

**Jewish Hospital Histocompatibility Laboratory**  
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**TEST INFO**

Patient ID: **AGEZ412** Sample ID: **19-027630** Kit Name: **LinkS<sub>eq</sub> HLA ABCDRDQDP+**  
Patient Name: **AGEZ412, DECEASED** Sample Date: **5/26/2019** Kit Lot #: **K3736-ER**  
Test Date: **5/27/2019** Plate 1 ID: **SX281828-CKK**  
Kit Exp Date: **2020-05-31**

**SUMMARY**

This session includes tests for A, B, C, DR, DQA, DQB, DPA and DPB

TEST	GENOTYPE	PHENOTYPE
HLA-A	A*02 A*24	A2 A24
HLA-B	B*18 B*35	B18 B35
HLA-DRB1	DRB1*01 DRB1*07	DR1 DR7
HLA-DQA1	DQA1*01 DQA1*02	DQA1*01 DQA1*02
HLA-DPA1	DPA1*01 DPA1*01	DPA1*01 DPA1*01

TEST	GENOTYPE	PHENOTYPE
HLA-C	C*04 C*07	Cw4 Cw7
Bw		Bw6 Bw6
HLA-DRB345	DRB4*01	DR53
HLA-DQB1	DQB1*02 DQB1*05	DQ2 DQ5

EPITYPE	ALLELES	HVR-A	HVR-B	HVR-C	HVR-D	HVR-E	HVR-F
EDP04	<b>DPB1* 04:01:01:01;</b> DPB1* 04:01:01:02e-04:01:37e / DPB1* 99:01e / DPB1* 120:01Ne / DPB1* 121:01e / DPB1* 128:01e / DPB1* 134:01e / DPB1* 149:01e / DPB1* 169:01e / DPB1* 174:01e / DPB1* 175:01e / DPB1* 180:01e / DPB1* 181:01e / DPB1* 192:01e / DPB1* 193:01e / DPB1* 194:01e / DPB1* 195:01e / DPB1* 212:01e / DPB1* 213:01e / DPB1* 224:01e / DPB1* 225:01e / DPB1* 228:01e / DPB1* 231:01e / DPB1* 232:01e / DPB1* 240:01e / DPB1* 253:01e / DPB1* 255:01e / DPB1* 262:01e / DPB1* 272:01e / DPB1* 275:01e / DPB1* 276:01e / DPB1* 281:01e / DPB1* 282:01e / DPB1* 283:01e / DPB1* 298:01e / DPB1* 320:01e / DPB1* 323:01e / DPB1* 334:01e / DPB1* 335:01e / DPB1* 336:01e / DPB1* 341:01e / DPB1* 350:01e / DPB1* 356:01e / DPB1* 360:01e / DPB1* 372:01e / DPB1* 376:01e / DPB1* 378:01e / DPB1* 396:01e / DPB1* 397:01e / DPB1* 415:01e / DPB1* 418:01e / DPB1* 425:01e / DPB1* 426:01e / DPB1* 428:01e / DPB1* 434:01e / DPB1* 453:01e / DPB1* 455:01Ne / DPB1* 459:01e / DPB1* 464:01e / DPB1* 465:01e / DPB1* 468:01e / DPB1* 475:01e / DPB1* 476:01e / DPB1* 479:01e / DPB1* 485:01e / DPB1* 486:01e / DPB1* 487:01e / DPB1* 497:01e / DPB1* 500:01e / DPB1* 520:01e / DPB1* 521:01e / DPB1* 522:01e / DPB1* 523:01e / DPB1* 524:01e / DPB1* 529:01e / DPB1* 534:01e / DPB1* 553:01e / DPB1* 554:01e / DPB1* 556:01e / DPB1* 559:01e / DPB1* 569:01e / DPB1* 575:01e / DPB1* 578:01e / DPB1* 583:01e / DPB1* 591:01e / DPB1* 593:01e / DPB1* 607:01e / DPB1* 614:01e / DPB1* 615:01e / DPB1* 618:01e / DPB1* 625:01e / DPB1* 643:01e / DPB1* 658:01e / DPB1* 666:01e / DPB1* 670:01e / DPB1* 677:01e / DPB1* 682:01e / DPB1* 683:01e / DPB1* 694:01e / DPB1* 699:01e	LFQG	EEFA	AAE	ILEEK	M	GGPM
EDP04	<b>DPB1* 04:01:01:01;</b> DPB1* 04:01:01:02e-04:01:12e, 04:01:14e-04:01:37e / DPB1* 99:01e / DPB1* 120:01Ne / DPB1* 121:01e / DPB1* 128:01e / DPB1* 134:01e / DPB1* 149:01e / DPB1* 169:01e / DPB1* 174:01e / DPB1* 175:01e / DPB1* 180:01e / DPB1* 181:01e / DPB1* 192:01e / DPB1* 194:01e / DPB1* 195:01e / DPB1* 212:01e / DPB1* 213:01e / DPB1* 224:01e / DPB1* 225:01e / DPB1* 228:01e / DPB1* 231:01e / DPB1* 232:01e / DPB1* 240:01e / DPB1* 253:01e / DPB1* 255:01e / DPB1* 262:01e / DPB1* 272:01e / DPB1* 275:01e / DPB1* 276:01e / DPB1* 281:01e / DPB1* 282:01e / DPB1* 283:01e / DPB1* 298:01e / DPB1* 320:01e / DPB1* 323:01e / DPB1* 334:01e / DPB1* 335:01e / DPB1* 336:01e / DPB1* 341:01e / DPB1* 350:01e / DPB1* 356:01e / DPB1* 360:01e / DPB1* 372:01e / DPB1* 376:01e / DPB1* 378:01e / DPB1* 396:01e / DPB1* 397:01e / DPB1* 415:01e / DPB1* 418:01e / DPB1* 425:01e / DPB1* 426:01e / DPB1* 428:01e / DPB1* 434:01e / DPB1* 453:01e / DPB1* 455:01Ne / DPB1* 459:01e / DPB1* 464:01e / DPB1* 465:01e / DPB1* 468:01e / DPB1* 475:01e / DPB1* 476:01e / DPB1* 479:01e / DPB1* 485:01e / DPB1* 486:01e / DPB1* 487:01e / DPB1* 497:01e / DPB1* 500:01e / DPB1* 520:01e / DPB1* 521:01e / DPB1* 522:01e / DPB1*	LFQG	EEFA	AAE	ILEEK	M	GGPM

