Olerup SSP® HLA-A*02

Product number:	**101.412-24/04 – including *Taq* pol.**
Lot number:	**17L**
Expiry date:	**2013-September-01**
Number of tests:	**24 tests – Product No. 101.412-24**
	4 tests – Product No. 101.412-04
Number of wells per test:	**96**
Storage - pre-aliquoted primers:	**dark at -20°C**
- PCR Master Mix:	**-20°C**
- Adhesive PCR seals	**RT**
- Product Insert	**RT**

This Product Description is only valid for Lot No. 17L.

CHANGES COMPARED TO THE PREVIOUS *OLERUP* SSP® HLA-A*02 LOT

The specificity and interpretation tables have been revised since the previous *Olerup* SSP® HLA-A*02 lot **(37K)**.

The amplification patterns for some rare HLA-A*02 alleles only differ by the length of the specific PCR products.

The primers of the wells detailed below have been exchanged, added or modified compared to the previous lot.

Well	5'-primer	3'-primer	rationale
57	-	Added	Increased yield of specific PCR product.

Change in revision R01 compared to R00:

1. In primer mix 33, the positive control band may be weaker than for other HLA-A*02 primer mixes. This primer mix may also give a lower yield of HLA-specific PCR product than the other HLA-A*02 primer mixes.

Change in revision R02 compared to R01:

1. The A*02:53N allele is amplified in primer mixes 70 and 79. This has been corrected in the specificity and interpretation tables.

PRODUCT DESCRIPTION

HLA-A*02 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the the A*02:01 to A*02:199 alleles.

PLATE LAYOUT

Each test consists of 96 PCR reactions in a 96 well cut PCR plate.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
9	**10**	**11**	**12**	**13**	**14**	**15**	**16**
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**
25	**26**	**27**	**28**	**29**	**30**	**31**	**32**
33	**34**	**35**	**36**	**37**	**38**	**39**	**40**
41	**42**	**43**	**44**	**45**	**46**	**47**	**48**
49	**50**	**51**	**52**	**53**	**54**	**55**	**56**
57	**58**	**59**	**60**	**61**	**62**	**63**	**64**
65	**66**	**67**	**68**	**69**	**70**	**71**	**72**
73	**74**	**75**	**76**	**77**	**78**	**79**	**80**
81	**82**	**83**	**84**	**85**	**86**	**87**	**88**
89	**90**	**91**	**92**	**93**	**94**	**95**	**96**

The 96 well cut PCR plate is marked with 'HLA-A*02' in silver/gray ink.
Well No. 1 is marked with the Lot No. '17L'.
A faint row of numbers is seen between wells 1 and 2 or wells 7 and 8 of the PCR trays. These stem from the manufacture of the trays, and should be disregarded.
The PCR plates are covered with a PCR-compatible foil.

INTERPRETATION

The interpretation of HLA-A*02 SSP subtypings will be influenced by four A*01, most A*03, five A*11, the A*23, most A*24, the A*25:11, nine A*26, three A*29, several A*30, the A*31:29, the A*32:08, seven A*33, the A*34:08, the A*66:09, the A*68, the A*69:01, three A*74 and the A*80:01 alleles when present on the other haplotype. In addition, the B*15:67 allele will be amplified by primer mix 88 and the B*15:173 allele will be amplified by primer mix 93.

UNIQUELY IDENTIFIED ALLELES

All HLA-A*02 alleles recognized by the HLA Nomenclature Committee in April 2010, i.e. **A*02:01 to A*02:199,** will give rise to unique amplification patterns by the primers in the HLA-A*02 subtyping kit[1].

The HLA-A*02 subtyping kit cannot distinguish the A*02:01:01:01, 02:01:01:03-02:01:02, 02:01:04-02:01:15, 02:01:18-02:01:19 and 02:01:21-02:01:45 alleles, the A*02:05:01-02:05:03 alleles, the A*02:06:01-02:06:09 alleles, the A*02:17:01-02:17:02 alleles, the 02:20:01-02:20:02 alleles, the A*02:22:01-02:22:02 alleles, the A*02:74:01-02:74:02 alleles, the A*02:97:01-02:97:02 alleles and the A*02:171:01-02:171:02 alleles.
The A*02:150 and 02:197 alleles may can be distinguished by the different sizes of the specific PCR products generated by primer mix 94.

The A*02:153 and 02:196 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 96.

[1]HLA-A alleles listed on the IMGT/HLA web page 2010-April-01, release 3.0.0, www.ebi.ac.uk/imgt/hla, i.e. the same alleles as were recognized by lot 37K of the HLA-A*02 subtyping kit.

SPECIFICITY TABLE

HLA-A*02 SSP subtyping

Specificities and sizes of the PCR products of the 96 primer mixes used for HLA-A*02 SSP subtyping

Primer Mix	Size of spec. PCR product[1]	Size of control band[2]	Amplified HLA-A*02 alleles[3]	Other amplified HLA-A alleles[4]
1[8]	360 bp	**800 bp**	*02:01:01:01-02:01:15, 02:01:17-02:01:19, 02:01:21-02:06:09, 02:08-02:09, 02:12-02:14, 02:16, 02:19-02:22:02, 02:24-02:32N, 02:34, 02:36-02:38, 02:40-02:46, 02:49-02:68, 02:70-02:77, 02:79-02:80, 02:82N-02:86, 02:88N-02:89, 02:91-02:97:02, 02:99, 02:101-02:102, 02:104-02:107, 02:109, 02:111, 02:113N-02:123, 02:125N-02:127, 02:131-02:135, 02:137-02:145, 02:147, 02:149-02:157, 02:159-02:190, 02:192-02:199	*03:09, 11:06, 11:18, 25:11, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 26:36, 29:19, 30:13, 30:16, 32:08, 33:24, 68:05, 68:15, 68:20, 74:06, 80:01[W]
2	230 bp	1070 bp	*02:01:01:01-02:01:02, 02:01:04-02:01:15, 02:01:17-02:01:19, 02:01:21-02:04, 02:07, 02:09, 02:12-02:13, 02:15N-02:20:02, 02:22:01-02:22:02, 02:24-02:27, 02:29-02:34, 02:36-02:40, 02:42-02:43N, 02:45-02:47, 02:49-02:50, 02:52-02:53N, 02:55-02:56:02, 02:58-02:60, 02:62-02:68, 02:70-02:71, 02:73-02:77, 02:80, 02:82N-02:83N, 02:85-02:86, 02:88N-02:89, 02:92-02:97:02, 02:101-02:105, 02:107, 02:109-02:111, 02:113N-02:121, 02:123, 02:125N, 02:130-02:135, 02:138-02:141, 02:145, 02:147-02:153, 02:155-02:168, 02:171:01-02:171:02, 02:173-02:177, 02:181-02:199	*03:09, 74:06

