

Active Recombinant Rat Igf1 Protein (71 aa)

Cat. No. Igf1-374I **Lot. No.** (See product label)

SPECIFICATION

Product Overview	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.
Species	Rat
Source	E.coli
ProteinLength	71
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.
Form	Sterile Filtered White lyophilized (freeze-dried) powder.
Bio-activity	ED50 < 10 ng/mL, measured by a cell proliferation assay using FDCP-1 cells,

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corresponding to a specific activity of $> 1 \times 10^5$ units/mg.

Molecular Mass	7.8 kDa, observed by reducing SDS-PAGE.
AA Sequence	MGPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLR RLEMYCAPLKPTKSA
Endotoxin	< 0.2 EU/μg, determined by LAL method.
Purity	> 95% as analyzed by SDS-PAGE and HPLC.
Storage	Lyophilized recombinant rat Insulin-like Growth Factor I (rrIGF-I) remains stable up to 6 months at -80 centigrade from date of receipt. Upon reconstitution, rrIGF-I remains stable up to 2 weeks at 4 centigrade or up to 3 months at -20 centigrade.
Storage Buffer	Lyophilized after extensive dialysis against PBS.
Reconstitution	Reconstituted in ddH ₂ O at 100 μg/mL.

GENE INFORMATION

Gene Name	Igf1 insulin-like growth factor 1 [Rattus norvegicus]
Official Symbol	Igf1
Synonyms	IGF1; insulin-like growth factor 1; insulin-like growth factor I; IGF-I; somatomedin;
Gene ID	24482
mRNA Refseq	NM_001082477

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Protein Refseq	NP_001075946
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UniProt ID	P08025
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