

FEATURED CASE #19-02

Rh Phenotype

	Rh system				Kell				Kidd		Duffy		Lewis		MNSs				PI	I	H	A ₁						
	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										
Patient	0	+	+	+																								

Question

1. What Might be causing these serologic reactions? Based on your hypothesis(es) how might you proceed?

Selected 3% cell panel tested by LISS/tube technique and by gel technique after resuspension to 0.8% with raw patient plasma

Cell	Rh	Rh system						Kell						Duffy		Kidd	Xg	Lewis		MNSs				P	Lutheran		Other Typings	Gel*	LISS				
		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	PI	Lu ^a			Lu ^b	IS	37	AHG	
315177	R1R1	+	+	0	0	+	0	+	+	0	+	/	+	+	0	0	+	+	0	0	+	+	+	+	+	+	0	+	HLA+	2+	0	0	2+
315088	R2R2	+	0	+	+	0	0	0	+	0	+	/	+	0	+	+	0	+	0	+	+	+	+	+	0	+	+		2+	0	0	2+	
302800	r ⁺ r	0	0	+	+	+	0	0	+	+	+	0	+	+	+	0	+	+	0	+	0	+	0	+	+	0	+		2+	0	0	2+	
111895	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	+	0	0	0	+	+	0	+	0	+	0	+	HLA+	2+	0	0	2+		
315417	R1R1	+	+	0	0	+	0	0	+	0	+	/	+	0	+	+	0	+	+	0	+	0	+	+	+	+s	0	+	HLA+	2+	0	0	2+
Patient																											AC		0	0	0 ^v		

*Cells for gel testing were washed and resuspended to 0.8% in MTS diluent.

Question

2. What hypothesis is ruled out by the new information? Given your answer what might you do next?

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Extended Phenotype

	Rh system				Kell				Kidd		Duffy		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	PI	I	H	A ₁			
Patient	+	0	0		+	0			0	+	+	+			0	+									

Question

3. Given this new information what new hypothesis might you make? How would you test it?

Selected cell panel tested against raw patient plasma by gel technique

Cell	Rh	Rh system						Kell						Duffy		Kidd	Xg	Lewis		MNSs				P	Lutheran		Other Typings	Gel	
		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	PI	Lu ^a			Lu ^b
316992	R2R2	+	0	+	+	0	0	+	0	0	+	/	+	+	0	+	+	0	0	+	+	+	+	0	+	0	+		0
109192	R1R2	+	+	+	+	+	0	+	0	0	+	0	+	+	0	0	+	+	0	+	+	+	+	0	+	0	+		0
313510	R2r	+	0	+	+	+	0	+	0	0	+	/	+	0	+	+	+	+	0	0	0	+	+	+	+	0	+		0
320910	R1R1	+	+	0	0	+	0	+	0	0	+	/	+	+	+	+	0	+	+	0	0	+	+	0	0	0	+		0
317519	R1r	+	+	0	+	+	0	+	0	0	+	/	+	+	+	+	0	+	0	+	0	+	0	+	0	0	+		0

Questions

4. Is the technologist's hypothesis proven? Is any more work needed? If so, what might we do next?

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A second technologist then ran the following tests:

Antibody Screening Cells with and without DTT treatment tested against raw patient plasma by saline/tube technique

		Rh system					Kell						Duffy		Kidd		Xg	Lewis			MNSs				P	Lutheran		Un-tx'd			DTT tx'd	
	Rh	D	C	E	c	e	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	Cell	IS	AHG	IS	AHG	
SC I	R1R1	+	+	0	0	+	0	+	0	+	/	+	0	+	0	+	+	0	+	+	0	+	+	+	0	+	SC I	0	1+	0	0 ^v	
SC II	R2R2	+	0	+	+	0	+	+	0	+	0	+	+	0	+	0	+	0	+	0	+	+	+	+	0	+	SC II	0	2+	0	0 ^v	

5. Is anti-S ruled out?