

REPORT OF THE 11th UCLA INTERNATIONAL MICA EXCHANGE

August 4, 2010

MICA 41-44

We thank all participating laboratories in the UCLA International MICA Exchange Program. For the 11th MICA Exchange, 4 DNA samples were shipped to 28 laboratories, and MICA typing results were received from 22 of the labs (Table 1). Fourteen laboratories used a reverse sequence-specific oligonucleotide (rSSO) hybridization method, 4 laboratories used sequencing-based testing (SBT), 3 laboratories used sequence-specific priming (SSP)

typing, and 1 laboratory used a combination of SBT and rSSO. The number of GCT-repeats in exon 5 was reported by the sequencing laboratories.

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

Thank you for your continued participation in this important program.

MICA#041 (Black)

MICA*008 (A5.1) and MICA*018 (A4) were the specificities for this sample as reported by 59% of the laboratories. Eight laboratories reported MICA*008/*058 and 2 sequencing laboratories reported MICA*008:01/*008:04. MICA*008:01 differs from MICA*008:04 at the leader sequence with synonymous mutations. MICA*058 differs from MICA*008 at codon 265 where glycine is replaced by an arginine in MICA*058. MICA*018:01 was reported by laboratories performing SBT.

MICA#042 (Asian)

This sample was homozygous for MICA*008 (A5.1). As in MICA#041, a number of laboratories reported MICA*008/*058. One laboratory reported MICA*008/*027 and another reported MICA*008/*027/*048. MICA*008, MICA*027, and MICA*048 have the same nucleotide sequence in exons 2, 3 and 4 making it difficult to distinguish MICA*008, MICA*027, and MICA*048 from each other if only exons 2-4 are analyzed. Both MICA*027 and MICA*048 belong to the A5 group.

MICA#043 (Caucasian)

MICA*009 (A6) and MICA*052 (A9) were assigned by SBT. MICA*009/*049 was reported by laboratories using rSSO. MICA*009 is identical to MICA*049 except at codon 333 (exon 6) in the transmembrane domain, where MICA*009 has a threonine while MICA*049 has a methionine.

MICA*030/*052 was assigned by 11 laboratories while several others reported MICA*002/*020/*052/*055. MICA*030 differs from MICA*052 at codon 271 in the α 3 domain, where MICA*030 has an alanine while MICA*052 has a proline. MICA*002, MICA*020, MICA*052 and MICA*055 are identical in their extra cellular domains, but differ in their transmembrane domains.

MICA#044 (Hispanic)

The consensus typing of this sample was MICA*004 (A6) and MICA*012 (A4). One laboratory reported MICA*021 as another possible allele. It is important to note that MICA*021 was renamed in the IMGT/HLA D*/-atabase in August 2007 to MICA*012:03.

NEXT MAILING DATE: February 2, 2011

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

Table 1: MICA typing results reported by participating laboratories.						
MICA #041 (Black)	Ctr	Investigator	MICA* allele-1	MICA* allele-2	Others	Method
	3224	Chen,Dong-Feng	*008/*058	*018		rSSO
	8030	Davidson&Poulton	*008	*018		rSSO
	762	Fischer&Mayr	*00801	*01801	*00804	SBT
	1647	Gautreaux,Micha	*008/*058	*018		rSSO
	8040	Gladman/Pellet/P	*00801	*018		SSP
	234	Gomez,Carmen	*008	*018		rSSO
	836	KuKuruga,Debra	*008	*018		rSSO
	759	Lopez-Cepero,My	*008/*058	*018		rSSO
	8055	Madrigal,J.A.	*008:01/*008:04 (A5.1)	*018:01 (A4)		SBT
	733	Mytilineos,Joannis	*00801	*01801	*00804	SBT
	5231	Nelson,Karen	*008/*058	*018		rSSO
	3966	Permpikul&Vejbæ	*008	*018		SSP
	16	Pidwell/Askar	*008:01/*008:04 (A5.1)	*018:01 (A4)		rSSO,SBT
	8057	Ray&Balazs	*008/*027	*018		rSSO
	3753	Reed,Elaine F.	*008/*058	*018		rSSO
	3625	Rees,Tracey	*00801	*01801		SSP
	3798	Reinsmoen,Nancy	*008	*018		rSSO
	791	Stastny,Peter	*00801 (A5.1)	*01801 (A4)	*00804 (A5.1), *01801 (A4)	SBT
	2518	Tambur,Anat	*008/*058	*018		rSSO
	8053	Tyan,Dolly	*008/*058	*018		rSSO
	3775	Vidan-Jeras,Blank	*008/*058	*018		rSSO
	1466	Yu,Neng	*008	*018		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 typing

