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## Minute™ Albumin Depletion Reagent for Plasma and Serum

Cat. No. WA-013

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### Description

Human/animal serum and plasma are the best source of samples for biomarker identification. However, the presence of large amount of albumin interferes with many assays and functional proteomic analysis. Serum albumin accounts for 50-70% of the total serum protein that causes loss of resolution for 1D and 2D electrophoresis. Effective removal of albumin using our reagent can increase sensitivity of the assay for many folds. Unlike resin-based depletion kit (that only deals with microliter amount of sample), Minute albumin depletion reagent can handle a few microliters to several ml of samples. Over 90% of albumin can be removed in less than 5 min.

**Package:** 20 ml (for research use only). The reagent is sufficient for processing dozen to a few hundred samples depending upon the starting sample volume.

**Shipping and Storage:** Ambient temperature

**Equipment and reagent required:** Table top microcentrifuge, deionized water and phosphate buffered saline (PBS).

### Protocol

1. Add serum or plasma sample to a test tube. For easy handling We recommend adding 100  $\mu$ l undiluted or diluted serum or plasma to a 1.5 ml Eppendorf tube.
2. Add equal amount albumin depletion reagent and mix by pipetting up and down for 10-20 times.
3. Centrifuge at 14,000 to 16,000 X g at ambient temperature for 2-3 min. Remove and discard supernatant (albumin fraction). Slowly add 100 to 200  $\mu$ l deionized water to the tube and remove immediately. This step is to wash residual albumin on the wall of the tube. Resuspend the pellet in 100-200  $\mu$ l buffer of your choice for downstream experiments.

### Protocol optimization:

1. Following above protocol once can remove about 70% albumin from animal serum or plasma. To remove higher percentage of albumin, it is recommended to precipitate the sample twice. For example: resuspend the pellet in step 3 in 100  $\mu$ l PBS and repeat step 2-3.
2. If small amount of sample is available, it is recommended to dilute it in PBS. For example: dilute the serum/plasma sample with PBS 1: 2-1:10 and perform above protocol.
3. Resuspended pellet contains serum proteins and higher concentration of sodium salt and other salt. It can be used directly for SDS-PAGE but it is necessary to remove the salts by a desalting column for 2D gel and some other analysis.