PRODUCT INFORMATION

Hsc70 (human recombinant)

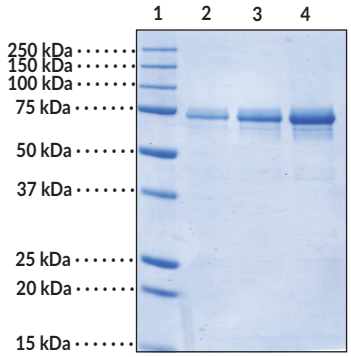
Item No. 22737

Overview and Properties

Synonyms:	Constitutive Heat Shock Protein 70, EC 3.6.3.51, Heat Shock 70 kDa Protein 8, Heat Shock Cognate 71 kDa Protein, Hsc54 Protein, Hsc71 Protein, Hsc73 Protein, Hsp71 Protein, Hsp74 Protein, HspA10 Protein, HspA8 Protein, LAP1 Protein, Lipopolysaccharide-associated Protein 1, NIP71 Protein
Source:	N-terminal Histidine-tagged Hsc70 (human recombinant) purified from *E. coli*
Amino acids:	2-646 (full length)
Uniprot No.:	P11142
Molecular Weight:	73.03 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	***batch specific*** (estimated by SDS-PAGE)
Supplied in:	***batch specific***
Protein Concentration:	***batch specific*** mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Hsc70 (1 µg)
Lane 3: Hsc70 (2 µg)
Lane 4: Hsc70 (4 µg)

Representative gel image shown; actual purity may vary between batches but protein will be ≥85% pure.

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Description

Hsc70 is a chaperone from the Hsp70 chaperone family encoded by the HspA8 gene, that shares 85% sequence identity to Hsp70 (encoded by HspA1A gene), and is one of the constitutively expressed members from this family.[1] Hsc70 acts as the main housekeeping protein but is also involved in many functions such as ubiquitin-proteasome degradation pathway and transporting cytoplasmic proteins into the nucleus.[2,3] Hsc70 also garnered interests as a potential therapeutic target since promoting accumulation of unfolded proteins can serve as a potential strategy to cause tumor death.[4]

References

1. Stricher, F., Macri, C., and Muller, S. HSPA8/HSC70 chaperone protein: Structure, function, and chemical targeting. *Autophagy* **9(12)**, 1937-1954 (2013).
2. Bercovich, B., Stancovski, I., Mayer, A., *et al*. Ubiquitin-dependent degradation of certain protein substrates *in vitro* requires the molecular chaperone Hsc70. *J. Biol. Chem*. **272(14)**, 9002-9010 (1997).
3. Dang, C.V. and Lee, W.M. Nuclear and nucleolar targeting sequences of c-*erb*-A, c-*myb*, N-*myc*, p53, HSP70, and HIV *tat* proteins. *J. Biol. Chem.* **264(30)**, 18019-18023 (1989).
4. Leu, J.I., Pimkina, J., Frank, A., *et al*. A small molecule inhibitor of inducible heat shock protein 70. *Molecular Cell* **36(1)**, 15-27 (2009).

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