Mouse HGF / Hepatocyte Growth Factor Protein

Catalog Number: **50038-MNAH**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

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

Protein Construction:

A DNA sequence encoding the mouse HGF (Q08048-1) (Met1-Leu728) was expressed and purified.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

1. Immobilized mouse HGF at 10 μg/ml (100 μl/well) can bind mouse MET-Fc (Cat:50622-M02H), EC_{50} of mouse MET-Fc (Cat:50622-M02H) is 0.05-0.12 μg/ml. 2. Measured by its ability to inhibit TGF?1 activity on Mv-1-lu mink lung epithelial cells. The ED_{50} for this effect is typically 1-4 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 ℃

Predicted N terminal: Gln 33

Molecular Mass:

The recombinant mouse HGF comprises 696 amino acids and has a predicted molecular mass of 79.3 kDa. The apparent molecular mass of the protein is approximately 93 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 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:

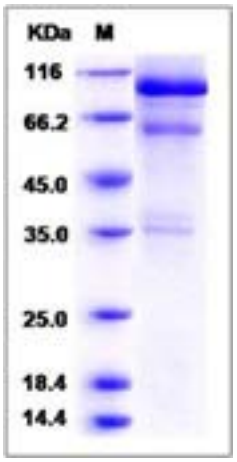
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Hepatocyte growth factor, also known as HGF, contains 4 kringle domains, 1 PAN domain and 1 peptidase S1 domain. It belongs to the peptidase S1 family, plasminogen subfamily. Hepatocyte growth factor is secreted by mesenchymal cellsas a single inactive polypeptide and is cleaved by serine proteases into a 69-kDa alpha-chain and 34-kDa beta-chain. A disulfide bond between the alpha and beta chains produces the active, heterodimeric molecule. Hepatocyte growth factor regulates cell growth, cell motility, and morphogenesis by activating a tyrosine kinase signaling cascade after binding to the proto-oncogenic c-Met receptor, 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, tumorogenesis, and tissue regeneration. HGF is a potent mitogen for mature parenchymal hepatocyte cells, seems to be an hepatotrophic factor, and acts as growth factor for a broad spectrum of tissues and cell types. HGF has no detectable protease activity. Defects in hepatocyte growth factor are the cause of deafness autosomal recessive type 39. A form of profound prelingual sensorineural hearing loss. Sensorineural deafness results from damage to the neural receptors of the inner ear, the nerve pathways to the brain, or the area of the brain that receives sound information.

References

1.Naldini L, *et al.* (1991) Scatter factor and hepatocyte growth factor are indistinguishable ligands for the MET receptor. EMBO J. 10(10):2867-78. 2.Comoglio, *et al.* (1993) Structure, biosynthesis and biochemical properties of the HGF receptor in normal and malignant cells. 65:131-65. 3.Hahn W, *et al.* (2011) Enhanced cardioprotective effects by coexpression of two isoforms of hepatocyte growth factor from naked plasmid DNA in a rat ischemic heart disease model. The Journal of Gene Medicine. 13(10):549-55.