Mouse TNF-α Antibody

Monoclonal Hamster IgG Clone # TN3-19.12
Catalog Number: MAB410

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects recombinant mouse (rm)TNF-α in direct ELISAs and Western blots. Shows 50% cross-reactivity with rrTNF-α and no cross-reactivity with 17 other tested proteins.
Source	Monoclonal Hamster IgG Clone # TN3-19.12
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant mouse TNF-α
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

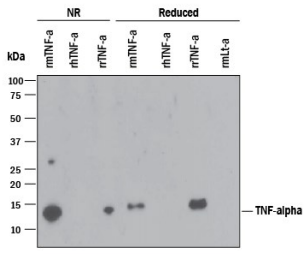
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below

DATA

Western Blot



Detection of Recombinant Mouse, and Rat TNF-α by Western Blot. Western blot shows 25 ng of Recombinant Mouse TNF-α aa 80-235 (Catalog # 410-MT), Recombinant Human TNF-α (Catalog # 210-TA), Recombinant Rat TNF-α (Catalog # 510-RT) and Recombinant Mouse Lymphotoxin-α/TNF- β. PVDF Membrane was probed with 1 µg/mL of Hamster Anti-Mouse TNF-α Monoclonal Antibody (Catalog # MAB410) followed by HRP-conjugated Anti-Hamster IgG Secondary Antibody. A specific band was detected for TNF-α at approximately 15 kDa (as indicated). This experiment was conducted under reducing and non reducing conditions using Immunoblot Buffer Group 3.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Tumor necrosis factor alpha (TNF-alpha, TNF- α, TNFA), also known as Cachectin and TNFSF2, is the prototypic ligand of the TNF superfamily. It is a pleiotropic molecule that plays a central role in inflammation, immune system development, apoptosis, and lipid metabolism. TNF-alpha is produced by several lymphoid cells as well as by astrocytes, endothelial cells, and smooth muscle cells. Mouse TNF-alpha consists of a 35 amino acid (aa) cytoplasmic domain, a 21 aa transmembrane segment, and a 179 aa extracellular domain (ECD). Within the ECD, mouse TNF-alpha shares 94% aa sequence identity with rat and 70%-77% with bovine, canine, cotton rat, equine, feline, human, porcine, and rhesus TNF-alpha. TNF-alpha is produced by a wide variety of immune, epithelial, endothelial, and tumor cells. TNF-alpha is assembled intracellularly to form a noncovalently linked homotrimer which is expressed on the cell surface. Cell surface TNF-alpha can induce the lysis of neighboring tumor cells and virus infected cells, and it can generate its own downstream cell signaling following ligation by soluble TNFR I. Shedding of membrane bound TNF-alpha by TACE/ADAM17 releases the bioactive cytokine, a 55 kDa molecular weight soluble trimer of the TNF-alpha extracellular domain. TNF-alpha binds the ubiquitous 55-60 kDa TNF RI and the hematopoietic cell-restricted 80 kDa TNF RII, both of which are also expressed as homotrimers present on virtually all cell types. Both type I and type II receptors bind TNF-alpha with comparable affinity, although only TNF RI contains a cytoplasmic death domain which triggers the activation of apoptosis. Soluble forms of both types of receptors are released and can neutralize the biological activity of TNF-alpha.

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