Technical Data Sheet

RecombiMAb anti-mouse CXCR4 (CD184)

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:	**CP103**
Clone:	**Cx4Mab-1-CP103**
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:	mCXCR4-PA tag overexpressing LN229 cells
Reported Applications:	Flow cytometry For details on *in vivo* applications please contact technicalservice@bioxcell.com
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤0.5EU/mg (≤0.0005EU/μg) Determined by LAL assay
Purity:	≥95% Determined by SDS-PAGE
Sterility:	0.2 μm filtration
Production:	Purified from mammalian 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 Cx4Mab-1-CP103 monoclonal antibody is a recombinant, Fc-engineered chimeric version of the original Cx4Mab-1 antibody. The variable domain sequences are identical but the constant region sequences have been switched from Rat IgG2a, κ to Mouse IgG2a, κ 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. This antibody has an effector function competent Fc domain allowing for activation of Fcγ receptors (FcγRs) to trigger antibody-dependent cellular cytotoxicity (ADCC), antibody-dependent cellular phagocytosis (ADCP), complement-dependent cytotoxicity (CDC) and opsonization to promote target cell depletion. The mouse IgG2a isotype demonstrates strong effector functions due to potent interaction with

mFcγRIV, which is functionally similar to the FcγRIIIa receptor involved in human ADCC. The highly controlled sequence and lack of genetic drift in recombinant antibodies provide more reliable and reproducible results over hybridoma derived antibodies. The Cx4Mab-1 monoclonal antibody reacts with mouse CXC chemokine receptor 4 (CXCR4), also called fusin and CD184. CXCR4 is a hepta-transmembrane domain G protein-coupled receptor (GPCR) that is expressed in hematopoietic cells, endothelial cells, neurons, and embryonic as well as adult stem cells. The primary ligand of CXCR4 is CXCL12, also known as stromal cell-derived factor-1α (SDF-1α). The CXCR4-CXCL12 signaling pathway plays a critical role in activating multiple signaling pathways including ERK1/2, ras, p38 MAPK, PLC/MAPK, and SAPK/JNK. CXCR4-CXCL12 signaling also regulates several biological processes including cell survival, proliferation, migration, and stemness. Overexpression of CXCR4 is often linked to poor prognosis in various cancers, and during cancer metastasis, CXCR4 positive cancer cells are chemotactically homed to tissues such as the liver, bone marrow, lungs, and lymph nodes that express abundant levels of CXCL12. CXCR4 as well as CXCR4/CXCL12 antagonists are emerging as attractive targets for experimental cancer therapeutics.

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/cp103?bxcs=9k1b3a#tab_references or scan the QR code below.

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