Purified anti-human TNF-α (Maxpar® Ready) Antibody

Catalog# / Size	502941 / 100 µg
Clone	MAb11
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 biological activities including: cytolysis and cytostasis of many tumor cell lines *in vitro*, hemorraghic necrosis of tumors *in vivo*, increased fibroblast proliferation, and enhanced chemotaxis and phagocytosis in neutrophils.

Product Details

Verified Reactivity	Human
Reported Reactivity	Cat, Chimpanzee, Baboon, Cynomolgus, Rhesus, Pigtailed Macaque, Sooty Mangabey, Pig
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	*E. coli*-expressed, recombinant human TNF-α
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and EDTA.
Preparation	The antibody was purified by affinity chromatography.
Concentration	1.0 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	ELISA - Quality tested CyTOF® - Verified
Recommended Usage	This product is suitable for use with the Maxpar® Metal Labeling Kits. For metal labeling using Maxpar® Ready antibodies, proceed directly to the step to Partially Reduce the Antibody by adding 100 µl of Maxpar® Ready antibody to 100 µl of 4 mM TCEP-R in a 50 kDa filter and continue with the protocol. Always refer to the latest version of Maxpar® User Guide when conjugating Maxpar® Ready antibodies.
Application Notes	**ELISA or ELISPOT Detection:** The biotinylated MAb11 antibody is useful as the detection antibody in a sandwich ELISA or ELISPOT, when used in conjunction with the purified MAb1 antibody (Cat. No. 502802/502804) as the capture antibody. **Flow Cytometry[3,5,6,10]:** The fluorochrome-labeled MAb11 antibody is useful for intracellular and membrane-bound immunofluorescent staining and flow cytometric analysis to identify TNF-a-producing cells within mixed cell populations. **Additional reported applications (for the relevant formats) include:** neutralization[1,2], immunohistochemical staining of paraformaldehyde-fixed, saponin-treated frozen tissue sections[4] and acetone-fixed frozen tissue sections[8], immunocytochemistry[7], and immunofluorescence[9]. The MAb11 antibody can neutralize the bioactivity of natural or recombinant TNF-a. **Note:** For testing human TNF-a in serum or plasma, BioLegend's ELISA Max™ Sets (Cat. No. 430201 to 430206) are specially developed and recommended. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for neutralization of human TNF-a bioactivity (Cat. No. 502922).

	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. Clone MAb11 cross-reacts to Cat[11]
Additional Product Notes	Maxpar® is a registered trademark of Standard BioTools Inc.
Application References **(PubMed link indicates BioLegend citation)**	1. Rathjen D, *et al.* 1991. *Mol. Immunol.* 28:79. (Neut) 2. Ablamunits V, *et al.* 2010. *Eur. J. Immunol.* 40:2891. (Neut) 3. Enr quez J, *et al.* 2002. *Adv. Perit. Dial.* 18:177. (ICFC) 4. Andersson U, *et al.* 1999. *Detection and quantification of gene expression*. New York:Springer-Verlag. (IHC) 5. Chen H, *et al.* 2005. *J. Immunol.* 175:591. (ICFC) 6. Iwamoto S, *et al.* 2007. *J. Immunol.* 179:1449. (ICFC) PubMed 7. Andersson U, *et al.* 2000. *J. Exp. Med.* 192:565. (ICC) 8. Moormann AM, *et al.* 1999. *J. Infect. Dis.* 180:1987. (IHC) 9. Zhao XJ, *et al.* 2003. *J. Immunol.* 170:2923. (IF) 10. Rieger R, *et al.* 2009. *Cancer Gene Ther.* 1:53-64. (FC) 11. Maksaereekul S, *et al.* 2009. *Vaccine*. 28:3754 (FC)
Product Citations	1. Stras SF, *et al.* 2020. Developmental Cell. 51(3):357-373.e5.. PubMed 2. Gruber CN, *et al.* 2020. Cell. 183:982. PubMed
RRID	AB_2562842 (BioLegend Cat. No. 502941)

Antigen Details

Structure	TNF superfamily; dimer/trimer; 17 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	Neutrophils, Tregs
Biology Area	Cell Biology, Immunology, Innate Immunity, Neuroinflammation, Neuroscience
Molecular Family	Cytokines/Chemokines
Antigen References	1. Fitzgerald K, *et al.* Eds. 2001. The Cytokine FactsBook. Academic Press, San Diego. 2. Beutler B, *et al.* 1988. *Annu. Rev. Biochem.* 57:505. 3. Beutler B, *et al.* 1989. *Annu. Rev. Immunol.* 7:625. 4. Tracey K, *et al.* 1993. *Crit. Care Med.* 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

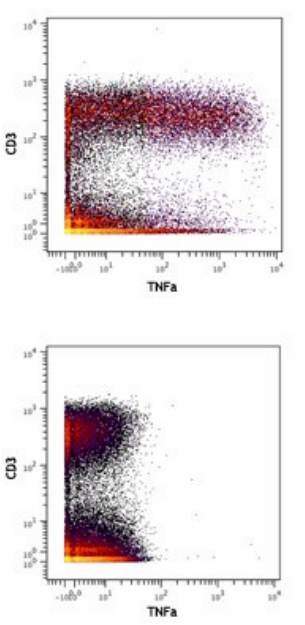
Sandwich ELISA Protocol

Other Formats

APC anti-human TNF-α, Biotin anti-human TNF-α, FITC anti-human TNF-α, PE anti-human TNF-α, Purified anti-human TNF-α, Alexa

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

Product Data



Human PBMCs were incubated for 6 hours in media alone (bottom) or with PMA and Ionomycin (top) in the presence of monensin and brefeldin A. Cells were then fixed, permeabilized, and stained with 170Er-anti-CD3 (UCHT1) and 152Sm-anti-TNFα (MAb11). Data provided by DVS Sciences.

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587