

REPORT OF THE 40TH UCLA INTERNATIONAL KIR EXCHANGE

JULY 1, 2016

KIR 157-160

For the 40th KIR Exchange, 4 DNA samples (KDNA# 157 - 160) were shipped to 77 participating laboratories. A total of 74 laboratories submitted their KIR typing results.

The results for the 40th KIR Exchange are summarized in Table 1 and individual laboratory results reported for each DNA sample are provided in Tables 2 - 5. Subtyping results for KIR2DL2, 2DL4, 2DL5, 3DL1, 2DS1, 2DS4, and 3DP1 loci were reported by some laboratories. The subtypes for

2DS4 and 3DP1 are denoted as FULL or DEL. The positive/negative assignments for all 4 DNA samples were reported without any discrepancies for 10 of the 16 tested KIR loci (KIR2DL2, 2DL3, 2DL4, 2DL5, 3DL1, 3DL3, 2DS1, 2DS3, 2DS4, and 3DP1). Discrepant results from consensus are italicized in tables 1 - 5 and described in the summation for each sample. Discrepancies at the allele level are not italicized.

KIR Exchange Sample: KDNA # 0157:

The consensus KIR genotype for this sample from a Hispanic donor is KIR2DL2-2DL4-2DL5A-3DL1-3DL2-3DL3-3DS1-2DS1-2DS2-2DS4DEL-2DS5-3DP1FULL. A number of discrepancies (n=4) were reported for this sample. One lab reported 2DL1 and 2DP1 as positive instead of negative. One lab reported 3DL2 as negative and another reported 3DS1 as negative. The genotype in this sample is observed in Native American Chiriguano and Wichí populations, with respective frequencies of 3.7% and 4.0% (1).

KIR Exchange Sample: KDNA # 0158:

The consensus KIR genotype for this sample from an Asian donor is KIR2DL1-2DL2-2DL3-2DL4-2DL5B-3DL1-3DL2-3DL3-3DS1-2DS2-2DS3-2DS4FULL-2DP1-3DP1FULL&DEL. Several discrepancies were reported for this sample. One lab reported it as negative for 3DS1, another reported it as negative for 2DS2, and 1 reported it as positive for 2DS5. Arnold noted the haplotype in this sample is unusual as 3DS1 is present in the absence of 2DL5A and 2DS1. In addition, Hartzman and Hurley observed the sample carries a 2DL5A/3DP1 fusion gene. The genotype in this sample has been observed in Southeast Asian populations, with the highest frequencies occurring among Thai (3.4%) and Singapore Indian (2.5%) populations (2, 3, 4). It is absent in African, Native American, and Mexican populations.

KIR Exchange Sample: KDNA # 0159:

The consensus KIR genotype for this sample from a donor of mixed Hispanic and Caucasian heritage is as follows: 2DL1-2DL3-2DL4-3DL1-3DL2-3DL3-2DS4DEL-2DP1-3DP1DEL. A few (n=4) discrepancies were observed for this sample. One lab reported 3DS1 as positive instead of negative. Two labs reported 2DS2 as positive instead of negative, and 1 lab reported 2DS5 as positive instead of negative. This is one of the most common genotypes observed across all populations. In Caucasians, it's observed most frequently in Northern Irish populations (35%) (2). In Hispanics, the highest frequencies are found among Huichol (4%) and Mestizo (38%) populations (4).

KIR Exchange Sample: KDNA # 0160:

The consensus KIR genotype for this sample from a Native American donor is as follows: 2DL1-2DL2-2DL3-2DL4-2DL5A-3DL1-3DL2-3DL3-3DS1-2DS1-2DS2-2DS4DEL-2DS5-2DP1-3DP1FULL&DEL. A number (n=4) of discrepancies were reported for this sample. One lab reported it as negative for 3DL2, and another reported it as negative for 3DS1. Finally, 2 labs reported 2DS2 as negative instead of positive. The genotype in this sample is observed across all populations, with the highest frequency (38%) occurring among Native American Yucpa populations (1).

