

Datasheet for ABIN2666488

HGF Protein (AA 32-494, AA 495-728)



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Overview

Quantity:	10 µg
Target:	HGF
Protein Characteristics:	AA 32-494, AA 495-728
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Flow Cytometry (FACS)

Product Details

Purity:	> 98 % , as determined by Coomassie stained SDS-PAGE and HPLC analysis.
Endotoxin Level:	Less than 0.1 ng per µg of protein.

Target Details

Target:	HGF
Alternative Name:	HGF (HGF Products)
Background:	Hepatocyte growth factor (HGF)was initially purified from plasma of a patient with fulminant hepatic failure. HGF is a dimeric molecule composed of the α-subunit and β-subunit, linked by a disulfide bond. The two chains are derived from a precursor encoded by the same open reading frame. The C-terminus of the α-subunit is followed directly by the N-terminus of the β-subunit. The pro-HGF possesses 728 amino acids and the subunits are formed by proteolytic cleavage.

Target Details

Proteolytic activation of the precursor form in the extracellular milieu is performed by HGF activator (HGFA). HGFA is a factor XII-like serine proteinase that is not inhibited by serum proteinase inhibitors. Two inhibitors have been described for HGFA, HGFA inhibitor type 1 and type 2 (HAI-1 and -2). Both inhibitors have two well-defined Kunitz inhibitor domains and a presumed transmembrane domain. HGF protects the epithelium, neurons and cardiomyocytes during organ diseases, this protective effect is mediated through anti-apoptotic signals via inhibition of caspase-3 activity or induction of anti-apoptotic molecules, such as Bcl-xL. In addition, HGF prohibits Fas-mediated apoptosis signals via sequestration of Fas and Met receptor on cell surfaces. Also, HGF elicits the regression of fibrosis in numerous organs, such as scleroderma, cardiomyopathy, vocal scarring, and peritoneal fibrosis.

Molecular Weight: The alpha and beta chains contains 463 and 234 amino acids and have a predicted molecular mass of approximately 53.6 and 26 kDa respectively. The predicted N-terminal amino acids are Gln and Val.

Pathways: [RTK Signaling](#), [Carbohydrate Homeostasis](#), [Glycosaminoglycan Metabolic Process](#), [Synaptic Membrane](#), [Signaling of Hepatocyte Growth Factor Receptor](#)

Application Details

Application Notes: Optimal working dilution should be determined by the investigator.

Comment: Biological activity: ED50 = 20 - 40 ng/ml, corresponding to a specific activity of 2.5 - 5.0 x 10⁴ units/mg, as determined by induction of 4MBr-5 cell proliferation.

Restrictions: For Research Use only

Handling

Format: Lyophilized

Reconstitution: For maximum results, quick spin vial prior to opening. Reconstitute in water to a concentration of 0.5 mg/mL. Do not vortex. Note: Allow the reconstituted vial to sit at room temperature for 1 hour before use. It is recommended to further dilute in a buffer containing a carrier protein such as 0.1 % BSA and store working aliquots at -20 °C to -80 °C.

Buffer: Lyophilized

Handling Advice: Avoid repeated freeze/thaw cycles.

Storage: -20 °C

Storage Comment: Unopened vial can be stored at -20°C or -70°C.