Technical Data Sheet

InVivoMAb 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

Catalog Number:	**BE0331**
Clone:	**OX-26**
Isotype:	Mouse IgG2a, κ
Recommended Isotype Control(s):	InVivoMAb mouse IgG2a isotype control, unknown specificity
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 Immunohistochemistry (frozen) Flow cytometry
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	<2EU/mg (<0.002EU/µg) Determined by LAL gel clotting assay
Purity:	>95% Determined by SDS-PAGE
Sterility:	0.2 µm filtration
Production:	Purified from cell culture supernatant in an animal-free facility
Purification:	Protein A
RRID:	AB_2894751
Molecular Weight:	150 kDa

Description

The OX-26 monoclonal antibody reacts with rat CD71 also known as transferrin receptor protein 1 (TfR1). The antibody is reported to cross-react with mouse CD71 as well. CD71 is a 170-180 kDa 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 expressed on malignant cells at high levels and its expression correlates with cancer progression. This high expression on malignant cells along with CD71's ability to internalize and the necessity of iron for cancer cell proliferation makes the transferrin receptor an attractive target to exploit for the delivery of drugs into malignant cells. Upon binding to an extracellular domain of CD71, OX-26 is transferred into the blood-brain barrier (BBB) via the endogenous transferrin transport system. Under this mechanism, the OX-26 antibody is often used to transport conjugated drugs across the BBB in experimental rat models. Bio X Cell is pleased to offer two recombinant versions of the original OX-26 antibody, OX-26-CP059 and OX-26-CP079 (LALA-PG). OX-26-CP058 is a rat chimeric antibody with constant regions converted 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. OX-26-CP079 has the original mouse IgG2a, kappa but contains LALA-PG Fc-silencing mutations to prevent antibody-dependent, cell-mediated cytotoxicity (ADCC) and complement-dependent cytotoxicity (CDC). Recent studies have demonstrated that administration of anti-TfR1 antibodies with intact Fc effector function resulted in acute clinical signs of

toxicity and a decrease in reticulocyte count. These negative effects were eliminated through Fc-silencing.

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/be0331?bxcs=9k1b3a#tab_references or scan the QR code below.

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