

REPORT OF THE 49th INTERNATIONAL MICA EXCHANGE

JUNE 2, 2025

MICA

217 - 222

For the 49th MICA Exchange, 6 DNA samples (MICA #217 - MICA#222) were shipped to 18 laboratories worldwide. MICA typing results were received

from all 18 laboratories. Results are summarized on Table 1 and individual laboratory results are listed on tables 2 - 7.

MICA #217. MICA*001 (A4)-MICA*010 (A5) was the reported MICA genotype for this sample from a Caucasian donor. This sample was previously examined as MICA sample #164 (2020). In this present retyping, MICA*001 and MICA*010 were once again reported with $\geq 80\%$ agreement. MICA*001:01 (50%) and MICA*010:01 (61%) were the assigned subtypes.

MICA #218. MICA*018 (A4)-MICA*019 (A5) was the reported MICA genotype for this sample from a Hispanic donor. MICA*018 and MICA*019 were each reported by $\geq 80\%$ of labs. Assigned subtypes were MICA*018:01 (67%) and MICA*019:01 (61%). Center 5142 noted a novel MICA*019:01 allele may be present.

MICA #219. MICA*007 (A4) and MICA*072 (A9) was the reported MICA genotype for this sample from a Caucasian donor. This sample was examined several times in the Exchange as MICA sample nos. 201 (2023), 171 (2021), and 147 (2019). In this present retyping, $\geq 80\%$ agreement was achieved in the reporting of MICA*007 and MICA*072. Assigned subtypes for each were MICA*007:01 (61%) and MICA*072:01 (55%).

MICA #220. MICA*101 (A6) and MICA*004 (A6) was the reported MICA genotype for this sample from a donor of mixed Caucasian and Hispanic heritage. This sample was examined previously as MICA sample nos. 186 (2022), 177 (2021), and 114 (2016). In this present retyping, the assignment of MICA*101 (72%) improved, compared to an assignment of 69% in 2022. MICA*047/*101 was reported by 2 labs, while 3 labs reported MICA*047. MICA*101 differs from MICA*047 in exon 6 by a single nucleotide substitution at codon 321 (CTG $\rightarrow$ GTG), resulting in an amino acid change from leucine in MICA*047 to valine in MICA*101. MICA*004 was reported by 94% as the second MICA allele, with 10 labs assigning MICA*004:01.

MICA #221. This sample from a Native Hawaiian donor was reported as homozygous for MICA*002 (A9). MICA*002 was reported by 13 labs, with 10 labs reporting MICA*002:01 and 1 lab reporting MICA*002:01:03. Interestingly, center 5142 noted a new MICA*002:01:03 allele may be present. The remaining labs were unable to resolve MICA*002 from among a string of other alleles, including MICA*020, *055, *089, and *090.

MICA #222. MICA*008 (A5.1)-MICA*015 (A9) was the reported MICA genotype for this sample from a donor of African American descent. MICA*008 and MICA*015 were each assigned by $\geq 80\%$ of labs, with the subtypes reported as MICA*008:01 (61%) and MICA*015:01 (50%). Center 5142 identified the presence of a possible MICA*015:01 allele in this sample.

NEXT MAILING DATE: August 27, 2025

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Table 1. Summary of 49th MICA Exchange #217 - #222

MICA#217	
18 labs	
Allele-1	%(n)
*001:01:01	6 (1)
*001:01	44 (8)
*001	50(9)
18 labs	
Allele-2	%(n)
*010:01:11	11(2)
*010:01	50(9)
*010	17(3)
*010/*069	17(3)
*010:01/*065/*069	5 (1)

MICA#218	
18 labs	
Allele - 1	%(n)
*018:01:11	6 (1)
*018:01	61(11)
*018	27(5)
*018:01/*018:02/*250:01	6 (1)
18 labs	
Allele - 2	%(n)
*019:01	61(11)
*019	33(6)
*019:01:NEW	6 (1)

