

Recombinant Rat Epidermal Growth Factor

#R00326

Size: 100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

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. It 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 rat EGF

shares 70 % a.a. sequence identity with mature human EGF.

AA Sequence

NSNTGCPPSYDGYCLNGGVCMYVESVDRYVCNCVI
GYIGERCQHRDLRWWKLR

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. 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.

Product Specification

Synonyms	Urogastrone, URG
Accession	P07522
GeneID	25313
Species	Rat
Source	Escherichia coli.
Molecular Weight	Approximately 6.1 kDa, a single non-glycosylated polypeptide chain containing 53 amino acids, including 3 intramolecular disulfide-bonds.
Purity	> 97 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ 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 $> 1.0 \times 10^7$ IU/mg.
Physical	Sterile Filtered White lyophilized
Appearance	(freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS, pH 7.4.
Endotoxin	Less than 1 EU/ μ g of rRtEGF as determined by LAL method.