523:01e / DPB1\* 524:01e / DPB1\* 529:01e / DPB1\*  
534:01e / DPB1\* 553:01e / DPB1\* 554:01e / DPB1\*  
556:01e / DPB1\* 559:01e / DPB1\* 569:01e / DPB1\*  
575:01e / DPB1\* 578:01e / DPB1\* 583:01e / DPB1\*  
591:01e / DPB1\* 593:01e / DPB1\* 607:01e / DPB1\*  
614:01e / DPB1\* 615:01e / DPB1\* 618:01e / DPB1\*  
625:01e / DPB1\* 643:01e / DPB1\* 658:01e / DPB1\*  
666:01e / DPB1\* 670:01e / DPB1\* 677:01e / DPB1\*  
682:01e / DPB1\* 683:01e / DPB1\* 694:01e / DPB1\*  
699:01e

*This genotype consists of alleles from a single group.  
This epitope was AUTOMATICALLY chosen because it is the only one which does not require a rare allele.*

(Notice: Cannot exclude other combinations. Review all results.)  
All test results are based on IMGT/HLA release: version 3.33.0 - Jul 2018

For research use only. Not for use in diagnostic procedures.

### LABORATORY ASSIGNMENT

HLA-A: **A2 A24**  
HLA-C: **Cw4 Cw7**  
HLA-DQA1: **DQA1\*01 DQA1\*02**  
HLA-DPA1: **DPA1\*01 DPA1\*01**

HLA-B: **B18 B35**  
HLA-DRB1: **DR1 DR7**  
HLA-DQB1: **DQ2 DQ5**  
HLA-DPB1: **DPB1\*04:01**  
**DPB1\*04:01**

Bw: **Bw6 Bw6**  
HLA-DRB345: **DR53**

### INTERNAL COMMENTS

The + sign indicates the presence of additional alleles of DPB1\* that cannot be ruled out. The detailed report can be found in the attachment section in Unet.

### REVIEW

Analyzed By: **Catherine Caradonna**

Signature:

Date:

Reviewed By:

Signature:

Date:



ALLELE GROUP	ALLELES	P GROUP	ANTIGEN
A*02	<b>A* 02:01:01:01, 02:01:04, 02:09:01:01;</b> A* 02:01:01:02Le-02:01:03e, 02:01:05e-02:01:08e, 02:01:10e-02:01:13e, 02:01:15e, 02:01:18e-02:01:35e, 02:01:37e-02:01:51e, 02:01:53e-02:01:73e, 02:01:75e-02:01:144e, 02:09:01:02e, 02:66e, 02:89e, 02:97e	02:01P	A2
	<b>A* 02:02:01:01;</b> A* 02:02:01:02e-02:02:04e	02:02P	
	<b>A* 02:04</b>	02:04P	
	<b>A* 02:05:01:01;</b> A* 02:05:01:02e-02:05:02e, 02:05:04e, 02:05:06e-02:05:07e	02:05P	
	<b>A* 02:06:01:01;</b> A* 02:06:01:02e-02:06:06e, 02:06:08e-02:06:11e, 02:06:13e-02:06:23e	02:06P	
	<b>A* 02:07:01;</b> A* 02:07:02e-02:07:11e	02:07P	
	<b>A* 02:11:01:01;</b> A* 02:11:01:02e, 02:11:03e-02:11:09e	02:11P	
	<i>A* 02:16d</i>	02:16P	
	<b>A* 02:17:01;</b> A* 02:17:02e-02:17:04e	02:17P	
	<b>A* 02:20:01;</b> A* 02:20:02e	02:20P	
	<b>A* 02:22:01:01;</b> A* 02:22:01:02e-02:22:02e	02:22P	
	<b>A* 02:24:01;</b> A* 02:24:02e	02:24P	
	<i>A* 02:49d</i>	02:49P	
	<i>A* 02:74:01d;</i> A* 02:74:02e	02:74P	
	A* 02:79:01e	02:79P	
	<b>A* 02:08, 02:14;</b> <i>A* 02:12d-02:13d, 02:18d, 02:21d, 02:25d, 02:29d, 02:34d;</i> A* 02:31e, 02:41e-02:42e, 02:46e, 02:59e, 02:67e-02:68e, 02:70e-02:72e, 02:77e, 02:90e, 02:105e	-	
	A* 02:03:05e	02:03P	A203
	A* 02:15Ne, 02:32Ne, 02:43Ne, 02:82Ne-02:83Ne, 02:88Ne, 02:94Ne, 02:113Ne, 02:125Ne	-	Null
	A* 02:01:14Qe, 02:75e, 02:132e, 02:134e, 02:140e, 02:241e, 02:252e, 02:256e, 02:266e, 02:291e, 02:294e, 02:327e, 02:329e, 02:357e, 02:397e, 02:411e, 02:446e, 02:455e, 02:469e, 02:481e, 02:538e, 02:559e, 02:607e, 02:614e, 02:629e, 02:642e, 02:665e, 02:685e-02:687e, 02:689e-02:690e, 02:692e, 02:704e, 02:716e, 02:719e-02:720e, 02:722e, 02:724e, 02:726e, 02:739e-02:740e	02:01P	-
	A* 02:717e	02:02P	
	A* 02:664e	02:04P	

