

# REPORT OF THE 29TH UCLA INTERNATIONAL KIR EXCHANGE

DECEMBER 3, 2012

KIR 113-116

Dear Colleagues:

For the 29th KIR Exchange, 4 DNA samples (KDNA#113-116) were shipped to each laboratory on August 1, 2012. Sixty-one laboratories submitted their KIR typing results. The majority of the laboratories used either commercial or in-house developed sequence-specific primer (SSP) based PCR and sequence-specific oligonucleotide probe (SSOP) typing systems.

The results for the 29th 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, 2DL5, 3DL1, 3DS1, 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 discrepancy for 14 of the 16 tested KIR loci (KIR2DL1, 2DL2, 2DL3, 2DL4, 2DL5, 3DL1, 3DL2, 3DL3, 3DS1, 2DS2, 2DS3, 2DS4, 2DP1 and 3DP1). Discrepant results from the consensus typing are italicized in tables 1-5, and described in the summation for each sample. Discrepancies at the allele level are not italicized. Participants are encouraged to resolve the discrepancies so that the information can be shared to develop reliable KIR typing systems.

We thank you for your continued participation in the UCLA KIR Exchange program.

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## **KIR Exchange Sample: KDNA #0113:**

The consensus KIR type for this Hispanic sample is: 2DL1-2DL2-2DL3-2DL4-3DL1-3DL2-3DL3-2DS4FULL-2DP1-3DP1. This sample was previously typed as KDNA#030 (2005). In the 2005 study, discrepancies were reported for 2DL1, 2DL2, 3DL1, 3DS1, 2DS3, and 2DS4. There were no discrepancies reported in this present study. This genotype is observed most often in populations of Southeast Asia, with the highest frequency (7.5%) occurring among the Malay populations in Singapore (1).

## **KIR Exchange Sample: KDNA #0114:**

The consensus KIR type for this Caucasian sample is: 2DL1-2DL3-2DL4-3DL1-3DL2-3DL3-3DS1-2DS4FULL&DEL-2DP1-3DP1. There were no discrepancies reported for this sample. This KIR genotype is observed across most ethnic populations. Vilches indicated that this DNA carries a 3DP1\*004-associated haplotype with possible gene duplications (2). Hartzman and Hurley observed that KDNA#114 carries a duplicate 2DL5A/3DP1 fusion gene, "which was detected by an additional 2DL5A/3DP1-FG SSP (SBT confirmed as 3DP1\*004 and 2DL4 copy number assay confirmed 3 copies)." This genotype has been observed highest among Singapore Chinese and French

Caucasians, with frequencies of 8% and 6.0%, respectively (1, 3). It has not been found in Mexican populations.

## **KIR Exchange Sample: KDNA #0115:**

The ethnic origin of KDNA#115 is unknown. The consensus KIR type for this sample is: 2DL1-2DL3-2DL4-2DL5A-3DL1-3DL2-3DL3-3DS1-2DS1-2DS4DEL-2DS5-2DP1-3DP1DEL. One laboratory reported this sample as negative for 2DS1. This genotype is found in all populations. It is observed most often in Native American and Mexican populations, with the highest frequencies occurring among the Native American Bari, 26%, and the Tarahumaras, 42%, in Mexico (4,5).

## **KIR Exchange Sample: KDNA #0116:**

This sample originated from a Black donor. The consensus KIR type is: 2DL1-2DL3-2DL4-3DL1-3DL2-3DL3-2DS4DEL-2DP1-3DP1DEL. There was only 1 discrepancy for this sample, in which a laboratory reported 2DS5 as positive. This KIR genotype occurs in all populations tested so far, with the highest frequencies observed among Chinese, Japanese, and Koreans (6).

