

Overview

Synonyms	Somatomedin C, IGF-I, IGFA, IGF1
Description	<p>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 the carcinogenesis, and related to the prostate cancer as well.</p> <p>Recombinant rat Insulin-like Growth Factor I (rrIGF-I) produced in <i>E. coli</i> 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.</p>
Accession No	P08025
Species	Rat
Source	<i>E. coli</i>
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.
Sequence	MGPETLCGAE LVDALQFVCG PRGFYFNKPT GYGSSIRRAP QTGIVDECCF RSCDLRRLEM YCAPLKPTKS A

Properties

Measured Molecular Weight	7.8 kDa, observed by reducing SDS-PAGE.
Purity	> 95% as analyzed by SDS-PAGE and HPLC.
Formulation	Lyophilized after extensive dialysis against PBS.
Reconstitution	Reconstituted in ddH ₂ O at 100 µg/mL.
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.
Note	For research use only

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