3[6]	175 bp	1070 bp	*02:01:01:01-02:01:15, 02:01:17-02:01:19, 02:01:21-02:03:02, 02:05:01-02:16, 02:18, 02:20:01-02:22:02, 02:24-02:38, 02:40-02:43N, 02:45-02:56:02, 02:58-02:64, 02:66-02:78, 02:80-02:85, 02:87-02:97:02, 02:99, 02:101-02:107, 02:109, 02:111-02:134, 02:136-02:148, 02:150-02:151, 02:153-02:155, 02:157-02:189, 02:191-02:193, 02:195-02:199	*68:02:01:01-68:02:04, 68:15, 68:18N, 68:23, 68:27-68:28, 68:31, 68:34, 68:40, 68:48, 69:01
4[5]	80 bp	1070 bp	*02:01:01:01-02:01:15, 02:01:18-02:01:19, 02:01:21-02:01:45, 02:03:01-02:04, 02:06:01-02:07, 02:09-02:13, 02:15N-02:22:02, 02:24-02:35:01, 02:35:03-02:44, 02:45[w], 02:46, 02:49, 02:51-02:54, 02:56:01[w], 02:57-02:62, 02:64-02:77, 02:78[w], 02:79-02:97:02, 02:99, 02:101-02:102, 02:104-02:114, 02:116-02:121, 02:123-02:128, 02:130-02:143, 02:145-02:153, 02:156-02:168, 02:170-02:171:02, 02:173-02:175, 02:177-02:178, 02:180-02:184, 02:187-02:194, 02:196-02:199	*03:01:03[w], 03:23, 26:07:02, 33:01:02, 33:08-33:09, 68:30, 74:04
5[5]	125 bp	1070 bp	*02:01:01:01-02:01:15, 02:01:17-02:01:19, 02:01:21-02:01:45, 02:04, 02:06:01-02:07, 02:09-02:11, 02:14-02:18, 02:20:01-02:21, 02:25-02:26, 02:28-02:36, 02:39-02:43N, 02:45-02:46, 02:48, 02:51-02:53N, 02:55-02:62, 02:64, 02:66-02:67, 02:68[w], 02:69-02:97:02, 02:99, 02:101, 02:103, 02:105-02:114, 02:116, 02:118-02:121, 02:123-02:134, 02:138-02:141, 02:143-02:147, 02:149-02:151, 02:153, 02:156-02:171:02, 02:173-02:178, 02:180-02:181, 02:183-02:185, 02:187-02:190, 02:192-02:199	*03:17, 23:01:01-23:01:02, 23:04-23:25, 24:13:01-24:13:02, 24:18, 24:24, 24:94, 68:08:01-68:08:02, 69:01

6[5,6]	75 bp	**800 bp**	*02:02-02:03:02, 02:05:01-02:05:03, 02:08, 02:22:01-02:22:02, 02:47, 02:49-02:50, 02:63, 02:102, 02:104, 02:115, 02:117, 02:122, 02:136, 02:148, 02:154-02:155, 02:172, 02:179, 02:186, 02:191	*68:01:01-68:07, 68:10-68:25, 68:27-68:47, 68:49N
7[7]	175 bp	1070 bp	*02:02, 02:05:01-02:05:03, 02:08, 02:14, 02:47, 02:63, 02:102, 02:115, 02:154-02:155, 02:172, 02:179, 02:186	
8[10]	415 bp, 505 bp	1070 bp	*02:02, 02:05:01-02:05:03, 02:14, 02:32N, 02:47, 02:63, 02:102, 02:115, 02:154-02:155, 02:172, 02:179, 02:186	
9[5]	105 bp	1070 bp	*02:03:01, 02:03:02^{W}, 02:25, 02:38, 02:117, 02:148, 02:171:01-02:171:02	*24:99, 26:10
10[5]	115 bp	**800 bp**	*02:03:01, 02:03:02^{W}, 02:13, 02:26, 02:38, 02:99, 02:117, 02:148, 02:171:01-02:171:02	*03:17, 24:18, 24:56, 26:10, 68:42
11[8,11]	225 bp, 350 bp	1070 bp	*02:04, 02:17:01-02:17:02, 02:57, 02:65, 02:89, 02:108, 02:110, 02:152	*23:12, 24:28, 24:30, 24:42, 24:89, 29:19, 32:08, 33:24, 68:05, 68:20, 74:06
12[12]	195 bp, 235 bp	1070 bp	*02:05:01-02:06:09, 02:08, 02:10, 02:14, 02:21, 02:28, 02:41, 02:44, 02:51, 02:54, 02:57, 02:61, 02:72, 02:79, 02:84-02:85, 02:91, 02:99, 02:106, 02:108, 02:122, 02:126-02:127, 02:137, 02:142-02:144, 02:154, 02:169-02:170, 02:172, 02:178-02:180	*11:06, 11:18, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 68:05, 68:15, 68:20
13[5,8]	145 bp	**800 bp**	*02:05:01-02:05:03, 02:08, 02:14, 02:84, 02:154, 02:172, 02:179	
14[5,8,13]	95 bp, 170 bp	**800 bp**	*02:07, 02:15N, 02:18, 02:91, 02:103, 02:112, 02:130, 02:191	
15[5,8,14]	125 bp, 265 bp, 305 bp	**800 bp**	*02:21, 02:87, 02:96, 02:112, 02:129, 02:136, 02:186	

16[5,15]	110 bp, 155 bp	**800 bp**	*02:09, 02:49-02:50, 02:73, 02:93, 02:122, 02:156, 02:172	*24:15, 24:41, 24:51, 24:92, 26:10, 68:02:01:01-68:02:04, 68:15, 68:18N, 68:25, 68:27-68:28, 68:31, 68:34, 68:40, 68:44, 68:48-68:49N
17[16]	205 bp, 360 bp	1070 bp	*02:10, 02:17:01-02:17:02, 02:39, 02:83N, 02:108, 02:110, 02:148	*23:12, 24:28, 24:30, 24:42, 24:89
18[7]	175 bp	1070 bp	*02:11, 02:29, 02:69, 02:128	
19[5]	125 bp	1070 bp	*02:12-02:13, 02:19, 02:27, 02:37-02:38, 02:44, 02:54, 02:142	*24:02:01:01-24:02:15, 24:02:17-24:05, 24:07-24:11N, 24:14-24:15, 24:17, 24:19-24:20, 24:23, 24:25-24:53, 24:55-24:64, 24:66-24:86N, 24:88-24:90N, 24:92-24:93, 24:95-24:99, 33:19, 68:09, 68:26
20	295 bp	1070 bp	*02:49	
21[8]	220 bp	1070 bp	*02:15N	
22	160 bp	1070 bp	*02:19, 02:36-02:37, 02:54	*23:01:01-23:02, 23:05-23:25, 24:02:01:01-24:02:31, 24:04-24:09N, 24:11N, 24:13:01-24:15, 24:17, 24:19-24:20, 24:23[w], 24:24-24:32, 24:34-24:64, 24:66-24:74, 24:76-24:93, 24:95-24:99, 33:19, 68:26
23[5,17]	135 bp, 180 bp	**800 bp**	*02:17:01-02:17:02, 02:31, 02:108, 02:110, 02:161	*24:94
24[5]	115 bp	1070 bp	*02:27	*24:59
25[5]	145 bp	1070 bp	*02:16, 02:131	*24:55
26[5,7,18]	125 bp, 165 bp, 260 bp	**800 bp**	*02:33, 02:52, 02:198	
27[5,19]	95 bp, 145 bp	1070 bp	*02:10, 02:28, 02:50, 02:52, 02:73, 02:93, 02:95, 02:110, 02:114, 02:117, 02:122, 02:155-02:156, 02:185	*11:16, 11:35, 11:57, 30:13, 30:16, 68:01:01-68:11N, 68:13-68:48
28	235 bp	**800 bp**	*02:08, 02:20:01-02:20:02,	

			02:55-02:56:02, 02:62, 02:78, 02:103, 02:128, 02:169, 02:195	
29[20]	220 bp, 300 bp	1070 bp	*02:45-02:46, 02:48, 02:56:01[w]-02:56:02[w], 02:78[w], 02:92, 02:103[w], 02:129, 02:169[w], 02:180, 02:195[w]	
30[5,21]	130 bp, 160 bp	**800 bp**	*02:43N, 02:104, 02:163	
31[5,6,22]	95 bp, 220 bp	**800 bp**	*02:45, 02:56:01-02:56:02, 02:78, 02:82N, 02:103, 02:169, 02:195	*23:08N
32[23]	205 bp, 230 bp, 255 bp	1070 bp	*02:46-02:48, 02:70, 02:129, 02:176	
33[7-9,24]	230 bp, 325 bp	1070 bp	*02:19, 02:36-02:37, 02:54, 02:165, 02:168	
34[5,6,25]	120 bp, 180 bp	**800 bp**	*02:34-02:35:02, 02:56:01-02:56:02, 02:62, 02:78, 02:88N, 02:103	*30:01:01-30:01:03, 30:08, 30:11:01-30:11:02, 30:14L-30:20, 30:23-30:24, 30:26, 30:30-30:31, 30:35-30:37
35[5,26]	110 bp, 155 bp	1070 bp	*02:40, 02:51, 02:77, 02:130	*23:01:01-23:01:02, 23:02[w], 23:04-23:13, 23:14[w], 23:15-23:23, 23:25, 24:24
36[5,27]	85 bp, 445 bp	1070 bp	*02:24, 02:65, 02:94N, 02:135, 02:137, 02:152	*03:09, 11:06, 11:18, 25:11, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 26:36, 29:19, 30:13, 30:16, 32:08, 33:24, 74:06, 80:01[w]
37[5]	140 bp	1070 bp	*02:38, 02:68, 02:101, 02:154	*23:10[w], 24:10, 24:46[w], 24:91, 26:10
38[5]	125 bp	**800 bp**	*02:41, 02:80, 02:117	
39[5,7,28]	75 bp, 165 bp, 200 bp	1070 bp	*02:18, 02:159, 02:170	
40[5,29]	90 bp, 210 bp	1070 bp	*02:40, 02:51, 02:67, 02:130	*29:22, 33:22
41[8]	185 bp	1070 bp	*02:02, 02:05:01-02:05:03, 02:08, 02:14, 02:17:01-02:17:02, 02:47, 02:57-02:58, 02:63, 02:75, 02:102, 02:108, 02:110, 02:115,	*24:94