A* 02:179e, 02:324e	02:05P
A* 02:126e, 02:428e, 02:625e, 02:718e, 02:737e	02:06P
A* 02:265e, 02:426e, 02:452e	02:07P
A* 02:69e	02:11P
<i>A* 02:131d</i>	02:16P
A* 02:104e	02:22P
<b>A* 02:30:01;</b> A* 02:30:02e	02:30P
A* 02:40e	02:40P
A* 02:683e	02:49P
A* 02:56:01e	02:56P
<b>A* 02:60:01;</b> A* 02:60:02e	02:60P
<i>A* 02:64:01d</i>	02:64P
A* 02:76:01e	02:76P
A* 02:81e, 02:124e	02:81P
<i>A* 02:86:01d</i>	02:86P
A* 02:101e	02:101P
A* 02:153e	02:153P
A* 02:157e	02:157P
A* 02:164e	02:164P
A* 02:197e	02:197P
A* 02:211e	02:211P
A* 02:217e	02:217P
A* 02:243:01e	02:243P
A* 02:289e	02:289P
A* 02:419e	02:419P
A* 02:524:01e	02:524P
A* 02:528:01e	02:528P
A* 02:591:02e	02:591P
A* 02:610e	02:610P
<i>A* 02:27d, 02:33d, 02:36d, 02:44d-02:45d, 02:58d, 02:63d, 02:84d-02:85d, 02:87d, 02:96d, 02:119d, 02:123d, 02:137d;</i> A* 02:26e, 02:28e, 02:37e, 02:47e, 02:51e, 02:54e, 02:57e, 02:61e-02:62e, 02:80e, 02:91e-02:92e, 02:99e, 02:102e, 02:106e-02:109e, 02:111e-02:112e, 02:115e-02:116e, 02:118e, 02:120e-02:121e, 02:127e-02:128e, 02:130e, 02:133e, 02:136e, 02:138e-02:139e, 02:141e-02:142e, 02:144e-02:147e, 02:149e-02:151e, 02:154e-02:155e, 02:158e-02:163e, 02:165e-02:168e, 02:170e, 02:172e-02:178e, 02:180e-02:184e, 02:186e-02:194e, 02:196e, 02:198e-02:210e, 02:212e-02:216e, 02:218e-02:229e, 02:231e-02:236e, 02:238e-02:240e, 02:246e-02:251e,	-

	02:254e-02:255e, 02:257e, 02:259e-02:263e, 02:267e-02:278e, 02:283e-02:288e, 02:290e, 02:292e-02:293Qe, 02:295e-02:299e, 02:301Ne-02:303e, 02:305Ne-02:308e, 02:310e-02:314Ne, 02:316e-02:323e, 02:325e-02:326e, 02:328e, 02:330e-02:333e, 02:335e-02:337e, 02:340e-02:344e, 02:346e-02:354e, 02:356Ne, 02:358e-02:369e, 02:371e-02:396e, 02:399e-02:408e, 02:410e, 02:413e-02:418e, 02:420e-02:425e, 02:429e-02:430e, 02:432e-02:445e, 02:448e-02:451e, 02:456e-02:462e, 02:464e-02:465e, 02:467e-02:468Ne, 02:470e-02:479e, 02:482e-02:503e, 02:506Ne-02:523e, 02:525Ne-02:526e, 02:530e-02:537e, 02:539e-02:543e, 02:545e-02:556e, 02:558e, 02:560e-02:567e, 02:569e, 02:572e-02:579e, 02:581e, 02:583e-02:590e, 02:592e-02:593e, 02:595e-02:600e, 02:602e-02:603e, 02:605Qe-02:606e, 02:608Ne-02:609e, 02:611e, 02:613e, 02:615e-02:618Qe, 02:620e-02:624e, 02:626e-02:627e, 02:632e, 02:635e-02:640e, 02:643Ne, 02:645e-02:650e, 02:652e-02:663e, 02:667e-02:680e, 02:682e, 02:688e, 02:691Ne, 02:693e-02:703e, 02:705e-02:710Ne, 02:712e-02:715Ne, 02:721e, 02:725e, 02:727e-02:736e, 02:738e		
<b>A*24</b>	A* 24:05:01d; A* 24:05:02e	24:05P	A9
	A* 24:22d; A* 24:19e	-	
	<b>A* 24:02:01:01-24:02:01:02L;</b> A* 24:02:02d; A* 24:02:01:03e-24:02:01:16e, 24:02:04e-24:02:109e, 24:76e	24:02P	<b>A24</b>
	<b>A* 24:07:01;</b> A* 24:07:02e	24:07P	
	A* 24:13:01d; A* 24:13:02e	24:13P	
	A* 24:14:01:01d; A* 24:14:01:02e-24:14:01:03e	24:14P	
	<b>A* 24:20:01:01;</b> A* 24:20:01:02e	24:20P	
	A* 24:21e	24:21P	
	<b>A* 24:17;</b> A* 24:04d, 24:06d, 24:08d, 24:37d, 24:43d, 24:58d; A* 24:18e, 24:27e-24:28e, 24:78e	-	
	<b>A* 24:03:01:01, 24:33;</b> A* 24:03:01:02e-24:03:04e	24:03P	A2403
	<b>A* 24:10:01;</b> A* 24:10:02e	24:10P	
	A* 24:23d	-	
	A* 24:11Nd; A* 24:36Ne, 24:40Ne, 24:45Ne, 24:48Ne, 24:60Ne	-	Null
	A* 24:02:03Qe, 24:79e, 24:144e, 24:150e, 24:153e-24:154e, 24:231e, 24:249e-24:251e, 24:263e-24:271e, 24:352e-24:354e, 24:383e, 24:385e, 24:400e-24:402e	24:02P	-
	A* 24:199e	24:05P	
	A* 24:26d; A* 24:314e	24:26P	
	A* 24:74e	24:74P	
	A* 24:135e	24:135P	



A* 24:142e	24:142P
A* 24:172e	24:172P
A* 24:207e	24:207P
A* 24:225e	24:225P
A* 24:226e	24:226P
A* 24:310e	24:310P
A* 24:313e	24:313P
A* 24:347e	24:347P
<b>A* 24:25;</b> <i>A* 24:15d, 24:29d-24:32d, 24:35d, 24:38d, 24:47d, 24:53d, 24:56d, 24:64d, 24:72d, 24:81d, 24:90:01Nd, 24:95d;</i> A* 24:34e, 24:39e, 24:41e-24:42e, 24:44e, 24:46e, 24:49e-24:52e, 24:54e-24:55e, 24:59e, 24:61e-24:63e, 24:66e-24:70e, 24:73e, 24:75e, 24:77e, 24:80e, 24:83Ne-24:89e, 24:90:02Ne-24:91e, 24:93e-24:94e, 24:96e-24:103e, 24:105e-24:119e, 24:121e-24:123e, 24:125e-24:134e, 24:137e-24:141e, 24:143e, 24:145e-24:149e, 24:151e-24:152e, 24:155Ne-24:171e, 24:173e-24:198e, 24:200e-24:206e, 24:208e-24:224e, 24:227e-24:228e, 24:230e, 24:232Ne-24:242e, 24:244e-24:248e, 24:252Ne-24:262e, 24:272e-24:289e, 24:291e-24:309e, 24:311e-24:312Ne, 24:316e-24:346e, 24:348e-24:351e, 24:355e-24:366e, 24:368e-24:382e, 24:384e, 24:386e-24:391e, 24:393e-24:399e, 24:403e-24:405e	-

