Supp. Table 1: Sources of the gene models used in the present study.

Homo sapiens	NCBI 36 from Ensembl build 41
Mus musculus	NCBI m36 from Ensembl build 41
Rattus norvegicus	RGSC 3.4 from ensembl build 41
Gallus gallus	WASHUC 1 from Ensembl build 41
Xenopus tropicalis	JGI version 4.1
Danio rerio	Zv 6 from Ensembl build 41
Takifugu rubripes	JGI version 4.0
Ciona intestinalis	JGI version 2.0
Branchiostoma floridae	JGI version 1.0
Strongylocentrotus purpuratus	build 2 version 1 on Bayler's assmbly Spur_v2.1
Drosophila melanogaster	BDGP 4.3 from ensembl build 41
Anopheles gambiae	AgamP3 from Ensembl build 41
Caenorhabditis elegans	Wormbase release WS164
Caenorhabditis briggsae	Wormbase release WS164
Lottia gigantea	genome.jgi-psf.org/Lotgi1/Lotgi1.home.html
Nematostella vectensis	JGI version 1.0
Monosiga brevicollis	JGI Version 1.0
Dictyostelium discoideum	dictyBase.org; Full Chromosomes made 10/05/2004; Primary Features made 7/11/2005
Saccharomyces cerevisiae	genome-ftp.stanford.edu created on 7 July 2004
Arabidopsis thaliana	TAIR6, updated 11.2005 from NCBI

Supp. Table 2 Domain combinations in amphioxus

	Number of gene models	Number of gene models with Pfam e-value < 10^{-3}	Number of Pfams e-value < 10^{-3} (A)	Number of amphioxus specific domain pairs (B)	% (A/B)
All of Amphioxus gene models	50,817	32,459	121,370	1,965	1.62%
Flanked by ESTs	24,909	10,774	35280	847	2.40%

The rate of amphioxus specific domain combinations is robust to the filtering of gene models by EST evidence. The top row shows the total number of gene models, Pfams and the number of amphioxus-specific domain combinations. In the second row, we show only the Pfams deriving from gene models flanked by paired ESTs. The final column (A/B) shows the percentage of specific domain pairs relative to the total number of Pfam domains. Since the rate of amphioxus specific domain combinations remains constant or slightly more in the genemodels with EST evidence than in the original dataset, the reliability of these rates is enhanced in bottom rowcompared to the top row. Compared with the estimated number of genes 21,900 (Putnum et al., 2008), the total number of gene models is more than twice as many. This is because in many genes two alleles were recoginized as disntinct gene models. In some cases, more than three gene models were predicted to have similar amino acid sequences, where only one gene was counted in these cases (Putnum et al., 2008). Therefore, in most case, only one allelic gene models are supported by EST sequences. It should also be noted that EST sequences were only recovered from embryonic or larval cDNAs, and not from cDNAs of adult stage.

Supp. Table 3. Domain combinations excuded from the list of vertebrate specific combinations.

Domain combinations excuded from the list of vertebrate specific combinations								
Human genes	Acc. No.	Domain1		Domain2		Genes found in invertebrates		
complement component 3	P01024	PF07703	A2M_N_2	PF01821	ANATO	Ciona intestinalis	complement component C3	CAC85958
growth-arrest-specific 6	Q14393	PF00594	Gla	PF07645	EGF_CA	Ciona intestinalis	gamma-carboxyglutamic acid protein 3 splice variant C	ABJ09594
heat shock transcription factor 2	Q03933	PF00447	HSF_DNA-bind	PF06546	Vert_HS_TF	Drosophila melanogaster	Heat shock factor	NP_001036557
hexokinase 3 (white cell)	P52790	PF03727	Hexokinase_2	PF00349	Hexokinase_1	Arabidopsis thaliana	Hexokinase_2	AAF99786
matrix metallopeptidase 23B	NP_008914	PF00413	Peptidase_M10	PF01549	ShK	Caenorhabditis elegans	Nematode AStacin protease family member (nas-6)	NP_001040903
runt-related transcription factor 3	Q13761	PF00853	Runt	PF08504	RunxI	Branchiostoma lanceolatum	runt protein	AAN08565
SEMA3E	O15041	PF01403	Sema	PF00047	ig	Caenorhabditis briggsae	Semaphorin-2A precursor	Q60PR7
sorbin and SH3 domain containing 1	Q9BX66	PF02208	Sorb	PF00018	SH3_1	Drosophila melanogaster	CAP	AAO39438
		PF02208	Sorb	PF07653	SH3_2	Drosophila melanogaster	CAP	AAO39438
BACH2	Q9BYV9	PF00651	BTB	PF00170	bZIP_1	Ciona intestinalis	transcription factor protein	NP_001071661
tumor protein p73	O15350	PF07710	P53_tetramer	PF07647	SAM_2	Strongylocentrotus purpuratus	similar to p63(47) transcription factor	XP_001196748

Supp. Table 4. Class I Domain combinations specific to vertebrates.

