

# CD-MPR (D-19): sc-34573

## BACKGROUND

CD-MPR (cation-dependent mannose-6-phosphate receptor) is an oligomeric transmembrane protein that plays a critical role in the intracellular delivery of phosphorylated lysosomal enzymes from the *trans*-Golgi network (TGN). Intracellular trafficking of CD-MPR is mediated by sorting signals in its 67 amino acid cytoplasmic tail which prevent it from entering the lysosome where it would be degraded. CD-MPR is predominantly expressed in mouse testicular germ cells and shows differentiated expression during maturation of rat spermatozoa. Increased expression of CD-MPR in Alzheimer's disease and the location of the CD-MPR gene next to a region on chromosome 12 which is possibly linked to the disease indicate that CD-MPR may play a role in Alzheimer's disease.

## REFERENCES

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2. Schweizer, A., et al. 1997. Proper sorting of the cation-dependent mannose 6-phosphate receptor in endosomes depends on a pair of aromatic amino acids in its cytoplasmic tail. *Proc. Natl. Acad. Sci. USA* 94: 14471-14476.
3. Olson, L.J., et al. 1999. Mutational analysis of the binding site residues of the bovine cation-dependent mannose 6-phosphate receptor. *J. Biol. Chem.* 274: 36905-36911.
4. Chayko, C.A. and Orgebin-Crist, M.C. 2000. Targeted disruption of the cation-dependent or cation-independent mannose 6-phosphate receptor does not decrease the content of acid glycosidases in the acrosome. *J. Androl.* 21: 944-953.
5. Belmonte, S.A., et al. 2000. Changes in distribution of phosphomannosyl receptors during maturation of rat spermatozoa. *Biol. Reprod.* 63: 1172-1178.
6. Stöckli, J., et al. 2004. The acidic cluster of the CK2 site of the cation-dependent mannose 6-phosphate receptor (CD-MPR) but not its phosphorylation is required for GGA1 and AP-1 binding. *J. Biol. Chem.* 279: 23542-23549.
7. Reddy, S.T., et al. 2004. Identification of a low affinity mannose 6-phosphate-binding site in domain 5 of the cation-independent mannose 6-phosphate receptor. *J. Biol. Chem.* 279: 38658-38667.

## CHROMOSOMAL LOCATION

Genetic locus: M6pr (mouse) mapping to 6 F1.

## SOURCE

CD-MPR (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CD-MPR of mouse 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-34573 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CD-MPR (D-19) is recommended for detection of CD-MPR of mouse and rat 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 CD-MPR siRNA (m): sc-45451, CD-MPR shRNA Plasmid (m): sc-45451-SH and CD-MPR shRNA (m) Lentiviral Particles: sc-45451-V.

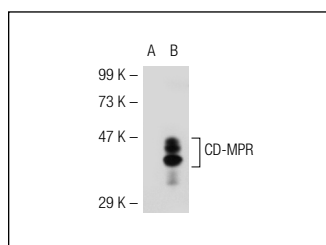
Molecular Weight of CD-MPR: 46 kDa.

Positive Controls: CD-MPR (m): 293T Lysate: sc-119090.

## 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



CD-MPR (D-19): sc-34573. Western blot analysis of CD-MPR expression in non-transfected 293T: sc-117752 (A) and mouse CD-MPR transfected 293T: sc-119090 (B) whole cell lysates.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.