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Datasheet for ABIN3094410

## PDE8A Protein (AA 1-829) (Strep Tag)

### 1 Image

#### Overview

Quantity:	1 mg
Target:	PDE8A
Protein Characteristics:	AA 1-829
Origin:	Human
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This PDE8A protein is labelled with Strep Tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS)

#### Product Details

Sequence: MGCAPSIHIS ERLVAEDAPS PAAPPLSSGG PRLPQGQKTA ALPRTRGAGL LESELRDGSG  
KKVAVADVQF GPMRFHQDQL QVLLVFTKED NQCNGFCRAC EKAGFKCTVT KEAQAVLACF  
LDKHHDIII DHRNPRQLDA EALCRSIRSS KLSSENTVIVG VVRRVDREEL SVMPFISAGF  
TRRYVENPNI MACYNELLQL EFGEVRSQK LKACNSVFTE LENSEDAIEI TSEDRFIQYA  
NPAFETTMGY QSGELIGKEL GEVPINEKKA DLLDTINSCI RIGKEWQGIY YAKKKNKDNI  
QQNVKIIPVI GQGGKIRHYV SIIRVCNGNN KAEKISECVQ SDTHTDNQTG KHKDRRKGS  
L DVKAVASRAT EVSSQRRHSS MARIHSMTIE APITKVINII NAAQESSPMP VTEALDRVLE  
ILRTTELYSP QFGAKDDDPH ANDLVGGLMS DGLRRLSGNE YVLSTKNTQM VSSNIITPIS  
LDDVPPRIAR AMENEYWDF DIFELEAATH NRPLIYLGLK MFARFGICEF LHCESTLRS  
WLQIIEANYH SSNPYHNSTH SADVLHATAY FLSKERIKET LDPIDEVAAL IAATIHDVDH  
PGRNTSFLCN AGSELAILYN DTAVLESHA ALAFQLTTGD DKCNIFKNME RNDYRTLRLQ  
IIDMVLATEM TKHFEHVNKF VNSINKPLAT LEENGETDKN QEVINTMLRT PENRTLIKRM

LIKCADVSNP CRPLQYCI EW AARISEEYFS QTDEEKQOGL PVVMPVFDRN TCSIPKSQIS  
FIDYFITDMF DAWDAFVDLP DLMQHLDNNF KYWKGLDEM KLRNLRPPPE

**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.**

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### 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.

## Product Details

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Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): <ol style="list-style-type: none"><li>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.</li><li>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.</li></ol>
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

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Target:	PDE8A
Alternative Name:	PDE8A ( <a href="#">PDE8A Products</a> )
Background:	High affinity cAMP-specific and IBMX-insensitive 3',5'-cyclic phosphodiesterase 8A (EC 3.1.4.53),FUNCTION: Hydrolyzes the second messenger cAMP, which is a key regulator of many important physiological processes (PubMed:18983167). May be involved in maintaining basal levels of the cyclic nucleotide and/or in the cAMP regulation of germ cell development (PubMed:18983167). Binding to RAF1 reduces RAF1 'Ser-259' inhibitory-phosphorylation and stimulates RAF1-dependent EGF-activated ERK-signaling (PubMed:23509299). Protects against cell death induced by hydrogen peroxide and staurosporine (PubMed:23509299). {ECO:0000269 PubMed:18983167, ECO:0000269 PubMed:23509299}.
Molecular Weight:	93.3 kDa
UniProt:	<a href="#">O60658</a>
Pathways:	<a href="#">cAMP Metabolic Process</a>

## 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 <i>Nicotiana tabacum</i> c.v.. This contains all the protein expression machinery needed to produce

## Application Details

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Restrictions: For Research Use only

## Handling

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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

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