

REPORT OF THE 45th UCLA INTERNATIONAL KIR EXCHANGE

MAY 8, 2018

KIR 177-180

For the 45th KIR Exchange, 4 DNA samples (KDNA#177 - 180) were shipped to 74 laboratories worldwide. KIR typing results were received from 72 of the laboratories.

The results for the 45th 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 2DL5, 3DL1, 2DS1, 2DS3, 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 overall

among laboratories in the positive/negative assignments for all 4 DNA samples, as 7 tested KIR loci (KIR2DL2, 2DL5, 3DL1, 3DS1, 2DS1, 2DS3, and 2DS5) were reported without discrepancy. 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.

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

KIR Exchange Sample: KDNA # 177:

The consensus KIR type for this sample from a Hispanic donor is KIR2DL1-2DL3-2DL4-3DL1-3DL2-3DL3-2DS4FULL/DEL-2DP1-3DP1DEL. Two labs accounted for the discrepancies reported for this sample. One lab reported 2DL1, 3DL2, 2DP1, and 3DP1 as negative, and the other reported 2DL4, 3DL3, and 2DS4 as negative instead of positive. Predicted haplotypes were reported as cA01/cA01 and tA01/tA01 (AA/AA). The genotype of this sample is observed commonly across all populations.

KIR Exchange Sample: KDNA # 178:

The consensus KIR type for this sample from a Hispanic donor is KIR2DL1-2DL3-2DL4-2DL5A-3DL2-3DL3-3DS1-2DS1-2DS5-2DP1-3DP1FULL/DEL. No discrepancies were reported for this sample. Predicted haplotypes were reported as cA01/cA01 and tB01/tB01 (AA/BB). Vilches noted this sample's "profile is consistent with presence of the recombinant allele 3DP1*004 and duplication of the 3DP1-2DL4-3DS1 group (Gómez-Lozano Eur J Immunol. 2005 and Martin J Immunol. 2003). Accordingly, the sample would have three copies of each of those genes (two in one haplotype, one in the other)"(1, 2). Bottino reported similar observations: "GCNV analysis revealed that this donor has: 2 copies of 2DL1, 2DL5, and 2DS1 and 3 copies of 3DP1, 2DL4, and 3DS1. These results suggested the presence of an expanded haplotype carrying the duplication of 3DP1-2DL4-3DS1 block." The genotype present in this sample is observed among the Native American Bari (10%), Hispanics (3.1%), and the Kanikar (5.5%) (3).

KIR Exchange Sample: KDNA # 179:

The consensus KIR type for this sample from a Black donor is KIR2DL1-2DL2-2DL4-2DL5B-3DL1-3DL2-3DL3-2DS2-2DS3-2DS4FULL-2DS5-2DP1-3DP1DEL. Only 2 discrepancies were reported for this sample, as 1 lab reported 2DL3 as positive and the other reported 2DS2 as negative. Predicted haplotypes were reported as cB01/cB01 and tA01/tA01 (BB/AA). The genotype in this sample is exclusively observed in African American (3.5%) and Afro-Caribbean (1.7%) populations (4, 5).

KIR Exchange Sample: KDNA # 180:

The consensus KIR type for this sample from a donor of Filipino descent is KIR2DL1-2DL3-2DL4-2DL5A-3DL2-3DL3-3DS1-2DS1-2DS3-2DP1-3DP1DEL. No discrepancies were reported for this sample. Predicted haplotypes were reported as cA01/cA01 and tB01/tB01 (AA/BB). The genotype present in this sample is observed among Cook Islanders (2%), Han Chinese (1.9%), Singapore Chinese (0.5%), and Persians (0.4%) (3, 4, 6).

References:

1. Gómez-Lozano N, Estafania E, Williams F, et al. The silent KIR3DP1 gene (CD158c) is transcribed and might encode a secreted receptor in a minority of humans, in whom the KIR3DP1, KIR2DL4 and KIR3DL1/KIR3DS1 genes are duplicated. *Eur. J. Immunol.* 2005;35:16-24.
2. Martin MP, Bashirova A, Traherne J, et al. Cutting Edge: Expansion of the *KIR* locus by Unequal Crossing Over. *J. Immunol.* 2003;171:2192–2195.
3. Ashouri E, Farjadian S, Reed EF, et al. KIR gene content diversity in four Iranian populations. *Immunogenetics.* 2009;61:483-492.
4. 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.
5. Cook MA, Moss PA, Briggs DC. The distribution of 13 killer-cell immunoglobulin-like receptor loci in UK blood donors from three ethnic groups. *Eur J Immunogenet.* 2003;30:213-221.
6. Velickovic M, Velickovic Z, Dunckley H. Diversity of killer cell immunoglobulin-like receptor genes in Pacific Islands populations. *Immunogenetics.* 2006;58:523-532.

