

CHMP5 (D-11): sc-374337

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) 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. CHMP5 interacts directly with LIP5, a protein required for HIV release. Depletion of LIP5 will reduce HIV-1 budding, whereas a depletion of CHMP5 will increase HIV-1 release. Subsequently, over-expression of CHMP5 will reduce HIV-1 budding. CHMP5 also regulates late endosomal development downstream of MVB formation and a loss of CHMP5 will result in increased signal transduction due to a decrease in lysosomal degradation function.

CHROMOSOMAL LOCATION

Genetic locus: CHMP5 (human) mapping to 9p13.3; Chmp5 (mouse) mapping to 4 A5.

SOURCE

CHMP5 (D-11) is a mouse monoclonal antibody raised against amino acids 130-219 mapping at the C-terminus of CHMP5 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.

STORAGE

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

APPLICATIONS

CHMP5 (D-11) is recommended for detection of CHMP5 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).

CHMP5 (D-11) is also recommended for detection of CHMP5 in additional species, including equine and bovine.

Suitable for use as control antibody for CHMP5 siRNA (h): sc-60374, CHMP5 siRNA (m): sc-60375, CHMP5 shRNA Plasmid (h): sc-60374-SH, CHMP5 shRNA Plasmid (m): sc-60375-SH, CHMP5 shRNA (h) Lentiviral Particles: sc-60374-V and CHMP5 shRNA (m) Lentiviral Particles: sc-60375-V.

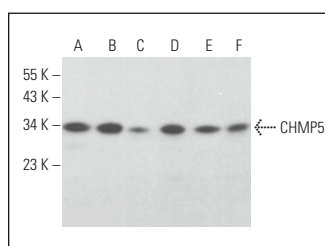
Molecular Weight of CHMP5: 32 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, K-562 whole cell lysate: sc-2203 or c4 whole cell lysate: sc-364186.

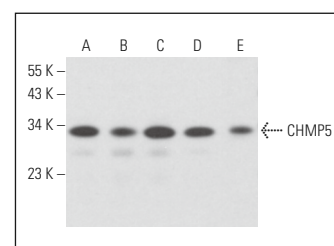
RECOMMENDED SUPPORT REAGENTS

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



CHMP5 (D-11): sc-374337. Western blot analysis of CHMP5 expression in K-562 (A), HEL 92.1.7 (B), HEK293T (C), Neuro-2A (D), C6 (E) and Hep G2 (F) whole cell lysates.



CHMP5 (D-11): sc-374337. Western blot analysis of CHMP5 expression in SW480 (A), AMJ2-C8 (B), c4 (C) and RPE-J (D) whole cell lysates and rat brain tissue extract (E).

SELECT PRODUCT CITATIONS

1. Dai, E., et al. 2020. ESCRT-III-dependent membrane repair blocks ferroptosis. *Biochem. Biophys. Res. Commun.* 522: 415-421.
2. Dai, E., et al. 2020. AIFM2 blocks ferroptosis independent of ubiquitin metabolism. *Biochem. Biophys. Res. Commun.* 523: 966-971.
3. Liu, Y., et al. 2020. The circadian clock protects against ferroptosis-induced sterile inflammation. *Biochem. Biophys. Res. Commun.* 525: 620-625.
4. Feng, Z., et al. 2022. NMN recruits GSH to enhance GPX4-mediated ferroptosis defense in UV irradiation induced skin injury. *Biochim. Biophys. Acta Mol. Basis Dis.* 1868: 166287.

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.