

REPORT OF THE 36th UCLA INTERNATIONAL MICA EXCHANGE

NOVEMBER 8, 2018

MICA

141-144

For the 36th MICA Exchange, 4 DNA samples (MICA#141-MICA#144) were shipped to 22 laboratories worldwide. MICA typing results were re-

ceived from 21 laboratories. Results for MICA Exchange 36 are summarized in Table 1 and individual laboratory results are shown in Tables 2-5.

MICA#141. MICA*010 and MICA*012 was the reported consensus type for this sample from an Asian donor. MICA*010 was assigned by 10 labs, with 6 labs assigning MICA*010:01. MICA*010/*069 was reported by 9 labs and 1 lab reported MICA*010:01/*065/*069. MICA*069 differs from MICA*010:01 in exon 5 by a single nucleotide substitution at codon 350 (GCT→GAT), which results in amino acid change from alanine to aspartic acid. MICA*012 was assigned in complete consensus as the second MICA allele, with 12 labs assigning MICA*012:01.

MICA#142. MICA*008 and MICA*016 was the reported consensus type for this sample from a Caucasian donor. MICA*008 was assigned by all but 1 lab, which misassigned MICA*027. Among the labs reporting MICA*008, 8 labs assigned MICA*008:01, 2 labs reported MICA*008:01/*008:04, 1 lab reported MICA*008:01:01/*008:01:02/*008:04, and 1 lab reported MICA*008:01:01/*008:01:02/*008:03. MICA*008:03 differs from MICA*008:01 in exon 4 by a single nucleotide substitution at codon 193 (GCC→GCA), resulting in a synonymous substitution. MICA*008:04 differs from MICA*008:01 by a single nucleotide substitution (TTC→TTT) in exon 1 at codon -16, which also results in a synonymous substitution.

MICA#143. MICA*004 and MICA*011 was the reported consensus type for this sample from an African American donor. MICA*004 and MICA*011 were each assigned in complete consensus.

MICA#144. MICA*012 was the reported consensus type for this sample from a Filipino donor. This sample was previously examined as MICA sample #118 (2016). In this present retyping, 11 labs reported this sample as homozygous for MICA*012 (*012:01), compared to only 4 labs in the 2016 study. A number of labs (N=9) assigned MICA*012/*018 (*012:01/*018:01) along with MICA*012, while 1 lab assigned MICA*018:01 along with MICA*012. MICA*018:01 differs from MICA*012:01 by 2 nucleotide substitutions. The first is in exon 3 at codon 151 (CTC→CAC) in which leucine is replaced by histidine in MICA*018:01. The second substitution is in exon 6 at codon 360 (GCC→ACC) where alanine is replaced by threonine in MICA*018:01.

One lab reporting by NGS detected the presence of novel alleles in this sample, noting the “alleles are identical to MICA*012:01 with a single nucleotide difference in exon 1 at codon -12. The sequence change from GGC to GTC will result in an amino acid change from Glycine to Valine. This sequence was not observed in any known MICA exon 1 sequence.”



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Table 1. Summary of 36th MICA Exchange #141-#144

MICA#141	
21 labs	
Allele-1	%(n)
*010:01	28(6)
*010	19(4)
*019:01	5 (1)
*010:01/*069	19(4)
*010/*069	24(5)
*010:01/*065/*069	5 (1)
21 labs	
Allele-2	%(n)
*012:01	57(12)
*012	38(8)
*012:01/*012:04	5 (1)

MICA#142	
21 labs	
Allele - 1	%(n)
*008:01	38(8)
*008	38(8)
*008:01/*008:04	9 (2)
*008:01:01/*008:01:02/*008:04	5 (1)
*008:01:01/*008:01:02/*008:03	5 (1)
*027	5 (1)
21 labs	
Allele - 2	%(n)
*016	100(21)

MICA#143	
21 labs	
Allele - 1	%(n)
*004	100(21)
21 labs	
Allele - 2	%(n)
*011	100(21)

MICA#144	
21 labs	
Allele - 1	%(n)
*012:01	57(12)
*012	38(8)
*012:01/*012:04	5 (1)
21 labs	
Allele - 2	%(n)
*012:01	33(7)
*012	14(3)
*012:01/*012:04	5 (1)
*012:01/*018:01	19 (4)
*012/*018	24(5)
*018:01	5 (1)

Table 2. MICA typing results reported by participating laboratories.					
MICA# 141 (Asian)	CTR	Allele-1	Allele-2	Others	Method
	234	*019:01	*012:01		SSO
	278	*010:01	*012:01		
	733	*010:01	*012:01	*069	SBT
	735	*010	*012	*069	SSO
	762	*010:01	*012:01		SBT
	836	*010/*069	*012		SSO
	1426	*010:01/*069	*012:01		SSO
	2549	*010:01/*069	*012:01		SSO
	3224	*010:01/*069	*012:01		SSO
	3753	*010/*069	*012		SSO
	3798	*010/*069	*012		SSO
	3966	*010	*012		SSO
	4337	*010	*012:01		SSP
	5000	*010/*069	*012		SSO
	5231	*010:01/*069	*012:01		SSO
	8035	*010/*069	*012		SSO
	8047	*010:01/*065/*069	*012:01/*012:04		NGS
	8080	*010:01	*012:01		NGS
	8086	*010:01	*012:01		SBT
	8105	*010:01	*012:01		NGS
	8108	*010	*012	*069	SSO

Table 3. MICA typing results reported by participating laboratories.					
MICA# 142 (Caucasian)	CTR	Allele-1	Allele-2	Others	Method
	234	*008:01/*008:04	*016		SSO
	278	*008:01	*016	*008:04	
	733	*008:01	*016	*008:04	SBT
	735	*008	*016		SSO
	762	*008:01	*016		SBT
	836	*008	*016		SSO
	1426	*008:01:01/*008:01:02/*008:04	*016		SSO
	2549	*008:01/*008:04	*016		SSO
	3224	*008:01	*016		SSO
	3753	*008	*016		SSO
	3798	*008	*016		SSO
	3966	*008	*016		SSO
	4337	*027	*016		SSP
	5000	*008	*016		SSO
	5231	*008:01	*016		SSO
	8035	*008	*016		SSO
	8047	*008:01:01/*008:01:02/*008:03	*016	*008:04	NGS
	8080	*008:01	*016		NGS
	8086	*008:01	*016		SBT
	8105	*008:01	*016		NGS
	8108	*008	*016		SSO

Table 4. MICA typing results reported by participating laboratories.					
MICA# 143 (Black)	CTR	Allele-1	Allele-2	Others	Method
	234	*004	*011		SSO
	278	*004	*011		
	733	*004	*011		SBT
	735	*004	*011		SSO
	762	*004	*011		SBT
	836	*004	*011		SSO
	1426	*004	*011		SSO
	2549	*004	*011		SSO
	3224	*004	*011		SSO
	3753	*004	*011		SSO
	3798	*004	*011		SSO
	3966	*004	*011		SSO
	4337	*004	*011		SSP
	5000	*004	*011		SSO
	5231	*004	*011		SSO
	8035	*004	*011		SSO
	8047	*004	*011		NGS
	8080	*004	*011		NGS
	8086	*004	*011		SBT
	8105	*004	*011		NGS
	8108	*004	*011		SSO

Table 5. MICA typing results reported by participating laboratories.					
MICA# 144 (Filipino)	CTR	Allele-1	Allele-2	Others	Method
	234	*012:01	*018:01		SSO
	278	*012:01	*012:01	*018:01	
	733	*012:01			SBT
	735	*012	*012	*018	SSO
	762	*012:01			SBT
	836	*012	*012/*018		SSO
	1426	*012:01	*012:01/*018:01		SSO
	2549	*012:01	*012:01/*018:01		SSO
	3224	*012:01	*012:01/*018:01		SSO
	3753	*012	*012/*018		SSO
	3798	*012	*012/*018		SSO
	3966	*012	*012	*018	SSO
	4337	*012:01	*012:01		SSP
	5000	*012	*012/*018		SSO
	5231	*012:01	*012:01/*018:01		SSO
	8035	*012	*012/*018		SSO
	8047	*012:01/*012:04	*012:01/*012:04		NGS
	8080	*012:01	*012:01	Novelty detected.	NGS
	8086	*012:01	-	MICA-Null	SBT
	8105	*012:01			NGS
	8108	*012		*018	SSO