
Anti-Mouse/Rat TNF alpha Functional Grade Purified

Catalog Number: 16-7423

Also known as: Tumor Necrosis Factor alpha

RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: Anti-Mouse/Rat TNF alpha
Functional Grade Purified
Catalog Number: 16-7423
Clone: TN3-19
Concentration: 1 mg/mL
Host/Isotype: Armenian Hamster IgG
Handling Conditions: Use in sterile
environment.
Endotoxin: Less than 0.001 ng/ug antibody,
as determined by the LAL assay.

Formulation: aqueous buffer, no sodium azide
Temperature Limitation: Store at 2-8°C.

Batch Code: Refer to vial

Use By: Refer to vial



Description

The TN3-19.12 monoclonal antibody reacts with mouse, rat, and rabbit tumor necrosis factor alpha (TNF alpha), but not with human TNF alpha. The TN3-19.12 antibody is a neutralizing antibody. Mouse TNF alpha is a 17 kDa factor produced by macrophages, monocytes, neutrophils, CD4+ T cells and NK cells. A 26 kDa form of TNF alpha is expressed as a membrane-bound molecule. TNF alpha is cytolytic and plays an important role in immune regulation. Dimers and trimers of TNF alpha have been observed.

Applications Reported

The TN3-19.12 antibody has been reported for use in intracellular staining for flow cytometric analysis, cytokine neutralization, and ELISA. Fluorochrome conjugated TN3-19.12 is recommended for use in intracellular staining and flow cytometry. Functional Grade purified TN3-19.12, cat. 16-7423, is recommended for use in functional assays. For ELISPOT capture, the alternative clone, 1F3F3D4 (cat # 16-7325), is recommended.

Applications Tested

The Functional Grade Purified TN3-19.12 antibody has been tested by LAL assay to verify low endotoxin level and has been tested for neutralization of TNF alpha bioactivity and for ELISA capture.

The TN3-19.12 antibody at 0.150 ug/mL has been found to inhibit by 50% the biological effects of 1.0 ng/ml mouse TNF alpha in an assay of cytotoxicity of L929 cells. Detailed information and protocols about cytokine bioassays and in vitro cytokine neutralization using antibodies can be found in the BestProtocols® section.

The TN3-19.12 antibody has been tested as the capture antibody in a sandwich ELISA for analysis of mouse or rat TNF alpha in combination with the biotinylated anti-mouse/rat TNF alpha polyclonal antibody (13-7341) for detection and recombinant mouse TNF α (14-8321) or rat TNF- α as the standard. [For a rat TNF alpha ELISA standard, please consult eBioscience Technical Support. Product 14-8320 is a bioactive protein, but is not recommended for rat TNF alpha ELISA.] A suitable range of concentrations of this antibody for ELISA capture is 1-4 μ g/mL. A standard curve consisting of doubling dilutions of the recombinant standard over the range of 2000 pg/mL- 15 pg/mL (mouse TNF-a) or 5000 – 30 pg/mL (rat TNF-a) should be included in each ELISA plate. Recognition of mouse TNF a by this assay is not interfered with by 1000x excess soluble TNF alpha receptor type I or II. The Functional Grade purified TN3-19.12 antibody has been tested for neutralization of TNF alpha bioactivity.

References

Sheehan KC, Ruddle NH, Schreiber RD. 1989. Generation and characterization of hamster monoclonal antibodies that neutralize murine tumor necrosis factors. *J Immunol.* 142: 3884-93.

Rabinovici R, Bugelski PJ, Esser KM, Hillegass LM, Griswold DE, Vernick J, Feuerstein G. 1993. Tumor necrosis factor-alpha mediates endotoxin-induced lung injury in platelet activating factor-primed rats. *Macol Exp Ther.* 267: 1550-57.

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Merrick BA, He CY, Craig WA, Clark GC, Corsini E, Rosenthal GJ, Mansfield BK, Selkirk JK. 1992. Two dimensional gel electrophoresis of cellular and secreted proteins from rat alveolar macrophages after lipopolysaccharide treatment. *Appl Theor Electrophor.* 2: 177-87.

Takahashi S, Kapas L, Fang J, Krueger JM. 1995. An anti-tumor necrosis factor antibody suppresses sleep in rats and rabbits. *Brain Res.* 690: 241-44.

Finkelman, F., S. Morris, T. Orekhova, and D. Sehy. 2003. The In Vivo Cytokine Capture Assay for measurement of cytokine production in the mouse. In *Current Protocols in Immunology*. Unit 6.28. J. Coligan, A. Kruisbeek, D. Margulies, E. Shevach, and W. Strober, eds. John Wiley and Sons, New York.

Finkelman, F.D., and S.C. Morris. 1999. Development of an assay to measure in vivo cytokine production in the mouse. *Int. Immunology.* 11: 1811-1818.

Related Products

14-8320 Rat TNF alpha Recombinant Protein

14-8321 Mouse TNF alpha Recombinant Protein

16-4888 Armenian Hamster IgG Isotype Control Functional Grade Purified (eBio299Arm)