Human Genes	Acc. No.	Domain 1		Domain 2		-3	-5	-10	-15	-20	Other examples of Human genes
A. Function that many kinds of cells use											
potassium inwardly-rectifying channel, subfamily J, member 12	Q14500	PF08466	IRK_N	*PF01007*	*IRK*	+	+	+	+	+	P63252
apolipoprotein B mRNA editing enzyme, catalytic polypeptide 1	P41238	*PF08210*	*APOBEC_N*	*PF05240*	*APOBEC_C*	+	+	+	+	+	Q9GZX7, P31941, Q9UH17
coiled-coil-helix-coiled-coil-helix domain-containing protein 6.	Q9BRQ6	*PF05300*	*DUF737*	PF06747	CHCH	+	+	-	-	-	Q9NX63
potassium voltage-gated channel, Shab-related subfamily, member 2	Q92953	PF00520	Ion_trans	*PF03521*	*Kv2channel*	+	+	+	+	+	Q14721
		PF07885	Ion_trans_2	*PF03521*	*Kv2channel*	+	+	+	-	-	Q14721
sorting nexin 1.	Q13596	*PF03700*	*Sorting_nexin*	PF00787	PX	+	+	+	+	+	O60749
internexin neuronal intermediate filament protein, alpha	Q16352	*PF04732*	*Filament_head*	PF00038	Filament	+	+	+	+	+	P07196, P14136, P08670
B. Cell-cell communication											
BI. Signaling receptors and ligands											
amyloid beta (A4) precursor protein	Q9UCC8	PF02177	A4_EXTRA	*PF03494*	*Beta-APP*	+	+	+	+	+	
major histocompatibility complex, class I, F	P30511	*PF00129*	*MHC_I*	PF07654	C1-set	+	+	+	+	+	P17693, NP_001522, NP_000238
		PF00129	*MHC_I*	PF00047	ig	+	+	+	-	-	P17693, NP_001522, NP_000238
major histocompatibility complex, class II, DQ beta 1	P03992	*PF00969*	*MHC_II_beta*	PF00047	ig	+	+	+	+	-	P13765, P01913, NP_872355
		PF00969	*MHC_II_beta*	PF07654	C1-set	+	+	+	+	+	P03992, P13765, P01913
insulin-like growth factor 2 (somatomedin A)	P01344	PF00049	Insulin	*PF08365*	*IGF2_C*	+	+	+	+	+	
latrophilin 1	O94910	PF00002	7tm_2	*PF02354*	*Latrophilin*	+	+	+	+	+	Q9HAR2, O95490
		PF01825	GPS	*PF02354*	*Latrophilin*	+	+	+	+	+	Q9HAR2, O95490
		PF02140	Gal_Lectin	*PF02354*	*Latrophilin*	+	+	+	+	+	Q9HAR2, O95490
		PF02191	OLF	*PF02354*	*Latrophilin*	+	+	+	+	+	Q9HAR2, O95490
		PF02793	HRM	*PF02354*	*Latrophilin*	+	+	+	+	-	Q9HAR2, O95490
platelet-derived growth factor beta polypeptide	P01127	*PF04692*	*PDGF_N*	PF00341	PDGF	+	+	+	+	+	P04085
gap junction protein, alpha 1, 43kDa	P17302	PF00029	Connexin	*PF03508*	*Connexin43*	+	+	-	-	-	
BII. Intracellular singnal transduction											
erythrocyte membrane protein band 4.1-like 3	Q9Y2J2	PF00373	Band_41	*PF04382*	*SAB*	+	+	+	+	+	P11171, O43491, Q9H4G0
		PF04382	*SAB*	PF05902	4_1_CTD	+	+	+	+	+	P11171, O43491, Q9H4G0
connector enhancer of kinase suppressor of Ras 2	Q8WXI2	PF00595	PDZ	*PF06663*	*DUF1170*	+	+	-	-	-	
		PF07647	SAM_2	*PF06663*	*DUF1170*	+	+	+	-	-	
		PF06663	*DUF1170*	PF00169	PH	+	+	+	+	+	
		PF00536	SAM_1	*PF06663*	*DUF1170*	+	+	+	+	-	
proopiomelanocortin	P01189	*PF08384*	*NPP*	*PF00976*	*ACTH domain*	+	+	+	+	+	
		PF00976	*ACTH domain*	*PF08035*	*Op_neuropeptide*	+	+	+	+	-	
		PF08384	*NPP*	*PF08035*	*Op_neuropeptide*	+	+	+	+	-	
S100 calcium binding protein A11	P31949	*PF01023*	*S_100*	PF00036	efhand	+	+	-	-	-	P04271, P23297, P06703
BIII. ECM and cell adhesion											
protocadherin 9	Q9HC56	PF00028	Cadherin	*PF08374*	*Protocadherin*	+	+	+	+	+	O60245, Q08174, Q9BZA7
		PF08266	Cadherin_2	*PF08374*	*Protocadherin*	+	+	-	-	-	O60245, Q08174, Q9BZA7
odz, odd Oz/ten-m homolog 4	Q6N022	*PF06484*	*Ten_N*	PF00008	EGF	+	+	+	+	+	Q9UKZ4
		PF06484	*Ten_N*	PF07974	EGF_2	+	+	+	+	+	Q9P273, Q9NT68, Q9UKZ4
C. Transcription factors											
arginine-glutamic acid dipeptide (RE) repeats	Q9P2R6	PF00249	Myb_DNA-binding	*PF03154*	*Atrophin-1*	+	+	-	-	-	
		PF00320	GATA	*PF03154*	*Atrophin-1*	+	+	+	-	-	
		PF01448	ELM2	*PF03154*	*Atrophin-1*	+	+	-	-	-	
		PF03154	*Atrophin-1*	PF01448	ELM2	+	+	-	-	-	
HNF1 homeobox A	P20823	PF04814	HNF-1_N	*PF04812*	*HNF-1B_C*	+	+	+	+	+	P35680
caudal type homeobox 2	Q99626	*PF04731*	*Caudal_act*	PF00046	Homeobox	+	+	+	+	+	P47902, O14627

HOXC9	P31274	*PF04617*	*Hox9_act*	PF00046	Homeobox	+	+	+	+	+	P31269, P17482, P28356
RFX1	P22670	*PF04589*	*RFX1_trans_act*	PF02257	RFX_DNA_binding	+	+	+	+	+	P48378, P48380
v-myb myeloblastosis viral oncogene homolog	P10242	PF00249	Myb_DNA-binding	*PF07988*	*Wos2*	+	+	+	+	+	P10243
myelin transcription factor 1-like	Q9UL68	PF01530	zf-C2HC	*PF08474*	*MYT1*	+	+	+	+	+	Q01538, O60284
		PF08474	*MYT1*	PF01530	zf-C2HC	+	+	+	+	+	
nuclear factor I/C	P08651	PF03165	MH1	*PF00859*	*CTF_NFI*	+	+	+	+	+	Q12857, Q14938, O00712
nuclear factor, interleukin 3 regulated	NP_005375	PF07716	bZIP_2	*PF06529*	*Vert_IL3-reg_TF*	+	+	+	+	-	
single-minded homolog 2	Q14190	PF08447	PAS_3	*PF06621*	*SIM_C*	+	+	+	+	+	P81133
Wilms tumor 1	P19544	*PF02165*	*WT1*	PF00096	zf-C2H2	+	+	+	+	+	
zinc finger protein, Y-linked	P08048	*PF04704*	*Zfx_Zfy_act*	PF00096	zf-C2H2	+	+	+	+	+	P17010, NP_068838
D. Specialized terminal differentiation products											
crystallin, alpha B	P02511	*PF00525*	*Crystallin*	PF00011	HSP20	+	+	+	+	+	P02489, O14558

*: + and - indicate whether the combination was vertebrate-specific using the range of cutoff values; e.g., + in the -3 column indicates that the combination was vertebrate-specific at a cutoff E-value of 10^{-3}.

Gene models were classified according to Lee et al. Development 126, 3857 (1999)

Domains shown in italics (red) are found only in vertebrate proteomes.

Supp. Table 5. Exon structure and intron phase of the domain combinations acquired by vertebrates (human gene models).

