Blood Group H Antibody / Blood Group Subgroup Antibody [clone A46-B/B10] (V8784)

Catalog No.	Formulation	Size
V8784-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V8784-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V8784SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

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	A46-B/B10
Purity	Protein A/G affinity
UniProt	P16442
Localization	Cell surface, cytoplasmic
Applications	Immunofluorescence: 2-4ug/ml
Limitations	This Blood Group H Antibody / Blood Group Subgroup Antibody is available for research use only.



Description

Blood Group H Antigen is a carbohydrate structure that serves as the precursor molecule for the ABO blood group system and is expressed on erythrocytes, epithelial cells, endothelial cells, and other cell types. The Blood Group H Antibody is useful for investigating blood group antigen expression, immunohematology, glycobiology, and tissue-specific glycosylation patterns. H antigen forms the molecular foundation upon which A and B blood group determinants are generated through the action of specific glycosyltransferases. As a result, the amount and distribution of H antigen expression can vary among blood group subtypes and cellular populations.

Blood Group H antibody, also referred to as Blood Group Subgroup antibody, H antigen antibody, and ABO H antigen antibody in the literature, recognizes the H type 2 trisaccharide epitope of human origin. Clone A46-B/B10 antibody has been extensively characterized through haemagglutination testing, immunohistochemistry, binding inhibition studies, absorption experiments, and evaluation of hundreds of human blood samples. The antibody demonstrates strong reactivity with H type 2 antigen while exhibiting minimal recognition of H type 1 antigen and closely related carbohydrate structures such as the Y antigen. This highly selective binding profile provides a valuable tool for investigating H antigen biology and blood group-associated carbohydrate expression.

A distinctive feature of clone A46-B/B10 is its ability to discriminate between blood group subtypes based on the amount of H substance expressed on erythrocytes. The antibody strongly agglutinates blood group O, A2, and A2B erythrocytes while showing little or no reactivity toward A1 and A1B cells. These characteristics have made clone A46-B/B10 particularly useful in studies of blood group subgroup classification and serologic evaluation of ABO-associated carbohydrate antigens. The antibody may also provide utility for investigating selected B blood group subgroups and variations in H antigen expression.

In addition to blood group serology applications, H antigen expression has been evaluated in epithelial tissues and selected carcinomas. Carbohydrate antigens of the ABO system are frequently used as markers for studies of cellular differentiation, glycosylation, and tissue-specific glycobiology. Because alterations in blood group antigen expression can occur during malignant transformation and disease progression, antibodies recognizing specific H antigen determinants remain valuable tools for investigating normal and neoplastic tissues.

Research involving Blood Group H continues to contribute to understanding of ABO blood group biology, blood group subgroup classification, glycobiology, and carbohydrate-mediated cellular interactions. A Blood Group H antibody can support studies of immunohematology, glycosylation, epithelial differentiation, and blood group serology. General antibody-based approaches may be used to evaluate H antigen expression in a variety of research applications. NSJ Bioreagents offers clone A46-B/B10 antibody to support investigations of H type 2 antigen biology and blood group subgroup characterization.

Researchers investigating blood group subgroup classification, H antigen expression, and ABO-associated carbohydrate determinants may also wish to explore our Blood Group H Antibody page highlighting the H Type 2 antigen that serves as the molecular foundation of the ABO blood group system.

Application Notes

Optimal dilution of the Blood Group H Antibody / Blood Group Subgroup Antibody should be determined by the researcher.

Immunogen

Human breast cancer MCF-7 cells were used as the immunogen for the ABO / Blood Group H antibody.

Storage

Aliquot the ABO / Blood Group H antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

H Antigen antibody, H Type 2 antibody, ABO H Antigen antibody, A1 A2 Blood Group Antibody, Blood Group Serology

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