

Recombinant Human Tumor Necrosis Factor-alpha/TNFSF2

#R00001

Size: 10 µg/100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Tumor necrosis factor alpha (TNF-α), also called cachectin, is the best-know member of the TNF-family, which can cause cell death. This protein is produced by neutrophils, activated lymphocytes, macrophages, NK cells, LAK cells, astrocytes endothelial cells, smooth muscle cells and some transformed cells. TNF-α occurs as a secreted, soluble form and as a membrane-anchored form, both of which are biologically active. The naturally-occurring form of TNF-α is glycosylated, but non-glycosylated recombinant TNF-α has comparable biological activity. The biologically active native form of TNF-α is reportedly a trimer. Human and murine TNF-α show approximately 79 % homology at the amino acid level and cross-reactivity between the two species. Two types of receptors for TNF-α have been described and virtually all cell types studied show the presence of one or both of these receptor types.

AA Sequence

MVRSSSRTPSDKPVAVHVVANPQAEQQLQWLNRRAN
ALLANGVELRDNQLVVPSEGLYLIYSQVLFGQGQGPS
THVLLTHTISRIAVSYQTKVNLLSAIKSPCQRETPEGA
EAKPWYEPIYLGGVFQLEKGDRLSAEINRPDYLDFAE
SGQVYFGIIAL

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Synonyms	Tumor Necrosis Factor, TNFSF2, Cachectin, Differentiation-inducing factor , DIF, Necrosin, Cytotoxin
Accession	P01375
GeneID	7124
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 17.5 kDa, a single non-glycosylated polypeptide chain containing 158 amino acids.
Purity	> 98 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by a cytotoxicity assay using murine L929 cells is

	less than 0.05 ng/ml, corresponding to a specific activity of $> 2.0 \times 10^7$ IU/mg in the presence of actinomycin D.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μ m filtered concentrated solution in 20 mM PB, 10 mM NaCl, pH 7.0.
Endotoxin	Less than 1.0 EU/ μ g of rHuTNF- α /TNFSF2 as determined by LAL method.
