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imusyn



rBGA - Recombinant Blood Group Antigens

For the specification of irregular anti-erythrocytic antibodies

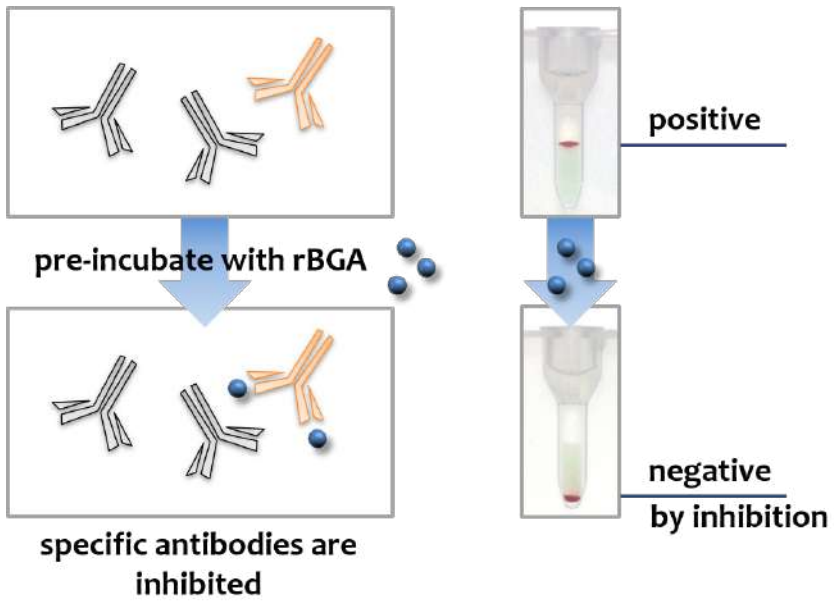
Recombinant Blood Group Antigens

Solution for limited RBC Alloantibody Detection

The detection of antibodies to blood group antigens is crucial in pre and post transfusion testing to allow for adequate blood supply of patients requiring blood transfusions. In cases when e.g. antibody mixtures, autoantibodies or alloantibodies to high prevalence blood group antigens are present, the clear identification could be problematic due to unspecific positive (false positive) or overlapping reactions in antibody screening.
Recombinant blood group antigens (rBGA) by imusyn can specifically inhibit antibodies and therefore minimize the risk of incompatible blood transfusions.

rBGA Method: Principle of hemagglutination inhibition assay

- Preincubation of 2 µl rBGA with 25 µl patient serum or plasma for 30 minutes: neutralization of specific red cell antibodies.
- Serum or plasma can be used for indirect antiglobulin test with conventional gel card systems (Grifols DG Gel, Bio-Rad ID-System, ORTHO BioVue, ORTHO MTS, or Cellbind Screen) or in tube testing.



References

- Seltsam A, Blasczyk R. Recombinant blood group proteins for use in antibody screening and identification tests. Curr Opin Hematol 2009:16:473-9.
- Seltsam A, Wagner F, Lambert M, et al. Recombinant blood group proteins facilitate the detection of alloantibodies to high-prevalence antigens and reveal underlying antibodies: results of an international study. Transfusion 2014;54:1823-30.
- Seltsam A, Blasczyk R. Recombinant blood group proteins in clinical practice - from puzzling to binary antibody testing. ISBT Science Series 2016; 11:243-249.
- Grueger D, Schneeweiss C, et al. Two novel antithetical KN blood group antigens may contribute to more than a quarter of all KN antisera in Europe. Transfusion 2020 Oct;60(10):2408-2418.

