

Data S1. Sequences of the constructs used in this study.

HA secretory sequence

Flag-tag

Human GPCR sequence

Universal Module

A. dLight1.1/dLight1.2/dLight1.3

Aminoacid sequence

MKTIIALS**YIFCLVFADYKDDDDA**MRTLNTSAMDG**TGLV**VERDFSVRILTACFLSLLILS
TLLGNTLVCAAVIRFRHLRSKVTNFFVISLAVSDLLVAVLVMPWKAVAEIAGFWPFGSF
CNIWVAFDIMCSTASILNLCVISVD**RYWA**ISSP(F/A)RYERKMTPKAAFILISVAWTL**SVLI**
SFIPVQLSWHKAKPTSPSDGNATSLAETIDNC**DSSLS**RTYA**AISSSVISFYIPVA**IMIVTYTRI
YRIAQ**KL**SSLIN**VYIKADKQ**NGIKANFKIRHNIEDGGVQLAYHYQQNTPIGDGPVLLP
DNHYLSVQSKLSKDPNEKRDMVLEFVTAAGITLGMD**ELYKGGTGGSMVSKGEELFT**
GVVPILVELDGDVNGHKFSVSGEGEGDATY**GKLT**LFICTTGKLPVPWPTLVTT**LT**YGV
QCF**SRYPDHMKQHDF**FKSAMPEGYIQERTIFFKDDGNYK**TRAEVKFEGD**TLVNRIELKG
IDFKEDGNILGHKLE**YNNHDQLKRETKVLK**TL**SVIMGVFVCCWLP**FFILNCILPFCGS**GE**
TQPFCIDSNTFDV**FVWFGW**ANSSLNPIYAFNADFRKAFSTLLGCYRLCPATN**NAIETVSI**
NNGAAMFSSHHEPRGSISKECNLVYLIPHAVG**SS**EDLKKEEAAGIARPLEKLS**PALS**VIL
DYDTDVSLEKI**QPITQNGQHPT***

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGAGGACTCTGAACACCTCTGCCATGGACGGGACTGGGCT
GGTGGTGGAGAGGGACTTCTCTGTTTCGTATCCTCACTGCCTGTTTCTGTCGCTGCTC
ATCCTGTCCACGCTCCTGGGGAACACGCTGGTCTGTGCTGCCGTTATCAGGTTCCGA
CACCTGCGGTCCAAGGTGACCAACTTCTTTGTCACTCCTTGGCTGTGTCAGATCTCT
TGGTGGCCGTCCTGGTCATGCCCTGGAAGGCAGTGGCTGAGATTGCTGGCTTCTGGC
CCTTTGGGTCCTTCTGTAACATCTGGGTGGCCTTTGACATCATGTGCTCCACTGCATC
CATCCTCAACCTCTGTGTGATCAGCGTGGACAGGTATTGGGCTATCTCCAGCCCTTT
CGGTATGAGAGAAAGATGACCCCAAGGCAGCCTTCATCCTGATCAGTGTGGCATG
GACCTTGTCTGTACTCATCTCCTTCATCCCAGTGCAGCTCAGCTGGCACAAGGCAAA
ACCCACAAGCCCCTCTGATGGAAATGCCACTTCCCTGGCTGAGACCATAGACA**ACTG**
TGACTCCAGCCTCAGCAGGACATATGCCATCTCATCCTCTGTAATCAGCTTTTACATC
CCTGTGGCCATCATGATTGTCACCTACACCAGGATCTACAGGATTGCTCAGAAACAG
CTGAGCTCACTCATTAACGTCTATATCAAGGCCGACAAGCAGAAGAACGGCATCAA
GGCGAACTTCAAGATCCGCCACAACATCGAGGACGGCGGGCTGCAGCTCGCCTACC
ACTACCAGCAGAACACCCCCATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCAC
TACCTGAGCGTGCAGTCCAAACTTTCGAAAGACCCCAACGAGAAGCGCGATCACAT
GGTCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTA
CAAGGGCGGTACCGGAGGGAGCATGGT**GAGCAAGGGCGAGGAGCTGTT**CACCGGG
GTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGT
GTCCGGCGAGGGT**GAGGGCGATGCC**ACCTACGGCAAGCTGACCCTGAAGTTCATCT

GCACCACCGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCCTGACCTACG
GCGTGCAGTGCTTCAGCCGCTACCCCGACCACATGAAGCAGCACGACTTCTTCAAGT
CCGCCATGCCCGAAGGCTACATCCAGGAGCGCACCATCTTCTTCAAGGACGACGGC
AACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCAT
CGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGG
AGTACAACAATCATGACCAACTGAAAAGAGAACTAAAGTCCTGAAGACTCTGTGC
GTGATCATGGGTGTGTTTGTGTGCTGTTGGCTACCTTTCTTCATCTTGAAGTGCATTT
TGCCCTTCTGTGGGTCTGGGGAGACGCAGCCCTTCTGCATTGATTCCAACACCTTTG
ACGTGTTTGTGTGGTGGTGGGCTAATTCATCCTTGAACCCCATCATTTATGCCTT
TAATGCTGATTTTCGGAAGGCATTTTCAACCCTCTTAGGATGCTACAGACTTTGCCCT
GCGACGAATAATGCCATAGAGACGGTGAGTATCAATAACAATGGGGCCGCGATGTT
TTCCAGCCATCATGAGCCACGAGGCTCCATCTCCAAGGAGTGCAATCTGGTTTACCT
GATCCACATGCTGTGGGCTCCTCTGAGGACCTGAAAAAGGAGGAGGCAGCTGGCA
TCGCCAGACCCTTGAGAAAGCTGTCCCCAGCCCTATCGGTCATATTGGACTATGACA
CTGACGTCTCTTGGAGAAGATCCAACCCATCACACAAAACGGTCAGCACCCAACC*

