

Technical Data Sheet

Purified NA/LE Mouse Anti-Human TNF

Product Information

Material Number:	554508
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	MAb1
Immunogen:	Human TNF Recombinant Protein
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2µm sterile filtered. Endotoxin level is ≤0.01 EU/µg (≤0.001 ng/µg) of protein as determined by the LAL assay.

Description

The MAb1 antibody reacts with human tumor necrosis factor (TNF, aka TNF- α) protein. TNF is a multifunctional cytokine involved in a variety of immune and inflammatory responses including hemorrhagic necrosis of tumors, septic shock, fever and autoimmune diseases. TNF can regulate the growth and differentiation of many different cell types. It is produced by different activated cell types including macrophages, T lymphocytes, NK cells, dendritic cells, endothelial cells, peripheral blood leukocytes, osteoblasts, astrocytes, mast cells, Kupffer cells, smooth muscle cells, fibroblasts and certain tumor cells. TNF exists in two biologically active forms, i.e., transmembrane and soluble forms. Upon activation, cells express transmembrane TNF glycoproteins that associate as homotrimeric complexes. After enzymatic cleavage, the extracellular region of membrane TNF sheds as a soluble homotrimer. The biologically active form of TNF has been reported to be a trimer.

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Application Notes

Application

ELISA	Routinely Tested
Neutralization	Tested During Development

Neutralization Activity:

This antibody has been reported to be useful for the neutralization of recombinant human TNF. Neutralization activity may be measured using a cytotoxicity assay for MTT dye conversion with 2.0 ng/mL recombinant human TNF (Cat. No. 554618) and L929 at 2×10^5 cells/mL as indicator cells (i.e. preincubation of the antibody with recombinant human TNF for 60 minutes).

50% Neutralization (ND50) at 20 - 1200 ng/mL

≥ 85% Neutralization at 2 - 15 µg/mL

Recommended Assay Procedure:

ELISA: Purified Mouse Anti-Human TNF antibody (Clone MAb1, Cat. No. 551220) is useful as a capture antibody for a sandwich ELISA for measuring human TNF. The purified MAb1 antibody can be paired with Biotin Mouse Anti-Human TNF mAb (Clone MAb11, Cat. No. 554511) as the detection antibody, with recombinant human TNF protein (Cat. No. 554618) as the standard. For complex biological samples, such as serum or plasma, investigators are encouraged to use the BD OptEIA™ Human TNF ELISA Set (Cat. No. 555212) or BD OptEIA™ Human TNF ELISA Kit II (Cat. No. 550610).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554721	Purified NA/LE Mouse IgG1 κ Isotype Control	0.5 mg	107.3
554618	Recombinant Human TNF	10 µg	(none)
555212	Human TNF ELISA Set	20 plates	(none)
550610	Human TNF ELISA Kit II	2 plates	(none)
558273	Human TNF Flex Set	1 vial	(none)
551220	Purified Mouse Anti-Human TNF	1.0 mg	MAb1
554511	Biotin Mouse Anti-Human TNF	0.5 mg	MAb11

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

Danis VA, Franic GM, Rathjen DA, Brooks PM. Effects of granulocyte-macrophage colony-stimulating factor (GM-CSF), IL-2, interferon-gamma (IFN-gamma), tumour necrosis factor-alpha (TNF-alpha) and IL-6 on the production of immunoreactive IL-1 and TNF-alpha by human monocytes. *Clin Exp Immunol.* 1991; 85(1):143-150. (Clone-specific: ELISA)

Hogan MM, Vogel SN. Production of tumor necrosis factor by rIFN-gamma-primed C3H/HeJ (Lpsd) macrophages requires the presence of lipid A-associated proteins. *J Immunol.* 1988; 141(12):4196-4202. (Methodology)

Rathjen DA, Cowan K, Furphy LJ, Aston R. Antigenic structure of human tumour necrosis factor: recognition of distinct regions of TNF alpha by different tumour cell receptors. *Mol Immunol.* 1991; 28(1-2):79-86. (Clone-specific: ELISA)

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