

Recombinant mouse HGF

Catalog No: #AG0047

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Description

Product Name	Recombinant mouse HGF
Host Species	HEK293
Purification	> 95% by Tris-Bis PAGE;> 95% by SEC-HPLC
Immunogen Description	Gln33-Leu728
Target Name	HGF
Other Names	Mouse hepatocyte growth factor (hepatopoietin A; scatter factor); Hepatopoietin-A; Hepatopoietin A; HGF; HGFB; HPTA; HPTAhepatocyte growth factor; lung fibroblast-derived mitogen; Scatter factor; SF; SFhepatopoietin-A
Accession No.	Uniprot:Q08048Gene ID:15234
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GeneID	15234
Target Species	mouse
Calculated MW	79.3 KDa
Tag Info	additional amino acid free
Formulation	0.22 µm filtered solution of PBS, pH 7.4.
Storage	Aliquot and store at -80°C. Avoid repeated freeze/thaw cycles.

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 (1 - 5). 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 60 kDa 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 (6,77). HGF-dependent c-MET activation is implicated in the development of many human cancers (8). HGF regulates epithelial morphogenesis by inducing cell scattering and branching tubulogenesis (9,10). HGF induces the up-regulation of integrin alpha 2 beta 1 in epithelial cells by a selective increase in alpha 2 gene transcription (11). This integrin serves as a collagen receptor, and its blockade disrupts epithelial cell branching tubulogenesis (11, 12). HGF can also alter epithelium morphology by the induction of nectin1 alpha ectodomain shedding, an adhesion protein component of adherens junctions (13). In the thyroid, HGF induces the proliferation, motility, and loss of differentiation markers of thyrocytes and inhibits TSH-stimulated iodine uptake (14). HGF promotes the motility of cardiac stem cells in damaged myocardium (15).

Note: This product is for in vitro research use only