Recombinant Human Epidermal Growth Factor (EGF)

Certificate of Analysis and Data Sheet

Source:	Catalog No.
E.Coli	CTK-217

Background:

A neurotrophic factor that promotes the survival of various neuronal cell types and may play an important role in the injury response in the nervous system.

Description :

Recombinant Human Epidermal Growth Factor produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 53 amino acids and having a molecular mass of 6222 Dalton.
The EGF is purified by proprietary chromatographic techniques.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

Recombinant EGF was lyophilized from a concentrated (1mg/ml) solution with no additives.

Solubility:

It is recommended to reconstitute the lyophilized EGF in sterile 18MΩ-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Stability:

Lyophilized EGF although stable at room temperature for 3 weeks, should be stored desiccated below -18 C. Upon reconstitution EGF should be stored at 4 C between 2-7 days and for future use below -18 C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).
Please avoid freeze-thaw cycles.

Purity:

Greater than 98.0% as determined by:
(a) Analysis by RP-HPLC.
(b) Anion-exchange FPLC.
(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

Amino acid sequence:

The sequence of the first five N-terminal amino acids was determined and was found to be Asn-Ser-Asp-Ser-Glu, which agrees with the sequence of native human EGF. N-terminal methionine has been completely removed enzymatically.

Dimers and aggregates:

Less than 1% as determined by silver-stained SDS-PAGE gel analysis.

Biological Activity:

This recombinant Human Epidermal Growth Factor is fully biologically active when compared to standards. The ED50, calculated by the dose-dependant proliferation of murine BALB/c 3T3 cells (measured by 3H-thymidine uptake) is less then 0.1 ng/ml corresponding to a specific activity of 1×10^7 Units/mg.

Endotoxin:

Less than 0.1 ng/µg (IEU/µg) of recombinant EGF .

Protein content:

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 2.858 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a standard solution of human EGF as a Reference Standard.

Usage:

This material is offered for research, laboratory or further evaluation purposes.