**This genotype was chosen as the most likely; cannot exclude one or more rare genotypes.**

## HLA-B

ALLELE GROUP	ALLELES	P GROUP	ANTIGEN
B*18	B* 18:01:01:01; B* 18:01:02d; B* 18:01:01:02e-18:01:01:13e, 18:01:03e-18:01:05e, 18:01:07e-18:01:08e, 18:01:10e-18:01:11e, 18:01:13e-18:01:28e	18:01P	B18
	B* 18:03:01; B* 18:03:02e	18:03P	
	B* 18:05:01:01d; B* 18:05:01:02e	18:05P	
	B* 18:06d; B* 18:09e	-	
	B* 18:17Ne, 18:23Ne	-	Null
	B* 18:53e, 18:81e, 18:119e, 18:124e, 18:131e, 18:135e, 18:144e-18:146e	18:01P	-
	B* 18:07:01e	18:07P	
	B* 18:12:01d	18:12P	
	B* 18:44:01e	18:44P	
	B* 18:08d, 18:13d-18:14d, 18:20d, 18:25d; B* 18:22e, 18:24e, 18:26e, 18:28e, 18:31e-18:32e, 18:34e, 18:36e, 18:38e-18:43e, 18:45e-18:47e, 18:49e-18:51e, 18:55e, 18:59e-18:66e, 18:68e-18:71e, 18:73e-18:79e, 18:82e-18:97e, 18:99e-18:100e, 18:103e-18:104e, 18:106e, 18:109e, 18:111e-18:112e, 18:114e-18:118e, 18:120e-18:123e, 18:126e-18:128e, 18:130e, 18:133e-18:134e, 18:136e-18:143e, 18:147e-18:149e	-	

ALLELE GROUP	ALLELES	P GROUP	ANTIGEN
B*35	B* 35:01:01:01; B* 35:01:01:02e-35:01:09e, 35:01:11e-35:01:48e, 35:42e, 35:57e	35:01P	B35
	B* 35:03:01:01; B* 35:03:01:02e-35:03:21e, 35:70e	35:03P	
	B* 35:05:01:01; B* 35:05:01:02e-35:05:03e	35:05P	
	B* 35:08:01:01; B* 35:08:01:02e-35:08:10e	35:08P	
	B* 35:11:03e	35:11P	
	B* 35:15:01d; B* 35:15:02e	35:15P	
	B* 35:20:01; B* 35:20:02e	35:20P	
	B* 35:29:01d; B* 35:29:02e	35:29P	
	B* 35:32:01d; B* 35:32:02e	35:32P	
	B* 35:61e	35:61P	
	B* 35:23, 35:41; B* 35:06d, 35:10d, 35:13d, 35:27d, 35:30d, 35:55d; B* 35:07e, 35:50e, 35:52e	-	Null
	B* 35:40Ne, 35:53Ne	-	
	B* 35:94e, 35:161e, 35:227e, 35:241e, 35:245e, 35:250e, 35:330e, 35:332e, 35:336e, 35:347e-35:348e, 35:359e, 35:365e, 35:370e	35:01P	-
	B* 35:279e, 35:298e, 35:344e, 35:364e, 35:371e	35:03P	
	B* 35:24:01d; B* 35:24:02e	35:24P	
	B* 35:59e	35:59P	
	B* 35:64e	35:64P	
	B* 35:68e	35:68P	
	B* 35:101e	35:101P	
	B* 35:108e	35:108P	
	B* 35:131e	35:131P	
	B* 35:137e, 35:147e	35:137P	
	B* 35:150e	35:150P	
	B* 35:28d, 35:34d, 35:48d, 35:77d; B* 35:33e, 35:36e, 35:38e-35:39e, 35:54e, 35:56e, 35:62e, 35:65Qe, 35:69e, 35:72e-35:75e, 35:78e, 35:80e, 35:84e-35:85e, 35:88e-35:93e, 35:97e-35:98e, 35:100e, 35:103e-35:107e, 35:109e-35:112e, 35:114e-35:116e, 35:119e-35:123e, 35:126e-35:128e, 35:130Ne, 35:132e-35:134Ne, 35:136e, 35:138e-35:141e,	-	

35:143e-35:146e, 35:148e, 35:151e-35:153e, 35:155e-35:160e, 35:163e,  
35:165Ne-35:166e, 35:168e, 35:170e-35:171e, 35:173Ne-35:181e, 35:185e,  
35:187e, 35:189e-35:197e, 35:200e, 35:202e, 35:204e-35:206e, 35:209e-35:210e,  
35:212e, 35:214e-35:216Ne, 35:218e-35:219e, 35:221e-35:226e, 35:228e-35:231e,  
35:234e, 35:236e-35:240e, 35:243e-35:244e, 35:246e-35:249e, 35:252e-35:253e,  
35:255e-35:256e, 35:259e-35:264e, 35:267e-35:269e, 35:271e-35:272e, 35:275e,  
35:280e-35:284e, 35:286e-35:290e, 35:293e, 35:295e-35:297e, 35:299e-35:308e,  
35:310e, 35:312e-35:315e, 35:318e-35:319e, 35:322e, 35:324e-35:328e, 35:331e,  
35:333Qe-35:334e, 35:338e, 35:340e-35:342e, 35:345e, 35:349e-35:354e, 35:356e,  
35:358e, 35:360e, 35:362e-35:363e, 35:366e, 35:368e-35:369e

