

Report of the 4th UCLA International MICA Exchange

May 7, 2008

MICA

13-16

We thank all participating laboratories in the UCLA International MICA Exchange Program. Four DNA samples were shipped to eight laboratories, and MICA typing results were received from seven laboratories (Table 1). Three laboratories used a Luminex-based reverse sequence-specific oligonucleotide (rSSO) hybridization method, two laboratories used sequencing-based testing (SBT), one laboratory used sequence-specific priming (SSP) typing, and one

laboratory used both rSSO and SBT methods. Two of the sequencing laboratories also reported the nature of GCT-repeats in exon 5.

We encourage the participating laboratories to resolve the discrepancies so that the information can be shared to improve the reliability and resolution of MICA typing systems.

MICA#013 (Hispanic)

This DNA was reported to carry MICA*010 and MICA*011 alleles by all 7 participating laboratories. Two laboratories characterized the sequences of exon 5 and reported identical results: MICA*010 with A5 and MICA*011 with A6.

MICA#014 (Asian)

The consensus typing of this DNA is MICA*002/*020 and MICA*010 (A5). Six laboratories assigned MICA*010, while one reported MICA*016/*019/*033. MICA*002, MICA*020, MICA*052, and MICA*055 are identical in the extra cellular domains, but only differ in number of GCT repeats at their transmembrane domains, where MICA*002 belongs to the A9 group, while MICA*020 belongs to the A10 group. MICA*052 and MICA*055 do not have sequencing information at codon 291-304. Notably, the two sequencing laboratories reported different alleles with different number of GCT-repeats in exon 5, with one reporting MICA*00201 with A9 and the other reporting MICA*020 with A10.

MICA#015 (Asian)

The consensus typing of this sample is MICA*008 (A5.1) and MICA*027 (A5). One laboratory reported this DNA as homozygous for MICA*008. Both sequencing laboratories reported identical results and they did not rule out MICA*048 (A5).

MICA#016 (Asian)

The consensus typing of this sample is MICA*004 (A6) and MICA*012 (A4). Four laboratories reported the ambiguous combination of MICA*012/*021. The MICA*021 allele has been deleted from the IMGT database in August 2007 and was renamed MICA*01203, and thus these assignments are considered to be only MICA*012.

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Table 1: MICA typing results reported by participating laboratories.

MICA#013 (Hispanic)	CTR	Investigator	MICA* allele-1	MICA* allele-2	Others	Method
	8050	Baxter-Lowe, Lee-	*010	*011		SBTex2-4, rSSO
	3625	Darke, Christophe	*010	*011		SSP
	8054	Jackson, Annette	*010	*011		rSSO
	278	Lee, Jar-How	*010	*011		rSSO
	8055	Little, Ann-Margar	*010 (A5)	*011 (A6)		SBT ex2-5
	3753	Reed, Elaine	*010	*011		rSSO
	791	Stastny, Peter	*010 (A5)	*011 (A6)		SBT
MICA#014 (Asian)	8050	Baxter-Lowe, Lee-	*00201/*020/*055	*010		SBTex2-4, rSSO
	3625	Darke, Christophe	*00201/*020/*052	*010		SSP
	8054	Jackson, Annette	*002	*010	*020	rSSO
	278	Lee, Jar-How	*002/*020	*016/*019/*033		rSSO
	8055	Little, Ann-Margar	*020 (A10)	*010 (A5)		SBT ex2-5
	3753	Reed, Elaine	*002/*020	*010		rSSO
	791	Stastny, Peter	*00201 (A9)	*010 (A5)		SBT
MICA#015 (Asian)	8050	Baxter-Lowe, Lee-	*00801/*008104	*027		SBTex2-4, rSSO
	3625	Darke, Christophe	*00801	*027		SSP
	8054	Jackson, Annette	*008			rSSO
	278	Lee, Jar-How	*008	*027		rSSO
	8055	Little, Ann-Margar	*00801 (A5.1)	*027 (A5)	*048 (A5)	SBT ex2-5
	3753	Reed, Elaine	*008	*008/*027		rSSO
	791	Stastny, Peter	*00801 (A5.1)	*027 (A5)	*048 (A5)	SBT
MICA#016 (Asian)	8050	Baxter-Lowe, Lee-	*004	*01202/*01203		SBTex2-4, rSSO
	3625	Darke, Christophe	*004	*01201		SSP
	8054	Jackson, Annette	*004	*012	*021	rSSO
	278	Lee, Jar-How	*004	*012/*021		rSSO
	8055	Little, Ann-Margar	*004 (A6)	*01201 (A4)		SBT ex2-5
	3753	Reed, Elaine	*004	*012/*021		rSSO
	791	Stastny, Peter	*004 (A6)	*01201 (A4)		SBT

The number of GCT-repeats (A4, A5, A6, A7, A9, A10) or five GCT-repeats with an additional G (A5.1) in exon-5 (transmembrane region) are indicated in parenthesis (PNAS 1997, 94:1298-1303). rSSO - Luminex-based reverse sequence-specific oligonucleotide hybridization method, SBT - sequencing-based testing, SSP- sequence-specific priming typing.