

Datasheet

Tumor Necrosis Factor alpha

Human Recombinant

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

Product description

Synonyms: TNF- α , TNF-alpha, Tumor necrosis factor ligand superfamily member 2
 Tumor necrosis factor alpha (TNF-a) is a cytokine involved in systemic inflammation and is a member of a group of cytokines that stimulate the acute phase reaction. TNF is mainly secreted by macrophages. TNF causes apoptotic cell death, cellular proliferation, differentiation, inflammation, tumorigenesis and viral replication. TNF is also involved in lipid metabolism and coagulation. The primary role of TNF is in the regulation of immune cells. Dysregulation and, in particular, overproduction of TNF have been implicated in a variety of human diseases - autoimmune diseases, insulin resistance, and cancer. TNF-a human recombinant produced in E. coli is a single, non-glycosylated, polypeptide chain containing 158 amino acids (157 amino acids of the mature human TNF-a and an N-terminal methionine) and having a molecular mass of 17.5 kDa. The TNF-a is purified by standard chromatographic techniques.

Solubility and storage conditions

It is recommended to reconstitute lyophilized TNF-a in sterile, distilled water not less than 100 µg/ml, which can then be further diluted to other aqueous solutions. Lyophilized TNF-a although stable at room temperature for 3 weeks, should be stored desiccated below -20° C. Upon reconstitution TNF-a 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

Sterile filtered white lyophilized (freeze-dried) powder. Lyophilized TNF-a human recombinant contains 20 mM PB, pH-7.2, and 100 mM NaCl.

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

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

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

Suitability

FOR RESEARCH USE ONLY!

Not approved for human or animal diagnostic or therapeutic procedures.

Technical Support

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

07/2014