Product Information Sheet

Polyclonal Anti- *HSP70s*

Catalogue No. PA1214

Lot No. 09C01

Ig type rabbit IgG

Size 100µg/vial

Specificity

Human.

No cross reactivity with other proteins.

Recommended application

Western blot

Immunohistochemistry(P)

To reorder contact us at:

Antagene, Inc.

Toll Free: 1(866)964-2589

email: Info@antageneinc.com

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminal of human HSP70s, identical to the related rat and mouse sequence.

Purity

Immunogen affinity purified.

Application

	Concen-tration	Tested Species	Concluded Species	Antigen Retrieval
WB	1µg/ml	Hu	-	-
IHC-P	1-2µg/ml	Hu	-	By Heat
IHC-F	-	-	-	-
ICC	-	-	-	-

Other applications have not been tested.

Optimal dilutions should be determined by end user.

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg Thimerosal, 0.05mg NaN_3.

Reconstitution

0.2ml of distilled water will yield a concentration of 500µg/ml.

Storage

At -20˚C for one year. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for longer time.

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BACKGROUND

The 70 kilodalton heat shock proteins (Hsp70s) are a family of ubiquitously expressed heat shock proteins. The Hsp70s are an important part of the cell's machinery for protein folding, and help to protect cells from stress.[1,2] All of the Hsp70 proteins have three major functional domains: An N-terminal ATPase domain binds ATP (Adenosine triphosphate) and hydrolyzes it to ADP (Adenosine diphosphate); A substrate binding domain contains a groove with an affinity for neutral, hydrophobic amino acid residues; A C-terminal domain rich in alpha helical structure acts as a 'lid' for the substrate binding domain. By binding tightly to partially-synthesized peptide sequences (incomplete proteins), Hsp70 prevents them from aggregating and being rendered nonfunctional. And it also can act to protect cells from thermal or oxidative stress. Finally, Hsp70 seems to be able to participate in disposal of damaged or defective proteins. Interaction with CHIP (*C*arboxyl-terminus of *H*sp70 *I*nteracting *P*rotein)–an E3 ubiquitin ligase–allows Hsp70 to pass proteins to the cell's ubiquitination and proteolysis pathways.[3]

REFERENCE

1. Tavaria M, Gabriele T, Kola I, Anderson RL (April 1996). "A hitchhiker's guide to the human Hsp70 family". *Cell Stress Chaperones* 1 (1): 23–8.
2. Morano KA (October 2007). "New tricks for an old dog: the evolving world of Hsp70". *Ann. N. Y. Acad. Sci.* 1113: 1–14.
3. Luders, J.; Demand, J.; Hohfeld, J. (2000), *Journal of Biological Chemistry* 275 (7): 4613–461, http://www.jbc.org/cgi/content/full/275/7/4613, retrieved on 2009-04-07