

humanATP7B	-----MPEQERQITAREGASRKILSKLSLPTRAWEPA	MKKSF	AFDNVGYEGGL	48
mouseATP7B	MDPRKNLASVGT	MPEQERQVTAKE	-ASRKILSKLALPGRPWEQSMKQSF	AFDNVGYEGGL 59
zebrafishATP7B	-----	MNKLSPFSN	-LAKFISKSPDNGPVGGE---	26
drosophilaATP7B	-----			
celegansATP7B	-----			
humanATP7B	DGLGPSSQVATSTVRILGMT	CQSCVKSIEDRISNLKGIISMKVSLEQGSATVKYVPSVVC		108
mouseATP7B	DSTS-SSPAATDVVNILGMT	CHSCVKSIEDRISSLKGIVNIKVSLEQGSATVRYVPSVMN		118
zebrafishATP7B	-----QLCMKDCKPLCHCDPEL	CVCSLPQ--NSKDGPT	EYK---ENG	SQQEGWIP---- 71
drosophilaATP7B	-----			
celegansATP7B	-----MSENVSLLDGSPLPSRPSTSSIPR	SPS-----		28
humanATP7B	LQQVCHQIGDMGFEASIAEGKAASWPSRSLPAQEAVVKLRVEGMT	CQSCVSSIEGKVRKL		168
mouseATP7B	LQQICLQIEDMGFEASAAEGKAASWPSRSSPAQEAVVKLRVEGMT	CQSCVSSIEGKIRKL		178
zebrafishATP7B	---TKHAFDNFGYEPDGLKHNLV---	HQLPSEEGMKIQVEGMT	CQSCVRSIEEQIGRL	124
drosophilaATP7B	-----MPSD-----	ERVEATMSTVRLPIVGMT	CQSCVRNITEHIGQK	37
celegansATP7B	-KNIQLLVDFG-----	APKTDGNVQETMLEIKGMT	CNSCVKNIQDVIGAK	72
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humanATP7B	QGVVRVKVSLSNQEAVITYQPYLIQPEDLRDHVNDMGFEAAIKSKVAPLSLGPIDIERLQ			228
mouseATP7B	QGVVRIKVSLSNQEAVITYQPYLIQPEDLRDHICDMGFEAAIKNRTAPLRLGPIDVNKLE			238
zebrafishATP7B	EGVIGVQVSLSDKEAILRFNPAKVTPEDMRKRIEDMGFDALILALQG--	QIQPLSTDWSE		182
drosophilaATP7B	SGILGVRVILEENAGYFDYDPRQTDPARIASDIDDMGFEC	SYPGDAAD-----		85
celegansATP7B	PGIHSIQVNLKEENAKCSFDTTKWTAEKVAEAVDDMGFDCKVLKKEPP-----			120
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humanATP7B	STNPKRPLSSANQNFN	NSETLGHQGS	HVVTLQLRIDGMHCKSCVLNIEENIGQLLGVQSI	288
mouseATP7B	STNLKKETVSPVQISNHFETLGHQGS	YLATLPLRIDGMHCKSCVLNIEGNIGQLPGVQNI		298
zebrafishATP7B	VT-----	LGVEGMHCGSCVKNITETLSGMLGVNSV		212
drosophilaATP7B	-----			
celegansATP7B	-----			
humanATP7B	QVSLENKTAQVKYDP	SCTSPVALQRAIEALPPGNFKVSLPDGAEGSGTDHRSSSSSHSPGS		348
mouseATP7B	HVSLENKTAQIQYDP	SCVTPMFLQTAIEALPPGHFKVSLPDGVE-----	ENEPQSGS	350
zebrafishATP7B	FVSLEKGSVDLRFDPSLLTLET	VKGFLEEIPPGNFRVSIPG-----	WS	255
drosophilaATP7B	-----	PP-----		87
celegansATP7B	-----			
humanATP7B	PPRNQVQGTCSTTLIAIAGMTCASCVHSIEGMISQLEGVQQISVSLAEGTATVLYNPSVI			408
mouseATP7B	SQRHQEQGPGR	TAVLTISGITCASSVQPIEDMLSQRKGVQQT	SISLAEGTGAVLYDPSIV	410
zebrafishATP7B	SRLNSASTPTQSVTIGIEGMT	CNSCVQAIEGMMSQRAGVCSIKVYLQEKKGIVTFDSTVT		315
drosophilaATP7B	-----ETPASAWTNIRVVGMT	CQSCVRNIEGNIGTKPGIHSIEVQLAAKNARVQYDPAQY		142
