



11 Park Drive, Suite 12
Boston, MA 02215

Human Tumor Necrosis Factor-Alpha (TNF- α , Mutant)

ORDERING INFORMATION

Catalog No: rAP-0158;

Size: 10 μ g; 50 μ g

Storage: <- 20° C

Synonyms:

TNF-alpha, Tumor necrosis factor ligand superfamily member 2, TNF-a, Cachectin, DIF, TNFA, TNFSF2.

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- α 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*.

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-alpha Variant is purified by standard chromatographic techniques.

Source:

Escherichia Coli.

Physical Appearance:

Sterile Filtered White Lyophilized (freeze-dried) powder.

Formulation:

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

Solubility:

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

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.

Purity:

Greater than 95.0% as determined by:

(a) Analysis by RP-HPLC.

(b) Analysis by SDS-PAGE.

Contact & Ordering Information: Angio-Proteomie, 11 Park Drive, Suite 12, Boston, MA 02215, USA. Fax: (480) 247-4337, angioproteomie@gmail.com



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Amino acid sequence:

M**R**K**R**KPVAHV VANPQAEGQL QWLNRRANAL LANGVELRDN
QLVVPSEGLY LIYSQVLFKG QGCPSTHVLL THTISRIAVS YQTKVNLLSA IKSPCQRETP EGAEAKPWYE
PIYLGGVFQL EKGDRLSAEI NRPDYLDFAE SGQVYFGIIAE

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 1×10^8 IU/mg

Usage:

Angio-Proteomie'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.

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