ABID CASE #13

1. Develop a hypothesis or hypotheses regarding the identity of this antibody or antibodies. *Anti-Fy^a & anti-S.*

2. Is any further workup needed to prove it? If so, select cells from the following tables to resolve the problem.

Anti-K needs to be ruled out, and 1 anti-Fy^a rule-in cell is needed. Antigen typing also has to be done for any demonstrated antibodies.

Additional cells

8RA179		Rh system						Kell						Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheran		Other				
Cell	Rh	D	C	E	c	e	V	K	k	Kp^a	Kp^b	Js^a	Js^b	Fy^a	Fy^b	Jk^a	Jk^b	Xg^a	Le^a	Le^b	S	s	M	N	P1	Lu^a	Lu^b	Typings	Cell	Gell			
1	R1wR1	+	+	0	0	+	0	0	+	0	+	0	+	+	+	+	0	+	0	+	+	0	+	+	+	0	+	C^w	1				
2	R1R1	+	+	0	0	+	0	0	+	0	+	0	+	+	0	0	+	+	0	+	0	+	+	0	0	0	+		2	2+			
3	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	+	+	0	0	+	0	+	+	0	+s	0	+		3				
4	Ror	+	0	0	+	+	+	0	+	0	+	0	+	0	0	+	+	+	0	0	0	+	0	+	+s	0	+		4				
5	r'r	0	+	0	+	+	0	0	+	0	+	0	+	0	+	+	0	0	+	0	+	0	+	+	0	+	+		5				
6	r"r	0	0	+	+	+	0	0	+	0	+	0	+	+	+	+	+	+	0	+	+	0	+	+	+	0	+		6				
7	rr	0	0	0	+	+	0	+	+	0	+	0	+	0	+	+	0	+	0	0	0	+	+	+	+	0	+		7	0			
8	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	0	+	0	+	0	+	+	0	+	+	0	+		8				
9	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	+	+	+	0	+	+	0	+	0	0	+	+		9				
10	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	0	+	+	0	+	0	+	0	+	+	0	+		10				
11	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	0	+	0	+	0	0	+	+	+	+	0	+	0	+		11				
Patient																													AC				

Additional cells

8RB178		Rh system						Kell						Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheran		Other				
Cell	Rh	D	C	E	c	e	V	K	k	Kp^a	Kp^b	Js^a	Js^b	Fy^a	Fy^b	Jk^a	Jk^b	Xg^a	Le^a	Le^b	S	s	M	N	P1	Lu^a	Lu^b	Typings	Cell	Gel			
12	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	+	0	+	+	0	+	0	+	0	0	0	+		12				
13	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	0	+	0	0	+	+	+	+	+	+s	+	+		13				
14	rr	0	0	0	+	+	0	+	+	0	+	0	+	+	0	+	+	+	+	0	0	+	0	+	0	0	+		14	2+			
15	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	+	0	+	+	+	0	0	0	+	+	+	0	0	+		15				
16	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	0	+	+	+	0	+	0	+	+	+	0	+		16				
17	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	+	0	+	0	+	0	+	+	+	+	0	+		17				
18	R1wR1	+	+	0	0	+	0	0	+	0	+	0	+	0	+	+	0	+	0	+	+	+	+	+	+	+s	0	+		18				
19	R1R1	+	+	0	0	+	0	0	+	0	+	+	+	0	0	+	0	0	0	0	0	+	+	0	+s	0	+		19				
20	RzR1	+	+	+	0	+	0	0	+	0	+	0	+	+	0	0	+	+	0	+	+	+	+	+	+	0	+		20				
21	r"r	0	0	+	+	+	0	0	+	+	+	0	+	0	+	+	+	+	+	0	+	0	+	+	+s	0	+		21				
22	R1R1	+	+	0	0	+	0	+	0	0	+	0	+	+	+	+	0	+	0	+	+	+	+	0	+	0	+		22				
Patient																													AC				

Antigen Phenotype

	Rh system				Kell				Duffy		Kidd		Lewis		MNSs								
	C	E	c	e	K	k	Kp^a	Js^a	Fy^a	Fy^b	Jk^a	Jk^b	Le^a	Le^b	S	s	M	N	P1	I	H	A$_1$	
Patient					0				0	3+					0	3+							
Pos control					2+				2+	3+					3+	3+							
Neg Control					0				0	0					0	0							

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3. Does this antibody(ies) cause hemolytic transfusion reactions? Hemolytic disease of the newborn?

Both antibodies can cause both immediate and delayed reactions, as well as HDN.

4. How would we select blood for the patient in this case? What percentage of Caucasian donors would be compatible? African-American donors?

Select A or O negative RBCs, negative for the Fy^a and S antigens and compatible by a Coombs' crossmatch.
Caucasian donors: *0.45 x 0.34 = 0.153* *(15%)*
African-American donors: *0.70 x 0.90 = 0.63* *(63%)*