

MAN2C1 (C-4): sc-377132

BACKGROUND

Misfolded glycoproteins are deglycosylated by the peptide N-glycanase during the degradation process. Free oligosaccharides released by N-glycanase are catabolized by cytosolic MAN2C1, also designated α -mannosidase 2C1. MAN2C1, a member of the glycosyl hydrolase 38 family, can cleave α 1,2-linked, α 1,3-linked and α 1,6-linked mannose residues and is stimulated by cobalt. The furanose analogs, swainsonine (SW) and 1,4-dideoxy-1,4-imino- δ -mannitol (DIM), are known inhibitors of MAN2C1. The inhibition of MAN2C1 can enhance the adhesion of Jurkat T cells, showing a cytoskeletal rearrangement of the cells.

CHROMOSOMAL LOCATION

Genetic locus: MAN2C1 (human) mapping to 15q24.2; Man2c1 (mouse) mapping to 9 B.

SOURCE

MAN2C1 (C-4) is a mouse monoclonal antibody raised against amino acids 741-1040 mapping at the C-terminus of MAN2C1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MAN2C1 (C-4) is available conjugated to agarose (sc-377132 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377132 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377132 PE), fluorescein (sc-377132 FITC), Alexa Fluor® 488 (sc-377132 AF488), Alexa Fluor® 546 (sc-377132 AF546), Alexa Fluor® 594 (sc-377132 AF594) or Alexa Fluor® 647 (sc-377132 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377132 AF680) or Alexa Fluor® 790 (sc-377132 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

MAN2C1 (C-4) is recommended for detection of MAN2C1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for MAN2C1 siRNA (h): sc-62596, MAN2C1 siRNA (m): sc-62597, MAN2C1 shRNA Plasmid (h): sc-62596-SH, MAN2C1 shRNA Plasmid (m): sc-62597-SH, MAN2C1 shRNA (h) Lentiviral Particles: sc-62596-V and MAN2C1 shRNA (m) Lentiviral Particles: sc-62597-V.

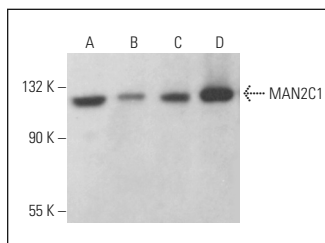
Molecular Weight of MAN2C1: 116 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, Jurkat whole cell lysate: sc-2204 or Hep G2 cell lysate: sc-2227.

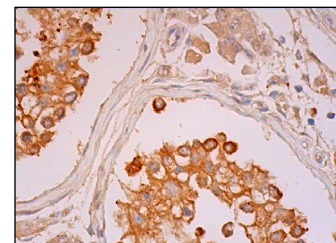
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



MAN2C1 (C-4): sc-377132. Western blot analysis of MAN2C1 expression in NIH/3T3 (A), Hep G2 (B), Jurkat (C) and L6 (D) whole cell lysates.



MAN2C1 (C-4): sc-377132. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and membrane staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells.

SELECT PRODUCT CITATIONS

- Fujita, K., et al. 2020. Rapid and accurate visualization of breast tumors with a fluorescent probe targeting α -mannosidase 2C1. ACS Cent. Sci. 6: 2217-2227.
- Maia, N., et al. 2022. Impaired catabolism of free oligosaccharides due to MAN2C1 variants causes a neurodevelopmental disorder. Am. J. Hum. Genet. 109: 345-360.

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.