

MAN2C1 (G-8): sc-271088

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-D-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.

REFERENCES

1. Suzuki, T., et al. 2006. Man2C1, an α -mannosidase, is involved in the trimming of free oligosaccharides in the cytosol. *Biochem. J.* 400: 33-41.
2. Qu, L., et al. 2006. Inhibition of the α -mannosidase MAN2C1 gene expression enhances adhesion of Jurkat cells. *Cell Res.* 16: 622-631.
3. Dash, D.P., et al. 2006. Fine mapping of the keratoconus with cataract locus on chromosome 15q and candidate gene analysis. *Mol. Vis.* 12: 499-505.
4. Costanzi, E., et al. 2006. Cloning and expression of mouse cytosolic α -mannosidase (MAN2C1). *Biochim. Biophys. Acta* 1760: 1580-1586.
5. McDaniel, A.H., et al. 2006. A locus on mouse chromosome 9 (Adip5) affects the relative weight of the gonadal but not retroperitoneal adipose depot. *Mamm. Genome* 17: 1078-1092.
6. Shi, Y., et al. 2007. Inhibition of malignant activities of nasopharyngeal carcinoma cells with high expression of CD44 by siRNA. *Oncol. Rep.* 18: 397-403.

CHROMOSOMAL LOCATION

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

SOURCE

MAN2C1 (G-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 891-924 within an internal region 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.

Blocking peptide available for competition studies, sc-271088 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

MAN2C1 (G-8) 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) 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.

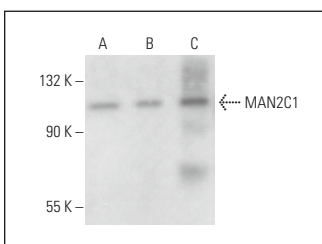
Molecular Weight of MAN2C1: 116 kDa.

Positive Controls: L6 whole cell lysate: sc-364196, NIH/3T3 whole cell lysate: sc-2210 or MAN2C1 (m): 293T Lysate: sc-121498.

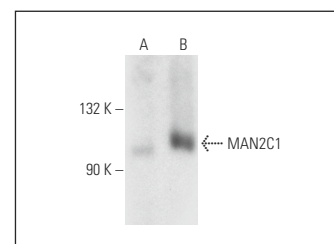
RECOMMENDED SUPPORT REAGENTS

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.

DATA



MAN2C1 (G-8): sc-271088. Western blot analysis of MAN2C1 expression in NIH/3T3 (A) and L6 (B) whole cell lysates and rat liver tissue extract (C).



MAN2C1 (G-8): sc-271088. Western blot analysis of MAN2C1 expression in non-transfected: sc-117752 (A) and mouse MAN2C1 transfected: sc-121498 (B) 293T whole cell lysates.

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.