Anti-Human MUC1 (CD227) Antibody, Clone 16A

Antibodies

Mouse monoclonal IgG1 antibody against human MUC1 (CD227), unconjugated

Catalog #60155 | 100 µg | 0.5 mg/mL

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Product Description

The 16A antibody reacts with human MUC1, a large (> 250 kDa) heavily glycosylated type 1 transmembrane protein expressed on the surface of most glandular and ductal epithelial cells and a variety of hematopoietic cells. A characteristic feature of the MUC1 glycoprotein is a core domain composed of a variable number of tandem repeats and multiple oligosaccharide side chains. Because the extracellular portion of MUC1 can extend beyond most cell surface proteins, it is thought to play a role in cell-cell and cell-substrate adhesion. The protein is highly expressed by a majority of human adenocarcinomas and is associated with a poor prognosis. In the mammary gland, MUC1 is localized on the apical plasma membrane of luminal epithelial cells. The clone 16A antibody has a higher affinity for the glycosylated form of MUC1.

Target Antigen Name:	MUC1 (CD227)
Alternative Names:	CD227, EMA, Episialin, Epithelial membrane antigen, HMFG antigen, MAM6, Mucin 1, PEM, Polymorphic epithelial mucin
Gene ID:	4582
Species Reactivity:	Human
Host Species:	Mouse (C57BL/6)
Clonality:	Monoclonal
Clone:	16A
Isotype:	IgG1, lambda
Immunogen:	Jurkat cells expressing MUC1
Conjugate:	Unconjugated

Applications

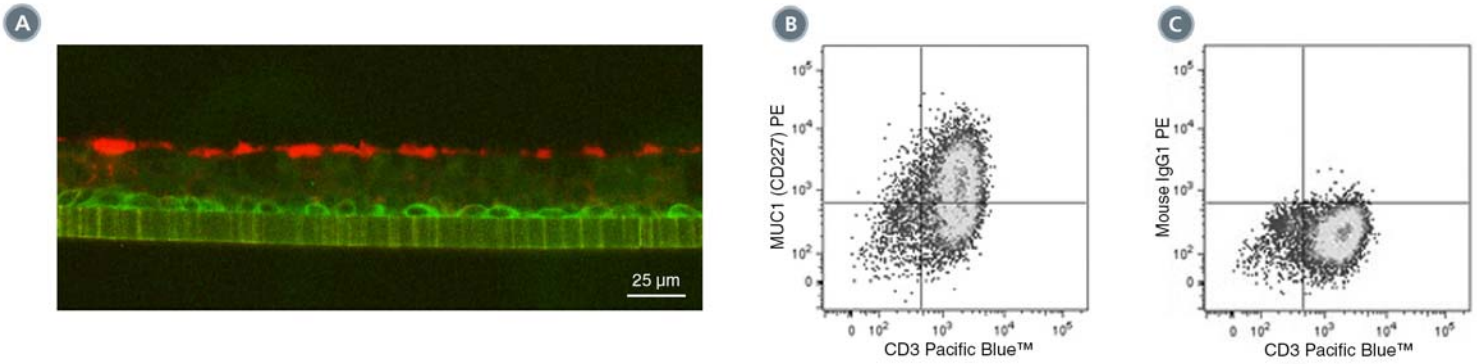
Verified:	FC, ICC, IF
Reported:	FC, IHC
Special Applications:	This antibody clone has been verified for labeling human airway epithelial cells cultured in PneumaCult™-ALI Medium (Catalog #05001) in air-liquid interface cultures.

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The immunoglobulin was purified by affinity chromatography.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use:	The suggested use of this antibody is: FC, ≤ 1 µg per 1 x 10^6 cells in 100 µL; ICC/IF, 1 in 200 to 1 in 500. It is recommended that the antibody be titrated for optimal performance for each application.

Data



(A) Primary human airway epithelial cells were cultured in PneumaCult™-ALI Medium at the air-liquid interface, then cryo-sectioned and labeled with Anti-Human MUC1 (CD227) Antibody, Clone 16A, followed by a goat anti-rabbit IgG antibody, Alexa Fluor® 594 (red), and an anti-human NGF Receptor/p75NTR (CD271) antibody, followed by a donkey anti-mouse IgG antibody, Alexa Fluor® 488 (green).
(B) Flow cytometry analysis of human peripheral blood lymphocytes following stimulation with phytohemagglutinin (PHA) for 3 days. Cells were labeled with Anti-Human MUC1 (CD227) Antibody, Clone 16A, followed by an anti-mouse IgG1 antibody, PE and anti-human CD3 antibody, Clone HIT3a, Pacific Blue™.
(C) Flow cytometry analysis of human peripheral blood lymphocytes following stimulation with PHA for 3 days. Cells were labeled with Mouse IgG1, kappa Isotype Control Antibody, Clone MOPC-21 (Catalog #60070), followed by an anti-mouse IgG1 antibody, PE, and anti-human CD3 antibody, clone HIT3a, Pacific Blue™.

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

1. Qu J et al. (2016) Molecular basis of antibody binding to mucin glycopeptides in lung cancer. Int J Oncol 48(2): 587–94. (FC)
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