



International Rare Donor Panel

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1. Rare Donor Program

Country: SPAIN

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Rare Donor Program

Rare Donor Program	YES
National Regional or Facility based	The national program is the result of 8 regional programs (autonomous communities), out of a total of 19
Number of Rare Donors	1013
Definition of Rare	Someone who is negative for a high prevalence antigen where the frequency of this antigen negative phenotype is less than 1 in 1000. People with a combination of antigen negative phenotypes where that combination has a prevalence of less than 1 in 1000 may also be considered rare.
Are the donors listed in the International Rare Donor Panel	YES
Frozen Inventory	YES: 1123 frozen units
How are Rare Donors found	Selected donor phenotyping and genotyping Corresponding antibody detected in a donor or patient Family studies
Number of Rare Donor Units used per year	The number varies from year to year. In 2021, 68 units were supplied. In the period 2010-2021, 905 were supplied
ISBT Rare Donor WP Blood Shipment form used	YES (no, in 100% of cases...)
Outcome of incompatible transfusion form used	YES
Most difficult types to find	Rh null, In (b-). Bombay, RH: -46
Phenotypes confirmed by molecular testing	Yes, in the case of newly identified rare phenotypes (last 10 years)

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Phenotype	Total Active Donors	Group O	O Positive	O Negative	Other ABO/Rh
GE:-2,-3	0	0	0	0	0
JK(a-b-)	8	6	3	3	2
Ko	0	0	0	0	0
Kp(b-)	46	30	13	17	16
MkMk	0	0	0	0	0
Rh:-34	0	0	0	0	0
U-	6	4	3	1	2
PP1Pk-	17	10	9	1	7
SC:-1	0	0	0	0	0
En(a-)	0	0	0	0	0
At(a-)	0	0	0	0	0
Di(b-)	24	24	24	0	0
Jr(a-)	12	8	4	4	4
Rh null	2	1	NA	NA	1
Vel(-)	23	18	12	6	5
D--	1	0	0	NA	1
Oh positive	0	NA	NA	NA	NA
Oh negative	1	NA	NA	NA	NA

Country/Region: SPAIN

How are your rare donors found?

	Yes / No	Method	Comments
Extended phenotyping donors	YES	All donors typed for Rh (C, E, c, e) and K K+ donors typed for k and confirmed by molecular methods Selected donors (10% donations) typed for Fya, Fyb, Jka, Jkb, M, S and s – (IH-1000, Bio-Rad)	
Extended genotyping donors	YES	The serological findings are confirmed with the study of the phenotype and genotype. In donors of African, Pakistani, Indian or Iranian origin, certain genotypes are performed.	The rare phenotype is confirmed with molecular testing (genotyping or NGS)
Family studies	YES	Recruitment of family of donors and patients	Information to recruit family of donors is provided to the donor for discussion with family members.
Antibody investigations	YES	All donors are screened for red cell antibodies	
Other	NA	NA	NA



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2. Red Cell Product Specifications

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Donor Selection – Whole Blood

Donation	Voluntary	
Age or Weight Restrictions	New donors: 18 to 65 years >50 kg	
Donation Interval	12 weeks	
Sexual Activity Precautions	Positive for HIV, Hepatitis B/C, or HTLV	Permanent deferral
	Male to male sex	4 month deferral (risk based-deferral)
	Sex worker (permanent deferral) or contact with sex worker (4 months)	
Travel Exclusions <i>If donor has returned from an area endemic for the listed infectious illnesses</i>	Dengue	4 week deferral
	Ebola	8 week deferral
	Malaria	Antibody screening: If donor has visited in previous 3 years or lived for 6 or more months continuously
	West Nile Virus	NAT testing based on travel risk
Lifestyle	Acupuncture, piercing or tattoo	4 month deferral
	Drug use (Non-prescribed injected)	Permanent deferral
	Incarceration	4 month deferral from date of release
CJD geographic restrictions	Living in UK 1980-1996 permanent deferral	
COVID restrictions	COVID19 vaccine administration	3 days deferral
	COVID infection	7 day deferral from last symptoms
	Household contact	According to the relevant public health guidelines

