

# Recombinant Mouse IGF-I Protein

Catalog No.: RP01887 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Mouse	16000	P05017

### Tags

N-hFc

### Synonyms

Igf1; Igf-1; Insulin-like growth factor I; IGF-I; Somatomedin

## Product Information

Source	Purification
HEK293 cells	> 98% by SDS-PAGE.

Calculated MW	Observed MW
33.64 kDa	35-45 kDa

### Endotoxin

<0.01EU/μg of the protein by LAL method.

### Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Background

Insulin-like growth factor I, also known as somatomedin C, is the dominant effector of growth hormone and is structurally homologous to proinsulin. Mouse IGF-I/IGF-1 is synthesized as two precursor isoforms with alternate N- and C-terminal propeptides. These isoforms are differentially expressed by various tissues. The 7.6 kDa mature IGF-I/IGF-1 is identical between isoforms and is generated by proteolytic removal of the N- and C-terminal regions. Mature mouse IGF-I/IGF-1 shares 94% and 99% aa sequence identity with human and rat IGF-I/IGF-1, respectively, and exhibits cross-species activity. It shares 60% aa sequence identity with mature mouse IGF-II/IGF-2. Circulating IGF-I/IGF-1 is produced by hepatocytes, while local IGF-I is produced by many other tissues in which it has paracrine effects. IGF-I induces the proliferation, migration, and differentiation of a wide variety of cell types during development and postnatally. IGF-I regulates glucose and fatty acid metabolism, steroid hormone activity, and cartilage and bone metabolism. It plays an important role in muscle regeneration and tumor progression. IGF-I binds IGF-I R, IGF-II R, and the insulin receptor, although its effects are mediated primarily by IGF-I R. IGF-I association with IGF binding proteins increases its plasma half-life and modulates its interactions with receptors.

## Basic Information

### Description

Recombinant Mouse IGF-I Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gly49-Ala118) of Mouse IGF-I (Accession #NP\_001104745.1) fused with a hFc tag at the N-terminus.

### Bio-Activity

#### Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

## Contact

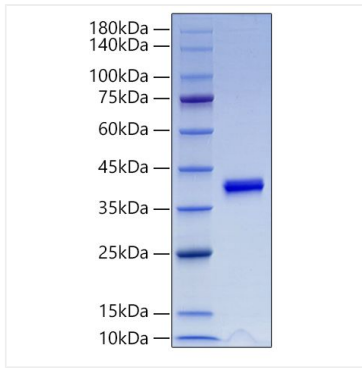
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## Validation Data

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Recombinant Mouse IGF-I Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 35-45 kDa.