

REPORT OF THE 60th UCLA INTERNATIONAL KIR EXCHANGE

JUNE 2, 2025

KIR 261-266

For the 60th KIR Exchange, 6 DNA samples (KDNA#261 - 266) were shipped to 57 laboratories worldwide. KIR typing results were received from 55 of the laboratories. The results for the 60th KIR Exchange are summarized in Table 1 and individual laboratory results reported for each DNA sample are provided in Tables 2 - 7. Subtyping results for KIR2DS4 and 3DP1 are denoted as FULL or DEL. Discrepant results from consensus are

italicized in tables 1 - 7. Discrepancies at the allele level are not italicized.

We would like to express our appreciation to centers 8047 and 8132 for consistently providing allele level typing results for individual KIR genes and encourage other labs to do so as well. We would also like to thank Arnold, Azzaro, and Renac for sharing their predicated haplotypes for the samples examined in this study.

KDNA #261 (Unknown)

2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
POS	POS	POS	POS	A, B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL

A couple of discrepancies were observed for sample **KDNA #261** in which 2 labs reported KIR2DS4 as positive instead of negative.

One lab, center 8132, noted a new KIR3DL2*007 allele may be present in this sample. Another lab, center 8047, indicated a possible new 2DS1 allele was present.

Predicted haplotypes:

Arnold - AB + B

Azzaro - Cen-A/Cen-B1 + Tel-B2/Tel-B2

Renac - AB

KDNA #262 (Hispanic)

2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
NEG	POS	NEG	POS	A, B	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL

Two discrepancies were observed for sample **KDNA #262** in which 2 labs reported KIR3DP1 as negative instead of positive.

Predicted haplotypes:

Arnold - Bdel + Bdel

Azzaro - Cen-B2/Cen-B2 + Tel-B1/Tel-B1

Renac - B

KDNA #263 (Black)

2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL

No discrepancies were observed for sample **KDNA#263**.

Several possible new alleles were identified in this sample. Center 8047 commented on a new 2DP1 allele, while center 8132 noted the presence of a new KIR2DL4*0010302 allele. In addition, both center 8047 and center 8132 indicated a new KIR2DS2 allele was present.

Predicted haplotypes:

Arnold - A + BA2

Azzaro - Cen-A/Cen-B1 + Tel-A/Tel-A

Renac - AB

KDNA #264 (Asian)

2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL, DEL	NEG	POS	DEL

There were no discrepancies observed for sample **KDNA#264**.

Center 8047 noted a possible new KIR2DP1 allele was present.

Predicted haplotypes:

Arnold - A + A

Azzaro - Cen-A/Cen-A + Tel-A/Tel-A

Renac - A

KDNA #265 (Hispanic)

2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
POS	POS	POS	POS	A, B	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL

No discrepancies were observed for sample **KDNA#265**.

Two possible new alleles were identified in this sample. Center 8047 noted the presence of a new KIR2DS4 allele and center 8132 commented on the presence of a new 3DL3*003 allele.

Predicted haplotypes:

Azzaro - Cen-A/Cen-B1 + Tel-A/Tel-B

Renac - AB

KDNA #266 (Hispanic)

2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	DEL

A number of discrepancies were observed for sample **KDNA#266**. Four labs reported 3DL1 as positive instead of negative, and 3 labs reported 2DS4 as positive instead of negative. Each lab indicated testing was performed using the One Lambda LinkSeq RT-PCR kit.

A possible new KIR2DS3*002 allele was noted by center 8132.

Predicted haplotypes:

Arnold - AB + AB

Azzaro - Cen-A/Cen-A+ Tel-B1/Tel-B2

Renac - AB

NEXT MAILING DATE: August 27, 2025

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Table 1. Summary of the 60th KIR Exchange (KDNA #261-266)

