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

MKTIIALSYIFCLVFADYKDDDDAMRTLNTSAMDGTGLVVERDFSVRILTACFLSLLILS
TLLGNTLVCAAVIRFRHLRSKVTNFFVISLAVSDLLVAVLVMPWKAVAEIAGFWPFGSF
CNIWVAFDIMCSTASILNLCVISVDRYWAISSP(F/A)RYERKMTPKAAFILISVAWTLSVLI
SFIPVQLSWHKAKPTSPSDGNATSLAETIDNCDSSLSRTYAISSSVISFYIPVAIMIVTYTRI
YRIAQKQLSSLINVYIKADKQKNGIKANFKIRHNIEDGGVQLAYHYQQNTPIGDGPVLLP
DNHYLSVQSKLSKDPNEKRDHMVLLEFVTAAGITLGMDELYKGGTGGSMVSKGEELFT
GVVPILVELDGDVNGHKFSVSGEGEGDATYGKLTLKFICTTGKLPVPWPTLVTTLTYGV
QCFSRYPDHMKQHDFFKSAMPEGYIQERTIFFKDDGNYKTRAEVKFEGDTLVNRIELKG
IDFKEDGNILGHKLEYNNHDQLKRETKVLKTLSVIMGVFVCCWLPFFILNCILPFCGSGE
TQPFCIDSNTFDVFVWFGWANSSLNPIIYAFNADFRKAFSTLLGCYRLCPATNNAIETVSI
NNNGAAMFSSHHEPRGSISKECNLVYLIPHAVGSSEDLKKEEAAGIARPLEKLSPALSVIL
DYDTDVSLEKIQPITQNGQHPT*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGAGGACTCTGAACACCTCTGCCATGGACGGGACTGGGCT
GGTGGTGGAGAGGGACTTCTCTGTTCGTATCCTCACTGCCTGTTTCCTGTCGCTGCTC
ATCCTGTCCACGCTCCTGGGGAACACGCTGGTCTGTGCTGCCGTTATCAGGTTCCGA
CACCTGCGGTCCAAGGTGACCAACTTCTTTGTCATCTCCTTGGCTGTGTCAGATCTCT
TGGTGGCCGTCCTGGTCATGCCCTGGAAGGCAGTGGCTGAGATTGCTGGCTTCTGGC
CCTTTGGGTCCTTCTGTAACATCTGGGTGGCCTTTGACATCATGTGCTCCACTGCATC
CATCCTCAACCTCTGTGTGATCAGCGTGGACAGGTATTGGGCTATCTCCAGCCCTTTT
CGGTATGAGAGAAAGATGACCCCCAAGGCAGCCTTCATCCTGATCAGTGTGGCATG
GACCTTGTCTGTACTCATCTCCTTCATCCCAGTGCAGCTCAGCTGGCACAAGGCAAA
ACCCACAAGCCCCTCTGATGGAAATGCCACTTCCCTGGCTGAGACCATAGACAACTG
TGACTCCAGCCTCAGCAGGACATATGCCATCTCATCCTCTGTAATCAGCTTTTACATC
CCTGTGGCCATCATGATTGTCACCTACACCAGGATCTACAGGATTGCTCAGAAACAG
CTGAGCTCACTCATTAACGTCTATATCAAGGCCGACAAGCAGAAGAACGGCATCAA
GGCGAACTTCAAGATCCGCCACAACATCGAGGACGGCGGCGTGCAGCTCGCCTACC
ACTACCAGCAGAACACCCCCATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCAC
TACCTGAGCGTGCAGTCCAAACTTTCGAAAGACCCCAACGAGAAGCGCGATCACAT
GGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTA
CAAGGGCGGTACCGGAGGGAGCATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGG
GTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGT
GTCCGGCGAGGGTGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCT

GCACCACCGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCCTGACCTACG
GCGTGCAGTGCTTCAGCCGCTACCCCGACCACATGAAGCAGCACGACTTCTTCAAGT
CCGCCATGCCCGAAGGCTACATCCAGGAGCGCACCATCTTCTTCAAGGACGACGGC
AACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCAT
CGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGG
AGTACAACAATCATGACCAACTGAAAAGAGAAACTAAAGTCCTGAAGACTCTGTCG
GTGATCATGGGTGTGTTTGTGTGCTGTTGGCTACCTTTCTTCATCTTGAACTGCATTT
TGCCCTTCTGTGGGTCTGGGGAGACGCAGCCCTTCTGCATTGATTCCAACACCTTTG
ACGTGTTTGTGTGGTTTGGGTGGGCTAATTCATCCTTGAACCCCATCATTTATGCCTT
TAATGCTGATTTTCGGAAGGCATTTTCAACCCTCTTAGGATGCTACAGACTTTGCCCT
GCGACGAATAATGCCATAGAGACGGTGAGTATCAATAACAATGGGGCCGCGATGTT
TTCCAGCCATCATGAGCCACGAGGCTCCATCTCCAAGGAGTGCAATCTGGTTTACCT
GATCCCACATGCTGTGGGCTCCTCTGAGGACCTGAAAAAGGAGGAGGCAGCTGGCA
TCGCCAGACCCTTGGAGAAGCTGTCCCCAGCCCTATCGGTCATATTGGACTATGACA
CTGACGTCTCTCTGGAGAAGATCCAACCCATCACACAAAACGGTCAGCACCCAACC*

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

B. dLight1.4

Aminoacid sequence
MKTIIALSYIFCLVFADYKDDDDAMGNRSTADADGLLAGRGPAAGASAGASAGLAGQG
AAALVGGVLLIGAVLAGNSLVCVSVATERALQTPTNSFIVSLAAADLLLALLVLPLFVYS
EVQGGAWLLSPRLCDALMAMDVMLCTASIFNLCAISVDRFVAVAVPLRYNRQGGSRR
QLLLIGATWLLSAAVAAPVLCGLNDVRGRDPAVCRLEDRDYVVYSSVCSFFLPCPLMLL
LYWATFRGLQRLSSLINVYIKADKQKNGIKANFKIRHNIEDGGVQLAYHYQQNTPIGDG
PVLLPDNHYLSVQSKLSKDPNEKRDHMVLLEFVTAAGITLGMDELYKGGTGGSMVSKG
EELFTGVVPILVELDGDVNGHKFSVSGEGEGDATYGKLTLKFICTTGKLPVPWPTLVTTL
TYGVQCFSRYPDHMKQHDFFKSAMPEGYIQERTIFFKDDGNYKTRAEVKFEGDTLVNRI
ELKGIDFKEDGNILGHKLEYNNHDQLGRERKAMRVLPVVVGAFLLCWTPFFVVHITQA
LCPACSVPPRLVSAVTWLGYVNSALNPVIYTVFNAEFRNVFRKALRACC*

DNA sequence
ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGGGGAACAGATCCACTGCAGATGCAGACGGTCTTCTCGC
AGGCCGGGGACCTGCTGCCGGAGCGAGCGCTGGGGCTTCCGCAGGTCTTGCTGGGC
AGGGGGCCGCGGCCTTGGTTGGAGGCGTTTTGCTTATAGGGGCCGTTCTTGCTGGCA
ATAGTTTGGTATGTGTTTCAGTTGCGACAGAGCGCGCACTTCAGACGCCGACTAACT
CCTTTATAGTGAGTTTGGCTGCTGCAGATCTCTTGTTGGCATTGTTGGTACTCCCACT
GTTCGTTTATTCAGAAGTACAGGGTGGCGCATGGCTCCTGTCACCCAGGTTGTGTGA
TGCCTTGATGGCCATGGATGTTATGCTGTGTACCGCTTCTATCTTTAACCTTTGTGCT
ATCAGTGTTGACAGATTCGTCGCGGTCGCGGTCCCTCTGAGGTATAACCGGCAAGGA
GGCAGCAGGAGGCAACTGCTGCTGATCGGCGCAACTTGGCTCCTCTCCGCAGCAGT
GGCCGCGCCTGTTCTGTGTGGTCTCAACGACGTTCGCGGCAGAGACCCGGCTGTATG
TCGCCTCGAGGATAGAGATTATGTCGTATACTCAAGTGTGTGTTCCTTTTTTCTTCCT

TGCCCACTGATGCTTCTGTTGTATTGGGCTACCTTTAGAGGACTGCAACGCCTGAGC
TCACTCATTAACGTCTATATCAAGGCCGACAAGCAGAAGAACGGCATCAAGGCGAA
CTTCAAGATCCGCCACAACATCGAGGACGGCGGCGTGCAGCTCGCCTACCACTACC
AGCAGAACACCCCCATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTG
AGCGTGCAGTCCAAACTTTCGAAAGACCCCAACGAGAAGCGCGATCACATGGTCCT
GCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGG
GCGGTACCGGAGGGAGCATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTG
CCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGG
CGAGGGTGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCA
CCGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCCTGACCTACGGCGTGC
AGTGCTTCAGCCGCTACCCCGACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCA
TGCCCGAAGGCTACATCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTAC
AAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCT
GAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACA
ACAATCATGACCAACTGGGCCGCGAACGGAAAGCCATGCGAGTTTTGCCGGTGGTA
GTAGGGGCATTCCTTCTTTGTTGGACCCCTTTTTTTGTGGTGCATATAACGCAGGCTC
TGTGCCCGGCCTGTTCTGTCCCACCCCGCCTCGTGTCAGCTGTCACTTGGTTGGGTTA
CGTAAACTCAGCCCTCAATCCAGTTATCTATACGGTTTTCAATGCCGAGTTCAGGAA
TGTTTTTAGGAAGGCCCTTAGAGCCTGTTGT*

C. B1AR

Aminoacid sequence

MKTIIALSYIFCLVFADYKDDDDAMGAGVLVLGASEPGNLSSAAPLPDGAATAARLLVP
ASPPASLLPPASESPEPLSQQWTAGMGLLMALIVLLIVAGNVLVIVAIAKTPRLQTLTNLF
IMSLASADLVMGLLVVPFGATIVVWGRWEYGSFFCELWTSVDVLCVTASIETLCVIALD
RYLAITSPFRYQSLLTRARARGLVCTVWAISALVSFLPILMHWWRAESDEARRCYNDPK
CCDFVTNRAYAIASSVVSFYVPLCIMAFVYLRVFREAQKLSSLINVYIKADKQKNGIKAN
FKIRHNIEDGGVQLAYHYQQNTPIGDGPVLLPDNHYLSVQSKLSKDPNEKRDHMVLLEF
VTAAGITLGMDELYKGGTGGSMVSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEGD
ATYGKLTLKFICTTGKLPVPWPTLVTTLTYGVQCFSRYPDHMKQHDFFKSAMPEGYIQE
RTIFFKDDGNYKTRAEVKFEGDTLVNRIELKGIDFKEDGNILGHKLEYNNHDQLLREQK
ALKTLGIIMGVFTLCWLPFFLANVVKAFHRELVPDRLFVFFNWLGYANSAFNPIIYCRSP
DFRKAFQGLLCCARRAARRRHATHGDRPRASGCLARPGPPPSPGAASDDDDDDVVGAT
PPARLLEPWAGCNGGAAADSDSSLDEPCRPGFASESKV*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCGGCGCTGGAGTCCTCGTACTGGGGGCAAGCGAACCGGGGAA
TTTGAGCTCCGCAGCACCCCTCCCGGATGGTGCGGCAACTGCTGCTCGCCTCTTGGT
CCCAGCTAGTCCGCCAGCAAGTTTGCTCCCGCCAGCGTCTGAGAGCCCCGAGCCCCT
CTCCCAGCAGTGGACTGCAGGGATGGGCTTGCTGATGGCACTCATTGTACTGTTGAT
CGTTGCGGGGAACGTACTTGTGATAGTGGCAATAGCTAAGACTCCCAGGCTGCAAA
CACTCACCAACCTTTTTATAATGAGTCTTGCTAGTGCTGATCTCGTAATGGGATTGCT
TGTGGTGCCTTTTGGAGCCACAATTGTAGTGTGGGGACGGTGGGAATACGGCTCCTT
TTTTTGCGAACTTTGGACTTCCGTCGATGTATTGTGCGTAACTGCCTCTATCGAGACT
CTTTGTGTCATTGCTCTTGATAGATATCTGGCCATCACTAGCCCTTTTCGGTACCAGA