			02:154-02:155, 02:172, 02:179, 02:186	
42[7]	225 bp	**800 bp**	*02:34-02:35:03, 02:56:01-02:56:02, 02:62, 02:103	*01:13, 01:17, 03:01:01:01-03:07, 03:09-03:11N, 03:13-03:31, 03:33-03:35, 03:37-03:40, 03:42-03:58, 03:60-03:71, 03:73-03:76, 34:08, 74:13
43[30]	180 bp, 225 bp	**800 bp**	*02:03:01-02:03:02, 02:22:01-02:22:02, 02:49, 02:71, 02:104, 02:117, 02:136, 02:148, 02:191	*26:22, 66:09
44	155 bp	**800 bp**	*02:59	
45[5,31]	105 bp, 185 bp	1070 bp	*02:19, 02:39, 02:44, 02:60, 02:79, 02:86	*01:20, 24:14, 24:93
46[5,7,32]	70 bp , 150 bp, 205 bp	1070 bp	*02:61, 02:66, 02:181	
47	165 bp	**800 bp**	*02:63	
48[5]	110 bp	1070 bp	*02:64, 02:177-02:178	
49[5]	145 bp	1070 bp	*02:38, 02:101, 02:154	*23:10[W], 24:10, 24:46[W], 26:10
50[5]	145 bp	**800 bp**	*02:01:01:02L	
51	410 bp	1070 bp	*02:65, 02:80, 02:114, 02:117, 02:152	*03:09, 11:06, 11:18, 29:19, 32:08, 33:24, 68:05, 68:20, 74:06, 80:01[W]
52	185 bp	**800 bp**	*02:76	*30:22
53	225 bp	1070 bp	*02:14, 02:17:01-02:17:02, 02:57-02:58, 02:108, 02:110	*03:75, 23:01:01-23:01:02, 23:03:01-23:13, 23:15-23:25, 24:13:01, 24:18, 24:24, 24:94, 29:07, 31:29
54[7,33]	240 bp, 350 bp	**800 bp**	*02:74:01-02:74:02, 02:189-02:190	
55	200 bp	1070 bp	*02:30	
56[34]	150 bp, 275 bp	1070 bp	*02:53N, 02:81, 02:124, 02:175, 02:181	
57[5,7,35]	105 bp, 145 bp	1070 bp	*02:42, 02:160, 02:175	
58	255 bp	**800 bp**	*02:11, 02:35:01-02:35:03, 02:48, 02:69, 02:78, 02:90, 02:128	

59[5]	145 bp	**800 bp**	*02:97:01-02:97:02	
60[8]	345 bp	1070 bp	*02:50, 02:65, 02:73, 02:122, 02:135, 02:152	*25:11, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 26:36, 29:19, 32:08, 33:24, 68:05, 68:15, 68:20, 74:06
61[7]	185 bp	1070 bp	*02:50, 02:73, 02:122, 02:156	*11:16, 11:35, 11:57, 68:01:01-68:11N, 68:13-68:43, 68:45-68:48
62	180 bp	**800 bp**	*02:69, 02:179	*68:01:01-68:32, 68:34-68:49N
63	160 bp	**800 bp**	*02:105	
64[5,36]	125 bp, 175 bp, 260 bp	1070 bp	*02:106, 02:145, 02:164, 02:187	*01:44, 03:44, 24:72
65[5,37]	145 bp, 185 bp	1070 bp	*02:107, 02:160	
66	170 bp	**800 bp**	*02:109	
67[5,38]	105 bp, 130 bp	**800 bp**	*02:111, 02:177	
68[39]	215 bp, 260 bp	1070 bp	*02:113N, 02:184	
69[40]	170 bp, 335 bp	1070 bp	*02:114, 02:166	
70[5,41]	125 bp, 280 bp	**800 bp**	*02:53N, 02:115, 02:192	
71[8]	260 bp	**800 bp**	*02:116	
72[5,42]	110 bp, 230 bp, 260 bp	1070 bp	*02:19, 02:44, 02:118, 02:135, 02:149, 02:152, 02:183, 02:189-02:190	
73[43]	200 bp, 250 bp	1070 bp	*02:119, 02:158	
74[44]	175 bp, 260 bp	**800 bp**	*02:120, 02:187	
75[6, 45]	165 bp, 205 bp	1070 bp	*02:121, 02:166	*68:14
76	230 bp	**800 bp**	*02:50, 02:122, 02:143	
77[5,46]	85 bp, 110 bp	**800 bp**	*02:123, 02:162	
78[5,47]	75 bp, 240 bp	1070 bp	*02:124, 02:193	
79[8,48]	225 bp, 270 bp	1070 bp	*02:53N, 02:125N, 02:184, 02:192	

80[5,49]	135 bp, 230 bp	1070 bp	*02:126, 02:194	
81[5,50]	110 bp, 235 bp, 315 bp	1070 bp	*02:127, 02:165, 02:167, 02:183	
82[5,51]	130 bp, 295 bp	1070 bp	*02:131, 02:199	
83[5]	100 bp	**800 bp**	*02:132	
84[7]	180 bp	**800 bp**	*02:133, 02:164	*01:44, 03:44
85	260 bp	**800 bp**	*02:134	
86[52]	180 bp, 255 bp	**800 bp**	*02:135, 02:174	
87	155 bp	1070 bp	*02:138	
88[5,53]	130 bp, 240 bp	**800 bp**	*02:139, 02:188	**B*15:67**
89[5,54]	115 bp, 295 bp	**800 bp**	*02:140, 02:182	*33:15
90[5,55]	100 bp, 130 bp, 190 bp	**800 bp**	*02:72, 02:141, 02:161	
91[5]	110 bp	**800 bp**	*02:50, 02:73, 02:93, 02:122, 02:156, 02:162, 02:172	*24:15, 24:41, 24:51, 24:92, 26:10, 68:02:01:01-68:02:04, 68:15, 68:18N, 68:25, 68:27-68:28, 68:31, 68:34, 68:40, 68:44, 68:48-68:49N
92[56]	180 bp, 260 bp	1070 bp	*02:146, 02:173	
93[5,8,57]	130 bp, 250 bp, 295 bp	**800 bp**	*02:147, 02:157, 02:163	*24:73, **B*15:173**
94[7,58]	210 bp, 360 bp	**800 bp**	*02:150, 02:197	
95[5]	135 bp	**800 bp**	*02:52, 02:105, 02:147, 02:151, 02:188	*68:06
96[5,59]	135 bp, 250 bp	1070 bp	*02:153, 02:196	

[1]Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-A*02 SSP typings.
When the primers in a primer mix can give rise to specific PCR products of more than one length this is indicated if the size difference is 20 base pairs or more. Size differences shorter than 20 base pairs are not given. For high resolution SSP kits the respective lengths of the specific PCR product(s) of the alleles amplified by these primer mixes are given.
Nonspecific amplifications, i.e. a ladder or a smear of bands, may sometimes be seen. GC-rich primers have a higher tendency of giving rise to nonspecific amplifications than other primers.
PCR fragments longer than the control bands may sometimes be observed. Such bands should be disregarded and do not influence the interpretation of the SSP typings.

