

Ens84	Common name	Scientific name	Abbreviation	Assembly Ensembl	Assembly NCBI
	Anole lizard	Anolis carolinensis	Aca	AnoCar2.0	AnoCar2.0
	Amphioxus	Branchiostoma floridae	Bfl		GCA_000003815.1 Version 2
	Ciona intestinalis	Ciona intestinalis	Cin	KH	KH
	Ciona savignyi	Ciona savignyi	Csa	CSAV 2.0	
	Caenorhabditis elegans	Caenorhabditis elegans	Cel	WBcel235	
	Chicken	Gallus gallus	Gga	Galgal4	
	Chinese softshell turtle	Pelodiscus sinensis	Psi	PelSin_1.0	PelSin_1.0
	Coelacanth	Latimeria chalumnae	Lch	LatCha1	LatCha1
	Fruitfly	Drosophila melanogaster	Dme	BDGP6	
	Human	Homo sapiens	Hsa	GRCh38.p5	
	Spotted gar	Lepisosteus oculatus	Loc	LepOcu1	LepOcu1
	Zebrafish	Danio rerio	Dre	GRCz10	GRCz11
	Frog	Xenopus tropicalis	Xtr	JGI 4.2	

Species	HGNC,ZFIN or FlyBase name	Chromosome/scaffold locations	Ensembl ID or NCBI accession number	Transcript ID	Assigned taxa ID	Comments/Annotation notes
Human	ATP8A1	4: 42.41M	ENSG00000124406	ENST00000381668	Hsa_4_ATP8A1	
	ATP8A2	13: 25.37m	ENSG00000132932	ENST00000381655	Hsa_13_ATP8A2	
Chicken		4: 67.76m	ENSGALG00000014236	ENSGALT00000023022	Gga_4	
		1: 175.97m	ENSGALG000000017106	ENSGALT00000027641	Gga_1	
Coelacanth		JH128043: 0.05m	ENSLACG00000002566	ENSLACT00000002895	Lch_scaffoldJH128043	
		JH126629: 2.17m	ENSLACG000000017524	ENSLACT000000020073	Lch_scaffoldJH126629	
Spotted gar		LG4: 57.41	ENSLOCG000000012435	ENSLCOT000000015353	Loc_LG4	
		LG3: 5.26m	ENSLOCG000000004080	ENSLCOT000000004919	Loc_LG3	
Zebrafish	atp8a1	14: 45.98m	ENSDARG000000063001	ENSDARG000000063001	Dre_14_atp8a1	
	atp8a2	24: 21.23m	ENSDARG000000077492	ENSDART00000109848	Dre_24_atp8a2	
Ciona savignyi		reflig: 19: 3.80m	ENSCSAVG00000010637	ENSCSAVT00000018276	Csa_ref19	
Ciona intestinalis		2: 3.42m	ENSCING000000005920	ENSCINT000000012227	Cin_2	
Fruitfly		2R: 13.41	FBgn0259221	FBtr0299757	Dme_2R	
C elegans		III: 12.40m	WBGene00013034	Y49E10.11c.1	Cel_III	

