

REPORT OF THE 56th UCLA INTERNATIONAL KIR EXCHANGE

MAY 3, 2023

KIR 237-242

For the 56th KIR Exchange, 6 DNA samples (KDNA#237 - 242) were shipped to 62 laboratories worldwide. KIR typing results were received from all 62 laboratories. The results for the 56th KIR Exchange are summarized in Table 1 and individual laboratory results reported for each DNA sample are provided in Tables 2 - 7.

We would like to acknowledge and thank centers 8047 and 8132 for providing allele level typing results for individual KIR genes. 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. For **sample # 238**, the results for KIR2DS3 were not included in the grading analysis. Eight-two percent of labs reported it as negative, 15% reported it as positive, and 3% reported ambiguous results.

Lastly, we would like to express our appreciation to Arnold, Azzaro, Falco, and Renac for sharing their insights and predicated haplotypes for the samples examined in this study.

KDNA # 237: KIR2DL1-2DL3-2DL4-2DL5A-3DL1-3DL2-3DL3-3DS1-2DS1-2DS3-2DS4FULL-2DS5-2DP1-3DP1DEL was the consensus KIR type for this sample from a donor of Hispanic decent.

One lab reported 2DS1 as absent and 1 other lab reported 3DP1 as absent.

Falco noted an unusual KIR genotype was present in this sample and shared the following observations: "The analysis of the telomeric region suggested the presence of 2 CenA regions, one TelA region, and one TelB expanded region, the last one carrying both 2DS3 and 2DS5. This KIR asset is reminiscent of the Tel B04 region described by Vierra-Green and colleagues (PlosOne 2012)."

Arnold noted this sample encodes for cysteine at KIR2DL1 codon 245.

Predicted haplotypes:

Renac - AB

KDNA # 238: KIR2DL1-2DL3-2DL4-2DL5A-3DL1-3DL2-3DL3-3DS1-2DS1-2DS2-2DS3?-2DS4DEL-2DS5-2DP1-3DP1DEL was the reported KIR type for this sample from a Caucasian donor.

As indicated earlier, consensus for KIR2DS3 was < 90%. The majority of labs (51/62) (82%) reported 2DS3 as negative, while 9/62 (15%) labs reported it as positive. Two labs noted discrepancies in test results between different method types; SSO/SSP assigned 2DS3 as negative, while qPCR/RT-PCR assigned it as positive. Each of the 9 labs reporting 2DS3 as positive listed LinkSeq™ RT-PCR as the method type used for testing.

Azzaro and Falco commented on the unusual haplotype present, with each noting the presence of 2DS2 in the absence of 2DL2. In addition, Falco observed the donor "has a centromeric B region carrying KIR2DS2 and missing KIR2DL2 thus suggesting the presence of KIR2DS2*005, a hybrid allele sharing the first six exons with KIR2DS2 and the exons 7 to 9 with KIR2DS3."

Arnold noted this sample is positive for a 3DL1 variant allele that is retained intracellularly and encodes for cysteine at KIR2DL1 codon 245.

Predicted haplotypes

Arnold - A and AB

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

Renac - AB

*(3DP1*003-L alleles characterize Cen-B1, Bono et al Immunology 2018.

**Tel-B1 has been assigned based on KIR2DS5 presence, Cisneros Frontiers in Immunology 2020).

KDNA # 239: KIR2DL1-2DL2-2DL3-2DL4-2DL5A&B-3DL1-3DL2-3DL3-3DS1-2DS2-2DS3-2DS4FULL-2DP1-3DP1DEL was the consensus KIR type for this sample from a donor of unknown ethnicity.

One lab reported 2DL1, 2DL2, 3DL1, 3DL2, and 3DP1 as negative. Two labs assigned 2DS5 as positive instead of negative.

