SANTA CRUZ BIOTECHNOLOGY, INC.

CHMP7 (F-8): sc-271805

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), as well as required for the formation of these bodies. CHMP7 is an ESCRT-III-related protein that associates with CHMP4B. CHMP7 contains an SNF7 domain in the C-terminus and is most similar to CHMP6. CHMP7 also binds to the microtubule interacting and transport (MIT) domain of the deubiquitinating enzyme, UBPY. The overexpression of CHMP7 inhibits EGFR degradation.

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. Cells 17: 255-261.
4. Reid, E., et al. 2004. 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: CHMP7 (human) mapping to 8p21.3; Chmp7 (mouse) mapping to 14 D2.

SOURCE

CHMP7 (F-8) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of CHMP7 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.

CHMP7 (F-8) is available conjugated to agarose (sc-271805 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271805 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271805 PE), fluorescein (sc-271805 FITC), Alexa Fluor® 488 (sc-271805 AF488), Alexa Fluor® 546 (sc-271805 AF546), Alexa Fluor® 594 (sc-271805 AF594) or Alexa Fluor® 647 (sc-271805 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271805 AF680) or Alexa Fluor® 790 (sc-271805 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

CHMP7 (F-8) is recommended for detection of CHMP7 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 CHMP7 siRNA (h): sc-62106, CHMP7 siRNA (m): sc-62107, CHMP7 shRNA Plasmid (h): sc-62106-SH, CHMP7 shRNA Plasmid (m): sc-62107-SH, CHMP7 shRNA (h) Lentiviral Particles: sc-62106-V and CHMP7 shRNA (m) Lentiviral Particles: sc-62107-V.

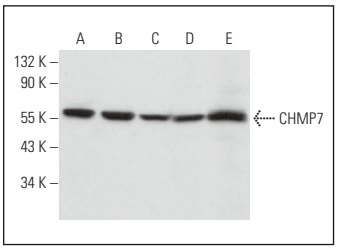
Molecular Weight of CHMP7: 51 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A549 cell lysate: sc-2413 or C6 whole cell lysate: sc-364373.

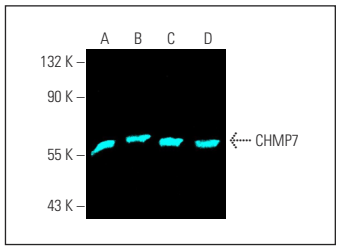
RECOMMENDED SUPPORT REAGENTS

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



CHMP7 (F-8): sc-271805. Western blot analysis of CHMP7 expression in A549 (**A**), U-251-MG (**B**), Neuro-2A (**C**) and C6 (**D**) whole cell lysates and rat brain tissue extract (**E**).



CHMP7 (F-8) Alexa Fluor® 647: sc-271805 AF647. Direct fluorescent western blot analysis of CHMP7 expression in A549 (**A**), NTERA-2 cl.D1 (**B**) and HeLa (**C**) whole cell lysates and rat brain tissue extract (**D**). Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. Takahashi, Y., et al. 2018. An autophagy assay reveals the ESCRT-III component CHMP2A as a regulator of phagophore closure. Nat. Commun. 9: 2855.
2. Shao, R., et al. 2021. The balance between AIM2-associated inflammation and autophagy: the role of CHMP2A in brain injury after cardiac arrest. J. Neuroinflammation 18: 257.

RESEARCH USE

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