Domain Combination			Gene ID	Protein ID	Domain 1	N_Exon	Phase	C_Exon	Phase	C_Exon_Margin	Domain_on_C_Exon	Domain 2	N_Exon	Phase	C_Exon	Phase	N_Exon_Margin	Domain_on_N_Exon
PF06119	-	PF01826	ENSG00000109927	ENST00000264037	PF06119	4	0	5	1	34	132 farther	PF01826	8	1	8	0	14	162
PF00089	-	PF00595	ENSG00000166033	ENST00000368984	PF00089	3	2	6	1	28	87 same	PF00595	6	0	9		102	13
PF00089	-	PF00595	ENSG00000170801	ENST00000307358	PF00089	3	2	6	1	28	87 same	PF00595	6	0	9		105	10
PF00651	-	PF06665	ENSG00000148411	ENST00000371753	PF00651	1		1	1	514	315 neighbor	PF06665	2	1	5		8	157
PF00651	-	PF06665	ENSG00000160877	ENST00000292431	PF00651	2		2	1	574	315 neighbor	PF06665	3	1	6		17	157
PF03815	-	PF00092	ENSG00000100473	ENST00000216361	PF03815	3	1	4	1	10	124 farther	PF00092	7	1	10	1	11	137
PF03815	-	PF00092	ENSG00000205221	ENST00000379242	PF03815	4	1	5	1	10	124 farther	PF00092	13	1	16	1	11	137
PF00320	-	PF01448	ENSG00000142599	ENST00000337907	PF00320	15	1	16	0	114	86 neighbor	PF01448	17	0	21	1	3	159
PF00040	-	PF00041	ENSG00000115414	ENST00000357867	PF00040	9	1	9	1	10	126 farther	PF00041	13	1	14	1	2	120
PF07645	-	PF00086	ENSG00000087303	ENST00000216286	PF07645	12	1	13	1	7	113 neighbor	PF00086	14	1	14	1	23	198
PF07645	-	PF00086	ENSG00000116962	ENST00000264187	PF07645	11	1	12	1	10	113 neighbor	PF00086	13	1	14	0	17	211
PF06119	-	PF00086	ENSG00000087303	ENST00000216286	PF06119	3	0	4	1	250	52 farther	PF00086	14	1	14	1	23	198
PF06119	-	PF00086	ENSG00000116962	ENST00000264187	PF06119	3	0	4	1	331	52 farther	PF00086	13	1	14	0	17	211
PF02177	-	PF00014	ENSG00000142192	ENST00000346798	PF02177	2	0	5	2	98	96 farther	PF00014	7	1	7	1	2	159
PF02177	-	PF00014	ENSG00000084234	ENST00000263574	PF02177	2	0	5	2	101	96 farther	PF00014	7	1	7	1	2	159
PF07974	-	PF03160	ENSG00000132470	ENST00000200181	PF07974	14	1	15	0	18	81 farther	PF03160	25	1	27	1	152	28
PF00194	-	PF00041	ENSG00000106278	ENST00000265220	PF00194	2	1	8	1	28	123 neighbor	PF00041	9	1	10	1	5	180
PF00194	-	PF00041	ENSG00000144724	ENST00000295874	PF00194	2	1	8	1	70	123 neighbor	PF00041	9	1	10	1	5	180
PF00041	-	PF00039	ENSG00000115414	ENST00000357867	PF00041	37	1	39	1	37	102 neighbor	PF00039	40	1	40	1	35	120
PF00560	-	PF03736	ENSG00000168481	ENST00000306317	PF00560	4	2	5	2	17	55 farther	PF03736	7	1	7	1	2	123
PF00560	-	PF03736	ENSG00000153902	ENST00000310123	PF00560	5	2	6	1	118	52 neighbor	PF03736	7	1	7	1	8	117
PF00560	-	PF03736	ENSG00000153012	ENST00000382114	PF00560	5	2	6	1	115	55 neighbor	PF03736	7	1	7	1	2	123
PF00560	-	PF03736	ENSG00000108231	ENST00000371418	PF00560	5	2	6	1	100	70 neighbor	PF03736	7	1	7	1	2	123
PF00594	-	PF02210	ENSG00000184500	ENST00000348974	PF00594	2	1	4	1	85	2 farther	PF02210	10	2	12	1	19	171
PF00594	-	PF02210	ENSG00000183087	ENST00000327773	PF00594	2	1	4	1	61	2 farther	PF02210	10	2	12	1	19	171
PF00041	-	PF00612	ENSG00000154358	ENST00000366709	PF00041	52	1	52	1	25	258 farther	PF00612	55	0	55	1	114	63
PF00594	-	PF00089	ENSG00000180210	ENST00000389910	PF00594	2	1	4	1	49	2 farther	PF00089	9	1	14		86	41
PF00594	-	PF00089	ENSG00000126231	ENST00000375547	PF00594	2	1	4	1	112	2 farther	PF00089	6	1	8		20	48
PF00594	-	PF00089	ENSG00000115718	ENST00000234071	PF00594	3	1	5	1	136	2 farther	PF00089	7	1	9		98	45
PF00594	-	PF00089	ENSG00000101981	ENST00000218099	PF00594	2	1	4	1	112	2 farther	PF00089	6	1	8		158	45
PF00594	-	PF00089	ENSG00000057593	ENST00000261967	PF00594	3	1	5	1	112	2 farther	PF00089	7	1	9		65	45
PF00594	-	PF00089	ENSG00000126218	ENST00000375559	PF00594	2	1	4	1	112	2 farther	PF00089	6	1	8		200	45
PF00433	-	PF02185	ENSG00000067900	ENST00000261535	PF00433	10	1	10	2	2	138 farther	PF02185	13	2	15	0	10	39
PF00433	-	PF02185	ENSG00000134318	ENST00000315872	PF00433	9	1	9	2	2	138 farther	PF02185	13	2	15	0	10	39
PF00040	-	PF08238	ENSG00000071537	ENST00000336735	PF00040	4	1	4	1	4	126 neighbor	PF08238	5	1	6	0	38	68
PF00249	-	PF01448	ENSG00000142599	ENST00000337907	PF00249	12	0	14	1	130	33 farther	PF01448	17	0	21	1	3	159
PF01284	-	PF07303	ENSG00000152939	ENST00000325631	PF01284	2		2	0	45	540 farther	PF07303	5	2	7		4	168
PF01284	-	PF07303	ENSG00000197822	ENST00000355237	PF01284	3	2	4	0	84	78 farther	PF07303	7	2	9		4	168
PF01284	-	PF07303	ENSG00000183222	ENST00000356995	PF01284	2	2	3	0	84	78 farther	PF07303	6	2	8		4	168
PF01391	-	PF00014	ENSG00000163359	ENST00000295550	PF01391	30	0	33	0	6	27 farther	PF00014	43	1	43	1	2	159
PF01391	-	PF00014	ENSG00000114270	ENST00000328333	PF01391	110	0	112	0	36	18 farther	PF00014	117	1	117	1	2	168
PF00619	-	PF00097	ENSG00000023445	ENST00000263464	PF00619	7	1	8	1	37	5 neighbor	PF00097	9	1	9		47	105
PF00619	-	PF00097	ENSG00000110330	ENST00000227758	PF00619	7	1	8	1	37	5 neighbor	PF00097	9	1	9		47	105
PF00096	-	PF00646	ENSG00000163013	ENST00000295133	PF00096	1		1	2	806	78 farther	PF00646	5	1	5	0	77	141
PF01821	-	PF07645	ENSG00000077942	ENST00000327858	PF01821	4	0	4	1	52	99 farther	PF07645	6	1	7	1	101	1
PF00194	-	PF00102	ENSG00000106278	ENST00000265220	PF00194	2	1	8	1	28	123 farther	PF00102	17	0	23	0	60	37
PF00194	-	PF00102	ENSG00000144724	ENST00000295874	PF00194	2	1	8	1	70	123 farther	PF00102	17	0	23	0	60	37
PF00595	-	PF02188	ENSG00000159788	ENST00000344733	PF00595	2		2	0	1593	225 farther	PF02188	16	0	17	1	147	7
PF00014	-	PF00057	ENSG00000166145	ENST00000344051	PF00014	5	1	5	1	58	159 farther	PF00057	7	1	7	1	8	111
PF00069	-	PF02185	ENSG00000067900	ENST00000261535	PF00069	3	1	9	1	37	55 farther	PF02185	13	2	15	0	10	39
PF00069	-	PF02185	ENSG00000134318	ENST00000315872	PF00069	3	1	8	1	37	55 farther	PF02185	13	2	15	0	10	39
PF01437	-	PF00059	ENSG00000107518	ENST00000355044	PF01437	14	0	15	0	135	47 same	PF00059	15	1	16	1	59	123
PF01437	-	PF00059	ENSG00000088812	ENST00000262919	PF01437	14	0	15	0	144	47 same	PF00059	15	1	16	1	59	132
PF00092	-	PF05586	ENSG00000169604	ENST00000303714	PF00092	1		8	0	6	75 farther	PF05586	16	0	18		0	168
PF00092	-	PF05586	ENSG00000163297	ENST00000346652	PF00092	1		7	0	9	72 farther	PF05586	11	0	12		168	168
PF02825	-	PF00536	ENSG00000085788	ENST00000319246	PF02825	2		3	0	75	116 farther	PF00536	10	0	11	0	21	102
PF00039	-	PF00040	ENSG00000115414	ENST00000357867	PF00039	7	1	7	1	10	105 neighbor	PF00040	8	1	8	1	41	126
PF00629	-	PF00089	ENSG00000154646	ENST00000284885	PF00629	10	1	13	1	52	84 farther	PF00089	21	1	25		41	134
PF07965	-	PF03160	ENSG00000132470	ENST00000200181	PF07965	16	0	18	0	87	20 farther	PF03160	25	1	27	1	152	28
PF01033	-	PF00045	ENSG00000116690	ENST00000367486	PF01033	4	1	5	1	145	5 farther	PF00045	7	1	8	0	29	49
PF01033	-	PF00045	ENSG00000109072	ENST00000226218	PF01033	1		3	1	340	5 same	PF00045	3	1	4	0	296	49
PF01835	-	PF01821	ENSG00000206264	ENST00000383162	PF01835	1		9	1	127	6 farther	PF01821	17	1	17	1	32	105
PF01835	-	PF01821	ENSG00000204319	ENST00000375177	PF01835	1		9	1	127	6 farther	PF01821	17	1	17	1	32	105
PF01835	-	PF01821	ENSG00000125730	ENST00000245907	PF01835	1		9	1	121	6 farther	PF01821	17	1	17	1	29	108
PF01835	-	PF01821	ENSG00000106804	ENST00000223642	PF01835	1		9	1	124	3 farther	PF01821	17	1	17	1	32	105
PF01835	-	PF01821	ENSG00000204342	ENST00000375295	PF01835	1		9	1	127	6 farther	PF01821	17	1	17	1	32	105

