerio cDNA clone 014-F05-2, mRNA sequence [AL916381]	5.943845602
reverbb2	Danio rerio rev erb beta 2 (reverbb2), mRNA [NM_131065]	5.943736593
zgc:100934	Danio rerio zgc:100934 (zgc:100934), mRNA [NM_205618]	5.943456358
zgc:85649	Danio rerio cDNA clone MGC:85649 IMAGE:6805750, complete cds. [BC067558]	5.94340226
TC290307	Q8JHI0 (Q8JHI0) Solute carrier family 25 member 5 protein (Solute carrier family 25 member 5)	5.943202055
sepw1	Danio rerio selenoprotein W, 1 (sepw1), mRNA [NM_178287]	5.94316921
zgc:63637	Danio rerio zgc:63637 (zgc:63637), mRNA [NM_213365]	5.942879138
tkf	Danio rerio transketolase (tkf), mRNA [NM_198070]	5.942460614
zgc:55881	Danio rerio zgc:55881 (zgc:55881), mRNA [NM_199721]	5.942407238
ivd	Danio rerio isovaleryl Coenzyme A dehydrogenase (ivd), mRNA [NM_201491]	5.942386878
cyp1a	Danio rerio cytochrome P450, family 1, subfamily A (cyp1a), mRNA [NM_131879]	5.94233174
wu:fb40a10	AGENCOURT_16620780 NIH_ZGC_7 Danio rerio cDNA clone IMAGE:7055414 5'	5.942266072
wu:fb06e02	AGENCOURT_32341965 NIH_ZGC_15 Danio rerio cDNA clone IMAGE:7450065 5'	5.94158148
zgc:63736	Danio rerio zgc:63736 (zgc:63736), mRNA [NM_200486]	5.941511984
TC293438	Unknown	5.941050021
dt1p1a10l	Danio rerio hypothetical protein DT1P1A10 (human) - like (dt1p1a10l), mRNA [NM_001002332]	5.940847704
calr	Danio rerio calreticulin (calr), mRNA [NM_131047]	5.940839487
zgc:55783	Danio rerio zgc:55783 (zgc:55783), mRNA [NM_201098]	5.940680974
cox4i1	Danio rerio cytochrome c oxidase subunit IV isoform 1 (cox4i1), mRNA [NM_21470]	5.940100151
TC268266	Q7ZU62 (Q7ZU62) Ik:tdsubc_1f2 protein (Fragment), partial (45%) [TC268266]	5.939643628
zgc:55931	Danio rerio zgc:55931 (zgc:55931), mRNA [NM_213663]	5.938846483
zgc:77825	Danio rerio zgc:77825 (zgc:77825), mRNA [NM_205643]	5.938671572
wu:fk47a03	fk47a03.y1 Zebrafish 15-19hr embryonic cDNA Danio rerio cDNA 5', mRNA sequence	5.938189236
atp13a	Danio rerio ATPase type 13A (atp13a), mRNA [NM_001001403]	5.937524983
sf3a1	Danio rerio splicing factor 3a, subunit 1 (sf3a1), mRNA [NM_200094]	5.93648294
hdac1	Danio rerio histone deacetylase 1, mRNA (cDNA clone MGC:101582 IMAGE:72237) full-length	5.936349874
ENSDART00C	fv73b01.y1 zebrafish adult brain Danio rerio cDNA clone IMAGE:5413968 5' similar	5.936301887
wu:fc80b03	fc80b03.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372766	5.935650188
zgc:103591	Danio rerio zgc:103591 (zgc:103591), mRNA [NM_001004681]	5.935138301

zgc:91819	Danio rerio zgc:91819 (zgc:91819), mRNA [NM_205594]	5.934061933
ldb3	Danio rerio LIM-domain binding factor 3 (ldb3), mRNA [NM_201505]	5.933861727
TC280006	Q6NZZ2 (Q6NZZ2) Actin related protein 2/3 complex subunit 4, complete [TC280006]	5.933305706
ENSDART00C	Q8AVT5 (Q8AVT5) Mg:db03h09-prov protein, partial (57%) [TC292842]	5.932330841
TC274542	Q8CED3 (Q8CED3) Mus musculus 0 day neonate skin cDNA, RIKEN full-length en	5.932045137
ENSDART00C	fc83c01.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372796	5.931979988
BG306386	fm58d10.x1 Zebrafish adult retina cDNA Danio rerio cDNA clone IMAGE:4199491	5.93174152
TC269058	Q90ZC9 (Q90ZC9) Granulin 2, complete [TC269058]	5.930922154
zgc:66022	Danio rerio zgc:66022 (zgc:66022), mRNA [NM_200536]	5.930865243
zgc:92115	Danio rerio zgc:92115 (zgc:92115), mRNA [NM_001004544]	5.930763629
CN171076	AGENCOURT_21022083 NIH_ZGC_8 Danio rerio cDNA clone IMAGE:7250782 5'	5.930394959
zgc:63476	Danio rerio zgc:63476 (zgc:63476), mRNA [NM_213528]	5.930069383
A_15_P10005	Unknown	5.930027825
zgc:66137	Danio rerio zgc:66137 (zgc:66137), mRNA [NM_213477]	5.929292415
rab1a	Danio rerio RAB1A, member RAS oncogene family (rab1a), mRNA [NM_00100716	5.929065844
zgc:77065	Danio rerio zgc:77065 (zgc:77065), mRNA [NM_212884]	5.928737177
wu:fb02e09	Danio rerio wu:fb02e09 (wu:fb02e09), mRNA [NM_213638]	5.928098797
BI473831	fp47d01.y3 zebrafish gridded kidney Danio rerio cDNA clone IMAGE:4759728 5', r	5.92806251
zgc:101832	Danio rerio zgc:101832 (zgc:101832), mRNA [NM_001007383]	5.927874595
BM026694	fq86e12.y3 Zebrafish neuronal Danio rerio cDNA clone IMAGE:4887262 5', mRNA	5.927737607
zgc:66485	Danio rerio zgc:66485 (zgc:66485), mRNA [NM_200051]	5.927493841
TC292344	Q9I903 (Q9I903) Beta-catenin-interacting protein, complete [TC292344]	5.927422668
zgc:63790	Danio rerio zgc:63790 (zgc:63790), mRNA [NM_199896]	5.927171386
ing3	Danio rerio inhibitor of growth family, member 3 (ing3), mRNA [NM_200937]	5.926770185
zgc:56109	Danio rerio zgc:56109 (zgc:56109), mRNA [NM_199911]	5.926562946
wu:fb75d06	AGENCOURT_10697964 NCI_CGAP_ZKid1 Danio rerio cDNA clone IMAGE:6791	5.92599957
