

HGF, Human

Cat. No.: Z03229-50

Size: 50.0 ug

Synonyms: Hepatocyte Growth Factor (HGF), Human

Description:

Hepatocyte Growth Factor (HGF), also known as hepatopoietin-A and scatter factor, is a pleiotropic mitogen belonging to the peptidase S1 family (plasminogen subfamily). It is produced by mesenchymal cells and acts on epithelial cells, endothelial cells and haemopoietic progenitor cells. HGF binds to the proto-oncogenic c-Met receptor to activate a tyrosine kinase signaling cascade. It regulates cell growth, motility and morphogenesis, thus it plays a pivotal role in angiogenesis, tumorigenesis and tissue regeneration.

Recombinant human Hepatocyte Growth Factor (rhHGF) is produced in CHO cells and consists of two polypeptide chains (α -chain and β -chain) held by a single disulfide bond resulting in the formation of a biologically active heterodimer. The α -chain consists of 463 amino acid residues and four kringle domains. The β -chain consists of 234 amino acid residues. A fully biologically active molecule, rhHGF has a molecular mass of around 88-90 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

```
00001 QRKRRNTIHE FKKSAKTTLI KIDPALKIKT KKVNTADQCA
00041 NRCTRNGKLP FTCKAFVFDK ARKQCLWFPF NSMSSGVKKE
00081 FGHEFDLYEN KDYIRNCIIG KGRSYKGTVS ITKSGIKCQP
00121 WSSMIPHEHS FLPSSYRGKD LQENYCRNPR GEEGPPWCFT
00161 SNPEVRYEVC DIPQCSEVEC MTCNGESYRG LMDHTESGKI
00201 CQRWDHQTPH RHKFLPERYP DKGFDNYCR NPDGQPRPWC
00241 YTLDPHTRWE YCAIKTCADN TMNDTDVPLE TTECIQQGGE
00281 GYRGTVNTIW NGIPCQRWDS QYPHEHDMTP ENFKCKDLRE
00321 NYCRRNPDGSE SPWCFTTDPN IRVGYCSQIP NCDMSHGQDC
00361 YRNGKNYMG NLSQTRSGLT CSMWDKNMED LHRHIFWEPD
00401 ASKLNENYCR NPDDDAHGWP CYTGNPLIPW DYCPISRCEG
00441 DTTPTIVNLD HPVISCARKT QLRVVNGIPT RTNIGWMVSL
00481 RYRNKHICGG SLIKESWVLT ARQCFPSRDL KDYEAWLGIH
00521 DVHGRGDEKC KQVLNVSQVL YGPEGSDLVL MKLARPAVLD
00561 DFVSTIDLPN YGCTIPEKTS CSVYGWGYTG LINYDGLLRV
00601 AHLIYMGNEK CSQHHRGKVT LNESEICAGA EKIGSGPCEG
00641 DYGGPLVCEQ HKMRMVLGVI VPGRGCAIPN RPGIFVRVAY
00681 YAKWIHKIIL TYKVPQS
```

Source: CHO

Species: Human

Biological Activity: ED₅₀ < 10 ng/ml, measured in a cell proliferation assay using 4MBr5 cells, corresponding to a specific activity of > 1×10⁵ units/mg.

Molecular Weight: 88-90 kDa (single chain), 59-61kDa (alpha chain), 30-34kDa (beta chain), observed by reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100 µg/ml.

Purity: > 95% as analyzed by SDS-PAGE.

Endotoxin Level: < 0.2 EU/µg, determined by LAL method.

Storage: Lyophilized recombinant humanHepatocyte Growth Factor (HGF) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, human Hepatocyte Growth Factor (HGF) should be stable up to 1 week at 4°C or up to 2 months at -20°C.