SANTA CRUZ BIOTECHNOLOGY, INC.

CHMP4A (C-15): sc-49913

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 required for the formation of these bodies. During HIV-1 infection, the virus uses the ESCRT-III complex to mediate budding and exocytosis of viral proteins *via* the association of CHMP4 and a protein recruited by HIV-1 p6, called PDCD61P, which is present in viral Gag assembly and budding. CHMP4 is strongly expressed in kidney, liver, heart and skeletal muscle and to a lesser degree in lung, brain and pancreas. Three CHMP4 isoforms, encoded by distinct genes, are designated CHMP4A, CHMP4B and CHMP4C.

REFERENCES

1. von Schwedler, U.K., Stuchell, M., Müller, B., Ward, D.M., Chung, H.Y., Morita, E., Wang, H.E., Davis, T., He, G.P., Cimbora, D.M., Scott, A., Kräusslich, H.G., Kaplan, J., Morham, S.G. and Sundquist, W.I. 2003. The protein network of HIV budding. Cell 114: 701-713.
2. Katoh, K., Shibata, H., Hatta, K. and Maki, M. 2003. CHMP4B is a major binding partner of the ALG-2-interacting protein Alix among the three CHMP4 isoforms. Arch. Biochem. Biophys. 421: 159-165.
3. Katoh, K., Suzuki, H., Terasawa, Y., Mizuno, T., Yasuda, J., Shibata, H. and Maki, M. 2005. The penta-EF-hand protein ALG-2 interacts directly with the ESCRT-I component TSG101, and Ca^{2+}-dependently co-localizes to aberrant endosomes with dominant-negative AAA ATPase SKD1/Vps4B. Biochem. J. 391: 677-685.
4. Horii, M., Shibata, H., Kobayashi, R., Katoh, K., Yorikawa, C., Yasuda, J. and Maki, M. 2006. CHMP7, a novel ESCRT-III-related protein, associates with CHMP4B and functions in the endosomal sorting pathway. Biochem. J. 400: 23-32.

CHROMOSOMAL LOCATION

Genetic locus: CHMP4A (human) mapping to 14q12.

SOURCE

CHMP4A (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CHMP4A of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-49913 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CHMP4A (C-15) is recommended for detection of CHMP4A of human origin by Western Blotting (starting dilution 1:200, 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).

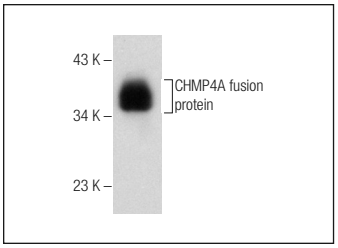
Suitable for use as control antibody for CHMP4A siRNA (h): sc-60373, CHMP4A shRNA Plasmid (h): sc-60373-SH and CHMP4A shRNA (h) Lentiviral Particles: sc-60373-V.

Molecular Weight of CHMP4A: 25 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CHMP4A (C-15): sc-49913. Western blot analysis of human recombinant CHMP4A fusion protein.

RESEARCH USE

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

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **CHMP4A (E-6): sc-514869**, our highly recommended monoclonal alternative to CHMP4A (C-15).