

Supplemental Table S1

This table provides data on each dCNE family for many of the analyses carried out in this paper. All coordinates, positions and gene names derive from Human Ensembl v27.35.1 unless otherwise stated. Explanation for each column is as follows:

Family# – arbitrary number to identify each dCNE family.

Chr – human chromosomes in which each dCNE member is located.

dCNE_start/end – start and end coordinate of each dCNE within the chromosome in column *Chr*.

Length - dCNE length (in base pairs).

Associated paralogs – Ensembl gene names of *trans-dev* paralogs associated with each dCNE. If no paralogs were identified within the search region, dCNE were annotated as ambiguous (grey shading).

Gene_start/end - start and end coordinate of the associated paralog on chromosome from column *Chr*.

DFSOG – (Distance from Start of Gene). Distance of dCNE from start of associated paralog (in base pairs) as defined in column *Gene_start*. Figures in orange are located more than 1.5Mb from their putatively associated genes.

Genomic_location – General genomic environment of the dCNE. [pink] – intergenic, [purple] – intronic to the target paralog, [light blue] – intronic of a non-associated neighbouring gene.

Position in other species – States whether the PWRTG (Position with Relation to Gene) and genomic location are the same as the human genome in 4 other vertebrate genomes for which chromosomal mapping is available. [S] – same PWRTG and genomic location, [D (orange)] – dCNE and associated paralog were found on different chromosomes, [N (grey)] – could not identify an orthologous dCNE or associated gene in this genome or the dCNE was located on a random chromosome. Human positions: [5' (orange)] – 5' of target gene, [intronic(blue)] – intronic to target gene, [3' (green)] – 3' to target gene.

Ultra –ultra-conserved elements (as defined in Bejerano et al. 2004a) that overlap a dCNE.

Profile – summary of how the dCNE is conserved in 9 available vertebrate genomes (see column *Number of dCNE conserved in different species*). [A (blue)] – all copies in at least one fish, one tetrapod [T (light green)] - all copies in at least one tetrapod but not in fish (for genome versions see Methods).

ESTs – average number of significant hits to ESTs within the dCNE family.

Number of dCNE conserved in different species – number of independent copies of the dCNE family members in each of 8 vertebrate genomes identified using sensitive BLAST searches. In each case, the result is for the whole dCNE family not for each dCNE individually. dCNE families with 2 or more copies in other genomes are in pink. dCNEs with only 1 copy are in grey.

