

GH Zebrafish

Description: Somatotropin Zebrafish Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 185 amino acids with an additional Ala at the N-terminus and having a molecular mass of 21.18 kDa. The Zebrafish Recombinant 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 six N-terminal amino acids was determined and was found to be Ala-Gln-Arg-Leu-Phe-Asn.

Purity: Greater than 99.0% as determined by: (a) Analysis by SEC-HPLC. (b) Analysis by SDS-PAGE.

Formulation:

The protein was lyophilized from a concentrated (1mg/ml) solution with 0.5% NaHCO₃ pH-8.

Stability:

Lyophilized Zebrafish Growth-Hormone 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.

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 Zebrafish Growth-Hormone in 0.4% NaHCO₃ or water adjusted to pH-9, not less than 100

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:

Zebrafish Growth-Hormone is biologically active in PDF-P1 3B9 cells stably transfected with rabbit

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.
doi:10.1371/journal.pone.0028372Link:http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0028372

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