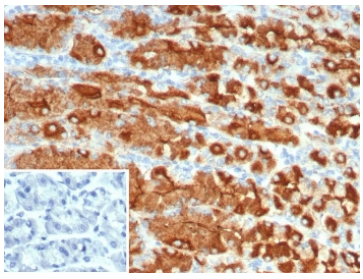
Recombinant MUC1 Antibody / Mucin 1 / EMA [clone r115D8] (V5491)

Catalog No.	Formulation	Size
V5491-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5491-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5491SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

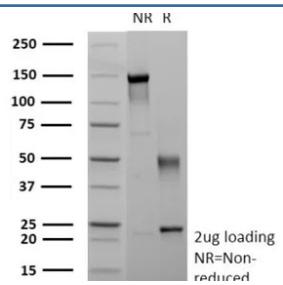
Recombinant MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG2b, kappa
Clone Name	r115D8
Purity	Protein A/G affinity
UniProt	P15941
Localization	Cytoplasm, Cell membrane
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This recombinant MUC1 antibody is available for research use only.



Immunohistochemistry analysis of MUC1 / Mucin 1 antibody (clone r115D8) in human stomach tissue. FFPE human stomach section shows strong membranous and apical cytoplasmic brown chromogenic staining in gastric epithelial cells lining glandular structures, consistent with MUC1 expression, while surrounding stromal cells show minimal staining and nuclei appear blue. The inset shows PBS used in place of primary antibody as a negative control with no specific staining observed. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 minutes followed by cooling prior to staining.



SDS-PAGE analysis of purified, BSA-free recombinant MUC1 antibody (clone r115D8) as confirmation of integrity and purity.

Description

Recombinant MUC1 antibody (clone r115D8) targets Mucin 1, a transmembrane glycoprotein encoded by the human MUC1 gene and a member of the membrane-bound mucin family. Mucin 1, also widely referred to as MUC1 and epithelial membrane antigen in the literature, is primarily localized to the apical surface of epithelial cells where it contributes to mucosal barrier protection and intracellular signaling. Recombinant MUC1 antibody clone r115D8 is designed to detect Mucin 1 expression in epithelial tissues and carcinoma models where MUC1 is frequently overexpressed and aberrantly glycosylated.

MUC1 is synthesized as a large precursor that undergoes autocatalytic cleavage into two subunits that remain non-covalently associated at the cell surface. Its extracellular domain contains variable number tandem repeats that are extensively O-glycosylated, forming a protective mucin layer on epithelial surfaces. In normal tissues, Mucin 1 expression is restricted to the apical membrane of glandular and ductal epithelial cells. In malignant transformation, MUC1 commonly loses apical polarity and becomes diffusely expressed across the cell membrane, with altered glycosylation patterns that expose peptide epitopes. Recombinant MUC1 antibody clone r115D8 is therefore valuable for investigating tumor-associated antigen expression and epithelial cell transformation.

The cytoplasmic tail of Mucin 1 participates in signaling pathways through interactions with beta-catenin and additional regulatory proteins, influencing proliferation, survival, and metastatic behavior. Elevated MUC1 expression has been documented in breast, ovarian, pancreatic, lung, gastric, and colorectal carcinomas, where it is frequently associated with aggressive disease. Because of its biological and clinical relevance, recombinant MUC1 antibody clone r115D8 supports studies of tumor progression and epithelial signaling mechanisms.

Structurally, Mucin 1 contains an extracellular mucin domain with tandem repeats, a transmembrane region, and a short cytoplasmic tail involved in signal transduction. A recombinant MUC1 antibody such as clone r115D8 is suitable for detecting Mucin 1 expression in epithelial tissues and cancer research applications.

Application Notes

Optimal dilution of the recombinant MUC1 antibody should be determined by the researcher.

Immunogen

Recombinant full-length human Mucin 1 protein was used as the immunogen for the recombinant MUC1 antibody.

Storage

Aliquot the recombinant MUC1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Copyright © NSJ Bioreagents. All rights reserved.