

P.pygmaeus	1	MASAGNAAEPQDRGGGGSGCTGAPGRPAGGG---RRTRTGGLRRAAAPDRDYLHRPSYCD
H.sapiens	1	MASAGNAAEPQDRGGGGSGCTGAPGRPAGGG---RRRRTGGLRRAAAPDRDYLHRPSYCD
B.taurus	1	MASAGNAAELQNRGGGGS-CSGAPGRPAGGG---RRRRTGGLRRNAVDPWDYLHRPSYCD
M.musculus	1	MASAGNAA-----GALGRQAGGG---RRRRTGGPHR-AAPDRDYLHRPSYCD
M.eugenii	1	MASAVNTIAEPESGGGGSGGCGRDPSLPGGNGSRRRRRTGGSRRACAPDLEFYIQRPSYCD

(Homo sapiens)

Putative sterol transport fam.

=====100%=====

P.pygmaeus	58	AAFALE-ISKGKATGRKAPLWLRAKFQRLLFKLGCIQKNCGKFLVVGLLIFGAFVGLK
H.sapiens	58	AAFALEQISKGKATGRKAPLWLRAKFQRLLFKLGCIQKNCGKFLVVGLLIFGAFVGLK
B.taurus	57	AAFALEQISKGKATGRKAPLWLRAKFQRLLFKLGCIQKNCGKFLVVGLLIFGAFVGLK
M.musculus	44	AAFALEQISKGKATGRKAPLWLRAKFQRLLFKLGCIQKNCGKFLVVGLLIFGAFVGLK
M.eugenii	61	AAFALEQISKGKATGRKAPLWLRAKFQRLLFKLGCIQKNCGKFLVVGLLIFGAFVGLK

P.pygmaeus	117	AANLETNVEELWVEVGGRVSRELNYTRQKIGEEAMFNPQLMIQTPKEEGANILTTEALLQ
H.sapiens	118	AANLETNVEELWVEVGGRVSRELNYTRQKIGEEAMFNPQLMIQTPKEEGANVLTTEALLQ
B.taurus	117	AANLETNVEELWVEVGGRVSRELNYTRQKIGEEAMFNPQLMIQTPKEEGANVLTTEALLQ
M.musculus	104	AANLETNVEELWVEVGGRVSRELNYTRQKIGEEAMFNPQLMIQTPKEEGANVLTTEALLQ
M.eugenii	121	AANLETNVEELWVEVGGRVSRELNYTRQKIGEEAMFNPQLMIQTPREDGANVLTVEALKQ

P.pygmaeus	177	HLDSALQASRVHVYMYNRQWKLEHLICYKSGELITETGYMDQII EYLYPCLIIITPLDCFWE
H.sapiens	178	HLDSALQASRVHVYMYNRQWKLEHLICYKSGELITETGYMDQII EYLYPCLIIITPLDCFWE
B.taurus	177	HLDSALQASRVHVYMYNRQWKLEHLICYKSGELITETGYMDQII EYLYPCLIIITPLDCFWE
M.musculus	164	HLDSALQASRVHVYMYNRQWKLEHLICYKSGELITETGYMDQII EYLYPCLIIITPLDCFWE
M.eugenii	181	HLDSALQASRVHVYMYNRQWKLEHLICYKSGELITETGYMDQII EYLYPCLIIITPLDCFWE

P.pygmaeus	237	GAKLQSGTAYLLGKPPLRWTNFDPLEFLEELKKINYQVDSWEEMLNKA EVGHGYMDR PCL
H.sapiens	238	GAKLQSGTAYLLGKPPLRWTNFDPLEFLEELKKINYQVDSWEEMLNKA EVGHGYMDR PCL
B.taurus	237	GAKLQSGTAYLLGKPPLQWTNFDPLEFLEELKKINYQVDSWEEMLNKA EVGHGYMDR PCL
M.musculus	224	GAKLQSGTAYLLGKPPLRWTNFDPLEFLEELKKINYQVDSWEEMLNKA EVGHGYMDR PCL
M.eugenii	241	GAKLQSGTAYLLGKPPLQWTNFDPLEFLEELKKINYQVDSWEEMLNKA EVGHGYMDR PCL

