abcam

ab24224

Anti-Blood Group B Antigen antibody [Z5H-2]

Key facts

Isotype	IgM
Host species	Mouse
Storage buffer	pH: 7.2 - 7.6 Preservative: 0.1% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Clone number	Z5H-2
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS

Reactivity data

IP

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Expected

Species	Human
Dilution info	-
Notes	ab91545 - Mouse monoclonal IgM, is suitable for use as an isotype control with this antibody.

ELISA

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information Blood Group B Antigen

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The Blood Group B Antigen commonly called the B antigen is a carbohydrate antigen found on the surface of red blood cells. This antigen is part of the ABO blood group system which determines an individual's blood type. The B antigen's molecular composition consists primarily of a sugar molecule called D-galactose. The B antigen is expressed on the erythrocyte surface and is encoded by the B allele of the ABO gene. Individuals with blood type B will have the B antigen on the surface of their red blood cells and do not have anti-B antibodies in their plasma. The mass of the B antigen can vary depending on the glycoproteins and glycolipids it attaches to on the membrane.
Biological function summary	The B antigen's presence on red blood cells plays a fundamental role in immune system recognition and compatibility during blood transfusions. It is not part of a complex but associates directly with the cell membrane structures. The presence of particular carbohydrate sequences such as those of the B antigen allows the immune system to distinguish between self and non-self cells. Known as anti-B antibodies these antibodies exist in individuals who do not express the B antigen specifically those with blood type A or O.
Pathways	Blood Group B Antigen contributes significantly to the ABO blood group system's immunological pathway. This pathway includes biosynthesis and degradation processes involving the glycosyltransferase enzyme responsible for adding sugar residues to the precursor substance to form specific antigens. Glycosyltransferase is related to protein pathways that handle energy metabolism and cellular processes due to its enzymatic role in forming cell surface markers like the B antigen.
Associated diseases and disorders	The B antigen is linked to transfusion reactions and hemolytic disease of the newborn (HDN). Incompatibility between donor and recipient blood types during transfusions can cause immunological reactions where anti-B antibodies attack the B antigens. These reactions can lead to severe complications. HDN occurs when a mother with type O blood carries a baby with type B blood resulting in anti-B antibodies attacking fetal red blood cells. This emphasizes the clinical significance of the B antigen in blood type compatibility and transfusion medicine.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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Terms & Conditions.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.