PCR fragments migrating faster than the control bands, but slower than a 400 bp fragment may be seen in some gel read-outs. Such bands can be disregarded and do not influence the interpretation of the SSP typings.

Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an inherit feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated.

[2]The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-A*02 subtyping.

In addition, wells number 6, 10, 13-16, 23, 26, 28, 30, 31, 34, 38, 42-44, 47, 50, 52, 54, 58, 59, 62, 63, 66, 67, 70, 71, 74, 76, 77, 83-86, 88- 91 and 93-95 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

In the presence of a specific amplification the intensity of the control band often decreases.

[3]For several HLA-A alleles 1st and 4th exon nucleotide sequences are not available. In these instances it is not known whether some of the primers of the SSP sets are completely matched with the target sequences or not. We assume that unknown sequences in the 1st and 4th exons are conserved within allelic groups.

The A*02:150 and 02:197 alleles may can be distinguished by the different sizes of the specific PCR products generated by primer mix 94.

The A*02:153 and 02:196 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 96.

[4]Due to the sharing of sequence motifs between HLA-A alleles non-HLA-A*02 alleles will be amplified by primer mixes 1 to 6, 9 to 12, 16, 17, 19, 22 to 25, 27, 31, 34 to 37, 40 to 43, 45, 49, 51 to 53, 60 to 62, 64, 75, 84, 89, 91, 93 and 95. In addition, the B*15:67 allele will be amplified by primer mix 88 and the B*15:173 allele will be amplified by primer mix 93.

[5]Short specific PCR fragments are less intense and not as sharp as longer specific bands.

[6]The specific primers in primer mixes 3, 6, 31, 34 and 75 may yield less specific PCR products than the other HLA-A*02 primer mixes.

[7]Primer mixes 7, 18, 26, 33, 39, 42, 46, 54, 57, 61, 84 and 94 have a tendency of giving rise to a primer oligomer artefact.

[8]Primer mixes 1, 11, 13, 14, 15, 21, 33, 41, 60, 71, 79 and 93 have a tendency of giving rise to nonspecific amplification.

[9]In primer mix 33, the positive control band may be weaker than for other HLA-A*02 primer mixes. This primer mix may also give a lower yield of HLA-specific PCR product than the other HLA-A*02 primer mixes.

[10]Primer mix 8: Specific PCR fragment of 415 bp in the A*02:02, 02:05:01-02:05:03, 02:14, 02:47, 02:63, 02:102, 02:115, 02:154-02:155, 02:172, 02:179 and 02:186 alleles. Specific PCR fragment of 505 bp in the A*02:32N allele.

[11]Primer mix 11: Specific PCR fragment of 225 bp in the A*02:89 allele. Specific PCR fragment of 350 bp in the A*02:04, 02:17:01-02:17:02, 02:57, 02:65, 02:89, 02:108, 02:110 and 02:152 and the A*23:12, 24:28, 24:30, 24:42, 24:89, 29:19, 32:08, 33:24, 68:05, 68:20 and 74:06 alleles.

Primer mix 11 may give rise to a long fragment of approx. 600 bp in some HLA-A alleles. This band should not be considered in the interpretatation of HLA-A*02 typings.

[12]Primer mix 12: Specific PCR fragment of 195 bp in A*02:85 allele. Specific PCR fragment of 235 bp in the A*02:05:01-02:06:09, 02:08, 02:10, 02:14, 02:21, 02:28, 02:41, 02:44, 02:51, 02:54, 02:57, 02:61, 02:72, 02:79, 02:84, 02:91, 02:99, 02:106, 02:108, 02:122, 02:126-02:127, 02:137, 02:142-02:144, 02:154, 02:169-02:170, 02:172 and 02:178-02:180 and the A*11:06, 11:18, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 68:05, 68:15, 68:20 alleles.

[13]Primer mix 14: Specific PCR fragment of 95 bp in A*02:91 allele. Specific PCR fragment of 170 bp in the A*02:07, 02:15N, 02:18, 02:103, 02:112, 02:130 and 02:191 alleles.

[14]Primer mix 15: Specific PCR fragment of 125 bp in the A*02:21 and 02:186 alleles. Specific PCR fragment of 265 bp in the A*02:87, 02:112, 02:129 and 02:136 alleles. Specific PCR fragment of 305 bp in the A*02:96 allele.

[15]Primer mix 16: Specific PCR fragment of 110 bp in the A*02:50, 02:73, 02:93, 02:122, 02:156 and 02:172 and the A*24:15, 24:41, 24:51, 24:92, 26:10, 68:02:01:01-68:02:04, 68:15, 68:18N, 68:25, 68:27-68:28, 68:31, 68:34, 68:40, 68:44 and 68:48-68:49N alleles. Specific PCR fragment of 155 bp in the A*02:09 and 02:49 alleles.
[16]Primer mix 17: Specific PCR fragment of 205 bp in the A*02:83N allele. Specific PCR fragment of 360 bp in the A*02:10, 02:17:01-02:17:02, 02:39, 02:108, 02:110 and 02:148 and the A*23:12, 24:28, 24:30, 24:42 and 24:89 alleles.
[17]Primer mix 23: Specific PCR fragment of 135 bp in the A*02:31 and 02:161 alleles. Specific PCR fragment of 180 bp in the A*02:17:01-02:17:02, 02:108 and 02:110 and the A*24:94 alleles.
[18]Primer mix 26: Specific PCR fragment of 125 bp in the A*02:33 allele. Specific PCR fragment of 165 bp in the A*02:52 allele. Specific PCR fragment of 260 bp in the A*02:198 allele.
[19]Primer mix 27: Specific PCR fragment of 95 bp in the A*02:28, 02:155 and 02:185 and the A*30:13 and 30:16 alleles.
Specific PCR fragments of 145 bp in A*02:10, 02:50, 02:52, 02:73, 02:93, 02:95, 02:110, 02:114, 02:117, 02:122, 02:156, 11:16, 11:35, 11:57, 68:01:01-68:11N, 68:13-68:48 alleles.
[20]Primer mix 29: Specific PCR fragment of 220 bp in the A*02:45-02:46, 02:48, 02:56:01[w]-02:56:02[w], 02:78[w], 02:92, 02:103[w], 02:129, 02:169[w] and 02:195[w] alleles. Specific PCR fragment of 300 bp in A*02:180 allele.
[21]Primer mix 30: Specific PCR fragment of 130 bp in the A*02:163 allele. Specific PCR fragment of 160 bp in A*02:43N and 02:104 alleles.
[22]Primer mix 31: Specific PCR fragment of 95 bp in A*02:82N and in the A*23:08N alleles. Specific PCR fragments of 220 bp in A*02:45, 02:56:01-02:56:02, 02:78, 02:103, 02:169 and 02:195 alleles.
[23]Primer mix 32: Specific PCR fragment of 205 bp in the A*02:176 allele. Specific PCR fragment of 230 bp in the A*02:46, 02:48, 02:70 and 02:129 alleles. Specific PCR fragment of 255 bp in the A*02:47 allele.
[24]Primer mix 33: Specific PCR fragment of 230 bp in A*02:165 and 02:168 alleles. Specific PCR fragments of 325 bp in A*02:19, 02:36-02:37 and 02:54 alleles.
[25]Primer mix 34: Specific PCR fragment of 120 bp in the A*02:88N allele. Specific PCR fragment of 180 bp in the A*02:34-02:35:02, 02:56:01-02:56:02, 02:62, 02:78, 02:103 and in the A*30:01:01-30:01:03, 30:08, 30:11:01-30:11:02, 30:14L-30:20, 30:23-30:24, 30:26, 30:30-30:31 and 30:35-30:37 alleles.
Primer mix 34 may give rise to a long fragment of approx. 600 bp in some HLA-A alleles. This band should not be considered in the interpretation of HLA-A*02 typings.
[26]Primer mix 35: Specific PCR fragment of 110 bp in A*02:40, 02:51, 02:130 and in the A*23:01:01-23:01:02, 23:02[w], 23:04-23:13, 23:14[w], 23:15-23:23, 23:25 and 24:24 alleles. Specific PCR fragment of 155 bp in A*02:77 allele.
[27]Primer mix 36: Specific PCR fragment of 85 bp in A*02:94N allele. Specific PCR fragments of 445 bp in the A*02:24, 02:65, 02:135, 02:137 and 02:152 and in the A*03:09, 11:06, 11:18, 25:11, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 26:36, 29:19, 30:13, 30:16, 32:08, 33:24, 74:06 and 80:01[w] alleles.
[28]Primer mix 39: Specific PCR fragment of 75 bp in the A*02:18 allele. Specific PCR fragment of 165 bp in the A*02:159 allele. Specific PCR fragment of 200 bp in the A*02:170 allele.
[29]Primer mix 40: Specific PCR fragment of 90 bp in the A*02:67 allele. Specific PCR fragment of 210 bp in the A*02:40, 02:51 and 02:130 and in the A*29:22 and 33:22 alleles.
[30]Primer mix 43: Specific PCR fragment of 180 bp in the A*02:71 allele. Specific PCR fragment of 225 bp in the A*02:03:01-02:03:02, 02:22:01-02:22:02, 02:49, 02:104, 02:117, 02:136, 02:148 and 02:191 and in the A*26:22 and 66:09 alleles.
[31]Primer mix 45: Specific PCR fragment of 105 bp in the A*02:60 allele. Specific PCR fragment of 185 bp in the A*02:19, 02:39, 02:44, 02:79 and 02:86 and in the A*01:20, 24:14 and 24:93 alleles.
[32]Primer mix 46: Specific PCR fragment of 70 bp in the A*02:66 allele. Specific PCR fragment of 150 bp in the A*02:181 allele. Specific PCR fragment of 205 bp in the A*02:61 allele.
[33]Primer mix 54: Specific PCR fragment of 240 bp in the A*02:189-02:190 alleles. Specific PCR fragment of 350 bp in A*02:74:01- 02:74:02 alleles.
[34]Primer mix 56: Specific PCR fragment of 150 bp in the A*02:175 and 02:181 alleles. Specific PCR fragment of 275 bp in A*02:53N, 02:81 and 02:124 alleles.