Azzaro, Falco, and Arnold each commented on the unusual haplotypes present in this sample. Azzaro noted the presence of 3DS1 in the absence of 2DS1, and Arnold noted the presence of 2DL5A in the absence of 2DS1. Falco kindly provided the following observation: "The analysis of the centromeric and telomeric regions suggested the presence of one CenA, one CenB1, one TelA region, and one TelB expanded region. The last one carries 3DS1-2DL5A-2DS3 but lacks 2DS1. This KIR asset is reminiscent of the Tel B06 region described by Vierra-Green and colleagues (PlosOne 2012)."

Arnold noted the sample encodes for cysteine at KIR2DL1 codon 245.

Predicted haplotypes

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

Renac - AB

*3DP1*003-L alleles characterize Cen-B1, Bono et al Immunology 2018.

**Tel-B2 has been assigned based on KIR2DS3 presence, Cisneros Frontiers in Immunology 2020).

KDNA # 240: KIR2DL1-2DL2-2DL3-2DL4-3DL1-3DL2-3DL3-2DS2-2DS4DEL-2DP1-3DP1FULL&DEL was the consensus KIR type for this sample from a Caucasian donor.

One lab reported 2DL5 as present and 1 lab reported 3DL3 as absent.

Arnold noted this sample encodes for arginine at KIR2DL1 codon 245.

Predicted haplotypes

Arnold - A and BA1

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

Falco - Cen-A/Cen-B2 + Tel-A/Tel-A

Renac - AB

*3DP1*001-L alleles characterize Cen-B2, Bono et al J.Immunolog. 2018.

KDNA # 241: KIR2DL1-2DL2-2DL3-2DL4-2DL5B-3DL1-3DL2-3DL3-2DS2-2DS3-2DS4FULL&DEL-2DP1-3DP1DEL was the consensus KIR type for this sample from a donor of African American descent.

One lab reported 2DP1 as negative and 1 other lab reported 3DP1 as negative.

Arnold noted this sample is positive for a 3DL1 variant allele that is retained intracellularly and encodes for cysteine at KIR2DL1 codon 245.

Predicted haplotypes:

Arnold - A and BA2

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

Falco - Cen-A/Cen-B1 + Tel-A/Tel-A

Renac - AB

*3DP1*003-L alleles characterize Cen-B1, Bono et al J.-Immunolog. 2018.

KDNA # 242: KIR2DL1-2DL3-2DL4-2DL5A-3DL1-3DL2-3DL3-3DS1-2DS1-2DS4DEL-2DS5-2DP1-3DP1DEL was the consensus KIR type for this sample from a donor of Asian descent.

One lab reported 2DL1 as negative, 2DL2 as positive, and 3DP1 as negative.

Arnold noted this sample encodes for arginine at KIR2DL1 codon 245.

Predicted haplotypes

Arnold - A and AB

Azarro - Cen-A/Cen-A + Tel-A/Tel-B1*

Falco - Cen-A/Cen-A + Tel-A/Tel-B1

Renac - AB

*Tel-B1 has been assigned based on KIR2DS5 presence, Cisneros Frontiers in Immunology 2020.



NEXT MAILING DATE: August 2, 2023

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Table 1. Summary of the 56th KIR Exchange (KDNA #237-242)

