

Biotin anti-mouse TNF- α Antibody

Catalog# / Size	506311 / 50 μ g 506312 / 500 μ 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 cytostasis 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	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	ELISA Detection, ELISPOT Detection - Quality tested ICFC - Reported in the literature, not verified in house
Recommended Usage	Each lot of this antibody is quality control tested by ELISA assay . For use as an ELISA detection antibody, a concentration range of 0.25-1.0 μ g/ml is recommended. To obtain a linear standard curve, serial dilutions of mouse TNF- α recombinant protein ranging from 500 to 4 μ g/ml are recommended for each ELISA plate. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	<p>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.</p> <p>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.</p> <p>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.</p> <p>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/μg, Azide-Free, 0.2 μm filtered) is recommended for neutralization of mouse TNF-α bioactivity <i>in vivo</i> and <i>in vitro</i> (Cat. No. 506310). For <i>in vivo</i> 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/μg).</p> <p>Additional reported applications (for the relevant formats) include: Western blotting, immunohistochemical staining of paraformaldehyde-fixed, saponin-treated frozen tissue sections⁷⁻⁹</p>

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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Product Citations

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3. Condotta S, *et al.* 2015. *J Immunol.* 195: 116 - 125. [PubMed](#)
4. Jain A, *et al.* 2020. *Nat Immunol.* 0.920138889. [PubMed](#)
5. Chan M, *et al.* 2021. *Mol Syst Biol.* 17:e10426. [PubMed](#)

RRID

AB_315432 (BioLegend Cat. No. 506311)
AB_315433 (BioLegend Cat. No. 506312)

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	<ol style="list-style-type: none">1. Fitzgerald K, <i>et al.</i> Eds. 2001. <i>The Cytokine FactsBook.</i> 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

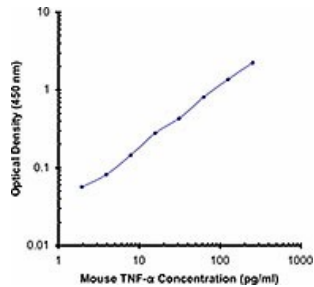
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Other Formats

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 , Spark NIR™ 685 anti-mouse TNF- α

Product Data



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