

B-CELL LINE EXCHANGE #297 FEBRUARY 2, 2022

B-cell Line	593 - 594
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The results for B-cell Line Exchange #297 are summarized in Tables 1 - 2 and individual laboratory results reported for each sample are listed in Tables 3 - 6.

We would like to also thank the labs performing NGS for sharing their

findings and encourage other NGS labs to do so as well. Haplotype frequencies used in this report are from the NMDP Bioinformatics website, <https://bioinformatics.bethematchclinical.org/>.

Ter-593. The reported HLA type for this cell from a donor of Vietnamese descent was DRB1*09:01-DRB1*15:02-DRB4*01:03-DRB5*01:08N-DQA1*01:01-DQA1*03:02-DQB1*03:03-DQB1*05:01-DPA1*02:01-DPA1*02:02-DPB1*05:01-DPB1*14:01-A*26:01-A*34:01-B*15:21-B*38:02-C*04:03-C*07:02.

One possible association present in this cell was B*38:02-C*07:02-DRB1*15:02-DQB1*05:01, observed exclusively in Asians, with HF = 0.00518. The other likely association present was B*15:21-C*04:03-DRB1*09:01-DQB1*03:03. The B*15:21-C*04:03 association in this cell is observed exclusively in Asians, with HF = 0.00341.

This cell was previously examined as Ter 489 (2013), Ter 192 (1996), Ter 69 (1990), and extract 76 (1999). In this present retyping, ≥ 90% agreement was achieved for all allele assignments except DQA1*03. Fifteen lab assigned DQA1*03:02, 1 lab assigned DQA1*03:01P, and 1 lab assigned DQA1*03:01.

Liu noted a possible new DQA1*01 allele was present: "TER 593 new DQA1 allele closest allele: DQA1*01:01:01:07 Mismatch E1-36, codon -12.3 CTC>CTG." This same observation was made by Fischer in the 2013 study (Figure 1) (1).

Ter-594. The reported HLA type for this from cell a donor of unknown heritage was DRB1*09:01-DRB1*12:02-DRB3*02:02-DRB4*01:03-DQA1*03:02-DQA1*06:01-DQB1*03:01-DQB1*03:03-DPA1*02:02-DPB1*05:01-A*11:01-A*30:01-B*13:02-B*15:02-C*06:02-C*08:01.

One possible association present in this cell was B*15:02-C*08:01-DRB1*12:02-DQB1*03:01, observed commonly in Asians, with HF = 0.02287. The other likely association present was B*13:02-C*06:02-DRB1*09:01-DQB1*03:03. The DRB1*09:01-DQB1*03:03 association present is the most common association observed in Asians, with HF = 0.09664.

This cell was previously examined in the Exchange as Ter 258 (2000). In this present study, ≥ 90% agreement was achieved for all allele assignments.

Reference:

1. Locke A, Gjertson D, Zhang Q, and Reed EF. Report of the 375th Cell Exchange. August 7, 2013.

AA Codon	-20	-15	-10	-5	1
DQA1*01:01:01	ATG ATC CTA AAC AAA GCT CTG CTG CTG GGG GCC CTG GCT CTG ACC ACC GTG ATG AGC CCC TGT GGA GGT GAA GAC ATT GTG G		↙		
AA Codon	-20	-15	-10	-5	1
DQA1*01:new	ATG ATC CTA AAC AAA GCT CTG CTG CTG GGG GCC CTG GCT CTG ACC ACC GTG ATG AGC CCC TGT GGA GGT GAA GAC ATT GTG G				

Figure 1. from Gottfried Fischer, Vienna, June 6, 2013.

