

# Mucin 3 (M3.1): sc-7315

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Mucin 3 (M3.1) is a mouse monoclonal antibody epitope corresponding to the tandem repeat region of Mucin 3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Mucin 3 (M3.1) is recommended for detection of Mucin 3 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Mucin 3A siRNA (h): sc-43162, Mucin 3A shRNA Plasmid (h): sc-43162-SH and Mucin 3A shRNA (h) Lentiviral Particles: sc-43162-V.

Molecular Weight of Mucin 3: 1100 kDa.

Positive Controls: human colon extract: sc-363757.

## RECOMMENDED SUPPORT REAGENTS

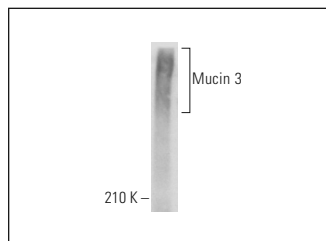
To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

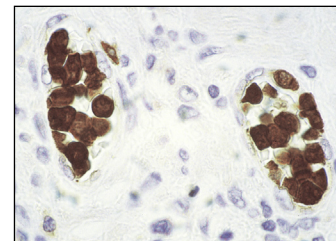
## STORAGE

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

## DATA



Mucin 3 (M3.1): sc-7315. Western blot analysis of Mucin 3 expression in human colon tissue extract.



Mucin 3 (M3.1): sc-7315. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human prostate carcinoma tissue showing staining of secreted Mucin 3.

## SELECT PRODUCT CITATIONS

- Wong, S., et al. 2004. CHOP activation by photodynamic therapy increases treatment induced photosensitization. *Lasers Surg. Med.* 35: 336-341.
- Glickman, J.N., et al. 2006. Mucin core polypeptide expression in the progression of neoplasia in Barrett's esophagus. *Hum. Pathol.* 37: 1304-1315.
- Sasaki, M., et al. 2007. Expression profiles of MUC Mucins and trefoil factor family (TFF) peptides in the intrahepatic biliary system: physiological distribution and pathological significance. *Prog. Histochem. Cytochem.* 42: 61-110.
- Zhang, Y.H., et al. 2011. Lentiviral shRNA silencing of CHOP inhibits apoptosis induced by cyclic stretch in rat annular cells and attenuates disc degeneration in the rats. *Apoptosis* 16: 594-605.
- Zhang, Y.H., et al. 2011. Cyclic stretch-induced apoptosis in rat annulus fibrosus cells is mediated in part by endoplasmic reticulum stress through nitric oxide production. *Eur. Spine J.* 20: 1233-1243.
- Miyamoto, Y., et al. 2014. Mmu-miR-615-3p regulates lipoapoptosis by inhibiting C/EBP homologous protein. *PLoS ONE* 9: e109637.
- Stremmel, W., et al. 2016. Phosphatidylcholine passes through lateral tight junctions for paracellular transport to the apical side of the polarized intestinal tumor cell-line CaCo2. *Biochim. Biophys. Acta* 1861: 1161-1169.
- Ma, H., et al. 2018. hsa-miR-93 regulates Mucin family gene expression via WNT/β-catenin pathway in intrahepatic stone disease. *Clin. Res. Hepatol. Gastroenterol.* 42: 453-461.
- Castellani, S., et al. 2022. Mucopenetration study of solid lipid nanoparticles containing magneto sensitive iron oxide. *Eur. J. Pharm. Biopharm.* E-published.

## RESEARCH USE

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