

PE/Cyanine7 anti-human TNF- α Antibody

Catalog# / Size	502929 / 25 tests 502930 / 100 tests
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 17 kD 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 <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	Human
Reported Reactivity	Cat, Chimpanzee, Baboon, Cynomolgus, Rhesus, Pigtailed Macaque, Sooty Mangabey, Pig
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 and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography, and conjugated with PE/Cyanine7 under optimal conditions.
Concentration	Lot-specific (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, and protected from prolonged exposure to light. Do not freeze.
Application	ICFC - Quality tested FC - Reported in the literature, not verified in house
Recommended Usage	Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is 5 μ l per million cells in 100 μ l staining volume or 5 μ l per 100 μ l of whole blood.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
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- α -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- α .

Note: For testing human TNF- α 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/ μ g, Azide-Free, 0.2 μ m filtered) is recommended for neutralization of human TNF- α bioactivity (Cat. No. 502922).

The Purified MAb1 antibody is useful in neutralization² 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 Cat¹¹

Additional Product Notes

BioLegend is in the process of converting the name PE/Cy7 to PE/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine7 products. Please contact [Technical Service](#) if you have any questions.

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. Enrquez 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. Maksierekul S, *et al.* 2009. *Vaccine.* 28:3754 (FC)

Product Citations

1. Li M, *et al.* 2021. *J Clin Invest.* 131:. [PubMed](#)
2. Mayassi T, *et al.* 2019. *Cell.* 176:967. [PubMed](#)
3. Viborg N, *et al.* 2019. *Oncoimmunology.* 8:e1663107. [PubMed](#)
4. Mastelic-Gavillet B, *et al.* 2019. *J Immunother Cancer.* 7:257. [PubMed](#)
5. Pachnio A, *et al.* 2016. *PLoS Pathog.* 12: 1005832. [PubMed](#)
6. Chiu Y, *et al.* 2016. *Sci Rep.* 6:19227. [PubMed](#)
7. Kim C, *et al.* 2018. *Cell Rep.* 25:2148. [PubMed](#)
8. Di Blasi D, *et al.* 2019. *Cell Mol Gastroenterol Hepatol.* 0.510416667. [PubMed](#)
9. Marquardt N, *et al.* 2019. *Nat Commun.* 10:3841. [PubMed](#)
10. Seo IH, *et al.* 2021. *Immune Netw.* 21:e17. [PubMed](#)
11. Pattekar A, *et al.* 2021. *Cellular and Molecular Gastroenterology and Hepatology.* 11(5):1267-1289. [PubMed](#)
12. Misra R, *et al.* 2015. *Hum Immunol.* 76:329. [PubMed](#)
13. Bradley T *et al.* 2018. *Cell.* 175(2):387-399. [PubMed](#)
14. Kilpelainen A, *et al.* 2022. *Front Immunol.* 13:815041. [PubMed](#)
15. Ni J, *et al.* 2020. *Immunity.* 52(6):1075-1087.e8. [PubMed](#)
16. Saini SK, *et al.* 2021. *Sci Immunol.* 6:. [PubMed](#)
17. Motozono C, *et al.* 2021. *Cell Host Microbe.* . [PubMed](#)
18. Wilgenburg B, *et al.* 2016. *Nat Commun.* 7:11653. [PubMed](#)
19. Saini SK, *et al.* 2020. *Nat Commun.* 4.388888889. [PubMed](#)
20. Festag J, *et al.* 2020. *Mol Ther Nucleic Acids.* 1.330555556. [PubMed](#)
21. Mathewson ND, *et al.* 2021. *Cell.* 184(5):1281-1298.e26. [PubMed](#)
22. Marzan-Rivera N, *et al.* 2022. *iScience.* 25:104764. [PubMed](#)
23. Ribot J, *et al.* 2014. *J Immunol.* 192:2237. [PubMed](#)
24. Li L, *et al.* 2022. *JCI Insight.* 7:. [PubMed](#)
25. Cimen Bozkus C, *et al.* 2021. *STAR Protoc.* 2:100758. [PubMed](#)

RRID

AB_2204080 (BioLegend Cat. No. 502929)
AB_2204079 (BioLegend Cat. No. 502930)

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	<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

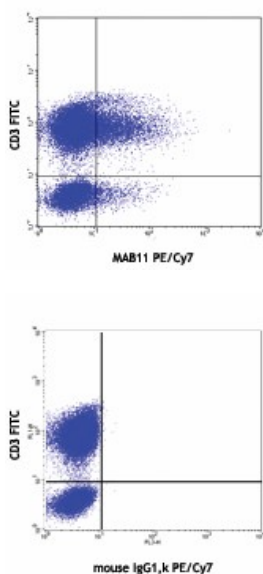
[Surface and Intracellular Cytokine Staining for Flow Cytometry - Video](#)

[Intracellular Flow Cytometry Staining 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



PMA+ionomycin-stimulated (6 hours) peripheral blood lymphocytes surface stained with CD3 FITC, then intracellularly stained with MAB11 PE/Cyanine7 (top) or mouse IgG1,k PE/Cyanine7 isotype control (bottom)

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 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