

REPORT OF THE 12th UCLA INTERNATIONAL MICA EXCHANGE

December 8, 2010

MICA

45-48

We thank all participating laboratories in the UCLA International MICA Exchange Program. Four DNA samples were shipped to 28 laboratories, and MICA typing results were received from 22 laboratories (Tables 1 - 4). 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 both 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#045 (Asian)

The consensus typing of this sample is MICA*008 (A5.1) and MICA*010 (A5). Laboratories performing SBT reported MICA*008:01/*008:04. MICA*008:01 differs from MICA*008:04 at the leader sequence with synonymous mutations. Several other laboratories reported MICA*008/*058. MICA*058 differs from MICA*008 at codon 265 where glycine in MICA*008 is replaced by an arginine in MICA*058.

A number of laboratories performing rSSO reported MICA*010/*054. MICA*010 and MICA*054 differ from other MICA alleles at codon 6 where arginine is replaced by a proline resulting in the loss of cell surface expression. MICA*054 differs from MICA*010 only at codon 268 in the a3 domain, where MICA*054 has a glycine and MICA*010 has a serine.

MICA#046 (Asian)

MICA*008 (A5.1) and MICA*045 (A4) is the consensus typing for this sample. Several laboratories reported MICA*008/*058 and 1 other laboratory reported MICA*008/*027. MICA*027 has the same nucleotide sequence in exons 2, 3,

and 4 as MICA*008 making it difficult to distinguish MICA*027 from MICA*008 if only exons 2 – 4 are analyzed.

MICA#047 (Hispanic)

The consensus typing of sample is MICA*001 (A4) and MICA*016 (A5). MICA*016/*019/*056 was reported by several laboratories. MICA*016 differs from MICA*019 at codon 221 in the alpha 3 chain (exon 4), where MICA*016 has a leucine compared to valine in MICA*019. Additionally, MICA*016 differs from MICA*056 at codon 230 where tryptophan is replaced by serine in MICA*056.

MICA#048 (Asian)

MICA*017 (A9) and MICA*019 (A5) is the consensus typing for this sample. Only 1 laboratory reported MICA*002 instead of MICA*017. MICA*017 differs from MICA*002 at codon 91 (exon 3) where MICA*017 has an arginine while MICA*002 has a glutamine. MICA*017 also differs from MICA*002 at the 3' end of exon 4 where MICA*017 has a guanine deletion at the beginning of exon 5 resulting in a large polylysine repeat.

NEXT MAILING DATE: February 2, 2011

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Table 1: MICA typing results reported by participating laboratories.						
MICA #045 (Asian)	Ctr	Investigator	MICA* allele-1	MICA* allele-2	Others	Method
	3224	Chen,Dong-Feng	*008	*010		rSSO
	8030	Davidson&Poulton	*008	*010/*054		rSSO
	762	Fischer&Mayr	*008:01/*008:04 (A5.1)	*010 (A5)		SBT
	8040	Gladman/Pellet/P	*00801	*010		SSP
	234	Gomez, Carmen	*008:01/*008:04	*010		rSSO
	4337	Kim,Tai-Gyu	*008	*010		SSP
	836	KuKuruga,Debra	*008	*010		rSSO
	278	Lee, Jar-How	*008	*010		rSSO
	759	Lopez-Cepero, My	*008/*058	*016/*019/*033/*056		rSSO
	8055	Madrigal, J.A.	*00801/*00804 (A5.1)	*010 (A5)		SBT
	733	Mytilineos, Joannis	*00801	*010	*00804	SBT
	5231	Nelson, Karen	*008	*010		rSSO
	16	Pidwell/Askar	*008:01/*008:04 (A5.1)	*010 (A5)		rSSO, SBT
	8057	Ray&Balazs	*008/*027	*010/*054		rSSO
	3753	Reed, Elaine F.	*008	*010		rSSO
	3625	Rees, Tracey	*008	*010/*019		SSP
	3798	Reinsmoen, Nancy	*008/*058	*010/*054		rSSO
	791	Stastny, Peter	*008:01/*008:04 (A5.1)	*010 (A5)		SBT
	2518	Tambur, Anat	*008	*010		rSSO
	8053	Tyan, Dolly	*008	*010		rSSO
	3775	Vidan-Jeras, Blank	*008/*058	*010/*054		rSSO
	1466	Yu, Neng	*008	*010		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 #046 (Asian)	Ctr	Investigator	MICA* allele-1	MICA* allele-2	Others	Method
	3224	Chen,Dong-Feng	*008	*045		rSSO
	8030	Davidson&Poulton	*008	*045		rSSO
	762	Fischer&Mayr	*008:01/*008:04 (A5.1)	*045 (A4)		SBT
	8040	Gladman/Pellet/P	*00801	*045		SSP
	234	Gomez,Carmen	*008	*045		rSSO
	4337	Kim,Tai-Gyu	*008	*045		SSP
	836	KuKuruga,Debra	*008	*045		rSSO
	278	Lee,Jar-How	*008	*045		rSSO
	759	Lopez-Cepero,My	*008/*058	*045		rSSO
	8055	Madrigal,J.A.	*008:01/*008:04 (A5.1)	*045 (A4)		SBT
	733	Mytilineos,Joannis	*00801	*045	*00804	SBT
	5231	Nelson,Karen	*008	*045		rSSO
	16	Pidwell/Askar	*008:01/*008:04 (A5.1)	*045 (A4)		rSSO, SBT
	8057	Ray&Balazs	*008/*027	*045		rSSO
	3753	Reed,Elaine F.	*008	*045		rSSO
	3625	Rees,Tracey	*008	*045		SSP
	3798	Reinsmoen,Nancy	*008/*058	*045		rSSO
	791	Stastny,Peter	*008:01/*008:04 (A5.1)	*045 (A4)		SBT
	2518	Tambur,Anat	*008	*045		rSSO
	8053	Tyan,Dolly	*008	*045		rSSO
	3775	Vidan-Jeras,Blank	*008/*058	*045		rSSO
	1466	Yu,Neng	*008	*045		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).

