

## GH Carp

**Description:** Growth Hormone Carp Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 188 amino acids & having a molecular mass of 21,408 Dalton. Growth Hormone Carp is purified by proprietary chromatographic techniques.

**Synonyms:** GH1, GH, GHN, GH-N, hGH-N, Pituitary growth hormone, Growth hormone 1, Somatotropin.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.

**Amino Acid Sequence:** The sequence of the first five N-terminal amino acids was determined and found to be Ser-Asp-Asn-Gln-Arg.

**Purity:** Greater than 95.0% as determined by: (a) Analysis by SEC-HPLC. (b) Analysis by SDS-PAGE.

**Formulation:**

The GH Carp was lyophilized from a concentrated (1mg/ml) solution with 0.3% NaHCO<sub>3</sub> adjusted to pH 8.

**Stability:**

Lyophilized Growth Hormone Carp recombinant although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Growth Hormone Carp 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 prevent freeze-thaw cycles.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Solubility:**

It is recommended to reconstitute the lyophilized Growth Hormone Carp recombinant in sterile 18M-cm H<sub>2</sub>O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

**Introduction:**

Growth-Hormone 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:**

Carp GH is biologically active in rat 3T3 F442A preadipocytes, though its activity is 15-fold lower

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compared to bovine GH, but it is equally potent in vivo in promoting carp growth (Fine et al.1993).

Furthermore, carp GH forms 1:2 complex with the extra cellular domain of ovine growth hormone receptor.



Catalog #:CYPs-304

#### References:

Title:Growth Hormone Promotes Hair Cell Regeneration in the Zebrafish (Danio rerio) Inner Ear following Acoustic Trauma.Publication:Sun H, Lin C-H, Smith ME (2011) Growth Hormone

Promotes Hair Cell Regeneration in the Zebrafish (Danio rerio) Inner Ear following Acoustic

Trauma. PLoS ONE 6(11): e28372.

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