

## Recombinant Mouse TNF- $\alpha$ (carrier-free)

**Catalog # / Size:** 575202 / 10  $\mu$ g  
575204 / 25  $\mu$ g  
575206 / 100  $\mu$ g  
575208 / 500  $\mu$ g

**Source:** Mouse TNF- $\alpha$ , amino acids Leu80-Leu235 (Accession # NM\_013693), was expressed in *E. coli*.

**Molecular Mass:** The 156 amino acid recombinant protein has a predicted molecular mass of 17,257 Da. The DTT-reduced and non-reduced protein migrate at approximately 16 kD by SDS-PAGE. The N-terminal amino acid is Leu.

**Purity:** Purity is >98%, as determined by Coomassie stained SDS-PAGE.

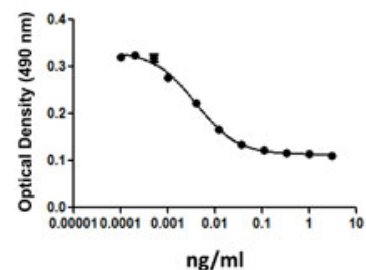
**Endotoxin Level:** Endotoxin level is <0.1 EU/ $\mu$ g (<0.01ng/ $\mu$ g) protein as determined by the LAL method.

**Activity:** The ED<sub>50</sub> is 0.010-0.020 ng/ml, corresponding to a specific activity of 5-10 X10<sup>7</sup> units/mg, as determined by a dose dependent stimulation of L929 cells treated with actinomycin D.

**Preparation:** 10-100 $\mu$ g sizes are bottled at 200 $\mu$ g/ml. 500 $\mu$ g and larger sizes are bottled at the concentration indicated on the vial.

**Formulation:** 0.22  $\mu$ m filtered protein solution is in 10mM NaH<sub>2</sub>PO<sub>4</sub>, 150mM NaCl, pH 7.2.

**Storage:** Unopened vial can be stored at 4°C for three months, at -20°C for six months, or at -70°C for one year. For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10 $\mu$ g/mL in buffer containing carrier protein such as 1% BSA or HSA or 10% FBS. For long term storage, aliquot into polypropylene vials and store in a manual defrost freezer. **Avoid repeated freeze/thaw cycles.**



Cytotoxic effect on L929 mouse fibroblast cells induced by mouse TNF- $\alpha$  in the presence of actinomycin D.

## Applications:

**Applications:** Bioassay

**Recommended Usage:** Use when high specific biological activity is required.

**Application References:**

- Alcaide P, *et al.* 2012. *J. Immunol.* 188:1421. PubMed
- Azcutia V, *et al.* 2012. *J. Immunol.* 189:2553. PubMed
- Theiss AL, *et al.* 2009. *Mol. Biol. Cell.* 20:4412. PubMed

**Description:** TNF- $\alpha$  is secreted by macrophages, monocytes, neutrophils, T-cells (principally CD4<sup>+</sup>), and NK-cells. Many transformed cell lines also secrete TNF- $\alpha$ . TNF- $\alpha$  forms multimeric complexes; stable trimers are most common in solution. A 26 kD membrane form of TNF- $\alpha$  has also been described. TNF- $\alpha$  binding to surface receptors elicits a wide array of biologic activities including: cytolysis and cytostasis of many tumor cell lines *in vitro*, hemorrhagic necrosis of tumors *in vivo*, increased fibroblast proliferation, and enhanced chemotaxis and phagocytosis in neutrophils.



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