Technical Data Sheet

InVivoMAb anti-mouse TNFR1 (CD120a)

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:	**BE0491**
Clone:	**55R-593**
Isotype:	Armenian Hamster IgG1
Recommended Isotype Control(s):	InVivoMAb Armenian hamster IgG isotype control, anti-S. japonicum glutathione S-transferase
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	Soluble purified extra-cellular domain of the murine p55-TNFR (TNFR1)
Reported Applications:	*in vivo* TNFR1 stimulation *in vitro* TNFR1 stimulation Immunoprecipitation Western blot
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤1EU/mg (≤0.001EU/µg) Determined by LAL 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
RRID:	
Molecular Weight:	150 kDa

Description

The 55R-593 monoclonal antibody reacts with mouse tumor necrosis factor receptor 1 (TNFR1), a single-pass type I membrane protein also known as CD120a, p55, and Tnfrsf1a. TNFR1 belongs to the TNF receptor (TNFR) superfamily and is expressed at low levels in most nucleated cells. TNFR1 signals primarily through its interaction with soluble tumor necrosis factor-α (sTNF-α). It plays a central role in systemic inflammation and exhibits a context-dependent dual function in promoting both cell survival and apoptosis. This functional complexity arises from its diverse molecular interactions as well as post-translational modifications. The canonical ligands of TNFR1 include TNF-α (TNFSF2) and TNF-β/lymphotoxin-α (TNFSF1). TNFR1 also interacts with several intracellular adaptor and signaling proteins, including TRADD, RIPK1, NOL3, SH3RF2, GRB2, and BAG4. Its direct interaction with NOL3 (via the CARD domain) can inhibit TNF signaling. TNFR1 is implicated in the pathogenesis of cancer, autoimmune disorders, and chronic inflammatory diseases such as rheumatoid arthritis (RA) and Crohn's disease. Selective stimulation of TNFR1 with agonistic antibodies, e.g., 55R-593, enables researchers to dissect TNFR1-mediated pathways and model TNF/TNFR1-driven disease mechanisms or therapeutic interventions under controlled, receptor-specific conditions.

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/be0491?bxcs=9k1b3a#tab_references or scan the QR code below.

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