

Hsc70 (Hsp73) Recombinant Protein

Product Specifications

Catalog Number:	SPP-751
Product Description:	Recombinant Bovine Hsc70 (Hsp73) Protein
Format:	30 mM Tris pH 7.5, 300 mM NaCl, 2 mM DTT, 1 mM EDTA
Application:	WB Control: 100 ng of protein recommended (Colorimetric) ATPase Activity Assay: Positive <i>The optimal dilution for a specific application must be determined by the investigator Other applications not tested</i>
Purity:	>80% pure as determined by SDS-PAGE and Western blot analyses
Molecular Weight:	~ 70 kDa observed
Concentration:	See product label
Endotoxin Concentration:	< 50 EU/mg as determined by Limulus Amebocyte Lysate (LAL) gel clot assay
Storage:	Store at -70°C <i>Shipping conditions may differ from the recommended storage temperature</i>
Related Products:	
SPA-815	Hsc70 (Hsp73) Monoclonal Antibody (1B5)
LYC-HL100	HeLa Cell Lysate
SAB-200	Rabbit anti-Rat IgG Polyclonal Antibody: HRP Conjugate
SPP-752	Hsc70 (Hsp73) Recombinant Protein (ATPase fragment)
SPA-816	Hsc70 (Hsp73) Polyclonal Antibody

Background:

The 70 kDa heat shock cognate protein, hsc70 is biochemically and biologically related to hsp70 and is part of the hsp70 family which contains a number of highly-related protein isoforms ranging in size from 66 kDa to 78 kDa. These proteins include both cognate members which are found within major intracellular compartments and highly inducible isoforms which appear to be predominantly cytoplasmic or nuclear in distribution¹. Members of the hsp70 family are ATP-dependent molecular chaperones which are involved in many cellular functions such as protein folding, transport, maturation and degradation. The molecular chaperones of the hsp70 family recognize and bind to nascent polypeptide chains as well as partially folded intermediates of proteins preventing their aggregation and misfolding. Binding of ATP triggers a conformational change leading to the release of the bound substrate protein². Recent data has demonstrated that BAG-1 which possesses a ubiquitin-like domain at its amino terminus modulates the chaperone activity of hsc70 and hsp70. These findings reveal a role of BAG-1 as a physical link between the hsc70/hsp70 chaperone system and the proteasome³. There is also experimental data which shows that the ATPase domain and the substrate binding domain of hsc70 cooperate and form a chaperone complex with the synaptic vesicle cysteine string protein (csp) which is essential for normal neurotransmitter release⁴.

References:

1. Tavaría, M., Gabriele, T., Kola, I. and Anderson, R.L. (1996) *Cell Stress & Chaperones* **1**: 23-28.
2. Fink A.L. (1999) *Physiol Rev* **79**: 425-449.
3. Luders, J., Demand, J. and Hohfeld, J. (2000) *J Biol Chem* **275**: 4613-4617.
4. Stahl B., Tobaben, S. and Sudhof, T.C (1999) *Eur. J. Cell Biol* **78**: 375-381.

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