# Technical Data Sheet

## RecombiMAb anti-rat/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

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| **Catalog Number:** | **CP059** |
| **Clone:** | **OX-26-CP059** |
| **Isotype:** | Rat IgG2a |
| **Recommended Isotype Control(s):** | InVivoMAb rat IgG2a isotype control, anti-trinitrophenol |
| **Recommended Dilution Buffer:** | InVivoPure pH 7.0 Dilution Buffer |
| **Immunogen:** | PHA-activated PVG rat lymph node cells |
| **Reported Applications:** | Targeted drug delivery to the brain<br>Immunohistochemistry<br>Flow Cytometry<br>*Reported for the original mouse IgG1 antibody. For information on *in vivo* applications, please contact technicalservice@bioxcell.com |
| **Formulation:** | PBS, pH 7.0<br>Contains no stabilizers or preservatives |
| **Endotoxin:** | <1EU/mg (<0.001EU/µg)<br>Determined by LAL gel clotting assay |
| **Purity:** | >95%<br>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%<br>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-CP059 monoclonal antibody is a recombinant, chimeric version of the original OX-26 antibody. The variable domain sequences are identical but the constant region sequences have been switched from mouse IgG2a, kappa to rat IgG2a, kappa for use in rat 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 highly controlled sequence and lack of genetic drift in recombinant

antibodies provide more reliable and reproducible results over hybridoma derived antibodies. 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. 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. 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 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/cp059?bxcs=9k1b3a#tab_references or scan the QR code below.

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