Technical Data Sheet

RecombiMAb anti-mouse CD71 (TfR1) (LALA-PG)

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:	**CP078**
Clone:	**8D3-CP078**
Isotype:	Mouse IgG2a (LALA-PG), κ
Recommended Isotype Control(s):	RecombiMAb mouse IgG2a (LALA-PG) isotype control, anti-hen egg lysozyme
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Mutations:	LALA-PG
Immunogen:	Mouse transformed endothelioma cell line t.end1
Reported Applications:	Targeted drug delivery to the brain Immunohistochemistry Flow Cytometry Western Blot Transport across the BBB Receptor mediated transcytosis
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤0.5EU/mg (≤0.0005EU/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 8D3-CP078 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. Additionally, 8D3-CP078 contains LALA-PG mutations in the heavy chain Fc

fragment rendering it unable to bind endogenous murine Fcγ receptors or C1q to induce antibody-dependent, cell-mediated cytotoxicity (ADCC) or complement-dependent cytotoxicity (CDC). Species-matched chimeric antibodies result in reduced immunogenicity and formation of anti-drug antibodies (ADAs) than xenogenic antibodies. In vivo studies using a murine chimeric 8D3 antibody showed rapid uptake in the brain at a level comparable to the rat 8D3 Mab. Anti-TfR1 antibodies with eliminated Fc effector function have reduced acute clinical signs and reticulocyte depletion. Furthermore, murine studies using a TfR-targeting bispecific antibody showed that chimeric mouse IgG2a LALA-PG effector silencing demonstrated improved safety profiles. The LALA-PG variant had less effector function, C1q binding and C3 fixation compared to other common Fc silencing mutations such as the LALA and DANG variants. The 8D3-CP078 monoclonal antibody reacts with native, soluble and denatured forms of murine CD71, also known as transferrin receptor protein 1 (TfR1). CD71 is a 170-180 kDa 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. Cells of the vascular endothelium of brain capillaries that compose the blood-brain barrier (BBB) express high levels of TfR1 allowing for receptor-mediated transcytosis of large biomolecules into the brain. Murine chimeric anti-TfR1 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/cp078?bxcs=9k1b3a#tab_references or scan the QR code below.

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