Family#	Chr	dCNE_start	dCNE_end	Length	Associated Paralogues	Gene_start	Gene_end	DFSOG	Genomic Location	PWRIG						Number of dCNE conserved in different species											
										Human	Mouse	Rat	Chick	Dog	Tetra	Ultra	Profile	HUMAN	CHIMP	DOG	RAT	MOUSE	CHICKEN	XENOPUS	TETRA	FUGU	
2	1	3041066	3041193	128	PRDM16	3008902	3378341	32165	Intronic to PRDM16	Intronic	S	N	S	S	N	N	T	2	1	2	2	2	2	2	0	1	
2	3	170779684	170779918	235	EV11	170283999	170348225	431694	INTRAGENIC	Intronic	S	S	S	S	N	N	T	2	1	2	2	2	2	2	2	0	1
19	1	90440827	90441109	283	BARHL2	90889607	90894816	448779	INTRAGENIC	Intronic	S	S	S	S	S	S	A	2	2	2	2	2	3	1	1	2	
19	9	132649650	132649784	135	BARHL1	132487548	132495195	154590	Intronic to C9orf98	Intronic	S	S	N	S	S	S	A	2	2	2	2	2	3	1	1	2	
20	1	91012595	91012940	346	BARHL2	90889607	90894816	118125	INTRAGENIC	Intronic	S	N	S	S	S	S	A	2	2	2	2	1	2	3	1	2	
20	9	132391679	132391759	81	EV11	132487548	132495195	95868	Intronic to NP_997300	Intronic	S	S	N	S	S	S	A	2	2	2	2	1	2	3	1	2	
21	1	91018452	91018939	488	BARHL2	90889607	90894816	124124	INTRAGENIC	Intronic	S	S	S	S	S	S	T	2	1	2	2	2	2	1	1	1	
21	9	132330028	132330220	193	BARHL1	132487548	132495195	157519	Intronic to NP_997300	Intronic	S	S	N	S	S	S	T	2	1	2	2	2	2	1	1	1	
26	1	161369685	161369762	78	PBX1	161260719	161551236	108967	Intronic to PBX1	Intronic	S	S	S	S	S	S	uc.40	2	1	2	2	2	2	2	2	1	
26	9	125663685	125663810	126	PBX3	125589262	125808922	74424	Intronic to PBX3	Intronic	S	S	S	S	S	S	uc.275	2	1	2	2	2	2	2	2	1	
27	1	161432581	161432712	132	PBX1	161260719	161551236	171863	Intronic to PBX1	Intronic	S	S	N	S	N	N	A	2	1	2	2	2	3	2	1	2	
27	9	125725716	125726002	287	PBX3	125589262	125808922	136455	Intronic to PBX3	Intronic	S	S	S	S	N	N	uc.278	2	1	2	2	2	3	2	1	2	
46	10	77027568	77027842	275	ZNF503	76828514	76831293	196550	INTRAGENIC	Intronic	S	S	S	S	S	S	A	2	0	2	2	2	1	3	2	2	
46	8	37497590	37497703	114	ZNF703	37672466	37675555	174875	INTRAGENIC	Intronic	S	S	S	S	S	S	A	2	0	2	2	2	2	1	3	2	2
47	10	77043685	77043810	126	ZNF503	76828514	76831293	212518	INTRAGENIC	Intronic	S	S	S	S	S	S	A	2	0	2	2	2	2	2	1	1	
47	8	37456105	37456186	82	ZNF703	37672466	37675555	216360	INTRAGENIC	Intronic	S	N	S	N	S	N	A	2	0	2	2	2	2	1	1	1	
48	10	77059424	77059590	167	ZNF503	76828514	76831293	228298	INTRAGENIC	Intronic	S	S	S	S	S	S	A	2	0	2	3	2	0	2	1	2	
48	8	37397177	37397277	101	ZNF703	37672466	37675555	275288	INTRAGENIC	Intronic	S	N	S	N	S	S	A	2	0	2	3	2	0	2	1	2	
49	10	77076250	77076659	410	ZNF503	76828514	76831293	245367	INTRAGENIC	Intronic	S	S	S	S	S	S	A	2	0	2	2	2	1	2	3	4	
49	8	37357464	37357760	297	ZNF703	37672466	37675555	315001	INTRAGENIC	Intronic	S	N	S	N	S	S	A	2	0	2	2	2	1	2	3	4	
50	10	77090598	77090762	165	ZNF503	76828514	76831293	259470	INTRAGENIC	Intronic	S	N	S	S	S	S	A	2	0	2	2	1	2	2	1	2	
50	8	37307844	37307996	153	ZNF703	37672466	37675555	364621	INTRAGENIC	Intronic	S	N	S	N	S	S	A	2	0	2	2	1	2	2	1	2	
51	10	77137772	77138143	372	ZNF503	76828514	76831293	306851	INTRAGENIC	Intronic	S	S	S	S	S	S	A	2	0	2	2	2	2	3	2	2	
51	8	37302681	37302894	214	ZNF703	37672466	37675555	369784	INTRAGENIC	Intronic	S	S	N	S	S	S	A	2	0	2	2	2	2	3	2	2	
54	10	77367526	77367818	293	ZNF503	76828514	76831293	536526	Intronic to C10orf11	Intronic	S	S	S	S	S	S	T	2	0	2	2	2	1	2	1	1	
