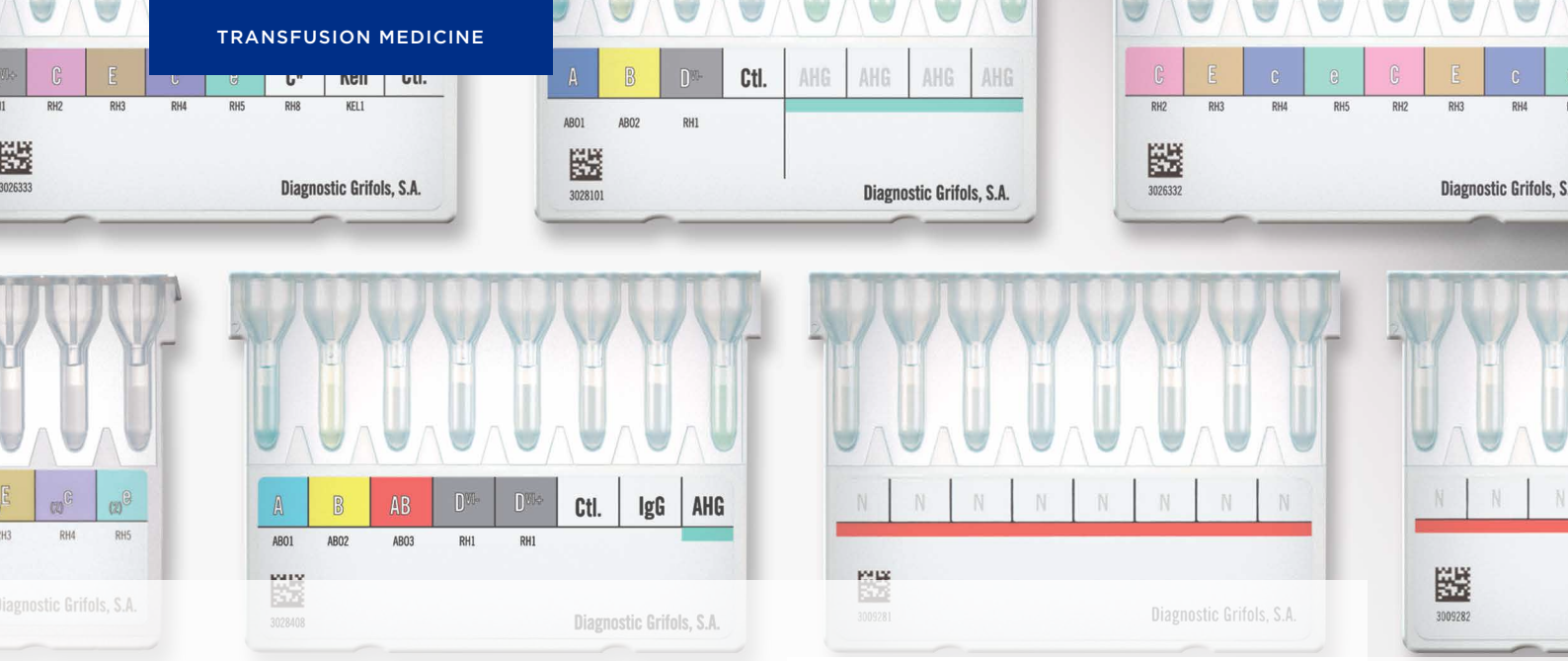
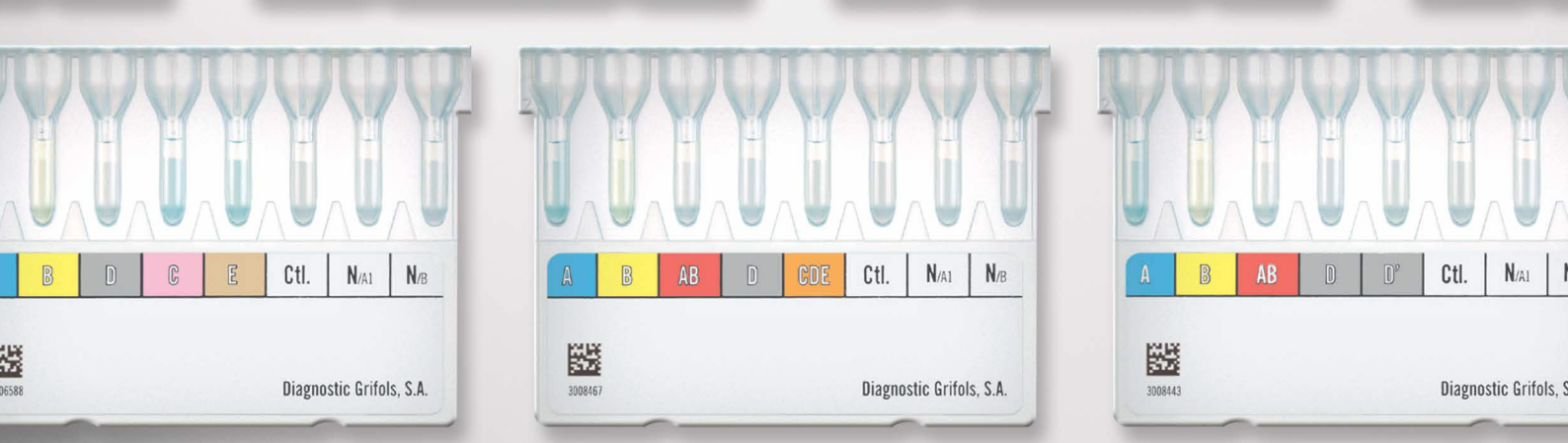
TRANSFUSION MEDICINE



DG gel

One system
Many solutions

TYPING



GRIFOLS

DG Gel system

The DG Gel system is based on column agglutination technology (CAT) for patient and donor blood typing. It is the result of Grifols long history and extensive expertise in transfusion medicine and quality engineering.

The DG Gel system supports achieving safer transfusions and improved outcomes for patients.

Efficiently type patients and help identify the best donor match

Scalable solutions

- Meet different typing and throughput needs with a wide range of reagents and instruments
- Cards, reagents, and complementary solutions are formatted to be conveniently compatible across all instrument platforms

Flexibility

- Get more comprehensive profiles using the original 8-well gel card
- Customize your testing profiles with a wide range of reagent red blood cells and liquid antisera
- Optimize the use of your laboratory with compact and intelligently designed instruments

Intuitive operations

- Consistent and reliable results via a process-oriented system that uses the same technology across all platforms
- Easy-to-operate instruments and ready-to-use, universal reagents[1]
- High-quality results with users across the world and the high standards of quality recognition (CE mark and FDA approved)

DG Gel reagents

DG Gel reagents are universal![1] The DG Gel cards, reagent red blood cells (RRBC), antisera, and complementary solutions are compatible with all DG Gel system platforms. This compatibility enables any combination of instruments and makes it easy to upgrade laboratory instrumentation.

Compatibility chart

REAGENT	INSTRUMENT		
	FULLY-AUTOMATED	SEMI-AUTOMATED	MANUAL PROCESSING
DG Gel cards	✔	✔	✔
Reagent red blood cells 0.8%	✔	✔	✔
Antisera	✔	✔	✔
Quality controls	✔	✔	✔
Complementary reagents and solutions	✔	✔	✔

Comprehensive portfolio of reagents to fulfill any laboratory's requirement using DG Gel cards

1. Grifols universal reagents are compatible with all of the DG Gel system platforms (from manual to fully automated instruments).

Product registration and availability vary by country. Ask your local Grifols representative for more information.

DG Gel cards

DG Gel cards are the original 8-well gel card based on column agglutination technology for blood group typing and investigation of unexpected antibodies. The same cards can be used with any of our instruments.