Table 2: MICA typing results reported by participating laboratories.						
MICA #042 (Asian)	Ctr	Investigator	MICA* allele-1	MICA* allele-2	Others	Method
	3224	Chen,Dong-Feng	*008	*008/*058		rSSO
	8030	Davidson&Poulton	*008			rSSO
	762	Fischer&Mayr	*00801		*00804	SBT
	1647	Gautreaux,Micha	*008	*008/*058		rSSO
	8040	Gladman/Pellet/P	*00801	*00801		SSP
	234	Gomez,Carmen	*008	*008		rSSO
	836	KuKuruga,Debra	*008			rSSO
	759	Lopez-Cepero,My	*008	*008/*058		rSSO
	8055	Madrigal,J.A.	*008:01/*008:04 (A5.1)			SBT
	733	Mytilineos,Joannis	*00801	*00801	*00804	SBT
	5231	Nelson,Karen	*008	*008/*058		rSSO
	3966	Permpikul&Vejbae	*008	*027		SSP
	16	Pidwell/Askar	*008:01/*008:04 (A5.1)			rSSO,SBT
	8057	Ray&Balazs	*008/*027	*008/*027		rSSO
	3753	Reed,Elaine F.	*008	*008/*058		rSSO
	3625	Rees,Tracey	*008/*054-*059			SSP
	3798	Reinsmoen,Nancy	*008			rSSO
	791	Stastny,Peter	*00801 (A5.1)		*00804 (A5.1)	SBT
	2518	Tambur,Anat	*008/*058	*008/*058		rSSO
	8053	Tyan,Dolly	*008/*058			rSSO
	3775	Vidan-Jeras,Blank	*008	*008/*058		rSSO
	1466	Yu,Neng	*008	*008/*027/*048		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 typing

Table 3: MICA typing results reported by participating laboratories.						
MICA #043 (Caucasian)	Ctr	Investigator	MICA* allele-1	MICA* allele-2	Others	Method
	3224	Chen,Dong-Feng	*009/*049	*030/*052		rSSO
	8030	Davidson&Poulton	*009/*049	*002/*020/*055		rSSO
	762	Fischer&Mayr	*00901	*052	*049	SBT
	1647	Gautreaux,Micha	*009/*049	*030/*052		rSSO
	8040	Gladman/Pellet/P	*00901/02	*00201/*0202	*049	SSP
	234	Gomez,Carmen	*009/*049	*030/*052		rSSO
	836	KuKuruga,Debra	*009/*049	*030/*052		rSSO
	759	Lopez-Cepero,My	*009/*049	*030/*052		rSSO
	8055	Madrigal,J.A.	*009:01 (A6)	*002:01 (A9)		SBT
	733	Mytilineos,Joannis	*006	*052		SBT
	5231	Nelson,Karen	*009/*049	*030/*052		rSSO
	3966	Permpikul&Vejbæ	*049	*004		SSP
	16	Pidwell/Askar	*009:01/*049 (A6)	*052 (A9)		rSSO,SBT
	8057	Ray&Balazs	*009	*002	*030	rSSO
	3753	Reed,Elaine F.	*009/*049	*030/*052		rSSO
	3625	Rees,Tracey	*049	*00201/*020/*050/*052		SSP
	3798	Reinsmoen,Nancy	*009/*049	*030/*052		rSSO
	791	Stastny,Peter	*00901 (A6)	*052 (A9)	*049 (A6), *052 (A9)	SBT
	2518	Tambur,Anat	*009/*049	*030/*052		rSSO
	8053	Tyan,Dolly	*009/*049	*030/*052		rSSO
	3775	Vidan-Jeras,Blank	*009/*049	*030/*052		rSSO
	1466	Yu,Neng	*009/*049	*002/*020/*052/*055		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 typing

Table 4: MICA typing results reported by participating laboratories.						
MICA #044 (Hispanic)	Ctr	Investigator	MICA* allele-1	MICA* allele-2	Others	Method
	3224	Chen,Dong-Feng	*004	*012		rSSO
	8030	Davidson&Poulton	*004	*012		rSSO
	762	Fischer&Mayr	*004	*01201		SBT
	1647	Gautreaux,Micha	*004	*012		rSSO
	8040	Gladman/Pellet/P	*004	*01201	*021	SSP
	234	Gomez,Carmen	*004	*012		rSSO
	836	KuKuruga,Debra	*004	*012		rSSO
	759	Lopez-Cepero,My	*004	*012		rSSO
	8055	Madrigal,J.A.	*004 (A6)	*012:01 (A4)		SBT
	733	Mytilineos,Joannis	*004	*01201		SBT
	5231	Nelson,Karen	*004	*012		rSSO
	3966	Permpikul&Vejbae	*004	*012		SSP
	16	Pidwell/Askar	*004 (A6)	*012:01 (A4)		rSSO,SBT
	8057	Ray&Balazs	*004	*012		rSSO
	3753	Reed,Elaine F.	*004	*012		rSSO
	3625	Rees,Tracey	*004	*01201		SSP
	3798	Reinsmoen,Nancy	*004	*012		rSSO
	791	Stastny,Peter	*004 (A6)	*01201 (A4)		SBT
	2518	Tambur,Anat	*004	*012		rSSO
	8053	Tyan,Dolly	*004	*012		rSSO
	3775	Vidan-Jeras,Blank	*004	*012		rSSO
	1466	Yu,Neng	*004	*012		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 typing