54	8	37117171	37117343	173	ZNF703	37672466	37675555	555294	INTRAGENIC	Intronic	S	N	S	N	S	N	T	2	0	2	2	2	1	2	1	1	
55	10	77397215	77397510	296	ZNF503	76828514	76831293	566218	Intronic to C10orf11	Intronic	S	S	S	S	S	S	uc.288	2	0	2	2	2	1	2	5	4	
55	8	37077108	37077250	143	ZNF703	37672466	37675555	595357	INTRAGENIC	Intronic	S	N	S	N	S	N	A	2	0	2	2	2	1	2	5	4	
56	10	102404267	102404489	223	PAX2	102495323	102579688	91055	INTRAGENIC	Intronic	S	S	S	S	S	S	A	2	2	2	2	2	1	1	3	3	
56	2	113815744	113815956	213	PAX8	113691172	113720752	95205	INTRAGENIC	Intronic	S	S	S	N	S	S	A	2	2	2	2	2	1	1	3	3	
57	10	102437610	102437981	372	PAX2	102495323	102579688	57712	INTRAGENIC	Intronic	S	S	S	N	N	N	uc.298	2	1	1	2	2	1	2	3	3	
57	9	37205225	37205582	358	PAX5	36828538	37024477	181106	Intronic to ZCCHC7	Intronic	S	S	N	S	S	S	uc.257	2	1	1	2	2	1	2	3	3	
58	10	102553681	102553935	255	PAX2	102495323	102579688	58359	Intronic to PAX2	Intronic	S	S	S	S	S	S	A	2	1	2	2	2	2	3	3	3	
58	9	36960919	36960998	180	PAX5	36828538	37024477	55378	Intronic to PAX5	Intronic	S	S	S	S	S	S	A	2	1	2	2	2	2	3	3	3	
59	10	102557871	102558046	176	PAX2	102495323	102579688	62549	Intronic to PAX2	Intronic	S	S	S	S	S	S	uc.301	2	1	2	2	2	2	2	3	3	
59	9	36951432	36951583	152	PAX5	36828538	37024477	72893	Intronic to PAX5	Intronic	S	S	S	S	S	S	A	2	1	2	2	2	2	2	3	3	
60	10	102586114	102586242	129	PAX2	102495323	102579688	90792	INTRAGENIC	Intronic	S	S	S	S	S	S	A	2	1	1	2	3	2	2	2	2	
60	9	36809115	36809190	76	PAX5	36828538	37024477	215286	INTRAGENIC	Intronic	S	S	S	S	S	S	A	2	1	1	2	3	2	2	2	2	
64	10	130424184	130424471	288	EBF3	131524704	131652528	1100519	INTRAGENIC	Intronic	S	S	S	S	S	S	T	2	1	2	2	2	2	1	1	1	
64	5	157173534	157173628	95	EBF	158058008	158459065	884473	Intronic to EPN4_HUMAN	Intronic	S	N	S	S	N	N	T	2	1	2	2	2	2	1	1	1	
65	10	131542829	131543057	229	EBF3	131524704	131652528	18126	Intronic to EBF3	Intronic	S	S	S	S	S	S	T	2	1	2	2	2	2	1	1	1	
65	5	158120337	158120454	118	EBF	158058008	158459065	62330	Intronic to EBF	Intronic	S	N	S	S	N	N	T	2	1	2	2	2	2	1	1	1	
66	10	131575784	131576004	221	EBF3	131524704	131652528	51081	Intronic to EBF3	Intronic	S	S	S	S	S	S	A	2	1	2	2	2	2	2	2	1	
66	5	158234503	158234605	103	EBF	158058008	158459065	176496	Intronic to EBF	Intronic	S	N	S	S	S	S	A	2	1	2	2	2	2	2	2	1	
67	10	131581603	131581835	233	EBF3	131524704	131652528	56900	Intronic to EBF3	Intronic	S	S	S	S	S	S	uc.318	4	2	4	4	4	3	3	3	3	
67	5	158274441	158274666	226	EBF	158058008	158459065	216434	Intronic to EBF	Intronic	S	S	S	S	S	S	uc.175	4	2	4	4	4	3	3	3	3	
67	20	2667373	2667509	137	EBF4 (Q7ZT1)	2667374	2667510	45734	Intronic to EBF4 (Q7ZT1)	Intronic	S	S	N	S	N	N	A	4	2	4	4	4	3	3	3	3	
67	8	25831858	25832003	146	EBF2	25757490	25803239	28620	INTRAGENIC	Intronic	S	S	S	S	S	S	uc.235	4	2	4	4	4	3	3	3	3	
68	10	131584075	131584354	280	EBF3	131524704	131652528	59372	Intronic to EBF3	Intronic	S	S	S	S	S	S	A	2	2	2	2	2	2	1	2	2	
68	5	158289152	158289282	131	EBF	158058008	158459065	231145	Intronic to EBF	Intronic	S	N	S	S	S	S	A	2	2	2	2	2	2	1	2	2	
73	10	134331092	134331438	347	NKX6-2	134448411	134449443	117318	Intronic to INPP5A	Intronic	S	S	S	N	S	S	A	2	1	2	2	2	2	2	2	2	
73	4	85057711	85058061	351	NKX6																						

