Adju-Phos® adjuvant
Aluminium phosphate gel
Catalog code: vac-phos-250
https://www.invivogen.com/adju-phos

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Version 22G01-NJ

PRODUCT INFORMATION

Contents
- 250 ml of Adju-Phos® adjuvant provided as a ready-to-use, aluminium phosphate wet gel (colloidal) suspension. It is sterilized by heating and aseptically filled.

Storage and stability
- Adju-Phos® adjuvant is shipped at room temperature and should be stored at room temperature. The expiry date is specified on the product label. The product tolerates re-autoclaving but is destroyed if frozen. DO NOT FREEZE.
- Quality control
  - Adju-Phos® adjuvant has been tested for pyrogenicity and sterility.
  - The pH at the time of production has been confirmed.

DESCRIPTION

Adju-Phos® adjuvant is an aluminium phosphate wet gel suspension. Aluminium adjuvants, comprising Adju-Phos® and Alhydrogel® (aluminium hydroxide), are the most commonly used class of adjuvants1. Both products increase Th2 antibodies but do not promote significant Th1 cellular responses2. These adjuvants improve attraction and uptake of antigen by antigen presenting cells (APCs)3. It has been suggested that the antigens adsorbed on the aluminium salts are presented in a particulate form, making them more efficiently internalized by APCs. The main difference between the two aluminium salts is their point of zero charge (PZC), the pH value at which the surface of the adjuvant has a net neutral charge. The PZC influences the adjuvant’s ability to adsorb and release antigen. For example, when the pH is maintained at 6-8, which is normal during vaccine production, Adju-Phos® particles have a negative electrical charge and thus are well suited for adsorption of positively charged antigens (e.g. antigens with isoelectric points above the pH of formulation)4. In contrast, at neutral pH Alhydrogel® particles are positively charged and thus readily adsorb negatively charged antigens5. Several other factors significantly change the adsorption capacity of both Alhydrogel® and Adju-Phos®, including molecular weight of protein antigens, sodium chloride, phosphate buffer, denaturing agents, and size of aluminium particles6. The adsorption capacity for a model protein such as IgG or lysozyme in Adju-Phos® varies from 0.4 to 0.6 (mg/mg Al)7. Another difference between these two salts is that following injection, Adju-Phos® adjuvant dissolves more readily than Alhydrogel® adjuvant. Adju-Phos® adjuvant is made by Croda, a leader in the global vaccine adjuvants market with a long history of producing high quality aluminium phosphate adjuvants used in clinically approved human vaccinations. Sci Rep. 6:31578. 2016.

METHODS

Preparation of antigen-Adju-Phos® adjuvant mixture

Antigens are preferentially diluted in saline or phosphate buffers. The amount of protein or conjugated peptide used for the primary immunization can be adjusted depending upon availability and immunogenicity of the antigen. The adsorption capacity for a model protein such as IgG or lysozyme in Adju-Phos® varies from 0.4 to 0.6 (mg/mg Al)7. 1. Shake vigorously before use the capped bottle of Adju-Phos® adjuvant.
2. Add Adju-Phos® adjuvant to the antigen solution; the final volume ratio of Adju-Phos® adjuvant to antigen should range from 1:1 (100 μl Adju-Phos® adjuvant for 100 μl of antigen) to 1:9 (100 μl Adju-Phos® adjuvant for 900 μl of antigen).
3. Mix well by pipetting up and down for at least 5 minutes to allow Adju-Phos® adjuvant to effectively adsorb the antigen.

The volume of injection depends on the site of administration. For example, 100 μl can be injected subcutaneously in mice.

Note: To avoid lung embolism or anaphylaxis, do not use adjuvants for intravenous injection.

RELATED PRODUCTS

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Catalog Code</th>
</tr>
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<tbody>
<tr>
<td>Alum and emulsions</td>
<td>Squalene-o/w</td>
<td>vac-adx-10</td>
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<tr>
<td>AddaVac</td>
<td>Al(OH)₃ gel</td>
<td>vac-alu-250</td>
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<td>CFA</td>
<td>Complete Freund’s Adjuvant</td>
<td>vac-cfa-10</td>
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<td>PRR ligands</td>
<td>2′3′-cGAMP VacciGrade™</td>
<td>vac-nacga23</td>
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<td>STING agonist</td>
<td>vac-mpla</td>
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<td>TLR4 agonist</td>
<td>vac-1826-1</td>
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<td>Murine TLR9 agonist</td>
<td>vac-pic</td>
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<tr>
<td>R848 VacciGrade™</td>
<td>TLR7/8 agonist</td>
<td>vac-r848</td>
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<td>EmbFlt™ Ovalbumin</td>
<td>vac-pova</td>
</tr>
<tr>
<td>Ova 257-264</td>
<td>For in vivo use</td>
<td>vac-sin</td>
</tr>
<tr>
<td>Ova 323-339</td>
<td>For detection; ELISPOT</td>
<td>vac-isq</td>
</tr>
</tbody>
</table>


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TECHNICAL SUPPORT

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