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Product Information

Anti-Hepatocyte Growth Factor
produced in goat, IgG fraction of antiserum

Catalog Number **H0652**

Synonym: Anti-HGF

Product Description

Anti-Human Hepatocyte Growth Factor (HGF) is produced in goat using as the immunogen recombinant human hepatocyte growth factor expressed in the insect cell line *Sf*21. The antibody is purified by Protein G affinity chromatography.

Hepatocyte Growth Factor, also known as Scatter Factor (SF) and Hepatopoietin A, is a pleiotropic growth factor produced by mesodermally derived cells, such as Kupfer cells/macrophages, endothelial cells, and hepatic fat storing cells. HGF stimulates hepatocytes and other epithelial and endothelial cells to various biological actions, including mitogenic, morphogenic, and motogenic activity.[1-3]

Reagent

Lyophilized from 0.2 μm-filtered solution in phosphate buffered saline containing carbohydrates.

Precautions and Disclaimer

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

Preparation Instructions

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

Storage/Stability

Prior to reconstitution, store at –20 °C. The reconstituted antibody may be stored at 2–8 °C for up to one month. For prolonged storage, freeze in working aliquots. Avoid repeated freezing and thawing. Do not store in a frost-free freezer.

Product Profile

Neutralization: Anti-Hepatocyte Growth Factor was tested for its ability to neutralize the bioactivity of recombinant human HGF in a cell proliferation assay using 4MBr-5 cells, a monkey epithelial cell line responsive to HGF.[4] In this bioassay, recombinant human HGF was pre-incubated with various dilutions of the antibody for 1 hour at 22 °C in a 96 well plate. Then, 4MBr-5 cells were added to each well. The assay mixture in a total volume of 100 μl, containing diluted antibody, recombinant human HGF at 100 ng/ml, and cells at 3×10^5 cells/ml, was incubated for 48 hours at 37 °C in a 5% CO_2 humidified incubator and pulsed for the final 24 hours with ^{3}H-thymidine. Cells were harvested onto glass filters and the ^{3}H-thymidine incorporation into DNA is measured.

The Neutralization $Dose_{50}$ (ND_{50}) of the antibody is defined as the concentration of antibody required to yield one-half maximal inhibition of the cytokine activity on a responsive cell line, when that cytokine is present at a concentration just high enough to elicit a maximum response.

The exact concentration of antibody required to neutralize recombinant human HGF activity is dependent on the cytokine concenration, cell type, growth conditions, and the type of activity studied.

Immunoblotting: a working antibody concentration of 1–2 μg/ml is recommended to detect human HGF. The detection limit for recombinant human HGF is ~20 ng/lane under non-reducing conditions and 50 ng/lane under reducing conditions. This antibody preparation is a total IgG fraction, so complete monospecificity cannot be assumed.

Note: In order to obtain the best results in various techniques and preparations, it is recommended to determine the optimal working concentrations by titration.

Endotoxin: <0.1 EU (endotoxin units)/μg antibody as determined by the LAL method.

References

1. Nakamura, T., et al., *Proc. Natl. Acad. Sci. USA*, **83**, 6489 (1986).
2. Strain, A., *J. Endocrinol*., **137**, 1 (1993).
3. Stoker, M., et al., Nature, **327**, 239 (1987).
4. Rubin, J., et al., *Proc. Natl. Acad. Sci. USA*, **88**, 415 (1991).

FF,KAA,PHC,TMS,MAM 06/16-1