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Datasheet for ABIN3095014
RGS14 Protein (AA 1-566) (Strep Tag)

Overview

Quantity:	1 mg
Target:	RGS14
Protein Characteristics:	AA 1-566
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This RGS14 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence: MPGKPKHLGV PNGRMVLAVS DGELSSTTGP QQGEGERGSS LSIHSLPSGP SSPFPTEEQP
VASWALSFER LLQDPLGLAY FTEFLKKEFS AENVTFWKAC ERFQQIPASD TQQLAQEARN
IYQEFSSQA LSPVNIDRQA WLGEVLAEP RPD MFRAQQL QIFNLMKFDS YARFVKSPLY
RECLLAE AEG RPLREPGSSR LGSPDATRKK PKLPGKSLP LGVEELGQLP PVEGPGGRPL
RKSFRRELGG TANAALRRES QGSLNSSASL DLGFLAFVSS KSESHRKS LG STEGESES RP
GKYCCVYLPD GTASLALARP GLTIRDMLAG ICEKRGLSLP DIKVVYLVGNE QALVLDQDCT
VLADQEVRL E NRITFELELT ALERVV RISA KPTKRLQEAL QPILEKHGLS PLEVVLHRPG
EKQPLDLGKL VSSVAAQRLV LDTLPGVKIS KARDKSPCRS QGCPPRTQDK ATHPPPASPS
SLVKVPSSAT GKRQTC DIEG LV ELLNRVQS SGAHDQRGLL RKEDLVLP EF LQLPAQGPSS
EETPPQTKSA AQPIGGSLNS TTDSAL

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.

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.

Product Details

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.

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)

Target Details

Target: RGS14

Alternative Name: RGS14 ([RGS14 Products](#))

Background: Regulator of G-protein signaling 14 (RGS14),FUNCTION: Regulates G protein-coupled receptor signaling cascades. Inhibits signal transduction by increasing the GTPase activity of G protein alpha subunits, thereby driving them into their inactive GDP-bound form. Besides, modulates signal transduction via G protein alpha subunits by functioning as a GDP-dissociation inhibitor (GDI). Has GDI activity on G(i) alpha subunits GNAI1 and GNAI3, but not on GNAI2 and G(o)-alpha subunit GNAO1. Has GAP activity on GNAI0, GNAI2 and GNAI3. May act as a scaffold integrating G protein and Ras/Raf MAPkinase signaling pathways. Inhibits platelet-derived growth factor (PDGF)-stimulated ERK1/ERK2 phosphorylation, a process depending on its interaction with HRAS and that is reversed by G(i) alpha subunit GNAI1. Acts as a positive modulator of microtubule polymerisation and spindle organization through a G(i)-alpha-dependent mechanism. Plays a role in cell division. Required for the nerve growth factor (NGF)-mediated neurite outgrowth. Involved in stress resistance. May be involved in visual memory processing capacity and hippocampal-based learning and memory.
{ECO:0000269|PubMed:15917656, ECO:0000269|PubMed:17635935}.

Molecular Weight: 61.4 kDa

UniProt: [O43566](#)

Pathways: [Myometrial Relaxation and Contraction](#), [Regulation of G-Protein Coupled Receptor Protein Signaling](#), [Platelet-derived growth Factor Receptor Signaling](#)

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.

Application Details

Comment:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
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.
Expiry Date:	Unlimited (if stored properly)