

Grp75 Antibody
Rabbit mAb
Catalog # AP91430**Specification****Grp75 Antibody - Product Information**

Application	WB
Primary Accession	P38646
Reactivity	Rat
Clonality	Monoclonal

Other Names

GRP-75; Heat shock 70 kDa protein 9; Mortalin; MOT; Peptide-binding protein 74; PBP74; HSPA9; GRP75; HSPA9B; mt-HSP70;

Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	73680 Da

Grp75 Antibody - Additional Information

Dilution	WB~~1:1000
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Grp75
Description	Implicated in the control of cell proliferation and cellular aging. May also act as a chaperone.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Grp75 Antibody - Protein Information

Name HSPA9 ([HGNC:5244](#))

Function

Mitochondrial chaperone that plays a key role in mitochondrial protein import, folding, and assembly. Plays an essential role in the protein quality control system, the correct folding of proteins, the re-folding of misfolded proteins, and the targeting of proteins for subsequent degradation. These processes are achieved through cycles of ATP binding, ATP hydrolysis, and ADP release, mediated by co-chaperones (PubMed: [18632665](http://www.uniprot.org/citations/18632665), PubMed: [25615450](http://www.uniprot.org/citations/25615450), PubMed: [28848044](http://www.uniprot.org/citations/28848044), PubMed: [30933555](http://www.uniprot.org/citations/30933555), PubMed: [31177526](http://www.uniprot.org/citations/31177526)). In mitochondria, it associates with the TIM (translocase of the inner membrane) protein complex to

assist in the import and folding of mitochondrial proteins (By similarity). Plays an important role in mitochondrial iron-sulfur cluster (ISC) biogenesis, interacts with and stabilizes ISC cluster assembly proteins FXN, NFU1, NFS1 and ISCU (PubMed:26702583). Regulates erythropoiesis via stabilization of ISC assembly (PubMed:21123823, PubMed:26702583). Regulates mitochondrial calcium-dependent apoptosis by coupling two calcium channels, ITPR1 and VDAC1, at the mitochondria- associated endoplasmic reticulum (ER) membrane to facilitate calcium transport from the ER lumen to the mitochondria intermembrane space, providing calcium for the downstream calcium channel MCU, which releases it into the mitochondrial matrix (By similarity). Although primarily located in the mitochondria, it is also found in other cellular compartments. In the cytosol, it associates with proteins involved in signaling, apoptosis, or senescence. It may play a role in cell cycle regulation via its interaction with and promotion of degradation of TP53 (PubMed:24625977, PubMed:26634371). May play a role in the control of cell proliferation and cellular aging (By similarity). Protects against reactive oxygen species (ROS) (By similarity). Extracellular HSPA9 plays a cytoprotective role by preventing cell lysis following immune attack by the membrane attack complex by disrupting formation of the complex (PubMed:16091382).

Cellular Location

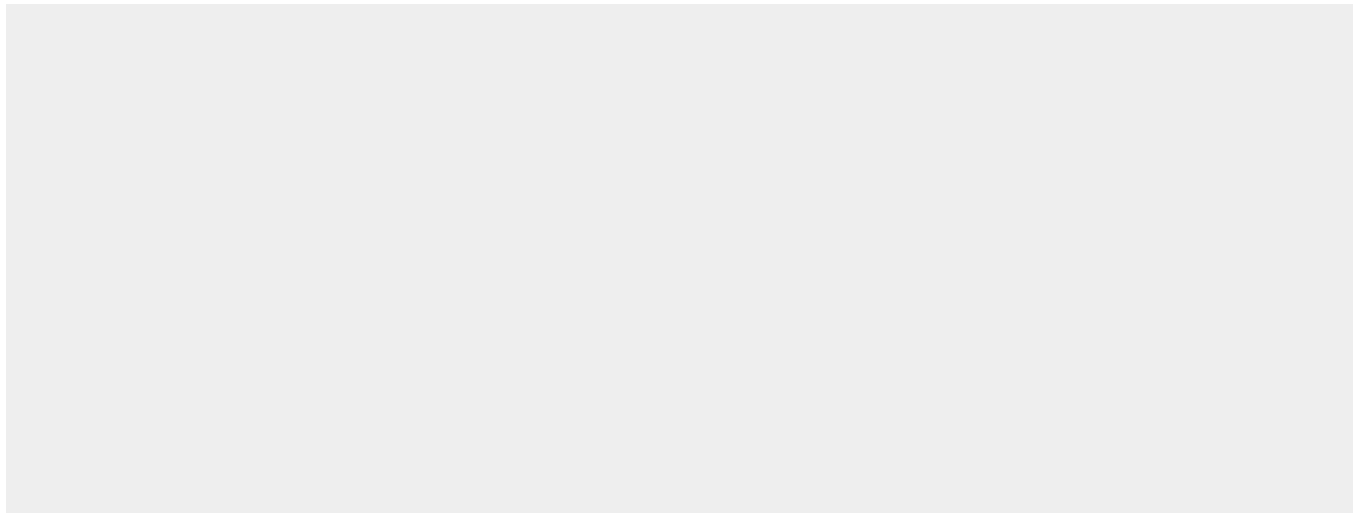
Mitochondrion. Nucleus, nucleolus. Cytoplasm. Mitochondrion matrix
{ECO:0000250|UniProtKB:P48721}. Note=Found in a complex with HSPA9 and VDAC1 at the endoplasmic reticulum-mitochondria contact sites {ECO:0000250|UniProtKB:P48721}

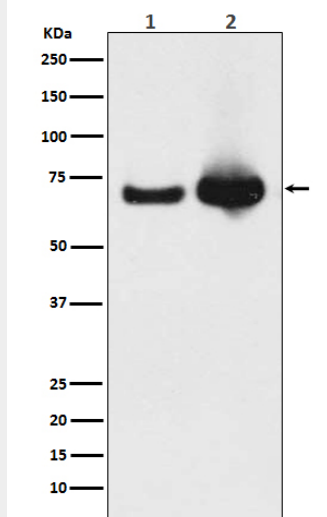
Grp75 Antibody - Protocols

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](#)

Grp75 Antibody - Images





Western blot analysis of Grp75 expression in (1) HeLa cell lysate; (2) Mouse liver lysate.