Recombinant human IGF-1 protein

Catalog Number: IGF0501

PRODUCT INFORMATION

Expression system
E.coli

Domain
49-118aa

UniProt No.
P05019

NCBI Accession No.
NP_000609.1

Alternative Names
IBP1, IGF-1, IGFI, IGF-IA, IGF-IB, Insulin like growth factor 1 (somatomedin C), Insulin like growth factor IA, Insulin like growth factor IB, Insulin-like growth factor-1 IGF IA, Mechano growth factor, MGF, Somatomedin C

PRODUCT SPECIFICATION

Molecular Weight
7.7 kDa (71aa) confirmed by MALDI-TOF

Concentration
1mg/ml (determined by Bradford assay)

Formulation
Liquid in. Phosphate-Buffered Saline (pH 7.4)

Purity
> 95% by SDS-PAGE

Endotoxin level
< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity
Measured in a cell proliferation assay using MCF-7 human breast cancer cells. The ED50 range ≤ 5ng/ml.

Tag
Non-Tagged

Application
SDS-PAGE, Bioactivity

Storage Condition
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Recombinant human IGF-1 protein

Catalog Number: IGF0501

Description

The Insulin-like growth factor-1 (IGF-1) is mitogenic polypeptide growth factors that stimulate the proliferation and survival of various cell types including muscle, bone, and cartilage tissue in vitro. IGF-1 is predominantly produced by the liver, although a variety of tissues produce the IGFs at distinctive times. The IGF-1 belongs to the insulin gene family, which also contains insulin and relaxin. The IGF-1 is similar by structure and function to insulin, but have a much higher growth-promoting activity than insulin. This recombinant human IGF-I is globular protein containing 70 amino acids, and 3 intra-molecular disulfide bonds. Recombinant IGF-1 was expressed in E. coli and purified by conventional chromatography, after refolding of the isolated inclusion bodies in a renaturation buffer.

Amino acid Sequence

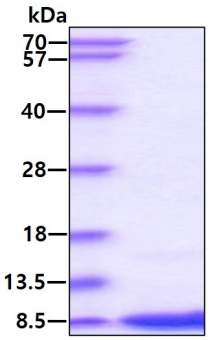
MGPETLCGAE LVDALQFVCG DRGFYFNKPT GYGSSSRRAP QTGIVDECCF RSCDLRRLEM YCAPLKPAKS A

General References

Rinderknecht E., et al (1978) J Biol.Chem, 253: 2769.
Zumstein P., et al (1987) J Biol. Chem, 262: 11252.
Rabinovsky ED (2004) Neurol Res, 26: 204-210

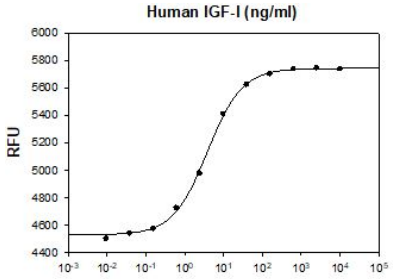
DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

Biological Activity



Human IGF-I stimulates cell proliferation of the MCF-7 human breast cancer cells. The ED50 range ≤ 5 ng/ml.