

## IGF-II, Human

**Cat. No.:** Z03147-1

**Size:** 1.0 mg

**Synonyms:** Insulin-like Growth Factor-II, Somatomedin 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  $\alpha$ -subunits and two  $\beta$ -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 *E. coli* 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 at GenScript.

**Amino Acid Sequence:**

00001 MAYRPSETLC GGELVDTLQF VCGDRGFYFS RPASRVSRRS  
00041 RGIVEECCFR SCDLALLETY CATPAKSE

**Source:** *E. coli*

**Species:** Human

**Biological Activity:** ED<sub>50</sub> < 20 ng/mL, measured by a cell proliferation assay using FDCP-1 cells, corresponding to a specific activity of > 5×10<sup>4</sup> units/mg.

**Molecular Weight:** 7.6 kDa, observed by reducing SDS-PAGE.

**Formulation:** Lyophilized after extensive dialysis against 25mM Tris, pH8.0.

**Reconstitution:** Reconstituted in ddH<sub>2</sub>O at 100  $\mu$ g/mL.

**Purity:** > 95% as analyzed by SDS-PAGE and HPLC.

**Endotoxin Level:** < 0.2 EU/ $\mu$ g, 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.