zgc:92231	Danio rerio zgc:92231 (zgc:92231), mRNA [NM_001004584]	5.92590264
ENSDART00C	GEM2_RAT (Q9QZP1) Survival of motor neuron protein-interacting protein 1 (SMN	5.924825821
BC090786	Danio rerio cDNA clone IMAGE:7152284. [BC090786]	5.924725918
BI980240	ft73h01.x1 Gong zebrafish ovary Danio rerio cDNA clone IMAGE:5159256 3', mRN	5.924214526
nitr5	Danio rerio novel immune-type receptor 5 (nitr5), mRNA [NM_001005768]	5.921377105
LOC493626	Danio rerio ras-dva small GTPase (LOC493626), mRNA [NM_001007781]	5.921349515
wu:fc35f01	fc35f01.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372338	5.920018109
psmc3	Danio rerio proteasome (prosome, macropain) 26S subunit, ATPase, 3 (psmc3), m	5.919192577
wu:fb18d11	fb18d11.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:371224	5.919018326
sps2	Danio rerio selenophosphate synthetase 2 (sps2), mRNA [NM_001004295]	5.91897895
ing3	Danio rerio inhibitor of growth family, member 3 (ing3), mRNA [NM_200937]	5.918750178
zgc:56419	Danio rerio zgc:56419 (zgc:56419), mRNA [NM_200034]	5.918101052
ik:tdsubc_2f7	TDsubC_2F7_T7 Zebrafish shield stage whole embryo Danio rerio cDNA clone TD:	5.917782573
zgc:76906	Danio rerio zgc:76906 (zgc:76906), mRNA [NM_200921]	5.917699282
cdkal1	Danio rerio CDK5 regulatory subunit associated protein 1-like 1 (cdkal1), mRNA [N	5.917691762
sb:cb793	STR00995 gastrula stage cDNA library Danio rerio cDNA clone CB793 5', mRNA s	5.917540201
isl3	Danio rerio islet3 (isl3), mRNA [NM_130964]	5.917080902
TC271674	Q8MIB3 (Q8MIB3) Brain multidrug resistance protein, partial (76%) [TC271674]	5.916716318
zgc:91951	Danio rerio zgc:91951 (zgc:91951), mRNA [NM_001007764]	5.91584295
TC281007	BC011391 Ureb1 protein {Mus musculus;} , partial (44%) [TC281007]	5.915814249
zgc:56526	Danio rerio zgc:56526 (zgc:56526), mRNA [NM_200267]	5.915753978
wu:fk26g04	AL714785 Danio rerio embryonic inner ear subtracted cDNA Danio rerio cDNA clor	5.915725134
zgc:77044	Danio rerio zgc:77044 (zgc:77044), mRNA [NM_212682]	5.914895918
zp2.3	Danio rerio zona pellucida glycoprotein 2.3 (zp2.3), mRNA [NM_131828]	5.914343574
zgc:85914	Danio rerio zgc:85914 (zgc:85914), mRNA [NM_213190]	5.91426155
gclc	Danio rerio glutamate-cysteine ligase, catalytic subunit (gclc), mRNA [NM_199277]	5.914196889
wu:fn06a08	fn06a08.y1 Zebrafish Research Genetics C32 fin Danio rerio cDNA clone IMAGE:4	5.914160131
arl6ip	Danio rerio ADP-ribosylation factor-like 6 interacting protein (arl6ip), mRNA [NM_20	5.913827484
cth	Danio rerio cystathionase (cystathionine gamma-lyase) (cth), mRNA [NM_212604]	5.913492916
ENSDART00C	AGENCOURT_27272445 NIH_ZGC_4 Danio rerio cDNA clone IMAGE:7288050 5'	5.913272574
ahcyl2	Danio rerio S-adenosylhomocysteine hydrolase-like 2 (ahcyl2), mRNA [NM_201340	5.912786807
fem1c	Danio rerio fem-1 homolog c (C.elegans) (fem1c), mRNA [NM_198145]	5.912697144
arpc5b	Danio rerio actin related protein 2/3 complex, subunit 5B (arpc5b), mRNA [NM_201	5.912154765
ivns1abpb	Danio rerio influenza virus NS1A binding protein b (ivns1abpb), mRNA [NM_20148:	5.911874778
BC067613	Danio rerio cDNA clone IMAGE:6960592, partial cds. [BC067613]	5.911066174
pvalb	Danio rerio parvalbumin (pvalb), mRNA [NM_205574]	5.910996271
zgc:55815	Danio rerio zgc:55815 (zgc:55815), mRNA [NM_200176]	5.910905854
ldb4	Danio rerio LIM-domain binding factor 4 (ldb4), mRNA [NM_131316]	5.910807559
zgc:86727	Danio rerio zgc:86727 (zgc:86727), mRNA [NM_001002072]	5.910743929
zgc:85609	Danio rerio zgc:85609 (zgc:85609), mRNA [NM_213101]	5.910447833
cct4	Danio rerio chaperonin containing TCP1, subunit 4 (delta) (cct4), mRNA [NM_2005	5.910030809
CN329188	AGENCOURT_21834957 NIH_ZGC_10 Danio rerio cDNA clone IMAGE:7258288	5.909888371
zgc:85724	Danio rerio zgc:85724 (zgc:85724), mRNA [NM_214743]	5.909486019
CD589947	RK055A1E12.T3 Zebrafish Kidney Marrow cDNA library Danio rerio cDNA clone RI	5.909313244
LOC407695	Danio rerio hypothetical protein LOC407695, mRNA (cDNA clone IMAGE:6965421)	5.908462984
sgk	Danio rerio serum/glucocorticoid regulated kinase (sgk), mRNA [NM_199212]	5.908387811
zgc:92086	Danio rerio zgc:92086 (zgc:92086), mRNA [NM_001002370]	5.907747854
fts	Danio rerio fused toes homolog (fts), mRNA [NM_200105]	5.90765599
tpi1a	Danio rerio triosephosphate isomerase 1a, mRNA (cDNA clone MGC:56599 IMAGI	5.907638092
zgc:77634	Danio rerio zgc:77634 (zgc:77634), mRNA [NM_200865]	5.907578345
wsb1	Danio rerio SOCS box-containing WD protein SWIP-1 (wsb1), mRNA [NM_199633]	5.90756596
zgc:91989	Danio rerio zgc:91989 (zgc:91989), mRNA [NM_001002227]	5.907167226
arf1l	Danio rerio ADP-ribosylation factor 1 like (arf1l), mRNA [NM_201480]	5.906412837