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Mandatory Infectious Diseases Screening of Blood Products		
	Screening test	Risk of blood transfusion transmission
HIV	Anti-HIV/p24/NAT	<1/1,6 millions
HCV	Anti-HCV/NAT	<1/32 millions
HBV	HBsAg/NAT	<1/300,000
Syphilis	Treponemic or reaginic tests	
HTLV (1 & 2)	Not mandatory (tested in some Centers)	
CMV	Not mandatory (CMV IgG/IGM selective components for special patients)	
Zika Virus	N/A	
West Nile Virus	28-day deferral or ID-NAT	
Babesia	N/A	
Trypanosoma cruzi (T. cruzi) Chagas Disease	Anti-T. cruzi (selective testing)	

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Red Cells	Leucocyte Depleted	Paediatric Leucocyte Depleted	Washed Leucocyte Depleted
Description	A red cell component obtained by removing most of the plasma after centrifuging whole blood collected into anticoagulant. The red cells may be resuspended in other additives to prolong storage and are filtered to remove most leucocytes.	A leucocyte depleted red cell component divided into four packs of equal volume for the purpose of reducing donor exposure for small paediatric transfusions and to minimise product wastage.	Red cells leucocyte depleted are washed with sterile SAG-M solution using a manual process to remove the majority of unwanted plasma proteins, antibodies and electrolytes. The washed red cells are resuspended in SAG-M2 additive solution.
Anticoagulant	Citrate phospahte dextrose (CPD) 66.5 mL +/- 10% per pack of whole blood	Citrate phospahte dextrose (CPD)	Citrate phosphate dextrose (CPD) 66.5 mL +/- 10% per pack of whole blood
Additive Solution	Saline adenine glucose mannitol (SAG-M) 105 +/- 10% mL	Saline adenine glucose mannitol (SAG-M)	Saline adenine glucose mannitol (SAG-M) 100 +/- 10% mL
Average volume	260 +/- 15 mL	60 +/- 4 mL	258 +/- 18 mL
Storage Duration	42 days	35 days	28 days
Leukofiltration	leucocyte reduced to $<1 \times 10^6$ /unit		
Storage Temperature	2°C to 6°C		
Transport Temperature	2°C to 10°C		
Modifications	Phenotyped, CMV seronegative, irradiated		
Irradiation Policy	Gamma irradiation: 25-50Gy or X-ray irradiation		

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	For Intrauterine Transfusion	Frozen Leucocyte Depleted
Description	A hyper-concentrated red cell component less than five days old with a haematocrit of 0.70–0.85 obtained by removing most of the plasma/additive solution. The red cells may be resuspended in additive solution to achieve the desired haematocrit.	Used for patients with rare red cell phenotypes, or multiple red cell antibodies and for autologous collections when liquid-preserved blood cannot fulfil demands. Can be supplied internationally as a frozen product and thawed locally
Anticoagulant	Citrate phosphate dextrose (CPD)	Citrate phosphate dextrose (CPD)
Additive Solution	Saline adenine glucose mannitol (SAG-M)	Glycerol is added to red cells as a cryoprotectant
Leukofiltration	leucocyte reduced to $<1 \times 10^6$ /unit	leucocyte reduced to $<1 \times 10^6$ /unit
Average volume	>220 mL	>185 mL
Storage Temperature	2°C to 6°C	-65°C to -80°C / -190°C Frozen within 7 days of collection 2°C to 6°C once thawed
Transport Temperature	2°C to 10°C	Below -65°C / -150°C 2°C to 10°C once thawed
Storage Duration	24 hours post irradiation	10 years / 30 years
Irradiation Policy	Gamma irradiation: 25-50Gy or X-ray irradiation Red cells for IUT must be irradiated. Once irradiated the component must be used within 24 hours.	Gamma irradiation: 25-50Gy or X-ray irradiation
Other	ABO, RhD compatible with both mother and fetus, K negative. Should be antigen-negative for maternal alloantibodies, IAT crossmatch compatible with the maternal plasma and CMV seronegative. If the fetal blood group is unknown use group O, RhD negative red cells.	Prior to transfusion, glycerol must be removed from the thawed component by washing the cells with sodium chloride. After washing, the red cells are resuspended in additive solution or and must be used within 24 hours. There will be some loss of red cells during the freezing and thawing process. When requesting frozen red cells it should be noted that thawing and processing time is several hours.



