Revision 5

#2080 Store at -20C

CHIP (C3B6) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk	Endogenous	32	Rabbit IgG	#Q9UNE7	10273

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

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

CHIP (C3B6) Rabbit mAb detects endogenous levels of total CHIP protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues around Leu36 of human CHIP.

Background

The carboxy terminus of Hsc70-interacting protein (CHIP, STUB1) is a co-chaperone protein and functional E3 ubiquitin ligase that links the polypeptide binding activity of Hsp70 to the ubiquitin proteasome system (1). Cytoplasmic CHIP protein contains three 34-amino acid TPR (tetratricopeptide repeat) domains at its amino terminus and a carboxy-terminal U-box domain. CHIP interacts with the molecular chaperones Hsc70-Hsp70 and Hsp90 through its TPR domain, while E3 ubiquitin ligase activity is confined to the U-box domain (2,3). The binding of CHIP to Hsp70 can stall the folding of Hsp70 client proteins and concomitantly facilitate the U-box dependent ubiquitination of Hsp70-bound substrates (4-6). CHIP appears to play a central role in cell stress protection (7) and is responsible for the degradation of disease-related proteins that include cystic fibrosis transmembrane conductance regulator (4), p53 (8), huntingtin and Ataxin-3 (9), Tau protein (10), and α-synuclein (11).

Background References

1. McDonough, H. and Patterson, C. (2003) *Cell Stress Chaperones* 8, 303-8.
2. Ballinger, C.A. et al. (1999) *Mol Cell Biol* 19, 4535-45.
3. Murata, S. et al. (2001) *EMBO Rep* 2, 1133-8.
4. Meacham, G.C. et al. (2001) *Nat Cell Biol* 3, 100-5.
5. Younger, J.M. et al. (2004) *J Cell Biol* 167, 1075-85.
6. Jiang, J. et al. (2001) *J Biol Chem* 276, 42938-44.
7. Dai, Q. et al. (2003) *EMBO J* 22, 5446-58.
8. Esser, C. et al. (2005) *J Biol Chem* 280, 27443-8.
9. Jana, N.R. et al. (2005) *J Biol Chem* 280, 11635-40.
10. Shimura, H. et al. (2004) *J Biol Chem* 279, 4869-76.
11. Shin, Y. et al. (2005) *J Biol Chem* 280, 23727-34.

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

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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