**This genotype was chosen as the most likely; cannot exclude one or more rare genotypes.**

	ALLELES	ANTIGEN
Bw6	<p><b>B* 18:01:01:01, 18:03:01 / B* 35:01:01:01, 35:03:01:01, 35:05:01:01, 35:08:01:01, 35:20:01, 35:23, 35:41;</b></p> <p><i>B* 18:01:02d, 18:05:01:01d, 18:06d, 18:08d, 18:12:01d, 18:13d-18:14d, 18:20d, 18:25d / B* 35:06d, 35:10d, 35:13d, 35:15:01d, 35:24:01d, 35:27d-35:29:01d, 35:30d, 35:32:01d, 35:34d, 35:48d, 35:55d, 35:77d;</i></p> <p>B* 18:01:01:02e-18:01:01:13e, 18:01:03e-18:01:05e, 18:01:07e-18:01:08e, 18:01:10e-18:01:11e, 18:01:13e-18:01:28e, 18:03:02e, 18:05:01:02e, 18:07:01e, 18:17Ne, 18:22e-18:24e, 18:26e, 18:28e, 18:31e-18:32e, 18:34e, 18:36e, 18:38e-18:44:01e, 18:45e-18:47e, 18:49e-18:51e, 18:53e, 18:55e, 18:59e-18:66e, 18:68e-18:71e, 18:73e-18:79e, 18:81e-18:97e, 18:99e-18:100e, 18:103e-18:104e, 18:106e, 18:109e, 18:111e-18:112e, 18:114e-18:124e, 18:126e-18:128e, 18:130e-18:131e, 18:133e-18:135e, 18:137e-18:149e / B* 35:01:01:02e-35:01:09e, 35:01:11e-35:01:48e, 35:03:01:02e-35:03:21e, 35:05:01:02e-35:05:03e, 35:07e, 35:08:01:02e-35:08:10e, 35:11:03e, 35:15:02e, 35:20:02e, 35:24:02e, 35:29:02e, 35:32:02e-35:33e, 35:36e, 35:38e-35:40Ne, 35:42e, 35:50e, 35:52e-35:54e, 35:56e-35:57e, 35:59e, 35:61e-35:62e, 35:64e-35:65Qe, 35:68e-35:70e, 35:72e-35:75e, 35:78e, 35:80e, 35:84e-35:85e, 35:88e-35:94e, 35:97e-35:98e, 35:100e-35:101e, 35:103e-35:112e, 35:114e-35:116e, 35:119e-35:123e, 35:126e-35:128e, 35:130Ne-35:134Ne, 35:136e-35:141e, 35:143e-35:148e, 35:150e-35:153e, 35:155e-35:161e, 35:163e, 35:165Ne-35:166e, 35:168e, 35:170e-35:171e, 35:173Ne-35:181e, 35:185e, 35:187e, 35:189e-35:197e, 35:200e, 35:202e, 35:204e-35:206e, 35:209e-35:210e, 35:212e, 35:214e-35:216Ne, 35:218e-35:219e, 35:221e-35:231e, 35:234e, 35:236e-35:241e, 35:243e-35:250e, 35:252e-35:253e, 35:255e-35:256e, 35:259e-35:264e, 35:267e-35:269e, 35:271e-35:272e, 35:275e, 35:279e-35:284e, 35:286e-35:290e, 35:293e, 35:295e-35:308e, 35:310e, 35:312e-35:315e, 35:318e-35:319e, 35:322e, 35:324e-35:328e, 35:330e-35:334e, 35:336e, 35:338e, 35:340e-35:342e, 35:344e-35:345e, 35:347e-35:354e, 35:356e, 35:358e-35:360e, 35:362e-35:366e, 35:368e-35:371e</p>	Bw6

#### HLA-C

ALLELE GROUP	ALLELES	P GROUP	ANTIGEN
C*04	C* 04:01:01:01; C* 04:01:01:02e-04:01:22e, 04:01:24e-04:01:94e	04:01P	Cw4
	C* 04:07:01	04:07P	
	C* 04:10d; C* 04:20e	-	
	C* 04:82d; C* 04:28e, 04:30e, 04:41e, 04:79e, 04:84e, 04:106e, 04:144e, 04:146e, 04:161e-04:162e, 04:165e, 04:195e, 04:226e, 04:267e, 04:274e-04:275e, 04:277e, 04:287e, 04:289e-04:290e	04:01P	-
	C* 04:04:01:01; C* 04:04:01:02e-04:04:02e	04:04P	
	C* 04:15e	04:15P	
	C* 04:64e	04:64P	
	C* 04:98e	04:98P	
	C* 04:164e	04:164P	
	C* 04:180e	04:180P	
	C* 04:201:01e	04:201P	
	C* 04:05d, 04:08d, 04:19d, 04:27d; C* 04:12e, 04:14e, 04:18e, 04:23e-04:26e, 04:31e, 04:33e, 04:35e, 04:38e-04:40e, 04:43e-04:54e, 04:56e-04:57e, 04:59Qe-04:60e, 04:62e-04:63e, 04:65e-04:67e, 04:69e-04:76e, 04:78e, 04:81e, 04:83e, 04:85e-04:93Ne, 04:95Ne-04:97e, 04:99e, 04:101e-04:102e, 04:104e-04:105Ne, 04:108e-04:111e, 04:115Ne-04:121e, 04:123Ne-04:139e, 04:141e-04:143e, 04:145e, 04:148e-04:159e, 04:163e, 04:166e-04:168e, 04:170Ne, 04:173Ne-04:177e, 04:179e, 04:181e-04:189e, 04:191Ne-04:194e, 04:196e-04:200e, 04:202e-04:211e, 04:214e-04:216e, 04:218e-04:219e, 04:221e-04:222e, 04:225Ne, 04:227e-04:229e, 04:231e-04:255Ne, 04:257e-04:262e, 04:264e, 04:266e, 04:268e-04:273e, 04:276e, 04:278e-04:285e, 04:288e, 04:292e-04:293e	-	
C*07	C* 07:01:01:01, 07:06:01:01; C* 07:01:02d; C* 07:01:01:02e-07:01:01:13e, 07:01:01:15e-07:01:01:24e, 07:01:03e-07:01:48e, 07:01:50e-07:01:61e, 07:06:01:02e-07:06:02e	07:01P	Cw7
	C* 07:02:01:01; C* 07:02:01:03d; C* 07:02:01:02e, 07:02:01:04e-07:02:01:16e, 07:02:01:18e-07:02:08e, 07:02:10e-07:02:31e, 07:02:33e-07:02:54e, 07:02:56e-07:02:74e, 07:02:76e-07:02:86e	07:02P	
	C* 07:04:01:01; C* 07:04:01:02e-07:04:10e, 07:04:12e-07:04:13e	07:04P	
	C* 07:38e	07:38P	
	C* 07:05d, 07:12d, 07:40d; C* 07:14e, 07:16e, 07:36e-07:37e, 07:44e-07:45e, 07:49e	-	
	C* 07:32Nd; C* 07:33Ne	-	Null