KIR Ex.	DNA	# Labs	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
#60	261	55	POS[53] *0020101[1] *00101/ *00201[1]	POS[53] *0010102[2]	POS[54] *0020101[1]	POS[52] *00501[1] *0050101, *0050101[1] Full[1]	POS[44] A*0050104, B*0020107[1] A,B[9] A[1]	NEG[54] NT[1]	POS[54] *0070102, *007New[1]	POS[53] *064, *02801[1] *01601+ *063] *02801+ *064[1]	POS[54] *0130102[1]	POS[53] *0020103[1] New+ *002/ *005*002/ *005+ *002/ *005[1]	POS[53] *0010102[1] *00101/ *002/*022] *00101/ *022[1]	POS[52] *0020101, *0020101[2] Ambiguous[1]	NEG[52] POS[2] NT[1]	NEG[54] NT[1]	POS[52] *0030103[1] *00301[1] NT[1]	POS[39] DEL [13] *0060101, *0060101[1] *00601[1] NT[1]
	262	55	NEG[54] NT[1]	POS[53] *00301+ *00301[1] NT[1]	NEG[54] NT[1]	POS[52] *00501[1] *0050101, *0050101[1] Full[1]	POS[45] A*0010103, B*0080101[1] A,B[9]	NEG[54] NT[1]	POS[53] *007+ *007[1] NT[1]	POS[53] *00402+ *00402[1] NT[1]	POS[53] *01301/ *107[1] NT[1]	POS[54] NT[1]	POS[54] NT[1]	NEG[54] NT[1]	NEG[54] NT[1]	POS[53] *00201+ *00201 [1] NT[1]	NEG[53] NT[2]	POS[38] FULL[12] *007, *007[1] *007[1] NEG[2] NT[1]
	263	55	POS[54] *0030248, *00401[1]	POS[53] *0010102[1] *00101[1]	POS[53] *0010101[1] *00101[1]	POS[52] *0010302 (New), *0010307[1] *00103+ *00103[1] FULL[1]	POS[41] B[12] B*017[2]	POS[53] *0150101, *01701[1] *01501/ *017/*018 +*01501/ *017/ *018[1]	POS[53] *001/ *100/ 116+*024] *010+ *013[1] *01001, *01301[1]	POS[53] *032, *00901[1] *00901/ *081+ *032[1]	NEG[55]	NEG[55]	POS[53] *0010102 New[1] New/ *00101/ *002/ *00601/ *022[1]	POS[52] *00103013[1] *00103/ *007[1] Ambiguous[1]	POS[36] FULL[18] *0010106, *0010108[1]	NEG[55]	POS[52] *00105, *0020109[1] New+ *00201[1] NT[1]	POS[40] DEL[13] *0030101, *01001[1] NT[1]
	264	55	POS[53] *020, *0030204[1] *020, *00*00301/ *00302/ *034/*071/ *074+ *020[1]	NEG[55]	POS[53] *0010101[1] *00101+ *00101[1]	POS[52] *0010201, *00602[1] *00102+ *00601/ *00602] *00103+ *00603[1] FULL[1]	NEG[55]	POS[53] *0070104, *01502[1] *007/ *102+ *015/*017/ *018[1]	POS[53] *083, *0020105[1] *00201/ *00202/ *101/*102+ *083[1]	POS[53] *01001, *01001[2]	NEG[55]	NEG[55]	NEG[55]	NEG[55]	POS[36] FULL,DEL[17] *0010107, *00401[2]	NEG[55]	POS[52] New+ *00201[1] *0020120, *0020120[1] NT[1]	POS[40] DEL[13] *0030202, *0030202[1] NT[1]

Table 1. Summary of the 60th KIR Exchange (KDNA #261-266)

