

Anti-Grp75 (Mortalin)

Catalog# SMC-133C/D

Size: 25/100µg

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This product is for *in vitro* research use only and is not intended for use in humans or animals

StressMarq

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Product	Mouse anti-Grp75 antibody monoclonal
Clone	S52A-42
Immunogen	Peptide immunogen to SALM2
Host and Subclass	Mouse IgG ₁
Cited Applications	WB, IHC, IP
Specificity	~75kDa
Species cross-reactivity	Human, mouse, rat, other species not yet tested
Format	Mouse IgG in PBS pH 7.2; 50% glycerol, 0.09% azide. Protein G Purified.
Concentration and working dilution	1mg/mL; Recommended dilution for WB 1:1000 (colorimetric)
Storage and stability	-20°C; 1 year+; shipped on cold packs or ambient

Scientific 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).

Selected References

1. Kaul S.C., *et al.* (1993) *Biochem Biophys Res Commun.* 193: 348-355.
2. Wadhwa R., *et al.* (1993) *J Biol Chem* 268: 6615-6621.
3. Schneider H.C., *et al.* (1994) *Nature* 371: 768-774.
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.
9. Mizzen L.A., *et al.* (1991) *Cell Regulation.* 2: 165-179.
10. Leustek U.K., *et al.* (1989) *PNAS USA.* 86: 7805-7808.

Certificate of Analysis

1 µg/mL of SMC-133 was sufficient for detection of Grp75 in 10µg of heat shocked HeLa lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

Material Safety Data Sheet

Anti-GRP75 (Monoclonal Antibody) SMC-133

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The below information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. StressMarq shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalogue for additional terms and conditions of sale.

Hazardous Ingredients

The physical, chemical and toxicological properties of these components have not been fully investigated. It is recommended that all laboratory personnel follow standard laboratory safety procedures when handling this product. Safety procedures should include wearing OSHA approved safety glasses, gloves and protective clothing. Direct physical contact with this product should be avoided.

<u>Known Hazardous Components</u>	<u>CAS Number</u>	<u>Percent</u>
Sodium Azide	26628-22-8	0.09

Physical Data

This product consists of mouse immunoglobulin in PBS containing 0.09% azide in 50% glycerol shipped on gel packs. The physical properties of this product have not been investigated thoroughly.

Fire and Explosion Hazard and Reactivity Data

NOT APPLICABLE

Toxicological Properties

May be harmful by inhalation, ingestion, or skin absorption. The toxicological properties of this product have not been investigated thoroughly. Exercise due caution.

Preventative Measures

Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.

Spill and Leak Procedures

Observe all federal, state and local environmental regulations.

- Wear protective equipment.
- Absorb on sand or vermiculite and place in closed containers for disposal.
- Dispose or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

First Aid Measures

- If swallowed, wash out mouth with water, provided person is conscious. Call a physician.
- In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If a rash or other irritation develops, call a physician.
- If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
- In case of eye contact, flush with copious amounts of water for at least 15 minutes while separating the eyelids with fingers. Call a physician.

Authorized: StressMarq Biosciences Inc.
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