



Goat Anti-Rat TNF- α Polyclonal Antibody (CABT-Z183R)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Low endotoxin azide free antibody.
Specificity	Detects rat TNF- α in direct ELISAs and Western blots. In Western blots, approximately 25% cross-reactivity with recombinant porcine TNF- α is observed and less than 1% cross-reactivity with recombinant human (rh) TNF- β , rhTNF sRI, and rhTNF sRII is observed. In direct ELISAs, approximately 40% cross-reactivity with recombinant canine TNF- α , recombinant feline TNF- α , and recombinant rhesus macaque TNF- α is observed. Neutralizes the biological activity of rat TNF- α . This antibody will also neutralize the biological activity of murine TNF- α , but weak neutralization of rhTNF- α and no neutralization of rhTNF- β was observed.
Immunogen	E. coli-derived recombinant rat TNF- α (aa80-235). Accession # P16599
Isotype	IgG
Source/Host	Goat
Species Reactivity	Rat
Purification	Antigen Affinity-purified
Conjugate	Unconjugated
Applications	WB, ICC, Neut Recommended concentration: WB: 0.1 μ g/mL ICC: 5-15 μ g/mL

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Format	Lyophilized
Size	100 µg
Buffer	PBS with Trehalose. Endotoxin Level<0.10 EU per 1 µg of the antibody by the LAL method.
Preservative	None
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.
Ship	Wet ice

BACKGROUND

Introduction	<p>Tumor Necrosis Factor Alpha (TNF-alpha) 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, apoptosis, and immune system development. TNF-alpha is produced by a wide variety of immune and epithelial cell types. Rat 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, rat TNF-alpha shares 94% aa sequence identity with mouse and 69% - 76% with bovine, canine, cotton rat, equine, feline, human, porcine, and rhesus TNF-alpha. The 26 kDa type 2 transmembrane protein is assembled intracellularly to form a noncovalently linked homotrimer. Ligation of this complex induces reverse signaling that promotes lymphocyte co-stimulation but diminishes monocyte responsiveness. Cleavage of membrane bound TNF-alpha by TACE/ADAM17 releases a 55 kDa soluble trimeric form of TNF-alpha. TNF-alpha trimers bind the ubiquitous TNF RI and the hematopoietic cell-restricted TNF RII, both of which are also expressed as homotrimers. TNF-alpha regulates lymphoid tissue development through control of apoptosis. It also promotes inflammatory responses by inducing the activation of vascular endothelial cells and macrophages. TNF-alpha is a key cytokine in the development of several inflammatory disorders. It contributes to the development of type 2 diabetes through its effects on insulin resistance and fatty acid metabolism.</p>
Keywords	<p>APC1 protein;Cachectin;Cachetin;DIF;TNF;TNF, monocyte-derived;TNFA;TNF-A;TNFalpha;TNF-alpha;TNF-alphacachectin;TNFATNF, macrophage-derived;TNFG1F;TNFSF1A;TNFSF2;TNFSF2TNF superfamily, member 2;tumor necrosis factor (TNF superfamily, member 2);tumor necrosis factor alpha;Tumor necrosis factor ligand superfamily member 2;tumor necrosis factor;tumor necrosis factor-alpha</p>

GENE INFORMATION

Gene Name	Tnf
Entrez Gene ID	24835
UniProt ID	P16599