Mucin 5AC (CLH2): sc-33667

**BACKGROUND**

Mucins are a group of high molecular weight glycoproteins consisting of a mucin core protein and O-linked carbohydrates. Mucin 5A carries GlcNAcα1→4Galβ→R structures, indicating that α1,4-N-acetylgalcosaminyltransferase 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 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 one of the major Mucins in the ethmoid mucosa.

**CHROMOSOMAL LOCATION**

Genetic locus: MUC5AC (human) mapping to 11p15.5.

**SOURCE**

Mucin 5AC (CLH2) 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 IgG kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mucin 5AC (CLH2) is available conjugated to agarose (sc-33667 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33667 HRP), 200 µg/ml, for WB, HCP(O) and ELISA; to either phycoerythrin (sc-33667 PE), fluorescein (sc-33667 FITC), Alexa Fluor® 488 (sc-33667 AF488), Alexa Fluor® 546 (sc-33667 AF546), Alexa Fluor® 594 (sc-33667 AF594) or Alexa Fluor® 647 (sc-33667 AF647), 200 µg/ml, for WB (RGB), IF, IHCP and FCM; and to either Alexa Fluor® 680 (sc-33667 AF680) or Alexa Fluor® 790 (sc-33667 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

Mucin 5AC (CLH2) is recommended for detection of Mucin 5AC of human origin by Western Blotting (starting dilution 1:100, 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 5AC siRNA (h): sc-37131, Mucin 5AC shRNA Plasmid (h): sc-37131-SH and Mucin 5AC shRNA (h) Lentiviral Particles: sc-37131-V.

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

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

**STORAGE**

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

**DATA**

- Mucin 5AC (CLH2): sc-33667. Western blot analysis of Mucin 5AC expression in MCF7 whole cell lysate.
- Mucin 5AC (CLH2): sc-33667. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human gastric mucosa showing extracellular matrix staining of superficial and foveolar epithelium. Image kindly provided by Celso Albuquerque Reis, Ph.D., Institute of Molecular Pathology and Immunology, University of Porto (A).

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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