DATASHEET
Version 20181206

IGF-I, Rat

Cat. No.: Z03146-1

Size: 1.0 mg

Synonyms: Somatomedin C, IGF-I, IGFIA, IGF1

Description:

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 the carcinogenesis, and related to the prostate cancer as well. Recombinant rat Insulin-like Growth Factor I (rrIGF-I) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 71 amino acids. A fully biologically active molecule, rrIGF-I has a molecular mass of 7.8 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

Amino Acid Sequence:

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00001 MGPETLCGAE LVDALQFVCG PRGFYFNKPT GYGSSIRRAP
00041 QTGIVDECCF RSCDLRRLEM YCAPLKPTKS A
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Source: *E. coli*

Species: Rat

Biological Activity: ED_{50} < 10 ng/mL, measured by a cell proliferation assay using FDCP-1 cells, corresponding to a specific activity of > 1×10^5 units/mg.

Molecular Weight: 7.8 kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH_2O at 100 µg/mL.

Purity: > 95% as analyzed by SDS-PAGE and HPLC.

Endotoxin Level: < 0.2 EU/µg, determined by LAL method.

Storage: Lyophilized recombinant rat Insulin-like Growth Factor I (rrIGF-I) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rrIGF-I remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.

GenScript USA, Inc.
860 Centennial Ave. Piscataway, NJ 08854
Tel: 1-877-436-7274; 1-732-885-9188