89	11	16418376	16418704	329	SOX6	15949901	16454495	468476	Intronic to SOX6	intronic	S	S	S	S	N	A	2	0	2	2	2	2	2	2	1	2	
89	12	24183264	24183428	165	SOX5	23576500	23993905	189524	INTERGENIC	5'	S	S	S	S	S	uc. 336	A	2	0	2	2	2	2	2	2	1	2
92	7	127401553	127401638	86	Ambiguous											A	2	0	2	2	2	2	0	2	3	2	
92	11	43534069	43534153	85	NO PARALOGUES											A	2	0	2	2	2	2	0	2	3	2	
99	11	78167271	78167357	87	ODZ4	78041977	78458637	125295	Intronic to ODZ4	intronic	S	S	N	S	S	T	2	1	1	1	1	1	2	1	1	1	
99	4	184007863	184007906	44	ODZ3	183620323	184096257	387541	Intronic to ODZ3	intronic	S	N	S	S	N	T	2	1	1	1	1	1	2	1	1	1	
100	3	198441036	198441103	68	DLG1	198259733	198513757	181304	Intronic to DLG1	intronic	N	N	S	S	N	A	2	1	1	1	1	1	5	2	2	2	
100	11	84108984	84109054	71	DLG2	82847757	83923422	185633	INTERGENIC	5'	S	S	N	S	S	A	2	1	1	1	1	1	5	2	2	2	
115	7	26946646	26946794	149	HOXA4	26941250	26943639	5396	INTERGENIC	5'	S	S	S	S	N	A	4	4	3	3	3	2	2	2	1	2	
115	17	44014841	44014948	108	HOXB4	44007875	44010742	6966	INTERGENIC	5'	N	N	N	N	N	A	4	4	3	3	3	2	2	2	1	2	
115	12	52729191	52729426	236	HOXC4	52696940	52735630	32252	INTERGENIC	5'	S	S	N	S	S	A	4	4	3	3	3	2	2	2	1	2	
115	2	176839251	176839338	88	HOXD4	176841620	176843458	2368	INTERGENIC	5'	S	S	S	S	N	A	4	4	3	3	3	2	2	2	1	2	
120	12	112663124	112663244	121	LHX5	112363415	112372598	290647	INTERGENIC	5'	S	S	N	N	N	A	2	1	1	2	2	2	1	1	2	2	
120	17	32091992	32092114	123	LHX1	32368613	32374608	276620	INTERGENIC	5'	S	S	S	S	S	A	2	1	1	2	2	2	1	1	2	2	
129	13	34858951	34859093	143	MAB2LL1	34947197	34948276	88245	Intronic to NBEA	3'	S	S	S	S	S	A	2	3	2	2	2	2	2	3	2	2	
129	4	151958087	151958422	336	MAB2LL2	151860909	151863449	94974	Intronic to LRBA	3'	S	S	S	S	S	A	2	3	2	2	2	2	2	3	2	2	
130	13	34986976	34987412	437	MAB2LL1	34947197	34948276	39137	Intronic to NBEA	5'	S	S	S	S	S	A	2	2	2	2	2	2	2	1	2	2	
130	4	151810901	151811043	143	MAB2LL2	151860909	151863449	50007	Intronic to LRBA	5'	S	S	S	S	S	A	2	2	2	2	2	2	2	1	2	2	
135	13	71096899	71097030	132	DACH1	70936833	71339332	160067	Intronic to DACH1	intronic	S	S	S	S	S	T	2	2	2	2	2	2	2	2	1	1	
135	X	85738946	85739066	121	DACH2	85209771	85893751	529176	Intronic to DACH2	intronic	S	S	S	S	S	T	2	2	2	2	2	2	2	2	1	1	
136	13	71199213	71199586	374	DACH1	70936833	71339332	262381	Intronic to DACH1	intronic	S	S	S	S	S	A	2	1	2	2	2	2	2	2	2	2	
136	X	85545555	85545748	194	DACH2	85209771	85893751	335785	Intronic to DACH2	intronic	S	S	S	S	N	A	2	1	2	2	2	2	2	2	2	2	
137	13	71324948	71325202	255	DACH1	70936833	71339332	388116	Intronic to DACH1	intronic	S	S	S	S	N	T	2	2	2	2	2	2	2	2	1	1	
137	X	85240388	85240623	236	DACH2	85209771	85893751	30618	Intronic to DACH2	intronic	S	S	S	S	N	T	2	2	2	2	2	2	2	2	1	1	
138	13	71980422	71980696	275	DACH1	70936833	71339332	641365	INTERGENIC	5'	S	S	S	S	S	T	2	1	1	2	2	2	2	2	1	1	
138	X	84989072	84989184	113	DACH2	85209771	85893751	220698	Intronic to CHNL	5'	S	S	S	S	S	T	2	1	1	2	2	2	2	2	1	1	
139	13	71985742	71985956	215	DACH1	70936833	71339332	646625	INTERGENIC	5'	S	S	S	S	S	T	2	2	2	2	2	2	2	2	1	1	
139	X	84971973	84972091	119	DACH2	85209771	85893751	237797	Intronic to CHNL	5'	S	S	S	S	S	T	2	2	2	2	2	2	2	2	1	1	
141	13	78246317	78246480	164	POU4F1	78071238	78075697	170784	INTERGENIC	5'	S	S	N	N	S	A	2	2	2	2	2	2	2	3	2	2	
141	4	147722544	147722638	95	POU4F2	147917694	147921229	195149	Intronic to Q8NBP8	5'	S	S	S	S	S	A	2	2	2	2	2	2	2	3	2	2	
