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Recombinant Human IGF-I Protein

Catalog No.: RP00996 Recombinant 1 Publications

Sequence Information

Species	Gene ID	Swiss Prot
Human	3479	P05019-1

Tags
C-hFc&His

Synonyms
IGF1;IGF-I;IGFI;MGF; IGFI; MGF

Product Information

Source	Purification
HEK293 cells	≥ 85 % as determined by SDS-PAGE.

Calculated MW	Observed MW
34.44 kDa	41 kDa

Endotoxin
< 0.1 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.Contact us for customized product form or formulation.

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.

Contact

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Background

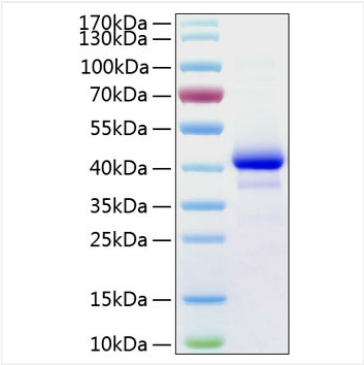
Basic Information

Description
Recombinant Human IGF-I Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gly 49 - Ala 118) of human IGF1 (Accession #NP_001104755.1) fused with an Fc, 6×His tag at the C-terminus.

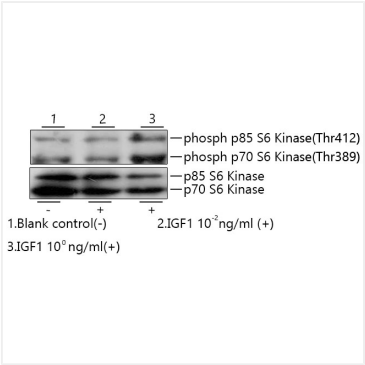
Bio-Activity
1.Measured by its ability to stimulate p70 S6 Kinase(Thr389) and p85 S6 Kinase(Thr412) autophosphorylation in 293T human embryonic kidney cells. 0.01-1 ng/mL of Recombinant Human IGF1 can effectively enhance p70 S6 Kinase(Thr389) and p85 S6 Kinase(Thr412) autophosphorylation.|2.Measured by its binding ability in a functional ELISA. Immobilized recombinant human IGFBP6 at 1 μg/mL (100 μL/well) can bind recombinant human IGF1 with a linear range of 30-250 ng/mL. 3.Measured in a cell proliferation assay using MCF-7 cells. The ED_{50} for this effect is typically 7.5-30 ng/mL, corresponding to a specific activity of 3.33×10^{4}-1.33×10^{5}units/mg.

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.

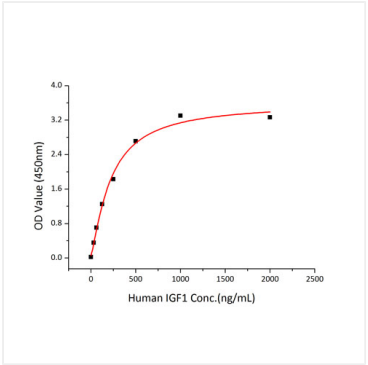
Validation Data



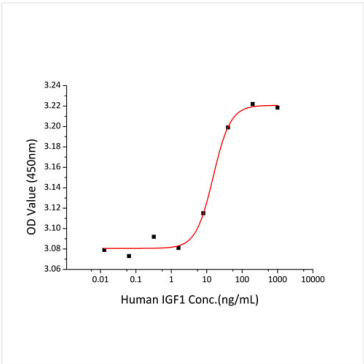
Recombinant Human IGF-I Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



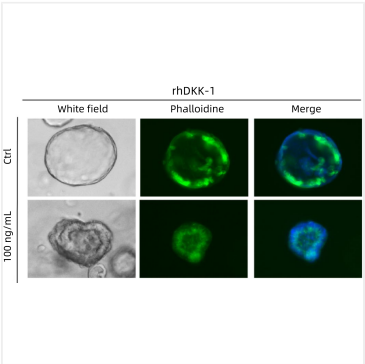
Recombinant Human IGF1 enhances p70S6 Kinase(Thr389) and p85 S6 Kinase(Thr412) autophosphorylation in 293T human embryonic kidney cells.0.01-1ng/mL of Recombinant Human IGF1 can effectively enhance p70S6 Kinase(Thr389) and p85 S6 Kinase(Thr412) autophosphorylation.



Measured by its binding ability in a functional ELISA. Immobilized recombinant human IGFBP6 at 1μg/mL (100 μL/well) can bind recombinant human IGF1 with a linear range of 30-250ng/mL.



Recombinant Human IGF1 promotes the proliferation of MCF-7 cells. The ED_{50} for this effect is typically 7.5-30 ng/mL.



Human kidney organoids were cultured with EGF(Cat. RP03287), FGF2(Cat. RP01042), FGF7(Cat. RP01717), FGF9(Cat. RP01710), FGF10(Cat. RP01140), IGF-(Cat. RP00996), NOG(Cat. RP01237), RSPO1(Cat. RP00071), WNT-3a(Cat. RP01618SLQ). And further, DKK-1(RP01343) was used to induce the establishment of cell polarity.