SANTA CRUZ BIOTECHNOLOGY, INC.

CHMP3 (C-6): sc-271501

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The charged multivesicular body 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. CHMP3, also known as Vps24, associates directly with CHMP2 and CHMP4 for the disassembly of ESCRT-III complex in an ATP-dependent manner. During HIV-1 infection, the virus uses the ESCRT-III complex to mediate budding and exocytosis of viral proteins. Overexpression of CHMP3 strongly inhibits HIV-1 release. CHMP3 is expressed in brain, skeletal muscle, heart, lung, kidney and liver.

REFERENCES

1. von Schwedler, U.K., et al. 2003. The protein network of HIV budding. Cell 114: 701-713.
2. Muziol, T., et al. 2006. Structural basis for budding by the ESCRT-III factor CHMP3. Dev. Cell 10: 821-830.
3. Bache, K.G., et al. 2006. The ESCRT-III subunit hVps24 is required for degradation but not silencing of the epidermal growth factor receptor. Mol. Biol. Cell 17: 2513-2523.
4. Agromayor, M. and Martin-Serrano, J. 2006. Interaction of AMSH with ESCRT-III and deubiquitination of endosomal cargo. J. Biol. Chem. 281: 23083-23091.

CHROMOSOMAL LOCATION

Genetic locus: CHMP3 (human) mapping to 2p11.2; Chmp3 (mouse) mapping to 6 C1.

SOURCE

CHMP3 (C-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 144-177 near the C-terminus of CHMP3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271501 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

CHMP3 (C-6) is recommended for detection of CHMP3 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 CHMP3 siRNA (h): sc-60371, CHMP3 siRNA (m): sc-60372, CHMP3 shRNA Plasmid (h): sc-60371-SH, CHMP3 shRNA Plasmid (m): sc-60372-SH, CHMP3 shRNA (h) Lentiviral Particles: sc-60371-V and CHMP3 shRNA (m) Lentiviral Particles: sc-60372-V.

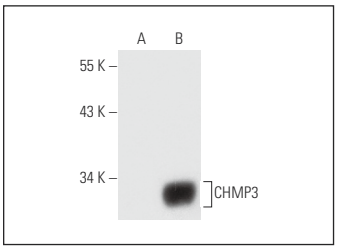
Molecular Weight of CHMP3: 33 kDa.

Positive Controls: CHMP3 (m): 293T Lysate: sc-119240 or 3T3-L1 cell lysate: sc-2243.

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



CHMP3 (C-6): sc-271501. Western blot analysis of CHMP3 expression in non-transfected: sc-117752 (**A**) and mouse CHMP3 transfected: sc-119240 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Du, Y., et al. 2021. Kv1.5 channels are regulated by PKC-mediated endocytic degradation. J. Biol. Chem. 296: 100514.

RESEARCH USE

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