Mutation site: phenylalanine (F) in dLight1.1, Alanine (A) in dLight1.2
Residue only present in dLight1.3

B. dLight1.4

Aminoacid sequence

MKTIIALSYIFCLVFADYKDDDDAMGNRSTADADGLLAGRGPAAAGASAGASAGLAGQG
AAALVGGVLLIGAVLAGNSLVCVSVATERALQTPNSFIVSLAAADLLLALLVLPLFVYS
EVQGGAWLLSPRLCDALMAMDVMLCTASIFNLCAISVDRFVAVAVPLRYNRQGGSRR
QLLLIGATWLLSAAVAAPVLCGLNDVGRDPAVCRLEDRDYVVYSSVCSFFLPCPLMLL
LYWATFRGLQRLSSLINVIKADKQKNGIKANFKIRHNIEDGGVQLAYHYQONTPIGDG
PVLLPDNHVLSVQSKLSKDPNEKRDMVLEFVTAAGITLGMDELYKGGTGGSMVSKG
EELFTGVVPILVELDGDVNGHKFSVSGEGEDATYGKLTkFICTTGKLPVPWPTLVTTL
TYGVQCFSRYPDHMKQHDFFKSAMPEGYIQERTIFFKDDGNYKTRAEVKFEGDTLVNRI
ELKGIDFKEDGNILGHKLEYNNHDQLGRERKAMRVLVVVGAFLLCWTPFFVWHITQA
LCPACSVPPRLVSAVTWLGYNVNSALNPVIYTVFNAEFRNVFRKALRACC*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTTCGCCGACTACAAG
GACGATGATGACGCCATGGGGAACAGATCCACTGCAGATGCAGACGGTCTTCTCGC
AGGCCGGGGACCTGCTGCCGGAGCGAGCGCTGGGGCTTCCGCAGGTCTTGCTGGGC
AGGGGGCCGCGGCCCTTGGTTGGAGGCGTTTTGCTTATAGGGGCCGTTCTTGCTGGCA
ATAGTTTGGTATGTGTTTCAGTTGCGACAGAGCGCGCACTTCAGACGCCGACTAACT
CCTTTATAGTGAGTTTGGCTGCTGCAGATCTCTTGTGGCATTGTTGGTACTCCCCT
GTTTCGTTTATTCAGAAGTACAGGGTGGCGCATGGCTCCTGTCACCCAGGTTGTGTGA
TGCCTTGATGGCCATGGATGTTATGCTGTGTACCGCTTCTATCTTTAACCTTTGTGCT
ATCAGTGTGACAGATTCGTCGCGGTTCGCGGTCCCTCTGAGGTATAACCGGCAAGGA
GGCAGCAGGAGGCAACTGCTGCTGATCGGCGCAACTTGGCTCCTTCCGCAGCAGT
GGCCGCGCCTGTTCTGTGTGGTCTCAACGACGTTTCGCGGCAGAGACCCGGCTGTATG
TCGCCTCGAGGATAGAGATTATGTCGTATACTCAAGTGTGTGTTCTTTTTTCTTCT

TGCCCACTGATGCTTCTGTTGTATTGGGCTACCTTTAGAGGACTGCAACGCCTGAGC
TCACTCATTAACGTCTATATCAAGGCCGACAAGCAGAAGAACGGCATCAAGGGCGAA
CTTCAAGATCCGCCACAACATCGAGGACGGCGGGCGTGCAGCTCGCCTACCACTACC
AGCAGAACACCCCCATCGGCGACGGCCCCGTGCTGCTGCCCCGACAACCACTACCTG
AGCGTGCAGTCCAACTTTCGAAAGACCCCAACGAGAAGCGCGATCACATGGTCTT
GCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGG
GCGGTACCGGAGGGAGCATGGTGAGCAAGGGGCGAGGAGCTGTTACCGGGGTGGTG
CCCATCCTGGTTCGAGCTGGACGGCGACGTAACGGCCACAAGTTCAGCGTGTCCGG
CGAGGGTGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCA
CCGGCAAGCTGCCCCGTGCCCTGGCCACCCTCGTGACCACCCTGACCTACGGCGTGC
AGTGCTTCAGCCGCTACCCCGACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCA
TGCCCGAAGGCTACATCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTAC
AAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCT
GAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACA
ACAATCATGACCAACTGGGCCGCGAACGGAAAGCCATGCGAGTTTTGCCGGTGGTA
GTAGGGGCATTCCTTCTTTGTTGGACCCCTTTTTTTGTGGTGCATATAACGCAGGCTC
TGTGCCCGGCCTGTTCTGTCCCACCCCGCCTCGTGTGAGCTGTCACTTGGTTGGGTTA
CGTAAACTCAGCCCTCAATCCAGTTATCTATAACGGTTTTCAATGCCGAGTTCAGGAA
TGTTTTAGGAAGGCCCTTAGAGCCTGTTGT*

