

Overview

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 <i>E. coli</i> 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.
Accession No	P05019
Species	Human
Source	<i>E. coli</i>
Biological Activity	ED ₅₀ < 5 ng/ml, measured by a cell proliferation assay using FDC-P1 cells, corresponding to a specific activity of > 2.0× 10 ⁵ units/mg.
Sequence	GPETLCGAEL VDALQFVCGD RGFYFNKPTG YGSSSRRAPO TGIVDECCFR SCDLRRLEMY CAPLKPAKSA

Properties

Measured Molecular Weight	7.7 kDa, observed by reducing SDS-PAGE.
Purity	> 95% by SDS-PAGE and HPLC analyses.
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 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.
Note	For research use only

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