Blood Group B Antibody / ABO Antigen B Antibody [clone HEB-29] (V2551)

Catalog No.	Formulation	Size
V2551-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2551-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2551SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Citations (7)

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	HEB-29
Purity	PEG precipitation
UniProt	P16442
Localization	Cell surface
Applications	Immunofluorescence: 2-4ug/ml Immunohistology (formalin-fixed): 1-2ug/ml for 30 min at RT
Limitations	This Blood Group B Antibody / ABO Antigen B Antibody is available for research use only.



Description

Blood group B antigen is a carbohydrate determinant of the ABO blood group system generated through enzymatic modification of precursor H antigens on glycolipids and glycoproteins. Blood Group B Antibody / ABO Antigen B Antibody (clone HEB-29) recognizes human blood group B associated carbohydrate epitopes and is useful for investigating ABO antigen expression in erythrocytes, epithelial tissues, vascular structures, and other biological specimens. Blood Group B Antibody, also known as blood group B antigen antibody and blood type B antibody in the literature, targets one of the principal carbohydrate antigens responsible for human blood group classification and transfusion compatibility.

The ABO blood group system represents one of the most extensively characterized examples of biologically important cell surface glycosylation. Blood group B antigen is formed when ABO glycosyltransferase enzymes add terminal galactose residues to precursor carbohydrate structures, producing a distinct antigenic determinant that can be recognized by specific antibodies. These carbohydrate epitopes are best known for their expression on erythrocytes, but they are also detected on numerous epithelial and endothelial cell populations as well as in secretions of certain individuals. Because of this broad tissue distribution, ABO antigens have become important research targets in glycobiology, developmental biology, pathology, and studies of cell surface recognition.

Blood group related antigens comprise a family of structurally interconnected carbohydrate determinants carried by both glycolipids and glycoproteins. This family includes A, B, H, Lewis A, Lewis B, Lewis X, Lewis Y, and precursor chain antigens that arise through related biosynthetic pathways. These molecules frequently occur on mucin-associated glycoconjugates and contribute to tissue-specific glycosylation patterns that influence cellular interactions, adhesion processes, and recognition events at the cell surface.

The A, B, and H antigens have been reported to undergo modulation during malignant cellular transformation. Alterations in glycosyltransferase activity and glycan biosynthesis may result in changes in the abundance, distribution, or accessibility of blood group associated carbohydrate determinants. Consequently, Blood Group B Antibody can be useful for evaluating blood group antigen expression patterns in normal and neoplastic tissues and for studying the biological consequences of altered glycosylation during disease progression.

Clone HEB-29 represents a well-established monoclonal antibody directed against human blood group B associated carbohydrate determinants. The clone has appeared in the scientific literature and is widely associated with studies involving ABO antigen detection and characterization. Recognition of blood group B epitopes on erythrocytes, vascular epithelium, and epithelial tissues makes this antibody valuable for investigations of blood group biology, glycoconjugate expression, and cell surface carbohydrate research. A Blood Group B antibody is suitable for detecting ABO Antigen B expression in relevant research applications.

Researchers seeking a Blood Group B antibody with demonstrated immunohistochemical staining of human colon carcinoma tissue may also be interested in our Blood Group B Antibody / Blood Typing Marker Antibody clone HEB-20 page featuring tissue-based detection of blood group B associated carbohydrate determinants in epithelial tumor cells.

Application Notes

Optimal dilution of the Blood Group B Antibody / ABO Antigen B 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 group B and glycoprotein fraction isolated from saliva of secretors with blood group B was used as the immunogen for the ABO / Blood Group B antibody.

Storage

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

Alternate Names

Blood group B antigen antibody, ABO blood group B antibody, Blood type B antibody, B antigen antibody, ABO carbohydrate antigen B antibody

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