C. B1AR

Aminoacid sequence

MKTHIALSYIFCLVFADYKDDDDAMGAGVLLVGLASEPGNLSSAAPLPDGAATAARLLVP
ASPPASLLPPASESPEPLSQQWTAGMGLLMALIVLLVAGNVLVIVAIKTPRLQTLTNLF
IMSLASADLVMGLLVVPGATIVVWGRWEYGSFFCELWTSVDVLCVTASIELCVIALD
RYLAITSPFRYQSLLTRARARGLVCTVWALSALVSFLPILMHWWRAESDEARRCYNDPK
CCDFVTNRAYAIASSVVSFYVPLCIMAFVYLRVFREAQKLSSLINVIKADKQKNGIKAN
FKIRHNIEDGGVQLAYHYQQNTPIGDGPVLLPDNHVLSVQSKLSKDPNEKRDHMLLEF
VTAAGITLGMDELYKGGTGGSMVSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEGD
ATYGKLTCLKFICTTGKLPVPWPTLVTTLTYGVCFSRYPDHMKQHDFFKSAMPEGYIQE
RTIFFKDDGNYKTRAEVKFEGDTLVNRIELKGFDFKEDGNILGHKLEYNNHDQLLREQK
ALKTLGIIMGVFTLCWLPFFLANVVKAFHRELVPDRLFVFFNWLGYANSAFNPIIYCRSP
DFRKAFQGLLCCARRAARRRHATHGDRPRASGCLARPGPPSPGAASDDDDDDVVGAT
PPARLLEPWAGCNGGAAADS DSSLDEPCRPGFASESKV*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCGGCGCTGGAGTCCCTCGTACTGGGGGCAAGCGAACCGGGGAA
TTTGAGCTCCGCAGCACCCCTCCCGGATGGTGCGGCAACTGCTGCTCGCCTCTTGGT
CCCAGCTAGTCCGCCAGCAAGTTTGTCCCGCCAGCGTCTGAGAGCCCCGAGCCCT
CTCCAGCAGTGGACTGCAGGGATGGGCTTGTGATGGCACTCATTGTACTGTTGAT
CGTTGCGGGGAACGTACTTGTGATAGTGGCAATAGCTAAGACTCCCAGGCTGCAAA
CACTCACCAACCTTTTTATAATGAGTCTTGCTAGTGCTGATCTCGTAATGGGATTGCT
TGTGGTGCCTTTTGGAGCCACAATTGTAGTGTGGGGACGGTGGGAATACGGCTCCTT
TTTTTGCGAACTTTGGACTTCCGTCGATGTATTGTGCGTAACTGCCTCTATCGAGACT
CTTTGTGTCATTGCTCTTGATAGATATCTGGCCATCACTAGCCCTTTTCGGTACCAGA

GCCTGCTGACGCGCGCAAGAGCCC GCGGGCTCGTATGTACCGTCTGGGCCATTAGTG
CTCTGGTTTCCTTTCTCCCAATTCTTATGCACTGGTGGAGAGCCGAGTCTGATGAGGC
ACGAAGGTGTTATAACGACCCTAAATGCTGCGATTTCGTGACTAATAGAGCTTATGC
TATTGCCAGCAGCGTGGTCAGTTTTTATGTCCCCCTGTGTATAATGGCCTTCGTCTAT
CTTCGGGTATTTCCGGGAAGCTCAAAAACTGAGCTCACTCATTAACGTCTATATCAAG
GCCGACAAGCAGAAGAACGGCATCAAGGCGAACTTCAAGATCCGCCACAACATCGA
GGACGGCGGCGTGCAGCTCGCCTACCACTACCAGCAGAACACCCCCATCGGCGACG
GCCCCGTGCTGCTGCCCGACAACCACTACCTGAGCGTGCAGTCCAAACTTTCGAAAG
ACCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCGGGG
ATCACTCTCGGCATGGACGAGCTGTACAAGGGCGGTACCGGAGGGAGCATGGTGAG
CAAGGGCGAGGAGCTGTTACCGGGGTGGTGCCATCCTGGTCGAGCTGGACGGCG
ACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGTGAGGGCGATGCCACCTAC
GGCAAGCTGACCCTGAAGTTCATCTGCACCACCGGCAAGCTGCCCGTGCCCTGGCCC
ACCCTCGTGACCACCCTGACCTACGGCGTGCAGTGCTTCAGCCGCTACCCCGACCAC
ATGAAGCAGCAGCACTTCTTCAAGTCCGCCATGCCCGAAGGCTACATCCAGGAGCG
CACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCG
AGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGAC
GGCAACATCCTGGGGCACAAGCTGGAGTACAACAATCATGACCAACTGCGAGAACA
GAAGGCCCTGAAAACACTTGGTATCATAATGGGCGTATTCACTCTTTGCTGGCTTCC
ATTTTTCCTTGCAAACGTGGTGAAAGCATTCCATCGAGA ACTTGTCCCCGATAGACT
GTTTCGTATTCTTCAATTGGCTGGGGTACGCTAATAGTGCCTTTAACCTATCATCTAC
TGTCGCAGCCCCGACTTTCGAAAGGCCTTTCAAGGACTGCTGTGCTGTGCGAGGCGC
GCTGCGCGACGGAGACACGCCACTCATGGAGATCGCCCTCGAGCTAGCGGATGCTT
GGCCCCGCCAGGGCCCCCACCTAGTCCAGGTGCGGGCGTCCGATGACGACGATGACG
ACGTGGTAGGCGCTACACCACCTGCTCGGCTCTTGGAACCGTGGGCTGGATGCAATG
GCGGTGCAGCGGCTGACTCAGATTCTTCTTTGGACGAACCATGCAGACCCGGTTTTG
CCTCTGAGTCAAAGGTT*