References:

1. Middleton, D. and Gonzelez, F. The extensive polymorphism of KIR genes. *Immunology* 2010;129:8–19.
2. Middleton D, Meenagh A, Moscoso J, et al. Killer immunoglobulin receptor gene and allele frequencies in Caucasoid, Oriental and Black populations from different continents. *Tissue Antigens* 2008;71:105-113.
3. Norman PJ, Carrington CV, Byng M, Maxwell LD, Curran MD, et al. Natural killer cell immunoglobulin-like receptor (KIR) locus profiles in African and South Asian populations. *Genes Immun* 2002;3:86–95.
4. Lee YC, Chan SH, Ren EC. Asian population frequencies and haplotype distribution of killer cell immunoglobulin-like receptor (KIR) genes among Chinese, Malay, and Indian in Singapore. *Immunogenetics* 2008;60:645-654.
5. Ashouri E, Farjadian S, Reed EF, et al. KIR gene content diversity in four Iranian populations. *Immunogenetics*. 2009;61:483-492.

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Table 1. Summary of the 40th KIR Exchange (KDNA #157-160)

KIR Ex.	DNA	# Reporting Labs	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
#40	157	74	NEG[73] <i>POS[1]</i>	POS[73] *001/*002/ *003/*005[1]	NEG[74]	POS[71] DEL[1] NT[2]	POS[55] A[17] A*00101[1] A*001[1]	POS[72] *001[1] *005,*018[1]	POS[72] <i>NEG[1]</i> NT[1]	POS[72] NT[2]	POS[73] <i>NEG[1]</i>	POS[72] *002[1] *002- *008[1] A*001[1]	POS[74]	NEG[74]	POS[50] DEL[23] *003[1]	POS[74]	NEG[72] <i>POS[1]</i> <i>NT[1]</i>	POS[56] FULL[15] *001[1] NT[2]
	158	74	POS[74]	POS[73] *001/*002/ *003/*005[1]	POS[74]	POS[72] NT[2]	POS[57] B[15] B*00201[1] B*002[1]	POS[72] *01502[1] *001[1]	POS[73] NT[1]	POS[72] NT[2]	POS[73] <i>NEG[1]</i>	NEG[74]	POS[73] <i>NEG[1]</i>	POS[74]	POS[49] FULL[23] *001[1] WT[1]	NEG[73] <i>POS[1]</i>	POS[73] NT[1]	POS[61] FULL, DEL[11] NT[2]
	159	74	POS[74]	NEG[74]	POS[74]	POS[72] NT[2]	NEG[74]	POS[72] *001[2]	POS[73] NT[1]	POS[72] NT[2]	NEG[73] <i>POS[1]</i>	NEG[74]	NEG[72] <i>POS[2]</i>	NEG[74]	POS[49] DEL[24] *003[1]	NEG[73] <i>POS[1]</i>	POS[73] NT[1]	POS[55] DEL[16] *003[1] NT[2]
	160	74	POS[74]	POS[73] *001/*002/ *003/*005[1]	POS[74]	POS[72] NT[2]	POS[55] A[17] A*00101[1] A*001[1]	POS[72] *001[2]	POS[72] <i>NEG[1]</i> NT[1]	POS[72] NT[2]	POS[73] <i>NEG[1]</i>	POS[72] *002[1] *002- *008[1]	POS[72] <i>NEG[2]</i>	NEG[74]	POS[49] DEL[24] *003[1]	POS[74]	POS[73] NT[1]	POS[61] FULL, DEL[11] NT[2]

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
 SSP - Sequence-specific priming-based typing
 SSOP - Sequence-specific oligonucleotide probing-based typing
 SSO - Reverse Sequence-specific oligonucleotide probing-based
 SBT - Sequencing-based typing

Table 2. KIR Exchange Sample: KDNA #157 (Hispanic)

