Catalog No. LF-P0079

ACTIVE PROTEIN

Tumor Necrosis Factor - α

Background : Tumor necrosis factor-α (TNF-α) is a pleiotropic pro-inflammatory cytokine produced mainly by activated macrophages and in smaller amounts by several other types of cell. TNF-α has been isolated and characterized from a large number of mammals and fish species. TNF-α is expressed in two different forms: a soluble. Mature 17kDa form and a transmembrane 26kDa form. TNF-α interacts with two distinct cell-surface receptors : Tumor necrosis factor receptor 1(TNFR1) and TNFR2. these mediate the cellular actions. The actions of TNF-α are diverse and profound involving inflammation, apoptosis, cell proliferation and the stimulation of various aspects within the immune system. TNF-α is increasingly recognized as a key regulator of lipid metabolism in adipose tissue and protein catabolism in muscle and in disease states such as cancer, Acquired Immune Deficiency Syndrome (AIDS) and obesity-related insulin resistance.

Purity : >98%, as determined by SDS-PAGE

Source : Purified from *E.coli* expressing the human TNF-α protein sequence (77-234 amino acid)

Concentration : 1.0 mg/ml

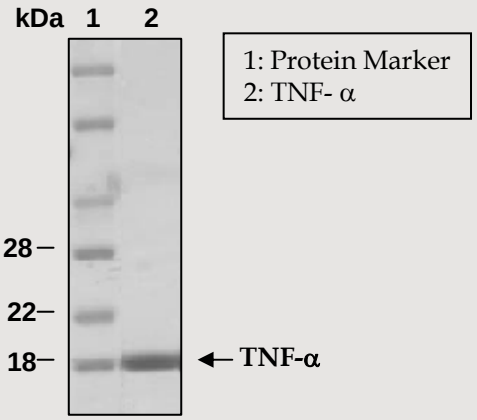
Packaging size : 20 μg

Molecular Weight : 17.5 kDa

Endotoxin level : < 0.05 EU/μg

Biological activity : The ED50 as determined by the cytolysis of murine L929 cells in the presense of actinomycin D is <0.02ng/ml

Storage : TNF- α is supplied with a vial of storage buffer (20mM Tris-Cl, pH 8.0/1mM EDTA). Store at -80°C.



Background Reference:

(1) Wen-Xing Ding et al (2004) *J.Cell. Mol. Med* **8**(4);445-454
(2) Sudhir Gupta (2002) *Journal of Clinical Immunology* **22**(4);185-194
(3) Frederick W. goetz et al (2004) *Developmental and comparative Immunology* **28**;487-497
(4) Havell, E.A. (1987) *J. Immunol*. **39**:4225-4231

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