

Conservation: 001000001154378656011111264549967443528288397847403311012043978645
SS

| TARGET | IA | IB | IC | |
|---------------------------|---------------------------|------------------------------|-----------------------------|---------------|
| S-VDKVKQIHRGTGYHFQPP----- | KNWIND | PNGPLYKGLYHLFYQYNPKGA-- | WVGNIVWAHVS | |
| LANQQIEQPYRTGYHFQPP----- | SNWMND | PNGPMLYQGVYHFFYQYNPYAAT-FGDV | IWGHAVS | |
| Q93X60 | KS-PSVNQPYRTGFHFQPP----- | KNWMND | PNGPMLYKGIYHLFYQWNPNGA-- | WVGNIVWAHSTS |
| Q43866 | PWNSMLSWQRTAFHFQPE----- | KNWMND | PNGPLFYKGYHFFYQWNPNGA-- | WVGDIVWGHAVS |
| A0A7Z0 | PWSNAMLQWQRTGFHFQPE----- | QHYMND | PNGPVYGGWYHLFYQHNPNGD-- | SWGNIWAHVS |
| A3QRG0 | S---EDLQPYRTAFHFQPL----- | KNWMND | PNGPMYFNGVYHLFYQYNPGGP-- | IWGNISWGHVS |
| A5GXL9 | SP---SQTYSYHFQPP----- | KNWMND | PNGPTVYRGLYHLFYQYNPLGP-- | DWGNIVWAHSTS |
| A7IZK7 | PWTNAMLQWQRTGFHFQPE----- | KNWMND | PNGPLFHMGWYHLFYQYNPDSA-- | IWGNITWGHAVS |
| A7IZK8 | PFTTKMLQWQRTGFHFQPP----- | RYFMSD | PSGPVYKGVYHFFYQHNAKAA-- | FWGNIAWGHAS |
| A7LJR5 | PWTNDMLRWQRTGFHFQPE----- | KNFQAD | PNAAMFYKGYHFFYQYNPTGV-- | AWDYTIWGHAVS |
| A7RDD3 | ---PLASTQFRTAYHFQPT----- | HYWMND | PNAPMYDGVYHLFYQYNPNGA-- | TWTAYMSWGHVS |
| A9CZQ1 | ---FIASELYRTAYHFQPT----- | QHWMDN | PNAPMYNGVYHLFYQHNPDA-- | TWTANISWGHVS |
| A9E2W4 | LPTQIEQPYRTGYHFQPP----- | SNWMND | PNGPMLYNGVYHFFYQYNPYAA-- | TFGDVIVWGHAVS |
| A9JIF3 | AWSNAMLQWQRTAYHFQPP----- | KNWMND | PNGPLYHKGWYHLFYQYNPDSA-- | IWGNITWGHAVS |
| A9LST6 | LESNAEVEWERSAYHFQPD----- | KNFISD | PDGPMYHMGWYHLFYQYNPESA-- | IWGNITWGHVS |
| A9YTS8 | YSQSDRLTWERTAYHFQPP----- | KNFIYD | PNGPLFHMGWYHLFYQYNPYAP-- | IWGNMSWGHAVT |
| A9YTS9 | PWSNAMLQWQRTGFHFQPL----- | KHYMND | PNGPVYGGWYHLFYQHNPYGD-- | SWANISWGHAVS |
| B0I1Q7 | BNINAMFSWQRTAFHFQPE----- | KNWIND | PNGPLFHKGWYHLFYQYNPDSA-- | IWGNITWGHAVS |
| B2NIA0 | PWTNKMLSWQRTGFHFQPE----- | KNWMND | PNGPLYKGYHFFYQYNPNAA-- | WVGDIAWGHAVS |
| 004372 | LKTNAEVEWQRSAYHFQPD----- | KNYISD | PDGPMYHMGWYHLFYQYNPESA-- | IWGNITWGHVS |
| 023786 | LESNADVEWQRSAYHFQPD----- | KNFISD | PDGPMYHMGWYHLFYQYNPESA-- | IWGNITWGHVS |
| 024459 | PWSNAMLQWQRTGFHFQPP----- | KNWMND | PNGPVYKGVYHLFYQYNPDGA-- | IWGNKIAGHAVS |
| 065341 | PWSNAMLQWQRTGFHFQPP----- | KNWMND | PNGPVYKGVYHLFYQYNPDGA-- | IWGNKIAGHAVS |
| 065342 | PSAADRLRWERTAFHFQPA----- | KNFIYD | PNGPLFHMGWYHLFYQYNPYAP-- | FWGNMTWGHAVS |
| 065778 | PWTNEMLKWQRTGYHFQPP----- | NHFMSD | PNAAMYKGYHFFYQYNPNGS-- | AWDYSISWGHAVS |
| 081082 | PWTNQMLSWQRTGFHFQPP----- | KNWMND | PNGPLYKGYHFFYQYNPEGA-- | IWGNITWGHAVS |
| 081083 | E-ATEVDKELRTGYHFQPP----- | KHWIND | PNGPMYKGLYHLFYQYNPKGA-- | WVGNIIWAHVS |
| 081118 | YSQTDRLSWERTAFHFQPA----- | KNFIYD | PDGQLFHMGWYHMFYQYNPYAP-- | WVGNMSWGHVS |
| 081985 | LDSSAEVEWQRSTYHFQPD----- | KNFISD | PDGPMYHMGWYHLFYQYNPQSA-- | IWGNITWGHVS |
| 081986 | TSHVDASKVHRTGYHFQPP----- | KNWIND | PNGPMYNGVYHLFYQYNPKGA-- | IWGNIVWAHVS |
| 082119 | PWSNAMLQWQRTGFHFQPL----- | KHYMND | PNGPVYGGWYHLFYQHNPYGD-- | SWGNSWGHAVS |
| Q05G13 | WNTNAMFTWQRTSFHFQPE----- | KNWMND | PNGPLFYKGYHFFYQYNPDSA-- | WVGNITWGHAS |
| Q05JI1 | PWTNNMLSWQRTAFHFQPP----- | KNWMND | PNGPVFYKGYHFFYQYNPNGA-- | IWGDIVWGHAVS |
| Q05JI2 | YSQSDRLIERTAFHFQPP----- | KNFIYD | PNGPLFHMGWYHLFYQYNPYAP-- | WVGNMSWGHVS |
| Q0PCC5 | -----QPA----- | KNFIYD | PNGQLFYMGWYHLFYQYNPYGP-- | WVGNMSWGHVS |
| Q0PCC7 | SSQFDRLLWERTAFHFQPS----- | KNFIYD | PNGQIFHMGWYHLFYQHNPYAP-- | WVGNMSWGHVS |
| Q0PCC8 | PSAADRLRWERTAYHYQPA----- | KNFMYD | PNGPIFHMGWYHLFYQYNPYSV-- | FWGNMTWGHAVS |
| Q0PCC9 | PWTQKMLAWQRTSFHFQPK----- | KNWMND | PNGPLYKGYHFFYQYNPEAA-- | WVGNIVWAHVS |
| Q09N0 | AWSNAMLQWQRTAYHFQPP----- | KNWMND | PNGPLYHKGWYHLFYQYNPDSA-- | IWGNITWGHAVS |
| Q1KL65 | LVRHGHGIVIRPAYHFLPA----- | KNWQND | PNGPMYHNGVYHMFYQYNPLGAMWQPG | NLSWGHVS |
| Q2UXF7 | YSPADRLSWERTAFHFQPA----- | KNMIYD | PDGLLFYMGWYHLFYQHNPYAP-- | WVGNMTWGHAVS |
| Q2WEC6 | PWSNAMLQWQRTGFHFQPP----- | KNWMND | PNGPVYKGVYHLFYQYNPEGA-- | WVGNKIAGHAS |
| Q2XQ19 | P-PSIVDSQLRTGYHFQPL----- | KNWIND | PNAPMYKGYHFFYQYNPKGA-- | WVGNIVWAHVS |
| Q2XQ21 | SS-LKTHQPYRTGYHFQPP----- | KNWMND | PNGPMLYKGLYHFFYQYNPHGA-- | WVGNIVWAHSTS |
| Q3L7K5 | AWSNAMLQWQRTAYHFQPP----- | KNWMND | PNGPLYHKGWYHLFYQYNPDSA-- | IWGNITWGHAVS |
| Q41215 | PWTDAMLEWQRTGFHFQPE----- | KNWMND | PDGPMFYKGYHFFYQYNPVSA-- | WVGNITWGHAVS |
| Q41604 | PWTDAMLQWQRTGFHFQPE----- | KNWMND | PDGPMFYKGYHFFYQYNPVSA-- | WVGNITWGHAVS |
| Q41606 | ---SNQPYRTAYHFQPP----- | KNWIND | PNGPMLFKGIYHLFYQYNPNVGLR-- | GPPVWGHSTS |
| Q42691 | PWNSNVLQWQRTGFHFQPN----- | QNWMDN | PNGPLFYKGYHFFYQYNPDGA-- | IWGNKIAGHAVS |
| Q42722 | S-TVDEKNVHRTGYHFQPP----- | KNWIND | PNAPMYNGVYHLFYQYNPYGS-- | WVGNIVWAHVS |
| Q43172 | SSNVKN--VHRTGYHFQPP----- | KNWIND | PNGPMYNGVYHLFYQYNPKGA-- | WVGNIVWAHVS |
| Q43799 | PLSLISVKTWRCKYQLAPMSHEQAV | NKNTND | PNGYIYSKGSYSQFLASNLGS-- | INGNVPWAIAS |
| Q43818 | S-APSVNKLHRTGFHFQPN----- | RNWIND | PNGPMYRGIYHLFYQYNPKGA-- | WVGNIVWGHVS |
| Q43855 | EY--STNQPYRTGYHFQPP----- | KNWIND | PNGPLIYKGVYHLFYQYNPKGA-- | QWGNIVWAHVS |
| Q43856 | PWSNAMLQWQRTGFHFQPE----- | KNYQND | PNGPVYKGVYHFFYQHNPNGT-- | WVGNISWGHAVS |
| Q4AEI9 | AWSNAMLQWQRTAYHFQPP----- | KNWMND | PNGPLYHKGWYHLFYQYNPDSA-- | IWGNITWGHAVS |
| Q547Q0 | PWSNAMLQWQRTGFHFQPE----- | KNWMND | PNGPVYKGYHFFYQYNPDGA-- | IWGNKIAGHAS |
| Q575T1 | LPS---DQPYRTGYHFQPP----- | QNWMDN | PNGPMYKGVYHFFYQYNPNGP-- | LFGDIMIWGHAVS |
| Q5ZQK6 | EVPSIVSDRYRTAYHFQPP----- | KNWMND | PNGPMYNGIYHLFFQHNPNGP-- | QWGDIVWGHVS |
| Q64GB3 | PWSNAMLQWQRTGFHFQPL----- | KHYMND | PNGPVYGGWYHLFYQHNPYGD-- | SWGNSWGHAVS |
| Q6F4N3 | PWSNAMLQWQRTGFHFQPE----- | KNWMND | PNGPVYKGYHFFYQYNPDGA-- | IWGNKIAGHAS |
| Q6KCH6 | PWSNAMLQWQRTGFHFQPE----- | KNWMND | PNGPVYRGGWYHLFYQYNPEGA-- | WVGNIAWGHAVF |
| Q6PVN1 | QDPSPASTMYKTAFHFQPA----- | KNWMND | PSGPMYFNGIYHFFYQYNLNGP-- | IFGDIVWGHVS |
| Q70AT7 | PWSNAMLQWQRTGFHFQPD----- | KYYQND | PNGPVYGGWYHFFYQYNPSGS-- | VWEPQIVWGHAVS |
| Q70LF5 | HQMINDDDPYRTAYHFQSP----- | KNWMND | PNGPMLYKGIYHLFYQYYPYDPV-- | WHTEIVWGHSTS |
| Q70XE6 | PWNTILSWQRTAFHFQPE----- | KNWMND | PNGPLFYKGYHFFYQYNPNAA-- | WVGDIVWGHAVS |
| Q7DLY6 | ---SSNQPYRTAYHFQPP----- | KNWIND | PNGPLRYAGLYHLFYQYNPKGA-- | WVGNIVWAHVS |
| Q7XA49 | AWSNAMLQWQRTAYHFQPP----- | KNWMND | PNGPLYHKGWYHLFYQYNPDSA-- | IWGNITWGHAVS |
| Q7XAS5 | PWSNAMLQWQRTGFHFQPP----- | RNWMDN | PNGPVYKGYHFFYQYNPDGA-- | IWGNKIAGHAVS |
| Q7XZS5 | | | | |

