

CHIP (C-10): sc-133083

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 ErbB2 and down-regulation of ErbB2 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.

CHROMOSOMAL LOCATION

Genetic locus: STUB1 (human) mapping to 16p13.3; Stub1 (mouse) mapping to 17 A3.3.

SOURCE

CHIP (C-10) is a mouse monoclonal antibody raised against amino acids 73-303 mapping at the C-terminus of CHIP of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CHIP (C-10) is available conjugated to agarose (sc-133083 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-133083 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133083 PE), fluorescein (sc-133083 FITC), Alexa Fluor® 488 (sc-133083 AF488), Alexa Fluor® 546 (sc-133083 AF546), Alexa Fluor® 594 (sc-133083 AF594) or Alexa Fluor® 647 (sc-133083 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-133083 AF680) or Alexa Fluor® 790 (sc-133083 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CHIP (C-10) is recommended for detection of CHIP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CHIP siRNA (h): sc-43555, CHIP siRNA (m): sc-44731, CHIP shRNA Plasmid (h): sc-43555-SH, CHIP shRNA Plasmid (m): sc-44731-SH, CHIP shRNA (h) Lentiviral Particles: sc-43555-V and CHIP shRNA (m) Lentiviral Particles: sc-44731-V.

Molecular Weight of CHIP: 35 kDa.

Positive Controls: CHIP (h): 293T Lysate: sc-170019, HEK293 whole cell lysate: sc-45136 or HeLa whole cell lysate: sc-2200.

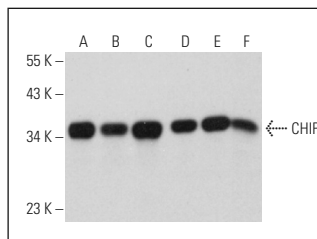
RESEARCH USE

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

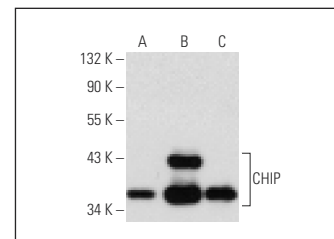
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



CHIP (C-10): sc-133083. Western blot analysis of CHIP expression in HeLa (A), HEK293 (B), PC-12 (C), Neuro-2A (D), NIH/3T3 (E) and C3H/10T1/2 (F) whole cell lysates.



CHIP (C-10): sc-133083. Western blot analysis of CHIP expression in non-transfected 293T: sc-117752 (A), human CHIP transfected 293T: sc-170019 (B) and HeLa (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Broderick, T.L., et al. 2012. Downregulation in GATA4 and downstream structural and contractile genes in the db/db mouse heart. *ISRN Endocrinol.* 2012: 736860.
- Yang, Y.C., et al. 2013. Androgen receptor inclusions acquire GRP78/BiP to ameliorate androgen-induced protein misfolding stress in embryonic stem cells. *Cell Death Dis.* 4: e607.
- Parrales, A., et al. 2016. DNAJA1 controls the fate of misfolded mutant p53 through the mevalonate pathway. *Nat. Cell Biol.* 18: 1233-1243.
- Porpora, M., et al. 2018. Counterregulation of cAMP-directed kinase activities controls ciliogenesis. *Nat. Commun.* 9: 1224.
- Rinaldi, L., et al. 2019. Feedback inhibition of cAMP effector signaling by a chaperone-assisted ubiquitin system. *Nat. Commun.* 10: 2572.
- Wang, Y.L., et al. 2020. *Buxus alkaloid* compound destabilizes mutant p53 through inhibition of the HSF1 chaperone axis. *Phytomedicine* 68: 153187.
- Serlidaki, D., et al. 2020. Functional diversity between HSP70 paralogs due to variable interactions with specific co-chaperones. *J. Biol. Chem.* 295: 7301-7316.
- Wu, H.H., et al. 2021. Hsp70 acts as a fine-switch that controls E3 ligase CHIP-mediated TAp63 and ΔNp63 ubiquitination and degradation. *Nucleic Acids Res.* 49: 2740-2758.
- Martin, T.G., et al. 2021. Cardiomyocyte contractile impairment in heart failure results from reduced BAG3-mediated sarcomeric protein turnover. *Nat. Commun.* 12: 2942.
- Carrettiero, D.C., et al. 2022. Stress routes clients to the proteasome via a BAG2 ubiquitin-independent degradation condensate. *Nat. Commun.* 13: 3074.

PROTOCOLS

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