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SBT - sequencing-based testing

SSP- sequence-specific priming typing

Table 3: MICA typing results reported by participating laboratories.						
MICA #047 (Hispanic)	Ctr	Investigator	MICA* allele-1	MICA* allele-2	Others	Method
	3224	Chen, Dong-Feng	*001	*016		rSSO
	8030	Davidson&Poulton	*001	*016/*019	*056	rSSO
	762	Fischer&Mayr	*001 (A4)	*016 (A5)		SBT
	8040	Gladman/Pellet/P	*001	*016		SSP
	234	Gomez, Carmen	*001	*016		rSSO
	4337	Kim, Tai-Gyu	*001	*016		SSP
	836	KuKuruga,Debra	*001	*016		rSSO
	278	Lee, Jar-How	*001	*016		rSSO
	759	Lopez-Cepero, My	*001	*016/*019/*056		rSSO
	8055	Madrigal, J. A.	*001 (A4)	*016 (A5)		SBT
	733	Mytilineos, Joannis	*001	*016		SBT
	5231	Nelson, Karen	*001	*016		rSSO
	16	Pidwell/Askar	*001 (A4)	*016 (A5)		rSSO, SBT
	8057	Ray&Balazs	*001	*016		rSSO
	3753	Reed, Elaine F.	*001	*016		rSSO
	3625	Rees, Tracey	*001	*016		SSP
	3798	Reinsmoen, Nancy	*001	*016/*019/*056		rSSO
	791	Stastny, Peter	*001 (A4)	*016 (A5)		SBT
	2518	Tambur, Anat	*001	*016		rSSO
	8053	Tyan, Dolly	*001	*016		rSSO
	3775	Vidan-Jeras, Blank	*001	*016/*019/*056		rSSO
	1466	Yu, Neng	*001	*016		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).

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SBT - sequencing-based testing

SSP- sequence-specific priming typing

Table 4: MICA typing results reported by participating laboratories.						
MICA #048 (Asian)	Ctr	Investigator	MICA* allele-1	MICA* allele-2	Others	Method
	3224	Chen,Dong-Feng	*017	*019		rSSO
	8030	Davidson&Poulton	*017	*016/*019	*033/*056	rSSO
	762	Fischer&Mayr	*017 (A9)	*019 (A5)		SBT
	8040	Gladman/Pellet/P	*017	*019		SSP
	234	Gomez,Carmen	*017	*019		rSSO
	4337	Kim,Tai-Gyu	*017	*019		SSP
	836	KuKuruga,Debra	*017	*019		rSSO
	278	Lee,Jar-How	*017	*019		rSSO
	759	Lopez-Cepero,My	*017	*016/*019/*033/*056		rSSO
	8055	Madrigal,J.A.	*017 (A9)	*019 (A5)		SBT
	733	Mytilineos,Joannis	*017	*019		SBT
	5231	Nelson,Karen	*017	*019		rSSO
	16	Pidwell/Askar	*017 (A9)	*019 (A5)		rSSO,SBT
	8057	Ray&Balazs	*002	*019	*030	rSSO
	3753	Reed,Elaine F.	*017	*019		rSSO
	3625	Rees,Tracey	*017	*019		SSP
	3798	Reinsmoen,Nancy	*017	*016/*019/*033/*056		rSSO
	791	Stastny,Peter	*017 (A9)	*019 (A5)		SBT
	2518	Tambur,Anat	*017	*010/*019		rSSO
	8053	Tyan,Dolly	*017	*019		rSSO
	3775	Vidan-Jeras,Blank	*017	*016/*019/*033/*056		rSSO
	1466	Yu,Neng	*017	*019		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).

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