## References

1. Lee YC, Chan SH, and 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.
2. Gomez-Lozano N, Estefanie E, Williams F, et al. The silent KIR3DP1 (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. *European Journal of Immunology* 2005;35:16-24.
3. Guinan KJ, Cunningham RT, Meenagh A, et al. Receptor systems controlling natural killer cell function are genetically stratified in Europe. *Genes & Immunity* 2010;11:67-78.
4. Gutierrez-Rodriguez ME, Sandoval-Ramirez L, Diaz-Flores M, et al. KIR gene in ethnic and Mestizo populations from Mexico. *Human Immunology* 2006;67:85-93.
5. Gendzekhadze K, Norman PJ, Abi-Rached L, et al. High KIR diversity in Amerindians is maintained using few gene-content haplotypes. *Immunogenetics* 2006;58:474-480.
6. Yawata M, Yawata N, Abi-Rached L, and Parham P. Variation within the human killer cell immunoglobulin-like receptor (KIR) gene family. *Crit Rev Immunol* 2002;22:463-482.

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**Table 1. Summary of the 29th KIR Exchange (KDNA#113-116)**

KIR Ex.	DNA	# reporting labs	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
#29	#0113	61	POS	POS <i>*001- *003/ *005 [1]</i>	POS	POS NT [2]	NEG	POS <i>*1501 [1]</i>	POS NT [1]	POS NT [2]	NEG	NEG	NEG	NEG	POS FULL [29] <i>*001, - [1] *001 [1]</i>	NEG	POS NT [2]	POS FULL, DEL [12] FULL [1] NT [4]
	#0114	61	POS	NEG	POS	POS NT [2]	NEG	POS <i>*001, *1502 [1]</i>	POS NT [1]	POS NT [2]	POS <i>*01301 [1]</i>	NEG	NEG	NEG	POS FULL, DEL [23] <i>*001, DEL [1]</i>	NEG	POS NT [3]	POS FULL, DEL [12] FULL [1] NT [4]
	#0115	61	POS	NEG	POS	POS NT [2]	POS A [21] A*00101[1] A*00101-01202 [1]	POS <i>*005 [1]</i>	POS NT [1]	POS NT [2]	POS <i>*01301 [1]</i>	POS <i>*002-*008 [1] *0020101- *008 [1] NEG [1]</i>	NEG	NEG	POS DEL [31]	POS	POS NT [3]	POS DEL [18] <i>*003, - [1] *003 [1] FULL, DEL [1] NT [4]</i>
	#0116	61	POS	NEG	POS	POS NT [2]	NEG	POS <i>*001, *005 [1]</i>	POS NT [1]	POS NT [2]	NEG	NEG	NEG	NEG	POS DEL [31]	NEG <i>POS [1]</i>	POS NT [3]	POS DEL [18] <i>*003, - [1] *003 [1] FULL, DEL [1] NT [4]</i>

**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

**KEY for Tables 2-5**

*italics* - assignment different from consensus  
 SSP - Sequence-specific priming-based typing  
 SSOP - Sequence-specific oligonucleotide probing-based typing  
 RSSOP - Reverse Sequence-specific oligonucleotide probing-based typing  
 SBT - Sequencing-based typing

**Table 1. Summary of the 29th KIR Exchange (KDNA#113-116)**

KIR Ex.	DNA	# reporting labs	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
#29	#0113	61	POS	POS <i>*001- *003/ *005 [1]</i>	POS	POS NT [2]	NEG	POS <i>*1501 [1]</i>	POS NT [1]	POS NT [2]	NEG	NEG	NEG	NEG	POS FULL [29] <i>*001, - [1] *001 [1]</i>	NEG	POS NT [2]	POS FULL, DEL [12] FULL [1] NT [4]
	#0114	61	POS	NEG	POS	POS NT [2]	NEG	POS <i>*001, *1502 [1]</i>	POS NT [1]	POS NT [2]	POS <i>*01301 [1]</i>	NEG	NEG	NEG	POS FULL, DEL [23] <i>*001, DEL [1]</i>	NEG	POS NT [3]	POS FULL, DEL [12] FULL [1] NT [4]
	#0115	61	POS	NEG	POS	POS NT [2]	POS A [21] A*00101[1] A*00101-01202 [1]	POS <i>*005 [1]</i>	POS NT [1]	POS NT [2]	POS <i>*01301 [1]</i>	POS <i>*002-*008 [1] *0020101- *008 [1] NEG [1]</i>	NEG	NEG	POS DEL [31]	POS	POS NT [3]	POS DEL [18] <i>*003, - [1] *003 [1] FULL, DEL [1] NT [4]</i>
	#0116	61	POS	NEG	POS	POS NT [2]	NEG	POS <i>*001, *005 [1]</i>	POS NT [1]	POS NT [2]	NEG	NEG	NEG	NEG	POS DEL [31]	NEG <i>POS [1]</i>	POS NT [3]	POS DEL [18] <i>*003, - [1] *003 [1] FULL, DEL [1] NT [4]</i>

