Anti-Human CD227 (Mucin 1) eFluor® 615

Catalog Number: 42-9893
Also known as: Mucin Glycoprotein, MUC1, EMA (Epithelial Membrane Antigen), Episialin, Tumor-Associated Mucin, PEM (Polymorphic Epithelial Mucin), Breast Cancer-Associated Antigen
RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: Anti-Human CD227 (Mucin 1) eFluor® 615
REF **Catalog Number:** 42-9893
Clone: SM3
Concentration: 0.2 mg/mL
Host/Isotype: Mouse IgG1

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer
Temperature Limitation: Store at 2-8°C. Do not freeze. Light-sensitive material.
LOT **Batch Code:** Refer to vial
Use By: Refer to vial
Contains sodium azide

Description

This SM3 monoclonal antibody reacts with the under-glycosylated form of human Mucin 1 (MUC1, CD227), a large glycoprotein belonging to the mucin protein family. Mucin 1 contains a polypeptide core consisting of multiple tandem repeats that become highly glycosylated. Mucin 1 is typically expressed in ductal or glandular epithelial cells and is localized to the apical membrane. In cancerous cells, Mucin 1 expression is increased and membrane-specific localization is lost resulting in expression throughout the membrane and cytoplasm. High levels of under-glycosylated Mucin 1 are thought to affect cell behavior during both invasion and metastasis as well as in immune recognition. In addition, under-glycosylated Mucin 1 is shed from the epithelial cell surface and can be detected in circulation. Alterations in Mucin 1 glycosylation are found in most adenocarcinomas of the breast, lung, pancreas, prostate, and ovary. Mucin 1 has recently been shown to co-localize and interact with members of the erbB receptor kinase family, proteins that are upregulated in more aggressive forms of breast cancer.
Please note this antibody sees a distinct epitope from other Mucin 1 antibodies.

Applications Reported

This SM3 antibody has been reported for use in immunohistochemical staining of formalin-fixed paraffin embedded tissue sections (IHC-P) and immunocytochemistry (ICC).

Applications Tested

This SM3 antibody has been tested by immunohistochemistry on formalin-fixed paraffin embedded human breast carcinoma tissue and by immunocytochemistry on fixed MCF-7 cells at less than or equal to 20 ug/mL. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest. This product has not been validated for flow cytometric analysis.

Filter Recommendation: When using this eFluor® 615 antibody conjugate, we recommend a filter that will capture the 615 emission wavelength (for example, Excitation 560/55, 585LP, Emission 645/75). A standard Alexa Fluor® 594 filter is acceptable.

References

Croce MV, Isla-Larrain MT, Rua CE, Rabassa ME, Gendler SJ, Segal-Eiras A. Patterns of MUC1 tissue expression defined by an anti-MUC1 cytoplasmic tail monoclonal antibody in breast cancer. J Histochem Cytochem. 2003 Jun;51(6):781-8.

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Mukherjee P, Ginardi AR, Madsen CS, Sterner CJ, Adriance MC, Tevethia MJ, Gendler SJ. Mice with spontaneous pancreatic cancer naturally develop MUC-1-specific CTLs that eradicate tumors when adoptively transferred. J Immunol. 2000 Sep 15;165(6):3451-60.

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MUC-1 mucin from normal breast epithelial cell lines and breast carcinoma cell lines. Demonstration of simpler and fewer glycan chains in tumor cells. J Biol Chem. 1996 Dec 27;271(52):33325-34.(SM3, WB)

Ioannides CG, Fisk B, Jerome KR, Irimura T, Wharton JT, Finn OJ. Cytotoxic T cells from ovarian malignant tumors can recognize polymorphic epithelial mucin core peptides. J Immunol. 1993 Oct 1;151(7):3693-703.(SM3, FC)

Burchell J, Taylor-Papadimitriou J, Boshell M, Gendler S, Duhig T. A short sequence, within the amino acid tandem repeat of a cancer-associated mucin, contains immunodominant epitopes. Int J Cancer. 1989 Oct 15;44(4):691-6.

Related Products
00-4953 IHC /ICC Blocking Buffer - Low Protein
00-4954 20X TBS Wash Buffer for IHC/ICC
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42-4714 Mouse IgG1 K Isotype Control eFluor® 615 (P3.6.2.8.1)

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