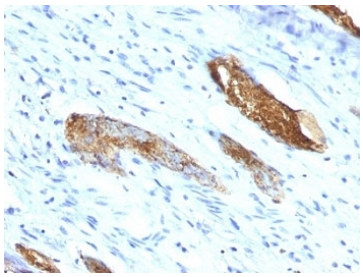
Blood Group Antigen A Antibody / ABO Antigen A [clone 33C13] (V2547)

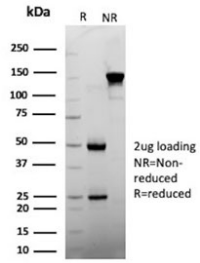
Catalog No.	Formulation	Size
V2547-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V2547-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V2547SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-2 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	33C13
Purity	Protein G affinity chromatography
UniProt	P16442
Localization	Cell surface
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This Blood Group Antigen A antibody is available for research use only.



Immunohistochemistry analysis of Blood Group Antigen A expression. Blood Group Antigen A antibody (clone 33C13) staining was performed on formalin-fixed, paraffin-embedded human colon carcinoma tissue, showing DAB-positive membranous staining in discrete tumor cell populations against a hematoxylin counterstain. Heat-induced epitope retrieval was carried out by boiling tissue sections in 10 mM citrate buffer (pH 6.0) for 10-20 minutes, followed by cooling at room temperature for 20 minutes, with signal detection using an HRP-conjugated secondary antibody and DAB chromogen.



SDS-PAGE analysis of purified, BSA-free Blood Group Antigen A antibody (clone 33C13) as confirmation of integrity and purity.

Description

Blood Group Antigen A antibody targets ABO Antigen A, a carbohydrate-based blood group determinant that is part of the ABO blood group system. ABO Antigen A is expressed on the surface of erythrocytes as well as on epithelial and endothelial cells in a variety of tissues, where it contributes to blood group specificity and histo-blood group antigen expression. This antigen is generated through glycosylation of precursor chains, resulting in a terminal N-acetylgalactosamine residue that defines the A blood group phenotype.

Functionally, ABO Antigen A serves as a clinically important marker in transfusion medicine, transplantation biology, and tissue typing. A short functional summary is that Blood Group Antigen A defines blood group A status and contributes to antigenic diversity on cell surfaces through regulated carbohydrate modification. Because of its stable and well-characterized expression pattern, Blood Group Antigen A antibody reagents are widely used to detect and visualize A antigen distribution in tissues and cell populations.

At the molecular level, ABO Antigen A is not a protein but a carbohydrate epitope displayed on glycoproteins and glycolipids. Its expression depends on the activity of specific glycosyltransferases encoded by the ABO gene locus. Blood Group Antigen A antibody tools are therefore valuable for studying glycosylation patterns, cell surface antigen expression, and histo-blood group related biology in both normal and pathological tissues.

From a biological and disease relevance perspective, ABO Antigen A expression has been examined in cancer pathology, vascular biology, and developmental studies. Altered or aberrant expression of ABO blood group antigens has been reported in certain malignancies and disease states, where changes in glycosylation may reflect cellular transformation or altered differentiation. Clone 33C13 is designed to recognize ABO Antigen A and is widely used in research and histological applications to support consistent detection of this blood group determinant.

Developmentally, ABO Antigen A expression varies by tissue type and differentiation state, with stable expression on erythroid cells and more variable expression in epithelial tissues. Clone 33C13 provides a reliable reagent for detecting ABO Antigen A in studies of tissue pathology, blood group antigen distribution, and carbohydrate antigen biology. Blood Group Antigen A antibodies from NSJ Bioreagents are supplied for research use to support investigations in pathology and cell surface glycosylation.

Application Notes

Optimal dilution of the Blood Group Antigen A antibody should be determined by the researcher.

Immunogen

Mucin isolated from an ovarian cyst fluid was used as the immunogen for the Blood Group Antigen A antibody.

Storage

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