

## Animal-Free TNF-beta/TNFSF1 Protein, Human (His)

<b>Cat. No.:</b>	HY-P700154AF
<b>Synonyms:</b>	Lymphotoxin-Alpha; LT-Alpha; TNF-beta; Tumor Necrosis Factor Ligand Superfamily Member 1; LTA; TNFB; TNFSF1
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	P01374 (L35-L205)
<b>Gene ID:</b>	4049
<b>Molecular Weight:</b>	Approximately 18.65 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> L P G V G L T P S A   A Q T A R Q H P K M   H L A H S T L K P A   A H L I G D P S K Q N S L L W R A N T D   R A F L Q D G F S L   S N N S L L V P T S   G I Y F V Y S Q V V F S G K A Y S P K A   T S S P L Y L A H E   V Q L F S S Q Y P F   H V P L L S S Q K M V Y P G L Q E P W L   H S M Y H G A A F Q   L T Q G D Q L S T H   T D G I P H L V L S P S T V F F G A F A   L           </pre>
<b>Biological Activity</b>	Measure by its ability to induce cytotoxicity in L929 cells in the presence of actinomycin D. The ED <sub>50</sub> for this effect is <3 pg/mL. The specific activity of recombinant human TNF beta is > 3.3x10 <sup>8</sup> IU/mg.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a solution containing 20 mM sodium citrate, 0.2 M NaCl, pH 3.5.
<b>Endotoxin Level</b>	<0.1 EU per 1 µg of the protein by the LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	TNF-beta Protein, in its homotrimeric configuration, exhibits binding capabilities to TNFRSF1A/TNFR1, TNFRSF1B/TNFB, and TNFRSF14/HVEM, as demonstrated by various studies. Additionally, in its heterotrimeric association with LTB, it forms interactions with TNFRSF3/LTBR, underscoring its diverse receptor engagement. This cytokine, primarily produced by lymphocytes, showcases cytotoxic effects against a broad array of tumor cells both in vitro and in vivo. Structurally, TNF-beta exists as both homotrimers and heterotrimers, the latter comprising either two LTB and one LTA subunits or, to a lesser
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extent, two LTA and one LTB subunits. Furthermore, TNF-beta engages in interactions with TNFRSF14, emphasizing its pivotal role in mediating intricate immunological responses.

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

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