

DATASHEET
Version 20181206**EGF, His, Human****Cat. No.:** Z03368-1**Size:** 1.0 mg**Synonyms:** Urogastrone, URG**Description:**

Epidermal Growth Factor (EGF) is a potent growth factor that stimulates the proliferation of various epidermal and epithelial cells. Additionally, EGF has been shown to inhibit gastric secretion, and to be involved in wound healing. EGF signals through the EGF receptor (EGFR) also known as erbB1, is a class I tyrosine kinase receptor. This receptor also binds with TGF- α and VGF (vaccinia virus growth factor). EGF-receptor binding results in cellular proliferation, differentiation, and survival. EGF is a low-molecular-weight polypeptide first purified from the mouse submandibular gland, but since then found in many human tissues including submandibular gland, parotid gland. Salivary EGF, which seems also regulated by dietary inorganic iodine, also plays an important physiological role in the maintenance of oro-esophageal and gastric tissue integrity. The biological effects of salivary EGF include healing of oral and gastroesophageal ulcers, inhibition of gastric acid secretion, stimulation of DNA synthesis as well as mucosal protection from intraluminal injurious factors such as gastric acid, bile acids, pepsin, and trypsin and to physical, chemical and bacterial agents.

Recombinant Human EGF (His tagged) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 60 amino acids. A fully biologically active molecule, rhEGF His has a molecular mass of 7.2 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

00001 MNSDSECPLS HDGYCLHDGV CMYIEALDKY ACNCVVGYYG
00041 ERCQYRDLKW WELRHHHHHH

Source: *E. coli*

Biological Activity: ED₅₀ < 0.2ng/ml, as determined by a cell proliferation assay using Balb/c 3T3 cells, corresponding to a specific activity of $\geq 5 \times 10^6$ units/mg.

Molecular Weight: 7.2 kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized from a 0.2 μ m filtered solution in PBS.

Reconstitution: Reconstituted in sterile ddH₂O or PBS at 100 μ g/ml.

Purity: > 95% as analyzed by SDS-PAGE.

Endotoxin Level: < 0.2 EU/ μ g, determined by LAL method.

Storage: Lyophilized recombinant Human EGF (His tagged) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Human EGF should be stable up to 1 week at 4°C or up to 3 months at -20°C under sterile conditions. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.