

## LR<sup>3</sup>-IGF-I (Receptor Grade), Human

**Cat. No.:** Z03177-100

**Size:** 100.0 ug

**Synonyms:** Human LR<sup>3</sup> Insulin-like Growth Factor-I (LR<sup>3</sup>-IGF-I) (Receptor Grade)

### Description:

IGF-1 is a well-characterized basic peptide secreted by the liver that circulates in the blood. It has growth-regulating, insulin-like, mitogenic activities. IGF-1 is a growth factor that has a major, but not absolute, dependence on somatotropin. It is believed to be mainly active in adults in contrast to IGF-2, which is also a major fetal growth factor.

Human Long R<sup>3</sup> Insulin-like Growth Factor-1 (rhLR<sup>3</sup>IGF-1) contains an 83 amino acid analog of human IGF-I. Compared to the complete human IGF-I sequence, an addition of the rhLR<sup>3</sup>IGF-1 includes the substitution of an Arg for the Glu at position 3 (hence R<sup>3</sup>) and a 13 amino acid extension peptide at the N-terminus. An enhanced potency is due to the markedly decreased binding of human Long-R<sup>3</sup>-IGF-I to IGF binding proteins which normally inhibit the biological actions of IGFs. RhLR<sup>3</sup>IGF-1 is properly folded under oxidizing conditions and then purified by proprietary chromatographic techniques at GenScript.

### Amino Acid Sequence:

00001 MFPAMPLSSL FVNGPRTLGG AELVDALQFV CGDRGFYFNK  
00041 PTGYGSSRRR APQTGIVDEC CFRSCDLRRL EMYCAPLKPA  
00081 KSA

**Source:** *E. coli*

**Species:** Human

**Biological Activity:** ED<sub>50</sub> □ 10 ng/ml, measured by the dose-dependant proliferation of CHO cells, corresponding to a specific activity of >1.0 × 10<sup>5</sup> units/mg.

**Molecular Weight:** 9.1 ± 0.9 KDa, observed by reducing SDS-PAGE.

**Formulation:** Lyophilized after dissolved in 48% acetonitrile and 0.1% TFA

**Reconstitution:** Reconstituted in 10mM HCl at 1mg/ml. Use a 0.22 μm membrane for filter Sterilization.

**Purity:** > 95% by SDS-PAGE.

**Endotoxin Level:** □ 1 EU/μg, determined by LAL method.

**Storage:** Lyophilized recombinant human Long R<sup>3</sup> Insulin-like Growth Factor-1 (rhLR<sup>3</sup> IGF-1) remains stable up to 6 months at lower than -70°C from date of receipt. Stock solution of peptide can be stored at least 3 months at -20°C. Avoid repeated freeze-thaw cycles.