

# Active Recombinant Zebrafish Growth Hormone 1

Cat. No. gh1-644Z    Lot. No. (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Species</b>          | Zebrafish                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Source</b>           | Zebrafish                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>      | 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. |
| <b>Form</b>             | The protein was lyophilized from a concentrated (1mg/ml) solution with 0.5% NaHCO <sub>3</sub> pH-8.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>              | Greater than 99.0% as determined by: (a) Analysis by SEC-HPLC. (b) Analysis by SDS-PAGE.                                                                                                                                                                                                                                                                                                  |
| <b>Bio-activity</b>        | Zebrafish Growth-Hormone is biologically active in PDF-P1 3B9 cells stably transfected with rabbit GH receptors.                                                                                                                                                                                                                                                                          |
| <b>Physical Appearance</b> | Sterile Filtered White lyophilized (freeze-dried) powder.                                                                                                                                                                                                                                                                                                                                 |
| <b>Solubility</b>          | It is recommended to reconstitute the lyophilized Zebrafish Growth-Hormone in 0.4% NaHCO <sub>3</sub> or water adjusted to pH-9, not less than 100g/ml, which can then be further diluted to other aqueous solutions, preferably in a presence of a carrier protein such as BSA or similar.                                                                                               |
| <b>Amino acid sequence</b> | The sequence of the first six N-terminal amino acids was determined and was found to be Ala-Gln-Arg-Leu-Phe-Asn.                                                                                                                                                                                                                                                                          |
| <b>Protein content</b>     | 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. |

## GENE INFORMATION

|                        |                                             |
|------------------------|---------------------------------------------|
| <b>Gene Name</b>       | gh1 growth hormone 1 [ <i>Danio rerio</i> ] |
| <b>Official Symbol</b> | gh1                                         |
| <b>Synonyms</b>        | gh1; ghl; somatotropin; gh                  |
| <b>Gene ID</b>         | 407639                                      |

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|------------------------|---------------------------------------------------------------------|
| <b>mRNA Refseq</b>     | NM_001020492                                                        |
| <b>Protein Refseq</b>  | NP_001018328                                                        |
| <b>UniProt ID</b>      | Q1JQ34                                                              |
| <b>Pathway</b>         | Jak-STAT signaling pathway; Neuroactive ligand-receptor interaction |
| <b>Function</b>        | hormone activity                                                    |
| <b>GrowthHormone 1</b> |                                                                     |

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