

Recombinant Human TNF- α (carrier-free)

Catalog # / Size: 570102 / 10 μ g
570104 / 50 μ g
570106 / 100 μ g
570108 / 500 μ g

Source: Human TNF- α , amino acids Val77-Leu233 (Accession# NM_000594), was expressed in *E. coli*.

Molecular Mass: The 157 amino acid recombinant protein has a predicted molecular mass of 17,352 Da. The DTT-reduced protein and non-reduced protein migrate at approximately 16kDa by SDS-PAGE. The N-terminal amino acid is Val.

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

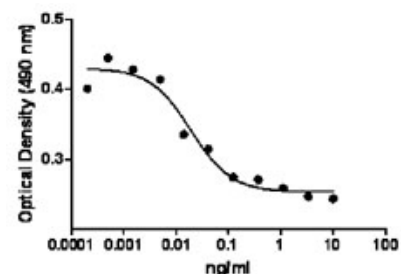
Endotoxin Level: Endotoxin level is <0.1 EU/ μ g (<0.01ng/ μ g) protein as determined by the LAL method.

Activity: The ED₅₀ is 0.020-0.050 ng/ml, corresponding to a specific activity of 5-2 X10⁷ units/mg, as determined by a dose dependent stimulation of L929 cells treated with actinomycin D.

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

Formulation: 0.22 μ m filtered protein solution is in 10mM NaH₂PO₄, 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 μ 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.**



Human TNF- α cytotoxicity on L929 cells.

Applications:

Applications: Bioassay

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

Application References: 1. Chen AR, *et al.* 1985. *J. Immunol.* 135:3978.

Description: TNF- α is released from macrophages, monocytes, neutrophils, T-cells (principally CD4⁺), NK-cells and many transformed cell lines. Soluble homotrimeric TNF- α is released from cells by proteolysis of the integral membrane precursor form of TNF- α . TNF- α binding to some TNF- α receptors induces apoptosis and depending on cell type, receptor expression, and signal transduction status can induce other responses. TNF- α is involved in the inflammatory response.

Antigen References: 1. Fitzgerald K, *et al.* Eds. 2001. *The Cytokine FactsBook*. Academic Press San Diego.
2. Beutler B, *et al.* 1988. *Annu. Rev. Biochem.* 57:505.
3. Beutler B, *et al.* 1989. *Annu. Rev. Immunol.* 7:625.
4. Tracey K, *et al.* 1993. *Crit. Care Med.* 21:S415.



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