celegansATP7B	-TQMAEKPKIRRAIVSIEGMT	CHACVNNIQDTVGSKD	GIVKIVVSLEQKQGTVDYNSEKW	179
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humanATP7B	SPEELRAAIEDMGFEASVV--	SESCSTNPLGNHSAGNSMVQTTDGTPTS	SVQEVAPHTGRL	466
mouseATP7B	SLDELRTAVEDMGFEVSVN--	SETFTINPVRNFKSGNSVPQTMGDIAGSVQKMAPDTRGL		468
zebrafishATP7B	CPEELRAEIEDMGFEAWLNQDSEICEVSSVSQMP	SG-----	LKHLPSQRHP	361
drosophilaATP7B	DPAQIAELIDDMGF	EASVQ--EPRSPSQSP	PAPAS-----	SPKKRATPTP 186
celegansATP7B	NGESVAESIDDMGFDCKLITDQEIAAVEPQKASTTKLS-----		ISPLKTVDLSD	228
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humanATP7B	PANHAPDILAKSPQSTRAVAPQKCFLQIKGMTCASCVSNIERNLQKEAGVLSVLVALMAG	526
mouseATP7B	PTHQGPGHSSETPSSPGATASQKCFVQIKGMTCASCVSNIERSLQRHAGILSVLVALMSG	528
zebrafishATP7B	SKPSPSPITKENADGTGERELRKCFVHVVTGMTCASCVSNIERNLVKHEGIKSVLVALMAG	421
drosophilaATP7B	PPPSYAQNGSAVAIPVEQEELLTKCFLHIRGMTCASCVA AEKHCKKIYGLDSILVALLAA	246
celegansATP7B	GKVELQLNGVKYSKEGSSDHLEKCTFAVEGMTCASCVQYIERNISKIEGVHSIVVALIAA	288
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humanATP7B	KAEIKYDPEVIQPLEIAQFIQ-DLGFEAAVMEDYAGSD--GNIELTITGMTCASCVHNIE	583
mouseATP7B	KAEVKYDPEIIQSPRIAQLIQ-DLGFEASVMEDNTVSE--GDIELIITGMTCASCVHNIE	585
zebrafishATP7B	KAEVKYDPGLLDPAQIVQLIS-HLGFGASVMEEHSVQD--GVLDLSVTGMTCASCVHNIE	478
drosophilaATP7B	KAEVKFNANVVTAENIAKSIT-ELGFPTTELIDEPDNGE--AEVELEIMGMTCASCVNKIE	303
celegansATP7B	KAEVIYDGRVTSSDAIREHMTGELGYKATLLDSMGANPNYSKIRLIIGNLSTESDANRIE	348
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humanATP7B	SKLTRTNGITYASVALATSKALVKFDPEIIGPRDIIKIIIEEIGFHASLAQRNP--NAHHL	641
mouseATP7B	SKLTRTNGITYASVALATSKAHVKFDPEIVGPRDIIKIIIEEIGFHASLAQRNP--NAHHL	643
zebrafishATP7B	SKLLRTKGIQEASVALATNKAHVKFDSDLVGSRDIVRIIEGLGFGVSLIKNEG--LNNTL	536
drosophilaATP7B	SHVLKIRGVTTASVTLLTKRGKFRYITEETGPRSICEAIEALGFEAKLMTGRDKMAHNYL	363
celegansATP7B	SHVLSKSGIDSCNVSIATSMALVEFSPQVIGPRDIINVVESLGFTADLATRDD--QMKRL	406
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humanATP7B	DHKMEIKQWKKSFLCSLVFGIPVMALMIYMLIPSNEPHQS---MVLDHNIIPGLSILNLI	698
mouseATP7B	DHKTEIKQWKKSFLCSLVFGIPVMGLMVYMLIPSSTPQET---MVLDHNIIPGLSVLNLI	700
zebrafishATP7B	DHQEEIRQWKHSFLFSLVFGIPVMGLMIYMMVMDSQHKEHGGSPADQNILPGLSIINLA	596
drosophilaATP7B	EHKEEIRKWRNAFLVSLIFGGPCMVAMIYFMLEMSDKGHAN----MCCLVPGLSMENLV	418
celegansATP7B	DHSDDVKKWRNTFFIALIFGVPVMIIMIIFHWILRTPMHPD---KQTPIFTPALSLDNFL	463