NEXT MAILING DATE: March 2, 2022

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Table 3a: Individual laboratory results for B-cell #593 - Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
278	*09	*15	4*01	5*01	*01	*03	*03	*05	*02	*02	*05	*14		
725	*09	*15	4*01	5*01	*01	*03	*03(DQ9)	*05					SSO	
747	*09	*15	4*01	5*01	*01	*03	*03	*05	*02	*02	*05	*14	SSP SSO NGS	
792	*09	*15	4*01	5*01N	*01	*03	*03(DQ9)	*05	*02	*02	*05	*14	SSO NGS	
793	*09	*15	4*PRESENT	5*NULL	*01	*03	*03(DQ9)	*05			*05	*14	SSP	
2400	*09	*15	4*01	5*01N	*01	*03	*03	*05	NT	NT	*05	*14	SSO NGS	
2847	*09	*15											SSP	
													SSP NGS	
3519	*09	*15	4*01	5*01	*01	*03	*03(DQ9)	*05	*02		*05	*14	RT-PCR	
3753	*09	*15	4*01	5*01N	*01	*03	*03(DQ9)	*05	*02	*02	*05	*14	SSO	
3966													SSP	
4079	*09	*15	4*01	5*01N	*01	*03	*03(DQ9)	*05	*02	*02	*05	*14	SSO	
5130	*09	*15	4*01	5*01	*01	*03	*03	*05			*05	*14	SSO NGS	
5214	*09	*15	4*01	5*01N	*01	*03	*03(DQ9)	*05	*02	*02	*05	*14	SSO	
5219	*09	*15			*01	*03	*03	*05					SSO NGS	
5451	*09	*15	4*01	5*01N	*01	*03	*03	*05					SSO SBT	
5462	*09	*15	4*01	5*01N	*01	*03	*03	*05	*02	*02	NT	NT	SSO	
5488			4*01										SSO NGS	
5642	*09	*15	4*PRESENT	5*PRESENT			*03(DQ9)	*05					SSP SSO	
6649	*09	*15					*03(DQ9)	*05					SSO	
8029	*09	*15			*01	*03	*03	*05						
8068	*09	*15			*01	*03	*03	*05					SSO	A*66
8123	*09	*15	4*01	5*01N	*01	*03	*03(DQ9)	*05	*02	*02	*05	*14	RT-PCR	

Table 3b: Individual laboratory results for B-cell #593 - Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
230	*09:01	*15:02	4*01:03	5*01:08N	*01:01	*03:02	*03:03	*05:01	*02:01	*02:02	*05:01	*14:01	NGS	
278	*09:01	*15:02	4*01:03	5*01:08N	*01:01	*03:02	*03:03	*05:01	*02:01	*02:02	*05:01	*14:01		DRB1*09:21
747	*09:01:02	*15:02:01	4*01:03:01	5*01:08N	*01:01	*03:02:01	*03:03:02	*05:01	*02:01:01	*02:02:02	*05:01:01	*14:01:01	SSP SSO NGS	DRB1*15:140 DRB1*15:149 DQB1*05:263
762	*09:01	*15:02	4*01:03	5*01:08N	*01:01	*03:02	*03:03	*05:01	*02:01	*02:02	*05:01	*14:01	NGS	
792	*09:01	*15:02	4*01:03	5*01:08N	*01:01	*03:02	*03:03	*05:01	*02:01	*02:02	*05:01	*14:01	SSO NGS	DRB1*15:140 DRB1*15:149
793					*01:01	*03:02					*05:01	*14:01	SSP	
2344	*09:01:02	*15:02:01	NT	NT	NT	NT	*03:03:02	*05:01:24	NT	NT	*05:01:01	*14:01:01	NGS	DPB1*135:01 DRB1*09:31 DRB1*15:140 DRB1*15:149 DPB1*834:01
2400	*09:01	*15:02	4*01:03	5*01:08N	NEW	*03:02	*03:03	*05:01	NT	NT	*05:01:01G	*14:01:01G	SSO NGS	DRB1*15:140 DRB1*15:149
3135	*09:01P	*15:02:01	4*01:03	5*01:08N	*01:01P	*03:01P	*03:03:02	*05:01P	*02:01	*02:02P	*05:01:01	*14:01:01		
3224	*09:01	*15:02	4*01:03	5*01:08N	*01:01	*03:02	*03:03	*05:01	*02:01	*02:02	*05:01	*14:01	NGS	
3511	*09:01	*15:02	4*01:03	5*01:08N	*01:01	*03:02	*03:03	*05:01	*02:01	*02:07	*05:01	*14:01	SSP SSO	
3519	*09:01	*15:02P	4*01:03	5*01:08N	*01:01	*03:02	*03:03	*05:01			*05:01	*14:01	SSP NGS RT-PCR	DRB1*15:02 DRB1*15:140 DRB1*15:149
3966	*09:01	*15:02	4*01:03	5*01:08N			*03:03	*05:01					SSP	
4337	*09:01	*15:02					*03:03	*05:01			*05:01	*14:01	SSP SBT NGS	
5130	*09:01	*15:02	4*01:03	5*01:08N	*01:01	*03:02	*03:03	*05:01			*05:01	*14:01	SSO NGS	DRB1*15:140 DRB1*15:149
5219	*09:01:02	*15:02:01					*03:03:02	*05:01:24			*05:01:01	*14:01:01	SSO NGS	
5451	*09:01:02	*15:02:01											SSO SBT	

