Tumor Necrosis Factor beta, human recombinant (rHuTNF-b)

Catalog No: 50439
Lot No: XXXXX
Source: *E. coli*
Synonyms: Lymphotoxin-alpha, LT-alpha, TNF-beta, Tumor necrosis factor ligand superfamily member 1, LTA, LT, TNFB, TNFSF1

Background

Lymphotoxin alpha, a member of the tumor necrosis factor family, is a cytokine produced by lymphocytes. LTA is highly inducible, secreted, and exists as homotrimeric molecule. LTA forms heterotrimers with lymphotoxin-beta which anchors lymphotoxin-alpha to the cell surface. LTA mediates a large variety of inflammatory, immunostimulatory, and antiviral responses. LTA is also involved in the formation of secondary lymphoid organs during development and plays a role in apoptosis.

Description

Tumor Necrosis Factor-b human recombinant (Lymphotoxin) produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 172 amino acids and having a molecular mass of 18645 Dalton. TNF-b is purified by standard chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized protein with no additives.

Solubility

It is recommended to reconstitute the lyophilized Tumor Necrosis Factor-beta in sterile 18 MΩ-cm H_2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Tumor Necrosis Factor-b, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution TNF-b should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 98.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

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MLPGVGLTPS AAQTARQHPK MHLAHSTLKP AAHLIGDPSK QNSLLWRANT DRAFLQDGFS LSNNSLLVPT SGIYFVYSQV
VFSGKAYSPK ATSSPLYLAH EVQLFSSQYP FHVPLLSSQK MVYPGLQEPW LHSMYHGAAF QLTQGDQLST HTDGIPHLVL
SPSTVFFGAF AL
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Activity

The ED50 as determined by the cytolysis of murine L929 cells in the presence of Actinomycin D is <0.05 ng/ml, corresponding to a specific activity of 20,000,000 IU/mg.

Usage

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