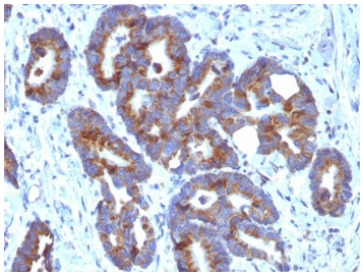
ABO Antibody / A and H Chain Antibody [clone HE-10] (V2553)

Catalog No.	Formulation	Size
V2553-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2553-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2553SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Citations (1)

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	HE-10
Purity	PEG precipitation
UniProt	P16442
Localization	Cell surface
Applications	Agglutination (order BSA/sodium azide-free format) Immunofluorescence: 0.5-1ug/ml Immunohistochemistry (FFPE): 0.5-1ug/ml for 30 min at RT
Limitations	This ABO Antibody / A and H Chain Antibody is available for research use only.



ABO Antibody Colorectal Carcinoma IHC. Immunohistochemistry staining of FFPE human colorectal carcinoma tissue using ABO Antibody demonstrates distinct membranous and apical HRP-DAB brown staining within gland-forming epithelial tumor cells. The staining pattern is consistent with expression of A and H chain carbohydrate antigens, cell surface glycan structures associated with the ABO blood group system. Clone HE-10 highlights carbohydrate epitope expression on neoplastic epithelial cells and supports the utility of this chain-selective antibody for studies of blood group antigen distribution, glycobiology, and tissue-specific glycosylation patterns. The observed staining is consistent with expression of ABO-associated carbohydrate determinants on epithelial-derived tumor tissues.

Description

The ABO blood group system is defined by terminal carbohydrate structures expressed on glycoproteins and glycolipids present on erythrocytes, epithelial cells, endothelial cells, and numerous secretory tissues. The ABO Antibody is useful for investigating blood group antigen expression, glycobiology, and tissue-specific glycosylation patterns. ABO-associated carbohydrate epitopes contribute to cellular recognition processes and represent some of the most extensively studied cell surface glycans in human biology. Beyond their established importance in transfusion medicine and transplantation, ABO antigens are widely utilized as markers for studies of cellular differentiation, tissue architecture, and membrane-associated carbohydrate expression.

ABO antibody, also referred to as A and H Chain antibody, Blood Group Glycan antibody, and ABO carbohydrate antibody in the literature, recognizes specific A and H carbohydrate determinants present on selected glycan chain structures. Clone HE-10 antibody preferentially reacts with A and H type 3 and type 4 chain antigens while demonstrating limited recognition of type 1 and type 2 chain structures. This chain-selective binding profile provides a distinct research tool for evaluating carbohydrate epitope distribution and glycan heterogeneity across different tissues and cellular populations. Clone HE-10 antibody is particularly useful for studies examining the biologic significance of specific ABO-associated carbohydrate structures.

Blood group carbohydrate antigens are generated through sequential enzymatic modifications of precursor oligosaccharides by glycosyltransferases encoded within the ABO pathway. Differences in glycan chain composition influence antigen presentation and contribute to the remarkable diversity of cell surface carbohydrate structures observed among tissues. Type 3 and type 4 chain antigens possess distinct structural characteristics compared with type 1 and type 2 chains, making chain-specific antibodies valuable tools for investigating tissue-associated glycosylation patterns and carbohydrate antigen biology.

Cell surface glycans participate in numerous biologic processes including cellular adhesion, host-microbe interactions, immune recognition, membrane organization, and tissue-specific signaling events. Alterations in glycosylation have been associated with developmental processes, epithelial differentiation, inflammation, and disease progression. Consequently, antibodies capable of distinguishing specific carbohydrate chain structures provide important tools for glycobiology research and characterization of cell surface carbohydrate diversity.

Research involving ABO-associated carbohydrate antigens continues to expand as investigators explore the functional significance of glycan expression patterns in normal and diseased tissues. An ABO antibody can support studies of glycobiology, immunohematology, epithelial differentiation, cell surface glycosylation, and carbohydrate-mediated cellular interactions. General antibody-based approaches may be used to evaluate A and H chain antigen expression in a variety of research applications. NSJ Bioreagents offers clone HE-10 antibody to support investigations of blood group antigen biology and glycan structure diversity.

Researchers seeking additional information on ABO Antigen A expression and blood group carbohydrate biology may also be interested in our Blood Group Antigen A Antibody page featuring the published HE-193 clone and extensive characterization of A antigen epitopes.

Application Notes

Optimal dilution of the ABO Antibody / A and H Chain 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 minutes

Immunogen

A mixture of erythrocytes of blood group A and glycoprotein fraction isolated from the saliva of secretors with blood group A was used as the immunogen for the ABO antibody.

Storage

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

Alternate Names

Blood Group Antigen A antibody, H Antigen antibody, ABO Carbohydrate Antibody, Blood Group Glycan Antibody, A Chain Antibody

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