KIR Ex.	DNA	# Labs	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
#60	265	55	POS[53] *0020101, *00701[1] *00101/ *00201+ *007[1]	POS[54] *0010102[1]	POS[54] *0020101[1]	POS[52] *0010305, *0050101[1] *00103+ *00501[1] FULL[1]	POS[43] A,B[11] A*0010103, A*0050104[1]	POS[54] *0080101[1]	POS[53] *0070108, *0090101[1] *001+*112[*007+*009] *010+ *019[1]	POS[54] *0010201, *003New[1]	POS[53] *0130101[1] *01301/ *107[1]	POS[54] *0020114[1]	POS[54] *0010102[1]	POS[53] *0010301[1] Ambiguous[1]	POS[35] DEL[17] FULL,DEL[1] New[1] *0030104[1]	POS[54] *0020132[1]	POS[52] *0010201, *00301[1] *00102+ *00301[1] NT[1]	POS[39] DEL[13] *00501, *0030101[1] *00301+ *005[1] NT[1]
	266	55	POS[54] *0030204, *00302[1]	NEG[55]	POS[54] *0010101, *0010108[1]	POS[53] FULL[1] *0010101, *0010108[1]	POS[45] A[7] A*0010103, A*0050104[1] A,B?2]	NEG[51] <i>POS[4]</i>	POS[54] *0070102, *0070108[1]	POS[54] *01503, *02601[1]	POS[54] *0130101, *0130102[1]	POS[54] *0020103[1]	NEG[55]	POS[53] *002New[1] Ambiguous[1]	NEG[52] DEL[1] POS[2]	POS[54] *0020126[1]	POS[53] *0020119, *0020120[1] NT[1]	POS[40] DEL[13] *0030202, *0030202[1] NT[1]

[] - number of labs reporting allele assignment/POS/NEG/NT
 POS - Presence of gene
 NEG - Absence of gene
 NT - Not typed; NR - Not reported/No result
italics - assignment different from consensus
 Subtypes of 2DS4 and 3DP1 are designated as FULL and/or DEL

Methods
 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. KDNA #261 (Unknown)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[55]	POS[55]	POS[55]	POS[55]	POS[45]+ A,B[10]	NEG[54]	POS[55]	POS[55]	POS[55]	POS[55]	POS[55]	POS[54]	NEG[52]	NEG[54]	POS[54]	POS[39]+ DEL [15]	
124	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	NT	NT	SSP
187	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
713	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	RT-PCR
733	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP NGS
762	POS	POS	POS	POS	A	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
1108	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
1426	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP RT-PCR
1466	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	RT-PCR
1694	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
3519	POS	POS	POS	POS	A,B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
3753	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
3798	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
3966	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	RT-PCR
4251	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SBT
4337	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
4345	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
5000	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP SSO
5133	POS	POS	POS	POS	A,B?	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	RT-PCR
5142	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
5282	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
5462	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
5488	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8030	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8047	*00101/ *00201	*00101	POS	*00501	POS	NEG	POS	*01601+ *063 *02801+ *064	POS	New+ *002/ *005 *002 /*005+ *002/ *005	*00101/ *002/*022 *00101/ *022	*00201+ *00201	NEG	NEG	*00301	*00601	NGS
8050	POS	POS	POS	POS	A,B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
8053	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSO RT-PCR
8060	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8069	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8071	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8073	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	RT-PCR
8074	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8079	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	SSO
8080	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	RT-PCR
8083	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO

Table 2. KDNA #261 (Unknown)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8084	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	Ambiguous	NEG	NEG	POS	POS	RT-PCR
8085	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	NGS
8086	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP
8090	POS	POS	POS	POS	A,B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP SSO
8092	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	RT-PCR
8098	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	
8104	POS	POS	POS	POS	A,B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
8105	POS	POS	POS	POS	A,B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	NGS
8110	POS	POS	POS	POS	A,B?	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	RT-PCR
8118	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	RT-PCR
8122	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	RT-PCR
8124	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSP SSO
8126	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
8127	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	RT-PCR
8129	POS	POS	POS	FULL	A,B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP
8130	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	
8132	*0020101	*0010102	*0020101	*0050101, *0050101	A*0050104, B*0020107	NT	*0070102, *007NEW	*064, *02801	*0130102	*0020103	*0010102	*0020101, *0020101	NT	NT	*0030103	*0060101, *0060101	NGS
8134	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	SSO
8136	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	
8137	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	RT-PCR
8141	POS	POS	POS	POS	A,B	NEG	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	DEL	SSP

