

Recombinant Rat TNFA Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52286

Size: 10ug, 100ug

Protein Name: Tumor necrosis factor (Cachectin) (TNF-alpha) (Tumor necrosis factor ligand superfamily member 2) (TNF-a) [Cleaved into: Tumor necrosis factor, membrane form (N-terminal fragment) (NTF); Intracellular domain 1 (ICD1); Intracellular domain 2 (ICD2); C-domain 1; C-domain 2; Tumor necrosis factor, soluble form]

Synonym: Tnf, Tnfa, Tnfsf2

UniProt ID: P16599

UniProt Link: www.uniprot.org/uniprotkb/P16599/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 235 AA

Molecular Weight: 26 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSTESMIRDVELAEEALPKKMGGLQNSRRCLCLSLFSFLLVAGATTLCLLNFGVIGPNKEEKFPNGL
PLISSMAQTLTLRSSSQNSSDKPVAHVVANHQAEEQLEWLSQRANALLANGMDLKDNQLVVPADGL
YLIYSQVLFGKGQCPDYVLLTHTVSRFAISYQEKVSLLSAIKSPCKDTPEGAELKPWYEPMYLGGVF
QLEKGDLLSAEVNLPKYLDITESGQVYFGVIAL

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Tumor necrosis factor (Cachectin) (TNF-alpha) (Tumor necrosis factor ligand superfamily member 2) (TNF-a) [Cleaved into: Tumor necrosis factor, membrane form (N-terminal fragment) (NTF); Intracellular domain 1 (ICD1); Intracellular domain 2 (ICD2); C-domain 1; C-domain 2; Tumor necrosis factor, soluble form] produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct action or by stimulation of interleukin-1 secretion and is implicated in the induction of cachexia. Under certain conditions it can stimulate cell proliferation and induce cell differentiation (By similarity). Induces insulin resistance in adipocytes via inhibition of insulin-induced IRS1 tyrosine phosphorylation and insulin-induced glucose uptake. Induces GKAP42 protein degradation in adipocytes which is partially responsible for TNF-induced insulin resistance (By similarity). Plays a role in angiogenesis by inducing VEGF production synergistically with IL1B and IL6 (By similarity). Promotes osteoclastogenesis and therefore mediates bone resorption (By similarity).; The TNF intracellular domain (ICD) form induces IL12 production in dendritic cells.

Subcellular Localization: Cell membrane ; Single-pass type II membrane protein .; [Tumor necrosis factor, membrane form]: Membrane ; Single-pass type II membrane protein .; [Tumor necrosis factor, soluble form]: Secreted .; [C-domain 1]: Secreted .; [C-domain 2]: Secreted .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.