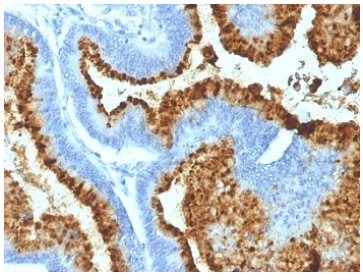
ABO Antibody Blood Group Antigen B / ABO Antigen B [clone HEB-20] (V2552)

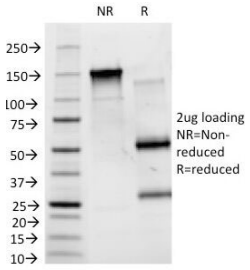
Catalog No.	Formulation	Size
V2552-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2552-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2552SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2552IHC-7ML	Prediluted 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

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	HEB-20
Purity	Protein G affinity
UniProt	P16442
Localization	Cell surface
Applications	Immunofluorescence : 2-4ug/ml Immunohistology (formalin-fixed) : 1-2ug/ml for 30 min at RT
Limitations	This ABO antibody is available for research use only.



Immunohistochemistry analysis of Blood Group Antigen B expression. Blood Group Antigen B antibody (clone HEB-20) staining was performed on formalin-fixed, paraffin-embedded human colon carcinoma tissue, showing strong DAB-positive membranous and apical staining in tumor epithelial cells, with surrounding stromal regions largely negative. Signal detection was carried out using an HRP-conjugated secondary antibody and DAB chromogen with hematoxylin counterstaining.



SDS-PAGE Analysis of Purified, BSA-Free ABO Antibody (clone HEB-20). Confirmation of Integrity and Purity of the Antibody.

Description

ABO Antibody Blood Group Antigen B targets ABO Antigen B, a carbohydrate blood group determinant that is part of the ABO blood group system and defines the B blood group phenotype. ABO Antigen B is expressed on the surface of erythrocytes and is also present on epithelial and endothelial cells in various tissues. This antigen is generated through specific glycosylation of precursor chains, resulting in a terminal galactose residue that distinguishes Antigen B from Antigen A and H antigens within the ABO system.

Functionally, ABO Antigen B serves as a critical marker in transfusion medicine, transplantation biology, and histopathology. A short functional summary is that Blood Group Antigen B defines blood group B status and contributes to cell surface antigen diversity through regulated carbohydrate modification. Because of its stable expression on red blood cells and variable expression in tissues, ABO Antigen B antibody reagents are widely used to study blood group antigen distribution and tissue specific glycosylation patterns.

At the molecular level, ABO Antigen B is not a protein but a carbohydrate epitope displayed on glycoproteins and glycolipids. Its biosynthesis depends on the activity of glycosyltransferases encoded by the ABO gene locus. ABO Antibody Blood Group Antigen B tools are therefore valuable for investigating carbohydrate antigen expression, cell surface biology, and alterations in glycosylation associated with disease. Clone HEB-20 is designed to recognize ABO Antigen B and is commonly used in research and histological studies to support consistent detection of this blood group determinant.

From a biological and disease relevance perspective, changes in Blood Group Antigen B expression have been reported in certain malignancies and pathological conditions, where altered glycosylation may reflect changes in differentiation or cellular transformation. Expression of ABO Antigen B has been examined in colorectal cancer, gastric cancer, and other epithelial tumors. Clone HEB-20 provides a reliable reagent for detecting ABO Antigen B in studies of pathology, blood group antigen expression, and carbohydrate-based biomarkers.

Developmentally, ABO Antigen B expression is well established on erythroid cells and shows tissue specific regulation in epithelial and endothelial compartments. ABO Antibody Blood Group Antigen B reagents from NSJ Bioreagents are supplied for research use to support investigations in pathology, transfusion related research, and cell surface glycosylation.

Application Notes

Optimal dilution of the ABO 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
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

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 antibody.

Storage

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