The 8-well format card provides:

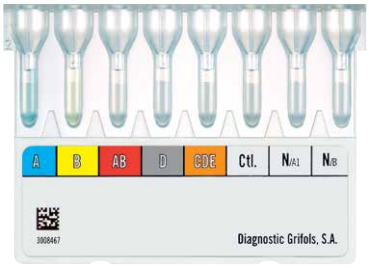
- Unique, exclusive profiles and complete determinations in a single card
- Control well in the cards
- The desired extended phenotype profile combining the DG Gel cards with liquid antisera
- Unique double-decker rack saving storage space

One card format, multiple profiles, same great performance

COMPLETE ABO/RH BLOOD GROUPING

DG Gel ABO/Rh — Ref. 210355

A	B	AB	D^{VI-}	CDE	Ctl.	N_{A1}	N_{B}



TECHNIQUE Determination of the antigens of the ABO and Rh (D) systems and determination of the reverse ABO group.

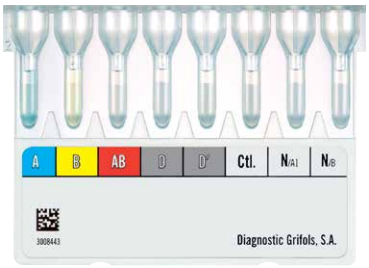
TESTS/CARD 1

CLONES
Anti-A: Monoclonal anti-A (mixture of IgM antibodies of murine origin, clones 16243 G2 and 16247 E6)
Anti-B: Monoclonal anti-B (IgM antibodies of murine origin, clone 9621 A8)
Anti-AB: Monoclonal anti-AB (mixture of IgM antibodies of murine origin, clones 16245 F11 D8, 16247 E6 and 7821 D9)
Anti-D^{VI-}: Monoclonal anti-D (IgM antibodies of human origin, clone P3x61)
Anti-CDE: Monoclonal anti-CDE (mixture of IgM antibodies of human origin, clones P3x61, P3x25513 G8, P3x234)
Ctl.: Buffered solution without antibodies (control microtube)
N: Buffered solution without antibodies (reverse group test)

PRESENTATION 2 x 25 cards

DG Gel ABO/Rh (2D) — Ref. 210338

A	B	AB	D^{VI-}	D^{VI+}	Ctl.	N_{A1}	N_{B}



TECHNIQUE Determination of the antigens of the ABO and Rh (D) systems and determination of the reverse ABO group.

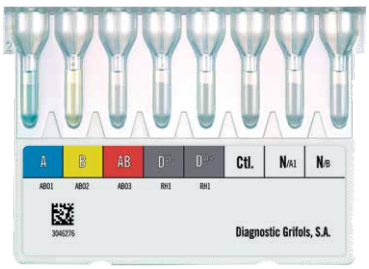
TESTS/CARD 1

CLONES
Anti-A: Monoclonal anti-A (mixture of IgM antibodies of murine origin, clones 16243 G2 and 16247 E6)
Anti-B: Monoclonal anti-B (IgM antibodies of murine origin, clone 9621 A8)
Anti-AB: Monoclonal anti-AB (mixture of IgM antibodies of murine origin, clones 16245 F11 D8, 16247 E6 and 7821 D9)
Anti-D^{VI-}: Monoclonal anti-D (IgM antibodies of human origin, clone P3x61)
Anti-D^{VI+}: Monoclonal anti-D (mixture of IgG and IgM antibodies of human origin, clones P3x290, P3x35, P3x61 and P3x21223 B10). This anti-D monoclonal reagent detects weak D and partial variants of the D antigen, including the D^{VI} variant
Ctl.: Buffered solution without antibodies (control microtube)
N: Buffered solution without antibodies (reverse group test)

PRESENTATION 2 x 25 cards

DG Gel ABO/Rh (2D)(RT) — Ref. 210126

A	B	AB	D^{VI-}	D^{VI+}	Ctl.	N/A1	N/B



TECHNIQUE Determination of the antigens of the ABO and Rh (D) systems and determination of the reverse ABO group.

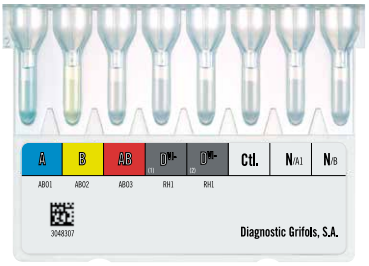
TESTS/CARD 1

CLONES
Anti-A: Monoclonal Anti-A (mixture of IgM and IgG antibodies of murine origin, clones 16243 G2+16247 E6)
Anti-B: Monoclonal Anti-B (IgM antibodies of murine origin, clone 9621 A8)
Anti-AB: Monoclonal anti-AB (mixture of IgM and IgG antibodies of murine origin, clones 16245 F11 D8, 16247 E6 and 7821 D9)
Anti-D^{VI-}: Monoclonal anti-D (IgM antibodies of human origin, clone MS-201)
Anti-D^{VI+}: Monoclonal anti-D (mixture of IgM antibodies of human origin, clones Anti-D P3x61 and ESD-1M). This anti-D monoclonal reagent detects weak D and partial variants of the D antigen, including the D^{VI} variant
Ctl.: Buffered solution without antibodies (control microtube)
N: Buffered solution without antibodies (reverse group test)

PRESENTATION 2 x 25 cards

DG Gel ABO/Rh ($2D^{VI-}$) — Ref. 210198

A	B	AB	$_{(1)}D^{VI-}$	$_{(2)}D^{VI-}$	Ctl.	N/A1	N/B



TECHNIQUE Determination of the antigens of the ABO and Rh (D) systems and determination of the reverse ABO group.

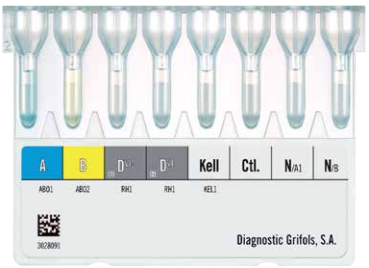
TESTS/CARD 1

CLONES
Anti-A: Monoclonal anti-A (mixture of IgM and IgG antibodies of murine origin, clones 16243 G2 + 16247 E6)
Anti-B: Monoclonal Anti-B (IgM antibodies of murine origin, clone 9621 A8)
Anti-AB: Monoclonal anti-AB (mixture of IgM and IgG antibodies of murine origin, clones 16245 F11 D8, 16247 E6 and 7821 D9)
Anti-$_{(1)}D^{VI-}$: Monoclonal anti-D (IgM antibodies of human origin, clone P3x61)
Anti-$_{(2)}D^{VI-}$: Monoclonal anti-D (IgM antibodies of human origin, clone MS-201)
Ctl.: Buffered solution without antibodies (control microtube)
N: Buffered solution without antibodies (reverse group test)

PRESENTATION 2 x 25 cards

DG Gel ABO/Rh ($2D^{VI-}$) + Kell — Ref. 210348

A	B	$_{(1)}D^{VI-}$	$_{(2)}D^{VI-}$	Kell	Ctl.	N/A1	N/B



TECHNIQUE Determination of the antigens of the ABO, Rh (D), Kell systems and determination of the reverse ABO group.

TESTS/CARD 1

CLONES
Anti-A: Monoclonal anti-A (IgM antibodies of murine origin, clones 16243 G2 and 16247 E6)
Anti-B: Monoclonal anti-B (IgM antibodies of murine origin, clone 9621 A8)
Anti-$_{(1)}D^{VI-}$ Monoclonal anti-D (IgM antibodies of human origin, clone P3x61)
Anti-$_{(2)}D^{VI-}$: Monoclonal anti-D (IgM antibodies of human origin, clone MS-201)
Anti-Kell: Monoclonal anti-Kell (IgM antibodies of human origin, clone MS-56)
Ctl.: Buffered solution without antibodies (control microtube)
N: Buffered solution without antibodies (reverse group test)

PRESENTATION 2 x 25 cards

DG Gel ABO/Rh (CR) — Ref. 210378

A	B	$_{(1)}D^{VI-}$	$_{(2)}D^{VI-}$	Ctl.	N	N	N

TECHNIQUE Determination of the antigens of the ABO and Rh (D) systems and determination of the complete reverse ABO group.

