

Recombinant Mouse 5HT2B Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51549

Size: 10ug, 100ug

Protein Name: 5-hydroxytryptamine receptor 2B (5-HT-2B) (5-HT2B) (5-HT-2F) (NP75 protein) (Serotonin receptor 2B)

Synonym: Htr2b

UniProt ID: Q02152

UniProt Link: www.uniprot.org/uniprotkb/Q02152/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 479 AA

Molecular Weight: 54 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MASSYKMSEQSTTSEHILQKTCDHILTNRSGLTDSVAEEMKQTVEGQGHTVHWAALLILAVIPTIG
GNILVILAFALEKRLQYATNYFLMSLAADLLVGLFVMPIALLTIMFEAIWPLPLALCPAWLFDDVLFSTA
SIMHLCAISLDRIYIAIKKPIQANQCNSRATAFIKITVWVLISIGIAIPVPIKGIETDVINPHNVTCELT
KDRFGSFMVFGSLAAFFAPLTMVVITYFLTIHTLQKKAYLVKNKPPQRLTRWTVPTVFLREDSSFS
SPEKVALDGSHRDKILPNSSDETLMRRMSSVGKRSQAQTISNEQRASKALGVVFFLFLMWCPFFIT
NLTLALCDSCNQTTLLKTLLEIFVWIGYVSSGVNPLIYTLFNKTFREAFGRYITCNYRATKSVKAL
RKFSSTLCFGNSMVENSKFFTKHGIRNGINPAMYQSPMRLRSSTIQSSSIILLDTLLTENDGD
KAEQVSYI

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) (5-HT-2F) (NP75 protein) (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:1426253, PubMed:17325130). Also functions as a receptor for various ergot alkaloid derivatives and psychoactive substances (PubMed:1426253, PubMed:16940156). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of downstream effectors (By similarity). 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 (By similarity). Beta-arrestin family members inhibit signaling via G proteins and mediate activation of alternative signaling pathways (By similarity). 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 (PubMed:16940156, PubMed:18337424). May play a role in the perception of pain (PubMed:21273425). 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 (PubMed:10944220, PubMed:11413089). Protects cardiomyocytes against apoptosis (PubMed:12738797). Plays a role in the adaptation of pulmonary arteries to chronic hypoxia (PubMed:12244304). Plays a role in vasoconstriction (PubMed:12244304, PubMed:23346101). Required for normal osteoblast function and proliferation, and for maintaining normal bone density (PubMed:17846081). Required for normal proliferation of the interstitial cells of Cajal in the intestine (PubMed:19941613).

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.