CTR	Investigator	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	Consensus	NEG [73]	POS [74]	NEG [74]	POS [71]	POS + A [74]	POS [74]	POS [72]	POS [72]	POS [73]	POS [74]	POS [74]	NEG [74]	POS + DEL [74]	POS [74]	NEG [72]	POS + FULL [72]	
5488	Adams, Sharon	NEG	POS	NEG	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	FULL	SSP SSO
8094	Ameen, Reem	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
5462	Arnold, Paula	NEG	POS	NEG	POS	A	POS	POS	POS	POS	*002- *008	POS	NEG	DEL	POS	NEG	FULL	SSP
5133	Askar, Medhat	NEG	POS	NEG	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	FULL	SSO NGS
8073	Bengtsson, Mats	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	
713	Bettinotti, Maria	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	
8026	Bittencourt, Vanessa	NEG	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
8038	Cao, Kai	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	POS	SSO
8025	Carrington, Martin &	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	NT	SSP
1461	Cauwelier, Barbara	NEG	POS	NEG	POS	A	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
774	Cecka, J. Michael	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
3224	Chen, Dong-Feng	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
3632	Colombe, Beth W.	NEG	POS	NEG	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
189	Crowe, Deborah	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
1108	DeConinck, Martha	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	POS	
8095	denHollander, Neal	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
705	Ellis, Thomas	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
2549	Fagoaga, Omar	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
234	Fernandez, Casiana	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	RT-PCR
8053	Fernandez-Vina, Ma	NEG	POS	NEG	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	FULL	SSP SSO RT-PCR
762	Fischer, Gottfried	NEG	POS	NEG	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	POS	SSP
1778	Freed, Brian	NEG	POS	NEG	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
8047	Fuessel, Monika	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
8076	Gaitonde, Sujata	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
1647	Gautreaux, Michael	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
8022	Hedlund, Anna	NEG	POS	NEG	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
1694	Hesse, Nicole	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
4985	Hoover, Beverly	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	
5000	Hsu, Susan H.	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP SSO
2344	Hurley, Hartzman &	NEG	POS	NEG	POS	A*00101	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	POS	SSP SSO SBT
8093	Jindra, Peter	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
8074	JunHe,	NEG	POS	NEG	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	POS	SSP SSO
8035	Kanangat, Siva	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
8079	Kashi, Zahra M.	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
8086	Keming, Du	POS	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
4337	Kim, Tai-Gyu	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
8084	Kimball, Pam	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
8046	Kusnierczyk, Piotr	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	POS	SSP
8071	Kwok, Janette	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
791	Lacelle, Chantale	NEG	POS	NEG	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	FULL	SSP

Table 2. KIR Exchange Sample: KDNA #157 (Hispanic)

CTR	Investigator	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	Consensus	NEG [73]	POS [74]	NEG [74]	POS [71]	POS + A [74]	POS [74]	POS [72]	POS [72]	POS [73]	POS [74]	POS [74]	NEG [74]	POS + DEL [74]	POS [74]	NEG [72]	POS + FULL [72]	
725	Lardy, N.M.	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
278	Lee, Jar-How	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
8088	Liu, Cong	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	
8069	Maha, George	NEG	POS	NEG	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
5142	Marsh, Steven	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
8097	Meunier, Marie-Chri	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
8080	Monos, Dimitrios	NEG	POS	NEG	POS	A	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	
8092	Morris, Gerald	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
8091	Murphey, Cathi	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
733	Mytilineos, Joannis	NEG	POS	NEG	DEL	A	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
8083	Nikaein, Afzal	NEG	POS	NEG	POS	A	*001	POS	POS	POS	POS	POS	NEG	*003	POS	NEG	*001	SSP
3966	Permpikul, Vejbaes	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
4021	Pollack, Marilyn S.	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
8030	Poulton, Kay	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
8050	Raja, Rajalingam	NEG	POS	NEG	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
3753	Reed, Elaine F.	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP SSO
3798	Reinsmoen, Nancy	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP SSO
8064	Roberts, Chrissy H.	NEG	2 COPIES	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	POS	
8090	Rossi, Angela	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP SSO
8060	Rost, Klein &	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
8039	Scalf,Carolynn	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	
4251	Schiller, Jennifer	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO RT-PCR
1426	Senitzer, David	NEG	POS	NEG	POS	A*001	*005, *018	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
8085	Shalini, Pereira	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	
702	Spannagl, Michael	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP
3261	Stevens, Tait	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
3808	Thornton, Alycia	NEG	POS	NEG	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
5451	Tilanus, Marcel G.J.	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
8024	Trowsdale, John	NEG	POS	NEG	NT	POS	POS	NT	NT	POS	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
8028	Uhrberg, Markus	NEG	POS	NEG	NT	POS	POS	POS	NT	POS	POS	POS	NEG	POS	POS	NT	NT	SSP
8023	Vilches, Carlos	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	NEG	FULL	SSP
8098	Xu, Ri	NEG	*001/ *002/ *003/ *005	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSO
1466	Yu, Neng	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP SSO
5282	Yu, Neng	NEG	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NEG	POS	SSP

