

Instructions for Use – Panel Cells



IVD

REAGENT RED CELLS for the identification of red cell antibodies
for *in vitro* diagnostic use only

Product codes PR141, PR144, PR146, PR151, PR154

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Blood and Transplant

Intended use

These reagent red blood cells are intended to be used to test plasma/serum samples to identify red cell antibodies by serological means.

Principles of the examination method

Plasma/serum samples are incubated with reagent red cells to determine the presence of agglutinins by direct and/or indirect methods

Components

These cells are supplied as either a 3.0±0.2% suspension in AP or as 1.5±0.2% suspension in LISP, both to be used directly from the vial.

These reagent red cells, prepared from non-remunerated blood donors, are leucodepleted, washed and suspended in a preservative solution – Either Modified Alsevers solution (AP), which has been specially formulated to preserve red cell integrity and antigenicity, containing trisodium citrate 8g/L, D-glucose 20/0g/L, citric acid monohydrate 0.5g/L, sodium chloride 4.2g/L, inosine 0.938g/L, ATP 0.4g/L, chloramphenicol 0.34g/L and neomycin sulphate 0.1g/L and supplied as or LISP, a low ionic strength solution containing glycine, sodium chloride, glucose, potassium phosphate, sodium phosphate, inosine, adenine, EDTA (di-potassium dihydrate), EDTA (tetrasodium dihydrate), sulfamethoxazole and trimethoprim.

Reagent Preparation

Mix before use

These cells may be washed and resuspended before use in phosphate buffered saline (PBS) pH7 or in LISS to the concentration appropriate to the method involved. However they must then be discarded within 24 hours of preparation. The user is responsible for assuring the strength of these cell suspensions, quality of suspension used and ensuring that an appropriate serum:cell ratio is maintained in the test system.

Storage and shelf life after first opening

Store at 2°- 8°C. Do not freeze

Do not use beyond the notified expiry date

Warnings and precautions

For professional use only. Cells must not be pooled.

Some loss of antigenic expression may occur during the stated shelf life. Since this loss cannot be predicted or controlled and is partly determined by the characteristics of individual blood donations or donors, the recommended conditions of storage and use must be rigidly applied.

Do not use if red cells appear obviously discoloured or haemolysed.

The donations used in this product have been tested at source and found negative for the mandatory microbiological tests required by the UK BTS at the time of donation. No known test methods can offer assurances that products derived from human blood will not transmit infectious diseases. Appropriate care should be taken in the use and disposal of this product. Chloramphenicol is classed as a carcinogen, neomycin sulphate as an irritant.

Primary sample collection, handling and storage

Clotted serum or EDTA plasma samples may be used, usually less than 7 days old, different time scales apply to recently transfused patients

Examination procedure

It is important to detect the presence of clinically significant red cell antibodies in a patient's serum/plasma and subsequently identify the specificity of such antibodies in order to ensure that any subsequent transfusion is as free from risk of a red cell transfusion reaction as possible within the limits of the techniques used.

Tube method for PR141, PR144, PR151, PR154

1. Add 2 volumes of test serum to a labelled tube
2. Add 1 volume of supplied product cells
3. Mix thoroughly and incubate at 37°C for 45 minutes
4. Wash the cells at least three times
5. Add 2 volumes of anti-human globulin reagent
6. Centrifuge and observe for agglutination

Tube method for PR146

1. Add 1 volume of test serum to a labelled tube
2. Add 1 volume of supplied product cells
3. Mix thoroughly and incubate at 37°C for 15 minutes
4. Wash the cells at least three times
5. Add 2 volumes of anti-human globulin reagent
6. Centrifuge and observe for agglutination

Control procedure

Each batch of tests should be controlled with suitable positive and negative controls

Interpretation of results

The presence of agglutination indicates a positive result, meaning that an antibody may be present in the sample and may only be seen against 1 cell of the set and will require further investigation to assign specificity to the reaction seen.

Performance characteristics

The reagent red cells selected to be used for the detection of antibodies are negative for Wra, and positive for Lub and Kpb unless stated.

The antigenic status of these red cells has been determined using, wherever possible, at least two examples of antisera directed against that antigen.

The designation of positive or negative status for a particular antigen relates to the normal expression of that antigen, if an individual cell is known to possess a weak or variant form of an antigen, this is indicated on the profile

For cells that have been treated with the enzyme papain the following antigens will be absent or reduced: M, N, S, s, Fya, Fyb, Ch/Rg, In, JMH, Xga.

Limitations of the examination procedure

If controls set up with the batch of tests fail to give required results then all tests must be repeated.

Literature references

These reagents comply with

- The requirements of Directive 98/79/EC on in vitro diagnostic medical devices
- The recommendations contained in current version of the Guidelines for the Blood Transfusion Services in the UK.
- BCSH Guidelines for compatibility procedures - current version.