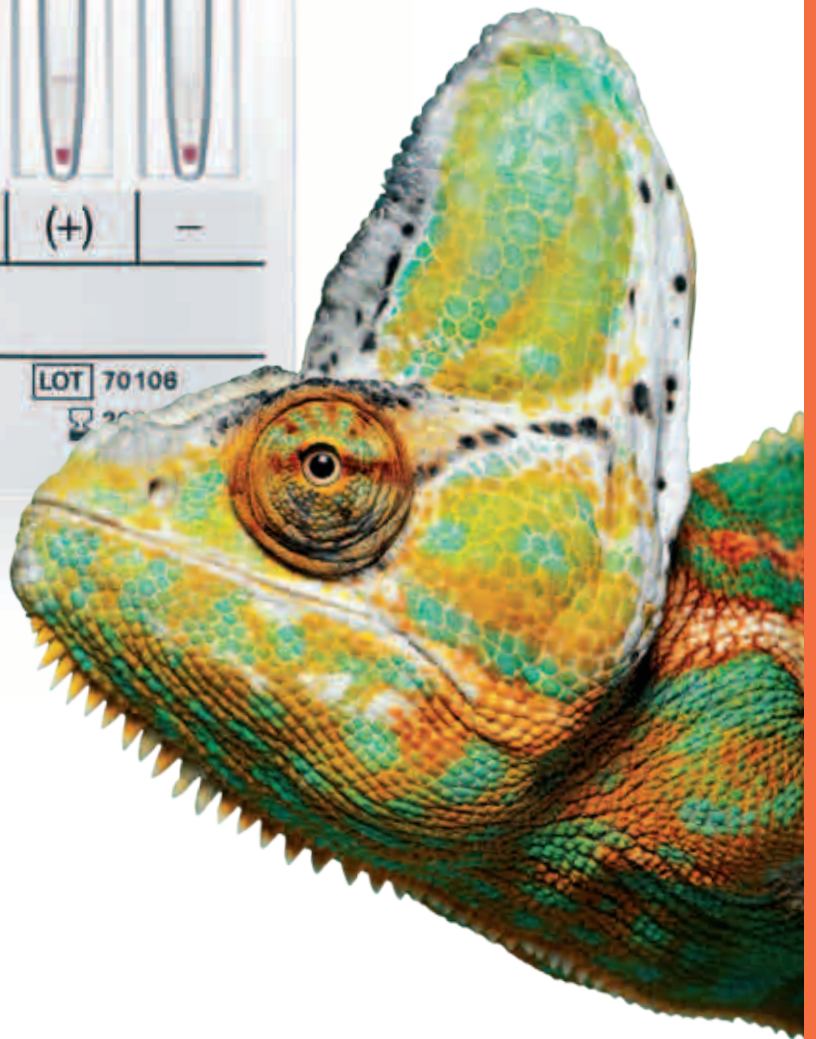


*Immunofixation column technology*

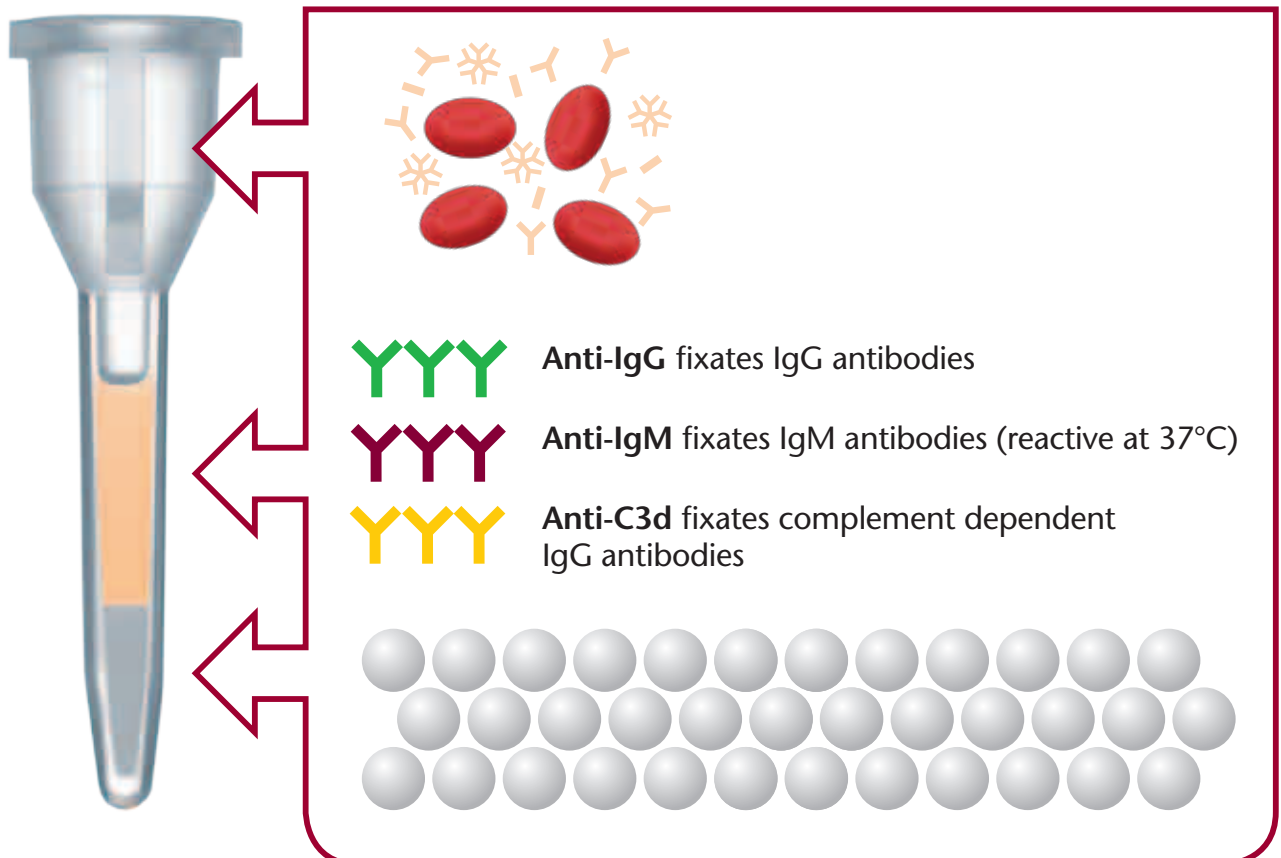
# Maximise flexibility



## Immunofixation