SANTA CRUZ BIOTECHNOLOGY, INC.

MAN1A1 (A-13): sc-109312

BACKGROUND

The α-mannosidases (designated MAN1A1, MAN1A2, MAN2A1 and MAN2A2) comprise a group of soluble proteins that localize to the endoplasmic reticulum, the Golgi apparatus or the cytoplasm. Depending on their cellular location, these proteins are involved in either the processing or the degradation of newly synthesized N-glycans. MAN1A1 (mannosidase, α, class 1A, member 1), also known as MAN9, HUMM3 or HUMM9, is a 653 amino acid single-pass type II membrane protein that localizes to the Golgi apparatus and is involved in protein glycosylation. Using calcium as a cofactor, MAN1A1 functions to catalyze the hydrolysis of terminal α-D-mannose residues in select oligo-mannose oligosaccharides, a reaction that is important for the maturation of Asn-link oligosaccharides.

REFERENCES

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4. Tremblay, L.O., Campbell Dyke, N. and Herscovics, A. 1998. Molecular cloning, chromosomal mapping and tissue-specific expression of a novel human α1,2-mannosidase gene involved in N-glycan maturation. Glycobiology 8: 585-595.
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6. Gonzalez, D.S., Karaveg, K., Vandersall-Nairn, A.S., Lal, A. and Moremen, K.W. 1999. Identification, expression, and characterization of a cDNA encoding human endoplasmic reticulum mannosidase I, the enzyme that catalyzes the first mannose trimming step in mammalian Asn-linked oligosaccharide biosynthesis. J. Biol. Chem. 274: 21375-21386.

CHROMOSOMAL LOCATION

Genetic locus: MAN1A1 (human) mapping to 6q22.31; Man1a (mouse) mapping to 10 B3.

SOURCE

MAN1A1 (A-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MAN1A1 of human origin.

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-109312 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MAN1A1 (A-13) is recommended for detection of MAN1A1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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); non cross-reactive with family member MAN1A2.

MAN1A1 (A-13) is also recommended for detection of MAN1A1 in additional species, including canine and avian.

Suitable for use as control antibody for MAN1A1 siRNA (h): sc-95638, MAN1A1 siRNA (m): sc-149242, MAN1A1 shRNA Plasmid (h): sc-95638-SH, MAN1A1 shRNA Plasmid (m): sc-149242-SH, MAN1A1 shRNA (h) Lentiviral Particles: sc-95638-V and MAN1A1 shRNA (m) Lentiviral Particles: sc-149242-V.

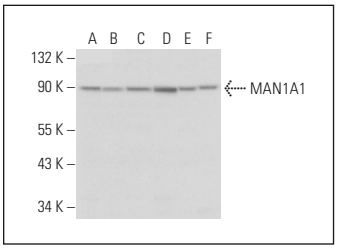
Molecular Weight of MAN1A1: 71 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



MAN1A1 (A-13): sc-109312. Western blot analysis of MAN1A1 expression in HEK293 (**A**), Hep G2 (**B**), HeLa (**C**), K-562 (**D**), NIH/3T3 (**E**) and PC-12 (**F**) whole cell lysates.

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.