D. B2AR

Aminoacid sequence

MKTIIALSYIFCLVFADYKDDDDA MGQPNGNSAFL LAPNRSHAPDHDVTQQRDEVWV
GMGIVMSLIVLAI VFGNVLVITAI AKFERLQTVTNYFITS LACADLVMGLAVVPFGAAHI
LMKMWTFGNFWCEFWTSIDVLCVTAS IETLCVIAVD RYFAITSPAKYQSLLTKNKARVII
LMVWIVSGLTSFLPIQMHWYRATHQEAINCYANETCCDFFTNQAYAIASSIVSFYVPLVI
MVFVYSRVFQEA KRLSSLINVIKADKQKNGIKANFKIRHNIEDGGVQLAYHYQQNTPI
GDGPVLLPDNH YLSVQSKLSKDPNEKRDH MVLLEFVTAAGITLGMDELYKGGTGGSM
VSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEGDATY GKLTLKFICTTGKLPVPWPT
LVTTLT YGVQCFSRYPDHMKQHDFFKSAMP EGYIQERTIFFKDDGNYKTRAEVKFEGDT
LVNRIELKGIDFKEDGNILGHKLEYNNHDQLKEHKALKTLGIIMGTFTLCWLPFFIVNIVH
VIQDNLIRKEVYILLNWIGYVNSGFNPLIYCRSPDFRIAFQELLCLRRSRYPNVRPNNGYI
YNAHSWQSENREQSKGSSGSDHAEGNLAKEECLSA DKTDSNGNCSKAQMRVL*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGGGGCAGCCAGGTAATGGCTCTGCGTTCTTGTTGGCCCCG
AACAGGAGCCATGCTCCCGACCATGACGTCACCCAACAGAGAGATGAGGTCTGGGT

AGTAGGCATGGGTATTGTCATGTCTCTGATAGTCTTGGCAATCGTGTTTGGAAATGT
GCTCGTTATCACGGCAATAGCTAAGTTTGAGCGACTTCAAACGGTAACAAATTATT
CATAACATCTCTCGCGTGTGCAGATCTCGTAATGGGACTCGCTGTGGTCCCCTTGG
CGCGGCCCATATCCTGATGAAGATGTGGACTTTTGGTAATTTCTGGTGTGAATTTG
GACCAGCATAGATGTA CTCTGTGTTACAGCTTCAATTGAAACTCTCTGTGTGATAGC
CGTTGATCGCTATTTTCGCCATTACGTCCCCTGCCAAGTATCAATCATTGCTTACCAAG
AATAAAGCCCGAGTAATAATTCTCATGGTGTGGATCGTAAGCGGGCTCACATCTTTT
TTGCCGATTCAGATGCACTGGTATAGAGCAACGCACCAAGAAGCCATAAACTGCTA
CGCAAATGAAACTTGCTGTGACTTCTTTACAAATCAGGCTTACGCTATTGCCTCTTCA
ATAGTCAGTTTTTACGTTCCCTCTGGTTATTATGGTGTGGTATACTCACGGGTATTCC
AGGAGGCTAAGCGGCTGAGCTCACTCATTAACGTCTATATCAAGGCCGACAAGCAG
AAGAACGGCATCAAGGCCAACTTCAAGATCCGCCACAACATCGAGGACGGCGGGCGT
GCAGCTCGCTACCACTACCAGCAGAACACCCCCATCGGCGACGGCCCCGTGCTGCT
GCCCCACAACCACTACCTGAGCGTGCAGTCCAACTTTCGAAAGACCCCAACGAGA
AGCGCGATCACATGGTCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCA
TGGACGAGCTGTACAAGGGCGGTACCGGAGGGAGCATGGTGTGAGCAAGGGCGAGGA
GCTGTTACCGGGGTGGTGCCATCCTGGTTCGAGCTGGACGGCGACGTAAACGGCC
ACAAGTTCAGCGTGTCCGGCGAGGGTGAGGGCGATGCCACCTACGGCAAGCTGACC
CTGAAGTTCATCTGCACCACCGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACC
ACCCTGACCTACGGCGTGCAGTGCTTCAGCCGCTACCCCGACCACATGAAGCAGCA
CGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACATCCAGGAGCGCACCATCTTCTT
CAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACC
CTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCT
GGGGCACAAGCTGGAGTACAACAATCATGACCAACTGAAGGAGCACAAAGCGCTG
AAGACGCTTGGAATTATCATGGGGACGTTTACTCTCTGCTGGCTTCCCTTCTTCATAG
TAAACATTGTTACAGTAATCCAAGACAATCTGATTCGAAAGGAGGTGTATATTCTCC
TCAATTGGATTGGGTACGTAAACAGCGGATTTAATCCTCTTATCTATTGCCGAAGCC
CTGATTTCCGCATAGCCTTTCAGGAACTGCTTTGTCTTCGCCGATCCCGGTATCCGAA
TGTGCGTCCATAACAATGGCTACATTTACAATGCTCATAGCTGGCAGTCCGAAAACAG
GGAACAGAGCAAAGGTTCCAGTGGAGACAGTGACCACGCTGAAGGCAATCTCGCTA
AGGAAGAGTGCCTCAGCGCCGATAAACTGATTCAAATGGGAATTGCAGCAAAGCT
CAAATGCGTGTTCTG*

