

Datasheet for ABIN3114834

PDE3A Protein (AA 1-1141) (Strep Tag)



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1 Image

Overview

Quantity:	1 mg
Target:	PDE3A
Protein Characteristics:	AA 1-1141
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PDE3A protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence: MAVPGDAARV RDKPVHSGVS QAPTAGRDCH HRADPASPRD SGCRGCWGD LVLQPLRSSRK
 LSSALCAGSL SFL LALLVRL VRGEVGC DLE QCKEAAAAEE EEAAPGAEGG VFP GPRGGAP
 GGGARLSPWL QPSALLFSL CAFFWMGLYL LRA GVR LPLA VALLA ACCGG EALVQIGLGV
 GEDHLLSLPA AGV VLSCLAA ATWLVLRLRL GVLMIALTSA VRTVSLISLE RFKVAWRPYL
 AYLAGVLGIL LARYVEQILP QSAEAAPREH LGSQLIAGTK EDIPVFKRRR RSSSVVSAEM
 SGCSSKSHRR TSLPCIPREQ LMGHSEWDHK RGPRGSQSSG TSITVDIAVM GEAHGLITDL
 LADPSLPPNV CTS LRAVSNL LSTQLTFQAI HKPRVNPVTS LSENYTCS DS EESSEKDKLA
 IPKRLRRSLP PGLLRVSST WTTTTSATGL PTLEPAPVRR DRSTSIKLQE APSSSPDSWN
 NPVMMLTKS RSFTSSY AIS AANHVKAKKQ SRPGALAKIS PLSSPCSSPL QGTPASSLV S
 KISAVQFPES ADTTAKQLG SHRALTYTQS APDLSPQILT PPVICSSCGR PYSQGNPADE
 PLERSGVATR TPSRTDDTAQ VTS DYETNNN SDSSDIVQNE DETECLREPL RKASACSTYA
 PETMMFLDKP ILAPEPLVMD NLDSIMEQLN TWNFPIFDLV ENIGRKCGRI LSQVSYRLF E

DMGLFEAFKI PIREFMNYFH ALEIGYRDIP YHNRIHATDV LHAVWYLTTQ PIPGLSTVIN
DHGSTSDSDS DSGFTHGHMG YVFSKTYNVT DDKYGCLSGN IPALELMALY VAAAMHDYDH
PGRTNAFLVA TSAPQAVLYN DRSVLENHHA AAAWNLFMSR PEYNFLINLD HVEFKHFRFL
VIEAILATDL KKHFDVAKF NGKVNDDVGI DWTNENDRLL VCQMCIKLAD INGPAKCKEL
HLQWTDGIVN EFYEQGDEEA SLGLPISPFM DRSAQLANL QESFISHIVG PLCNSYDSAG
LMPGKWVEDS DESGDTDDPE EEEEEAPAPN EETCENNES PKKKTFRKRK IYCQITQHLL
QNHKMWKKVI EEEQRLAGIE NQSLDQTPQS HSSEIQAIK EEEEEKGKPR GEEIPTQKPD Q

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:

Product Details

- 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. 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:	PDE3A
Alternative Name:	PDE3A (PDE3A Products)
Background:	<p>CGMP-inhibited 3',5'-cyclic phosphodiesterase 3A (EC 3.1.4.17) (Cyclic GMP-inhibited phosphodiesterase A) (CGI-PDE A) (cGMP-inhibited cAMP phosphodiesterase) (cGI-PDE),FUNCTION: Cyclic nucleotide phosphodiesterase with specificity for the second messengers cAMP and cGMP, which are key regulators of many important physiological processes (PubMed:1315035, PubMed:8695850, PubMed:8155697, PubMed:25961942). Has also activity toward cUMP (PubMed:27975297). Independently of its catalytic activity it is part of an E2/17beta-estradiol-induced pro-apoptotic signaling pathway. E2 stabilizes the PDE3A/SLFN12 complex in the cytosol, promoting the dephosphorylation of SLFN12 and activating its pro-apoptotic ribosomal RNA/rRNA ribonuclease activity. This apoptotic pathway might be relevant in tissues with high concentration of E2 and be for instance involved in placenta remodeling (PubMed:31420216, PubMed:34707099).</p> <p>{ECO:0000269 PubMed:1315035, ECO:0000269 PubMed:25961942, ECO:0000269 PubMed:27975297, ECO:0000269 PubMed:31420216, ECO:0000269 PubMed:34707099, ECO:0000269 PubMed:8155697, ECO:0000269 PubMed:8695850}.</p>

Target Details

Molecular Weight:	125.0 kDa
UniProt:	Q14432
Pathways:	cAMP 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.
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)



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