

Recombinant Mouse IGF-I Protein

Catalog No.: RP01887

Sequence Information

Species	Gene ID
Mouse	16000
Swiss Prot	Tags
P05017	N-hFc

Synonyms

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

Product Information

Source	Purification
HEK293 cells	≥ 95 % as determined by SDS-PAGE.

Calculated MW Observed MW

33.64 kDa 35-45 kDa

Endotoxin

< 0.01 EU/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.

Activity

Shipping

Lyophilized proteins are shipped at ambient temperature. Liquid proteins are shipped at frozen temperature with dry ice. Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

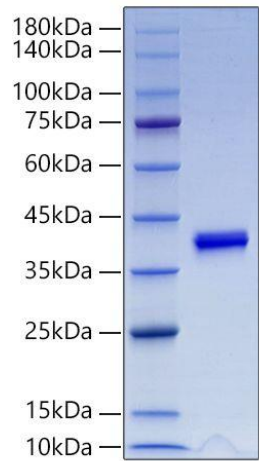
Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

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Validation Data



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