GCCTGCTGACGCGCGCAAGAGCCCGCGGGCTCGTATGTACCGTCTGGGCCATTAGTG
CTCTGGTTTCCTTTCTCCCAATTCTTATGCACTGGTGGAGAGCCGAGTCTGATGAGGC
ACGAAGGTGTTATAACGACCCTAAATGCTGCGATTTCGTGACTAATAGAGCTTATGC
TATTGCCAGCAGCGTGGTCAGTTTTTATGTCCCCCTGTGTATAATGGCCTTCGTCTAT
CTTCGGGTATTTCGGGAAGCTCAAAAACTGAGCTCACTCATTAACGTCTATATCAAG
GCCGACAAGCAGAAGAACGGCATCAAGGCGAACTTCAAGATCCGCCACAACATCGA
GGACGGCGGCGTGCAGCTCGCCTACCACTACCAGCAGAACACCCCCATCGGCGACG
GCCCCGTGCTGCTGCCCGACAACCACTACCTGAGCGTGCAGTCCAAACTTTCGAAAG
ACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGG
ATCACTCTCGGCATGGACGAGCTGTACAAGGGCGGTACCGGAGGGAGCATGGTGAG
CAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCG
ACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGTGAGGGCGATGCCACCTAC
GGCAAGCTGACCCTGAAGTTCATCTGCACCACCGGCAAGCTGCCCGTGCCCTGGCCC
ACCCTCGTGACCACCCTGACCTACGGCGTGCAGTGCTTCAGCCGCTACCCCGACCAC
ATGAAGCAGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACATCCAGGAGCG
CACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCG
AGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGAC
GGCAACATCCTGGGGCACAAGCTGGAGTACAACAATCATGACCAACTGCGAGAACA
GAAGGCCCTGAAAACACTTGGTATCATAATGGGCGTATTCACTCTTTGCTGGCTTCC
ATTTTTCCTTGCAAACGTGGTGAAAGCATTCCATCGAGAACTTGTCCCCGATAGACT
GTTCGTATTCTTCAATTGGCTGGGGTACGCTAATAGTGCCTTTAACCCTATCATCTAC
TGTCGCAGCCCCGACTTTCGAAAGGCCTTTCAAGGACTGCTGTGCTGTGCGAGGCGC
GCTGCGCGACGGAGACACGCCACTCATGGAGATCGCCCTCGAGCTAGCGGATGCTT
GGCCCGGCCAGGGCCCCCACCTAGTCCAGGTGCGGCGTCCGATGACGACGATGACG
ACGTGGTAGGCGCTACACCACCTGCTCGGCTCTTGGAACCGTGGGCTGGATGCAATG
GCGGTGCAGCGGCTGACTCAGATTCTTCTTTGGACGAACCATGCAGACCCGGTTTTG
CCTCTGAGTCAAAGGTT*

D. B2AR

Aminoacid sequence

MKTIIALSYIFCLVFADYKDDDDAMGQPGNGSAFLLAPNRSHAPDHDVTQQRDEVWVV
GMGIVMSLIVLAIVFGNVLVITAIAKFERLQTVTNYFITSLACADLVMGLAVVPFGAAHI
LMKMWTFGNFWCEFWTSIDVLCVTASIETLCVIAVDRYFAITSPAKYQSLLTKNKARVII
LMVWIVSGLTSFLPIQMHWYRATHQEAINCYANETCCDFFTNQAYAIASSIVSFYVPLVI
MVFVYSRVFQEAKRLSSLINVYIKADKQKNGIKANFKIRHNIEDGGVQLAYHYQQNTPI
GDGPVLLPDNHYLSVQSKLSKDPNEKRDHMVLLEFVTAAGITLGMDELYKGGTGGSM
VSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEGDATYGKLTLKFICTTGKLPVPWPT
LVTTLTYGVQCFSRYPDHMKQHDFFKSAMPEGYIQERTIFFKDDGNYKTRAEVKFEGDT
LVNRIELKGIDFKEDGNILGHKLEYNNHDQLKEHKALKTLGIIMGTFTLCWLPFFIVNIVH
VIQDNLIRKEVYILLNWIGYVNSGFNPLIYCRSPDFRIAFQELLCLRRSRYPNVRPNNGYI
YNAHSWQSENREQSKGSSGDSDHAEGNLAKEECLSADKTDSNGNCSKAQMRVL*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGGGGCAGCCAGGTAATGGCTCTGCGTTCTTGTTGGCCCCG
AACAGGAGCCATGCTCCCGACCATGACGTCACCCAACAGAGAGATGAGGTCTGGGT

