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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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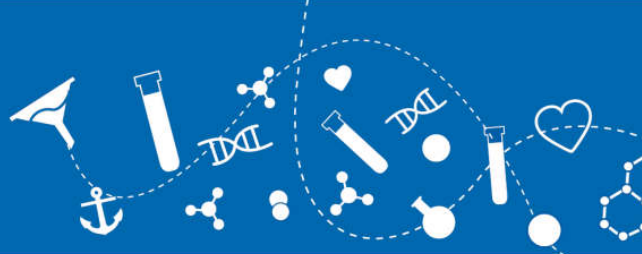
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## Insulin Like Growth Factor-I, denis recombinant (rdIGF-I)

**Catalog No:** 94923  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** Somatomedin C, IGF-I, IGF1

### Background

The somatomedins, or insulin-like growth factors (IGFs), comprise a family of peptides that play important roles in mammalian growth and development. IGF1 mediates many of the growth-promoting effects of growth hormone (GH; MIM 139250). Early studies showed that growth hormone did not directly stimulate the incorporation of sulfate into cartilage, but rather acted through a serum factor, termed 'sulfation factor,' which later became known as 'somatomedin' (Daughaday et al., 1972). Three main somatomedins have been characterized: somatomedin C (IGF1), somatomedin A (IGF2; MIM 147470), and somatomedin B (MIM 193190) (Rotwein, 1986; Rosenfeld, 2003).

### Description

Insulin-Like Growth Factor-I Gilthead Seabream recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 68 amino acids and having a molecular mass of 7545.4 Dalton, the predicted pI=7.72. IGF-1 is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

The protein was lyophilized from a concentrated (1 mg/ml) solution with 0.02% NaHCO<sub>3</sub>.

### Solubility

It is recommended to reconstitute the lyophilized IGF-1 in sterile 0.4% NaHCO<sub>3</sub> adjusted, not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized Insulin-Like Growth Factor-1, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IGF1 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.

### Purity

Greater than 98.0% as determined by (a) Analysis by SEC-HPLC, (b) Analysis by SDS-PAGE.

### Amino Acid Sequence

The sequence of the first ten N-terminal amino acids was determined and was found to be Met-Ser-Pro-Glu-Thr-Leu-Cys-Gly-Ala-Glu.



### Activity

Binding assays of the <sup>125</sup>I-Gealthed Seabream IGF1 to Gilthead Seabream or carp (*Cyprinus carpio*) sera resulted in high specific binding, indicating the existence of one or more IGF-binding proteins. In binding experiments to crude Gilthead Seabream brain homogenate, using human (h) IGF-I as a ligand, the respective IC<sub>50</sub> value of hIGF1 was about fourfold lower than that of Gilthead Seabream IGF-1. Recombinant Gilthead Seabream IGF-1 exhibited mitogenic activity in a mouse mammary gland-derived MME-L1 cell line which was approximately 200-fold lower than that of hIGF1. Binding experiments to intact MME-L1 cells suggests that this difference most likely results from a correspondingly lower affinity for IGF1 receptor in these cells. In contrast, the activities of Gilthead Seabream IGF-I and hIGF-I measured by <sup>35</sup>S uptake by gill arches from the goldfish (*Carassius auratus*) were identical, indicating that the recombinant Gilthead Seabream IGF-I is biologically active.

### Usage

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