

# Active Recombinant Full Length Human HSPA1A Protein, C-Flag-tagged

Cat. No. HSPA1A-116HFL Lot. No. (See product label)

## SPECIFICATION

### Product Overview

Recombinant Full Length Human HSPA1A Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.

### Species

Human

### Source

Mammalian Cells

### Description

This intronless gene encodes a 70kDa heat shock protein which is a member of the heat shock protein 70 family. In conjunction with other heat shock proteins, this protein stabilizes existing proteins against aggregation and mediates the folding of newly translated proteins in the cytosol and in organelles. It is also involved in the ubiquitin-proteasome pathway through interaction with the AU-rich element RNA-binding protein 1. The gene is located in the major histocompatibility complex class III region, in a cluster with two closely related genes which encode similar proteins.

### Form

25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.

### Bio-activity

Higher specific activity than E. coli derived HSP70: Origene human recombinant Hsp70 (TP300270) was compared side-by-side with E. coli derived Hsp70 in a firefly luciferase refolding assay. Percentage of refolding is relative to an identical load of non-denatured luciferase in the reaction. The human cell produced Hsp70 is approximately 30% more active than the bacterial produced Hsp70.

### Molecular Mass

69.9 kDa

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**AA Sequence**

MAKAAAIGIDLGTTYSCVGVFQHGKVEIANDQGNRTTPSYVAFTDTERLIGDAAKNQ  
 VALNPQNTVFDA KRLIGRKFQDPVVQSDMKHWPVQVINDGDKPKVQVSYKGETKA  
 FYPEEISSMVLTKMKEIAEAYLGYPT NAVITVPAYFNDSQRQATKDAGVIAGLNVLR  
 IINEPTAAAIAYGLDRTGKGERNVLIFDLGGGTFDVSIL TIDGIFEVKATAGDTHLGG  
 EDFDNRLVNHFVEEFKRKHKKDISQNKRAVRRRLTACERAKRTLSSSTQA SLEIDSL  
 FEGIDFYTSITRARFEELCSDLFRSTLEPVEKALRDAKLDKAQIHDLVLVGGSTRIPKV  
 QKLL QDFFNDRDLNKSINPDEAVAYGAAVQAAILMGDKSENVQDLLLDVAPLSLGL  
 ETAGGVM TALIKRNSTI PTKQTQIFTTYSNQPGLVLIQVYEGERAMTKDNNLLGRFE  
 LSGIPPAPRGVPQIEVTFDIDANGILNVTA TDKSTGKANKITITNDKGRLSKEEIERMV  
 QEAEKYKAEDEVQRERSAKNALESYAFNMKSAVEDEGLKG KISEADKKKVLDKC  
 QEVISWLDANTLAEKDEFEHKRKELEQVCNPIISGLYQGAGGPGPGGFGAQQGPKGG  
 SSGSGPTIEEVDTRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Purity** > 80% as determined by SDS-PAGE and Coomassie blue staining.

**Stability** Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.

**Storage** Store at -80 centigrade.

**Concentration** >50 ug/mL as determined by microplate BCA method.

**Preparation** Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.

**Protein Pathways** Antigen processing and presentation, Endocytosis, MAPK signaling pathway, Prion diseases, Spliceosome

**Full Length** Full L.

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## GENE INFORMATION

<b>Gene Name</b>	HSPA1A heat shock protein family A (Hsp70) member 1A [ Homo sapiens (human) ]
<b>Official Symbol</b>	HSPA1A
<b>Synonyms</b>	HSP70; HSP72; HSPA1; HSP70I; HSP70-1; HSP70-2; HSP70.1; HSP70.2; HSP70-1A; HEL-S-103
<b>Gene ID</b>	3303
<b>mRNA Refseq</b>	NM_005345.6
<b>Protein Refseq</b>	NP_005336.3
<b>MIM</b>	140550
<b>UniProt ID</b>	P0DMV8

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Coomassie blue staining of purified HSPA1A protein.

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