psmb6	Danio rerio proteasome (prosome, macropain) subunit, beta type, 6 (psmb6), mRN	5.906367211
zgc:77828	Danio rerio zgc:77828 (zgc:77828), mRNA [NM_212896]	5.906043312

BC091537	AGENCOURT_21612346 NIH_ZGC_19 Danio rerio cDNA clone IMAGE:7252475	5.905801868
ihpk2	Danio rerio inositol hexaphosphate kinase 2 (ihpk2), mRNA [NM_201470]	5.905472012
zfr	Danio rerio zinc finger RNA binding protein, mRNA (cDNA clone IMAGE:5915209),	5.905428223
TC293855	Q6P416 (Q6P416) MGC68514 protein, partial (39%) [TC293855]	5.905292039
TC281879	Q9PTK4 (Q9PTK4) Ribonucleoprotein, partial (56%) [TC281879]	5.905045969
zgc:92567	Danio rerio zgc:92567 (zgc:92567), mRNA [NM_001002731]	5.904768351
wu:fi28c07	AGENCOURT_14627825 NCI_CGAP_ZK1 Danio rerio cDNA clone IMAGE:6961	5.904587586
zgc:63840	Danio rerio zgc:63840 (zgc:63840), mRNA [NM_200626]	5.904242248
CO958967	AGENCOURT_30802700 NIH_ZGC_19 Danio rerio cDNA clone IMAGE:7427013	5.903904724
hmbs	Danio rerio hydroxymethylbilane synthase (hmbs), mRNA [NM_201154]	5.90370354
zgc:85971	Danio rerio zgc:85971 (zgc:85971), mRNA [NM_213271]	5.90334478
CO351725	DR_AOV_NRM05_E08 adult ovary normalized (TLL) Danio rerio cDNA, mRNA sec	5.902418986
TC270570	Q63925 (Q63925) ICER, partial (80%) [TC270570]	5.902406098
zgc:77033	Danio rerio zgc:77033 (zgc:77033), mRNA [NM_213306]	5.902211723
wu:fc04g05	Danio rerio wu:fc04g05, mRNA (cDNA clone IMAGE:6791382), partial cds. [BC056	5.902069949
zgc:77429	Danio rerio zgc:77429 (zgc:77429), mRNA [NM_213262]	5.901791357
zgc:56165	Danio rerio zgc:56165 (zgc:56165), mRNA [NM_200961]	5.901706668
yrk	Danio rerio Yes-relayed kinase (yrk), mRNA [NM_212781]	5.901587535
BI879974	fm68b05.x1 Zebrafish adult retina cDNA Danio rerio cDNA clone IMAGE:4200513	5.901333904
zgc:55886	Danio rerio zgc:55886 (zgc:55886), mRNA [NM_200959]	5.901096483
ENSDART00C	Q921V3 (Q921V3) Nitrogen fixation, partial (88%) [TC269256]	5.900927777
zgc:85738	Danio rerio zgc:85738 (zgc:85738), mRNA [NM_214820]	5.900868445
kiaa00071	Danio rerio KIAA00071 protein (human), like (kiaa00071), mRNA [NM_173282]	5.900683878
zgc:92235	Danio rerio zgc:92235 (zgc:92235), mRNA [NM_001004563]	5.900411074
TC280895	Q7ZV95 (Q7ZV95) General transcription factor IIF, polypeptide 1, 74kDa, complete	5.900046449
wu:fb72g02	fb72g02.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:371745	5.899933191
zgc:56020	Danio rerio zgc:56020 (zgc:56020), mRNA [NM_200188]	5.899620383
wu:fi11e03	fi11e03.y1 Sugano Kawakami zebrafish DR A Danio rerio cDNA clone IMAGE:2600	5.899140175
BC050157	Danio rerio, clone IMAGE:5604458, mRNA. [BC050157]	5.899091971
ENSDART00C	BC009439 THAP4 protein {Homo sapiens;}, partial (61%) [TC282971]	5.898892905
npl4	Danio rerio nuclear protein localization 4 (npl4), mRNA [NM_199807]	5.898373391
BI868116	ft68c04.y1 Gong zebrafish ovary Danio rerio cDNA clone IMAGE:5158279 5', mRN	5.897741011
zgc:65787	Danio rerio zgc:65787 (zgc:65787), mRNA [NM_213157]	5.897451963
zgc:66396	Danio rerio zgc:66396 (zgc:66396), mRNA [NM_200057]	5.897053507
zgc:65882	Danio rerio zgc:65882 (zgc:65882), mRNA [NM_200821]	5.896966246
TC268784	Q6NSR8 (Q6NSR8) Npepl1 protein, partial (89%) [TC268784]	5.896494959
zgc:55819	Danio rerio zgc:55819 (zgc:55819), mRNA [NM_199432]	5.895719017
TC268831	BC054684 zgc:66329 {Danio rerio;}, complete [TC268831]	5.895362538
TC285431	Q8WWH5 (Q8WWH5) TruB pseudouridine synthase-like protein 1 (TruB pseudouri	5.895077996
zgc:56257	Danio rerio zgc:56257 (zgc:56257), mRNA [NM_200218]	5.894881875
TC276048	Q8N108 (Q8N108) Mesoderm induction early response 1 N1-beta (Mesoderm indu	5.894788495
zgc:65781	Danio rerio zgc:65781 (zgc:65781), mRNA [NM_199632]	5.8946331
desm	Danio rerio desmin (desm), mRNA [NM_130963]	5.894011026
zgc:77398	Danio rerio zgc:77398 (zgc:77398), mRNA [NM_205664]	5.893908615
alcam	Danio rerio activated leukocyte cell adhesion molecule (alcam), mRNA [NM_13100	5.893905882
BC090281	Danio rerio cDNA clone MGC:113121 IMAGE:6905212, complete cds. [BC090281]	5.89383819
LOC402845	Danio rerio hypothetical protein LOC402845, mRNA (cDNA clone IMAGE:6793503)	5.893548327
mylip	Danio rerio myosin regulatory light chain interacting protein (mylip), mRNA [NM_19	5.892596533
zgc:63609	Danio rerio zgc:63609 (zgc:63609), mRNA [NM_200441]	5.892564618
gtf2b	Danio rerio general transcription factor IIB (gtf2b), mRNA [NM_199697]	5.892317118
zgc:85781	Danio rerio zgc:85781 (zgc:85781), mRNA [NM_199588]	5.892225625
BC074047	Danio rerio cDNA clone IMAGE:7040135, partial cds. [BC074047]	5.892141542
BM342488	fw44e12.y1 Zebrafish SJD day 3 embryo Danio rerio cDNA clone IMAGE:5567710	5.892002164
slc9a3r2	Danio rerio solute carrier family 9 (sodium/hydrogen exchanger), isoform 3 regulato	5.891953002
zgc:55635	Danio rerio zgc:55635 (zgc:55635), mRNA [NM_200170]	5.891672998
BF938883	fl96c04.y1 Zebrafish adult retina cDNA Danio rerio cDNA clone IMAGE:4144518 5'	5.891046129
TC292818	Q7SXN3 (Q7SXN3) Ahsa1 protein, complete [TC292818]	5.890829539
TC268566	Q7ZU14 (Q7ZU14) Catenin (Cadherin-associated protein), beta, complete [TC268	5.888338897
zgc:77760	Danio rerio zgc:77760 (zgc:77760), mRNA [NM_200859]	5.886831
max	Danio rerio myc-associated factor X, mRNA (cDNA clone IMAGE:6795370), partial	5.886340703
TC294273	KINH_HUMAN (P33176) Kinesin heavy chain (Ubiquitous kinesin heavy chain) (UK	5.886192505
BC090507	MIME_HUMAN (P20774) Mimecan precursor (Osteoglycin) (Osteoinductive factor)	5.886070824
zgc:101858	Danio rerio zgc:101858 (zgc:101858), mRNA [NM_001005597]	5.885501761
nsep1	Danio rerio nuclease sensitive element binding protein 1 (nsep1), mRNA [NM_131	5.885486773
zgc:63914	Danio rerio zgc:63914 (zgc:63914), mRNA [NM_001002165]	5.885360146
faf1	Danio rerio Fas associated factor 1 (faf1), mRNA [NM_212973]	5.884093209
TC270221	Q7ZYX1 (Q7ZYX1) Fts protein, complete [TC270221]	5.882582037
wu:fa02f12	fa02f12.s1 Zebrafish ICRFZf1s Danio rerio cDNA clone 2G16 3', mRNA sequence [f	5.882092249
TC269368	Q6QWF9 (Q6QWF9) CaMKII inhibitor protein alpha, partial (29%) [TC269368]	5.881820746
sertad2	Danio rerio SERTA domain containing 2 (sertad2), mRNA [NM_212794]	5.881673575
bcap37	Danio rerio B-cell receptor-associated protein 37 (bcap37), mRNA [NM_199681]	5.880745367
mkrn1	Danio rerio Makorin RING zinc-finger protein 1 (mkrn1) mRNA, partial cds. [AF2771	5.880286308
zgc:65806	Danio rerio zgc:65806 (zgc:65806), mRNA [NM_201127]	5.880198051
zgc:101017	Danio rerio zgc:101017 (zgc:101017), mRNA [NM_001003597]	5.878661818
ENSDART00C	Q92074 (Q92074) Beta-1,4-galactosyltransferase, partial (67%) [TC293471]	5.877826808
gsk3a	Danio rerio glycogen synthase kinase 3 alpha (gsk3a), mRNA [NM_131390]	5.877821224
BM958205	fy70f10.y1 Sugano SJD adult male Danio rerio cDNA clone IMAGE:5605386 5' sim	5.877808768
lsm7	Danio rerio LSM7 homolog, U6 small nuclear RNA associated (S. cerevisiae) (lsm7	5.877720316
zgc:92250	Danio rerio zgc:92250 (zgc:92250), mRNA [NM_001004560]	5.87770532
siat6	Danio rerio sialyltransferase 6 (N-acetylglucosaminide alpha 2,3-sialyltransferase) (s	5.876978797
ptpru	Danio rerio protein tyrosine phosphatase, receptor type, U (ptpru), mRNA [NM_001	5.876949192

rarg	Danio rerio retinoic acid receptor gamma (rarg), mRNA [NM_131339]	5.87683092
zgc:77665	Danio rerio zgc:77665 (zgc:77665), mRNA [NM_199993]	5.876039089
zgc:63557	Danio rerio zgc:63557 (zgc:63557), mRNA [NM_201003]	5.875394203
TC293142	CHRD_BRARE (O57472) Chordin precursor (Chordino protein), complete [TC2931	5.875373099
slc26a11	Danio rerio solute carrier family 26, member 11 (slc26a11), mRNA [NM_199767]	5.874895121
CO958967	AGENCOURT_30802700 NIH_ZGC_19 Danio rerio cDNA clone IMAGE:7427013	5.874675228
ENSDART00C	AB049214 facilitative glucose transporter GLUT11-s {Homo sapiens;} , partial (31%	5.873081535
sgk	Danio rerio serum/glucocorticoid regulated kinase (sgk), mRNA [NM_199212]	5.872787647
im:7139999	AGENCOURT_10726497 NCI_CGAP_ZEmb3 Danio rerio cDNA clone IMAGE:679	5.872519203
CN316371	AGENCOURT_21834875 NIH_ZGC_10 Danio rerio cDNA clone IMAGE:7258259	5.872181783
zgc:92816	Danio rerio zgc:92816 (zgc:92816), mRNA [NM_001002514]	5.872113924
sepw1	Danio rerio selenoprotein W, 1 (sepw1), mRNA [NM_178287]	5.87204333
TC268559	Q6PC12 (Q6PC12) Wu:fi32b03 protein, complete [TC268559]	5.870786357
TC275938	Q6FHV7 (Q6FHV7) SGK protein, partial (40%) [TC275938]	5.870530887
CF347101	AGENCOURT_15223819 NIH_ZGC_10 Danio rerio cDNA clone IMAGE:7002585	5.870383533
tef	Danio rerio thyrotroph embryonic factor (tef), mRNA [NM_131400]	5.870357244
zgc:103629	Danio rerio zgc:103629 (zgc:103629), mRNA [NM_001007771]	5.869809031
CN022011	AGENCOURT_20195787 NIH_ZGC_14 Danio rerio cDNA clone IMAGE:7228792	5.869713406
wu:fk54d01	AGENCOURT_30421498 NIH_ZGC_14 Danio rerio cDNA clone IMAGE:7409413	5.869677933
TC272214	BC004045 lactamase, beta 2 [Mus musculus;} , partial (67%) [TC272214]	5.869619334
BC083404	Danio rerio cDNA clone IMAGE:7238334, partial cds. [BC083404]	5.869428212
AI942590	fc73c10.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372702	5.869356695
pxn	Danio rerio paxillin (pxn), mRNA [NM_201588]	5.869232513
zgc:100907	Danio rerio zgc:100907 (zgc:100907), mRNA [NM_205724]	5.86858355
