



Rabbit Rapid Aqueous Adjuvant

Our Product Introduction

for more products please visit us on melonmaterials.com

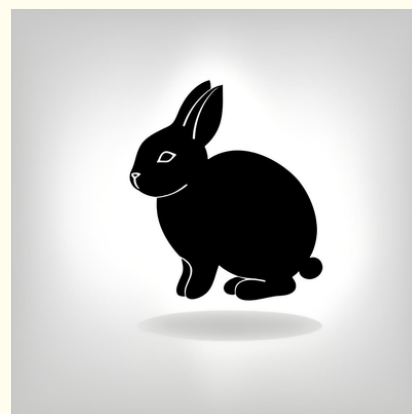
Basic Information

- Place of Origin: Wuhan, Hubei, China
- Brand Name: Meilun Materials
- Model Number: SNK
- Minimum Order Quantity: 1 ML
- Packaging Details: 1ml/ bottle, 10ml/ bottle
- Payment Terms: L/C, T/T
- Supply Ability: 1T/month



Product Specification

- Highlight: Rabbit Rapid Aqueous Adjuvant, Immune adjuvant, Veterinary vaccine adjuvants



More Images



Product Description

【Product Name】 : Rabbit Rapid Aqueous Adjuvant

【Main Ingredients】 : Nano water-based adjuvant, polymer materials.

【Characteristics】 : White transparent emulsion.

【Function and Purpose】 : The reagent itself is a water-soluble adjuvant complex. There is no need for the complicated emulsification process of Freund's adjuvant when in use. The antigen and adjuvant only need to be mixed simply to immunize animals. Can be used via intramuscular or subcutaneous immunization routes. It has good broad-spectrum antibody production, high antibody titers, and high antibody affinity. By reducing the number of immunizations and lowering the antigen dose per immunization, total antigen usage is saved, greatly shortening the antibody production cycle, far superior to industry standards.

【Usage and Dosage】 :

1: Dilute the antigen with physiological saline to a final concentration of 2 times (prepare according to 100μl antigen per injection). Recommended antigen doses based on experimental data from the company for hundreds of antigens, vaccines, and semi-antigens are as follows: (1) For weakly immunogenic subunit protein antigens, a recommended dose of 100μg per injection is suggested; (2) For strongly immunogenic inactivated whole viruses or bacteria and virus-like particle antigens, a recommended dose of 20μg per injection is suggested; (3) For small molecule antigens conjugated with carrier proteins, a recommended dose of 100μg per injection is suggested. (Actual doses should be based on company's previous data and experience)

2: Thoroughly mix the adjuvant (suggested to mix several times with a syringe), aseptically take out the required amount (100μl per injection) and mix rapidly with the antigen at a volume ratio of 1:1 (The slight precipitation produced by this adjuvant when mixed with the antigen is normal. Mix thoroughly with the antigen and inject as soon as possible).

3: Immunize rabbits by intramuscular injection into the hind leg calf muscle, injecting 200μl per rabbit. (Injection method can follow the company's routine operations) (1) After mixing the adjuvant with the antigen, precipitation is a normal phenomenon. Mix well before drawing into the syringe and inject as soon as possible; (2) Immunization can also be performed by subcutaneous or intradermal injection according to individual experimental habits.

4: Strengthen the immunization with the same dose and method on days 10-14 (The timing of the second dose should be determined based on the actual antigen type). Note: Each adjuvant and antigen should be prepared and used immediately. Injection sites are the same as the initial immunization. (If reinforcement immunization is needed, follow the company's actual immunization procedures)

5: IgG can be detected on day 14, and on day 21, a small amount of blood can be taken for ELISA testing (The above are experimental predictions, and data conclusions should be based on actual conditions). Antibody titers can reach their peak. Subsequently, whole blood can be collected or antigen shock immunization and spleen cell fusion can be performed according to conventional methods.

6: If the potency is lower than expected on day 21, another immunization with the same dose and method can be performed around day 21. Potency testing can be performed on days 28-35, and generally, antibody titers can reach their peak. Subsequently, whole blood can be collected or antigen shock immunization and spleen cell fusion can be performed according to conventional methods.

【Storage and Shelf Life】 : Store at 4-8°C, aseptically remove, shelf life is two years.

【Manufacturer】 : Wuhan Melon New Materials Co., Ltd

Product Q&A

Q1: How to choose MelonAntibody series immunization adjuvants?

Our water-soluble MelonAntibody series immunization adjuvants are available for various animals, including: water-based rapid immunization adjuvants for rabbits, mice, alpacas, goats, chickens, and pigs.

Q2: What are the characteristics of the MelonAntibody series immunization adjuvants?

Compared to conventional Freund's adjuvants, MelonAntibody immunization adjuvants have several advantages, detailed as follows:

MelonAntibody requires only two to three immunizations, reducing the number of immunizations compared to Freund's adjuvants, whether used for monoclonal or polyclonal antibody preparation.

