

## TNF-alpha/TNFSF2 Protein, Sheep (GST)

Cat. No.:	HY-P700515
Synonyms:	rHuTNF- $\alpha$ , His; Cachectin; TNFSF2
Species:	Sheep
Source:	E. coli
Accession:	P23383 (L78-L234)
Gene ID:	443540
Molecular Weight:	44.2 kDa

### PROPERTIES

AA Sequence	<pre> L R S S S Q A S N N   K P V A H V V A N I   S A P G Q L R W G D   S Y A N A L M A N G V E L K D N Q L V V   P T D G L Y L I Y S   Q V L F R G H G C P   S T P L F L T H T I S R I A V S Y Q T K   V N I L S A I K S P   C H R E T L E G A E   A K P W Y E P I Y Q G G V F Q L E K G D   R L S A E I N L P E   Y L D Y A E S G Q V   Y F G I I A L           </pre>
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. It is primarily secreted by macrophages and has multiple biological activities. It can induce cell death in certain tumor cell lines and acts as a potent pyrogen, causing fever either through direct action or by stimulating interleukin-1 secretion. TNF-alpha/TNFSF2 Protein is also implicated in the induction of cachexia. Under specific conditions, it can stimulate cell proliferation and promote cell differentiation. Additionally, it induces insulin resistance in adipocytes by inhibiting insulin-induced IRS1 tyrosine phosphorylation and glucose uptake, while also leading to GKAP42 protein degradation, which contributes to TNF-induced insulin resistance. TNF-alpha/TNFSF2 Protein plays a role in angiogenesis by synergistically inducing VEGF production with IL1B and IL6. Moreover, it facilitates osteoclastogenesis and, consequently, mediates bone resorption. Lastly, the TNF intracellular domain (ICD) form of TNF-alpha/TNFSF2 Protein stimulates IL12 production in dendritic cells.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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