AGTAGGCATGGGTATTGTCATGTCTCTGATAGTCTTGGCAATCGTGTTTGGAAATGT
GCTCGTTATCACGGCAATAGCTAAGTTTGAGCGACTTCAAACGGTAACAAATTATTT
CATAACATCTCTCGCGTGTGCAGATCTCGTAATGGGACTCGCTGTGGTCCCCTTTGG
CGCGGCCCATATCCTGATGAAGATGTGGACTTTTGGTAATTTCTGGTGTGAATTTTG
GACCAGCATAGATGTACTCTGTGTTACAGCTTCAATTGAAACTCTCTGTGTGATAGC
CGTTGATCGCTATTTCGCCATTACGTCCCCTGCCAAGTATCAATCATTGCTTACCAAG
AATAAAGCCCGAGTAATAATTCTCATGGTGTGGATCGTAAGCGGGCTCACATCTTTT
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CGCAAATGAAACTTGCTGTGACTTCTTTACAAATCAGGCTTACGCTATTGCCTCTTCA
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AGGAGGCTAAGCGGCTGAGCTCACTCATTAACGTCTATATCAAGGCCGACAAGCAG
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GCCCGACAACCACTACCTGAGCGTGCAGTCCAAACTTTCGAAAGACCCCAACGAGA
AGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCA
TGGACGAGCTGTACAAGGGCGGTACCGGAGGGAGCATGGTGAGCAAGGGCGAGGA
GCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCC
ACAAGTTCAGCGTGTCCGGCGAGGGTGAGGGCGATGCCACCTACGGCAAGCTGACC
CTGAAGTTCATCTGCACCACCGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACC
ACCCTGACCTACGGCGTGCAGTGCTTCAGCCGCTACCCCGACCACATGAAGCAGCA
CGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACATCCAGGAGCGCACCATCTTCTT
CAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACC
CTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCT
GGGGCACAAGCTGGAGTACAACAATCATGACCAACTGAAGGAGCACAAAGCGCTG
AAGACGCTTGGAATTATCATGGGGACGTTTACTCTCTGCTGGCTTCCTTTCTTCATAG
TAAACATTGTTCACGTAATCCAAGACAATCTGATTCGAAAGGAGGTGTATATTCTCC
TCAATTGGATTGGGTACGTAAACAGCGGATTTAATCCTCTTATCTATTGCCGAAGCC
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TGTGCGTCCTAACAATGGCTACATTTACAATGCTCATAGCTGGCAGTCCGAAAACAG
GGAACAGAGCAAAGGTTCCAGTGGAGACAGTGACCACGCTGAAGGCAATCTCGCTA
AGGAAGAGTGCCTCAGCGCCGATAAAACTGATTCAAATGGGAATTGCAGCAAAGCT
CAAATGCGTGTTCTG*

E. DRD2

Aminoacid sequence
MKTIIALSYIFCLVFADYKDDDDAMDPLNLSWYDDDLERQNWSRPFNGSDGKADRPHY
NYYATLLTLLIAVIVFGNVLVCMAVSREKALQTTTNYLIVSLAVADLLVATLVMPWVV
YLEVVGEWKFSRIHCDIFVTLDVMMCTASILNLCAISIDRYTAVAMPMLYNTRYSSKRR
VTVMISIVWVLSFTISCPLLFGLNNADQNECIIANPAFVVYSSIVSFYVPFIVTLLVYIKIYI
VLRRRRKLSSLINVYIKADKQKNGIKANFKIRHNIEDGGVQLAYHYQQNTPIGDGPVLLP
DNHYLSVQSKLSKDPNEKRDHMVLLEFVTAAGITLGMDELYKGGTGGSMVSKGEELFT
GVVPILVELDGDVNGHKFSVSGEGEGDATYGKLTLKFICTTGKLPVPWPTLVTTLTYGV
QCFSRYPDHMKQHDFFKSAMPEGYIQERTIFFKDDGNYKTRAEVKFEGDTLVNRIELKG
IDFKEDGNILGHKLEYNNHDQLKEKKATQMLAIVLGVFIICWLPFFITHILNIHCDCNIPPV
LYSAFTWLGYVNSAVNPIIYTTFNIEFRKAFLKILHC*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGGACCCCCTTAACCTCTCATGGTACGACGATGATCTTGAG
AGGCAGAACTGGTCCCGACCATTCAATGGGTCTGATGGTAAGGCTGACCGGCCTCAT
TACAATTATTATGCGACCCTGCTTACTCTTCTTATCGCTGTGATCGTATTCGGCAACG
TCTTGGTTTGCATGGCAGTCTCTAGGGAAAAAGCGCTCCAGACGACAACTAATTACT
TGATTGTGAGTCTGGCTGTAGCTGACTTGCTTGTGGCGACCCTGGTGATGCCATGGG
TCGTATACTTGGAAGTCGTTGGCGAGTGGAAGTTTTCTAGGATTCATTGCGACATAT
TTGTAACTCTGGACGTAATGATGTGTACTGCTTCCATTTTGAACCTCTGCGCTATATC
CATTGACAGGTACACGGCGGTTGCTATGCCGATGCTTTATAATACCCGGTATTCAAG
CAAAAGGCGAGTAACTGTGATGATAAGCATTGTATGGGTGCTCAGTTTCACAATTAG
CTGCCCTCTGCTCTTCGGCCTTAACAACGCGGATCAAAATGAATGCATCATCGCAAA
CCCGGCTTTTGTGGTTTATAGCAGCATTGTTAGCTTCTATGTGCCATTCATAGTTACG
CTCCTTGTTTATATAAAAATTTATATCGTGCTTAGGCGCCGCCGAAAACTGAGCTCA
CTCATTAACGTCTATATCAAGGCCGACAAGCAGAAGAACGGCATCAAGGCGAACTT
CAAGATCCGCCACAACATCGAGGACGGCGGCGTGCAGCTCGCCTACCACTACCAGC
AGAACACCCCCATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTGAGC
GTGCAGTCCAAACTTTCGAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCT
GGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGGGCG
GTACCGGAGGGAGCATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCC
ATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGA
GGGTGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACCG
GCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCCTGACCTACGGCGTGCAGT
GCTTCAGCCGCTACCCCGACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCATGC
CCGAAGGCTACATCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAG
ACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAA
GGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACA
ATCATGACCAACTGAAGGAAAAGAAGGCCACGCAAATGTTGGCAATCGTGCTCGGC
GTGTTCATAATCTGCTGGCTTCCATTTTTTATAACGCATATATTGAACATACACTGTG
ATTGCAATATTCCACCAGTCCTGTATAGTGCGTTTACGTGGTTGGGTTATGTGAATTC
TGCGGTTAACCCGATCATTTACACCACGTTCAACATAGAATTCCGAAAGGCATTCCT
CAAAATATTGCATTGT*