Q84LA1 PSP-AVSTMYKTAFHFQPA-----KNWMNDPSGPMYFNGIYHEFYQYNLNGP--IFGDIVWGHSVS
 Q84RM0 PWSNAMLQWQRTGFHFQPE-----QHYMNDPNGPVYGGWYHLFYQHNPKGD--SWGNIWAHAVS
 Q84V21 S-AISVKNVHRTRFHFQPP-----KHWINDPNAPMYNGVYHLFYQYNPKGS--VWGNIIWAHSV
 Q84XV1 P-ASVVDNRLRTGYHFQPP-----RNWINDPNGPMYFNGVYHLFYQYNP**NGS**--VWGNIVWAHSV
 Q8GT50 ---FSTPSLSTGYHFRPI-----KNWINDPNAPMYKGYHLFYQYNPKGA--VWGNIVWAHSV
 Q8GT63 VTTAG-GVRTRSAYHFQPA-----KNWQNDPNGPMYHNGLYHFFYQYNPDGVTWGN**NLS**WGHSVS
 Q8GUA3 PWTNAMLTWQRTAYHFQPP-----KNWMNDPNGPLYHKGWYHLFYQYNPDSA--IWGN**IT**WGHAS
 Q8GUB8 --SNAMLQWQRTGFHFQPE-----MNMWMDPNGPVYRGWYHLFYQYNPEGA--VWGNIAWGHAVS
 Q8L6W0 GASAGTTPYRTAYHFQPL-----KNWMNDPNGPLYKGYHLFYQYNPYSA--IWGN**MT**WGHASIS
 Q8L6W1 -----TNQPYRTAYHFQPR-----KNWINDPNGPMLYKGYHLFYQYNPNPGV--IWGPPVWGHSTS
 Q8L6W2 DWNDLQLAWQRTAFHFQPP-----KNWMNDPNGPLYNGWYHFFYQYNPAGA--VWGNIVWGHAVS
 Q8L897 PWDNTMLSWQRTAFHFQPE-----KNWMNDPNGPLYKGYHLFYQYNPAGA--VWGDIVWGHAVS
 Q8LPM7 PWTNDMFQWRPGYHFQPP-----YHFMGDPAAMYKGYHFFYQYNPYGS-AWDTTISWAHAVS
 Q8LRN6 -----VHRTRYHFQPP-----KNWINDPNAPMYNGVYHLFYQYNPYGS--VWGNIVWAHSV
 Q8RVH4 PWSNNMLDWQRTAFHFQPK-----KNWMNDPNGPVFYNGWYHLFYQYHPDAP--VWGKIVWGHAVS
 Q8VXS5 -----TNQPYRTAYHFQPR-----KNWINDPNGPMLYKGYHLFYQYDNPNPG--VWGPVWGHSPS
 Q8VXS7 DWNDLQLAWQRTAFHFQPP-----KNWMNDPNGPLYNGWYHFFYQYNPAGA--VWGNIVWGHAVS
 Q8W3M2 PWTNNMLSWQRTAFHFQPP-----KNWMNDPNGPVFYKGYHLFYQYNPNPG--AIWGDIVWGHAVS
 Q93X59 LANQQIQPYRTGYHFQPP-----SNWMNDPNGPMLYQGVYHFFYQYNPYAATFG-DVIIWAHAVS
 Q941I4 **NWT**NAMLSWQRTAFHFQPE-----KNWMNDPDGPMFYKAWYHLFYQYNPNSA--LWGN**IT**WGHAVS
 Q944C8 **NWT**NAMFTWQRTSFHFQPE-----KNWMNDPNGPLFYKGYHLFYQYNPDSA--VWGN**IT**WGHAVS
 Q944U7 S-VDIVDQIHRRTAYHFQPP-----KHWINDPNAPMYNGVYHLFYQYNPKGA--VWGNIVWAHSV
 Q94C05 PWSNLMLTWQRTAYHFQPE-----KNWMNDPDGPLYHKGWYHFFYQYNPDSA--VWGN**IT**WGHAVS
 Q94C06 AWSNLMLSWQRTSYHFQPV-----KNWMNDPNGPLYKGYHLFYQYNPDSA--VWGN**IT**WGHAVS
 Q94C07 AWTNIMLTWQRTTYHFQPA-----QNMWMDPNGPLYKGYHLFYQWNPDTA-VWGNKISWGHAV-
 Q94C08 VWSNVMLVWQRTVVFHFQPE-----KNWMNDPNGPLYHKGWYHIFYQWNPAGA-AWGNKISWGHAVD
 Q9AUH1 PWSNEMLQWQRSSYHFQPA-----KNYMSDPDGLLYGGWYHMFYQYNPVGT-DWADGMWGHAVS
 Q9FNS9 SPTNEESQPYRTGFHFQPP-----KNWINDPNGPMYFNGVYHLFYQYNPYGP--LWGN**IS**WGHASIS
 Q9FQ62 **AWNNS**VLSWQRTAFHFQPE-----QNMWMDPNGPLFYKGYHFFYQYNPNAA--VWGDIVWGHAVS
 Q9FR47 PWSNSMLQWQRAGFHFTQTE-----KNFMSPDNGPVYRGYHLFYQYNTKGV-VWDDGIVWGHVVS
 Q9LD97 S-AISVKNVHRTRFHFQPP-----KHWINDPNAPMYNGVYHLFYQYNPKGS--VWGNIIWAHSV
 Q9LDS8 S-AISVKNVHRTRFHFQPP-----KHWINDPNAPMYNGVYHLFYQYNPKGS--VWGNIIWAHSV
 Q9M4K8 R-AISVKNVHRTGFHFQPP-----KYWINDPNAPMYNGVYHLFYQYNPKGS--VWGNIVWAHSV
 Q9SB12 P-PSIVNPLLRRTGYHFQPP-----KNWINDPNAPMYKGYHFFYQYNPKGA--VWGNIVWAHSV
 Q9SM30 LESNAGVEWERSAYHFQPD-----KNFISDPDGPMYHMGWYHLFYQYNPESA--IWGN**IT**WGHASIS
 Q9SPK0 P-PSIVNPLLRRTGYHFQPP-----KNWINDPNAPMYKGYHFFYQYNPKGA--VWGNIVWAHSV
 Q9ZP42 STHPQAKDPYRTGYHFQPR-----KNWINDPNGPLIYKGIYHLFYQYNPSSV--VWGNIVWAHSTS
 Q9ZR55 PATS--EQPYRTAFHFQPP-----QNMWMDPNGPMYNGVYHLFYQYNPFGP-LWNLRMVWAHSV
 Q9ZR96 HYQSDRLTWERTAYHFQPA-----KNFIYDPNGPLFHMWYHLFYQYNPYAP--IWGN**MS**WGHAVS
 Q9ZTW9 AWSNLMLSWQRTSYHFQPV-----KNWMNDPNGPLYKGYHLFYQYNPDSA--LWGN**IT**WGHAVS
 Q9ZTX2 PWSNLMLTWQRTAYHFQPE-----KNWMNDPNGPLYKGYHFFYQYNPDSA--VWGN**IT**WGHAVF
 P92916 PWTNDMLAQWRCGFHFRTV-----RNYMNDPSGPMYKGYHLFYQHNKDF--YWGN**IT**WGHAVS
 Q5FC15 AWTNQMLTWQWAGFHFRV-----KNYMNDPGPMYKGYHLFYQHNPNYA--YWGDISWGHAVS
 P93761 TWSNAMLNWQRTAYHFQPP-----KNWMNDPNGPLYHKGWYHLFYQYNPDSA--LWGN**IT**WGHAVS
 P49175 SWTNAMLAWQRTAFHFQPP-----KNWMNDPNGPLYHKGWYHLFYQWNPDSA--VWGN**IT**WGHAVS
 Q43089 HSSKSNHQPYRTAYHFQPL-----KNWINDPNGPMRYGGFYHLFYQYNPKGA--VWGNIVWAHSV
 Q39692 S-AVNQVLVHRTGYHFQPK-----KHWINDPNGPMYKGYHLFYQYNPKGA--VWGNIVWAHSV
 Q39693 S-AVDVKLVHRTGYHFQPP-----KHWINDPNGPMFYKGYHLFYQYNPKGS--VWGNIVWAHSV
 Q56UD0 ANGHR-----RTAYHFQPA-----KNWQNDPNGPVYNGMYHLFYQYNPHGALWDVGN**LS**WGHSVS
 Q0J360 ANHAR-----RTAYHFQPA-----KNWQNDPNGPMYHNGMYHLFYQYNPHSALWDIG**NLS**WGHSVS
 P29001 PWDNSMLSWQRTSFHFQPE-----KNWMNDPNGPMYKGYHFFYQYNPAGA--VWGDIVWGHAVS
 O24509 PWDNSMLSWQRTSFHFQPE-----KNWMNDPNGPMYKGYHFFYQYNPAGA--VWGDIVWGHAVS
 P29000 AWSNAMLSWQRTAYHFQPP-----KNWMNDPNGPLYHKGWYHLFYQYNPDSA--LWGN**IT**WGHAVS
 Q43857 **PWNNT**MLSWQRTAFHFQPE-----KNWMNDPNGPLYKGYHFFYQYNPAGA--VWGDIVWGHAVS
 P80065 PWTNDMLSWQRTSFHFQPP-----ENWMNDPNGPLFHMWYHLFYQYNPDSA--IWGN**IT**WGHASIS