Table 3b: Individual laboratory results for B-cell #593 - Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
														DPB1*860:01 DPB1*951:01 DPB1*1015:01 DPB1*1018:01 DPB1*1117:01 DPB1*1118:01 DPB1*1119:01 DPB1*1120:01 DPB1*1143:01 DPB1*1172:01 DPB1*1213:01 DPB1*1257:01 DPB1*1273:01 DPB1*794:01N DPB1*834:01 DPB1*949:01 DPB1*986:01N DPB1*135:01+
5462	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	*05:01	*14:01	SSO
5488	*09:01:02	*15:02:01G		5*01:08N	*01:01	*03:02:01	*03:03:02	*05:01:24	*02:01:01	*02:02:02	*05:01:01	*14:01:01	SSO NGS	
5642	*09:01	*15:02					*03:03	*05:01					SSP SSO	
8021	*09:01	*15:02	4*01:03	5*01:08N	*01:01	*03:01	*03:03	*05:01	*02:01	*02:02	*05:01	*14:01	SSO NGS	
8043	*09:01	*15:02	4*01:03	5*01:08N	*01:01	*03:02	*03:03	*05:01	*02:01	*02:02	*05:01	*14:01		
8086	*09:01	*15:02	4*01:03	5*01:08N	*01:01	*03:02	*03:03	*05:01	*02:01:01G	*02:02:02G	*05:01	*14:01	SBT	
8122	*09:01	*15:02	4*01:03	5*01:08N	*01:01	*03:02	*03:03	*05:01	*02:01	*02:02	*05:01	*14:01	NGS	DPB1*135:01 DPB1*834:01