TESTS/CARD 1

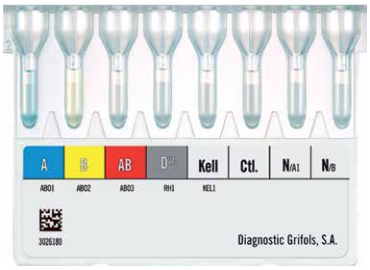
CLONES
Anti-A: Monoclonal anti-A (IgM antibodies of murine origin, clones 16243 G2 and 16247 E6)
Anti-B: Monoclonal anti-B (IgM antibodies of murine origin, clone 9621 A8)
Anti-$_{(1)}D^{VI-}$ Monoclonal anti-D (IgM antibodies of human origin, clone P3x61)
Anti-$_{(2)}D^{VI-}$: Monoclonal anti-D (IgM antibodies of human origin, clone MS-201)
Ctl.: Buffered solution without antibodies (control microtube)
N: Buffered solution without antibodies (reverse group test)

PRESENTATION 2 x 25 cards

COMPLETE ABO/RH BLOOD GROUPING

DG Gel ABO/Rh + Kell (RT) — Ref. 210352

A	B	AB	D^{VI-}	Kell	Ctl.	$N_{/A1}$	$N_{/B}$



TECHNIQUE Determination of the antigens of the ABO, Rh (D), Kell systems and determination of the reverse ABO group.

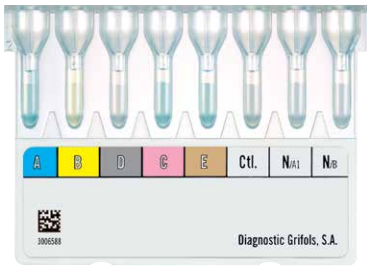
TESTS/CARD 1

CLONES
Anti-A: Monoclonal anti-A (IgM antibodies of murine origin, clones 16243 G2 and 16247 E6)
Anti-B: Monoclonal anti-B (IgM antibodies of murine origin, clone 9621 A8)
Anti-AB: Monoclonal anti-AB (mixture of IgM antibodies of murine origin, clones ES-15, LA-2, LB-2)
Anti-D^{VI-}: Monoclonal anti-D (IgM antibodies of human origin, clone P3x61)
Anti-Kell: Monoclonal anti-Kell (IgM antibodies of human origin, clone MS-56)
Ctl.: Buffered solution without antibodies (control microtube)
N: Buffered solution without antibodies (reverse group test)

PRESENTATION 2 x 25 cards

DG Gel ABO-CDE — Ref. 210340

A	B	D^{VI-}	C	E	Ctl.	$N_{/A1}$	$N_{/B}$



TECHNIQUE Determination of the antigens of the ABO and Rh (D, C, E) systems and determination of the reverse ABO group.

TESTS/CARD 1

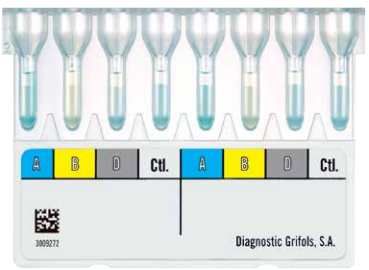
CLONES
Anti-A: Monoclonal anti-A (mixture of IgM antibodies of murine origin, clones 16243 G2 and 16247 E6)
Anti-B: Monoclonal anti-B (IgM antibodies of murine origin, clone 9621 A8)
Anti-D^{VI-}: Monoclonal anti-D (IgM antibodies of human origin, clone P3x61)
Anti-C: Monoclonal anti-C (IgM antibodies of human origin, clone P3x25513 G8)
Anti-E: Monoclonal anti-E (IgM antibodies of human origin, clone 906)
Ctl.: Buffered solution without antibodies (control microtube)
N: Buffered solution without antibodies (reverse group test)

PRESENTATION 2 x 25 cards

BLOOD GROUP CONFIRMATION

DG Gel Confirm — Ref. 210339

A	B	D^{VI+}	Ctl.	A	B	D^{VI+}	Ctl.



TECHNIQUE Confirmation of the blood groups of the ABO and Rh (D) systems.

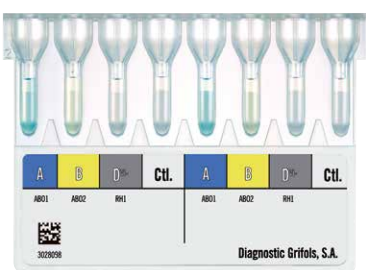
TESTS/CARD 2

CLONES
Anti-A: Monoclonal anti-A (mixture of IgM antibodies of murine origin, clones 16243 G2 and 16247 E6)
Anti-B: Monoclonal anti-B (IgM antibodies of murine origin, clone 9621 A8)
Anti-D^{VI+}: Monoclonal anti-D (mixture of IgG and IgM antibodies of human origin, clones P3x290, P3x35, P3x61 and P3x21223 B10). This anti-D monoclonal reagent detects weak D and partial variants of the D antigen, including the D^{VI} variant
Ctl.: Buffered solution without antibodies (control microtube)

PRESENTATION 2 x 25 cards

DG Gel Confirm P — Ref. 210351

A	B	D^{VI-}	Ctl.	A	B	D^{VI-}	Ctl.



TECHNIQUE Confirmation of the blood groups of the ABO and Rh (D) systems.

TESTS/CARD 2

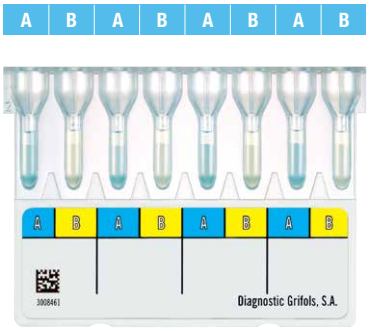
CLONES
Anti-A: Monoclonal anti-A (IgM antibodies of murine origin, clone Birma-1)
Anti-B: Monoclonal anti-B (IgM antibodies of murine origin, clone LB-2)
Anti-D^{VI-}: Monoclonal anti-D (IgM antibodies of human origin, clone MS-201)
Ctl.: Buffered solution without antibodies (control microtube)

PRESENTATION 2 x 25 cards

DG Gel AB (x4)

Ref. 210346

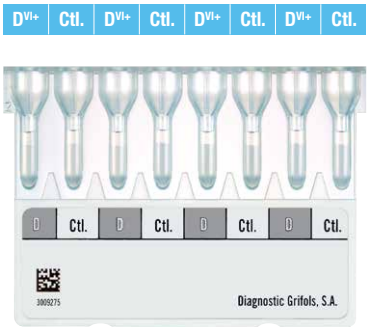
TECHNIQUE	Confirmation of the blood groups of the ABO system.
TESTS/CARD	4
CLONES	**Anti-A:** Monoclonal anti-A (mixture of IgM antibodies of murine origin, clones 16243 G2 and 16247 E6) **Anti-B:** Monoclonal anti-B (IgM antibodies of murine origin, clone 9621 A8)
PRESENTATION	2 x 25 cards



DG Gel Anti-D

Ref. 210341

TECHNIQUE	Determination of the Rh (D) system.
TESTS/CARD	4
CLONES	**Anti-D^{VI+}:** Monoclonal anti-D (mixture of IgG and IgM antibodies of human origin, clones P3x290, P3x35, P3x61, and P3x21223 B10). This anti-D monoclonal reagent detects weak D and partial variants of the D antigen, including the D^{VI} variant **Ctl.:** Buffered solution without antibodies (control microtube)
PRESENTATION	1 x 25 cards

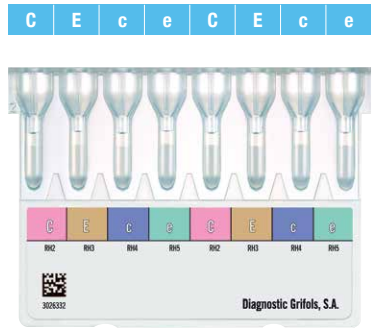


RH PHENOTYPE & KELL

DG Gel Rh Pheno

Ref. 210349

TECHNIQUE	Determination of the antigens of the Rh system.
TESTS/CARD	2
CLONES	**Anti-C:** Monoclonal anti-C (IgM antibodies of human origin, clone MS-24) **Anti-E:** Monoclonal anti-E (IgM antibodies of human origin, clone MS-260) **Anti-c:** Monoclonal anti-c (IgM antibodies of human origin, clone MS-33) **Anti-e:** Monoclonal anti-e (mixture of IgM antibodies of human origin, clones MS-21, MS-16, and MS-63)
PRESENTATION	2 x 25 cards



