

Rev03  
Update: Dec,14,2021

**DATASHEET**

# IGF-I, Rat

Cat. No.: Z03146

## Product Introduction

<b>Species</b>	Rat
<b>Protein Construction</b>	Expressed with an N-terminal Met. <b>IGF-I (Gly49-Ala118) Accession # P08025</b>
<b>Purity</b>	> 95% as analyzed by SDS-PAGE > 95% as analyzed by HPLC
<b>Endotoxin Level</b>	< 0.2 EU/μg of protein by gel clotting method
<b>Biological Activity</b>	ED <sub>50</sub> < 10.0 ng/ml, measured by a cell proliferation assay using FDCP-1 cells, corresponding to a specific activity of > 1.0 × 10 <sup>5</sup> units/mg.
<b>Expression System</b>	E. coli
<b>Apparent Molecular Weight</b>	~7.8 kDa, on SDS-PAGE under reducing conditions.
<b>Formulation</b>	Lyophilized after extensive dialysis against PBS.
<b>Reconstitution</b>	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH <sub>2</sub> O up to 100 μg/ml.
<b>Storage &amp; Stability</b>	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

## Background

**Target Background :** Insulin-like Growth Factor I (IGF-I) is a single chain 7 kDa growth-promoting polypeptide originally identified as somatomedin-c. It belongs to the IGF family of peptides, which also includes IGF-II and insulin. The gene expression of IGF-I is mainly regulated by Growth Hormone, and IGF-I executes its functions via signaling through transmembrane tyrosine receptors (IGF Receptors). Most circulating IGF-I is associated with the IGF Binding Protein 3 (IGFBP-3), and the IGFBPs may inhibit the actions of IGFs by competing against the IGF Receptors. IGF-I is active in post-natal and adult animals, and is crucial for somatic growth, as IGF-I null mice show marked retardation in utero. IGF-I is involved in the carcinogenesis, and related to the prostate cancer as well.

**Synonyms :** Somatomedin C; IGF-I; IGFI; IGF1; IGF-IA; Mechano growth factor; MGF; Insulin-like Growth Factor-I

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