144	13	94416844	94417201	358	SOX21	94161475	94162305	254897	INTERGENIC	5'	S	S	N	N	S	uc. 355	A	2	2	2	3	3	2	2	2	2	
144	3	138466162	138466661	500	SOX14	138966278	138967095	500115	INTERGENIC	5'	S	S	S	N	S	uc. 123	A	2	2	2	3	3	2	2	2	2	
146	13	99174182	99174462	281	ZIC2	99432321	99437020	258138	Intronic to CLYBL	5'	S	N	S	S	S	A	2	1	2	2	2	2	2	2	2	2	
146	X	136041804	136041956	153	ZIC3	136373867	136379776	32062	INTERGENIC	5'	S	S	S	S	S	A	2	1	2	2	2	2	2	2	2	2	
147	13	99193412	99193583	172	ZIC2	99432321	99437020	238908	Intronic to CLYBL	5'	S	N	S	S	N	T	2	1	2	1	1	2	2	2	1	1	
147	X	136042880	136043094	215	ZIC3	136373867	136379776	330986	INTERGENIC	5'	S	S	S	S	S	T	2	1	2	1	1	2	2	2	1	1	
148	13	99312146	99312247	102	ZIC2	99432321	99437020	120174	Intronic to CLYBL	5'	S	N	S	S	S	A	2	1	1	1	1	0	2	2	2	1	
148	X	136094975	136095118	144	ZIC3	136373867	136379776	278891	INTERGENIC	5'	S	S	N	S	S	A	2	1	1	1	1	0	2	2	2	1	
149	13	99410380	99410478	99	ZIC2	99432321	99437020	21940	INTERGENIC	5'	S	N	N	S	S	A	2	2	2	1	2	1	2	2	2	1	
149	X	136237316	136237483	168	ZIC3	136373867	136379776	136550	INTERGENIC	5'	S	S	S	S	S	A	2	2	2	1	2	1	2	2	2	1	
150	13	99754680	99754809	130	ZIC2	99432321	99437020	317790	Intronic to PCCA	3'	S	N	S	S	S	T	2	2	2	0	1	2	2	1	1	1	
150	X	136635707	136635795	89	ZIC3	136373867	136379776	256020	INTERGENIC	3'	S	S	S	S	N	T	2	2	2	0	1	2	2	1	1	1	
152	13	110835569	110835812	244	SOX1	111769915	111774022	934345	INTERGENIC	5'	S	S	S	S	S	T	2	2	2	2	2	2	2	2	1	1	
152	3	182256829	182257160	332	SOX2	182912425	182914924	655595	INTERGENIC	5'	N	S	S	S	S	T	2	2	2	2	2	2	2	2	1	1	
163	14	36796212	36796346	135	FOXA1	37128948	371342418	332735	Intronic to MIPOL1	3'	S	S	N	S	S	T	2	2	2	2	2	2	2	1	1	1	
163	20	22331013	22331299	287	FOXA2	22509824	22514103	178810	INTERGENIC	3'	S	S	N	S	S	T	2	2	2	2	2	2	2	1	1	1	
165	14	56546130	56546273	144	OTX2	56337181	56346941	199333	INTERGENIC	5'	S	S	N	S	S	A	2	2	2	2	2	2	2	2	2	2	
165	2	63105825	63105967	143	OTX1	63189617	63195955	83791	Intronic to EHP1	5'	S	S	N	S	S	uc. 64	A	2	2	2	2	2	2	2	2	2	2
168	2	50668405	50668455	51	NRXN1	50059139	50486509	181897	INTERGENIC	5'	S	N	S	S	N	A	2	2	2	2	2	2	2	2	3	3	
168	14	78344712	78344762	51	NRXN3	77779190	79400511	565523	Intronic to NRXN3	intronic	S	S	S	S	S	A	2	2	2	2	2	2	2	2	3	3	
170	14	96501155	96501355	201	BCLL1B	98705378	98807569	2204222	INTERGENIC	3'	S	S	S	S	N	uc. 379	A	2	2	2	1	2	2	2	3	2	
170	2	58769811	58770065	255	BCLL1A	60590946	60692285	1821134	INTERGENIC	3'	S	N	S	S	S	A	2	2	2	1	2	2	2	2	3	2	
171	14	98392650	98392818	169	BCLL1B	98705378	98807569	312727	INTERGENIC	3'	S	S	S	S	S	A	2	2	2	2	2	2	2	2	2	2	
171	2	60209607	60209817	211	BCLL1A	60590946	60692285	381338	INTERGENIC	3'	S	S	S	S	S	uc. 58	A	2	2	2	2	2	2	2	2	2	2
172	14	98536290	98536488	199	BCLL1B	98705378	98807569	169087	INTERGENIC	3'	S	S	S	S	S	A	2	2	2	2	2	2	2	2	3	3	
172	2	60353438	60353749	312	BCLL1A	60590946	60692285	237507	INTERGENIC	3'	S	S	S	S	S	A	2	2	2	2	2	2	2	2	3	3	
184	15	34723819	34723925	107	MEIS2	34970526	35180797	246706	INTERGENIC	3'	S	S	S	S	S	A	2	2	2	2	2	2	2	2	2	2	
184	2	67406541	67406644	104	MEIS1	66574184	66711542	695103	INTERGENIC	3'	S	S	S	S	S	A	2	2	2	2	2	2	2	2	2	2	
185	15	34738473	34738622	150	MEIS2	34970526	35180797	232052	INTERGENIC	3'	N	S	S	S	N	T	2	1	1	1	1	1	2	2	0	1	
185	2	67304174	67304268	95	MEIS1	66574184	66711542	592727	INTERGENIC	3'	S	N	S	S	N	T	2	1	1	1	1	1	2	2	0	1	

