

GRP75 Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP51270

Product Information

Application	WB
Primary Accession	P38646
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	73680

Additional Information

Gene ID	3313
Other Names	Stress-70 protein, mitochondrial, 75 kDa glucose-regulated protein, GRP-75, Heat shock 70 kDa protein 9, Mortalin, MOT, Peptide-binding protein 74, PBP74, HSPA9, GRP75, HSPA9B, mt-HSP70
Target/Specificity	KLH conjugated synthetic peptide derived from human GRP75
Dilution	WB~~ 1:1000
Format	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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 , PubMed: 25615450 , PubMed: 28848044 , PubMed: 30933555 , PubMed: 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, NFS1, 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}

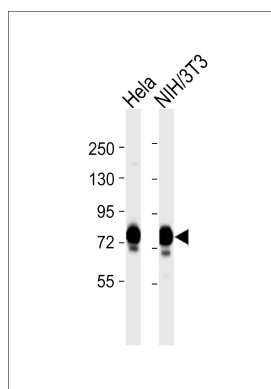
Background

Implicated in the control of cell proliferation and cellular aging. May also act as a chaperone.

References

Domanico S.Z.,et al.Mol. Cell. Biol. 13:3598-3610(1993).
Bhattacharyya T.,et al.J. Biol. Chem. 270:1705-1710(1995).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Suzuki Y.,et al.Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases.
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

Images



All lanes : Anti-GRP75 Antibody at 1:1000 dilution Lane 1: HeLa whole cell lysates Lane 2: NIH/3T3 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 74 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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