

human	ATGATGCAGGACGTGTCCAGCTCGCCAGTCTCGCCGGCCGACGACAGCCTGAGCAACAGC
rabbit	ATGATGCAGGACGTGTCCAGCTCGCCAGTCTCGCCGGCCGACGACAGCCTGAGCAACAGC

human	GAGGAAGAGCCAGACCGGCAGCAGCCGCCGAGCGGCAAGCGCGGGGGACGCAAGCGGCGC
rabbit	GAGGAGGAGCCGGACCGGCAGCAGCCGCCGAGCGGCAAGCGCGGGGGCGCAAGCGGCGC
	*****.*****.*****.*****
human	AGCAGCAGGCGCAGCGCGGGCGGCGGCGGGGCCCGGCGGAGCCGCGGGTGGGGGCGTC
rabbit	AGCAGCCGGCGCAGCGCGGGCGGCGGCGGGGCCCGGCGGGGCCGCGGGCGGGGCGTC
	*****.*****.*****
human	GGAGGCGGCGACGAGCCGGGCAGCCCGGCCAGGGCAAGCGCGGCAAGAAGTCTGCGGGC
rabbit	GCAGCCGGCGATGAGCCCGGCAGCCCGGCAGGGCAAGCGCGGCAAGAAGTCTGCGGGC
	* ** ***** ***** *****
human	TGTGGCGGCGGCGGCGGCGCG-----GGCGGCGGCGGCGGCAGCAGC
rabbit	TGCGGCGGTGGCGGCGGCGGCGGTGGTGGCGGCGCGGCGGCGGCGGTGGCGGCAGCAGC
	** ***** *****
human	AGCGGCGGCGGGAGTCCGCAGTCTTACGAGGAGCTGCAGACGCAGCGGGTCATGGCCAAC
rabbit	AGCGGCGGCGGGAGCCCGCAGTCGTACGAGGAGCTGCAGACGCAGCGGGTCATGGCCAAT
	***** ***** *****
human	GTGCGGGAGCGCCAGCGCACCCAGTCGCTGAACGAGGCGTTCGCCGCGCTGCGGAAGATC
rabbit	GTGCGGGAGCGCCAGCGCACGCAGTCGCTGAACGAGGCGTTCGCCGCGCTGCGGAAGATC
	***** *****
human	ATCCCCACGCTGCCCTCGGACAAGCTGAGCAAGATTACAGACCCTCAAGCTGGCGGCCAGG
rabbit	ATCCCCACGCTGCCCTCGGACAAGCTGAGCAAGATCCAGACGCTCAAGCTGGCCGCCAGG
	***** ***** *****
human	TACATCGACTTCCTCTACCAGGTCCTCCAGAGCGACGAGCTGGACTCCAAGATGGCAAGC
rabbit	TACATCGACTTCCTGTACCAGGTCCTGCAGAGCGACGAGCTGGACTCCAAGATGGCAAGC
	***** ***** *****
human	TGCAGCTATGTGGCTCACGAGCGGCTCAGCTACGCCTTCTCGGTCTGGAGGATGGAGGGG
rabbit	TGCAGCTACGTGGCCCACGAGCGGCTCAGCTACGCCTTCTCGGTCTGGAGGATGGAGGGG
	***** *****
human	GCCTGGTCCATGTCCGCGTCCCACTAG
rabbit	GCCTGGTCCATGTCCGCGTCCCACTAG

CLUSTAL O(1.1.0) multiple sequence alignment

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human      MMQDVSSSPVSPADDSLNSNEEFPDRQQPPSGKRGGRKRRSSRRSAGGGAGPGGAAGGGV
mouse      MMQDVSSSPVSPADDSLNSNEEFPDRQQPASGKRGARKRRSSRRSAGGSAGPGGATGGGI
rabbit     MMQDVSSSPVSPADDSLNSNEEFPDRQQPPSGKRGGRKRRSSRRSAGGGAGPGGAAGGGV
*****_*****_*****:***:

