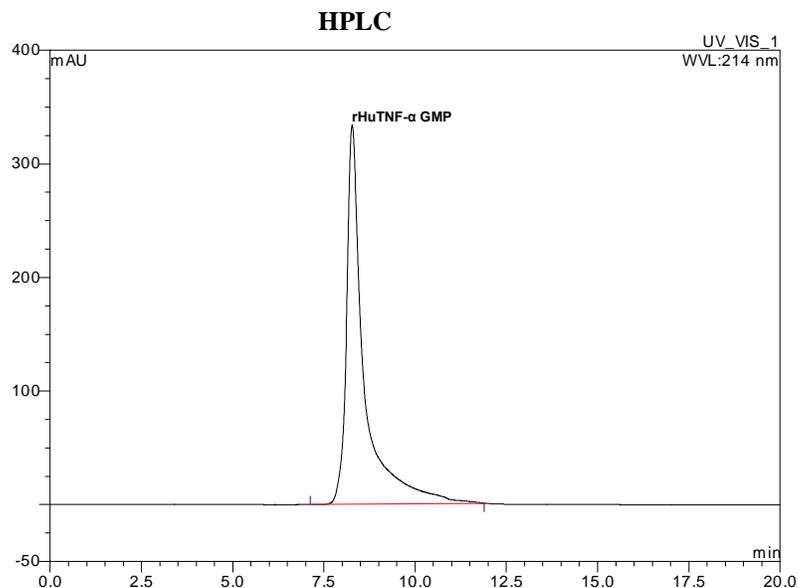
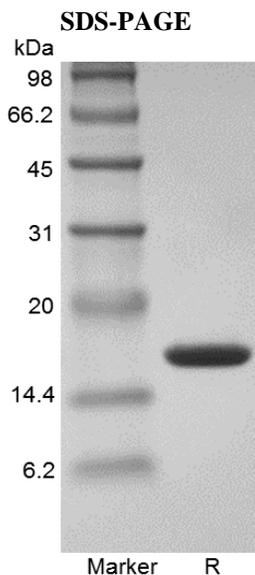


**Recombinant Human Tumor Necrosis  
Factor-alpha/TNFSF2 GMP  
(rHuTNF- $\alpha$ /TNFSF2 GMP)**  
PrimeGene Technical DataSheet

<b>Catalog Number:</b>	GMP-103-01
<b>Source:</b>	<i>Escherichia coli</i>
<b>Molecular Weight:</b>	Approximately 17.5 kDa, a single non-glycosylated polypeptide chain containing 158 amino acids.
<b>Size:</b>	5 $\mu$ g/100 $\mu$ g/1 mg
<b>Sequence:</b>	MVRSSSRTPS DKPVAHVVAN PQAEGQLQWL NRRANALLAN GVELRDNQLV VPSEGLYLIY SQVLFKGQGC PSTHVLLTHT ISRIAVSYQT KVNLLSAIKS PCQRETPEGA EAKPWYEPIY LGGVFQLEKG DRLSAEINRP DYLDFAESGQ VYFGIIAL
<b>Purity:</b>	> 98% by SDS-PAGE and HPLC analyses.
<b>Biological Activity:</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cytotoxicity assay using murine L929 cells is less than 0.05 ng/mL, corresponding to a specific activity of > 2.0 $\times$ 10 <sup>7</sup> IU/mg in the presence of actinomycin D, which is calibrated against rHuTNF- $\alpha$ /TNFSF2 WHO International Standard (NIBSC code: 12/154).
<b>Physical Appearance:</b>	Sterile filtered white lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 $\mu$ m filtered concentrated solution in 5 mM Na <sub>2</sub> HPO <sub>4</sub> , 5 mM NaH <sub>2</sub> PO <sub>4</sub> , 10 mM NaCl, pH 7.0.
<b>Endotoxin:</b>	Less than 0.01 EU/ $\mu$ g of rHuTNF- $\alpha$ /TNFSF2 GMP as determined by LAL method.
<b>Sterility:</b>	Negative.
<b>Mycoplasma:</b>	Negative.
<b>Host Cell Protein:</b>	Less than 0.05% when tested by ELISA.
<b>Host Cell DNA:</b>	Less than 20 ng/mg when tested by qPCR.
<b>In Vitro Virus Assay:</b>	Negative.
<b>Reconstitution:</b>	Prior to opening, it is recommended to centrifuge the vial briefly to bring the contents down the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. If animal-origin-free condition is expected in your product, then sterile distilled water is recommended. Stock solutions should be apportioned into working aliquots and stored at $\leq$ -20 °C. Further dilutions should be made in appropriate buffered solutions.
<b>Shipping:</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● A minimum of 12 months from date of receipt, when stored at <math>\leq</math> -20 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li><li>● Refer to lot-specific CoA for the Expiry Date.</li></ul>
<b>Usage:</b>	This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory, or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>
<b>Quality Statement:</b>	<b>The manufacturing and testing of these products comply with ICH Q7 guidelines.</b>

# Recombinant Human Tumor Necrosis Factor-alpha/TNFSF2 GMP (rHuTNF- $\alpha$ /TNFSF2 GMP) PrimeGene Technical DataSheet



## Background:

Tumor necrosis factor alpha (TNF- $\alpha$ ), also called cachectin, is the best-know member of the TNF-family, which can cause cell death. This protein is produced by neutrophils, activated lymphocytes, macrophages, NK cells, LAK cells, astrocytes endothelial cells, smooth muscle cells and some transformed cells. TNF- $\alpha$  occurs as a secreted, soluble form and as a membrane-anchored form, both of which are biologically active. The naturally-occurring form of TNF- $\alpha$  is glycosylated, but non-glycosylated recombinant TNF- $\alpha$  has comparable biological activity. The biologically active native form of TNF- $\alpha$  is reportedly a trimer. Human and murine TNF- $\alpha$  show approximately 79% homology at the amino acid level and cross-reactivity between the two species. Two types of receptors for TNF- $\alpha$  have been described and virtually all cell types studied show the presence of one or both of these receptor types.

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