

## TNF-alpha/TNFSF2 Protein, Marmota monax (Baculovirus, His)

Cat. No.:	HY-P700504
Synonyms:	rHuTNF- $\alpha$ , His; Cachectin; TNFSF2
Species:	Others
Source:	Sf9 insect cells
Accession:	O35734 (G57-L233)
Gene ID:	124109351
Molecular Weight:	22.2 kDa

### PROPERTIES

AA Sequence	<p>           G P Q R E E F L N N    L P L S P Q A Q M L    T L R S S S Q N M N    D K P V A H V V A K            N E D K E Q L V W L    S R R A N A L L A N    G M E L I D N Q L V    V P A N G L Y L V Y            S Q V L F K G Q G C    P S Y V L L T H T V    S R F A V S Y Q D K    V N L L S A I K S P            C P K E S L E G A E    F K P W Y E P I Y L    G G V F E L Q K G D    R L S A E V N L P S            Y L D F A E S G Q V    Y F G V I A L         </p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 $\mu$ m filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	<p>TNF-alpha/TNFSF2 protein, a cytokine, binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. Mainly secreted by macrophages, it possesses the capability to induce cell death in specific tumor cell lines and functions as a potent pyrogen, causing fever through direct action or by stimulating interleukin-1 secretion. Implicated in the induction of cachexia, TNF-alpha exhibits diverse roles; under certain conditions, it can stimulate cell proliferation and induce cell differentiation. Additionally, it induces insulin resistance in adipocytes by inhibiting insulin-induced IRS1 tyrosine phosphorylation and insulin-induced glucose uptake, contributing to GKAP42 protein degradation and TNF-induced insulin resistance. TNF-alpha plays a role in angiogenesis by synergistically inducing VEGF production with IL1B and IL6, and it promotes osteoclastogenesis, mediating bone resorption. The intracellular domain (ICD) form of TNF-alpha induces IL12 production in dendritic cells, highlighting its</p>
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multifaceted impact across various physiological processes.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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