By reducing the number of immunizations and lowering the antigen dosage per injection, MelonAntibody can significantly reduce the total antigen dosage. Recommended antigen dosages are as follows: (1) 100μg per injection for weakly immunogenic subunit protein antigens; (2) 20μg per injection for strongly immunogenic inactivated whole viruses or bacteria as well as virus-like particle antigens; (3) 100μg per injection for small molecule antigens conjugated to carrier proteins (actual dosages should be based on company's preliminary data and experience).

MelonAntibody generates antibodies quickly with high titers and affinity. For a standard immunization program, whether for monoclonal or polyclonal antibody preparation, only two to three immunizations within three weeks are required. Typically, ELISA titers (with a cutoff value of 0.1000) reaching 1:10,000 to 1:10,000,000 of high-affinity antibodies can be obtained by the third to fourth week.

MelonAntibody does not disrupt the natural conformation of antigens, making it easier to obtain monoclonal antibodies targeting conformational epitopes, a significant advantage not possessed by Freund's adjuvants.

MelonAntibody is water-soluble, eliminating the need for the complex emulsification process required by Freund's adjuvants. Antigen and adjuvant only need to be mixed for animal immunization.

MelonAntibody uses the muscle immunization route, which is much more convenient than using footpads or splenic immunization in the conventional process of rabbit monoclonal antibody preparation.

Q3: Is there a need to increase the dosage for immunizing larger rabbits?

No, it is not necessary.

Q4: Antigen Solvents

Solvents	Feasibility
PBS,saline	Ok
Contains urea	No effect.Customer feedback indicates urea concentrations can be as high as 6M or above.
Contains Guanidine Hydrochloride	No effect
Contains imidazole	No effect,but it is recommended to immunize after dialysis with PBS.

Q5: How to Immunize and Boost Immunization

For immediate use upon arrival in the animal room, thoroughly mix the solution. Immunize the animals within 10 minutes of mixing, as prolonged standing may result in slow sedimentation, leading to uneven distribution of active components and affecting immunization efficacy. Alternatively, clients may pre-mix in the laboratory and achieve uniformity by gently blowing through the needle or gently shaking upon arrival in the animal room. It's not advisable to mix with an injection syringe as it may not effectively blend. For immunization: Use MelonAntibody water-based adjuvant. For mice, immunize at the inner side of the hind leg root muscle with a single-point injection. Avoid deep penetration into the leg muscles, as it may hit the bone. For boost immunization: Inject 20-50ug of antigen into the abdominal cavity, with a volume of 100-200ul. The injection point should be on the left or right lower abdomen of the mouse, avoiding the liver and lower bladder along the leg angle, with the needle entering about 1/3 of the 1ml syringe.

Q6: Is muscle immunization necessary?

Our adjuvant contains components intended for subsequent use in human vaccine adjuvants. Therefore, optimization is based on muscle immunization. However, subcutaneous immunization can also be used, but abdominal cavity immunization is not recommended.

Q7: Lump or leakage after adjuvant use

Our adjuvant is intended for intramuscular immunization. However, some customers may have used intraperitoneal or subcutaneous immunization previously, resulting in unfamiliarity with intramuscular immunization and causing lumps. The main reason for lumps is subcutaneous injection. Customers can try to inject deeper. For first-time use, it is recommended to wipe the hind leg with alcohol. During immunization, avoid the two veins on the inner side of the hind leg. After immunization, rotate the needle half a circle, hold for a few seconds, and then withdraw.

Q8: Can the immunization interval be shortened?

Generally, it is not recommended to shorten the interval due to considerations of antibody affinity and potency. However, for serum potency testing, our instructions suggest testing 7-10 days after the second immunization, with the potency generally measured 14 days after the second immunization. After the potency meets the standard, several boost immunizations can be performed for fusion.

Q9: Can it be used for plasmids or whole viruses?

Plasmids are not suitable, but proteins and viruses are suitable.

Q10: Can it be used for non-protein antigens such as cells or viruses?

Our adjuvant has been tested with tens of thousands of antigen immunizations, including cells, viruses, proteins, peptides, polysaccharides, lipids, heavy metals, antibiotics, pesticides, drugs, and food safety-related compounds, all with excellent results and rich industrial customer cases.

Q11: Can it be used for immunization of nucleic acid plasmids or RNA?

For nucleic acid immunization, our adjuvant is not suitable. Liposomes can be used instead.

Q12: Can it be used for vaccine development?

The initial purpose of the adjuvant composition development was for human vaccine adjuvants, and some components are suitable for vaccine development. Considering the cost requirements of customers for animal vaccine development, they generally consider using it for pets or special animals. However, if you intend to cooperate and plan to use a cost-effective water-based rapid adjuvant to achieve cost reduction and efficiency improvement for your company, we should be able to meet your requirements with our company's ability to control costs throughout the supply chain and large-scale production capacity in GMP production lines.