Conservation: 1197758016417407313460194488837364431154458991201111111233
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| TARGET | ID | ITA | IIB |
|--------|-------------------------------------------------------------------|-----|-----|
| Q93X60 | -KDLINWESLEPAIYPSKWFNDNYGCWSGSATILPNG-EPVIFYTGIVDGNR----- | | |
| Q43866 | -YDLVNIHLDPAIYPTQEADSKSCWSGSATILPGN-IPAMLYTGSDSKSR----- | | |
| A0A7Z0 | -TDLINWDPHPAIFPSAPFDINGCWSGSATILPNG-KPVILYTGIDPKNQ----- | | |
| A3QRG0 | -KDLIHLHLPLAMVADQWYDINGVWTSATILPDG-KIVMLYTGST----- NE SV | | |
| A5GXL9 | -KDMVNWRHPLAMVPDQWYDSNGVLTGSITVLPDG-QVILLYTGNLDT-----LA | | |
| A7IZK7 | -HDLVNVFLELPALSPKEPYDIGGCFGSSTLHGS-KPIILLYTAQDQVDGA----- | | |
| A7IZK8 | -KDLINWNPHKAAIFPSQKGDVNGCWSGSTMLRGE-NPAILYTGIDPKSQ----- | | |
| A7LJR5 | -RDLIHLWYLPFAMVDRPFIDINGVWTSATILPGG-QIVILYTGDT-----ADLV | | |
| A7RDD3 | -RDLLNWVHPLAVEPDHWDYIEGDWTGSVAVLPDG-RVIMLFTGGTGA---- NE LA | | |
| A9CZQ1 | -KDLLHWNYLPMALRPDHWYDRKGVWSGYSTLLPDG-RIVVLYTGGT----- KE LW | | |
| A9E2W4 | -TDLVHWTGLELALTPSDPFIDISGCWSGSATILPGN-KPVVLYTG-LDTVGR----- | | |
| | -ADLVHWTGLELALTPSDPFIDISGCWSGSATILPGS-KPVILYTG-LDTVSR----- | | |

