

Mucin 6 (CLH5): sc-33668

BACKGROUND

Mucin 6 (also designated MUC 6 and gastric mucin) is a large glycoprotein that plays a major role in the protection of the gastrointestinal tract. Mucin 6 carries GlcNAc α 1 \rightarrow 4Gal β \rightarrow R structures, indicating that α 1,4-N-acetylglucosaminyltransferase is important to the formation of the mucous glycoproteins *in vivo*. Mucin 6 expression is highest in the stomach and gall bladder, with lower expression in the terminal ileum and right colon. In gastric cancer, Mucin 6 has an altered expression. In normal stomach, Mucin 6 apomucin is associated with Lewis type 2; Mucin 6 is also expressed in gastric metaplasia, duodenum and pancreas. Mucin 6 is a secretory mucin, located in the deeper mucosal folds of human gall bladder, and its expression is altered with increasing degrees of inflammation. Mucin 6 mRNA is expressed transiently in the nephrogenic zone of the kidney in the early mid-trimester of development, and Mucin 6 glycoprotein is expressed in the epithelium of ureteric buds and collecting ducts, but absent from adult kidney. Proliferating bile ductular cells express Mucin 6 apomucin in diseased liver, especially in chronic viral hepatitis with active necroinflammation, suggesting that this secreted mucin acts as a cytoprotective agent and represents a phenotype of reactive biliary epithelium in chronic viral hepatitis.

CHROMOSOMAL LOCATION

Genetic locus: MUC6 (human) mapping to 11p15.5.

SOURCE

Mucin 6 (CLH5) is a mouse monoclonal antibody raised against a synthetic peptide of the Mucin 6 tandem repeat 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 6 (CLH5) is available conjugated to agarose (sc-33668 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-33668 PE), fluorescein (sc-33668 FITC), Alexa Fluor[®] 488 (sc-33668 AF488), Alexa Fluor[®] 546 (sc-33668 AF546), Alexa Fluor[®] 594 (sc-33668 AF594) or Alexa Fluor[®] 647 (sc-33668 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-33668 AF680) or Alexa Fluor[®] 790 (sc-33668 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Mucin 6 (CLH5) is recommended for detection of Mucin 6 of human origin by Western Blotting (starting dilution 1:200, 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Mucin 6 siRNA (h): sc-43166, Mucin 6 shRNA Plasmid (h): sc-43166-SH and Mucin 6 shRNA (h) Lentiviral Particles: sc-43166-V.

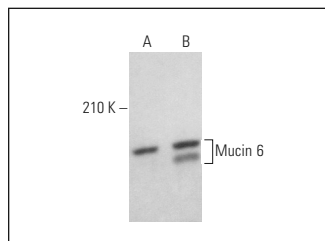
Molecular Weight of Mucin 6: 252 kDa.

Positive Controls: U-698-M whole cell lysate: sc-364799.

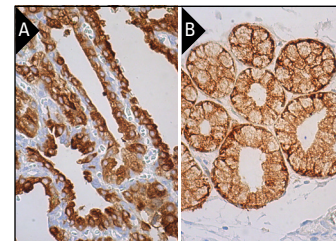
STORAGE

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

DATA



Mucin 6 (CLH5): sc-33668. Western blot analysis of Mucin 6 expression in K-562 (A) and U-698-M (B) whole cell lysates.



Mucin 6 (CLH5): sc-33668. Immunoperoxidase staining of formalin fixed, paraffin-embedded human seminal vesicle tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

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- Mustapha, P., et al. 2014. Chemokines and antimicrobial peptides have a cag-dependent early response to *Helicobacter pylori* infection in primary human gastric epithelial cells. *Infect. Immun.* 82: 2881-2889.
- Karakoç, Z., et al. 2016. Mucin profiles of the abomasum in bulls and rams: a comparative study. *Microsc. Res. Tech.* 79: 856-868.
- Özbek, M., et al. 2018. Prenatal development and histochemical characteristics of gastrointestinal mucins in sheep fetuses. *Microsc. Res. Tech.* 81: 630-648.
- Zhang, P., et al. 2019. Dissecting the single-cell transcriptome network underlying gastric premalignant lesions and early gastric cancer. *Cell Rep.* 27: 1934-1947.e5.
- Xu, D.F., et al. 2020. Long non-coding RNA CASC2 suppresses pancreatic cancer cell growth and progression by regulating the miR-24/MUC6 axis. *Int. J. Oncol.* 56: 494-507.
- Rana, T., et al. 2021. Linking bacterial enterotoxins and α defensin 5 expansion in the *Crohn's colitis*: a new insight into the etiopathogenetic and differentiation triggers driving colonic inflammatory bowel disease. *PLoS ONE* 16: e0246393.
- Ohya, A., et al. 2021. Decreased gastric gland mucin-specific O-glycans are involved in the progression of ovarian primary mucinous tumours. *Acta Histochem. Cytochem.* 54: 115-122.

RESEARCH USE

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

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