SANTA CRUZ BIOTECHNOLOGY, INC.

Mucin 6 (0.N.459): sc-71623

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 GlcNAcα1→4Galβ→R structures, indicating that α1, 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.

REFERENCES

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2. Sasaki, M., et al. 1998. Increased MUC6 apomucin expression is a characteristic of reactive biliary epithelium in chronic viral hepatitis. J. Pathol. 185: 191-198.
3. Reid, C.J. and Harris, A. 1999. Expression of the MUC6 mucin gene in development of the human kidney and male genital ducts. J. Histochem. Cytochem. 47: 817-822.
4. Guillem, P., et al. 2000. Mucin gene expression and cell differentiation in human normal, premalignant and malignant esophagus. Int. J. Cancer 88: 856-861.
5. Ho, S.B., et al. 2000. Altered mucin core peptide expression in acute and chronic cholecystitis. Dig. Dis. Sci. 45: 1061-1071.
6. Zhang, M.X., et al. 2001. Immunohistochemical demonstration of α1, 4-N-acetylglucosaminyltransferase that forms GlcNAcα1, 4Galβ residues in human gastrointestinal mucosa. J. Histochem. Cytochem. 49: 587-596.
7. Perrais, M., et al. 2001. Aberrant expression of human mucin gene MUC5B in gastric carcinoma and cancer cells. Identification and regulation of a distal promoter. J. Biol. Chem. 276: 15386-15396.
8. Lopez-Ferrer, A., et al. 2001. Apomucin, expression and association with Lewis antigens during gastric development. Appl. Immunohistochem. Mol. Morphol. 9: 42-48.

CHROMOSOMAL LOCATION

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

RESEARCH USE

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

SOURCE

Mucin 6 (0.N.459) is a mouse monoclonal antibody raised against a synthetic peptide of the Mucin 6 tandem repeat of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Mucin 6 (0.N.459) 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 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 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: human stomach extract: sc-363780.

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.

SELECT PRODUCT CITATIONS

1. Miao, Z.F., et al. 2014. Peritoneal milky spots serve as a hypoxic niche and favor gastric cancer stem/progenitor cell peritoneal dissemination through hypoxia-inducible factor 1α. Stem Cells 32: 3062-3074.

STORAGE

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

PROTOCOLS

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