SANTA CRUZ BIOTECHNOLOGY, INC.

MAN1B1 (D-14): sc-104975

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MAN1B1 (mannosidase α, class 1B, member 1), also referred to as MANA-ER or ERManI, is a widely expressed enzyme that is a member of the glycosyl hydrolase 47 family. MAN1B1 is a single-pass type II membrane protein that localizes to the endoplasmic reticulum (ER) and catalyzes the first mannose trimming step in the maturation of Asn-linked oligosaccharide biosynthesis on glycoproteins. Asn-linked oligosaccharides are important for a variety of biological functions, including cellular recognition, adhesion and protein targeting. MAN1B1 is also involved in targeting terminally misfolded or unassembled glycoproteins for degradation via the cytoplasmic ubiquitin-proteasome pathway, a process known as endoplasmic reticulum-associated protein degradation (ERAD). MAN1B1 activity requires calcium and is inhibited by either 1-deoxymannojirimycin or kifunensine, which are class I α-mannosidase inhibitors.

REFERENCES

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3. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 604346. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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6. Karaveg, K., et al. 2005. Mechanism of class 1 (glycosylhydrolase family 47) α-mannosidases involved in N-glycan processing and endoplasmic reticulum quality control. J. Biol. Chem. 280: 16197-16207.
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CHROMOSOMAL LOCATION

Genetic locus: MAN1B1 (human) mapping to 9q34.3; Man1b1 (mouse) mapping to 2 A3.

SOURCE

MAN1B1 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MAN1B1 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-104975 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MAN1B1 (D-14) is recommended for detection of MAN1B1 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).

MAN1B1 (D-14) is also recommended for detection of MAN1B1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MAN1B1 siRNA (h): sc-92479, MAN1B1 siRNA (m): sc-149244, MAN1B1 shRNA Plasmid (h): sc-92479-SH, MAN1B1 shRNA Plasmid (m): sc-149244-SH, MAN1B1 shRNA (h) Lentiviral Particles: sc-92479-V and MAN1B1 shRNA (m) Lentiviral Particles: sc-149244-V.

Molecular Weight of MAN1B1: 80 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or A-431 whole cell lysate: sc-2201.

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.

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.