MICA#219	
18 labs	
Allele - 1	%(n)
*007:01:01	6 (1)
*007:01	55(10)
*007	16(3)
*007/026	11(2)
*007/026/100	6 (1)
*007:01/007:10/026/100/111	6 (1)
18 labs	
Allele - 2	%(n)
*072:01:01	11(2)
*072:01	44(8)
*072	44(8)

MICA#220	
18 labs	
Allele - 1	%(n)
*101	72(13)
*047/*101	11(2)
*047	17(3)
18 labs	
Allele-2	%(n)
*004:01:06	11(2)
*004:01	44(8)
*004	39(7)
*004/*149/*182	6 (1)

MICA#221	
18 labs	
Allele - 1	%(n)
*002:01:03	5.5 (1)
*002:01	56(10)
*002	11(2)
*002/110	5.5 (1)
*002/020/055/089/090/091	5.5 (1)
*002/020/055/086/089/090/091	11(2)
*002/020/023/052/055/089/090/09	5.5 (1)

MICA#222	
18 labs	
Allele - 1	%(n)
*008:01:01	11(2)
*008:01	50(9)
*008:01/008:03/008:04	5.5 (1)
*008	17(3)
*058	5.5 (1)
*008/088N	5.5 (1)
*008/027/048/087/102/103/104	5.5 (1)
18 labs	
Allele - 2	%(n)
*015:01	50(9)
*015	44(8)
*015:01:NEW	6 (1)

Table 2. MICA typing results reported by participating laboratories

MICA #217 (Caucasian)	CTR	Allele-1	Allele-2	Others	Method
	733	001	010:01	069	NGS
	762	001:01	010:01		NGS
	3753	001	010/069		SSO
	3798	001	010		NGS
	3966	001	010		SSP
	4337	001	010		SSP
	4345	001	010/069		
	5133	001:01	010:01		NGS
	5142	001:01:01	010:01:11		NGS
	8022	001:01	010:01		NGS
	8035	001:01	010:01		NGS
	8047	001:01	010:01/065/069		NGS
	8073	001:01	010:01:11		NGS
	8086	001	010:01		SBT
	8105	001:01	010:01		NGS
	8110	001	010/069		SSO
	8135	001:01	010:01		NGS
	8137	001	010:01		SBT

Table 3. MICA typing results reported by participating laboratories

MICA #218 (Hispanic)	CTR	Allele-1	Allele-2	Others	Method
	733	018:01	019:01		NGS
	762	018:01	019:01		NGS
	3753	018	019		SSO
	3798	018	019		NGS
	3966	018	019		SSP
	4337	018:01	019		SSP
	4345	018	019		
	5133	018:01	019:01		NGS
	5142	018:01:11	019:01:NEW		NGS
	8022	018:01	019:01		NGS
	8035	018:01	019:01		NGS
	8047	018:01/018:02/250:01	019:01		NGS
	8073	018:01	019:01		NGS
	8086	018:01	019:01		SBT
	8105	018:01	019:01		NGS
	8110	018	019		SSO
	8135	018:01	019:01		NGS
	8137	018:01	019:01		SBT

Table 4. MICA typing results reported by participating laboratories

MICA #219 (Caucasian)	CTR	Allele-1	Allele-2	Others	Method
	733	007:01	072:01		NGS
	762	007:01	072:01		NGS
	3753	007/026	072		SSO
	3798	007	072		NGS
	3966	007	072	026	SSP
	4337	007	072		SSP
	4345	007/026/100	072		
	5133	007:01	072:01		NGS
	5142	007:01:01	072:01:01		NGS
	8022	007:01	072:01		NGS
	8035	007:01	072:01		NGS
	8047	007:01/007:10/026/100/111	072:01		NGS
	8073	007:01	072:01:01		NGS
	8086	007:01	072		SBT
	8105	007:01	072:01		NGS
	8110	007/026	072		SSO
	8135	007:01	072:01		NGS
	8137	007:01	072		SBT

