

CHIP (h2): 293T Lysate: sc-170498

BACKGROUND

CHIP (carboxy-terminus of HSP 70-interacting protein), also designated StIP1 homology and U-box containing protein 1, HSPABP2, NY-CO-7, SDCCAG7 and STUB1, is a cytoplasmic E3 ubiquitin ligase that influences protein ubiquitylation. CHIP interacts with Smad1/Smad4 and blocks BMP signaling through the ubiquitin-mediated degradation of Smad proteins. CHIP controls both association of HSP 70/HSP 90 chaperones with ErbB-2 and downregulation of ErbB-2 induced by inhibitors of HSP 90. A 1.3-kb transcript is most abundant in striated muscle (heart and skeletal muscle), with lower expression in pancreas and brain.

REFERENCES

1. Ballinger, C.A., et al. 1999. Identification of CHIP, a novel tetratricopeptide repeat-containing protein that interacts with heat shock proteins and negatively regulates chaperone functions. *Mol. Cell. Biol.* 19: 4535-4545.
2. Jiang, J., et al. 2001. CHIP is a U-box-dependent E3 ubiquitin ligase: identification of HSC 70 as a target for ubiquitylation. *J. Biol. Chem.* 276: 42938-42944.
3. Imai, Y., et al. 2002. CHIP is associated with Parkin, a gene responsible for familial Parkinson's disease, and enhances its ubiquitin ligase activity. *Mol. Cell* 10: 55-67.
4. Xu, W., et al. 2002. Chaperone-dependent E3 ubiquitin ligase CHIP mediates a degradative pathway for c-ErbB-2/Neu. *Proc. Natl. Acad. Sci. USA* 99: 12847-12852.
5. Jiang, J., et al. 2003. Chaperone-dependent regulation of endothelial nitric-oxide synthase intracellular trafficking by the co-chaperone/ubiquitin ligase CHIP. *J. Biol. Chem.* 278: 49332-49341.
6. Alberti, S., et al. 2004. The cochaperone HspBP1 inhibits the CHIP ubiquitin ligase and stimulates the maturation of the cystic fibrosis transmembrane conductance regulator. *Mol. Biol. Cell* 15: 4003-4010.
7. Schipper, R.G., et al. 2004. Intracellular localization of ornithine decarboxylase and its regulatory protein, antizyme-1. *J. Histochem. Cytochem.* 52: 1259-1266.
8. Younger, J.M., et al. 2004. A foldable CFTR Δ F508 biogenic intermediate accumulates upon inhibition of the HSC 70-CHIP E3 ubiquitin ligase. *J. Cell Biol.* 167: 1075-1085.

CHROMOSOMAL LOCATION

Genetic locus: STUB1 (human) mapping to 16p13.3.

PRODUCT

CHIP (h2): 293T Lysate represents a lysate of human CHIP transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

CHIP (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive CHIP antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

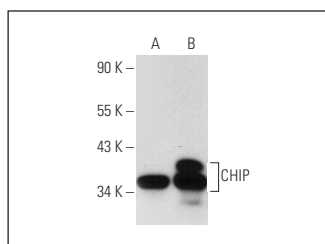
CHIP (C-10): sc-133083 is recommended as a positive control antibody for Western Blot analysis of enhanced human CHIP expression in CHIP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



CHIP (C-10): sc-133083. Western blot analysis of CHIP expression in non-transfected: sc-117752 (A) and human CHIP transfected: sc-170498 (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.