Technical Data Sheet

InVivoMAb anti-mouse/human CXCL12 (SDF-1)

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:	**BE0477**
Clone:	**K15C**
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:	SDF-1-derived peptide KPVSLSYRSPSRFFC
Reported Applications:	*in vivo* neutralization of CXCL12/SDF-1 *in vitro* neutralization of CXCL12/SDF-1 *in vitro* functional assay Immunohistochemistry (frozen) Immunohistochemistry (paraffin) Immunoelectron microscopy Immunofluorescence Flow cytometry ELISA Western blot Dot blot
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 filtered
Production:	Purified from cell culture supernatant in an animal-free facility
Purification:	Protein G
RRID:	
Molecular Weight:	150 kDa

Description

Description: The K15C monoclonal antibody reacts with mouse C-X-C motif chemokine ligand 12 (CXCL12), also called stromal cell-derived factor (SDF-1). This antibody specifically recognizes an N-terminal epitope shared by all isoforms of CXCL12, and this antibody is often regarded as a pan-CXCL12 or a pan-SDF1 antibody. CXCL12 functions as an exclusive cognate or canonical ligand of C-X-C chemokine receptor type 4 (CXCR4). CXCL12 also binds CXCR7 in a non-canonical "decoy" functional manner to regulate CXCR4 signaling. CXCL12 interacts with heparan sulfate (HS) to form an HS-CXCL12 complex, which presents this chemokine ligand to CXCR4 on migrating cells, thereby facilitating its spatial and temporal regulation. The activation of the CXCL12-CXCR4 axis triggers downstream MAPK, PI3K/Akt, JAK/STAT, and β-arrestin-mediated signaling pathways. The CXCL2-CXCR4 signaling is involved in regulation of embryogenesis, immune

surveillance, tissue homeostasis, vascular development, hematopoiesis, the central nervous system, and the pathophysiology of inflammation and cancer. Combined targeting of CXCL12-CXCR4 and PD-1 is suggested to reprogram intra-tumoral type 1 conventional dendritic cells (cDC1s) and also exert anti-angiogenic effects besides boosting T cell immunity, which enhances the efficacy of immune checkpoint blockade in cancer immunotherapy.

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/be0477?bxcs=9k1b3a#tab_references or scan the QR code below.

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