

REPORT OF THE 48th UCLA INTERNATIONAL KIR EXCHANGE

MAY 13, 2019

KIR 189-194

For the 48th KIR Exchange, 6 DNA samples (KDNA#189 - 194) were shipped to 70 laboratories worldwide. KIR typing results were received from 68 of the laboratories.

The results for the 48th KIR Exchange are summarized in Table 1 and individual laboratory results reported for each DNA sample are provided in Tables 2 - 7. Subtyping results for 2DL4, 2DL5, 2DS4, and 3DP1 loci were reported by some laboratories. The subtypes for 2DS4 and 3DP1 are denoted as FULL or DEL. Good agreement was achieved among labs in the re-

porting of positive/negative assignments for all 6 DNA samples, as 9 tested KIR loci (KIR2DL2, 2DL4, 2DL5, 3DL2, 3DL3, 2DS2, 2DS4, 2DS5, 3DP1) were reported without discrepancy. Discrepant results from consensus are italicized in Tables 1 - 7 and described in the summation for each sample. Discrepancies at the allele level are not italicized.

We would like to thank and acknowledge Arnold, Bottino, and Hurley & Hartzman for sharing their predicted haplotypes for each of the samples examined in this study.

KDNA # 189:

The consensus KIR type for this sample from a Hispanic donor was KIR2DL2-2DL4-2DL5A-3DL2-3DL3-3DS1-2DS1-2DS2-2DS5-3DP1FULL. Several discrepancies were reported for this sample as 1 lab reported 2DL1 and 3DL1 as positive, 1 lab reported 3DS1 as negative, and 2 labs reported 2DP1 as positive. Predicted haplotypes were reported as cB02/cB02 and tB01/tB01.

KDNA # 190:

The consensus KIR type for this sample from a donor of unknown ethnicity is KIR2DL1-2DL2-2DL3-2DL4-2DL5A&B-3DL2-3DL3-3DS1-2DS1-2DS2-2DS3-2DP1-3DP1DEL. Several discrepancies were observed for this cell, in which 1 lab reported 2DL3 as negative, 1 lab reported 3DL1 as positive, and 1 lab reported 2DS4Full as present. Predicted haplotypes were reported as cA01/cB01 and tB01/tB01 or cB02 and tB01/tB01.

KDNA # 191:

The consensus KIR type for this sample from an African American donor was as follows: KIR2DL1-2DL2-2DL4-2DL5B-3DL1-3DL2-3DL3-2DS2-2DS3-2DS4FULL-2DP1-3DP1DEL. Only 3 discrepancies were observed in this sample, as 2 labs reported 2DL3 as positive instead of negative and 1 lab reported 2DS1 as positive instead of negative. Predicted haplotypes were reported as cB01/cB01 and tA01/tA01 or cB02 and tA01/tA01.

KDNA # 192:

The consensus KIR type for this sample from a Caucasian donor was KIR2DL1-2DL3-2DL4-2DL5A-3DL1-3DL2-3DL3-3DS1-2DS1-*2DS3*-2DS4DEL-2DS5-2DP1-3DP1DEL. Good agreement was achieved among labs in the reporting all KIR loci, except KIR2DS3. No consensus (>90% agreement) was achieved for this gene, as 52 labs reported it as positive, 13 labs reported it as negative, and 3 labs reported it as undefined due to weak bands. A number of labs commented on observing conflicting results for 2DS3, including Vilches who noted "if the sample had 2DS3, it would possibly imply some sort of duplication in the telomeric region."

Bottino provided similar insights, stating "the presence of a TelA region and the presence of a TelB region carrying both 2DS3 and 2DS5 suggested that this donor is characterized by an expanded haplotype." Sortino also commented on the possibility of 2DS3 and 2DS5 being on the same haplotype in the telomeric position. Additionally, Hurley and Hartzman commented on the duplication, when reporting the predicted haplotypes: "cA01/cA01 and tA01/tB01var with 2DS3 and 2DS5 both present, predicting duplication of telomeric region."