E. DRD2

Aminoacid sequence

MKTIIALSYIFCLVFADYKDDDDAMDPLNLSWYDDDLERQNWSRPFNGSDGKADRPHY
NYYATLLTLLIIVIVFGNVLVCMASREKALQTTTNYLIVSLAVADLLVATLVMPWVV
YLEVVG EWKFSRIHCDIFVTLDVMMCTASILNLCAISIDRYTAVAMPMLYNTRYSSKRR
VTVMISIVWVLSFTISCP LLFGLNNADQNECIANPAFVVYSSIVSFYVPIVITLLVYIKIYI
VLRRRRKLSSLINVIKADKQKNGIKANFKIRHNIEDGGVQLAYHYQQNTPIGDGPVLLP
DNHYLSVQSKLSKDPNEKRDHMLLEFVTAAGITLGMDELYKGGTGGSMVSKGEELFT
GVVPILVELDGDVNGHKFSVSGEGEDATYGKLT LKFICTTGKLPVPWPTLVTTLYGV
QCFSRYPDHMKQHDFFKSAMPEGYIQERTIFFKDDGNYKTRAEVKFEGDTLVNRIELKG
IDFKEDGNILGHKLEYNNHDQLKEKKATQMLAIVLGVFIICWLPFFITHILNIHCDCNIPPV
LYSAFTWLGYVNSAVNPIIYTTFNIEFRKAFLKILHC*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGGACCCCTTAACCTCTCATGGTACGACGATGATCTTGAG
AGGCAGAACTGGTCCCGACCATTCAATGGGTCTGATGGTAAGGCTGACCGGCCTCAT
TACAATTATTATGCGACCCTGCTTACTCTTCTTATCGCTGTGATCGTATTTCGGCAACG
TCTTGGTTTGCATGGCAGTCTCTAGGGAAAAAGCGCTCCAGACGACAATAATTACT
TGATTGTGAGTCTGGCTGTAGCTGACTTGCTTGTGGCGACCCTGGTGTATGCCATGGG
TCGTATACTTGGAAAGTCGTTGGCGAGTGGAAGTTTTCTAGGATTCATTGCGACATAT
TTGTAACCTCTGGACGTAATGATGTGTACTGCTTCCATTTTGAACCTCTGCGCTATATC
CATTGACAGGTACACGGCGGTTGCTATGCCGATGCTTTATAATACCCGGTATTCAAG
CAAAGGGCGAGTAACTGTGATGATAAGCATTGTATGGGTGCTCAGTTTCACAATTAG
CTGCCCTCTGCTCTTCGGCCTTAACAACGCGGATCAAATGAATGCATCATCGCAA
CCCGGCTTTTGTGGTTTATAGCAGCATTGTTAGCTTCTATGTGCCATTCATAGTTACG
CTCCTTGTTTATATAAAAATTTATATCGTGCTTAGGGCGCCGCCGAAAACTGAGCTCA
CTCATTAACGTCTATATCAAGGCCGACAAGCAGAAGAACGGCATCAAGGGCGAACTT
CAAGATCCGCCACAACATCGAGGACGGCGGCGTGCAGCTCGCCTACCACTACCAGC
AGAACACCCCATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTGAGC
GTGCAGTCCAACTTTCGAAAGACCCCAACGAGAAGCGCGATCACATGGTCTGCT
GGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGGGCG
GTACCGGAGGGAGCATGGTGAGCAAGGGCGAGGAGCTGTTACCGGGGTGGTGCCC
ATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGA
GGGTGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACCG
GCAAGCTGCCCCGTGCCCTGGCCCACCCTCGTGACCACCCTGACCTACGGCGTGCAGT
GCTTCAGCCGCTACCCCGACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCATGC
CCGAAGGCTACATCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAG
ACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAA
GGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACA
ATCATGACCAACTGAAGGAAAAGAAGGCCACGCAAATGTTGGCAATCGTGCTCGGC
GTGTTTATAATCTGCTGGCTTCCATTTTTTTATAACGCATATATTGAACATACACTGTG
ATTGCAATATTCCACCAGTCCTGTATAGTGCGTTTACGTGGTTGGGTTATGTGAATTC
TGCGGTTAACCCGATCATTTACACCACGTTCAACATAGAATTCCGAAAGGCATTCT
CAAATATTGCATTGT*

F. A2AR

Aminoacid sequence

MKTIIALSYIFCLVFADYKDDDDAMGSLQPDAGNASWNGTEAPGGGARATPYSLQVTL
TLVCLAGLLMLLTVFGNVLVIIAVFTSRALKAPQNLFLVSLASADILVATLVIPFSLANEV
MGYWYFGKAWCEIYLALDVLFCSTSSIVHLCAISLDRYWSITQAAEYNLKRTPRRIKAIIT
VWVISA VISFPPLISIEKKGSGGGPQPAEPRCEINDQKWYVISSCIGSFFAPCLIMILVYVRI
YQIAKRLSSLINVIKADKQKNGIKANFKIRHNIEDGGVQLAYHYQQNTPIGDGPVLLPD
NHYSVQSKLSKDPNEKRDHMLLEFVTAAGITLGMDELKGGTGGSMVSKGEELFTG
VVPILVELDGDVNGHKFSVSGEGEGDATYGLTLKFICTTGKLPVPWPTLVTTLTYG VQ
CFSRYPDHMKQHDFFKSAMPEGYIQERTIFFKDDGNYKTRAEVKFEGDTLVNRIELKGI
DFKEDGNILGHKLEYNNDQLREKRFTFVLAVVIGVFVVCWPFFFFTYTLTAVGCSVPR
TLFKFFWFYGCNSSLNPVIYTIFNHDFFRAFKKILCRGDRKRIV*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGGGCTCCCTCCAGCCGGACGCAGGCAATGCGTCATGGAA
TGGGACAGAAGCCCCTGGCGGAGGCGCAAGGGCAACGCCATATAGTCTTCAAGTAA
CCCTGACTCTTGTCTGCCTCGCAGGTCTCCTGATGCTCCTGACGGTCTTTGGCAATGT
GCTTGTGATAATAGCTGTATTTACATCCAGGGCACTCAAGGGCGCCACAAAACCTTGT
TTTGGTTTCACTGGCGTCCGCCGACATTCTTGTGGCTACGCTCGTCATCCCCTTCTCA
CTCGCTAATGAAGTGATGGGTTATTGGTACTTTGGCAAGGCGTGGTGTGAGATATAT
CTTGCACTCGATGCTTGTCTGCACGAGCAGTATAGTTCATCTCTGCGCTATCTCAT
TGGATAGATATTGGTCAATAACGCAAGCTgcTGAGTATAACCTGAAGAGAACCCTA
GACGGATCAAGGCCATTATTATTACCGTTTGGGTCATATCAGCGGTTCATCTCATTCC
CTCCCTTGATAAGCATTGAGAAAAAAGGTGGAGGCGGAGGACCGCAACCTGCTGAG
CCCAGATGTGAGATAAACGACCAAAAATGGTACGTTATATCAAGTTGTATCGGGTC
ATTCTTTGCGCCATGCTTGATTATGATTCTGGTATATGTTAGAATCTATCAGATAGCG
AAACGGCTGAGCTCACTCATTAACGTCTATATCAAGGCCGACAAGCAGAAGAACGG
CATCAAGGCGAACTTCAAGATCCGCCACAACATCGAGGACGGCGGCGTGCAGCTCG
CCTACCACTACCAGCAGAACACCCCATCGGCGACGGCCCCGTGCTGCTGCCCGAC
AACCACTACCTGAGCGTGCAGTCCAACTTTCGAAAGACCCCAACGAGAAGCGCGA
TCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGA
GCTGTACAAGGGCGGTACCGGAGGGAGCATGGTGTGAGCAAGGGCGAGGAGCTGTTCA
CCGGGGTGGTGCCATCCTGGTTCGAGCTGGACGGCGACGTAACGGCCACAAGTTC
AGCGTGTCCGGCGAGGGTGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTT
CATCTGCACCACCGGCAAGCTGCCCGTCCCTGGCCCACCCTCGTGACCACCCTGAC
CTACGGCGTGCAGTGCTTCAGCCGCTACCCCGACCACATGAAGCAGCACGACTTCTT
CAAGTCCGCCATGCCCGAAGGCTACATCCAGGAGCGCACCATCTTCTTCAAGGACG
ACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAAC
CGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACA
GCTGGAGTACAACAATCATGACCAACTGAGGGAGAAACGATTTACGTTTCGTTCTCGC
CGTAGTCATCGGTGTTTTTCGTAGTTTGCTGGTTCCTTTCTTTTTTACATACATTGA
CTGCCGTCGGCTGTTCTGTACCCCGAACACTTTTTAAATTTTTTTCTGGTTCGGGTA
CTGCAACTCTAGCCTTAATCCGGTGATATACACAATTTTAATCATGATTTTCGGCGG
GCTTTTAAGAAAATTCTCTGTCCGGGGGACCGAAAACGCATAGTG*

