

Recombinant Rat Growth Hormone

Certificate of Analysis and Data Sheet

➤ Source: E.Coli	➤ Catalog No. CTK-296
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➤ **Background:**

A polypeptide that is secreted by the adenohypophysis . Growth hormone, also known as somatotropin, stimulates mitosis, cell differentiation and cell growth. Species-specific growth hormones have been synthesized.

GH augments the cytolytic activity of T-cells, antibody synthesis, and granulocyte differentiation induced by GM-CSF. GH also enhances production of TNF-alpha, generation of superoxide anions from peritoneal macrophages, and natural killer activity.

➤ **Description:**

Recombinant Rat GH produced in E.Coli is a single, non-glycosylated, polypeptide chain containing having a molecular mass of 21940.01 Dalton.

Rat-GH is purified by proprietary chromatographic techniques.

➤ **Physical Appearance:**

Sterile Filtered White lyophilized (freeze-dried) powder.

➤ **Formulation:**

Rat Growth Hormone (1mg/ml) was lyophilized after extensive dialyses against 5mM phosphate buffer, 5mg mannitol and 1mg glycine.

➤ **Solubility:**

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

➤ **Stability:**

Lyophilized Rat-GH although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution Rat-GH 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 97.0% 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 Met-Phe-Pro-Thr-Ile.

➤ **Dimers and aggregates:**

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

➤ **Endotoxin:**

Less than 0.1 ng/μg (IEU/μg) of Rat Growth Hormone.

➤ **Protein content:**

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm.

2. Analysis by RP-HPLC, using a standard solution of Rat Growth Hormone as a Reference Standard.

➤ **References:**

Flint D. J. & Gardner M.J. (1993) J. Endocrinol., 137, 203-211.

➤ **Usage:**

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