

Product Data Sheet

Product Name: GH Gilthead Seabream
 Cat. No.: GP20340
 Batch No.: 1

Product Data

Purity	>98%	Source	Escheric
Physical Appearance	solid	Shipping Condition	Shipped

Synonyms GH1; GH; GHN; GH-N; hGH-N; Pituitary growth hormone; Growth hormone 1; Somatotropin.

Amino Acid Sequence AQPITDGQRLFSIAVSRVQHLHLAQLRFSDFESSLQTEEQQLNKIFLQDFCNDYIISPDKHETQRSSVLKLLSISYRLVESWEFSPRSLSGGAPRNQI

Solubility It is recommended to reconstitute the lyophilized Growth-Hormone Gilthead Seabream in 0.4% NaHCO₃ or water adjusted to pH 8-9 in the presence of a carrier protein such as BSA or similar.

Formulation The protein was lyophilized from a concentrated (1mg/ml) solution with 0.02% NaHCO₃.

Introduction

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.

Biological Activity

Binding assays of the ¹²⁵I-labeled gilthead seabream GH to dolphin fish liver microsomal fraction resulted in high specific binding characterized by a K_a of 1.93 nM and a B_{max} of 540 fmol/mg microsomal fraction protein. Recombinant gilthead seabream Growth Hormone, like ovine placental lactogen, exhibited growth-stimulating activity when applied orally to Sparus aurata larvae or intraperitoneally to juvenile fish.

Stability

Lyophilized Growth-Hormone Gilthead Seabream although stable at room temperature for at least two weeks, should be stored desiccated below -18°C. Upon reconstitution and filter sterilization GH can be stored at 4°C, pH 9 for up to 4 weeks. For long term storage and more diluted solutions it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Background

Somatotropin Gilthead Seabream Recombinant Sparus Aurata produced in E.Coli is a single, non-glycosylated polypeptide chain containing 188 amino acids with an additional Ala at the N-terminus and having a molecular mass of 21.4 kDa. The Gilthead Seabream Growth-Hormone Recombinant is purified by proprietary chromatographic techniques.

Caution: Product has not been fully validated for medical applications. For research use only.

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