

Human TNF- α Membrane Form PE-conjugated Antibody

Monoclonal Mouse IgG₁ Clone # 6401

Catalog Number: FAB210P

50 Tests, 25 Tests

DESCRIPTION

Species Reactivity	Human
Specificity	Detects cell surface expressed TNF- α (membrane and receptor bound forms) by flow cytometry. Detects human TNF- α in direct ELISAs and Western blots. In direct ELISAs, approximately 25-50% cross-reactivity with recombinant porcine TNF- α and recombinant rhesus macaque TNF- α is observed but no cross-reactivity with recombinant cotton rat TNF- α , recombinant rat TNF- α , recombinant human (rh) LT α 1/ β 2, rhLT α 2/ β 1, rhAPRIL, rhBAFF, rhEDA-A2, recombinant mouse EDA, rhFas Ligand, rhLIGHT, rhOX40 Ligand, rhTRAIL, rhTRANCE, rhTWEAK, or rhVEG1 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 6401
Purification	Protein A or G purified from ascites
Immunogen	<i>E. coli</i> -derived recombinant human TNF- α Gly57-Leu233 (predicted) Accession # P01375
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

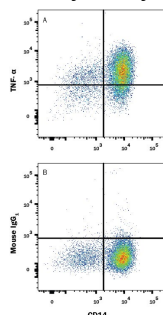
APPLICATIONS

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
Flow Cytometry	10 μ L/10 ⁶ cells	See Below

DATA

Flow Cytometry



Detection of TNF- α in Human PBMC Monocytes by Flow Cytometry. Human PBMCs were treated with 1 μ g/ml LPS for 4 hours then stained with (A) Mouse Anti-Human TNF- α Membrane Form PE-conjugated Monoclonal Antibody (Catalog # FAB210P) or (B) isotype control antibody (Catalog # IC002P) followed by Mouse anti-Human CD14 APC-conjugated Monoclonal Antibody (Catalog # FAB3832A). Staining was performed using our Staining Membrane-associated Proteins protocol.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

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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- is produced by several lymphoid cells as well as by astrocytes, endothelial cells, and smooth muscle cells. Human TNF-alpha consists of a 35 amino acid (aa) cytoplasmic domain, a 21 aa transmembrane segment, and a 177 aa extracellular domain (ECD). Within the ECD, human TNF-alpha shares 97% aa sequence identity with rhesus and 71%-92% with bovine, canine, cotton rat, equine, feline, mouse, porcine, and rat 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.