KDNA # 193:

The consensus KIR type for this sample from a Hispanic donor was KIR2DL1-2DL2-2DL3-2DL4-3DL1-3DL2-3DL3-2DS2-2DS4FULL&DEL-2DP1-3DP1FULL&DEL. Only a single discrepancy was observed for this sample, as 1 lab reported 2DS3 as positive instead of negative. Predicted haplotypes were reported as cA01/cB02 and tA01/tA01.

KDNA # 194:

The consensus KIR type for this sample from a Caucasian donor was KIR2DL2-2DL4-2DL5B-3DL1-3DL2-3DL3-2DS1-2DS2-2DS4DEL-2DS5-3DP1FULL. There were no discrepancies observed for this sample.

Arnold and Sortino commented on this sample's unusual haplotypes, noting the presence of 2DS1 in the absence of 3DS1. Bottino further noted that "the presence of KIR2DL5B in the absence of KIR2DP1 - KIR2DL1 in the centromeric region and the presence of KIR2DS5 – KIR2DS1 in the absence of KIR3DS1 – KIR2DL5A in the telomeric region suggests that this donor could be characterized by one contracted haplotype." Vilches offered a similar observation, noting the sample "possibly carries on one chromosome a deletion of the central cluster, including 3DP1-2DL4-3DS1, within a B-haplotype." Hurley and Hartzman provided the following predicted haplotypes for this sample: "cB02/cB02 and tA01/tB01var with a absence of 3DS1."

NEXT MAILING DATE: August 7, 2019

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Table 1. Summary of the 48th KIR Exchange (KDNA #189-194)

KIR Ex.	DNA	# Labs	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	
48	189	68	NEG[67] <i>POS[1]</i>	POS[68]	NEG[67] NT[1]	POS[66] NT[2]	POS[58] A[10]	NEG[66] <i>POS[1]</i> NT[1]	POS[67] NT[1]	POS[66] NT[2]	POS[67] <i>NEG[1]</i>	POS[68]	POS[68]	NEG[67] NT[1]	NEG[67] NT[1]	POS[68]	NEG[62] <i>POS[2]</i> NT[4]	POS[48] FULL[15] *001[1] VAR[1] NT[3]	
	190	68	POS[68]	POS[68]	POS[67] <i>NEG[1]</i>	POS[66] NT[2]	POS[61] A, B[7]	NEG[66] <i>POS[1]</i> NT[1]	POS[67] NT[1]	POS[66] NT[2]	POS[68]	POS[68]	POS[68]	POS[68]	NEG[67] FULL[1]	NEG[67] NT[1]	POS[65] NT[3]	POS[48] DEL[17] NT[3]	
	191	68	POS[68]	POS[68]	NEG[64] <i>POS[2]</i> NT[2]	POS[66] NT[2]	POS[54] B[14]	POS[68]	POS[67] NT[1]	POS[66] NT[2]	NEG[67] NT[1]	NEG[66] <i>POS[1]</i> NT[1]	POS[68]	POS[68]	POS[44] FULL[22] *001[1] DEL[1]	NEG[67] NT[1]	POS[65] NT[3]	POS [47] DEL[17] *003[1] NT[3]	
	192	68	POS[68]	NEG[67] NT[1]	POS[68]	POS[66] NT[2]	POS[57] A[10] A/B*003[1]	POS[68]	POS[67] NT[1]	POS[66] NT[2]	POS[68]	POS[68]	NEG[67] NT[1]	NEG[67] NT[1]	POS[52] NEG[13] Undefined[3]	POS[44] DEL[22] *003[1] FULL[1]	POS[67] NT[1]	POS[65] NT[3]	POS[47] DEL[17] *003[1] NT[3]
	193	68	POS[68]	POS[68]	POS[68]	POS[66] NT[2]	NEG[67] NT[1]	POS[68]	POS[67] NT[1]	POS[66] NT[2]	NEG[67] NT[1]	NEG[67] NT[1]	POS[68]	NEG[66] <i>POS[1]</i> NT[1]	POS[50] FULL, DEL[18]	NEG[67] NT[1]	POS[65] NT[3]	POS [52] FULL, DEL[13] NT[3]	
	194	68	NEG[67] NT[1]	POS[68]	NEG[66] NT[2]	POS[65] *007[1] NT[2]	POS[53] B[15]	POS[68]	POS[67] NT[1]	POS[66] NT[2]	NEG[67] NT[1]	POS[68]	POS[68]	NEG[67] NT[1]	NEG[67] NT[1]	POS[44] DEL[22] *003[1] FULL[1]	POS[68]	NEG[64] NT[4]	POS [48] FULL[15] *001[1] VAR[1] NT[3]

