Red Cell Genotyping
Test Request Form

BLOOD GROUP GENETICS LABORATORY
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Form BT-0637 [5]

Irish Blood Transfusion Service
Seirbhís Fuilaistriúcháin Eireann

Please supply ≥3ml EDTA-coagulated whole blood.
Store and Transport at room temperature.

Please ensure there are at least three (3) points of matching identification on this form and sample tube(s).
Samples must be either hand-written at time of phlebotomy, or labelled using demand-printed labels.

PATIENT'S DETAILS			
Surname		EDD and Gestation (if pregnant)	
First Name			
(Maiden Name)		Known Blood Groups	
Gender		Known Antibodies	
DoB		Hospital	
MRN		Consultant	
Ethnic Origin		Sample Type, Date & Time	
Address			
		Referring Laboratory Sample Number	
Clinical Details and Other Useful Information (e.g. transfusion, transplantation, medication, diagnosis)			

TEST REQUIRED (Please Tick)	
See Reverse for Guide to Tests	
	Weak D Genotype Please enclose copies of RhD phenotyping results
	***RHD/RHCE* Genotype** Please enclose copies of RhD phenotyping results
	Full RBC Genotype Please enclose copies of any phenotyping results
	***RHCE* Variant Investigation** Please ring before referring (Please enclose copies of RhCcEc phenotyping results)
	Other Blood Group Genotype Investigation Please ring before referring (Currently referred to IBGRL, UK)
	Please tick Here if Urgent Urgent samples processed within 48 hours (Mon-Fri only). An additional emergency charge will apply.

Requester's Details

Print Name	Signature	Position	Date

For IBTS Use Only

Sample Labelled	Date & Time Received by IBTS	IBTS Laboratory Number
Comments		

Hospitals wishing to refer for the first time must contact the Blood Group Genetics Laboratory before sending the sample to discuss the appropriateness of the proposed investigation.

Sample Requirements

1. Peripheral whole blood (≥3ml) collected in EDTA-coagulated tube.
2. The sample tube should not be opened following phlebotomy (please contact BGGL if this is not possible).
3. The sample should not be used for any other testing.
4. The sample tube should only be stored at room temperature.
5. The sample tube **MUST** be labelled with the following information:
    a. Three unique sample identifiers including: first name and surname, date of birth, and hospital number (these **MUST** be identical to the Test Request Form)
    b. The patient's ethnic origin should be indicated: this is very useful information for result interpretation.
    c. Samples **MUST** be labelled, dated and signed by the person taking them.
6. *Addressograph* labels are **NOT** acceptable on sample.
7. Samples must either have handwritten labels, or demand-printed labels produced at the time of phlebotomy.
8. Hand written alterations on either the sample or request form may make the sample invalid for testing.
9. Any minor alterations must be initialled by the person taking the sample to be acceptable for testing.

Test Information

Weak D Genotype	Identifies Weak D patients that can safely be treated as RhD-positive, and those that should be treated as RhD-negative: • Weak D types 1, 2 and 3 → Treat as RhD-positive • All other Weak D Types → Treat as RhD-negative ***This test is not the appropriate test for baby samples, where the purpose of testing is to determine if prophylactic anti-D is required for mother.*** (RHD genotype or RhD phenotype should be requested (RhD phenotyping is performed by Red cell Immunohaematology Laboratory, NBC or Diagnostics Laboratory MRTC). ***Please supply copies of any RhD phenotype testing performed by your laboratory***
***RHD/RHCE* Genotype**	Identifies *RHD* type (including the most common *RHD* variants) and C/c/E/e types. Important *RHD* variants in Caucasian and Asian patients (e.g. DIIIc, DVI, DVII) and Africans (e.g. DIIIa, DAU-4, DAR) are covered. Useful for the following patients: • RhD-positive with apparent alloanti-D. • Patients of African origin (*RHD* variants are more common). • Haemoglobinopathy Patients going on transfusion programs (identify those who can safely receive RhD-positive red cells) • Patients where is it unclear if they have auto or alloanti-D. ***Please supply copies of any RhD phenotype testing performed by your laboratory***
Full RBC Genotype	Identifies the predicted phenotype for common blood groups. This test is useful for the following groups of patients: • Multi-transfused patients • Patients with AIHA, CAD, or other conditions with autoantibodies interfering with red cell serology • DAT positive patients • Patients with multiple myeloma being (or about to be) treated with Darzalex™ (Daratumumab) • The *Full RBC Genotyping* test predicts the phenotype for the following blood groups: RhD, C/c, E/e, K/k; Fy^a/Fy^b (including Fy_{GATA} and Fy^X); Jk^a/Jk^b; M/N/S/s; Do^a/Do^b; Vel. ***Please supply copies of any phenotype testing performed by your laboratory***
***RHCE* Variant Genotype**	This test profile identifies the most important *RHCE* variants in both Caucasian and African populations. The test may be useful for African patients with possible variant expression of the C-antigen and e-antigen. ***PLEASE CONTACT LABORATORY TO DISCUSS REASON FOR REFERRAL.*** ***Please supply copies of any RhCcEe phenotype testing performed by your laboratory*** . If indicated, samples will be referred to IBGRL (NHSBT) for *RHD*/*RHCE* sequencing. Turn-around-times for this test can be significant.
Other Blood Group Genotype Investigation	Molecular investigation for other blood groups not covered by any of the test profiles described above may be indicated. PLEASE CONTACT LABORATORY TO DISCUSS REASON FOR REFERRAL. ***Samples are currently referred to IBGRL, NHSBT***

Please refer to User Guide for additional information.

The following can be found at **www.giveblood.ie/Clinical-Services/Blood-Group-Genetics/**

- Red Cell Genotyping – Test Request Form (BT-0637 - RED)
- Fetal *RHD* Screen – Test Request Form (BT-0638 - YELLOW)
- IBTS Address Label Template
- User Guide (IBTS/BGG/UG/0001)
- Other useful information.