

# Mucin 2 (F-2): sc-515032

## 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: MUC2 (human) mapping to 11p15.5.

## SOURCE

Mucin 2 (F-2) is a mouse monoclonal antibody raised against amino acids 4880-5179 mapping at the C-terminus of Mucin 2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mucin 2 (F-2) is available conjugated to agarose (sc-515032 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515032 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515032 PE), fluorescein (sc-515032 FITC), Alexa Fluor<sup>®</sup> 488 (sc-515032 AF488), Alexa Fluor<sup>®</sup> 546 (sc-515032 AF546), Alexa Fluor<sup>®</sup> 594 (sc-515032 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-515032 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-515032 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-515032 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Mucin 2 (F-2) is recommended for detection of Mucin 2 of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight of Mucin 2 monomer: 300 kDa.

Molecular Weight of Mucin 2 dimer: 600 kDa.

Positive Controls: human small intestine extract: sc-364225.

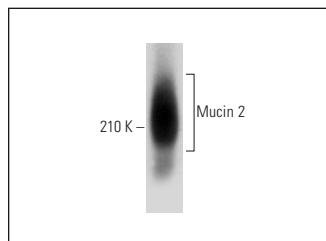
## RESEARCH USE

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

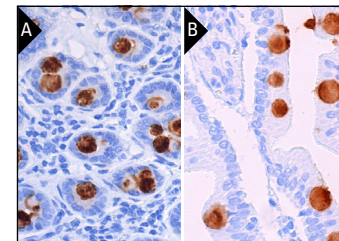
## STORAGE

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

## DATA



Mucin 2 (F-2): sc-515032. Western blot analysis of Mucin 2 expression in human small intestine tissue extract.



Mucin 2 (F-2): sc-515032. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of goblet cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of goblet cells. Blocking reagent used: UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-HRP: sc-516102 (B).

## SELECT PRODUCT CITATIONS

- Janardhan, K.S., et al. 2018. Immunohistochemistry in investigative and toxicologic pathology. *Toxicol. Pathol.* 46: 488-510.
- Coquenlorge, S., et al. 2019. GLI2 modulated by SUFU and SPOP induces intestinal stem cell niche signals in development and tumorigenesis. *Cell Rep.* 27: 3006-3018.
- Wu, A., et al. 2020. Transmissible gastroenteritis virus targets Paneth cells to inhibit the self-renewal and differentiation of LGR5 intestinal stem cells via Notch signaling. *Cell Death Dis.* 11: 40.
- Xie, Y., et al. 2020. Impact of a high-fat diet on intestinal stem cells and epithelial barrier function in middle-aged female mice. *Mol. Med. Rep.* 21: 1133-1144.
- Engevik, M.A., et al. 2020. Human intestinal enteroids as a model of *Clostridioides difficile*-induced enteritis. *Am. J. Physiol. Gastrointest. Liver Physiol.* 318: G870-G888.
- Lian, Q., et al. 2020. TRIM34 attenuates colon inflammation and tumorigenesis by sustaining barrier integrity. *Cell. Mol. Immunol.* E-published.
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- Lourenço, M., et al. 2020. The spatial heterogeneity of the gut limits predation and fosters coexistence of bacteria and bacteriophages. *Cell Host Microbe.* E-published.

## PROTOCOLS

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