Technical Data Sheet

InVivoMAb anti-human Fy3

Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at https://bioxcell.com/terms-and-conditions.

Lot Specific Information

Lot Number: **Lot Specific***
Volume: **Lot Specific***
Concentration: **Lot Specific* (generally 4 to 11 mg/ml) ***
Total Protein: **Lot Specific***

*This information will be noted on the certificate of analysis that ships with this product.

Product Information

Catalog Number:	**BE0407**
Clone:	**MIMA-29**
Isotype:	Mouse IgG2a, κ
Recommended Isotype Control(s):	InVivoMAb mouse IgG2a isotype control, unknown specificity
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	Fyb transfected 293T cells
Reported Applications:	*in vivo* targeting of HOD Ag+ RBCs *in vitro* targeting of HOD Ag+ RBCs Indirect Antiglobulin Test (IAT) Immunohistochemistry (paraffin) Functional assays Flow cytometry ELISA
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤1EU/mg (≤0.001EU/µg) Determined by LAL gel clotting assay
Purity:	≥95% Determined by SDS-PAGE
Sterility:	0.2 µm filtered
Production:	Purified from cell culture supernatant in an animal-free facility
Purification:	Protein A
Molecular Weight:	150 kDa

Description

The MIMA-29 monoclonal antibody reacts with the Fy3 antigen on Duffy glycoprotein, a seven-pass transmembrane protein also known as Duffy antigen/chemokine receptor (DARC), Fy glycoprotein (FY), and cluster of differentiation 234 (CD234). In humans, Duffy antigen is encoded by the atypical chemokine receptor 1 (Duffy blood group) gene (ACKR1). The antigenic determinants of the Duffy protein include Fya, Fyb, Fy3, Fy4, Fy5, and Fy6, and the polymorphisms observed in the ACKR1 gene form the basis of the Duffy blood group system. The antigens of the Duffy blood group system are mainly expressed on the surface of RBCs. Besides RBCs, these antigens are also expressed in endothelial cells, pulmonary alveolar epithelial cells, renal collecting tubules, and Purkinje cells of the brain. Antibodies against Duffy antigens are involved in transfusion reactions and hemolytic disease of the fetus and newborn (HDFN). Duffy protein also acts as a receptor for the human malaria parasite Plasmodium vivax and the monkey malaria parasite P. knowlesi. Duffy protein is involved in the regulation of leucocyte recruitment to inflammatory sites, and it also facilitates the trans-endothelial movement of chemokines. Among various Duffy antigens, Fy3 is the most prevalent and a clinically significant antigen. Fy3 antigen is often detected using flow cytometry with the MIMA-29 antibody, and synthetic peptide-based experiments have shown that the MIMA-29 antibody recognizes either a linear epitope of amino acid 281-285 (ALDLL) in the fourth extracellular domain (ECD4, loop 3) or a

conformational epitope that includes amino acid residues of ECD4 and of other extracellular domains of Duffy glycoprotein. The MIMA-29 monoclonal antibody has been used in vivo for the targeting of RBCs in HOD mice that express an RBC-restricted triple fusion protein HOD antigen (HOD Ag) consisting of hen egg lysozyme (HEL), ovalbumin (OVA), and human blood group molecule Duffy. In another in vivo study involving antibody-mediated immune suppression (AMIS) experimental models with HOD and other strains of mice, the MIMA 29 antibody was shown to induce an AMIS effect at the level of IgM and all isotypes of IgG.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**
It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at https://bioxcell.com/faqs.

Protocol Information

Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Application References

For a complete list of references, visit https://bioxcell.com/be0407?bxcs=9k1b3a#tab_references or scan the QR code below.

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