

Report of the 2nd UCLA International MICA Exchange

August 14, 2007

MICA

5-8

We thank the laboratories that participated in the second UCLA International MICA Exchange. Four DNA samples were shipped to eight laboratories that are actively involved in MICA genotyping studies. All laboratories submitted MICA typing results for samples MICA#005-008. Five laboratories used a Luminex-based sequence-specific oligonucleotide probe hybridization method (SSOP), two laboratories used in-house developed direct DNA sequencing methods, and the remaining laboratory used in-house SSP typing methods. The two laboratories that used sequencing methods reported the number of GCT-triplet repeats in exon 5.

Thanks again for your participation in this important program.

Best regards,

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MICA exchange sample: MICA#005

MICA*004 and MICA*018 were both assigned by 100% of the participating laboratories. MICA*004 is common in African Americans, Caucasians, and Asians (1-3). MICA*004 has also been shown to have a strong association with HLA-B*44 in African American, Caucasian, and Asian populations (2, 4, 5). MICA*004 has 6 GCT repeats in exon 5.

MICA*018 differs from MICA*001 only at position 125 (exon 3) where MICA*018 has a glutamic acid but MICA*001 has a lysine. The allele frequency of MICA*018 is less than 10% in all populations studied (1-3, 6, 7).

MICA exchange sample: MICA#006

This sample was from an Hispanic donor. MICA*004 was assigned by 100%.

MICA*008 was assigned by 87.5% of the laboratories. MICA*008 is the

most common Caucasian allele, with allele frequencies ranging from 28%-78% (1-8). MICA*008 belongs to the A5.1 group with G inserted after the second GCT repeat, which results in a stop codon at position 304. MICA*008 is reported to be aberrantly transported to the apical cell surface (9). MICA*008 has the same nucleotide sequence in exons 2, 3, and 4 as MICA*027.

MICA exchange sample: MICA#007

This DNA was derived from a Caucasian donor. MICA*008 was detected by 87.5%.

MICA*009 was assigned by 87.5% of the laboratories. MICA*009 is identical to MICA*049 except at position 332 (exon 6) in the transmembrane domain, where MICA*009 has a threonine instead of methionine. The allele frequency of MICA*009 is less than 10% in Caucasian and African American populations; however, in Japanese and Korean populations, the MICA*009 allele frequency is 18.4 % and 10.6%, respectively (1-3, 6).

MICA exchange sample: MICA#008

MICA*015 was assigned by 100% of the laboratories for this sample from an Hispanic individual. The allele frequency of MICA*015 is less than 5% in all populations studied (1-3, 6). Three laboratories indicated homozygosity for this allele and four other laboratories identified a second allele string that included MICA*015/*002/*020/*030/*052. MICA*002, MICA*020, MICA*030, and MICA*052 are identical in their extracellular domains, but differ in their transmembrane domains. They also differ from MICA*015 at position 114 (exon 3) where arginine is replaced by glycine. The transmembrane domain of MICA*015 has a large polylysine repeat followed by a truncation due to a deletion at the beginning of exon 5.

References

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MICA#005					
CTR	Investigator Name	MICA	MICA*	OTHERS	METHOD
8050	Baxter-Lowe, Lee-	*004	*018		RVSSO
3625	Darke, Christophe	*004	*01801		SSP
713	Jackson, Annette	*004	*018		RVSSO
278	Lee, Jar-How	*004	*01801		RVSSO
5142	Little, Ann-Margar	*004	*01801	*004/A6, *01801/A4	SBT ex2-5
8049	Lopez-Larrea, Car	*004	*01801		RVSSO
3753	Reed, Elaine	*004	*018		RVSSO
791	Stastny, Peter	*004	*01801	*004/A6, *01801/A4	SBT
MICA#006					
Hispanic					
CTR	Investigator Name	MICA	MICA*	OTHERS	METHOD
8050	Baxter-Lowe, Lee-	*004	*008		RVSSO
3625	Darke, Christophe	*004	*008		SSP
713	Jackson, Annette	*004	*008		RVSSO
278	Lee, Jar-How	*004	*008		RVSSO
5142	Little, Ann-Margar	*004	*008	*004/A6, *008/A5.1	SBT ex2-5
8049	Lopez-Larrea, Car	*004	*027		RVSSO
3753	Reed, Elaine	*004	*008		RVSSO
791	Stastny, Peter	*004	*00801	*004/A6, *00801/A5.1	SBT
MICA#007					
Caucasian					
CTR	Investigator Name	MICA	MICA*	OTHERS	METHOD
8050	Baxter-Lowe, Lee-	*008			RVSSO
3625	Darke, Christophe	*008	*009		SSP
713	Jackson, Annette	*008	*009		RVSSO
278	Lee, Jar-How	*008	*009/*049		RVSSO
5142	Little, Ann-Margar	*008	*00901/049	*008/A5.1, *00901/A6, *049/A6	SBT ex2-5
8049	Lopez-Larrea, Car	*027	*00901		RVSSO
3753	Reed, Elaine	*008	*009/*049		RVSSO
791	Stastny, Peter	*00801	*00901	*00801/A5.1, *00901/A6 or *049	SBT
MICA#008					
Hispanic					
CTR	Investigator Name	MICA	MICA*	OTHERS	METHOD
8050	Baxter-Lowe, Lee-	*015			RVSSO
3625	Darke, Christophe	*015	*00201/*015/*020		SSP
713	Jackson, Annette	*015	*002		RVSSO
278	Lee, Jar-How	*015	*002/*015/*020/*030/*052		RVSSO
5142	Little, Ann-Margar	*015		A9	SBT ex2-5
8049	Lopez-Larrea, Car	*015	*002/*015/*020/*030/*052		RVSSO
3753	Reed, Elaine	*015	*002/*015/*020/*030/*052		RVSSO
791	Stastny, Peter	*015	*015	*015/A9, *015/A9	SBT