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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: BE0501
Clone: RM2-5
Isotype: Rat IgG2b, λ
Recommended Isotype Control(s): InVivoMAb rat IgG2b isotype control, anti-keyhole limpet hemocyanin
Recommended Dilution Buffer: InVivoPure pH 7.0 Dilution Buffer
Reported Applications:
in vivo CD2 blockade
in vitro CD2 blockade
in vivo antibody-mediated cell targeting for therapeutic nanoparticle delivery
ex vivo depletion - magnetic bead based negative selection
Functional Assay
Flow cytometry
Immunoprecipitation
Formulation: PBS, pH 7.0
Contains no stabilizers or preservatives
Endotoxin: ≤ 1 EU/mg (≤ 0.001 EU/ μ g)
Determined by LAL assay
Purity: $\geq 95\%$
Determined by SDS-PAGE
Sterility: 0.2 μ m filtered
Production: Purified from cell culture supernatant in an animal-free facility
Purification: Protein G
RRID:
Molecular Weight: 150 kDa

Description

The RM2-5 monoclonal antibody reacts with mouse CD2, a 50–55 kDa type I transmembrane glycoprotein and member of the immunoglobulin superfamily. CD2 is also called lymphocyte function-associated antigen 2 (LFA-2), ant T-11. CD2 is expressed on thymocytes, mature CD4⁺ and CD8⁺ T cells, NK cells, NKT cells, and on murine B cells. The cognate ligand of CD2 in mouse is CD48 (the human ortholog binds CD58/LFA-3). CD2/CD48 engagement mediates cell–cell adhesion at the immunological synapse, lowers the threshold for T-cell receptor (TCR)–mediated activation, supports NK-cell cytotoxicity, and contributes to memory T-cell maintenance. CD2-deficient mice exhibit altered thymocyte selection and impaired T-cell activation, and CD2-CD48 interactions are involved in the pathophysiology of allograft rejection, graft-versus-host disease, autoimmune diseases (e.g., psoriasis, rheumatoid arthritis, multiple sclerosis), T-cell malignancies, and chronic viral infections. Antibody-based blockade of CD2-mediated adhesion and co-stimulation is emerging as a therapeutic strategy in transplantation, autoimmunity, and oncology, with clinical-stage anti-human CD2 agents (e.g., alefacept, sipilizumab) validating the target. The RM2-5 antibody is suitable for flow cytometric characterization, immunoprecipitation, and *in vivo* modulation of CD2 in murine models of immune activation, autoimmunity, transplantation, and tumor immunology. NOTE: Please see Yagita et al. Proc Natl Acad Sci USA 1989;86(2):645–9 (PMID 2463634) for the foundational characterization of

the RM2-series anti-mouse CD2 antibodies, including identification of CD2 expression on B cells.

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 [?utm_source=cr9k1b#tab_references](https://bioxcell.com/?utm_source=cr9k1b#tab_references) or scan the QR code below.



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