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humanATP7B	FFILCTFVQLLGGWYFYVQAYKSLRHRSANMDVLIVLATSIA YVYSLVILVVAVAEKAER	758
mouseATP7B	FFILCTFVQFLGGWYFYVQAYKSLRHRSANMDVLIVLAT TIAYAYSLVILVVAVAEKA EK	760
zebrafishATP7B	FLLCTPVQFLGGRYFYIQAYRSLRHGVANMDVLIVLAT TIAYVYSFTVLIVAMIEGAKQ	656
drosophilaATP7B	MFLSTPVQFFGGFH FYVQSYRAIKHGTTNMDVLISMVTTISYVYSVAVVIAAVLLEQNS	478
celegansATP7B	LLCLCTPVQIFGGRYFYVASWKAIKHG NANMDVLIMLSTTIAYTYSIVVLLLAIFKWPS	523
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humanATP7B	SPVTFFDTPPMLFVFIALGRWLEHLAKSKTSEALAKLMSLQATEATVVT LGEDNLI IREE	818
mouseATP7B	SPVTFFDTPPMLFVFIALGRWLEHVAKSKTSEALAKLMSLQATEATVVT LGEDNLI LREE	820
zebrafishATP7B	SPLTFFDTPPMLFVFIALGRWLEHVAKSKTSEALAKLMSLQATDATIVE SLGPDNTI IREE	716
drosophilaATP7B	SPLTFFDTPPMLLIFISLGRWLEHIAKGKTSEALSKLLSLKAADALLVEISP DFDI ISEK	538
celegansATP7B	SPMTFFDVPPMLIVFIALGRMLEHKAKGKTSEALSKLMSLQAKEATLV TMDSEGRLTSEK	583
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humanATP7B	QVPMELVQRGDIVKVVPGGKFPVDGKVLEGNTMADESLITGEAMPVTKKPGSTVIAGSIN	878
mouseATP7B	QVPMELVQRGDVIKVVPGGKFPVDGKVLEGNTMADESLITGEAMPVTKKPGSIVIAGSIN	880
zebrafishATP7B	QVSVDLVQRGDVVKVAPGGKFPVDGKVIEGTSMADESLITGEPMPVIKKAGSCVIAGSIN	776
drosophilaATP7B	VISVDYVQRGDILKVIPGAKVPVDGKVLYGHSSCDESLITGESMPVAKRKGSV VIGGSIN	598
celegansATP7B	GINIELVQRNDLIKVVPGAKVPVDGVVVDGKSSVDESFITGESMPVVKKPGSTVIGGSVN	643
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humanATP7B	AHGSVLIKATHVGNDTTLAQIVKLVEEAQMSKAPIQQLADRFSGYFVPFIIIMSTLT LVV	938
mouseATP7B	AHGSVLLKATHVGNDTTLAQIVKLVEEAQMSKAPIQQLADRFSGYFVPFIIIIISTLT LVV	940
zebrafishATP7B	AHGALLVEATHVGSETTLSQIVKLVEEAQTSKAPIQQLADKLSGYFVPFIVVISILT VTA	836
drosophilaATP7B	QNGVLLVEATHTGENTTTLAQIVRLVEEAQTSKAPIQQLADRIAGYFVPFVVVVSSITLIA	658
celegansATP7B	QKGV LIVKATHVGNDSTLSQIVRLVEEAQTNRAPIQQLADK IAGYFVPFVIVLSLFTLG V	703
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humanATP7B	WIVIGFIDFGVVQRYFPNPNKHISQTEV IIRFAFQTSITVLCIACPCSLGLATPTAVMVG	998
mouseATP7B	WIVIGFVDFGVVQKYFPSPSKHISQTEV IIRFAFQTSITVLCIACPCSLGLATPTAVMVG	1000
zebrafishATP7B	WLIIGFLDFDVVSKNFP GYNQNISRTEVIVRFAFQASITVLSIACPCSLGLATPTAVMVG	896
drosophilaATP7B	WIIIGFSNP NLVPVAMEH-KMHMDQNTIIVSYAFKCALSVLAIACPCALGLATPTAVMVA	717
celegansATP7B	WIYIEYN--SARNANLPP---GLRFEEALKIAFEAAITVLAIACPCSLGLATPTAVMVG	757

