

Datasheet for ABIN3134534

## OPA1 Protein (AA 88-960) (rho-1D4 tag)



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### 1 Image

#### Overview

Quantity:	1 mg
Target:	OPA1
Protein Characteristics:	AA 88-960
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This OPA1 protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

#### Product Details

Sequence:	FWPARLAARL LKLRYIILGS AVGGGYTAKK TFDEWKDMIP DLSDYKWIVP DFIWEIDEYI DLEKIRKALP SSEDLASLAP DLDKITESLS LLKDFFTAGS PGETAFRATD HGSESDKHYR KVSDKEKIDQ LQEELLHTQL KYQRILERLE KENKELRKL V LQKDDKGIHH RKLKSLIDM YSEVLVDLSD YDASYNTQDH LPRVVVVG DQ SAGKTSVLEM IAQARIFPRG SGEMMTRSPV KVTLSEGGPH VALFKDSSRE FDLTKEEDLA ALRHEIELRM RKNVKEGCTV SPETISLNVK GPGLQRMVLV DLPGVINTVT SGMAPDTKET IFSISKAYMQ NPNAIILCIQ DGSVDAERSI VTDLVSQMDP HGRRTIFVLT KVDLAEKNA SPSRIQIIE GKLFPKALG YFAVVTGKGN SSESIEAIRE YEEFFQNSK LLKTSMLKAH QVTTRNLSLA VSDCFWK MVR ESVEQQADSF KATRFNLETE WKNYPRLRE LDRNELFEKA KNEILDEVIS LSQVTPKHWE EILQQSLWER VSTHVNIY LPAAQTMNSG TFNTTVDIKL KQWTDKQLPN KAVEVAWETL QEEFSRFMTE PKGKEHDDIF DKLKEAVKEE SIKRHKWNDF AEDSLRVIQH NALED RSISD KQQWDAAIYF MEEALQGRLK DTENAIENMI GPDWKKRWMY WKNRTQE QCV HNETKNELEK MLKVNDHPA
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YLASDEITTV RKNLESRGVE VDPSTLIKDTW HQVYRRHFLK TALNHCNLCR RGFYYYQRHF  
IDSELECNDV VLFWRIRML AITANTLRQQ LTNTEVRRLE KNVKEVLEDF AEDGEKKVKL  
LTGKRVQLAE DLKKVREIQE KLDAFIEALH QEK

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

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### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Opa1 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.

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### Purification:

Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

1. Membrane proteins are fractionated by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.
  2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot.
  3. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and Western blot.
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## Product Details

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:	OPA1
Alternative Name:	Opa1 ( <a href="#">OPA1 Products</a> )
Background:	<p>Dynamin-related GTPase required for mitochondrial fusion and regulation of apoptosis. May form a diffusion barrier for proteins stored in mitochondrial cristae. Proteolytic processing in response to intrinsic apoptotic signals may lead to disassembly of OPA1 oligomers and release of the caspase activator cytochrome C (CYCS) into the mitochondrial intermembrane space. May also play a role in mitochondrial genome maintenance. {ECO:0000250 UniProtKB:O60313, ECO:0000269 PubMed:16839884, ECO:0000269 PubMed:16839885, ECO:0000269 PubMed:20038678}., Dynamin-like 120 kDa protein, form S1: Inactive form produced by cleavage at S1 position by OMA1 following stress conditions that induce loss of mitochondrial membrane potential, leading to negative regulation of mitochondrial fusion. {ECO:0000269 PubMed:22433842}.</p>
Molecular Weight:	102.4 kDa Including tag.
UniProt:	<a href="#">P58281</a>
Pathways:	<a href="#">Tube Formation</a>

## 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:	Protein has not been tested for activity yet. 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
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