slc9a3r2	Danio rerio solute carrier family 9 (sodium/hydrogen exchanger), isoform 3 regulato	5.868571199
BM185499	fv72b07.y1 zebrafish adult brain Danio rerio cDNA clone IMAGE:5413957 5', mRN	5.868553818
popdc3	Danio rerio popeye domain containing 3 (popdc3), mRNA [NM_001001848]	5.868303616
TC298357	Q6L967 (Q6L967) Solute carrier family 26 member 6 c, partial (31%) [TC298357]	5.866857257
zgc:73143	Danio rerio zgc:73143 (zgc:73143), mRNA [NM_200728]	5.866767599
ube2v2	Danio rerio ubiquitin-conjugating enzyme E2 variant 2 (ube2v2), mRNA [NM_21351	5.865732939
TC297039	Q06054 (Q06054) Zinc finger protein, partial (22%) [TC297039]	5.865047532
zgc:92633	Danio rerio zgc:92633 (zgc:92633), mRNA [NM_001002442]	5.8642802
BQ618300	faa59f04.x1 Gong zebrafish testis Danio rerio cDNA clone IMAGE:5898007 3', mR	5.863351582
zgc:64113	Danio rerio zgc:64113 (zgc:64113), mRNA [NM_198810]	5.863042812
TC272114	Q9V832 (Q9V832) CG4866-PA (RE57564p), partial (75%) [TC272114]	5.862786634
TC292674	Unknown	5.862786214
TC292508	BC049316 zgc:56444 {Danio rerio;} , complete [TC292508]	5.862378056
TC293467	Q91941 (Q91941) ERCC2/XPD protein, partial (43%) [TC293467]	5.861957285
CK400431	AGENCOURT_17518817 NIH_ZGC_4 Danio rerio cDNA clone IMAGE:7118344 5'	5.861922637
im:7145273	fl62g06.y1 Sugano Kawakami zebrafish DRA Danio rerio cDNA clone IMAGE:3818	5.861506565
zgc:91819	Danio rerio zgc:91819 (zgc:91819), mRNA [NM_205594]	5.861135455
AW165036	fd99c03.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:373747	5.860438985
casp3	Danio rerio caspase 3, apoptosis-related cysteine protease (casp3), mRNA [NM_13	5.860430073
TC272167	Q76IQ7 (Q76IQ7) Granulosa cell HMG-box protein-1, partial (41%) [TC272167]	5.860222001
zgc:92698	Danio rerio zgc:92698 (zgc:92698), mRNA [NM_001002404]	5.859995579
TC278257	GUB_RHOMR (P45798) Beta-glucanase precursor (Endo-beta-1,3-1,4 glucanase)	5.859574095
rpl7	Danio rerio ribosomal protein L7 (rpl7), mRNA [NM_213644]	5.859277767
zgc:86900	Danio rerio zgc:86900 (zgc:86900), mRNA [NM_001002678]	5.859207421
snrpf	Danio rerio small nuclear ribonucleoprotein polypeptide F-like (snrpf), mRNA [NM_	5.859198173
dtmb	Danio rerio dystrobrevin, beta (dtmb), mRNA [NM_199709]	5.858899782
bscv	Danio rerio bscv (C20orf3) homolog (bscv), mRNA [NM_212608]	5.858797782
zgc:76972	Danio rerio zgc:76972 (zgc:76972), mRNA [NM_213320]	5.858642872
zgc:86935	Danio rerio zgc:86935 (zgc:86935), mRNA [NM_001002083]	5.856174805
zgc:56150	Danio rerio zgc:56150 (zgc:56150), mRNA [NM_200942]	5.856006214
pkri	Danio rerio protein-kinase, interferon-inducible double stranded RNA dependent int	5.855290766
arpc5b	Danio rerio actin related protein 2/3 complex, subunit 5B (arpc5b), mRNA [NM_201	5.855008438
bactin1	Danio rerio bactin1, mRNA (cDNA clone MGC:77623 IMAGE:6996683), complete c	5.85482668
TC287044	Q8QGB0 (Q8QGB0) VHSV-induced protein-10, partial (45%) [TC287044]	5.85454201
zgc:100860	Danio rerio zgc:100860 (zgc:100860), mRNA [NM_001003532]	5.854131543
zgc:63759	Danio rerio zgc:63759 (zgc:63759), mRNA [NM_200488]	5.852743664
TC282810	NPH1_CANFA (Q9TU19) Nephrocystin 1 (Fragment), partial (48%) [TC282810]	5.851816235
jak2b	Danio rerio mRNA for protein tyrosine kinase (jak2b), partial. [AJ005691]	5.851538783
CN839230	AGENCOURT_25053294 NIH_ZGC_4 Danio rerio cDNA clone IMAGE:7287032 5'	5.851414114
ldha	Danio rerio lactate dehydrogenase A4 (ldha), mRNA [NM_131246]	5.851251933
krt8	Danio rerio keratin 8 (krt8), mRNA [NM_200080]	5.850097154
pitpnb	Danio rerio phosphatidylinositol transfer protein, beta (pitpnb), mRNA [NM_200920]	5.849286268
AW019648	fd55b04.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:373361	5.849173399
kiaa00071	Danio rerio KIAA0007 protein (human), like (kiaa00071), mRNA [NM_173282]	5.848959814
zgc:64067	Danio rerio zgc:64067 (zgc:64067), mRNA [NM_212611]	5.848953288
TC287604	1VID Catechol O-Methyltransferase. {Rattus norvegicus;} , partial (41%) [TC28760	5.848810091
zgc:101085	Danio rerio zgc:101085 (zgc:101085), mRNA [NM_001003763]	5.848358203
TC274602	SMA6_HUMAN (O43541) Mothers against decapentaplegic homolog 6 (SMAD 6) (	5.848099742
zgc:76972	Danio rerio zgc:76972 (zgc:76972), mRNA [NM_213320]	5.847550955
TC280463	Unknown	5.847048363
zgc:73257	Danio rerio zgc:73257 (zgc:73257), mRNA [NM_213397]	5.845547181
zgc:77247	Danio rerio zgc:77247 (zgc:77247), mRNA [NM_213240]	5.845465696
ENSDART00C	Unknown	5.845171313
zgc:101722	Danio rerio zgc:101722 (zgc:101722), mRNA [NM_001008630]	5.844948243
etfa	Danio rerio electron-transfer-flavoprotein, alpha polypeptide (etfa), mRNA [NM_198	5.842224321