Table 3. KDNA #262 (Hispanic)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	NEG[54]	POS[54]	NEG[54]	POS[55]	POS[45]+ A,B[10]	NEG[54]	POS[54]	POS[54]	POS[54]	POS[54]	POS[54]	NEG[54]	NEG[54]	POS[54]	NEG[53]	POS[38]+ FULL[15]	
124	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NT	NT	SSP
187	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
713	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	RT-PCR
733	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP NGS
762	NEG	POS	NEG	POS	A,B	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
1108	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
1426	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
1466	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	RT-PCR
1694	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
3519	NEG	POS	NEG	POS	A,B	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
3753	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
3798	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
3966	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	RT-PCR
4251	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SBT
4337	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
4345	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
5000	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP SSO
5133	NEG	POS	NEG	POS	A,B?	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	RT-PCR
5142	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
5282	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
5462	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
5488	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8030	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	NEG	SSO
8047	NEG	*00301+ *00301	NEG	*00501	POS	NEG	*007+ *007	*00402+ *00402	*01301/ *107	POS	POS	NEG	NEG	*00201+ *00201	NEG	*007	NGS
8050	NEG	POS	NEG	POS	A,B	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
8053	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSO
8060	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8069	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8071	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8073	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	RT-PCR
8074	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8079	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8080	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	RT-PCR
8083	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8084	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	RT-PCR
8085	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	NGS

Table 3. KDNA #262 (Hispanic)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8086	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP
8090	NEG	POS	NEG	POS	A,B	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP SSO
8092	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	RT-PCR
8098	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	
8104	NEG	POS	NEG	POS	A,B	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
8105	NEG	POS	NEG	POS	A,B	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	NGS
8110	NEG	POS	NEG	POS	A,B?	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	RT-PCR
8118	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	RT-PCR
8122	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	RT-PCR
8124	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSP SSO
8126	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
8127	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	RT-PCR
8129	NEG	POS	NEG	FULL	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	FULL	SSP
8130	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	
8132	NT	NT	NT	*0050101, *0050101	A*0010103, B*0080101	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	*007, *007	NGS
8134	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	SSO
8136	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	
8137	NEG	POS	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	RT-PCR
8141	NEG	POS	NEG	POS	A,B	NEG	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	NEG	SSP

Table 4. KDNA #263 (Black)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[55]	POS[55]	POS[55]	POS[55]	POS[41]+ B[14]	POS[55]	POS[55]	POS[55]	NEG[55]	NEG[55]	POS[55]	POS[54]	POS[36]+ FULL[19]	NEG[55]	POS[54]	POS[40]+ DEL[14]	
124	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	NT	NT	SSP
187	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
713	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
733	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP NGS
762	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
1108	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	POS	SSO
1426	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP RT-PCR
1466	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
1694	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
3519	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
3753	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
3798	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
3966	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
4251	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SBT
4337	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
4345	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
5000	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
5133	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	RT-PCR
5142	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
5282	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
5462	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
5488	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8030	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8047	POS	*00101	*00101	*00103+		*01501/ *017/*018 + *01501/ *017/*018	*001/ *100/ 116+*024 *010+ *013	*00901/ *081+*032	NEG	NEG	New/ *00101/ *002/ *00601/ *022	*00103/ *007	POS	NEG	New+ *00201	POS	NGS
8050	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8053	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSO RT-PCR
8060	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8069	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	POS	SSO
8071	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8073	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	RT-PCR
8074	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	POS	SSO
8079	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8080	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR

Table 4. KDNA #263 (Black)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8083	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8084	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	Ambiguous	POS	NEG	POS	POS	RT-PCR
8085	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	NGS
8086	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
8090	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
8092	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
													ALL EX.4 FULL LENGTH EX.5				
8098	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS		NEG	POS	POS	
8104	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8105	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	NGS
8110	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	RT-PCR
8118	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
8122	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
8124	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
8126	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8127	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
8129	POS	POS	POS	FULL	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8130	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	
8132	*0030248, *00401	*0010102	*0010101	*0010302 (New), *0010307	B*017	*0150101, *01701	*01001, *01301	*032, *00901	NEG	NEG	*0010102 New	*00103013	*0010106, *0010108	NEG	*00105, *0020109	*0030101, *01001	NGS
													ALL EX.4 FULL LENGTH EX.5				
8134	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS		NEG	POS	POS	SSO
8136	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	
8137	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
8141	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL	NEG	POS	DEL	SSP

