

HOP Protein (Active)

Catalog# SPR-302A/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 Human HOP Protein, his-tagged
Source	Human CDNA; SwissProt: P31948
Cited Applications	WB control, functional/activity studies
Purity	>90%
Format	20mM HEPES buffer p7.2, 80mM NaCl in 10% glycerol
Concentration	1mg/mL
Storage and stability	-20°C; 1 year+; shipped on cold packs or ambient

Scientific Background

Hop (Hsp70/Hsp90 Organizing Protein), or Stress-induced Phosphoprotein 1 (STI1) as it is also known, is a 60kDa protein that belongs to the large group of co-chaperones which regulate and assist the major chaperones. It is located in diverse cellular regions and can move between the cytoplasm and the nucleus.

It functions to reversibly link together the protein chaperones Hsp70 and Hsp90. HOP contains three tetratricopeptide repeat (TPR) domains, TPR1, TPR2a and TPR2b. Hsp70 binding has been localized to TPR1 and sp90 binding have been localized to TPR2a (1). It has also been found to modulate the chaperone activities of the linked proteins and possible interacts with other chaperones and proteins. It has also been found to participate in other complexes besides the Hsp70/Hsp90 one (2).

HOP is closely related to human 63kDa protein that is sensitive to simian virus SV40 transformation, and is related to the yeast heat-shock- responsive STI1 gene product (3, 4).

Selected References

1. Flom G., Behal R.H., Rosen L., Cole D.G., Johnson J.L. (2007) *Biochem J.* 404(1): 159-167.
2. Harst A., Lin H., Obermann W.M. (2005) *Biochem J.* 387 (pt3): 789-796.
3. Honore B.H., *et al.* (1992) *J Biol Chem.* 267: 8485-8491.
4. Nicolet C.M., *et al.* (1989) *Mol Cell Bio.* 9: 3638-3646.

Certificate of Analysis

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

4µM SPR-302, when added to 2µM SPR-300 (Aha1)-activated Hsp90 (2µM; His-tagged Hsp90 beta) in 33mM Hepes pH7.2, 30mM NaCl, 5mM MgCl₂, 1mM DTT, 1.5mM ATP in a 100ul reaction at 37 degrees C, eliminated all Aha1-mediated ATPase stimulation as well as intrinsic Hsp90 ATPase activity.

(This is an enzyme-linked ATP regeneration assay tracking loss of NADH absorbance at 340nm).

Material Safety Data Sheet

HOP (Human) Protein SPR-302

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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>
None		

Physical Data

This product consists of purified protein in Hepes buffer and 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.

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