PF00040	-	PF00039	ENSG00000115414	ENST00000357867	PF00040	9	1	9	1	10	126	neighbor	PF00039	10	1	10	1	14	117
PF00040	-	PF00039	ENSG00000109758	ENST00000382774	PF00040	3	1	4	1	31	49	farther	PF00039	6	1	6	1	5	108
PF00040	-	PF00039	ENSG00000131187	ENST00000253496	PF00040	3	1	4	1	22	49	farther	PF00039	6	1	6	1	5	108
PF00039	-	PF00041	ENSG00000115414	ENST00000357867	PF00039	12	1	12	1	22	117	neighbor	PF00041	13	1	14	1	2	120
PF02469	-	PF00193	ENSG00000010327	ENST00000321725	PF02469	50	0	53	0	51	99	farther	PF00193	61	1	62	1	8	126
PF02469	-	PF00193	ENSG00000136011	ENST00000258495	PF02469	50	0	53	0	48	99	farther	PF00193	61	1	62		8	126
PF00050	-	PF00089	ENSG00000170801	ENST00000382512	PF00050	1		1	1	7	153	farther	PF00089	3	2	6	1	4	219
PF00050	-	PF00089	ENSG00000166033	ENST00000368984	PF00050	1		1	1	7	165	farther	PF00089	3	2	6	1	4	201
PF00093	-	PF00092	ENSG00000110799	ENST00000261405	PF00093	18	1	20	0	52	87	farther	PF00092	28	2	28	1	87	543
PF00538	-	PF00271	ENSG00000146414	ENST00000367505	PF00538	7	0	8	0	42	215	farther	PF00271	27	0	28	2	30	57
PF00086	-	PF00058	ENSG00000087303	ENST00000216286	PF00086	15	1	16	0	168	2	neighbor	PF00058	17	0	18	2	39	91
PF00086	-	PF00058	ENSG00000116962	ENST00000264187	PF00086	13	1	14	0	171	2	neighbor	PF00058	15	0	16	2	39	88
PF00754	-	PF00246	ENSG00000106624	ENST00000223357	PF00754	10	1	13	1	19	126	neighbor	PF00246	14	1	19	0	77	9
PF00754	-	PF00246	ENSG00000088882	ENST00000380605	PF00754	3	1	6	1	19	132	neighbor	PF00246	7	1	12	0	80	9
PF00754	-	PF00246	ENSG00000121898	ENST00000241305	PF00754	3	1	6	1	19	132	neighbor	PF00246	7	1	12	0	80	9
PF07546	-	PF00386	ENSG00000138080	ENST00000380320	PF07546	1		3	1	127	94	farther	PF00386	7	1	8		38	100
PF07546	-	PF00386	ENSG00000132205	ENST00000254528	PF07546	1		3	1	82	94	farther	PF00386	7	1	8		23	106
PF07546	-	PF00386	ENSG00000173269	ENST00000372027	PF07546	1		3	1	13	94	farther	PF00386	7	1	7		11	360
PF07546	-	PF00386	ENSG00000138722	ENST00000264790	PF07546	1		3	1	13	94	farther	PF00386	8	1	8		38	372
PF00538	-	PF00628	ENSG00000146414	ENST00000367505	PF00538	7	0	8	0	42	215	neighbor	PF00628	9	0	9	0	399	150
PF07648	-	PF00595	ENSG00000166033	ENST00000368984	PF07648	1		1	1	7	141	farther	PF00595	6	0	9		102	13
PF07648	-	PF00595	ENSG00000170801	ENST00000307358	PF07648	1		1	1	7	156	farther	PF00595	6	0	9		105	10
PF00431	-	PF03815	ENSG00000164465	ENST00000338728	PF00431	2	1	3	1	19	116	neighbor	PF03815	4	1	7	1	5	47
PF00431	-	PF03815	ENSG00000057019	ENST00000326840	PF00431	2	1	3	1	19	119	neighbor	PF03815	4	1	7	1	5	47
PF00594	-	PF00054	ENSG00000184500	ENST00000348974	PF00594	2	1	4	1	85	2	farther	PF00054	10	2	12	1	19	171
PF00594	-	PF00054	ENSG00000183087	ENST00000327773	PF00594	2	1	4	1	61	2	farther	PF00054	10	2	12	1	19	171
PF00047	-	PF00193	ENSG00000157766	ENST00000268134	PF00047	3	1	3	1	49	276	same	PF00193	3	1	5	1	383	1
PF00047	-	PF00193	ENSG00000140511	ENST00000359595	PF00047	4	1	4	1	49	258	same	PF00193	4	1	5	1	368	1
PF02185	-	PF00169	ENSG00000067900	ENST00000261535	PF02185	13	2	15	0	12	80	farther	PF00169	28	1	32		2	69
PF02185	-	PF00169	ENSG00000134318	ENST00000315872	PF02185	18	0	20	2	146	39	farther	PF00169	28	1	31	1	2	69
PF00917	-	PF00008	ENSG00000112818	ENST00000230588	PF00917	11	1	13	2	299	2	same	PF00008	13	1	14		236	65
PF07528	-	PF00035	ENSG00000129351	ENST00000380583	PF07528	4	2	10	1	43	69	farther	PF00035	12	1	13	0	23	177
PF07528	-	PF00035	ENSG00000165209	ENST00000373639	PF07528	5	2	11	1	43	69	farther	PF00035	13	1	14	0	23	177
PF00092	-	PF05587	ENSG00000169604	ENST00000303714	PF00092	1		8	0	6	75	neighbor	PF05587	9	0	13	0	3	58
PF00092	-	PF05587	ENSG00000163297	ENST00000307333	PF00092	1		8	1	58	3	same	PF05587	8	0	12	0	3	58
PF00092	-	PF05587	ENSG00000198250	ENST00000354871	PF00092	1		8	0	6	75	neighbor	PF05587	9	0	12		3	58
PF00653	-	PF00619	ENSG00000023445	ENST00000263464	PF00653	2		4	0	63	16	farther	PF00619	7	1	8	1	5	250
PF00653	-	PF00619	ENSG00000110330	ENST00000227758	PF00653	2		4	0	63	16	farther	PF00619	7	1	8	1	5	250
PF00362	-	PF03160	ENSG00000132470	ENST00000200181	PF00362	3	1	11	0	12	150	farther	PF03160	25	1	27	1	152	28
PF07686	-	PF00193	ENSG00000187664	ENST00000291481	PF07686	10	1	11	1	280	53		PF00193	10	1	11	1	362	1
PF07686	-	PF00193	ENSG00000038427	ENST00000265077	PF07686	2		3	1	1	374	same	PF00193	3	1	5	1	374	1
PF07686	-	PF00193	ENSG00000145681	ENST00000380141	PF07686	3	1	3	1	10	348	same	PF00193	3	1	4	1	371	1
PF07686	-	PF00193	ENSG00000132702	ENST00000255039	PF07686	3		4	1	7	347	same	PF00193	4	1	6	1	353	1
PF07686	-	PF00193	ENSG00000132692	ENST00000329117	PF07686	3	1	3	1	1	360	same	PF00193	3	1	5	1	374	1
PF07686	-	PF00193	ENSG00000157766	ENST00000268134	PF07686	3	1	3	1	7	360	same	PF00193	3	1	5	1	383	1
PF07686	-	PF00193	ENSG00000140511	ENST00000359595	PF07686	4	1	4	1	1	351	same	PF00193	4	1	5	1	368	1
PF00415	-	PF02204	ENSG00000003393	ENST00000264276	PF00415	7	2	9	0	123	60	farther	PF02204	31	0	34		27	35
PF00431	-	PF01759	ENSG00000163710	ENST00000295992	PF00431	4	1	6	1	70	85	neighbor	PF01759	7	1	9		59	25
PF00431	-	PF01759	ENSG00000106333	ENST00000223061	PF00431	4	1	6	1	130	85	neighbor	PF01759	7	1	9		47	25
PF07648	-	PF00089	ENSG00000170801	ENST00000382512	PF07648	1		1	1	7	156	farther	PF00089	3	2	6	1	4	219
PF07648	-	PF00089	ENSG00000205403	ENST00000379924	PF07648	2	0	2	1	10	141	farther	PF00089	9	1	13		77	27
PF07648	-	PF00089	ENSG00000166033	ENST00000368984	PF07648	1		1	1	7	141	farther	PF00089	3	2	6	1	4	201
PF07648	-	PF00089	ENSG00000169495	ENST00000302495	PF07648	1		1	1	10	144	farther	PF00089	3	2	6	1	4	201
PF02191	-	PF00002	ENSG00000117114	ENST00000370728	PF02191	8	1	8	1	16	771	farther	PF00002	17	0	22	0	18	192
PF02191	-	PF00002	ENSG00000072071	ENST00000340736	PF02191	6	1	6	1	16	771	farther	PF00002	15	0	20	0	18	192
PF02191	-	PF00002	ENSG00000150471	ENST00000280009	PF02191	5	1	5	1	16	771	farther	PF00002	15	0	21	0	18	192
PF05743	-	PF00056	ENSG00000151116	ENST00000320750	PF05743	2	0	5	1	70	66	neighbor	PF00056	6	1	9	1	53	66
PF07474	-	PF00086	ENSG00000087303	ENST00000216286	PF07474	6	1	9	1	106	125	farther	PF00086	14	1	14	1	23	198
PF07474	-	PF00086	ENSG00000116962	ENST00000264187	PF07474	5	1	8	1	106	140	farther	PF00086	13	1	14	0	17	211
PF00594	-	PF00051	ENSG00000180210	ENST00000389910	PF00594	2	1	4	1	49	2	neighbor	PF00051	5	1	6	1	5	101
PF03160	-	PF00041	ENSG00000132470	ENST00000200181	PF03160	25	1	27	1	64	141	neighbor	PF00041	28	1	29	1	62	96
PF07502	-	PF00014	ENSG00000166145	ENST00000344051	PF07502	2		2	1	55	288	farther	PF00014	5	1	5	1	2	159
PF00053	-	PF01390	ENSG00000188157	ENST00000379370	PF00053	15	1	15	1	7	135	farther	PF01390	19	1	22	1	134	4
PF01344	-	PF00059	ENSG00000107518	ENST00000355044	PF01344	11	1	12	1	109	100	farther	PF00059	15	1	16	1	59	123
PF01344	-	PF00059	ENSG00000088812	ENST00000262919	PF01344	11	1	12	1	115	106	farther	PF00059	15	1	16	1	59	132
PF07593	-	PF07645	ENSG00000095713	ENST00000370597	PF07593	11	0	12	0	51	95	neighbor	PF07645	13	0	14	1	42	1
PF01471	-	PF00040	ENSG00000087245	ENST00000219070	PF01471	1		2	2	77	150	farther	PF00040	5	1	5	1	38	126
PF01471	-	PF00040	ENSG00000100985	ENST00000372330	PF01471	1		2	2	77	156	farther	PF00040	5	1	5	1	38	126