A9JIF3 -YDLVNWIIHLDPAIYPTHEADAKSCWGSATILPGN-IPAMLYTGSDSHSR-----
A9LST6 -KDLIHWLYLPPFAMVPDQWYDINGVWTGSATILPDG-QIMMLYTGDT-----DDYV
A9YTS8 -RDMINWFHLPFAMVPDHWYDIEGVMTGSATVLPNG-QVIMLYTGNAY-----DLS
A9YTS9 -KDMINWFELPVALTPTEWYDFEGVLSGSTTALPNG-QIFALYTGNNAN-----DFS
B011Q7 -KDMVNWHRHLPVALVPDQWYDINGVLTGSITVLPDG-RVILLYTGNTDT-----FA
B2NIA0 -TDMIHWLYLPLAMVDPDRWFDANGVWTGSATLLPDG-QIIMLYTGST-----NESV
004372 -KDLLSWRHLPLAMVDPDRWYDINGVWTGSATILPDG-RIIMLYTGAT-----NESV
023786 -KDMINWFHLPFAMVPDHWYDIEGVMTGSATVLPNG-QIIMLYTGNAY-----DLS
024459 -RDMINWFHLPFAMVPDHWYDIEGVMTGSATVLPNG-QIIMLYTGNAY-----DLS
065341 -RDLIHRHRLPLAMVPDQWYDTNGVWTGSATILPDG-RLAMLYTGST-----NASV
065342 -RDLIHRHRLPLAMVPDQWYDTNGVWTGSATILPDG-RLAMLYTGST-----NASV
065778 -KDMINWFELPVALTPTEWYDIEGVLSGSTTILPDG-RIFALYTGNTN-----DLE
081082 -KDMIHWLHLPVAMVPDHWYDSKGVWSGYATTLPDG-RIIVLYTGGT-----DQLV
081083 -RDLVHWTHLPLAMVPDQWYDINGVWTGSATILPDG-QIVMLYTGAT-----NESV
081118 -TDLVDWVALEPGIYPSKPFDDINGCWSGSATILPNG-VPVIMYTGIEPKET-----
081985 -KDMINWFELPVALTPTEWYDIEGVLSGSTTILPDG-QIFALYTGNNAN-----DFS
081986 -KDMINWFHLPFAMVPDHWYDIEGVMTGSATVLPNG-QIIMLYSGNAY-----DLS
082119 -KDLINWIPLPAIYPSKVFDDYGTWGSATILPGN-KPVILYTGIVDA-----NKT-
Q05G13 -KDLVNWHRHLPVALVPDQWYDINGVLTGSITVLPDG-RVILLYTGNTDT-----FS
Q05JI1 -TDLIHWLYLPIAMVPDQWYDINGVWTGSATILPDG-QIVMLYTGST-----DKSV
Q05JI2 -KDLIHWYHLPAMVADQWYDIMGVWTGSATILPDG-KLMMLYTGST-----NESV
Q0PCC5 -KDLVNWLELVALTPTEWYDIEGVLSGSTTALPNG-QIFALYTGNNAN-----DFS
Q0PCC7 -KDMIHWFELPVALTPSKWYDSEGVLSGSITVLPNG-EIFALYTGNNAN-----DFS
Q0PCC8 -KDMINWFELPVALTPTEWYDIEGVLSGSITVLPNG-QIFALYTGNNAN-----DFS
Q0PCC9 -KDMINWFELPVALPVEWYDIEGVLSGSTTILPDG-EIFALYTGNNAN-----DFS
Q0W9N0 -RDLIHWQHLPLAMVADQWYDINGVWTGSATFLPNG-DLIMLYTGST-----NESI
Q1KL65 -KDLIHWLYLPPFAMVPDQWYDINGVWTGSATILPDG-QIMMLYTGDT-----DDYV
Q2UXF7 -RDLVNWDAALDPTAPFDYNGCWSGSATILPBG-IPALYTGRIADAKEV-----
Q2WEC6 -KDMVNWYELPIAMVPTEWYDIEGVLSGSITVLPNG-KIFALYTGNNAN-----DFS
Q2XQ19 -RDLLHWRHLPVALPDRWYDINGVWTGSATILPDG-RLAVLYTGST-----NTSV
Q2XQ21 -RDLINWVSLKPAIEPSIKSDKYGCWSGSATMLDG-TPAIMYTGVRPDVNY-----
Q3L7K5 -TDLVNWTPHKYAISSQPADINGCWSGSATILPBG-KPVILYTGIDPQNK-----
Q41215 -KDLIHWLYLPPFAMVPDQWYDINGVWTGSATILPDG-QIMMLYTGDT-----DDYV
Q41604 -RNLIIHWFHLPIAFVDPQWYDANGALTSATFLPDG-RIAMLYTGITTEF-----V
Q41606 -RNLIIHWFHLPIAFVDPQWYDANGALTSATFLPDG-SIAMLYTGITTEF-----V
Q42691 -KDLVNWMPQPLTMEPEMAANINGSWGSATILPBG-KPAILFTGLDENYE-----
Q42722 -SDLIHWKHLPLAMVTDHWYDINGVWTGSATILPDG-QIVMLYTGST-----NESV
Q43172 -TDLINWIPLPPIYPSKPFDDYGTWGSATILPNN-KPIILYTGIVDAKNT-----
Q43799 -TDLINWIPLPPIYPSKPFDDYGTWGSATILPNN-KPIILYTGIVDANRT-----
Q43818 -LDEINWIVLNFALSRDQPIYINGIVSTSELILDGN-LPVIYTGTAIDEN-----V
Q43855 -KDLINWKELEPALFSPKPFDDYGTWGSATILPBG-GPVILYTGIVDQSN-----
Q43856 -TDLINWIPLDPAIFPSQPSDINGCWSGSSTILHGN-KPSILYTGINKLNH-----
Q4AEI9 -RDMVHWRHLPAMVPEHWDYDIEGVLTGSITVLPDS-RVILLYTGNTET-----FA
Q547Q0 -KDLIHWLYLPPFAMVPDQWYDINGVWTGSATILPDG-QIMMLYTGDT-----DDYV
Q575T1 -RDLRWRHLPVAMSPDQWYDINGVWSGSATVLPDG-RIVMLYTGST-----NASV
Q5ZQK6 -YDLVNWIIHIDPAIYPTDPADINSCFSGSATFLPGY-KPVMLYTGIDTEKR-----
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Q6F4N3 -KDLVNWHRHLPVALVPDQWYDINGVLTGSITVLPDG-RVILLYTGNTDT-----FS
Q6KCH6 -RDLRWRHLPVAMSPDQWYDINGVWSGSATVLPDG-RIVMLYTGST-----NASV
Q6PVN1 -RDLIHRHRLPLAMVPDQWYDINGVWTGSATVLPDG-SLVMLYTGST-----NASV
Q70AT7 -TDLVNWIGLEPALVRDTPSDIDGCWTGSVTLPPG-KPVIYTG-GNIDQH-----
Q70LF5 -KDLIHRHRLPALVPDQWYDIEGVLTGSITVLPDG-KVILYTGNTET-----FA
Q70XE6 -TDLINWTTQPIALSPSEPYDINGCWSGSITILPQN-KPVILYTGINNKNY-----
Q7DLY6 -KDLIHWLYLPIAMVPDQWYDANGVWTGSATFLDDG-SIVMLYTGST-----DEFV
Q7XA49 -KDLVNWTPDPAIFPSQPSDINGCWSGSSTILPBG-KPVILYTGIDLLNQ-----
Q7XAS5 -KDLIHWLYLPPFAMVPDQWYDINGVWTGSATILPDG-QIMMLYTGDT-----DDYV
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Q84LA1 -TDLVNWIGLEPALVRDTPSDIDGCWTGSVTLPPG-KPIIYTG-GDIDQH-----
Q84RM0 -KDMVNWHRHLPAMVPDQWYDSNGVLTGSITVLPDG-QVILLYTGNTDT-----LA
Q84V21 -KDLINWIIHLEPAIYPSKPFDDYGTWGSSTILPNN-KPVIYTGIVDVSNN-----
Q84XV1 -TDLVNWIALDPAIRPSKPFDDINGCWSGSATVLPBG-RPVIVYTGIDPQQR-----
Q8GT50 -RDLINWVALETAIQPSIKSDKYGCWSGSAXILRDG-TPAIMYTGIDRADINY-----
Q8GT63 -VDLVNWFALDAALQPSRPFDDANGCWSGSATILPDG-SPVMLYTG-IDARGD-----
Q8GUA3 -TDLIHWLYLPPALVPDQWYDINGVWTGSATFLPDG-QIMMLYTGDT-----NDYV
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Q8L897 -RDLIHWLHLPAMVADQWYDSNGVWTGSATILPDG-QVIMLYTGST-----NESV
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Conservation: 432347310111102221323160661240200015311001444498485676

| SS | IIIB | IIIC | IIID | IIV |
|---------------|----------------------------------------------------------|------|---------------------------------------------|----------------------------------|
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| Q93X60 | WRIVVGGDR | --- | DNNGMAFLYQS | -TDFVNWKRYDQLSS-ADATGTWECPDFYFP |
| Q43866 | WRVIGSKI | --- | HRRGLAITYTS | -KDFLKWEKSPEPLHY-DDGSGMWECPDFFPV |
| A0A7Z0 | WRITIGSKL | --- | NKTGISLVYDT | -KDFKTYEQLNGVLHA-VPGTGMWECVDFYFP |
| A3QRG0 | WRTVIGSKDDD | --- | GHAGIILSYKTKDFVNYELMPGNMHRGPDGTGMYE | CIDLFPV |
| A5GXL9 | WRIVIGSEI | --- | IKGQATALLYYS | -TDFGNWTRSDKPLKF-SRETNMWECPDFYFP |
| A7IZK7 | WRVIVGNK | --- | LNRRGKALLYRS | -KDFVWRTKAQHPLYS-IQGTGMWECPDFYFP |
| A7LZK8 | WLVTLGSKV | --- | NKTGIALVYETSDFKGYRLLDGVLHA-VPRTGMWECVDFYFP | |
| A7LJR5 | WYVVVGSKNDS | --- | LSHTGIALVYTTKDFLSYTLPGVLHAVDI-VGMWECVDLFPV | |
| A7RDD3 | WHVIGSKDP | --- | EHYGIVLIYTTKDFVNTLLPNLHSTKQPVGMLECVDFLFPV | |
| A9CZQ1 | WRLTVGTLIDEGG | --- | LAIVYKS-KDFMKWVPAENPLY--TNGSGMWE | CVDFFP |
| A9E2W4 | WRLTVGTVIDGNG | --- | LAMLKYS-KDFVWVPAENPLY--TNGSGMWE | CVDFFP |
| A9JIF3 | WRIVVG | --- | ADRD-NNGMAFLYQS-TDFVNWKRYEQPLSS-ADLTGTWEC | PDFYFP |
| A9LST6 | WRLTIGSKIG | --- | KTGVALVYETS | NFTSFKLLDGLHA-VPGTGMWECVDFYFP |
| A9YTS8 | WRMVMGSKHNQT | --- | IGCALVYRTT | NFTHFVLEEVLHA-VPHTGMWECVDLFPV |
| A9YTS9 | HRMIMGTKINR | --- | TGLVLVYHTTDFVNYVMLDEPLHS-VPNTDMWECVDFYFP | |
| B0IIQ7 | WRIIGSKDDD | --- | GHAGIILSYKTTDFVNYELMPGTMHRGPDGTGMYE | CCLDFPV |
| B2NIA0 | WRITIGSKF | --- | NTTGISMVYTTNDFINYLHNGVLHE-VPGTGMWECVDFYFP | |
| O04372 | WRIAIGTKDA | --- | DHSGVALVYSTKDFLNFTLLPGTLHTVKH-VGMWECIDFYPI | |
| O23786 | YRMVMGSKHNET | --- | IGCALIYHTT | NFTHFELKEEVLHA-VPHTGMWECVDLFPV |
| O24459 | WRMVMGSKHNET | --- | IGCALVYRTT | NFTHFELNEEVLHA-VPHTGMWECVDLFPV |
| O65341 | WRIVIGSKDDAEGDHAGIAVVYRTRDFVHFELLPDLLHR-VAGTGMWECIDFYFPV | | | |
| O65342 | WRIVIGSKDDAEGDHAGIAVVYRTRDFVHFELLPDLLHR-VAGTGMWECIDFYFPV | | | |
| O65778 | HRMIGTKR | --- | NTTGLVLVYHTTDFVNYVMLDEPLHS-VPNTDMWECVDLFPV | |
| O81082 | WHMLIGSKDD | --- | NHYGTVLIYTTKDFETYLLPDILHKTSDSVGMLECVDFLFPV | |
| O81083 | WRIVIGSKDS | --- | SHSGIAIVYSTKDFINYLKILPGILHAVER-VGMWECVDFYFP | |
| O81118 | WRLVVGSK | --- | ENMRGIAVLYRS-RDFRRWIKAHSLHA-G-LTGMWECPDFYFP | |
| O81985 | HRMIMGTRGN | --- | TGMVLVYTTDYTNYELLDEPLHS-VPNTDMWECVDFYFP | |
| O81986 | YRMVMGSKHNET | --- | IGCALIYHTT | NFTHFELKEEVLHA-VPHTGMWECVDLFPV |
| O82119 | WRVLVGSVR | --- | NHRGKVIYKSNKFMKWTAKHPLHS-AQGTGNWECPDFFPV | |
| Q05G13 | WRTIIGSKDDD | --- | GHAGIVLSYKTTDFVNYELMPGNMHRGPDGTGMYE | CCLDFPV |
| Q05JI1 | WRLTIGSKIG | --- | KTGISLVYQTTDFKTYELLDEYLHA-VPGTGMWECVDFYFP | |
| Q05JI2 | WRIAIGSRI | --- | NRTGITFVYDTKDFINYLRLGVLHG-VPNTGMWECVDFYFP | |
| Q0PCC5 | HRMIMGTRGN | --- | TGLVLVYHTTDFINYLLEDEPLHS-VPNTDMWECVDFYFP | |
| Q0PCC7 | HRMIMGTRGS | --- | TGMVLVYTTKDFTYELKDEPLHS-VANTDMWECVDFYFP | |
| Q0PCC8 | HRMIMGSKRNN | --- | TGLVLVYTTDFVNYELLDEPLHS-VPNTDMWECVDFYFP | |
| Q0PCC9 | HRMIGTRRNN | --- | TGLVLVYHTKDFINYLLEDEPLHS-VPDSGMWECVDLFPV | |
| Q0W9N0 | WRITIGSKI | --- | NKTGISLVYDTIDFKFELKGLMLHG-VPGTGMWECVDFYFP | |
| Q1KL65 | WLLTIGSKIG | --- | KTGIALVYETS | NFTSFKLLDEVLHA-VPGTGMWECVDFYFP |
| Q2UXF7 | WRIAIAAKVGGPNGIASTLIYRS-KDFRHWKRNASPLYT-SRAAGMVECPDLFPV | | | |
| Q2WEC6 | HRMIMGSKRGN | --- | TGVVLVYHTTDFVNYELLDEPLHS-VPNTDMWECVDFYFP | |

