10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

HSP70 (Crab) Antibody
Catalog # ASM10475

Specification

HSP70 (Crab) Antibody - Product Information

Application	**WB**
Primary Accession	B3VKG9
Other Accession	AFX62578
Host	**Rabbit**
Reactivity	**Crab**
Clonality	**Polyclonal**
Format	**APC**

Description
Rabbit Anti-Crab HSP70 (Crab) Polyclonal

Target/Specificity
Detects ~ 70kDa.

Other Names
HSP70 1 Antibody, HSP70 2 Antibody, HSP70.1 Antibody, HSP72 Antibody, HSPA1 Antibody, HSPA1A Antibody, HSPA1B Antibody

Immunogen
Crab protein peptide: NDQGNRTTPSYVA, 100% identical to a wide variety of species including Mouse, Rat, Drosophilia, Rice, Arabidopsis, Bovine, Nematode, Bonobos.

Purification
Protein A Purified

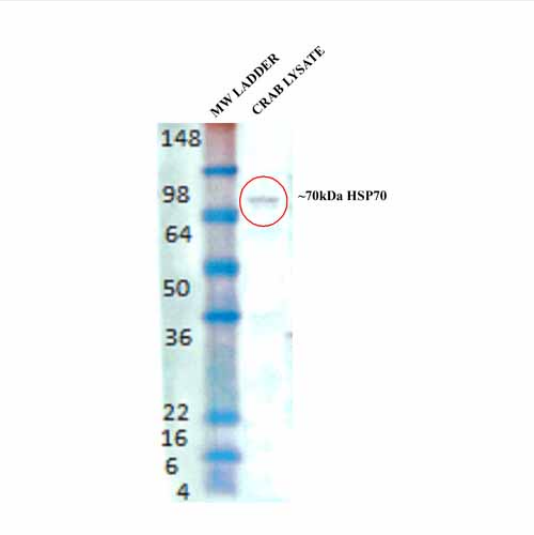
Storage	**-20ºC**

Storage Buffer
1X PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature	**Blue Ice or 4ºC**

Certificate of Analysis
1 µg/ml of SPC-318 was sufficient for detection of HSP70 in 20 µg of crab muscle lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.

Cellular Localization
Cytoplasm



Western blot analysis of Crab Cell Lysate showing detection of HSP70 protein using Rabbit Anti-HSP70 Polyclonal Antibody (ASM10475). Primary Antibody: Rabbit Anti-HSP70 Polyclonal Antibody (ASM10475) at 1:1000.

HSP70 (Crab) Antibody - 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 compartments 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 5O% identity (1, 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

HSP70 (Crab) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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.

HSP70 (Crab) Antibody - References

1. Welch W.J. and Suhan J.P. (1986) J.Cell Biol. 103: 2035-2050.
2. Boorstein W. R., Ziegelhoffer T. & Craig E. A. (1993) J. Mol. Evol. 38(1): 1-17.
3. Rothman J. (1989) Cell 59: 591 -601.
4. DeLuca-Flaherty et al. (1990) Cell 62: 875-887.
5. Bork P., Sander C. & Valencia A. (1992) Proc. Nut1 Acad. Sci. USA 89: 7290-7294.
6. Fink A.L. (1999) Physiol. Rev. 79: 425-449.
7. Hung T.H., et al. (2001) Am J Pathol. 159: 1031-1043.
8. Locke M. (2000) Cell Stress & Chaperones 5: 45-51.
9. Ianaro A., et al. (2001) FEBS Lett. 508: 61-66.
10. Trentin G.A. et al. (2001) J Biol Chem. 276: 13087-13095.