

TNF a Mutant Human

Description: Tumor Necrosis Factor- α Variant Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 151 amino acids and having a molecular mass of 16598 Dalton. The TNF- α Variant is purified by standard chromatographic techniques.

Synonyms: TNF- α , Tumor necrosis factor ligand superfamily member 2, TNF- α , Cachectin, DIF, TNFA, TNFSF2.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Amino Acid Sequence: MRKRKPVAHV VANPQAEGQL QWLNRRANAL
LANGVELRDNQLVVPSEGLY LIYSQVLFKG QGCPSTHVLL THTISRIAVS YQTKVNLLSA
IKSPCQRETP EGAEAKPWYE PIYLGGVFQL EKGDRLSAEI NRPDYLDFAE SGQVYFGIIAF.

Purity: Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

Formulation:

The protein was lyophilized after extensive dialysis against 0.5x PBS pH -7.

Stability:

Lyophilized Tumor Necrosis Factor- α Variant although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution TNF- α Variant 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.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

Solubility:

It is recommended to reconstitute the lyophilized Tumor Necrosis Factor- α Variant in sterile 18M-cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Introduction:

The clinical use of the potent anti-tumor activity of TNF- α has been limited by the proinflammatory side effects including fever, dose-limiting hypotension, hepatotoxicity, intravascular thrombosis, and hemorrhage. Designing clinically applicable TNF- α mutants with low systemic toxicity has been an intense pharmacological interest. Human TNF- α , which binds to the murine TNF-R55 but not to the mouse TNF-R75, exhibits retained anti-tumor activity and reduced systemic toxicity in mice compared with murine TNF- α , which binds to both murine TNF receptors. Based on these results, many TNF- mutants that selectively bind to TNF-R55 have been designed. These mutants displayed cytotoxic activities on tumor cell lines in vitro, and exhibited lower systemic toxicity in vivo. Recombinant Human TNF- α Variant/Mutant compared with the wild-type, has an amino acid sequence deletion from a.a. 1-7, and the following a.a. substitutes Arg8, Lys9, Arg10 and Phe157 which is proven to have more activity and with less inflammatory side effect in vivo.

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Biological Activity:

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

Catalog #:CYP5-391

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