SANTA CRUZ BIOTECHNOLOGY, INC.

MAN2C1 (G-20): sc-66460

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Dash, D.P., Silvestri, G. and Hughes, A.E. 2006. Fine mapping of the keratoconus with cataract locus on chromosome 15q and candidate gene analysis. Mol. Vis. 12: 499-505.
2. Qu, L., Ju, J.Y., Chen, S.L., Shi, Y., Xiang, Z.G., Zhou, Y.Q., Tian, Y., Liu, Y. and Zhu, L.P. 2006. Inhibition of the α-mannosidase MAN2C1 gene expression enhances adhesion of Jurkat cells. Cell Res. 16: 622-631.
3. McDaniel, A.H., Li, X., Tordoff, M.G., Bachmanov, A.A. and Reed, D.R. 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.
4. Suzuki, T., Hara, I., Nakano, M., Shigeta, M., Nakagawa, T., Kondo, A., Funakoshi, Y. and Taniguchi, N. 2006. MAN2C1, an α-mannosidase, is involved in the trimming of free oligosaccharides in the cytosol. Biochem. J. 400: 33-41.
5. Costanzi, E., Balducci, C., Cacan, R., Duvet, S., Orlacchio, A. and Beccari, T. 2006. Cloning and expression of mouse cytosolic α-mannosidase (MAN2C1). Biochim. Biophys. Acta 1760: 1580-1586.
6. Shi, Y., Tian, Y., Zhou, Y.Q., Ju, J.Y., Qu, L., Chen, S.L., Xiang, Z.G., Liu, Y. and Zhu, L.P. 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-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MAN2C1 of human origin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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-66460 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MAN2C1 (G-20) is recommended for detection of MAN2C1 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).

MAN2C1 (G-20) is also recommended for detection of MAN2C1 in additional species, including equine, canine, bovine, porcine and avian.

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) Lenti-viral Particles: sc-62596-V and MAN2C1 shRNA (m) Lentiviral Particles: sc-62597-V.

Molecular Weight of MAN2C1: 116 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, Jurkat whole cell lysate: sc-2204 or BJAB whole cell lysate: sc-2207.

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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.