

## HGFA Protein (pro form), Human, Recombinant (His)

### General Information

Synonyms:	MGC138397;HGFA;RP11-529E1.2;MGC138395
Protein Construction:	A DNA sequence encoding the human HGF activator precursor (NP_001519.1) (Met 1-Ser 655) was expressed with a fused polyhistidine-tag at the C-terminus. Predicted N terminal: Gln 36
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q04756
Molecular Weight:	68.2 kDa (predicted); 34, 37, 65, 105 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

**Stability & Storage:**

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

**Shipping:**

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

HGF activator (HGFA) is a serum-derived serine protease and belongs to the peptidase family S1. HGFA is responsible for the conversion of hepatocyte growth factor (HGF), from the inactive single-chain precursor to the active heterodimeric form, which is a potent mitogen, motogen, and morphogen for liver cells, epithelial cells, and endothelial cells. HGFA is synthesized and secreted by the liver and circulates in the plasma as an inactive single-chain zymogen in normal states. The zymogen is cleaved by thrombin or thermolysin through the endoproteolytic

process and forms an active heterodimer linked by a disulfide bond. In turn, the active protease can be inhibited by HGFA inhibitors (HAIs) including HAI-1 and HAI-2. Besides, the HGFA zymogen acquires a strong affinity upon activation and thus may ensure the local action in tissue regeneration in the liver, kidney, and skin. It has been reported that activation of HGF is a critical limiting step in the HGF/SF-induced signaling pathway mediated by Met, and accordingly, aberrant expression of HGFA is implicated in tumorigenesis and progression.

### Reference

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