

CHMP1B (D-10): sc-514013

BACKGROUND

The charged multivesicular body proteins or chromatin modifying proteins, commonly designated CHMPs, belong to the vacuolar sorting protein family and function as chromatin-modifying proteins. CHMP1-6 are all components of ESCRT (endosomal sorting complex required for transport) I, II or III complexes. These complexes are crucial for sorting endosomal articles into multivesicular bodies (MVBs), and are also required for the formation of these bodies. CHMP1 interacts with VPS4B and localizes to early endosomes. Two isoforms, encoded by distinct genes, exist for CHMP1. They are designated CHMP1A and CHMP1B. CHMP1 overexpression can lead to the dilation of endosomal compartments resulting in a disruption of the normal distribution of endosomal markers.

REFERENCES

1. Stauffer, D.R., et al. 2001. CHMP1 is a novel nuclear matrix protein affecting chromatin structure and cell-cycle progression. *J. Cell Sci.* 114: 2383-2393.
2. Howard, T.L., et al. 2001. CHMP1 functions as a member of a newly defined family of vesicle trafficking proteins. *J. Cell Sci.* 114: 2395-2404.
3. Yang, K.S., et al. 2004. Molecular characterization of NbCHMP1 encoding a homolog of human CHMP1 in *Nicotiana benthamiana*. *Mol. Cell* 17: 255-261.
4. Reid, E., et al. 2005. The hereditary spastic paraplegia protein spastin interacts with the ESCRT-III complex-associated endosomal protein CHMP1B. *Hum. Mol. Genet.* 14: 19-38.

CHROMOSOMAL LOCATION

Genetic locus: CHMP1B (human) mapping to 18p11.21; Chmp1b (mouse) mapping to 18 E1.

SOURCE

CHMP1B (D-10) is a mouse monoclonal antibody raised against amino acids 146-199 mapping at the C-terminus of CHMP1B 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.

CHMP1B (D-10) is available conjugated to agarose (sc-514013 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514013 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514013 PE), fluorescein (sc-514013 FITC), Alexa Fluor® 488 (sc-514013 AF488), Alexa Fluor® 546 (sc-514013 AF546), Alexa Fluor® 594 (sc-514013 AF594) or Alexa Fluor® 647 (sc-514013 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514013 AF680) or Alexa Fluor® 790 (sc-514013 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

CHMP1B (D-10) is recommended for detection of CHMP1B 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 CHMP1B siRNA (h): sc-72893, CHMP1B siRNA (m): sc-72894, CHMP1B shRNA Plasmid (h): sc-72893-SH, CHMP1B shRNA Plasmid (m): sc-72894-SH, CHMP1B shRNA (h) Lentiviral Particles: sc-72893-V and CHMP1B shRNA (m) Lentiviral Particles: sc-72894-V.

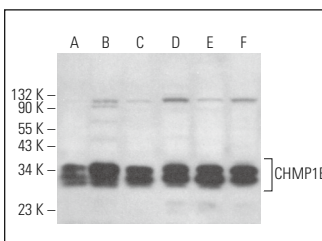
Molecular Weight of CHMP1B: 22 kDa.

Positive Controls: CHMP1B (m): 293T Lysate: sc-119239, HL-60 whole cell lysate: sc-2209 or HeLa whole cell lysate: sc-2200.

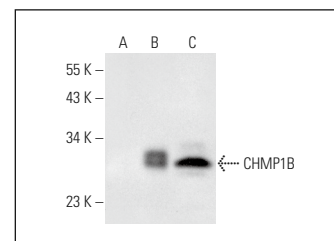
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CHMP1B (D-10): sc-514013. Western blot analysis of CHMP1B expression in HeLa (A), HL-60 (B), A549 (C), Neuro-2A (D), C6 (E) and KNRK (F) whole cell lysates.



CHMP1B (D-10): sc-514013. Western blot analysis of CHMP1B expression in non-transfected 293T: sc-117752 (A), mouse CHMP1B transfected 293T: sc-119239 (B) and HeLa (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Mittal, E., et al. 2018. *Mycobacterium tuberculosis* type VII secretion system effectors differentially impact the ESCRT endomembrane damage response. *mBio* 9: e01765-18.
2. Stempels, F.C., et al. 2023. Giant worm-shaped ESCRT scaffolds surround actin-independent integrin clusters. *J. Cell Biol.* 222: e202205130.

RESEARCH USE

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