

#4876

Store at -20°C

HSP70 (D69) Antibody

✓ 100 µl
(10 western blots)



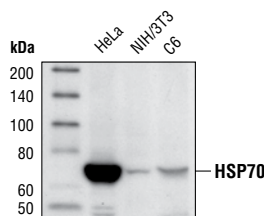
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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IHC-P, IHC-F, IF-IC, F Endogenous	H, M, R, Mk	70 kDa	Rabbit**

Background: HSP70 and HSP90 are molecular chaperones expressed constitutively under normal conditions to maintain protein homeostasis and are induced upon environmental stress (1). Both HSP70 and HSP90 are able to interact with unfolded proteins to prevent irreversible aggregation and catalyze the refolding of their substrates in an ATP and co-chaperone dependent manner (1). HSP70 has a broad range of substrates including newly synthesized and denatured proteins, while HSP90 tends to have a more limited subset of substrates, most of which are signaling molecules (2,3). HSP70 and HSP90 often function collaboratively in a multi-chaperone system, which requires a minimal set of co-chaperones: HSP40, Hop and p23 (2,3). The co-chaperones either regulate the intrinsic ATPase activity of the chaperones or recruit chaperones to specific substrates or subcellular compartments (1,4). When the ubiquitin ligase CHIP associates with the HSP70/HSP90 complex as a cofactor, the unfolded substrates are subjected to degradation by the proteasome (4). The biological functions of HSP70/HSP90 go beyond their chaperone activity. They are essential for the maturation and inactivation of nuclear hormones and other signaling molecules (1,3). They also play a role in vesicle formation and protein trafficking (2).



Western blot analysis of extracts from HeLa, NIH/3T3 and C6 cells, using HSP70 (D69) Antibody.

Specificity/Sensitivity: HSP70 (D69) Antibody detects endogenous levels of total HSP70 protein. This antibody does not cross-react with other HSPs.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide surrounding Asp69 of human HSP70. Antibodies are purified by protein A and peptide affinity chromatography.

Entrez-Gene ID #3303
Swiss-Prot Acc. #P08107

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

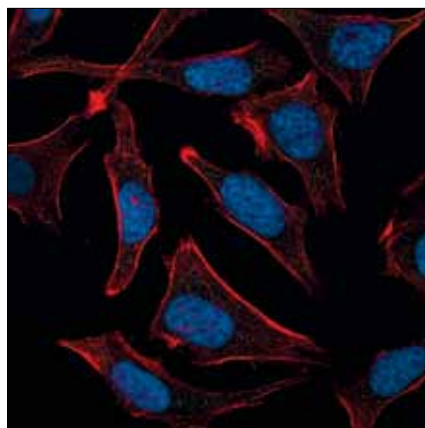
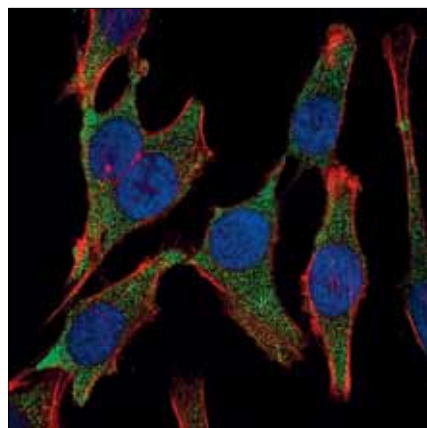
Western blotting	1:1000
Immunohistochemistry (Paraffin)	1:50
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Immunohistochemistry (Frozen)	1:50
Fixative:	3% Formaldehyde
Immunofluorescence (IF-IC)	1:50
Flow Cytometry	1:25

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

- (1) Nollen, E.A. and Morimoto, R.I. (2002) *J. Cell Sci.* 115, 2809–2816.
- (2) Young, J.C. et al. (2003) *Trends Biochem. Sci.* 28, 541–547.
- (3) Pratt, W.B. and Toft, D.O. (2003) *Exp. Biol. Med.* 228, 111–133.
- (4) Hohfeld, J. et al. (2001) *EMBO Rep.* 2, 885–890.