PF07646	-	PF00059	ENSG00000107518	ENST00000355044	PF07646	11	1	12	1	109	100	farther	PF00059	15	1	16	1	59	123
PF07646	-	PF00059	ENSG00000088812	ENST00000262919	PF07646	11	1	12	1	142	79	farther	PF00059	15	1	16	1	59	132
PF06119	-	PF00100	ENSG00000109927	ENST00000264037	PF06119	4	0	5	1	34	132	farther	PF00100	17	1	21	1	29	174
PF01823	-	PF00084	ENSG00000112936	ENST00000313164	PF01823	7	0	10	1	139	90	farther	PF00084	12	2	13	1	49	39
PF01823	-	PF00084	ENSG00000039537	ENST00000337836	PF01823	8	0	11	1	136	90	farther	PF00084	13	2	14	1	73	39
PF00059	-	PF01437	ENSG00000107518	ENST00000355044	PF00059	15	1	16	1	7	207	neighbor	PF01437	17	1	17	1	35	153
PF00059	-	PF01437	ENSG00000088812	ENST00000262919	PF00059	15	1	16	1	4	216	neighbor	PF01437	17	1	17	1	29	156
PF00050	-	PF00595	ENSG00000166033	ENST00000368984	PF00050	1		1	1	7	165	farther	PF00595	6	0	9		102	13
PF00050	-	PF00595	ENSG00000170801	ENST00000307358	PF00050	1		1	1	7	153	farther	PF00595	6	0	9		105	10

