

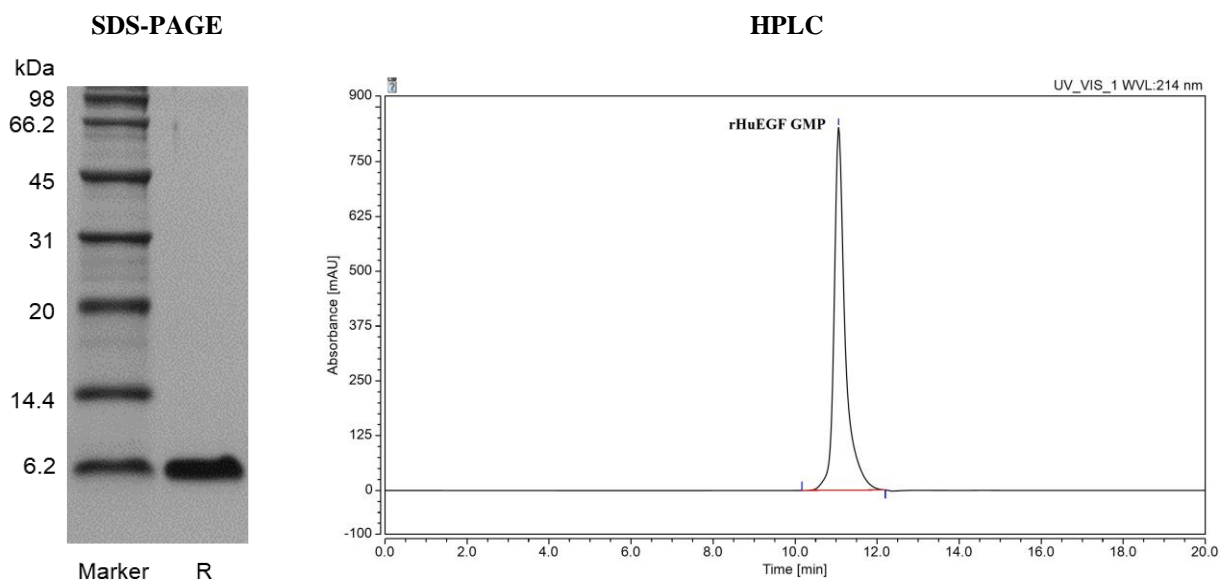
# Recombinant Human Epidermal Growth Factor GMP (rHuEGF GMP)

## PrimeGene Technical DataSheet

<b>Catalog Number:</b>	GMP-105-04
<b>Source:</b>	<i>Escherichia coli</i>
<b>Molecular Weight:</b>	Approximately 6.2 kDa, a single non-glycosylated polypeptide chain containing 53 amino acids.
<b>Size:</b>	5 µg/100 µg/1 mg
<b>Sequence:</b>	NSDSECLPSH DGYCLHDGVC MYIEALDKYA CNCVVG YIGE RCQYRDLKWW ELR
<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 cell proliferation assay using murine Balb/c 3T3 cells is less than 0.1 ng/mL, corresponding to a specific activity of > 1.0 × 10 <sup>7</sup> U/mg.
<b>Physical Appearance:</b>	Sterile filtered white lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
<b>Endotoxin:</b>	Less than 0.01 EU/µg of rHuEGF GMP as determined by LAL method.
<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 ≤ -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 ≤ -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>

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### Background:

Epidermal Growth Factor (EGF) was originally discovered in crude preparations of nerve growth factor prepared from mouse submaxillary glands as an activity that induced early eyelid opening, incisor eruption, hair growth inhibition, and stunting of growth when injected into newborn mice. Human EGF was isolated from urine based on its inhibitory effect on gastric secretion and named urogastrone, accordingly. EGF is prototypic of a family of growth factors that are derived from membrane-anchored precursors. All members of this family are characterized by the presence of at least one EGF structural unit (defined by the presence of a conserved 6 cysteine motif that forms three disulfide bonds) in their extracellular domain. EGF is initially synthesized as a 130 kDa precursor transmembrane protein containing 9 EGF units. The mature soluble EGF sequence corresponds to the EGF unit located proximal to the transmembrane domain. The membrane EGF precursor is capable of binding to the EGF receptor and was reported to be biologically active. Mature human EGF shares 70% a.a. sequence identity with mature mouse and rat EGF.

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