**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 salivary mucin complex (SMC). Mucin 4 protein consists of Mucin 4α, a large amino mucin type subunit and Mucin 4β, 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. TGFβ2 serves as an intermediate 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 2 distinct types, a secreted type and a membrane-associated type. Mucin 4 protein acts as a heterodimeric bifunctional cell-surface glycoprotein and forms thick mucus effusion in the diseased middle ear.

**CHROMOSOMAL LOCATION**

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

**SOURCE**

Mucin 4 (8G7) is a mouse monoclonal antibody raised against a synthetic peptide (STGDTPLPVTDTSSV) directed against the Mucin 4 tandem repeats of human origin.

**PRODUCT**

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

**APPLICATIONS**

Mucin 4 (8G7) is recommended for detection of Mucin 4 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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 of Mucin 4α: 850 kDa.

Molecular Weight of Mucin 4β: 80 kDa.

Positive controls: MCF7 whole cell lysate: sc-2206 or HUV-EC-C whole cell lysate: sc-384180.

**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.

**DATA**

Mucin 4 (8G7): sc-53945. Western blot analysis of Mucin 4 expression in PANCA-1 (A), CD-18/MPAF (B) and Colo320DM cells showing glycosylation. Kindly provided by Dr. Suninder Batta, University of Nebraska Medical Center.

Mucin 4 (8G7): sc-53945. Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasal and respiratory epithelial cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing membrane and cytoplasmic staining of glandular cells (B).

**SELECT PRODUCT CITATIONS**


See Mucin 4 (1G8): sc-33654 for Mucin 4 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.