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Q2XQ21 WRLLVGSVVTGGS-RGVAYVYRS-RDFRLWTRVRRPLHS-A-PTGMWECPDFYVP
Q3L7K5 WRVIGSK---IKRKGALILYRS-KDFVRWTKAQHPLHS-GKNTGMWECPDFFPV
Q41215 WLLTIGSKIG---KTGVALVYETS**NFT**SFKLLDGLVLA-VPGTGMWECVDFYVP
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Q43818 SL**NIT**GSDLG---RGSVALYSETEFIKHGKTGVPIDA-QTNTVTSEKLDLFLV
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Conservation: 20020000000022221001101212345559272221216263481511013151312
SS IVE IVC IVD

TARGET SLSGEE-----GLDTSVG-GSN---VRHVLKVSLLDTRYEYTTIGTYDEKKDRYYPDE
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A9E2W4 G-----EARGV---TKYMLKVSMDVSYDYALGTYDEEGGVF-TRD
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B0I1Q7 GGNS-----SEMLGGDSSPEVLFVLKESANBEWHDYAPWEVRCRRNTWTPQD
B2NIA0 AING-----SKGLDT--SVNSGRIKHVHLKASLDDTKLDHYAIGTYFIE**NET**WVDPDD
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O81083 ATADS--SHANHGLDP---SARPSPAVKHVHLKASMDDDRHDYAIIGTYDPAQNTWVDPDD
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O81986 STVH-----TNGLDMV--DNGPNVKYVLKQSGDEDRHDWYAIIGSYDIVNDKWYPDD
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Q8L6W2 SVAE-----PNGLDT--STNDQSVKHVLKASMDDRNDYTTIGTYIED**NVT**WVDPN
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Q8VXS7 SVAE-----PNGLDT--STNGPSVKHVLKASMDDRNDYTTIGTYIED**NVT**WVDPN
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Q94C06 STTG-----ENGLDT--SVNGLDVKHVLKASLDDDKHDYALGTYDPAKNKWTPDN
Q94C07 STVADV--ATDEGSDSTEY--SVPGIGVKHVLKSRLLDDDKDYKALGTYFAATGTFAADD
Q94C08 STKSVI--VITQ-ENGLDT--SVHGLGVKHVLKTSFDDDKHDYALGTYDLQADTFVPDD
Q9AUH1 GGGGSE**NSS**-----EVLHVLKASMDDERHDYSLGTYDSAANIWTPID
Q9FNS9 TNGDKK-----GLDTS-VQGNn----TLHVLKVSFNsR--EYVYIGTYDPIKDKFSVVT
Q9FQ62 SKTA-----VNGLDT--SVNGPNVKHIVKASMDDRFDHYAVGTYFDS**NGT**WIPDD
Q9FR47 GGG**DSS**-----SEVLYVIKASMNDRHDYALGRYDAAAGNTWTPLD
Q9LD97 L**FNSTN**-----GLDVSYR-GKN----VKYVLKNSLDVARFDYTTIGMYHTKIDRYIPNN
Q9LDS8 SL**NSTN**-----GLDVSYR-GKN----VKYVLKNSLDVARFDYTTIGMYHTKIDRYIPNN
Q9M4K8 SLKNTN-----GLDASYR-GKN----VKYVLKNSLDVNRFEYTTIGMYDTKKDRYIPDN
Q9SB12 SKGGAP----RAGLETsvppGPR----VKHVLKNSLDLRRYDYTTVGTYHPRAEYVPDD
Q9SM30 STH-----TNGLDMM--DNGPNVYILKQSGDEDRHDWYALGSDPINDKWYPDD
Q9SPK0 SKGGAP----RAGLETsvppGPR----VKHVLKNSLDLRRYDYTTVGTYHPRAEYVPDD
Q9ZP42 SKTKLLG-----LDTSAIGPD----VKHVLKVSLLDNTRKEYTTIGTY**NVS**KDIYIPDD
Q9ZR55 WVDSTN-----GVDTS-IINPSNR--VKHVLKLGIQDHGKDCYLI GKYSADKENYVPED
Q9ZR96 STINDS-----ALDIA---AYGPMKHVIKESWEGHGMWYSIGTYDVINDKWTPDN
Q9ZTW9 STTG-----ENGLDT--SVNGLGVKHVLKTSLDDDKHDYALGTYDPVKNKWTPDN
Q9ZTX2 STTG-----ENGLDT--SVNGLDVKHVLKASLDDDKHDYALGTYDPAKNKWTPDN
P92916 ATTG---PLLHKAIDNFDVDRVLDSTVKHVLKASMNDEWHDYALGTFDPIGNKWTPDD
Q5FC15 ASSG---PLIGRGLD---RSMMLADNVKHVLKASMNDEWHDYALGSDVATHRWVPDD
P93761 STLD-----ANGLDT--SYNGPGIKHVLKASLDDNKQDHYVIGTYDPVKNKFSDPN
P49175 AAGS-----AAAGSGDLETSAAPGPGVKHVLKASLDDDKHDYALGTYDPATDTWTPDS
Q43089 LDKNLLR-----TGVDTSRNGDDD---VRHVLKVSLLDCKHDLGYSYDVVKDVFVPEN
Q39692 APKGMN-----GLDTSVPT-GQD---IKHVLKVSLSYSTRYEYTTVGEYDRDNDIYVPDN
Q39693 SPRSED-----GLDNSKM-GRG----IKHVLKVS**LNST**RYEYTTIGRYNRVRDFYVPDN
Q56UD0 AEHGEDGLD-LDASAI GGAGAG-----VRHVLKVSMPDTLEDYMYMGRYDADDTFTVPP
Q0J360 AERGEDGLD-----TSANGAG-----VRHVLKLSVMDTLQDYMYMGTYYDAAADF-SPA
P29001 SKKN-----GNGLDT--SVNGAEVKHVMKVSLLDDRHDYALGTYDDNKVLFTPDD
O24509 SKKN-----ENGLDTSLSINGAEVKYVMKVSLLDDRHDYTTIGTYDENKVLFTPDD
P29000 STKK-----TNGLDT--SYNGPGVKHVLKASLDDNKQDHYAIGTYDLGKNKWTPDN
Q43857 SMKS-----ENGLDT--SFTGDEVKHMVKSLLDDRHDYALGTYDEKVKFIADD
P80065 SVTG-----SNGLDT--SVNGPGVKHVLKSSLLDDRHDYALGTYDPIINDKWTPDN

