

# CD-MPR (E-19): sc-34574

## 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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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., et al. 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.
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6. Stockli, 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.
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## CHROMOSOMAL LOCATION

Genetic locus: M6PR (human) mapping to 12p13.31; M6pr (mouse) mapping to 6 F1.

## SOURCE

CD-MPR (E-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CD-MPR of human 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-34574 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CD-MPR (E-19) is recommended for detection of CD-MPR 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CD-MPR (E-19) is also recommended for detection of CD-MPR in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for CD-MPR siRNA (h): sc-45450, CD-MPR siRNA (m): sc-45451, CD-MPR shRNA Plasmid (h): sc-45450-SH, CD-MPR shRNA Plasmid (m): sc-45451-SH, CD-MPR shRNA (h) Lentiviral Particles: sc-45450-V and CD-MPR shRNA (m) Lentiviral Particles: sc-45451-V.

Molecular Weight of CD-MPR: 46 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181 and Jurkat whole cell lysate: sc-2204.

## 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.

## 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.