F. A2AR

Aminoacid sequence

MKTIIALSYIFCLVFADYKDDDDAMGSLQPDAGNASWNGTEAPGGGARATPYSLQVTL
TLVCLAGLLMLLTVFGNVLVIIAVFTSRALKAPQNLFLVSLASADILVATLVIPFSLANEV
MGYWYFGKAWCEIYLALDVLFCTSSIVHLCAISLDRYWSITQAAEYNLKRTPRRIKAIIIT
VWVISAVISFPPLISIEKKGGGGGPQPAEPRCEINDQKWYVISSCIGSFFAPCLIMILVYVRI
YQIAKRLSSLINVYIKADKQKNGIKANFKIRHNIEDGGVQLAYHYQQNTPIGDGPVLLPD
NHYLSVQSKLSKDPNEKRDHMVLLEFVTAAGITLGMDELYKGGTGGSMVSKGEELFTG
VVPILVELDGDVNGHKFSVSGEGEGDATYGKLTLKFICTTGKLPVPWPTLVTTLTYGVQ
CFSRYPDHMKQHDFFKSAMPEGYIQERTIFFKDDGNYKTRAEVKFEGDTLVNRIELKGI
DFKEDGNILGHKLEYNNHDQLREKRFTFVLAVVIGVFVVCWFPFFFTYTLTAVGCSVPR
TLFKFFFWFGYCNSSLNPVIYTIFNHDFRRAFKKILCRGDRKRIV*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGGGCTCCCTCCAGCCGGACGCAGGCAATGCGTCATGGAA
TGGGACAGAAGCCCCTGGCGGAGGCGCAAGGGCAACGCCATATAGTCTTCAAGTAA
CCCTGACTCTTGTCTGCCTCGCAGGTCTCCTGATGCTCCTGACGGTCTTTGGCAATGT
GCTTGTGATAATAGCTGTATTTACATCCAGGGCACTCAAGGCGCCACAAAACTTGTT
TTTGGTTTCACTGGCGTCCGCCGACATTCTTGTGGCTACGCTCGTCATCCCCTTCTCA
CTCGCTAATGAAGTGATGGGTTATTGGTACTTTGGCAAGGCGTGGTGTGAGATATAT
CTTGCACTCGATGTCTTGTTCTGCACGAGCAGTATAGTTCATCTCTGCGCTATCTCAT
TGGATAGATATTGGTCAATAACGCAAGCTgcTGAGTATAACCTGAAGAGAACCCCTA
GACGGATCAAGGCCATTATTATTACCGTTTGGGTCATATCAGCGGTCATCTCATTCC
CTCCCTTGATAAGCATTGAGAAAAAAGGTGGAGGCGGAGGACCGCAACCTGCTGAG
CCCAGATGTGAGATAAACGACCAAAAATGGTACGTTATATCAAGTTGTATCGGGTC
ATTCTTTGCGCCATGCTTGATTATGATTCTGGTATATGTTAGAATCTATCAGATAGCG
AAACGGCTGAGCTCACTCATTAACGTCTATATCAAGGCCGACAAGCAGAAGAACGG
CATCAAGGCGAACTTCAAGATCCGCCACAACATCGAGGACGGCGGCGTGCAGCTCG
CCTACCACTACCAGCAGAACACCCCCATCGGCGACGGCCCCGTGCTGCTGCCCGAC
AACCACTACCTGAGCGTGCAGTCCAAACTTTCGAAAGACCCCAACGAGAAGCGCGA
TCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGA
GCTGTACAAGGGCGGTACCGGAGGGAGCATGGTGAGCAAGGGCGAGGAGCTGTTCA
CCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTC
AGCGTGTCCGGCGAGGGTGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTT
CATCTGCACCACCGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCCTGAC
CTACGGCGTGCAGTGCTTCAGCCGCTACCCCGACCACATGAAGCAGCACGACTTCTT
CAAGTCCGCCATGCCCGAAGGCTACATCCAGGAGCGCACCATCTTCTTCAAGGACG
ACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAAC
CGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAA
GCTGGAGTACAACAATCATGACCAACTGAGGGAGAAACGATTTACGTTCGTTCTCGC
CGTAGTCATCGGTGTTTTCGTAGTTTGCTGGTTCCCTTTCTTTTTTACATACACATTGA
CTGCCGTCGGCTGTTCTGTACCCCGAACACTTTTTAAATTTTTTTTCTGGTTCGGGTA
CTGCAACTCTAGCCTTAATCCGGTGATATACACAATTTTTAATCATGATTTTCGGCGG
GCTTTTAAGAAAATTCTCTGTCGGGGGGACCGAAAACGCATAGTG*

