SANTA CRUZ BIOTECHNOLOGY, INC.

CHMP2B (N-18): sc-69352

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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), and are also required for the formation of these bodies. CHMP2B, also known as CHMP2.5 or vacuolar protein-sorting-associated protein 2-2, is a 213 amino acid cytosolic protein. Widely expressed in brain, heart, skeletal muscle, small intestine, pancreas, lung, placenta and leukocytes, CHMP2B associates directly with CHMP2A and Vps4 for the disassembly of the ESCRT-III complex. Defects in the gene encoding CHMP2B have been shown to cause chromosome 3-linked frontotemporal dementia (FTD3).

REFERENCES

1. Rizzu, P., et al. 2006. CHMP2B mutations are not a cause of dementia in Dutch patients with familial and sporadic frontotemporal dementia. Am. J. Med. Genet. B Neuropsychiatr. Genet. 141B: 944-946.
2. Talbot, K., et al. 2006. Recent advances in the genetics of amyotrophic lateral sclerosis and frontotemporal dementia: common pathways in neurodegenerative disease. Hum. Mol. Genet. 15: R182-R187.
3. Momeni, P., et al. 2006. Genetic variability in CHMP2B and frontotemporal dementia. Neurodegener. Dis. 3: 129-133.
4. Parkinson, N., et al. 2006. ALS phenotypes with mutations in CHMP2B (charged multivesicular body protein 2B). Neurology 67: 1074-1077.
5. Cannon, A., et al. 2006. CHMP2B mutations are not a common cause of frontotemporal lobar degeneration. Neurosci. Lett. 398: 83-84.
6. Momeni, P., et al. 2006. Sequence analysis of all identified open reading frames on the frontal temporal dementia haplotype on chromosome 3 fails to identify unique coding variants except in CHMP2B. Neurosci. Lett. 410: 77-79.
7. Schumacher, A., et al. 2007. No association of chromatin-modifying protein 2B with sporadic frontotemporal dementia. Neurobiol. Aging 28: 1789-1790.

CHROMOSOMAL LOCATION

Genetic locus: CHMP2B (human) mapping to 3p11.2; Chmp2b (mouse) mapping to 16 C1.3.

SOURCE

CHMP2B (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CHMP2B of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-69352 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CHMP2B (N-18) is recommended for detection of CHMP2B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

CHMP2B (N-18) is also recommended for detection of CHMP2B in additional species, including canine, bovine, porcine and avian.

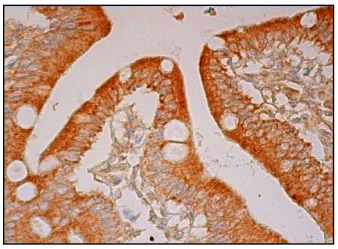
Suitable for use as control antibody for CHMP2B siRNA (h): sc-72895, CHMP2B siRNA (m): sc-72896, CHMP2B shRNA Plasmid (h): sc-72895-SH, CHMP2B shRNA Plasmid (m): sc-72896-SH, CHMP2B shRNA (h) Lentiviral Particles: sc-72895-V and CHMP2B shRNA (m) Lentiviral Particles: sc-72896-V.

Molecular Weight of CHMP2B: 24 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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



CHMP2B (N-18): sc-69352. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

STORAGE

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

RESEARCH USE

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