

Mucin 4 (C-20): sc-49763

BACKGROUND

Mucins are a group of high molecular weight glycoproteins consisting of a mucin core protein and O-linked carbohydrates. Mucin 4, a membrane-bound mucin, is the human homolog of the rat sialomucin complex (SMC). Mucin 4 protein consists of Mucin 4 α , a large amino mucin type subunit, and Mucin 4 β , a transmembrane subunit containing three EGF-like domains. The Mucin 4 gene is the predominant mucin gene expressed in the normal urothelium and is also expressed in several normal tissues such as trachea, lung and testis. Dysregulation of Mucin 4 results in high levels of expression in pancreatic tumors and tumor cell lines. Induction of Mucin 4 in pancreatic carcinoma by all-*trans*-retinoic acid is mediated through the retinoic acid receptor- α signaling pathway. TGF β 2 serves as an interim mediator of this regulated expression. Alternative splicing in the 3'-end of the Mucin 4 gene generates at least 12 splice variants, which are characterized as two distinct types, a secreted type and a membrane-associated type. Mucin 4 protein acts as a heterodimeric bifunctional cell-surface glycoprotein and forms thick mucous effusion in the diseased middle ear.

REFERENCES

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6. Arul, G.S., et al. 2000. Mucin gene expression in Barrett's oesophagus: an *in situ* hybridisation and immunohistochemical study. *Gut* 47: 753-61.
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CHROMOSOMAL LOCATION

Genetic locus: MUC4 (human) mapping to 3q29.

SOURCE

Mucin 4 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Mucin 4 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-49763 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Mucin 4 (C-20) is recommended for detection of Mucin 4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (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 4 siRNA (h): sc-43163, Mucin 4 shRNA Plasmid (h): sc-43163-SH and Mucin 4 shRNA (h) Lentiviral Particles: sc-43163-V.

Molecular Weight of glycosylated Mucin 4: 980 kDa.

Molecular Weight (predicted) of Mucin 4 α : 850 kDa.

Molecular Weight (predicted) of Mucin 4 β : 80 kDa.

Positive controls: MCF7 whole cell lysate: sc-2206, HUV-EC-C Cell Lysate or HPAFII pancreatic cancer cell line.

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) 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.

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 or our catalog for detailed protocols and support products.