

Human HGF / Hepatocyte Growth Factor Protein

Catalog Number: 10463-HNAS



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

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

Protein Construction:

A DNA sequence encoding the human HGF (NP_000592.3) precursor (Met 1-Ser 728) was expressed and purified.

Source: Human

Expression Host: CHO Stable Cells

QC Testing

Purity: > 93 % as determined by SDS-PAGE

Bio-Activity

Measured by its ability to neutralize TGF-beta mediated inhibition on Mv-1-Lu cell proliferation.
The ED50 for this effect is typically 2-10 ng/mL.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gln 32 (α chain) & Val 495 (β chain)

Molecular Mass:

The secreted recombinant human HGF consists of 697 amino acids after cleavage of the signal peptide and has a predicted molecular mass of 79.7 kDa. The HGF single chain can be processed into the active form of disulfide-linked heterodimer of α and β chain. As a result of glycosylation, it migrates with the apparent molecular mass of 90, 60 and 34 kDa corresponding to the single chain, α chain and β chain respectively in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

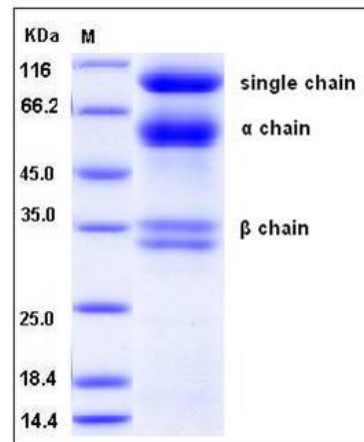
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Hepatocyte growth factor (HGF), also known as Scatter factor, is a paracrine cellular growth, motility and morphogenic factor. Hepatocyte Growth Factor/HGF is a member of the peptidase S1 family, and is derived from a single chain precursor of 728 amino acid residues containing 4 kringle domains, 1PAN domain and 1peptidase S1 domain. The synthesized single chain of HGF is further processed into a bioactive heterodimer composed of the 69 kDa α-subunit and the 34 kDa β-subunit by a serine protease. Hepatocyte Growth Factor/HGF has no detectable protease activity. Alternative splicing of its gene produces multiple transcript variants encoding different isoforms. It is secreted by mesenchymal cells and targets and acts primarily upon epithelial cells and endothelial cells, as well as haemopoietic progenitor cells. Hepatocyte Growth Factor/HGF regulates cell growth, cell motility, and morphogenesis by activating a tyrosine kinase signaling cascade after binding to the c-Met receptor. Hepatocyte Growth Factor/HGF may also play an important role as a paracrine or endocrine mediator through an epithelial-mesenchymal interaction in wound-healing, tissue or organ regeneration, morphogenesis and carcinogenesis.

References

1. Naldini, L. et al., 1991, EMBO J. (ENGLAND)10 (10): 2867-78.
2. Nakamura, T. et al., 1992, Prog. Growth Factor Res.3 (1): 67-85.
3. Comoglio, PM. et al., 1993, EXS. (SWITZERLAND)65: 131-65.
4. Skibinski, G. et al., 2004, Arch. Immunol. Ther. Exp. 51 (5): 277-82.
5. Kemp, LE. et al., 2006, Biochem. Soc. Trans.34 (Pt 3): 414-7.

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