KIR Ex.	DNA	# Labs	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
#56	237	62	POS[61] *0040115, *03201[1]	NEG[62]	POS[60] *0010101, *00101[1] *00101+ *00101[1]	POS[59] NORM[1] *0010201, *00501[1] NT[1]	POS[51] A[8] A,B[1] A*00101, A*00501[1] A*001/ A*012+ A*005[1]	POS[60] *0150204[1] *01502/ *01702[1]	POS[61] *0020105, *00701[1]	POS[60] *00802, *01501[1] NT[1]	POS[60] *0130101[1] *01301/ *107+ *01301/ *107[1]	POS[59] *002-*009 New/ *00201[1] NEG[1] NT[1]	NEG[62]	POS[59] *00103/*007/ *00201[1] *00103[1] Ambiguous [1]	POS[44] FULL[15] *00101/ *017[1] NORM[1] NT[1]	POS[60] *0020109[1] *00201/ *015[1]	POS[59] NT[3]	POS[46] DEL[12] *0030101, *00302[1] NEG[1] NT[2]
	238	62	POS[60] *0020110, *00401[1] *00101/ *00201+ *00401/ *035[1]	NEG[62]	POS[60] *00201[1] *0020103, *00201[1]	POS[58] *0050101, *00802[1] *00501+ *00802[1] NORM / DEL[1] NT[1]	POS[51] A[8] A*0010101[1] A*001/ A*012[1] AB[1]	POS[60] *0040105[1] *00401[1]	POS[61] *00901, *0070102[1]	POS[59] *0010101, *01402[1] *00101/ *00301+ *01302/ *01402/ *092[1] NT[1]	POS[60] *0130101[1] *01301/ *107[1]	POS[60] *0130101[1] NT[1]	POS[60] *005[1] NEG[1]	NEG[51] POS[9] Ambiguous [1] POS/NEG [1]	POS[44] DEL[16] *006[1] NT[1]	POS[60] *0020111[1] *00201[1]	POS[58] New+ *00301[1] NT[3]	POS[46] DEL[12] *0030101, *00601[1] NEG[1] NT[2]
	239	62	POS[60] *0030205, *00401[1] NEG[1]	POS[59] *0010102[1] *00101[1] NEG[1]	POS[60] *0010108[1] *00101[1]	POS[59] NORM[1] NT[2]	POS[53] A, B[7] A*0050101, B*002[1] A*005/ B*002/ B*010+ A*005/ B*002/ B*010[1]	POS[60] *0150204, *015020[1] NEG[1]	POS[60] *0020105, *002010[1] NEG[1]	POS[59] *00902, *00301+ *00902[1] NT[1]	POS[60] *0130101[1] *01301/ *107[1]	NEG[61] NT[1]	POS[60] *0010102[1] *00101/ *002/ *0601[1]	POS[59] *0010301, *00103[1] *00103/ *007+ *00103/ *007[1] Ambiguous [1]	POS[44] FULL[15] *00101/ *017+ *00101/ *017/ *01102[1] NORM[1] NT[1]	NEG[60] POS[2]	POS[59] NT[3]	POS[46] DEL[12] NEG[1] NT[3]
	240	62	POS[60] *0030212[1] *00301/ *00302/ *034[1]	POS[60] *0030101[1] *00301[1]	POS[60] *0010112[1] *00101[1]	POS[58] DEL[1] *0080105, *01101[1] *00801+ *01101[1]	NEG[61] POS[1]	POS[60] *0010102, *00501[1] *00101/ *095+ *00501[1]	POS[61] *0010102, *00103[1]	POS[58] *0020602, *00701[1] *00206/ *01404+ *00701/ *030[1] NEG[1] NT[1]	NEG[62]	NEG[61] NT[1]	POS[60] *0010108[1] *00101[1]	NEG[62]	POS[44] DEL[16] *00301+ *010[1] NT[1]	NEG[62]	POS[58] *00203[1] NT[3]	POS[48] FULL, DEL[11] *001, *0030207[1] NT[2]
	241	62	POS[60] *0030220, *00401[1] *003/*006/ *034+*004/ *010/ *035[1]	POS[60] *0010102[1] *00101[1]	POS[60] *0010101[1] New[1]	POS[58] NORM / DEL[1] *00103+ *00802[1] *0010302, *00802[1] NT[1]	POS[49] B[10] B*0020101 [1] B*00201/ B*00202/ B*00203/ B*010[1] A[1]	POS[60] *0040106, *01501[1] *00401+ *01501/ *01701[1]	POS[61] *00501, *01301[1]	POS[59] *0030103, *00901[1] *00301+ *00901/ *081[1] NT[1]	NEG[62]	NEG[61] NT[1]	POS[60] *0010105[1] New/ *00101/ *002/ *00601[1]	POS[59] *0220101[1] *02201[1] Ambiguous [1]	POS[47] FULL, DEL[14] NT[1]	NEG[62]	POS[57] *00102+ *00201[1] NEG[1] NT[3]	POS[46] DEL[12] *0030102, *01001[1] NEG[1] NT[2]

