5HT2C Human Protein

PRODUCT OVERVIEW

Product Name	5HT2C, Protein
Full Product Name	Human 5HT2C-Strep full length protein-synthetic nanodisc
Product Gene Name	5HT2C protein
Product Synonym Names	5-HT1C; 5-HT2C; 5-HTR2C; 5HTR2C; HTR1C
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	51,821 Da
Chromosome Location	Chromosome: X; NC_000023.10 (113818551..114144624). Location: Xq24
OMIM	312861
3D Structure	ModBase 3D Structure for P28335
Tag	C-DYKDDDDK&Strep
Product Categories/Family for 5HT2C protein	GPCRDB Class A Rhodopsin-like; Monoamine GPCRs; Metabolic and Obesity
Related Product Information for 5HT2C protein	This gene encodes a seven-transmembrane G-protein-coupled receptor. The encoded protein responds to signaling through the neurotransmitter serotonin. The mRNA of this gene is subject to multiple RNA editing events, where adenosine residues encoded by the genome are converted to inosines. RNA editing is predicted to alter the structure of the second intracellular loop, thereby generating alternate protein forms with decreased ability to interact with G proteins. Abnormalities in RNA editing of this gene have been detected in victims of suicide that suffer from depression. In addition, naturally-occuring variation in the promoter and 5' non-coding and coding regions of this gene may show statistically-significant association with mental illness and behavioral disorders. Alternative splicing results in multiple different transcript variants. [provided by RefSeq, Jan 2015]
Other Notes	Small volumes of 5HT2C 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 5HT2C purchase	MBS1883329 is a protein targeting 5HT2C. Also known as Human 5HT2C-Strep full length protein-synthetic nanodisc. Host: HEK293.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for 5HT2C. It may not necessarily be applicable to this product.

NCBI GI #	4504541
NCBI GeneID	3358
NCBI Accession #	NP_000859.1
UniProt Primary Accession #	P28335

UniProt Secondary Accession #	Q5VUF8; Q9NP28; B1AMW4
UniProt Related Accession #	P28335
GenBank Nucleotide #	NM_000868.2
NCBI Official Full Name	5-hydroxytryptamine receptor 2C isoform a
NCBI Official Synonym Full Names	5-hydroxytryptamine (serotonin) receptor 2C, G protein-coupled
NCBI Official Symbol	HTR2C
NCBI Official Synonym Symbols	HTR1C; 5-HT2C; 5-HTR2C
UniProt Protein Name	5-hydroxytryptamine receptor 2C
UniProt Synonym Protein Names	5-hydroxytryptamine receptor 1C; 5-HT-1C; 5-HT1C; Serotonin receptor 2C
UniProt Gene Name	HTR2C
UniProt Synonym Gene Names	HTR1C; 5-HT-2C; 5-HT2C; 5-HTR2C; 5-HT-1C; 5-HT1C
UniProt Entry Name	5HT2C_HUMAN
NCBI Protein Information	5-hydroxytryptamine receptor 2C; 5-HT1C; 5-HT-1C; 5-HT-2C; serotonin receptor 2C; serotonin 5-HT-2C receptor; 5-hydroxytryptamine receptor 1C; 5-hydroxytryptamine receptor-1c
NCBI Summary for 5HT2C	Serotonin (5-hydroxytryptamine, 5-HT), a neurotransmitter, elicits a wide array of physiological effects by binding to several receptor subtypes, including the 5-HT2 family of seven-transmembrane-spanning, G-protein-coupled receptors, which activate phospholipase C and D signaling pathways. This gene encodes the 2C subtype of serotonin receptor and its mRNA is subject to multiple RNA editing events, where genomically encoded adenosine residues are converted to inosines. RNA editing is predicted to alter amino acids within the second intracellular loop of the 5-HT2C receptor and generate receptor isoforms that differ in their ability to interact with G proteins and the activation of phospholipase C and D signaling cascades, thus modulating serotonergic neurotransmission in the central nervous system. Studies in humans have reported abnormalities in patterns of 5-HT2C editing in depressed suicide victims. Three transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Feb 2012]
UniProt Comments for 5HT2C	5-HT(2C): a G-protein coupled receptor. One of several different receptors for 5-hydroxytryptamine (serotonin), a biogenic hormone that functions as a neurotransmitter, a hormone, and a mitogen. Mediates its action by activating a phosphatidylinositol-calcium second messenger system. Protein type: Receptor, GPCR; GPCR, family 1; Membrane protein, integral; Membrane protein, multi-pass Chromosomal Location of Human Ortholog: Xq24 Cellular Component: integral to plasma membrane; plasma membrane Molecular Function: serotonin binding; serotonin receptor activity; 5-HT2 receptor activity; drug binding Biological Process: response to drug; cGMP biosynthetic process; elevation of cytosolic calcium ion concentration during G-protein signaling, coupled to IP3 second messenger (phospholipase C activating); behavioral fear response; regulation of corticotropin-releasing hormone secretion; serotonin receptor, phospholipase C activating pathway; locomotory behavior; positive regulation of phosphatidylinositol biosynthetic process; cellular calcium ion homeostasis; synaptic transmission; regulation of neurological process; release of sequestered calcium ion into cytosol; regulation of appetite; positive regulation of fat cell differentiation; feeding behavior; G-protein signaling, coupled to IP3 second messenger (phospholipase C activating); serotonin receptor signaling pathway
Research Articles on 5HT2C	**1.** used the most updated and assessed bioinformatic tools to predict which variations can give rise to biological effects among 2450 HTR2C SNPs; suggest 48 SNPs worth considering in future association studies in psychiatry, psychology and pharmacogenomics
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