[35]Primer mix 57: Specific PCR fragment of 105 bp in the A*02:42 allele. Specific PCR fragment of 145 bp in A*02:160 and 02:175 alleles.
[36]Primer mix 64: Specific PCR fragment of 125 bp in the A*02:106 and 02:145 and in the A*24:72 alleles. Specific PCR fragment of 175 bp in A*02:164 and in the A*01:44 and 03:44 alleles. Specific PCR fragment of 260 bp in A*02:187 allele.
[37]Primer mix 65: Specific PCR fragment of 145 bp in the A*02:160 allele. Specific PCR fragment of 185 bp in A*02:107 allele.
[38]Primer mix 67: Specific PCR fragment of 105 bp in the A*02:177 allele. Specific PCR fragment of 130 bp in A*02:111 allele.
[39]Primer mix 68: Specific PCR fragment of 215 bp in the A*02:113N allele. Specific PCR fragment of 260 bp in A*02:184 allele.
[40]Primer mix 69: Specific PCR fragment of 170 bp in the A*02:114 allele. Specific PCR fragment of 335 bp in A*02:166 allele.
[41]Primer mix 70: Specific PCR fragment of 125 bp in the A*02:115 allele. Specific PCR fragment of 280 bp in A*02:53N and 02:192 alleles.
[42]Primer mix 72: Specific PCR fragment of 110 bp in the A*02:183 allele. Specific PCR fragment of 230 bp in A*02:189 allele. Specific PCR fragment of 260 bp in the A*02:19, 02:44, 02:118, 02:135, 02:149, 02:152 and 02:190 alleles.
[43]Primer mix 73: Specific PCR fragment of 200 bp in the A*02:119 allele. Specific PCR fragment of 250 bp in A*02:158 allele.
[44]Primer mix 74: Specific PCR fragment of 175 bp in the A*02:120 allele. Specific PCR fragment of 260 bp in A*02.187 allele.
[45]Primer mix 75: Specific PCR fragment of 165 bp in the A*02:166 allele. Specific PCR fragment of 205 bp in the A*02:121 and the A*68:14 alleles.
[46]Primer mix 77: Specific PCR fragment of 85 bp in the A*02:123 allele. Specific PCR fragment of 110 bp in the A*02:162 allele.
[47]Primer mix 78: Specific PCR fragment of 75 bp in the A*02:193 allele. Specific PCR fragment of 240 bp in the A*02:124 allele.
[48]Primer mix 79: Specific PCR fragment of 225 bp in the A*02:125N allele. Specific PCR fragment of 270 bp in A*02:53N, 02:184 and 02:192 alleles.
[49]Primer mix 80: Specific PCR fragment of 135 bp in the A*02:194 allele. Specific PCR fragment of 230 bp in A*02:126 allele.
[50]Primer mix 81: Specific PCR fragment of 110 bp in the A*02:183 allele. Specific PCR fragment of 235 bp in A*02:165 allele. Specific PCR fragment of 315 bp in A*02:127 and 02:167 alleles.
[51]Primer mix 82: Specific PCR fragment of 130 bp in the A*02:131 allele. Specific PCR fragment of 295 bp in the A*02:199 allele.
[52]Primer mix 86: Specific PCR fragment of 180 bp in the A*02:135 allele. Specific PCR fragment of 255 bp in the A*02:174 allele.
[53]Primer mix 88: Specific PCR fragment of 130 bp in the A*02:188 and the B*15:67 alleles. Specific PCR fragment of 240 bp in the A*02:139 allele.
[54]Primer mix 89: Specific PCR fragment of 115 bp in the A*02:140 and the A*33:15 alleles. Specific PCR fragment of 295 bp in the A*02:182 allele.
[55]Primer mix 90: Specific PCR fragment of 100 bp in the A*02:72 allele. Specific PCR fragment of 130 bp in the A*02:161 allele. Specific PCR fragment of 190 bp in the A*02:141 allele.
[56]Primer mix 92: Specific PCR fragment of 180 bp in the A*02:173 allele. Specific PCR fragment of 260 bp in the A*02:146 allele.
[57]Primer mix 93: Specific PCR fragment of 130 bp in the A*02:163 allele. Specific PCR fragment of 250 bp in the A*02:147 and the A*24:73 and B*15:173 alleles. Specific PCR fragment of 295 bp in the A*02:157 allele.
[58]Primer mix 94: Specific PCR fragment of 210 bp in the A*02:150 allele. Specific PCR fragment of 360 bp in A*02:197 allele.
[59]Primer mix 96: Specific PCR fragment of 135 bp in the A*02:196 allele. Specific PCR fragment of 250 bp in A*02:153 allele.
'w', might be weakly amplified.

