



MAN1C1 (E-16): sc-104361

BACKGROUND

MAN1C1 (mannosidase α , class 1C, member 1), also known as HMIC, MAN1C, MAN1A3 or pp6318, is a 630 amino acid single-pass type II membrane protein that localizes to the Golgi apparatus and belongs to the glycosyl hydrolase 47 family. Expressed in most tissues throughout the body with the exception of pancreas, muscle and lung, MAN1C1 uses calcium as a cofactor to catalyze the hydrolysis of terminal α -D-mannose residues in Man9(GlcNAc)₂, a reaction that is involved in oligosaccharide maturation. MAN1C1 is functionally inhibited by 1-deoxymannojirimycin and kifunensine and is encoded by a gene which maps to human chromosome 1. Chromosome 1 spans 260 million base pairs and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Pal, R., Hoke, G.M. and Sarngadharan, M.G. 1989. Role of oligosaccharides in the processing and maturation of envelope glycoproteins of human immunodeficiency virus type 1. *Proc. Natl. Acad. Sci. USA* 86: 3384-3388.
2. Papandreou, M.J. and Fenouillet, E. 1997. Effect of various glycosidase treatments on the resistance of the HIV-1 envelope to degradation. *FEBS Lett.* 406: 191-195.
3. Tremblay, L.O. and Herscovics, A. 2000. Characterization of a cDNA encoding a novel human Golgi α 1,2-mannosidase (IC) involved in N-glycan biosynthesis. *J. Biol. Chem.* 275: 31655-31660.
4. Land, A. and Braakman, I. 2001. Folding of the human immunodeficiency virus type 1 envelope glycoprotein in the endoplasmic reticulum. *Biochimie* 83: 783-790.
5. Hart, M.L., Saifuddin, M. and Spear, G.T. 2003. Glycosylation inhibitors and neuraminidase enhance human immunodeficiency virus type 1 binding and neutralization by mannose-binding lectin. *J. Gen. Virol.* 84 (Pt. 2): 353-360.
6. Hosokawa, N., You, Z., Tremblay, L.O., Nagata, K. and Herscovics, A. 2007. Stimulation of ERAD of misfolded null Hong Kong α 1-antitrypsin by Golgi α 1,2-mannosidases. *Biochem. Biophys. Res. Commun.* 362: 626-632.

CHROMOSOMAL LOCATION

Genetic locus: MAN1C1 (human) mapping to 1p36.11; Man1c1 (mouse) mapping to 4 D3.

SOURCE

MAN1C1 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MAN1C1 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.

PRODUCT

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

Blocking peptide available for competition studies, sc-104361 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MAN1C1 (E-16) is recommended for detection of MAN1C1 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).

Suitable for use as control antibody for MAN1C1 siRNA (h): sc-88747, MAN1C1 siRNA (m): sc-149245, MAN1C1 shRNA Plasmid (h): sc-88747-SH, MAN1C1 shRNA Plasmid (m): sc-149245-SH, MAN1C1 shRNA (h) Lentiviral Particles: sc-88747-V and MAN1C1 shRNA (m) Lentiviral Particles: sc-149245-V.

Molecular Weight of MAN1C1: 71 kDa.

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.

PROTOCOLS

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