Recombinant Protein Technical Manual

Recombinant Rat TNF-alpha/TNFA Protein

RPES4243

Product Data:

Product SKU: RPES4243

Size: 10µg

Species: Rat

Expression host: E. coli

Uniprot: P16599

Protein Information:

Molecular Mass: 17.4 kDa

AP Molecular Mass: 14 kDa

Tag:

Bio-activity:

Purity: > 95% as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4.

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Tumor Necrosis Factor; Cachectin; TNF-Alpha; Tumor Necrosis Factor Ligand Superfamily Member 2; TNF-a; Tumor Necrosis Factor; Membrane Form; Tumor Necrosis Factor; Soluble Form; Tnf; Tnfa; Tnfsf2

Immunogen Information:

Sequence: Leu80-Leu235

Background:

Tumor necrosis factor alpha (TNF-alpha, TNFSF2) is the prototypic ligand of the TNF superfamily. Rat TNF-alpha consisits of a 35 amino acid (aa) cytoplasmic domain, a 21 aa transmembrane segment, and a 179 aa extracellular domain (ECD). Within the ECD, rat TNF-alpha shares 94% aa sequence identity with mouse. TNF-alpha is produced by a wide variety of immune, epithelial, endothelial, and tumor cells. TNF exists as a homotrimer and interacts with SPPL2B. TNF is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. TNF is a key cytokine in the development of several inflammatory disorders. It contributes to the development of type 2 diabetes throught its effects on insulin resistance and fatty acid metabolism.