Table 5. KDNA #264 (Asian)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[55]	NEG[55]	POS[55]	POS[55]	NEG[55]	POS[55]	POS[55]	POS[55]	NEG[55]	NEG[55]	NEG[55]	NEG[55]	POS[36]+ FULL, DEL[19]	NEG[55]	POS[54]	POS[40]+ DEL[14]	
124	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	NT	NT	SSP
187	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	RT-PCR
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	FULL,DEL	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	POS	POS	POS	NEG	NEG	NEG	NEG	FULL,DEL	NEG	POS	DEL	SSP RT-PCR
1466	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	RT-PCR
1694	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
3519	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
3753	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
3798	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
3966	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	RT-PCR
4251	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SBT
4337	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
4345	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	FULL,DEL	NEG	POS	DEL	SSP
5282	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP
5462	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL,DEL	NEG	POS	DEL	SSP
5488	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8030	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8047	*00301/ *00302/ *034/*071/ *074*020	NEG	*00101+ *00101	*00102+ *00601/ *00602 *00103+ *00603	NEG	*007/ *102+ *015/ *017/*018	*00201/ *00202/ *101/ *01001+ *01001		NEG	NEG	NEG	NEG	*00101/ *017+ *00401	NEG	New+ *00201	POS	NGS
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	FULL,DEL	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	POS	SSO
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	SSO
8079	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
8080	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	RT-PCR

Table 5. KDNA #264 (Asian)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8083	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSO
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
8090	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP SSO
8092	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	RT-PCR
8098	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
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
8110	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL,DEL	NEG	POS	DEL	RT-PCR
8118	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	RT-PCR
8122	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	RT-PCR
8124	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	SSP SSO
8126	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL,DEL	NEG	POS	DEL	SSP
8127	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	RT-PCR
8129	POS	NEG	POS	FULL	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL,DEL	NEG	POS	DEL	SSP
8130	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
8132	*020, *0030204	NEG	*0010101	*0010201, *00602	NEG	*0070104, *01502	*083, *0020105	*01001, *01001	NEG	NEG	NEG	NEG	*0010107, *00401	NEG	*0020120, *0020120	*0030202, *0030202	NGS
8134	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL,DEL	NEG	POS	POS	SSO
8136	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	
8137	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	POS	NEG	POS	POS	RT-PCR
8141	POS	NEG	POS	POS	NEG	POS	POS	POS	NEG	NEG	NEG	NEG	FULL,DEL	NEG	POS	DEL	SSP

Table 6. KDNA #265 (Hispanic)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[55]	POS[55]	POS[55]	POS[55]	POS[43]+ A,B[12]	POS[55]	POS[55]	POS[55]	POS[55]	POS[55]	POS[55]	POS[54]	POS[37]+ DEL[18]	POS[55]	POS[54]	POS[39]+ DEL[15]	
124	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NT	NT	SSP
187	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSO
713	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
733	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSP NGS
762	POS	POS	POS	POS	A,B	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	SSP
1108	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	POS	SSO
1426	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	SSP RT-PCR
1466	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
1694	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSP
3519	POS	POS	POS	POS	A,B	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSP
3753	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSO
3798	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSP
3966	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
4251	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SBT
4337	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSP
4345	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSP
5000	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSP SSO
5133	POS	POS	POS	POS	A,B?	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	RT-PCR
5142	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	SSP
5282	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSP
5462	POS	POS	POS	POS	A,B	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	SSP
5488	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSO
8030	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSO
8047	*00101/ *00201+ *007	POS	POS	*00103+ *00501	POS	POS	*001+*112 *007+*009 *010+*019	POS	*01301/ *107	POS	POS	POS	New	POS	*00102+ *00301	*00301+ *005	NGS
8050	POS	POS	POS	POS	A,B	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	SSP
8053	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	SSO RT-PCR
8060	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSO
8069	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	POS	SSO
8071	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSO
8073	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	RT-PCR
8074	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	FULL, DEL	POS	POS	POS	SSO
8079	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSO
8080	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
8083	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSO
8084	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	Ambiguous	POS	POS	POS	POS	RT-PCR