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Table 1. Summary of the 45th KIR Exchange (KDNA #177-180)

KIR Ex.	DNA	# Labs	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
#45	177	72	POS[71] <i>NEG[1]</i>	NEG[72]	POS[72]	POS[69] <i>NEG[1]</i> NT[2]	NEG[72]	POS[70] <i>*01502,</i> <i>*005[1]</i> <i>*001[1]</i>	POS[70] <i>NEG[1]</i> NT[1]	POS[69] <i>NEG[1]</i> NT[2]	NEG[72]	NEG[72]	NEG[72]	NEG[72]	POS[53] FULL, DEL[18] <i>NEG[1]</i>	NEG[72]	POS[70] <i>NEG[1]</i> NT[1]	POS[48] DEL[20] <i>NEG[2]</i> NT[2]
	178	72	POS[72]	NEG[72]	POS[72]	POS[70] NT[2]	POS[55] A[16] <i>*001,</i> <i>*001/*008/*</i> <i>013/*014/*0</i> <i>15[1]</i>	NEG[72]	POS[71] NT[1]	POS[70] NT[2]	POS[72]	POS[70] <i>*002[1]</i> <i>*002-</i> <i>*008[1]</i>	NEG[72]	NEG[72]	NEG[72]	POS[72]	POS[71] NT[1]	POS[56] FULL, DEL[13] <i>*003[1]</i> NT[2]
	179	72	POS[72]	POS[72]	NEG[71] <i>POS[1]</i>	POS[70] NT[2]	POS[56] B[15] B*002, <i>*006[1]</i>	POS[70] <i>*01501,</i> <i>*01502[1]</i> <i>001[1]</i>	POS[71] NT[1]	POS[70] NT[2]	NEG[72]	NEG[72]	POS[71] <i>NEG[1]</i>	POS[72]	POS[49] FULL[21] WT[1] <i>*001[1]</i>	POS[72]	POS[71] NT[1]	POS[50] DEL[19] <i>*003[1]</i> NT[2]
	180	72	POS[72]	NEG[72]	POS[72]	POS[70] NT[2]	POS[55] A[16] A*005, <i>*005/*009/*</i> <i>016[1]</i>	NEG[72]	POS[71] NT[1]	POS[70] NT[2]	POS[72]	POS[70] <i>*002-</i> <i>*008[1]</i> <i>*002[1]</i>	NEG[72]	POS[71] <i>*001-*004/</i> <i>*006-</i> <i>*007[1]</i>	NEG[72]	NEG[72]	POS[71] NT[1]	POS[50] DEL[19] <i>*003[1]</i> 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
 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 #177 (Hispanic)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[71]	NEG[72]	POS[72]	POS[69]	NEG[72]	POS[72]	POS[70]	POS[69]	NEG[72]	NEG[72]	NEG[72]	NEG[72]	POS[53]+ FULL, DEL[18]	NEG[72]	POS[70]	POS[48]+ DEL[20]	
189	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
234	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	RT-PCR
278	POS	NEG	POS	NEG	NEG	POS	POS	NEG	NEG	NEG	NEG	NEG	NEG	NEG	POS	NEG	
705	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
713	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
725	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
733	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP NGS
762	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	DEL	SSP
1108	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	POS	SSO
1426	POS	NEG	POS	POS	NEG	*01502, *005	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	DEL	SSO RT-PCR
1461	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
1466	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
1647	NEG	NEG	POS	POS	NEG	POS	NEG	POS	NEG	NEG	NEG	NEG	POS	NEG	NEG	NEG	RT-PCR
1694	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
1778	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	DEL	SSP
2344	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
2549	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
3224	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP SSO
3410	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	DEL	SSP
3632	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	DEL	SSP
3753	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP SSO
3798	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
3808	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	DEL	
3966	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
4021	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
4251	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
4337	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
4985	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
5000	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP SSO
5133	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	DEL	RT-PCR
5142	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
5282	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
5451	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO