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human      GGGDEPGSPAQGKRGKKSAGCGGGGGAG-----GGGGSSSGGSPQSYEELQTQRVMAN
mouse      GGGDEPGSPAQGKRGKKSAGGGGGGGAGG--GGGGGGSSSGGSPQSYEELQTQRVMAN
rabbit     AAGDEPGSPAQGKRGKKSAGCGGGGGGGGGAGGGGGSSSGGSPQSYEELQTQRVMAN
_.******_*****_******

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human      VRERQRTQSLNEAFAALRKIIPTLP SDKLSKIQTLKLAARYIDFLYQVLQSD ELDSKMAS
mouse      VRERQRTQSLNEAFAALRKIIPTLP SDKLSKIQTLKLAARYIDFLYQVLQSD ELDSKMAS
rabbit     VRERQRTQSLNEAFAALRKIIPTLP SDKLSKIQTLKLAARYIDFLYQVLQSD ELDSKMAS
*****

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human      CSYVAHERLSYAFSVWRMEGAWSMSASH
mouse      CSYVAHERLSYAFSVWRMEGAWSMSASH
rabbit     CSYVAHERLSYAFSVWRMEGAWSMSASH
*****

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rabbit	1	GC	GGCGGGGGGGCGGGGGCGGGGGCGGAGGGCTCGGGCTCAGGACCTGGCGCGCGCGCG	66
human	1	GT	CGCGGGCAGCTGGCGCGCGCGGTCTGCTCTGCGGTCTGACGACGACGC--ACGGCGGGCGCGCGCGCGGAGGACGGGCGGAGCTGGCGCGCG	98

rabbit	67	G	CTCGCGCGCG--GCCCGGGGCGGTGACGAGGTGCGCCCTCTCTCTCCGAGACTCGGCGTGCGCTTCTCTCTCTCGGGCGCGCGCGGGC	164
human	99	G	ACAGCGAGCGGAGCGGGAGCGCGCTAGCGAGCGGGCTCCGGCGCTCGCAGTCTCCGAGCG--GCGCGCGCTCCCGCGGTGCGCGCGCGCG	197

rabbit	165	C	GTGGGGGCGAGCATGCCCGCGCGCGCTGAGGACGCCG--CTCGGTCCCCGCTAGGGCGCCCGCGCGCGCTGGCACTCTGCTGGCCGT	261
human	198	C	GTGGGGGCGAGCATGCCCGCGCGCGCTGAGGACGCCCGCGCGCGCGCATGGCGCGCTTCTGCTGCGCCTCTGCGCTCTGCTGGCGGT	297

rabbit	262	G	TGTGTCTGGCGGCGTCTCTGGGAGCTGCGGGTCCGGAGCGCGTGTGTGCGGAGCGCCAGGGGTGCCGGTTGGAGCCAGCGCAGAGAA	361
human	298	G	GCATCTGTGGCGGCGCTCTCGAGTCTTGGGAGCGGAGCGCGCTGTGGGCGAGCGGAGAGTCCCGGGCCAGAGCCCGCGCAGGAG	397

rabbit	362	C	AGGTGTCTTTGGCAGTGGGACACCTGGAGCTGAGTGCACCTTCTGGAGTGGCCCCCTGGGCGCACCTGTGGTCAAGGACGGCACGGGC	461
human	398	C	AGTGTGTCTTGGCAGCGGGATGCTGTGGAGCTGAGCTGTCCCCCGCGGGGTGTGTCCATGGGCGCACTGTCTGGTCAAGGATGGCAGGGC	497

rabbit	462	T	GGCGTCCAGGACGCATCTGTGTGGGCTCAACGGCTGCAAGTGTGAACGCTCCAGGAGGACGGGGGCTACAGTGTCCGGCAGCGGCTCAC	561
human	498	T	GGTGTCTCGAGCGTGTCTGTGGGGGCGCGCGCTGAGTGTGCTCTCCACGAGGACTCCGGGCGTACAGTGTCCGGCAGCGGCTCAC	597

