

#4868 Store at -20°C

HSP40 Antibody


Cell Signaling
TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC, FC-FP	H M R Mk	Endogenous	40	Rabbit	#P25685	3337

Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:1000
1:50
1:400
1:200

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.

Specificity / Sensitivity

HSP40 Antibody detects endogenous levels of total HSP40 protein. This antibody does not cross-react with other HSPs.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to Glu300 of human HSP40/Hdj1. Antibodies are purified by protein A and peptide affinity chromatography.

Background

HSP40 and HSP40-like proteins represent a large family of chaperone proteins that are homologous to *E. coli* DnaJ protein (1). These proteins are classified into three subtypes based on their structures. The common feature of the family is a conserved J domain, which is usually located at the amino terminus of proteins and responsible for their association with HSP70 (1,2). Human HSP40, also known as Hdj1, belongs to subtype II that contain a unique Gly/Phe-rich region (2). HSP40 family proteins bind unfolded proteins, prevent their aggregation, and then deliver them to HSP70 (2,3). Another major function of HSP40 is to stimulate ATPase activity of HSP70, which causes conformational change of the unfolded proteins (4,5). The HSP40-HSP70-unfolded protein complex further binds to co-chaperones Hip, Hop and HSP90 or components of the protein degradation machinery such as CHIP and BAG-1, which either leads to protein folding or degradation, respectively (6).

Background References

- Cheetham, M.E. and Caplan, A.J. (1998) *Cell Stress Chaperones* 3, 28-36.
- Fan, C.Y. et al. (2003) *Cell Stress Chaperones* 8, 309-316.
- Langer, T. et al. (1992) *Nature* 356, 683-689.
- Liberek, K. et al. (1991) *Proc. Natl. Acad. Sci. USA* 88, 2874-2878.
- Cyr, D.M. et al. (1992) *J. Biol. Chem.* 267, 20927-20931.
- Höhfeld, J. et al. (2001) *EMBO Rep.* 2, 885-890.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)
FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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