Magic Cellular Immunity Adjuvant

(Prod. No.: CDN-CA1)
For Research Use Only

INTRODUCTION

Magic Cellular Immunity Adjuvant is a novel immunization adjuvant specifically designed for inducing antigen-specific CD4+ Th1 and CD8+ CTL responses. Th1 cells secrete IFN-γ, which activates macrophages and induces the production of opsonizing antibodies by B cells. The Th1 response leads mainly to a cell-mediated immunity (cellular response), which protects against intracellular pathogens (invasive bacteria, protozoa and viruses). The Th1 response activates cytotoxic T lymphocytes (CTL), a sub-group of T cells, which induce death of cells infected with viruses and other intracellular pathogens. These cells play a major role in the induction of apoptosis in tumors and cells infected by viruses. Protein antigens (including inactivated pathogenic microorganisms, tumor cell lysates, recombinant or extracted protein antigens, synthetic peptides, etc.) cannot induce antigen-specific CD4+ TH1 and CD8+ CTL responses through the use of common adjuvants, such as alum & emulsions. Magic Cellular Immunity Adjuvant is a new type of water-soluble adjuvant with independent intellectual property rights and unique formula, which is developed as a protein antigen adjuvant for inducing efficient antigen-specific CD4+ Th1 and CD8+ CTL responses in mice.

KIT CONTENTS

1.0 mL Magic Cellular Immunity Adjuvant, sufficient for immunization (priming and boosting) of up to 10 mice.

KEY FEATURES

- Highly effective - Effectively induce antigen-specific CD4+ Th1 and CD8+ CTL responses.
- Easy to use - No emulsion step required.
- Safe - non-toxic adjuvant with no adverse side effects to animals.

IMMUNIZATION PROTOCOL

1. Calculate the total amount of immunogen required; dilute the immunogen with PBS or another animal compatible buffer to 2-fold of its final concentration in immunogen adjuvant mix. Recommended immunogen dosage is: (a). 10-100 μg per injection for weak immunogens such as synthetic peptides and tumor cell lysates; (b). 1-10 μg per injection for highly immunogenic immunogens such as inactivated pathogens, virus-like-particles (VLPs), and recombinant proteins.

2. Mix Magic Cellular Immunity Adjuvant in the vial by gentle vortexing before use. Mix the adjuvant with the immunogen at 1:1 ratio (V/V) by gently pipetting up and down 5 times. The total volume of immunogen adjuvant mix used per mouse is 100 μL.

3. Inject 100 μL of the immunogen/adjuvant mix into a quadriceps muscle of each mouse. Subcutaneous or intradermal injection is also compatible with Magic Cellular Immunity Adjuvant and will yield the comparable results as intramuscular injection.

4. Boost animals 7 days after the first immunization, following steps 1-3 of the priming protocol above.

5. On day 14, antigen-specific CD4+ Th1 and/or CD8+ CTL responses in draining lymph nodes, PBMC or spleen can be detected by ELISPOT, intracellular cytokine staining, MHC tetramer staining or other feasible methods.

STORAGE AND STABILITY

Magic Cellular Immunity Adjuvant is supplied as a ready-to-use solution and is shipped at ambient temperature. Upon arrival, it should be stored at -20 °C. The adjuvant is stable for up to 18 months at -20 °C.