

Product Information

Sigma Adjuvant System®

S6322

Storage Temperature: 2-8 °C

Product Description

The Sigma Adjuvant System® is a stable oil-in-water emulsion which can be used as an alternative to the classical Freund's water-in-oil emulsion. The Sigma Adjuvant System® is a powerful immunostimulant. The product is non-viscous (2% squalene oil-in-water emulsion) and easily prepared. Each vial contains 0.5 mg Monophosphoryl Lipid A (isolated from *Salmonella minnesota*) and 0.5 mg synthetic trehalose dicorynomycolate (an analogue of trehalose dimycolate from the cord factor of the tubercle bacillus) in 44 µL of squalene oil, 0.2% Tween® 80 emulsifier and water. The Sigma Adjuvant System® is tested for suitability in mice.

Materials Recommended

- One 2.5 mL all-plastic or siliconized glass Luer Lok™ syringe
- One 20 or 21-gauge needle

Recommended Injection Protocol

- Mice: a 200 µL dose intraperitoneally or subcutaneously (100 µL in each of 2 sites).
- Rats: a 500 µL dose given as 400 µL subcutaneously (200 µL in each of two sites) and 100 µL intraperitoneally.
- Rabbits: a 1.0 mL dose administered as 300 µL intradermally (50 µL in each of 6 sites), 400 µL intramuscularly (200 µL into each hind leg), 100 µL subcutaneously (neck region) and 200 µL intraperitoneally.
- Guinea Pigs: a 500 µL dose administered as 400 µL subcutaneously (200 µL in each of two sites) and 100 µL intraperitoneally.
- Goats: a 1.0 mL dose administered intramuscularly (500 µL into each hind leg).

Recommended Antigen Concentration

The recommended antigen concentration range is 0.05-0.25 mg per mL of saline.

Weak or non-immunogenic antigens however, can be used at concentrations up to 1.0 mg/mL.

Procedure

Prior to antigen addition, warm contents of vial to 40-45 °C. Add 2.0 mL of sterile saline containing the desired amount of antigen as recommended above. The final emulsion will contain a concentration of 2% oil.

1. Inject antigen-saline solution (2 mL) directly into the vial through the rubber stopper using a syringe fitted with a 20 or 21-gauge needle (leave the cap seal in place).
2. Vortex the vial vigorously for 2 to 3 minutes to form emulsion. Invert the vial and vortex for 1 minute to ensure reconstitution of any product adhering to the stopper.
3. If the entire contents of the vial will not be used initially, reconstitute with 1 mL saline without antigen. This emulsion can be stored at 2-8 °C for up to 60 days. Do Not freeze. To use, mix aliquots 1:1 with antigen in saline.
4. Prior to inoculation, warm the vial to 37 °C and vortex briefly.

Boosting

For mice, rabbits, rats and guinea pigs; boost on day 21 or 28, bleed 10-14 days after booster injection. Boost every 3-4 weeks thereafter. For goats, boost every four weeks. Use the same protocol for each injection.

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.

Storage/Stability

Store adjuvant at 2-8 °C until use. Adjuvant is stable for 2 years when stored under these conditions.

Do not freeze.

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