

Datasheet for ABIN361821

anti-HSP70 antibody

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Overview

Quantity:	100 µL
Target:	HSP70
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This HSP70 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), ELISA, Immunofluorescence (IF), Immunoprecipitation (IP), Immunocytochemistry (ICC)

Product Details

Immunogen:	Recombinant Full length HSP70 Protein
Specificity:	Detects a ~70 kDa. May cross-react with HSC70 at lower dilutions.
Cross-Reactivity:	Beluga, Carp, Coral, Cow, Dog, Fish, Guinea Pig, Hamster, Human, Leishmania amazonensis, Monkey, Mouse, Pig, Plant, Rat, Shark, Sheep
Purification:	Peptide Affinity Purified

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 compartments

Target Details

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 (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 therefore resided within the C-terminal half (4). The structure of this ATPbinding 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>.

Gene ID:	3303
NCBI Accession:	NP_005336
UniProt:	P0DMV8 , P0DMV9

Application Details

Application Notes:	<ul style="list-style-type: none">• WB (1:1000)• IHC (1:100)• ICC/IF (1:100)• IP (1:100)• optimal dilutions for assays should be determined by the user.
Comment:	A 1:1000 dilution of ABIN361820 was sufficient for detection of HSP70 in 20 µg of HeLa cell lysate by ECL immunoblot analysis.
Restrictions:	For Research Use only

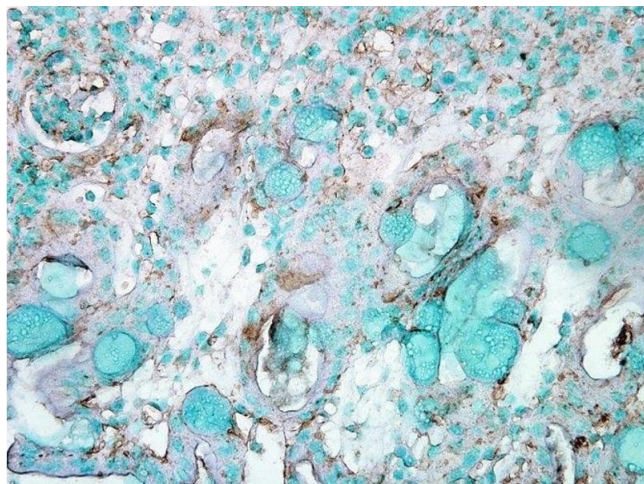
Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	-20°C

Publications

Product cited in: Ekuni, Tomofuji, Irie, Kasuyama, Umakoshi, Azuma, Tamaki, Sanbe, Endo, Yamamoto, Nishida, Morita: "Effects of periodontitis on aortic insulin resistance in an obese rat model." in: **Laboratory investigation; a journal of technical methods and pathology**, Vol. 90, Issue 3, pp. 348-59, (2010) ([PubMed](#)).

Images



Immunohistochemistry

Image 1. Immunohistochemistry analysis using Rabbit Anti-HSP70 Polyclonal Antibody (ABIN361820 and ABIN361821). Tissue: Inflamed colon. Species: Mouse. Fixation: Formalin. Primary Antibody: Rabbit Anti-HSP70 Polyclonal Antibody (ABIN361820 and ABIN361821) at 1:1000 for 12 hours at 4 °C. Secondary Antibody: Biotin Goat Anti-Rabbit at 1:2000 for 1 hour at RT. Counterstain: Methyl Green at 200 µL for 2 min at RT.

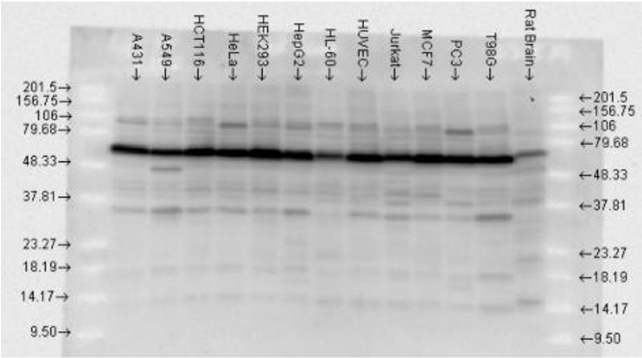


Image 2. Hsp70, human cell lines, polyclonal

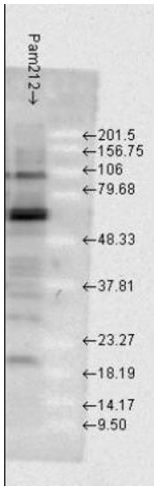


Image 3. Hsp70, Pam212 cell lysate

Please check the [product details page](#) for more images. Overall 9 images are available for ABIN361821.