

Product datasheet for **SC116997**

beta 2 Adrenergic Receptor (ADRB2) (NM_000024) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	beta 2 Adrenergic Receptor (ADRB2) (NM_000024) Human Untagged Clone
Tag:	Tag Free
Symbol:	beta 2 Adrenergic Receptor
Synonyms:	ADRB2R; ADRBR; B2AR; BAR; BETA2AR
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >SC116997 representing NM_000024.
 Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCGGCCGCGAATTCGGCAGGAGGCAGGCACCGCGAGCCCCTAGCACCCGACAAGCTGAGTGTGCAGGAC
GAGTCCCCACACCCACACCACAGCCGCTGAATGAGGCTTCCAGGCGTCCGCTCGCGGCCCGCAGAG
CCCCCGGTGGTCCGCTGCTGAGGCGCCCCAGCCAGTGCCTTACCTGCCAGACTGCGGCCATGG
GGCAACCCGGGAACGGCAGCGCCTTCTTGCTGGCACCCCAATGGAAGCCATGCGCCGGACCACGACGTCA
CGCAGCAAAGGGACGAGGTGTGGGTGGTGGGCATGGGCATCGTCATGTCTCTCATCGTCCCTGGCCATCG
TGTTTGGCAATGTGCTGGTCATCACAGCCATTGCCAAGTTCGAGCGTCTGCAGACGGTCCACAACTACT
TCATCACTTCACTGGCTGTGCTGATCTGGTCATGGGCCTAGCAGTGGTGCCCTTTGGGCGCCCCATA
TTCTTATGAAAATGTGGACTTTTGGCAACTTCTGGTGGGAGTTTTGGACTTCCATTGATGTGCTGTGCG
TCACGGCCAGCATTGAGACCCTGTGCGTATCGCAGTGGATCGCTACTTTGCCATTACTTCACTTTCA
AGTACCAGAGCCTGTGACCAAGAATAAGGCCCGGTGATCATTCTGATGGTGTGGATTGTGCAGGCC
TTACCTCCTTCTGCCATTGAGTGCATGCTGTTACAGGGCCACCCACCAGGAAGCCATCAACTGCTATG
CCAATGAGACCTGCTGTGACTTCTTACGAACCAAGCCTATGCCATTGCCTCTTCCATCGTGTCTTCT
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AGATTGACAAATCTGAGGGCCGCTTCCATGTCCAGAACCTTAGCCAGGTGGAGCAGGATGGGCGGACGG
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TCATGGGCACTTCCACCTCTGCTGGTGGCCCTTCTTATCGTTAACATTGTGCATGTGATCCAGGATA
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AGGAGAAAAGAAAATAAACTGCTGTGTGAAGACCTCCAGGCACGGAAGACTTTTGTGGGCCATCAAGGTA
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TAACTTAGAATAAAATTTGATAAATTTGATAGAGATATGCAGAAGGAAGGCATCCTTCTGCCTTTTTT
ATTTTTTAAAGCTGTAAGGAGAGAGAACTTATTTGAGTGATTATTTGTTATTTGTACAGTTTCAAGTTC
CTCTTTCATGGAATTTGTAAGTTTATGTCTAAAGAGCTTTAGTCTAGAGGACCTGAGTCTGCTATAT
TTTCATGACTTTTCCATGTATCTACCTCACTATTCAAGTATTAGGGTAAATATTTGCTGCTGGTAATT
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CTGTGAACATGGACTCTTCCCCACTCCTTATTTGCTCACACGGGGTATTTTAGCAGGGATTTGAG
GAGCAGCTTCAAGTTGTTTTCCCGAGCAAAGTCTAAAGTTTACAGTAAATAAATTGTTTGACCATGCAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACTCGACTCTAGATTGCGGCCG
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_000024 unedited

