Revision 1

Store at -20C

#8444

HSPA8 (D12F2) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk B Pg	Endogenous	70-72	Rabbit IgG	#P11142	3312

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

HSPA8 (D12F2) Rabbit mAb recognizes endogenous levels of total HSPA8 protein. This antibody cross-reacts with HSPA2, HSPA1A, and HSPC70.

Species predicted to react based on 100% sequence homology

Hamster, Chicken, D. melanogaster, Xenopus, Zebrafish, Dog, Horse

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys25 of human HSPA8 protein.

Background

HSPA8, alternately known as HSC70 or HSP73, is a constitutively expressed member of the HSP70 superfamily (1). Although its primary role in cells appears to be that of a general chaperone for unfolded proteins, HSPA8 has also been identified as the uncoating ATPase responsible for removing clathrin from coated vesicles and may also play a role in stabilizing untranslated mRNAs (1-5). In addition to these "housekeeping" functions, HSPA8 may also have an important role in inducible cellular stress responses. For example, oxidative or thermal stress promotes the nuclear/nucleolar accumulation of HSPA8, where it forms a complex with the topoisomerase I complex and likely protects it from heat inactivation (6,7). HSPA8 is reportedly phosphorylated in response to DNA damage, but it remains unclear what effect, if any, this has on HSPA8 function (8-10). Numerous high throughput studies support this observation. For more information, please see the HSPA8 page in PhosphoSitePlus® at www.phosphosite.org.

Background References

1. Takayama, S. et al. (1999) *J Biol Chem* 274, 781-6.
2. Goldfarb, S.B. et al. (2006) *Proc Natl Acad Sci USA* 103, 5817-22.
3. Cheetham, M.E. et al. (1996) *Biochem J* 319 (Pt 1), 103-8.
4. Ma, Y. et al. (2002) *J Biol Chem* 277, 49267-74.
5. Jønson, L. et al. (2007) *Mol Cell Proteomics* 6, 798-811.
6. Shiota, M. et al. (2010) *Hybridoma (Larchmt)* 29, 453-6.
7. Ciavarra, R.P. et al. (1994) *Proc Natl Acad Sci USA* 91, 1751-5.
8. Rush, J. et al. (2005) *Nat Biotechnol* 23, 94-101.
9. Matsuoka, S. et al. (2007) *Science* 316, 1160-6.
10. Beausoleil, S.A. et al. (2004) *Proc Natl Acad Sci USA* 101, 12130-5.

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

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey **B:** Bovine **Pg:** Pig

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Limited Uses

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