DG Gel Double Pheno

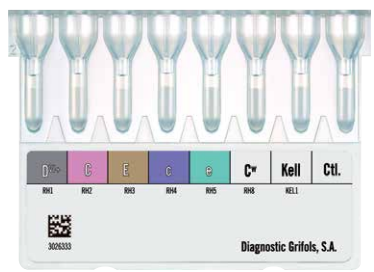
Ref. 210382

TECHNIQUE	Double determination of the antigens of the Rh system.
TESTS/CARD	1
CLONES	**Anti-$_{(1)}$C:** Monoclonal anti-C (IgM antibodies of human origin, clone MS-24) **Anti-$_{(1)}$E:** Monoclonal anti-E (IgM antibodies of human origin, clone MS-260) **Anti-$_{(1)}$c:** Monoclonal anti-c (IgM antibodies of human origin, clone 951) **Anti-$_{(1)}$e:** Monoclonal anti-e (mixture of IgM antibodies of human origin, clones MS-21, MS-63, and MS-16) **Anti-$_{(2)}$C:** Monoclonal anti-C (IgM antibodies of human origin, clone P3x25513G8) **Anti-$_{(2)}$E:** Monoclonal anti-E (IgM antibodies of human origin, clone 906) **Anti-$_{(2)}$c:** Monoclonal anti-c (IgM antibodies of human origin, clone MS-33) **Anti-$_{(2)}$e:** Monoclonal anti-e (mixture of IgM antibodies of human origin, clones MS-63, and MS-16)
PRESENTATION	2 x 25 cards

DG Gel Rh Pheno + Kell

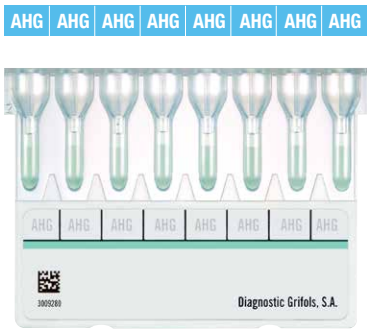
Ref. 210350

TECHNIQUE	Determination of the antigens of the Rh and Kell systems.
TESTS/CARD	1
CLONES	**Anti-D^{VI+}:** Monoclonal anti-D (mixture of IgM antibodies of human origin, clones RUM-1 and ESD-1M). This anti-D monoclonal reagent detects weak D and partial variants of the D antigen, including the D^{VI} variant **Anti-C:** Monoclonal anti-C (IgM antibodies of human origin, clone MS-24) **Anti-E:** Monoclonal anti-E (IgM antibodies of human origin, clone 906) **Anti-c:** Monoclonal anti-c (IgM antibodies of human origin, clone MS-33) **Anti-e:** Monoclonal anti-e (mixture of IgM antibodies of human origin, clones MS-21, MS-63 and MS-16) **Anti-C^{w}:** Monoclonal anti-C^{w} (IgM antibodies of human origin, clone MS-110) **Anti-Kell:** Monoclonal anti-Kell (IgM antibodies of human origin, clone MS-56) **Ctl.:** Buffered solution without antibodies (control microtube)
PRESENTATION	2 x 25 cards



UNEXPECTED ANTIBODY INVESTIGATION

DG Gel Coombs — Ref. 210342



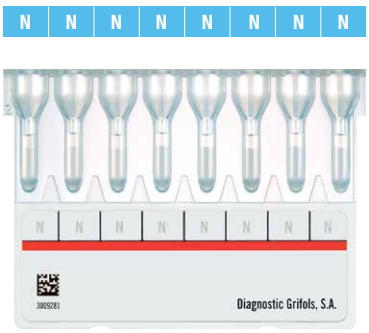
TECHNIQUE Indirect Coombs and direct Coombs tests. The indirect Coombs tests include screening and identification of unexpected antibodies, cross-matching tests, autocontrol, and red blood cell typing.

TESTS/CARD Depending on the test

CLONES **AHG:** Coombs, buffered low ionic strength solution (LISS) with polyspecific anti-human globulin. Mixture of rabbit polyclonal anti-IgG and monoclonal anti-C3d antibodies (IgM antibodies of murine origin, clone 12011 D10)

PRESENTATION 2 x 25 cards

DG Gel Neutral — Ref. 210343



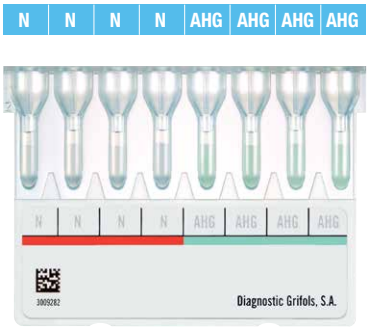
TECHNIQUE Physical medium for saline and enzymatic tests. The saline and enzymatic technique tests include: screening and identification of unexpected antibodies, cross-matching tests, autocontrol, red blood cell typing, and determination of the reverse ABO group.

TESTS/CARD Depending on the test

CLONES **N:** Buffered solution without antibodies (neutral microtubes)

PRESENTATION 2 x 25 cards

DG Gel Neutral/Coombs — Ref. 210375



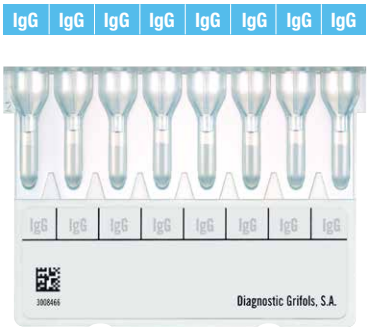
TECHNIQUE Indirect, direct Coombs tests and physical medium for saline and enzymatic tests. The tests include: screening and identification of unexpected antibodies, cross-matching tests, autocontrol, and red blood cell typing.

TESTS/CARD Depending on the test

CLONES **N:** Buffered solution without antibodies (neutral microtubes)
AHG: Coombs, buffered low ionic strength solution (LISS) with polyspecific anti-human globulin. Mixture of rabbit polyclonal anti-IgG and monoclonal anti-C3d antibodies (IgM antibodies of murine origin, clone 12011 D10)

PRESENTATION 2 x 25 cards

DG Gel Anti-IgG — Ref. 210344



TECHNIQUE Indirect Coombs and direct Coombs tests. The indirect Coombs tests include: screening and identification of unexpected antibodies, cross-matching tests, and autocontrol.

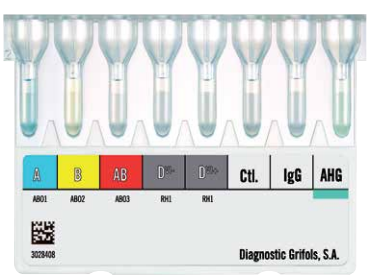
TESTS/CARD Depending on the test

CLONES **Anti-IgG:** Rabbit polyclonal anti-IgG in buffered low ionic strength solution (LISS)

PRESENTATION 2 x 25 cards

SPECIAL TESTS

DG Gel Newborn — Ref. 210353



TECHNIQUE Determination of the antigens of the ABO and Rh (D) systems and direct Coombs test in newborns.

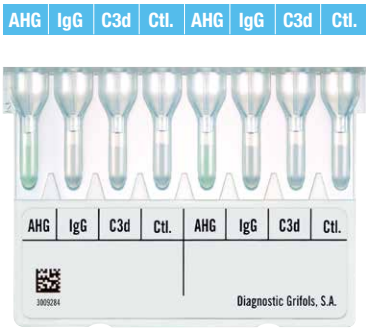
TESTS/CARD 1

CLONES **Anti-A:** Monoclonal anti-A (IgM antibodies of murine origin, clones 16243 G2 and 16247 E6)
Anti-B: Monoclonal anti-B (IgM antibodies of murine origin, clone 9621 A8)
Anti-AB: Monoclonal anti-AB (mixture of IgM antibodies of murine origin, clones LA-2, LB-2, and ES-15)
Anti-D^{VI-}: Monoclonal anti-D (IgM antibodies of human origin, clone P3x61)
Anti-D^{VI+}: Monoclonal anti-D (mixture of IgM antibodies of human origin, clones RUM-1 and ESD-1M). This anti-D monoclonal reagent detects weak D and partial variants of the D antigen, including the D^{VI} variant
Ctl.: Buffered solution without antibodies (control microtube)
Anti-IgG: Rabbit polyclonal anti-IgG in buffered low ionic strength solution (LISS)
AHG: Coombs, buffered low ionic strength solution (LISS) with polyspecific anti-human globulin. Mixture of rabbit polyclonal anti-IgG and monoclonal anti-C3d antibodies (IgM antibodies of murine origin, clone 12011 D10)

PRESENTATION 2 x 25 cards

DG Gel DC Scan

Ref. 210345



TECHNIQUE Evaluation of positive Direct Coombs samples. It allows differentiating red blood cells sensitized in vivo by IgG type immunoglobulin or the complement C3d fraction.

