BACKGROUND

Mucins are a group of high molecular weight glycoproteins consisting of a mucin core protein and O-linked carbohydrates. 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 5AC is a gel-forming mucin that is secreted from surface mucous cells. Glucocorticoid is required for the expression of Mucin 5AC mRNA and high doses of hydrocortisone suppresses its expression. Additionally, asthmatic fluid stimulates Mucin 5AC synthesis several-fold. The pro-inflammatory cytokines IL-6 and TNFα stimulate Mucin 5AC secretion and thus contribute to the upregulation of mucin by chronic inflammation. Expression of Mucin 5AC is retinoic acid (RA)- or retinol-dependent, and RA control of mucin genes is mediated by the retinoid acid receptor RARα and, to a lesser extent, by RARγ. Thyroid hormone binding to thyroid receptors inhibits Mucin5AC gene expression. Mucin 5AC is also expressed in normal endocervical epithelium, small intestine, gastric cells (Lewis type 1) and gastric metaplasia and it is one of the major mucins in the ethmoid mucosa.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: MUC5AC (human) mapping to 11p15.5; Muc5ac (mouse) mapping to 7F5.

SOURCE

Mucin 5AC (2X123) is a mouse monoclonal antibody raised against M1 mucin preparation from the fluid of an ovarian mucinous cyst belonging to an O Le (a-b) patient.

PRODUCT

Each vial contains 200 µg IgG1 in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Mucin 5AC (2X123) is recommended for detection of Mucin 5AC of mouse, rat and 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).

Mucin 5AC (2X123) is also recommended for detection of Mucin 5AC in additional species, including rabbit, porcine, feline, avian, monkey and hedgehog.

Suitable for use as control antibody for Mucin 5AC siRNA (h): sc-37131, Mucin 5AC siRNA (m): sc-37132, Mucin 5AC shRNA Plasmid (h): sc-37131-SH, Mucin 5AC shRNA Plasmid (m): sc-37132-SH, Mucin 5AC shRNA (h) Lentiviral Particles: sc-37131-V and Mucin 5AC shRNA (m) Lentiviral Particles: sc-37132-V.

Molecular Weight of Mucin 5AC: 400-600 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

SELECT PRODUCT CITATIONS


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.

See Mucin 5AC (45M1): sc-21701 for Mucin 5AC antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488, 546, 594, 647, 680 and 790.