of red cells

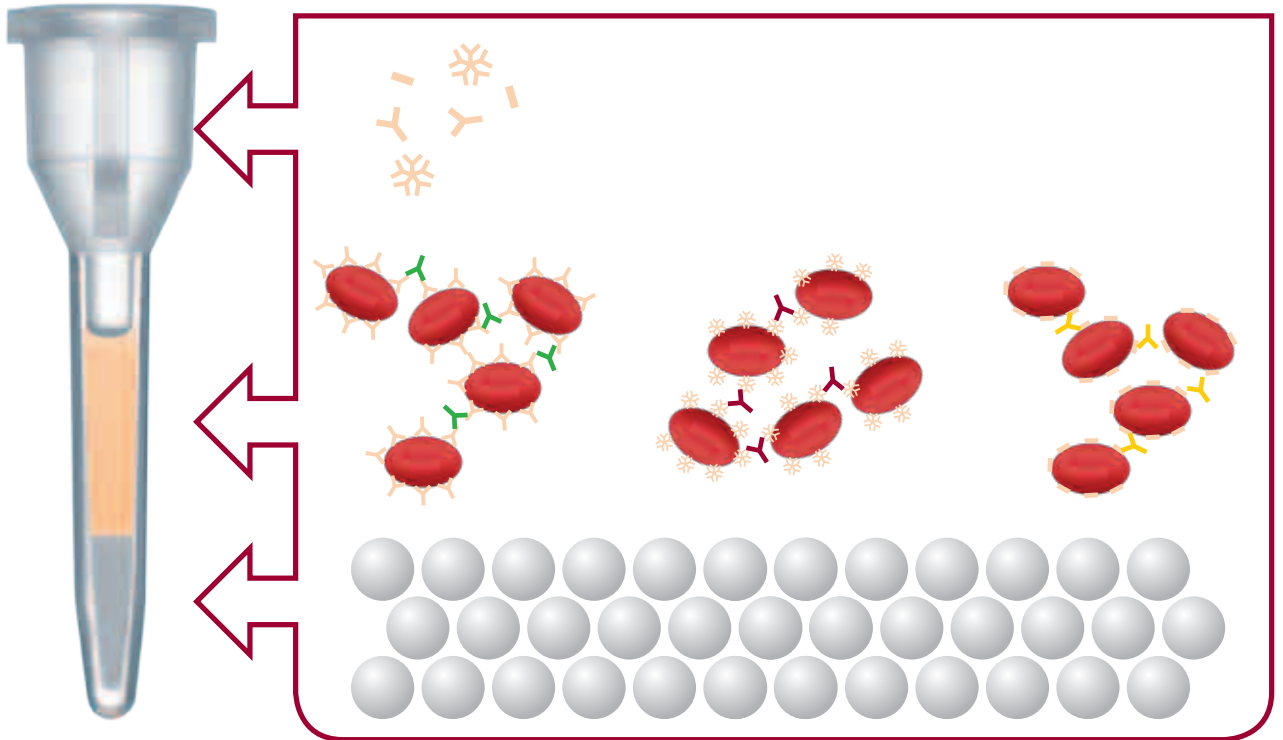
Conventional techniques for blood group serology are based on the principle of agglutination of red cells.

**Cellbind is based on an improved version of this principle**

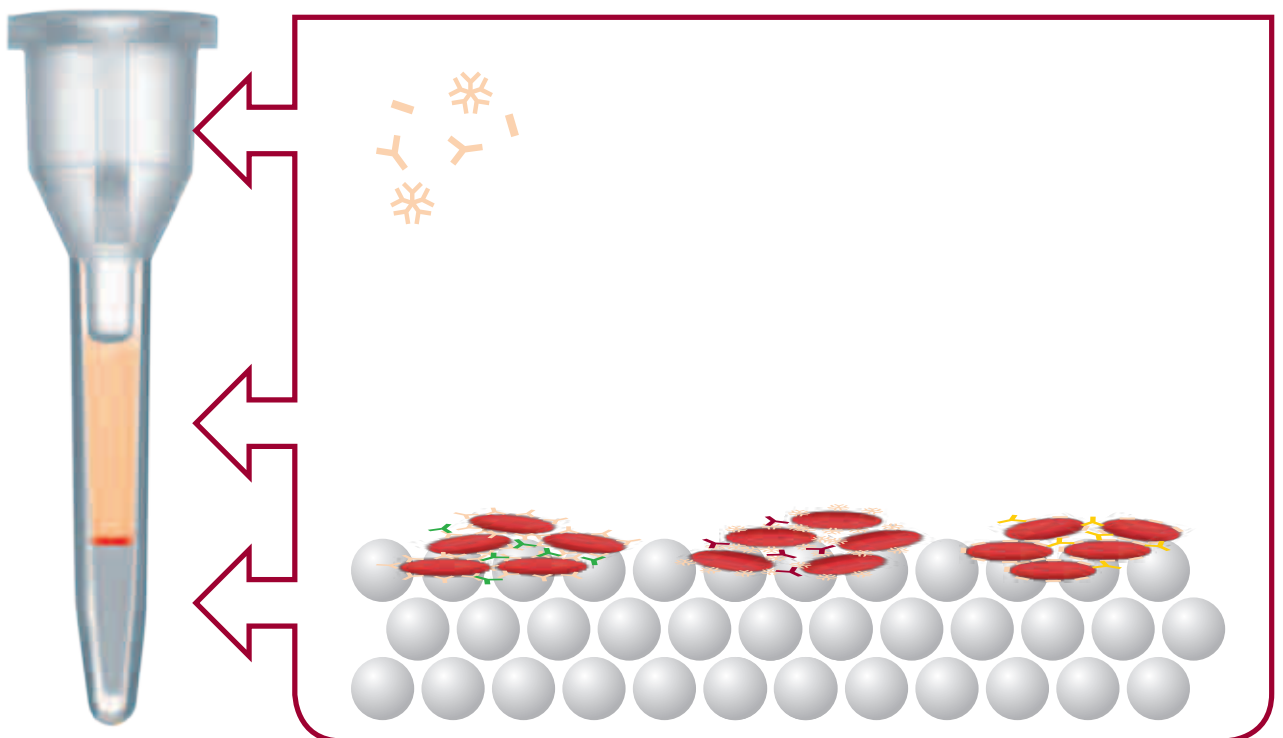


**Step 1:**

Optimally sensitised red cells are caught by ligands: anti-IgG, anti-IgM and anti-C3d in an enhancing High Density Medium. This results in a 3-dimensional network of red cells, attached to each other by these ligands.

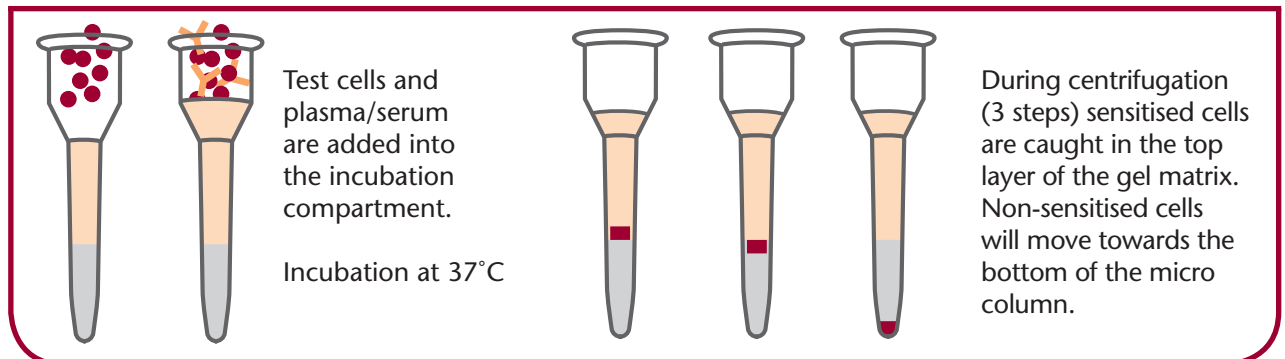
**Step 2:**

This network is compressed into aggregates during landing on the surface of the gel.



# Cellbind Test procedure

## Test principle



## Test procedure for universal Cellbind screen card

- Add cell suspension + plasma/serum or typing reagent



15 min.



- **Incubate in the Cellbind Incubator**

Cards are incubated in the Cellbind Incubator for 15 minutes at 37°C. For this purpose you can use the rack (package). The total capacity of the incubator is 48 cards. When performing only blood group typing with monoclonal reagents, the incubation step can be skipped. If typing is combined with other tests which need an incubation step, the incubation does not influence the results of the blood group typing.

10 min.



- **Introduce cards into the Cellbind Centrifuge**

The rotor is recognised by the centrifuge and is automatically programmed according to the Cellbind protocol. Centrifugation (pre-programmed in 3 steps) of the Cellbind cards will take 10 minutes. The Hettich centrifuge, when using a different rotor, can also be used for other laboratory tests. This also means flexibility!



- **Read the reactions**



In positive reactions, red cells will be caught in the top layer of the gel matrix. In negative reactions, only a discrete button of red cells at the bottom of the micro column will be seen. If a reaction is weaker than 4+, cells will also appear at the bottom of the micro column (see the picture of the Cellbind card with the different reaction patterns). Reading of Cellbind cards, by eye or with a reader, is very easy and clear.

## One type of card for different serology tests

### Screening and antibody identification

Use a 0.5% ready-for-use cell suspension Cellbind P2/  
Cellbind P3 (-P)/Cellbind ID 16 (-P)

**40 µl of cell suspension**  
+  
**40 µl of patient plasma or serum**

### Typing of blood group antigens

0.5% donor or patient red cells in Cellbind LISS

**40 µl of cell suspension**  
+  
**20 µl of typing reagent**

### Reverse typing

Use a 0.5% ready-for-use red cell suspension  
(Cellbind A1, A2, B or O+ cells)

**40 µl of cell suspension**  
+  
**40 µl of patient plasma or serum**

### Crossmatch

0.5% donor red cells in Cellbind LISS

**40 µl of cell suspension**  
+  
**40 µl of patient plasma or serum**

### Modified Direct Antiglobulin Test (DAT)

0.5% donor or patient red cells in Cellbind LISS

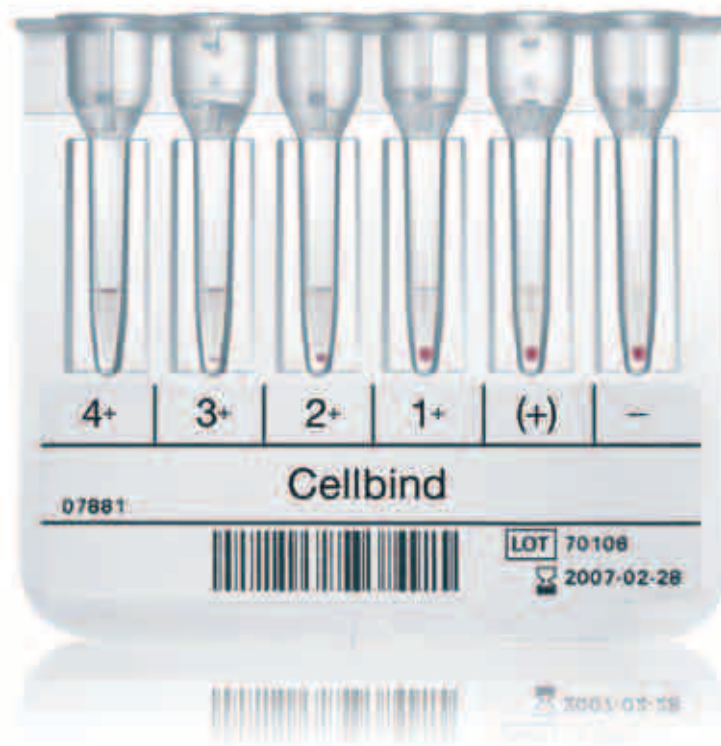
**40 µl of cell suspension**



To distinguish between  
IgG antibodies or complement  
components, a special Cellbind  
(Direct) card is available.

**Cellbind®**





- The patterns in the columns are very sharp, only on top and at the bottom, even with very weak reactions
- Optimal sensitivity for clinically relevant antibodies and outstanding diagnostic value
- Low sensitivity for clinically irrelevant antibodies
- Cellbind can be used easily in automated systems

**One card for all tests**

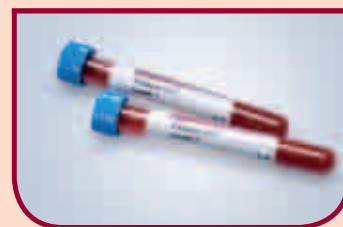


The Central Laboratory of the Netherlands Red Cross Blood Transfusion Service was founded in 1943. By that time, aseptic collection, storage and administration of human blood had become a reality and blood transfusion developed into a new and promising mode of therapy.

