Rabbit HSP70 Polyclonal Antibody | anti-HSP70 antibody

HSP70 Antibody (Acetyl Lys77): ATTO 594

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA253871	**Rabbit**	**Human; Mouse; Rat**	**Immunofluorescence, Immunocytochemistry, ELISA, Western Blot**

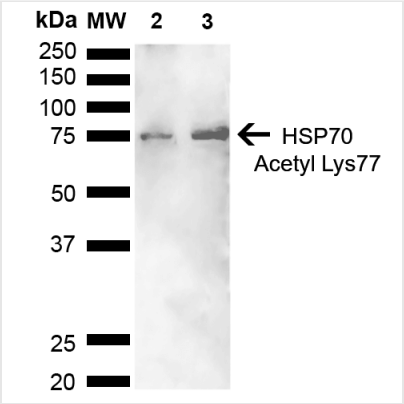
PRODUCT SYNONYMS

HSP70; Polyclonal Antibody; HSP70 Antibody (Acetyl Lys77): ATTO 594; Rabbit Anti-Human HSP70 Acetyl Lys77 Polyclonal; HSP70 Acetylated lysine 77 Antibody; HSP70 acLys77 Antibody; HSP70 acK77 Antibody; Acetylated Lysine HSP70 Antibody; HSP70 AcetylLys77 Antibody; HSP70 AceyltK77 Antibody; DnaK type molecular chaperone HSP70 1 antibody; Epididymis secretory protein Li 103 antibody; Heat shock 70 kDa protein 1 antibody; Heat shock 70 kDa protein 1/2 antibody; Heat shock 70 kDa protein 1A/1B antibody; Heat shock 70kDa protein 1A antibody; Heat shock 70kDa protein 1B antibody; Heat shock induced protein antibody; HEL S 103 antibody; HSP70 1 antibody; HSP70 1B antibody; HSP70 2 antibody; HSP70-1/HSP70-2 antibody; HSP70-1A antibody; HSP70.1 antibody; HSP70.1/HSP70.2 antibody; HSP70I antibody; HSP71_HUMAN antibody; HSP72 antibody; HSPA1 antibody; HSPA1A antibody; HSPA1B antibody; anti-HSP70 antibody

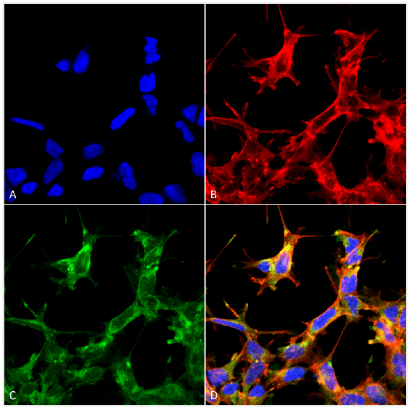
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human; Mouse; Rat
Clonality	Polyclonal
Specificity	Binds to acetylated lysine 77 on HSP70. Detects 70 kDa band.
Purity/Purification	Peptide Affinity Purified
Sequence Length	641
Applicable Applications for anti-HSP70 antibody	IF (Immunofluorescence), ICC (Immunocytochemistry), ELISA, WB (Western Blot)
Target	HSP70 Acetyl Lys77
Immunogen	Synthetic peptide from the N-terminal of Human HSP70 Acetyl Lys77 (1-100 aa), conjugated to Keyhole Limpet Haemocyanin (KLH).
Immunogen Species	Human
Cellular Localization	Cytoplasm; Nucleus
Conjugate	ATTO 594
Storage Buffer	PBS pH 7.4, 50% glycerol, 0.09% Sodium Azide
Preparation and Storage	Store at -20 degree C.

