Human HGFA Protein (His Tag)

Catalog Number: **10329-H08H**

General Information

Gene Name Synonym:

HGFA; MGC138395; MGC138397; RP11-529E10.2

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.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

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 36

Molecular Mass:

The recombinant human HGF activator consists of 631 amino acids and has a predicted molecular mass of 68.2 kDa. As a result of proteolysis or autocatalysis and glycosylation, it migrates as four bands (34, 37, 65, 105 kDa) in SDS-PAGE under reducing conditions, corresponding to the active long chain, uncleaved single chain (long chain + short chain), pro doamin and the full-length pro form of HGFA respectively.

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:

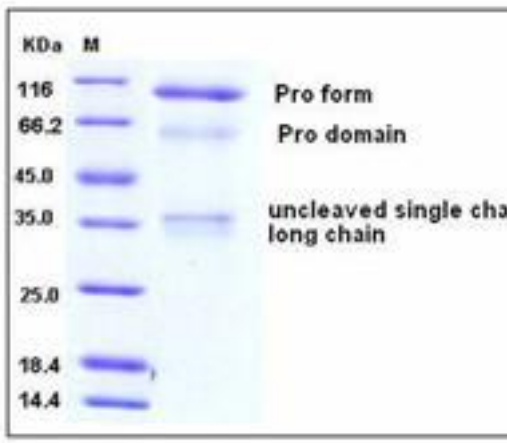
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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. In addition, the HGFA zymogen acquires a strong affinity upon activation and thus may ensure the local action in tissue regeneration in 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.

References

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2. Miyazawa, K. et al., 1996, J. Biol. Chem. 271 : 3615-3618.
3. Shia, S. et al., 2005, J. Mol. Biol. 346: 1335-1349.
4. Kataoka, H. et al., 2000, J. Biol. Chem. 275: 40453-40462.
5. Tjin, E.P. et al., 2006, Blood. 107: 760-768.
6. Kitajima, Y. et al., 2000, Cancer. Res. 60: 6148-6159.