TESTS/CARD 2

CLONES
AHG: Coombs, buffered low ionic strength solution (LISS) with polyspecific anti-human globulin. Mixture of rabbit polyclonal anti-IgG and monoclonal anti-C3d antibodies (IgM antibodies of murine origin, clone 12011 D10)
Anti-IgG: Rabbit polyclonal anti-IgG in buffered low ionic strength solution (LISS)
Anti-C3d: Monoclonal anti-C3d (IgM antibodies of murine origin, clone 12011 D10)
Ctl.: Buffered solution without antibodies (control microtube)

PRESENTATION 1 x 25 cards

DG Gel DC Scan Plus

Ref. 210127

TECHNIQUE Evaluation of positive Direct Coombs samples. It allows differentiating red blood cells sensitized in vivo by IgG, IgA, and IgM type immunoglobulins and/or with the complement C3b, C3d, and C4b fractions.

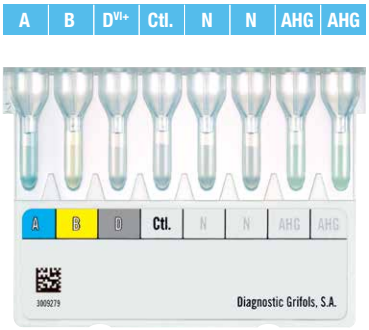
TESTS/CARD 1

CLONES
AHG: Coombs, buffered Low Ionic Strength Solution (LISS) with polyspecific anti-human globulin. Mixture of rabbit polyclonal anti IgG and murine monoclonal anti C3d antibodies (IgM antibodies, clone 12011D10)
Anti-IgG: Rabbit polyclonal anti IgG in a buffered Low Ionic Strength Solution (LISS).
Anti-IgA: Rabbit polyclonal anti IgA heavy chain specific in a buffered Low Ionic Strength Solution (LISS).
Anti-IgM: Rabbit polyclonal anti IgM heavy chain specific in a buffered Low Ionic Strength Solution (LISS).
Anti-C3c: Rabbit polyclonal anti C3c in a buffered Low Ionic Strength Solution (LISS).
Anti-C3d: Murine monoclonal anti C3d (IgM antibodies, clone 12011D10) in a buffered Low Ionic Strength Solution
Anti-C4: Rabbit polyclonal anti C4c in a buffered Low Ionic Strength Solution (LISS).
Ctl.: Buffered solution without antibodies (control microtube).

PRESENTATION 1 x 25 cards

DG Gel CT

Ref. 210374



TECHNIQUE Confirmation of the blood groups of the ABO and Rh (D) systems, ABO/Rh (D) isogroup compatibility test, screening of unexpected antibodies, crossmatch, and autocontrol.

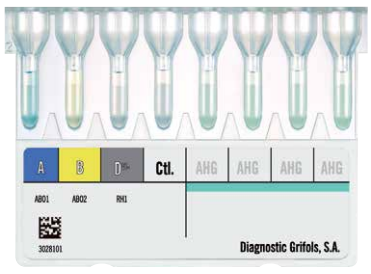
TESTS/CARD 1

CLONES
Anti-A: Monoclonal anti-A (mixture of IgM antibodies of murine origin, clones 16243 G2 and 16247 E6)
Anti-B: Monoclonal anti-B (IgM antibodies of murine origin, clone 9621 A8)
Anti-D^{VI+}: Monoclonal anti-D (mixture of IgG and IgM antibodies of human origin, clones P3x290, P3x35, P3x61, P3x21223 B10). This anti-D monoclonal reagent detects weak D and partial variants of the D antigen, including the D^{VI} variant
Ctl.: Buffered solution without antibodies (control microtube)
N: Buffered solution without antibodies (neutral microtubes)
AHG: Coombs, buffered low ionic strength solution (LISS) with polyspecific anti-human globulin. Mixture of rabbit polyclonal anti-IgG and monoclonal anti-C3d antibodies (IgM antibodies of murine origin, clone 12011 D10)

PRESENTATION 2 x 25 cards

DG Gel T/S Poly

Ref. 210377



TECHNIQUE Confirmation of the blood groups of the ABO and Rh (D) systems and indirect Coombs tests. The indirect Coombs tests include: screening of unexpected antibodies, cross-matching tests, and autocontrol.

TESTS/CARD 1

CLONES
Anti-A: Monoclonal anti-A (IgM antibodies of murine origin, clones 16243 G2 and 16247 E6)
Anti-B: Monoclonal anti-B (IgM antibodies of murine origin, clone 9621 A8)
Anti-D^{VI-}: Monoclonal anti-D (IgM antibodies of human origin, clone P3x61)
Ctl.: Buffered solution without antibodies (control microtube)
AHG: Coombs, buffered low ionic strength solution (LISS) with polyspecific anti-human globulin. Mixture of rabbit polyclonal anti-IgG and monoclonal anti-C3d antibodies (IgM antibodies of murine origin, clone 12011 D10)

PRESENTATION 2 x 25 cards

Reagent red blood cells 0.8%

The DG Gel system offers a complete range of reagent red blood cells for use with column agglutination technology that can easily adapt to the daily work requirements of immunohematology laboratories (IH) and fulfill high-quality standards.

Determination of the reverse group

Reagent red blood cells from known A_1, A_2, B, and O group donors for reverse grouping

- The combination of A_1 and A_2 provides an effective way of detecting unexpected anti-A_1
- The preservative used does not inhibit complement activation, allowing for the detection of hemolysins

Find the product that best fits your needs with a comprehensive range of reagent red blood cells 0.8%

Reagent red blood cells for reverse grouping

REF	PRODUCT	PRESENTATION
210215	Serigrup Diana 4	4 x 10 mL (A_1, A_2, B, O)
213588	Reverse-Cyte A_1, A_2, B, O (0.8%)	4 x 10 mL (A_1, A_2, B, O)
213659	Serigrup Diana A_1, B	2 x 10 mL (A_1, B)
213598	Reverse-Cyte A_1, B 0.8%	2 x 10 mL (A_1, B)
213591	Reverse-Cyte A_1 0.8%	1 x 10 mL (A_1)
213658	Serigrup Diana A_2	1 x 10 mL (A_2)
213592	Reverse-Cyte A_2 0.8%	1 x 10 mL (A_2)
213593	Reverse-Cyte B 0.8%	1 x 10 mL (B)
213594	Reverse-Cyte O 0.8%	1 x 10 mL (O)

Reverse-Cyte reagents

Screening of unexpected antibodies

Panels of 1, 2, 3, or 4 cells, with a specifically selected antigen configuration, for screening most of the clinically relevant, unexpected antibodies.

- A complementary range of papainized (P) red blood cells is available (2, 3, and 4 cells)
- Routine presence of antigen C^w, K, Kp^a, Le^a, Le^b and P1
- Homozygous expression for the following antigens: D, C, c, E, e, M, N, S, s, Fy^a, Fy^b, Jk^a, Jk^b, Lu^b, Kp^b and k
- Screen-Cyte Di^a 0.8%: 3-cell panel for screening unexpected antibodies including anti-Di^a
- Sero-Cyte Pool 0.8%: Mixture of 2 cells in 1 vial (pool) for screening unexpected antibodies in donors. Each vial of red blood cells is from a single O group donor, except for the Sero-Cyte Pool 0.8%
- Data-Cyte Extend 0.8%: 4-cell panel O RhD negative for screening unexpected antibodies. It can be used for known anti-D-positive patients.

