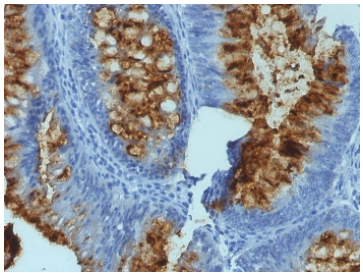
FUT3 Antibody / Lewis Antigen Biosynthesis Antibody [clone SPM194] (V2520)

Catalog No.	Formulation	Size
V2520-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2520-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2520SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2520IHC-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 (3)

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	SPM194
Purity	Protein G affinity chromatography
UniProt	P21217
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This FUT3 Antibody / Lewis Antigen Biosynthesis Antibody is available for research use only.



FUT3 Antibody Colon Carcinoma IHC. Immunohistochemistry analysis of FFPE human colon carcinoma tissue stained with FUT3 Antibody demonstrates strong membranous and granular apical HRP-DAB brown staining throughout gland-forming epithelial tumor cell populations, consistent with expression of Fucosyltransferase 3 / FUT3 within gastrointestinal-derived carcinoma tissue. This Lewis antigen biosynthesis antibody highlights epithelial glycosylation pathways and Lewis blood group-associated glycoconjugate organization involved in gastrointestinal epithelial differentiation and mucin-associated cellular signaling.

Description

Fucosyltransferase 3 (FUT3) is a glycosyltransferase enzyme involved in biosynthesis of Lewis blood group carbohydrate antigens including Lewis a, Lewis b, and sialyl-Lewis-associated glycoconjugates. FUT3 catalyzes terminal fucosylation reactions that contribute to epithelial glycobiology, mucosal differentiation, selectin-mediated adhesion pathways, and gastrointestinal epithelial surface organization. FUT3 Antibody is useful for investigations involving glycosylation-associated signaling, epithelial differentiation, gastrointestinal tumor biology, and Lewis antigen biosynthetic pathways.

FUT3 antibody, also referred to as Fucosyltransferase 3 antibody and Lewis antigen biosynthesis antibody in the literature, recognizes a Golgi-associated glycosyltransferase encoded on chromosome 19p13.3. FUT3 expression is strongly associated with gastrointestinal epithelial tissues and contributes to synthesis of carbohydrate structures involved in mucin-associated signaling, epithelial glycoconjugate organization, and selectin ligand formation. The enzyme plays an important role in generation of Lewis blood group antigens expressed on epithelial cell surfaces and secreted mucins.

FUT3 Antibody / Lewis Antigen Biosynthesis Antibody (clone SPM194) is uniquely positioned for studies involving gastrointestinal epithelial glycobiology and tumor-associated glycosylation pathways. This mouse monoclonal antibody supports immunohistochemical detection of FUT3-associated carbohydrate biosynthetic activity in epithelial-derived tissue compartments and colon carcinoma-associated cellular populations. Clone SPM194 may be useful for investigations involving mucin-associated differentiation, epithelial surface glycosylation, and gastrointestinal tumor-associated carbohydrate antigen regulation.

Lewis antigen-associated glycoconjugates contribute to diverse biologic processes including epithelial barrier organization, inflammatory cell interaction, microbial adhesion, and selectin-mediated cellular trafficking pathways. Altered FUT3 expression and Lewis antigen distribution patterns have been associated with gastrointestinal tumor progression, epithelial remodeling, mucosal differentiation status, and carcinoma-associated glycosylation changes. Because FUT3 is centrally involved in biosynthesis of Lewis blood group carbohydrate structures, it serves as a useful marker for investigations involving epithelial glycoconjugate regulation and tumor-associated glycosylation biology.

In tissue-based detection systems, FUT3-associated expression patterns are commonly observed within gland-forming gastrointestinal epithelial structures and mucin-associated secretory compartments. Colon carcinoma tissues may demonstrate prominent membranous and apical staining patterns reflecting active epithelial glycosylation pathways and altered carbohydrate antigen organization during tumor progression. FUT3-associated glycans additionally participate in interactions involving selectins, mucins, and epithelial surface adhesion molecules within gastrointestinal cellular environments.

This FUT3 Antibody supports research involving Lewis antigen biosynthesis, epithelial glycobiology, gastrointestinal differentiation pathways, mucin-associated signaling, tumor-associated glycosylation regulation, selectin-mediated adhesion biology, and epithelial carbohydrate antigen organization. Clone SPM194 may be incorporated into immunohistochemistry and tissue-based investigations examining gastrointestinal epithelial differentiation and Lewis blood group-associated glycoconjugate biology in normal and diseased tissues.

For detection of Lewis blood group-associated carbohydrate antigens in gastrointestinal epithelial tumors, see our Lewis b Antibody / Lewis Blood Group Antibody featuring clone 2-25LE/LWB01 for epithelial glycobiology and tumor-associated glycosylation investigations.

Application Notes

Optimal dilution of the FUT3 Antibody / Lewis Antigen Biosynthesis Antibody should be determined by the researcher.

1. Staining of formalin-fixed tissues is enhanced by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 min

2. 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

Mucin isolated from a human ovarian cyst fluid was used as the immunogen for the FUT3 antibody.

Storage

Store the FUT3 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Fucosyltransferase 3 antibody, FUT3 antibody, Lewis antigen biosynthesis antibody, Lewis blood group enzyme antibody, CD174 antibody