

Ultra-LEAF™ Purified anti-human TNF-α Antibody

Catalog# / Size	502805 / 100 µg 502806 / 1 mg
Clone	MAb1
Regulatory Status	RUO
Other Names	Tumor necrosis factor-α, Cachectin, Necrosin, Macrophage cytotoxic factor (MCF), Differentiation inducing factor (DIF), TNFSF2
Isotype	Mouse 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 human TNF-α is a 157 amino acid protein (non-glycosylated) with a reported molecular weight of 17 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. The MAb1 antibody can neutralize the bioactivity of natural or recombinant TNF-α.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	<i>E. coli</i> -expressed, recombinant human TNF-α
Formulation	0.2 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is <0.01 EU/µg of the protein (<0.001 ng/µg of the protein) as determined by the LAL test.
Preparation	The Ultra-LEAF™ (Low Endotoxin, Azide-Free) 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. Older lots may have also been bottled at 1 mg/mL. To obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. This Ultra-LEAF™ solution contains no preservative; handle under aseptic conditions.
Application	ELISA Capture - Quality tested ELISPOT Capture, Neut. WB - 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 ELISPOT capture antibody, a concentration range of 0.25 - 1.0 µg/ml is recommended. For ELISA capture applications, a concentration range of 1.0 - 4.0 µg/ml is recommended. To obtain a linear standard curve, serial dilutions of 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 Capture: The purified MAb1 antibody is useful in neutralization ² and as the capture antibody in a sandwich ELISA or ELISPOT assay, when used in conjunction with the biotinylated MAb11 antibody (Cat. No. 502904/502914) as the detecting antibody. The Ultra-LEAF™ purified antibody is suggested for ELISPOT capture.
Application References	1. Rathjen, D., <i>et al.</i> 1991. <i>Mol. Immunol.</i> 28:79. 2. Verschoor CP, <i>et al.</i> 2015. <i>Mol. Immunol.</i> 65:148. (Neut) Pubmed 3. Wyant, T. L., <i>et al.</i> 1999. <i>Infect. Immun.</i> 67:1338. 4. Nichols, J. E., <i>et al.</i> 2001. <i>J. Virol.</i> 73:5921. 5. Ivanov, VN., <i>et al.</i> 1999. <i>J. Biol Chem.</i> 274:14079. PubMed
(PubMed link indicates BioLegend citation)	

6. Varadarajan N, *et al.* 2012. *PNAS*. 109:3885. [PubMed](#).

Product Citations

1. Benjamin Krämer, *et al.* 2021. *Immunity*. Online ahead of print. [PubMed](#)
2. OConnor RA, *et al.* 2021. *OncolImmunology*. 10(1):1940675. [PubMed](#)

RRID

AB_2814397 (BioLegend Cat. No. 502805)
AB_2814398 (BioLegend Cat. No. 502806)

Antigen Details

Structure	TNF superfamily; dimer/trimer; 52 kD (Mammalian)
Bioactivity	Paracrine/endocrine mediator of inflammatory and immune functions; selectively cytotoxic for transformed cells; 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	Cell Biology, Immunology, Innate Immunity, Neuroinflammation, Neuroscience
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	Type II integral membrane protein processed by TACE for secretion; upregulated by interferons, IL-2, GM-CSF, substance P, bradykinin, PAF, immune complexes, cyclooxygenase; downregulated by IL-6, TGF- β , vitamin D3, prostaglandin E2, PAF antagonists,
Gene ID	7124

Related Protocols

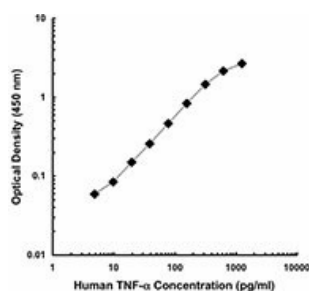
[Active Protocols: Sandwich ELISA - Video](#)

[Sandwich ELISA Protocol](#)

Other Formats

Purified anti-human TNF- α , Ultra-LEAF™ Purified anti-human TNF- α

Product Data



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