

Technical Data Sheet

InVivoMAb anti-mouse CXCL10 (IP-10)



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: BE0440
Clone: 1F11
Isotype: Armenian hamster IgG
Recommended Isotype Control(s): InVivoMAb polyclonal Armenian hamster IgG
Recommended Dilution Buffer: InVivoPure pH 7.0 Dilution Buffer
Immunogen: recombinant E. coli-produced murine IP-10
Reported Applications: *in vitro* neutralization of CXCL10
in vivo neutralization of CXCL10
in vivo inhibition of T cell recruitment
Functional assays
ELISA
Western blot
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
Molecular Weight: 150 kDa

Description

The 1F11 monoclonal antibody reacts with the pro-inflammatory cytokine C-X-C motif chemokine ligand 10 (CXCL10), also known as 10 kDa interferon gamma-induced protein (gamma-IP10 or IP-10), Crg2, Ili10, Ilnp10, and Scyb10. CXCL10 is a secreted protein that is mainly produced by cancer cells, endothelial cells, fibroblasts, and monocytes in response to IFN-gamma secretion. CXCL10 binds its only receptor, C-X-C motif chemokine receptor 3 (CXCR3), to activate several downstream pathways, including Src, PI3K-AKT, Erk1/2, and MAPK signaling. The CXCL10-CXCR3 axis activates G protein-mediated signaling, leading to the recruitment of activated Th1 lymphocytes to inflammatory sites (e.g., tumors, brain injury, and viral or *Toxoplasma gondii* infections) through a phospholipase C-dependent downstream pathway. In tumors, CXCL10-CXCR3 regulates immune cell activation, differentiation, and migration to promote anti-tumor immunity through paracrine signaling. The tumor-derived CXCL10 molecules, on the contrary, interact with CXCR3, thereby inducing cancer cell proliferation, tumor angiogenesis, and other pro-cancerous effects. During brain injury, the CXCL10/CXCR3 axis is involved in the activation and recruitment of microglia (i.e., the CNS' resident macrophage population) to the lesion sites, which is an essential element for neuronal reorganization. The 1F11 monoclonal antibody has been extensively used for neutralization of CXCL10 (in vitro and in vivo) and for inhibition of T cell recruitment in vivo in a range of inflammatory disease

models. The 1F11 antibody is specific for mouse CXCL10/IP-10, and it does not bind its closest known homolog CXCL9/Mig or other chemokines, including MIP-1 alpha, MIP-1beta, SDF-1, KC, TCA-3, RANTES, eotaxin, MCP-1, MCP-3, and MCP-5 (Khan et al. 2000, Immunity, 12: 483–94). This antibody binds soluble CXCL10, but it does not bind the membrane-bound form of CXCL10, i.e., the glycosaminoglycan (GAG)-bound chemokine present on endothelial cell surfaces.

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/catalogsearch/result/?q=BE0440#tab_references or scan the QR code below.



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