# Blood Group H Antibody / Type 2 H Antigen Antibody [clone A51-B/A6] (V8857)

| Catalog No. | Formulation | Size |
|---|---|---|
| V8857-100UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide | 100 ug |
| V8857-20UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide | 20 ug |
| V8857SAF-100UG | 1 mg/ml in 1X PBS; BSA free, sodium azide free | 100 ug |

**Bulk quote request**

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| **Availability** | 1-3 business days |
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Host** | Mouse |
| **Clonality** | Monoclonal (mouse origin) |
| **Isotype** | Mouse IgA |
| **Clone Name** | A51-B/A6 |
| **Purity** | Protein affinity |
| **UniProt** | P16442 |
| **Localization** | Cell Surface |
| **Applications** | Immunofluorescence : 2-4ug/ml<br>Immunohistochemistry (FFPE) : 1-2ug/ml |
| **Limitations** | This Blood Group H Antibody / Type 2 H Antigen Antibody is available for research use only. |

## Description

Blood Group H Antigen is a carbohydrate epitope that serves as a precursor structure within the ABO blood group system and is expressed on erythrocytes, epithelial cells, and other specialized cellular populations. The Blood Group H Antibody is useful for investigating blood group antigen expression, glycobiology, and tissue-specific glycosylation patterns. H antigens are generated through sequential carbohydrate modifications of glycoproteins and glycolipids and form the molecular foundation upon which A and B blood group determinants are synthesized. Because expression of individual H antigen chain types varies among tissues and biologic contexts, highly specific antibodies provide valuable tools for investigating carbohydrate epitope distribution.

Blood Group H antibody, also referred to as Type 2 H Antigen antibody, H antigen antibody, and ABO H antigen antibody in the literature, recognizes the H type 2 blood group epitope Fuc(alpha1-2)Gal(beta1-4)GlcNAc. Clone A51-B/A6 antibody demonstrates highly selective recognition of H type 2 antigen and does not cross-react with human blood group H type 1, H type 3, or H type 4 structures. The antibody also shows minimal reactivity toward closely related Lewis Y (LeY) and Lewis X (LeX) carbohydrate antigens. This specificity profile makes clone A51-B/A6 a valuable reagent for studies requiring precise discrimination of H type 2 carbohydrate determinants.

Blood group antigens are formed through sequential addition of monosaccharides to carbohydrate side chains present on glycoproteins and glycolipids. The resulting glycan structures contribute to cellular recognition, tissue-specific differentiation, and membrane-associated biologic processes. Multiple genetically and biosynthetically distinct blood group-associated carbohydrate antigens exist, including A, B, H, Lewis, and precursor chain antigens. Because many of these structures share related carbohydrate motifs, antibodies with narrow specificity can provide important advantages when investigating individual glycan populations.

The expression of H antigens has been reported to undergo modulation during development, epithelial differentiation, and malignant transformation. Altered patterns of blood group-associated carbohydrate expression have been observed in a variety of neoplastic tissues and may reflect changes in glycosyltransferase activity and glycan biosynthesis pathways. Consequently, highly specific H type 2 reagents are useful for studies examining carbohydrate antigen expression in both normal and diseased tissues.

Research involving Blood Group H continues to contribute to understanding of ABO blood group biology, glycobiology, and cell surface carbohydrate diversity. A Blood Group H antibody can support studies of glycosylation, immunohematology, epithelial differentiation, and carbohydrate-mediated cellular interactions. General antibody-based approaches may be used to evaluate H type 2 antigen expression in a variety of research applications. NSJ Bioreagents offers clone A51-B/A6 antibody to support investigations of highly specific H type 2 carbohydrate epitopes and blood group antigen biology.

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 / Type 2 H Antigen Antibody should be determined by the researcher.

## Immunogen

Human breast cancer MCF-7 cells were used as the immunogen for the Blood Group H antibody. This antibody reacts with H type 2 blood group epitope Fuca1-2 Galb1-4 GlcNAc.

## Storage

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

## Alternate Names

H Type 2 antibody, H Antigen antibody, ABO H Antigen antibody, H2 Antigen antibody, Blood Group H Type 2 antibody