Table 5. MICA typing results reported by participating laboratories

MICA #220 (Mixed)	CTR	Allele-1	Allele-2	Others	Method
	733	004:01	101		NGS
	762	004:01	101		NGS
	3753	004	047		SSO
	3798	004	101		NGS
	3966	004	047		SSP
	4337	004	101		SSP
	4345	004/149/182	047/101		
	5133	004:01	101		NGS
	5142	004:01:06	101		NGS
	8022	004:01	101		NGS
	8035	004:01	101		NGS
	8047	004:01	047/101		NGS
	8073	004:01:06	101		NGS
	8086	004	101		SBT
	8105	004:01	101		NGS
	8110	004	047		SSO
	8135	004:01	101		NGS
	8137	004	101		SBT

Table 6. MICA typing results reported by participating laboratories

MICA #221 (Native Hawaiian)	CTR	Allele-1	Allele-2	Others	Method
	733	002:01			NGS
	762	002:01			NGS
	3753	002/020/055/086/089/090/091	002/020/055/086/089/090/091	092/093	SSO
	3798	002	002		NGS
	3966	002	002	020/055/086	SSP
	4337	002/020/055/089/090/091	002/020/055/089/090/091		SSP
	4345	002/020/023/052/055/089/090/09	002/020/023/052/055/089/090/09		
	5133	002:01			NGS
	5142	002:01:03	002:01:NEW		NGS
	8022	002:01	002:01		NGS
	8035	002:01	-		NGS
	8047	002/110	002/110		NGS
	8073	002:01	002:01		NGS
	8086	002:01	002:01		SBT
	8105	002:01	002:01		NGS
	8110	002/020/055/086/089/090/091	002/020/055/086/089/090/091	092/093	SSO
	8135	002:01	002:01		NGS
	8137	002:01	002:01		SBT

Table 7. MICA typing results reported by participating laboratories

MICA #222 (Black)	CTR	Allele-1	Allele-2	Others	Method
	733	008:01	015:01		NGS
	762	008:01	015:01		NGS
	3753	008/088N	015		SSO
	3798	008	015		NGS
	3966	008	015		SSP
	4337	008	015		SSP
	4345	008/027/048/087/102/103/104	015		
	5133	008:01	015:01		NGS
	5142	008:01:01	015:01:NEW		NGS
	8022	008:01	015:01		NGS
	8035	008:01	015:01		NGS
	8047	008:01/008:03/008:04	015:01		NGS
	8073	008:01:01	015:01		NGS
	8086	008:01	015		SBT
	8105	008:01	015:01		NGS
	8110	058	015		SSO
	8135	008:01	015:01		NGS
	8137	008:01	015		SBT

Table 8. Participating Centers					
Director Last Name	Director First	Institution	City	State	Country
Alquist	Caroline	Univ of Cincinnati/Hoxworth Blood Center	Cincinnati	OH	
An	Lin	Shanghai Tissuebank Medical Laboratory	Shanghai		China
Bengtsson	Mats	Uppsala University Hospital	Uppsala		Sweden
Blasczyk	Rainer	Medizinische Hochschule Hannover	Hannover		Germany
Cereb	Nezih	HistoGenetics	Ossining	NY	
Chung	Yeun-Jun	The Catholic University of Korea College of Med	Seoul		Korea, Republic Of
Fischer	Gottfried	AKH Transfusion Medizin 4i	Vienna		Austria
Fuessel	Monika	DKMS Life Science Lab gGmbH	Dresden		Germany
Furst	Daniel	IKT Und Immunogenetik Ulm	Ulm, Baden-Wuerttemberg		Germany
Hedlund	Anna	CareDx AB	Stockholm		Sweden
Li	Rui	Shanghai Cinopath Medical Laboratory	Shanghai		China
Mayor	Neema	Anthony Nolan	London		United Kingdom
Pan	Jianhua	Guangzhou KingMed Center for Clinical Lab. Co., Ltd.	Kwun Tong, Kowloon		Hong Kong
Pando Rigal	Marcelo	Baylor University Medical Center	Dallas	TX	
Permpikul	Parichart	Mahidol University	Bangkok		Thailand
Reed	Elaine F.	UCLA Immunogenetics Center	Los Angeles	CA	
Skaljic	Ina	Rush University Medical Center	Chicago	IL	
Zhang	Xiaohai	Cedars-Sinai Medical Center	Los Angeles	CA	