SANTA CRUZ BIOTECHNOLOGY, INC.

CD-MPR (H-7): sc-365196

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

CD-MPR (H-7) is a mouse monoclonal antibody raised against amino acids 27-277 mapping at the C-terminus of CD-MPR 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.

CD-MPR (H-7) is available conjugated to agarose (sc-365196 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365196 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365196 PE), fluorescein (sc-365196 FITC), Alexa Fluor® 488 (sc-365196 AF488), Alexa Fluor® 546 (sc-365196 AF546), Alexa Fluor® 594 (sc-365196 AF594) or Alexa Fluor® 647 (sc-365196 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365196 AF680) or Alexa Fluor® 790 (sc-365196 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

CD-MPR (H-7) is recommended for detection of CD-MPR 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 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.

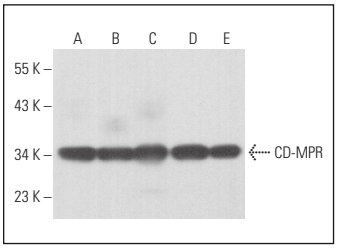
Molecular Weight of CD-MPR: 46 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, HL-60 whole cell lysate: sc-2209 or Jurkat whole cell lysate: sc-2204.

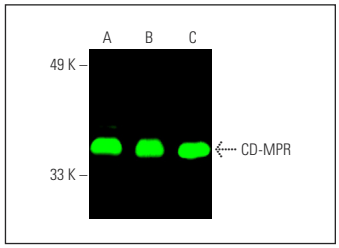
RECOMMENDED SUPPORT REAGENTS

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



CD-MPR (H-7): sc-365196. Western blot analysis of CD-MPR expression in Jurkat (**A**), NTERA-2 cl.D1 (**B**), HL-60 (**C**), M1 (**D**) and AMJ2-C8 (**E**) whole cell lysates.



CD-MPR (H-7): sc-365196. Near-Infrared western blot analysis of CD-MPR expression in HL-60 (**A**), M1 (**B**) and AMJ2-C8 (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

SELECT PRODUCT CITATIONS

1. Han, J., et al. 2021. Involvement of CASP9 (caspase 9) in IGF2R/CI-MPR endosomal transport. Autophagy 17: 1393-1409.
2. Jalagadugula, G., et al. 2022. Defective RAB31-mediated megakaryocytic early endosomal trafficking of VWF, EGFR, and M6PR in RUNX1 deficiency. Blood Adv. 6: 5100-5112.
3. Chen, M., et al. 2023. Comparative site-specific N-glycoproteome analysis reveals aberrant N-glycosylation and gives insights into mannose-6-phosphate pathway in cancer. Commun. Biol. 6: 48.

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 for detailed protocols and support products.