N_Exon and C_Exon indicate the exon in which N-terminus and C-terminus of the domain are encoded.

Margin indicate the number of amino acids in the exon excluding the domain sequence.

Domain on Exon indicate the number of amino acids of the domain sequence encoded by the exon.

Phase indicate the intron phase of C_Exon of domain 1 and N_Exon of domain 2.

Type indicate the relative position of the domain sequences according to the exon-intron structure. Neighbor indicates that the domains are encoded by abutting exon, and Farther indicates the domains are encoded by exons separated by more than one exon. Same indicate that the domains are encoded by the same exon.

Supp. Table 6. Domain combinations excluded from the chordate-specific combinations.

Human Genes	Acc. No.	Domain 1		Domain 2		Genes found in non-chordates		
hypothetical protein	BAB13408	PF00627	UBA	PF00076	RRM_1	Aedes aegypti	conserved hypothetical protein	EAT40860
keltch-like*	Q4SHR9	PF01344	Kelch_1	PF07707	BACK	Aedes aegypti	leucine-zipper-like transcriptional regulator 1	EAT48040
keltch-like*	Q4SHR9	PF07646	Kelch_2	PF07707	BACK	Aedes aegypti	leucine-zipper-like transcriptional regulator 1	EAT48040
LAG1 homolog, ceramide synthase 5	Q8N5B7	PF00046	Homeobox	PF03798	LAG1	Drosophila pseudoobscura	GA17532-PA	XP_001355097
midline 2	Q9UJV3	PF00097	zf-C3HC4	PF00041	fn3	Strongylocentrotus purpuratus	hypothetical protein	XP_001187072
polycystic kidney disease 1 (autosomal dominant)	P98161	PF00801	PKD	PF02010	REJ	Strongylocentrotus purpuratus	receptor for egg jelly 5	ABJ97172
ret proto-oncogene	P07949	PF00028	Cadherin	PF07714	Pkinase_Tyr	Apis mellifera	similar to Cad96Ca CG10244-PA	XP_392586
		PF00028	Cadherin	PF00069	Pkinase	Apis mellifera	similar to Cad96Ca CG10244-PA	XP_392586
SLC12A1	Q13621	PF08403	AA_permease_N	PF00324	AA_permease	Anopheles gambiae	putative Na-K-Cl symporter	CAD27923
synaptosomal-associated protein, 25kDa	P60880	PF05739	SNARE	PF00835	SNAP-25	Anopheles gambiae	ENSANGP00000016880	EAA01106
T-cell lymphoma invasion and metastasis 1	Q13009	PF00169	PH	PF00595	PDZ	Apis mellifera	similar to connector enhancer of ksr	XP_392772
unnamed protein product*	CAG00668.1	PF00610	DEP	PF00595	PDZ	Strongylocentrotus purpuratus	hypothetical protein	XP_001200459

*: Takifugu was used as the gene model because the human gene model used here did not contain these module combinations.

