

HSP65 Protein (Native)

Catalog# SPR-116A/B/C

Size: 50/100/200µg

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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	Recombinant Hsp65 Protein from <i>Mycobacterium bovis</i> BCG, native sequence
Source	Recombinant <i>Mycobacterium bovis</i> BCG Hsp65 expressed in <i>E.coli</i>
Cited Applications	WB control
Purity	This protein is >90% pure as determined by SDS-PAGE analysis.
Format	Affinity Purified <i>Mycobacterium bovis</i> BCG Hsp65 in 20mM Tris, 150mM NaCl and 10% glycerol.
Concentration	0.5µg/mL
Storage and stability	-20°C; 1 year+; shipped on cold packs

Scientific Background

Hsp65 isolated from *Mycobacterium bovis* BCG, is a member of the hsp60 family of heat shock proteins (2, 3). Hsp60s are mitochondrial chaperonins that are typically held responsible for the transportation and refolding of proteins from the cytoplasm into the mitochondrial matrix. In addition to its role as a heat shock protein, Hsp60 functions as a chaperonin to assist in folding linear amino acid chains into their respective three-dimensional structure. Hsp60s are a ubiquitous class of HSPs that specifically promote the folding and assembly of cellular polypeptides in an ATP-dependent manner (1).

Specifically, sequence comparison of Hsp65 from different mycobacterium strains showed that the protein sequence of *M. bovis* BCG is identical to that of *M.*

tuberculosis, and very similar to that of *M. leprae*, the pathogens that cause tuberculosis and tuberculoid leprosy, respectively (2,4). *Mycobacterium bovis* BCG Hsp65 was identified as the immunodominant antigen during mycobacterial diseases and vaccination. It is also believed to be the antigen that induces autoimmune disease, such as adjuvant arthritis in rats (5, 6).

Selected References

1. Koll H., *et al.* (1992) *Cell* 68: 1163-1175.
2. Thole J.E.R., *et al.* (1985) *Infect. Immuno.* 50: 800-806.
3. Thole J.E.R., *et al.*, (1987) *Infect. Immuno.* 55: 1466-1475.
4. Shinnick T.M. Sweetser D., Thole J., van Embden J. and Young R.A. (1987) *Infect. Immuno.* 55: 1932-1935.
5. Van Eden W., *et al.* (1988) *Nature* 331: 171-178.
6. Cobelens P.M., *et al.* (2002) *Rheumatology* 41: 775-779.

Certificate of Analysis

This product has been certified >90% pure using SDS-PAGE analysis.

Material Safety Data Sheet

HSP65 Protein SPR-116

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 purified protein in Tris buffer in 10% 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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