Table 4: Individual laboratory results for B-cell #593 - Class I

Center	Low resolution						High resolution						METHOD	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
230							*26:01	*34:01	*15:21	*38:02	*04:03	*07:02	NGS	
278	*26	*34	*15	*38	*04	*07	*26:01	*34:01	*15:21	*38:02	*04:03	*07:02		
725	*26	*34	*15(B75)	*38	*04	*07							SSO	
747							*26:01:01	*34:01:01	*15:21	*38:02:01	*04:03:01	*07:02:01	SSP SSO NGS	
762													NGS	
792	*26	*34	*15(B75)	*38	*04	*07	*26:01	*34:01	*15:21	*38:02	*04:03	*07:02	SSO NGS	
793	*26	*34	*15(B75)	*38	*04	*07							SSP	
2344							*26:01:01	*34:01:01	*15:21	*38:02:01	*04:03:01	*07:02:01	NGS	
2400	*26	*34	*15(B75)	*38	*04	*07	*26:01	*34:01	*15:21	*38:02	*04:03	*07:02	SSO NGS	
2847	*26	*34	*15	*38	*04	*07							SSP	
3135							*26:01P	*34:01:01G	*15:21	*38:02:01G	*04:03	*07:02P		
3224							*26:01	*34:01	*15:21	*38:02	*04:03	*07:02	NGS	
3511							*26:01	*34:01	*15:21	*38:02	*04:03	*07:02	SSP SSO	
3519	*26	*34	*15(B75)	*38	*04	*07	*26:01	*34:01	*15:21	*38:02	*04:03	*07:02	SSP NGS RT-PCR	
3753	*26	*34	*15(B75)	*38	*04	*07							SSO	
3966	*26	*34	*15(B75)	*38	*04	*07							SSP	
4079	*26	*34	*15(B75)	*38	*04	*07							SSO	
4337							*26:01	*34:01	*15:21	*38:02	*04:03	*07:02	SSP SBT NGS	
5130	*26	*34	*15	*38	*04	*07	*26:01	*34:01	*15:21	*38:02	*04:03	*07:02	SSO NGS	
5214	*26	*34	*15(B75)	*38	*04	*07							SSO	
5219	*26	*34	*15	*38	*04	*07	*26:01:01	*34:01:01	*15:21	*38:02:01	*04:03:01	*07:02:01	SSO NGS	
5451													SSO SBT	
5462	*26	*34	*15	*38	*04	*07	NT	NT	NT	NT	NT	NT	SSO	
5488							*26:01:01	*34:01:01	*15:21	*38:02:01	*04:03:01	*07:02:01	SSO NGS	
5642													SSP SSO	
6649													SSO	
8021							*26:01	*34:01	*15:21	*38:02	*04:03	*07:02	SSO NGS	
8029	*26	*34	*15	*38	*04	*07								
8043							*26:01	*34:01	*15:21	*38:02	*04:03	*07:02		
8068	*26	*34	*15	*38	*04	*07							SSO	
8086							*26:01	*34:01	*15:21	*38:02	*04:03	*07:02	SBT	
8122							*26:01	*34:01	*15:21	*38:02	*04:03	*07:02	NGS	
8123	*26	*34	*15(B75)	*38	*04	*07							RT-PCR	

Table 5a: Individual laboratory results for B-cell #594 - Class II

Low resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
278	*09	*12	3*02	4*01	*03	*06	*03	*03	*02	*02	*05	*05		
725	*09	*12	3*02	4*01	*03	*06	*03(DQ7)	*03(DQ9)					SSO	
747	*09	*12	3*02	4*01	*03	*06	*03	*03	*02	*02	*05	*05	SSP SSO NGS	
792	*09	*12	3*02	4*01	*03	*06	*03(DQ7)	*03(DQ9)	*02	*02	*05	*05	SSO NGS	
793	*09	*12	3*PRESENT	4*PRESENT	*03	*06	*03(DQ7)	*03(DQ9)			*05		SSP	
2400	*09	*12	3*02	4*01	*03	*06	*03	*03			*05		SSO NGS	
2847	*09	*12											SSP	
													SSP NGS	
3519	*09	*12	3*02	4*01	*03	*06	*03(DQ7)	*03(DQ9)	*02		*05		RT-PCR	
3753	*09	*12	3*02	4*01	*03	*06	*03(DQ7)	*03(DQ9)	*02	*02	*05	*05	SSO	
3966													SSP	
4079	*09	*12	3*02	4*01	*03	*06	*03(DQ7)	*03(DQ9)	*02		*05		SSO	
5130	*09	*12	3*02	4*01	*03	*06	*03	*03			*05	*05	SSO NGS	
5214	*09	*12	3*02	4*01	*03	*06	*03(DQ7)	*03(DQ9)	*02		*05		SSO	
5219	*09	*12			*03	*06	*03	*03					SSO NGS	
5451	*09	*12	3*02	4*01	*03	*06	*03	*03					SSO SBT	
5462	*09	*12	3*02	4*01	*03	*06	*03	*03	*02		NT	NT	SSO	
5488			3*02										SSO NGS	
5642	*09	*12	3*PRESENT	4*PRESENT			*03(DQ7)	*03(DQ9)					SSP SSO	
6649	*09	*12					*03(DQ7)	*03(DQ9)					SSO	
8029	*09	*12			*03	*06	*03	*03						
8068	*09	*12			*03	*06	*03	*03					SSO	
8123	*09	*12	3*02	4*01	*03	*06	*03(DQ7)	*03(DQ9)	*02	*02	*05	*05	RT-PCR	

