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Datasheet for ABIN3133829

## HTR2A Protein (AA 1-471) (Strep Tag)

### Overview

Quantity:	1 mg
Target:	HTR2A
Protein Characteristics:	AA 1-471
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HTR2A protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

### Product Details

Sequence: MEILCEDNIS LSSIPNSLMQ LGDDSRLYPN DFNSRDANTS EASNWTIDAE NRTNLSCEGY  
LPPTCLSILH LQEKNEWSALL TTVVIILTIA GNILVIMAVS LEKKLQ NATN YFLMSLAIAD  
MLLGFLVMPV SMLTILYGYR WPLPSKLC AV WIYLDVLFST ASIMHLCAIS LDRYVAIQNP  
IHHSRFNSRT KAFLKIIAVW TISVGISMPI PVFGLQDDSK VFKEGSCLLA DDNFVLIGSF  
VAFFIPLTIM VITYFLT IKS LQKEATLCVS DLSTRAKLSS FSFLPQSSLS SEKLFQRSIH  
REPGSYAGRR TMQISNEQK ACKVLGIVFF LFVVMWCPFF ITNIMAVICK ESCNENVIGA  
LLNVFVWIGY LSSAVNPLVY TLFNKTYRSA FSRYIQCQYK ENRKPLQLIL VNTIPTLAYK  
SSQLQVGQKK NSQEDAEP TA NDCSMVTLGN QHSEEMCTDN IETVNEKVSC 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:

- 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 Expasy's protparam tool to determine the absorption coefficient of each protein.

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#### 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

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

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

## Target Details

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Target: HTR2A

Alternative Name: Htr2a ([HTR2A Products](#))

Background: 5-hydroxytryptamine receptor 2A (5-HT-2) (5-HT-2A) (Serotonin receptor 2A),FUNCTION: G-protein coupled receptor for 5-hydroxytryptamine (serotonin). Also functions as a receptor for various drugs and psychoactive substances, including mescaline, psilocybin, 1-(2,5-dimethoxy-4-iodophenyl)-2-aminopropane (DOI) and lysergic acid diethylamide (LSD). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of down-stream effectors. Beta-arrestin family members inhibit signaling via G proteins and mediate activation of alternative signaling pathways. Signaling activates phospholipase C and a phosphatidylinositol-calcium second messenger system that modulates the activity of phosphatidylinositol 3-kinase and promotes the release of  $\text{Ca}^{2+}$  ions from intracellular stores. Affects neural activity, perception, cognition and mood. Plays a role in the regulation of behavior, including responses to anxiogenic situations and psychoactive substances. Plays a role in intestinal smooth muscle contraction, and may play a role in arterial vasoconstriction. {ECO:0000269|PubMed:11960784, ECO:0000269|PubMed:16873667, ECO:0000269|PubMed:17270739, ECO:0000269|PubMed:18297054, ECO:0000269|PubMed:21645528, ECO:0000269|PubMed:23129762, ECO:0000269|PubMed:23346101}.

Molecular Weight: 52.8 kDa

UniProt: [P35363](#)

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

## Application Details

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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.

Comment: 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

## Application Details

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Restrictions:	For Research Use only
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## Handling

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Format:	Liquid
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Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
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Handling Advice:	Avoid repeated freeze-thaw cycles.
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Storage:	-80 °C
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Storage Comment:	Store at -80°C.
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Expiry Date:	Unlimited (if stored properly)
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