Table 2. KIR Exchange Sample: KDNA #177 (Hispanic)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
5462	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	DEL	SSP RT-PCR
5488	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	DEL	SSP SSO
8022	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	DEL	SSP
8023	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	DEL	SSP
8024	POS	NEG	POS	NT	NEG	POS	NT	NT	NEG	NEG	NEG	NEG	WT, DEL	NEG	POS	DEL	SSP
8025	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	NT	SSP
8028	POS	NEG	POS	NT	NEG	POS	POS	NT	NEG	NEG	NEG	NEG	POS	NEG	NT	NT	SSP
8030	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8035	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8038	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	POS	SSO
8046	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	POS	SSP
8047	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8050	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	DEL	SSP
8053	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	DEL	SSO RT-PCR
8060	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8069	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	DEL	SSP
8071	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8073	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	DEL	RT-PCR
8074	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	POS	SSP SSO
8076	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8079	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
8080	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8083	POS	NEG	POS	POS	NEG	*001	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	*003	SSP
8084	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	RT-PCR
8085	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	NGS
8086	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8088	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
8090	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP SSO
8091	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8092	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8094	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8095	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8097	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP

Table 2. KIR Exchange Sample: KDNA #177 (Hispanic)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8098	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
8101	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	DEL	SSP
8102	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8104	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	DEL	SSP
8105	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	NGS
8106	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	DEL	

Table 3. KIR Exchange Sample: KDNA #178 (Hispanic)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[72]	NEG[72]	POS[72]	POS[70]	POS[56]+ A[16]	NEG[72]	POS[71]	POS[70]	POS[72]	POS[72]	NEG[72]	NEG[72]	NEG[72]	POS[72]	POS[71]	POS[57]+ FULL, DEL[13]	
189	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	
234	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	RT-PCR
278	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	
705	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
713	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
725	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
733	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP NGS
762	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
1108	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
1426	POS	NEG	POS	POS	*001, *001/ *008/ *013/ *014/ *015	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	FULL, DEL	SSO RT-PCR
1461	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
1466	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
1647	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	RT-PCR
1694	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
1778	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
2344	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
2549	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
3224	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP SSO
3410	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
3632	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	FULL, DEL	SSP
3753	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP SSO
3798	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
3808	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	FULL, DEL	
3966	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
4021	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
4251	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
4337	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
4985	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
5000	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP SSO
5133	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	FULL, DEL	RT-PCR
5142	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
5282	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
5451	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO

Table 3. KIR Exchange Sample: KDNA #178 (Hispanic)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
5462	POS	NEG	POS	POS	A	NEG	POS	POS	POS	*002- *008	NEG	NEG	NEG	POS	POS	FULL, DEL	SSP RT-PCR
5488	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP SSO
8022	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	FULL, DEL	SSP
8023	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	FULL, DEL	SSP
8024	POS	NEG	POS	NT	POS	NEG	NT	NT	POS	POS	NEG	NEG	NEG	POS	POS	FULL, DEL	SSP
8025	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	NT	SSP
8028	POS	NEG	POS	NT	POS	NEG	POS	NT	POS	POS	NEG	NEG	NEG	POS	NT	NT	SSP
8030	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
8035	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
8038	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
8046	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
8047	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
8050	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	FULL, DEL	SSP
8053	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO RT-PCR
8060	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
8069	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	FULL, DEL	SSP
8071	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
8073	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	FULL, DEL	RT-PCR
8074	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP SSO
8076	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
8079	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	
8080	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
8083	POS	NEG	POS	POS	A	NEG	POS	POS	POS	*002	NEG	NEG	NEG	POS	POS	*003	SSP
8084	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	RT-PCR
8085	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	NGS
8086	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
8088	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	
8090	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP SSO
8091	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
8092	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
8094	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
8095	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSO
8097	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
8098	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	
8101	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
8102	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	SSP
8104	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	FULL, DEL	SSP

Table 3. KIR Exchange Sample: KDNA #178 (Hispanic)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8105	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	NGS
8106	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	FULL, DEL	

