BLOOD GROUPING REAGENT
Anti-Fy\textsuperscript{b}
ALBAsera\textsuperscript{®}
REF Z153U
For Indirect Antiglobulin Test by Tube Technique
- Meets FDA potency requirements
- Discard if turbid
- Preservative: 0.1% sodium azide

CAUTION: THE ABSENCE OF ALL VIRUSES HAS NOT BEEN DETERMINED. THIS PRODUCT HAS COMPONENTS (DROPPER BULBS) CONTAINING DRY NATURAL RUBBER.

INTENDED USE
The Anti-Fy\textsuperscript{b} reagent is for the in vitro detection and identification of human Fy\textsuperscript{b} positive red blood cells by the indirect antiglobulin test.

SUMMARY AND EXPLANATION
Anti-Fy\textsuperscript{a} and anti-Fy\textsuperscript{b} were described in 1950 and 1951 respectively and define a pair of alleles on the long arm of chromosome 1. In Caucasians the phenotype Fy\textsuperscript{a-b-} is exceptionally rare. In African Americans, the incidence of Fy\textsuperscript{a-b-} is 67% and it is perhaps not insignificant that Fy\textsuperscript{a-b-} red cells are resistant to invasion by the malarial parasite Plasmodium vivax. This is thought to be due to balanced polymorphism. Fy\textsuperscript{a} and Fy\textsuperscript{b} antigens are destroyed when red blood cells are treated with appropriate concentrations of the proteolytic enzymes ficin, papain and bromelin.

PRINCIPLE OF THE TEST
When used by the recommended technique, this reagent will cause agglutination (clumping) of red blood cells carrying the Fy\textsuperscript{b} antigen. Lack of agglutination of the red blood cells demonstrates the absence of the Fy\textsuperscript{b} antigen.

REAGENT DESCRIPTION
This reagent has been prepared from plasma collected from blood donors. ABO hemagglutinins were removed by adsorption. Conversion to serum was achieved by the addition of calcium chloride and where necessary, thrombin. Excess calcium was removed by the addition of sodium oxalate. The formulation also contains 0.1% (w/v) sodium azide. The volume delivered by the reagent dropper bottle is approximately 40 \( \mu \)L. Bearing this in mind, care should be taken to ensure that appropriate serum: cell ratios are maintained in all test systems.

STORAGE CONDITIONS
The reagent should be stored at 2-8 \( ^\circ \)C. Do not use if turbid. Do not dilute. Do not use beyond the notified expiry date.

TEST PROCEDURE
Consult instructions for use

MATERIALS
Materials provided
- ALBAsera\textsuperscript{®} Anti-Fy\textsuperscript{b}

Materials required but not provided
- Isotonic saline
- Reagent red blood cells suitable for the control of Anti-Fy\textsuperscript{b}
- Polyspecific Anti-Human Globulin / Monospecific Anti-Human IgG
- IgG sensitized red blood cells
- 10 x 75 mm or 12 x 75 mm glass test tubes
- Pipettes
- Centrifuge
- Heating block / waterbath
- Optical aid

TEST PROCEDURE
General Information
This reagent has been standardized for use by the technique described below and therefore its suitability for use in other techniques cannot be guaranteed. When a test is required to be incubated for a specific period of time, a timer should be used.

PRECAUTIONS FOR USE AND DISPOSAL
This reagent contains 0.1% (w/v) sodium azide. Sodium azide may be toxic if ingested and may react with lead and copper plumbing to form explosive compounds. If discarded into sink, flush with a large volume of water to prevent azide buildup. Handle and dispose of reagents as potentially infectious.

CAUTION: ALL BLOOD PRODUCTS SHOULD BE TREATED AS POTENTIALLY INFECTIOUS. SOURCE MATERIAL FROM WHICH THIS PRODUCT WAS DERIVED WAS FOUND NEGATIVE WHEN TESTED IN ACCORDANCE WITH CURRENT FDA REQUIRED TESTS. NO KNOWN TEST METHODS CAN OFFER ASSURANCE THAT PRODUCTS DERIVED FROM HUMAN BLOOD WILL NOT TRANSMIT INFECTIOUS AGENTS. This product has components (dropper bulbs) containing dry natural rubber. This reagent is for in vitro diagnostic use only.

SPECIMEN COLLECTION AND PREPARATION
Specimens should be collected by a standard collection technique. The specimen should be tested as soon as possible after collection. If testing is delayed, the specimen should be stored at refrigerated temperatures. Blood specimens exhibiting contamination should not be used. Extreme care should be taken if hemolyzed samples must be tested. Clotted samples or those collected in EDTA should be tested within fourteen days from collection. Donor blood may be tested until the expiry date of the donation.

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Wash the test at least 3 times with a large excess of isotonic saline e.g. 4 mL of saline per 12 (or 10) x 75 mm glass tube.

**NOTE:**
(i) allow adequate spin time to sediment the red blood cells.
(ii) make sure that most of the residual saline is removed at the end of each wash.

- Add Anti-Human Globulin to each test tube in the amount specified in the manufacturer’s product insert.
- Mix the contents of the test tube well and centrifuge.
  - Suggested centrifugation: 900-1000g (~3400 rpm) for 10-20 seconds or a time and speed appropriate for the centrifuge used that produces the strongest reaction of antibody with antigen-positive cells, yet allows easy re-suspension of antigen-negative cells.
- Gently shake the test tube to dislodge the cell button from the bottom and observe macroscopically for agglutination. Negative reactions may be examined with an optical aid.
- Record results.
- Add IgG sensitized antiglobulin control cells to confirm the validity of negative test results.

**STABILITY OF REACTION**
Test results should be read and interpreted immediately after centrifugation. Delays may cause dissociation of antigen-antibody complexes resulting in weak positive or false negative reactions.

**INTERPRETATION OF RESULTS**
- Agglutination = positive test result
- No agglutination = negative test result

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**QUALITY CONTROL**
Quality control of reagents is essential and should be performed on each day of use and in accordance with local, state and federal regulations. We suggest that the following red blood cell samples are used to control the reactions of this reagent.

- Fy(a+b+) red blood cells should be used as a positive control.
- Fy(a-b-) red blood cells should be used as a negative control.

**PERFORMANCE LIMITATIONS**
Since the antibodies from which this product has been prepared were stimulated by red blood cells, extensive tests have been undertaken to exclude the presence of additional contaminating blood group antibodies. However, it is impossible to state categorically that reagents of this nature will only contain antibodies of the required specificity. Direct antiglobulin test positive samples will react by the indirect antiglobulin test irrespective of their Fy² status.

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