Conservation: 011110203011125274912369776756103167544543274330014110578534
SS

| TARGET | VA | VB | VC |
|--------|---------------------------------------------------------------|----|----|
| A93X60 | A-----LVDGWAGLRYDYG--NFYASKTFFDPSKNRRILWGWANESDSVQDD-MNKGWAGI | | |
| Q43866 | GL---SLTGSTLDRYDYG-QFYASKSFFDDAKNRRVLWAWVPETDSQADD-IEKGWAGL | | |
| A0A7Z0 | G-----FKMDGTAPRYDYG-KYYASKTFFDPSKNRRILWGWITNESSVEDD-VEKGWAGI | | |
| A3QRG0 | QK---IDVGIG--IRYDYG-IFYASKTFYDQNKERRVLWGWIGESDSEAD-MQKGWASV | | |
| A5GXL9 | RE---LDLGIG--LRYDWG-KYYASKSFYDQKKNRRIVWAYIGETDSEQAD-ITKGWANL | | |
| A7IZK7 | S----DFNVSNLQYDYG-RFYASKSFYDQKKNRRVLWGWVNEGDNPSDA-FKKGWAGL | | |
| A7IZK8 | G-----AAEKFSGLRYDYG-KSYASKTFYDSLKRRILWGWINESLSREDD-IAQGWASV | | |
| A7LJR5 | PE---LDVGIG--LRLDYG-KYYASKTFYDQNKRRILWGWIGETDSEAD-LMKGWASV | | |
| A7RDD3 | EI---IDVGIG--LRYDWG-KFYASRTFYDPVKQRRVLWGWVGETDSREVD-IRKGWASV | | |
| A9CZQ1 | ET---IDVGIG--LRYDWG-KFYASKTFYDQEKHRRVLWGWVGETDSKRDD-ALKGWASL | | |
| A9E2W4 | DASSD---DCRMWPMIDYG-RLYASKTFVDEAKQRRILWAWSNETS SVADN-VAKGWAGI | | |
| A9JIF3 | DASST---DYRTWPMIDYG-RFYASKTFVDEAKQRRILWGWSNESNSIADD-VAKGWAGI | | |
| A9LST6 | EV---DRKYYGPEVR--YG-NFYASKSFFDDAKNRRVLWGWIPESDSQEDD-IQKGWAGL | | |
| A9YTS8 | PE---LDCGIG--LRLDYG-KYYASKTFYDQKKNRRVLWGWIGETDSEAD-LQKGWASV | | |
| A9YTS9 | PE---NDVGIG--LRYDYG-KFYASKTFYDQKKNRRVLWGWVGETDPPKDD-LLKGWANI | | |
| B01IQ7 | PE---LDVGIG--LRVDYG-RFFASKSLYDPLKRRVTVGWYVAESDSADQD-LNRGWATI | | |
| B2NIA0 | PE---ADLGIG--LRYDWX-KYYASKSFYDPTKNRRIVWAYVGETDSEQAD-KAKGWASL | | |
| 004372 | PT---IDVGIG--LRYDYG-RYYASKTFYDQNKDRRILLGWVNETDTETDD-LKKGWASL | | |
| 023786 | ES---LDVGIG--LRYDLG-KFYASKTFYDQEKHRRVLWGWIGESDSEAD-ILKGWASL | | |
| 024459 | PE---NDVGIG--LRYDFG-KFYASKTFYDQKKNRRVLWGWVGETDPPKYD-VYKGWANI | | |
| 065341 | PE---NDVGIG--LRYDYG-KFYASKTFYDQKKNRRVLWGWVGETDPPKSD-LLKGWANI | | |
| 065342 | AE---KDVGTG--LRYDWG-KFYASKTFYDPAKRRRVLWGWVGETDSEAD-VSKGWASL | | |
| 065778 | AE---KDVGTG--LRYDWG-KFYASKTFYDPAKRRRVLWGWVGETDSEAD-VSKGWASL | | |
| 081082 | PE---LDVGIG--LRCDYG-RFFASKSLYDPLKRRVTVGWYVAESDSYDQD-VSRGWATI | | |
| 081083 | DT---IDVGIG--LRYDYG-KFYASKTFYDQEKHRRILWGWVGETDSKADD-ILKGWASV | | |
| 081118 | AS---VDVGIG--LRYDWG-KFYASKTFYDHAKRRILLWSWIGETDSETAD-IAKGWASL | | |
| 081985 | D-----FPDNDYGLRYDYG-DFYASKSFYDPPKRRVLWGWANESDTPVDD-RNKGWAGI | | |
| 081986 | PE---LDVGIG--LRCDYG-RFFASKSLYDPLKRRITWGWVGESDSDQD-LSRGWATV | | |
| 082119 | PE---NDVGIG--LRYDFG-KFYASKTFYDQKKNRRVLWGWVGETDPPKYD-LSKGWANI | | |
| Q05G13 | T-----SIDGWKGLGLDYG-NYYASKTFFDPSKNRRILLGWANESDTPVDD-VKKGWAGV | | |
| Q05JI1 | PE---ADLGIG--LRYDWG-KYYASKSFYDPIKNRRVWVAFVGETDSEQAD-KAKGWASL | | |
| Q05JI2 | PE---EDVGIG--LKWDYG-RYYASKSFYDPIKRRIVWGWINETDTESDD-LEKGWASV | | |
| Q0PCC5 | PE---IDVGIG--IRYDYG-LFYASKTFYDQNKRRVLWGWIGESDSEIAD-VKKGWASL | | |
| Q0PCC7 | PE---LDVGIG--LRVDYG-RFFASKSLYDPLNRRVTVGWYVGESDSEAD-VNRGWATI | | |
| Q0PCC8 | PE---LDVGIG--YRCDYG-RFFASKSLYDPLKRRVTVGWYVGESDSDQD-LSRGWATI | | |
| Q0PCC9 | PE---LDVGIG--YRCDYG-RFFASKSLYDPLKRRVTVGWYVGESDSDQD-LSRGWATI | | |
| Q0W9N0 | PE---LDLGMG--WRCDYG-RFFASKTLYDPLKRRVTVGWYVAESDSGDQD-RSRGWSNI | | |
| Q1KL65 | PI---IDVGIG--LRYDYG-NFYASKSFYDQEKHRRVLWAWIKETDSEAD-ICRGWASL | | |
| Q2UXF7 | PE---LDCGIG--LKLDYG-KYYASKTFYDQKKNRRVLWGWIGETDSEAD-LQKGWASV | | |
| Q2WEC6 | VDVERNADDCRTWRRFDYG-HVYASKSFFDPSKNRRVLWAWANESDSDQD-IARGWSGV | | |
| Q2XQ19 | PE---LDVGIG--LRCDYG-RFFASKSLYDPLKRRITWAYVAESDSDQD-LSRGWAHV | | |
| Q2XQ21 | PD---ADVIGIG--LRYDWG-KFYASKTFYDPAKRRRVLWGWVGETDSEAD-VAKGWASL | | |
| Q3L7K5 | P-----AGDEHH-LRYDYG-NFYASKTFYDPAKRRRILWGWANESDTAVDD-VAKGWAGI | | |
| Q41215 | G-----SVDNDSGLRYDYG-KFYASKTFFDPAKRRRILWGWINESSVEHD-IEKGWASV | | |
| Q41604 | PE---LDCGIG--LRLDYG-KYYASKTFYDQKKNRRVLWGWIGETDSEAD-LQKGWASV | | |
| Q41606 | VE---ADVIGIG--WRYDYG-KFYASKTFFDPAKRRRVLWGWVGETDSEAD-RLKGWASV | | |
| Q42691 | VE---ADVIGIG--WRYDYG-KFYASKTFFDPAKRRRVLWGWVGETDSEAD-RLKGWASV | | |
| Q42722 | G-----FMNDSLRYDYG-KYYASKTFYDQKKNRRVLWGWVGETDSEAD-RLKGWASV | | |
| Q43172 | PE---LDVGIG--LRYDYG-IYYASKTFYDQKKNRRVLWGWVGETDSEAD-VRKGWASV | | |
| Q43799 | T-----SIDGWKGLRLDYG-NYYASKSFFDPSKNRRIMWGWANESDTPVDD-VKKGWAGI | | |
| Q43818 | IL-----VDLVI SERSLYG-KQVADKSLGLRKNDEALEMIASETPSVRNF-VSNGWLEI | | |
| Q43855 | T-----SEDGWGLRYDYG-NFYASKSFFDPTKNRRILWGWANESDTKEDD-VKKGWAGI | | |
| Q43856 | GF---EEVEIEEVFRYDYG-KYYASKTFFDYKKNRRILLGWVNESSIPDD-IKKGWAGI | | |
| Q4AEI9 | TE---QELGVA--LRYDYG-RYDASKSFYDPAKRRRVLWGWVGETDSEAD-AAKGWANL | | |
| Q547Q0 | PE---LDCGIG--LRLDYG-KYYASKTFYDQKKNRRVLWGWIGETDSEAD-LQKGWASV | | |
| Q575T1 | SD---ADVIGIG--LRYDWG-KFYASKTFYDPSKRRRVLWGWVGETDSEAD-VAKGWASL | | |
| Q62QK6 | ----GLKGNSLDMRYDYG-KFYASKSFYDPAKRRRVLWGWVGETDSEAD-VARGWSGL | | |
| Q64GB3 | IVLD---DRLLPRIDYG-NYYASKSFFDPSKNRRILWGWITNESSSDDD-VAKGWAGI | | |
| Q6F4N3 | PE---ADLGIG--LRYDWG-KYYASKSFYDPIKNRRVWVAFVGETDSEQAD-KAKGWASL | | |
| Q6KCH6 | VD---ADLGIG--LRYDWG-KFYASKTFYDPAKRRRVLWGWVGETDSEAD-VAKGWASL | | |
| Q6PVN1 | AE---MDVGIG--LRYDWG-KFYASKTFYDPSKRRRVLWGWVGETDSEAD-VAKGWASL | | |
| Q70AT7 | NVVD---DRRLWLRMDYG-TFYASKSFFDPSKRRRVLWGWVGETDSEAD-LAKGWAGL | | |
| Q70LF5 | DE---LELGVG--LRYDRG-KYYASKSFYDPPKRRVWVACVGETDSEAD-ITKGWANL | | |
| Q70XE6 | G-----SIESDLGLRYDYG-KFYASKSFFDDETNRRILWGWVNESSIQADD-IKKGWASV | | |
| Q7DLY6 | PS---IDVGISTGLRYDYG-KYYASKTFYDQKKNRRVLWGWVGETDSEAD-VQKGWSSV | | |
| Q7XA49 | ----EESNEFVLRDYDYG-KYYASKTFFDQKKNRRILLGWANESSVAAD-IKKGWAGI | | |
| Q7XAS5 | PE---LDCGIG--LKLDYG-KYYASKTFYDQKKNRRVLWGWVGETDSEAD-LQKGWASV | | |
| Q7XZS5 | AE---KDVGTG--LRYDWG-KFYASKTFYDPAKRRRVLWGWVGETDSEAD-FSKGWASL | | |

