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OPA1(form S1) Blocking Peptide (C-term)

Synthetic peptide
Catalog # BP20727c

Specification

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:16778770, PubMed:17709429, PubMed:20185555, PubMed:24616225, PubMed:28746876). Coexpression of isoform 1 with shorter alternative products is required for optimal activity in promoting mitochondrial fusion (PubMed:17709429). Binds lipid membranes enriched in negatively charged phospholipids, such as cardiolipin, and promotes membrane tubulation (PubMed:20185555). The intrinsic GTPase activity is low, and is strongly increased by interaction with lipid membranes (PubMed:<a

href="http://www.uniprot.org/citations/20185555" target="_blank">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, PubMed: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

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Wang W.,et al.Nucleic Acids Res. 39:44-58(2011).
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Delettre C.,et al.Hum. Genet. 109:584-591(2001).