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GCGGTCGAGATTTGTATACGACTCATATAGGGCGGCCGGAATTCGCACGAGGCAGGCAC
CGCGAGCCCCTAGCACCCGACAAGCTGAGTGTGCAGGACGAGTCCCACACACCCACAC
CACAGCCGCTGAATGAGGCTTCCAGGCGTCCGCTCGCGGCCCGCAGAGCCCCGCGTGG
TCCGCCTGCTGAGGCGCCCCAGCCAGTGCCTTACCTGCCAGACTGCGCGCCATGGGGC
AACCCGGGAACGGCAGCGCCTTCTTGTGGCACCCCAATGGAAGCCATGCGCCGGACCAG
ACGTCACGACGAAAGGGACGAGGTGTGGGTGGTGGGCATGGGCATCGTCATGTCTCTCA
TCGTCCTGGCCATCGTGTGGCAATGTGCTGGTCATCACAGCCATTGCCAAGTTCGAGC
GTCTGCAGACGGTACCAACTACTTCACTTCACTTCACTGGCCTGTGCTGATCTGGTCATGG
GCCTAGCAGTGGTCCCTTTGGGCGGCCCATATTCTTATGAAAATGTGGACTTTTGGCA
ACTTCTGGTGCAGTTTTGGACTTCCATTGATGTGCTGTGCGTACGGCCAGCATTGAGA
CCCTGTGCGTGTGCGAGTGGATCGCTACTTTGCCATTACTTCACTTTCAAGTACCAGA
GCCTGCTGACCAAGAATAAGGCCCGGTGATCATTCTGATGGTGTGGATTGTGTCAGGCC
TTACCTCCTTCTTGCCATTGAGTGCATGCTGTTACAGGGCCACCCACCAGGAAGCCATCA
ACTGCTATGCCAATGAGACCTGCTGTGACTTCTTACGAACCAAGCCTATGCCATTGCCT
CTTCCATCGTGTCTTCTACGTTCCCTGGTGTGATGGTGTGCTGCTACTCCAGGGT
C
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3' Read Nucleotide Sequence:	>OriGene 3' read for NM_000024 unedited ACCTTCAGACATCTTATTACTGTAACTTTATACTTTGCTCGGGAAACAACCTGAAGCTGC TCCTCAAATCCCTGCCTAAAATACCCCGTGTGAGCAAATAAGAGGAGTGGGGGAAGAGTC CATGTTACAGCTGAAAGGTCCGAGATACTCAAATCCTCAAGTCCAAGGGTGTAGGAAG GAAAATCCTTCAGATACAAATTACCAGCAGCAATATATTACCCTAATACTTGAATAG TGAGGTAGATACATGAAAAAGTCATGAAAATATAGCAGACTCAGGTCCTCTAGGACTAAA GCTCTTTAGACATAAACTTACAAATCCATGCAAAGAGGAACTGAACTGTACAAAATAACA AATAATCACTCAAATAAGTTTTCTCTTTTTACAGCTTAAAAAATAAAAAAGGCAGAA GGATGCCCTTCCTTCTGCATATCTCTATACAATTTTACAATTTTATTCTAAGTTTATTAC CCTCAAGTTAAATAGTCTGTTTGTGTTCTGTTGGGCGGGGGGGGTCTTTAAAAGTAGA AAAAGTCTTTATAGCAGTGAGTCATTTGTACTACAATTCCTCCCTTGTGAATCAATGTT ATCGCTAGGCACAGTACCTTGATGGCCACAAAGTCTCCGTGCCTGGGAAGTCTTCACA CAGCAGTTTATTTCTTCTCTGTTCCACGTGATATCCACTCTGCTCCCTGTGTTGCC GTTGCTGGAGTAGCCATTGCCATANGCCTTCAAAGAGACCTGCGCAGCACAGAAGCTCCT GGAAGGCATCCTNGAATCTGGGCTCCNGCAGTAGATAAGGGGATTGAAACCAGAATTGAC ATAGCCTATCCAATTGAGAAGATGTAACTTCCNTACGATGANGTATCCTGGATCAATGC ACATGTAACGATGAAGAAGGCAA
Restriction Sites:	NotI-NotI
ACCN:	NM_000024
Insert Size:	2066 bp
OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery. The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq:	NM_000024.3
RefSeq Size:	2015 bp
RefSeq ORF:	2066 bp
Locus ID:	154
UniProt ID:	P07550
Cytogenetics:	5q32
Domains:	7tm_1
Protein Families:	Druggable Genome, GPCR, Transmembrane
Protein Pathways:	Calcium signaling pathway, Endocytosis, Neuroactive ligand-receptor interaction
MW:	76.5 kDa

Gene Summary: This gene encodes beta-2-adrenergic receptor which is a member of the G protein-coupled receptor superfamily. This receptor is directly associated with one of its ultimate effectors, the class C L-type calcium channel Ca(V)1.2. This receptor-channel complex also contains a G protein, an adenylyl cyclase, cAMP-dependent kinase, and the counterbalancing phosphatase, PP2A. The assembly of the signaling complex provides a mechanism that ensures specific and rapid signaling by this G protein-coupled receptor. This receptor is also a transcription regulator of the alpha-synuclein gene, and together, both genes are believed to be associated with risk of Parkinson's Disease. This gene is intronless. Different polymorphic forms, point mutations, and/or downregulation of this gene are associated with nocturnal asthma, obesity, type 2 diabetes and cardiovascular disease. [provided by RefSeq, Oct 2019]