rabbit	562	G	CAGCGGTGTGCTGCCACTTATTGTGCGGTGACCGAGGCTCGTCTCGGAGATGACGAAGACGGCGAGGATGAGGCCGAAGACAGG-----	654
human	598	G	CAGCGGTGACTGTGCCACTTACGTGTGCGGTGACAGCGCTCATCTCTGGAGATGACGAAGAGGGAGGAGGAGCTGAGGACACAGGTGTGAGC	697

rabbit	655	-	-----GGCCCCCTACTGGACCGCGCGCGAGCGGATGGACAAGAAGCTGTGGCGGTGCCGGCGCAACACCGTCCGCTGCCCGCGCGCGGCA	749
human	698	A	CAGGGCGCGCCCCCTACTGGACCGCGCGCGGATGGACAAGAAGTCTGCGCGTGTGCCCGCGCAACACCGTCCGCTTCTGCTGCCAGCGCTGGCA	797

rabbit	750	A	CCCGACGCGCTCATCTCTGGCTGAAGAATGGCAAAGTTTGCGGCGAGCACCGCATCGCGGCTCAAGTGTGGCAGCAGAGTGGAGCTGGT	849
human	798	A	CCCGACCTCCCTCATCTCTGGCTGAAGAATGGCAAAGTTCGCGGCGAGCACCGATTGGAGGATCAAGTGTGGCATGACAGTGGAGCTGGT	897

rabbit	850	G	ATGGAGAGCGTGTGCCATCGGACCGCGGCACTACACGTGCTGGTGGAGAACAAAGTTCCGGCAGATCCGGCAGAGTACACGCTGACGTGCTGGAG	949
human	898	C	ATGGAAAGCGTGTGCCCTCGGACCGCGGCACTACACCTGCTGCTGGAGAACAAAGTTGGCAGATCCGGCAGAGTACACGCTGACGTGCTGGAG	997

rabbit	950	C	GCTCCCCGACCGCGGCTCTGAGGCGGGGCTGCCGCAACGAGCGCGGTGCTGGGAGCGAGCTGGAGTTCACCTGCAAGGTGTACAGCGAC	1049
human	998	C	GCTCCCCGACCGCGGCTCTGAGGCGGGGCTGCCGCAACGAGCGCGGTGCTGGGAGCGAGCTGGAGTTCACCTGCAAGGTGTACAGTACG	1097

rabbit	1050	C	GCAGCGCACATCTCAGTGGCTGAAGCAGTGGAGGTGAACGGCAGCAAGTGGGCGCGGACGGCAGCGCTACGTACCGTGTGAAGACGGCGGGCGC	1149
human	1098	C	CACAGCGCACATCTCAGTGGCTGAAGCAGTGGAGGTGAATGGCAGCAAGTGGGCGCGGAGCGCACACCTACGTACCTGCTCAAGAGCGCGGGCGC	1197

rabbit	1150	T	AACACCAACCGACAAGGAGCTAGAGTTCTGCTTTGCGCAATGTACCTTTGAGGATCGGGGAGTACAGTGCCTGGCGGCAATTCTATCGGGTTT	1249
human	1198	T	AACACCAACCGACAAGGAGCTAGAGTTCTCTCTTGCACAACGTACCTTTGAGGACCGCGGGAGTACACCTGCCTGGCGGCAATTCTATTGGTTT	1297

rabbit	1250	T	CCCATCACTCTGCGTGGTGGTGTGCTGCAGCGAGGAGGAGCTGCGCGCGCGGCGAGGCGGCGAGCGTGTACGCGGCGTCTCAGCTACGGC	1349
human	1298	T	CTCATCACTCTGCGTGGTGGTGTGCTGCAGCGAGGAGGAGCTGCGGAGGCTGACGAGGCGGCGAGTGTATCGAGGATCTCAGCTACGGG	1397