**KEY for Table 1**

[ ] - number of labs reporting allele assignment/POS/NEG/NT  
 POS - Presence of gene  
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**KEY for Tables 2-5**

*italics* - assignment different from consensus  
 SSP - Sequence-specific priming-based typing  
 SSOP - Sequence-specific oligonucleotide probing-based typing  
 RSSOP - Reverse Sequence-specific oligonucleotide probing-based typing  
 SBT - Sequencing-based typing

**Table 2. KIR Exchange Sample: KDNA #113 (Hispanic)**

CTR	Investigator Name	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	METHOD
5488	Adams,Sharon	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	SSP
234	Amador,Alexandra	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
16	Askar,Medhat	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	FULL, DEL	SSOP,SSP
8038	Cao,Kai	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	SSOP
8025	Carrington&Marti	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	NT	SSP
3224	Chen,Dong-Feng	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP,SSOP
1108	Clark,Traci	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	SSOP
3632	Colombe,Beth	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	FULL, DEL	SSP
8050	Cook,Daniel J.	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	SSP
189	Crowe,Deborah	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP,SSOP
8039	Davidson,Maureen	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
8031	Dinauer,David	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	FULL, DEL	SSP
705	Ellis,Thomas	POS	*001-*	*003/	*005	POS	POS	NEG	POS	POS	POS	POS	POS	*001	NEG	POS	POS	SSOP
8051	Endres,Robert	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	FULL, DEL	SSP
2549	Fagoaga,Omar	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	SSP
762	Fischer&Mayr	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	FULL	SSP
8047	Fuessel,Monika	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8026	Gardiner,Clair M.	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8040	Gladman/Pellet/P	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
4985	Graff,Ralph J.	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8022	Hedlund, Anna	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
1694	Hesse&Kissel	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
1461	Hidajat,M.	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	SSP
3808	Hogan,Patrick	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	FULL, DEL	SSP
5000	Hsu,Susan H.	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP,SSP
2344	Hurley&Hartzman	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	SSP, SSOP, SBT-2DL5
3261	Iwaki,Yui	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8076	Jaramillo&Gaitonde	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	SSP,SSOP
8035	Kanangat,Siva	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
8079	Kashi,Zahra	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP,SSOP
4337	Kim,Tai-Gyu	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8046	Kusnierczyk,Piot	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	NT	NT	MULTIPLEX SSP, SSP
8071	Kwok,Janette	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
791	Lacelle,Chantale	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	SSP
278	Lee,Jar-How	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
8069	Maha,George	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	FULL, DEL	SSP
8067	Marino,Susan R.	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP,SSOP
5142	Marsh,Steven	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	*001, -	NEG	POS	FULL, *003	SSP
8073	Mats,Bengtsson	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
733	Mytilineos,Joanni	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
3966	Permpikul&Vejba	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8030	Poulton,Kay V.	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
3753	Reed&Rajalingam	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP,SSP
8060	Rost&Klein	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
4251	Schiller,Jennifer	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
3410	Schroeder,M.L.	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	SSP