Table 1. Summary of the 56th KIR Exchange (KDNA #237-242)

KIR Ex.	DNA	# Labs	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1
#56	242	62	POS[59] *0030204, *00302[1] *003/*034+ *003/*034 [1] <i>NEG[1]</i>	NEG[61] <i>POS[1]</i>	POS[60] *023, *0010101[1] *00101+ *023[1]	POS[58] *0050101, *01101[1] *00501+ *01101[1] NORM/ DEL[1] NT[1]	POS[51] A[8] A*0010101[1] A*00101/ A*00104/ A*01201/ A*01202[1] A,B?[1]	POS[60] *0050103[1] *00501[1]	POS[61] *0020105, *00701[1]	POS[59] *00902, *01001[1] *00901/ *00902/ *081+ *01001/ *01002[1] NT[1]	POS[60] *00902, *01001[1] *00901/ *00902/ *081+ *01001/ *01002[1]	POS[60] *00201[1] NT[1]	NEG[62]	NEG[62]	POS[44] DEL[16] *010[1] NT[1]	POS[60] *0020111[1] *00201[1]	POS[58] New+ *00201[1] NT[3]	POS[46] DEL[12] *0030202, *00302[1] <i>NEG[1]</i> NT[2]

[] - number of labs reporting allele assignment/POS/NEG/NT
 POS - Presence of gene
 NEG - Absence of gene
 NT - Not typed; NR - Not reported
 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 #237 (Hispanic)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[62]	NEG[62]	POS[62]	POS[61]	POS[52]+ A[10]	POS[62]	POS[62]	POS[61]	POS[62]	POS[60]	NEG[62]	POS[60]	POS[44]+ FULL[17]	POS[62]	POS[59]	POS[46]+ DEL[13]	
124	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NT	NT	SSP
713	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	RT-PCR
733	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP NGS
762	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	FULL	POS	POS	DEL	SSP
792	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
1108	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	FULL	POS	POS	POS	SSO
1426	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	FULL	POS	POS	DEL	SSP RT-PCR
1466	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	RT-PCR
1694	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
3224	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
3410	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
3519	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
3632	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	RT-PCR
3753	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
3798	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
3966	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
4021	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
4251	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
4337	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
4345	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	NEG	SSP
4985	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
5000	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
5133	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	FULL	POS	POS	DEL	RT-PCR
5142	POS	NEG	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	FULL	POS	POS	DEL	
5219	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
5282	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
5462	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	FULL	POS	POS	DEL	SSP RT-PCR
5488	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO RT-PCR
8022	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	FULL	POS	POS	DEL	SSP
8028	POS	NEG	POS	NT	POS	POS	POS	NT	POS	POS	NEG	POS	POS	POS	NT	NT	SSP
8030	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
8047	POS	NEG	*00101+	POS	A*001/ A*012+ A*005	*01502/ *01702	POS	POS	*01301/ *107+	NEW/ *00201	NEG	*00103/ *007/ *00201	*00101/ *017	*00201/ *015	POS	POS	NGS
8050	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	FULL	POS	POS	DEL	SSP
8053	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO RT-PCR
8060	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
8069	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	FULL	POS	POS	POS	SSO
8071	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
8073	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	FULL	POS	POS	DEL	RT-PCR
8079	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
8080	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP RT-PCR

