

Datasheet for ABIN3088097
Serotonin Receptor 2B Protein (HTR2B) (AA 1-481) (Strep Tag)



[Go to Product page](#)

1 Image

Overview

Quantity:	0.5 mg
Target:	Serotonin Receptor 2B (HTR2B)
Protein Characteristics:	AA 1-481
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Serotonin Receptor 2B protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MALSYRVSEL QSTIPEHILQ STFVHVISSN WSQLQTESIP EEMKQIVVEEQ GNKLHWAALL
 ILMVVIPTIG GNTLVILAVS LEKKLQYATN YFLMSLAVAD LLVGLFVMPI ALLTIMFEAM
 WPLPLVLCPA WFLDVLVST ASIMHLCAIS VDRIAIAIKK IQANQYNSRA TAFIKITVWV LISIGIAPV
 PIKGIETDVD NPNNITCVLT KERFGDFMLF GSLAAFFTPL AIMIVTYFLT IHALQKKAYL
 VKNKPPQRLT WLTVSTVFQR DETPCSSPEK VAMLDGSRKD KALPNSGDET LMRRTSTIGK
 KSVQTISNEQ RASKVLGIVF FLFLMWCPF FITNITLVLC DSCNQTTLQM LLEIFVWIGY
 VSSGVNPLVY TLFNKTRDA FGRYITCNYR ATKSVKTLRK RSSKIYFRNP MAENSKFFKK
 HGIRNGINPA MYQSPMRLRS STIQSSSIIL LDTLLLTENE GDKTEEQVSY V

Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.

Characteristics:	Key Benefits:
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- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.
- We use the Exspasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.
2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Product Details

Purity: >80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Endotoxin Level: Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

Grade: Crystallography grade

Target Details

Target: Serotonin Receptor 2B (HTR2B)

Alternative Name: HTR2B ([HTR2B Products](#))

Background: 5-hydroxytryptamine receptor 2B (5-HT-2B) (5-HT2B) (Serotonin receptor 2B),FUNCTION: G-protein coupled receptor for 5-hydroxytryptamine (serotonin) (PubMed:8143856, PubMed:7926008, PubMed:8078486, PubMed:8882600, PubMed:18703043, PubMed:23519210). Also functions as a receptor for various ergot alkaloid derivatives and psychoactive substances (PubMed:8143856, PubMed:7926008, PubMed:8078486, PubMed:12970106, PubMed:18703043, PubMed:23519210, PubMed:23519215, PubMed:24357322, PubMed:28129538). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of down-stream effectors (PubMed:8143856, PubMed:8078486, PubMed:8882600, PubMed:23519215, PubMed:28129538). Beta-arrestin family members inhibit signaling via G proteins and mediate activation of alternative signaling pathways (PubMed:23519215, PubMed:28129538). Signaling activates a phosphatidylinositol-calcium second messenger system that modulates the activity of phosphatidylinositol 3-kinase and down-stream signaling cascades and promotes the release of Ca(2+) ions from intracellular stores (PubMed:8143856, PubMed:8078486, PubMed:8882600, PubMed:18703043, PubMed:23519215, PubMed:28129538). 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. Protects cardiomyocytes against apoptosis. Plays a role in the adaptation of pulmonary arteries to chronic hypoxia. Plays a role in vasoconstriction. Required for normal osteoblast function and proliferation, and for maintaining normal bone density. Required for normal proliferation of the interstitial cells of Cajal in the intestine (By similarity). {ECO:0000250|UniProtKB:P30994, ECO:0000250|UniProtKB:Q02152, ECO:0000269|PubMed:12970106, ECO:0000269|PubMed:18703043, ECO:0000269|PubMed:21179162, ECO:0000269|PubMed:23519210,

Target Details

ECO:0000269|PubMed:23519215, ECO:0000269|PubMed:24357322,
ECO:0000269|PubMed:28129538, ECO:0000269|PubMed:7926008,
ECO:0000269|PubMed:8078486, ECO:0000269|PubMed:8143856,
ECO:0000269|PubMed:8882600}.

Molecular Weight: 54.3 kDa

UniProt: [P41595](#)

Pathways: [JAK-STAT Signaling](#), [Inositol Metabolic Process](#), [Regulation of G-Protein Coupled Receptor Protein Signaling](#), [Regulation of Carbohydrate Metabolic Process](#)

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Handling

Expiry Date: Unlimited (if stored properly)

Images



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process