

# Recombinant Human TNF- $\alpha$

Cat. #: STNA-010

## Product Specifications

- Expression of Human Proteins in Human Cells
- Extremely Low Endotoxin Level
- High Purity
- Animal Free and Xeno Free
- Tag Free

## Protein Description

Tumor necrosis factor alpha (TNF- $\alpha$ ) is an EGF-related polypeptide growth factor that signals through the TNFRSF1A/TNFR1 and TNFRSF1B/TNFR2. It is mainly secreted by macrophages and also produced by monocytes, keratinocytes, and various tumor cells. TNF- $\alpha$  stimulates the proliferation of a wide range of epidermal and epithelial cells. TNF- $\alpha$  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, impair regulatory T cells (Treg) function in individuals with rheumatoid arthritis via FOXP3 dephosphorylation.

## References

Pennica D, et al. (1984) Nature 312, 724-729.

Nie H, et al. (2013) Nat. Med. 19, 322-328.

Friedmann E, et al. (2006) Nat. Cell Biol. 8, 843-848.

**Source:** Derived from human cells

**Size:** 10  $\mu$ g

**Shipping:** Ambient temperature

**Structure:** Glycosylated homodimer

**Purity:** >95% by SDS-PAGE

**Endotoxin Level:** <0.5 EU/ $\mu$ g

**Molecular Weight:** 17 kDa

**Formulation:** Lyophilized from a 0.2  $\mu$ m filtered solution in PBS without carrier protein

## Activity Assay

Activity was measured by the cytotoxicity in L-929 cell in the presence of actinomycin D.

## Reconstitution

Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein in sterile PBS containing 0.1% endotoxin-free recombinant human serum albumin.

## Stability and Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles. In general: 12 months from date of receipt, -20 to -80° C as supplied. 1 month, 2 to 8° C under sterile conditions after reconstitution. 3 months, -20 to -80° C under sterile conditions after reconstitution.

