Tumor necrosis factor (TNF, cachexin or cachectin and formerly known as tumor necrosis factor-α) is a cytokine involved in systemic inflammation and is a member of a group of cytokines that stimulate the acute phase reaction. Multimeric TNF-α is a high activity construct in which two trimeric TNF-α ligands are artificially linked via the collagen domain of mouse ACRP30 (adiponectin, Adipoq). The receptor TNF-R1 is activated by both the membrane-bound and soluble trimeric forms of TNF-α, whereas the receptor TNF-R2 only responds to the membrane-bound form of TNF-α. Since Multimeric TNF-α mimics the membrane-bound form (forms oligomers higher than trimer), it is the only TNF-α protein that can activate the TNF-R2. For TNF-R1 activation, either "regular" recombinant TNF-α or Multimeric TNF-α can be used.

Human TNF-alpha aa 85-233 is fused at the N-terminus to mouse collagen domain of ACRP30 (aa18-111) and a FLAG tag.

Concentration: 0.1 mg/ml after reconstitution
Gene ID: Human TNF-alpha: 7124; Mouse ACRP30 (adiponectin): 11450
Protein Accession No: Human TNF-alpha: P01375; Mouse ACRP30 (adiponectin): Q60994
Source: HEK 293 cells
Molecular Weight: ~34 kDa by SDS-PAGE
Formulation: Lyophilized solution containing PBS.
Purity: ≥95% (SDS-PAGE)
Endotoxin Level: <0.02 EU/μg purified protein as determined by LAL test (Lonza).
Specificity: Binds to human and mouse TNF-R1 and TNF-R2.
Biological Activity: Activates human and mouse TNF-R1 and TNF-R2. Induces cell death of WEHI 164 cells at a concentration range of 0.01-10 ng/ml, ED50 = 0.05 ng/ml or 2 x 10E7 Units/mg.
Amino Acid Sequence: FLAG tag + mouse collagen domain of ACRP30 (aa 18-111) + Human TNF-alpha (aa 85-233)
Reconstitution: Reconstitute with 100μl sterile water.
Storage & Stability: Store at 4°C upon arrival and at -20°C for long term. Lyophilized product is stable for at least 6 months after receipt when stored at -20°C. After reconstitution, prepare aliquots and store at -20°C. PBS containing at least 0.1% BSA or HSA should be used for further dilutions. Avoid repeated freeze-thaw cycles.