Active Recombinant Human Runt-related Transcription Factor 3, His-tagged

Cat. No. RUNX3-2500H **Lot. No.** (See product label)

SPECIFICATION

Species	Human
Source	Yeast
Description	Tumor necrosis factor is a cytokine involved in systemic inflammation and is a member of a group of cytokines that all stimulate the acute phase reaction. TNF is mainly secreted by macrophages.TNF causes apoptotic cell death, cellular proliferation, differentiation, inflammation, tumorigenesis and viral replication, TNF is also involved in lipid metabolism, and coagulation. TNF"s primary role is in the regulation of immune cells. Dysregulation and, in particular, overproduction of TNF have been implicated in a variety of human diseases-autoimmune diseases, insulin resistance, and cancer.
Biochem/physiol Actions	Tumor necrosis factor-α, also known as cachectin, is expressed as a 26 kDa membrane bound protein and is then cleaved by TNF-α converting enzyme (TACE) to release the soluble 17 kDa monomer, which forms homotrimers in circulation. TNF-α plays roles in antitumor activity, immune modulation, inflammation, anorexia, cachexia, septic shock, viral replication and hematopoiesis. TNF-α is expressed by a great variety of cells, with numerous inductive and suppressive agents. Primarily, TNF-α is produced by macrophages in response to immunological challenges such as bacteria (lipopolysaccharides), viruses, parasites, mitogens and other cytokines. TNF-α is cytotoxic for many transformed cells (its namesake activity) but in normal diploid cells, it can stimulate proliferation (fibroblasts), differentiation (myeloid cells) or

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	activation (neutrophils). TNF-α also shows antiviral effects against both DNA and RNA viruses and it induces production of several other cytokines. Although TNF-α is used in clinical trials as an antitumor agent, TNF-α and the related molecule TNF-β (LT-α) share close structural homology with 28% amino acid sequence identity and both activate the same TNF receptors, TNFR1 and TNFR2. Mouse and human TNF-α share 79% amino acid sequence identity. Unlike human TNF-α, the mouse form is glycosylated.
Physical Form	Solution in phosphate buffered saline containing 1 mg/ml bovine serum albumin.
Assay	≥95% (SDS-PAGE).
Form	buffered aqueous solution.
Activity	≥2 × 107 units/mg.
Mol Wt	mol wt ~17.4 kDa.
Total Impurities	endotoxin, tested.
Suitability	cell culture tested.
Storage Temp	−20°C.
Pathways	Adipocytokine signaling pathway; Allograft rejection; Alzheimer"s disease; Alzheimer"s disease; Amyotrophic lateral sclerosis (ALS); Apoptosis; Asthma; Cytokine-cytokine receptor interaction; Fc epsilon RI signaling pathway; Graft-versus-host disease; Hypertrophic cardiomyopathy (HCM); Hematopoietic cell lineage; MAPK signaling pathway; Natural killer cell mediated cytotoxicity; RIG-I-like receptor signaling pathway; Systemic lupus erythematosus; T cell receptor signaling pathway;

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	TGF-beta signaling pathway; Toll-like receptor signaling pathway; Type I diabetes mellitus; Type II diabetes mellitus; Apoptosis; Hematopoietic cell lineage

GENE INFORMATION

Gene Name	TNF tumor necrosis factor (TNF superfamily, member 2) [Homo sapiens]
Synonyms	TNF; tumor necrosis factor (TNF superfamily, member 2); DIF; TNFA; TNFSF2; TNF-alpha; Tumor necrosis factor; Tumor necrosis factor ligand; TNF-a; Cachectin; Tumor necrosis factor, membrane form; Tumor necrosis factor, soluble form; superfamily member 2; OTTHUMP00000029281; OTTHUMP00000037669; cachectin; APC1 protein; TNF superfamily, member 2; TNF, macrophage-derived; TNF, monocyte-derived; Tumor necrosis factor ligand superfamily member 2; tumor necrosis factor (TNF superfamily, member 2); tumor necrosis factor alpha
Gene ID	7124
mRNA Refseq	NM_000594
Protein Refseq	NP_000585
MIM	91160
UniProt ID	P01375
Chromosome Location	6p21.3
Function	cytokine activity; identical protein binding; tumor necrosis factor receptor binding

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA