SONY

Product Data Sheet

Biotin anti-human TNF-α

Catalog # / Size: 3114520 / 500 µg
3114515 / 50 µg

Clone: MAb11

Isotype: Mouse IgG1, κ

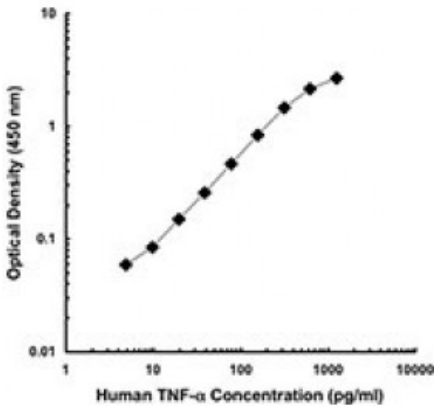
Immunogen: *E. coli*-expressed, recombinant human TNF-α

Reactivity: Human

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

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Concentration: 0.5

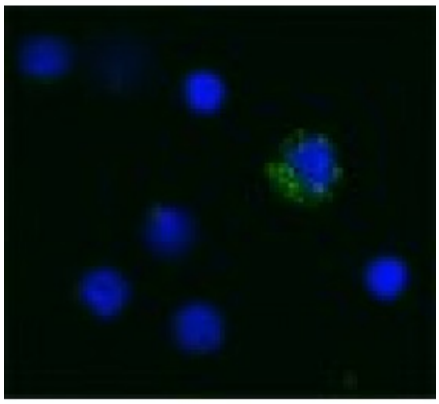


Applications:

Applications: Other

Recommended Usage: Each lot of this antibody is quality control tested by ELISA assay. For ELISA detection applications, a concentration range of 0.25-1.0 microg/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.
For use as an ELISPOT detection antibody, a concentration range of 0.5-2.0 microg/ml is recommended. For flow cytometric staining, the suggested use of this reagent is ≤ 0.25 microg per 10^6 cells in 100 microL volume. 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[3,5,6,10]: 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:



Human PBMCs, stimulated with 1 microg/ml of LPS for 8 h and treated with Brefeldin A during the last 4 h, were prepared by cytospin, fixed and permeabilized on a slide and then treated with endogenous biotin blocking kit (Vector labs). Slides were stai

neutralization[1,2], immunohistochemical staining of paraformaldehyde-fixed, saponin-treated frozen tissue sections4 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/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 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.

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)
9. Zhao XJ, *et al.* 2003. *J. Immunol.* 170:2923. (IF)
10. Rieger R, *et al.* 2009. *Cancer Gene Ther.* 1:53-64. (FC)

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.