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P.pygmaeus	297	NPADPDCPATAPNKNSTKPLDMALVLNGGCHGLSRKYMHWQEELIVGGTVKNSTGKLI SA
H.sapiens	298	NPADPDCPATAPNKNSTKPLDMALVLNGGCHGLSRKYMHWQEELIVGGTVKNSTGKLVSA
B.taurus	297	NPADPDCPATAPNKNATKPLDMALVLNGGCHGLSRKYMHWQEELIVGGTVKNSTGKLVSA
M.musculus	284	NPADPDCPATAPNKNSTKPLDVALVLNGGCQGLSRKYMHWQEELIVGGTVKNATGKLVSA
M.eugenii	301	SPADPDCPV TAPNKNSTKPLDVALVLNGGCHGLSRKYMHWQEELIVGGTVKNSTGKLVSA

P.pygmaeus	357	HALQTMFQLMTPKQMYEHFKGYEYVSHINWNEDKAAAILEAWQRTYVEVVHQSVAQNSTQ
H.sapiens	358	HALQTMFQLMTPKQMYEHFKGYEYVSHINWNEDKAAAILEAWQRTYVEVVHQSVAQNSTQ
B.taurus	357	HALQTMFQLMTPKQMYEHFKGYEYVSHINWNEDKAAAILEAWQRTYVEVVHQSVAQNSTQ
M.musculus	344	HALQTMFQLMTPKQMYEHFRGYDYVSHINWNEDRAAAILEAWQRTYVEVVHQSVA PNSTQ
M.eugenii	361	QALQTMFQLMTPKQMYEHFKGYEYVSHINWNEDKAAAILEAWQRMVYVEVVHQSVAQNSTQ

		(<i>Homo sapiens</i>)	(<i>Danio rerio</i>)
		Putative sterol transport fam.	Putative sterol transport fam.
		=====100%=====	=====100%=====
P.pygmaeus	417	KVLSFTTTTLDLILKSFSDVSVIRVASGYLLMLAYACLTMLRWDCSKSQGAVGLAGVLLV	
H.sapiens	418	KVLSFTTTTLDLILKSFSDVSVIRVASGYLLMLAYACLTMLRWDCSKSQGAVGLAGVLLV	
B.taurus	417	KVLSFTTTTLDLILKSFSDVSVIRVASGYLLMLAYACLTMLRWDCSKSQGAVGLAGVLLV	
M.musculus	404	KVLFTTTTLDLILKSFSDVSVIRVASGYLLMLAYACLTMLRWDCSKSQGAVGLAGVLLV	
M.eugenii	421	KVLSFTTTTLDLILKSFSDVSVIRVASGYLLMLAYACLTMLRWDCSKSQGAVGLAGVLLV	

		(<i>Homo sapiens</i>)	
		Putative sterol transport fam.	
		=====100%=====	=====
P.pygmaeus	477	ALSVAAGLGLCSLIGISFNAATTQVLPFLALGVGVDDVFLLAHAFSETGQNKRIPFEDRT	
H.sapiens	478	ALSVAAGLGLCSLIGISFNAATTQVLPFLALGVGVDDVFLLAHAFSETGQNKRIPFEDRT	
B.taurus	477	ALSVAAGLGLCSLIGISFNAATTQVLPFLALGVGVDDVFLLAHAFSETGQNKRIPFEDRT	
M.musculus	464	ALSVAAGLGLCSLIGISFNAATTQVLPFLALGVGVDDVFLLAHAFSETGQNKRIPFEDRT	
M.eugenii	481	ALSVAAGLGLCSLIGISFNAATTQVLPFLALGVGVDDVFLLAHAFSETGQNKRIPFEDRT	

		(<i>Homo sapiens</i>)	(<i>Callorhinchus milii</i>)
		Putative sterol transport fam. (BOTH)	
		====100%=====	=====100%=====
P.pygmaeus	537	GECLKRTGASVALTSISNVTAFFMAALIPIPALRAFSLQAQAVVVVFNFAMVLLIFPAILS	
H.sapiens	538	GECLKRTGASVALTSISNVTAFFMAALIPIPALRAFSLQAQAVVVVFNFAMVLLIFPAILS	
B.taurus	537	GECLKRTGASVALTSISNVTAFFMAALIPIPALRAFSLQAQAVVVVFNFAMVLLIFPAILS	
M.musculus	524	GECLKRTGASVALTSISNVTAFFMAALIPIPALRAFSLQAQAVVVVFNFAMVLLIFPAILS	
M.eugenii	541	GECLKRTGASVALTSISNVTAFFMAALIPIPALRAFSLQAQAVVVVFNFAMVLLIFPAILS	