Each vial of red blood cells is from a single O group donor, except for the Sero-Cyte Pool 0.8%.

Reagent red blood cells for screening of unexpected antibodies

REF	PRODUCT	PRESENTATION
213634	Sero-Cyte Pool 0.8%	3 x 10 mL (I, I, I)
210204	Serascan Diana 2	2 x 10 mL (I, II)
213589	Sero-Cyte 0.8%	2 x 10 mL (I, II)
210206	Serascan Diana 3	3 x 10 mL (I, II, III)
213590	Screen-Cyte 0.8%	3 x 10 mL (I, II, III)
213653	Screen-Cyte Di^a 0.8%	3 x 10 mL (I, II, III^{Dia})
210208	Serascan Diana 4	4 x 10 mL (I, II, III, IV)
210203	Serascan Diana Di^a	1 x 10 mL (Di^a)
213802	Diego(a)-Cyte 0.8%	1 x 10 mL (Di^a)
213386	Mi(a)-Cyte 0.8%	1 x 10 mL (Mi^a)
213685*	Data-Cyte Extend 0.8%	4 x 4 mL (I, II, III, IV)

Papainized reagent red blood cells for screening of unexpected antibodies

REF	PRODUCT	PRESENTATION
210205	Serascan Diana 2P	2 x 10 mL (IP, IIP)
210207	Serascan Diana 3P	3 x 10 mL (IP, IIP, IIIP)
210209	Serascan Diana 4P	4 x 10 mL (IP, IIP, IIIP, IVP)
213665	Screen-Cyte P 0.8%	3 x 10 mL (IP, IIP, IIIP)

**Data-Cyte Extend 0.8% is also validated for use in the identification of unexpected antibodies.*

Identification of unexpected antibodies

11-cell, 12-cell, 15-cell, and 16-cell panels with an antigen configuration specifically selected for identification of clinically relevant unexpected antibodies.

- Several panels can be used in combination
- A complementary range of papainized (P) red blood cells is available
- In the presence of anti-D, anti-C, or anti-E, it enables detection of a second antibody for Jk, Fy, MNS, or K
- **Homozygous expression** for the following antigens: M, N, S, s, C, c, E, e, Lu^b, k, Kp^b, Js^b, Fy^a, Fy^b, Jk^a, and Jk^b
- **Data-Cyte Plus Di^a 0.8%:** a new 12-cell panel that always includes a positive cell for the Di^a antigen
- **Identisera Diana + Identisera Diana Extend:** Unique 15-cell panel with 3 R_1R_1 and 4 rr homozygous cells and complementary Jk, Fy, and MNS
- **Data-Cyte Plus 0.8% or Data-cyte plus Dia 0.8% + Data-Cyte Extend 0.8%:** Unique 15 or 16-cell panel including 4-cell O RhD negative for identifying unexpected antibodies. Data-Cyte Extend 0.8% complements Data-Cyte® Plus 0.8% and Data-Cyte® Plus Dia 0.8% Reagent Red Blood Cells

Reagent red blood cells for identification of unexpected antibodies

REF	PRODUCT	PRESENTATION
210210	Identisera Diana	11 x 5 mL (1 to 11)
210212	Identisera Diana Extend	4 x 5 mL (12 to 15)
213587	Data-Cyte Plus 0.8%	11 x 4 mL (1 to 11)
213627	Data-Cyte Plus Di^a 0.8%	12 x 4 mL (1 to 12^{Dia})
213685*	Data-Cyte Extend 0.8%	4 x 4 mL (13 to 17)

Papainized reagent red blood cells for identification of unexpected antibodies

REF	PRODUCT	PRESENTATION
210211	Identisera Diana P	11 x 5 mL (1P to 11P)
210213	Identisera Diana Extend P	4 x 5 mL (12P to 15P)
213661	Data-Cyte Plus P 0.8%	11 x 4 mL (1P to 11P)

Identisera Diana

**Data-Cyte Extend 0.8% is also validated for use in the detection of unexpected antibodies.*

Antisera for DG Gel cards

The DG Gel system provides a wide range of high-quality monoclonal and polyclonal antisera for typing common and rare antigens.

Antisera reagents combined with DG Gel Neutral, DG Gel Coombs, or DG Gel anti-IgG cards enables further customization of your testing profile without using different cards.

Antisera validated for manual and automated processing

REF	PRODUCT	ANTIBODY TYPE & ORIGIN	CLONE	PRESENTATION
213633*	Anti-H Mono-Type	Monoclonal murine IgM	10934C11	1 x 5 mL
213437*	Anti-A_1 Lectin	Lectin from Dolichos biflorus	-	1 x 5 mL
213005	Anti-D IgG Mono-Type	Monoclonal murine/human IgG	ESD1	1 x 10 mL
213296*	Anti-C^w Mono-Type Dual	Monoclonal murine/human IgM	MS-110	1 x 5 mL
213297*	Anti-K Mono-Type Dual (1)	Monoclonal murine/human IgM	MS-56	1 x 5 mL
213557*	Anti-K Mono-Type (2)	Monoclonal human IgM	AEK-3	1 x 5 mL
213209*	Anti-k (cellano) Mono-Type	Monoclonal human IgG	P3A118OL67	1 x 5 mL
213995*	Anti-Kp^a Dual	Polyclonal human	-	1 x 5 mL
213996*	Anti-Kp^b Dual	Polyclonal human	-	1 x 5 mL
213208*	Anti-Fy^a Mono-Type	Monoclonal human IgG	P3TIM	1 x 5 mL
213206	Anti-Fy^a for DG Gel	Polyclonal human	-	1 x 5 mL
213207	Anti-Fy^b for DG Gel	Polyclonal human	-	1 x 5 mL
213293*	Anti-Fy^b Mono-Type Dual	Monoclonal murine IgM	SpA264LBg1	1 x 5 mL
213189	Anti-Jk^a	Polyclonal human	-	1 x 5 mL
213184	Anti-Jk^b	Polyclonal human	-	1 x 5 mL
213290	Anti-Jk^a	Monoclonal human IgM	MS-15	1 x 5 mL
213291	Anti-Jk^b	Monoclonal human IgM	MS-8	1 x 5 mL
213294	Anti-Lu^a	Polyclonal human	-	1 x 5 mL
213295*	Anti-Lu^b Mono-Type Dual	Monoclonal murine IgG	LU2	1 x 5 mL
213008*	Anti-M Mono-Type Dual	Monoclonal murine IgG	LM110/140	1 x 5 mL
213181	Anti-M	Monoclonal murine	LM110/140	1 x 5 mL
213989*	Anti-N (LN3/MN879) Mono-Type	Monoclonal murine IgG	LN3/MN879	1 x 5 mL
213182	Anti-N	Monoclonal murine	20H12, MN879	1 x 5 mL
213993*	Anti-S Mono-Type	Monoclonal murine/human IgM	MS-94	1 x 5 mL
213183	Anti-S	Polyclonal human	-	1 x 5 mL
213994*	Anti-s Mono-Type	Monoclonal murine/human IgM	P3BER	1 x 5 mL
213185	Anti-s	Polyclonal human	-	1 x 5 mL
213217	Anti-Le^a	Monoclonal murine IgA	GA2	1 x 5 mL
213283	Anti-Le^a	Monoclonal human IgM	P3N20V3	1 x 5 mL
213219	Anti-Le^b	Monoclonal murine IgM	LEB1	1 x 5 mL
213284	Anti-Le^b	Monoclonal murine IgM	LeB2/L2-74.4.D11G11-9A9	1 x 5 mL
213292*	Anti-P_1 Mono-Type Dual	Monoclonal human IgM	P3NIL100	1 x 5 mL

Antisera validated for manual processing

REF	PRODUCT	ANTIBODY TYPE & ORIGIN	CLONE	PRESENTATION
213229*	Anti-Di^a Dual	Polyclonal human	-	1 x 2 mL
213215	Anti-Co^a	Polyclonal human	-	1 x 3 mL
213216	Anti-Co^b	Polyclonal human	-	1 x 3 mL
213238	Anti-Js^b for card method	Monoclonal human	PRIM-1	1 x 2 mL

** Antisera reagents also validated for use in conventional techniques.*

Quality controls for DG Gel cards

Quality management is necessary for reliable and accurate laboratory performance. To guarantee increased transfusion safety, internal controls must be conducted at regular intervals in accordance with local and national guidelines.

