



# SZABO SCANDIC

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## Produktinformation



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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## Tumor Necrosis Factor alpha Mutant/Variant, human recombinant (rHuTNF-a-M)

**Catalog No:** 94964  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** TNF-alpha, Tumor necrosis factor ligand superfamily member 2, TNF-a, Cachectin, DIF, TNFA, TNFSF2

### Background

The clinical use of the potent anti-tumor activity of TNF-a 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-? 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-a 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-a 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. TNF-alpha Variant is purified by proprietary chromatographic techniques.

### 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 TNF-a Variant in sterile 18 MΩ-cm H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

### Stability

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

### Amino Acid Sequence

MRKRKPVAHV VANPQAEQQL QWLNRRANAL LANGVELRDN QLVVPSEGLY LIYSQVLFKG QGCPSTHLL THTISRIAVS  
YQTKVNLLSA IKSPCQRETPE EGAEAKPWYE PIYLGGVFQL EKGDRLSAEI NRPDYLDFAE SGQVYFGIIA F



**Activity**

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

**Usage**

**This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.**