Technical Data Sheet

RecombiMAb anti-rat/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:	**CP079**
Clone:	**OX-26-CP079**
Isotype:	Mouse IgG2a LALA-PG
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:	PHA-activated PVG rat lymph node cells
Reported Applications:	Targeted drug delivery to the brain Immunohistochemistry Flow Cytometry *Reported for the original mouse IgG1 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 OX-26-CP079 monoclonal antibody is a recombinant version of the original OX-26 antibody that contains the Fc-silencing mutations in the heavy chain rendering it unable to bind endogenous murine Fcγ receptors or C1q. The LALA-PG mutations prevent antibody-dependent, cell-mediated cytotoxicity (ADCC) and complement-dependent cytotoxicity (CDC). The LALA-PG variant has significantly reduced effector function, C1q binding and C3 fixation compared to other common

silencing mutations such as the LALA and DANG variants while retaining favorable biophysical and manufacturing properties. Recent studies have demonstrated that administration of anti-TfR1 antibodies with Fc effector function in mice resulted in acute clinical signs of toxicity and a decrease in reticulocyte count. These negative effects were eliminated through Fc-silencing. The OX-26 monoclonal antibody reacts with rat and mouse CD71, also known as transferrin receptor protein 1 (TfR1). CD71 is a type II homodimeric transmembrane glycoprotein which is 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. OX-26 has been used as a BBB transporter in rats and mice and is suitable for studying CD71 expression and iron uptake into different tissues. The OX-26 antibody binds to a distinct extracellular epitope on TfR that does not compete for binding with the natural ligand Tf or iron uptake. The OX-26 antibody is often used to transport conjugated drugs across the BBB in experimental models.

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/cp079?bxcs=9k1b3a#tab_references or scan the QR code below.

Bio X Cell, LLC
https://bioxcell.com
+1-866-787-3444
customerservice@bioxcell.com