Data Sheet (Cat.No.TMPS-00170)

TargetMol

IGF2/IGF-II Protein, Human, Recombinant (E. coli)

General Information

Synonyms:	Somatamedin A;Insulin-like Growth Factor-II
Protein Construction:	Ala25-Glu91
Species:	Human
Expression Host:	E. coli
Accession:	P01344-1
Molecular Weight:	~7.6 kDa (Reducing conditions)

QC Testing

Biological Activity:	ED 50 < 20.0 ng/ml, measured by a cell proliferation assay using FDCP-1 cells, corresponding to a specific activity of > 5.0 × 10 4 units/mg.
Purity:	> 95% as determined by SDS-PAGE; > 95% as determined by HPLC
Endotoxin:	< 0.2 EU/μg of protein as determined by the LAL method.
Formulation:	Lyophilized after extensive dialysis against 25 mM Tris, pH 8.0.

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.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Insulin-like Growth Factor II (IGF-II) is a single chain 7 kDa polypeptide, and shares a high degree of homology with insulin. During circulation in vivo, IGF-II is complexed to high affinity binding proteins, IGF Binding Proteins (IGFBP), which act as circulating reservoirs, transport IGF-II, and prolong the half life of IGF-II. The receptors of IGF-II (IGFRs) are transmembrane tyrosine receptors, and are heterotetrameric consisting of two α-subunits and two β-subunits. IGFRs execute their role via intracellullar signaling molecules, such as IRS, shc, and PI3K. The functions of IGF-II include promoting cell survival, growth, proliferation, differentiation and motility. In particular, IGF-II promotes proliferation, inhibits death, and stimulates transformation in breast cancer cells.

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