

## 32-190056: TNF-Alpha, Soluble (human) (rec.)

**Reactivity :** Mouse, Human

**Alternative Name :** Tumor Necrosis Factor Ligand Superfamily Member 2; Cachectin

### Description

Source : E. coli

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). 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

**Purification :** ≥95% (SDS-PAGE)

**Content :**

Reconstitution 10 µg size: Reconstitute with 100 µl sterile water. 50 µg size: Reconstitute with 50 µl sterile water. PBS containing at least 0.1% BSA should be used for further dilutions.

Concentration 10 µg size: 0.1 mg/ml after reconstitution. 50 µg size: 1 mg/ml after reconstitution. Formulation: Lyophilized. Contains PBS.

**Storage condition :**

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.

**Amino Acid :**

A FLAG®-tag is fused at the N-terminus of human TNF-Alpha (aa 85-223).

### Application Note

MW :~17kDa (SDS-PAGE); Biological Activity: Induces cell death at a concentration range of 0.01-10 ng/ml (ED50= 0.05 ng/ml or 2 x 10<sup>7</sup> Units/mg; WEHI 164 cells). Endotoxin Content <0.01 EU/µg purified protein (LAL test; Lonza).

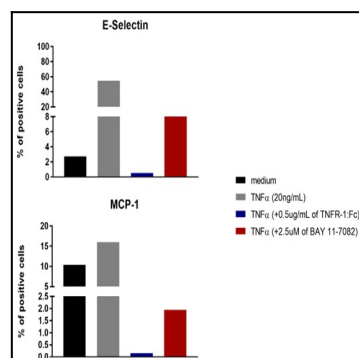


Figure 1: TNF-Alpha, Soluble (human) (rec.) induces NF-κB dependent genes. Methods: Endothelial cells (HUVEC) are incubated for 1h in the presence of BAY 11-7082 and then treated with TNF-Alpha (20 ng/ml) (red bar) or incubated with TNF-Alpha (20 ng/ml) (in the presence or absence of TNF-R1 (human):Fc (human) (rec.) (0.5 µg/ml) (blue and gray bar, respectively). TNF-Alpha-induced genes expression such as E-Selectin or MCP-1 are tested by flow cytometry.