ab173231

BSA Removal Kit

Instructions for Use

For the removal of BSA from antibodies prior to conjugation. Please note that this kit is not compatible with our range of GOLD conjugation kits. To remove BSA from antibodies prior to conjugation with our GOLD conjugation kits please use GOLD BSA removal kit (ab204912).

This product is for research use only and is not intended for diagnostic use.
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1. Introduction

Bovine Serum Albumin (BSA) is often added to purified antibodies as it is an effective stabilizer. However, when labelling antibodies, the BSA becomes a hindrance, as it directly competes with the antibody to attach to the label, greatly reducing the conjugation efficiency. Therefore, prior to undertaking labelling techniques, it is essential to remove the BSA. Common commercial BSA removal techniques can involve many laborious steps.

Abcam’s BSA Removal Kit (ab173231) is a simple one-step, 10 minute method which effectively separates the BSA from the antibody. The antibody is left in a suitable position for transfer to a buffer more suited to conjugation. The BSA Removal Kit can be used on any antibody sub-type, and species.
2. Materials Supplied

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSA Removal Buffer</td>
<td>1 vial</td>
</tr>
<tr>
<td>Re-suspension Buffer</td>
<td>1 vial</td>
</tr>
</tbody>
</table>

3. Storage and Handling

- This kit is shipped at ambient temperature. Upon receipt, store kit at ambient temperature.

- BSA Removal Buffer may contain precipitated material. To dissolve the aggregates, place the Vial containing the BSA Removal Buffer, in a water bath at 40°C for about 10 minutes until the aggregates have dissolved. Caution DO NOT heat above 44°C.

- If the precipitate in the buffer does not dissolve completely. Spin it in a bench top micro-centrifuge, at a recommended maximum speed of 13,000g for 1 minute, and use the supernatant.

- Please note that this kit is not compatible with our range of gold conjugation kits.
Pre-Reaction Considerations

A. Minimum amount of antibody to purify

50 µg of antibody is the lower limit for seeing a clearly visible pellet.

B. Antibody/ BSA concentration

The BSA Removal Kit can separate BSA from antibody solutions with antibody concentrations from 0.03 mg/ml to 10 mg/ml. Separation is more efficient at higher antibody concentrations. BSA can be effectively separated when present at concentrations of up to 0.5%. If BSA is present at higher concentrations, dilute the antibody mix with de-ionized, distilled water until BSA concentration is 0.5% or less.

C. Buffer composition

Buffers such as MES, Tris and PBS are compatible with the kit and common non-buffering salts (e.g. NaCl) have no adverse effect on the separation. Glycerol up to 20% has no effect.

The BSA Removal kit is effective with buffers between pH 6.0 and pH 8.0. If the buffer is outside the suggested pH range, please contact us by email (technical@abcam.com) or phone (select “contact us” on www.abcam.com for the phone number for your region).
4. Removal of BSA

1. For every 100 μl of antibody to be treated, add 80 μl of the BSA Removal Buffer directly to the antibody solution.

2. Mix and incubate for 5 minutes at room temperature.

3. Spin the sample in a microfuge, at a recommended maximum speed of 13,000 x g for 5 minutes, until a pellet is formed**

**Note:**
Required spin time will vary depending on buffer composition and speed.

4. Remove the supernatant. The supernatant can be kept on ice until a positive outcome is confirmed.

5. Re-suspend the pellet using the Re-suspension buffer provided, or another buffer suitable for the labeling process.
5. Frequently Asked Questions

1. How much BSA can the BSA Removal Kit remove?

This 1 ml kit can remove all of the BSA from up to 1.25 ml of antibody, with a BSA concentration of 0.5% or less. For higher BSA concentrations, the method may need to be repeated, or a higher volume of BSA Removal Buffer may be required.

2. Can the BSA Removal Kit remove gelatin from my sample?

No, the kit is specifically designed for the removal of BSA. It is effective on some other buffers (see question 3) but is not effective on gelatin.

3. Could I use the BSA Removal Kit to remove Tris or Glycine from my antibody?

Yes, the kit will effectively separate the antibody in this situation. See section 5, Pre-Reaction Considerations for more information on suitable buffers for use with the kit.

4. Can the kit be used to purify antibody from TCS or serum?

No, the kit is not specific enough to the antibody to be used as a purification technique in this instance.
6. Can the BSA Removal Kit be used to concentrate a sample?

Yes, once the separation is complete, the antibody pellet can be recovered using any volume, to reach the desired final concentration.

7. Could the kit have any negative impact on the conjugation efficiency?

No, the BSA Removal Buffer has no effect on antibody conjugation.
6. Appendix

SDS-PAGE Gel showing the use of the BSA Removal Kit on a mixture containing 1 mg/ml IgG and 1 mg/ml BSA. The gel shows the mix before and after separation.

For technical questions please do not hesitate to contact us by email (technical@abcam.com) or phone (select “contact us” on www.abcam.com for the phone number for your region).

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