

# TNF-alpha Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO1134a

## Product Information

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<b>Application</b>	WB, E
<b>Primary Accession</b>	<a href="#">P01375</a>
<b>Reactivity</b>	Human
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clone Names</b>	2A9B9
<b>Isotype</b>	IgG1
<b>Calculated MW</b>	25644
<b>Description</b>	TNF-alpha (tumor necrosis factor alpha) is an important cytokine produced by numerous cell types including neutrophils, activated lymphocytes, macrophages and NK cells. It plays a critical role in inflammatory responses and in apoptosis. TNF-alpha is believed to mediate pathogenic shock and tissue injury associated with endotoxemia. TNF-alpha exists as a multimer of two, three, or five non covalently linked units, but shows a single 17 kDa band following SDS PAGE under non reducing conditions. Although it has little effect on many cultured normal human cells, TNF-alpha appears to be directly toxic to vascular endothelial cells. Other actions of TNF-alpha include stimulating growth of human fibroblasts and other cell lines, activating polymorphonuclear neutrophils and osteoclasts, and induction of interleukin 1, prostaglandin E2 and collagenase production. TNF-alpha is currently being evaluated in treatment of certain cancers and AIDS Related Complex.
<b>Immunogen</b>	Recombinant Human TNF-alpha (BioSource company, Cat.No. PHC3013)
<b>Formulation</b>	Purified antibody in PBS containing 0.03% sodium azide.

## Additional Information

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<b>Gene ID</b>	7124
<b>Other Names</b>	Tumor necrosis factor, Cachectin, TNF-alpha, Tumor necrosis factor ligand superfamily member 2, TNF-a, Tumor necrosis factor, membrane form, N-terminal fragment, NTF, Intracellular domain 1, ICD1, Intracellular domain 2, ICD2, C-domain 1, C-domain 2, Tumor necrosis factor, soluble form, TNF, TNFA, TNFSF2
<b>Dilution</b>	WB~~1/500 - 1/2000 E~~N/A
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	TNF-alpha Antibody is for research use only and not for use in diagnostic or

therapeutic procedures.

## Protein Information

<b>Name</b>	TNF
<b>Synonyms</b>	TNFA, TNFSF2
<b>Function</b>	Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct action or by stimulation of interleukin-1 secretion and is implicated in the induction of cachexia, Under certain conditions it can stimulate cell proliferation and induce cell differentiation. Impairs regulatory T- cells (Treg) function in individuals with rheumatoid arthritis via FOXP3 dephosphorylation. Up-regulates the expression of protein phosphatase 1 (PP1), which dephosphorylates the key 'Ser-418' residue of FOXP3, thereby inactivating FOXP3 and rendering Treg cells functionally defective (PubMed: <a href="#">23396208</a> ). Key mediator of cell death in the anticancer action of BCG-stimulated neutrophils in combination with DIABLO/SMAC mimetic in the RT4v6 bladder cancer cell line (PubMed: <a href="#">16829952</a> , PubMed: <a href="#">22517918</a> , PubMed: <a href="#">23396208</a> ). Induces insulin resistance in adipocytes via inhibition of insulin-induced IRS1 tyrosine phosphorylation and insulin-induced glucose uptake. Induces GKAP42 protein degradation in adipocytes which is partially responsible for TNF-induced insulin resistance (By similarity). Plays a role in angiogenesis by inducing VEGF production synergistically with IL1B and IL6 (PubMed: <a href="#">12794819</a> ). Promotes osteoclastogenesis and therefore mediates bone resorption (By similarity).
<b>Cellular Location</b>	Cell membrane; Single-pass type II membrane protein [Tumor necrosis factor, soluble form]; Secreted [C-domain 2]; Secreted.

## References

1. Knowlton KU. Yajima T. J Am Coll Cardiol. 2004,Sep 15, 44(6):1298-300. 2. Reynolds JL. Ignatowski TA. Gallant S.et al. Brain Res. 2004,Oct 8, 1023(1):112-20. 3. Dulak J. Tomala K. Loboda A. et al. Life Sci. 2004,Oct 8, 75(21):2573-86.

## Images

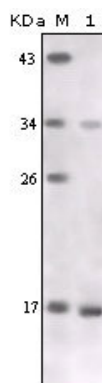


Figure 1: Western blot analysis using TNF-alpha mouse mAb against TNF-alpha recombinant protein.