Recombinant Human IGF-I
Catalog # C032
Derived from E.coli

DESCRIPTION
Recombinant Human Insulin-like Growth Factor I is produced by our E.coli expression system and the target gene encoding Gly49-Ala118 is expressed.

Accession #: P05019
Known as: Insulin-Like Growth Factor I; IGF-I; Mechano Growth Factor; MGF; Somatomedin-C; IGF1; IBP1

FORMULATION
Lyophilized from a 0.2 μm filtered solution of 300mM NaAc, pH 6.5.

SHIPPING
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.

STORAGE
Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

RECONSTITUTION
Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100μg/ml. Dissolve the lyophilized protein in distilled water. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

QUALITY CONTROL
Purity: Greater than 95% as determined by reducing SDS-PAGE.
Endotoxin: Less than 0.1 ng/μg (1 IEU/μg).

AMINO ACID SEQUENCE
GPETLCGAEVLADLQFVCGRGFYFNKPTGYGSSSRRAPQTVGEDECCFRSCDLRRLEMYCAPLKPAA

BACKGROUND
Insulin-like growth factor I (IGF1) belongs to the family of insulin-like growth factors that are structurally homologous to proinsulin. Mature IGFs are generated by proteolytic processing of inactive precursor proteins, which contains the N- and C-terminal propeptide regions. Mature human IGF-I consisting of 70 amino acids has 94% identity with mouse IGF-I and exhibits cross-species activity. IGF-1 binds IGF-IR, IGF-IIR, and the insulin receptor and plays a key role in cell cycle progression, cell proliferation and tumor progression. IGF-1 expression is regulated by growth hormone. R3 IGF-1 is an 83 amino acid analog of IGF-1 comprising the complete human IGF-1 sequence with the substitution of an Arg (R) for the Glu(E) at position three, hence R3, and a 13 amino acid extension peptide at the N terminus. R3 IGF-1 has been produced with the purpose of increasing biological activity. R3 IGF-1 is significantly more potent than human IGF-I in vitro.