

Purified anti-human TNF- α Antibody

Catalog# / Size	502801 / 50 μ g 502802 / 500 μ g
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	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	ELISA Capture - Quality tested 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 ELISA capture applications, a concentration range of 0.25-1 μ g/ml is recommended. To obtain a linear standard curve, serial dilutions of 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	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	<ol style="list-style-type: none"> 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 6. Varadarajan N, <i>et al.</i> 2012. <i>PNAS.</i> 109:3885. PubMed.
(PubMed link indicates BioLegend citation)	
Product Citations	<ol style="list-style-type: none"> 1. Varadarajan N, <i>et al.</i> 2012. <i>Proc Natl Acad Sci U S A.</i> 109:3885. PubMed 2. Rodriguez-Salazar CA, <i>et al.</i> 2022. <i>Viruses.</i> 14:. PubMed 3. Schwaderer J, <i>et al.</i> 2020. <i>Cell Death Dis.</i> 11:154. PubMed

4. Li M, *et al.* 2022. J Biol Chem. 298:101543. [PubMed](#)
5. Tao S, *et al.* 2020. Methods Mol Biol. 2108:181. [PubMed](#)
6. Hammer Q, *et al.* 2018. Front Immunol. 1.705555556. [PubMed](#)
7. Han G, *et al.* 2022. Ann Transl Med. 10:1134. [PubMed](#)
8. Han X, *et al.* 2020. Mol Carcinog. 59:1088. [PubMed](#)

RRID AB_315249 (BioLegend Cat. No. 502801)
AB_315250 (BioLegend Cat. No. 502802)

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. 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	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

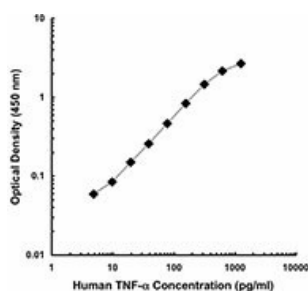
[Active Protocols: Sandwich ELISA - Video](#)

[Sandwich ELISA Protocol](#)

Other Formats

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

Product Data



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