C* 07:18; C* 07:01:01:14Qe, 07:52e, 07:153e, 07:166e, 07:337e, 07:343e, 07:419e, 07:453e, 07:458e, 07:588e, 07:591e, 07:607e, 07:610e, 07:615e, 07:617e-07:619e, 07:621e, 07:623e-07:624e	07:01P	-
C* 07:66d; C* 07:50e, 07:74e, 07:159e-07:160e, 07:167e, 07:245e, 07:308e, 07:348e-07:349e, 07:359e, 07:446e, 07:486e, 07:500e, 07:533e, 07:544e, 07:566e, 07:592e, 07:594e-07:596e, 07:608e, 07:612e	07:02P	
C* 07:11e, 07:324e, 07:585e-07:586e, 07:622e	07:04P	
C* 07:17:01d; C* 07:17:04e	07:17P	
C* 07:26:01d; C* 07:26:02e	07:26P	
C* 07:27:01d; C* 07:27:02e	07:27P	
C* 07:29:01d	07:29P	
C* 07:31:02e	07:31P	
C* 07:43:01d; C* 07:43:02e	07:43P	
C* 07:56:01d; C* 07:56:02e	07:56P	
C* 07:76e	07:76P	
C* 07:78e	07:78P	
C* 07:108e	07:108P	
C* 07:109e	07:109P	
C* 07:131e	07:131P	
C* 07:137e	07:137P	
C* 07:141:02e	07:141P	
C* 07:199e	07:199P	
C* 07:204e	07:204P	
C* 07:246e	07:246P	
C* 07:257e	07:257P	
C* 07:260e	07:260P	
C* 07:314:01e, 07:314:03e	07:314P	
C* 07:330e	07:330P	
C* 07:341e	07:341P	
C* 07:368e	07:368P	
C* 07:441e	07:441P	
C* 07:454e	07:454P	
C* 07:07d, 07:10d, 07:13d, 07:19d, 07:21d-07:22d, 07:24d-07:25d, 07:35d, 07:46d,	-	

07:60d-07:61Nd, 07:67d, 07:72d, 07:104Nd;  
C\* 07:02:01:17Ne, 07:03e, 07:08e-07:09e, 07:15e, 07:23e, 07:28e, 07:39e, 07:42e,  
07:47e-07:48e, 07:51e, 07:53e-07:55Ne, 07:57e-07:59e, 07:62e-07:63e, 07:65e,  
07:68e-07:71e, 07:75e, 07:77e, 07:79e-07:91e, 07:93e-07:94e, 07:97e-07:100e,  
07:102e-07:103e, 07:105e-07:107e, 07:110e-07:130e, 07:132e-07:136e, 07:139e,  
07:142e-07:147e, 07:149e-07:152Ne, 07:154e-07:158e, 07:162e-07:164Ne,  
07:168e-07:171e, 07:173e-07:198Ne, 07:200e-07:203e, 07:205e-07:240e,  
07:243e-07:244e, 07:247e-07:256e, 07:258e-07:259e, 07:261e-07:264Ne,  
07:266e-07:303e, 07:305e-07:306e, 07:309e-07:313e, 07:315e-07:323e,  
07:325e-07:329Ne, 07:331e-07:336e, 07:338e-07:340e, 07:344e-07:346e,  
07:350Ne-07:358e, 07:360e-07:363e, 07:365e-07:367e, 07:369e-07:389e,  
07:391e-07:392e, 07:394e-07:418e, 07:420e-07:440e, 07:442e-07:445e,  
07:448e-07:452Ne, 07:455e-07:457e, 07:459e-07:485e, 07:488e-07:499e,  
07:501e-07:511e, 07:513Qe, 07:515e-07:532e, 07:534e-07:543e, 07:545e-07:565e,  
07:567e-07:577e, 07:579e-07:582Qe, 07:584e, 07:587e, 07:589e-07:590e,  
07:593Ne, 07:597e-07:598e, 07:600Ne-07:606e, 07:609e, 07:611e, 07:613e-07:614e,  
07:616e, 07:620e, 07:625e-07:634e



## HLA-DR

## HLA-DRB1

ALLELE GROUP	ALLELES	P GROUP	ANTIGEN
DRB1*01	DRB1* 01:01:01-01:01:02; DRB1* 01:01:03e-01:01:31e	01:01P	DR1
	DRB1* 01:02:01; DRB1* 01:02:02e-01:02:13e	01:02P	
	DRB1* 01:04d, 01:07d; DRB1* 01:09e, 01:13e	-	
	DRB1* 01:50e, 01:67e, 01:77e, 01:82e	01:01P	-
	DRB1* 01:83e, 01:87e-01:88e	01:02P	
	DRB1* 01:11:01d; DRB1* 01:11:02e	01:11P	
	DRB1* 01:18e	01:18P	
	DRB1* 01:20e	01:20P	
	DRB1* 01:29e	01:29P	
	DRB1* 01:44e	01:44P	
	DRB1* 01:65e	01:65P	
	DRB1* 01:05e-01:06e, 01:08e, 01:10e, 01:12e, 01:14e, 01:16e-01:17e, 01:19e, 01:21e-01:22e, 01:25e-01:28e, 01:30e-01:32e, 01:34e-01:38e, 01:40Ne-01:41e, 01:43e, 01:45e-01:49e, 01:52Ne-01:53e, 01:55e-01:60e, 01:62Ne-01:64e, 01:66e, 01:68Ne-01:76e, 01:78e-01:81e, 01:84e-01:86e	-	
DRB1*07	DRB1* 07:01:01:01; DRB1* 07:01:01:02e-07:01:22e	07:01P	DR7
	DRB1* 07:03d; DRB1* 07:04e, 07:09e	-	
	DRB1* 07:10Ne	-	Null
	DRB1* 07:34e, 07:72e, 07:79e, 07:81e, 07:85e	07:01P	-
	DRB1* 07:05d, 07:07d, 07:11d, 07:13d; DRB1* 07:06e, 07:08e, 07:12e, 07:14e-07:33e, 07:35e-07:49e, 07:51e-07:71e, 07:73e-07:78e, 07:80e, 07:82e-07:84e, 07:86e-07:90e	-	

