

TNF-alpha / TNFA Neutralizing Antibody

Catalog Number: 10602-R10N1



Sino Biological
Biological Solution Specialist

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General Information	
Immunogen:	Recombinant Human TNF-alpha / TNFA protein (Catalog#10602-HNAE)
Clone ID:	R101
Ig Type:	Rabbit IgG
Applications:	Neutralization,FCM
Specificity:	Human TNF-alpha / TNFA
Formulation:	0.2 µm filtered solution in PBS
Storage:	< -20°C

Preparation

This antibody was obtained from a rabbit immunized with purified, recombinant Human TNF-alpha / TNFA (rHuman TNF-alpha / TNFA; Catalog#10602-HNAE; NP_000585.2; Val77-Leu233) and was produced using recombinant antibody technology.

Specificity

Human TNF-alpha / TNFA

Has cross-reactivity with Cynomolgus TNFa (Catalog#90330-CNAE)/Canine TNFA Catalog#(70003-DNAE) and Ferret TNFa (Catalog#60002-FNAE)

No cross-reactivity with Mouse TNFa (Catalog#50349-MNAE) and Rat TNFa (Catalog#80045-RNAE) in ELISA assay

Storage

This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. **Preservative-Free.**

Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. **Avoid repeated freeze-thaw cycles.**

Background

Tumor necrosis factor alpha (TNF-alpha), also known as TNF, TNFA or TNFSF2, is the prototypic cytokine of the TNF superfamily, and is a multifunctional molecule involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. Two receptors, TNF-R1 (TNF receptor type 1; CD120a; p55/60) and TNF-R2 (TNF receptor type 2; CD120b; p75/80), bind to TNF-alpha. TNF-alpha protein is produced mainly by macrophages, and large amounts of this cytokine are released in response to lipopolysaccharide, other bacterial products, and Interleukin-1 (IL-1). TNF-alpha is involved in fighting against the tumorigenesis, thus, is regarded as a molecular insight in cancer treatment.

Reference

Hector J, et al. (2007) TNF-alpha alters visfatin and adiponectin levels in human fat. *Horm Metab Res.* 39 (4): 250-5.

Berthold-Losleben M, et al. (2008) The TNF-alpha System: Functional Aspects in Depression, Narcolepsy and Psychopharmacology. *Curr Neuropharmacol.* 6 (3): 193-202.

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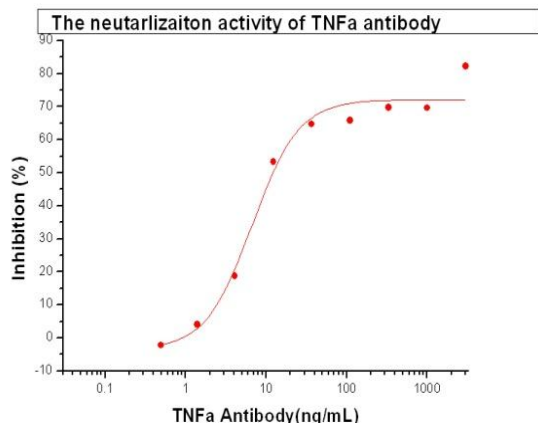
Applications

Block

In a functional ELISA which immobilized recombinant Human TNFR1 (Catalog# 10872-H08H) at 1 µg/mL (100 µL/well) in the plate, the Rabbit Anti-Human TNFα Monoclonal Antibody (Catalog# 10602-R10N1) can block the binding of 0.2 µg/mL of biotinylated Human TNFα (Catalog# 10602-HNAE-B) to human TNFR1, the EC50 is 1.25 µg/mL;

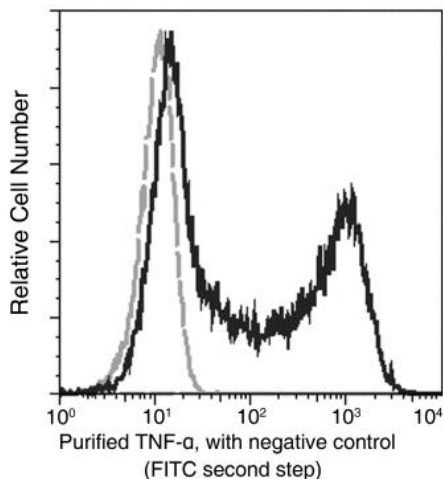
In a functional ELISA which immobilized recombinant Human TNFR2 (Catalog# 10417-H08H) at 2 µg/mL (100 µL/well) in the plate, the Rabbit Anti-Human TNFα Monoclonal Antibody (Catalog# 10602-R10N1) can block the binding of 0.2 µg/mL of biotinylated Human TNFα (Catalog# 10602-HNAE-B) to human TNFR2, the EC50 is 1.26 µg/mL.

Neutralization - The neutralization activity of antibody is measured by its ability to neutralize TNFα induced cytotoxicity in the L-929 mouse fibroblast cell line. The Neutralization titer (IC50) is typically 13.5-54 ng/mL in the presence of 0.25 ng/mL Recombinant Human TNFα and 1 µg/mL actinomycin D.



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FCM: 0.5-2 µg/Test



Flow cytometric analysis of Human TNF-α expression on human peripheral blood lymphocytes. Human peripheral blood mononuclear cells were stimulated for 4-6 hours with PMA and ionomycin in the presence of GolgiPlug. The cells were treated according to manufacturer's manual (BD Pharmingen™ Cat. No. 554714), stained with purified anti-Human TNF-α, then a FITC-conjugated second step antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes.

Flow cytometry was performed on a BD FACSCalibur flow cytometry system. Please refer to www.sinobiological.com/Flow-Cytometry-FACS-Protocols-a-750.html for technical protocols.