

Datasheet for ABIN3094480 PDE9A Protein (AA 1-593) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	PDE9A
Protein Characteristics:	AA 1-593
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PDE9A protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence: MSGSGSSSYRP 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 DLGLVRDFS I NPVTLRRWLF
CVHDNYRNNP FHNFRHCFCV AQMMYSMVWL CSLQEKFSTQ DILILMTAAI CHDLDPGYN
NTYQINARTE LAVRYNDISP LENHHCAVAF QILAEPECNI FSNIPPDGFK QIRQGMITLI
LATDMARHAE IMDSFKEKME NFDYSNEEHM TLLKMILIKC CDISNEVRPM EVAEPWVDCL
LEEYFMQSDR EKSEGLPVAP FMDRDKVTKA TAQIGFIKVV LIPMFETVTK LFPMVVEIML
QPLWESRDY EELKRIDDAM KELQKKTDSL TSGATEKSRE RSRDVKNSEG DCA

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Product Details

- Characteristics:
- Made in Germany - from design to production - by highly experienced protein experts.
 - Human PDE9A Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
 - 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

- Purification:
- Two step purification of proteins expressed in baculovirus infected SF9 insect cells:
1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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.

Purity: >95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility: 0.22 µm filtered

Endotoxin Level: Protein is endotoxin free.

Grade: Crystallography grade

Target Details

Target:	PDE9A
Alternative Name:	PDE9A (PDE9A Products)
Background:	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:	69.4 kDa Including tag.
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:	In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C

Handling

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