Species	HGNC,ZFIN or FlyBase name	Chromosome/scaffold locations	Ensembl ID or NCBI accession number	Transcript ID	Assigned taxa ID	Comments/Annotation notes
Human	FAT1	4: 186.59m	ENSG000000083857	ENST000000441802	Hsa_4_FAT1	
	FAT2	5: 151.50m	ENSG000000086570	ENST000000261800	Hsa_5_FAT2	
	FAT3	11: 92.35m	ENSG00000165323	ENST00000409404	Hsa_11_FAT3	
Chicken		4: 61.30m	ENSGALG000000013579	ENSGALT000000022100	Gga_4	
		1: 185.62m	ENSGALG000000017229	ENSGALT000000027846	Gga_1	
		13: 12.27m	ENSGALG000000004320	ENSGALT000000006879	Gga_13	
Coelacanth		JH127221.1: 743.65k	ENSLACG000000012627	ENSLACT000000014447	Lch_scaffoldJH127221	
		JH128785.1: 48.53k	ENSLACG000000002412	ENSLACT000000002719	Lch_scaffoldJH128785	
		NW_005819034: 1.2 0.30m	XP_005988388.1		Lch_scaffoldNW005819034	
Spotted gar		LG4: 70.55m	ENSLOCG000000013845	ENSLCOT000000017128	Loc_LG4	
		LG3: 11.27m	ENSLOCG000000007262	ENSLCOT000000008801	Loc_LG3	
		LG6: 34.80m	ENSLOCG000000011694	ENSLCOT000000014408	Loc_LG6	
Zebrafish	fat1a	1: 16.68m	ENSDARG000000017591	ENSDART00000145068	Dre_1_fat1a	
	fat1b	14: 29.82m	ENSDARG000000019063	ENSDART000000172789	Dre_14_2_fat1b	
	fat2	14: 25.81m	ENSDARG000000018923	ENSDART000000014149	Dre_14_1_fat2	
	fat3a	15: 40.71m	ENSDARG000000033840	ENSDART000000042082	Dre_15_fat3a	
	si.ch211-214k5.6	10: 25.12m	ENSDARG000000087709	ENSDART000000161100	Dre_10_fat3b	assigned gene name in this study: fat3b
Ciona intestinalis		14: 1274.72k	ENSCING000000002930	ENSCINT000000006009	Cin_14	
Ciona savignyi		reflig: 49: 2.49m	ENSCSAVG000000009836	ENSCSAVT000000016909	Csa_ref49	
		reflig: 17: 1741.14k	ENSCSAVG000000009559	ENSCSAVT000000016425	Csa_ref17	
Fruitfly	kug	3L: 20.01m	FBgn0261574	FBtr0332721	Dme_3L	
C elegans		III: 4.52m	WBGene00000396	F25F2.2a	Cel_III	

Species	HGNC,ZFIN or FlyBase name	Chromosome/scaffold locations	Ensembl ID or NCBI accession number	Transcript ID	Assigned taxa ID	Comments/Annotation notes
Human	FRYL	4: 48.50m	ENSG000000075539	ENST000000358350	Hsa_4_FRYL	
	FRY	13: 32.03m	ENSG000000073910	ENST000000542859	Hsa_13_FRY	
Chicken		4: 65.92M	ENSGALG000000014103	ENSGALT000000022828	Gga_4	
		1: 173.86m	ENSGALG000000017075	ENSGALT000000027578	Gga_1	
Coelacanth		JH127019: 0.60	ENSLACG000000011439	ENSLACT000000013080	Lch_scaffoldJH127019	
		JH127744: 0.12m	ENSLACG000000001219	ENSLACT000000001368	Lch_scaffoldJH127744	
Spotted gar		LG4: 72.42m	ENSLOCG000000014083	ENSLCOT000000017404	Loc_LG4	
		LG3: 13.26m	ENSLOCG000000008150	ENSLCOT000000009925	Loc_LG3	
Zebrafish	fryl	20: 23.36m	ENSDARG000000040001	ENSDART00000132248	Dre_20_fryl	
	frya	13: 31.95m	ENSDARG000000013921	ENSDART000000155902	Dre_13_frya	
	fryb	10: 33.95m	ENSDARG000000056001	ENSDART000000044294	Dre_10_fryb	
Amphioxus		NW_003101550.1: 5.32m	XP_002611435.1		Bfl_scaffoldNW003101550	
Fruitfly	fry	3L: 9.63m	FBgn016081	FBtr0306240	Dme_3L	
C elegans	sax-2	III: 5.11m	WBGene00004728	F21H11.2a	Cel_III	

