

Mucin 2 (R-12): sc-13312

BACKGROUND

The mucins are a family of highly glycosylated, secreted proteins with a basic structure consisting of a variable number of tandem repeats (VNTRs) encoded by 60 base pairs (Mucin 1), 69 base pairs (Mucin 2) and 51 base pairs (Mucin 3). The number of repeats is highly polymorphic and varies among different alleles. Mucin 1 proteins are expressed as type I membrane proteins in addition to secreted forms. Mucin 1 is aberrantly expressed in epithelial tumors including breast carcinomas. Mucin 2 coats the epithelia of the intestines and airways and is associated with colonic tumors. Mucin 3 is a major component of various mucus gels and is broadly expressed in normal and tumor cells.

REFERENCES

- Siddiqui, J., et al. 1988. Isolation and sequencing of a cDNA coding for the human DF3 breast carcinoma-associated antigen. *Proc. Natl. Acad. Sci. USA* 85: 2320-2323.
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- Gum, J.R., et al. 1992. The human Mucin 2 intestinal mucin has cysteine-rich subdomains located both upstream and downstream of its central repetitive region. *J. Biol. Chem.* 267: 21375-21383.
- Pandey, P., et al. 1995. Association of the DF3/Mucin 1 breast cancer antigen with Grb2 and the Sos/Ras exchange protein. *Cancer Res.* 55: 4000-4003.
- Bell, S.L., et al. 2003. N-linked oligosaccharides play a role in disulphide-dependent dimerization of intestinal mucin Mucin 2. *Biochem. J.* 373: 893-900.
- Mesquita, P., et al. 2003. Human Mucin 2 mucin gene is transcriptionally regulated by Cdx homeodomain proteins in gastrointestinal carcinoma cell lines. *Biol. Chem.* 278: 51549-51556.

CHROMOSOMAL LOCATION

Genetic locus: MUC2 (human) mapping to 11p15.5; Muc2 (mouse) mapping to 7 F5.

SOURCE

Mucin 2 (R-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Mucin 2 of rat origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13312 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Mucin 2 (R-12) is recommended for detection of Mucin 2 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).

Mucin 2 (R-12) is also recommended for detection of Mucin 2 in additional species, including equine, bovine and porcine.

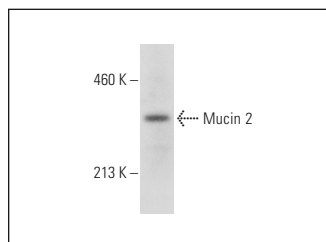
Suitable for use as control antibody for Mucin 2 siRNA (h): sc-43160, Mucin 2 siRNA (m): sc-155920, Mucin 2 shRNA Plasmid (h): sc-43160-SH, Mucin 2 shRNA Plasmid (m): sc-155920-SH, Mucin 2 shRNA (h) Lentiviral Particles: sc-43160-V and Mucin 2 shRNA (m) Lentiviral Particles: sc-155920-V.

Molecular Weight of Mucin 2 monomer: 300 kDa.

Molecular Weight of Mucin 2 dimer: 600 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

DATA



Mucin 2 (R-12): sc-13312. Western blot analysis of Mucin 2 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

- Kuver, R., et al. 2006. Absence of CFTR is associated with pleiotropic effects on mucins in mouse gallbladder epithelial cells. *Am. J. Physiol. Gastrointest. Liver Physiol.* 291: G1148-G1154.
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- Badonnel K, et al. 2009. Leptin-sensitive OBP-expressing mucous cells in rat olfactory epithelium: a novel target for olfaction-nutrition crosstalk? *Cell Tissue Res.* 338: 53-66.
- Nikitas, G., et al. 2011. Transcytosis of *Listeria monocytogenes* across the intestinal barrier upon specific targeting of goblet cell accessible E-cadherin. *J. Exp. Med.* 208: 2263-2277.

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.