SANTA CRUZ BIOTECHNOLOGY, INC.

MAN2C1 (h): 293T Lysate: sc-111434

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.

REFERENCES

1. 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.
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. 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.
4. 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.
5. 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.
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.

PRODUCT

MAN2C1 (h): 293T Lysate represents a lysate of human MAN2C1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

MAN2C1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive MAN2C1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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