zgc:86607	Danio rerio zgc:86607 (zgc:86607), mRNA [NM_001002050]	5.840014839
wu:fb18c12	fc13h01.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372129	5.838298378

BQ132634	fz61f11.y1 zebrafish fin day1 regeneration Danio rerio cDNA clone IMAGE:5907620	5.838165934
ENSDART00C	fb99d04.y1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:372000	5.837945511
TC284674	Q8UWM1 (Q8UWM1) Beta-3-galactosyltransferase, partial (42%) [TC284674]	5.837851601
zgc:64089	Danio rerio zgc:64089 (zgc:64089), mRNA [NM_200410]	5.837618277
zgc:55807	Q7ZU41 (Q7ZU41) Wu:fb14h09 protein, partial (97%) [TC291168]	5.8375189
pgd	Danio rerio phosphogluconate hydrogenase (pgd), mRNA [NM_213453]	5.836391292
zgc:77380	Danio rerio zgc:77380 (zgc:77380), mRNA [NM_213270]	5.83501223
wu:fb52f06	fb52f06.x1 Zebrafish WashU MPIMG EST Danio rerio cDNA clone IMAGE:3715520	5.834464304
ENSDART00C	AF297050 prostacyclin synthase {Homo sapiens;} , partial (20%) [TC274387]	5.833879508
TC296477	Q96BN8 (Q96BN8) LOC90268 protein, partial (9%) [TC296477]	5.833674458
TC281501	UBF1_HUMAN (P17480) Nucleolar transcription factor 1 (Upstream binding factor : 5.832629535	
BI983424	ft71e08.x1 Gong zebrafish ovary Danio rerio cDNA clone IMAGE:5158766 3', mRN	5.831930818
zgc:64135	Danio rerio zgc:64135 (zgc:64135), mRNA [NM_213130]	5.831488473
aldh9a1	Danio rerio aldehyde dehydrogenase 9 family, member A1 (aldh9a1), mRNA [NM_;	5.830943946
slc1a3	Danio rerio solute carrier family 1 (glial high affinity glutamate transporter), member	5.830736568
wu:fi75a02	fi75a02.y1 Sugano Kawakami zebrafish DRA Danio rerio cDNA clone IMAGE:2643	5.829975649
TC273111	BC008281 guanosine monophosphate reductase {Homo sapiens;} , partial (98%) [	5.829699547
TC273438	SYN_MOUSE (Q8BP47) Asparaginyl-tRNA synthetase, cytoplasmic (Asparagine--	5.829146078
zgc:66371	Danio rerio zgc:66371 (zgc:66371), mRNA [NM_200689]	5.828395375
CO936527	AGENCOURT_30539272 NIH_ZGC_19 Danio rerio cDNA clone IMAGE:7429593 5	5.825713846
zgc:85729	Danio rerio zgc:85729 (zgc:85729), mRNA [NM_214811]	5.825434984
pgd	Danio rerio phosphogluconate hydrogenase (pgd), mRNA [NM_213552]	5.823691826
ENSDART00C	AF182424 MDS011 {Homo sapiens;} , partial (69%) [TC272682]	5.823557625
zgc:63719	Danio rerio zgc:63719 (zgc:63719), mRNA [NM_213499]	5.821505285
TC294304	YAF2_HUMAN (Q8IY57) YY1-associated factor 2, partial (98%) [TC294304]	5.821375052
degs	Danio rerio degenerative spermatocyte homolog, lipid desaturase (Drosophila) (deg	5.82122775
TC270369	Q9NS37 (Q9NS37) HCF-binding transcription factor Zhangfei, partial (38%) [TC270	5.820751974
BQ109731	imageqc_7_2001 [BQ109731]	5.820528581
LOC407660	Danio rerio hypothetical protein LOC407660, mRNA (cDNA clone IMAGE:6971411)	5.820195369
ube2h	Danio rerio ubiquitin-conjugating enzyme E2H (UBC8 homolog, yeast) (ube2h), mR	5.819807407
BI879676	fm64b01.x1 Zebrafish adult retina cDNA Danio rerio cDNA clone IMAGE:4200121 3	5.818445494
TC290770	AE003479 CG11624-PC {Drosophila melanogaster;} , partial (22%) [TC290770]	5.817173411
TC281115	Q9CWM6 (Q9CWM6) Mus musculus ES cells cDNA, RIKEN full-length enriched lib	5.816192877
BQ077770	fy69f05.x1 Sugano SJD adult male Danio rerio cDNA clone IMAGE:5605017 3', mF	5.815708336
TC279379	Q8AV10 (Q8AV10) Sdf1a (Chemokine ligand 12), complete [TC279379]	5.813960388
ndpkz4	Danio rerio nucleoside diphosphate kinase-Z4 (ndpkz4), mRNA [NM_130929]	5.811520304
zgc:73356	Danio rerio zgc:73356 (zgc:73356), mRNA [NM_200804]	5.810474108
TC295052	Unknown	5.807052045
sox17	Danio rerio SRY-box containing gene 17 (sox17), mRNA [NM_131287]	5.806426802
CN328293	CN328293 AGENCOURT_21843070 NIH_ZGC_10 Danio rerio cDNA clone IMAGE	5.806067223
appa	Danio rerio amyloid beta (A4) precursor protein a (appa), mRNA [NM_131564]	5.804233103
AL914296	AL914296 PJR-Z1+Z2 Danio rerio cDNA clone 149-F06-2, mRNA sequence [AL91.	5.803564303
TC279012	SYU_TORCA (P37379) Synuclein, partial (66%) [TC279012]	5.800505974
TC301592	Q6WNU3 (Q6WNU3) Transcription factor Sox1a, partial (39%) [TC301592]	5.797375289
flj11749l	Danio rerio hypothetical protein FLJ11749-like (H. sapiens) (flj11749l), mRNA [NM_	5.7926995
fn1	Danio rerio fibronectin 1 (fn1), mRNA [NM_131520]	5.792526783
BC081644	Danio rerio cDNA clone IMAGE:7054369. [BC081644]	5.789767927
zgc:56454	Danio rerio zgc:56454 (zgc:56454), mRNA [NM_200289]	5.780766846

Supplemental Table 17. Intersection between chromatin marks associated genes and transcripts from mature sperm. All marks are scored in proximal TSS region, -2 ~ +1 kb. Sperm transcripts retrieved showed at least 5.8 fold enrichment.