Table 2. KDNA #237 (Hispanic)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8083	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	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	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	NGS
8086	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
8090	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP SSO
8092	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	RT-PCR
8094	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
8098	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	ALL EX.4, FULL LENGTH EX.5	POS	POS	POS	
8104	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	FULL	POS	POS	DEL	SSP
8105	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	NGS
8106	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	POS	FULL	POS	POS	DEL	SSP
8110	POS	NEG	POS	POS	A,B?	POS	POS	POS	POS	POS	NEG	POS	FULL	POS	POS	DEL	
8113	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP
8118	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	RT-PCR
8122	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	RT-PCR
8124	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP SSO
8126	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	FULL	POS	POS	DEL	SSP
8127	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	RT-PCR
8129	POS	NEG	POS	NORM	POS	POS	POS	POS	POS	POS	NEG	POS	NORM	POS	POS	POS	SSP
8130	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSO
8131	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	SSP SSO
8132	*0040115, *03201	NEG	*0010101, *00101	*0010201, *00501	A*00101, A*00501	*0150204	*0020105, *00701	*00802, *01501	*0130101	NT	NEG	*00103	NT	*0020109	NT	*0030101, *00302	NGS

Table 3. KDNA #238 (Caucasian)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[62]	NEG[62]	POS[62]	POS[61]	POS[52] +A[10]	POS[62]	POS[62]	POS[61]	POS[62]	POS[61]	POS[61]	NEG[51]/ POS[9]	POS[44]+ DEL[17]	POS[62]	POS[59]	POS[46]+ DEL[13]	
124	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	NT	NT	SSP
713	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
733	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP NGS
762	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	DEL	SSP
792	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
1108	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	POS	SSO
1426	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	DEL	SSP RT-PCR
1466	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
1694	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
3224	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
3410	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
3519	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
3632	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
3753	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
3798	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
3966	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
4021	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
4251	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
4337	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
4345	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	SSP
4985	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
5000	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
5133	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	RT-PCR
5142	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	DEL	
5219	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
5282	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
5462	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	DEL	SSP RT-PCR
5488	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO RT-PCR
8022	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	DEL	SSP
8028	POS	NEG	POS	NT	POS	POS	POS	NT	POS	POS	POS	NEG	POS	POS	NT	NT	SSP
8030	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8047	*00101/ *00201+ *00401/ *035	NEG	*00201	*00501+ *00802	A*001/ A*012	*00401	POS	*00101/ *00301+ *01302/ *01402/ *092	*01301/ *107	*00201	*005	NEG	*006	*00201	NEW+ *00301	POS	NGS
8050	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	DEL	SSP
8053	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG (SSO) POS (Linkseq)	POS	POS	POS	POS	SSO RT-PCR
8060	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8069	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	POS	SSO

Table 3. KDNA #238 (Caucasian)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8071	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8073	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	RT-PCR
8079	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8080	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP RT-PCR
8083	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8084	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	Ambiguous	POS	POS	POS	POS	RT-PCR
8085	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	NGS
8086	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
8090	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP SSO
8092	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
8094	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8098	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	ALL EX.4, DEL EX.5	POS	POS	POS	
8104	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DELL	POS	POS	DEL	SSP
8105	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	NGS
8106	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	DEL	SSP
8110	POS	NEG	POS	POS	A,B	POS	POS	POS	POS	POS	POS	POS	DEL	POS	POS	DEL	
8113	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP
8118	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
8122	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	POS	RT-PCR
8124	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP SSO
8126	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	DEL	POS	POS	DEL	SSP
8127	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	RT-PCR
8129	POS	NEG	POS	NORM / DEL	POS	POS	POS	POS	POS	POS	POS	NEG	DEL-22BP	POS	POS	POS	SSP
8130	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSO
8131	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	SSP SSO
8132	*0020110, *00401	NEG	*0020103, *00201	*0050101, *00802	A*0010101	*0040105	*00901, *0070102	*0010101, *01402	*0130101	NT	NEG	NEG	NT	*0020111	NT	*0030101, *00601	NGS