274	17	34972731	34972926	196	NEUROD2	35014578	35017700	41846	INTERGENIC		3'	S	S	N	S	S	A	3	2	3	3	3	2	3	2	3	
274	7	31047755	31047942	188	NEUROD6	31150323	31153779	102567	INTERGENIC		3'	S	S	S	S	S	A	3	2	3	3	3	2	3	2	3	
274	2	182244416	182244503	88	NEUROD1	182244504	182370760	126256	INTERGENIC		3'	S	S	S	S	S	A	3	2	3	3	3	2	3	2	3	
275	17	35028189	35028302	114	NEUROD2	35014578	35017700	10603	INTERGENIC		5'	S	S	S	N	S	A	3	2	3	3	3	3	2	2	2	
275	7	31175767	31175892	126	NEUROD6	31150323	31153779	22114	INTERGENIC		5'	S	S	S	S	S	A	3	2	3	3	3	3	2	2	2	
275	2	182376934	182377007	74	NEUROD1	182244504	182370760	6175	INTERGENIC		5'	S	S	S	S	S	A	3	2	3	3	3	3	2	2	2	
278	17	43987792	43987857	66	HOXB3	43982246	44006848	5547	Intronic to HOXB3	intronic		S	S	N	S	N	A	2	0	2	2	2	1	1	1	2	
278	7	26926384	26926447	64	HOXA3	26919049	26939879	7336	Intronic to HOXA3	intronic		S	S	S	S	S	A	2	0	2	2	2	1	1	1	2	
281	17	44022620	44022786	167	HOXB5	44023619	44026117	998	INTERGENIC		3'	S	S	S	S	S	A	2	0	2	2	2	2	3	3	3	
281	7	26953055	26953286	232	HOXA5	26954236	26956527	1180	INTERGENIC		3'	S	S	S	S	S	A	2	0	2	2	2	2	3	3	3	
291	18	22491749	22491877	129	CHST9	22749660	23019279	347910	INTERGENIC		3'	S	S	N	S	N	A	2	2	1	2	2	2	2	2	1	
291	19	38978900	38978955	56	CHST8	38804717	38956248	22708	INTERGENIC		3'	S	S	N	N	N	A	2	2	1	2	2	2	2	2	1	
302	18	70719433	70719537	105	SDCCAG33	71052131	71130666	332698	INTERGENIC		5'	S	S	S	S	S	A	3	1	3	3	3	2	1	1	3	
302	19	37142360	37142560	201	ZNF537	36458841	36531985	610549	INTERGENIC		5'	S	S	S	S	S	A	3	1	3	3	3	2	1	1	3	
302	20	50489281	50489495	215	ZNF218	51023160	51541016	533878	INTERGENIC		5'	N	N	N	S	S	A	3	1	3	3	3	2	1	1	3	
303	18	70721674	70721970	297	SDCCAG33	71052131	71130666	330456	Intronic to ZNF407	intronic	5'	N	S	S	S	S	A	2	2	2	2	2	3	1	2	2	
303	20	50491876	50491954	79	ZNF537	51023160	51541016	531283	INTERGENIC		5'	S	S	S	S	N	A	2	2	2	2	2	3	1	2	2	
304	18	70845865	70846147	283	SDCCAG33	71052131	71130666	206265	Intronic to ZNF407	intronic	5'	N	S	S	S	S	A	2	2	2	1	1	3	0	3	4	
304	20	50543452	50543567	116	ZNF218	51023160	51541016	479707	INTERGENIC		5'	S	N	S	S	S	A	2	2	2	1	1	3	0	3	4	
305	18	70909875	70909917	43	SDCCAG33	71052131	71130666	142255	INTERGENIC		5'	N	S	S	S	N	A	2	2	1	1	2	2	1	1	2	
305	19	36729013	36729106	94	ZNF537	36458841	36531985	197122	INTERGENIC		5'	S	S	S	S	S	A	2	2	1	1	2	2	1	1	2	
306	18	70951494	70951681	188	SDCCAG33	71052131	71130666	100636	INTERGENIC		5'	N	S	S	S	S	A	3	2	3	3	3	3	2	4	4	
306	20	50813548	50813816	269	ZNF218	51023160	51541016	209611	INTERGENIC		5'	N	N	N	S	N	A	3	2	3	3	3	3	2	4	4	
306	19	36690781	36690918	138	ZNF537	36458841	36531985	158934	INTERGENIC		5'	S	S	S	S	S	A	3	2	3	3	3	3	2	4	4	
307	19	36607036	36607152	117	ZNF537	36458841	36531985	75168	INTERGENIC		5'	S	S	S	S	S	A	3	3	2	2	2	3	2	1	2	
307	20	50854958	50855143	186	ZNF218	51023160	51541016	168201	INTERGENIC		5'	N	N	S	S	S	A	3	3	2	2	2	3	2	1	2	
307	18	71009859	71009859	127	SDCCAG33	71052131	71130666	42271	INTERGENIC		5'	N	S	S	S	N	A	3	3	2	2	2	3	2	1	2	
308	18	71053485	71053621	137	SDCCAG33	71052131	71130666	1355	Intronic to SDCCAG33	intronic		N	S	S	S	N	A	3	3	3	3	3	3	2	4	4	
308	20	51024204	51024308	105	ZNF218	51023160	51541016	1045	Intronic to ZNF218	intronic		S	S	S	S	N	A	3	3	3	3	3	3	2	4	4	
308	19	36530959	36531046	88	ZNF537	36458841	36531985	72119	Intronic to ZNF537	intronic		S	S	S	S	S	A	3	3	3	3	3	3	2	4	4	