Species	HGNC,ZFIN or FlyBase name	Chromosome/scaffold locations	Ensembl ID or NCBI accession number	Transcript ID	Assigned taxa ID	Comments/Annotation notes
Human	MTMR6	13: 25.25m	ENSG00000139505	ENST000000381801	Hsa_13_MTMR6	
	MTMR7	8: 17.30m	ENSG000000003987	ENST000000180173	Hsa_8_MTMR7	
	MTMR8	X: 64.27m	ENSG00000102043	ENST000000374852	Hsa_X_MTMR8	
Chicken		1: 176.34m	ENSGALG000000017112	ENSGALT000000027648	Gga_1	
		4: 62.71m	ENSGALG000000013641	ENSGALT000000022188	Gga_4_2	
		4: 11.58m	ENSGALG000000007590	ENSGALT000000012271	Gga_4_1	
Coelacanth		JH126629.1: 1372.02k	ENSLACG0000000015835	ENSLACT000000018102	Lch_scaffoldJH126629	
		JH127134.1: 263.45k	ENSLACG000000007217	ENSLACT000000008216	Lch_scaffoldJH127134	
		NW_005819239.1: 1.36m	XP_005994997.1		Lch_scaffoldNW005819239	oct-15
Spotted gar		LG3: 5.21m	ENSLOCG000000004016	ENSLCOT000000004811	Loc_LG3	
		LG4: 71.26m	ENSLOCG000000013919	ENSLCOT000000017200	Loc_LG4	
		LG7: 40.08m	ENSLOCG000000014615	ENSLCOT000000018022	Loc_LG7	
Zebrafish	mtmr6	24: 24.89m	ENSDARG000000016794	ENSDART000000005845	Dre_24_mtmr6	
	mtmr7b	1: 15.79m	ENSDARG000000070412	ENSDART000000169081	Dre_1_mtmr7b	
	mtmr7a	14: 30.06m	ENSDARG0000000037101	ENSDART000000053925	Dre_14_mtmr7a	
	mtmr8	5: 21.62m	ENSDARG000000008592	ENSDART000000002938	Dre_5_mtmr8	
Ciona savignyi		reflig: 26: 418.33k	ENSCSAVG000000005453	ENSCSAVT000000009367	Csa_ref26	
Fruitfly	CG3530	2R: 23.39m	FBgn0028497	FBtr0072029	Dme_2R	
C elegans		III: 13.35m	WBGene00003478	F53A2.8b.1	Cel_III	

Species	HGNC,ZFIN or FlyBase name	Chromosome/scaffold locations	Ensembl ID or NCBI accession number	Transcript ID	Assigned taxa ID	Comments/Annotation notes
Human	PDS5A	4: 39.82m	ENSG00000121892	ENST000000303538	Hsa_4_PDS5A	
	PDS5B	13: 32.59m	ENSG000000093642	ENST000000315596	Hsa_13_PDS5B	
Chicken		4: 68.69m	ENSGALG000000014286	ENSGALT000000023102	Gga_4	
		1: 173.66m	ENSGALG000000017070	ENSGALT000000027571	Gga_1	
Coelacanth		JH127267: 0.73m	ENSLACG000000012539	ENSLACT000000014341	Lch_scaffoldJH127267	
		JH127744	ENSLACG000000010011	ENSLACT000000011463	Lch_scaffoldJH127744	
Spotted gar		LG4: 62.80m	XP_015200905.1		Loc_LG4	jan-16
		LG3: 13.42m	XP_015197326.1		Loc_LG3	jan-16
Zebrafish	pds5a	1: 22.63m	ENSDARG000000055022	ENSDART000000126785	Dre_1_pds5a	
	pds5b	15: 33.89m	ENSDARG000000098897	ENSDART000000158445	Dre_15_pds5b	

Ciona intestinalis		14: 3.92m	ENSCING00000004221	ENSCINT00000026301	Cin_14
Ciona savignyi		reflig_238: 0.67m	ENSCSAVG00000002399	ENSCSAVT00000004124	Csa_ref238
Fruitfly	pds5 evf-14	2R: 12.03m III: 4.30m	FBgn0260012 WBGene00001352	FBtr0306062 H38K22.1	Dme_2R Cel_III