Table 4. KDNA #239 (Unknown)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[61]	POS[61]	POS[62]	POS[60]	POS[53]+ A,B[9]	POS[61]	POS[61]	POS[61]	POS[62]	NEG[61]	POS[62]	POS[61]	POS[44]+ FULL[17]	NEG[60]	POS[59]	POS[46]+ DEL[12]	
124	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NT	NT	SSP
713	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
733	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP NGS
762	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
792	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
1108	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	POS	SSO
1426	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	DEL	SSP RT-PCR
1466	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
1694	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
3224	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
3410	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
3519	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
3632	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
3753	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
3798	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
3966	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
4021	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
4251	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
4337	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
4345	NEG	NEG	POS	POS	POS	NEG	NEG	POS	POS	NEG	POS	POS	POS	POS	POS	NEG	SSP
4985	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
5000	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
5133	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	DEL	RT-PCR
5142	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	DEL	
5219	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
5282	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
5462	POS	POS	POS	POS	A, B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	DEL	SSP RT-PCR
5488	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO RT-PCR
8022	POS	POS	POS	POS	A, B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8028	POS	POS	POS	NT	POS	POS	POS	NT	POS	NEG	POS	POS	POS	NEG	NT	NT	SSP
8030	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8047	POS	*00101	*00101	POS	A*005/ B*002/ B*010+ A*005/ B*002/ B*010	POS	POS	*00301+ *00902	*01301/ *107	NEG	*00101/ *002/ *0601	*00103/ *007+ *00103/ *007	*00101/ *017+ *00101/ *017/ *01102	NEG	POS	POS	NGS
8050	POS	POS	POS	POS	A, B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8053	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO RT-PCR
8060	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8069	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	POS	SSO
8071	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8073	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	DEL	RT-PCR

Table 4. KDNA #239 (Unknown)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8079	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8080	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP RT-PCR
8083	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8084	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	Ambiguous	POS	NEG	POS	POS	RT-PCR
8085	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	NGS
8086	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
8090	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
8092	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
8094	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
													ALL EX.4, FULL LENGTH				
8098	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	EX.5	NEG	POS	POS	
8104	POS	POS	POS	POS	A, B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8105	POS	POS	POS	POS	A, B	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	NGS
8106	POS	POS	POS	POS	A, B	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8110	POS	POS	POS	POS	A,B?	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	DEL	
8113	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP
8118	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
8122	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
8124	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
8126	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	FULL	NEG	POS	DEL	SSP
8127	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
8129	POS	POS	POS	NORM	POS	POS	POS	POS	POS	NEG	POS	POS	NORM	NEG	POS	POS	SSP
8130	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	POS	POS	SSO
8131	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	POS	POS	POS	POS	POS	POS	SSP SSO
8132	*0030205, *00401	*0010102	*0010108	NT	A*0050101, B*002	*0150204, *015020	*0020105, *002010	*00902, *0030103	*0130101	NT	*0010102	*0010301, *00103	NT	NEG	NT	NT	NGS

Table 5. KDNA #240 (Caucasian)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[62]	POS[62]	POS[62]	POS[62]	NEG[61]	POS[62]	POS[62]	POS[60]	NEG[62]	NEG[61]	POS[62]	NEG[62]	POS[44]+ DEL[17]	NEG[62]	POS[59]	POS[48]+ FULL, DEL[12]	
124	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	NT	NT	SSP
713	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	RT-PCR
733	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP NGS
762	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	POS	SSP
792	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
1108	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	POS	SSO
1426	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	FULL,DEL	SSP RT-PCR
1466	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	RT-PCR
1694	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
3224	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
3410	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
3519	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
3632	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	RT-PCR
3753	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
3798	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
3966	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
4021	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
4251	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
4337	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
4345	POS	POS	POS	POS	NEG	POS	POS	NEG	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
4985	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
5000	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
5133	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	FULL,DEL	RT-PCR
5142	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	FULL,DEL	
5219	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
5282	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
5462	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	FULL,DEL	SSP RT-PCR
5488	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO RT-PCR
8022	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	FULL,DEL	SSP
8028	POS	POS	POS	NT	NEG	POS	POS	NT	NEG	NEG	POS	NEG	POS	NEG	NT	NT	SSP
8030	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
8047	*00301/ *00302/ *034	*00301	*00101	*00801+ *01101	NEG	*00101/ *095+ *00501	POS	*00206/ *01404+ *00701/ *030	NEG	NEG	*00101	NEG	*00301+ *010	NEG	*00203	POS	NGS
8050	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	FULL,DEL	SSP
8053	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO RT-PCR
8060	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
8069	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	POS	SSO
8071	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
8073	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	FULL,DEL	RT-PCR
8079	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO

Table 5. KDNA #240 (Caucasian)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8080	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP RT-PCR
8083	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
8084	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	RT-PCR
8085	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	NGS
8086	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
8090	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP SSO
8092	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	RT-PCR
8094	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
8098	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	ALL EX.4, DEL EX.5	NEG	POS	POS	
8104	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	FULL,DEL	SSP
8105	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	NGS
8106	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	FULL,DEL	SSP
8110	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	FULL,DEL	
8113	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP
8118	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	RT-PCR
8122	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	RT-PCR
8124	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP SSO
8126	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL	NEG	POS	FULL,DEL	SSP
8127	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	RT-PCR
8129	POS	POS	POS	DEL	NEG	POS	POS	POS	NEG	NEG	POS	NEG	DEL-22BP	NEG	POS	POS	SSP
8130	POS	POS	POS	POS	NEG	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSO
8131	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	NEG	POS	NEG	POS	POS	SSP SSO
8132	*0030212	*0030101	*0010112	*0080105, *01101	NEG	*0010102, *00501	*0010102, *00103	*0020602, *00701	NEG	NT	*0010108	NEG	NT	NEG	NT	*001, *0030207	NGS

Table 6. KDNA #241 (Black)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[62]	POS[62]	POS[62]	POS[61]	POS[50]+ B[12]	POS[62]	POS[62]	POS[61]	NEG[62]	NEG[61]	POS[62]	POS[61]	POS[47]+ FULL, DEL[14]	NEG[62]	POS[58]	POS[46]+ DEL[13]	
124	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	NT	NT	SSP
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	A	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	DEL	SSP
792	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
1108	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL, DEL	NEG	POS	POS	SSO
1426	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL, DEL	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
3224	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
3410	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
3519	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
3632	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	RT-PCR
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	SSP
4021	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
4251	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
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	NEG	SSP
4985	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	SSO
5133	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL, DEL	NEG	POS	DEL	RT-PCR
5142	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	FULL, DEL	NEG	POS	DEL	
5219	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
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, DEL	NEG	POS	DEL	SSP RT-PCR
5488	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO RT-PCR
8022	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL, DEL	NEG	POS	DEL	SSP
8028	POS	POS	POS	NT	POS	POS	POS	NT	NEG	NEG	POS	POS	POS	NEG	NT	NT	SSP
8030	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	NEG	POS	SSO
8047	*003/ *006/ *034+ *004/ *010/ *035	*00101	NEW	*00103+ *00802	B*00201/ B*00202/ B*00203/ B*010	*00401+ *01501/ *01701	POS	*00301+ *00901/ *081	NEG	NEG	NEW/ *00101/ *002/ *00601	*02201	POS	NEG	*00102+ *00201	POS	NGS
8050	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL, DEL	NEG	POS	DEL	SSP
8053	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	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, DEL	NEG	POS	POS	SSO
8071	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO

Table 6. KDNA #241 (Black)

CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8073	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL, DEL	NEG	POS	DEL	RT-PCR
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	SSP RT-PCR
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	POS	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
8094	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8098	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	
8104	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL, DEL	NEG	POS	DEL	SSP
8105	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	NGS
8106	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL, DEL	NEG	POS	DEL	SSP
8110	POS	POS	POS	POS	B	POS	POS	POS	NEG	NEG	POS	POS	FULL, DEL	NEG	POS	DEL	
8113	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP
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, DEL	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	NORM / DEL	POS	POS	POS	POS	NEG	NEG	POS	POS	NORM / DEL-22BP	NEG	POS	POS	SSP
8130	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSO
8131	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	POS	POS	SSP SSO
8132	*0030220, *00401	*0010102	*0010101	*0010302, *00802	B*0020101	*0040106, *01501	*00501, *01301	*0030103, *00901	NEG	NT	*0010105	*0220101	NT	NEG	NT	*0030102, *01001	NGS

Table 7. KDNA #242 (Asian)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
	POS[61]	NEG[61]	POS[62]	POS[61]	POS[52]+ A[10]	POS[62]	POS[62]	POS[61]	POS[62]	POS[61]	NEG[62]	NEG[62]	POS[44]+ DEL[17]	POS[62]	POS[59]	POS[46]+ DEL[13]	
124	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	NT	NT	SSP
713	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	RT-PCR
733	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP NGS
762	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
792	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
1108	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	POS	SSO
1426	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP RT-PCR
1466	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	RT-PCR
1694	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
3224	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
3410	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
3519	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
3632	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	RT-PCR
3753	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
3798	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
3966	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
4021	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
4251	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
4337	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
4345	NEG	POS	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	NEG	SSP
4985	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
5000	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
5133	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	RT-PCR
5142	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	
5219	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
5282	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
5462	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP RT-PCR
5488	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO RT-PCR
8022	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
8028	POS	NEG	POS	NT	POS	POS	POS	NT	POS	POS	NEG	NEG	POS	POS	NT	NT	SSP
8030	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
8047	*003/ *034+ *003/*034	NEG	*00101+ *023	*00501+ *01101	A*00101/ A*00104/ A*01201/ A*01202	*00501	POS	*00901/ *00902/ *081+ *01001/ *01002	*01301/ *107	*00201	NEG	NEG	*010	*00201	NEW+ *00201	POS	NGS
8050	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
8053	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO RT-PCR
8060	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
8069	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	POS	SSO
8071	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
8073	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	RT-PCR
8079	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO

Table 7. KDNA #242 (Asian)																	
CTR	2DL1	2DL2	2DL3	2DL4	2DL5	3DL1	3DL2	3DL3	3DS1	2DS1	2DS2	2DS3	2DS4	2DS5	2DP1	3DP1	Method
8080	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP RT-PCR
8083	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
8084	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	RT-PCR
8085	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	NGS
8086	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
8090	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP SSO
8092	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	RT-PCR
8094	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
8098	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	ALL EX.4, DEL EX.5	POS	POS	POS	
8104	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
8105	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	NGS
8106	POS	NEG	POS	POS	A	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
8110	POS	NEG	POS	POS	A,B?	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	
8113	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP
8118	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	RT-PCR
8122	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	RT-PCR
8124	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP SSO
8126	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL	POS	POS	DEL	SSP
8127	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	RT-PCR
8129	POS	NEG	POS	NORM/ DEL	POS	POS	POS	POS	POS	POS	NEG	NEG	DEL-22BP	POS	POS	POS	SSP
8130	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSO
8131	POS	NEG	POS	POS	POS	POS	POS	POS	POS	POS	NEG	NEG	POS	POS	POS	POS	SSP SSO
8132	*0030204, *00302	NEG	*023, *0010101	*0050101, *01101	A*0010101	*0050103	*0020105, *00701	*00902, *01001	*0130101	NT	NEG	NEG	NT	*0020111	NT	*0030202, *00302	NGS