INTERPRETATION TABLE

HLA-A*02 high resolution SSP typing

Amplification patterns of the HLA-A*02:01 to *02:199 alleles

	Well[5]																																							
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
Length of spec.	360	230	175	80	125	75	175	415	105	115	225	195	145	95	125	110	205	175	125	295	220	160	135	115	145	125	95	235	220	130	95	205	230	120	110	85	140	125	75	90	185	225	180	155	105	70	165	110
PCR product(s)								505			350	235		170	265	155	360						180			165	145		300	160	220	230	325	180	155	445			165	210			225		185	150		
															305											260						255							200						205		
Length of int.	800	1070	1070	1070	1070	800	1070	1070	1070	800	1070	1070	800	800	800	800	1070	1070	1070	1070	1070	1070	800	1070	1070	800	1070	800	1070	800	800	1070	1070	800	1070	1070	1070	1070	800	1070	1070	800	800	800	1070	1070	800	1070
pos. control[1]																																															
Well No.										1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4
HLA-A allele[2]	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
***02:01:01:01, 02:01:01:03-02:01:02, 02:01:04-02:01:15, 02:01:18-02:01:19, 02:01:21-02:01:45**	+	+	+	+	+																																								
***02:01:01:02L**	+	+	+	+	+																																								
***02:01:03**	+		+	+	+																																								
***02:01:17**	+	+	+		+																																								
***02:02**	+	+	+			+	+	+																																	+							
***02:03:01**	+	+	+	+		+			+	+																																+						
***02:03:02**	+	+	+	+		+			w	w																																+						
***02:04**	+	+		+	+						+																																				
***02:05:01-02:05:03**	+		+			+	+	+				+	+																													+						
***02:06:01-02:06:09**	+		+	+	+							+																																				
***02:07**		+	+	+	+									+																																			
***02:08**	+		+			+	+					+	+															+														+						
***02:09**	+	+	+	+	+											+																																	
***02:10**			+	+	+							+					+									+																					
***02:11**			+	+	+													+																														
***02:12**	+	+	+	+															+																													
***02:13**	+	+	+	+						+									+																													
***02:14**	+		+		+		+	+				+	+																												+						
***02:15N**		+	+	+	+									+							+																										
***02:16**	+	+	+	+	+																				+																						
***02:17:01-02:17:02**		+		+	+						+						+						+																		+						
***02:18**		+	+	+	+									+																							+										
***02:19**	+	+		+															+			+																							+			
***02:20:01-02:20:02**	+	+	+	+	+																							+																				
***02:21**	+		+	+	+							+			+																																	
***02:22:01-02:22:02**	+	+	+	+		+																																										
***02:24**	+	+	+	+																																											
***02:25**	+	+	+	+	+				+																																						
***02:26**	+	+	+	+	+					+																																					
***02:27**	+	+	+	+															+						+																						
***02:28**	+		+	+	+							+														+																					
***02:29**	+	+	+	+	+													+																													
***02:30**	+	+	+	+	+																																										
***02:31**	+	+	+	+	+																			+																						
***02:32N**	+	+	+	+	+			+																																							
***02:33**		+	+	+	+																					+																					
***02:34**	+	+	+	+	+																													+									+				
***02:35:01**			+	+	+																													+									+				
***02:35:02**			+		+																													+									+				
***02:35:03**			+	+	+																																						+				
***02:36**	+	+	+	+	+																	+											+														
***02:37**	+	+	+	+															+			+											+														
***02:38**	+	+	+	+					+	+									+																												
***02:39**		+		+	+												+																													+			
Well No.										1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4
HLA-A allele[2]	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8

INTERPRETATION TABLE

HLA-A*02 high resolution SSP typing

Amplification patterns of the HLA-A*02:01 to *02:199 alleles

Well[5]

49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	
145	145	410	185	225	240	200	150	105	255	145	345	185	180	160	125	145	170	105	215	170	125	260	110	200	175	165	230	85	75	225	135	110	130	100	180	260	180	155	130	115	100	110	180	130	210	135	135	**Length of spec.**
					350		275	145							175	185		130	260	335	280		230	250	260	205		110	240	270	230	235	295				255		240	295	130		260	250	360		250	**PCR product(s)**
															260								260									315									190			295				
1070	800	1070	800	1070	800	1070	1070	1070	800	800	1070	1070	800	800	1070	1070	800	800	1070	1070	800	800	1070	1070	800	1070	800	800	1070	1070	1070	1070	1070	800	800	800	800	1070	800	800	800	800	1070	800	800	800	1070	**Length of int. pos. control[1]**
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	**Well No. / HLA-A allele[2]**
																																																***02:01:01:01, 02:01:01:03-02:01:02, 02:01:04-02:01:15, 02:01:18-02:01:19, 02:01:21-02:01:45**
	+																																															***02:01:01:02L**
																																																***02:01:03**
																																																***02:01:17**
																																																***02:02**
																																																***02:03:01**
																																																***02:03:02**
																																																***02:04**
																																																***02:05:01-02:05:03**
																																																***02:06:01-02:06:09**
																																																***02:07**
																																																***02:08**
																																																***02:09**
																																																***02:10**
								+																																							***02:11**
																																																***02:12**
																																																***02:13**
			+																																													***02:14**
																																																***02:15N**
																																																***02:16**
			+																																													***02:17:01-02:17:02**
																																																***02:18**
																						+																									***02:19**
																																																***02:20:01-02:20:02**
																																																***02:21**
																																																***02:22:01-02:22:02**
																																																***02:24**
																																																***02:25**
																																																***02:26**
																																																***02:27**
																																																***02:28**
																																																***02:29**
						+																																										***02:30**
																																																***02:31**
																																																***02:32N**
																																																***02:33**
																																																***02:34**
								+																																							***02:35:01**
								+																																							***02:35:02**
								+																																							***02:35:03**
																																																***02:36**
																																																***02:37**
+																																																***02:38**
																																																***02:39**
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	**Well No. / HLA-A allele[2]**

Well No.										1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4
HLA-A allele[2]	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
*02:40	+	+	+	+	+																											+								+							
*02:41	+		+	+	+							+																																			
*02:42	+	+	+	+	+																																										
*02:43N	+	+	+	+	+																									+																	
*02:44	+			+								+							+																							+						
*02:45	+	+	+	w	+																									+		+															
*02:46	+	+	+	+	+																									+			+														
*02:47		+	+			+	+	+																								+								+						
*02:48			+		+																									+			+														
*02:49	+	+	+	+		+										+					+																					+						
*02:50	+	+	+			+										+										+																					
*02:51	+		+	+	+							+																																			
*02:52	+	+	+	+	+																					+	+																				
*02:53N	+	+	+	+	+																																										
*02:54	+		+	+								+							+				+																								
*02:55	+	+	+		+																						+																				
*02:56:01	+	+	+	w	+																						+		w		+			+							+						
*02:56:02	+	+	+		+																						+		w		+			+							+						
*02:57	+			+	+						+	+																													+						
*02:58	+	+	+	+	+																																				+						
*02:59	+	+	+	+	+																																						+				
*02:60	+	+	+	+	+																																					+					
*02:61	+		+	+	+							+																														+				
*02:62	+	+	+	+	+																						+																				
*02:63	+	+	+			+	+	+																																	+					+	
*02:64	+	+	+	+	+																																										+
*02:65	+	+		+							+																														+					
*02:66	+	+	+	+	+																																						+				
*02:67	+	+	+	+	+																																					+					
*02:68	+	+	+	+	w																																				+						
*02:69			+	+	+														+																												
*02:70	+	+	+	+	+																																										
*02:71	+	+	+	+	+																																						+				
*02:72	+		+	+	+							+																																			
*02:73	+	+	+	+	+											+										+																					
*02:74:01-02:74:02	+	+	+	+	+																																										
*02:75	+	+	+	+	+																																					+					
*02:76	+	+	+	+	+																																										
*02:77	+	+	+	+	+																																						+				
*02:78			+	w	+																							+	w		+			+												
*02:79	+			+	+							+																																	+			
*02:80	+	+	+	+	+																																										
*02:81			+	+	+																																										
*02:82N	+	+	+	+	+																											+															
*02:83N	+	+	+	+	+												+																														
*02:84	+		+	+	+							+	+																																		
*02:85	+	+	+	+	+							+																																			
*02:86	+	+		+	+																																								+		
*02:87			+	+	+										+																																
*02:88N	+	+	+	+	+																																										
*02:89	+	+	+	+	+						+																																			
*02:90			+	+	+																																										
*02:91	+		+	+	+							+		+																																	
*02:92	+	+	+	+	+																									+																	
*02:93	+	+	+	+	+											+										+																					
*02:94N	+	+	+	+	+																																										
*02:95	+	+	+	+	+																						+																				
*02:96	+	+	+	+	+										+																																
*02:97:01-02:97:02	+	+	+	+	+																																										
*02:99	+		+	+	+					+		+																																		
*02:101	+	+	+	+	+																																				+						
*02:102	+	+	+	+		+	+	+																								+								+						
*02:103		+	+		+										+														w		+			+												
*02:104	+	+	+	+		+																								+																
Well No.										1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4
HLA-A allele[2]	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8