Table 3. KIR Exchange Sample: KDNA #158 (Asian)

CTR	Investigator	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	Consensus	POS [74]	POS [74]	POS [74]	POS [72]	POS+B [74]	POS [74]	POS [73]	POS [72]	POS [73]	NEG [74]	POS [73]	POS [74]	POS + FULL [74]	NEG [73]	POS [73]	POS + FULL, DEL [72]	
5488	Adams, Sharon	POS	POS	POS	POS	B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	POS	SSP SSO
8094	Ameen, Reem	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
5462	Arnold, Paula	POS	POS	POS	POS	B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	FULL, DEL	SSP
5133	Askar, Medhat	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	FULL, DEL	SSO NGS
8073	Bengtsson, Mats	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	
713	Bettinotti, Maria	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	
8026	Bittencourt, Vanessa	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	SSP
8038	Cao, Kai	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	POS	SSO
8025	Carrington, Martin &	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	NT	SSP
1461	Cauwelier, Barbara	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	POS	SSP
774	Cecka, J. Michael	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
3224	Chen, Dong-Feng	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
3632	Colombe, Beth W.	POS	POS	POS	POS	B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	FULL, DEL	SSP
189	Crowe, Deborah	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
1108	DeConinck, Martha	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	POS	
8095	denHollander, Neal	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	NEG	POS	POS	SSO
705	Ellis, Thomas	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
2549	Fagoaga, Omar	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
234	Fernandez, Casiana	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
8053	Fernandez-Vina, Ma	POS	POS	POS	POS	B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	POS	SSP SSO RT-PCR
762	Fischer, Gottfried	POS	POS	POS	POS	B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	POS	SSP
1778	Freed, Brian	POS	POS	POS	POS	B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	POS	SSP
8047	Fuessel, Monika	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
8076	Gaitonde, Sujata	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
1647	Gautreaux, Michael	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
8022	Hedlund, Anna	POS	POS	POS	POS	B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	FULL, DEL	SSP
1694	Hesse, Nicole	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
4985	Hoover, Beverly	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	
5000	Hsu, Susan H.	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
2344	Hurley, Hartzman &	POS	POS	POS	POS	B*00201	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	POS	SSP SSO SBT
8093	Jindra, Peter	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8074	JunHe,	POS	POS	POS	POS	B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	POS	SSP SSO
8035	Kanangat, Siva	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8079	Kashi, Zahra M.	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8086	Keming, Du	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
4337	Kim, Tai-Gyu	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
8084	Kimball, Pam	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
8046	Kusnierczyk, Piotr	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	POS	SSP
8071	Kwok, Janette	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
791	Lacelle, Chantale	POS	POS	POS	POS	B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	FULL, DEL	SSP
725	Lardy, N.M.	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP

Table 3. KIR Exchange Sample: KDNA #158 (Asian)

