

Mucin 2 (H-9): sc-515106

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.
- Lan, M.S., et al. 1990. Cloning and sequencing of a human pancreatic tumor mucin cDNA. *J. Biol. Chem.* 265: 15294-15299.
- 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.
- Gum, J.R., Jr., et al. 1992. The human MUC2 intestinal mucin has cysteine-rich subdomains located both upstream and downstream of its central repetitive region. *J. Biol. Chem.* 267: 21375-21383.

CHROMOSOMAL LOCATION

Genetic locus: MUC2 (human) mapping to 11p15.5.

SOURCE

Mucin 2 (H-9) 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_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mucin 2 (H-9) is available conjugated to agarose (sc-515106 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515106 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515106 PE), fluorescein (sc-515106 FITC), Alexa Fluor® 488 (sc-515106 AF488), Alexa Fluor® 546 (sc-515106 AF546), Alexa Fluor® 594 (sc-515106 AF594) or Alexa Fluor® 647 (sc-515106 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515106 AF680) or Alexa Fluor® 790 (sc-515106 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

Mucin 2 (H-9) 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) 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.

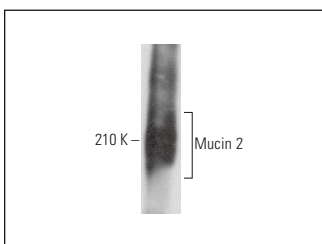
Molecular Weight of Mucin 2 dimer: 600 kDa.

Positive Controls: human colon extract: sc-363757 or human small intestine extract: sc-364225.

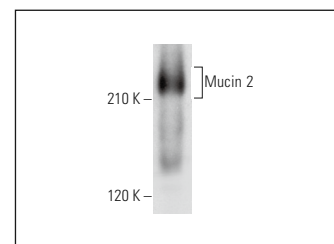
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Mucin 2 (H-9): sc-515106. Western blot analysis of Mucin 2 expression in human colon tissue extract.



Mucin 2 (H-9): sc-515106. Western blot analysis of Mucin 2 expression in human small intestine tissue extract.

SELECT PRODUCT CITATIONS

- Gorman, H., et al. 2023. IgGFc-binding protein and MUC2 mucin produced by colonic goblet-like cells spatially interact non-covalently and regulate wound healing. *Front. Immunol.* 14: 1211336.
- Brasino, D.S.K., et al. 2024. A linkable, polycarbonate gut microbiome-distal tumor chip platform for interrogating cancer promoting mechanisms. *Adv. Sci.* 11: e2309220.

RESEARCH USE

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