

# PRODUCT INFORMATION



## Hsc70 (human, recombinant)

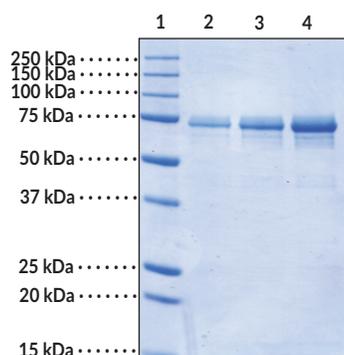
Item No. 22737

### Overview and Properties

**Synonym:** Heat Shock Cognate 70  
**Source:** N-terminal Histidine-tagged Hsc70 (human, recombinant) expressed in *E. coli*  
**Amino acids:** 2-646 (full length)  
**Uniprot No.:** P11142  
**Molecular Weight:** 72.9 kDa  
**Storage:** -80°C (as supplied); avoid freeze/thaw cycles and it is recommended to aliquot the protein.  
**Stability:** ≥1 year  
**Purity:** ≥90% estimated by SDS-PAGE  
**Supplied in:** 50 mM HEPES, pH 8.0, and 150 mM sodium chloride  
**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.*

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM

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## Description

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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.<sup>1</sup> 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.<sup>2,3</sup> 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.<sup>4</sup>

## References

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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).

CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM