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Human Recombinant HGF (CHO-expressed)

Hepatocyte growth factor

Catalog #78019.1	10 µg
Catalog #78019	50 µg
Catalog #78019.2	1000 µg

Product Description

Hepatocyte growth factor/scatter factor (HGF/SF) is a pleiotropic growth factor that promotes proliferation, motility, survival, and differentiation. HGF binds and promotes the dimerization and activation of the receptor tyrosine kinase c-MET, and stimulates PI3K/AKT, FAK, JNK, and ERK1/2 signaling (Organ & Tsao). HGF stimulates migration of cells during embryogenesis, induces cell motility and scattering of epithelial cells, and regulates epithelial-mesenchymal transition. It is a chemoattractant for motor neurons, and regulates the development of sensory, sympathetic, parasympathetic, and cortical neurons as well as the proliferation of oligodendrocytes and glial development. Additionally, HGF is cytoprotective and regulates liver growth and regeneration (Nakamura et al.).

Product Information

Alternative Names: DFNB39, FTCF, Fibroblast-derived tumor cytotoxic factor, Hepapoietin A, HPTA, Lung fibroblast-derived mitogen, Scatter factor, SF

Accession Number: P14210

Amino Acid Sequence: QRKRRNTIHE FKKSAKTTLI KIDPALKIKT KKVNTADQCA NRCTRNKGLP FTCKAFVFDK ARKQCLWFPF NSMSSGVKKE FGHEFDLYEN KDYIRNCIIG KGRSYKGTVS ITKSGIKCQP WSSMIPHEHS FLPSSYRGKD LQENYCRNPR GEEGGPWCFT SNPEVRYEVC DIPQCSEVEC MTCNGESYRG LMDHTESGKI CQRWDHQTPH RHKFLPERYP DKGFDDNYCR NPDGQPRPWC YTLDPHTRWE YCAIKTCADN TMNDTDVPLE TTECIQGQGE GYRGTVNTIW NGIPCQRWDS QYPHEHDMTP ENFKCKDLRE NYCRNPDGSE SPWCFTTDPN IRVGYCSQIP NCDMSHGQDC YRGNGKNYMG NLSQTRSGLT CSMWDKNMED LHRHIFWEPD ASKLNENYCR NPDDDAHGPW CYTGNPLIPW DYCPISRCEG DTTPTIVNLD HPVISCAKTK QLRVVNGIPT RTNIGWMVSL RYRNKHICGG SLIKESWVLT ARQCFPSRDL KDYEAWLGIH DVHGRGDEKC KQVLNVSQLV YGPEGSDLVL MKLARPAVLD DFVSTIDLPN YGCTIPEKTS CSVYGWGYTG LINYDGLLRV AHLYIMGNEK CSQHHRGKVT LNESEICAGA EKIGSGPCEG DYGGPLVCEQ HKMRMVLGVI VPGRGCAIPN RPGIFVRVAY YAKWIHKIIL TYKVPQS

Predicted Molecular Mass: 88 - 90 kDa (single chain)

Species: Human

Product Formulation: Lyophilized after dialysis against phosphate-buffered saline.

Source: CHO

Purity: ≥ 95%

Specifications

Activity: The specific activity is ≥ 1 x 10^5 units/mg (EC50 ≤ 10 ng/mL), as determined by a cell proliferation assay using 4MBr-5 cells.

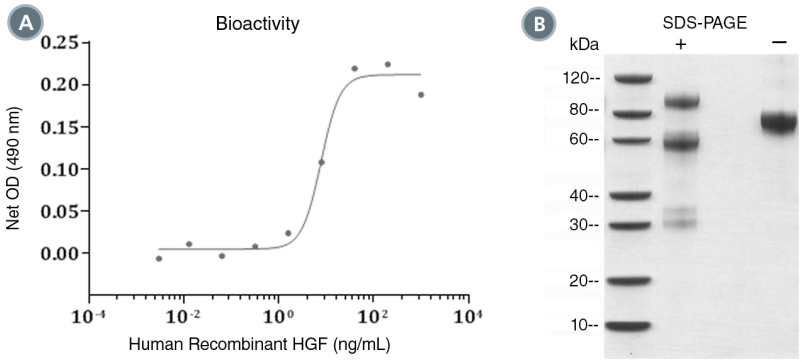
Endotoxin Level: Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 0.2 EU/µg protein.

Preparation and Storage

Stability and Storage: Store at -80°C. Stable as supplied for 12 months from date of receipt.

Preparation: Centrifuge vial before opening. Reconstitute the product in sterile water or phosphate-buffered saline to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. As a general guide, do not store at 2 - 8°C for more than 1 week or at -20°C for more than 2 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant HGF was tested by its ability to promote the proliferation of 4MBr5 cells. The EC50 is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC50 in the above example is 7.2 ng/mL. (B) 5 µg of Human Recombinant HGF was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant HGF has a predicted molecular mass of 88 - 90 kDa (single chain), 59 - 61 kDa (alpha chain), or 30 - 34 kDa (beta chain).

Related Products

For a complete list of cytokines or peptide pools, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

Nakamura T et al. (2011) Hepatocyte growth factor twenty years on: Much more than a growth factor. J Gastroenterol Hepatol 26 Suppl 1: 188–202.

Organ SL & Tsao M-S. (2011) An overview of the c-MET signaling pathway. Ther Adv Med Oncol 3(1 Suppl): S7–S19.