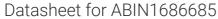
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HSP70 Protein (full length)



Go to Product page

Overview

| Quantity: | 100 μg |
|--------------------------|---|
| Target: | HSP70 |
| Protein Characteristics: | full length |
| Origin: | Human |
| Source: | Escherichia coli (E. coli) |
| Protein Type: | Recombinant |
| Biological Activity: | Active |
| Application: | SDS-PAGE (SDS), Western Blotting (WB), Functional Studies (Func), Activity Assay (AcA), ELISA |

Product Details

Sequence:

MAKAAAIGID LGTTYSCVGV FQHGKVEIIA NDQGNRTTPS YVAFTDTERL IGDAAKNQVA LNPQNTVFDA KRLIGRKFGD PVVQSDMKHW PFQVINDGDK PKVQVSYKGE TKAFYPEEIS SMVLTKMKEI AEAYLGYPVT NAVITVPAYF NDSQRQATKD AGVIAGLNVL RIINEPTAAA IAYGLDRTGK GERNVLIFDL GGGTFDVSIL TIDDGIFEVK ATAGDTHLGG EDFDNRLVNH FVEEFKRKHK KDISQNKRAV RRLRTACERA KRTLSSSTQA SLEIDSLFEG IDFYTSITRA RFEELCSDLF RSTLEPVEKA LRDAKLDKAQ IHDLVLVGGS TRIPKVQKLL QDFFNGRDLN KSINPDEAVA YGAAVQAAIL MGDKSENVQD LLLLDVAPLS LGLETAGGVM TALIKRNSTI PTKQTQIFTT YSDNQPGVLI QVYEGERAMT KDNNLLGRFE LSGIPPAPRG VPQIEVTFDI DANGILNVTA TDKSTGKANK ITITNDKGRL SKEEIERMVQ EAEKYKAEDE VQRERVSAKN ALESYAFNMK SAVEDEGLKG KISEADKKKV LDKCQEVISW LDANTLAEKD EFEHKRKELE QVCNPIISGL YQGAGGPGPG GFGAQGPKGG SGSGPTIEEV D

Specificity: ~70 kDa

Product Details

| Product Details | |
|------------------------------|---|
| Characteristics: | The protein has ATPase activity at the time of manufacture of 3.0 µM phosphate liberated/hr/µ |
| | g protein in a 200 μ L reaction at 37 °C (pH 7.5) in the presence of 20 μ L of 1 mM ATP using a |
| | Malachite Green assay. |
| Purification: | Multi-Step Purified |
| Purity: | >95% |
| Biological Activity Comment: | ATPase active |
| Target Details | |
| Target: | HSP70 |
| Alternative Name: | Hsp70 (HSP70 Products) |
| Background: | HSP70 genes encode abundant heat-inducible 70- kDa HSPs (HSP70s). In most eukaryotes |
| | HSP70 genes exist as part of a multigene family. They are found in most cellular compartment |
| | of eukaryotes including nuclei, mitochondria, chloroplasts, the endoplasmic reticulum and the |
| | cytosol, as well as in bacteria. The genes show a high degree of conservation, having at least |
| | 50 % identity (2). The N-terminal two thirds of HSP70s are more conserved than the C-terminal |
| | third. HSP70 binds ATP with high affinity and possesses a weak ATPase activity which can be |
| | stimulated by binding to unfolded proteins and synthetic peptides (3). When HSC70 |
| | (constitutively expressed) present in mammalian cells was truncated, ATP binding activity was |
| | found to reside in an N-terminal fragment of 44 kDa which lacked peptide binding capacity. |
| | Polypeptide binding ability therefore resided within the C-terminal half (4). The structure of this |
| | ATP binding domain displays multiple features of nucleotide binding proteins (5). All HSP70s, |
| | regardless of location, bind proteins, particularly unfolded ones. 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. The binding of ATP |
| | triggers a critical conformational change leading to the release of the bound substrate protein |
| | (6). The universal ability of HSP70s to undergo cycles of binding to and release from |
| | hydrophobic stretches of partially unfolded proteins determines their role in a great variety of |
| | vital intracellular functions such as protein synthesis, protein folding and oligomerization and |
| | protein transport. Looking for more information on HSP70? Visit our new HSP70 Scientific |
| | Resource Guide at http://www.HSP70.com. |
| Molecular Weight: | approx. 70 kDa |

Molecular Weight: approx. 70 kDa

Gene ID: 3303

NCBI Accession: NM_005345

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Application Details

| Application Notes: | Optimal working dilution should be determined by the investigator. |
|--------------------|--|
| Comment: | This product has been certified >95% pure using SDS-PAGE analysis. The protein has ATPase activity at the time of manufacture of 3.0µM phosphate liberated/hr/µg protein in a 200µl reaction at 37°C (pH7.5) in the presence of 20ul of 1mM ATP using a Malachite Green assay. |
| Restrictions: | For Research Use only |
| Handling | |
| Concentration: | Lot specific |
| Buffer: | 50 mM Tris/HCl pH 7.5, 2.5 mM Bme, 0.15M NaCl, 10 % glycerol |
| Storage: | -20 °C |