**Table 2. KIR Exchange Sample: KDNA #113 (Hispanic)**

CTR	Investigator Name	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	METHOD
1426	Senitzer,David	POS	POS	POS	POS	NEG	*1501	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	MULTIPLEX-SSP
8077	Shanahan,Thomas	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	FULL, DEL	SSP
769	Tavoularis,Sofia	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	SSOP,SSP
5451	Tilanus,Marcel	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
4021	Trachtenberg,Eliz	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8024	Trowsdale,John	POS	POS	POS	NT	NEG	POS	NT	NT	NEG	NEG	NEG	NEG	FULL	NEG	POS	FULL, DEL	SSP
5462	Turner,E.V.	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	SSP
8053	Tyan,Dolly	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	FULL, *003	SSP,SSOP
8028	Uhrberg,Markus	POS	POS	POS	NT	NEG	POS	POS	NT	NEG	NEG	NEG	NEG	POS	NEG	NT	NT	SSP
3775	Vidan-Jeras,Blan	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8023	Vilches,Carlos	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	FULL, DEL	SSP
124	Witt,Campbell	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	NT	NT	MULTIPLEX SSP
1466	Yu,Neng	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
5282	Yu,Neng	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	FULL, DEL	SSP
713	Zachary,Andrea	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL	NEG	POS	POS	SSP

**Table 3. KIR Exchange Sample: KDNA #114 (Caucasian)**

CTR	Investigator Name	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	METHOD
5488	Adams, Sharon	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
234	Amador, Alexandra	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
16	Askar, Medhat	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSOP, SSP
8038	Cao, Kai	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	POS	SSOP
8025	Carrington&Marti	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	NT	SSP
3224	Chen, Dong-Feng	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP, SSOP
1108	Clark, Traci	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	POS	SSOP
3632	Colombe, Beth	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
8050	Cook, Daniel J.	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
189	Crowe, Deborah	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP, SSOP
8039	Davidson, Maureen	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
8031	Dinauer, David	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
705	Ellis, Thomas	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
8051	Endres, Robert	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
2549	Fagoaga, Omar	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	POS	SSP
762	Fischer&Mayr	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	FULL	SSP
8047	Fuessel, Monika	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8026	Gardiner, Clair M.	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8040	Gladman/Pellett/P	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
4985	Graff, Ralph J.	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8022	Hedlund, Anna	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
1694	Hesse&Kissel	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
1461	Hidajat, M.	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
3808	Hogan, Patrick	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
5000	Hsu, Susan H.	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP, SSP
2344	Hurley&Hartzman	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	POS	SSP, SSOP, SBT-2DL5
3261	Iwaki, Yui	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8076	Jaramillo&Gaitonde	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	POS	SSP, SSOP
8035	Kanangat, Siva	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
8079	Kashi, Zahra	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP, SSOP
4337	Kim, Tai-Gyu	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8046	Kusnierczyk, Piot	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	NT	NT	MULTIPLEX SSP, SSP
8071	Kwok, Janette	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
791	Lacelle, Chantale	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
278	Lee, Jar-How	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
8069	Maha, George	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
8067	Marino, Susan R.	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP, SSOP
5142	Marsh, Steven	POS	NEG	POS	POS	NEG	POS	POS	POS	*01301	NEG	NEG	NEG	*001, DEL	NEG	POS	FULL, *003	SSP
8073	Mats, Bengtsson	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
733	Mytilineos, Joanni	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
3966	Permpikul&Vejba	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8030	Poulton, Kay V.	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
3753	Reed&Rajalingam	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP, SSP
8060	Rost&Klein	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
4251	Schiller, Jennifer	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
3410	Schroeder, M.L.	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	POS	SSP

