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TNF-a

Catalog # PVGS1001

Product Information

Species	Human
Purity	Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Anion-exchange FPLC. (c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.
Endotoxin Level	Less than 0.01 ng/ g (0.1 EU/ g) determined by LAL test
Formulation	Lyophilized from a 0.2 m filtered solution in PBS
Reconstitution	It is recommended to reconstitute the lyophilized rHuTNF-alpha mutant in sterile 18 MΩ-cm H_2O not less than 100 g/ml, which can then be further diluted to other aqueous solutions.

Additional Information

Target Background	TNF is secreted by macrophages, monocytes, neutrophils, T-cells, NK-cells following their stimulation by bacterial LPS. Cells expressing CD4 secrete TNF-alpha while CD8 cells secrete little or no TNF-alpha. The synthesis of TNF-alpha is induced by many different stimuli including interferons, IL2, GM-CSF. The clinical use of the potent anti-tumor activity of TNF-alpha has been limited by the proinflammatory side effects including fever, dose-limiting hypotension, hepatotoxicity, intravascular thrombosis, and hemorrhage. Designing clinically applicable TNF-a mutants with low systemic toxicity has been an intense pharmacological interest. Human TNF-a, 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-a, which binds to both murine TNF receptors. Based on these results, many TNF-a 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-alpha 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. Recombinant Human TNF-alpha Mutant produced in E. coli is a single, non-glycosylated, polypeptide chain containing 151 amino acids and having a molecular mass of 16,886 Da.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.