

Imject[®] Freund's Adjuvants

77140 77145

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Number	Description
77140	Imject Freund's Complete Adjuvant, 5 × 10mL
77145	Imject Freund's Incomplete Adjuvant, 5 × 10mL

Storage: Upon receipt store at 4°C. Product is shipped at ambient temperature.

Introduction

Adjuvants are nonspecific stimulators used to improved immune response in conjunction with an antigen. Adjuvants are mixed and injected with an antigen to prevent catabolism and help increase the immune response by localizing the antigen for an extended time and attracting the appropriate cells (T cells, B cells and APC) to interact with it. The most commonly used adjuvants are Freund's and alum, or aluminum hydroxide.

Freund's adjuvants produce a stronger, longer lasting immunogenic response compared to other adjuvants. They are easy-to-use water-in-oil emulsions and are supplied in two forms. Thermo Scientific Imject Freund's Complete Adjuvant is the form that contains killed cells of *Mycobacterium butyricum* to enhance the immune response. The form that does not contain this bacterium is known as Thermo Scientific Imject Freund's Incomplete Adjuvant. The complete adjuvant is used in initial injections, and the incomplete form is used to boost.

Important Product Information

- Products are supplied as immunogen-grade emulsions.
- Avoid direct contact with this adjuvant.
- These reagents are for use in laboratory animals only.
- Injection at multiple sites is generally favorable.
- To avoid anaphylaxis, adjuvants are not generally used for intravenous injection.

Procedure for Mixing an Immunogen with Freund's Adjuvants

1. Mix equal volumes of immunogen and Freund's adjuvant. Final immunogen concentrations of 33-50µg/100µL are usually sufficient for immunizing mice, rats and rabbits.
2. Mix by forcing the adjuvant-immunogen mixture through a small orifice. A double-hub needle (available from major laboratory suppliers) designed for mixing two liquid media differing in viscosity connected to two syringes works well. Push the mixture back and forth between the syringes for approximately 10-15 minutes until a thick emulsion develops. The mixing is complete if a drop of the emulsion does not disperse on the surface of water.¹ If it does disperse, continue mixing until this test is successful. When this procedure is complete, the sample is ready for injection.

Related Thermo Scientific Products

77161	Imject Alum, 50mL
77130	Imject Blue Carrier Protein, 100mg
77660	Imject Blue Carrier Protein, 500mg
77600	Imject mcKLH (in PBS), 5 × 20mg
77649	Imject mcKLH Subunits, High Purity Research Grade, 20mg
77653	Imject mcKLH (in MES Buffer), 2mg
77110	Imject BSA (in PBS), 5 × 20mg
77171	Imject BSA (in MES Buffer), 2mg
77661	Imject Maleimide-Activated Blue Carrier Protein, 2mg
77662	Imject Maleimide-Activated Blue Carrier Protein, 10 × 10mg
77663	Imject Maleimide-Activated PEGylated KLH, 10mg
77664	Imject Maleimide-Activated Blue Carrier Protein, 10mg
77665	Imject Maleimide-Activated Blue Carrier Protein Spin Kit
77666	Imject Maleimide-Activated mcKLH Spin Kit
77667	Imject Maleimide-Activated BSA Spin Kit
77670	Imject EDC Blue Carrier Protein Spin Kit
77671	Imject EDC mcKLH Spin Kit
77672	Imject EDC BSA Spin Kit

General References

- Harlow, E. and Lane, D. (1988). *Antibodies: A Laboratory Manual*. Cold Spring Harbor Laboratory, Cold Spring Harbor, New York 56-100.
- Male, D., Champion, B. and Cooke, A. (1987). *Advanced Immunology*. J.B. Lippincott Co., Gower Medical Publishing, London 8.1-8.8.
- Sell, S. (1987). *Immunology, immunopathology and immunity*. Elsevier, New York 69-78.

This product ("Product") is warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation") and to be free from defects in material and workmanship. Unless otherwise expressly authorized in writing, Products are supplied for research use only. No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the original purchaser of the Product ("Buyer").

No other warranties, express or implied, are granted, including without limitation, implied warranties of merchantability, fitness for any particular purpose, or non infringement. Buyer's exclusive remedy for non-conforming Products during the warranty period is limited to replacement of or refund for the non-conforming Product(s).

There is no obligation to replace Products as the result of (i) accident, disaster or event of force majeure, (ii) misuse, fault or negligence of or by Buyer, (iii) use of the Products in a manner for which they were not designed, or (iv) improper storage and handling of the Products.

Current product instructions are available at www.thermoscientific.com/pierce. For a faxed copy, call 800-874-3723 or contact your local distributor.

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