

Anti-Hsp40 (Ydj1)

Catalog# SMC-166 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-Hsp40 antibody; monoclonal
Clone	2A7.H6
Immunogen	Full length protein HSP40 (YDJ1)
Host and Subclass	Mouse, IgG ₁ kappa
Cited Applications	WB, ELISA, IP other applications not tested
Specificity	~40kDa
Species cross-reactivity	Yeast, does not cross react with human, mouse, rat
Format	Protein G Purified in 0.09% sodium azide in 50% glycerol
Concentration and working dilution	1.0mg/mL; 1/2000 dilution (WB)
Storage and stability	-20°C; 1 year+; shipped on cold packs or ambient

Selected References

- Cheetham M.E. and Caplan A.J. (1998) *Cell Stress Chaperones* 3: 28-36.
- Fan C.Y., et al. (2003) *Cell Stress Chaperones* 8: 309-316.
- Terda K., et al. (1997) *J Cell Biol.* 139: 1089-1095.
- Lu Z. and Cyr D.M. (1998) *J Biol Chem.* 273: 27824-27830.
- Liberek K. et al. (1991) *Proc. Natl. Acad. Sci. USA* 88: 2874-2878.
- Cyr D.M., et al. (1992) *J Biol Chem.* 267: 20927-20931.
- Höhfeld J., et al. (2001) *EMBO Rep.* 2: 885-890.

Scientific Background

Human Hsp40/DnaJ proteins comprise a large protein family, members of which feature the J domain (named after the bacterial DnaJ protein) (1). The J-domain spans the first 75 N-terminal amino acids and is separated from the C-terminal by a glycine/phenylalanine-rich domain (2). There are two main types of Hsp40; type I DNAJ proteins including HDJ2 and yeast Ydj1; type II includes yeast Sis1 and human Hdj1. Whereas type I possesses a zinc finger domain which helps in the function of protein folding. (3, 4), type II does not.

Members of the Hsp40/DnaJ family play diverse roles in many cellular processes, such as folding, translocation, degradation and assembly of multi-protein complexes. Hsp40 stimulates the ATPase activity of Hsp70 which in turn causes conformational changes of the unfolded proteins (5, 6). The Hsp40-Hsp70-unfolded protein complex further binds to co-chaperones Hip, Hop and HSP90 which leads to protein folding, or components of protein degradation machinery CHIP and BAG-1 (7).

Certificate of Analysis

0.5 µg/mL of SMC-166 was sufficient for detection of 50ng YDJ1 by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

Material Safety Data Sheet

Anti-Hsp40, Ydj1 (Monoclonal Antibody) SMC-166

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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% sodium 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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