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humanATP7B	TGVAAQNGILIKGGKPLEMAHKIKTVMFDKTGTITHGVPRVMRVLLLGDVATLPLRKVLA	1058
mouseATP7B	TGVAAQNGVLIKGGKPLEMAHKIKTVMFDKTGTITHGVPRVMRFLLLADVATLPLRKVLA	1060
zebrafishATP7B	TGVGAQNGILIKGGEPLEMAHKVGAVMFDKTGTITNGVPQVTRVLVLWDRARLPLRTVLA	956
drosophilaATP7B	TGTGAINGVLVKGATALENAHKVKTIVVFDKTGTITHGTPMTSKVTLFVTAQVCSLARALT	777
celegansATP7B	TGVGAANGILIKGGEPLESVHKVTTIVFDKTGTITEGRPRVVQIASFVNPSTMSLKLITF	817

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humanATP7B	VVGTAEEASSEHPLGVAVTKYCKEELGT-----ETLGYCTDFQAVPGCGIGCKVSNVEGI	1112
mouseATP7B	VVGTAEEASSEHPLGVAVTKYCKEELGT-----ETLGYSTDFQAVPGCGISCKVSNVEGI	1114
zebrafishATP7B	VVGTAEEASSEHPLGMAVAKHCKEELGA-----ETLGFCHDFQAVPGCGISCKVSSVEDL	1010
drosophilaATP7B	IVGAAEQNSEHPIASAIVHFAKDMLNVGATPQAGSFGKSSHFQAVPGCGIRVTVSNYEQT	837
celegansATP7B	LSGATEALSEHPIGNAVAAFAKQLLNEP-----TWPNTSRFHVSAGHGVTCTRIDSIRQS	871

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humanATP7B	LAHSERPL-----SAPASHLNEAGSLP-----	1134
mouseATP7B	LARSD-----LTAHPVGVGNPP-----	1131
zebrafishATP7B	LQNSPKTQ-----ETKASAVKQTPLLVTLOGVTTD	1040
drosophilaATP7B	LRQACNADRIINYENLHRTHPQGSVPVDNGASIEHLLPQRSVRKSMELNNQQLSDLVLE	897
celegansATP7B	FSSLALSG-----STCEIPRLPDGQTITIPGTEVN	901

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humanATP7B	-----AEKDAVPQTFSVLIGNREWLRRNGLTISSDVSDAMTDHEMKGQTAILVAIDGV	1187
mouseATP7B	-----TGEGAGPQTFSVLIGNREWMRRNGLTISSDISDAMTDHEMKGQTAILVAIDGV	1184
zebrafishATP7B	ESSLVADTDSGSDSPSYSVLIGNRQWMLRNGLEVTADVDNAMSSHETKGTAILVAIDGV	1100
drosophilaATP7B	PEEELLTDQKIIDSPEILVLIGNREWMERNAIEVPLEISDCMTHEERKGH TAVLCALNGQ	957
celegansATP7B	LLQVSSKEVSQPNPDTANIVIGTERMHERHGIPVSEVVKMTLSEEQRKGHISVICAINAE	961

