

Recombinant Human Hepatocyte growth factor/HGF Protein

Catalog No.: RP01602 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	3082	P14210

Tags

C-His

Synonyms

HGF;DFNB39;F-TCF;HGFB;HPTA;SF

Background

Hepatocyte growth factor/scatter factor (HGF/SF) is a paracrine cellular growth, motility and morphogenic factor. It belongs to the peptidase S1 family and Plasminogen subfamily, contains 4 kringle domains, 1 PAND domain and 1 peptidase S1 domain. HGF regulates cell growth, cell motility, and morphogenesis by activating a tyrosine kinase signaling cascade after binding to the proto-oncogenic c-Met receptor. HGF is secreted by mesenchymal cells and acts as a multi-functional cytokine on cells of mainly epithelial origin. Its ability to stimulate mitogenesis, cell motility, and matrix invasion gives it a central role in angiogenesis, tumorigenesis, and tissue regeneration.

Basic Information

Description

Recombinant Human Hepatocyte growth factor/HGF Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gln32-Ser728) of human Hepatocyte growth factor/HGF (Accession #NP_000592.3) fused with His tag at the C-terminus.

Bio-Activity

1. Measured by its ability to induce IL-11 secretion by Saos-2 human osteosarcoma cells. Hjertner, O. et al. (1999) Blood 94:3883. The ED₅₀ for this effect is 2.23-8.91 ng/mL, corresponding to a specific activity of 1.12×10⁵-4.48×10⁵ units/mg. 2. Measured by its ability to inhibit TGFβ1 activity on Mv-1-lu mink lung epithelial cells. The ED₅₀ for this effect is 2.66-10.64 ng/mL, corresponding to a specific activity of 9.40×10⁴~3.76×10⁵ units/mg.

Shipping

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

Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C 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.

Product Information

Source	Purification
HEK293 cells	≥ 95 % as determined by SDS-PAGE; ≥ 95 % as determined by HPLC.

Calculated MW	Observed MW
80.51 kDa	100-110 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.

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 stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

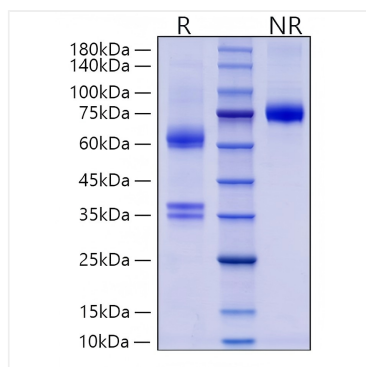
Contact

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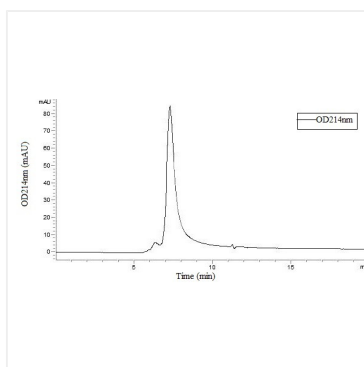
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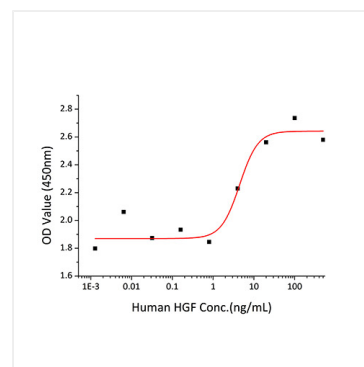
Validation Data



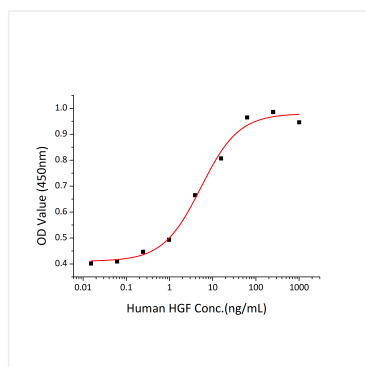
Recombinant Human Hepatocyte growth factor/HGF Protein was determined by SDS-PAGE under reducing (R) and non-reducing (NR) conditions.



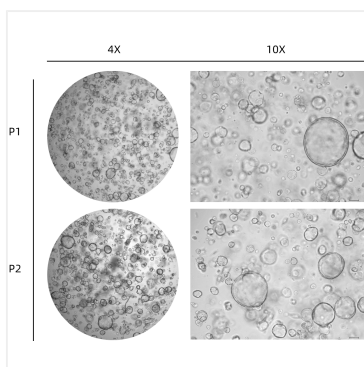
Recombinant Human Hepatocyte growth factor/HGF Protein is greater than 95% as determined by SEC-HPLC.



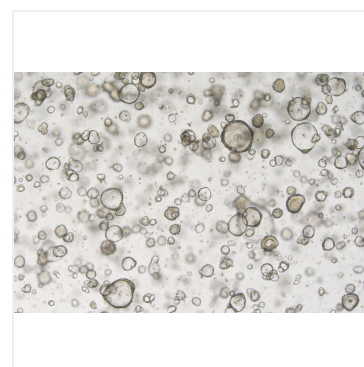
Recombinant Human HGF induce IL-11 secretion by Saos-2 human osteosarcoma cells. The ED_{50} for this effect is 2.23-8.91 ng/mL, corresponding to a specific activity of 1.12×10^5 - 4.48×10^5 units/mg.



Measured by its ability to inhibit TGF β 1 activity on Mv-1-lu mink lung epithelial cells. The ED_{50} for this effect is 2.66-10.64 ng/mL, corresponding to a specific activity of 9.40×10^4 ~ 3.76×10^5 units/mg.



Human liver organoids were cultured with EGF(Cat. RP03287), HGF(Cat. RP01602), FGF2(Cat. RP01042), FGF10(Cat. RP01140), NOG(Cat. RP01237), RSP01(Cat. RP00071), WNT-3a(Cat. RP01618SLQ).



Human colorectal cancer organoid were cultured with EGF(Cat. RP03287), NOG(Cat. RP01237), FGF10(Cat. RP01140), RSP01(Cat. RP00071), HGF(Cat. RP01602), A83-01(Cat. RPM0008), SB202190(Cat. RPM0010), Y-27632 dihydrochloride(Cat. RPM0007), Acetylcysteine/NAC(Cat. RPM0017), Nicotinamide (Cat. RPM0016), Gastrin I(Cat. RPM0011), AB-27 Supplement(Cat. RPM0047LQ).