IMAGES



WB (Western Blot)
Western blot analysis of Human Cervical cancer cell line (HeLa) lysate showing detection of ~70 kDa HSP70 Acetyl Lys77 protein using Rabbit Anti-HSP70 Acetyl Lys77 Polyclonal Antibody (SPC-743). Lane 1: Molecular Weight Ladder (MW). Lane 2: Cervical Cancer cell line (HeLa) lysate. Lane 3: H2O2 Cervical Cancer cell line (HeLa) lysate. Load: 10 ug. Block: 5% Skim Milk in 1X TBST. Primary Antibody: Rabbit Anti-HSP70 Acetyl Lys77 Polyclonal Antibody (SPC-743) at 1:1000 for 2 hours at RT. Secondary Antibody: Goat Anti-Rabbit HRP:IgG at 1:3000 for 1 hour at RT. Color Development: ECL solution for 5 min at RT. Predicted/Observed Size: ~70 kDa.



ICC (Immunocytochemistry)
Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-HSP70 Acetyl Lys77 Polyclonal Antibody (SPC-743). Tissue: Embryonic kidney cells (HEK293) cultured overnight with 50 uM H2O2. Species: Human. Fixation: 5% Formaldehyde for 5 min. Primary Antibody: Rabbit Anti-HSP70 Acetyl Lys77 Polyclonal Antibody (SPC-743) at 1:60 for 30-60 min at RT. Secondary Antibody: Goat Anti-Mouse Alexa Fluor 488 at 1:1500 for 30-60 min at RT. Counterstain: Phalloidin Alexa Fluor 633 F-Actin stain; DAPI (blue) nuclear stain at 1:250, 1:50000 for 30-60 min at RT. Localization: Cytoplasmic. Magnification: 20X (2X Zoom). (A) DAPI (blue) nuclear stain. (B) Phalloidin Alex Fluor 633 F-Actin stain. (C) HSP70 Antibody (Acetyl Lys77). (D) Composite. Courtesy of: Dr. Robert Burke, University of Victoria.

ADDITIONAL INFORMATION

Related Product Information for anti-HSP70 antibody	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 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.
Product Categories/Family for anti-HSP70 antibody	Antibodies; Cancer; Heat Shock; Cell Signaling; Protein Trafficking; Chaperone Proteins; Cancer; Tumor Biomarkers
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. Galan A., et al. (2000) J. Biol. Chem. 275: 11418-11424. 8. Kondo T., et al. (2000) J. Biol. Chem. 275: 8872-8879. 9. Misaki T., et al. (1994) Clin. Exp. Immun. 98: 234-239. 10. Pockley A.G., et al. (1998) Immunol. Invest. 27: 367-377. 11. Moon I.S., et al. (2001) Cereb Cortex 11(3): 238-248. 12. Dressel et al. (2000) J. Immunol. 164: 2362-2371. 13. Verma A.K., et al. (2007) Fish and Shellfish Immunology. 22(5): 547-555. 14. Banduseela V.C., et al. (2009) Physiol Genomics. 39(3): 141-159.

NCBI AND UNIPROT INFORMATION

NCBI GI #	194248072
NCBI GeneID	3303

NCBI Accession #	NP_005336.3
NCBI GenBank Nucleotide #	NM_005345.5
UniProt Accession #	P0DMV8; P08107; P19790; Q5JQI4; Q5SP17; Q9UQL9; Q9UQM0; B4E3B6
Molecular Weight	63,937 Da
NCBI Official Full Name	heat shock 70 kDa protein 1A
NCBI Official Synonym Full Names	heat shock protein family A (Hsp70) member 1A
NCBI Official Symbol	HSPA1A
NCBI Official Synonym Symbols	HSP72; HSPA1; HSP70I; HSP70-1; HSP70.1; HSP70-1A; HEL-S-103
NCBI Protein Information	heat shock 70 kDa protein 1A
UniProt Protein Name	Heat shock 70 kDa protein 1A
UniProt Gene Name	**HSPA1A**
UniProt Synonym Gene Names	; HSP70.1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: https://www.aaabiotech.com/polyclonal/hsp70-antibody-immunofluorescence-immunocytochemistry-western-blot-elisa/253871