Table 4. KIR Exchange Sample: KDNA #179 (Black)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[72]	POS[72]	NEG[71]	POS[70]	POS[56] B[16]	POS[72]	POS[71]	POS[70]	NEG[72]	NEG[72]	POS[71]	POS[72]	POS[48]+ FULL[23]	POS[72]	POS[71]	POS[50]+ DEL[20]	
189	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	
234	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	RT-PCR
278	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	POS	POS	
705	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSO
713	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSO
725	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
733	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP NGS
762	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	SSP
1108	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	POS	SSO
1426	POS	POS	NEG	POS	*002, *006	*01501, *01502	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	SSO RT-PCR
1461	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSO
1466	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
1647	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	RT-PCR
1694	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
1778	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	SSP
2344	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSO
2549	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
3224	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP SSO
3410	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	SSP
3632	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	SSP
3753	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP SSO
3798	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
3808	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	
3966	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
4021	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
4251	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSO
4337	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
4985	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
5000	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP SSO
5133	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	RT-PCR
5142	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
5282	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
5451	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSO
5462	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	SSP RT-PCR
5488	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	SSP SSO
8022	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	SSP
8023	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	DEL	SSP
8024	POS	POS	NEG	NT	POS	POS	NT	NT	NEG	NEG	POS	POS	WT	POS	POS	DEL	SSP
8025	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	NT	SSP
8028	POS	POS	NEG	NT	POS	POS	POS	NT	NEG	NEG	POS	POS	POS	POS	NT	NT	SSP
8030	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSO

Table 4. KIR Exchange Sample: KDNA #179 (Black)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8035	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSO
8038	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	POS	SSO
8046	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	POS	SSP
8047	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
8050	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	SSP
8053	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	SSO RT-PCR
8060	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSO
8069	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	SSP
8071	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSO
8073	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	RT-PCR
8074	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	POS	SSP SSO
8076	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
8079	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	
8080	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
8083	POS	POS	NEG	POS	POS	*001	POS	POS	NEG	NEG	POS	POS	*001	POS	POS	*003	SSP
8084	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	RT-PCR
8085	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	NGS
8086	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
8088	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	
8090	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP SSO
8091	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
8092	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSO
8094	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSO
8095	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSO
8097	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
8098	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	
8101	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	SSP
8102	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	SSP
8104	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	SSP
8105	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	POS	POS	NGS
8106	POS	POS	NEG	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	POS	POS	DEL	

Table 5. KIR Exchange Sample: KDNA #180 (Filipino)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[72]	NEG[72]	POS[72]	POS[70]	POS[55]+ A[17]	NEG[72]	POS[71]	POS[70]	POS[72]	POS[72]	NEG[72]	POS[72]	NEG[72]	NEG[72]	POS[71]	POS[50] DEL[20] NT[2]	
189	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	
234	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	RT-PCR
278	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	
705	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
713	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
725	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
733	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP NGS
762	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	SSP
1108	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
1426	POS	NEG	POS	POS	*005, *005/ *009/ *016	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	SSO RT-PCR
1461	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
1466	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
1647	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	RT-PCR
1694	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
1778	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	SSP
2344	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
2549	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
3224	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP SSO
3410	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	SSP
3632	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	SSP
3753	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP SSO
3798	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
3808	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	
3966	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
4021	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
4251	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
4337	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
4985	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
5000	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP SSO
5133	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	RT-PCR
5142	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
5282	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
5451	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
5462	POS	NEG	POS	POS	A	NEG	POS	POS	POS	*002-*008	NEG	POS	NEG	NEG	POS	DEL	SSP RT-PCR
5488	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	SSP SSO
8022	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	SSP
8023	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	SSP
8024	POS	NEG	POS	NT	POS	NEG	NT	NT	POS	POS	NEG	POS	NEG	NEG	POS	DEL	SSP
8025	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	NT	SSP
8028	POS	NEG	POS	NT	POS	NEG	POS	NT	POS	POS	NEG	POS	NEG	NEG	NT	NT	SSP

Table 5. KIR Exchange Sample: KDNA #180 (Filipino)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8030	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
8035	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
8038	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
8046	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
8047	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
8050	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	SSP
8053	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	SSO RT-PCR
8060	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
8069	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	SSP
8071	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
8073	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	RT-PCR
8074	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP SSO
8076	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
8079	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	
8080	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
8083	POS	NEG	POS	POS	A	NEG	POS	POS	POS	*002	NEG	POS	NEG	NEG	POS	*003	SSP
8084	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	RT-PCR
8085	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	NGS
8086	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
8088	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	
8090	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP SSO
8091	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
8092	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
8094	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
8095	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSO
8097	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
8098	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	
8101	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	*001- *004/ *006-*007	NEG	NEG	POS	DEL	SSP
8102	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	SSP
8104	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	SSP
8105	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	POS	NGS
8106	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	NEG	POS	DEL	

