

REPORT OF THE 6th UCLA INTERNATIONAL MICA EXCHANGE

FEBRUARY 4, 2009

MICA 21-24

Welcome to the 2009 UCLA International MICA Exchange!

We congratulate all participating laboratories for completion of the 2008 International MICA Exchange program. Enclosed in your February sendout package is a certificate to document your participation

Four DNA samples (MICA#21-24) were shipped on August 8, 2008 and MICA typing results were received from 10 laboratories (Table 1). Seven laboratories used a reverse sequence-specific oligonucleotide (rSSO) hybridization method, 2 laboratories used sequencing-based testing (SBT),

MICA#021 (Hispanic)

The MICA*008 and MICA*018 were assigned by 100% of the laboratories. One laboratory did not exclude MICA*027 as this allele is identical to MICA*008 in exons 2, 3, and 4. Using sequencing-based typing, Little and Stastny reported this sample carrying MICA*008 (A5.1) and MICA*01801 (A4). MICA*008 contains 5 triplet repeats plus one additional nucleotide insertion (GGCT/AGCC). This causes a frame shift mutation, which results in premature termination by the stop codon (TAA) in the transmembrane domain.

MICA#022 (Asian)

The consensus typing of this sample is MICA*008 and MICA*019. Six laboratories reported the ambiguous combination, MICA*019/*016/*033. One laboratory did not exclude MICA*027 as this allele is identical to MICA*008 in exons 2, 3 and 4.

Two sequencing laboratories reported this sample carrying MICA*008 (A5.1) and MICA*019 (A5). MICA*016, MICA*019, and MICA*033 all belong to the A5 group. MICA*016 differs from MICA*019 at amino acid position 221, where MICA*016 has a leucine, while MICA*019 has a valine. MICA*033 differs from MICA*019 at amino acid position 124 where MICA*033 has a serine and MICA*019 has a threonine.

and one laboratory used sequence-specific priming (SSP) typing. The sequencing laboratories also reported the number of GCT-repeats in exon 5.

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

We thank all participating laboratories in the MICA Exchange. We appreciate your interest in this important program.

MICA#023 (Hispanic)

The consensus typing of this sample is MICA*002/*015/*020/*030/*052/*055 and MICA*015. Two laboratories using sequencing-based typing reported MICA*00201 (A9) and MICA*015 (A9). MICA*002, MICA*020, MICA*030, MICA*052, and MICA*055 are identical in their extracellular domains, but differ in their transmembrane domains. MICA*015 differs from MICA*002, MICA*020, MICA*030, MICA*052, and MICA*055 at amino acid position 114 where an arginine is replaced by a glycine. The transmembrane domain of MICA*015 contains a large polylysine repeat followed by a truncation due to a deletion at the beginning of exon 5.

MICA#024 (Asian)

The consensus typing of this sample is MICA*012 and MICA*027. Two laboratories reported MICA*012/*021 despite the fact that MICA*021 was renamed as MICA*01203 in the IMGT/HLA Database in August 2007. The two sequencing laboratories assigned MICA*01201 (A4) and MICA*027 (A5). Two laboratories did not exclude MICA*048, which is identical to MICA*027 in the extracellular domains. MICA*027 differs from MICA*048 by one amino acid at position 316 in the transmembrane domain, where a glutamic acid in MICA*027 is replaced by an aspartic acid in MICA*048.

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Marie Lau, Arlene Locke, Qiuheng Zhang, Raja Rajalingam, J.Michael Cecka, and Elaine F. Reed

Table 1: MICA typing results reported by participating laboratories.

MICA#021 (Hispanic)	CTR	Investigator	MICA* allele-1	MICA* allele-2	Others	Method
	3625	Darke, Christophe	*00801	*018		SSP
	8054	Jackson, Annette	*008	*018		rSSO
	278	Lee, Jar-How	*008	*018		rSSO
	759	Lefor, W.M.	*008	*018		rSSO
	8055	Little, Ann-Margar	*008 (A5.1)	*01801 (A4)		SBT ex2-5
	16	Pidwell, Diane J.	*008	*018		rSSO
	8057	Ray, Bryan	*008/*027	*018		rSSO
	3753	Reed, Elaine	*008	*018		rSSO
	791	Stastny, Peter	*00801 (A5.1)	*01801 (A4)		SBT
	8053	Tyan, Dolly	*008	*018		rSSO
MICA#022 (Asian)	3625	Darke, Christophe	*00801	*019		SSP
	8054	Jackson, Annette	*008	*016	*019, *033	rSSO
	278	Lee, Jar-How	*008	*019/*016/*033		rSSO
	759	Lefor, W.M.	*008	*019/*016/*033		rSSO
	8055	Little, Ann-Margar	*008 (A5.1)	*019 (A5)		SBT ex2-5
	16	Pidwell, Diane J.	*008	*019/*016/*033		rSSO
	8057	Ray, Bryan	*008/*027	*019		rSSO
	3753	Reed, Elaine	*008	*019/*016/*033		rSSO
	791	Stastny, Peter	*00801 (A5.1)	*019 (A5)		SBT
	8053	Tyan, Dolly	*008	*019/*016/*033		rSSO
MICA#023 (Hispanic)	3625	Darke, Christophe	*00201/*015/*020/*052	*015		SSP
	8054	Jackson, Annette	*002/*015/*020/*030/*052/*055	*015	*002, *020+	rSSO
	278	Lee, Jar-How	*002/*015/*020/*030/*052	*015		rSSO
	759	Lefor, W.M.	*002/*015/*020/*023+	*015		rSSO
	8055	Little, Ann-Margar	*00201 (A9)	*015 (A9)	*052 (A9)	SBT ex2-5
	16	Pidwell, Diane J.	*002/*015/*020/*030/*052/*055	*015		rSSO
	8057	Ray, Bryan	*002/*020/*052/*055	*015		rSSO
	3753	Reed, Elaine	*002/*015/*020/*030/*052/*055	*015		rSSO
	791	Stastny, Peter	*00201 (A9)	*015 (A9)		SBT
	8053	Tyan, Dolly	*002/*015/*020/*030/*052/*055	*015		rSSO
MICA#024 (Asian)	3625	Darke, Christophe	*01201	*027		SSP
	8054	Jackson, Annette	*012	*027		rSSO
	278	Lee, Jar-How	*012/*021	*027		rSSO
	759	Lefor, W.M.	*012/*021	*027		rSSO
	8055	Little, Ann-Margar	*01201 (A4)	*027 (A5)	*048 (A5)	SBT ex2-5
	16	Pidwell, Diane J.	*012	*027		rSSO
	8057	Ray, Bryan	*012	*008/*027		rSSO
	3753	Reed, Elaine	*012	*027		rSSO
	791	Stastny, Peter	*01201 (A4)	*027 (A5)	*048 (A5)	SBT
	8053	Tyan, Dolly	*012	*027		rSSO

The number of GCT-repeats (A4, A5, A6, A7, A9, A10) or five GCT-repeats with an additional G (A5.1) in exon 5 (trans-membrane 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