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3. Frozen Inventory

Country: SPAIN

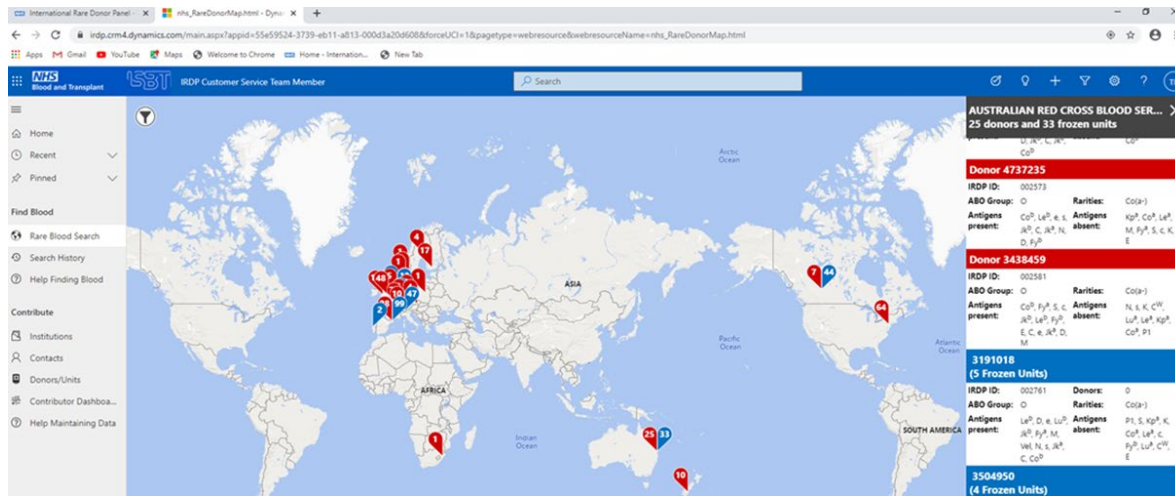
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General Information

Freezing Method	Glycerolyte 57 using Haemonetics ACP-.215 cell washer / High glycerol concentration IBM COBE 2991
Frozen Expiry (years)	30 years Exceptionally rare units may be retained beyond expiry. If required for issue they are released as a non-confirming product
Storage Temperature	Freezer -80°C / 190°C Liquid Nitrogen
Can inventory be issued and sent frozen	Yes
Thawing Method	Deglycerolisation with 12% and 0.9% saline using Haemonetics ACP-.215 cell washer / IBM COBE 2991
Thawed Expiry (days)	24 hours
Additive Solution	SAGM/ Saline Solution
Irradiation Policy	NA
IUT and Neonate use	NA
Supply out of date Policy	Exceptionally rare units may be retained beyond expiry . If required for issue they are released as a non-confirming product

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Product Specifications	
Volume	> 185mL
Supernatant Haemoglobin	<0,2 g/unit
Haematocrit	0.35 – 0.70 (L/L)
Haemoglobin	≥36
Osmolarity	NA
Residual leucocyte content	< 1.0 x 10 ⁶ /unit
Sterility	NA
Other	NA



4. Ordering and Shipping

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Exporting

Request form available	Yes
Government Requirements	National Blood Authority Approval to Supply Blood Products to Organisations for Use Overseas facilitated by Ministry of Health
Regulatory Requirements	National Blood Authority Approval case by case
Rare Donor Program Requirements	Preferred courier – World Couriers Completed request form
Other	NA

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Importing

Government Requirements	National Blood Authority Approval to Supply Blood Products to Organizations for Use Overseas facilitated by Ministry of Health The approval of the Ministry of Health allows customs to facilitate the importation of blood
Regulatory Requirements	Availability of Ministry approval for importation.
Rare Donor Program Requirements	A copy of all test results for the donation e.g. blood group, phenotype and infectious disease screening Temperature monitored transport (Preferred courier – World Couriers)
Other	NA