Confocal immunofluorescent images of HeLa cells labeled with HSP70 (D69) Antibody (green, left) compared to an isotype control (right). Actin filaments have been labeled with Alexa Fluor® 555 phalloidin (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

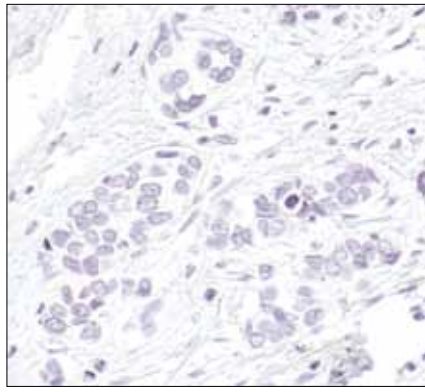
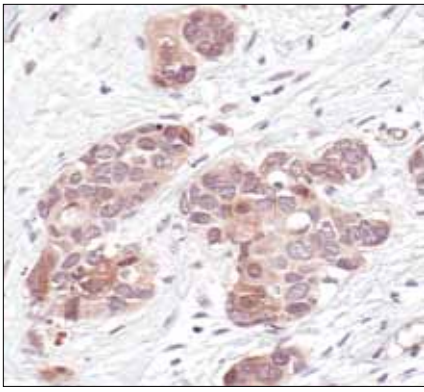
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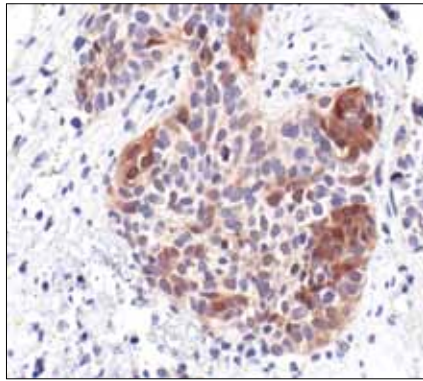
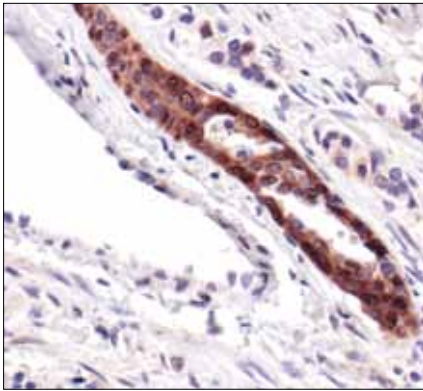
IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

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Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

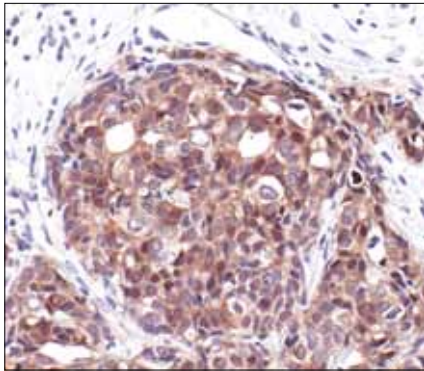


Immunohistochemical analysis of paraffin-embedded human breast carcinoma, using HSP70 (D69) Antibody in the presence of control peptide (left) or antigen specific peptide (right).

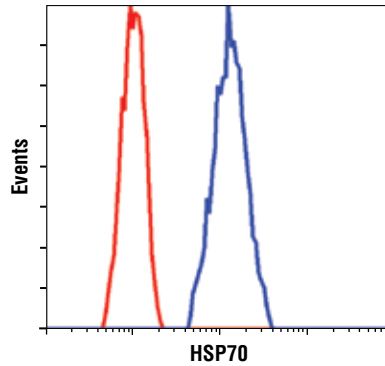


Immunohistochemical analysis of paraffin-embedded human prostate carcinoma, using HSP70 (D69) Antibody.

Immunohistochemical analysis of paraffin-embedded human lung carcinoma, using HSP70 (D69) Antibody.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma, using HSP70 (D69) Antibody.



Flow cytometric analysis of HeLa cells, using HSP70 (D69) Antibody (blue) compared to a nonspecific negative control antibody (red).