	sperm transcripts, 1731 genes	
	enrichment over random	P-value
H3K4me3 >2.0, 849 genes	1.5243 (98/64.2920)	<1/1000
H3K4me3 >1.8, 1824 genes	1.6768 (232/138.3600)	<1/1000
H3K4me2 >2.0, 1589 genes	1.4970 (179/119.5760)	<1/1000
H3K4me2 >1.8, 3094 genes	1.4786 (346/234.0120)	<1/1000
H3K14Ac >0.81, 784 genes	1.4707 (87/59.1570)	<1/1000
H3K14Ac >0.63, 1558 genes	1.5588 (184/118.0390)	<1/1000
Sperm UnMe <-1.2, 2288 genes	1.1742 (203/172.8840)	0.009
Sperm UnMe <-1.4, 949 genes	1.2744 (92/72.1900)	0.013
Sperm Me >1.2, 633 genes	1.1060 (53/47.9220)	0.243
H3K4me3 >1.8 & DNAUnMe <-1.2, 866 genes	1.6331 (107/65.5210)	<1/1000
H3K27me3 >0.43, 1534 genes	0.7993 (93/116.3560)	0.995
H2AFV >0. 34, 771 genes	1.0126 (59/58.2650)	0.481

Supplemental Table 18. Genes that begin their expression at specified stages.

2 hpf	4 hpf	6 hpf
aars	admp	anxa1a
abcf1	adrm1b	anxa4
adka	ak3l1	apoa1
aldoaa	anxa1c	aqp3
arf1l	bmp2b	arl6ip5
bc2	ccnd1	arpc5a
carm1	cdv3	arpp19
casc3	cldne	atf4
cct6a	ctsl1b	atp1b1a
cct7	cxc4b	atp1b3a
cdk9	dynll2	bin2l
chchd3	erm	bmp7
copb1	fgfr4	cahz
cops7a	flh	capns1
copz1	foxa3	ccnf
cpeb4	foxd5	ccr6a
cpsf2	fzd7a	cd99l2
cul3	g12	cdh2
dctn3	gata2	cdx4
ddx18	h2afx	cebpa
dpp3	id1	cirbp
EIF1B	irx7	ckmt1
eya1	ivns1abpa	cldnf
glud1a	klf2b	cldng
gnl2	klf4	cldnj
gspt1	marcksl1	clica
hsf2	mcm3	clint1
isl2b	msxd	cnn2
kpnb3	net1	cpn1
lyricl	nola1	crygm4
ncl	paics	cth
nola1	psmc2	ctps
pigp	psmc5	ctsl1b
pknox1.1	rbmx	ctsl1
plrg1	rpl7l1	dhx16
polb	si:dkey-252h13.6	dlc
ppig	si:dkey-261j4.9	dld
prim1	si:rp71-45k5.4	EIF3S4
prps1a	si:xx-bac7cse.2	EIF3S6IP
psat1	slc25a22	EIF3S7
psmc1a	sox11a	EIF3S8
psmc4	sox19a	EIF4E1A
psmd2	stm	elavl1
psmd7	tbx16	elovl5
ptges3	tfap2a	fgf8
rbb4l	usp14	fzd7b
scarb1	vent	fzd8a
seph	vox	fzd9
sfxn2	vtn	gata5
shmt1	yy1	gata6
sox11b	zgc:111843	gnl3
tcerg1	zgc:123178	gpr137bb
tmem50a	zgc:56335	gsnl1
tomm22	zgc:64105	gtpbp4

tra2a	zgc:64138	her7
tuba8l	zgc:77455	her9
uap1	zgc:85717	hif1al
ube2n	zgc:92784	hnrpu
usp5	zic2b	hnrpul1
vta1	znfl1	hoxa3a
xbp1		hs6st2
yars		hsp47
zfr		icat
zgc:101755		id3
zgc:103619		iglc2
zgc:103692		im:6893299
zgc:110682		kny
zgc:136473		krt4
zgc:55687		krt5
zgc:55690		krt8
zgc:55697		lcp1
zgc:55818		lhx1a
zgc:56682		lhx5
zgc:63491		lig3
zgc:64042		lmnb2
zgc:64105		lmo1
zgc:73124		maf
zgc:76917		magi1
zgc:77069		mcm6
zgc:77262		mki67ipl
zgc:85615		msgn1
zgc:86762		msxc
zgc:92345		nlcam
zgc:92639		nlz1
		notch3
		nqo1
		nrarpa
		otop1
		otx2
		papss2
		pcdh8
		ppp1r14b
		ranbp1
		rheb
		rhoaa
		rpl37
		rpl5a
		rpl8
		rtk6
		sall1
		sb:cb742
		sc:d0144
		sfpq
		six3b
		six4.3
		slc38a4
		slc46a1
		smo
		smox
		sox2
		sox32

sp5
sp5l
sp8l
spag1
spon2a
stard3nl
stau1
szl
tardbp
tbx6
tcf2
tfa
th
tpbgl
utp15
vtg1
wdr3
wu:fc04c01
yy1
zgc:100864
zgc:100900
zgc:101594
zgc:103627
zgc:109868
zgc:110689
zgc:136656
zgc:158360
zgc:55764
zgc:55852
zgc:55876
zgc:56585
zgc:63783
zgc:64214
zgc:66282
zgc:66286
zgc:73292
zgc:73324
zgc:77259
zgc:77262
zgc:77541
zgc:86889
zgc:91802
zgc:91861
zgc:91960
zgc:92116
zgc:92278
zgc:92451
zgc:92467
zgc:92888
zic2a

Supplemental Table 19. List of primers. Sequences start from 5' to 3'.

