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Recombinant Mouse Hepatocyte growth factor/HGF Protein

Catalog No.: RP01584 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Mouse	15234	Q08048

Tags
C-His

Synonyms
SF; NK1; NK2; HGF/SF; SF/HGF; C230052L06Rik;HGF

Product Information

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

Calculated MW	Observed MW
80.18 kDa	35 kDa, 65 kDa, 90-100 kDa

Endotoxin
< 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 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

400-999-6126

cn.market@abclonal.com.cn

Background

HGF, also known as Scatter Factor and Hepatopoietin A, is a pleiotropic protein in the Plasminogen subfamily of S1 peptidases. It is a multidomain molecule that includes an N-terminal PAN/APPLE-like domain, four Kringle domains, and a serine proteinase-like domain that has no detectable protease activity. Mouse HGF is secreted as an inactive 728 amino acid (aa) single chain propeptide. It is cleaved after the fourth Kringle domain by a serine protease to form bioactive disulfide-linked HGF with a 60kDa alpha and 30 kDa beta chain. Alternate splicing generates an isoform that lacks the peptidase and the second, third, and fourth Kringle domains. Mouse HGF shares 91%-95%aa sequence identity with bovine, canine, feline, human, and rat HGF. HGF binds heparan-sulfate proteoglycans and the widely expressed receptor tyrosine kinase, HGF R/c-MET. HGF dependent c-MET activation is implicated in the development of many human cancers. HGF regulates epithelial morphogenesis by inducing cell scattering and branching tubulogenesis. HGF induces the up regulation of integrin alpha 2 beta 1 in epithelial cells by a selective increase in alpha 2 gene transcription. This integrin serves as a collagen I receptor, and its blockade disrupts epithelial cell branching tubulogenesis. HGF can also alter epithelium morphology by the induction of nectin-1 alpha ectodomain shedding, an adhesion protein component of adherens junctions. In the thyroid, HGF induces the proliferation, motility, and loss of differentiation markers of thyrocytes and inhibits TSH-stimulated iodine uptake. HGF promotes the motility of cardiac stem cells in damaged myocardium.

Basic Information

Description
Recombinant Mouse Hepatocyte growth factor/HGF Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gln33-Leu728) of mouse Hepatocyte growth factor/HGF (Accession #NP_001276387.1) fused with a 6×His tag at the C-terminus.

Bio-Activity
Measured in a cell proliferation assay using Mv.1.lu cells. The ED_{50} for this effect is 1.2-5.0 ng/mL, corresponding to a specific activity of 2×10^5 ~ 8.3×10^5 units/mg.

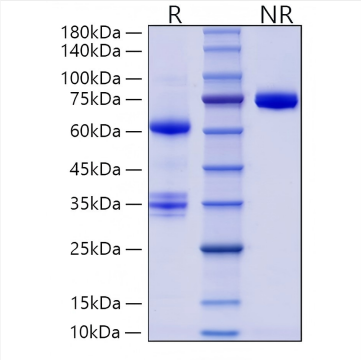
Shipping
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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.

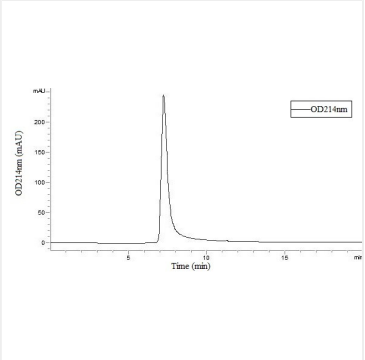
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

* 为了您的安全和健康，请穿实验服并戴一次性手套操作。

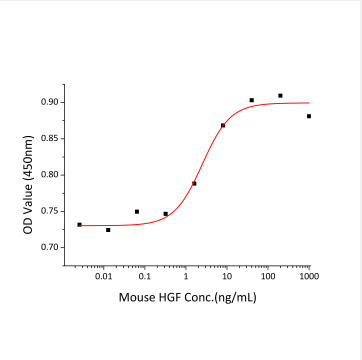
Validation Data



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



The purity of Recombinant Mouse Hepatocyte growth factor/HGF Protein is greater than 95% as determined by SEC-HPLC.



Recombinant Mouse Hepatocyte HGF stimulates cell proliferation of the Mv.1.lu cells. The ED_{50} for this effect is 1.2-5.0 ng/mL, corresponding to a specific activity of 2×10^5 ~ 8.3×10^5 units/mg.