

Datasheet for ABIN3094284

OAS1 Protein (AA 1-400) (Strep Tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	OAS1
Protein Characteristics:	AA 1-400
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This OAS1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	<p>MMDLRNTPAK SLDKFIEDYL LPDTCFRMQI NHAIDIICGF LKERCFRGSS YPVCVSKVVK GGSSGKGTTL RGRSDADLVV FLSPLTTFQD QLNRRGEFIQ EIRRQLEACQ RERAFSVKFE VQAPRWGNPR ALSFVLSSLQ LGEGVEFDVL PAFDALGQLT GGYKPNPQIY VKLIEECTDL QKEGEFSTCF TELQRDFLKQ RPTKLKSLIR LVKHWYQNCK KKLGLKLPQY ALELLTVYAW ERGSMKTHFN TAQGFRTVLE LVINYQQLCI YWTKYYDFKN PIIEKYLRRQ LTKPRPVILD PADPTGNLGG GPKGWRQLA QEAEAWLNYP CFKNWDGSPV SSWILLAESN SADDETDDPR RYQKYGYIGT HEYPHFSHRP STLQAASTPQ AEEDWTCTIL</p> <p>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.</p>
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.
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.

Product Details

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:	OAS1
Alternative Name:	OAS1 (OAS1 Products)
Background:	<p>2'-5'-oligoadenylate synthase 1 ((2-5')oligo(A) synthase 1) (2-5A synthase 1) (EC 2.7.7.84) (E18/E16) (p46/p42 OAS),FUNCTION: Interferon-induced, dsRNA-activated antiviral enzyme which plays a critical role in cellular innate antiviral response (PubMed:34581622). In addition, it may also play a role in other cellular processes such as apoptosis, cell growth, differentiation and gene regulation. Synthesizes higher oligomers of 2'-5'-oligoadenylates (2-5A) from ATP which then bind to the inactive monomeric form of ribonuclease L (RNase L) leading to its dimerization and subsequent activation. Activation of RNase L leads to degradation of cellular as well as viral RNA, resulting in the inhibition of protein synthesis, thus terminating viral replication (PubMed:34581622, PubMed:34145065). Can mediate the antiviral effect via the classical RNase L-dependent pathway or an alternative antiviral pathway independent of RNase L. The secreted form displays antiviral effect against vesicular stomatitis virus (VSV), herpes simplex virus type 2 (HSV-2), and encephalomyocarditis virus (EMCV) and stimulates the alternative antiviral pathway independent of RNase L. {ECO:0000269 PubMed:12799444, ECO:0000269 PubMed:18931074, ECO:0000269 PubMed:19923450, ECO:0000269 PubMed:23319625, ECO:0000269 PubMed:34145065, ECO:0000269 PubMed:34581622}., FUNCTION: [Isoform p46]: When prenylated at C-terminal, acts as a double-stranded RNA (dsRNA) sensor specifically targeted to membranous replicative organelles in SARS coronavirus-2/SARS-CoV-2 infected cells where it binds to dsRNA structures in the SARS-CoV-2 5'-UTR and initiates a potent block to SARS-CoV-2 replication. Recognizes short stretches of dsRNA and activates RNase L. The binding is remarkably specific, with two conserved stem loops in the SARS-CoV-2 5'- untranslated region (UTR) constituting the principal viral target (PubMed:34581622). The same mechanism is necessary to initiate a block to cardiovirus EMCV (PubMed:34581622). {ECO:0000269 PubMed:34581622}., FUNCTION: [Isoform p42]: Not prenylated at C-terminal, is diffusely localized and unable to initiate a detectable block to SARS-CoV-2 replication. {ECO:0000269 PubMed:34581622}.</p>

Target Details

Molecular Weight:	46.0 kDa
UniProt:	P00973
Pathways:	Hepatitis C

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