P.pygmaeus	597	MDLYRREDRRLDIFCCFTSPCVSRVIQVEPQAYTDTHDNTRYSPPPPYSSHSFAHETQIT
H.sapiens	598	MDLYRREDRRLDIFCCFTSPCVSRVIQVEPQAYTDTHDNTRYSPPPPYSSHSFAHETQIT
B.taurus	597	MDLYRREDRRLDIFCCFTSPCVSRVIQVEPQAYTDTHDNTRYSPPPPYSSHSFAHETQIT
M.musculus	584	MDLYRREDRRLDIFCCFTSPCVSRVIQVEPQAYTDTHDNTRYSPPPPYSSHSFAHETQIT
M.eugenii	601	MDLYRREDRRLDIFCCFTSPCVSRVIQVEPQAYTDTHDNTRYSPPPPYSSHSFAHETQIT

P.pygmaeus	657	MQSTVQLRTEYDPHTHVYYTTAEPRSEISVQPVTVTQDTLSCQSPESTSSTRDLLSQFSD
H.sapiens	658	MQSTVQLRTEYDPHTHVYYTTAEPRSEISVQPVTVTQDTLSCQSPESTSSTRDLLSQFSD
B.taurus	657	MQSTVQLRTEYDPHTHVYYTTAEPRSEISVQPVTVTQDTLSCQSPESTSSTRDLLSQFSD
M.musculus	644	MQSTVQLRTEYDPHTHVYYTTAEPRSEISVQPVTVTQDTLSCQSPESTSSTRDLLSQFSD
M.eugenii	661	MQSTVQLRTEYDPHTHVYYTTAEPRSEISVQPVTVTQDTLSCQSPESTSSTRDLLSQFSD

		(<i>Homo sapiens</i>)
		Putative sterol transport fam.
		=====100%=====
P.pygmaeus	717	SSLHCLEPPCTKWTLSFAEKHYAPFLKPKAKVVVIFLFLGLLGVSLYGTTRVRDGLDL
H.sapiens	718	SSLHCLEPPCTKWTLSFAEKHYAPFLKPKAKVVVIFLFLGLLGVSLYGTTRVRDGLDL
B.taurus	717	SSLHCLEPPCTKWTLSFAEKHYAPFLKPKAKVVVIFLFLGLLGVSLYGTTRVRDGLDL
M.musculus	704	SSLHCLEPPCTKWTLSFAEKHYAPFLKPKAKVVVIFLFLGLLGVSLYGTTRVRDGLDL
M.eugenii	721	SSLHCLEPPCTKWTLSFAEKHYAPFLKPKAKVVVIFLFLGLLGVSLYGTTRVRDGLDL

P.pygmaeus	777	TDIVPRETREYDFIAAQFKYFSFYNNMYIVTQKADYPNIQHLLYDLHRSFSNVKYVMLEEN
H.sapiens	778	TDIVPRETREYDFIAAQFKYFSFYNNMYIVTQKADYPNIQHLLYDLHRSFSNVKYVMLEEN
B.taurus	777	TDIVPRETREYDFIAAQFKYFSFYNNMYIVTQKADYPNIQHLLYDLHRSFSNVKYVMLEEN
M.musculus	764	TDIVPRETREYDFIAAQFKYFSFYNNMYIVTQKADYPNIQHLLYDLHRSFSNVKYVMLEEN
M.eugenii	781	TDIVPRETREYDFIAAQFKYFSFYNNMYIVTQKADYPNIQHLLYDLHRSFSNVKYVMLEEN

		+
		+
P.pygmaeus	837	KQLPKWLHYFRDWLQGLQDAFSDSWETGKIMPNNYKNGSDDGVLAYKLLVQTGSRDKPI
H.sapiens	838	KQLPKMWLHYFRDWLQGLQDAFSDSWETGKIMPNNYKNGSDDGVLAYKLLVQTGSRDKPI
B.taurus	837	KQLPKMWLHYFRDWLQGLQDAFSDSWETGKIMPNNYKNGSDDGVLAYKLLVQTGSRDKPI

