

Overview

Synonyms	Insulin-like Growth Factor-II, Somatamedin A
Description	Insulin-like Growth Factor II (IGF-II) is a single chain 7 kDa polypeptide, and shares a high degree of homology with insulin. During circulation in vivo, IGF-II is complexed to high affinity binding proteins, IGF Binding Proteins (IGFBP), which act as circulating reservoirs, transport IGF-II, and prolong the half life of IGF-II. The receptors of IGF-II (IGFRs) are transmembrane tyrosine receptors, and are heterotetrameric consisting of two \pm -subunits and two 2 -subunits. IGFRs execute their role via intracellular signaling molecules, such as IRS, shc, and PI3K. The functions of IGF-II include promoting cell survival, growth, proliferation, differentiation and motility. In particular, IGF-II promotes proliferation, inhibits death, and stimulates transformation in breast cancer cells. Recombinant human Insulin-like Growth Factor II (rhIGF-II) produced in <i>E. coli</i> is a single non-glycosylated polypeptide chain containing 68 amino acids. A fully biologically active molecule, rhIGF-II has a molecular mass of 7.6 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques.
Accession No	P01344
Species	Human
Source	<i>E. coli</i>
Biological Activity	ED ₅₀ < 20 ng/mL, measured by a cell proliferation assay using FDCP-1 cells, corresponding to a specific activity of > 5×10 ⁴ units/mg.
Sequence	MAYRPSETLC GGELVDTLQF VCGDRGFYFS RPASRVSRRS RGIVEECCFR SCDLALLETY CATPAKSE

Properties

Measured Molecular Weight	7.6 kDa, observed by reducing SDS-PAGE.
Purity	> 95% as analyzed by SDS-PAGE and HPLC.
Formulation	Lyophilized after extensive dialysis against 25mM Tris, pH8.0.
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 II (rhIGF-II) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhIGF-II 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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