

REPORT OF THE 31st UCLA INTERNATIONAL MICA EXCHANGE

APRIL 20, 2017

MICA

121-124

For the 31st MICA Exchange, 4 DNA samples (MICA#121-MICA#124) were shipped to 21 laboratories worldwide. MICA typing results were received from all 21 laboratories. Results for MICA Ex-

change 31 are summarized in Table 1 and individual laboratory results are shown in Tables 2-5.

MICA#121. MICA*002 and MICA*007 was the reported MICA type for this sample from a Hispanic donor. MICA*002 was assigned by 43% (9/21), with 7 labs assigning MICA*002:01. The remainder of the labs (57%), were unable to resolve MICA*002 from among MICA*020, MICA*055, MICA*081, or MICA*086. MICA*020 and MICA*055 differ from MICA*002 by the number of GCT repeats in their transmembrane domains (exon 5), where MICA*002 has 9 GCT repeats, MICA*020 has 10 GCT repeats, and MICA*055 has 8 GCT repeats. MICA*081 differs from MICA*002 by a single nucleotide substitution in exon 4 at codon 245 (GTG → GCG), resulting in an amino acid change from valine to alanine in MICA*081. Finally, MICA*086, differs from MICA*002 in exon 3 by a single nucleotide substitution at codon 130 (CCC → TCC), which results in an amino acid change from proline to serine.

MICA*007 (43%) was assigned as the second allele, with 7 labs

assigning MICA*007:01. A number of labs (n=12) were unable to resolve MICA*007 from MICA*026 and MICA*079. MICA*007 and MICA*026 are identical in their cellular domains, but differ in their transmembrane domains (exon 5), where MICA*007 has 4 GCT repeats, while MICA*026 has 6 GCT repeats. In turn, MICA*079 differs from MICA*007 in exon 4 at codon 250 (TGC → CGC), which results in an amino acid change from cysteine to arginine.

MICA#122. MICA*017 and MICA*019 was the reported MICA type for this sample from a Filipino donor. MICA*017 and MICA*019 were each assigned in complete consensus, with 8 labs reporting MICA*019:01. Two laboratories reported MICA*019:01/MICA*019:02. MICA*019:01 and MICA*019:02 differ with a single nucleotide substitution at codon 55 in exon 2 (GGA → GGG), resulting a synonymous mutation.

MICA#123. MICA*009/*049 and MICA*027 was the reported MICA type for this sample from an Asian (Chinese/Japanese) donor. No agreement was achieved for the first MICA allele, as MICA*009/*049 was assigned by 10 labs, MICA*009 by 8 labs, and MICA*049 by 3 labs (2 SBT and 1 SSP). MICA *049 differs from MICA*009 in exon 6 by a single nucleotide substitution at codon 333 (ACG → ATG), where threonine is replaced by methionine in MICA*049.

MICA*027 was reported as the second MICA allele, with 48% of labs reporting MICA*027 and 52% reporting MICA*027/*048. MI-

CA*048 differs from MICA*027 in exon 5 by a single nucleotide substitution at codon 316 (GAG → GAT), resulting in an amino acid change from glutamic acid to aspartic acid in MICA*048.

MICA#124. MICA*004 and MICA*027 was the reported MICA type for this sample from a Hispanic donor. MICA*004 was well assigned by 100% of labs. The assignment of the second MICA allele was not as well defined, as 48% of labs assigned MICA*027 and 52% assigned MICA*027/*048.

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Table 1. Summary of 31st MICA Exchange #121-#124

MICA#121		MICA#122		MICA#123		MICA#124	
21 labs		21 labs		21 labs		21 labs	
Allele-1	%(n)	Allele - 1	%(n)	Allele - 1	%(n)	Allele - 1	%(n)
*002:01	33(7)	*017	100(17)	*009:01	29(6)	*004	100(21)
*002	9 (2)			*009	10(2)		
*002/*020/*055	5 (1)			*009:01/*049	14(3)		
*002/*020/*086	5 (1)			*009/*049	33(7)		
*002:01/*020/*055/*086	9 (2)			*049	14(3)		
*002:01/*002:03/*020/*055/*081	5 (1)						
*002/*020/*055/*086	24(5)						
*002/*020/*055/*081/*086	9 (2)						
Allele-2	%(n)	Allele - 2	%(n)	Allele - 2	%(n)	Allele - 2	%(n)
*007:01	33(7)	*019:01	38(8)	*027	48(10)	*027	48(10)
*007	10(2)	*019	57(12)	*027/*048	52(11)	*027/*048	52(11)
*007:01/*026	19(4)	*019:01/*019:02	5 (1)				
*007/*026	28(6)						
*007/*026/*079	10(2)						

Table 2. MICA typing results reported by participating laboratories.						
MICA #121 (Hispanic)	CTR	Investigator	Allele-1	Allele-2	Others	Method
	3224	Chen, Dong-Feng	*002:01	*007:01	*026/*020/*055/*086	SSO
	8086	Du, Keming	*002:01	*007:01		SBT
	2549	Fagoaga, Omar	*002:01	*007:01	*026/*020/*055/*086	SSO
	234	Fernandez, Casiana	*002:01/*020/*055/*086	*007:01/*026		SSO
	762	Fischer, Gottfried	*002:01	*007:01	*002:02/*007:02	SBT
	5000	Hsu, Susan H.	*002/*020/*055/*086	*007/*026		SSO
	8035	Kanangat, Siva	*002/*020/*055/*081/*086	*007/*026/*079		SSO
	4337	Kim, Tai-Gyu	*002/*020/*055	*007/*026		SSP
	836	KuKuruga, Debra	*002/*020/*055/*086	*007/*026		SSO
	278	Lee, Jar-How	*002:01	*007:01	*002:03	
	8067	Marino, Susana R.	*002:01/*020/*055/*086	*007:01/*026		SSO
	8080	Monos, Dimitrios	*002:01/*002:03/*020/*055/*081	*007:01/*026	*055/*079	
	735	Moussa, Omar	*002	*007	*020/*026/*055/*079/*081/*086	SSO
	733	Mytilineos, Joannis	*002:01	*007:01		SBT
	3966	Permpikul, Vejbaesya &	*002	*007		SSP
	8030	Poulton, Kay	*002:01	*007:01	*020/*026/*055/*079/*081/*086	SSO
	3753	Reed, Elaine F.	*002/*020/*055/*081/*086	*007/*026/*079		SSO
	3798	Reinsmoen, Nancy L.	*002/*020/*055/*086	*007/*026		SSO
	1426	Senitzer, David	*002/*020/*055/*086	*007:01/*026		SSO
	5231	Warner, Paul	*002/*020/*086	*007/*026		SSO
	16	Zhang, Aiwen	*002/*020/*055/*086	*007/*026		