Species	HGNC,ZFIN or FlyBase name	Chromosome/scaffold locations	Ensembl ID or NCBI accession number	Transcript ID	Assigned taxa ID	Comments/Annotation notes
Human	SLC7A1 SLC7A2 SLC7A3	13: 29.51m 8: 17.50m X: 70.93m	ENSG00000139514 ENSG00000003989 ENSG00000165349	ENST00000380752 ENST00000004531 ENST00000298085	Hsa_13_SLC7A1 Hsa_8_SLC7A2 Hsa_X_SLC/A3	
Chicken		1: 174.69m 4: 62.64m 4: 2.41m 13: 12.34m	ENSGALG00000017085 ENSGALG00000013627 ENSGALG00000005727 ENSGALG00000004360	ENSGALT000000027598 ENSGALT000000045211 ENSGALT00000009196 ENSGALT00000006953	Gga_1 Gga_4_2 Gga_4_1 Gga_13	assigned family member name in synteny figure and tree: SLC7A16
Coelacanth		JH127923.1: 304.29k JH127134.1: 120.69k JH126585.1: 2.04m JH126922.1: 1067.53k	ENSLACG000000007860 ENSLACG000000004392 ENSLACG000000017344 ENSLACG000000014635	ENSLACT000000008969 ENSLACT000000004983 ENSLACT000000019864 ENSLACT00000016722	Lch_scaffoldJH127923 Lch_scaffoldJH127134 Lch_scaffoldJH126585 Lch_scaffoldJH126922	assigned family member name in tree: SLC7A16
Spotted gar		LG7: 44.04m LG3: 16.18m LG4: 71.22m LG6: 34.92m	ENSLOCG000000014920 ENSLOCG000000008941 ENSLOCG000000013912 ENSLOCG000000011752	ENSLOCT00000018404 ENSLOCT00000010917 ENSLOCT00000017186 ENSLOCT00000014489	Loc_LG7 Loc_LG3 Loc_LG4 Loc_LG6	assigned family member name in synteny figure and tree: SLC7A16
Zebrafish	zgc:175280 slc7a2 novel slc7a1 slc7a3a slc7a3b	5: 67.13m 14: 29.91m 15: 7.30m 10: 24.48m 21: 30.47m 14: 30.54m	ENSXDARG000000099111 ENSXDARG000000037097 ENSXDARG000000100227 ENSXDARG00000016439 ENSXDARG000000020645 ENSXDARG000000061566	ENSXDART00000168994 ENSXDART000000045423 ENSXDART000000161613 ENSXDART000000146370 ENSXDART000000043727 ENSXDART000000087918	Dre_5_slc7a16 Dre_14_1_slc7a2 Dre_15_slc7a1a Dre_10_slc7a1b Dre_21_slc7a3a Dre_14_2_slc7a3b	assigned gene name in this study: slc7a16 assigned gene name in this study: slc7a1a assigned gene name in this study: slc7a1b
Amphioxus		NW_003101394.1: 1.14m NW_003101570.1: 2.98m		XP_002591682.1 XP_002613919.1	Bfl_scaffoldNW003101394 Bfl_scaffoldNW003101570	okt-09 okt-09
Ciona intestinalis		2: 4.33m 5: 2.75m	ENSCING000000004391 ENSCING000000009305	ENSCINT000000009112 ENSCINT00000018908	Cin_2 Cin_5	
Ciona savignyi		reflig_48: 3.03m reflig_22: 1090.81k reflig_44: 1257.89k	ENSCSAVG000000011090 ENSCSAVG000000006446 ENSCSAVG000000007385	ENSCSAVT000000019089 ENSCSAVT000000011137 ENSCSAVT000000012689	Csa_ref48 Csa_ref22 Csa_ref44	
Fruitfly	CG7255 CG5535 slif	3L: 15.30m 3L: 17.85m 3L: 22.88m	FBgn036493 FBgn036764 FBgn037203	FBtr0301185 FBtr0273277 FBtr0078555	Dme_slc_1 Dme_slc_2 Dme_slc_3	