Supp. Table 7. Exon structure and intron phase of the domain combinations acquired by chordates (human gene modesl).

Domain Combination	Gene ID	Protein ID	Domain 1	N_Exon	Pha	C_Exon	Pha	C_Exon_Margin	Domain_on_C_Exon		Domain 2	N_Exon	Pha	C_Exon	Pha	N_Exon_Margin	Domain_on_N_Exon
PF00041 - PF00147	ENSG00000206336	ENST00000383317	PF00041	9	1	10	1	19	114	neighbor	PF00147	11	1	15		17	135
PF00041 - PF00147	ENSG00000120332	ENST00000239462	PF00041	13	1	14	1	28	105	neighbor	PF00147	15	1	19		17	135
PF00041 - PF00147	ENSG00000116147	ENST00000367674	PF00041	17	1	18	1	28	105	neighbor	PF00147	19	1	23		17	135
PF00041 - PF00147	ENSG00000041982	ENST00000350763	PF00041	22	1	23	1	28	105	neighbor	PF00147	24	1	28		17	135
PF00041 - PF00147	ENSG00000168477	ENST00000375247	PF00041	39	1	40	1	19	114	neighbor	PF00147	41	1	45		17	135
PF00560 - PF01477	ENSG00000008710	ENST00000262304	PF00560	3	2	4	1	112	58	farther	PF01477	26	0	28	1	150	46
PF00059 - PF00801	ENSG00000008710	ENST00000262304	PF00059	6	1	7	1	10	211	farther	PF00801	11	0	11	0	129	225
PF00094 - PF00093	ENSG00000110799	ENST00000261405	PF00094	34	0	36	1	17	176	farther	PF00093	38	1	40	1	103	97
PF00094 - PF00093	ENSG00000110799	ENST00000261405	PF00094	19	0	23	0	136	5	farther	PF00093	32	1	34	1	112	53
PF00094 - PF00093	ENSG00000110799	ENST00000261405	PF00094	9	1	14	1	173	23	farther	PF00093	18	1	20	0	136	25
PF00094 - PF00093	ENSG00000110799	ENST00000261405	PF00094	2		5	1	62	147	farther	PF00093	8	1	11	0	106	17
PF00094 - PF00093	ENSG00000117983	ENST00000358378	PF00094	5	1	7	0	30	50	farther	PF00093	13	1	14	1	2	30
PF03098 - PF00008	ENSG00000115705	ENST00000329066	PF03098	5	1	12	1	79	130	farther	PF00008	14	1	14	1	11	117
PF00169 - PF00609	ENSG00000077044	ENST00000264057	PF00169	2	0	4	0	15	90	farther	PF00609	19	2	23	0	22	89
PF00169 - PF00609	ENSG00000102780	ENST00000379274	PF00169	2	0	4	0	15	90	farther	PF00609	20	2	24	0	22	89
PF00169 - PF00609	ENSG00000204466	ENST00000376025	PF00169	2	0	4	0	15	90	farther	PF00609	18	2	22	0	19	89
PF02140 - PF02191	ENSG00000117114	ENST00000370728	PF02140	6	1	7	1	10	100	neighbor	PF02191	8	1	8	1	14	771
PF02140 - PF02191	ENSG00000072071	ENST00000340736	PF02140	3	1	4	1	10	100	farther	PF02191	6	1	6	1	14	771
PF02140 - PF02191	ENSG00000150471	ENST00000280009	PF02140	2	1	3	1	10	100	farther	PF02191	5	1	5	1	14	771
PF01826 - PF00092	ENSG00000110799	ENST00000261405	PF01826	25	0	26	1	17	142	farther	PF00092	28	2	28	1	87	543
PF01391 - PF00059	ENSG00000133661	ENST00000256035	PF01391	5	1	6	1	1	116	farther	PF00059	8	1	8		56	318
PF01391 - PF00059	ENSG00000165471	ENST00000373968	PF01391	1		2	1	4	113	farther	PF00059	4	1	4		56	309
PF01391 - PF00059	ENSG00000118004	ENST00000236693	PF01391	4	0	7	1	61	35	neighbor	PF00059	8	1	8		50	324
PF01391 - PF00059	ENSG00000182314	ENST00000372329	PF01391	3		4	1	1	119	farther	PF00059	6	1	6		59	315
PF01391 - PF00059	ENSG00000185303	ENST00000334432	PF01391	3		5	1	70	8	neighbor	PF00059	6	1	6		59	315
PF01391 - PF00059	ENSG00000122854	ENST00000372316	PF01391	3		4	1	1	119	farther	PF00059	6	1	6		59	315
PF01391 - PF00059	ENSG00000122852	ENST00000242455	PF01391	3		5	1	70	8	neighbor	PF00059	6	1	6		59	315
PF01391 - PF00059	ENSG00000158270	ENST00000344226	PF01391	6	1	6	1	58	180	neighbor	PF00059	7	1	9	1	53	84
PF01391 - PF00059	ENSG00000184374	ENST00000332843	PF01391	2	1	4	1	10	44	farther	PF00059	6	1	6		50	324
PF00560 - PF00801	ENSG00000008710	ENST00000262304	PF00560	3	2	4	1	112	58	neighbor	PF00801	5	1	5	1	299	228
PF01826 - PF00093	ENSG00000110799	ENST00000261405	PF01826	37	1	38	0	103	97	same	PF00093	38	1	40	1	103	97
PF01826 - PF00093	ENSG00000110799	ENST00000261405	PF01826	25	0	26	1	17	142	farther	PF00093	32	1	34	1	112	53
PF01826 - PF00093	ENSG00000110799	ENST00000261405	PF01826	17	2	18	0	28	133	same	PF00093	18	1	20	0	136	25
PF01826 - PF00093	ENSG00000110799	ENST00000261405	PF01826	7	0	8	1	20	103	same	PF00093	8	1	11	0	106	17
PF01826 - PF00093	ENSG00000117983	ENST00000349637	PF01826	9	1	10	2	65	53	same	PF00093	10	1	12	0	56	62
PF01826 - PF00093	ENSG00000117983	ENST00000349637	PF01826	20	1	21	2	65	87	same	PF00093	21	0	22	0	90	62
PF01826 - PF00093	ENSG00000117983	ENST00000349637	PF01826	42	1	44	0	27	5		PF00093	44	1	45	1	2	30
PF00560 - PF00059	ENSG00000008710	ENST00000262304	PF00560	3	2	4	1	112	58	farther	PF00059	6	1	7	1	71	113
PF00219 - PF00086	ENSG00000167779	ENST00000301464	PF00219	1		1	1	67	183	farther	PF00086	3	0	4		6	114
PF00219 - PF00086	ENSG00000146678	ENST00000275525	PF00219	1		1	1	82	180	farther	PF00086	3	0	4		6	123
PF00219 - PF00086	ENSG00000146674	ENST00000381086	PF00219	3	0	3	0	45	180	farther	PF00086	5	0	6		6	114
PF00219 - PF00086	ENSG00000115457	ENST00000233809	PF00219	1		1	1	94	225	farther	PF00086	3	0	4		6	135
PF00219 - PF00086	ENSG00000115461	ENST00000233813	PF00219	1		1	1	82	177	farther	PF00086	3	0	4		6	114
PF00219 - PF00086	ENSG00000141753	ENST00000269593	PF00219	1		1	1	94	177	farther	PF00086	3	0	4		12	123
PF00090 - PF01823	ENSG00000157131	ENST00000340792	PF00090	2	2	3	1	46	99	farther	PF01823	7	0	10	1	0	241
PF00090 - PF01823	ENSG00000021852	ENST00000371237	PF00090	2	2	3	1	43	99	farther	PF01823	7	0	10	1	241	241
PF00090 - PF01823	ENSG00000112936	ENST00000313164	PF00090	2	2	3	1	43	99	farther	PF01823	7	0	10	1	0	244
PF00090 - PF01823	ENSG00000039537	ENST00000337836	PF00090	3	2	4	1	46	99	farther	PF01823	8	0	11	1	241	241