G. KOR

Aminoacid sequence

MKTIIALSYIFCLVFADYKDDDDAMDSPIQIFRGEPGPTCAPSACLPPNSSAWFPGWAEP
DSNGSAGSEDAQLEPAHISPAIPVIITAVYSVVFVVGLVGNSLVMFVIIRYTKMKTATNIY
IFNLALADALVTTTMPFQSTVYLMNSWPFGDVLCKIVISIDYYNMFTSIFTLTMMSVDRY
IAVCHPVKALDFRTPLKAKIINICIWLLSSSVGISAIVLGGTKVREDVDVIECSLQFPDDDY
SWWDLFMKICVFIFAFVIPVLIIIVCYTLMILRLKSLSSLINVYIKADKQKNGIKANFKIRH
NIEDGGVQLAYHYQQNTPIGDGPVLLPDNHYLSVQSKLSKDPNEKRDHMVLLEFVTAA
GITLGMDELYKGGTGGSMVSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEGDATYG
KLTLKFICTTGKLPVPWPTLVTTLTYGVQCFSRYPDHMKQHDFFKSAMPEGYIQERTIFF
KDDGNYKTRAEVKFEGDTLVNRIELKGIDFKEDGNILGHKLEYNNHDQLREKDRNLRRI

TRLVLVVVAVFVVCWTPIHIFILVEALGSTSHSTAALAAYYFCIALGYTNAALNPILYAFL
DENFKRCFRDFCFPLKMRMERQATARVRNTVQDPAYLRDIDGMNKPV*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGGATTCACCAATTCAGATATTTAGGGGTGAACCGGGCCCT
ACCTGCGCGCCAAGTGCTTGTCTTCCTCCGAATTCAAGCGCATGGTTCCCCGGCTGG
GCAGAGCCCGACTCTAATGGGTCTGCTGGCAGTGAAGACGCGCAGCTTGAACCTGC
CCATATTAGCCCTGCTATACCCGTTATCATCACCGCCGTATATTCCGTTGTATTCGTG
GTCGGTCTGGTAGGAAATTCTCTGGTGATGTTTGTTATCATACGATATACCAAGATG
AAAACAGCTACCAACATCTACATCTTCAATCTGGCCTTGGCGGATGCGCTGGTCACT
ACTACTATGCCATTTCAATCAACTGTGTACCTTATGAACTCCTGGCCTTTTGGCGATG
TATTGTGCAAGATCGTCATCTCAATAGATTACTATAATATGTTTACTTCCATATTTAC
TCTCACTATGATGAGCGTCGATCGATATATAGCAGTATGTCACCCAGTAAAGGCTTT
GGACTTTCGAACGCCATTGAAGGCGAAAATTATAAACATTTGCATTTGGCTGCTTTC
CTCCAGCGTTGGAATCTCCGCTATTGTGTTGGGGGGGACCAAGGTCAGAGAAGACG
TAGACGTGATCGAGTGTTCCCTGCAGTTCCCGGACGATGATTATAGCTGGTGGGATC
TCTTTATGAAGATCTGTGTCTTCATCTTTGCTTTCGTAATACCTGTCCTTATCATTATT
GTATGCTATACGCTGATGATACTTAGATTGAAATCCCTGAGCTCACTCATTAACGTC
TATATCAAGGCCGACAAGCAGAAGAACGGCATCAAGGCGAACTTCAAGATCCGCCA
CAACATCGAGGACGGCGGCGTGCAGCTCGCCTACCACTACCAGCAGAACACCCCCA
TCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTGAGCGTGCAGTCCAAA
CTTTCGAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGAC
CGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGGGCGGTACCGGAGGGA
GCATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAG
CTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGTGAGGGCGA
TGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACCGGCAAGCTGCCCGT
GCCCTGGCCCACCCTCGTGACCACCCTGACCTACGGCGTGCAGTGCTTCAGCCGCTA
CCCCGACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACAT
CCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGG
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AAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACAATCATGACCAACT
GAGAGAGAAGGACCGGAATCTGCGACGCATTACCAGACTGGTCCTTGTGGTCGTGG
CAGTGTTCGTGGTCTGCTGGACTCCCATTCATATCTTTATACTGGTGGAGGCACTCGG
TTCTACGAGCCATAGCACTGCGGCACTTGCAGCTTACTACTTCTGTATTGCACTTGGG
TACACGAATGCTGCACTGAATCCTATCCTGTACGCCTTCCTTGATGAGAATTTCAAA
AGATGTTTCCGCGATTTCTGTTTCCCGTTGAAGATGCGGATGGAAAGACAAGCTACG
GCCCGCGTTAGAAATACTGTTCAAGACCCTGCATATCTTCGGGACATAGATGGTATG
AATAAACCCGTT*