Primer name	Primer set
Primers for bisulphite sequencing	
Eve1	5-TTA TGT TTT TTT GAT TTT AAT GGT AGG TTT-3 5-ATT TAA ATA ACA TTT TAA TCT CCA AAC ATA-3
Eve1 nested	5-ATA TAA GAG TTT GTT ATA GTG ATG ATG ATG-3 5-TAA ATA AAC TCC AAA TTT AAC TTC AAT ACT-3
hoxb3a	5- AAA ATG AGA TTA GAT AAT ATA ATT TGG GGT -3 5- CAT ACC TCA AAT CTT TCA TAC TAA ACC -3
hoxb3a nested	5- GAT AAT ATA ATT TGG GGT GTA TTT ATT TAG -3 5- TAT AAA CTT TAA ACT TTC TTA TTA ATT ACA AC -3
tbx2b	5- GAT TAA GTA AAA AGG TGA TGA GTA GAT AAT -3 5- AAT CAA ATA AAC AAA AAA AAC CTT AAA TCA -3
tbx2b nested	5- TGT ATA AAT ATT AAA TGG TTA TGT TAT GTA TG -3 5- CTA CAA TAA ATA AAT TTA CAA ATA ACA ACA TT -3
Sox2	5- GTT TAG ATT GAT ATT TGG AGT AGA TTG ATA -3 5- ACT ACA ACA AAA AAA AAA CAA TAA TAA CTT -3
Sox2 nested	5- GGA GTA GAT TGA TAT TTG GAT TTA AAG TAA -3 5- ATA ATA ACT TCA ATC AAA ATA CTA CCC TAA -3
dre-mir-15a-2	5- TTT GGA GAA ATT TTT GGA TAT TTG GAG AA -3 5- TTT CTC CAT CAC AAC TTC ACT AAC C -3
dre-mir-15a-2 nested	5- GGG TTA AAA GTA TTT AGG ATA ATT TTG AG -3 5- TTC ACT AAC CAC CTC TAA AAT ATC AA -3
pou5f1	5- TAATTTGGGATAGTTTAGGTTAGAAATTAG -3 5- CTTTCTTATTTAAATCTCAACAACCTT -3
pou5f1 nested	5-GTTTTGATTTTAGATGGTATTTTAATTTGT-3 5- ATCTAATTTTAAACAAACCCATTTC -3
Sox3	5- GTATTGTTGTGGAGATTTTGAAGA-3 5- TCAATCAAAAATTTCCAATCAACAC-3
Sox3 nested	5- GTTTGAGTTTTTTGAATTTTGAATTGA-3 5- TATACATTTTAAAATTCTCCTAAACCATC-3
Hoxb5a	5- TTGGAAATGTATAAAAGGATTAGTAGGT-3 5- ATTAACAACCTTAATTCCAAAATACTTCC-3
Hoxb5a nested	5- ATTTTATAAGTTATGTTTGATTTTGGTTTG-3 5- ACTTTCATACATTTTATCAAAAAAACTAACT-3
Hoxb8a	5- TTA AAAAGTTGTTAGGTTTTTATGAGG-3 5- CCAACAATAACAACAACCTCTTATCC-3
Hoxb8a nested	5- ATTTTAAATTTTATTTATGTAAGGATTGTAAG-3 5- AAACATTAACACTATACATAATCAACAATACT-3
Random region from Chr7	5- GATAGTTAGAGTTTTGAGTTTGTGAATG-3 5- CAATATCCCTCATTCTTAAACTAACA-3
Random region from Chr7 nested	5- TATTTTAGGTTATTGTTGTTGGAAAGA-3 5- TATAACACCACTCTCTCATCTCTTC-3
foxi3b	5- GGTGAGTTGTAAATTTTATTATTGAAG-3 5- ACTACATTCTTATCATTCAACCATTCTA-3
foxi3b nested	5- GTTTATAAATAAAGTAGATTATTTTGATAGTGA-3 5- ACAAATTCAAATAATTTACTTCTTACTTAC-3
Primers for qPCR	

Hoxb5a	5- CCT CAC CCG AAG AAG GAG GAT A -3 5- TAC CTG CGG TAG CCA GAC T -3
Tbx4	5- GAA TGG CAG CAG CCA GAA TAG -3 5- CAA CAG AAA ACC GCC TTT CCA TA -3
Sox3	5- GTG CGC TAA GCT CAG CTG TTA -3 5- GAG GAG TGT GAG GTG CTG T -3
Hoxc9	5- TAC CAC AGG CAT TTC AGG ATT TG -3 5- GTT CGG CCT ACA ACG ACA AT -3
Fgf24	5- AAA TGC AAA ACC CAG ACG TGT TT -3 5- CAC CCC AGA GGC TGT GAA ATT A -3
Zic2b	5- ATG TAC ACA TTT CGT ACG TTT TCA AA -3 5- CAA CTG AGT GGC TGT TAC TTG -3
flh	5- CTT ATG GAC AAT CAG CAC GTC CTT -3 5- AGC GCA GAG CTG GAG ACA G -3
Gsc 5'	5- GAC AAA AAC CGC GAA TTC TGT TTG-3 5- AAA GCA GAG CAG GAG GTT CA-3
Gsc 3'	5- TGTGCAACAGCAAGACAACA -3 5- AAA GCG ACG TGG ATT CTG AC -3
Bactin2 5'	5- CGT GTG GAG GAG CTC AAA GT -3 5- AGA GCA CAG AGC TCC GAA AG -3
Bactin2 3'	5- TCT CAG CTG TGG TGG TGA AG -3 5- GTG CCC ATC TAC GAG GGT TA -3
Klf4 5'	5- ATC CCA AGC GTC ATG AGA ACG -3 5- GAG GCA GAC AAT GCG TCT CT -3
Klf4 3'	5- GTG AGA AGC CCT ACC ACT GC -3 5- GTG TCC GGT GTG TTT CCT GTA G -3
Eve1 5'	5- AGC CAA CTC TTT GCT TTC AGC -3 5- TAG ACC CCA ATG ACA GTG CA -3
Eve1 3'	5- AGG TGG TCT TCC ACA ACC AG -3 5- TAG ATG AAT GGG TAA GCG GGG -3
Foxh1 5'	5- CTC CTC AAC CCC TCA GAC TG -3 5- TCA CCT TGA CTG CAG AAT CGG -3
Foxh1 3'	5- ATG ACG TGC ACC AGA CAG AC -3 5- CAC TTC CAC CCT CTA GCA GG -3
Ddx5 5'	5- TGA CTG AGG TAA TGC CGC TA -3 5- TCC AGT GTC GGT AGT GAC C -3
Ddx5 3'	5- GAT GCT TGA CAT GGG ATT TGA ACC -3 5- TCC AGG TGT GGC AAT ACA AAT CTC -3