

## Datasheet

# Tumor Necrosis Factor alpha

## Human Recombinant

| Product   | Description                                   | Catalogue-No.            | Size           |
|-----------|---|--------------------------|----------------|
| TNF alpha | Tumor necrosis factor alpha human recombinant | CB-1112011<br>CB-1112012 | 10 µg<br>50 µg |

### Product description

Synonyms: TNF- $\alpha$ , TNF-alpha, TNF-a, Cachectin, DIF, TNFA, TNFSF2, Tumor necrosis factor ligand superfamily member 2

Tumor necrosis factor alpha (TNF alpha) is a cytokine involved in systemic inflammation and is a member of a group of cytokines that stimulate the acute phase reaction. TNF alpha is mainly secreted by macrophages. TNF alpha causes apoptotic cell death, cellular proliferation, differentiation, inflammation, tumorigenesis and viral replication. TNF alpha is also involved in lipid metabolism and coagulation. The primary role of TNF alpha is in the regulation of immune cells.

Dysregulation and, in particular, overproduction of TNF alpha have been implicated in a variety of human diseases - autoimmune diseases, insulin resistance, and cancer.

TNF alpha human rec. produced in E. coli is a single, non-glycosylated, polypeptide chain containing 158 amino acids (157 amino acids of the mature human TNF alpha and an N-terminal methionine) and having a molecular mass of 17.5kDa.

TNF alpha is purified by standard chromatographic techniques.

### Solubility and storage conditions

It is recommended to reconstitute lyophilized TNF alpha in sterile, distilled water not less than 100µg/ml, which can be further diluted to other aqueous solutions.

Lyophilized TNF alpha although stable at room temperature for 3 weeks, should be stored desiccated below -20° C. Upon reconstitution TNF alpha should be stored at 2-8° C up to 7 days and for future use below -20° C.

For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Composition

Lyophilized TNF alpha human rec. contains 20 mM PB, pH-7.2, and 100 mM NaCl.

Purity: > 95.0% as determined by: (a) analysis by RP-HPLC (b) analysis by SDS-PAGE

Amino acid sequence: MVRSSSRTPS DKPVAHVVAN PQAEGQLQWL NRRANALLAN GVELR DNQLV VPSEGLYLIY SQVLFKGGQC PSTHVLLTHT ISRIAVSYQT KVNLLSAIKS PCQRETPEGA EAKPWYEPIY LGGVFQLEKG DRLSAEINRP DYLDFAESGQ VYFGIIAL

Biological activity: The specific activity is  $\geq 5.0 \times 10^7$  Units per mg as determined by the cytolysis of murine L929 cells in the presence of Actinomycin D.

### Technical support

For technical support, questions or remarks please contact your local PAN-Biotech partner or the technical department of PAN-Biotech via email ([info@pan-biotech.com](mailto:info@pan-biotech.com)) or phone +49-8543-601630.

---

FOR RESEARCH USE ONLY! Not approved for human or animal diagnostic or therapeutic procedures.