**Table 3. KIR Exchange Sample: KDNA #114 (Caucasian)**

CTR	Investigator Name	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	METHOD
1426	Senitzer,David	POS	NEG	POS	POS	NEG	*001, *1502	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	POS	MULTIPLEX SSP
8077	Shanahan,Thomas	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
769	Tavoularis,Sofia	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	POS	SSOP,SSP
5451	Tilanus,Marcel	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
4021	Trachtenberg,Eliz	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8024	Trowsdale,John	POS	NEG	POS	NT	NEG	POS	NT	NT	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
5462	Turner,E.V.	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	POS	SSP
8053	Tyan,Dolly	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	FULL, *003	SSP,SSOP
8028	Uhrberg,Markus	POS	NEG	POS	NT	NEG	POS	POS	NT	POS	NEG	NEG	NEG	POS	NEG	NT	NT	SSP
3775	Vidan-Jeras,Blan	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8023	Vilches,Carlos	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
124	Witt,Campbell	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	NT	NT	MULTIPLEX SSP
1466	Yu,Neng	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
5282	Yu,Neng	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	FULL, DEL	NEG	POS	FULL, DEL	SSP
713	Zachary,Andrea	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	NEG	NEG	NEG	POS	NEG	POS	POS	SSP



**Table 4. KIR Exchange Sample: KDNA #115**

CTR	Investigator Name	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	METHOD
5488	Adams, Sharon	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
234	Amador, Alexandra	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSOP
16	Askar, Medhat	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSOP,SSP
8038	Cao, Kai	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	POS	SSOP
8025	Carrington&Marti	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	NT	SSP
3224	Chen, Dong-Feng	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP,SSOP
1108	Clark, Traci	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	POS	SSOP
3632	Colombe, Beth	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
8050	Cook, Daniel J.	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
189	Crowe, Deborah	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP,SSOP
8039	Davidson, Maureen	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSOP
8031	Dinauer, David	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
705	Ellis, Thomas	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSOP
8051	Endres, Robert	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
2549	Fagoaga, Omar	POS	NEG	POS	POS	A*00101- 01202	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
762	Fischer&Mayr	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
8047	Fuessel, Monika	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
8026	Gardiner, Clair M.	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
8040	Gladman/Pellett/P	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
4985	Graff, Ralph J.	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
8022	Hedlund, Anna	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
1694	Hesse&Kissel	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
1461	Hidajat, M.	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
3808	Hogan, Patrick	POS	NEG	POS	POS	A	POS	POS	POS	POS	*0020101- *008	NEG	NEG	DEL	POS	POS	DEL	SSP
5000	Hsu, Susan H.	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSOP,SSP
2344	Hurley&Hartzman	POS	NEG	POS	POS	A*00101	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	POS	SSP, SSOP, SBT- 2DL5
3261	Iwaki, Yui	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
8076	Jaramillo&Gaitonde	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	POS	SSP,SSOP
8035	Kanangat, Siva	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSOP
8079	Kashi, Zahra	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP,SSOP
4337	Kim, Tai-Gyu	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
8046	Kusnierczyk, Piot	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	NT	NT	MULTIPLEX SSP, SSP
8071	Kwok, Janette	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSOP
791	Lacelle, Chantale	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
278	Lee, Jar-How	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSOP
8069	Maha, George	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
8067	Marino, Susan R.	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP,SSOP
5142	Marsh, Steven	POS	NEG	POS	POS	POS	POS	POS	POS	*01301	POS	NEG	NEG	DEL	POS	POS	*003, -	SSP
8073	Mats, Bengtsson	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
733	Mytilineos, Joanni	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
3966	Permpikul&Vejba	POS	NEG	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	NEG	POS	POS	POS	POS	SSP
8030	Poulton, Kay V.	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSOP
3753	Reed&Rajalingam	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSOP,SSP
8060	Rost&Klein	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSOP

**Table 4. KIR Exchange Sample: KDNA #115**

CTR	Investigator Name	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	METHOD
4251	Schiller, Jennifer	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSOP
3410	Schroeder, M.L.	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
1426	Senitzer, David	POS	NEG	POS	POS	POS	*005	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	POS	MULTIPLEX SSP
8077	Shanahan, Thomas	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	FULL, DEL	SSP
769	Tavoularis, Sofia	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	POS	SSOP, SSP
5451	Tilanus, Marcel	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSOP
4021	Trachtenberg, Eliz	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
8024	Trowsdale, John	POS	NEG	POS	NT	POS	POS	NT	NT	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
5462	Turner, E.V.	POS	NEG	POS	POS	A	POS	POS	POS	POS	*002- *008	NEG	NEG	DEL	POS	POS	POS	SSP
8053	Tyan, Dolly	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	*003	SSP, SSOP
8028	Uhrberg, Markus	POS	NEG	POS	NT	POS	POS	POS	NT	POS	POS	NEG	NEG	POS	POS	NT	NT	SSP
3775	Vidan-Jeras, Blan	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
8023	Vilches, Carlos	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
124	Witt, Campbell	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	NT	NT	MULTIPLEX SSP
1466	Yu, Neng	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSOP
5282	Yu, Neng	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
713	Zachary, Andrea	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP

