

Recombinant Human 5HT2B Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50003

Size: 10ug, 100ug

Protein Name: 5-hydroxytryptamine receptor 2B (5-HT-2B) (5-HT2B) (Serotonin receptor 2B)

Synonym: HTR2B

UniProt ID: P41595

UniProt Link: www.uniprot.org/uniprotkb/P41595/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 481 AA

Molecular Weight: 54 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MALSYRVSELQSTIPEHILQSTFVHVISSNWSGLQTESIPEEMKQIVEEQGNKLHWAALLILMVIPTIG
GNTLVILAVSLEKKLQYATNYFLMSLAVADLLVGLFVMPIALLTIMFEAMWPLPLVLCPAWLFLDVLFS
TASIMHLCAISVDRIYAIAIKKPIQANQYNSRATAFIKITVWVLISIGIAIPVPIKGIETDNDPNNITCVLTKE
RFGDFMLFGSLAAFFTPLAIMIVTYFLTIALQKKAYLVKNKPPQRLTWLTVSTVFQRDETPCSSPEKV
AMLDGSRKDKALPNSGDETLMRRTSTIGKKSQVTISNEQRASKVLGIVFFLFLLMWCPFFITNITLVLC
DSCNQTTQLMLEIFVWIGYVSSGVNPLVYTLFNKTFRDAFGRYITCNYRATKSVKTLRKRSSKIYFR
NPMAENSKFFKKHGIRNGINPAMYQSPMRLRSSTIQSSSIILLDTLLLTENEGDKTEEQVSYV

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions



Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant 5-hydroxytryptamine receptor 2B (5-HT-2B) (5-HT2B) (Serotonin receptor 2B) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: G protein-coupled receptor for 5-hydroxytryptamine (serotonin) (PubMed:18703043, PubMed:23519210, PubMed:7926008, PubMed:8078486, PubMed:8143856, PubMed:8882600). Also functions as a receptor for various ergot alkaloid derivatives and psychoactive substances (PubMed:12970106, PubMed:18703043, PubMed:23519210, PubMed:23519215, PubMed:24357322, PubMed:28129538, PubMed:30127358, PubMed:36087581, PubMed:7926008, PubMed:8078486, PubMed:8143856). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of downstream effectors (PubMed:23519215, PubMed:28129538, PubMed:8078486, PubMed:8143856, PubMed:8882600). HTR2B is coupled to G(q)/G(11) G alpha proteins and activates phospholipase C-beta, releasing diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3) second messengers that modulate the activity of phosphatidylinositol 3-kinase and promote the release of Ca(2+) ions from intracellular stores, respectively (PubMed:18703043, PubMed:23519215, PubMed:28129538, PubMed:30127358, PubMed:36087581, PubMed:8078486, PubMed:8143856, PubMed:8882600). Beta-arrestin family members inhibit signaling via G proteins and mediate activation of alternative signaling pathways (PubMed:23519215, PubMed:28129538, PubMed:30127358, PubMed:36087581). Plays a role in the regulation of dopamine and 5-hydroxytryptamine release, 5-hydroxytryptamine uptake and in the regulation of extracellular dopamine and 5-hydroxytryptamine levels, and thereby affects neural activity. May play a role in the perception of pain (By similarity). Plays a role in the regulation of behavior, including impulsive behavior (PubMed:21179162). Required for normal proliferation of embryonic cardiac myocytes and normal heart development (By similarity). Protects cardiomyocytes against apoptosis (By similarity). Plays a role in the adaptation of pulmonary arteries to chronic hypoxia (By similarity). Plays a role in vasoconstriction (By similarity). Required for normal osteoblast function and proliferation, and for maintaining normal bone density (By similarity). Required for normal proliferation of the interstitial cells of Cajal in the intestine (By similarity).

Subcellular Localization: Cell membrane ; Multi-pass membrane protein . Synapse, synaptosome .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.