

DATASHEET
Version 20181206**IGF-I, Mouse****Cat. No.:** Z03178-1**Size:** 1.0 mg**Synonyms:** Insulin-like Growth Factor-I, Somatomedin C, IGF-IA**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 IGF-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. Recombinant mouse Insulin-like Growth Factor I (rmIGF-I) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 71 amino acids. A fully biologically active molecule, rmIGF-I has a molecular mass of 7.8kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

Amino Acid Sequence:

00001 MGPETLCGAE LVDALQFVCG PRGFYFNKPT GYGSSIRRAP
00041 QTGIVDECCF RSCDLRRLEM YCAPLKPTKA A

Source: *E. coli***Species:** Mouse**Biological Activity:** ED₅₀ <10ng/mL, measured by a cell proliferation assay using FDC-P1 cells, corresponding to a specific activity of >1×10⁵ units/mg.**Molecular Weight:** 7.8 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 analysis.**Endotoxin Level:** < 0.2 EU/µg, determined by LAL method.**Storage:** Lyophilized recombinant mouse Insulin-like Growth Factor I (rmIGF-I) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rmIGF-I remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.