M.musculus 824 KQLPQMWLHYFRDWLQGLQDAFDSDWETGRIMPNNYKNGSDDGVLAYKLLVQTGSRDKPI
M.eugenii 841 KQLPKMWLHYFRDWLQGLQDAFDSDWESGKIMQNNYKNGSDDGVLAYKLLVQTGSRDKPI

P.pygmaeus 896 DISQLTKQRLVDADGIINPSAFYIYLTAWVSNDPVAYAASQANIRPHRPEWVHDKADYMP
H.sapiens 898 DISQLTKQRLVDADGIINPSAFYIYLTAWVSNDPVAYAASQANIRPHRPEWVHDKADYMP
B.taurus 897 DISQLTKQRLVDADGIINPSAFYIYLTAWVSNDPVAYAASQANIRPHRPEWVHDKADYMP
M.musculus 884 DISQLTKQRLVDADGIINPSAFYIYLTAWVSNDPVAYAASQANIRPHRPEWVHDKADYMP
M.eugenii 901 DISQLTKQRLVDADGIINPSAFYIYLTAWVSNDPVAYAASQANIRPHRPEWVHDKADYMP

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P.pygmaeus 956 ETRLRIPAAEPIEYAQFPFYLNGLRDTSDFVEAIEKVRTICSNYTSGLGLSSYPNGYPFLF
H.sapiens 958 ETRLRIPAAEPIEYAQFPFYLNGLRDTSDFVEAIEKVRTICSNYTSGLGLSSYPNGYPFLF
B.taurus 957 ETRLRIPAAEPIEYAQFPFYLNGLRDTSDFVEAIEKVRTICNNYTSGLGLSSYPNGYPFLF
M.musculus 944 ETRLRIPAAEPIEYAQFPFYLNGLRDTSDFVEAIEKVRVICNNYTSGLGLSSYPNGYPFLF
M.eugenii 961 ETRLRIPAAEPIEYAQFPFYLNGLRDTSDFVEAIEKVRTICNNYTSGLVSSYPNGYPFLF
(Polyodon spathula) (Homo sapiens) (Homo sapiens)

Putative sterol transport family (All three)
==100%=====100%=====100%=====
P.pygmaeus 1016 WEQYIGLRHWLLLFISVVLACTFLVCAVFLNPWTAGIIVVVLALMTVELFGMMGLIGIK
H.sapiens 1018 WEQYIGLRHWLLLFISVVLACTFLVCAVFLNPWTAGIIVMVLAALMTVELFGMMGLIGIK
B.taurus 1017 WEQYIGLRHWLLLSISVVLACTFLVCAVFLNPWTAGIIVTVLALMTVELFGMMGLIGIK
M.musculus 1004 WEQYISLRHWLLLSISVVLACTFLVCAVFLNPWTAGIIVMVLAALMTVELFGMMGLIGIK
M.eugenii 1021 WEQYIGLRHWLLLSISVVLACTFLVCAVFLNPWTAGIIVMVLAALMTVELFGMMGLIGIK
(Homo sapiens)

Putative sterol transport fam.
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P.pygmaeus 1076 LSAVPVILIASVGIGVEFTVHVALAFLTAIGDKNRRRAVLALAHMFAPVLDGAVSTLLGV
H.sapiens 1078 LSAVPVILIASVGIGVEFTVHVALAFLTAIGDKNRRRAVLALAHMFAPVLDGAVSTLLGV
B.taurus 1077 LSAVPVILIASVGIGVEFTVHVALAFLTAIGDKNRRRAVLALAHMFAPVLDGAVSTLLGV
M.musculus 1064 LSAVPVILIASVGIGVEFTVHVALAFLTAIGDKNHRAVLALAHMFAPVLDGAVSTLLGV
M.eugenii 1081 LSAVPVILIASVGIGVEFTVHVALAFLTAIGDKNRRRAVLALAHMFAPVLDGAVSTLLGV
(Homo sapiens)