H. MOR

Aminoacid sequence

MKTIIALSYIFCLVFADYKDDDDAMDSSAAPTNASNCTDALAYSSCSPAPSPGSWVNLS
HLDGNLSDPCGPNRTDLGGRDSLCPPTGSPSMITAITIMALYSIVCVVGLFGNFLVMYVI
VRYTKMKTATNIYIFNLALADALATSTLPFQSVNYLMGTWPFGTILCKIVISIDYYNMFT
SIFTLCTMSVDRYIAVCHPVKALDFRTPRNAKIINVCNWILSSAIGLPVMFMATTKYRQG

SIDCTLTFSHPTWYWENLLKICVFIFAFIMPVLIITVCYGLMILRLKSLSSLINVYIKADKQ
KNGIKANFKIRHNIEDGGVQLAYHYQQNTPIGDGPVLLPDNHYLSVQSKLSKDPNEKRD
HMVLLEFVTAAGITLGMDELYKGGTGGSMVSKGEELFTGVVPILVELDGDVNGHKFSV
SGEGEGDATYGKLTLKFICTTGKLPVPWPTLVTTLTYGVQCFSRYPDHMKQHDFFKSA
MPEGYIQERTIFFKDDGNYKTRAEVKFEGDTLVNRIELKGIDFKEDGNILGHKLEYNNHD
QLKEKDRNLRRITRMVLVVVAVFIVCWTPIHIYVIIKALVTIPETTFQTVSWHFCIALGYT
NSCLNPVLYAFLDENFKRCFREFCIPTSSNIEQQNSTRIRQNTRDHPSTANTVDRTNHQLE
NLEAETAPLP*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGGATAGTAGCGCTGCGCCTACCAACGCGTCAAACTGCAC
CGATGCTCTTGCGTACTCCTCCTGCTCCCCGGCACCTAGTCCCGGTTCTTGGGTCAAT
TTGTCCCATCTGGACGGAAACCTCTCTGATCCCTGTGGGCCTAACAGGACGGACCTC
GGTGGGAGGGACTCCCTTTGCCCGCCGACCGGATCTCCGTCCATGATAACGGCCATT
ACAATTATGGCGTTGTATAGCATCGTATGCGTTGTAGGTCTTTTTGGGAATTTCCTGG
TGATGTACGTCATCGTCAGGTACACAAAGATGAAAACAGCTACTAACATTTATATAT
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ATTATCTCATGGGTACTTGGCCTTTCGGAACAATACTGTGTAAAATTGTTATAAGCA
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ACACCCAACTTGGTACTGGGAAAATCTGCTCAAGATCTGCGTCTTCATTTTTGCTTTT
ATCATGCCAGTATTGATAATCACGGTCTGTTACGGGTTGATGATTTTGCGGCTCAAA
TCACTGAGCTCACTCATTAACGTCTATATCAAGGCCGACAAGCAGAAGAACGGCAT
CAAGGCGAACTTCAAGATCCGCCACAACATCGAGGACGGCGGCGTGCAGCTCGCCT
ACCACTACCAGCAGAACACCCCCATCGGCGACGGCCCCGTGCTGCTGCCCGACAAC
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CATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCT
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GGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAG
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TCTGCACCACCGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCCTGACCT
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AGTCCGCCATGCCCGAAGGCTACATCCAGGAGCGCACCATCTTCTTCAAGGACGAC
GGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCG
CATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGC
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TCTTGGCATTTCTGTATTGCATTGGGGTACACTAATTCCTGCCTTAATCCTGTATTGT
ACGCCTTTCTGGATGAAAACTTTAAAAGATGTTTCCGCGAGTTCTGCATACCGACCA
GCAGCAACATTGAACAACAAAACTCCACGCGCATACGGCAAAATACTAGGGATCAC
CCGTCCACTGCGAATACTGTAGACCGAACGAACCATCAGTTGGAGAATTTGGAAGC
GGAAACTGCTCCTCTGCCA*

I. 5HT2A

Aminoacid sequence

MKTIIALSYIFCLVFADYKDDDDAMDILCEENTSLSSTTNSLMQLNDDTRLYSNDFNSGE
ANTSDAFNWTVDSENRTNLSCEGCLSPSCLSLLHLQEKNWSALLTAVVIILTIAGNILVIM
AVSLEKKLQNATNYFLMSLAIADMLLGFLVMPVSMLTILYGYRWPLPSKLCAVWIYLD
VLFSTASIMHLCAISLDRYVAIQNPIHHSRFNSRTKAFLKIIAVWTISVGISMPIPVFGLQD
DSKVFKEGSCLLADDNFVLIGSFVSFFIPLTIMVITYFLTIKSLQKLSSLINVYIKADKQKN
GIKANFKIRHNIEDGGVQLAYHYQQNTPIGDGPVLLPDNHYLSVQSKLSKDPNEKRDHM
VLLEFVTAAGITLGMDELYKGGTGGSMVSKGEELFTGVVPILVELDGDVNGHKFSVSGE
GEGDATYGKLTLKFICTTGKLPVPWPTLVTTLTYGVQCFSRYPDHMKQHDFFKSAMPE
GYIQERTIFFKDDGNYKTRAEVKFEGDTLVNRIELKGIDFKEDGNILGHKLEYNNHDQLN
EQKACKVLGIVFFLFVVMWCPFFITNIMAVICKESCNEDVIGALLNVFVWIGYLSSAVNP
LVYTLFNKTYRSAFSRYIQCQYKENKKPLQLILVNTIPALAYKSSQLQMGQKKNSKQDA
KTTDNDCSMVALGKQHSEEASKDNSDGVNEKVSCV*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGGACATACTTTGTGAAGAGAATACTTCACTCTCTTCTACT
ACTAACTCTCTTATGCAACTGAACGATGATACCCGATTGTACTCAAACGACTTCAAT
TCCGGCGAAGCGAACACCAGTGACGCATTCAACTGGACTGTCGATTCTGAAAACAG
AACTAATCTGTCATGCGAGGGTTGTCTTAGTCCCTCTTGTCTCAGCCTGTTGCACCTC
CAGGAAAAGAACTGGTCAGCACTGCTCACTGCGGTAGTGATAATACTCACTATTGCT
GGCAATATTCTCGTAATTATGGCAGTCTCCTTGGAGAAGAAACTCCAAAACGCCACA
AATTATTTTCTTATGAGCCTTGCCATCGCAGATATGCTCTTGGGATTTTTGGTGATGC
CTGTGAGTATGCTCACGATACTGTATGGATATCGCTGGCCTCTGCCGTCTAAaCTTTG
CGCTGTGTGGATTTACTTGGATGTCCTTTTTTCAACTGCGAGTATTATGCATCTTTGC
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GGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTA
CAAGGGCGGTACCGGAGGGAGCATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGG
GTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGT
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CGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGG
AGTACAACAATCATGACCAACTGAATGAGCAAAAGGCTTGTAAGGTACTCGGCATA

