

# GRP75 Rabbit mAb

Catalog # AP78622

## Product Information

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<b>Application</b>	WB
<b>Primary Accession</b>	<a href="#">P38646</a>
<b>Reactivity</b>	Rat, Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal Antibody
<b>Isotype</b>	IgG
<b>Conjugate</b>	Unconjugated
<b>Immunogen</b>	A synthesized peptide derived from human Grp75
<b>Purification</b>	Affinity Chromatography
<b>Calculated MW</b>	73680

## Additional Information

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<b>Gene ID</b>	3313
<b>Other Names</b>	HSPA9
<b>Dilution</b>	WB~~1/500-1/1000
<b>Format</b>	Liquid in 10mM PBS, pH 7.4, 150mM sodium chloride, 0.05% BSA, 0.02% sodium azide and 50% glycerol.
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

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<b>Name</b>	HSPA9 ( <a href="#">HGNC:5244</a> )
<b>Function</b>	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: <a href="#">18632665</a> , PubMed: <a href="#">25615450</a> , PubMed: <a href="#">28848044</a> , PubMed: <a href="#">30933555</a> , PubMed: <a href="#">31177526</a> ). 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: <a href="#">26702583</a> ). Regulates erythropoiesis via stabilization of ISC assembly (PubMed: <a href="#">21123823</a> , PubMed: <a href="#">26702583</a> ). 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}

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