

Datasheet for ABIN1589618
HGF Protein (Heterodimer)



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Overview

Quantity: 5 µg

Target: HGF

Protein Characteristics: Heterodimer

Origin: Human

Source: Insect Cells

Protein Type: Recombinant

Biological Activity: Active

Product Details

Sequence: QRKRRNTIHE FKKSAKTTLI KIDPALKIKT KKVNTADQCA NRCTRNGLP FTCKAFVFDK
ARKQCLWFPF NSMSSGVKKE FGHEFDLYEN KDYIRNCIIG KGRSYKGTVS ITKSGIKCQP
WSSMIPHEHS YRGKDLQENY CRNPRGEEGG PWCFTSNPEV RYEVCDIPQC SEVECMTCNG
ESYRGLMDHT ESGKICQRWD HQTTPHRHKFL PERYPDKGFD DNYCRNPDGQ PRPWCYTLDP
HTRWEYCAIK TCADNTMNDT DVPLETTECI QQGEGYRGT VNTIWNIGIPC QRWDSQYPHE
HDMTPENFKC KDLRENYCRN PDGSESPWCF TTDPNIRVGY CSQIPNCDMS HGQDCYRNG
KNYMGNLSQT RSGLTCSMWD KNMEDLHRHI FWEPDASKLN ENYCRNPDDD AHGPWCYTGN
PLIPWDYCPI SRCEGDTTPT IVNLDHPVIS CAKTKQLRVV NGIPTRTNIG WMVSLRYRNK
HICGGSLIKE SWVLTARQCF PSRDLKDYEALWLG IHDVHGR GDEKCKQVLN VSQLVYGP
SDLVLMKLAR PAVLDDFVST IDLPNYGCTI PEKTS CSVYG WGYTGLINYD GLLRVAHLYI
MGNEKCSQHH RGKVTLNESE ICAGA EKIGS GPCEGDYGGP LVCEQHKMRM VLGVI VPGRG
CAIPNRP GIV VRVAYYAKWI HKIILTYKVP QS

Characteristics: Length (AA): 692

Product Details

Chromosomal location: 7q21.1

The activity was assayed for scattering activity in the MDCK cell assay. The ED50 for this effect is typically at 1.0-5.0 ng/mL.

Purity: > 95 % by SDS-PAGE. Visualized by silver stain

Target Details

Target: HGF

Alternative Name: HGF ([HGF Products](#))

Background: Human Hepatocyte Growth Factor (HGF), also known as scatter factor, is a pleiotropic cytokine that shows homology to the enzymes of the blood coagulation cascade. It stimulates the motility and invasion of several cancer cell types and can induce angiogenesis. Recently HGF was found to be identical to scatter factor, a fibroblast-derived factor promoting the dissociation of epithelial and vascular endothelial cell colonies in monolayer cell cultures by stimulating cell migration. HGF is synthesized as a biologically inactive single chain precursor, which is cleaved by a specific, extracellular serum serine protease to a fully active heterodimer. This mature, biologically active HGF consists of a disulfide-linked alpha-beta heterodimer of the two cleavage products. Previous studies have shown that single chain and heterodimeric HGF are equally active in vitro assay systems due to either production of the serine protease in cell culture or the presence of the ubiquitous protease in serum. All biological responses induced by HGF are elicited by binding to its transmembrane tyrosine kinase receptor, which is encoded by the MET proto-oncogene. After autophosphorylation of the receptor different cytoplasmic effectors are activated that bind to the same multifunctional docking site of the receptor. HGF function is essential for normal development. Knockout studies have demonstrated that both ligand and receptor deficient mice display an embryonic lethal phenotype. Hepatocytes have to be primed before they can fully respond to HGF. This priming requires cytokines as TNF and IL-6. Recent studies have suggested that HGF synergizes with basic FGF in the induction of angiogenesis.

Synonyms: HGF, SF, HGFB, HPTA, F-TCF, DFNB39, Hepatocyte growth factor, Scatter factor

Molecular Weight: 78.0 kDa

NCBI Accession: [NM_000601](#), [NP_000592](#)

UniProt: [P14210](#)

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

Application Details

Comment: Cytokines & Growth Factors

Restrictions: For Research Use only

Handling

Format: Lyophilized

Reconstitution: The lyophilized human HGF is soluble in water and acetic acid (50 mM) and can be reconstituted to a concentration of 100 µg/mL. Further dilutions should be made into buffer containing protein or medium containing serum.

Buffer: 50 mM acetic acid

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: 0 °C

Storage Comment: The lyophilized HGF, though stable at room temperature, is best stored desiccated below 0 °C. Reconstituted it should be stored in working aliquots at -20 °C to -70 °C.

Publications

Product cited in: Rezzola, Dal Monte, Belleri, Bugatti, Chiodelli, Corsini, Cammalleri, Cancarini, Morbidelli, Oreste, Bagnoli, Semeraro, Presta: "Therapeutic Potential of Anti-Angiogenic Multitarget N,O-Sulfated E. Coli K5 Polysaccharide in Diabetic Retinopathy." in: **Diabetes**, Vol. 64, Issue 7, pp. 2581-92, (2015) ([PubMed](#)).

Lohr, Mock, Beckhove, Herold-Mende: "Endothelial Cells Derived from Non-malignant Tissues Are of Limited Value as Models for Brain Tumor Vasculature." in: **Anticancer research**, Vol. 35, Issue 5, pp. 2681-90, (2015) ([PubMed](#)).