
Product Data Sheet

Product Name: IGF1 Gilthead Seabream
 Cat. No.: GP20424
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Somatomedin C; IGF-I; IGF1.		
Amino Acid Sequence	MSPETLCGAELVDTLQFVCGERGFYFSKPGYGNARRSRGIVDECCFQSCELRRLEMYCAPAKTSK		
Solubility	It is recommended to reconstitute the lyophilized IGF-1 in sterile 0.4% NaHCO ₃ adjusted to pH 8-9, not less than 100µg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	The protein was lyophilized from a concentrated (1mg/ml) solution with 0.02% NaHCO ₃ .		

Introduction

The somatomedins, or IGFs, comprise a family of peptides that play important roles in mammalian growth and development. IGF1 mediates many of the growth-promoting effects of GH. Early studies showed that GH 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. Three main somatomedins have been characterized: somatomedin C (IGF1), somatomedin A (IGF2), and somatomedin B.

Biological Activity

Binding assays of the ¹²⁵I-Gilthead 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 IC₅₀ 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 ³⁵S uptake by gill arches from the goldfish (*Carassius auratus*) were identical, indicating that the recombinant Gilthead Seabream IGF-I is biologically active.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Stability

Lyophilized IGF1 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.

Background

IGF1 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 $\text{pI}=7.72$. IGF-1 is purified by proprietary chromatographic techniques.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA