IGF-I Human E. coli

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Human
Other names: Insulin-like Growth Factor-I, Somatamedin C, IGF-IA

Cat. No.:

RBG101860020	(20u µg)
RBG101860100	(100 µg)
RBG101861000	(1mg)

Description

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. The calculated molecular weight of Recombinant Human IGF-I is 7.6 kDa.

Research topic

Bone and cartilage metabolism, Cardiovascular disease, Coronary artery disease, Diabetology - Other Relevant Products

Amino Acid Sequence

GPETLCGAEL VDALQFVCGD RGFYFNKPTG YGSSSRRAPQ TGIVDECCFR SCDLRRLEMY CAPLKPAKSA

Source

E. coli

Purity

98%

Biological Activity

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

Endotoxin

Endotoxin level is <0.1 ng/µg of protein (<1EU/µg).

Reconstitution

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

Storage, Stability/Shelf Life

-20°C

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