Table 6. KDNA #265 (Hispanic)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8085	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NGS
8086	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSP
8090	POS	POS	POS	POS	A,B	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSP SSO
8092	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
8098	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	ALL EX.4 DEL EX.5	POS	POS	POS	
8104	POS	POS	POS	POS	A,B	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	SSP
8105	POS	POS	POS	POS	A,B	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	NGS
8110	POS	POS	POS	POS	A,B?	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	RT-PCR
8118	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
8122	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
8124	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	SSP SSO
8126	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	SSP
8127	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
8129	POS	POS	POS	FULL	A,B	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	SSP
8130	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	
8132	*0020101, *00701	*0010102	*0020101	*0010305, *0050101	A*0010101, B*0020107	*0080101	*0070108, *0090101	*0010201, *003New	*0130101	*0020114	*0010102	*0010301	*0030104	*0020132	*0010201, *00301	*00501, *0030101	NGS
8134	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	ALL EX.4 DEL EX.5	POS	POS	POS	SSO
8136	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	
8137	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
8141	POS	POS	POS	POS	A,B	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	SSP

Table 7. KDNA #266 (Hispanic)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[55]	NEG[55]	POS[55]	POS[55]	POS[47]+ A[8]	NEG[51]	POS[55]	POS[55]	POS[55]	POS[55]	NEG[55]	POS[54]	NEG[52]	POS[55]	POS[54]	POS[40]+ DEL[14]	
124	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	NT	NT	SSP
187	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSO
713	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	RT-PCR
733	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSP NGS
762	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	DEL	SSP
1108	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSO
1426	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	DEL	SSP RT-PCR
1466	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	RT-PCR
1694	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSP
3519	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSP
3753	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSO
3798	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSP
3966	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	RT-PCR
4251	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SBT
4337	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSP
4345	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSP
5000	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSP SSO
5133	POS	NEG	POS	POS	A,B?	POS	POS	POS	POS	POS	NEG	POS	DEL	POS	POS	DEL	RT-PCR
5142	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	DEL	SSP
5282	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSP
5462	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	DEL	SSP
5488	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSO
8030	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSO
8047	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	NGS
8050	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	DEL	SSP
8053	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	DEL	SSO RT-PCR
8060	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSO
8069	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSO
8071	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSO
8073	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	DEL	RT-PCR
8074	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSO
8079	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSO
8080	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	RT-PCR
8083	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSO
8084	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	Ambiguous	POS	POS	POS	POS	RT-PCR
8085	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	NGS
8086	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSP
8090	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSP SSO

Table 7. KDNA #266 (Hispanic)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8092	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	RT-PCR
8098	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	
8104	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	DEL	SSP
8105	POS	NEG	POS	POS	A	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	NGS
8110	POS	NEG	POS	POS	A,B?	POS	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	DEL	RT-PCR
8118	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	RT-PCR
8122	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	RT-PCR
8124	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSP SSO
8126	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	DEL	SSP
8127	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	RT-PCR
8129	POS	NEG	POS	FULL	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	DEL	SSP
8130	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	
8132	*0030204, *00302	NEG	*0010101, *0010108	*0050101, *0050101	A*0010103, A*0050104	NEG	*0070102, *0070108	*01503, *02601	*0130101, *0130102	*0020103	NEG	*002New	NEG	*0020126	*0020119, *0020120	*0030202, *0030202	NGS
8134	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	SSO
8136	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	
8137	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	POS	RT-PCR
8141	POS	NEG	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	POS	NEG	POS	POS	DEL	SSP