312	18	71108906	71109079	174	SDCCAG33	71052131	71130666	56776	Intronic to SDCCAG33	intronic		N	S	S	S	N	A	2	2	2	1	1	2	1	1	2	
312	19	36498384	36498619	236	ZNF537	36458841	36531985	39544	Intronic to ZNF537	intronic		S	S	S	S	S	A	2	2	2	1	1	2	1	1	2	
313	18	71109237	71109306	70	SDCCAG33	71052131	71130666	57107	Intronic to SDCCAG33	intronic		N	S	S	S	N	A	2	2	2	2	2	2	1	2	2	
313	19	36490692	36490757	66	ZNF537	36458841	36531985	31852	Intronic to ZNF537	intronic		S	S	S	S	N	A	2	2	2	2	2	2	1	2	2	
314	18	71109337	71109471	135	SDCCAG33	71052131	71130666	57207	Intronic to SDCCAG33	intronic		N	S	S	S	S	A	2	2	2	2	2	2	1	4	4	
314	19	36490535	36490657	123	ZNF537	36458841	36531985	31695	Intronic to ZNF537	intronic		S	S	S	S	S	A	2	2	2	2	2	2	1	4	4	
344	19	36606811	36606910	100	ZNF537	36458841	36531985	74926	INTERGENIC		5'	S	S	S	S	S	A	2	2	1	1	1	2	2	2	1	
344	20	50855195	50855312	118	ZNF218	51023160	51541016	167964	INTERGENIC		5'	N	N	S	S	S	A	2	2	1	1	1	2	2	2	1	
363	2	58058729	58058810	82	Ambiguous												A	2	2	2	2	2	3	2	1	2	
363	3	19003391	19003608	218	NO PARALOGUES												A	2	2	2	2	2	3	2	1	2	
386	1	63177032	63177138	107	FOXD3	63500751	63502187	323612	INTERGENIC		5'	S	N	N	N	N	T	5	4	2	2	2	2	1	2	1	1
386	9	1501124	150231	108	FOXD4	106800	108119	42006	Intronic to CSMD1	intronic		S	S	N	N	N	T	5	4	2	2	2	2	1	2	1	1
386	9	67979611	67979718	108	FOXD4L4	67936136	67937386	42333	Intronic to Q8N7U	intronic		N	N	N	N	N	T	5	4	2	2	2	2	1	2	1	1
386	9	68105236	68105343	108	FOXD4L3	68147338	68149555	44211	Intronic to Q6VB91	intronic		N	N	N	N	N	T	5	4	2	2	2	2	1	2	1	1
386	2	113930781	113930888	108	FOXD4L1	113972472	113974958	41583	Intronic to CSMD2	intronic		N	N	N	N	N	T	5	4	2	2	2	2	1	2	1	1
391	2	144548728	144549137	410	Ambiguous												T	2	2	2	1	1	1	1	1	1	1
391	2	157970292	157970420	129	NO PARALOGUES												T	2	2	2	1	1	1	1	1	1	1
395	2	175019447	175019515	69	SP3	174598767	174655561	363955	INTERGENIC		5'	S	N	N	S	S	T	2	1	2	2	2	2	2	1	1	1
395	7	20606569	20606633	65	SP4	21240929	21324576	634295	INTERGENIC		5'	S	S	S	S	N	T	2	1	2	2	2	2	2	1	1	1
396	2	176763706	176764039	334	EVX2	176770343	176774012	6636	INTERGENIC		3'	S	S	N	S	S	A	2	1	2	2	2	2	2	1	2	2
396	7	27064025	27064188	164	EVX1	27055662	27059433	4756	INTERGENIC		3'	S	S	S	S	S	A	2	1	2	2	2	2	2	1	2	2
397	2	176765873	176766384	512	EVX2	176770343	176774012	4469	INTERGENIC		3'	S	S	N	S	S	A	3	1	3	3	3	3	3	2	2	2
397	7	27061713	27061779	67	EVX1	27055662	27059433	2347	INTERGENIC		3'	S	S	S	S	S	A	3	1	3	3	3	3	3	2	2	2
397	7	27062444	27062543	100	EVX1	27055662	27059433	3111	INTERGENIC		3'	S	S	S	S	S	A	3	1	3	3	3	3	3	2	2	2
417	20	48103245	48103288	44	SNAI1	48032935	48038826	64463	INTERGENIC		3'	S	N	N	S	S	T	2	1	1	1	2	2	2	1	1	1
417	8	49657516	49657703	188	SNAI2	49992803	49996542	335286	INTERGENIC		3'	S	N	S	N	N	T	2	1	1	1	2	2	2	1	1	1
460	3	71091877	71092071	195	FOXP1	71088617	71715831	3261	Intronic to FOXP1	intronic		S	S	S	S	S	A	2	1	2	2	2	2	2	2	1	1
460	7	113922748	113922913	166	FOXP2	113649004	113923935	273745	Intronic to FOXP2	intronic		S	S	S	S	S	A	2	1	2	2	2	2	2	2	1	1
461	3	71113551	71113712	162	FOXP1	71088617	71715831	24935	Intronic to FOXP1	intronic		S	S	S	S	S	A	2	1	2	2	2	2	1	2	2	2
461	7	113891494	113891630	137	FOXP2	113649004	113923935	242491	Intronic to FOXP2	intronic		S	S	S	S	S	A	2	1	2	2	2	2	1	2	2	2
462	3	71135500	71135730	231	FOXP1	71088617	71715831	46884	Intronic to FOXP1	intronic		S	S	S	S	S	A										