## HLA-DRB345

GROUP	ALLELES	ANTIGEN
DRB4*01	DRB4* 01:01:01:01, 01:03:01:01, 01:03:03; DRB4* 01:03:02d; DRB4* 01:01:02e, 01:03:01:03e, 01:03:04e, 01:03:05e, 01:03:06e, 01:05e	DR53
	DRB4* 01:02; DRB4* 01:04e, 01:06e, 01:07:01e, 01:07:02e, 01:08e, 01:09e, 01:10e, 01:11e, 01:12e, 01:13e, 01:14e, 01:15e, 01:16Ne, 01:17e, 01:18e, 01:19e, 01:20e, 01:21e, 01:22e, 01:23e, 01:24e, 01:25e, 01:26e, 01:27e, 01:28e, 01:29e, 01:30e, 01:31e, 01:32e, 01:33e, 01:34e, 01:35e, 01:36e, 01:37e, 01:38Ne, 01:39e, 01:40e, 01:41e, 01:42e, 01:43e, 01:44e, 01:45e, 01:46e, 01:47e, 01:48e, 01:49e, 01:50e, 01:51e, 01:52e, 01:53e, 01:54Ne, 01:55e, 01:56Ne, 01:57Ne, 01:58e, 01:59e, 01:60e, 01:61Ne, 01:62e, 01:63e, 01:64e, 01:65Ne, 01:66e, 01:67e, 01:68e, 01:69e	-

Cannot exclude RARE alleles from another locus.

### HLA-DQA1

ALLELE GROUP	ALLELES	P GROUP	ANTIGEN
DQA1*01	DQA1* 01:01:01:01, 01:01:02, 01:04:01:01, 01:05:01; DQA1* 01:01:01:02e-01:01:01:05e, 01:01:03e, 01:04:01:02e-01:04:02e, 01:05:02e, 01:12e	01:01P	-
	DQA1* 01:02:01:01; DQA1* 01:02:02d; DQA1* 01:02:01:02e-01:02:01:09e, 01:02:03e-01:02:04e, 01:08e-01:09e, 01:11e	01:02P	
	DQA1* 01:03:01:01; DQA1* 01:03:01:02e-01:03:01:08e	01:03P	
	DQA1* 01:06e-01:07Qe, 01:10e, 01:13e-01:16Ne	-	
DQA1*02	DQA1* 02:01:01:01; DQA1* 02:01:01:02e-02:01:02e	02:01P	-

### HLA-DQB1

ALLELE GROUP	ALLELES	P GROUP	ANTIGEN
DQB1*02	DQB1* 02:01:01, 02:02:01:01; DQB1* 02:01:02e-02:01:28e, 02:02:01:02e-02:02:05e	02:01P	DQ2
	DQB1* 02:03	-	
	DQB1* 02:04e, 02:06e, 02:09e-02:10e, 02:48e, 02:59e, 02:64e, 02:79e-02:82e, 02:89e, 02:97e-02:99e, 02:102e, 02:105e-02:106e	02:01P	-
	DQB1* 02:07e	02:07P	
	DQB1* 02:14e	02:14P	
	DQB1* 02:05e, 02:08e, 02:11e-02:13e, 02:15e-02:47e, 02:49e-02:53Qe, 02:55e-02:58Ne, 02:60e-02:63e, 02:65e-02:78e, 02:83e-02:88e, 02:90e-02:96Ne, 02:100e-02:101e, 02:103e-02:104e	-	

ALLELE GROUP	ALLELES	P GROUP	ANTIGEN
DQB1*05	DQB1* 05:01:01:01; DQB1* 05:01:01:02e-05:01:25e	05:01P	DQ5
	DQB1* 05:02:01:01; DQB1* 05:02:01:02e-05:02:15e	05:02P	
	DQB1* 05:03:01:01; DQB1* 05:03:01:02e-05:03:17e	05:03P	
	DQB1* 05:04	05:04P	
	DQB1* 05:18e, 05:27e, 05:31e-05:32e, 05:45e, 05:84e, 05:103e-05:104e, 05:107e, 05:133e, 05:137e, 05:139e, 05:144e, 05:148e, 05:150e, 05:152e, 05:155e, 05:159e-05:160e	05:01P	-
	DQB1* 05:14e, 05:17e, 05:35e-05:37e, 05:46e-05:47e, 05:57e, 05:87Qe, 05:102e, 05:106e, 05:136e	05:02P	
	DQB1* 05:08e, 05:10e, 05:42e-05:43e, 05:56e, 05:78e, 05:96e, 05:108e, 05:149e, 05:161e	05:03P	
	DQB1* 05:132Qe	05:04P	
	DQB1* 05:05e	05:05P	
	DQB1* 05:06e	05:06P	
	DQB1* 05:11e	05:11P	
	DQB1* 05:66e	05:66P	
	DQB1* 05:89e	05:89P	
	DQB1* 05:07e, 05:09e, 05:12e-05:13e, 05:15e-05:16e, 05:19e-05:26e, 05:28e-05:30e, 05:33e-05:34e, 05:38e-05:41Ne, 05:44e, 05:48e-05:50e, 05:52e-05:55e, 05:58e-05:65e, 05:67e-05:77e, 05:79e-05:81e, 05:83e, 05:85e-05:86e, 05:88e, 05:90Ne-05:95e, 05:97e-05:101e, 05:105e, 05:109e-05:118e, 05:120e-05:121e, 05:123e-05:124e, 05:126e-05:131e, 05:134e-05:135e, 05:138e, 05:140e-05:143e, 05:145e-05:147e, 05:151e, 05:153e-05:154e, 05:156e-05:158e	-	

#### HLA-DPA1

ALLELE GROUP	ALLELES	P GROUP	ANTIGEN
DPA1*01	DPA1* 01:03:01:01; DPA1* 01:03:01:02e-01:03:05e, 01:14e	01:03P	-
	DPA1* 01:06e	01:06P	
	DPA1* 01:04; DPA1* 01:05e, 01:07e, 01:09e-01:10e, 01:12e, 01:15e	-	

ALLELE GROUP	ALLELES	P GROUP	ANTIGEN
DPA1*01	<b>DPA1* 01:03:01:01;</b> DPA1* 01:03:01:02e-01:03:05e, 01:14e	01:03P	-
	DPA1* 01:06e	01:06P	
	<b>DPA1* 01:04;</b> DPA1* 01:05e, 01:07e, 01:09e-01:10e, 01:12e, 01:15e	-	

