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Carrier-Free Recombinant Mouse HGF (Hepatocyte growth factor)

RUO: For Research Use Only

Product Information

Contents: Carrier-Free Recombinant Mouse HGF (Hepatocyte growth factor)

REF Catalog Number: 34-8431

Handling Conditions: For best recovery, always quick-spin vial prior to opening. For dilution of current stock, always include carrier protein (1% BSA or 10% FBS) in the buffered saline diluent.

Source: Insect cells infected with baculovirus: amino acids 1-728 of mouse HGF (accession # D10212).

Molecular Mass: The intact mature protein, amino acids gln32-ser728, has a predicted molecular mass of 79,661. The protein migrates at 66-70 kDa on non-reducing SDS-PAGE, and as three bands at 85, 60, and 30 kDa on reducing SDS-PAGE. These bands correspond to the pro-peptide, the α-chain, and the β-chain, respectively.

Purity: Greater than 98% as determined by SDS-PAGE

Endotoxin Level: Less than 0.01 ng/ug cytokine as determined by the LAL assay.

Bioactivity: Measured in a bioassay of dose-dependent stimulation of mIMCD-3 cell proliferation. The ED_{50} for this is typically below 20 ng/ml, corresponding to a specific activity of greater than 5.0×10^4 U/mg.

Formulation: Sterile liquid; phosphate buffered saline, pH 7.2, 150 mM NaCl, with no carriers or preservatives. 0.22 µm filtered.

Temperature Limitation: For greatest stability, keep concentration of primary stock at or above 10 µg/ml. For long term storage, aliquot into polypropylene vials (volumes of 20 µl or greater) and store at or below -80°C. Avoid repeated freeze/thaw cycles.

LOT Batch Code: Refer to Vial

Use By: Refer to Vial

Description

Hepatocyte Growth Factor (HGF), also known as Hepatopoietin A and Scatter Factor, was originally identified based on its mitogenic activity for hepatocytes. Plasma from patients with hepatic failure was found to contain a factor that stimulates the growth of rat hepatocytes in primary culture. This plasma-derived HGF was purified and found to have multiple forms with molecular weights between 76 kD and 92 kD. Mature HGF consists of 2 disulfide-linked chains, heavy and light, with molecular weights of 54-65 kD and 31.5-34.5 kD, respectively. The heavy and light chains are encoded by the same mRNA, which by translation yields a biologically inactive single chain pro-peptide. The pro-peptide is cleaved by an extracellular serum serine protease to form the bioactive disulfide-linked alpha and beta chain heterodimeric HGF. HGF has also been described as Scatter Factor, based on its capacity to stimulate the dissociation and scattering of epithelial cells. The sequence of HGF has about 35% identity to that of plasminogen and the putative cleavage site of HGF is identical to that of plasminogen. The HGF receptor gene, the MET oncogene, is located on 7q, along with the HGF gene. An increase in the copy number of chromosome 7 is one of the most common chromosome abnormalities observed in human malignant gliomas.

Applications Reported

For research use only, not for diagnostic or therapeutic use.

Applications Tested

This recombinant mouse HGF has been tested in a bioassay of dose-dependent stimulation of mIMCD-3 cell proliferation. The ED_{50} for this is typically 20 ng/ml, corresponding to a specific activity of 5.0×10^4 U/mg.

References

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