Datasheet for ABIN3094480

PDE9A Protein (AA 1-593) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	PDE9A
Protein Characteristics:	AA 1-593
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PDE9A protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MGSGSSSYRP KAIYLDIDGR IQKVIFSKYC NSSDIMDLFC IATGLPRNTT ISLLTTDDAM VSIDPTMPAN SERTPYKVRP VAIKQLSAGV EDKRTTSRGQ SAERPLRDRR VVGLEQPRRE GAFESGQVEP RPREPQGCYQ EGQRIPPERE ELIQSVLAQV AEQFSRAFKI NELKAEVANH LAVLEKRVEL EGLKVVEIEK CKSDIKKMRE ELAARSSRTN CPCKYSFLDN HKKLTPRRDV PTYPKYLLSP ETIEALRKPT FDVWLWEPNE MLSCLEHMYH DLGLVRDFSI NPVTLRRWLF CVHDNYRNNP FHNFRHCFCV AQMMYSMVWL CSLQEKFSQT DILILMTAAI CHDLDHPGYN NTYQINARTE LAVRYNDISP LENHHCAVAF QILAEPECNI FSNIPPDGFK QIRQGMITLI LATDMARHAE IMDSFKEKME NFDYSNEEHM TLLKMILIKC CDISNEVRPM EVAEPWVDCL LEEYFMQSDR EKSEGLPVAP FMDRDKVTKA TAQIGFIKFV LIPMFETVTK LFPMVEEIML QPLWESRDRY EELKRIDDAM KELQKKTDSL TSGATEKSRE RSRDVKNSEG DCA **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)
Grade:	Crystallography grade

Target Details

Target:	PDE9A
Alternative Name:	PDE9A (PDE9A Products)
Background:	High affinity cGMP-specific 3',5'-cyclic phosphodiesterase 9A (EC 3.1.4.35),FUNCTION: Specifically hydrolyzes the second messenger cGMP, which is a key regulator of many important physiological processes. Highly specific: compared to other members of the cyclic nucleotide phosphodiesterase family, has the highest affinity and selectivity for cGMP (PubMed:9624146, PubMed:18757755, PubMed:21483814). Specifically regulates natriuretic-peptide-dependent cGMP signaling in heart, acting as a regulator of cardiac hypertrophy in myocytes and muscle. Does not regulate nitric oxide-dependent cGMP in heart (PubMed:25799991). Additional experiments are required to confirm whether its ability to hydrolyze natriuretic-peptide-dependent cGMP is specific to heart or is a general feature of the protein (Probable). In brain, involved in cognitive function, such as learning and long-term memory (By similarity). {ECO:0000250|UniProtKB:Q8QZV1, ECO:0000269|PubMed:18757755, ECO:0000269|PubMed:21483814, ECO:0000269|PubMed:25799991, ECO:0000269|PubMed:9624146, ECO:0000305}.
Molecular Weight:	68.5 kDa
UniProt:	O76083

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.
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

	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!
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)

Images

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