

Datasheet for ABIN7554812
OAS1 Protein (AA 1-400) (His tag)



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Overview

Quantity:	1 mg
Target:	OAS1
Protein Characteristics:	AA 1-400
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This OAS1 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant OAS1 Protein expressed in mammalian cells.
Sequence:	MMDLRNTPAK SLDKFIEDYL LPDTCFRMQI NHAIIDIICGF LKERCFRGSS YPVCVSKVVK GGSSGKGTTL RGRSDADLVV FLSPLTTFQD QLNRRGEFIQ EIRRQLEACQ RERAFSVKFE VQAPRWGNPR ALSFVLSSLQ LGEGVEFDVL PAFDALGQLT GGYKPNPQIY VKLIEECTDL QKEGEFSTCF TELQRDFLKQ RPTKLKSLIR LVKHWHYQNCK KKLGLKPPQY ALELLTVYAW ERGSMTHTFN TAQGFRTVLE LVINYQQLCI YWTKYYDFKN PIIEKYLRRQ LTKPRPVILD PADPTGNLGG GDPKGWRQLA QEAEAWLNYP CFKNWDGSPV SSWILLAESN SADDDETDDPR RYQKYGYIGT HEYPHFHRP STLQAASTPQ AEEDWTCTIL Sequence without tag. The proposed Purification-Tag is based on experiences 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.
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.

Product Details

Characteristics:

Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- 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 try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

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.

Purity:

> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)

Grade:

custom-made

Target Details

Target:

OAS1

Alternative Name:

OAS1 ([OAS1 Products](#))

Background:

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,

Target Details

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}.

Molecular Weight: 46.0 kDa

UniProt: [P00973](#)

Pathways: [Hepatitis C](#)

Application Details

Application Notes: We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months