

**Catalog No.: RP01859** **Recombinant**

Species	Gene ID	Swiss Prot
Mouse	16000	P05017

C-hFc

Insulin-like growth factor I; IGF-I;  
Somatomedin Iqf1; Iqf-1

<b>Source</b>	<b>Purification</b>
HEK293 cells	≥ 90% as determined by SDS-PAGE.

Calculated MW	Observed MW
33.64 kDa	35-40 kDa

< 0.1 EU/μg of the protein by LAL method.

Lyophilized from a 0.22  $\mu\text{m}$  filtered solution of PBS, pH 7.4.

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.

IGF1 (Insulin-like growth factor-1) is structurally and functionally related to insulin but has a much higher growth-promoting activity. A variety of cellular responses are induced by IGF1, including cell proliferation, differentiation, migration, and survival. Further, IGF1 is a polypeptide growth factor that stimulates the proliferation of a wide range of cell types in muscle, bone, and cartilage tissue. IGF1 stimulates glucose transport in rat bone-derived osteoblastic (PyMS) cells and is effective at much lower concentrations than insulin, not only regarding glycogen and DNA synthesis but also with regards to enhancing glucose uptake. In circulation, IGFs are predominantly bound to binding proteins (IGFBPs) which prolong the half-life of the IGFs and play a role in delivering them to target tissues. IGF-I is known as one of the most potent activators of the AKT signaling pathway which is known to be a stimulator of proliferation and an inhibitor of programmed cell death. Moreover, mature human IGF-I is 100% homologous with bovine and porcine proteins. Low levels of IGF1 have been linked to Alzheimer's disease. IGF1 is processed from a precursor, bound by a specific receptor, and secreted. Defects in the IGF1 gene are a cause of insulin-like growth factor 1 deficiency and several transcript variants encoding different isoforms have been found.

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 C-terminus.

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.

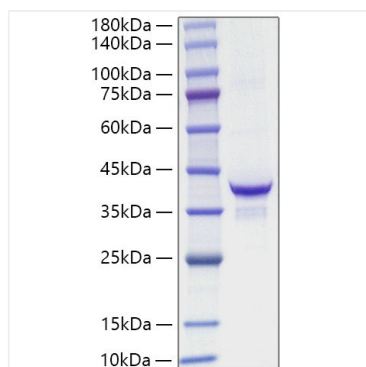
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## Validation Data

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Recombinant Mouse IGF-I Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.