Alum Adjuvant

(Cat. # 786-1215)
INTRODUCTION
Alum is widely used adjuvant for increasing the immune response. When compared to Freund’s adjuvants, alum is generally less toxic and hazardous to animals as well as researchers and thus reduces the risks of lesion and other adverse inflammatory responses at the injection site. Alum is an insoluble, white colloidal suspension of aluminum hydroxide. When alum is mixed with an antigen, the antigen binds with the alum particles and becomes an insoluble antigen. Alum-antigen, when injected into animals, forms a deposit of insoluble antigen at the injection sites; rendering insoluble antigens localized for an extended period of time, hence, prolonging interaction and uptake of antigens by immune responsive cells, such as T cells, B cells and antigen presenting cells (APCs). Alum stimulates pattern recognition receptors (PRRs) as well as a Th2 immune response.

Antigen adsorbs to the surface of aluminum adjuvants via hydrophobic and Vander Waals forces, via electrostatic attraction and by ligand exchange\(^1\). Aluminum hydroxide is positively charged at pH6-7.5 and attracts negatively charged proteins.

G-Biosciences Alum Adjuvant preparation is premade for use without any further handling; simply mix with antigen preparation and it is ready for delivery into selected animals. Alum Adjuvant preparation is sterile and is supplied in near neutral pH and unlike other commercial preparations of alum, do not contain any preservative or any inactive agent, minimizing the risk reduced antigen-alum binding.

ITEM(S) SUPPLIED

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<thead>
<tr>
<th>Cat. #</th>
<th>Description</th>
<th>Size</th>
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<tbody>
<tr>
<td>786-1215</td>
<td>Alum Adjuvant</td>
<td>50 ml</td>
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STORAGE CONDITIONS
Alum Adjuvant is shipped at ambient temperature. Upon arrival store it at room temperature. The kit is stable for 1 year if used as per instruction.

ADDITIONAL ITEMS REQUIRED
- Desired antigen either coupled to carrier protein or used as it
PROTOCOL
1. Prepare antigen in phosphate buffer saline.
2. Add Alum Adjuvant dropwise with mixing in ratio 1:1 (For example: 100 µl adjuvant to 100 µl of antigen) to 1:5 (For example: 100 µl adjuvant to 500 µl of antigen).
3. Continue mixing gently for 30 minutes to allow adsorption of antigen on alum.
4. Immunize animal according to the standard protocol².
   
   **NOTE:** Appropriate volume of antigen-alum suspension and appropriate amount of antigen to be injected should be selected based on species to be injected. For example for mice appropriate volume is 100-200 µl and concentration of antigen is 50 to 100 µg.¹
   
   **NOTE:** Do not inject adjuvant intravenously as it can lead to anaphylaxis.

REFERENCES

RELATED PRODUCTS
Download our Antibody Production and Protein Purification Handbooks

http://info2.gbiosciences.com/complete-antibody-production-handbook

For other related products, visit our website at [www.GBiosciences.com](http://www.GBiosciences.com) or contact us.

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