

Mucin 12 (B-9): sc-377269

BACKGROUND

Membrane-associated and secretory mucins are high molecular weight glycoproteins of the glycocalyx (polysaccharide biofilm) that protects mucosal epithelium from particulate matter and microorganisms. The mucin family consists of Mucins 1-4, Mucin 5 (AC and B), Mucins 6-8, Mucins 11-13 and Mucins 15-17. A family of four related Mucin genes (MUC2, MUC5AC, MUC5B and MUC6) encode the major secreted mucins. Mucin 12 contains a predicted transmembrane domain; two extracellular cysteine-rich EGF-like domains; a coiled-coil region; and a domain consisting of serine-, threonine-, and proline-rich degenerate tandem repeats of 28 amino acids, a structural feature typical of mucins. Mucin 12 transcript (> 12 kb) is present in colon, pancreas, prostate and uterus. Colorectal tumors can have low Mucin 12 transcript levels in comparison to normal colon tissues.

REFERENCES

- Owen, D.A. and Reid, P.E. 1995. Histochemical alterations of Mucin in normal colon, inflammatory bowel disease and colonic adenocarcinoma. *Histochem. J.* 27: 882-889.
- Gratchev, A., et al. 1998. Regulation of Mucin MUC2 gene expression during colon carcinogenesis. *Ann. N.Y. Acad. Sci.* 859: 180-183.
- Williams, S.J., et al. 1999. Two novel Mucin genes downregulated in colorectal cancer identified by differential display. *Cancer Res.* 59: 4083-4089.
- Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604609. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: MUC12 (human) mapping to 7q22.1.

SOURCE

Mucin 12 (B-9) is a mouse monoclonal antibody raised against amino acids 61-360 mapping near the N-terminus of Mucin 12 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mucin 12 (B-9) is available conjugated to agarose (sc-377269 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377269 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377269 PE), fluorescein (sc-377269 FITC), Alexa Fluor® 488 (sc-377269 AF488), Alexa Fluor® 546 (sc-377269 AF546), Alexa Fluor® 594 (sc-377269 AF594) or Alexa Fluor® 647 (sc-377269 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377269 AF680) or Alexa Fluor® 790 (sc-377269 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

Mucin 12 (B-9) is recommended for detection of Mucin 12 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 12 siRNA (h): sc-45683, Mucin 12 shRNA Plasmid (h): sc-45683-SH and Mucin 12 shRNA (h) Lentiviral Particles: sc-45683-V.

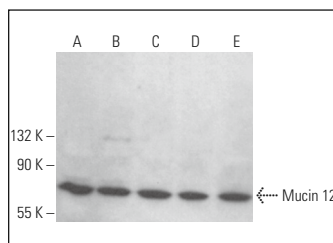
Molecular Weight of Mucin 12: 64 kDa.

Positive Controls: MES-SA/Dx5 whole cell lysate, COLO 205 whole cell lysate: sc-364177 or SW480 cell lysate: sc-2219.

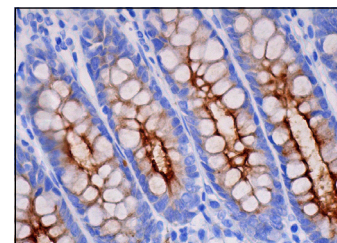
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Mucin 12 (B-9): sc-377269. Western blot analysis of Mucin 12 expression in MES-SA/Dx5 (A), COLO 205 (B), SW480 (C), Caco-2 (D) and HCT-116 (E) whole cell lysates.



Mucin 12 (B-9): sc-377269. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Huang, H., et al. 2021. Integrated bioinformatics analyses of key genes involved in hepatocellular carcinoma immunosuppression. *Oncol. Lett.* 22: 830.

STORAGE

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