Species	HGNC,ZFIN or FlyBase name	Chromosome/scaffold locations	Ensembl ID or NCBI accession number	Transcript ID	Assigned taxa ID	Comments/Annotation notes
Human	DLC1 STARD13 STARD8	8: 13.08m 13: 33.10m X: 68.65m	ENSG00000164741 ENSG00000133121 ENSG00000130052	ENST00000276297 ENST00000336934 ENST00000374599	Hsa_8_DLC1 Hsa_13_STARD13 Hsa_8_STARD8	
Chicken		1: 173.24m 4: 566.15k 4: 63.98m 13: 4.10m	ENSGALG00000017065 ENSGALG000000004575 ENSGALG000000013715 ENSGALG000000001874	ENSGALT00000027566 ENSGALT00000007282 ENSGALT00000022297 ENSGALT00000002909	Gga_1 Gga_4_1 Gga_4_2 Gga_13	assigned family member name in synteny figure and tree: novel
Coelacanth		JH126641.1: 857.78k JH126669.1: 1430.43k JH127144.1: 512.36k JH128172.1: 172.08k	ENSLACG000000013457 ENSLACG000000016020 ENSLACG00000010533 ENSLACG000000005530	ENSLACT00000015394 ENSLACT000000018318 ENSLACT00000012059 ENSLACT000000006286	Lch_scaffoldJH126641 Lch_scaffoldJH126669 Lch_scaffoldJH127144 Lch_scaffoldJH128172	assigned family member name in tree: novel
Spotted gar	stard13b DLC stard8	LG3: 13.50m LG4: 72.02m LG6: 38.86m LG7: 40.77m	ENSLOCG000000008293 ENSLOCG000000013982 ENSLOCG000000012379 ENSLOCG000000014688	ENSLOCT00000010089 ENSLOCT00000017272 ENSLOCT00000015273 ENSLOCT00000018117	Loc_LG3 Loc_LG4 Loc_LG6 Loc_LG7	assigned family member name in synteny figure and tree: novel
Zebrafish	dlic1 stard8 stard13a stard13b si:dkeyp-23e4.3	1: 14.60m 5: 35.19m 10: 34.37m 15: 33.61m 21: 35.35m	ENSXDARG00000079317 ENSXDARG00000014003 ENSXDARG00000079542 ENSXDARG000000098954 ENSXDARG000000074819	ENSXDART00000109970 ENSXDART00000127383 ENSXDART00000135303 ENSXDART00000167705 ENSXDART00000112308	Dre_1_dlic1 Dre_5_stard8 Dre_10_stard13a Dre_15_stard13b Dre_21_novel	assigned family member name in tree: novel
Ciona intestinalis		2: 1948.42k	ENSCING00000004038	ENSCINT000000008340	Cin_2	
Fruitfly	cv-c	3R: 14.39m	FBgn0068901	FBtr0112631	Dme_3R	
C elegans		III: 3.34m	WBGene00001559	F45H7.2a	Cel_III	

Species	HGNC,ZFIN or FlyBase name	Chromosome/scaffold locations	Ensembl ID or NCBI accession number	Transcript ID	Assigned taxa ID	Comments/Annotation notes
Human	TENM1 TENM2 TENM3 TENM4	X: 124.38m 5: 167.28m 4: 182.14m 11: 78.65m	ENSG000000009694 ENSG00000145934 ENSG00000218336 ENSG00000149256	ENST00000422452 ENST00000518659 ENST00000511685 ENST00000278550	Hsa_X_TENM1 Hsa_5_TENM2 Hsa_4_TENM3 Hsa_11_TENM4	
Chicken		4: 15.17m 13: 4.19m 4: 39.50m 1: 191.23m	ENSGALG000000008442 ENSGALG00000001768 ENSGALG00000010706 ENSGALG00000017261	ENSGALT00000039157 ENSGALT00000002712 ENSGALT00000038214 ENSGALT00000027898	Gga_4_1 Gga_3 Gga_4_2 Gga_1	
Coelacanth		JH126605.1: 1434.21k JH126605.1: 1939.78k JH126615.1: 825.06k JH126615.1: 908.75k JH126615.1: 1265.33k JH126615.1: 1490.48k JH126669.1: 716.06k JH126669.1: 1115.51k	ENSLACG000000016037 ENSLACG000000017160 ENSLACG000000013213 ENSLACG000000013779 ENSLACG000000015462 ENSLACG000000016215 ENSLACG000000012429 ENSLACG000000014853	ENSLACT00000018338 ENSLACT00000019651 ENSLACT00000015118 ENSLACT00000015760 ENSLACT00000017683 ENSLACT00000018542 ENSLACT00000014220 ENSLACT00000016982	Lch_scaffoldJH126605 Lch_scaffoldJH126615 Lch_scaffoldJH126669	manually edited, combined manually edited, combined manually edited, combined
Spotted gar		LG7: 39.02m LG6: 30.03m LG4: 69.27m LG3: 8.63m	ENSLOCG000000014581 ENSLOCG000000010864 ENSLOCG000000013649 ENSLOCG000000005799	ENSLOCT00000017986 ENSLOCT00000013361 ENSLOCT00000016881 ENSLOCT00000007015	Loc_LG7 Loc_LG6 Loc_LG4 Loc_LG3	
Zebrafish	tenm1 si:dkeyp-34i15.2 si:dkeyp-237h12.3 tenm3 tenm4 si:ch211-12m10.1	5: 20.79m 14: 28.86m 14: 36.18m 1: 38.67m 15: 10.08m 21: 31.74m	ENSXDARG00000003403 ENSXDARG000000037122 ENSXDARG000000087599 ENSXDARG00000005479 ENSXDARG00000105088 ENSXDARG00000001171	ENSXDART00000040184 ENSXDART00000157943 ENSXDART00000136233 ENSXDART00000137676 ENSXDART00000165668 ENSXDART00000040740	Dre_5_tenm1 Dre_14_1_tenm2b Dre_14_2_tenm3a Dre_1_tenm3b Dre_15_tenm4 Dre_21_tenm2a	assigned gene name in this study: tenm2b assigned gene name in this study: tenm3a assigned gene name in this study: tenm3b assigned gene name in this study: tenm2a
Ciona savignyi		reflig_251: 81.21k	ENSCSAVG00000001332	ENSCSAVT000000002315	Csa_ref251	
Fruitfly	Ten-m Ten-a	3L: 22.29m X: 12.04m	FBgn0004449 FBgn0267001	FBtr0078509 FBtr0346129	Dme_slc Dme_X	

