

CHMP1A (B-5): sc-271617

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), as well as required for the formation of these bodies. CHMP1 interacts with VPS4B and localizes to early endosomes. Two isoforms, encoded by distinct genes, exists for CHMP1. They are designated CHMP1A and CHMP1B. CHMP1 overexpression can lead to the dilation of endosomal compartments resulting in the disruption of normal distribution of endosomal markers.

CHROMOSOMAL LOCATION

Genetic locus: CHMP1A (human) mapping to 16q24.3; Chmp1a (mouse) mapping to 8 E1.

SOURCE

CHMP1A (B-5) is a mouse monoclonal antibody raised against amino acids 1-196 representing full length CHMP1A 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.

CHMP1A (B-5) is available conjugated to agarose (sc-271617 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271617 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271617 PE), fluorescein (sc-271617 FITC), Alexa Fluor[®] 488 (sc-271617 AF488), Alexa Fluor[®] 546 (sc-271617 AF546), Alexa Fluor[®] 594 (sc-271617 AF594) or Alexa Fluor[®] 647 (sc-271617 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271617 AF680) or Alexa Fluor[®] 790 (sc-271617 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CHMP1A (B-5) is recommended for detection of CHMP1A 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), immunohistochemistry (including paraffin-embedded sections) (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 CHMP1A siRNA (h): sc-60367, CHMP1A siRNA (m): sc-60368, CHMP1A shRNA Plasmid (h): sc-60367-SH, CHMP1A shRNA Plasmid (m): sc-60368-SH, CHMP1A shRNA (h) Lentiviral Particles: sc-60367-V and CHMP1A shRNA (m) Lentiviral Particles: sc-60368-V.

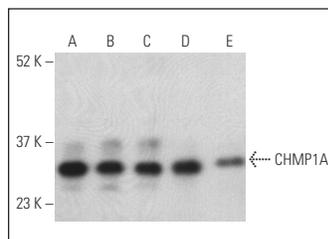
Molecular Weight of CHMP1A: 35 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176, MCF7 whole cell lysate: sc-2206 or Jurkat whole cell lysate: sc-2204.

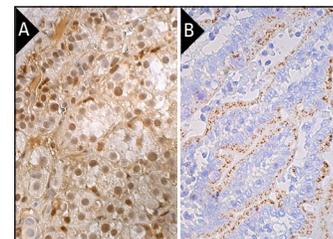
STORAGE

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

DATA



CHMP1A (B-5): sc-271617. Western blot analysis of CHMP1A expression in MCF7 (A), U-251-MG (B), Jurkat (C), Caco-2 (D) and NIH/3T3 (E) whole cell lysates. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.



CHMP1A (B-5): sc-271617. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and nuclear staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells. Blocked with 0.25X UltraCruz[®] Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz[®] ABC Kit: sc-516216 (B).

SELECT PRODUCT CITATIONS

- Kim, S.B., et al. 2017. Caspase-8 controls the secretion of inflammatory lysyl-tRNA synthetase in exosomes from cancer cells. *J. Cell Biol.* 216: 2201-2216.
- Skowrya, M.L., et al. 2018. Triggered recruitment of ESCRT machinery promotes endolysosomal repair. *Science* 360: eaar5078.
- Mittal, E., et al. 2018. *Mycobacterium tuberculosis* type VII secretion system effectors differentially impact the ESCRT endomembrane damage response. *MBio* 9: e01765-18.
- Davis, O.B., et al. 2021. NPC1-mTORC1 signaling couples cholesterol sensing to organelle homeostasis and is a targetable pathway in Niemann-Pick type C. *Dev. Cell* 56: 260-276.e7.
- Hondius, D.C., et al. 2021. The proteome of granulovacuolar degeneration and neurofibrillary tangles in Alzheimer's disease. *Acta Neuropathol.* 141: 341-358.

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.