G.KOR

Aminoacid sequence

MKTIALSIFCLVFADYKDDDDAMDSPIQIFRGEPPGPTCAPSACLPPNSSAWFPGWAEP
DSNGSAGSEDAQLEPAHISPAIPVIITAVYSVVFVGLVGNLVMFVIIRYTKMKTATNIY
IFNLALADALVTTTTPFQSTVYLMNSWPFQDVLCKIVISIDYINMFTSIFTLTMMSSVDY
IAVCHPVKALDFRTPLKAKIINICIWLLSSSVGISAIVLGGTKVREDVDVIECSLQFPDDDY
SWWDLFMKICVFIFAFVIPVLIHVCYTLMLRLKSLSSLINVYIKADKQKNGIKANFKIRH
NIEDGGVQLAYHYQQNTPIGDGPVLLPDNHYSVQSKLSKDPNEKRDHMLLEFVTA
GITLGMDELKGGTGGSMVSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEGDATYG
KLTCLKFICTTGKLPVPWPTLVTTLTYGVCFSRYPDHMKQHDFFKSAMPEGYIQERTIFF
KDDGNYKTRAEVKFEGDTLVNRIELKGIDFKEDGNILGHKLEYNNHDQLREKDRNLRI

TRLVLVVVAVFVVCWTPIHIFILVEALGSTSHSTAALAAYYFCIALGYTNAALNPILYAFL
DENFKRCFRDFCFPLKMRMERQATARVRNTVQDPAYLRDIDGMNKPV*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGGATTCACCAATTCAGATATTTAGGGGTGAACCGGGCCCT
ACCTGCGCGCCAAGTGCTTGTCTTCCCTCCGAATTCAAGCGCATGGTTCCTCCGGCTGG
GCAGAGCCCGACTCTAATGGGTCTGCTGGCAGTGAAGACGCGCAGCTTGAACCTGC
CCATATTAGCCCTGCTATACCCGTTATCATCACCGCCGTATATTCGGTTGTATTTCGTG
GTCGGTCTGGTAGGAAATTCTCTGGTGTATGTTTGTATCATACGATATAACCAAGATG
AAAACAGCTACCAACATCTACATCTTCAATCTGGCCTTGGCGGATGCGCTGGTCACT
ACTACTATGCCATTTCAATCAACTGTGTACCTTATGAACTCCTGGCCTTTTGGCGATG
TATTGTGCAAGATCGTCATCTCAATAGATTACTATAATATGTTTACTTCCATATTTAC
TCTCACTATGATGAGCGTCGATCGATATATAGCAGTATGTCACCCAGTAAAGGCTTT
GGACTTTCGAACGCCATTGAAGGCGAAAATTATAAACATTTGCATTTGGCTGCTTTC
CTCCAGCGTTGGAATCTCCGCTATTGTGTTGGGGGGGACCAAGGTCAGAGAAGACG
TAGACGTGATCGAGTGTTCCCTGCAGTTCCCGGACGATGATTATAGCTGGTGGGATC
TCTTTATGAAGATCTGTGTCTTCATCTTTGCTTTCGTAATACCTGTCCTTATCATTATT
GTATGCTATACGCTGATGATACTTAGATTGAAATCCCTGAGCTCACTCATTAACGTC
TATATCAAGGCCGACAAGCAGAAGAACGGCATCAAGGCCAACTTCAAGATCCGCCA
CAACATCGAGGACGGCGGCGTGCAGCTCGCCTACCACTACCAGCAGAACACCCCCA
TCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTGAGCGTGCAGTCCAAA
CTTTCGAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGAC
CGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGGGCGGTACCGGAGGGA
GCATGGTGAGCAAGGGCGAGGAGCTGTTACCGGGGTGGTGCCATCCTGGTTCGAG
CTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGTGAGGGCGA
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GCCCTGGCCACCCTCGTGACCACCCTGACCTACGGCGTGCAGTGCTTCAGCCGCTA
CCCCGACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACAT
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TGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTC
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CAGTGTTTCGTGGTCTGCTGGACTCCCATTCATATCTTTATACTGGTGGAGGCACTCGG
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TACACGAATGCTGCACTGAATCCTATCCTGTACGCCTTCTTGATGAGAATTTCAA
AGATGTTTCCGCGATTTCTGTTTCCCGTTGAAGATGCGGATGGAAAGACAAGCTACG
GCCCCGTTAGAAATACTGTTCAAGACCCTGCATATCTTCGGGACATAGATGGTATG
AATAAACCCGTT*

