

GolnVivo™ Purified anti-mouse TNF-α Antibody

Catalog# / Size	506351 / 5 mg 506352 / 25 mg 506353 / 50 mg 506354 / 100 mg 506355 / 500 mg 506356 / 1 g
Clone	MP6-XT22
Regulatory Status	RUO
Other Names	Tumor necrosis factor-α, Cachectin, Necrosin, Macrophage cytotoxic factor (MCF), Differentiation inducing factor (DIF), TNFSF-2, TNF-a, TNF-alpha
Isotype	Rat IgG1, κ
Description	TNF-α is secreted by macrophages, monocytes, neutrophils, T-cells, and NK-cells. Many transformed cell lines also secrete TNF-α. Monomeric mouse TNF-α is a 156 amino acid protein (N-glycosylated) with a reported molecular weight of 17.5 kD. TNF-α forms multimeric complexes; stable trimers are most common in solution. A 26 kD membrane form of TNF-α has also been described. TNF-α binding to surface receptors elicits a wide array of biologic activities including: cytolysis and cytoostasis of many tumor cell lines <i>in vitro</i> , hemorrhagic necrosis of tumors <i>in vivo</i> , increased fibroblast proliferation, and enhanced chemotaxis and phagocytosis in neutrophils.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	<i>E. coli</i> -expressed, recombinant mouse TNF-α
Formulation	0.2 μm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is < 1.0 EU/mg of the protein (< 0.1 pg/μg of the protein) as determined by the LAL test.
Preparation	The GolnVivo™ antibody was purified by affinity chromatography.
Concentration	The antibody is bottled at the concentration indicated on the vial, typically between 2 mg/mL and 3 mg/mL.
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. This GolnVivo™ solution contains no preservative; handle under aseptic conditions.
Application	ELISA, ICFC - Quality tested CyTOF®, ICC - Verified IHC-F, WB, Neut - Reported in the literature, not verified in house
Recommended Usage	Each lot of this antibody is quality control tested by ELISA assay. For ELISA capture applications, a concentration range of 2.0 - 6.0 μg/mL is recommended. To obtain a linear standard curve, serial dilutions of mouse TNF-α recombinant protein ranging from 500 to 4 pg/mL are recommended for each ELISA plate. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	ELISA or ELISPOT Detection: The biotinylated MP6-XT22 antibody is useful as a detection antibody for a sandwich ELISA or ELISPOT assay, when used in conjunction with purified 6B8 antibody (Cat. Nos. 510802 & 510804) as the capture antibody. ELISA Capture: The purified MP6-XT22 antibody is useful as the capture antibody in a sandwich ELISA when used in conjunction with the biotinylated Poly5160 antibody (Cat. No. 516003) as the detection antibody and recombinant mouse TNF-α (Cat. No. 575209) as the standard. Flow Cytometry ^{6,11,12} : The fluorochrome-labeled MP6-XT22 antibody is useful for intracellular immunofluorescent staining and flow cytometric analysis to identify TNF-α-producing cells within mixed cell populations. Neutralization ^{1,5,10,16,17} : The MP6-XT22 antibody can neutralize the bioactivity of natural or

recombinant TNF- α . The LEAF™ purified antibody (Endotoxin < 0.1 EU/ μ g, Azide-Free, 0.2 μ m filtered) is recommended for neutralization of mouse TNF- α bioactivity *in vivo* and *in vitro* (Cat. No. 506310). For *in vivo* studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 506332) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin < 0.01 EU/ μ g).

Additional reported applications (for the relevant formats) include: Western blotting, immunohistochemical staining of paraformaldehyde-fixed, saponin-treated frozen tissue sections⁷⁻⁹ *in vivo* detection⁵, immunofluorescence, and immunocytochemistry.

Note: For testing mouse TNF- α in serum, plasma or supernatant, BioLegend's ELISA Max™ Sets (Cat. No. 430901) are specially developed and recommended.

Application References

(PubMed link indicates BioLegend citation)

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6. Infante-Duarte C, *et al.* 2000 *J. Immunol.* 165:6107. (FC)
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8. Marinova-Mutachieva L, *et al.* 1997. *Clin. Exp. Immunol.* 107:507. (IHC)
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10. Scanga CA, *et al.* 1999. *Infect. Immun.* 67:4531. (Neut)
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12. Lawson BR, *et al.* 2007. *J. Immunol.* 178:5366. (FC)
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Antigen Details

Structure	TNF superfamily; dimer/trimer; 17.5-150 kD (Mammalian)
Bioactivity	Paracrine/endocrine mediator of inflammatory and immune functions; selectively cytotoxic for transformed cells; endothelial cell alterations; chemoattractant
Cell Sources	Activated monocytes, neutrophils, macrophages, T cells, B cells, NK cells, LAK cells
Cell Targets	Monocytes, neutrophils, macrophages, T cells, fibroblasts, endothelial cells, osteoclasts, adipocytes, astroglia, microglia
Receptors	TNFRSF1A (TNF-R1, CD120a, TNFR-p60 Type β , p55); TNFRSF1B (TNF-R2, CD120b, TNFR-p80 Type A, p75)
Cell Type	Tregs
Biology Area	Immunology, Innate Immunity
Molecular Family	Cytokines/Chemokines
Antigen References	1. Fitzgerald K, <i>et al.</i> Eds. 2001. The Cytokine FactsBook. Academic Press, San Diego. 2. Beutler B, <i>et al.</i> 1988. <i>Annu. Rev. Biochem.</i> 57:505. 3. Beutler B, <i>et al.</i> 1989. <i>Annu. Rev. Immunol.</i> 7:625. 4. Tracey K, <i>et al.</i> 1993. <i>Crit. Care Med.</i> 21:S415.
Regulation	Processed by TACE for secretion; upregulated by interferons, IL-2, GM-CSF, substance P, bradykinin, PAF, immune complexes, and cyclooxygenase; downregulated by IL-6, TGF- β , vitamin D3, prostaglandin E2, and PAF antagonists
Gene ID	21926

Related Protocols

[Active Protocols: Sandwich ELISA - Video](#)

Other Formats

APC anti-mouse TNF- α , FITC anti-mouse TNF- α , PE anti-mouse TNF- α , Purified anti-mouse TNF- α , Biotin anti-mouse TNF- α , Alexa Fluor® 488 anti-mouse TNF- α , Alexa Fluor® 647 anti-mouse TNF- α , Pacific Blue™ anti-mouse TNF- α , PerCP/Cyanine5.5 anti-mouse TNF- α , PE/Cyanine7 anti-mouse TNF- α , Brilliant Violet 421™ anti-mouse TNF- α , Brilliant Violet 605™ anti-mouse TNF- α , Ultra-LEAF™ Purified anti-mouse TNF- α , Brilliant Violet 650™ anti-mouse TNF- α , Alexa Fluor® 700 anti-mouse TNF- α , Purified anti-mouse TNF- α (Maxpar® Ready), Brilliant Violet 510™ anti-mouse TNF- α , Brilliant Violet 785™ anti-mouse TNF- α , APC/Cyanine7 anti-mouse TNF- α , PE/Dazzle™ 594 anti-mouse TNF- α , Brilliant Violet 711™ anti-mouse TNF- α , Brilliant Violet 750™ anti-mouse TNF- α , GolnVivo™ Purified anti-mouse TNF- α

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