rabbit	1350	C	GGGCTTCTTCTCTTATCTCTGGTGGTGGGCGCGTGAAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGT	1449
human	1398	T	GGGCTTCTTCTCTTATCTCTGGTGGTGGGCGCGTGAAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGT	1497

rabbit	1450	G	TCCCGCTTCCCGCTGAAGCGCAGGTGTCTTGGAGTCCAGTGTGCTGAACCTCACGACGCGCTGTGCGGCTGGCGGCTGTCTCCGCGAG	1549
human	1498	C	TCCCGCTTCCCGCTCAAGCGCAGGTGTCTTGGAGTCCAGCGCTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGTGTGAGT	1597

rabbit	1550	G	GGCCACGCTGGCCAGCTGTCCGAGCTGAGTGTCCCGCGCAGCGGAGTGGGAGTGTCCGGGCGCGGTGACCTCGGGAAGCCCTGGGAGAG	1649
human	1598	G	GGCCACGCTGGCCAGTGTCTCGAGCTGAGTGTCCCGCGCAGCGGAGTGGGAGTGTCCGGGCGCGGTGACCTCGGGAAGCCCTGGGAGAG	1697

rabbit	1650	G	CTGCTTCCGCGAGGTGTCTATGGCGAGGCGCATCGGATGACAAGGACCGGCGCGCAAGCGCTACCGTGGCGTGAAGTGTGAAAGACGATGC	1749
human	1698	G	CTGCTTCCGCGAGGTGTCTATGGCGAGGCGCATCGGATTGACAAGGACCGGCGCGCAAGCGCTGTACCGTGGCGTGAAGTGTGAAAGACGATGC	1797

rabbit	1750	C	ACCGACAAGACCTGTGCGACCTGGTGTGCGGATGAGATGATGAGATGATCGGGAACACAAAACATCATCAACTGCTGGGCGCTGCACGCAG	1849
human	1798	C	ACTGACAAGGACCTGTGCGACCTGGTGTGAGATGAGATGATGAGATGATCGGGAACACAAAACATCATCAACTGCTGGGCGCTGCACGCAG	1897

rabbit	1850	G	GGCGGCGCTGTACGTGCTGGTGGAGTTCGCGGCAAGGCAACCTGCGGAGTACCTGCGGCGCGCGCGCTCCGGGATGAGTACTCTTGCACA	1949
human	1898	G	GGCGGCGCTGTACGTGCTGGTGGAGTTCGCGGCAAGGCAACCTGCGGAGTACCTGCGGCGCGCGCGCTCCGGGATGAGTACTCTTGCACA	1997

rabbit	1950	C	CTGACGCTGCCGAGGAGCGAGCTCACCTTCAAGGACCTGGTGTCTGCGCTACAGGTGGCGCGGCGATGGAGTACCTGGCCTCCGAGAAGTGAT	2049
human	1998	C	CTGCAAGCGCGCGAGGAGCGAGCTCACCTTCAAGGACCTGGTGTCTGCTGCTACAGGTGGCGCGGCGATGGAGTACCTGGCCTCCGAGAAGTGAT	2097

rabbit	2050	C	CACAGGACCTGGCGCGCGCAACGTGTGTGACCGAGGACAACGTGATGAAGATCGCGGACTTGGCCTGGCGCGGAGCTGCACAACTCGACTAC	2149
human	2098	C	CACAGGACCTGGCTGCCGCGCAACGTGTGTGACCGAGGACAACGTGATGAAGATCGCGGACTTGGCCTGGCGCGGAGCTGCACAACTCGACTAC	2197

