

PE/Fire™ 744 anti-human TNF-α Antibody

Catalog# / Size	376221 / 25 tests 376222 / 100 tests
Clone	W19063E
Regulatory Status	RUO
Other Names	Tumor necrosis factor-α, Cachectin, Necrosin, Macrophage cytotoxic factor (MCF), Differentiation inducing factor (DIF), TNFSF2
Isotype	Rat IgG1, κ
Description	TNF-α is secreted by macrophages, monocytes, neutrophils, T cells (principally CD4+), and NK cells. Many transformed cell lines also secrete TNF-α. Monomeric human TNF-α is a 157 amino acid protein (non-glycosylated) with a reported molecular weight of 17 kD. TNF-α forms multimeric complexes; stable trimers are most common in solution. A 26 kD membrane form of TNF-α has also been described. TNF-α binding to surface receptors elicits a wide array of biological activities including: cytolysis and cytostasis of many tumor cell lines in vitro, hemorrhagic necrosis of tumors in vivo, increased fibroblast proliferation, and enhanced chemotaxis and phagocytosis in neutrophils.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Rat
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PE/Fire™ 744 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	ICFC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µL per million cells in 100 µL staining volume or 5 µL per 100 µL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. True-Stain Monocyte Blocker™ (Cat No. 426102) is recommended to minimize non-specific staining of PE/Fire™ 744 on monocytes and macrophages. * PE/Fire™ 744 has a maximum excitation of 565 nm and a maximum emission of 744 nm.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
RRID	AB_3720504 (BioLegend Cat. No. 376221) AB_3720504 (BioLegend Cat. No. 376222)

Antigen Details

Structure	TNF superfamily; dimer/trimer; 17 kD (Mammalian)
Distribution	Activated monocytes, neutrophils, macrophages, T cells, B cells, NK cells, LAK cells
Function	Type II integral membrane protein processed by TACE for secretion; upregulated by interferons, IL-2, GM-CSF, substance P, bradykinin, PAF, immune complexes, cyclooxygenase; downregulated by IL-6, TGF- β , vitamin D3, prostaglandin E2, PAF antagonists
Interaction	Monocytes, neutrophils, macrophages, T cells, fibroblasts, endothelial cells, osteoclasts, adipocytes, astroglia, microglia
Ligand/Receptor	TNFRSF1A (TNF-R1, CD120a, TNFR-p60 Type β , p55); TNFRSF1B (TNF-R2, CD120b, TNFR-p80 Type A, p75)
Cell Type	B cells, Granulocytes, Lymphocytes, Macrophages, Monocytes, NK cells, NKT cells, T cells, Th1, Th17
Biology Area	Adaptive Immunity, Cell Death, Immunology, Innate Immunity
Molecular Family	Cytokines/Chemokines
Antigen References	1. Volova L.T, <i>et al.</i> 2020. <i>Biomolecules</i>. 10:1563. 2. Szondy Z, <i>et al.</i> 2017. <i>Pharmacological Research</i>. 115:124-132.
Gene ID	7124

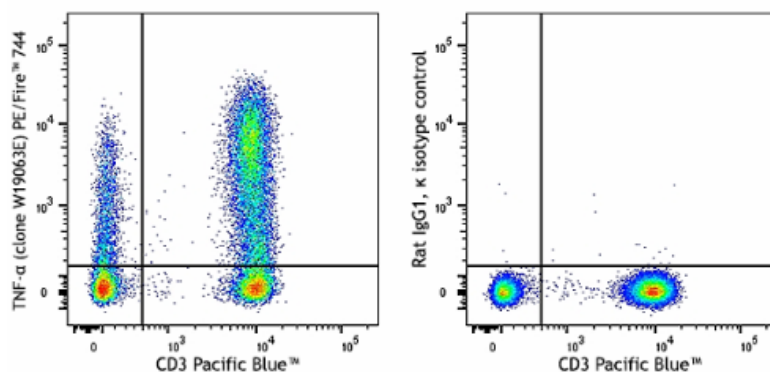
Related Protocols

- [Intracellular Flow Cytometry Staining Protocol](#)

Other Formats

Spark Blue™ 515 anti-human TNF- α , Spark UV™ 387 anti-human TNF- α , PE anti-human TNF- α , APC anti-human TNF- α , FITC anti-human TNF- α , Brilliant Violet 650™ anti-human TNF- α , PerCP/Fire™ 806 anti-human TNF- α , PE/Fire™ 744 anti-human TNF- α , PE/Cyanine7 anti-human TNF- α , Purified anti-human TNF- α , Brilliant Violet 421™ anti-human TNF- α

Product Data



PMA+ionomycin with Brefeldin A stimulated (4 hours) human peripheral blood lymphocytes were surface stained with anti-human CD3 (clone UCHT1) Pacific Blue™. Cells were then fixed with Fixation Buffer (Cat. No. 420801), permeabilized with Permeabilization Wash Buffer (Cat. No. 421002) and intracellularly stained with anti-human TNF- α (clone W19063E) PE/Fire™ 744 (left) or rat IgG1, κ PE/Fire™ 744 isotype control (right).

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