

## 32-20188: Animal-Free Recombinant Human IGF-I LR3(Discontinued)

**Reactivity :** Mouse

**Alternative Name :** Long R3 IGF-I, Insulin-like Growth Factor-I, Somatamedin C, IGF-IA

### Description

**Source:** **E.coli** The IGFs are mitogenic, polypeptide growth factors that stimulate the proliferation and survival of various cell types, including muscle, bone, and cartilage tissue in vitro. IGFs are predominantly produced by the liver, although a variety of tissues produce the IGFs at distinctive times. The IGFs belong to the Insulin gene family, which also contains insulin and relaxin. The IGFs are similar to insulin by structure and function, but have a much higher growth-promoting activity than insulin. IGF-II expression is influenced by placenta lactogen, while IGF-I expression is regulated by growth hormone. Both IGF-I and IGF-II signal through the tyrosine kinase type I receptor (IGF-IR), but IGF-II can also signal through the IGF-II/Mannose-6-phosphate receptor. Mature IGFs are generated by proteolytic processing of inactive precursor proteins, which contain N-terminal and C-terminal propeptide regions. Recombinant human IGF-I and IGF-II are globular proteins containing 70 and 67 amino acids, respectively, and 3 intra-molecular disulfide bonds. IGF-I LR3 is a recombinant analog of human IGF-I comprised of the complete IGF-I sequence, with an Arginine substitution for the third position Glutamic acid, and a 13 amino acid length N terminus peptide extension. Specifically engineered for higher biological potency in vitro, IGF-I LR3 has an increased half-life and a binding aversion to native proteins within the body that make it ideal for both research and large-scale culturing. Recombinant Human IGF-I LR3 is a 9.1 kDa, single, non-glycosylated polypeptide chain containing 83 amino acid residues.

### Product Info

**Amount :** 200 µg / 1mg

**Purification :** Purity:  $\geq 98\%$  by SDS-PAGE gel and HPLC analyses.

**Content :** This recombinant protein is supplied in lyophilized form.

**Amino Acid :** MFPAMPLSSL FVNGPRTL CG AELVDALQFV CGDRGFYFNK PTGYGSSSR R APQTGIVDEC CFRSCDLRRL  
EMYCAPLKPA KSA

### Application Note

The  $ED_{50}$  was determined by a cell proliferation assay using FDC-P1 cells is  $\leq 2.0$  ng/ml, corresponding to a specific activity of  $\geq 5 \times 10^5$  units/mg.