**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 mucus cells. Glucocorticoid is required for the expression of Mucin 5AC mRNA and high doses of hydrocortisone suppress its expression. Additionally, asthmatic fluid stimulates Mucin 5AC synthesis several-fold. The pro-inflammatory cytokines IL-6 and TNF-α 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 Mucin 5AC gene expression. Mucin 5AC is also expressed in normal endocervical epithelium, small intestine, gastric cells (Lewis type 1) and gastric metaplasia, and it is a one of the major mucins in the ethmoid mucosa.

**CHROMOSOMAL LOCATION**

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

**SOURCE**

Mucin 5AC (2Q445) is a mouse monoclonal antibody raised against a synthetic peptide of the mucin 5AC tandem repeat of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain 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 (2Q445) is recommended for detection of Mucin 5AC of mouse and human origin by Western Blotting (starting dilution 1:100, dilution range), 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 1:50-1500). 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, human stomach extract: sc-363780 or mouse stomach extract: sc-394628.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG HRP: sc-516102 or m-IgG 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 ml). 3) Immunofluorescence: use m-IgG FITC: sc-516140 or UltraCruz 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-IgG BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

**DATA**

**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.