**Quil-A® Adjuvant**

Saponin vaccine adjuvant

Catalog code: vac-quil

[https://www.invivogen.com/quila](https://www.invivogen.com/quila)

Distributed by InvivoGen for research use only. Not approved for use in humans.

Version 20D28-MM

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**PRODUCT INFORMATION**

**Contents**

- 1 g of lyophilized Quil-A® adjuvant

*Note: Product is not sterile nor aseptically filled. However, prior to lyophilization Quil-A® adjuvant has been passed through a 0.22 micron filter. Hence, the product has very few colony forming units (CFU).*

**Storage and stability:**

- Quil-A® adjuvant is provided lyophilized and shipped at room temperature.
- Lyophilized Quil-A® adjuvant can be stored from -25 °C to 25 °C. It is essential that Quil-A® adjuvant is not subjected to humidity, as the lyophilized product may contain a very low number of CFU.
- Lyophilized powder is stable for up to 5 years, provided the product is kept dry.
- Once dissolved and sterile-filtered, Quil-A® adjuvant should be stored at -20 °C.

**Quality control:**

- Purity and composition is assessed using high-performance liquid chromatography (HPLC) and high-performance thin-layer chromatography.
- The ability of Quil-A® adjuvant to hemolyze sheep red blood cells (SRBC) is used as an indirect read-out for the integrity of the saponin molecule.
- The dry-matter content is tested to verify the efficiency of the lyophilization, as low-water content in the final product is important for maximizing the shelf-life.

**DESCRIPTION**

Quil-A® adjuvant is a saponin adjuvant produced under GMP by Croda (following its acquisition of Brenntag Biosector A/S) a leader in the global vaccine adjuvants market, and purified by them through a proprietary process that ensures consistency and immunostimulatory potential. Quil-A® adjuvant is used in a wide variety of veterinary vaccines, as well as in immunological research into human and veterinary applications.

Quil-A® adjuvant contains the water-extractable fraction of saponins from the South-American tree, *Quillaja saponaria* Molina. These saponins belong to the group of triterpenoid saponins, that have a common triterpenoid backbone structure. Saponins induce a strong adjuvant response to T-dependent as well as T-independent antigens. Saponins also induce strong cytotoxic CD8+ lymphocyte responses and potentiate the response to mucosal antigens.

When combined with cholesterol and phospholipids to form ISCOMs (immunostimulatory complexes), Quil-A® adjuvant can activate both the cell-mediated and the antibody-mediated immune responses to a broad range of viral, bacterial, parasitic and tumor antigens.

**CHEMICAL PROPERTIES**

**CAS number:** 8047-15-2

**Dry matter:** ≥95%

**METHOD**

**Preparation of stock solution (10 mg/ml)**

1. Weigh 100 mg of Quil-A® adjuvant. Place in a clean container.
2. Add 10 ml of distilled water to 100 mg of Quil-A® adjuvant.
3. Mix using a magnetic stirrer until all the material has dissolved.
4. Immediately after dissolving the lyophilized powder, pass it through a 0.22 micron sterility filter into a sterile container under laminar air flow (Class A) in Class B surroundings.
5. After sterile filtration the Quil-A® adjuvant solution should be stored frozen until use. Prepare aliquots to avoid repeated freeze-thaw cycles.
6. Due to the risk of alkaline hydrolysis, do not expose Quil-A® adjuvant to a pH above 8.5.

**INJECTION ROUTE**

Quil-A® adjuvant should only be injected subcutaneously or intramuscularly. Quil-A® adjuvant should never be injected intraperitoneally, as the surface activity of the saponin molecules can lead to chemical peritonitis and induce fibrous adhesions between the organs in the peritoneum.

**DOSSING GUIDELINES**

<table>
<thead>
<tr>
<th>Species</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mice</td>
<td>≤ 15 µg/dose</td>
</tr>
<tr>
<td>Rabbits</td>
<td>≤ 50 µg/dose</td>
</tr>
<tr>
<td>Pigs</td>
<td>≤ 300 µg/dose</td>
</tr>
<tr>
<td>Cattle</td>
<td>≤ 750 µg/dose</td>
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</tbody>
</table>

**Guinea pigs:** ≤ 25 µg/dose

**RELATED PRODUCTS**

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Cat. Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alum and emulsions</td>
<td>Squalene o/w</td>
<td>vac-adx-10</td>
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<tr>
<td>Alhydrogel® adjuvant 2% CFA</td>
<td>Al(OH)₃ gel</td>
<td>vac-alu-250</td>
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<tr>
<td>Complete Freund’s Adjuvant</td>
<td>vac-cfa-10</td>
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<tr>
<td>PRR ligands</td>
<td>STING agonist</td>
<td>vac-nacg23</td>
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<tr>
<td>2’3’-cGAMP VacciGrade™</td>
<td>Murine TLR9 agonist</td>
<td>vac-1826-1</td>
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<td>ODN 1826 VacciGrade™</td>
<td>TLR3 agonist</td>
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<td>Poly(I:C) VacciGrade™</td>
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<tr>
<td>OVA Antigens</td>
<td>For in vivo use</td>
<td>vac-pova</td>
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<tr>
<td>EndoFit™ Ovalbumin</td>
<td>For detection: ELISPOT</td>
<td>vac-sin</td>
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<tr>
<td>Ova 257-264</td>
<td>For detection: ELISPOT</td>
<td>vac-isq</td>
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<tr>
<td>Ova 323-339</td>
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For a complete list of adjuvants provided by InvivoGen, please visit [https://www.invivogen.com/vaccine-adjuvants](https://www.invivogen.com/vaccine-adjuvants).

Quil-A® is a trademark of Croda.

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4. Sun HX. et al., 2009. Recent advances in veterinary viral, bacterial, parasitic and tumor antigens.

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**TECHNICAL SUPPORT**

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