

# Recombinant bovine TNF-alpha protein

Catalog Number: ATGP4076

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

78-234aa

### UniProt No.

Q06599

### NCBI Accession No.

NP\_776391

### Alternative Names

Tumor necrosis factor, Cachectin, TNF-alpha, Tumor necrosis factor ligand superfamily member 2, TNFSF2, TNF-a, TNFA, TNF

## PRODUCT SPECIFICATION

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### Molecular Weight

17.5 kDa (158aa) confirmed by MALDI-TOF

### Concentration

1mg/ml (determined by Bradford assay)

### Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

### Purity

> 90% by SDS-PAGE

### Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

### Biological Activity

Measured in a cytotoxicity assay using L-929 mouse fibroblast cells in the presence of the metabolic inhibitor actinomycin D. The ED50 range  $\leq$  15ng/ml.

### Tag

Non-Tagged

### Application

SDS-PAGE, Bioactivity

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

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## BACKGROUND

### Description

TNF-alpha, also known as tumor necrosis factor, 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. This protein is produced by a wide variety of immune and epithelial cell types. It is assembled intracellularly to form a noncovalently linked homotrimer which is expressed on the cell surface. Cell surface TNF 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. It also promotes inflammatory responses by inducing the activation of vascular endothelial cells and macrophages. Recombinant Bovine TNF-alpha was expressed in E. coli and purified by using conventional chromatography techniques.

### Amino acid Sequence

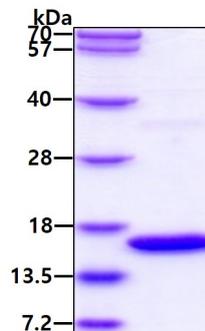
MLRSSSQASS NKPVAHVVD INSPGQLRWW DSYANALMAN GVKLEDNQLV VPADGLYLIY SQVLFRGQGC PSTPLFLTHT  
ISRIAVSYQT KVNILSAIKS PCHRETPEWA EAKPWYEPIY QGGVFQLEKG DRLSAEINLP DYLDYAESGQ VYFGIIAL

### General References

Bojarojc-Nosowicz B., et al (2015). Pol J Vet Sci. 18(3): 533-9.  
Lendez PA., et al (2015). Arch Virol. 160(8): 2001-7.

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain

### Biological Activity

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Bovine TNF-alpha induces cell cytotoxicity in the L-929 mouse fibroblast cells in the presence of the metabolic inhibitor actinomycin D.

