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Recombinant Human LR3-IGF-1(E51R) Protein

Catalog No.: RP00825 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Human	3479	P05019

Tags
NO-Tag

Synonyms
IGF1; IBP1; IGF-1;Insulin-like growth factor 1; Insulin-like growth factor I; IGF-I; Mechano growth factor; MGF; Somatomedin-C

Product Information

Source	Purification
E. coli	≥ 95 % as determined by SDS-PAGE.

Calculated MW	Observed MW
9.12 kDa	10-15 kDa

Endotoxin
< 1 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

Long R3 IGF-1 (LR3 IGF-1) is a synthetic analog of IGF-1 that is generated by modifying the AA sequence for mature human IGF-1. These modifications include the substitution of an Arg for Glu at position three of the mature IGF-1 sequence and the addition of a thirteen aa N-terminal extension, which is derived from methionyl porcine Growth Hormone. These aa changes generate a protein that is still capable of binding to IGF-1 and Insulin receptors, but shows considerably lower affinity binding to IGFBPs compared to wild-type IGF-1. As a result, LR3 IGF-1 has an increased half-life and displays increased biological potency compared to IGF-1.

Basic Information

Description
Recombinant Human LR3-IGF-1(E51R) Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Gly49-Ala118) of human IGF-1 (Accession #P05019) with the substitution of an Arg for Glu at position three and the addition of a thirteen aa N-terminal extension.

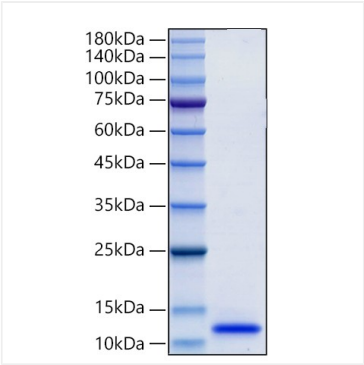
Bio-Activity
1□Measured in a cell proliferation assay using FDC-P1 cells. The ED_{50} for this effect is 9.85-39.4 ng/mL, corresponding to a specific activity of 2.54×10^{4}~1.01×10^{5} units/mg.

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

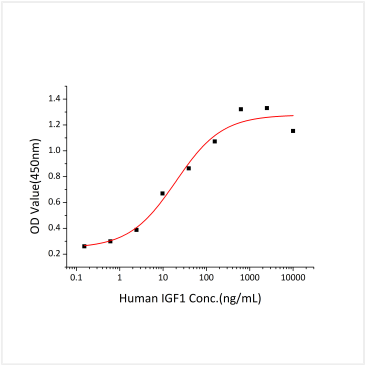
Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Validation Data



Recombinant Human LR3-IGF-1(E51R) Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



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