BioLegend
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Product Data Sheet

LEAF™ Purified anti-human TNF-α

Catalog # / Size: 502922 / 500 µg

Clone: MAb11

Isotype: Mouse IgG1, κ

Immunogen: *E. coli*-expressed, recombinant human TNF-α

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

Preparation: The LEAF™ (Low Endotoxin, Azide-Free) antibody was purified by affinity chromatography.

Formulation: 0.2 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is <0.1 EU/µg of the protein (<0.01 ng/µg of the protein) as determined by the LAL test.

Concentration: 1.0 mg/ml

Storage: The antibody solution should be stored undiluted at 4°C. This LEAF™ solution contains no preservative; handle under aseptic conditions.

Applications:

Applications: ELISA - *Quality tested*
ICFC, ICC, IHC, Neut - *Reported in the literature*
CyTOF® - *Validated*

Recommended Usage: Each lot of this antibody is quality control tested by ELISA assay. For use as an ELISPOT capture antibody, a concentration range of 0.25-1 µg/ml is recommended. For ELISA capture applications, a concentration range of 1-4 µg/ml is recommended. To obtain a linear standard curve, serial dilutions of TNF-α recombinant protein ranging from 500 to 4 pg/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 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]: The fluorochrome-labeled MAb11 antibody is useful for intracellular 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], and immunocytochemistry[7]. 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/µg, Azide-Free, 0.2 µm filtered) is recommended for neutralization of human TNF-α bioactivity (Cat. No. 502922).

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-α is secreted by macrophages, monocytes, neutrophils, T cells (principally $CD4^+$), 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.

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
LEAF™ Purified Mouse IgG1, κ Isotype Ctrl	MOPC-21	FC, ICFC, WB, IP, ICC, IF, FA

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