Q13: If the potency is not ideal after 2 immunizations

For antigens with relatively weak immunogenicity or for customers using our products for the first time, the potency may not increase after two immunizations. In this case, a third immunization can be performed 14 days after the second one, which generally results in a significant increase. However, a maximum of four immunizations is recommended. If the potency still does not increase after four immunizations, it is generally suggested to re-immunize or modify the antigen. This is more common with small molecule antigens such as peptides and small molecules. For peptides, increasing the number of amino acids to more than 20 can effectively increase antibody potency.

Q14: Can it be stored at -20°C?

Our adjuvant components are very stable and have been tested at 50°C for one month without any adverse effects. However, it should not be frozen, as freezing can significantly affect immunization efficacy. It is generally recommended to store it in a refrigerator at 4°C, preferably near the door, as some refrigerators may not have good temperature control, and the temperature inside may drop below 0°C if stored in the back.

Q15: Antibody Production in a Rabbit Immunized with 8-week Adjuvant

For our rabbit polyclonal antibody projects, there are two purification methods:

Antigen Affinity Purification: Typically, purifying 10ml of antiserum yields approximately 1-3mg of purified antibody. With 50ml of antiserum per rabbit, the total yield should be around 5-15mg.

Protein A/G Purification: Purifying 20ml of antiserum should yield around 100-150mg of purified antibody.

Clients generally prefer the antigen affinity purification method, so the first set of data is more commonly used.

Q16: Can fast adjuvants be used after one injection of Freund's adjuvant?

Yes, different adjuvants have similar functions, and different adjuvants can be cross-used.

Q17: Can it be used in parallel with aluminum adjuvants?

Yes, they can be used together. Any immunization method can produce both cellular and humoral immune effects.

Q18: Species Suitable for Adjuvants

Currently, MelonAntibody has been used for immunization in various species, including mice, rats, rabbits, guinea pigs, goats, llamas, chickens, monkeys, and more, with good results. The adjuvant itself is a mixture of multiple adjuvants, not a single adjuvant.

Q19: Why is water adjuvant more expensive than Freund's adjuvant?

Although the price may seem slightly higher, it saves time and costs:

Saves one month of time and mouse feeding costs.

Saves antigen usage; only 1/5 to 1/10 of the original amount is needed. The price of 1mg of natural antigen can be as high as tens of thousands of yuan.

Q20: Can our fast adjuvant be used for boosting immunization when the immunogen is cells, not processed proteins?

The main function of boost immunization is to activate splenocytes to a high degree, significantly affecting the ability of hybridoma cells to secrete antibodies after fusion. Therefore, it is still recommended to directly boost immunization with the antigen. Moreover, cells used as immunogens are likely to have low potency issues due to their complex composition, and the target epitope protein may not be the dominant immunogen. Previous experiences suggest that technical services for antibody preparation using similar cell immunization methods generally cannot meet experimental expectations.

Q21: Is there a requirement for the rabbit's weight?

There is no specific weight requirement. Currently, our company immunizes rabbits using healthy 6-week-old New Zealand White rabbits (bright eyes, clean hindquarters, weighing approximately 2kg).

Q22: During the use of antibody preparation, does the adjuvant need to react with the polypeptide in the antigen to form a covalent bond?

In the process of mixing the antibody with the antigen for immunization, aqueous rapid adjuvants usually do not need to react with the polypeptide in the antigen to form a covalent bond. Its mechanism of action is mainly that the hydrophobic end of the polymer molecule in the adjuvant binds to the protein antigen (containing protein-coupled polypeptides or small molecules) through non-covalent bonds, such as hydrophobic interactions, hydrogen bonds, van der Waals forces, etc., to form a complex. This binding method can keep the protein structure unaffected. After injection into the animal, the adjuvant can slowly release the bound antigen, thereby achieving the effect of gradually stimulating the immune system.

Q23: Species Suitable for Adjuvants

Currently, MelonAntibody has been used for immunization in various species, including mice, rats, rabbits, guinea pigs, goats, llamas, chickens, monkeys, and more, with good results. The adjuvant itself is a mixture of multiple adjuvants, not a single adjuvant.

Species	Adjuvant type	Antigen dosage(ug)	Antigen volume(ul)	Adjuvant volume(ul)
mice	MelonAntibody-Mouse	5~40ug	50	50
mice, guinea pigs	MelonAntibody-Mouse	20~50ug	70	70
rabbit, chicken	MelonAntibody-Rabbit	50~100ug	100	100
goat, alpaca	MelonAntibody-goat MelonAntibody-alpaca	200~500ug	300~500	300~500
monkey	MelonAntibody-monkey	200ug	200~300	200~300



Wuhan Meilun New Materials Co., Ltd



+8618062439876



hu1150563785@gmail.com



melonmaterials.com

Room 1206-1207, Building 8, Country Garden Yunxi Office, No. 20 Gaokeyuan West Road, Jiufeng Street, East
Lake New Technology Development Zone, Wuhan