HSP70/HSP72 (rat), (recombinant)

Recombinant rat Hsp70/Hsp72, a cytosolic and nuclear chaperone that assists protein folding, prevents aggregation of nascent or misfolded proteins, and coordinates proteostasis in an ATP-dependent manner.

The 70 kDa heat shock protein Hsp70 belongs to the Hsp70 family of highly-related protein isoforms ranging in size from 66 kDa to 78 kDa. Hsc70 shares close biochemical and biological ties to Hsp70, and also belongs to the Hsp70 family. These proteins include cognate members found within major intracellular compartments and highly inducible isoforms predominantly cytoplasmic or nuclear in distribution. Members of the Hsp70 family function as molecular chaperones involved in such cellular functions as protein folding, transport, maturation and degradation, operating in an ATP-dependent manner. The molecular chaperones of the Hsp70 family recognize and bind to nascent polypeptide chains or partially folded intermediates of proteins, preventing their aggregation and misfolding, and the binding of ATP triggers a critical conformational change leading to the release of the bound substrate protein. Data demonstrates that with a ubiquitin -like domain at its amino terminus and its association with the 26S proteosome in HeLa cells , Bag-1 modulates the chaperone activity of Hsc70 and Hsp70. These findings reveal Bag-1's role as a physical link between the Hsc70/Hsp70 chaperone system and the proteasome. Experimental data also shows that the ATPase domain and the substrate binding domain of Hsp70 (or Hsc70) cooperate to form a co-chaperone-chaperone complex with the synaptic vesicle cysteine string protein (csp), essential for normal neurotransmitter release.

Citations: 12 View Online »

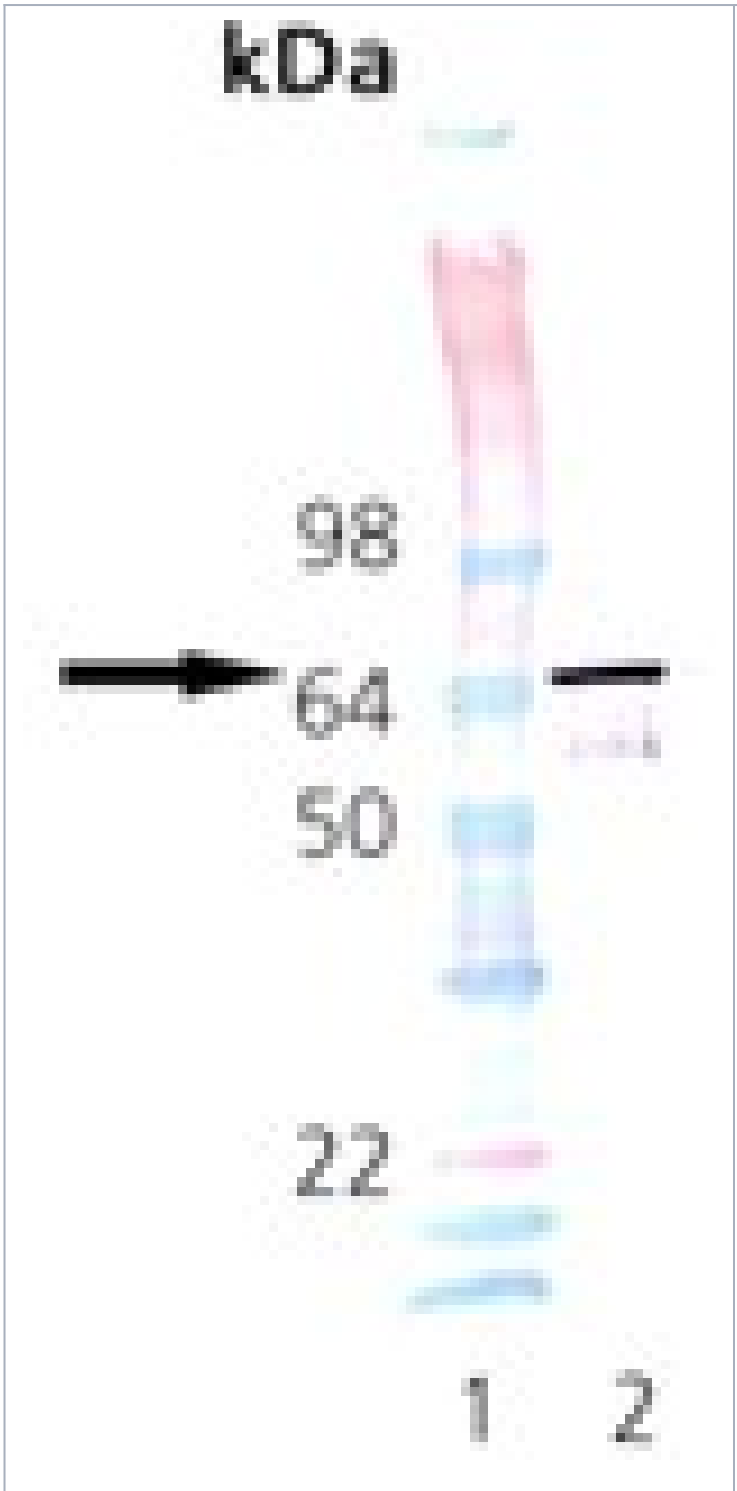
Ordering Information

Order Online »

