



[Go to Product page](#)

Datasheet for ABIN3094365

## OPA1 Protein (AA 114-960) (His tag)

### 1 Image

#### Overview

Quantity:	1 mg
Target:	OPA1
Protein Characteristics:	AA 114-960
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This OPA1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

#### Product Details

Sequence: TAKKTFDQWK DMIPDLSEYK WIVPDIVWEI DEYIDFEKIR KALPSSSEDLV KLAPDFDKIV  
 ESLSLLKDFE TSGSPEETAF RATDRGSESD KHFRKVSDEK KIDQLQEELL HTQLKYQRIL  
 ERLEKENKEL RKLVLQKDDK GIHHRKLLKKS LIDMYSEVLD VLSYDASYN TQDHLPRVVV  
 VGDQSAGKTS VLEMIAQARI FPRGSGEMMT RSPVKVTLSE GPHHVALFKD SSREFDLTKE  
 EDLAALRHEI ELRMRKNVKE GCTVSPETIS LNVKG PGLQR MVLVDLPGVI NTVTSGMAPD  
 TKETIFSISK AYMQNPNIAI LCIQDGSVDA ERSIVTDLVS QMDPHGRRTI FVLTKVDLAE  
 KNVASPSRIQ QIEGKLFPM KALGYFAVVT GKGNSSESIE AIREYEEFF QNSKLLKTSM  
 LKAHQVTRN LSLAVSDCFW KMVRESVEQQ ADSFKATRFN LETEWKNNYP RLRELD RNEL  
 FEKAKNEILD EVISLSQVTP KHWEILQQS LWERVSTHVI ENIYLPAAQT MNSGTFNTTV  
 DIKLLQWTDK QLPNKAVEVA WETLQEEFSR FMTEPKGKEH DDIFDKLKEA VKEESIKRHK  
 WNDFAEDSLR VIQHNALEDR SISDKQQWDA AIYFMEEALQ ARLKDTENAI ENMVGPDWKK  
 RWLYWKNRTQ EQCVHNETKN ELEKMLKCNE EHPAYLASDE ITTVRKNLES RGVEVDPSLI

KDTWHQVYRR HFLKTALNHC NLCRRGFYYY QRHFVDSELE CNDVVLFWRI QRMLAITANT  
LRQLTNTTEV RRLEKNVKEV LEDFAEDGEK KIKLLTGKRV QLAEDLKKVR EIQEKLDAFI EALHQEK

**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.
- Human 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:

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

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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.

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### Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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### Sterility:

0.22 µm filtered

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### Endotoxin Level:

Protein is endotoxin free.

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## Product Details

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Grade: Crystallography grade

## Target Details

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Target: OPA1

Alternative Name: OPA1 ([OPA1 Products](#))

Background: 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:P58281, ECO:0000269|PubMed:16778770, ECO:0000269|PubMed:18158317}. 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:20038677}.

Molecular Weight: 99.6 kDa Including tag.

UniProt: [O60313](#)

Pathways: [Tube Formation](#)

## 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: 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

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Format: Liquid

Buffer: 100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

## Handling

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Handling Advice: Avoid repeated freeze-thaw cycles.

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Storage: -80 °C

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Storage Comment: Store at -80°C.

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Expiry Date: Unlimited (if stored properly)

## Images

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