KEY for Table 1

[] - number of labs reporting allele assignment/POS/NEG/NT
 POS - Presence of gene
 NEG - Absence of gene
 NT - Not typed
 italics - assignment different from consensus
 Subtypes of 2DS4 and 3DP1 are designated as FULL and/or DEL

KEY for Tables 2-5

italics - assignment different from consensus
 NGS - Next-generation sequencing
 RT-PCR - Real-time PCR
 SSO - Sequence-specific oligonucleotide probe based typing
 SSP - Sequence-specific primer-based typing
 SBT - Sequencing-based typing

Table 2. KIR Exchange Sample: KDNA #189 (Hispanic)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	NEG[67]	POS[68]	NEG[67]	POS[66]	POS[58] +A[10]	NEG[66]	POS[67]	POS[66]	POS[67]	POS[68]	POS[68]	NEG[67]	NEG[67]	POS[68]	NEG[62]	POS[48] +FULL[17]	
124	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NT	NT	
234	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	RT-PCR
278	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	
713	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
725	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
733	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP NGS
762	NEG	POS	NEG	POS	A	NEG	POS	POS	NEG	POS	POS	NEG	NEG	POS	NEG	POS	SSP
792	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
1108	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
1426	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP RT-PCR
1466	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
1694	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
1778	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP SSO
2344	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	
2549	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
3224	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP SSO
3410	NEG	POS	NEG	POS	A	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
3632	NEG	POS	NEG	POS	A	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
3753	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
3798	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
3966	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
4021	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
4251	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO RT-PCR
4337	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
4985	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
5000	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP SSO
5133	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	RT-PCR
5142	POS	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	SSP
5282	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
5451	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
5462	NEG	POS	NEG	POS	A	NEG	POS	POS	POS	*002.*009	POS	NEG	NEG	POS	NEG	FULL	SSP RT-PCR
5488	NEG	POS	NEG	POS	A	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP SSO
8022	NEG	POS	NEG	POS	A	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
8023	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
8024	NEG	POS	NEG	NT	POS	NEG	NT	NT	POS	POS	POS	NEG	NEG	POS	NT	FULL	
8025	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	NT	SSP
8028	NEG	POS	NEG	NT	POS	NEG	POS	NT	POS	POS	POS	NEG	NEG	POS	NT	NT	SSP
8030	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8035	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8038	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8046	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	VAR	SSP

Table 2. KIR Exchange Sample: KDNA #189 (Hispanic)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8047	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
8050	NEG	POS	NEG	POS	A	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
8053	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSO RT-PCR
8060	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8069	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
8071	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8073	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	RT-PCR
8074	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP SSO
8079	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8080	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	RT-PCR
8083	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	*002	POS	NEG	NEG	POS	NEG	*001	SSP
8084	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	RT-PCR
8085	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
8086	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
8088	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
8090	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP SSO
8092	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8094	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8097	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
8098		*001/ *002/ *003/ *005	NT	POS	POS	NT	POS	POS	POS	POS	POS	NT	NT	POS	NT	POS	
8101	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
8102	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
8104	NEG	POS	NEG	POS	A	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
8105	NEG	POS	NEG	POS	A, A	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	NGS
8106	NEG	POS	NEG	POS	A	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
8110	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	RT-PCR
8113	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP

Table 3. KIR Exchange Sample: KDNA #190 (Unknown)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[68]	POS[68]	POS[67]	POS[66]	POS[61] +A, B[7]	NEG[66]	POS[67]	POS[66]	POS[68]	POS[68]	POS[68]	POS[68]	NEG[67]	NEG[67]	POS[65]	POS[48] +DEL[17]	
124	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	NT	NT	
234	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	RT-PCR
278	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	
713	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
725	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
733	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP NGS
762	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
792	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
1108	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
1426	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP RT-PCR
1466	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
1694	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
1778	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP SSO
2344	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	
2549	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
3224	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP SSO
3410	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
3632	POS	POS	POS	POS	A, B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
3753	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
3798	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
3966	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
4021	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
4251	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO RT-PCR
4337	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
4985	POS	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
5000	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP SSO
5133	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	RT-PCR
5142	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
5282	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
5451	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
5462	POS	POS	POS	POS	A, B	NEG	POS	POS	POS	*002-*009	POS	POS	NEG	NEG	POS	DEL	SSP RT-PCR
5488	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP SSO
8022	POS	POS	POS	POS	A, B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
8023	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
8024	POS	POS	POS	NT	POS	NEG	NT	NT	POS	POS	POS	POS	NEG	NEG	NT	DEL	
8025	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	NT	SSP
8028	POS	POS	POS	NT	POS	NEG	POS	NT	POS	POS	POS	POS	NEG	NEG	NT	NT	SSP
8030	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8035	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8038	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8046	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP

Table 3. KIR Exchange Sample: KDNA #190 (Unknown)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8047	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
8050	POS	POS	POS	POS	A, B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
8053	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSO RT-PCR
8060	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8069	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
8071	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8073	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	RT-PCR
8074	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP SSO
8079	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8080	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	RT-PCR
8083	POS	POS	POS	POS	POS	NEG	POS	POS	POS	*002	POS	POS	NEG	NEG	POS	POS	SSP
8084	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	RT-PCR
8085	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
8086	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
8088	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
8090	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP SSO
8092	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8094	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8097	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
8098	POS	*001/ *002/ *003/ *005	POS	POS	POS	NT	POS	POS	POS	POS	POS	POS	FULL	NT	POS	POS	
8101	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
8102	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
8104	POS	POS	POS	POS	A, B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
8105	POS	POS	POS	POS	A, B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	NGS
8106	POS	POS	POS	POS	A, B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
8110	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	RT-PCR
8113	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP

Table 4. KIR Exchange Sample: KDNA #191 (Black)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[68]	POS[68]	NEG[64]	POS[66]	POS[54] +B[14]	POS[68]	POS[67]	POS[66]	NEG[67]	NEG[66]	POS[68]	POS[68]	POS[45]+ FULL[23]	NEG[67]	POS[65]	POS [47] +DEL[18]	
124	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NT	NT	
234	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
278	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	
713	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
725	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
733	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP NGS
762	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
792	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
1108	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	POS	SSO
1426	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP RT-PCR
1466	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
1694	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
1778	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
2344	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	
2549	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
3224	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
3410	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
3632	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
3753	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
3798	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
3966	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
4021	POS	POS	NT	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
4251	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO RT-PCR
4337	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
4985	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
5000	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
5133	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	RT-PCR
5142	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
5282	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
5451	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
5462	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP RT-PCR
5488	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP SSO
8022	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8023	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	DEL	NEG	POS	DEL	SSP
8024	POS	POS	NEG	NT	POS	POS	NT	NT	NEG	NEG	POS	POS	FULL	NEG	NT	DEL	
8025	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	NT	SSP
8028	POS	POS	NEG	NT	POS	POS	POS	NT	NEG	NEG	POS	POS	POS	NEG	NT	NT	SSP
8030	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8035	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8038	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	POS	SSO
8046	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	POS	SSP

Table 4. KIR Exchange Sample: KDNA #191 (Black)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8047	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
8050	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8053	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSO RT-PCR
8060	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8069	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8071	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8073	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	RT-PCR
8074	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	POS	SSP SSO
8079	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8080	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
8083	POS	POS	NEG	POS	B	*001	POS	POS	NEG	NEG	POS	POS	*001	NEG	POS	*003	SSP
8084	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
8085	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
8086	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
8088	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
8090	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
8092	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8094	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8097	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
8098	POS	*001/ *002/ *003/ *005	NT	POS	POS	POS	POS	POS	NT	NT	POS	POS	FULL	NT	POS	POS	
8101	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
8102	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	
8104	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8105	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	NGS
8106	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8110	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	RT-PCR
8113	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP

Table 5. KIR Exchange Sample: KDNA #192 (Chinese)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[68]	NEG[67]	POS[68]	POS[66]	POS[58] +A[10]	POS[68]	POS[67]	POS[66]	POS[68]	POS[68]	NEG[67]	POS[52] +NEG[13]	POS[44] +DEL[23]	POS[67]	POS[65]	POS [47] +DEL[18]	
124	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NT	NT	
234	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	RT-PCR
278	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	
713	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
725	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
733	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP NGS
762	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	SSP
792	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
1108	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	POS	SSO
1426	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	SSP RT-PCR
1466	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
1694	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
1778	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP SSO
2344	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	
2549	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
3224	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP SSO
3410	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	DEL	NT	POS	DEL	SSP
3632	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	SSP
3753	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
3798	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
3966	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
4021	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
4251	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO RT-PCR
4337	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
4985	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
5000	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	UNDEF	POS	POS	POS	POS	SSP SSO
5133	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	RT-PCR
5142	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
5282	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
5451	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
5462	POS	NEG	POS	POS	A	POS	POS	POS	POS	*002-*009	NEG	POS	DEL	POS	POS	DEL	SSP RT-PCR
5488	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	SSP SSO
8022	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	SSP
8023	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	UNDEF	FULL	POS	POS	DEL	SSP
8024	POS	NEG	POS	NT	POS	POS	NT	NT	POS	POS	NEG	POS	DEL	POS	NT	DEL	
8025	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	NT	SSP
8028	POS	NEG	POS	NT	POS	POS	POS	NT	POS	POS	NEG	POS	POS	POS	NT	NT	SSP
8030	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
8035	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
8038	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	POS	SSO
8046	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	POS	SSP

Table 5. KIR Exchange Sample: KDNA #192 (Chinese)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8047	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	UNDEF	POS	POS	POS	POS	SSP
8050	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	SSP
8053	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	SSO RT-PCR
8060	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
8069	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	SSP
8071	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
8073	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	RT-PCR
8074	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	POS	SSP SSO
8079	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
8080	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	RT-PCR
8083	POS	NEG	POS	POS	A/B*003	*001	POS	POS	POS	*002	NEG	POS	*003	POS	POS	*003	SSP
8084	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	RT-PCR
8085	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
8086	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
8088	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
8090	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP SSO
8092	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
8094	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
8097	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
8098	POS	NT	POS	POS	POS	POS	POS	POS	POS	POS	NT	POS	DEL	POS	POS	POS	
8101	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
8102	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	
8104	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	SSP
8105	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	NGS
8106	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	SSP
8110	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	RT-PCR
8113	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP

Table 6. KIR Exchange Sample: KDNA #193 (Hispanic)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[68]	POS[68]	POS[68]	POS[66]	NEG[67]	POS[68]	POS[67]	POS[66]	NEG[67]	NEG[67]	POS[68]	NEG[66]	POS[50] +FULL, DEL[18]	NEG[67]	POS[65]	POS [52] +FULL, DEL[13]	
124	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	NT	NT	
234	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	RT-PCR
278	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	
713	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
725	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
733	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP NGS
762	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
792	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
1108	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	POS	SSO
1426	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP RT-PCR
1466	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
1694	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
1778	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP SSO
2344	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	
2549	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
3224	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP SSO
3410	NT	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
3632	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
3753	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
3798	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
3966	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
4021	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
4251	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO RT-PCR
4337	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
4985	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
5000	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP SSO
5133	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	FULL, DEL	RT-PCR
5142	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
5282	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
5451	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
5462	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP RT-PCR
5488	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP SSO
8022	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
8023	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
8024	POS	POS	POS	NT	NEG	POS	NT	NT	NEG	NEG	POS	NEG	FULL, DEL	NEG	NT	FULL, DEL	
8025	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	NT	SSP
8028	POS	POS	POS	NT	NEG	POS	POS	NT	NEG	NEG	POS	NEG	POS	NEG	NT	NT	SSP
8030	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
8035	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
8038	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	POS	SSO

