SANTA CRUZ BIOTECHNOLOGY, INC.

# CHMP4B siRNA (m): sc-72898

## 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 also required for the formation of these bodies. CHMP4B (charged multivesicular body protein 4b) is a 224 amino acid protein that interacts with Alix, which results in the redistribution of Alix from the cytoplasm to the perinuclear area. Overexpression of CHMP4B induces accumulation of ubiquinated proteins and inhibits degradation of endocytosed EGF. Defects in the gene encoding CHMP4B can cause posterior polar cataract type 3 (CTPP3), a disease characterized by distinct opacity located at the back of the lens resulting in visual impairment and eventual blindness.

## REFERENCES


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6. Zamborlini, A., et al. 2006. Release of autoinhibition converts ESCRT-III components into potent inhibitors of HIV-1 budding. Proc. Natl. Acad. Sci. USA 103: 19140-19145.
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## CHROMOSOMAL LOCATION

Genetic locus: Chmp4b (mouse) mapping to 2 H1.

## PROTOCOLS

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

## PRODUCT

CHMP4B siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CHMP4B shRNA Plasmid (m): sc-72898-SH and CHMP4B shRNA (m) Lentiviral Particles: sc-72898-V as alternate gene silencing products.

For independent verification of CHMP4B (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-72898A, sc-72898B and sc-72898C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

CHMP4B siRNA (m) is recommended for the inhibition of CHMP4B expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CHMP4B gene expression knockdown using RT-PCR Primer: CHMP4B (m)-PR: sc-72898-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

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