Q84LA1 NVVD----DRRLWLRIDYG-TFYASKSFFDSNKNRRIIWGWSRETDSPSDD-LEKGWAGL
Q84RM0 RE---LDLGIG--LRYDWG-KYYASKSFFYDQKKNRRIVWAYIGETDSEQAD-ITKGWANL
Q84V21 N-----PIDGWKGLRIDYG-NFYASKTFYDPSRNRRIWGWSNESDVLPPDEIKKGWAGI
Q84XV1 T-----SADDHTGLRYDYG-NFYASKTFYDPPKQRRILWGWAKESDAEDVD-VAKGWAGI
Q8GT50 P-----AGDEHH-LRYDYG-NFYASKTFYDPPKRRILWGWANESDAVDD-VAKGWAGI
Q8GT63 DD-----EDCRSWRRLDYG-HVYASKSFFDPARTGACSGAGPTSPTACPTT-SSGDGPVF
Q8GUA3 PQ---LDVGIG--LRLDYG-KYYASKTFYDQKRRILWGWIGETDSEAD-LLKGWASV
Q8GUB8 PE---NDLGIG--LRYDWG-KFYASKTFYDPAKQRRVLWGWIGETDSEAD-VAKGWASL
Q8L6W0 T---DFMEANTDWRDYGGKFFYASKTFYDGGKRRILWAWIMEADSRAND-IKKGWSGL
Q8L6W1 G-----YMNDSLRYDYG-KYYASKTFYDPAKRRILWGWANESSVVEDD-IKKGWSGI
Q8L6W2 PA---IDVGIG--LRYDYG-RFYASKTFYDHEKRRILWGWITEGDSEAD-VKKGWASL
Q8L897 FK---NDVGIG--LRYDYG-IFYASKTFYDQKKNRRIWGWIGESDSEYAD-VAKGWASV
Q8LPM7 DT---IDVGIG--LRYDYG-KFYASKTFYDQEKRRILWGYVGEVDSKTDD-ARKGWANV
Q8LRN6 T-----SIDGWKGLRLDYG-NFYASKSFFYDPSKNRRIWGWANESDVTVND-VKKGWAGI
Q8RVH4 PT---LDVGIG--LRYDYG-IYYASKTFYDQKQRRVLWSWIKETDTEASD-IKKGWASL
Q9GUS5 G-----YMNDSLRYDYG-KYYASKTFYDPAKRRILWGWANESSVVEDD-IKKGWSGI
Q8VXS7 PA---IDVGIG--LRYDYG-RFYASKTFYDHEKRRILWGWITEGDSEAD-VKKGWASL
Q8W3M2 PE---IDVGIG--IRYDYG-LFYASKTFYDQKKNRRIWGWIGESDSEIAD-VKKGWASL
Q93X59 GL---SLTGSTLDRYNYG-QFYASKSFFDDAKNRRVLWAWVPETDAPEDD-IEKGWAGL
Q941I4 PK---IDVGIG--LKYDYG-RYYASKTFYDQKERRILLGWINETYTETDD-LEKGWSSL
Q944C8 PE---EDVGIG--LKWYDYG-RYYASKSFFYDPPKRRIVWGWINETDTESSD-LEKGWASV
Q944U7 T-----LVDGWAGLRPDYG-NFYASKSFFDPKTNRRILWGWANESDSRQDD-VDKGWAGI
Q94C05 PE---IDVGIG--LRIDYG-KYYASKTFYDQKGRILWGWIGETDSEAD-LMKGWASV
Q94C06 TD---LDVGIG--LRLDYG-KYYASKTFYDQKQRRILWGWIGETDLEAVD-LMKGWASL
Q94C07 AD---LDVGIG--LRLDYG-KCYAARTFYDQKQRRILWGWIGETELEAVD-LMKGWASL
Q94C08 PD---LDVGIG--LRLDYG-KYYAARTFYDQKQRRILWGWIGETDLEAVD-PMKGWASL
Q9AUH1 PE---LDLGIG--LRYDWG-KFYASTSFFYDPAKRRVLWGWYGEVDSKRAD-VVKGWASI
Q9MNS9 N-----DFMVSNTQFYDYG-RYYASKSFFYDPSVNRRIWGWVNEGDSSEDA-VKKGWSGL
Q9FQ62 PT---IDVGMSASLRYDYG-KFYASKTFYDQKGRILWWSWIGESDSEAD-VQKGWSSL
Q9FR47 PE---LDLGMG--LRYDWG-KFYASTSFFYDPIKRRRVLVGYVGETDSRRSD-EAKGWASI
Q9LD97 N-----SIDGWKGLRIDYG-NFYASKTFYDPSRNRRIWGWSNESDVLPPDEIKKGWAGI
Q9LDS8 N-----SIDGWKGLRIDYG-NFYASKTFYDPSRNRRIWGWSNESDVLPPDDIKKGWAGI
Q9M4K8 N-----SIDGSKGLRLDYG-NFYASKSFFYDPMKNRRIWGWWTNESDVLPPDEIKKGWAGI
Q9SBI2 P-----AGDEHR-LRYDYG-NFYASKTFYDPAKRRILWGWANESD'TAADD-VAKGWAGI
Q9SM30 PE---NDVGIG--LRYDYG-KFYASKTFYDQKHSRRVLWGWYGETDPPKDD-LLKGWANM
Q9SPK0 P-----AGDEHR-LRYDYG-NFYASKTFYDPAKRRILWGWANESD'TAADD-VAKGWAGI
Q9ZP42 G-----SIESDSGLRYDYG-KFYASKTFYDPAKRRILWGWINESSVSGD-IKKGWSGL
Q9ZR55 EL---TLS---TLRLDYG-MYASKSFFYDPPKRRIMTAWVNESDSEADV-IARGWSGV
Q9ZR96 PE---LDVGIG--LRVDYG-RFFASKSLYDPLKRRRVTWGYVAESDSADQD-LNRGWATI
Q9ZTW9 PD---LDVGIG--LRLDYG-KYYAARTFYDQKQRRILWGWIGETDLEAVD-LMKGWASL
Q9ZTX2 TD---LDVGIG--LRLDYG-KYYASKTFYDQKQRRILWGWIGETDLEAVD-LMKGWASL
P92916 ET---VDVGIG--LRYDWG-KFYASKTFYDPLKQRRILWGYVGEVDSQKAD-IAKGWASL
Q5FC15 ES---VDVGIG--MRIDYG-KFYASRTFYDPPKERRVMGWYVGETDSGDAD-VAKGWASF
P93761 PD---LDCGIG--LRLDYG-RYYASKTFYDPPKQRRVLWGWIGETDSEAD-LQKGWASV
P49175 AE---DDVGIG--LRYDYG-KYYASKTFYDPPKRRVLWGWVGETDSEAD-ILKGWASV
Q43089 G-----FEDNGFVLRDYG-KYYASKTFYDPPKRRILWGWANESSVADD-VKKGWSGI
Q39692 T-----SVDGWAGLRDYG-NFYASKTFYDPPKQRRILWGWANESDSKQDD-VQKGWAGI
Q39693 T-----SVDGWAGLRDYG-NFYASKTFYDPIKRRILWGWANESDSQIDD-VQKGWAGI
Q56UD0 EDLEAHGDDYRWRRIDHG-HLYASKTFYDAGKRRVLWAWVNESDSEADD-VTKGWSGL
Q0J360 EP---ERGDCCRSWRRLDYG-HVYASKSFFDVRKNRRIWAWANESDSQADD-VARGWSGV
P29001 VK---NDVGIG--LRYDYG-IFYASKTFYDQKDRILWGWIGESDSEYAD-VTKGWASV
O24509 VK---NDVGIG--LRYDYG-IFYASKTFYDQKDRILWGWIGESDSEYAD-VTKGWASV
P29000 PE---LDCGIG--LRLDYG-KYYASKTFYDPPKERRVLWGWIGETDSEAD-LQKGWASV
Q43857 FE---NDVGIG--LRYDYG-IFYASKTFYDQKDRILWGWIGESDSEYAD-VAKGWASV
P80065 PE---LDVGIG--LRLDYG-KYYASKTFYDQKERRILWGWIGETDSEAD-LLKGWASV