In the Netherlands, the Central Laboratory was soon recognised as an authority in blood and blood transfusion; in the fields of both scientific research and public health care.

In January 1998 the Dutch Red Cross Blood Banks and the Central Laboratory merged into the Sanquin Blood Supply Foundation, generally known as Sanquin.

Sanquin is a not-for-profit organisation that provides blood supplies and transfusion medicine, in a manner that meets the most stringent quality, safety and efficiency requirements. The foundation provides products and services, carries out research and provides education. Sanquin has over 3000 employees in the Netherlands.



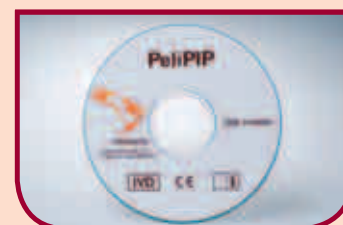
## Sanquin Reagents

Sanquin Reagents is part of the Sanquin Blood Supply Foundation in the Netherlands. It is among the first manufacturers of blood group and immune reagents. By virtue of its research facilities and diagnostic laboratories, Sanquin developed a broad range of blood group and immune reagents, including several innovative products for diagnostic use and for fundamental and clinical research.

Sanquin reagents are available worldwide through a network of distributors. They are intermediates between local clients and Sanquin for physical product distribution, information and services. Sanquin Reagents is ISO 9001 and ISO 13485 certified.

## Blood Grouping Reagents



Blood grouping reagents are essential tools for diagnostic laboratories specialised in serology. The broad range of reagents developed by Sanquin Reagents are used in several serological tests, especially focused on red blood cells and platelets.





- Cellbind is Sanquin's immunofixation column technique
- PeliPIP is a software program for the identification of red cell antibodies
- A broad range of monoclonal reagents for typing rare blood groups
- Pelicontrol: a whole blood control for use in all manual and automated typing and screening techniques
- MASPAT kit for platelet crossmatching in microplates








### Cellbind cards

48 cards	K7000	Cellbind screen, 48x6 tests, for the detection of IgG-, IgM- and complement sensitised red cells; suitable for LISS technique. One card for all: these cards can be used for screening, identification, DAT, crossmatching and typing!
		
48 cards	K7011	Cellbind Direct (IgG, C3d, Ctrl.), 48x2 tests for the detection of in vivo coating of red cells with IgG antibodies and/or complement components, suitable for LISS technique.
		

### Cellbind 0.5% ready-for-use red cell suspensions

2x10ml	K7200	Cellbind P2. Two red cell suspensions for the detection of red cell antibodies.
		
3x10ml	K7210 K7211	Cellbind P3 (-P). Three red cell suspensions (from 3 Bga-, Bgb- and Bgc negative donors) for the detection of red cell antibodies.
16x3ml	K7230 K7231	Cellbind ID-16 (-P). Sixteen red cell suspensions (from 16 donors) for the identification of red cell antibodies.
10ml	K7240	Cellbind A1 reagent red cells
10ml	K7241	Cellbind A2 reagent red cells
10ml	K7242	Cellbind B reagent red cells
10ml	K7243	Cellbind O, D-positive reagent red cells
250ml	K7100	Cellbind LISS. Modified LISS-solution; incubation medium for the preparation of 0.5% red cell suspensions of patient or donor red cells or from commercial cell panels.
		

### Cellbind equipment

K7300		Cellbind Dispenser for the addition of Cellbind LISS
K7301		Cellbind Workstation holder for cards and tubes
K7302		Cellbind Centrifuge (without Rotor) for 24 cards
K7303		Cellbind Rotor part of Cellbind centrifuge
K7304		Cellbind Incubator 37°C incubator for 48 cards
K7309		Cyclop Stand alone Reader for Cellbind cards

For other equipment to (fully) automate the handling and/or reading of Cellbind cards, please contact Sanquin Reagents at [reagents@sanquin.nl](mailto:reagents@sanquin.nl).



**Sanquin**

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