

Mucin 3A/B (E-13): sc-131979

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 3A and Mucin 3B). 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 3A and Mucin 3B are major components of various mucus gels and, while Mucin 3A is broadly expressed in normal and tumor cells, Mucin 3B is predominantly expressed in adult and fetal small intestine and colon.

REFERENCES

1. 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.
2. Lan, M.S., et al. 1990. Cloning and sequencing of a human pancreatic tumor Mucin cDNA. *J. Biol. Chem.* 265: 15294-15299.
3. Gum, J.R. Jr., et al. 1990. Molecular cloning of cDNAs derived from a novel human intestinal Mucin gene. *Biochem. Biophys. Res. Commun.* 171: 407-415.
4. Gum, J.R. Jr., 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.
5. 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.
6. Geng, H., et al. 2006. Soluble form of T cell Ig Mucin 3 is an inhibitory molecule in T cell-mediated immune response. *J. Immunol.* 176: 1411-1420.

CHROMOSOMAL LOCATION

Genetic locus: MUC3A (human) mapping to 7q22.1, MUC3B (human) mapping to 7q22.3.

SOURCE

Mucin 3A/B (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Mucin 3B 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-131979 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Mucin 3A/B (E-13) is recommended for detection of Mucin 3A and Mucin 3B of 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).

Molecular Weight of Mucin 3A: 266 kDa.

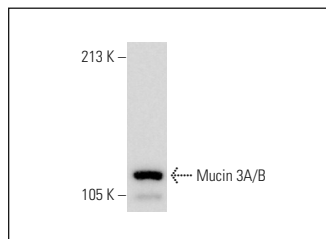
Molecular Weight of Mucin 3B: 96 kDa.

Positive Controls: human colon extract: sc-363757.

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



Mucin 3A/B (E-13): sc-131979. Western blot analysis of Mucin 3A/B expression in human colon tissue extract.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.