CTR	Investigator	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	Consensus	POS [74]	POS [74]	POS [74]	POS [72]	POS+B [74]	POS [74]	POS [73]	POS [72]	POS [73]	NEG [74]	POS [73]	POS [74]	POS + FULL [74]	NEG [73]	POS [73]	POS + FULL, DEL [72]	
278	Lee, Jar-How	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8088	Liu, Cong	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	
8069	Maha, George	POS	POS	POS	POS	B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	FULL, DEL	SSP
5142	Marsh, Steven	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
8097	Meunier, Marie-Chri	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
8080	Monos, Dimitrios	POS	POS	POS	POS	B	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	
8092	Morris, Gerald	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8091	Murphey, Cathi	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
733	Mytilineos, Joannis	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	POS	SSP
8083	Nikaein, Afzal	POS	POS	POS	POS	B	*001	POS	POS	POS	NEG	POS	POS	*001	NEG	POS	POS	SSP
3966	Permpikul, Vejbaes	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
4021	Pollack, Marilyn S.	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
8030	Poulton, Kay	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8050	Raja, Rajalingam	POS	POS	POS	POS	B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	FULL, DEL	SSP
3753	Reed, Elaine F.	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
3798	Reinsmoen, Nancy	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
8064	Roberts, Chrissy H.	POS	1 COPY	1 COPY	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	POS	
8090	Rossi, Angela	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
8060	Rost, Klein &	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8039	Scalf,Carolynn	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	
4251	Schiller, Jennifer	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO RT-PCR
1426	Senitzer, David	POS	POS	POS	POS	B*002	*01502	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	FULL, DEL	SSP
8085	Shalini, Pereira	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	
702	Spannagl, Michael	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
3261	Stevens, Tait	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
3808	Thornton, Alycia	POS	POS	POS	POS	B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	FULL, DEL	SSP
5451	Tilanus, Marcel G.J.	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8024	Trowsdale, John	POS	POS	POS	NT	POS	POS	NT	NT	POS	NEG	POS	POS	WT	NEG	POS	FULL, DEL	SSP
8028	Uhrberg, Markus	POS	POS	POS	NT	POS	POS	POS	NT	POS	NEG	POS	POS	POS	NEG	NT	NT	SSP
8023	Vilches, Carlos	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	FULL, DEL	SSP
8098	Xu, Ri	POS	*001/ *002/ *003/ *005	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
5282	Yu, Neng	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
1466	Yu, Neng	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO

Table 4. KIR Exchange Sample: KDNA #159 (Hispanic/Caucasian)

CTR	Investigator	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	Consensus	POS [74]	NEG [74]	POS [74]	POS [72]	NEG [74]	POS [74]	POS [73]	POS [72]	NEG [73]	NEG [74]	NEG [72]	NEG [74]	POS + DEL [74]	NEG [73]	POS [73]	POS + DEL [72]	
5488	Adams, Sharon	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP SSO
8094	Ameen, Reem	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
5462	Arnold, Paula	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
5133	Askar, Medhat	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSO NGS
8073	Bengtsson, Mats	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
713	Bettinotti, Maria	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
8026	Bittencourt, Vanessa	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	POS	SSP
8038	Cao, Kai	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	POS	SSO
8025	Carrington, Martin	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	NT	SSP
1461	Cauwelier, Barbara	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
774	Cecka, J. Michael	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
3224	Chen, Dong-Feng	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
3632	Colombe, Beth W.	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
189	Crowe, Deborah	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP SSO
1108	DeConinck, Martha	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	POS	
8095	denHollander, Nea	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
705	Ellis, Thomas	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
2549	Fagoaga, Omar	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
234	Fernandez, Casian	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	RT-PCR
8053	Fernandez-Vina, M	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP SSO RT-PCR
762	Fischer, Gottfried	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
1778	Freed, Brian	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
8047	Fuessel, Monika	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8076	Gaitonde, Sujata	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
1647	Gautreaux, Michael	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8022	Hedlund, Anna	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
1694	Hesse, Nicole	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
4985	Hoover, Beverly	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
5000	Hsu, Susan H.	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP SSO
2344	Hurley, Hartzman&	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	POS	SSP SSO SBT
8093	Jindra, Peter	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8074	JunHe,	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	POS	SSP SSO
8035	Kanangat, Siva	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8079	Kashi, Zahra M.	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8086	Keming, Du	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
4337	Kim, Tai-Gyu	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8084	Kimball, Pam	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8046	Kusnierczyk, Piotr	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	POS	SSP
8071	Kwok, Janette	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
791	Lacelle, Chantale	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
725	Lardy, N.M.	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP

Table 4. KIR Exchange Sample: KDNA #159 (Hispanic/Caucasian)

CTR	Investigator	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	Consensus	POS [74]	NEG [74]	POS [74]	POS [72]	NEG [74]	POS [74]	POS [73]	POS [72]	NEG [73]	NEG [74]	NEG [72]	NEG [74]	POS + DEL [74]	NEG [73]	POS [73]	POS + DEL [72]	
278	Lee, Jar-How	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8088	Liu, Cong	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
8069	Maha, George	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
5142	Marsh, Steven	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8097	Meunier, Marie-Ch	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
8080	Monos, Dimitrios	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
8092	Morris, Gerald	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8091	Murphey, Cathi	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
733	Mytilineos, Joannis	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	POS	SSP
8083	Nikaein, Afzal	POS	NEG	POS	POS	NEG	*001	POS	POS	NEG	NEG	NEG	NEG	*003	NEG	POS	*003	SSP
3966	Permpikul, Vejbaes	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
4021	Pollack, Marilyn S.	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8030	Poulton, Kay	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8050	Raja, Rajalingam	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
3753	Reed, Elaine F.	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP SSO
3798	Reinsmoen, Nancy	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP SSO
8064	Roberts, Chrissy H	POS	NEG	2 COPIES	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	POS	
8090	Rossi, Angela	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP SSO
8060	Rost, Klein &	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8039	Scalf,Carolynn	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
4251	Schiller, Jennifer	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO RT-PCR
1426	Senitzer, David	POS	NEG	POS	POS	NEG	*001	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
8085	Shalini, Pereira	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
702	Spannagl, Michael	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
3261	Stevens, Tait	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
3808	Thornton, Alycia	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
5451	Tilanus, Marcel G..	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8024	Trowsdale, John	POS	NEG	POS	NT	NEG	POS	NT	NT	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
8028	Uhrberg, Markus	POS	NEG	POS	NT	NEG	POS	POS	NT	NEG	NEG	NEG	NEG	POS	NEG	NT	NT	SSP
8023	Vilches, Carlos	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
8098	Xu, Ri	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
5282	Yu, Neng	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
1466	Yu, Neng	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP SSO

Table 5. KIR Exchange Sample: KDNA #160 (Native American)

CTR	Investigator	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	Consensus	POS [74]	POS [74]	POS [74]	POS [72]	POS + A [74]	POS [74]	POS [74]	POS [72]	POS [73]	POS [72]	POS [72]	NEG [74]	POS + DEL [74]	POS [74]	POS [73]	POS + FULL,DEL [72]	
5488	Adams, Sharon	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	POS	SSP SSO
8094	Ameen, Reem	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
5462	Arnold, Paula	POS	POS	POS	POS	A	POS	POS	POS	POS	*002- *008	POS	NEG	DEL	POS	POS	FULL, DEL	SSP
5133	Askar, Medhat	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	FULL, DEL	SSO NGS
8073	Bengtsson, Mats	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	
713	Bettinotti, Maria	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	
8026	Bittencourt, Vanes	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
8038	Cao, Kai	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	POS	SSO
8025	Carrington, Martin	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	NT	SSP
1461	Cauwelier, Barbara	POS	POS	POS	POS	A	POS	POS	POS	NEG	POS	POS	NEG	DEL	POS	POS	POS	SSP
774	Cecka, J. Michael	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
3224	Chen, Dong-Feng	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
3632	Colombe, Beth W.	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	FULL, DEL	SSP
189	Crowe, Deborah	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
1108	DeConinck, Martha	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	POS	
8095	denHollander, Nea	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
705	Ellis, Thomas	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
2549	Fagoaga, Omar	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
234	Fernandez, Casian	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	RT-PCR
8053	Fernandez-Vina, M	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	POS	SSP SSO RT-PCR
762	Fischer, Gottfried	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	POS	SSP
1778	Freed, Brian	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	POS	SSP
8047	Fuessel, Monika	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
8076	Gaitonde, Sujata	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
1647	Gautreaux, Michael	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
8022	Hedlund, Anna	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	FULL, DEL	SSP
1694	Hesse, Nicole	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
4985	Hoover, Beverly	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	
5000	Hsu, Susan H.	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP SSO
2344	Hurley, Hartzman&	POS	POS	POS	POS	A*00101	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	POS	SSP SSO SBT
8093	Jindra, Peter	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8074	JunHe,	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	POS	SSP SSO
8035	Kanangat, Siva	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8079	Kashi, Zahra M.	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8086	Keming, Du	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
4337	Kim, Tai-Gyu	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
8084	Kimball, Pam	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
8046	Kusnierczyk, Piotr	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	POS	SSP
8071	Kwok, Janette	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
791	Lacelle, Chantale	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	FULL, DEL	SSP

