

# Product Data Sheet

## APC anti-human TNF- $\alpha$

**Catalog # / Size:** 502913 / 50  $\mu$ g  
502912 / 100 tests

**Clone:** MAb11

**Isotype:** Mouse IgG1,  $\kappa$

**Immunogen:** *E. coli*-expressed, recombinant human TNF- $\alpha$

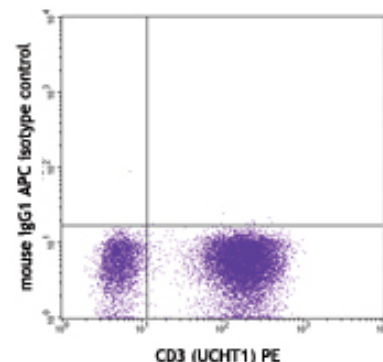
**Reactivity:** Human, **Cross-Reactivity:** Chimpanzee, Baboon, Cynomolgus, Rhesus, Pigtailed Macaque, Sooty Mangabey, Swine (Pig, Porcine)

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with APC under optimal conditions. The solution is free of unconjugated APC and unconjugated antibody.

**Formulation:** test size: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).  
 $\mu$ g size: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

**Concentration:** test size: lot-specific;  $\mu$ g size: 0.2 mg/ml

**Storage:** The antibody solution should be stored undiluted at 4°C and protected from prolonged exposure to light. **Do not freeze.**



PMA/ionomycin-stimulated (6 hours) human peripheral blood lymphocytes stained with mouse IgG1 APC isotype control and CD3 (UCHT1) PE

## Applications:

**Applications:** ICFC - *Quality tested*

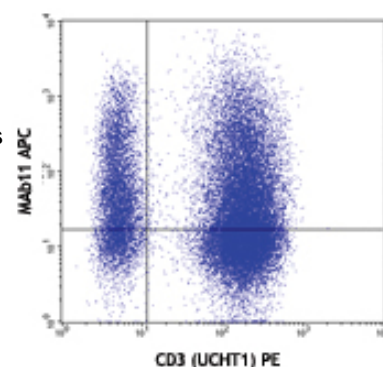
**Recommended Usage:** Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis. **Test size products are transitioning from 20  $\mu$ l to 5  $\mu$ l per test.** Please check your vial or your CoA to find the suggested use of this reagent per million cells in 100  $\mu$ l staining volume or per 100  $\mu$ l of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. Read more at [www.biolegend.com/testsize](http://www.biolegend.com/testsize) regarding the test size change.

**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<sup>3,5,6</sup>:** The fluorochrome-labeled MAb11 antibody is useful for intracellular immunofluorescent staining and flow cytometric analysis to identify TNF- $\alpha$ -producing cells within mixed cell populations.

**Additional reported applications (for the relevant formats) include:** 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>, and immunocytochemistry<sup>7</sup>. The MAb11 antibody can neutralize the bioactivity of natural or recombinant TNF- $\alpha$ .

**Note:** For testing human TNF- $\alpha$  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/ $\mu$ g, Azide-Free, 0.2  $\mu$ m filtered) is recommended for neutralization of human TNF- $\alpha$  bioactivity (Cat. No. 502922).



PMA/ionomycin-stimulated (6 hours) human peripheral blood lymphocytes stained with MAb11 APC and CD3 (UCHT1) PE

- Application References:**
1. Rathjen D, *et al.* 1991. *Mol. Immunol.* 28:79. (Neut)
  2. Danis V, *et al.* 1991. *Clin. Exp. Immunol.* 85:143. (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)

**Description:** TNF- $\alpha$  is secreted by macrophages, monocytes, neutrophils, T cells (principally CD4<sup>+</sup>), and NK cells. Many transformed cell lines also secrete TNF- $\alpha$ . Monomeric human TNF- $\alpha$  is a 157 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 *in vitro*, hemorrhagic



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necrosis of tumors *in vivo*, increased fibroblast proliferation, and enhanced chemotaxis and phagocytosis in neutrophils.

**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.

Related Products:	Product	Clone	Application
	APC Mouse IgG1, $\kappa$ Isotype Ctrl	MOPC-21	FC, ICFC
	Cell Staining Buffer		FC, ICC, ICFC
	Fixation Buffer		ICC, ICFC
	Permeabilization Wash Buffer (10X)		ICC, ICFC,
			IHC
	RBC Lysis Buffer (10X)		FC, ICFC
	Brefeldin A Solution (1,000X)		ICFC
	Monensin Solution (1,000X)		ICFC
	APC Mouse IgG1, $\kappa$ Isotype Ctrl (ICFC)	MOPC-21	ICFC



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