

Albumin Removal Kit for Plasma and Serum

Part #0070-3701

Albumin is abundant in serum and plasma and can obscure surrounding proteins in one and two-dimensional gels. The Genomic Solutions Albumin Removal Kit contains mini-spin columns filled with Cibachron™ Blue dye covalently linked to beads. This dye binds albumin and has been used to reduce albumin in samples prior to electrophoresis.¹ It is important to note that the albumin will be reduced, not eliminated, and that the Cibachron™ Blue resin may bind serum proteins other than albumin such as interferon, lipoproteins, and nucleotide-requiring enzymes.

Equipment Needed:

Micro-centrifuge
Speed Vac or lyophilizer

Kit Components:

| Part # | Description |
|-----------|--|
| 0070-3703 | Albumin Binding Buffer, 25 ml |
| 0080-0772 | Sample Buffer Mix, 2 ml (2) |
| 0070-3702 | Cibachron™ Blue Resin Mini-Spin Columns (5 per pack) |
| | Kit instructions |

Procedure:

Note: Use 1 column for each 50 µl sample of plasma or serum.

1. Equilibrate a mini-column by adding 400 µl of Albumin Binding Buffer to the sample cup just above the porous frit. Do not equilibrate columns if they will not be used immediately.
2. Place the mini-column in a microcentrifuge and spin at approximately 2000 rpm for 2 minutes. Do not spin at higher speeds or the column will be damaged. Collect the filtrate from the bottom of the microfuge tube with a pipette and discard.
3. Repeat steps 1 and 2. The column is now equilibrated and ready for use. Make sure that the filtrate in the bottom of the microfuge tube has been discarded and the tube is empty.
4. In a separate microfuge tube, prepare the sample by diluting 50 µl of plasma or serum with 150 µl of Albumin Binding Buffer.
5. Add the entire sample to the equilibrated mini-column sample cup.
6. Spin at approximately 2000 rpm for 2 minutes.

¹Walsh, T. et al., 1984 *J.Neurochem.*, 43, 1277-1285.

Procedure Cont':

7. Recover the filtrate in the bottom of the microfuge tube. Do not discard it. Place the filtrate back into the sample cup. This ensures that the sample has passed through the resin twice and that the maximum possible amount of albumin has been removed.
8. Spin at approximately 2000 rpm for 2 minutes.
9. Recover the filtrate and place in a separate microfuge tube. This is now the diluted plasma or serum sample with the albumin removed.
10. Place another 200 μ l of Albumin Binding Buffer in the same sample cup, and spin at approximately 2000 rpm for 2 minutes.
11. Recover the filtrate and combine it with the diluted plasma sample with the albumin removed.
12. The sample is now ready for isoelectric focusing . Mix 50 μ l of the sample with 350 μ l of Solubilization/ Rehydration Buffer for 18 cm pHLash strips. For analytical tube gels, add 25 μ l of the sample to 25 μ l of Solubilization/ Rehydration Buffer.
13. If recovery of the bound albumin is desired, elute the Cibachron™ Blue column with 300 μ l of Sample Buffer Mix. An aliquot of the eluant can be diluted with rehydration/solubilization solution and loaded directly onto a pHLash strip for iso-focusing.

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