

Product Information

Tumor Necrosis Factor- β , human recombinant, expressed in *E. coli*

Catalog Number **T7799**

Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonyms: TNF- β , lymphotoxin

Product Description

Tumor Necrosis Factor-Beta (TNF- β), also called lymphotoxin, is a lymphokine secreted by mitogen-activated T cells. It was initially identified as a mediator of cell-mediated hypersensitivity and a cytotoxic agent to several tumor cell lines.¹⁻³ TNF- β is secreted by lymphoblastoid cells as both the 20 kDa and 25 kDa forms.⁴ The 20 kDa form lacks the first 23 amino acids, but appears to be equipotent to the 25 kDa form in biological activity. TNF- β and the closely related protein tumor necrosis factor- α (TNF- α) are 30% homologous in amino acid sequence^{5,6} and share common cellular receptors.^{7,8} TNF- α and TNF- β have nearly identical biological actions, including toxicity to vascular endothelium, stimulation of growth in certain cells, activation of osteoclasts and phagocytic cells, and up-regulation of various cell surface proteins.⁹ The wide variety of cellular actions exhibited by these two proteins is due to the ubiquitous distribution of TNF receptors, the multiple pathways activated during signal transduction, and the great number of cellular genes activated.¹⁰

This recombinant, human TNF- β product is an 18.8 kDa protein expressed in *E. coli* and is effective on both human and mouse cells.

Purity: >95% (SDS-PAGE)

Typical EC₅₀: 4–20 pg/mL

The activity of TNF- β is measured in a cytotoxicity assay using L929 mouse fibroblast cells in the presence of the metabolic inhibitor actinomycin D. The EC₅₀ is defined as the effective concentration of growth factor that elicits 50% inhibition of cell growth in a cell based bioassay.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Reconstitute the contents of the vial to a concentration of 100 $\mu\text{g}/\text{mL}$ in sterile PBS containing $\geq 0.1\%$ human or bovine serum albumin.

Storage/Stability

Store the product at -20 to $-70\text{ }^{\circ}\text{C}$.

After reconstitution, store at $2-8\text{ }^{\circ}\text{C}$ for no more than 1 month. For extended storage, freeze in working aliquots at $-70\text{ }^{\circ}\text{C}$ or $-20\text{ }^{\circ}\text{C}$ for no more than 3 months. Repeated freezing and thawing is not recommended.

References

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