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TGATCTGCAAGGAATCATGCAATGAGGATGTGATCGGGGCACTTCTGAACGTTTTCG
TGTGGATAGGGTATCTGTCAAGTGCTGTGAACCCACTGGTCTATACCTTGTTTAATA
AGACATACCGcTCAGCCTTTTCACGGTATATTCAATGTCAGTATAAGGAAAACAAGA
AACCTCTGCAACTTATTCTTGTGAACACTATCCCTGCCCTGGCTTATAAGTCATCACA
GTTGCAGATGGGCCAGAAAAAAAATTCCAAGCAGGACGCGAAGACAACAGACAAC
GATTGTAGTATGGTTGCCCTCGGCAAGCAGCACAGTGAAGAAGCGAGCAAAGACAA
TAGTGATGGCGTAAACGAAAAAGTCAGTTGTGTA*

J. MT2

Aminoacid sequence

MKTIIALSYIFCLVFADYKDDDDAMSENGSFANCCEAGGWAVRPGWSGAGSARPSRTP
RPPWVAPALSAVLIVTTAVDVVGNLLVILSVLRNRKLRNAGNLFLVSLALADLVVAFYP
YPLILVAIFYDGWALGEEHCKASAFVMGLSVIGSVFNITAIAINRYCYICHSMAYHRIYR
RWHTPLHICLIWLLTVVALLPNFFVGSLEYDPRIYSCTFIQTASTQYTAAVVVIHFLLPIA
VVSFCYLRIWVLVLQARRLSSLINVYIKADKQKNGIKANFKIRHNIEDGGVQLAYHYQQ
NTPIGDGPVLLPDNHYLSVQSKLSKDPNEKRDHMVLLEFVTAAGITLGMDELYKGGTG
GSMVSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEGDATYGKLTLKFICTTGKLPVP
WPTLVTTLTYGVQCFSRYPDHMKQHDFFKSAMPEGYIQERTIFFKDDGNYKTRAEVKF
EGDTLVNRIELKGIDFKEDGNILGHKLEYNNHDQLKPSDLRSFLTMFVVFVIFAICWAPL
NCIGLAVAINPQEMAPQIPEGLFVTSYLLAYFNSCLNAIVYGLLNQNFRREYKRILLALW
NPRHCIQDASKGSHAEGLQSPAPPIIGVQHQADAL*

DNA sequence

ATGAAGACGATCATCGCCCTGAGCTACATCTTCTGCCTGGTGTTCGCCGACTACAAG
GACGATGATGACGCCATGTCAGAAAACGGATCTTTCGCGAATTGTTGCGAAGCAGG
GGGATGGGCCGTGAGGCCAGGCTGGTCTGGAGCAGGTTCTGCCAGGCCCTCAAGGA
CGCCGAGACCTCCTTGGGTAGCTCCTGCTCTGTCCGCTGTGCTGATAGTGACCACTG
CTGTGGACGTCGTAGGCAATCTTCTCGTGATCTTGTCTGTCCTGCGAAATCGGAAAC
TTAGGAACGCCGGAAATTTGTTCCTGGTCTCATTGGCGCTCGCAGACCTGGTAGTTG
CCTTCTATCCGTACCCCCTCATTTTGGTGGCTATCTTTTACGACGGCTGGGCCCTGGG
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ATTTAATATCACGGCCATAGCCATCAACAGGTACTGCTACATATGCCACAGTATGGC
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CTTGACGGTCGTCGCATTGCTCCCAAATTTCTTCGTAGGATCATTGGAGTACGACCC
AAGGATCTACTCCTGCACGTTTATTCAGACTGCGTCAACCCAATATACCGCAGCCGT
GGTGGTAATACACTTCCTCCTGCCTATAGCCGTCGTTAGCTTTTGCTATCTGAGGATT
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ACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGG
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CAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCG
ACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGTGAGGGCGATGCCACCTAC
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ACCCTCGTGACCACCCTGACCTACGGCGTGCAGTGCTTCAGCCGCTACCCCGACCAC
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CACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCG
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ATTTTGCTGGCTCTCTGGAATCCGCGCCATTGCATCCAGGATGCGTCTAAAGGCTCA
CACGCAGAAGGACTCCAGTCTCCAGCGCCTCCAATTATAGGCGTCCAACATCAAGC
GGATGCGCTT*