H.MOR

Aminoacid sequence

MKTIALSIFYFLVFADYKDDDDAMDSSAAPTNASNCTDALAYSSCSPAPSPGWSWNLS
HLDGNLSDPCPNRTDLGGRDSLCPPTGSPSMITAITIMALYSIVCVVGLFGNFLVMYVI
VRYTKMKTATNIYIFNLALADALATSTLPFQSVNYLMGTWPFGTILCKIVISIDYYNMF
SIFTLCTMSVDRYIAVCHPVKALDFRTPRNAKIINVCNWILSSAIGLPVMFMATTKYRQG

SIDCTLTFSHPTWYWENLLKICVFIFAFIMPVLIITVCYGLMILRLKSLSSLINVYIKADKQ
KNGIKANFKIRHNIEDGGVQLAYHYQNTPIGDGPVLLPDNHYSVQSKLSKDPNEKRD
HMLLEFVTAAGITLGMDELKGGTGGSMVSKGEELFTGVVPILVELDGDVNGHKFSV
SGEGEGDATYGKLTCLKFICTTGKLPVPWPTLVTTLTYGVCFSRYPDHMKQHDFKSA
MPEGYIQERTIFFKDDGNYKTRAEVKFEEDTLVNRIELKGIDFKEDGNILGHKLEYNNHD
QLKEKDRNLRRITRMVLVVAVFIVCWTPIHIVYVIKALVTIPETTFQTVSWHFCIALGYT
NSCLNPVLYAFLDENFKRCFREFCIPTSSNIEQQNSTRIRQNTRDHPSTANTVDRTNHQLE
NLEAETAPLP*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGGATAGTAGCGCTGCGCCTACCAACGCGTCAAACCTGCAC
CGATGCTCTTGCGTACTCCTCCTGCTCCCCGGCACCTAGTCCCGGTTCTTGGGTCAAT
TTGTCCCATCTGGACGGAAACCTCTCTGATCCCTGTGGGCCTAACAGGACGGACCTC
GGTGGGAGGGACTCCCTTTGCCCGCCGACCGGATCTCCGTCCATGATAACGGCCATT
ACAATTATGGCGTTGTATAGCATCGTATGCGTTGTAGGTCTTTTTGGGAATTTCTCTGG
TGATGTACGTCATCGTCAGGTACACAAAGATGAAAACAGCTACTAACATTTATATAT
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ACACCCAACCTTGGTACTGGGAAAATCTGCTCAAGATCTGCGTCTTCATTTTTGCTTTT
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TCACTGAGCTCACTCATTAACTGTCTATATCAAGGCCGACAAGCAGAAGAACGGCAT
CAAGGCGAACTTCAAGATCCGCCACAACATCGAGGACGGCGGCGTGCAGCTCGCCT
ACCACTACCAGCAGAACACCCCATCGGCGACGGCCCCGTGCTGCTGCCCGACAAC
CACTACCTGAGCGTGCAGTCCAACTTTCGAAAGACCCCAACGAGAAGCGCGATCA
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GTACAAGGGCGGTACCGGAGGGAGCATGGTGAGCAAGGGCGAGGAGCTGTTACCC
GGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAG
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TCTGCACCACCGGCAAGCTGCCCGTGCCCTGGCCACCCTCGTGACCACCCTGACCT
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AGTCCGCCATGCCCGAAGGCTACATCCAGGAGCGCACCATCTTCTTCAAGGACGAC
GGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCG
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TCTTGGCATTTCGTATTGCATTGGGGTACACTAATTCCTGCCTTAATCCTGTATTGT
ACGCCTTTCTGGATGAAAACCTTTAAAAGATGTTTCCGCGAGTTCTGCATACCGACCA
GCAGCAACATTGAACAACAAAACCTCCACGCGCATAACGGCAAAAATACTAGGGATCAC
CCGTCCACTGCGAATACTGTAGACCGAACGAACCATCAGTTGGAGAATTTGGAAGC
GGAAACTGCTCCTCTGCCA*