rBGA Products

Article number	rBGA	REF	Protein Specification	Quantity
004 010 001	Chido(a)	R_Ch(a)	**C4B*3**	1 vial à 300 µl
004 010 003	CROM/DAF	R_CROM	Cr(a+), Tc(a), **Dr(a+)**, Es(a+), IFC+, WES(b), UMC+, GUTI+, SERF+, CROZ+, CROV+, ZENA+, CRAM+, CROK+, CORS+, CRUE+, CRAG+	1 vial à 300 µl
004 010 004	Dombrock(a)	R_Do(a)	**Do(a)**, Hy+, Jo(a+), DOLG+, DOYA+, DOMR+, DOLC+, DODE+	1 vial à 300 µl
004 010 005	Dombrock(b)	R_Do(b)	**Do(b)**, Hy+, Jo(a+), DOLG+, DOYA+, DOMR+, DOLC+, DODE+	1 vial à 300 µl
004 010 006	Duffy(a)	R_Fy(a)	**Fy(a)**, Fy6	1 vial à 300 µl
004 010 007	Duffy(b)	R_Fy(b)	**Fy(b)**, Fy6	1 vial à 300 µl
004 010 008	Kell-Kp(b)-Js(a)	R_grKba	Js(a), K12+, Ul(a-), K19+, TOU+, K23-, K13+, K22+, K11, **Kp(b)**, RAZ+, VLAN+, **K**, K14/24, K18+, KASH+, KELP+, KYO-, KHUL+, KTIM+, KUCI+, KANT+, KETI+, KALT+, VONG+	1 vial à 300 µl
004 010 009	Indian(b)	R_In(b)	**In(b)**, INFI+, INJA+, INRA+, INSL+	1 vial à 300 µl
004 010 010	JMH	R_JMH	**JMH1**, JMH2, JMH3, JMH4, JMH5, JMH6, JMH7, JMH8	1 vial à 300 µl
004 010 011	Cellano-Kp(b)-Js(a)	R_klkba	Js(a), K12+, Ul(a-), K19+, TOU+, K23-, K13+, K22+, K11, **Kp(b)**, RAZ+, VLAN+, k, K14/24, K18+, KASH+, KELP+, KYO-, KHUL+, KTIM+, KUCI+, KANT+, KETI+, KALT+, VONG+	1 vial à 300 µl
004 010 014	Landsteiner-Wiener(a)	R_LW(a)	**LW(a)**	1 vial à 300 µl
004 010 015	Rodgers(a)	R_Rg(a)	**C4A*3**	1 vial à 300 µl
004 010 016	Scianna1	R_Sc1	**Sc1**, Rd-, SCAN+, STAR+, SCER+, SCAR+, SCAC+	1 vial à 300 µl
004 010 017	Xg(a)	R_Xg(a)	**Xg(a)**	1 vial à 300 µl
004 010 018	Cartwright(a)	R_Yt(a)	**Yt(a)**, YTEG+, YTLI+, YTOT+	1 vial à 300 µl
004 010 019	Kn(a)/DACY	R_CR1_2	**Kn(a)**, McC(a), Sl(a), Sl3+, KCAM+, Yk(a), **DACY**	1 vial à 300 µl
004 010 020	YCAD	R_YCAD	**YCAD**	1 vial à 300 µl
004 010 021	Lutheran(a)/ Au(a)	R_Lu(a)_2	**Lu(a)**, Lu4+, Lu5+, Lu6, Lu8, Lu12+, Lu13+, Lu16+, Lu17+, Lu20+, Lu21+, LURC+, Lu7+, Lu23, Lu24, Lu25, Lu27, Lu18, LU28, LU29	1 vial à 300 µl
004 010 022	Lutheran(b)/ Au(b)	R_Lu(b)_2	**Lu(b)**, Lu4+, Lu5+, Lu6, Lu8, Lu12+, Lu13+, Lu16+, Lu17+, Lu20+, Lu21+, LURC+, Lu7+, Lu23, Lu24, Lu25, Lu27, **Lu19**, LU28, LU29	1 vial à 300 µl

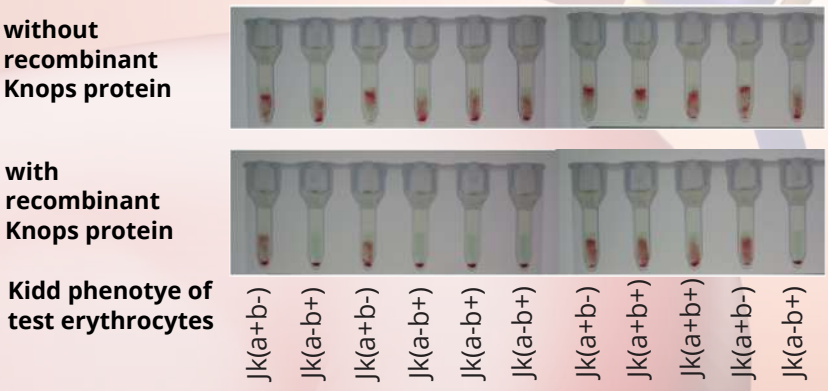
List of rBGAs with corresponding antigens. Serologically tested antigens are in bold.

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rBGA Features and Advantages

- Simple test procedure
- Direct antibody identification
- Antibody detection and identification in one step
- Simple and fast detection and identification of alloantibodies to high-prevalence blood group antigens
- Better resolution of antibody mixtures
- Neutralization of clinically insignificant antibodies to high-prevalence antigens in pretransfusion cross-matching
- Faster and safer treatment of immunized patients
- Easy to implement in routine serology
- Long shelf life of rBGA of 18 months

Serum sample with anti-Jk^a + anti-Kn^a



Specific detection of admixed alloantibodies in the presence of anti-Kn^a

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