Our immunohematology internal quality controls, Extended IV Control and Essential II Control, simulate real patient samples and are ideal for monitoring both manual and automated procedures.

Adapt to laboratory quality assurance protocols with a choice of controls

Specifications[2]

- **Extended IV Control:**
  - Tube 1: $A_2B\ R_1R_2$ (CcD.Ee), K pos
  - Tube 2: A $R_1^w\ R_1$ (CC^w D.ee), Fy^a neg, with anti-B and anti-Fy^a
  - Tube 3: B R_2R_2 (ccD.EE), with anti-A
  - Tube 4: O rr (ccddee), K neg, with anti-A, anti-B and anti-D (approx. 0.05 IU/mL)
- **Essential II Control:**
  - Tube 1: A rr (ccddee), K pos with anti-B and anti-D (approx. 0.05 IU/mL)
  - Tube 2: B R_1R_2 (CcD.Ee), K neg, Fy^a neg with anti-A and anti-Fy^a

Quality control reagents

REF	PRODUCT	PRESENTATION
213286	Extended IV Control	4 x 6 mL
213287	Essential II Control	2 x 2 x 6 mL

Extended IV Control

Essential II Control

2. Extended IV Control and Essential II Control have been validated to also work with Grifols conventional techniques and the MDmulticard system, providing additional flexibility.

Complementary reagents and solutions

Complementary solutions are compatible with all DG Gel reagents and instruments, improving laboratory stock management, enabling the use of any combination of instruments, and making it easy to upgrade laboratory instrumentation.

Complementary reagents and solutions

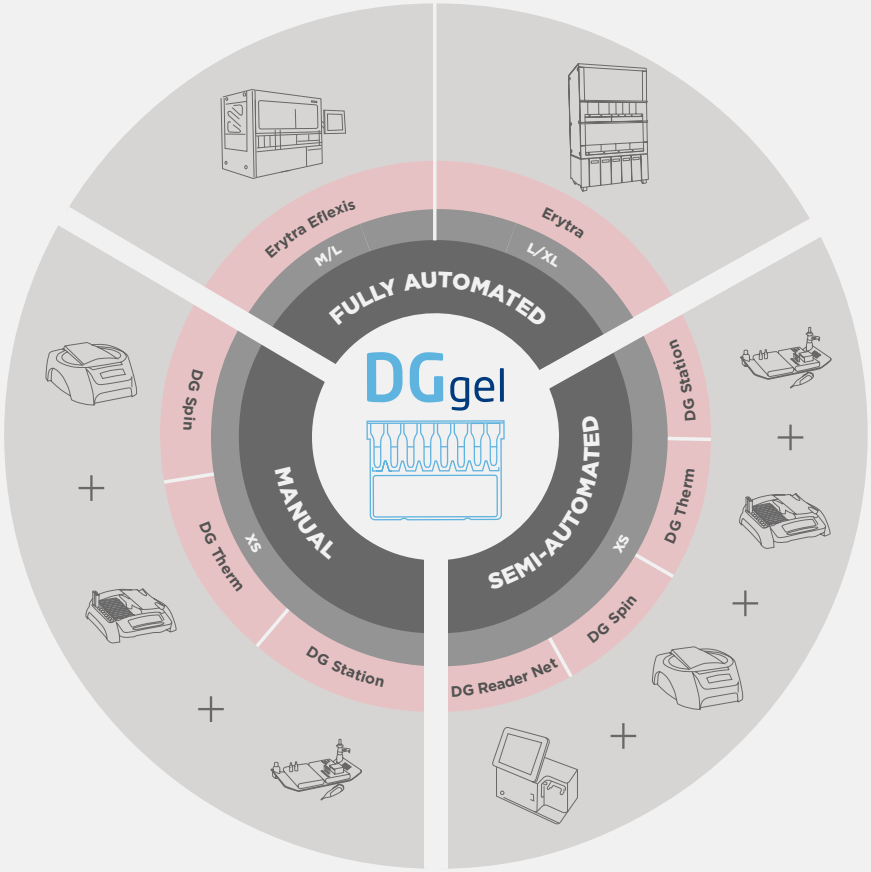
REF	PRODUCT	PRESENTATION	DESCRIPTION
210354	DG Gel Sol	2 x 100 mL	DG Gel Sol is a reagent used for preparing red blood cell suspensions used in DG Gel techniques.
210385	DG CellMedia	1 x 500 mL	DG CellMedia is a liquid red blood cell preservative used to prepare red blood cell 0.8% suspensions for use with DG Gel cards.
210357	DG-Papain	1 x 10 mL	DG-Papain is a liquid papain solution for performing enzyme assays in DG Gel techniques.
213578	Bromelase 30	1 x 10 mL	Bromelase 30 is a liquid bromelain solution for performing enzyme assays using conventional and DG Gel techniques.
213679	DG Fluid A	12 x 125 mL	DG Fluid A is a saline-based solution for internal washing of the fluid systems and probes of in vitro diagnostic devices. It should be diluted and used with DG Fluid B.
213678	DG Fluid B	12 x 125 mL	DG Fluid B is a tensioactive solution used for internal washing of the fluid systems and probes of in vitro diagnostic devices. It should be diluted and used with DG Fluid A.
213797	DG Clean	9 x 30 mL	DG Clean is a solution for cleaning the probes of Grifols analyzers. For laboratory use.

DG Gel system instruments

Grifols has been a pioneer in column agglutination automation by designing and manufacturing a range of scalable instruments from manual to fully automated.

DG Gel system instruments have a smart and simple design, which require minimal maintenance.[3] They were designed for consistent test procedures and sample management across different platforms. Using unique simultaneous perforation and dispensing technologies, they allow 100% use of the card wells, which reduces the risk of cross-contamination.

Combine DG Gel instruments to handle an increased workload or use as a backup system



Manual - XS	The minimum essentials: Pure manual processing of DG Gel cards
Semi-automated - XS/S	The enhanced combination: Manual processing of DG Gel cards with standardized reading and results traceability
Fully automated - M/L	Fully automated processing of DG Gel cards in a flexible and intuitive mid-sized instrument
Fully automated - L/XL	Fully automated processing of DG Gel cards in a high-capacity, high-throughput instrument

3. Only monthly maintenance is required.
Product registration and availability vary by country. Ask your local Grifols representative for more information.

Automated systems

erytra

Erytra is a fully automated, high-throughput, high-capacity instrument for performing pretransfusion compatibility tests using gel technology. Erytra combines efficiency and flexibility with intuitive operation that adapts to laboratory needs. The instrument assists in delivering highly reliable, quick results, which contribute to patient safety.

High workloads are handled efficiently

- Self-organizing capacity to optimally perform sample testing
- Autonomy of up to 4 hours
- Erytra can be combined with another Erytra or Erytra Eflexis using the same software
- Laboratory Information Systems (LIS)

High efficiency and flexibility

Superior flexibility

- Continuous loading of samples and reagents
- High capacity: 96 samples, 54 liquid reagents, 400 DG Gel cards
- Efficient STAT management
- Configurable parameters to be adapted to different laboratory requirements

Easy user interaction

- Minimal training required due to intuitive software and simple design[4]
- Real-time status of reagents and samples
- High-definition color results for easier revision of results
- Quality control check throughout the test procedure

110 x 70 x 175 cm; 43.3 x 27.6 x 68.9 in (W x D x H)
350 kg; 772 lb

4. On average, the training requires less than three work days to complete.

Automated systems

erytra eflexis

A fully automated, mid-size analyzer that performs pretransfusion compatibility tests using DG Gel technology.

This smart, flexible, and intuitive instrument helps labs achieve workflow efficiency and improve daily work routines.

