

Anti-HSPB2 (MKBP)

Catalog# SPC-194C/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	Rabbit anti-MKBP antibody; polyclonal
Clone	N/A
Immunogen	Synthetic peptide
Host and Subclass	Rabbit polyclonal
Cited Applications	WB
Specificity	~27kDa.
Species cross-reactivity	Human, mouse, rat
Format	Affinity Purified. In PBS, 50% glycerol and 0.02% sodium azide.
Concentration and working dilution	1mg/mL; 1:1000 for WB
Storage and stability	-20°C; 1 year+; shipped on cold packs or ambient

Selected References

1. Pinz I., *et al.* (2008) *FASEB J.* 22: 84-92
2. Suzuki A., *et al.* (1998) *J Cell Bio.* 140(5): 1113-1124.
3. Sugiyama Y., *et al.* (2000) *J Biol Chem.* 275: 1095-1104.
4. Oshita S.E., *et al.* (2010) *Breast Cancer Res Treat.* Epub: 20087649.

Certificate of Analysis

1 µg/mL of SPC-194 was sufficient for detection of MKBP in 10µg of human cell line mixed lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.

Scientific Background

HSPB2, also known as MKBP is the most divergent member of the sHSP family with only 30% sequence identity to all other mammalian sHSPs (1). MKBP is known to associate specifically with myotonic dystrophy protein kinase (DMPK) in skeletal muscle. MKBP enhances the kinase activity of DMPK and protects it from heat-induced activation. MKBP also shows a unique nature compared to other sHSPs, in that the expression of MKBP is not induced by heat shock (2). In unstressed skeletal muscle, MKBP forms large oligomeric complexes with HSPB3 in the cytosol which are localized on mitochondria and the neuromuscular junction (1, 3). During stress, these complexes dissolve and MKBP's localization to mitochondria increases, leading to increased cell survival. Pinz *et al.* tried to find a distinct role for MKBP in terms of cardiac mechanics and finds that it is required for normal systolic performance and normal cardiac energetic (1).

HSPB2 has also been found to be expressed in several cancer cell lines, including human breast cancer, suggesting that MKBP may be an important factor in tumor transformation and metastasis (4).

Material Safety Data Sheet

Anti-MKBP (Polyclonal Antibody) SPC-194

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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	0.02

Physical Data

This product consists of affinity purified material in PBS containing 0.02% 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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