Data Sheet (Cat.No.TMPS-00175)

TargetMol

IGF1/IGF-I Protein, Mouse, Recombinant (E. coli)

General Information

Synonyms:	IGF-I;IGF1;MGF;IGFI;IGF-IA;Somatomedin C;Insulin-like Growth Factor-I;Mechano growth factor
Protein Construction:	Gly49-Ala118
Species:	Mouse
Expression Host:	E. coli
Accession:	P05017
Molecular Weight:	~7.8 kDa (Reducing conditions)

QC Testing

Biological Activity:	ED 50 < 10.0 ng/ml, measured by a cell proliferation assay using FDC-P1 cells, corresponding to a specific activity of > 1.0 × 10 5 units/mg.
Purity:	> 95% as determined by SDS-PAGE
Endotoxin:	< 0.2 EU/μg of protein as determined by the LAL method.
Formulation:	Lyophilized from a 0.2 μm filtered solution in PBS.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

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.

Shipping:

In general, Lyophilized powders are shipping with blue ice. Solutions are shipping with dry ice.

Protein 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 IFG-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 carcinogenesis, and related to prostate cancer as well.

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