

## Recombinant Human HGF, Tag Free

### General Information

<b>Synonym</b>	DFNB39 Protein, Human; F-TCF Protein, Human; F-TCFB Protein, Human; Hepatocyte Growth Factor Protein, Human; HGFB Protein, Human; HPTA Protein, Human; SF Protein, Human.
<b>Accession #</b>	P14210-1
<b>Molecular Characterization</b>	Met 1-Ser 728
<b>M.Wt</b>	79.7 kDa
<b>Source</b>	293T 细胞
<b>Bio Activity</b>	Determined by the dose-dependent stimulation of murine CTLL-2 cells: ED50: < 0.1 ng/mL Specific activity: > 1x10 <sup>7</sup> units/mg.

### Components and Storage

<b>Formulation</b>	The protein is dissolved in PBS buffer.
<b>Storage</b>	This product is stable after storage at: <ul style="list-style-type: none"> <li>• 4°C for 1 week;</li> <li>• -20°C for 3 months.</li> <li>• <b>Please avoid repeated freeze-thaw cycles.</b></li> </ul>

### Quality Control

<b>Purity</b>	≥ 95%, by SDS-PAGE and HPLC.
<b>Endotoxin Level</b>	< 0.1 ng/μg

For detail QC information, please see the CoA.

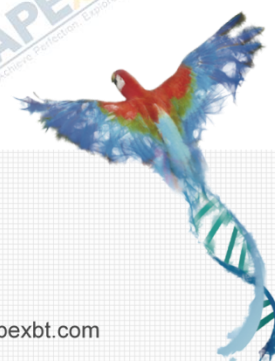
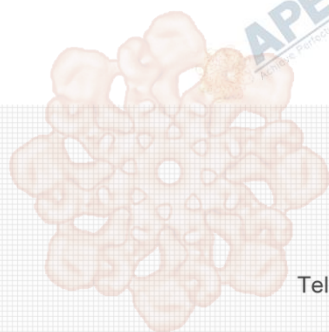
### Background

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 cells as 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, tumorigenesis, 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.

## Reference

1. Naldini L, Weidner KM, Vigna E, Gaudino G, Bardelli A, Ponzetto C, Narsimhan RP, Hartmann G, Zarnegar R, Michalopoulos GK, et al. Scatter factor and hepatocyte growth factor are indistinguishable ligands for the MET receptor. EMBO J. 1991 Oct;10(10):2867-78. PMID: 1655405; PMCID: PMC452997.
2. Comoglio PM. Structure, biosynthesis and biochemical properties of the HGF receptor in normal and malignant cells. EXS. 1993;65:131-65. PMID: 8380735.
3. Hahn W, Pyun WB, Kim DS, Yoo WS, Lee SD, Won JH, Shin GJ, Kim JM, Kim S. Enhanced cardioprotective effects by coexpression of two isoforms of hepatocyte growth factor from naked plasmid DNA in a rat ischemic heart disease model. J Gene Med. 2011 Oct;13(10):549-55. doi: 10.1002/jgm.1603. PMID: 21898720.



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