Table 5b: Individual laboratory results for B-cell #594 - Class II

High resolution														
Center	DRB1		DRB3/4/5		DQA1		DQB1		DPA1		DPB1		METHOD	Other Alleles
230	*09:01	*12:02	3*02:02	4*01:03	*03:02	*06:01	*03:01	*03:03	*02:02	*02:02	*05:01	*05:01	NGS	
278	*09:01	*12:02	3*02:02	4*01:03	*03:02	*06:01	*03:01	*03:03	*02:02	*02:02	*05:01	*05:01		
747	*09:01:02	*12:02:01	3*02:02:01	4*01:03:02	*03:02:01	*06:01:01	*03:01:01	*03:03:02	*02:02:02	*02:02:02	*05:01:01	*05:01:01	SSP SSO NGS	
762	*09:01	*12:02	3*02:02	4*01:03	*03:02	*06:01	*03:01	*03:03	*02:02		*05:01		NGS	
792	*09:01	*12:02	3*02:02	4*01:03	*03:02	*06:01	*03:01	*03:03	*02:02	*02:02	*05:01	*05:01	SSO NGS	
793					*03:02	*06:01					*05:01		SSP	
2344	*09:01:02	*12:02:01	NT	NT	NT	NT	*03:01:01	*03:03:02	NT	NT	*05:01:01	*05:01:01	NGS	DRB1*09:31
2400	*09:01	*12:02	3*02:02	4*01:03	*03:02	*06:01	*03:01	*03:03			*05:01:01G		SSO NGS	
3135	*09:01P	*12:02:01	3*02:02	4*01:03	*03:01P	*06:01	*03:01P	*03:03:02	*02:02P	*02:02P	*05:01:01	*05:01:01		
3224	*09:01	*12:02	3*02:02	4*01:03	*03:02	*06:01	*03:01	*03:03	*02:02		*05:01		NGS	
3511	*09:01	*12:02	3*02:02	4*01:03	*03:02	*06:01	*03:01	*03:03	*02:07	02:07	*05:01	*05:01	SSP SSO	
3519	*09:01	*12:02	3*02:02P	4*01:03	*03:02	*06:01	*03:01	*03:03			*05:01		SSP NGS RT-PCR	DRB3*02:02
3966	*09:01	*12:02	3*02:02	4*01:03			*03:01	*03:03					SSP	
4337	*09:01	*12:02					*03:01	*03:03			*05:01	*05:01	SSP SBT NGS	
5130	*09:01	*12:02	3*02:02	4*01:03	*03:02	*06:01	*03:01	*03:03			*05:01	*05:01	SSO NGS	
5219	*09:01:02	*12:02:01					*03:01:01	*03:03:02			*05:01:01	*05:01:01	SSO NGS	
5451	*09:01:02	*12:02:01											SSO SBT	
5462	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	*05:01		SSO	DPB1*951:01 DPB1*1143:01 DPB1*1156:01 DPB1*1172:01 DPB1*1180:01 DPB1*1199:01 DPB1*1213:01 DPB1*1257:01 DPB1*1273:01 DPB1*135:01 DPB1*223:01 DPB1*330:01 DPB1*331:01 DPB1*729:01 DPB1*778:01 DPB1*847:01 DPB1*851:01+
5488	*09:01:02	*12:02:01		4*01:03:02	*03:02:01	*06:01:01	*03:01:01	*03:03:02	*02:02:02		*05:01:01		SSO NGS	
5642	*09:01	*12:02					*03:01	*03:03					SSP SSO	
8021	*09:01	*12:02	3*02:02	4*01:03	*03:02	*06:01	*03:01	*03:03	*02:02		*05:01		SSO NGS	
8043	*09:01	*12:02	3*02:02	4*01:03	*03:02	*06:01	*03:01	*03:03	*02:02		*05:01			
8086	*09:01	*12:02	3*02:02	4*01:03	*03:02	*06:01	*03:01	*03:03	*02:02:02G	*02:02:02G	*05:01	*05:01	SBT	
8122	*09:01	*12:02	3*02:02	4*01:03	*03:02	*06:01	*03:01	*03:03	*02:02	*02:02	*05:01	*05:01	NGS	

