Technical Data Sheet

InVivoMAb anti-human/monkey 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:	**BE0472**
Clone:	**12G5**
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:	CP-MAC-infected Sup-T1 cells
Reported Applications:	*in vivo* blocking of CXCR4 *in vitro* blocking of CXCR4 *in vivo* imaging *in vitro* functional assay Immunoprecipitation flow cytometry immunofluorescence Immunohistochemistry (paraffin) Immunohistochemistry (frozen)
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 filtered
Production:	Purified from cell culture supernatant in an animal-free facility
Purification:	Protein A
RRID:	
Molecular Weight:	150 kDa

Description

The 12G5 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). Additionally, CXCR4 is reported to act as a coreceptor of X4 HIV-1 and an alternative receptor for some isolates of HIV-2. 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. The 12G5 antibody binds a region formed by the second extracellular loop (ECL2) of CXCR4, and several CXCR4 antagonists that block the binding of CXCL12 to CXCR4 are known to compete with this antibody. In in vitro and in vivo studies, the 12G5 is demonstrated to block the cognate ligand, CXCL12/SDF-1, and gp120/160 from binding to CXCR4.

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/be0472?bxcs=9k1b3a#tab_references or scan the QR code below.

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