
Recombinant Mouse Growth Hormone (GH)

(Cat. No.: C048)

Background:

GH is a member of the somatotropin / prolactin family of hormones which play an important role in growth control. The gene, along with four other related genes, is located at the growth hormone locus on chromosome 17 where they are interspersed in the same transcriptional orientation; an arrangement which is thought to have evolved by a series of gene duplications. The five genes share a remarkably high degree of sequence identity. Alternative splicing generates additional isoforms of each of the five growth hormones, leading to further diversity and potential for specialization. This particular family member is expressed in the pituitary but not in placental tissue as is the case for the other four genes in the growth hormone locus. Mutations in or deletions of the gene lead to growth hormone deficiency and short stature.

Description:

Recombinant Mouse Growth Hormone produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 191 amino acids and having a molecular mass of 22.0 kDa.

Quality Control:

Biological activity: Recombinant mouse growth hormone is fully biologically active when compared to standard human growth hormone which is 3 units/mg.

Purity: Greater than 95% as determined by

(a) Analysis by SEC-HPLC.

(b) 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-Ala-Met.

Endotoxin: Less than 0.1ng/μg (1IEU/μg) determined by LAL test.

Formulation: Mouse GH was lyophilized after extensive dialysis against 50mM Tris-HCl, pH8.0, 150mM NaCl buffer.

Storage: Lyophilized rmGH although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rmGH 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.

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