Adaptability that fits your lab

Smart, compact design

- Multiple laboratory configurations and multi-site networks: option to connect different Erytra Eflexis and Erytra units as a network
- Compact benchtop model with transparent casing for a clear view of the internal processes
- LIS bi-directional connectivity

Flexible performance

- True continuous loading and unloading of samples, reagents, and cards
- STAT management: just press the STAT button for sample prioritization
- Two in one: unique interchangeable sample and reagents lineal racks automatically identified by the system for additional laboratory workflow adaptability
- Capacity for 200 DG Gel cards, up to 72 samples, and 46 liquid reagents

Intuitive operations

- Minimal training[5] to interact with the easy-to-use external touchscreen
- Grifols exclusive simultaneous perforations and dispensing technology for 100% use of the cards
- The same intuitive and customizable Erytra software suite
- Remote access for results validation and after-sales support remote connection
- Minimal maintenance[6]

110 x 71 x 91 cm; 43.3 x 27.9 x 35.8 in (W x D x H)
173 kg; 381.4 lb

5. On average, the training requires less than three work days to complete.
6. Only monthly maintenance is required.

Semi-automated and manual systems

Manual instruments are the minimum essentials to manually process DG Gel cards.

They can be used as a single platform for card processing for low sample-volume laboratories or as a backup system for laboratories using a fully automated system.

Manual instruments can be combined with the DG Reader providing traceability and data management of results.

DG manual station

Work station

- Aluminum support for DG Gel cards, sample tubes, and reagents
- Capacity for 16 DG Gel cards, 2 bottles of DG Gel Sol diluent, 8 vials of reagents (5 and 10 mL), 32 dilution tubes (13 mm), and 16 sample tubes (16 mm)
- Completely adaptable to suit both left-handed and right-handed operators

34 × 55.5 × 4.5 cm; 13.4 × 21.8 × 1.8 in (W x D x H)
0.75 kg; 1.65 lb

DG Pipette

- Manual dispenser for the precise pipetting of liquids in repeat series
- One load can dispense multiple deposits of selected volumes: 10 µL in 40 wells, 25 µL in 16 wells, or 50 µL in 8 wells
- Easy access to the bottom of commonly used test tubes
- Lightweight ergonomic design makes it comfortable to use
- The removable tip system makes it easy to remove the tip quickly and safely after use

DG Dispenser Plus

- Fixed volume dispenser for volumes of 250 µL to 2500 µL
- Attachable to different types of bottles
- Convenient for dispensing DG Gel Sol diluent from the bottle precisely and safely when preparing RBC suspensions
- Easy-to-use volume adjustment control

DG Dispenser Holder

- Plastic subject base for the DG Gel Sol
- Convenient to facilitate the dispensing process together with the DG Dispenser Plus

DGtherm

Digital incubator

- 2 independent incubation zones
- Capacity for 12 DG Gel cards and 12 tubes each
- Digital on-screen display
- Fixed preset temperature of 37°C
- Adjustable, preset incubation time of 15 minutes

31 × 33 × 10 cm; 12 × 13 × 4 in (W x D x H)
4 kg; 9 lb

DGspin

Digital centrifuge

- Simultaneous centrifuge of up to 24 DG Gel cards
- Removable and exchangeable spinning head
- Pre-defined centrifuge parameters
- Digital on-screen display
- Automatic detection of incorrect placement of DG Gel cards on the spinning head

41 x 52.5 x 18 cm; 16 x 21 x 7 in (W x D x H)
9 kg; 20 lb

DGreadernet

Advanced instrument for reading and interpreting DG Gel cards

- Embedded PC and touch screen
- High resolution colored pictures for clear and reliable results management
- Possibility to combine different cards for a single assay
- Based on Erytra and Erytra Eflexis reader
- Wi-fi connection

43.9 x 28.6 x 40.6 cm; 17.28 x 11.26 x 15.98 in (W x D x H)
8.5 Kg; 18.7 lb

Automated systems

REF	PRODUCT	DESCRIPTION
210400	Erytra	Fully automated instrument with a high-processing capacity for the processing of DG Gel cards
210600	Erytra Eflexis	A fully automated, mid-sized analyzer to perform pretransfusion compatibility tests using DG Gel technology with a smart and compact design for intuitive operations

Semi-automated systems

REF	PRODUCT	DESCRIPTION
210700	DG Reader Net	Advanced reader for DG Gel cards

Manual systems

REF	PRODUCT	DESCRIPTION
210366	DG Manual Station	DG Gel card work station (2 modules for cards + 2 racks for reagents)
213722	DG Pipette	Repetitive pipette for set volumes (10, 25, 50 µL)
213720	DG Dispenser Plus	Dispenser for set volumes (from 250 µL to 2500 µL)
213699	DG Dispenser Holder	Plastic transparent subject base for the DG Gel Sol bottle
213734	DG Therm	Digital incubator for the processing of DG Gel cards
210363	DG Spin	Digital centrifuge for the processing of DG Gel cards

Accessories

REF	PRODUCT	DESCRIPTION
213713	Sample holder	Holder to load samples into Erytra and Erytra Eflexis analyzer
210601	Erytra Eflexis rack for samples	Rack to load samples into the Erytra Eflexis
233178	Erytra system solution container	Container designated for the Erytra diluted system solution (DG Fluid A or DG Fluid B)
234179	System solution container	Container designated to hold diluted wash solution (A or B) or decontamination solution in Erytra Eflexis
210603	Erytra Eflexis card waste container	Disposable container for card waste
213778	Diana BCC	Barcode replicating printer
213776	Diana BCC labels	Blank labels for use with the Diana BCC printer (1000 units)
213775	DG Pipette tips	Bag of tips for the DG Pipette (1000 units)
210367	DG Cap holder	Support for the dropper caps of the reagent red blood cells
210611	Grifols Bench (earthquake-proof)	Special stand-alone table designed to increase Erytra Eflexis autonomy
730541	Droppers for vials (10 mL)	Droppers for 10 mL 0.8% RRBCs vials (100 units)

Product registration and availability vary by country. Ask your local Grifols representative for more information.

Software solutions

Blood Typing Manager

A middleware that connects all your Immunohematology laboratory data, enhancing productivity and delivering rapid and safe results for your patients.

Ease of use

- Minimize risk of errors while increasing operational efficiency with an **up-to-date**, **highly intuitive interface**
- Deliver a consistent user experience within Grifols IH automated solutions, allowing easier training and adoption by staff
- Ease result analysis with **auto-validation** and auto-export capabilities, including **customizable rules** to alert you about rare results before validation and force the review of the desired special results

Enhanced safety

- Deliver **safer results** on time by reducing manual data handling procedures and paperwork, thus achieving cost savings
- Protect your patients by automatically comparing current results with historical results, thereby identifying result **discrepancies within the lab or network** database
- **Follow up your operations and results properly with enhanced traceability** of processes, including an audit trail

Streamlined operations

- **Improve workflow** management in a multi-site, multiple instrument laboratory environment, allowing quicker availability of blood, thanks to a **centralized dashboard** and **unique database**
- Simplify data handling processes with customizable **reflex rules** and the capability to manually create new test requests or samples, giving staff more time to focus on complex cases
- Optimize resources with **remote real-time access** to information, facilitating core labs to centralize network results review

Improved efficiency

- Centralize your **quality control** management and **increase efficiency** of your expert staff's working hours
- Remove analysis subjectivity and lower time for results release with the optional **Antibody Identification Module**, which helps you make decisions on unexpected antibody results
- Avoid test repetition with optional additional checkpoints, for example, the patient demographic double data entry

Secured data

- Have confidence knowing that the confidentiality, integrity, and availability of your data are in safe hands. Grifols designs products with cybersecurity in mind
- Patient data is securely managed in Blood Typing Manager, complying with **data protection** and **cybersecurity standards**
- Keep your lab running smoothly with Secure Remote Connectivity, a tool for the technical support team to **remotely access** the middleware to reduce incident handling time while optimizing system uptime

It complements Grifols instruments by providing advanced features that support your growth.

Ordering information

CODE	DESCRIPTION
21040401	Blood Typing Manager Core Module
21040402	Blood Typing Manager Multi-site plus (> 5 sites)
21040403	Blood Typing Manager Antybody Identification Module

The DG Gel system supports safer transfusions and improved outcomes for patients.

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GRIFOLS