Data Sheet (Cat.No.TMPY-02327)

TargetMol

HGF Protein, Human, Recombinant

General Information

Synonyms:	SF;hepatocyte growth factor (hepapoietin A;HGFB;F-TCF;F-TCFB;Hepatocyte Growth Factor; HPTA;DFNB39;scatter factor)
Protein Construction:	A DNA sequence encoding the human HGF (NP_000592.3) precursor (Met 1-Ser 728) was expressed and purified. Predicted N terminal: Gln 32 (α chain) & Val 495 (β chain)
Species:	Human
Expression Host:	CHO Cells
Accession:	P14210-1
Molecular Weight:	79.7 kDa (predicted); 90, 60 and 34 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	1.Measured by its ability to neutralize TGF-beta mediated inhibition on Mv-1-Lu cell proliferation. The ED50 for this effect is typically 0.2-2 ng/mL. 2. Immobilized Recombinant Human HGF / Hepatocyte Growth Factor Protein at 2μg/mL (100μL/well) can bind Recombinant Human c-MET / HGFR Protein (His Tag) , the EC50 is 16-48 ng/mL.
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.
Endotoxin:	< 0.01 EU/μg of the protein.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, 100 mM Arg, 0.05% tween20, pH7.0.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:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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

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. The 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. The 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 give 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 a 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.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

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