Table 3. MICA typing results reported by participating laboratories.						
MICA #122 (Filipino)	CTR	Investigator	Allele-1	Allele-2	Others	Method
	3224	Chen, Dong-Feng	*017	*019:01		SSO
	8086	Du, Keming	*017	*019:01		SBT
	2549	Fagoaga, Omar	*017	*019:01		SSO
	234	Fernandez, Casiana	*017	*019:01		SSO
	762	Fischer, Gottfried	*017	*019:01		SBT
	5000	Hsu, Susan H.	*017	*019		SSO
	8035	Kanangat, Siva	*017	*019		SSO
	4337	Kim, Tai-Gyu	*017	*019		SSP
	836	KuKuruga, Debra	*017	*019		SSO
	278	Lee, Jar-How	*017	*019		
	8067	Marino, Susana R.	*017	*019:01		SSO
	8080	Monos, Dimitrios	*017	*019:01/*019:02		
	735	Moussa, Omar	*017	*019		SSO
	733	Mytilineos, Joannis	*017	*019		SBT
	3966	Permpikul, Vejbaesya &	*017	*019		SSP
	8030	Poulton, Kay	*017	*019:01	*019:02	SSO
	3753	Reed, Elaine F.	*017	*019		SSO
	3798	Reinsmoen, Nancy L.	*017	*019		SSO
	1426	Senitzer, David	*017	*019:01		SSO
	5231	Warner, Paul	*017	*019		SSO
	16	Zhang, Aiwen	*017	*019		

Table 4. MICA typing results reported by participating laboratories.						
MICA #123 (Asian)	CTR	Investigator	Allele-1	Allele-2	Others	Method
	3224	Chen, Dong-Feng	*009:01	*027	*048/*049	SSO
	8086	Du, Keming	*049	*027		SBT
	2549	Fagoaga, Omar	*009:01	*027	*048/*049	SSO
	234	Fernandez, Casiana	*009:01	*027/*048		SSO
	762	Fischer, Gottfried	*049	*027	*024/*076	SBT
	5000	Hsu, Susan H.	*009/*049	*027/*048		SSO
	8035	Kanangat, Siva	*009/*049	*027/*048		SSO
	4337	Kim, Tai-Gyu	*049	*027		SSP
	836	KuKuruga, Debra	*009/*049	*027/*048		SSO
	278	Lee, Jar-How	*009:01	*027		
	8067	Marino, Susana R.	*009:01/*049	*027/*048		SSO
	8080	Monos, Dimitrios	*009:01/*049	*027/*048		
	735	Moussa, Omar	*009	*027	*048/*049	SSO
	733	Mytilineos, Joannis	*009:01	*027	*049	SBT
	3966	Permpikul, Vejbaesya &	*009	*027		SSP
	8030	Poulton, Kay	*009:01	*027	*048/*049	SSO
	3753	Reed, Elaine F.	*009/*049	*027/*048		SSO
	3798	Reinsmoen, Nancy L.	*009/*049	*027/*048		SSO
	1426	Senitzer, David	*009:01/*049	*027/*048		SSO
	5231	Warner, Paul	*009/*049	*027/*048		SSO
	16	Zhang, Aiwen	*009/*049	*027/*048		

Table 5. MICA typing results reported by participating laboratories.						
MICA #124 (Hispanic)	CTR	Investigator	Allele-1	Allele-2	Others	Method
	3224	Chen, Dong-Feng	*004	*027	*048	SSO
	8086	Du, Keming	*004	*027		SBT
	2549	Fagoaga, Omar	*004	*027	*048	SSO
	234	Fernandez, Casiana	*004	*027/*048		SSO
	762	Fischer, Gottfried	*004	*027	*048	SBT
	5000	Hsu, Susan H.	*004	*027/*048		SSO
	8035	Kanangat, Siva	*004	*027/*048		SSO
	4337	Kim, Tai-Gyu	*004	*027		SSP
	836	KuKuruga, Debra	*004	*027/*048		SSO
	278	Lee, Jar-How	*004	*027		
	8067	Marino, Susana R.	*004	*027/*048		SSO
	8080	Monos, Dimitrios	*004	*027/*048		
	735	Moussa, Omar	*004	*027	*048	SSO
	733	Mytilineos, Joannis	*004	*027		SBT
	3966	Permpikul, Vejbaesya &	*004	*027		SSP
	8030	Poulton, Kay	*004	*027	*048	SSO
	3753	Reed, Elaine F.	*004	*027/*048		SSO
	3798	Reinsmoen, Nancy L.	*004	*027/*048		SSO
	1426	Senitzer, David	*004	*027/*048		SSO
	5231	Warner, Paul	*004	*027/*048		SSO
	16	Zhang, Aiwen	*004	*027/*048		