rabbit	2150	T	ACAAGAAGACCAACATGGCAGGCTGCCGTGAAGTGGTGGCGCGCGAGGCCCTGTTGACCGGCTACACCCACAGAGCGATGCTGGTCTTTCG	2249
human	2198	T	ACAAGAAGACCAACAAAGCGCGCTGCCGTGAAGTGGTGGCGCGCGAGGCCCTGTTTACCGGCTACACCCACAGAGCGATGCTGGTCTTTCG	2297

rabbit	2250	G	GGTCTGCTTTGGAGATCTTACGCTGGGGGCTGCCGTACCCCGCATCCCTGTGGAGAACTGTTCAAGTGTGAGAGAGGGCACCGCATGGA	2349
human	2298	G	GGTCTGCTTTGGAGATCTTACGCTGGGGGCTGCCGTACCCCGCATCCCTGTGGAGAACTGTTCAAGTGTGAGAGAGGGCACCGCATGGA	2397

rabbit	2350	C	AAAGCGGCAACTGACGACGACCTGTACATGATCATGCGGAGTGTGACGCGGCGCTTGCAGAGGCCACCTTCAAGCAGCTGTGGAGGAC	2449
human	2398	C	AAAGCGGCAACTGACACACGACCTGTACATGATCATGCGGAGTGTGACGCGGCGCTTGCAGAGGCCACCTTCAAGCAGCTGTGGAGGAC	2497

[illegible]

human MGAPACALALCVAVAIVAGASSESLGTEQRVVGRAAEVPGPPEPGQQEQLVFGSGDAVELS
mouse MVVPACVLVFCVA--VVAGATSEPPGPEQRVVRRAAEVPGPPEPSQQEQVAFGSGDTVELS
rabbit MGAPARALALCVAVVVVAGVWVEPAGPERRVRRAGVPGLEPSRQEQQVVFSGSGDTVELS
* .** .*.*** :***. * * * :*** *** ** * . :*** : .***** :***

human CPPPGGGPMGPTVWVKDGTGLVPSERVLVGPQRLQVLNASHEDSGAYSCRQRLTQRVLCH
mouse CHPPGGAPTGPTVWAKDGTGLVASHRILVGPQRLQVLNASHEDAGVYSCQHRLTRRVLCH
rabbit CHLPGGGPLGPTVWVKDGTGLASTDRILVGPQRLQVLNASQEDAGAYSCRQRLTQRVLCH
* ***. * *****.*****. :. :***** :***. :*** :*** :***

human FSVRVTDAPSSGDDDEDGEDEAEDTGVDTGAPYWTRPERMDKLLAVPAANTVRFRCPAAG
mouse FSVRVTDAPSSGDDDEDGEDVAE----DTGAPYWTRPERMDKLLAVPAANTVRFRCPAAG
rabbit FIVRLTEAPSSGDDDEDGEDEAED----TGAPYWTRPERMDKLLAVPAANTVRFRCPAAG
* ** : :***** ** *****

human NPTPSISWLKNGREFRGEHRIGGIKLRHQQWSLVMESVVPSPDRGNITCVVENKFGSIRQT
mouse NPTPSISWLKNGKEFRGEHRIGGIKLRHQQWSLVMESVVPSPDRGNITCVVENKFGSIRQT
rabbit NPTPSISWLKNGKEFRGEHRIGGIKLRHQQWSLVMESVVPSPDRGNITCVVENKFGSIRQT
***** :*****

human YTLDVLERSPHRPILQAGLPANQTAVLGSDVEFHCKVYSDAQPHIQWLKHVEVNGSKVGP
mouse YTLDVLERSPHRPILQAGLPANQTAILGSDVEFHCKVYSDAQPHIQWLKHVEVNGSKVGP
rabbit YTLDVLERSPHRPILQAGLPANQTAVLGSDVEFHCKVYSDAQPHIQWLKHVEVNGSKVGP
***** :*****