Species	HGNC,ZFIN or FlyBase name	Chromosome/scaffold locations	Ensembl ID or NCBI accession number	Transcript ID	Assigned taxa ID	Comments/Annotation notes
Human	USP12 USP46	13: 27.07m 4: 52.59m	ENSG00000152484 ENSG00000109189	ENST00000282344 ENST00000441222	Hsa_13_USP12 Hsa_4_USP46	
Chicken		1: 175.59m 4: 12.30m 4: 65.60m	ENSGALG00000017101 NP_001294926.1 ENSGALG000000013961	ENSGALT000000027624 ENSGALT000000032088	Gga_1 Gga_4_1 Gga_4_2	feb-16. Assigned family member name in tree: USP12B
Coelacanth		JH126705.1: 619.84k JH126790.1: 529.59k JH127344.1: 71.29k	ENSLACG000000011615 ENSLACG000000010732 ENSLACG000000011615	ENSLACT00000013285 ENSLACT000000012287 ENSLACT00000013285	Lch_scaffoldJH126705 Lch_scaffoldJH126790 Lch_scaffoldJH127344	assigned family member name in tree: USP12B
Spotted gar		LG3: 5.50m LG4: 72.64m LG7: 37.67m	ENSLOCG000000004146 ENSLOCG000000014113 ENSLOCG000000014426	ENSLOCT000000004975 ENSLOCT000000017423 ENSLOCT00000017792	Loc_LG3 Loc_LG4 Loc_LG7	assigned family member name in synteny figure and tree: USP12B
Zebrafish	usp12b usp46	7: 51.05m 20: 23.18m	ENSXDARG000000074367 ENSXDARG000000045343	ENSXDART00000114429 ENSXDART00000132093	Dre_7_usp12b Dre_20_usp46	assigned family member name in tree: USP12B

	usp12a	24: 21.46m	ENSDARG00000078109	ENSDART00000112670	Dre_24_ usp12a	
Amphioxus		NW_003101550.1: 5.43m		XP_002611444.1	Bft_scaffoldNW003101550	aug-16
Ciona savignyi		reflig_335: 58.01k	ENSCSAVG00000006800	ENSCSAVT00000011727	Csa_ref335	
Ciona intestinalis		Scaffold HT001092.1: 30.49k	ENSCING00000014345	ENSCINT00000026229	Cin_scaffoldHT001092	
Fruitfly	Usp12-46	3R: 22.75m	FBgn0039025	FBtr0084311	Dme_3R	
C elegans		III: 9.78m	WBGene00011216	R10E11.3a.1	Cel_III	