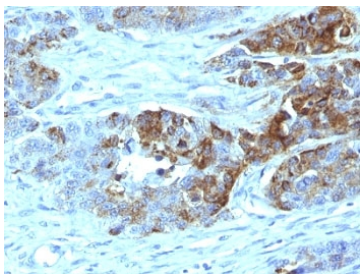
Blood Group H Antibody / H Type 2 Antigen Antibody [clone 19-OLE] (V2548)

Catalog No.	Formulation	Size
V2548-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2548-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2548SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Citations (8)

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgM, kappa
Clone Name	19-OLE
Purity	PEG precipitation
UniProt	P16442
Localization	Cell surface
Applications	Immunofluorescence: 0.5-1ug/ml Immunohistochemistry (FFPE): 0.5-1ug/ml for 30 min at RT
Limitations	This Blood Group H Antibody / H Type 2 Antigen Antibody is available for research use only.



Blood Group H Antibody Colon Carcinoma IHC. Immunohistochemistry staining of FFPE human colon carcinoma tissue using Blood Group H Antibody demonstrates distinct membranous and apical HRP-DAB brown staining within gland-forming epithelial tumor cells. The staining pattern is consistent with expression of Blood Group H / H Type 2 antigen, a precursor carbohydrate epitope of the ABO blood group system expressed on cell surface glycoproteins and glycolipids. Clone 19-OLE highlights H antigen-positive epithelial tumor populations and supports the utility of this antibody for studies of blood group antigen biology, glycobiology, and tissue-specific glycosylation patterns. The observed staining is consistent with expression of H type 2 carbohydrate determinants in epithelial-derived neoplastic tissues.

Description

Blood Group H Antigen is a terminal carbohydrate structure that serves as the precursor molecule for the ABO blood group system. The Blood Group H Antibody is useful for investigating blood group antigen expression, glycobiology, and tissue-specific glycosylation patterns. H antigen is expressed on erythrocytes, endothelial cells, epithelial cells, and granulocytes, where it functions as a foundational carbohydrate epitope that can be further modified to generate A and B blood group antigens. Because individuals with blood group O lack the glycosyltransferase activities required to convert H antigen into A or B structures, H antigen remains prominently expressed and serves as a central component of ABO blood group biology.

Blood Group H antibody, also referred to as H Type 2 Antigen antibody, H antigen antibody, and ABO H antigen antibody in the literature, recognizes the H type 2 trisaccharide epitope Fuc(alpha1-2)Gal(beta1-4)GlcNAc of human origin. Clone 19-OLE antibody detects a carbohydrate determinant that forms the molecular basis of the ABO blood group system. The H antigen serves as the substrate upon which A and B glycosyltransferases act to generate the corresponding blood group antigens through addition of N-acetylgalactosamine or galactose residues. As a result, H antigen occupies a critical position in the biosynthetic pathway that determines ABO blood group status.

The ABO blood group system represents one of the most extensively studied examples of cell surface carbohydrate diversity in humans. H antigen expression extends beyond erythrocytes and is observed throughout a variety of epithelial and endothelial tissues where carbohydrate structures contribute to cellular recognition, adhesion, and biologic signaling processes. Because glycan expression patterns vary among tissues and developmental states, antibodies directed against H antigen provide useful tools for investigating cell surface glycobiology and tissue-specific carbohydrate expression.

Increased expression of Blood Group H antigen has been reported in selected malignancies, including gastric carcinoma, urothelial carcinoma, and colorectal carcinoma. Altered expression of blood group-associated glycans is frequently observed during malignant transformation and may reflect changes in glycosylation pathways associated with tumor progression and cellular differentiation. Consequently, H antigen remains a useful marker for studies examining carbohydrate antigen expression in both normal and neoplastic tissues.

Research involving Blood Group H continues to contribute to understanding of ABO blood group biology, glycobiology, epithelial differentiation, and cell surface carbohydrate expression. A Blood Group H antibody can support studies of immunohematology, glycosylation, tissue-specific glycan distribution, and blood group antigen biology. General antibody-based approaches may be used to evaluate H antigen expression in a variety of research applications. NSJ Bioreagents offers clone 19-OLE antibody to support investigations of H type 2 antigen biology and carbohydrate-mediated cellular processes.

Researchers investigating H antigen expression, ABO blood group biology, and cell surface carbohydrate epitopes may also wish to explore our Blood Group Antigen H Antibody landing page featuring antibodies against H antigen targets used in glycobiology, immunohematology, and tissue expression studies.

For additional targets involved in cell surface glycosylation, carbohydrate-mediated cellular recognition, and membrane-associated glycobiology, visit our Cell Biology Antibodies landing page highlighting proteins and markers that regulate cellular structure, differentiation, and communication.

Application Notes

Optimal dilution of the Blood Group H Antibody / H Type 2 Antigen Antibody should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 min

Immunogen

Mucinous colonic adenocarcinoma was used as the immunogen for the ABO antibody. This antibody recognizes the blood group H type 2 antigens, trisaccharide Fuc(a1-2)Gal(b1-4)GlcNAc(b1) of human origin.

Storage

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

Alternate Names

H Antigen antibody, H Type 2 antibody, ABO H Antigen antibody, Blood Group O Antigen antibody, H Blood Group Antibody

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