Putative sterol transport fam.
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P.pygmaeus 1136 LMLAGSEFDFIVRYFFAVLAILTILGVLNGLVLLPVLLSFFGPYPEVSPANGLNRLPTPS
H.sapiens 1138 LMLAGSEFDFIVRYFFAVLAILTILGVLNGLVLLPVLLSFFGPYPEVSPANGLNRLPTPS
B.taurus 1137 LMLAGSEFDFIVRYFFAVLAILTILGVLNGLVLLPVLLSFFGPYPEVSPANGLNRLPTPS
M.musculus 1124 LMLAGSEFDFIVRYFFAVLAILTVLGVNGLVLLPVLLSFFGPECPEVSPANGLNRLPTPS
M.eugenii 1141 LMLAGSEFDFIVRYFFAVLAILTILGVLNGLVLLPVLLSFFGPYPEVTIPANGLNRLPTPS

P.pygmaeus 1196 PEPPPSVVRFAVPPGHMHS GSDSSDSEYSSQTTVSGLSEELRHVEAQQAAGGPAHQVIVE
H.sapiens 1198 PEPPPSVVRFAVPPGHTHS GSDSSDSEYSSQTTVSGLSEELRHVEAQQAAGGPAHQVIVE
B.taurus 1197 PEPPPSVVRFAVPAAGHTNNGSDSSDSEYSSQTTVSGISEELRHVEAQQAAGGPAHQVIVE
M.musculus 1184 PEPPPSVVRFAVPPGHTNNGSDSSDSEYSSQTTVSGISEELRQYEAQQAAGGPAHQVIVE
M.eugenii 1201 PEPPPSVVRFAVPPRHTNNGSDSSDSEYSSQTTVSGISEELYQYETQOSSCAPAQHQVIVE

P.pygmaeus 1256 ATENPVFAHSTVVHPESRHHPPSNPRQO-----PRRDPPREGLWPPPPYR
H.sapiens 1258 ATENPVFAHSTVVHPESRHHPPSNPRQOPHLDSGSLPPGRQGQQPRRDPPREGLWPPPPYR
B.taurus 1257 ATENPVFARSTVVHPEPRHHPPSNPRQOSHLDSTRTPPGQPGQQPRRETPRECLRAPPYK
M.musculus 1244 ATENPVFARSTVVHPDSRHOPPLTPRQOPHLDSGSLSPGRQGQQPRRDPPREGLRPPPYR
M.eugenii 1261 ATENPVFARSTVVOPEPRHHHPSSPRQOLHLDAGPHQPGHQGQQPFORDS-REGLRPPPYR

P.pygmaeus 1300 PRRDAFEISTEGHSGPSNRDRWGPRGARSHNPR--NPASTAMGSSMPGYCQPIITVTASA
H.sapiens 1318 PRRDAFEISTEGHSGPSNRARWGPRGARSHNPR--NPASTAMGSSVPGYCQPIITVTASA
B.taurus 1317 PRRDAFEISTEGHSGPSNRDRWGPRGARSHNPRHHNPASTAMGSSMPGYCQPIITVTASA

M.musculus	1304	PRRDAFEISTEGHSGPSNRDRSGPRGARSHNPR--NPTSTAMGSSVPSYCQPITTTVTASA
M.eugenii	1320	PRRNAFEISTDGHSGPSNRDRVGHARGARFHNPR--NPAFTAMGTSVPGYCQPITTTVTASA

P.pygmaeus	1358	SVTVAVHPPPVPGPGRNPRGGLCPG---YPETDHGLFEDPHVPFHVRRERRDSKVEVI
H.sapiens	1376	SVTVAVHPPPVPGPGRNPRGGLCPG---YPETDHGLFEDPHVPFHVRCERRDSKVEVI
B.taurus	1377	SVTVAVHPPPAPGPGPSRNPRSGLCPGYEDYPETDHGLFEDPHVPFNVRCERRPKVEVI
M.musculus	1362	SVTVAVHPP--PGPG--RNPRGGPCPGYESYPETDHGVFEDPHVPFHVRCERRDSKVEVI
M.eugenii	1378	SVTVAVHPP--PMHG--RNPWGGSCPSYEGYHETDHGVFEDPHVPFNVRCERRNSKIEVI

P.pygmaeus	1413	ELQDVECEERPRGSNSN
H.sapiens	1431	ELQDVECEERPRGSSSN
B.taurus	1437	ELQDVECEERRHGSSSN
M.musculus	1418	ELQDVECEERPWGSSSN
M.eugenii	1434	ELQDVECEERTKGNSSN