Table 8. Participating Centers

Director Last Name	Director First	Institution	City	State	Country
Alexander Keck	Rainer Frank and	inno-train Diagnostik GmbH	Kronberg		Germany
Alquist	Caroline	Univ of Cincinnati/Hoxworth Blood Center	Cincinnati	OH	
An	Lin	Shanghai Tissuebank Medical Laboratory	Shanghai		China
Arnold	Paula	St Jude Children's Research Hosp	Memphis	TN	
Azzaro	Maria	AOU "Policlinico-Vitt. Emanuele"	Catania		Italy
Baj-Krzyworzeka	Monika	Uniwersytecki Szpital DzieciÄ™cy w Krakowie	Krakow		Poland
Bengtsson	Mats	Uppsala University Hospital	Uppsala		Sweden
Berka	Nouredine	American National Red Cross	Philadelphia	PA	
Bettinotti	Maria	Johns Hopkins University	Baltimore	MD	
Blasczyk	Rainer	Medizinische Hochschule Hannover	Hannover		Germany
Blouin	Amanda	Memorial Sloan Kettering Cancer Center	New York	NY	
Cereb	Nezih	HistoGenetics	Ossining	NY	
Chan	Marieta	Health Sciences Authority			Singapore
Chang	Yenhui	TBG Biotechnology Corp.	New Taipei City		Taiwan, Province Of China
Chen	Dongfeng	Duke University Health System	Durham	NC	
Chung	Yeun-Jun	The Catholic University of Korea College of Med	Seoul		Korea, Republic Of
Czerwinski	Pawel	Gyncentrum Sp. z o.o.	Sosnowiec		Poland
Dambaeva	Svetlana	Rosalind Franklin University	North Chicago	IL	
D'Orsogna	Lloyd	Fiona Stanley Hospital	Murdoch		Australia
Fischer	Gottfried	AKH Transfusion Medizin 4i	Vienna		Austria
Fuessel	Monika	DKMS Life Science Lab gGmbH	Dresden		Germany
Furst	Daniel	IKT Und Immunogenetik Ulm	Ulm, Baden-Wuerttemberg		Germany
Gendzekhadze	Ketevan	City of Hope Medical Center	Irwindale	CA	
Girrita	Alin	UCI Medical Center	Orange	CA	
He	Jun	First Affiliated Hospital of Soochow University	SuZhou, JiangSu		China
Hirv	Kaimo	MVZ Martinsried GmbH	Martinsried		Germany
Kashi	Zahra	Kashi Clinical Laboratories	Portland	OR	
Koester	Ruth	LabCorp	Burlington	NC	
Kwok	Janette	Queen Mary Hospital			Hong Kong
Lalli	Peter	Health Network Labs	Allentown	PA	
Legler	med. Tobias	University Medical Center	Goettingen		Germany

Table 8. Participating Centers

Director Last Name	Director First	Institution	City	State	Country
Li	Rui	Shanghai Cinopath Medical Laboratory	Shanghai		China
Mayor	Neema	Anthony Nolan	London		United Kingdom
Monos	Dimitri	Children's Hospital of Philadelphia	Philadelphia	PA	
Morris	Gerald	UCSD	San Diego	CA	
Nikaein	Afzal	Texas Medical Specialty, Inc.	Dallas	TX	
Pando Rigal	Marcelo	Baylor University Medical Center	Dallas	TX	
Penning	Maarten	Genome Diagnostics B.V. (GenDx)	Utrecht		Netherlands
Pereira	Shalini	Scisco Genetics, Inc.	Seattle	WA	
Permpikul	Parichart	Mahidol University	Bangkok		Thailand
Philogene	Mary Carmelle	VCU Health Systems	Richmond	VA	
Pollack	Marilyn S.	UCSF Benioff Children's Hospital-Oakland	Oakland	CA	
Poulton	Kay	Manchester Royal Infirmary	Manchester		United Kingdom
Raja	Rajalingam	University of California San Francisco	San Francisco	CA	
Reed	Elaine F.	UCLA Immunogenetics Center	Los Angeles	CA	
Renac	Virginie	Etablissement Francais du Sang Bretagne	Rennes Cedex		France
Rossi	Angela	Ospedale Guglielmo Da Saliceto	Piacenza		Italy
Sachsenberg	Nicolas	BAG Diagnostics GmbH	Lich, Hesse		Germany
Schiller	Jennifer	Versiti Wisconsin, Inc.	Milwaukee	WI	
Stroncek	David	National Institutes of Health	Bethesda	MD	
Thiel	Jennifer	Werfen	Waukesha	WI	
Yizhou	Zou	Beijing BoFuRui Medical Laboratory Co. Ltd.	Beijing		China
Yizhou	Zou	Guangzhou Bo Fu Rui Medical Laboratory Co, Ltd.	Guangzhou		China
Yu	Neng	American Red Cross	Dedham	MA	
Yu	Neng	UMass Memorial Health	Worcester	MA	
Zhang	Xiaohai	Cedars-Sinai Medical Center	Los Angeles	CA	
Zhang	Bing Melody	Stanford Blood Center	Palo Alto	CA	