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Product Information

Monoclonal Anti-Insulin-like Growth Factor-II
Clone 75015
produced in mouse, purified immunoglobulin

Catalog Number **I9784**

Product Description

Monoclonal Anti-Insulin-like Growth Factor-II (IGF2; mouse IgG1 isotype) is purified from a hybridoma produced by the fusion of mouse myeloma cells and B cells from a mouse immunized with recombinant human Insulin-like Growth Factor-II (GeneID 3481) expressed by and purified from *Escherichia coli*. The antibody is purified by Protein G affinity chromatography.

Monoclonal Anti-Insulin-like Growth Factor-II recognizes human Insulin-like Growth Factor-II. This antibody was selected for its ability to neutralize the biological activity of human IGF2.

Insulin-like growth factor-II (also known as multiplication stimulating activity or MSA) and insulin-like growth factor I (IGF-I) belong to the family of insulin-like growth factors, which are structurally homologous to proinsulin. Mature IGF-I and IGF-II are highly conserved and share ~70% amino acid sequence identity. Mouse Igf2, a 67 amino acid protein, has a predicted molecular mass of ~7.4 kDa. Mouse and human IGF-II share 91% sequence identity.

Insulin-like growth factor-II has autocrine, paracrine, and endocrine functions. It is a potent mitogenic growth factor that mediates growth-promoting activities in embryonic development. IGF-II binds the IGF-II receptor with high affinity.

IGF-I and IGF-II are expressed in many tissues and cell types. IGF-II is mitogenic for a variety of cultured cells, including human or chicken fibroblasts, mouse 3T3 cells, normal rat kidney cells, and MCF-7 human breast carcinoma cells.[1]

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 0.2 μm filtered PBS to produce a 0.5 mg/mL stock solution. If aseptic technique is used, no further filtration should be necessary for use in cell culture environments.

Storage/Stability

Prior to reconstitution, store at –20 °C. Reconstituted product may be stored at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing, or storage in frost-free freezers, is not recommended.

Product Profile

Neutralization: To measure the ability of the antibody to neutralize the bioactivity of recombinant human IGF2 on MCF-7 cells, recombinant human IGF2 was incubated with various concentrations of the antibody for 1 hour at 37 °C in a 96 well microplate. Following this preincubation period, MCF-7 cells were added. The assay mixture in a total volume of 100 μL, containing antibody at 0.01-500 μg/mL, recombinant human IGF2 at 14 ng/mL and cells at 5×10^4 cells/mL, was incubated at 37 °C for 72 hours in a humidified CO_2 incubator and pulsed with ^{3}H-thymidine for the final 24 hours. The cells were subsequently detached, harvested onto glass fiber filters and the ^{3}H -thymidine incorporated into the DNA was determined.

The Neutralization $Dose_{50}$ (ND_{50}) for this antibody is defined as that 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.

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

Endotoxin: <0.1 EU/μg antibody as determined by the LAL method.

Reference

1. Zumstein, P., et al., J. Biol. Chem., **262**, 11252 (1987).

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