

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.

Source:

Recombinant Human EGF is expressed from human 293 cells (HEK293). It contains AA Asn 971 - Arg 1023. This protein fused with polyhistidine tag at the C terminus. The protein has a calculated MW of 6.2 kDa.

EGF (Asn 971 - Arg 1023) His₆

Endotoxin:

Less than 1.0 EU per µg by the LAL method.

AA Sequence:

NSDSECLSH DGYCLHDGVC MYIEALDKYA CNCVVG YIGE RCQYRDLKWW ELR

Purity:

Purity >90% as determined by SDS-PAGE.

Formulation:

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 100 mM Glycine, 150mM NaCl, pH7.5. Normally trehalose is added as protectant before lyophilization.

Reconstitution

Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at < -20°C. Further dilutions should be made in appropriate buffered solutions.

Storage

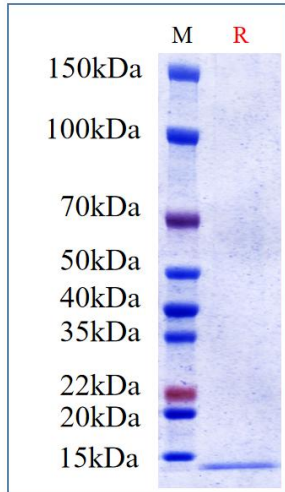
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

-20°C to -70°C for 12 months in lyophilized state;
-70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human EGF, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.