

## APC/Cyanine7 anti-human TNF- $\alpha$ Antibody

<b>Catalog# / Size</b>	502943 / 25 tests 502944 / 100 tests
<b>Clone</b>	MAb11
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Tumor necrosis factor- $\alpha$ , Cachectin, Necrosin, Macrophage cytotoxic factor (MCF), Differentiation inducing factor (DIF), TNFSF2
<b>Isotype</b>	Mouse IgG1, $\kappa$
<b>Description</b>	TNF- $\alpha$ is secreted by macrophages, monocytes, neutrophils, T cells, and NK cells. Many transformed cell lines also secrete TNF- $\alpha$ . Monomeric human TNF- $\alpha$ is a 17 kD amino acid protein (non-glycosylated) with a reported molecular weight of 17 kD. TNF- $\alpha$ forms multimeric complexes; stable trimers are most common in solution. A 26 kD membrane form of TNF- $\alpha$ has also been described. TNF- $\alpha$ 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

---

<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	Cat, Chimpanzee, Baboon, Cynomolgus, Rhesus, Pigtailed Macaque, Sooty Mangabey, Pig
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	<i>E. coli</i> -expressed, recombinant human TNF- $\alpha$
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with APC/Cyanine7 under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">ICFC. FC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">intracellular immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is 5 $\mu$ l per million cells in 100 $\mu$ l staining volume or 5 $\mu$ l per 100 $\mu$ l of whole blood.
<b>Excitation Laser</b>	Red Laser (633 nm)
<b>Application Notes</b>	<p><b>ELISA or ELISPOT Detection:</b> 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.</p> <p><b>Flow Cytometry<sup>3,5,6,10</sup>:</b> The fluorochrome-labeled MAb11 antibody is useful for intracellular and membrane-bound immunofluorescent staining and flow cytometric analysis to identify TNF-<math>\alpha</math>-producing cells within mixed cell populations.</p> <p><b>Additional reported applications (for the relevant formats) include:</b> neutralization<sup>1,2</sup>, immunohistochemical staining of paraformaldehyde-fixed, saponin-treated frozen tissue sections<sup>4</sup> and acetone-fixed frozen tissue sections<sup>8</sup>, immunocytochemistry<sup>7</sup>, and immunofluorescence<sup>9</sup>. The MAb11 antibody can neutralize the bioactivity of natural or recombinant TNF-<math>\alpha</math>.</p> <p><b>Note:</b> For testing human TNF-<math>\alpha</math> in serum or plasma, BioLegend's ELISA Max™ Sets (Cat. No.</p>

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-α bioactivity (Cat. No. 502922).

The Purified MAb1 antibody is useful in neutralization<sup>2</sup> 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<sup>11</sup>

#### Additional Product Notes

BioLegend is in the process of converting the name APC/Cy7 to APC/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our APC/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. 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. Maksaarekul S, *et al.* 2009. *Vaccine.* 28:3754 (FC)

#### Product Citations

1. Chugh RM, *et al.* 2021. *Stem Cell Res Ther.* 12:388. [PubMed](#)
2. Manson J, *et al.* 2019. *Front Immunol.* 10:1501. [PubMed](#)
3. Angjari S, *et al.* 2020. *Cell Metab.* 31:391. [PubMed](#)
4. Zhou R, *et al.* 2020. *Immunity.* S1074-7613(20)30333-2.. [PubMed](#)
5. Juno JA, *et al.* 2020. *Nat Med.* 26:1428. [PubMed](#)
6. Liu H, *et al.* 2021. *J Immunother Cancer.* 9:. [PubMed](#)
7. Leclercq G, *et al.* 2021. *J Immunother Cancer.* 9: . [PubMed](#)
8. Levin MJ, *et al.* 2018. *J Clin Invest.* 128:4429. [PubMed](#)

#### RRID

AB\_2562869 (BioLegend Cat. No. 502943)  
AB\_2562870 (BioLegend Cat. No. 502944)

## Antigen Details

---

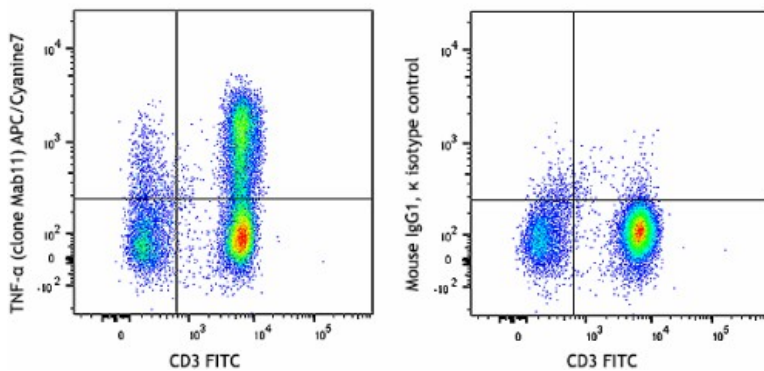
<b>Structure</b>	TNF superfamily; dimer/trimer; 17 kD (Mammalian)
<b>Bioactivity</b>	Paracrine/endocrine mediator of inflammatory and immune functions; selectively cytotoxic for transformed cells; chemoattractant
<b>Cell Sources</b>	Activated monocytes, neutrophils, macrophages, T cells, B cells, NK cells, LAK cells
<b>Cell Targets</b>	Monocytes, neutrophils, macrophages, T cells, fibroblasts, endothelial cells, osteoclasts, adipocytes, astroglia, microglia
<b>Receptors</b>	TNFRSF1A (TNF-R1, CD120a, TNFR-p60 Type β, p55); TNFRSF1B (TNF-R2, CD120b, TNFR-p80 Type A, p75)
<b>Cell Type</b>	Neutrophils, Tregs
<b>Biology Area</b>	Cell Biology, Immunology, Innate Immunity, Neuroinflammation, Neuroscience
<b>Molecular Family</b>	Cytokines/Chemokines
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Fitzgerald K, <i>et al.</i> Eds. 2001. <i>The Cytokine FactsBook.</i> Academic Press, San Diego.</li><li>2. Beutler B, <i>et al.</i> 1988. <i>Annu. Rev. Biochem.</i> 57:505.</li><li>3. Beutler B, <i>et al.</i> 1989. <i>Annu. Rev. Immunol.</i> 7:625.</li><li>4. Tracey K, <i>et al.</i> 1993. <i>Crit. Care Med.</i> 21:S415.</li></ol>
<b>Regulation</b>	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
<b>Gene ID</b>	<a href="#">7124</a>

## Related Protocols

## Other Formats

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

## Product Data



PMA+ionomycin-stimulated (6 hours) human peripheral blood lymphocytes (in the presence of monensin) were stained with CD3 FITC, then fixed, permeabilized, and stained with TNF- $\alpha$  (clone Mab11) APC/Cyanine7 (left) or Mouse IgG1,  $\kappa$  APC/Cyanine7 isotype control (right)

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](http://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](http://www.biolegend.com)  
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587