Table 6: Individual laboratory results for B-cell #594 - Class I

Center	Low resolution						High resolution						METHOD	Other Alleles
	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C			
230							*11:01	*30:01	*13:02	*15:02	*06:02	*08:01	NGS	
278	*11	*30	*13	*15	*06	*08	*11:01	*30:01	*13:02	*15:02	*06:02	*08:01		
725	*11	*30	*13	*15(B75)	*06	*08							SSO	
747							*11:01:01	*30:01:01	*13:02:01	*15:02:01	*06:02:01	*08:01:01	SSP SSO NGS	
762													NGS	
792	*11	*30	*13	*15(B75)	*06	*08	*11:01	*30:01	*13:02	*15:02	*06:02	*08:01	SSO NGS	
793	*11	*30	*13	*15(B75)	*06	*08							SSP	
2344							*11:01:01	*30:01:01	*13:02:01	*15:02:01	*06:02:01	*08:01:01	NGS	
2400	*11	*30	*13	*15(B75)	*06	*08	*11:01	*30:01	*13:02	*15:02	*06:02	*08:01	SSO NGS	
2847	*11	*30	*13	*15	*06	*08							SSP	
3135							*11:01P	*30:01P	*13:02P	*15:02:01	*06:02P	*08:01P		
3224							*11:01	*30:01	*13:02	*15:02	*06:02	*08:01	NGS	
3511							*11:01	*30:01	*13:02	*15:02	*06:02	*08:01	SSP SSO	
3519	*11	*30	*13	*15(B75)	*06	*08	*11:01	*30:01	*13:02	*15:02	*06:02	*08:01	SSP NGS RT-PCR	
3753	*11	*30	*13	*15(B75)	*06	*08							SSO	
3966	*11	*30	*13	*15(B75)	*06	*08							SSP	
4079	*11	*30	*13	*15(B75)	*06	*08							SSO	
4337							*11:01	*30:01	*13:02	*15:02	*06:02	*08:01	SSP SBT NGS	
5130	*11	*30	*13	*15	*06	*08	*11:01	*30:01	*13:02	*15:02	*06:02	*08:01	SSO NGS	
5214	*11	*30	*13	*15(B75)	*06	*08							SSO	
5219	*11	*30	*13	*15	*06	*08	*11:01:01G	*30:01:01	*13:02:01	*15:02:01	*06:02:01	*08:01:01	SSO NGS	
5451													SSO SBT	
5462	*11	*30	*13	*15	*06	*08	NT	NT	NT	NT	NT	NT	SSO	
5488							*11:01:01	*30:01:01	*13:02:01	*15:02:01	*06:02:01	*08:01:01	SSO NGS	
5642													SSP SSO	
6649													SSO	
8021							*11:01	*30:01	*13:02	*15:02	*06:02	*08:01	SSO NGS	
8029	*11	*30	*13	*15	*06	*08								
8043							*11:01	*30:01	*13:02	*15:02	*06:02	*08:01		
8068	*11	*30	*13	*15	*06	*08							SSO	
8086							*11:01	*30:01	*13:02	*15:02	*06:02	*08:01	SBT	
8122							*11:01	*30:01	*13:02	*15:02	*06:02	*08:01	NGS	
8123	*11	*30	*13	*15(B75)	*06	*08							RT-PCR	