Table 6. Participating Centers

Name			City	State	Country	Name			City	State	Country
Ameen	Reem	Dr	Jabriya		Kuwait	Kim	Tai-Gyu	Prof	Seoul		S. Korea
Arnold	Paula	PhD	Memphis	TN		Kimball	Pam	Dr	Richmond	VA	
Askar	Medhat	Dr	Dallas	TX		Kusnierczyk	Piotr	PhD	Wroclaw		Poland
Bengtsson	Mats	MD	Uppsala		Sweden	Kwok	Janette	Dr			Hong Kong
Bettinotti	Maria	PhD	Baltimore	MD		Lardy	N.M.	Dr	Amsterdam		Netherlands
Bittencourt	Vanessa Zaiatz		Dublin		Ireland	Lee	Jar-How	Dr	Woodland Hills	CA	
Cao	Kai	Dr	Houston	TX		Liu	Chang	MD, PhD	St Louis	MO	
Carrington	Martin &	Drs	Frederick	MD		Liu	Cong	PhD	Grand Rapids	MI	
Cauwelier	Barbara	Dr	Brugge		Belgium	Maha	George	PhD	Burlington	NC	
Cecka	J. Michael	PhD	Honolulu	HI		Marsh	Steven	Prof	London		United Kingdom
Chen	Dong-Feng	PhD	Durham	NC		Meunier	Marie-Christine	PhD	Montreal, Quebec		Canada
Colombe	Beth W.	PhD	Philadelphia	PA		Monos	Dimitrios	PhD	Philadelphia	PA	
Crowe	Deborah	PhD	Nashville	TN		Morris	Gerald	MD, PhD	San Diego		
denHollander	Neal	Dr	Toronto, ON		Canada	Murphey	Cathi	PhD	San Antonio	TX	
D'Orsogna	Lloyd	Dr	Murdoch		Australia	Mytilineos	Joannis	MD	Ulm		Germany
Du	Keming		Shanghai		China	Nikaein	Afzal	PhD	Dallas	TX	
Ellis	Thomas	Dr	Madison	WI		Permpikul	Vejbasesya &	Drs	Bangkok		Thailand
Ellison	Cynthia	PhD	Winnipeg, MB		Canada	Pollack	Marilyn S.	PhD	Oakland	CA	
Fagoaga	Omar	Dr	Detroit	MI		Poulton	Kay	Dr	Manchester		United Kingdom
Fernandez	Casiana		Miami	FL		Raja	Rajalingam	PhD	San Francisco	CA	
Fernandez-Vina	Marcelo	Dr	Palo Alto	CA		Reed	Elaine F.	PhD	Los Angeles	CA	
Fischer	Gottfried	Dr	Vienna		Austria	Reinsmoen	Nancy L.	PhD	Los Angeles	CA	
Freed	Brian	PhD	Aurora	CO		Roberts	Chrissy H.		London		United Kingdom
Fuessel	Monika	PhD	Dresden		Germany	Rombola	Giovanni	Dr	Firenze		Italy
Gaitonde	Sujata	Dr	Chicago	IL		Rossi	Angela	Dr	Piacenza		Italy
Gautreaux	Michael	Dr	Winston-Salem	NC		Rost	Klein &	Drs	Martinsried		Germany
Glaser	Chris		Waukesha	WI		Schiller	Jennifer	PhD	Milwaukee	WI	
Graff	Ralph J	Dr	St Louis	MO		Seidl	Christian	Prof Dr	Frankfurt		Germany
Hedlund	Anna		Stockholm		Sweden	Senitzer	David	PhD	Duarte	CA	
Hesse	Nicole		Lich		Germany	Shalini	Pereira		Seattle	WA	
Hogan	patrick	Dr	Brisbane QLD		Australia	Stevens	Tait	Dr	Loma Linda	CA	
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	
Khuu	Hanh	Dr	Bethesda	MD		Yu	Neng	Dr	Worcester	MA	