

DATASHEET
Version 20181206**IGF-I, Human****Cat. No.:** Z03017-50**Size:** 50.0 ug**Synonyms:** IGF-IA; Somatamedin C**Description:**

Insulin-like growth factor I (IGF-I) also known as Somatamedin C is a hormone similar in molecular structure to insulin. Human IGF-I has two isoforms (IGF-IA and IGF-IB) which is differentially expressed by various tissues. Mature human IGF-I respectively shares 94% and 96% aa sequence identity with mouse and rat IGF-I. Both IGF-I and IGF-II (another ligand of IGF) can signal through the IGF-I receptor (IGFIR), but IGF-II can alone bind the IGF-II receptor (IGFIIR/Mannose-6-phosphate receptor). IGF-I plays an important role in childhood growth and continues to have anabolic effects in adults.

Recombinant human Insulin-like growth factor I (rhIGF-I) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 70 amino acids. A fully biologically active molecule, rhIGF-I has a molecular mass of 7.7 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

Amino Acid Sequence:

00001 GPETLCGAEL VDALQFVCGD RGFYFNKPTG YGSSRRAPQ
00041 TGIVDECCFR SCDLRRLEMY CAPLKPAKSA

Source: *E. coli***Species:** Human**Biological Activity:** ED₅₀ < 5 ng/ml, measured by a cell proliferation assay using FDC-P1 cells, corresponding to a specific activity of > 2.0 × 10⁵ units/mg.**Molecular Weight:** 7.7 kDa, observed by reducing SDS-PAGE.**Formulation:** Lyophilized after extensive dialysis against PBS.**Reconstitution:** Reconstituted in ddH₂O at 100 µg/ml.**Purity:** > 95% by SDS-PAGE and HPLC analyses.**Endotoxin Level:** < 0.2 EU/µg, determined by LAL method.**Storage:** Lyophilized recombinant human Insulin-like growth factor I (rhIGF-I) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhIGF-I should be stable up to 2 weeks at 4°C or up to 3 months at -20°C.