

**OPA1(form S1) Blocking Peptide (C-term)**  
**Synthetic peptide**  
**Catalog # BP20727c****Specification**

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**OPA1(form S1) Blocking Peptide (C-term) - Product Information**

Primary Accession [O60313](#)  
Other Accession [Q2TA68](#), [P58281](#), [Q5U3A7](#), [Q5F499](#)

**OPA1(form S1) Blocking Peptide (C-term) - Additional Information**

**Gene ID** 4976

**Other Names**

Dynamin-like 120 kDa protein, mitochondrial, Optic atrophy protein 1, Dynamin-like 120 kDa protein, form S1, OPA1, KIAA0567

**Target/Specificity**

The synthetic peptide sequence is selected from aa 895-909 of HUMAN OPA1

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**OPA1(form S1) Blocking Peptide (C-term) - Protein Information**

**Name** OPA1

**Function**

Dynamin-related GTPase that is essential for normal mitochondrial morphology by regulating the equilibrium between mitochondrial fusion and mitochondrial fission (PubMed:<a href="http://www.uniprot.org/citations/16778770" target="\_blank">16778770</a>, PubMed:<a href="http://www.uniprot.org/citations/17709429" target="\_blank">17709429</a>, PubMed:<a href="http://www.uniprot.org/citations/20185555" target="\_blank">20185555</a>, PubMed:<a href="http://www.uniprot.org/citations/24616225" target="\_blank">24616225</a>, PubMed:<a href="http://www.uniprot.org/citations/28746876" target="\_blank">28746876</a>). Coexpression of isoform 1 with shorter alternative products is required for optimal activity in promoting mitochondrial fusion (PubMed:<a href="http://www.uniprot.org/citations/17709429" target="\_blank">17709429</a>). Binds lipid membranes enriched in negatively charged phospholipids, such as cardiolipin, and promotes membrane tubulation (PubMed:<a href="http://www.uniprot.org/citations/20185555" target="\_blank">20185555</a>). The intrinsic GTPase activity is low, and is strongly increased by interaction with lipid membranes (PubMed:<a

[20185555](http://www.uniprot.org/citations/20185555)). Plays a role in remodeling cristae and the release of cytochrome c during apoptosis (By similarity). 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 (By similarity). Plays a role in mitochondrial genome maintenance (PubMed:[20974897](http://www.uniprot.org/citations/20974897), PubMed:[18158317](http://www.uniprot.org/citations/18158317)).

#### **Cellular Location**

Mitochondrion inner membrane; Single-pass membrane protein. Mitochondrion intermembrane space {ECO:0000250|UniProtKB:P58281}. Mitochondrion membrane. Note=Detected at contact sites between endoplasmic reticulum and mitochondrion membranes

#### **Tissue Location**

Highly expressed in retina. Also expressed in brain, testis, heart and skeletal muscle. Isoform 1 expressed in retina, skeletal muscle, heart, lung, ovary, colon, thyroid gland, leukocytes and fetal brain. Isoform 2 expressed in colon, liver, kidney, thyroid gland and leukocytes. Low levels of all isoforms expressed in a variety of tissues.

### **OPA1(form S1) Blocking Peptide (C-term) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

### **OPA1(form S1) Blocking Peptide (C-term) - Images**

### **OPA1(form S1) Blocking Peptide (C-term) - 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.

### **OPA1(form S1) Blocking Peptide (C-term) - References**

Nagase T.,et al.DNA Res. 5:31-39(1998).  
Wang W.,et al.Nucleic Acids Res. 39:44-58(2011).  
Muzny D.M.,et al.Nature 440:1194-1198(2006).  
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.  
Delettre C.,et al.Hum. Genet. 109:584-591(2001).