

## 32-190047: TNF-alpha, Soluble (human) (Recombinant)

**Application :** Functional Assay  
**Reactivity :** Human  
**Alternative Name :** Tumor Necrosis Factor Ligand Superfamily Member 2; Cachectin

### Description

A FLAG®-tag is fused at the N-terminus of human TNF-alpha (aa 85-223). Specific Binds to human and mouse TNF-R1. Tumor necrosis factor (TNF, cachexin or cachectin and formerly known as tumor necrosis factor-alpha) is a cytokine involved in systemic inflammation and is a member of a group of cytokines that stimulate the acute phase reaction. The receptor TNF-R1 is activated by both the membrane-bound and soluble trimeric forms of TNF-alpha, whereas the receptor TNF-R2 only responds to the membrane-bound form of TNF-alpha (Multimeric TNF-alpha (32-190048)). Since the Multimeric TNF-alpha mimics the membrane-bound form (forms oligomers higher than trimer), it is the only TNF-alpha protein that can activate the TNF-R2. For TNF-R1 activation, either "normal" TNF-alpha or Multimeric TNF-alpha can be used.

### Product Info

**Amount :** 50 µg / 10 µg  
**Purification :** ≥95% (SDS-PAGE)  
10 µg size: Reconstitute with 100 µl sterile water.  
50 µg size: Reconstitute with 50 µl sterile water.  
**Content :** PBS containing at least 0.1% BSA should be used for further dilutions. 10 µg size: 0.1 mg/ml after reconstitution.  
50 µg size: 1 mg/ml after reconstitution.  
Lyophilized. Contains PBS.  
Short Term Storage +4°C ; Long Term Storage -20°C ; After reconstitution, prepare aliquots and store at -20°C.  
**Storage condition :** Avoid freeze/thaw cycles.  
PBS containing at least 0.1% BSA should be used for further dilutions. Stable for at least 6 months after receipt when stored at -20°C.  
Working aliquots are stable for up to 3 months when stored at -20°C.

### Application Note

MW : ~17kDa (SDS-PAGE)  
Biological Activity: Induces cell death at a concentration range of 0.01-10ng/ml (ED50= 0.05ng/ml or 2 x 10E7 Units/mg; WEHI 164 cells).  
Endotoxin Content: <0.01EU/µg purified protein (LAL test; Lonza).

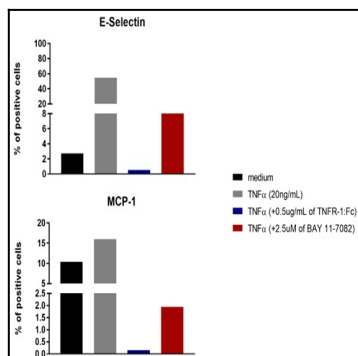


Figure 1: TNF-alpha, Soluble (human) (rec.) induces NF-kB dependent genes. Methods: Endothelial cells (HUVEC) are incubated for 1h in the presence of BAY 11-7082 and then treated with TNFalpha (20ng/ml) (red bar) or incubated with TNFalpha (20ng/ml) (in the presence or absence of TNF-R1 (human):Fc (human) (rec.) (0.5 $\mu$ g/ml) (blue and gray bar, respectively). TNFalpha-induced genes expression such as E-Selectin or MCP-1 are tested by flow cytometry. Picture courtesy of Giulia Vanoni (Dr. Camilla Jandus Lab, University of Lausanne).