ADRB2 Human Protein

PRODUCT OVERVIEW

Product Name	ADRB2, Protein
Full Product Name	Human ADRB2-Strep full length protein-synthetic nanodisc
Product Gene Name	ADRB2 protein
Product Synonym Names	ADRB2R; ADRBR; B2AR; BAR; BETA2AR
Host	HEK293
Form/Format	Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5%-8% trehalose is added as protectants before lyophilization. Please see Certificate of Analysis for specific instructions. Do not use solvents with pH lower
Preparation and Storage	Store at -20 degree C to -80 degree C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80 degree C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.
Molecular Weight	46,459 Da
Chromosome Location	Chromosome: 5; NC_000005.9 (148206156..148208197). Location: 5q31-q32
OMIM	109690
3D Structure	ModBase 3D Structure for P07550
Tag	C-DYKDDDDK&Strep
Product Categories/Family for ADRB2 protein	Calcium regulation in cardiac cells; GPCRDB Class A Rhodopsin-like; GPCRDB Other; Monoamine GPCRs; Metabolic and Obesity; G-Protein Coupled Receptors Signaling Pathway; cAMP and Ca2 Signaling Pathway
Related Product Information for ADRB2 protein	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]
Other Notes	Small volumes of ADRB2 protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ADRB2 purchase	MBS1883350 is a protein targeting ADRB2. Also known as Human ADRB2-Strep full length protein-synthetic nanodisc. Host: HEK293.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ADRB2. It may not necessarily be applicable to this product.

NCBI GI #	4501969
NCBI GeneID	154
NCBI Accession #	NP_000015.1
UniProt Primary Accession #	P07550

UniProt Secondary Accession #	O14823; O14824; O14825; O14826; Q4JG18; Q53GA6; Q6GMT4; Q6P4D8; Q8NEQ9; B0LPE4; B2R7X2
UniProt Related Accession #	P07550
GenBank Nucleotide #	NM_000024.5
NCBI Official Full Name	beta-2 adrenergic receptor
NCBI Official Synonym Full Names	adrenoceptor beta 2, surface
NCBI Official Symbol	ADRB2
NCBI Official Synonym Symbols	BAR; B2AR; ADRBR; ADRB2R; BETA2AR
UniProt Protein Name	Beta-2 adrenergic receptor
UniProt Synonym Protein Names	Beta-2 adrenoreceptor
Protein Family	Beta-2 adrenergic receptor
UniProt Gene Name	ADRB2
UniProt Synonym Gene Names	ADRB2R; B2AR; Beta-2 adrenoceptor
UniProt Entry Name	ADRB2_HUMAN
NCBI Protein Information	beta-2 adrenergic receptor; beta-2 adrenoceptor; beta-2 adrenoreceptor; catecholamine receptor; adrenergic, beta-2-, receptor, surface
NCBI Summary for ADRB2	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 gene is intronless. Different polymorphic forms, point mutations, and/or downregulation of this gene are associated with nocturnal asthma, obesity and type 2 diabetes. [provided by RefSeq, Jul 2008]
UniProt Comments for ADRB2	ADRB2: Beta-adrenergic receptors mediate the catecholamine- induced activation of adenylate cyclase through the action of G proteins. The beta-2-adrenergic receptor binds epinephrine with an approximately 30-fold greater affinity than it does norepinephrine. Belongs to the G-protein coupled receptor 1 family. Adrenergic receptor subfamily. ADRB2 sub-subfamily. Protein type: Receptor, GPCR; GPCR, family 1; Membrane protein, integral; Membrane protein, multi-pass Chromosomal Location of Human Ortholog: 5q31-q32 Cellular Component: integral to plasma membrane; lysosome; apical plasma membrane; plasma membrane; nucleus; endosome; receptor complex Molecular Function: protein binding; protein homodimerization activity; potassium channel regulator activity; beta2-adrenergic receptor activity; norepinephrine binding; adenylate cyclase binding Biological Process: arrestin mediated desensitization of G-protein coupled receptor protein signaling pathway; receptor-mediated endocytosis; diet induced thermogenesis; negative regulation of multicellular organism growth; transmembrane receptor protein tyrosine kinase activation (dimerization); regulation of vasodilation; adenylate cyclase activation; regulation of sodium ion transport; positive regulation of bone mineralization; G-protein signaling, adenylate cyclase activating pathway; G-protein signaling, coupled to cAMP nucleotide second messenger; cell surface receptor linked signal transduction; positive regulation of MAPKKK cascade; positive regulation of protein ubiquitination; heat generation; negative regulation of smooth muscle contraction; brown fat cell differentiation; endosome to lysosome transport; positive regulation of transcription from RNA polymerase II promoter; response to cold; bone resorption; norepinephrine-epinephrine vasodilation involved in regulation of systemic arterial blood pressure Disease: Obesity; Asthma, Susceptibility To
Research Articles on ADRB2	**1.** genotypes or haplotypes at positions 16/27 do not influence bronchial hyperresponsiveness in methacholine-responsive patients with asthma

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