human DGTPYVTVLKTAGANTTDKELEVLSLHNVTTFEDAGEYTCLAGNSIGFSHHSAWLVVLP
mouse DGTPYVTVLKTAGANTTDKELEVLSLHNVTTFEDAGEYTCLAGNSIGFSHHSAWLVVLP
rabbit DGTPYVTVLKTAGANTTDKELEVLSLRNVTTFEDAGEYTCLAGNSIGFSHHSAWLVVLP
***** :*****

human EELVEADEAGSVYAGILSYGVGFLLFILVVAAVTLCRLRSPPKKGLGSPTVHKISRFP
mouse EELMETDEAGSVYAGVLSYGVVFFLLFILVVAAVILCRLRSPPKKGLGSPTVHKISRFP
rabbit EELAAAGEAGSVYAGVLSYAGGFLLFILVVGAVTLCRLHSPPKKGLGSPTVHKISRFP
*** : ***** :***. *****. ** ***** :***** :*****

human RQVSLESNASMSSNTPLVRIARLSSGEGPTLANVSELELPADPKWELSRARLTGKPLGE
mouse RQVSLESNSSMNSNTPLVRIARLSSGEGPVLANVSELELPADPKWELSRTRLTGKPLGE
rabbit RQVSLESSSSMNSTTPLVRVARLSSAEGPTLANVSELELPADPQWELSRARLTGKPLGE
***** :*. *. ***** :*****. ***. ***** :***** :*****

human GCFGQVMAEAIGIDKDRAAKPVTVAVKMLKDDATDKDLSDLVSEMEMMKMIGKHKNIIIN
mouse GCFGQVMAEAIGIDKDRTAKPVTVAVKMLKDDATDKDLSDLVSEMEMMKMIGKHKNIIIN
rabbit GCFGQVMAEAIGIDKDRAAKPVTVAVKMLKDDATDKDLSDLVSEMEMMKMIGKHKNIIIN
***** :*****

human LLGACTQGGPLYVLVEYAAKGNLREFLRARRPPGLDYSFDTCKPPEEQLTFKDLVSCAYQ
mouse LLGACTQGGPLYVLVEYAAKGNLREFLRARRPPGMDYSFDACRLPEEQLTCKDLVSCAYQ
rabbit LLGACTQGGPLYVLVEFAAKGNLREYLRRARRPPGMDYSFDTCLPEEQLTFKDLVSCAYQ
***** :***** :***** :***** : : ***** *****

human VARGMEYLASQKCIHRDLAARNVLVTEDNVMKIADFGLARDVHNLDYYKTTNGRLPVKW
mouse VARGMEYLASQKCIHRDLAARNVLVTEDNVMKIADFGLARDVHNLDYYKTTNGRLPVKW
rabbit VARGMEYLASQKCIHRDLAARNVLVTEDNVMKIADFGLARDVHNLDYYKTTNGRLPVKW

human MAPEALFDRVYTHQSDVWSFGVLLWEIFTLGGSPYPGIPVEELFKLLKEGHRMDKPANCT
mouse MAPEALFDRVYTHQSDVWSFGVLLWEIFTLGGSPYPGIPVEELFKLLKEGHRMDKPASCT
rabbit MAPEALFDRVYTHQSDVWSFGVLLWEIFTLGGSPYPGIPVEELFKLLREGHRMDKPANCT
***** :*****. **

human HDLYMIMRECWAAPSQRPTFKQLVEDLDRVLTVTSTDEYLDLSAPFEQYSPGGQDTPSS
mouse HDLYMIMRECWAHVPSQRPTFKQLVEDLDRILT VTSTDEYLDLSVPFEQYSPGGQDTPSS
rabbit HDLYMIMRECWAAPSQRPTFKQLVEDLDRVLTVTSTDEYLDLSAPFEQYSPGGQDSPSA
*****. ***** :*****. ***** :*** :

human SSSGDDSVFAHDLPPAPPSSGGSRT
mouse SSSGDDSVFTHDLLPPGPPSNGGPRT
rabbit SSSGDDSVFTHDLLPPAPPSSGGPRT
***** :*****. ***. ** **