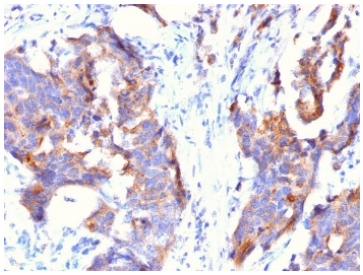
MUC1 Antibody / Mouse Monoclonal [clone 115D8] (V3962)

Catalog No.	Formulation	Size
V3962-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3962-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3962SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3962IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

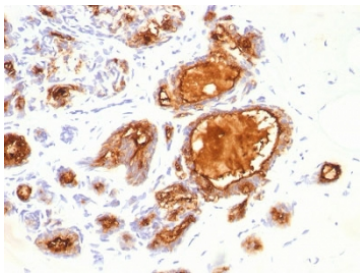
Citations (13)

Bulk quote request

Species Reactivity	Human
Format	Purified
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	115D8
Purity	Protein G affinity chromatography
UniProt	P15941
Localization	Cytoplasmic and cell surface
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT ELISA : order the BSA-free format for coating
Limitations	This MUC1 antibody is available for research use only.



IHC testing of FFPE human stomach with MUC1 antibody (clone 115D8). HIER: requires steaming of sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min.



IHC testing of FFPE human breast carcinoma with MUC1 antibody (clone 115D8). HIER: requires steaming of sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min.

Description

MUC1 antibody detects mucin 1, a large glycoprotein expressed on the apical surface of epithelial cells. MUC1 is encoded by the MUC1 gene and is characterized by an extensive extracellular domain with variable number tandem repeats rich in serine, threonine, and proline residues. These repeats are heavily O glycosylated, creating a protective barrier at mucosal surfaces. Because MUC1 expression changes dramatically in cancer, MUC1 antibody is a key tool in oncology, immunology, and epithelial biology.

In healthy tissues, MUC1 maintains epithelial integrity and contributes to barrier function by forming hydrated gels that trap pathogens and particles. Its cytoplasmic tail also participates in signaling pathways such as PI3K AKT and MAP kinase, influencing growth and survival. In cancer, MUC1 becomes aberrantly glycosylated and overexpressed, losing its polarized distribution and contributing to invasion and metastasis. These features make it both a biomarker and a therapeutic target.

The MUC1 antibody clone 115D8 provides specific and reproducible detection of this glycoprotein. Clone 115D8 has been employed in peer reviewed publications to study MUC1 expression patterns in breast and ovarian carcinomas, as well as in inflammatory conditions where altered mucin regulation occurs. Its performance makes it suitable for both diagnostic and experimental contexts, where reliable detection of MUC1 is crucial.

Research using clone 115D8 has clarified how aberrant MUC1 expression contributes to immune evasion and resistance to apoptosis. Elevated MUC1 in carcinomas correlates with poor prognosis, while targeted therapies directed against the protein continue to be developed. Beyond oncology, MUC1 detection aids in understanding mucosal immunity and epithelial differentiation, where its barrier functions are critical. This antibody remains essential in studies of epithelial biology and cancer pathology.

NSJ Bioreagents provides this MUC1 antibody to support investigations into epithelial biology, immune protection, and tumor development. The protein is also described as epithelial membrane antigen antibody, polymorphic epithelial mucin antibody, episialin antibody, carcinoma associated mucin antibody, and mucin glycoprotein antibody.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the MUC1 antibody to be titered up or down for optimal performance.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Human milk fat globule membranes were used as the immunogen for this MUC1 antibody.

Storage

Store the MUC1 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).