PF00090	-	PF01823	ENSG00000113600	ENST00000381737	PF00090	2	2	3	1	46	99	farther	PF01823	7	0	10	1	241	241
PF00057	-	PF01823	ENSG00000157131	ENST00000340792	PF00057	3	0	4	2	74	74	farther	PF01823	7	0	10	1	0	241
PF00057	-	PF01823	ENSG00000021852	ENST00000371237	PF00057	3	0	4	2	68	74	farther	PF01823	7	0	10	1	241	241
PF00057	-	PF01823	ENSG00000112936	ENST00000313164	PF00057	3	0	4	2	71	77	farther	PF01823	7	0	10	1	0	244
PF00057	-	PF01823	ENSG00000039537	ENST00000337836	PF00057	4	0	5	2	68	74	farther	PF01823	8	0	11	1	241	241
PF00057	-	PF01823	ENSG00000113600	ENST00000381737	PF00057	3	0	4	2	74	74	farther	PF01823	7	0	10	1	241	241
PF01602	-	PF06375	ENSG00000065000	ENST00000345016	PF01602	1		16	2	110	36	neighbor	PF06375	17	2	30		70	72
PF07974	-	PF00147	ENSG00000120332	ENST00000239462	PF07974	3	1	3	1	7	81	farther	PF00147	15	1	19		17	135
PF07974	-	PF00147	ENSG00000116147	ENST00000367674	PF07974	4	1	4	1	7	81	farther	PF00147	19	1	23		17	135
PF07974	-	PF00147	ENSG00000041982	ENST00000350763	PF07974	3	1	3	1	7	81	farther	PF00147	24	1	28		17	135
PF07974	-	PF00147	ENSG00000168477	ENST00000375247	PF07974	3	1	3	1	7	81	farther	PF00147	41	1	45		17	135
PF02985	-	PF06375	ENSG00000065000	ENST00000345016	PF02985	12	1	13	2	137	12	farther	PF06375	17	2	30		70	72
PF03098	-	PF00084	ENSG00000115705	ENST00000329066	PF03098	5	1	12	1	79	130	neighbor	PF00084	13	1	13	1	8	159
PF00169	-	PF00781	ENSG00000077044	ENST00000264057	PF00169	2	0	4	0	15	90	farther	PF00781	9	1	12	0	38	125
PF00169	-	PF00781	ENSG00000102780	ENST00000379274	PF00169	2	0	4	0	15	90	farther	PF00781	9	1	13	0	35	125
PF00169	-	PF00781	ENSG00000204466	ENST00000376025	PF00169	2	0	4	0	15	90	farther	PF00781	9	1	12	0	59	125
PF00092	-	PF00094	ENSG00000110799	ENST00000261405	PF00092	28	2	32	1	95	70	farther	PF00094	34	0	36	1	116	62
PF00560	-	PF08016	ENSG00000008710	ENST00000262304	PF00560	3	2	4	1	112	58	farther	PF08016	38	0	45	0	114	26
PF00560	-	PF01825	ENSG00000008710	ENST00000262304	PF00560	3	2	4	1	112	58	farther	PF01825	25	2	25	0	82	150
PF00560	-	PF01825	ENSG00000152990	ENST00000334304	PF00560	4	2	5	2	17	55	farther	PF01825	14	1	15	2	65	144
PF00169	-	PF00536	ENSG00000077044	ENST00000264057	PF00169	2	0	4	0	15	90	farther	PF00536	29	1	30		2	129
PF00169	-	PF00536	ENSG00000102780	ENST00000379274	PF00169	2	0	4	0	15	90	farther	PF00536	30	1	31		2	129
PF00169	-	PF07647	ENSG00000077044	ENST00000264057	PF00169	2	0	4	0	15	90	farther	PF07647	28	0	30		117	1
PF00169	-	PF07647	ENSG00000102780	ENST00000379274	PF00169	2	0	4	0	15	90	farther	PF07647	29	0	31		108	1
PF01759	-	PF05986	ENSG00000185761	ENST00000330475	PF01759	7	0	10	1	139	51	neighbor	PF01759	11	1	12		47	25
PF00560	-	PF02010	ENSG00000008710	ENST00000262304	PF00560	3	2	4	1	112	58	farther	PF02010	15	1	22	1	3206	414
PF00059	-	PF08016	ENSG00000008710	ENST00000262304	PF00059	6	1	7	1	10	211	farther	PF08016	38	0	45	0	114	26
PF00059	-	PF08016	ENSG00000166473	ENST00000388855	PF00059	1		2	1	1	161	farther	PF08016	36	1	45	0	95	91

N_Exon and C_Exon indicate the exon in which N-terminus and C-terminus of the domain are encoded.

Margin indicate the number of amino acids in the exon excluding the domain sequence.

Domain on Exon indicate the number of amino acids of the domain sequence encoded by the exon.

Phase indicate the intron phase of C_Exon of domain 1 and N_Exon of domain 2.

Type indicate the relative position of the domain sequences according to the exon-intron structure. Neighbor indicates that the domains are encoded by abutting exon, and Farther indicates the domains are encoded by exons separated by more than one exon. Same indicate that the domains are encoded by the same exon.