

Recombinant Mouse IGF-II Protein

Catalog No.: RP01881

Sequence Information

Species	Gene ID
Mouse	16002
Swiss Prot	Tags
P09535	C-hFc

Synonyms

C11orf43; chromosome 11 open reading frame 43; FLJ22066; FLJ44734; GRDF; IGF2; IGF-2; IGFII; IGF-II; insulin-like growth factor 2 (somatomedin A); insulin-like growth factor II; insulin-like growth factor type 2; MSA; PEG2; PP974; somatomedin-A

Product Information

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

Calculated MW	Observed MW
33.35 kDa	35-45kDa

Endotoxin

< 0.1 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

IGF-II (Insulin-like growth factor II; also multiplication-stimulating polypeptide /MSP and somatomedin-A) is a secreted 8 kDa polypeptide that belongs to the insulin family of peptide growth factors. It is part of a complex system of growth and metabolic-regulating proteins that is particularly important during development. It has been associated with nervous system proliferation and differentiation, myelination, adrenal cortical proliferation, and skeletal growth and differentiation. In human, IGF-II is primarily synthesized by the liver, and circulates at high levels in both fetus and adult. In rodent, however, IGF-II levels drop after the perinatal period, an effect attributed to the lack of a key gene promoter. This may indicate that postnatally, IGF-II has either a limited, or local effect only in rodent. For example, evidence suggests IGF-II may be the intermediary for SHH induction of VEGF attendant with local neovascularization. Rodent cells known to express IGF-II include astrocytes, hepatocytes, osteoblasts, embryonic striated muscle cells plus Kupffer cells and Ito cells. Mouse IGF-II is synthesized as a 180 amino acid (aa) preproprecursor. It contains a 24 aa signal sequence, a 67 aa mature region, and an 89 aa C-terminal prodomain that is alternatively referred to as the E-peptide. Mature IGF-II is 91% and 97% aa identical to human and rat IGF-II, respectively. Proper processing of IGF-II requires the chaperone activity of GRP94. This generates an 8 kDa mature form, an 18 kDa, 156 aa proform, and a potential 11 kDa, 88 aa "Big" form (aa 25-112). This 11 kDa "Big" form would be equivalent to human 15-16 kDa IGF-II, with the 5 kDa difference attributable to the presence of O-linked glycosylation. There is an additional 34 aa proteolytic fragment that is termed preptin and contains aa 93-126 of the preproprecursor. This is distinct from IGF-II, is secreted by pancreatic b cells, and facilitates insulin secretion. IGF-II has multiple binding partners. It binds to IGF-IR, the Insulin receptor (IR)-type A and IGF-IR:IR-A hybrids, the type 2 IGF receptor (IGF-2R), and IGF binding proteins 1-6. The first three receptors initiate downstream signaling events, the IGF-2R sequesters local IGF-II, and the six IGFBPs regulate IGF-II activity in various tissues.

Basic Information

Description

Recombinant Mouse IGF-II Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Ala25-Glu91) of Mouse IGF-II (Accession #NP_001116208.1) fused with a hFc at the C-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

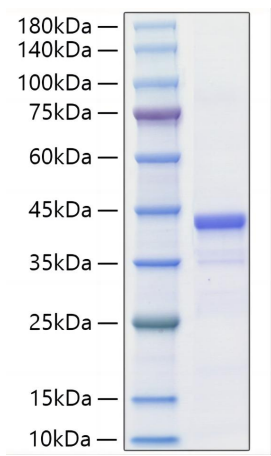
Operational Notes

Contact

		400-999-6126
		cn.market@abclonal.com.cn
		www.abclonal.com.cn

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

Validation Data



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