

Anti-HSP22

Catalog# SMC-187 C/D

Size: 25/100µg

PO Box 55036 Cadboro Bay
3825 Cadboro Bay Rd,
Victoria, BC V8N 4G0, Canada

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

StressMarq

Biosciences Inc.

Orders • sales@stressmarq.com
Tel: • +1 250 294 9065
Fax: • +1 250 294 9025
Email • info@stressmarq.com
Web • www.stressmarq.com

| | |
|------------------------------------|--|
| Product | Mouse anti-Hsp22 antibody; monoclonal |
| Clone | 3C12-H11 |
| Immunogen | His-tagged human recombinant hsp22 |
| Host and Subclass | Mouse, IgG1 kappa |
| Cited Applications | WB, IHC, ELISA, IF |
| Specificity | Detects endogenous and exogenous hsp22 in monomeric, dimeric and tetrameric (weak) forms in WB. Does not cross react with alpha crystalline. Exogenous hsp22 detected in dimeric form. |
| Species cross-reactivity | Human, mouse, rat |
| Format | Protein G purified in PBS pH7.4, 50% glycerol in 0.09% sodium azide. |
| Concentration and Working dilution | 1mg/ml, 1:2000 (WB) |
| Storage and stability | -20°C; 1 year+; shipped on cold packs or ambient |

Scientific Background

Hsp22 (HSPB8) is a 196-amino acid protein that is a member of the small heat shock protein super-family and the human protein is most closely related to Hsp27. Similar to most other sHSPs, Hsp22 is predominately transcribed in skeletal muscle and heart, as well as the placenta (1). Hsp22 is a monomeric protein which interacts with HSPB1. It displays temperature-dependent chaperone activity.

In a two hybrid screen, HspB8 interacted preferentially with a triple aspartate form of Hsp27 which mimics Hsp27 phosphorylated at Ser15, Ser78, and Ser82, as compared to wild-type Hsp27 (2). HSPB8 has two binding domains (N and C Terminal) that are specific for different binding partners, and has the ability to bind itself and other sHSPs (3). The chaperone-like activity is of great importance to the function of Hsp22 in various

processes including proliferation, apoptosis and macroautophagy (4).

Mutations in the HSPB8 gene are associated with the inherited peripheral neuropathies, autosomal dominant distal hereditary motor neuropathy type IIA (dSMA) and axonal Charcot-Marie-Tooth disease type 2L (CMT2L) (5).

Selected References

1. Kappe G., *et al.* (2001) *Biochem Biophys Acta* 1520: 1-6.
2. Benndorf R., *et al.* (2001) *J Biol Chem* 276: 26753-26761.
3. Sun X., *et al.* (2004) *J Biol Chem* 279: 2394-2402.
4. Kim M.V., *et al.* (2004) *Biochem Biophys Res Commun* 325: 649-652.
5. Wilhelmus M.M., *et al.* (2006) *Acta Neuropathol (Berl)* 111: 139-149.

Certificate of Analysis

1 µg/mL of SMC-187 was sufficient for detection of Hsp22 in 20 µg of whole rat tissue extract by ECL immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

Material Safety Data Sheet

Anti-Hsp22 (Monoclonal Antibody) SMC-187

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

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> |
|-----------------------------------|-------------------|----------------|
| None | | |

Physical Data

This product consists of mouse immunoglobulin in 50% glycerol containing sodium azide 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.
Creation Date: 09/02/2010