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Product Information

Anti-Hepatocyte Growth Factor
produced in goat, affinity isolated antibody

Catalog Number **H7157**

Product Description

Anti-Hepatocyte Growth Factor is produced in goat using recombinant human HGF (rhHGF) expressed in *SF* 21 as immunogen. The antibody is purified using human HGF affinity chromatography.

Anti-Hepatocyte Growth Factor will neutralize the biological activity of rhHGF. The antibody may also be used in immunoblotting and immunohistochemistry.

Hepatocyte Growth Factor (HGF), also known as Hepatopoetin A and Scatter Factor, is a potent mitogen for epithelial cells.[1] HGF has a molecular weight of 82-85 kDa.[2] HGF stimulates the growth of hepatocytes, renal tubular epithelial cells, epidermal keratinocytes, epidermal melanocytes, Mv1Lu (mink lung epithelial cells) and BALB/MK (mouse keratinocytes).[2] HGF inhibits the growth of B6/F1 (mouse melanoma) cells, KB (human squamous carcinoma) cells and HepG2 (human hepatoma) cells.[2] The HGF gene spans ~70 kb and consists of 18 exons interrupted by 17 introns.[2] The organization of the human HGF gene is highly homologous to that of human plasminogen.[3] HGF maps to the long arm of chromosome 7, 7q21.1.[4,5]

Reagent

Supplied as a lyophilized powder from a 0.2 µm filtered solution of phosphate buffered saline, pH 7.4, containing 5% trehalose.

Endotoxin: <10 ng/mg by LAL method

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Prior to reconstitution, store at –20 °C. Reconstituted product may be stored at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at –20 °C. Avoid repeated freezing and thawing.

Preparation Instructions

To one vial of lyophilized powder, add 1 ml of 0.2 µm-filtered PBS to produce a 0.1 mg/ml stock solution. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Procedure

Anti-HGF is tested for its ability to neutralize the bioactivity of rhHGF in a cell proliferation assay using 4MBr cells, a monkey epithelial cell line responsive to HGF.[6] The ND_{50} of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of bioactivity of rhHGF that is present at a concentration just high enough to elicit a maximum response. In this bioassay, 100 ng/ml rhHGF is preincubated with various dilutions of the antibody for 1 hour at 37 °C, then placed in a 96-well microtiter plate. 4MBr-5 cells are added to each well and incubated for 48 hours at 37 °C in a 5% CO_2 humidified incubator and then pulsed for the last 24 hours with ^{3}H-thymidine. Cells are harvested onto glass filters and the ^{3}H-thymidine incorporation into DNA is measured.

Results

Bioactivity: ND_{50} = 0.2 – 0.6 µg/ml
Indirect Immunoblotting: 0.1-0.2 µg/ml antibody detects rhHGF at 25 ng/lane under non-reducing and reducing conditions.
Immunohistochemistry: 15 µg/mL using formalin-fixed, paraffin-embedded human tissue sections

References

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4. Weidner, K., et al., *Proc. Natl. Acad. Sci. USA*, **88**, 7001 (1991).
5. Fukuyama, R., et al., *Genomics*, **11**, 410 (1991).
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