#### HLA-DPB1

EPITYPE	ALLELES	P GROUP	HVR-A	HVR-B	HVR-C	HVR-D	HVR-E	HVR-F
EDP04	<b>DPB1* 04:01:01:01;</b> DPB1* 04:01:01:02e-04:01:01:23e, 04:01:01:25e-04:01:37e / DPB1* 350:01e / DPB1* 415:01e / DPB1* 459:01e / DPB1* 464:01e / DPB1* 534:01e / DPB1* 615:01e / DPB1* 618:01e / DPB1* 670:01e / DPB1* 677:01e / DPB1* 699:01e	04:01P	LFQG	EEFA	AAE	ILEEK	M	GGPM
	DPB1* 04:01:01:24Ne / DPB1* 99:01e / DPB1* 120:01Ne / DPB1* 121:01e / DPB1* 128:01e / DPB1* 134:01e / DPB1* 149:01e / DPB1* 169:01e / DPB1* 174:01e / DPB1* 175:01e / DPB1* 180:01e / DPB1* 181:01e / DPB1* 192:01e / DPB1* 193:01e / DPB1* 194:01e / DPB1* 195:01e / DPB1* 212:01e / DPB1* 213:01e / DPB1* 224:01e / DPB1* 225:01e / DPB1* 228:01e / DPB1* 231:01e / DPB1* 232:01e / DPB1* 240:01e / DPB1* 253:01e / DPB1* 255:01e / DPB1* 262:01e / DPB1* 272:01e / DPB1* 275:01e / DPB1* 276:01e / DPB1* 281:01e / DPB1* 282:01e / DPB1* 283:01e / DPB1* 298:01e / DPB1* 320:01e / DPB1* 323:01e / DPB1* 334:01e / DPB1* 335:01e / DPB1* 336:01e / DPB1* 341:01e / DPB1* 356:01e / DPB1* 360:01e / DPB1* 372:01e / DPB1* 376:01e / DPB1* 378:01e / DPB1* 396:01e / DPB1* 397:01e / DPB1* 418:01e / DPB1* 425:01e / DPB1* 426:01e / DPB1* 428:01e / DPB1* 434:01e / DPB1* 453:01e / DPB1* 455:01Ne / DPB1* 465:01e / DPB1* 468:01e / DPB1* 475:01e / DPB1* 476:01e / DPB1* 479:01e / DPB1* 485:01e / DPB1* 486:01e / DPB1* 487:01e / DPB1* 497:01e / DPB1* 500:01e / DPB1* 520:01e / DPB1* 521:01e / DPB1* 522:01e / DPB1* 523:01e / DPB1* 524:01e / DPB1* 529:01e / DPB1* 553:01e / DPB1* 554:01e / DPB1* 556:01e / DPB1* 559:01e / DPB1* 569:01e / DPB1* 575:01e / DPB1* 578:01e / DPB1* 583:01e / DPB1* 591:01e / DPB1* 593:01e / DPB1* 607:01e / DPB1* 614:01e / DPB1* 625:01e / DPB1* 643:01e / DPB1* 658:01e / DPB1* 666:01e / DPB1* 682:01e / DPB1* 683:01e / DPB1* 694:01e	-						

EPITYPE	ALLELES	P GROUP	HVR-A	HVR-B	HVR-C	HVR-D	HVR-E	HVR-F
EDP04	DPB1* 04:01:01:01; DPB1* 04:01:01:02e-04:01:01:23e, 04:01:01:25e-04:01:12e, 04:01:14e-04:01:37e / DPB1* 350:01e / DPB1* 415:01e / DPB1* 459:01e / DPB1* 464:01e / DPB1* 534:01e / DPB1* 615:01e / DPB1* 618:01e / DPB1* 670:01e / DPB1* 677:01e / DPB1* 699:01e	04:01P	LFQG	EEFA	AAE	ILEEK	M	GGPM
	DPB1* 04:01:01:24Ne / DPB1* 99:01e / DPB1* 120:01Ne / DPB1* 121:01e / DPB1* 128:01e / DPB1* 134:01e / DPB1* 149:01e / DPB1* 169:01e / DPB1* 174:01e / DPB1* 175:01e / DPB1* 180:01e / DPB1* 181:01e / DPB1* 192:01e / DPB1* 194:01e / DPB1* 195:01e / DPB1* 212:01e / DPB1* 213:01e / DPB1* 224:01e / DPB1* 225:01e / DPB1* 228:01e / DPB1* 231:01e / DPB1* 232:01e / DPB1* 240:01e / DPB1* 253:01e / DPB1* 255:01e / DPB1* 262:01e / DPB1* 272:01e / DPB1* 275:01e / DPB1* 276:01e / DPB1* 281:01e / DPB1* 282:01e / DPB1* 283:01e / DPB1* 298:01e / DPB1* 320:01e / DPB1* 323:01e / DPB1* 334:01e / DPB1* 335:01e / DPB1* 336:01e / DPB1* 341:01e / DPB1* 356:01e / DPB1* 360:01e / DPB1* 372:01e / DPB1* 376:01e / DPB1* 378:01e / DPB1* 396:01e / DPB1* 397:01e / DPB1* 418:01e / DPB1* 425:01e / DPB1* 426:01e / DPB1* 428:01e / DPB1* 434:01e / DPB1* 453:01e / DPB1* 455:01Ne / DPB1* 465:01e / DPB1* 468:01e / DPB1* 475:01e / DPB1* 476:01e / DPB1* 479:01e / DPB1* 485:01e / DPB1* 486:01e / DPB1* 487:01e / DPB1* 497:01e / DPB1* 500:01e / DPB1* 520:01e / DPB1* 521:01e / DPB1* 522:01e / DPB1* 523:01e / DPB1* 524:01e / DPB1* 529:01e / DPB1* 553:01e / DPB1* 554:01e / DPB1* 556:01e / DPB1* 559:01e / DPB1* 569:01e / DPB1* 575:01e / DPB1* 578:01e / DPB1* 583:01e / DPB1* 591:01e / DPB1* 593:01e / DPB1* 607:01e / DPB1* 614:01e / DPB1* 625:01e / DPB1* 643:01e / DPB1* 658:01e / DPB1* 666:01e / DPB1* 682:01e / DPB1* 683:01e / DPB1* 694:01e	-						
This genotype consists of alleles from a single group. This epitype was AUTOMATICALLY chosen because it is the only one which does not require a rare allele.								
This genotype was chosen as the most likely; cannot exclude one or more rare genotypes.								

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