4 5 5 5	5 5 5 5	5 5 5 6	6 6 6 6	6 6 6 6	6 7 7 7	7 7 7 7	7 7 7 8	8 8 8 8	8 8 8 8	8 9 9 9	9 9 9 9	Well No.
9 0 1 2	3 4 5 6	7 8 9 0	1 2 3 4	5 6 7 8	9 0 1 2	3 4 5 6	7 8 9 0	1 2 3 4	5 6 7 8	9 0 1 2	3 4 5 6	HLA-A allele[2]
												*02:40
		+										*02:41
												*02:42
												*02:43N
					+							*02:44
												*02:45
												*02:46
												*02:47
		+										*02:48
												*02:49
		+	+			+				+		*02:50
												*02:51
											+	*02:52
	+				+		+					*02:53N
												*02:54
												*02:55
												*02:56:01
												*02:56:02
	+											*02:57
	+											*02:58
												*02:59
												*02:60
												*02:61
												*02:62
												*02:63
	+											*02:64
		+										*02:65
												*02:66
												*02:67
												*02:68
		+		+								*02:69
												*02:70
												*02:71
										+		*02:72
			+	+							+	*02:73
	+											*02:74:01-02:74:02
												*02:75
												*02:76
		+										*02:77
												*02:78
												*02:79
	+											*02:80
												*02:81
		+										*02:82N
												*02:83N
												*02:84
												*02:85
												*02:86
												*02:87
												*02:88N
												*02:89
		+										*02:90
												*02:91
												*02:92
										+		*02:93
												*02:94N
												*02:95
												*02:96
		+										*02:97:01-02:97:02
												*02:99
+												*02:101
												*02:102
												*02:103
												*02:104
4 5 5 5	5 5 5 5	5 5 5 6	6 6 6 6	6 6 6 6	6 7 7 7	7 7 7 7	7 7 7 8	8 8 8 8	8 8 8 8	8 9 9 9	9 9 9 9	Well No.
9 0 1 2	3 4 5 6	7 8 9 0	1 2 3 4	5 6 7 8	9 0 1 2	3 4 5 6	7 8 9 0	1 2 3 4	5 6 7 8	9 0 1 2	3 4 5 6	HLA-A allele[2]

Well No.																																									
HLA-A allele[2]	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
*02:105	+	+	+	+	+																																										
*02:106	+		+	+	+							+																																			
*02:107	+	+	+	+	+																																									
*02:108				+	+						+	+					+						+																		+					
*02:109	+	+	+	+	+																																									
*02:110		+		+	+						+						+						+																		+					
*02:111	+	+	+	+	+																																									
*02:112			+	+	+									+	+																																
*02:113N	+	+	+	+	+																																									
*02:114	+	+	+	+	+																																									
*02:115	+	+	+			+	+	+																																			+					
*02:116	+	+	+	+	+																																									
*02:117	+	+	+	+		+			+	+																																					
*02:118	+	+	+	+	+																																									
*02:119	+	+	+	+	+																																									
*02:120	+	+	+	+	+																																									
*02:121	+	+	+	+	+																																									
*02:122	+		+			+						+				+																														
*02:123	+	+	+	+	+																																									
*02:124			+	+	+																																									
*02:125N	+	+	+	+	+																																									
*02:126	+		+	+	+							+																																		
*02:127	+		+	+	+							+																																		
*02:128			+	+	+													+																													
*02:129			+		+										+										+																					
*02:130		+	+	+	+									+														+																		
*02:131	+	+	+	+	+																						+																			
*02:132	+	+	+	+	+																																									
*02:133	+	+	+	+	+																																									
*02:134	+	+	+	+	+																																									
*02:135	+	+		+																																										
*02:136			+	+		+										+																														
*02:137	+		+	+								+																																		
*02:138	+	+	+	+	+																																									
*02:139	+	+	+	+	+																																									
*02:140	+	+	+	+	+																																									
*02:141	+	+	+	+	+																																									
*02:142	+		+	+								+							+																											
*02:143	+		+	+	+							+																																		
*02:144	+		+		+							+																																		
*02:145	+	+	+	+	+																																									
*02:146			+	+	+																																									
*02:147	+	+	+	+	+																																									
*02:148		+	+	+		+			+	+							+																													
*02:149	+	+		+	+																																									
*02:150, 02:197[3]	+	+	+	+	+																																									
*02:151	+	+	+	+	+																																									
*02:152	+	+		+								+																																		
*02:153, 02:196[4]	+	+	+	+	+																																									
*02:154	+		+			+	+	+				+	+																												+					
*02:155	+	+	+			+	+	+															+																		+					
*02:156	+	+		+	+											+							+																							
*02:157	+	+	+	+	+																																									
*02:158		+	+	+	+																																									
*02:159	+	+	+	+	+																																									
*02:160	+	+	+	+	+																																									
*02:161	+	+	+	+	+															+																											
*02:162	+	+	+	+	+																																									
*02:163	+	+	+	+	+																					+																				
*02:164	+	+	+	+	+																																									
*02:165	+	+	+	+	+																								+																	
*02:166	+	+	+	+	+																																									
Well No.																																									
HLA-A allele[2]	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8

4 5 5 5	5 5 5 5	5 5 5 6	6 6 6 6	6 6 6 6	6 7 7 7	7 7 7 7	7 7 7 8	8 8 8 8	8 8 8 8	8 9 9 9	9 9 9 9	Well No.
9 0 1 2	3 4 5 6	7 8 9 0	1 2 3 4	5 6 7 8	9 0 1 2	3 4 5 6	7 8 9 0	1 2 3 4	5 6 7 8	9 0 1 2	3 4 5 6	HLA-A allele[2]
			+								+	*02:105
				+								*02:106
					+							*02:107
	+											*02:108
					+							*02:109
	+											*02:110
						+						*02:111
												*02:112
						+						*02:113N
	+				+							*02:114
						+						*02:115
							+					*02:116
	+											*02:117
							+					*02:118
					+							*02:119
						+						*02:120
							+					*02:121
		+	+								+	*02:122
												*02:123
												*02:124
												*02:125N
												*02:126
												*02:127
		+										*02:128
												*02:129
												*02:130
												*02:131
												*02:132
												*02:133
												*02:134
		+										*02:135
												*02:136
												*02:137
												*02:138
												*02:139
												*02:140
												*02:141
												*02:142
												*02:143
												*02:144
												*02:145
												*02:146
												*02:147
												*02:148
												*02:149
												*02:150, 02:197[3]
												*02:151
	+											*02:152
												*02:153, 02:196[4]
+												*02:154
												*02:155
			+									*02:156
												*02:157
						+						*02:158
												*02:159
		+										*02:160
												*02:161
												*02:162
												*02:163
												*02:164
												*02:165
												*02:166
4 5 5 5	5 5 5 5	5 5 5 6	6 6 6 6	6 6 6 6	6 7 7 7	7 7 7 7	7 7 7 8	8 8 8 8	8 8 8 8	8 9 9 9	9 9 9 9	Well No.
9 0 1 2	3 4 5 6	7 8 9 0	1 2 3 4	5 6 7 8	9 0 1 2	3 4 5 6	7 8 9 0	1 2 3 4	5 6 7 8	9 0 1 2	3 4 5 6	HLA-A allele[2]