**Table 5. KIR Exchange Sample: KDNA #116 (Black)**

CTR	Investigator Name	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	METHOD
5488	Adams, Sharon	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
234	Amador, Alexandra	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
16	Askar, Medhat	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSOP, SSP
8038	Cao, Kai	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	POS	SSOP
8025	Carrington&Marti	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	NT	SSP
3224	Chen, Dong-Feng	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP, SSOP
1108	Clark, Traci	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	POS	SSOP
3632	Colombe, Beth	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
8050	Cook, Daniel J.	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	DEL	NEG	POS	DEL	SSP, SSOP
8039	Davidson, Maureen	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
8031	Dinauer, David	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
705	Ellis, Thomas	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
8051	Endres, Robert	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
2549	Fagoaga, Omar	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
762	Fischer&Mayr	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
8026	Gardiner, Clair M.	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8040	Gladman/Pellett/P	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
4985	Graff, Ralph J.	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	POS	NEG	POS	POS	SSP
1694	Hesse&Kissel	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
1461	Hidajat, M.	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
3808	Hogan, Patrick	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
5000	Hsu, Susan H.	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP, SSP
2344	Hurley&Hartzman	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	POS	SSP, SSOP, SBT-2DL5
3261	Iwaki, Yui	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8076	Jaramillo&Gaitonde	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	POS	SSP, SSOP
8035	Kanangat, Siva	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
8079	Kashi, Zahra	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP, SSOP
4337	Kim, Tai-Gyu	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8046	Kusnierczyk, Piot	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	NT	NT	MULTIPLEX SSP, SSP
8071	Kwok, Janette	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
791	Lacelle, Chantale	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
278	Lee, Jar-How	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
8069	Maha, George	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
8067	Marino, Susan R.	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP, SSOP
5142	Marsh, Steven	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	*003, -	SSP
8073	Mats, Bengtsson	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
733	Mytilineos, Joanni	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
3966	Permpikul&Vejsa	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8030	Poulton, Kay V.	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
3753	Reed&Rajalingam	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP, SSP
8060	Rost&Klein	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
4251	Schiller, Jennifer	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
3410	Schroeder, M.L.	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP

**Table 5. KIR Exchange Sample: KDNA #116 (Black)**

CTR	Investigator Name	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	METHOD
1426	Senitzer,David	POS	NEG	POS	POS	NEG	*001, *005	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	POS	MULTIPLEX SSP
8077	Shanahan,Thomas	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	FULL, DEL	SSP
769	Tavoularis,Sofia	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	POS	SSOP,SSP
5451	Tilanus,Marcel	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
4021	Trachtenberg,Eliz	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	POS	POS	POS	SSP
8024	Trowsdale,John	POS	NEG	POS	NT	NEG	POS	NT	NT	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
5462	Turner,E.V.	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	POS	SSP
8053	Tyan,Dolly	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	*003	SSP,SSOP
8028	Uhrberg,Markus	POS	NEG	POS	NT	NEG	POS	POS	NT	NEG	NEG	NEG	NEG	POS	NEG	NT	NT	SSP
3775	Vidan-Jeras,Blan	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
8023	Vilches,Carlos	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
124	Witt,Campbell	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	NT	NT	MULTIPLEX SSP
1466	Yu,Neng	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSOP
5282	Yu,Neng	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP
713	Zachary,Andrea	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	DEL	NEG	POS	DEL	SSP