Table 6. KIR Exchange Sample: KDNA #193 (Hispanic)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8046	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	POS	SSP
8047	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
8050	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
8053	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO RT-PCR
8060	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
8069	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
8071	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
8073	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	FULL, DEL	RT-PCR
8074	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	POS	SSP SSO
8079	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
8080	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	RT-PCR
8083	POS	POS	POS	POS	NEG	*001	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
8084	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	RT-PCR
8085	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	
8086	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
8088	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
8090	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP SSO
8092	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
8094	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
8097	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
8098	POS	*001/ *002/ *003/ *005	POS	POS	NT	POS	POS	POS	NT	NT	POS	NT	POS	NT	POS	POS	
8101	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
8102	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	
8104	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
8105	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	NGS
8106	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
8110	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	FULL, DEL	NEG	POS	FULL, DEL	RT-PCR
8113	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP

Table 7. KIR Exchange Sample: KDNA #194 (Caucasian)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	NEG[67]	POS[68]	NEG[66]	POS[66]	POS[53] +B[15]	POS[68]	POS[67]	POS[66]	NEG[67]	POS[68]	POS[68]	NEG[67]	POS[45] +DEL[23]	POS[68]	NEG[64]	POS [48] +FULL[17]	
124	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NT	NT	
234	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	RT-PCR
278	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	
713	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSO
725	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
733	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP NGS
762	NEG	POS	NEG	POS	B	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	POS	SSP
792	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
1108	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	POS	SSO
1426	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	FULL	SSP RT-PCR
1466	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
1694	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
1778	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP SSO
2344	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	
2549	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
3224	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP SSO
3410	NEG	POS	NEG	POS	B	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	POS	SSP
3632	NEG	POS	NEG	POS	B	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
3753	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSO
3798	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
3966	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
4021	NEG	POS	NT	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
4251	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSO RT-PCR
4337	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
4985	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
5000	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP SSO
5133	NEG	POS	NEG	POS	B	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	FULL	RT-PCR
5142	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
5282	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
5451	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSO
5462	NEG	POS	NEG	POS	2DL5B	POS	POS	POS	NEG	*002-*009	POS	NEG	DEL	POS	NEG	FULL	SSP RT-PCR
5488	NEG	POS	NEG	POS	B	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	FULL	SSP SSO
8022	NEG	POS	NEG	POS	2DL5B	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
8023	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	FULL	POS	NEG	FULL	SSP
8024	NEG	POS	NEG	NT	POS	POS	NT	NT	NEG	POS	POS	NEG	DEL	POS	NT	FULL	
8025	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	NT	SSP
8028	NEG	POS	NEG	NT	POS	POS	POS	NT	NEG	POS	POS	NEG	POS	POS	NT	NT	SSP
8030	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSO
8035	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSO
8038	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	POS	SSO
8046	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	VAR	SSP

Table 7. KIR Exchange Sample: KDNA #194 (Caucasian)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8047	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
8050	NEG	POS	NEG	POS	B	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
8053	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	FULL	SSO RT-PCR
8060	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSO
8069	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
8071	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSO
8073	NEG	POS	NEG	POS	B	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	FULL	RT-PCR
8074	NEG	POS	NEG	POS	B	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	POS	SSP SSO
8079	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSO
8080	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	RT-PCR
8083	NEG	POS	NEG	*007	B	*001	POS	POS	NEG	*002	POS	NEG	*003	POS	NEG	*001	SSP
8084	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	RT-PCR
8085	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
8086	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
8088	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
8090	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP SSO
8092	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSO
8094	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSO
8097	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
8098	NT	*001/ *002/ *003/ *005	NT	POS	POS	POS	POS	POS	NT	POS	POS	NT	DEL	POS	NT	POS	
8101	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP
8102	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	
8104	NEG	POS	NEG	POS	B	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
8105	NEG	POS	NEG	POS	B	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	NGS
8106	NEG	POS	NEG	POS	B	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
8110	NEG	POS	NEG	POS	B	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	FULL	RT-PCR
8113	NEG	POS	NEG	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	POS	NEG	POS	SSP