Technical Data Sheet

RecombiMAb anti-mouse CD71 (TfR1)

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:	**CP055**
Clone:	**8D3-CP055**
Isotype:	Mouse IgG2a, κ
Recommended Isotype Control(s):	RecombiMAb mouse IgG2a isotype control, unknown specificity
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	Mouse transformed endothelioma cell line t.end1
Reported Applications:	Targeted drug delivery to the brain Immunohistochemistry Flow Cytometry Western Blot *in vivo* depletion of CD71+ cells *in vivo* anti-tumor activity *Reported for the original 8D3 antibody. For information on *in vivo* applications, please contact technicalservice@bioxcell.com
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 filtration
Production:	Purified from HEK293 cell supernatant in an animal-free facility
Purification:	Protein G
Aggregation:	<5% Determined by SEC
RRID:	
Molecular Weight:	150 kDa

Murine Pathogen Test Results

Mouse Norovirus: Negative, Mouse Parvovirus: Negative, Mouse Minute Virus: Negative, Mouse Hepatitis Virus: Negative, Reovirus Screen: Negative, Lymphocytic Choriomeningitis virus: Negative, Lactate Dehydrogenase-Elevating Virus: Negative, Mouse Rotavirus: Negative, Theiler's Murine Encephalomyelitis: Negative, Ectromelia/Mousepox Virus: Negative, Hantavirus: Negative, Polyoma Virus: Negative, Mouse Adenovirus: Negative, Sendai Virus: Negative, Mycoplasma Pulmonis: Negative, Pneumonia Virus of Mice: Negative, Mouse Cytomegalovirus: Negative, K Virus: Negative

Description

The CP055 monoclonal antibody is a recombinant, chimeric version of the original 8D3 antibody. The variable domain sequences are identical to the original 8D3 but the constant region sequences have been switched from rat IgG2a to mouse IgG2a, kappa for use in murine models. Species-matched chimeric antibodies exhibit regulated effector functions—including Fc receptor binding and complement activation—and result in less immunogenicity and formation of anti-drug antibodies (ADAs) than xenogenic antibodies in animal models. The anti-tumor and cytotoxic activities of anti-TfR1 antibodies have been demonstrated to require Fc effector function to elicit antibody-dependent cell-mediated cytotoxicity and antibody-dependent cell-mediated phagocytosis. The 8D3 monoclonal antibody reacts with native, soluble and denatured forms of murine CD71, also known as transferrin receptor protein 1 (TfR1). CD71 is a type II homodimeric transmembrane glycoprotein expressed on the surface of proliferating cells, reticulocytes, and erythroid precursors. CD71 plays a role in the control of cellular proliferation and is required for iron import from transferrin into cells by endocytosis. CD71 is overexpressed on many different types of cancer cells and expression level correlates with advanced stage and/or poorer prognosis in several cancers, including solid cancers. Elevated levels of CD71 expression on malignant cells, together with its extracellular accessibility, ability to internalize, and central role in cancer cell pathology make this receptor an attractive target for antibody-mediated therapy. In addition, cells of the vascular endothelium of brain capillaries that compose the blood-brain barrier (BBB) also express high levels of CD71 allowing for receptor-mediated transcytosis of large biomolecules into the brain. Chimeric anti-CD71 clone 8D3 has been used as a BBB transporter in mice and is suitable for studying CD71 expression and iron uptake into different tissues.

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/cp055?bxcs=9k1b3a#tab_references or scan the QR code below.

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