I. 5HT2A

Aminoacid sequence

MKTIIALSYIFCLVFADYKDDDDA MDILCEENTSLSSTTNSLMQLNDDTRLYSNDFNSGE
ANTSDAFNWTVDSENRTNLSCEGCLSPSCLSLHLQEKNWSALLTAVVIILTIAGNILVIM
AVSLEKKLQ NATNYFLMSLAIADMLLGLVMPVSMILTILYGYRWPLPSKLCVWIYLD
VLFSTASIMHLCAISLD RYVAIQNPIHHSRFSNRTKAFLKIIAVWTISVGISMPIPVFGLQD
DSKVFKEGSCLLADDNFVLIGSFVSFFIPLTIMVITYFLTIKSLQKLSSLINVIKADKQKN
GIKANFKIRHNIEDGGVQLAYHYQQNTPIGDGPVLLPDNHYLSVQSKLSKDPNEKRDHM
VLEFVTAAGITLGMDELYKGGTGGSMVSKGEELFTGVVPILVELDGDVNGHKFSVSGE
GEGDATYGKLT LKFICTTGKLPVPWPTLVTTLT YGVQCFSRYPDHMKQHDFFKSAMPE
GYIQERTIFFKDDGNYKTRAEVKFEGDTLVNRIELKGIDFKEDGNILGHKLEYNNHDQLN
EQKACKVLGIVFFLFVVMWCPFFITNIMAVICKESCNE DVIGALLNVFVWIGYLSSAVNP
LVYTLFNKTYRSAFSRYIQCYKENKKPLQLILVNTIPALAYKSSQLQMGQKKNSKQDA
KTTDNDCSMVALGKQHSEEASKDNSDGVNEK VSCV*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGGACATACTTTGTGAAGAGAATACTTCACTCTCTTCTACT
ACTAACTCTCTTATGCAACTGAACGATGATACCCGATTGTACTCAAACGACTTCAAT
TCCGGCGAAGCGAACACCAGTGACGCATTCAACTGGACTGTGCGATTCTGAAAACAG
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CAGGAAAAGA ACTGGTCAGCACTGCTCACTGCGGTAGTGATAATACTCACTATTGCT
GGCAATATTCTCGTAATTATGGCAGTCTCCTTGGAGAAGAACTCCAAAACGCCACA
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CATTCTTTGACAATCATGGTGATTACCTACTTTCTTACGATTA AATCTTTGCAAAG
CTGAGCTCACTCATTAACGTCTATATCAAGGCCGACAAGCAGAAGAACGGCATCAA
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TACCTGAGCGTGACGTCCAACTTTCGAAAGACCCCAACGAGAAGCGCGATCACAT
GGTCTGCTGGAGTTCGTGACCGCCGCGGGATCACTCTCGGCATGGACGAGCTGTA
CAAGGGCGGTACCGGAGGGAGCATGGTGAGCAAGGGCGAGGAGCTGTTACCGGG
GTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGT
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AGACATACCGcTCAGCCTTTTCACGGTATATTCAATGTCAGTATAAGGAAAAACAAGA
AACCTCTGCAACTTATTCTTGTGAACACTATCCCTGCCCTGGCTTATAAGTCATCACA
GTTGCAGATGGGCCAGAAAAAAATCCAAGCAGGACGCGAAGACAACAGACAAC
GATTGTAGTATGGTTGCCCTCGGCAAGCAGCACAGTGAAGAAGCGAGCAAAGACAA
TAGTGATGGCGTAAACGAAAAAGTCAGTTGTGTA*

J. MT2

Aminoacid sequence

MKTHIALSYIFCLVFADYKDDDDAMSENGSFANCCEAGGWAVRPGWSGAGSARPSRTP
RPPWVAPALSAVLIVTTAVDVVGNLLVILSVLRNRKLRNAGNLFVLSLALADLVVAFYP
YPLILVAIFYDGWALGEEHCKASAFVMGLSVIGSVFNITAIINRYCYICHSMAYHRIYR
RWHTPLHICLIWLLTVVALLPNFFVGSLEYDPRIYSCTFIQTASTQYTAADVVIHFLPIA
VVSFCYLRIWVVLQARRLSSLINVIKADKQKNGIKANFKIRHNIEDGGVQLAYHYQQ
NTPIGDGPVLLPDNHYSVQSKLSKDPNEKRDMVLEFVTAAGITLGMDELYKGGTG
GSMVSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEGDATYGKLTCLKFICTTGKLPVP
WPTLVTTLYGVQCFSRYPDHMKQHDFFKSAMPEGYIQERTIFFKDDGNYKTRAEVKF
EGDTLVNRIELKIDFKEDGNILGHKLEYNNHDQLKPSDLRSFLTMFVVFVIFAICWAPL
NCIGLAVAINPQEMAPQIPEGLFVTSYLLAYFNLSCLNAIVYGLLNQNFREYKRILLALW
NPRHCIQDASKGSHAEGQLQSPAPPIIGVQHQADAL*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGTCAGAAAACGGATCTTTCGCGAATTGTTGCGAAGCAGG
GGGATGGGCCGTGAGGCCAGGCTGGTCTGGAGCAGGTTCTGCCAGGCCCTCAAGGA
CGCCGAGACCTCCTTGGGTAGCTCCTGCTCTGTCCGCTGTGCTGATAGTGACCACTG
CTGTGGACGTCGTAGGCAATCTTCTCGTGATCTTGTCTGTCCTGCGAAATCGGAAAC
TTAGGAACGCCGAAATTTGTTCCCTGGTCTCATTGGCGCTCGCAGACCTGGTAGTTG
CCTTCTATCCGTACCCCTCATTTTGGTGGCTATCTTTACGACGGCTGGGCCCTGGG
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CAAGGGCGAGGAGCTGTTACCGGGGTGGTGCCATCCTGGTCGAGCTGGACGGCG
ACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGTGAGGGCGATGCCACCTAC
GGCAAGCTGACCCTGAAGTTCATCTGCACCACCGGCAAGCTGCCCGTGCCCTGGCCC

ACCCTCGTGACCACCCTGACCTACGGCGTGCAGTGCTTCAGCCGCTACCCCGACCAC
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CACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCG
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CAGATTCCAGAAGGCCTGTTTGTACCCAGTTACCTCCTCGCATACTTCAACTCCTGCC
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CACGCAGAAGGACTCCAGTCTCCAGCGCCTCCAATTATAGGCGTCCAACATCAAGC
GGATGCGCTT*