ONE LAMBDA
A Thermo Fisher Scientific Brand

PRODUCT INSERT

Adsorb Out™

REF **Catalog # ADSORB**
For General Laboratory Use

INTENDED USE

To reduce high background that is caused by nonspecific binding of materials in human sera to the latex beads used in flow antibody detection assays.

SUMMARY AND EXPLANATION

Adsorb Out™ consists of microparticles treated with blocking solution, but without any specific antigen coating. The beads have been shown to remove reactivity to latex beads from reference sera known to demonstrate high levels of non-specific binding. This product will not remove other factors that cause high background.

PRINCIPLE(S)

Flow bead immunoassays utilize purified antigen coated on latex beads as targets for binding of specific antibody in a test sample of human serum. After unbound serum components are washed away, a fluorescent-labeled secondary antibody is incubated with the beads. The fluorescent signal obtained is compared with the background signal from the same test serum that reacted with the Negative Control Beads. A significant shift over background indicates a positive reaction with the target antigen.

A problem arises when sera have a high background level, because this may mask a positive reaction with a specific antigen. A preliminary adsorption of the non-specifically binding material from the serum is performed to reduce or remove the serum factors that bind to the Negative Control Beads. The flow bead immuno-binding assay then displays a lower background signal, and the reactivity pattern should be easier to interpret.

REAGENTS

A. Identification

Adsorb Out™ beads

B. Warning or Caution

1. Nonhazardous: No Material Safety Data Sheet required.

C. Preparing Reagents for Use

1. See DIRECTIONS FOR USE.

D. Storage Instructions

Upon receipt, store reagents at temperature indicated on package. Reagents can be stored at 2 - 8° C for up to three months. After first use and upon thawing, store reagents at 2 – 8° C. Do not refreeze.

E. Purification or Treatment Required for Use

Vortex to re-suspend the beads before use.

F. Instability Indications

None

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INSTRUMENT REQUIREMENTS

A. Microcentrifuge

B. Flow cytometer or LABScan™ 100.

SPECIMEN COLLECTION AND PREPARATION

A. Serum may be fresh or thawed. Serum samples should be centrifuged for 2 minutes at 10,000 rpm prior to adsorption.

PROCEDURE

A. Materials Provided

1. Adsorb Out™ beads (25 tests)

B. Materials Required, But Not Provided

1. Pipettor and disposable tips
2. Microcentrifuge tubes (1.5 ml capacity)
3. FlowPRA® or LABScreen® antibody detection assay

C. Directions for Use

Note: Scale up as needed. This procedure supplies a slight excess of treated serum for a single antibody test.

Recommendation: To prevent reagent loss, pulse spin vial prior to use.

1. Vortex Adsorb Out™ beads prior to use.
2. Dispense 30 µl of the high background test serum into a labeled microcentrifuge tube.
3. Add 3 µl of Adsorb Out™ beads to the tube. Cap and vortex briefly.
4. Place the tube onto a rotator. Incubate for 30 minute at room temperature.
5. Centrifuge the treated serum for 5 minutes at 15,000 rpm.
6. Transfer the serum into a new labeled tube. Do not disturb the pelleted Adsorb Out™ beads. They may give a false positive reaction in the antibody detection test. Discard the used beads.
7. If some Adsorb Out™ beads were inadvertently transferred, repeat steps 5 and 6.
8. Serum is ready to be used in the antibody detection assay of choice.

RESULTS

When the adsorbed serum reacts with the Negative Control Beads (blank) in an antibody detection, assay, it should demonstrate a significantly reduced background fluorescent signal.

LIMITATIONS OF THE PROCEDURE

- Important: This treatment may be ineffective with some sera, depending on the type of material that is causing high background.
- Any aggregates in the serum or contamination of the serum may generate invalid results.
- Increasing the volume of Adsorb Out™ beads beyond that recommended in the Directions for Use above is not recommended. Use of too large a volume of Adsorb Out™ could result in adsorption of HLA antibody from the serum.

EXPECTED VALUES

Adsorption may reduce background levels for the Negative Control beads to the normal range. However, the degree of background reduction may be less for certain sera with exceptionally high non-specific binding.

Product is not to be used to prevent, diagnose or treat any disease or disease state.

SPECIFIC PERFORMANCE CHARACTERISTICS

A. In preliminary in-house studies conducted by One Lambda, Adsorb Out™ beads have been shown to reduce non-specific binding from 80% of high-background serum samples.

BIBLIOGRAPHY

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2. Pei R, Lee J, Chen T, Rojo S, Terasaki PI. Flow cytometric detection of HLA antibodies using a spectrum of microbeads. Human Immunology 60: 1293-1302, 1999.
3. Pei R, Lee JH, Shih NJ, Chen M, Terasaki P. Single human leukocyte antigen flow cytometry beads for accurate identification of human leukocyte antigen antibody specificities. Transplantation. Jan 15: 75, 1: 43-43, 2003.
4. Gebel HM, Bray RA, and Nickerson P. Pre-transplant assessment of donor reactive, HLA-specific antibodies in renal transplantation: contraindication vs. risk. Am J. Transplant. 2003 Dec 3 (12):1488-500.

TRADEMARKS AND DISCLAIMERS

EUROPEAN AUTHORIZED REPRESENTATIVE

EC REP MDSS GmbH, Schiffgraben 41, 30175, Hannover, Germany

EXPLANATION OF SYMBOLS

Symbol	Description
REF	Catalogue number
	Consult instructions for use
	Caution, consult accompanying documents
	Temperature limitation
	Manufacturer
EC REP	European Community authorized representative

REVISION HISTORY

Revision	Date	Revision Description
1	2009/02	Add CE Mark
2	2009/04	Change Adsorb Out™ Storage Temperature from 2-5°C to 2-8°C
3	2014/10	Updated PI to new template. Added recommendation to Directions for Use and Expected Values.

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