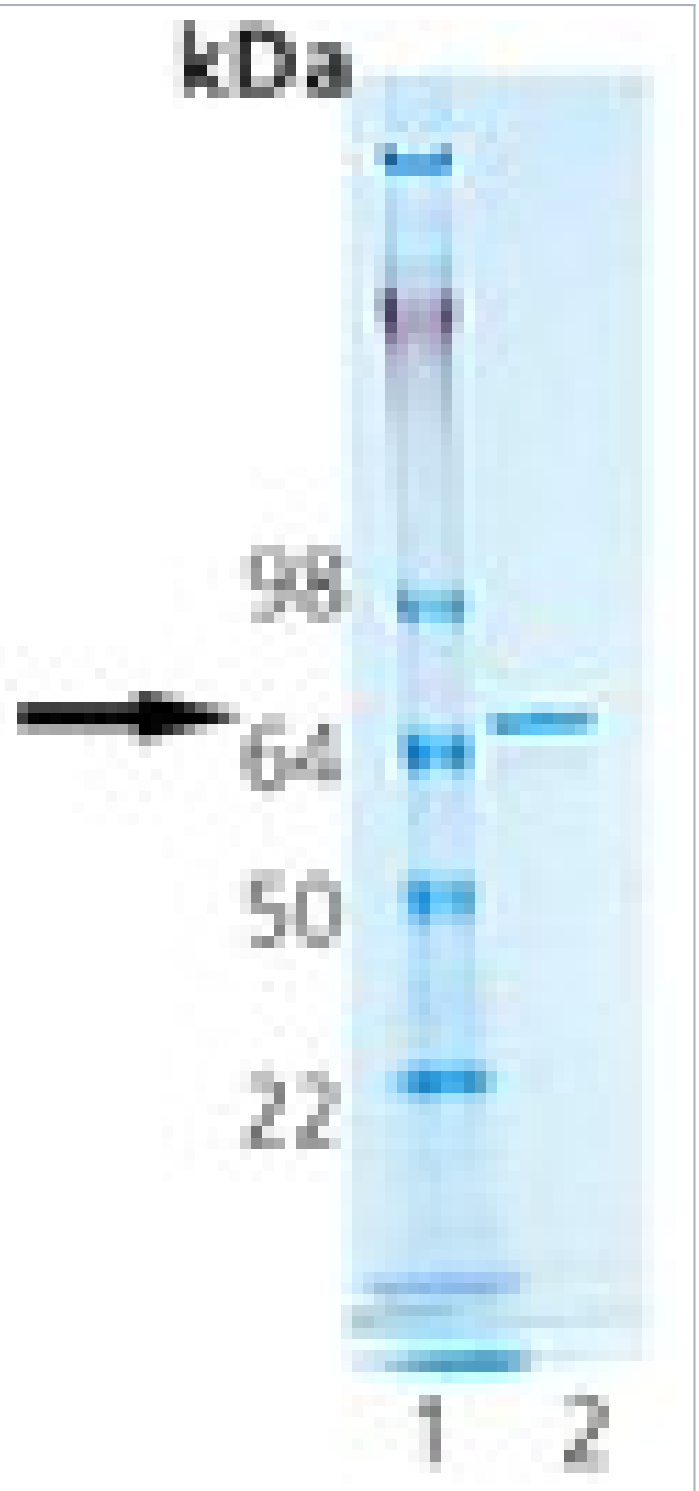
ADI-SPP-758-D	50µg
ADI-SPP-758-F	200µg

Manuals, SDS & CofA

View Online »



SDS-PAGE analysis of 0.5µg purified Rat HSP70 Protein.



Western Blot analysis of 100ng of purified Rat HSP70 Protein (Prod. No. ADI-SPP-758) probed with Anti-HSP70 mAb (Prod. No. ADI-SPA-810) at 1µg/ml.

Handling & Storage

Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status RUO - Research Use Only

Product Details

Alternative Name	Heat shock protein 70, HspA1A, HspA1B
Application Notes	ATPase activity assay (positive). Western blot control.
Formulation	Liquid. In 50mM TRIS, pH 7.5, containing 1.0mM DTT, 100mM sodium chloride, and 0.1mM PMSF
MW	~72kDa
Purity	≥90% (SDS-PAGE; Western blot)
Purity Detail	Purified by multi-step chromatography.
Source	Produced in *E. coli*.
UniProt ID	P0DMW0 (Hspa1a), P0DMW1 (Hspa1b)

Last modified: October 9, 2025

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