

OMA1 antibody - middle region
Rabbit Polyclonal Antibody
Catalog # AI13463**Specification****OMA1 antibody - middle region - Product Information**

Application	WB
Primary Accession	O96E52
Other Accession	NM_145243 , NP_660286
Reactivity	Human, Zebrafish, Pig
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60 KDa

OMA1 antibody - middle region - Additional Information**Gene ID** 115209**Alias Symbol** 2010001O09Rik, DAB1, FLJ33782, MPRP-1, YKR087C, ZMPOMA1**Other Names**

Metalloendopeptidase OMA1, mitochondrial, 3.4.24.-, Metalloprotease-related protein 1, MPRP-1, Overlapping with the m-AAA protease 1 homolog, OMA1, MPRP1

Format

Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

Reconstitution & Storage

Add 50 ul of distilled water. Final anti-OMA1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.

Precautions

OMA1 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

OMA1 antibody - middle region - Protein Information**Name** OMA1 {ECO:0000303|PubMed:20038677, ECO:0000312|HGNC:HGNC:29661}**Function**

Metalloprotease that is part of the quality control system in the inner membrane of mitochondria (PubMed: [20038677](http://www.uniprot.org/citations/20038677), PubMed: [25605331](http://www.uniprot.org/citations/25605331), PubMed: [32132706](http://www.uniprot.org/citations/32132706), PubMed: [32132707](http://www.uniprot.org/citations/32132707)). Activated in response to various mitochondrial stress, leading to the proteolytic cleavage of target proteins, such as OPA1, UQCC3 and DELE1 (PubMed: [20038677](http://www.uniprot.org/citations/20038677), PubMed: [20038677](http://www.uniprot.org/citations/20038677)).

href="http://www.uniprot.org/citations/25275009" target="_blank">25275009, PubMed:32132706, PubMed:32132707). Following stress conditions that induce loss of mitochondrial membrane potential, mediates cleavage of OPA1 at S1 position, leading to OPA1 inactivation and negative regulation of mitochondrial fusion (PubMed:20038677, PubMed:25275009). Also acts as a regulator of apoptosis: upon BAK and BAX aggregation, mediates cleavage of OPA1, leading to the remodeling of mitochondrial cristae and allowing the release of cytochrome c from mitochondrial cristae (PubMed:25275009). In depolarized mitochondria, may also act as a backup protease for PINK1 by mediating PINK1 cleavage and promoting its subsequent degradation by the proteasome (PubMed:30733118). May also cleave UQC3 in response to mitochondrial depolarization (PubMed:25605331). Also acts as an activator of the integrated stress response (ISR): in response to mitochondrial stress, mediates cleavage of DELE1 to generate the processed form of DELE1 (S- DELE1), which translocates to the cytosol and activates EIF2AK1/HRI to trigger the ISR (PubMed:32132706, PubMed:32132707). Its role in mitochondrial quality control is essential for regulating lipid metabolism as well as to maintain body temperature and energy expenditure under cold-stress conditions (By similarity). Binds cardiolipin, possibly regulating its protein turnover (By similarity). Required for the stability of the respiratory supercomplexes (By similarity).

Cellular Location

Mitochondrion inner membrane; Single-pass membrane protein
{ECO:0000250|UniProtKB:Q9D8H7}

Tissue Location

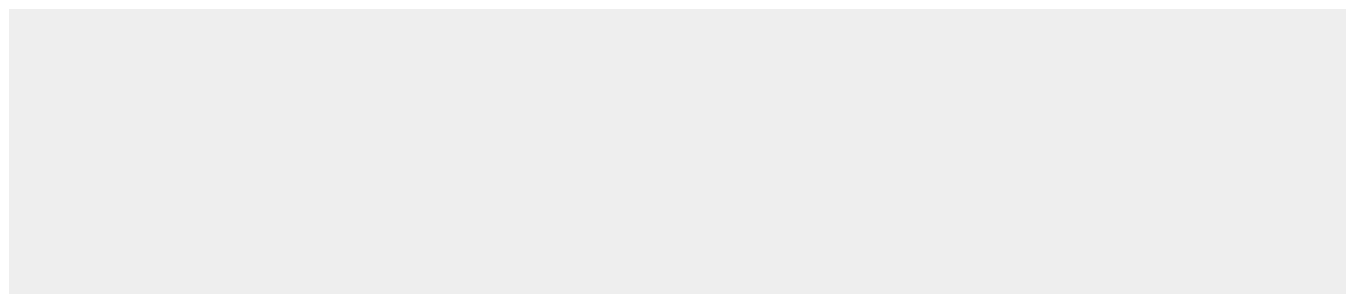
Widely expressed, with strong expression in the heart, skeletal muscle, kidney and liver

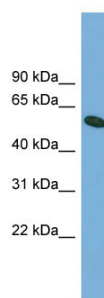
OMA1 antibody - middle region - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

OMA1 antibody - middle region - Images





WB Suggested Anti-OMA1 Antibody Titration: 0.2-1 μ g/ml
Positive Control: 721_B cell lysate

OMA1 antibody - middle region - References

Bao Y.-C., et al. DNA Res. 10:123-128(2003).
Gregory S.G., et al. Nature 441:315-321(2006).
Mural R.J., et al. Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Ota T., et al. Nat. Genet. 36:40-45(2004).
Head B., et al. J. Cell Biol. 187:959-966(2009).