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humanATP7B	LCGMIAIADAVKQEAALAVHTLQSMGVDVVLITGDNRKRTARAIATQVGINKVFAEVLPSH	1247
mouseATP7B	LCGMIAIADAVKPEAALAIYTLKSMGVDVALITGDNRKRTARAIATQVGINKVFAEVLPSH	1244
zebrafishATP7B	LCAMIAVADTVKAESALAVHTLSSMGIEVYMITGDNRRRTARAIATQVGIRKVFAEVLPSH	1160
drosophilaATP7B	LVCMFVAVSDMVKPEAHLAVYTLKRMGIDVLLTGDNKNTAASIAREVGIRTVYAEVLPSH	1017
celegansATP7B	VVAVISIADQVKKEASLAIYTLREMGLRVVLLTGDNSKTAESTAKQVGIDEVFAEVLPNQ	1021

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humanATP7B	KVAKVQELQNKGGKVAMVGDGVNDSPALAQADMGAIGTGTDVAIEAADVVLIRNDLLDV	1307
mouseATP7B	KVAKVQELQNEGKKVAMVGDGVNDSPALAQADVGLAIGTGTDVAIEAADVVLIRNDLLDV	1304
zebrafishATP7B	KVAKVQELQERGLKVAMVGDGVNDSPALAHADLGIAIGTGTDVAIEAADIVLIRNDLLDV	1220
drosophilaATP7B	KVAKIQRIQANGIRVAMVGDGVNDSPALAQADVGITIAAGTDVAIEASDIVLMRNDLLDV	1077
celegansATP7B	KQQKIKQLKGYKNKVAMVGDGVNDSPALAEANVGIAIAAGSDVAIESAGIVLVRNDLVDV	1081

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humanATP7B	VASIHL SKRTVRRIRINLVLALIYNLVGIPIAAGVFMPIGIVLQPWMGSAAMAASSVSVV	1367
mouseATP7B	VASIHL SKRTVRRIRVNLVLALIYNMVGIPPIAAGVFMPIGIVLQPWMGSAAMAASSVSVV	1364
zebrafishATP7B	VASIELSKKTVQRIRINFVFALIYNLLGIPFAAGVFMPLGLVLQPWMGSAAMAASSVSVV	1280
drosophilaATP7B	VACLDLSRCTVRRIRYNFFFASMYNLLGIPLASGLFAPYGFTLLPWMASVAMAASSVSVV	1137
celegansATP7B	VGAIKLSKMTTRRIRLNFLFAIIYNAIGIPIAAGVFRPFGFMLQPWMAAAAMALSSVSVV	1141

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humanATP7B	LSSLQLKCYKKP-----DLERYEAQAHGHMKPLTAS---QVSVHIGMDDRWRD-SPRATP	1418
mouseATP7B	LSSLQLKCYRKP-----DLERYEAQAHGRMKPLSAS---QVSVHIGMDDRVRD-SPRATA	1415
zebrafishATP7B	LSSLLLRLFKKT-----SVEEYESRAQSHKLSLSPS---QVSTHVGLSR-----RCSP	1326
drosophilaATP7B	CSSLLLKMYRKPTAKTLRTAEYEAQLAAERASGSEDELDKLSLHRLGLDDLPEK-GRMPFK	1196
celegansATP7B	SSSLLLNFRKP-----TIANLYTTSFKRHQKFLESGSFQVQVHRGLDDSAVFRGAASSK	1196

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humanATP7B	WDQVSYVSQVSL---SSLTSDKPSRHSAADDDG--DKWSLLLNGRDEEQYI-----	1465
mouseATP7B	WDQVSYVSQVSL---SSLTSDRLSRHGGAEDGG--DKWSLLLSDRDEEQCI-----	1462
zebrafishATP7B	LSDRKRRSRSAS---GSSSFISGSFHPSTTQPIN--TSGRSIV-----	1364

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drosophilaATP7B      RSSTSLISRIFMHDYGNITSPDAKYGEGLLDPEEQYDGRTKIVRSRFHANDSTELQKL 1254
celegansATP7B        LSILSSKVGSLLGSTTSIVSSGSSKKQRLLDNVG-SDLEDLIV----- 1238
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