10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Grp75 Antibody
Grp75 Antibody, Clone S52A-42
Catalog # ASM10044

Specification

Grp75 Antibody - Product Information

Application	**WB, IHC, ICC, IP, E**
Primary Accession	P38646
Other Accession	NP_004125.3
Host	**Mouse**
Isotype	**IgG1**
Reactivity	**Human, Mouse, Rat, C.Elegans**
Clonality	**Monoclonal**

Description
Mouse Anti-Mouse Grp75 Monoclonal IgG1

Target/Specificity
Detects ~75kDa.

Other Names
HSC74 Antibody, HSP74 Antibody, HSPA9 Antibody, HSPa9a Antibody, HSPA9B Antibody, Mortalin 2 Antibody, MOT2 Antibody, PBP74 Antibody

Immunogen
Fusion protein amino acids 551-766 of mouse SALM2.

Purification
Protein G Purified

Storage	**-20ºC**

Storage Buffer
PBS pH7.2, 50% glycerol, 0.09% sodium azide

Shipping Temperature	**Blue Ice or 4ºC**

Certificate of Analysis
1 µg/ml was sufficient for detection of Grp75 in 10 µg of heat shock HeLa lysate by colorimetric immunoblot analysis using Goat Anti-Mouse IgG:HRP as the secondary.

Cellular Localization
Mitochondrion

Grp75 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry

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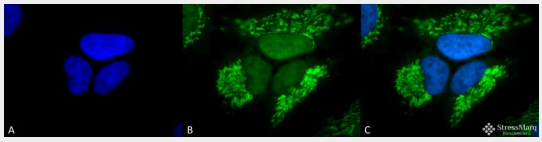
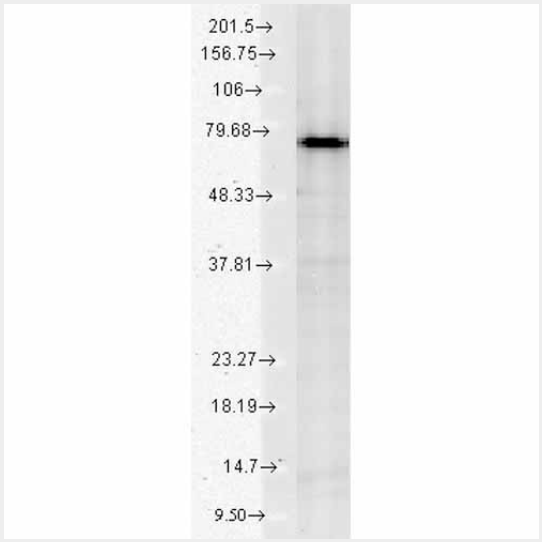
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

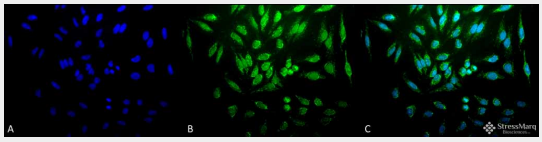
Grp75 Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Grp75 Monoclonal Antibody, Clone S52A-42 (ASM10044). Tissue: Heat Shocked HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Mouse Anti-Grp75 Monoclonal Antibody (ASM10044) at 1:100 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Mitochondria. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-Grp75 Antibody. (C) Composite.



Western Blot analysis of Human HeLa cell lysates showing detection of Grp75 protein using Mouse Anti-Grp75 Monoclonal Antibody, Clone S52A-42 (ASM10044). Load: 15 µg. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Grp75 Monoclonal Antibody (ASM10044) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.



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Grp75 Antibody - Background

Grp75, also known as mortalin, is a member of HSP70 family of chaperone proteins that is not heat inducible (1, 2). Grp75 is actually induced under conditions of low glucose and other nutritional and environmental stresses. Grp75 resides primarily in the mitochondrial matrix, where it collaborates with HSP60 in the re-folding of proteins translocated into this organelle (3, 4). Related forms may also be found in the cytosol or on the surface of the extracellular membrane.
Other Grp75 functions include its ability to inactivate the tumor suppressor p53 (5). Studies have found that Grp75 is over-expressed in many tumor tissues and immortalized human cell lines, suggesting its role in the tumor formation (6). Grp75 is also implicated in cell aging, as its overexpression appears to prolong the life span of human fibroblasts (7). And finally, like its E.coli homolog DnaK (8), GRP75 possesses a cation-dependent ATPase activity considered central to its function as a chaperone (9, 10).

Grp75 Antibody - References

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4. Manning-Krieg U.C., et al. (1991) EMBO J. 10: 3273-3280.
5. Wadhwa R., et al. (1998) J Biol Chem. 273: 29586-91.
6. Wadhwa R., et al. (2006) Int J Cancer 118: 2973-2980.
7. Kaul S.C., et al. (2003) Exp Cell Res. 286: 96-110.
8. Liberek K., et al. (1991) J Biol Chem. 266: 14491-14496.
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