SANTA CRUZ BIOTECHNOLOGY, INC.

Mucin 8 (T-20): sc-16920

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Mucin glycoproteins (mucins) are major constituents of the glycocalyx that covers mucosal epithelium. There are two broad classes of mucins: membrane-associated and secretory mucins. The gene expression of mucins (Mucin 1-Mucin 8) changes characteristically during malignant transformation of epithelial tissues. The MUC8 gene is localized to human chromosome 12q24.3. MUC8, a 313 amino acid protein, is not expressed in human fetal tissues, but has a high expression level in human testis, placenta, endometrium and cervix, and weak or undetectable levels in the human epididymis, seminal vesicle, ovary, fallopian tube and uterus. Both male and female reproductive tract tissues synthesize tracheal MUC8 mucin. MUC8 is one of the major mucins in the ethmoid mucosa and is upregulated by chronic inflammation. TNFα, IL-1β and a combination of both can significantly increase MUC8 mRNA levels, suggesting that a mixture of inflammatory mediators can synergistically increase secretion of mucin in human nasal epithelium.

REFERENCES

1. D'Curz, O.J., et al. 1996. Antigenic cross-reactivity of human tracheal mucin with human sperm and trophoblasts correlates with the expression of Mucin 8 gene messenger ribonucleic acid in reproductive tract tissues. Fertil. Steril. 66: 316-326.
2. Shankar, V., et al. 1997. Chromosomal localization of a human mucin gene (Muc 8) and cloning of the cDNA corresponding to the carboxy terminus. Am. J. Respir. Cell Mol. Biol. 16: 232-241.
3. Retz, M., et al. 1998. Differential mucin Muc 7 gene expression in invasive bladder carcinoma in contrast to uniform Muc 1 and Muc 2 gene expression in both normal urothelium and bladder carcinoma. Cancer Res. 58: 5662-5666.

CHROMOSOMAL LOCATION

Genetic locus: MUC8 (human) mapping to 12p13.33.

SOURCE

Mucin 8 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Mucin 8 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16920 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

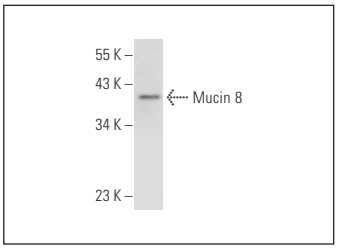
Mucin 8 (T-20) is recommended for detection of Mucin 8 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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).

Positive Controls: NCI-H292 whole cell lysate: sc-364179.

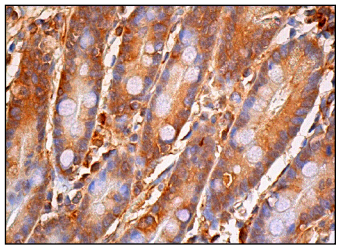
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Mucin 8 (T-20): sc-16920. Western blot analysis of Mucin 8 expression in NCI-H292 whole cell lysate.



Mucin 8 (T-20): sc-16920. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Paulsen, F.P., et al. 2006. TFF peptides and mucins are major components of dacryoliths. Graefes Arch. Clin. Exp. Ophthalmol. 244: 1160-1170.
2. Liegl, B., et al. 2007. Mammary and extramammary Paget's disease: an immunohistochemical study of 83 cases. Histopathology 50: 439-447.
3. Kutta, H., et al. 2008. Distribution of mucins and antimicrobial substances lysozyme and lactoferrin in the laryngeal subglottic region. J. Anat. 213: 473-481.
4. Finkbeiner, W.E., et al. 2011. Cystic fibrosis and the relationship between mucin and chloride secretion by cultures of human airway gland mucous cells. Am. J. Physiol. Lung Cell. Mol. Physiol. 301: L402-L414.