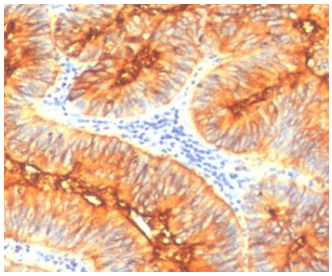
Mucin 4 Antibody / MUC4 [clone MUCN4-1] (V7573)

Catalog No.	Formulation	Size
V7573-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7573-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7573SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7573IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	MUCN4-1
Purity	Protein G affinity chromatography
UniProt	Q99102
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT Prediluted IHC only format: incubate for 30 min at RT (1)
Limitations	This Mucin 4 antibody is available for research use only.



Immunohistochemistry analysis of Mucin 4 / MUC4 antibody (clone MUCN4-1) in human colon carcinoma tissue. FFPE human colon carcinoma section shows strong membranous and apical cytoplasmic brown chromogenic staining in malignant epithelial cells forming glandular structures, consistent with MUC4 expression, while surrounding stromal cells show minimal staining and nuclei appear blue. Heat-induced epitope retrieval was performed by steaming tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 10-20 minutes followed by cooling prior to staining.

Description

Mucin 4 antibody targets Mucin 4, a large transmembrane glycoprotein encoded by the human MUC4 gene and a member of the membrane-bound mucin family. Mucin 4, also commonly referred to as MUC4 in the literature, is primarily localized to the apical surface of epithelial cells where it contributes to mucosal protection and epithelial cell signaling. Mucin 4 antibody is widely used in studies of epithelial differentiation and tumor biology because MUC4 is frequently overexpressed and aberrantly regulated in multiple carcinomas.

MUC4 is synthesized as a high molecular weight precursor that undergoes proteolytic processing into two subunits that remain associated at the cell surface. The extracellular domain contains tandem repeat regions that are heavily O-glycosylated, forming a protective mucin barrier on epithelial surfaces. In normal tissues, Mucin 4 expression is largely restricted to glandular and ductal epithelia, including respiratory and gastrointestinal mucosa. In malignant transformation, however, MUC4 expression is often upregulated and loses normal polarity, contributing to tumor progression and altered cell-cell interactions. Mucin 4 antibody is therefore valuable for investigating epithelial tumor development and differentiation status.

MUC4 has also been shown to interact with receptor tyrosine kinases such as ERBB2, modulating downstream signaling pathways involved in proliferation, survival, and metastasis. Elevated MUC4 expression has been documented in pancreatic, breast, lung, and ovarian carcinomas, where it may correlate with aggressive disease and poor prognosis. Because of its functional involvement in oncogenic signaling, Mucin 4 antibody is frequently applied in cancer research and tumor characterization studies.

Structurally, Mucin 4 contains an extensive extracellular mucin domain with tandem repeats, multiple epidermal growth factor-like domains, a transmembrane region, and a cytoplasmic tail involved in intracellular signaling. A Mucin 4 antibody is suitable for detecting MUC4 expression in epithelial tissues and carcinoma research applications.

Application Notes

Optimal dilution of the Mucin 4 antibody should be determined by the researcher.
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

Amino acids 1730-1864 from the human protein were used as the immunogen for this Mucin 4 antibody.

Storage

Store the Mucin 4 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

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