Technical Data Sheet

RecombiMAb anti-mouse TNFα

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:	**CP074**
Clone:	**XT3.11-CP074**
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:	Recombinant mouse TNFα
Reported Applications:	Western blot *in vivo* TNFα neutralization* *in vitro* TNFα neutralization* *Reported for the original rat IgG1 XT3.11 antibody
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤0.5EU/mg (≤0.0005EU/μg) Determined by LAL gel clotting 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 XT3.11-CP074 monoclonal antibody is a recombinant, chimeric version of the original XT3.11 antibody. The variable domain sequences are identical but the constant region sequences have been switched from rat IgG1 to murine IgG2a, kappa for use in murine models. Antibody-dependent cellular cytotoxicity (ADCC) is a contributing mechanism of action of anti-TNF antibodies, since anti-TNF antibodies have been confirmed to induce cytotoxic effects on TNF-producing cells via ADCC and complement-dependent cytotoxicity (CDC). Murine IgG2a mediates ADCC primarily through its high-affinity binding to the mFcγRIV receptor, a key effector mechanism in the mouse immune system for targeting diseased or infected

cells. In contrast to other isotypes, mIgG2a demonstrates strong effector functions due to this potent interaction with mFcγRIV, which is functionally like the FcγRIIIa receptor involved in human ADCC. Species-matched chimeric antibodies result in less immunogenicity and formation of anti-drug antibodies (ADAs) than xenogenic antibodies in animal models. The highly controlled sequence and lack of genetic drift in recombinant antibodies provide more reliable and reproducible results over hybridoma derived antibodies. The XT3.11-CP074 monoclonal antibody reacts with mouse TNFα (tumor necrosis factor-alpha) a multifunctional proinflammatory cytokine. TNFα exists as a soluble 17 kDa monomer, which forms homotrimers in circulation or as a 26 kDa membrane-bound form. TNFα belongs to the TNF superfamily of cytokines and signals through its two receptors, TNFR1 and TNFR2 which can be activated by both the soluble trimeric and membrane-bound and forms of TNFα. TNFα is primarily produced by macrophages in response to foreign antigens such as bacteria (lipopolysaccharides), viruses, and parasites as well as mitogens and other cytokines but can also be expressed by monocytes, neutrophils, NK cells, CD4 T cells and some specialized dendritic cells. TNFα is known to play key roles in a wide spectrum of biological processes including immunoregulation, cell proliferation, differentiation, apoptosis, antitumor activity, inflammation, anorexia, cachexia, septic shock, hematopoiesis, and viral replication. TNFα dysregulation has been implicated in a variety of diseases, including autoimmune diseases, insulin resistance, and cancer. Mouse and human TNFα share 79% amino acid sequence identity however, mouse TNFα is glycosylated while human TNFα is not. TNFα knockout animals display defects in response to bacterial infection, characterized by defects in forming organized follicular dendritic cell networks and germinal centers with a lack of primary B cell follicles.

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

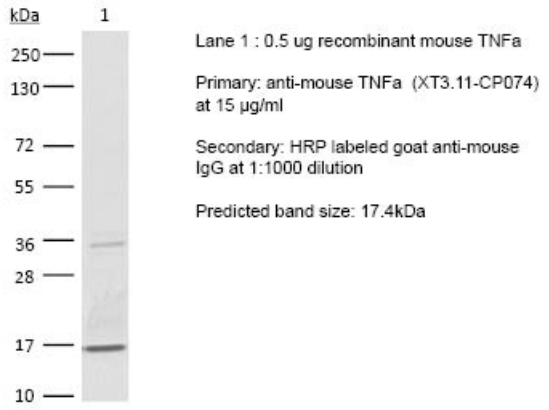
Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Application References

For a complete list of references, visit https://bioxcell.com/cp074?bxcs=9k1b3a#tab_references or scan the QR code below.

Binding Validation

Validation data shown below confirms that this clone binds to its target antigen. For lot specific binding validation data, e-mail technicalservice@bioxcell.com.



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