463	7	113667019	113667095	77	FOXP2	113649004	113923935	18016	Intronic to FOXP2	intronic	S	S	S	S	S	T	2	1	2	2	2	2	2	2	1	1
464	3	71360360	71360677	318	FOXP1	71088617	71715831	271744	Intronic to FOXP1	intronic	S	S	N	S	S	A	2	1	2	2	2	2	1	2	2	2
464	7	113652159	113652406	248	FOXP2	113649004	113923935	3156	Intronic to FOXP2	intronic	S	S	S	S	N	A	2	1	2	2	2	2	1	2	2	2
465	3	71373468	71373756	289	FOXP1	71088617	71715831	284852	Intronic to FOXP1	intronic	S	S	S	S	S	A	3	3	3	4	4	3	3	2	3	
465	7	113651358	113651661	304	FOXP2	113649004	113923935	2355	Intronic to FOXP2	intronic	S	S	S	S	S	A	3	3	3	4	4	3	3	2	3	
465	6	41631447	41631567	121	FOXP4	41622142	41676336	9306	Intronic to FOXP4	intronic	S	S	N	S	N	A	3	3	3	4	4	3	3	2	3	
466	3	71374692	71374863	172	FOXP1	71088617	71715831	286076	Intronic to FOXP1	intronic	S	S	S	S	S	A	2	2	2	2	2	2	1	1	2	
466	7	113651018	113651328	311	FOXP2	113649004	113923935	2015	Intronic to FOXP2	intronic	S	S	S	S	S	A	2	2	2	2	2	2	1	1	2	
467	3	71376974	71377143	170	FOXP1	71088617	71715831	288358	Intronic to FOXP1	intronic	S	S	S	S	S	A	2	0	1	2	2	1	2	2	1	
467	7	113648436	113648493	58	FOXP2	113649004	113923935	567	INTERGENIC	5'	S	S	S	S	N	A	2	0	1	2	2	1	2	2	1	
474	3	159259254	159259551	298	SHOX2	159298519	159306542	39264	INTERGENIC	3'	S	S	N	S	N	A	3	1	2	1	1	2	2	2	2	
474	Y	721576	721678	103	SHOX	561633	589564	132115	INTERGENIC	3'	N	N	S	S	S	A	3	1	2	1	1	2	2	2	2	
475	3	159492660	159492855	196	SHOX2	159298519	159306542	186314	Intronic to NP_057709	5'	S	S	N	S	N	A	3	1	2	1	1	2	2	2	2	
475	Y	403508	403625	118	SHOX	561633	589564	158124	INTERGENIC	5'	N	N	S	S	S	A	3	1	2	1	1	2	2	2	2	
480	X	9240861	9240965	105	TBLIX	9242775	9497513	1809	INTERGENIC	5'	S	S	N	S	S	A	3	3	1	2	2	1	2	1	2	
480	3	178560537	178560582	46	TBLIXR1	178221245	178397715	339293	Intronic to TBLIXR1	intronic	S	S	N	N	N	A	3	3	1	2	2	1	2	1	2	
484	3	182810772	182810892	121	SOX2	182912425	182914924	101652	INTERGENIC	5'	N	S	S	S	S	A	2	2	2	2	2	3	2	2	2	
484	X	139346357	139346511	155	SOX3	139311406	139312746	33766	INTERGENIC	5'	S	S	S	S	S	A	2	2	2	2	2	3	2	2	2	
503	4	20158266	20158337	72	SLIT2	19931152	20297057	227115	Intronic to SLIT2	intronic	S	S	S	S	S	T	2	2	2	2	2	2	2	1	1	
503	5	168204511	168204588	78	SLIT3	168021325	168660292	183187	Intronic to SLIT3	intronic	S	S	S	S	N	T	2	2	2	2	2	2	2	1	1	