

# MAN2A1 (H-222): sc-292351

## BACKGROUND

The  $\alpha$ -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. MAN2A1 (mannosidase  $\alpha$  class 2A member 1) is a single-pass type II membrane protein that localizes to the cisternae of the Golgi and is involved in protein modification pathways. More specifically, MAN2A1 uses zinc as a cofactor to catalyze the first committed step in the formation of N-glycans, namely the hydrolysis of the terminal  $\alpha$ -D-mannose residues in the oligosaccharide Man5(GlcNAc)<sub>3</sub>.

## REFERENCES

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- Chui, D., et al. 1997.  $\alpha$ -mannosidase-II deficiency results in dyserythropoiesis and unveils an alternate pathway in oligosaccharide biosynthesis. *Cell*. 90: 157-167.
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- Akama, T.O., et al. 2006. Essential and mutually compensatory roles of  $\alpha$ -mannosidase II and  $\alpha$ -mannosidase IIx in N-glycan processing *in vivo* in mice. *Proc. Natl. Acad. Sci. USA* 103: 8983-8988.
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## CHROMOSOMAL LOCATION

Genetic locus: MAN2A1 (human) mapping to 5q21.3.

## SOURCE

MAN2A1 (H-222) is a rabbit polyclonal antibody raised against amino acids 584-805 mapping within an internal region of MAN2A1 of human origin.

## PRODUCT

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

## APPLICATIONS

MAN2A1 (H-222) is recommended for detection of MAN2A1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 other MAN family members.

Suitable for use as control antibody for MAN2A1 siRNA (h): sc-61926, MAN2A1 shRNA Plasmid (h): sc-61926-SH and MAN2A1 shRNA (h) Lentiviral Particles: sc-61926-V.

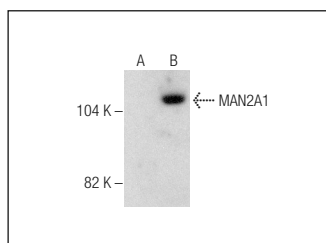
Molecular Weight of MAN2A1: 131 kDa.

Positive Controls: MAN2A1 (h2): 293T Lysate: sc-112856.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



MAN2A1 (H-222): sc-292351. Western blot analysis of MAN2A1 expression in non-transfected: sc-117752 (A) and human MAN2A1 transfected: sc-112856 (B) 293T 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.