

Mucin 13 (D-5): sc-373857

BACKGROUND

Mucins are epithelial glycoproteins with a high content of clustered oligosaccharides that are O-glycoside linked to tandem repeat peptides rich in threonine, serine and proline. Mucin 13 (MUC13), also designated down-regulated in colon cancer 1 (DRCC1), is an epithelial and hemopoietic type I membrane protein that undergoes secretion and influences gastrointestinal mucosa levels. It is most abundant in epithelial tissues of the gastrointestinal and respiratory tracts, such as large intestine and trachea, followed by kidney, small intestine, appendix and stomach. Mucin 13 is a good differentiation marker for gastrointestinal mucosa and may also indicate certain gastric tumors. It localizes to the apical membrane of both columnar and goblet cells in the gastrointestinal tract, and within goblet cell thecae. Mucin 13 is a cleaved protein, and the β subunit, containing the cytoplasmic tail, can homodimerize.

CHROMOSOMAL LOCATION

Genetic locus: MUC13 (human) mapping to 3q21.2.

SOURCE

Mucin 13 (D-5) is a mouse monoclonal antibody raised against amino acids 19-318 mapping within an N-terminal extracellular domain of Mucin 13 of human origin.

PRODUCT

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

Mucin 13 (D-5) is available conjugated to agarose (sc-373857 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373857 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373857 PE), fluorescein (sc-373857 FITC), Alexa Fluor[®] 488 (sc-373857 AF488), Alexa Fluor[®] 546 (sc-373857 AF546), Alexa Fluor[®] 594 (sc-373857 AF594) or Alexa Fluor[®] 647 (sc-373857 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-373857 AF680) or Alexa Fluor[®] 790 (sc-373857 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Mucin 13 (D-5) is recommended for detection of Mucin 13 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 13 siRNA (h): sc-45690, Mucin 13 shRNA Plasmid (h): sc-45690-SH and Mucin 13 shRNA (h) Lentiviral Particles: sc-45690-V.

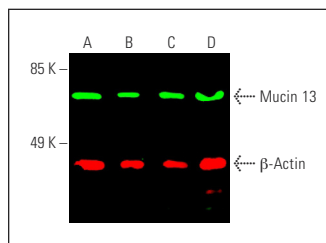
Molecular Weight of Mucin 13: 58 kDa.

Positive Controls: HCT-8 cell lysate: sc-24675, HCT-116 whole cell lysate: sc-364175 or RKO whole cell lysate: sc-364793.

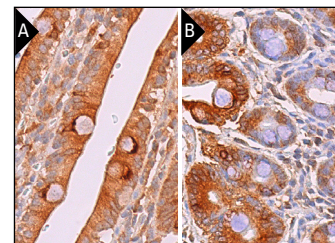
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Simultaneous direct near-infrared western blot analysis of Mucin 13 expression, detected with Mucin 13 (D-5) Alexa Fluor[®] 680: sc-373857 AF680 and β -Actin expression, detected with β -Actin (C4) Alexa Fluor[®] 790: sc-47778 AF790 in HCT-8 (A), HCT-116 (B), COLO 320DM (C) and RKO (D) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214.



Mucin 13 (D-5): sc-373857. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum (A) and human colon (B) tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Chhuon, C., et al. 2016. Changes in lipid raft proteome upon TNF- α stimulation of cystic fibrosis cells. *J. Proteomics* 145: 246-253.
- Sojka, L., et al. 2023. MUC13-miRNA-4647 axis in colorectal cancer: prospects to identifications of risk factors and clinical outcomes. *Oncol. Lett.* 25: 72.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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