Table 5. KIR Exchange Sample: KDNA #160 (Native American)

CTR	Investigator	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	Consensus	POS [74]	POS [74]	POS [74]	POS [72]	POS + A [74]	POS [74]	POS [74]	POS [72]	POS [73]	POS [72]	POS [72]	NEG [74]	POS + DEL [74]	POS [74]	POS [73]	POS + FULL,DEL [72]	
725	Lardy, N.M.	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
278	Lee, Jar-How	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
8088	Liu, Cong	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	
8069	Maha, George	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	FULL, DEL	SSP
5142	Marsh, Steven	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
8097	Meunier, Marie-Ch	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
8080	Monos, Dimitrios	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	
8092	Morris, Gerald	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8091	Murphey, Cathi	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
733	Mytilineos, Joannis	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	POS	SSP
8083	Nikaein, Afzal	POS	POS	POS	POS	A	*001	POS	POS	POS	*002	POS	NEG	*003	POS	POS	POS	SSP
3966	Permpikul, Vejbae	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
4021	Pollack, Marilyn S.	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
8030	Poulton, Kay	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8050	Raja, Rajalingam	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	FULL, DEL	SSP
3753	Reed, Elaine F.	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP SSO
3798	Reinsmoen, Nancy	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP SSO
8064	Roberts, Chrissy H	POS	1 COPY	1 COPY	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	POS	
8090	Rossi, Angela	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP SSO
8060	Rost, Klein &	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8039	Scalf,Carolynn	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	
4251	Schiller, Jennifer	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO RT-PCR
1426	Senitzer, David	POS	POS	POS	POS	*001	*001	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	FULL, DEL	SSP
8085	Shalini, Pereira	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	
702	Spannagl, Michael	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
3261	Stevens, Tait	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
3808	Thornton, Alycia	POS	POS	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	FULL, DEL	SSP
5451	Tilanus, Marcel G.	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8024	Trowsdale, John	POS	POS	POS	NT	POS	POS	NT	NT	POS	POS	POS	NEG	DEL	POS	POS	FULL, DEL	SSP
8028	Uhrberg, Markus	POS	POS	POS	NT	POS	POS	POS	NT	POS	POS	POS	NEG	POS	POS	NT	NT	SSP
8023	Viiches, Carlos	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	FULL, DEL	SSP
8098	Xu, Ri	POS	*001/ *002/ *003/ *005	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
1466	Yu, Neng	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP SSO
5282	Yu, Neng	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP

Table 6. Participating Centers

Name			City	State	Country	Name			City	State	Country
Ameen	Reem	Dr	Jabriya		Kuwait	Lacelle	Chantale	Ph.D.	Dallas	TX	
Arnold	Paula	PhD	Memphis	TN		Lardy	N.M.	Dr	Amsterdam		Netherlands
Askar	Medhat	Dr	Dallas	TX		Lee	Jar-How	Dr	Woodland Hills	CA	
Bengtsson	Mats	MD	Uppsala		Sweden	Liu	Cong	PhD	Grand Rapids	MI	
Bettinotti	Maria	PhD	Baltimore	MD		Maha	George	PhD	Burlington	NC	
Bittencourt	Vanessa Zaiatz		Dublin		Ireland	Marsh	Steven	Prof	London		United Kingdom
Cao	Kai	Dr	Houston	TX		Meunier	Marie-Christine	PhD	Montreal, Quebec		Canada
Carrington	Martin &	Drs	Frederick	MD		Monos	Dimitrios	PhD	Philadelphia	PA	
Cauwelier	Barbara	Dr	Brugge		Belgium	Morris	Gerald	MD, PhD	San Diego		
Cecka	J. Michael	PhD	Honolulu	HI		Murphey	Cathi	PhD	San Antonio	TX	
Chen	Dong-Feng	PhD	Durham	NC		Mytilineos	Joannis	MD	Ulm		Germany
Colombe	Beth W.	PhD	Philadelphia	PA		Nikaein	Afzal	PhD	Dallas	TX	
Crowe	Deborah	PhD	Nashville	TN		Permpikul	Vejbaesya &	Drs	Bangkok		Thailand
DeConinck	Martha		Stamford	CT		Pollack	Marilyn S.	PhD	Oakland	CA	
denHollander	Neal	Dr	Toronto, ON		Canada	Poulton	Kay		Manchester		United Kingdom
Ellis	Thomas	Dr	Madison	WI		Raja	Rajalingam	PhD	San Francisco	CA	
Ellison	Cynthia	PhD	Winnipeg, MB		Canada	Reed	Elaine F.	PhD	Los Angeles	CA	
Fagoaga	Omar	Dr	Detroit	MI		Reinsmoen	Nancy L.	PhD	Los Angeles	CA	
Fernandez	Casiana		Miami	FL		Roberts	Chrissy H.		London		United Kingdom
Fernandez-Vina	Marcelo	Dr	Palo Alto	CA		Rossi	Angela	Dr	Piacenza		Italy
Fischer	Gottfried	Dr	Vienna		Austria	Rost	Klein &	Drs	Martinsried		Germany
Freed	Brian	PhD	Aurora	CO		Scalf	Carolynn		Minneapolis	MN	
Fuessel	Monika	PhD	Dresden		Germany	Schiller	Jennifer	PhD	Milwaukee	WI	
Gaitonde	Sujata	Dr	Chicago	IL		Senitzer	David	PhD	Duarte	CA	
Gautreaux	Michael	Dr	Winston-Salem	NC		Shalini	Pereira		Seattle	WA	
Gizzarelli	Laila		Murdoch		Australia	Shanahan	Thomas C.	PhD	Buffalo	NY	
Hedlund	Anna		Stockholm		Sweden	Spannagl	Michael	Prof	Munich		Germany
Hesse	Nicole		Lich		Germany	Stevens	Tait	Dr	Loma Linda	CA	
Hoover	Beverly		St Louis	MO		Thornton	Alycia		Brisbane QLD		Australia
Hsu	Susan H.	PhD	Philadelphia	PA		Tilanus	Marcel G.J.	Prof Dr	Maastricht		Netherlands
Hurley	Hartzman&	Drs	Rockville	MD		Trowsdale	John	Prof	Cambridge		United Kingdom
Jindra	Peter	PhD	Houston	TX		Uhrberg	Markus	Dr	Dusseldorf		Germany
JunHe			Beijing		China	Vilches	Carlos	Dr	Majadahonda		Spain
Kanangat	Siva	PhD	Chicago	IL		Xu	Ri		BDA Beijing		China
Kashi	Zahra M.	Dr	Portland	OR		Yu	Neng	Dr	Dedham	MA	
Keming	Du		Shanghai		China	Yu	Neng	Dr	Worcester	MA	
Kim	Tai-Gyu	Prof	Seoul		S. Korea						
Kimball	Pam	Dr	Richmond	VA							
Kusnierczyk	Piotr	PhD	Wroclaw		Poland						
Kwok	Janette	Dr			Hong Kong						