

HTR2B Protein, Human (Cell-Free, His, SUMO)

Cat. No.:	HY-P702325
Synonyms:	5-hydroxytryptamine receptor 2B; Serotonin receptor 2B
Species:	Human
Source:	E. coli Cell-free
Accession:	P41595 (M1-V481)
Gene ID:	3357
Molecular Weight:	70.3 kDa

PROPERTIES

AA Sequence

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M A L S Y R V S E L   Q S T I P E H I L Q   S T F V H V I S S N   W S G L Q T E S I P
E E M K Q I V E E Q   G N K L H W A A L L   I L M V I I P T I G   G N T L V I L A V S
L E K K L Q Y A T N   Y F L M S L A V A D   L L V G L F V M P I   A L L T I M F E A M
W P L P L V L C P A   W L F L D V L F S T   A S I M H L C A I S   V D R Y I A I K K P
I Q A N Q Y N S R A   T A F I K I T V V W   L I S I G I A I P V   P I K G I E T D V D
N P N N I T C V L T   K E R F G D F M L F   G S L A A F F T P L   A I M I V T Y F L T
I H A L Q K K A Y L   V K N K P P Q R L T   W L T V S T V F Q R   D E T P C S S P E K
V A M L D G S R K D   K A L P N S G D E T   L M R R T S T I G K   K S V Q T I S N E Q
R A S K V L G I V F   F L F L L M W C P F   F I T N I T L V L C   D S C N Q T T L Q M
L L E I F V W I G Y   V S S G V N P L V Y   T L F N K T F R D A   F G R Y I T C N Y R
A T K S V K T L R K   R S S K I Y F R N P   M A E N S K F F K K   H G I R N G I N P A
M Y Q S P M R L R S   S T I Q S S S I I L   L D T L L L T E N E   G D K T E E Q V S Y
V

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Appearance

Lyophilized powder.

Formulation

Lyophilized from a 0.22 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

Endotoxin Level

<1 EU/µg, determined by LAL method.

Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.

Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping

Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

The HTR2B protein functions as a versatile G-protein coupled receptor for 5-hydroxytryptamine (serotonin) and various ergot alkaloid derivatives, as well as psychoactive substances. Upon ligand binding, HTR2B undergoes a conformational change that initiates signaling through guanine nucleotide-binding proteins (G proteins), influencing downstream effectors. Concurrently, members of the beta-arrestin family inhibit G protein signaling and activate alternative pathways. This intricate signaling cascade further involves a phosphatidylinositol-calcium second messenger system, modulating phosphatidylinositol 3-kinase activity, downstream signaling cascades, and promoting the release of Ca(2+) ions from intracellular stores. HTR2B plays a vital role in regulating dopamine and 5-hydroxytryptamine release, uptake, and extracellular levels, thereby affecting neural activity and potentially contributing to pain perception. Its involvement extends to the regulation of behavior, including impulsive behavior. Furthermore, HTR2B is indispensable for normal embryonic cardiac myocyte proliferation, heart development, protection against cardiomyocyte apoptosis, adaptation of pulmonary arteries to chronic hypoxia, vasoconstriction, normal osteoblast function and proliferation, and maintenance of bone density. It also plays a crucial role in the proliferation of interstitial cells of Cajal in the intestine, with documented interaction via its C-terminus with MPDZ.

Caution: Product has not been fully validated for medical applications. For research use only.

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