

# Mucin 1 (E29): sc-53377

## BACKGROUND

The mucins are a family of highly glycosylated, secreted proteins with a basic structure consisting of a variable number of tandem repeats (VNTRs) encoded by 60 base pairs (Mucin 1), 69 base pairs (Mucin 2) and 51 base pairs (Mucin 3). The number of repeats is highly polymorphic and varies among different alleles. Mucin 1 proteins are expressed as type I membrane proteins in addition to secreted forms. Mucin 1 is aberrantly expressed in epithelial tumors including breast carcinomas. Mucin 2 coats the epithelia of the intestines and airways and is associated with colonic tumors. Mucin 3 is a major component of various mucus gels and is broadly expressed in normal and tumor cells.

## REFERENCES

1. Siddiqui, J., et al. 1988. Isolation and sequencing of a cDNA coding for the human DF3 breast carcinoma-associated antigen. *Proc. Natl. Acad. Sci. USA* 85: 2320-2323.
2. Lan, M.S., et al. 1990. Cloning and sequencing of a human pancreatic tumor mucin cDNA. *J. Biol. Chem.* 265: 15294-15299.
3. Gum, J.R., Jr., et al. 1992. The human MUC2 intestinal mucin has cysteine-rich subdomains located both upstream and downstream of its central repetitive region. *J. Biol. Chem.* 267: 21375-21383.
4. Pandey, P., et al. 1995. Association of the DF3/MUC1 breast cancer antigen with Grb2 and the Sos/Ras exchange protein. *Cancer Res.* 55: 4000-4003.

## CHROMOSOMAL LOCATION

Genetic locus: MUC1 (human) mapping to 1q22.

## SOURCE

Mucin 1 (E29) is a mouse monoclonal antibody raised against milk fat globule membrane preparation of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mucin 1 (E29) is available conjugated to Alexa Fluor® 488 (sc-53377 AF488), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

## APPLICATIONS

Mucin 1 (E29) is recommended for detection of Mucin 1 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).

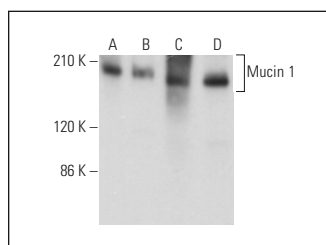
Suitable for use as control antibody for Mucin 1 siRNA (h): sc-35985, Mucin 1 shRNA Plasmid (h): sc-35985-SH and Mucin 1 shRNA (h) Lentiviral Particles: sc-35985-V.

Molecular Weight of Mucin 1: 200 kDa.

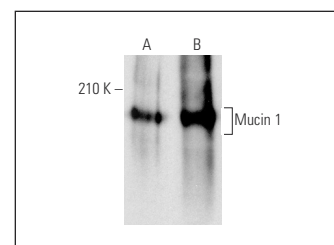
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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/2.0 ml). 3) Immunofluorescence: use m-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGλ BP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Mucin 1 (E29): sc-53377. Western blot analysis of Mucin 1 expression in BT-20 (A), MCF7 (B), DU 145 (C) and HeLa (D) whole cell lysates. Detection reagent used: m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM.



Mucin 1 (E29): sc-53377. Western blot analysis of Mucin 1 expression in BT-20 (A) and DU 145 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Wang, J.G., et al. 2010. Primary pleomorphic liposarcoma of pericardium. *Interact. Cardiovasc. Thorac. Surg.* 11: 325-327.
2. Wang, J.G., et al. 2012. Clinicopathologic analysis of cardiac myxomas: seven years' experience with 61 patients. *J. Thorac. Dis.* 4: 272-283.
3. Rojas, A., et al. 2015. HMGB1 enhances the protumoral activities of M2 macrophages by a RAGE-dependent mechanism. *Tumour Biol.* 37: 3321-3329.
4. Haley, S.A., et al. 2015. Human polyomavirus receptor distribution in brain parenchyma contrasts with receptor distribution in kidney and choroid plexus. *Am. J. Pathol.* 185: 2246-2258.
5. Coyne, G.O., et al. 2020. Intravenous 5-fluoro-2'-deoxycytidine administered with tetrahydrouridine increases the proportion of p16-expressing circulating tumor cells in patients with advanced solid tumors. *Cancer Chemother. Pharmacol.* 85: 979-993.

## 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.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA