# MAN2B2 (C-13): sc-104364



The Power to Question

## **BACKGROUND**

MAN2B2 (mannosidase,  $\alpha$ , class 2B, member 2) is a 1,009 amino acid secreted protein that belongs to the glycosyl hydrolase 38 family. Expressed as multiple alternatively spliced isoforms, MAN2B2 uses zinc as a cofactor to catalyze the hydrolysis of terminal, non-reducing  $\alpha$ -D-mannose residues in  $\alpha$ -D-mannoside proteins. The gene encoding MAN2B2 maps to human chromosome 4, which encodes nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes. Defects in some of the genes located on chromosome 4 are associated with Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

# **REFERENCES**

- Robinson, W.E., Montefiori, D.C. and Mitchell, W.M. 1987. Evidence that mannosyl residues are involved in human immunodeficiency virus type 1 (HIV-1) pathogenesis. AIDS Res. Hum. Retroviruses. 3: 265-282.
- Kozarsky, K., Penman, M., Basiripour, L., Haseltine, W., Sodroski, J. and Krieger, M. 1989. Glycosylation and processing of the human immunodeficiency virus type 1 envelope protein. J. Acquir. Immune Defic. Syndr. 2: 163-169.
- 3. Hiramoto, S., Tamba, M., Kiuchi, S., Jin, Y.Z., Bannai, S., Sugita, Y., Dacheux, F., Dacheux, J.L., Yoshida, M. and Okamura, N. 1997. Stage-specific expression of a mouse homologue of the porcine 135kDa  $\alpha$ -D-mannosidase (MAN2B2) in type A spermatogonia. Biochem. Biophys. Res. Commun. 241: 439-445.
- 4. Jin, Y.Z., Dacheux, F., Dacheux, J.L., Bannai, S., Sugita, Y. and Okamura, N. 1999. Purification and properties of major  $\alpha$ -D-mannosidase in the luminal fluid of porcine epididymis. Biochim. Biophys. Acta. 1432: 382-392.
- 5. Tascou, S., Nayernia, K., Engel, W. and Burfeind, P. 2000. Refinement of the expression pattern of a mouse homologue of the porcine 135 kDa  $\alpha$ -D-mannosidase (MAN2B2). Biochem. Biophys. Res. Commun. 272: 951-952.
- Land, A. and Braakman, I. 2001. Folding of the human immunodeficiency virus type 1 envelope glycoprotein in the endoplasmic reticulum. Biochimie. 83: 783-790.
- 7. 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: 353-360.
- 8. Park, C., Meng, L., Stanton, L.H., Collins, R.E., Mast, S.W., Yi, X., Strachan, H. and Moremen, K.W. 2005. Characterization of a human core-specific lysosomal  $\alpha$ 1,6-mannosidase involved in N-glycan catabolism. J. Biol. Chem. 280: 37204-37216.
- Campbell, E.M., Nonneman, D.J., Kuehn, L.A. and Rohrer, G.A. 2008. Genetic variation in the mannosidase 2B2 gene and its association with ovulation rate in pigs. Anim. Genet. 39: 515-519.

# **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## **CHROMOSOMAL LOCATION**

Genetic locus: MAN2B2 (human) mapping to 4p16.1.

## **SOURCE**

MAN2B2 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MAN2B2 of human origin.

#### **PRODUCT**

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

Blocking peptide available for competition studies, sc-104364 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **APPLICATIONS**

MAN2B2 (C-13) is recommended for detection of MAN2B2 of 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); non cross-reactive with family member MAN2B1.

Suitable for use as control antibody for MAN2B2 siRNA (h): sc-89272, MAN2B2 shRNA Plasmid (h): sc-89272-SH and MAN2B2 shRNA (h) Lentiviral Particles: sc-89272-V.

Molecular Weight of MAN2B2: 114 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.

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