Conservation: 0111102030111252749123
SS VC VD

TARGET QLIPRRVWLD-PSGKQLLQWPV
Q93X60 QSFPRALWID-RNGKQLIQWPV
Q43866 QTIPRKIWLDRSGKQLIQWPV
A0A7Z0 QGIPRTVLFDKKTGSNLIQWPV
A3QRG0 MTIPRTVELDRKTRTNLIQWPV
A5GXL9 QSFPRSVWLS-DTRKQLVQWPV
A7IZK7 QAIPRLVWLD-KSGKQLVQWPI
A7IZK8 QTIPRTVVFDKKTGTNLIQWPV
A7LJR5 EGLARTVLFDEKGTNLLTWPV
A7RDD3 QNIPRTILFDTKTKSNLILWPV
A9CZQ1 QTVPRVLSVD-TDGKRLIQWPI
A9E2W4 QTVPRVLSLD-TDGKRLVQWPI

| | |
|--------|-------------------------------------|
| A9JIF3 | QSFPRALWID-RSGMQLIQWPV |
| A9LST6 | QSIPRTVLYDKKTGTHLLQWPV |
| A9YTS8 | LNIPRSIVLDTQTGTNLIQWPI |
| A9YTS9 | YNVARTVVLDLDRKTGTHLLHWPV |
| B0I1Q7 | MSIPRTVELDKKTRTNLIQWPV |
| B2NIA0 | HTIPRTVLFDSKTGTNLLQWPV |
| 004372 | QGIPRTVLYDLRTGSNLIQWPI |
| 023786 | LNIPRTIVLDTKTNTNLIQWPI |
| 024459 | LNIPRSVVLDLDTGTNLIQWPI |
| 065341 | QGIPRTVLLDTKTGSNLLQWPV |
| 065342 | QGIPRTVLLDTKTGSNLLQWPV |
| 065778 | YNVARTIVLDRKTGTHLLQWPV |
| 081082 | QNIARTILFDAQTRSNLLVWPV |
| 081083 | QGVPRTVLLDVKTGSNLIQWPI |
| 081118 | QAIPRKIFLS-RSGRQLIQWPV |
| 081985 | YNVGRIVLDRKTGTHLLHWPV |
| 081986 | LNIPRTVVLDLETKTNLIQWPI |
| 082119 | HPIPRKIWLD-PSGKQLVQWPV |
| Q05G13 | MSIPRTVELDKKTRTNLIQWPV |
| Q05JI1 | QTIPRTVLYD NK TGSNVVQWPV |
| Q05JI2 | QGIPRTVALDTKTGSNLLQWPV |
| Q0PCC5 | YNVARTVVLDLDRKTGTHLLHWPV |
| Q0PCC7 | YNVGRIVLDRKTGTHLLHWPV |
| Q0PCC8 | YNVARTVVLDLDRKTGTHLLHWPV |
| Q0PCC9 | YNVARTVMLDRKTGTNLLQWPV |
| Q0W9N0 | QPIPRTIQYDKKTGSNLIQWPI |
| Q1KL65 | QSIPRTVLYDKKTGTHLLQWPV |
| Q2UXF7 | QTVPRKVWLD-EDGKQVRQWPI |
| Q2WEC6 | YNVGRIVLDRKTGTHLLHWPV |
| Q2XQ19 | QSIPRTVVLDLDTKTGSNLLQWPV |
| Q2XQ21 | QAIPRKVWLD-PSGKQLVQWPI |
| Q3L7K5 | QAIPRNWLD-KSGKQLLQWPI |
| Q41215 | QSIPRTVLYDKKTGTHLLQWPV |
| Q41604 | LPIPRTILFDQKTGSNLLLWPV |
| Q41606 | LPIPRTILFDQKTGSNLLLWPV |
| Q42691 | HTIPRTIWLD-KSGNQLIQWPI |
| Q42722 | QGIPRTILFDPKTGSNLLQWPV |
| Q43172 | QTIPRKLWLD-PSGKQLVQWPV |
| Q43799 | HPIPRKLWLD-PSGKQLVQWPV |
| Q43818 | Q-LDGNLSLTVTERGKNRDGSVL |
| Q43855 | QAIPRTVWLD-SSRRQLRQWPV |
| Q43856 | HTIPRTIWLH-ESGKQLVQWPV |
| Q4AEI9 | QSIPRTVELDEKTRTNLIQWPV |
| Q547Q0 | QSIPRTVLYDKKTGTHLLQWPV |
| Q575T1 | QSIPRTVVLDLDTKTGSNLLQWPV |
| Q5ZQK6 | QAVPRSVWLD-RNGKQLVQWPV |
| Q64GB3 | YGIPRTIWLD-RDGKQLLQWPV |
| Q6F4N3 | MSIPRTVELDKKTRTNLIQWPV |
| Q6KCH6 | QSTPRAVVLDLDTKTGSNLLQWPV |
| Q6PVN1 | QSIPRTVELDEKTRTNLIQWPV |
| Q70AT7 | HTIPRTIWLA-ADGKQLLQWPV |
| Q70LF5 | QSIPRTVELDEKTRTNLIQWPV |
| Q70XE6 | QAIPRTVVLD-KSGKQLVQWPL |
| Q7DLY6 | QGIPRTVVLDTRTHKNLVQWPV |
| Q7XA49 | HTIPRALWLH-KSGKQLVQWPV |
| Q7XAS5 | QSIPRTVLYDKKTGTHLLQWPV |
| Q7XZS5 | QGIPRTVLLDTKTGSNLLHWPV |
| Q84LA1 | HTIPRTIWLA-GDGKQLLQWPV |
| Q84RM0 | MTIPRTVELDRKTGTNLIQWPV |
| Q84V21 | QGIPRQVRLN-LSGKQLLQWPI |
| Q84XV1 | QAIPRTIWLD-SSGRQLIQWPI |
| Q8GT50 | QAIPRKVWLD-PSGRQLMQWPV |
| Q8GT63 | KLFPRKIWLD-EDGKQLRQWPV |
| Q8GUA3 | QSIPRTVLYDKETRTHVLQWPV |
| Q8GUB8 | MSIPRTVELDEKTRTNLIQWPV |
| Q8L6W0 | QSIPRVVWLS-ASGNQLMQWPV |
| Q8L6W1 | HTIPRKIWLD-KLGKQLIQWPI |
| Q8L6W2 | QGIPRTVLFQKTGTNLIQWPV |
| Q8L897 | QSIPRIVKLDKKTGSNLLQWPV |
| Q8LPM7 | LNARTILFDVKTRSNLLVWPV |
| Q8LRN6 | QTIPRKIWLD-SSGKQLVQWPV |

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| Q8RVH4 | MGPVRTIVLDKKTQSNI IQWPV |
| Q8VXS5 | HTIPRKIWLD-KLGKQLIQWPI |
| Q8VXS7 | QGIPRTVLFQDKTRTNLVQWPV |
| Q8W3M2 | QGIPRTVALDTKTGSNLLQWPV |
| Q93X59 | QSFPRALWID-RSGKQLIQWPI |
| Q941I4 | QTIPRTVLFDA TA GTQLLQWPV |
| Q944C8 | Q----- |
| Q944U7 | QTIPRKVWLD-PSGKQLRLWPV |
| Q94C05 | QTIPRTVVLDTKTYTHLLQWPV |
| Q94C06 | QAIPRTIVFDKKTGTNVLQWPV |
| Q94C07 | QAIPRTMVFDEKTGTNVLQRPE |
| Q94C08 | QAIPRSIVFDKKTGTNVLQRPE |
| Q9AUH1 | QSVPTIALDEKTRTNLLLWPV |
| Q9FNS9 | QSFPRSIWLS-NNRKQLVQWPV |
| Q9FQ62 | QGIPRTVVLDTKTGKNLVQWPV |
| Q9FR47 | QSIPRTVALDKKTWTNLLLWPV |
| Q9LD97 | QGIPRQVWLN-L LS GKQLLQWPI |
| Q9LDS8 | QGIPRQVWLD-LSGKQLVQWPI |
| Q9M4K8 | QAIPRKVWLD-PSGKQLIQWPI |
| Q9SBI2 | QAIPRTVWLD-PSGKQLLQWPI |
| Q9SM30 | LNIPRTIVLDTVTGTNLIQWPI |
| Q9SPK0 | QAIPRTVWLD-PSGKQLLQWPI |
| Q9ZP42 | QAIPRTIVLD-KSRKQLVQWPV |
| Q9ZR55 | QSFPRSLWLD-KNQKQLLQWPI |
| Q9ZR96 | YNVARTIVLDRKTGTHLLHWPV |
| Q9ZTW9 | QAIPRTIVFDKKTGTNVLQRPE |
| Q9ZTX2 | QAIPRTIVFDKKTGTNVLQWPV |
| P92916 | QGIPRSVLYDVKTGTNVLTPWI |
| Q5FC15 | QGIPRTVLFQDKKTGTNVLTPWI |
| P93761 | QSIPRTVLFQDKKTGTNVLQWPV |
| P49175 | QSIPRTVLLDTKTGSNLLQWPV |
| Q43089 | HTIPREIWLH-ESGKQLVQWPV |
| Q39692 | QLIPRKLWLD-PNGKQLIQWPI |
| Q39693 | QLIPRRIWLD-PSGRQLVQWPI |
| Q56UD0 | QSFPRAVWLD-EGGRQLVQWPV |
| Q0J360 | QTFPRKMWLA-KDGKQLLQWPI |
| P29001 | QSIPRTVRLDTKTGSNLLQWPV |
| O24509 | QSIPRTVRLDKKTGSNLLQWPV |
| P29000 | QSIPRTVLYDKKTGTHLLQWPV |
| Q43857 | QSIPRIVKLDKKTGSNLLQWPV |
| P80065 | QSIPRTVVFQDKKTGTNLIQWPV |