No-Waste™ Freund's Complete Adjuvant

(Cat. # 786-709, 786-710)

INTRODUCTION

Our No-Waste™ format adjuvant minimizes waste and risk of cross contamination. Small dose packaging allows researchers to assign a vial per project or animal without concerns for excessive documentation and monitoring. Researchers do not have the burden of storing large amounts of unused adjuvant.

Freund's Complete Adjuvant (FCA): Freund's Complete Adjuvant potentiates immune response and is used as water in oil emulsion with antigen. It is most commonly used for primary immunization to raise polyclonal and/or monoclonal antibodies for research purposes.

FCA comprises non-metabolizable oils like paraffin and mannide monooleate, and heat killed mycobacteria. These non-metabolizale oils help in formation of water in oil emulsion with aqueous antigen which helps in retention of antigen for longer times at the site of injection and therefore helps in boosting immune response. Furthermore, heat-killed mycobacteria attract macrophages and initiate cell-mediated immune response which is long lasting.

In spite of several substitutes for FCA, it still is by far the most common adjuvant used for initial injections for raising antibodies.

The disadvantage of FCA is that it can result in formation of granulomas at the site of injection, can cause inflammation and lesions. Therefore it is advised that the FCA is used only for initial injection and subsequent injections can be given with incomplete adjuvant (no mycobacteria) and the desired antigen emulsions.

In addition one needs to carefully choose the route of antigen administration when using FCA. Preferred mode is subcutaneous. Adjuvants are not used for intravenous injections as it can result in anaphylaxis.

ITEM(S) SUPPLIED

Cat. #	Description	Size
786-709	No-Waste™ Freund's Complete Adjuvant*	2ml
786-710	No-Waste™ Freund's Complete Adjuvant*	5 x 2ml

* Heat-killed mycobacteria, paraffin oil and mannide monooleate

STORAGE CONDITIONS

It is shipped at ambient temperature. Upon arrival, store at 4°C. Freund's Complete Adjuvant is stable for up to 1 year if stored correctly and handled with aseptic techniques. Do not freeze Freund's Complete Adjuvant.

ADDITIONAL ITEMS REQUIRED

- Desired antigen either coupled to carrier protein or used as it is

PROTOCOL

Preparation of antigen-adjuvant emulsion for injections:

1. Mix equal volumes of desired antigen/immunogen and adjuvant solution under sterile conditions. The final antigen concentration in range of 33-50μg/ml is normally adequate for immunizing mice, rats and rabbits

2. The antigen-adjuvant emulsion can be prepared by forcing the antigen-adjuvant mixture through a small orifice. A double-hub needle connected to two syringes and designed with the purpose of mixing two liquids of different viscosity is suitable for making the adjuvant- antigen emulsion. Push the antigen-adjuvant mixture back and forth between the syringes for about 10-15 minutes till a thick white emulsion appears. Check the emulsion by placing a drop of it on the surface of water or saline. The emulsion is ready to use if the drop does not disperse in water. If it disperses in water then continue mixing till the drop of emulsion does not disperse in water

3. Other methods for emulsion preparation like using vortex, homogenizer etc can be employed depending upon the amount required and convenience.

4. Before injecting animals, one need to take care that there are no bubbles in the prepared emulsion.

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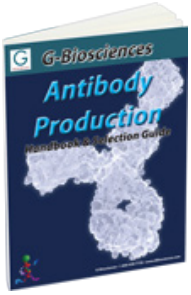

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