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## Product Data Sheet

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Product Name: GH Antagonist Chicken  
Cat. No.: GP20346  
Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	GH1; GH; GHN; GH-N; hGH-N; Pituitary growth hormone; Growth hormone 1; Somatotropin.		
Amino Acid Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Thr-Phe-Pro-Ala.		
Solubility	It is recommended to reconstitute the lyophilized Growth-Hormone Chicken antagonist in 0.4% NaHCO <sub>3</sub> or water adjusted to pH 8-9, not less than 100µg/ml, which can then be further diluted to other aqueous solutions, preferably in a presence of a carrier protein such as BSA or similar.		
Formulation	The protein was lyophilized from a concentrated (1mg/ml) solution with 0.3% NaHCO <sub>3</sub> pH-8.		

### 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

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

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Recombinant Chicken Growth Hormone G119R mutant did not bind to ovine GHR-ECD and was devoid of any biological activity in FDC-P1 3B9 cells. However, in binding experiments that were carried out using chicken liver membranes, both ovine GH and chicken GH showed similar IC50 values in competition with 125I-ovine GH, while the IC50 of G119R mutein was 10-fold higher. These results emphasize the importance of species specificity and indicate the possibility of antagonistic activity of chGH G119R in homologous system.

### Stability

Lyophilized Growth-Hormone Chicken antagonist 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 Chicken Antagonist Recombinant mutein G119R produced in E.Coli is a single, non-glycosylated polypeptide chain containing 191 amino acids with an additional Ala at the N-terminus and having a molecular mass of 22.3 kDa. The Chicken Growth-Hormone Antagonist Recombinant is purified by proprietary chromatographic techniques.

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