Well No.										1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4
HLA-A allele[2]	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
***02:167**	+	+	+	+	+																																										
***02:168**	+	+	+	+	+																										+																
***02:169**	+		+		+							+											+	w		+																			
***02:170**	+		+	+	+							+																				+														
***02:171:01-02:171:02**	+	+	+	+	+				+	+																																				
***02:172**	+		+			+	+	+				+	+			+																						+								
***02:173**	+	+	+	+	+																																									
***02:174**	+	+	+	+	+																																									
***02:175**	+	+	+	+	+																																									
***02:176**	+	+	+		+																													+												
***02:177**	+	+	+	+	+																																									+
***02:178**	+		+	+	+							+																																		+
***02:179**	+		+			+	+	+				+	+																										+							
***02:180**	+		+	+	+							+																		+																
***02:181**	+	+	+	+	+																																							+			
***02:182**	+	+	+	+																																										
***02:183**	+	+	+	+	+																																									
***02:184**	+	+	+	+	+																																									
***02:185**	+	+	+		+																			+																						
***02:186**	+	+	+			+	+	+							+																								+							
***02:187**	+	+	+	+	+																																									
***02:188**	+	+	+	+	+																																									
***02:189**	+	+	+	+	+																																									
***02:190**	+	+		+	+																																									
***02:191**		+	+	+		+								+																											+					
***02:192**	+	+	+	+	+																																									
***02:193**	+	+	+	+	+																																									
***02:194**	+	+		+	+																																									
***02:195**	+	+	+		+																					+	w		+																	
***02:198**	+	+	+	+	+																			+																						
***02:199**	+	+	+	+	+																																									
***01:13, 01:17, 03:01:01:01-03:01:02, 03:01:04-03:07, 03:10-03:11N, 03:13-03:16, 03:18-03:22, 03:24-03:31, 03:33-03:35, 03:37-03:40, 03:42-03:43, 03:45-03:58, 03:60-03:71, 03:73-03:74, 03:76, 34:08, 74:13**																																							+							
***01:20**																																												+			
***01:44**																																															
***03:01:03**				w																																											
***03:09**	+	+																																													
***03:17**					+					+																																					
***03:23**				+																																											
***03:44**																																															
***03:75**																																															
***11:06, 11:18**	+											+																																			
***11:16, 11:35, 11:57**																																															
***23:01:01-23:01:02, 23:05-23:07N, 23:09, 23:11N, 23:13, 23:15-23:23, 23:25, 24:24**					+																	+																							
***23:02**																						+																							
***23:03:01-23:03:02, 29:07, 31:29**																																															
***23:04**					+																																									
***23:08N**					+																	+																							
Well No.										1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4
HLA-A allele[2]	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8

4 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 7 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9	Well No.
9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6	HLA-A allele[2]
+	*02:167
	*02:168
	*02:169
	*02:170
	*02:171:01-02:171:02
+	*02:172
+	*02:173
+	*02:174
+ +	*02:175
	*02:176
+	*02:177
	*02:178
+	*02:179
	*02:180
+	*02:181
+	*02:182
+ +	*02:183
+ +	*02:184
	*02:185
	*02:186
+ +	*02:187
+	*02:188
+ +	*02:189
+ +	*02:190
	*02:191
+ +	*02:192
+ +	*02:193
+	*02:194
	*02:195
	*02:198
+	*02:199
	*01:13, 01:17, 03:01:01:01-03:01:02, 03:01:04-03:07, 03:10-03:11N, 03:13-03:16, 03:18-03:22, 03:24-03:31, 03:33-03:35, 03:37-03:40, 03:42-03:43, 03:45-03:58, 03:60-03:71, 03:73-03:74, 03:76, 34:08, 74:13
	*01:20
+ +	*01:44
	*03:01:03
+	*03:09
	*03:17
	*03:23
+	*03:44
+	*03:75
+	*11:06, 11:18
+	*11:16, 11:35, 11:57
+	*23:01:01-23:01:02, 23:05-23:07N, 23:09, 23:11N, 23:13, 23:15-23:23, 23:25, 24:24
	*23:02
+	*23:03:01-23:03:02, 29:07, 31:29
+	*23:04
+	*23:08N
4 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 7 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9	Well No.
9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6	HLA-A allele[2]

Well No.									1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
HLA-A allele[2]	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
*23:10					+																	+													+		w											
*23:12					+						+						+					+													+													
*23:14					+																	+													w													
*23:24, 24:13:01					+																	+																										
*24:02:01:01-24:02:15, 24:02:17-24:02:31, 24:04-24:05, 24:07-24:09N, 24:11N, 24:17, 24:19-24:20, 24:25-24:27, 24:29, 24:31-24:32, 24:34-24:40N, 24:43-24:45N, 24:47-24:50, 24:52-24:53, 24:57-24:58, 24:60N-24:64, 24:66-24:71, 24:74, 24:76-24:86N, 24:88, 24:90N, 24:95-24:98, 33:19																			+			+																										
*24:02:16, 24:06, 24:54, 24:87																						+																										
*24:03:01-24:03:02, 24:33, 24:75																			+																													
*24:10																			+																		+											
*24:13:02					+																	+																										
*24:14, 24:93																			+			+																							+			
*24:15, 24:41, 24:51, 24:92																+			+			+																										
*24:18					+					+																																						
*24:23																			+			w																										
*24:28, 24:30, 24:42, 24:89											+						+		+			+																										
*24:46																			+			+															w											
*24:55																			+			+			+																							
*24:56										+									+			+																										
*24:59																			+			+		+																								
*24:72																			+			+																										
*24:73																			+			+																										
*24:91																						+															+											
*24:94					+																		+																		+							
*24:99									+										+			+																										
*25:11, 26:36	+																																			+												
*26:03:01-26:03:02, 26:06, 26:21, 26:30	+											+																								+												
*26:07:02, 33:01:02, 33:08-33:09, 74:04				+																																												
*26:10									+	+						+																					+											
*26:22, 66:09																																											+					
*29:19, 32:08, 33:24	+										+																									+												
*29:22, 33:22																																								+								
*30:01:01-30:01:03, 30:08, 30:11:01-30:11:02, 30:14L-30:15, 30:17-30:20, 30:23-30:24, 30:26, 30:30-30:31, 30:35-30:37																																		+														
*30:13	+																										+									+												
*30:16	+																										+							+		+												
*30:22																																																
*33:15																																																
Well No.									1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
HLA-A allele[2]	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8

4 5 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 7 7 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9	Well No.
9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6	HLA-A allele[2]
w +	*23:10
+	*23:12
	*23:14
+	*23:24, 24:13:01
	*24:02:01:01-24:02:15, 24:02:17-24:02:31, 24:04-24:05, 24:07-24:09N, 24:11N, 24:17, 24:19-24:20, 24:25-24:27, 24:29, 24:31-24:32, 24:34-24:40N, 24:43-24:45N, 24:47-24:50, 24:52-24:53, 24:57-24:58, 24:60N-24:64, 24:66-24:71, 24:74, 24:76-24:86N, 24:88, 24:90N, 24:95-24:98, 33:19
	*24:02:16, 24:06, 24:54, 24:87
	*24:03:01-24:03:02, 24:33, 24:75
+	*24:10
	*24:13:02
	*24:14, 24:93
+	*24:15, 24:41, 24:51, 24:92
+	*24:18
	*24:23
	*24:28, 24:30, 24:42, 24:89
w	*24:46
	*24:55
	*24:56
	*24:59
+	*24:72
+	*24:73
	*24:91
+	*24:94
	*24:99
+	*25:11, 26:36
+	*26:03:01-26:03:02, 26:06, 26:21, 26:30
	*26:07:02, 33:01:02, 33:08-33:09, 74:04
+	*26:10
	*26:22, 66:09
+ +	*29:19, 32:08, 33:24
	*29:22, 33:22
	*30:01:01-30:01:03, 30:08, 30:11:01-30:11:02, 30:14L-30:15, 30:17-30:20, 30:23-30:24, 30:26, 30:30-30:31, 30:35-30:37
	*30:13
	*30:16
+	*30:22
+	*33:15
4 5 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 7 7 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9	Well No.
9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6	HLA-A allele[2]

Well No.																																									
HLA-A allele[2]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
***68:01:01-68:01:07, 68:03:01-68:04, 68:07, 68:10-68:11N, 68:13, 68:16-68:17, 68:19, 68:21-68:22, 68:24, 68:29, 68:32, 68:35-68:39, 68:41, 68:43, 68:45-68:47**						+																						+												
***68:02:01:01-68:02:04, 68:18N, 68:27-68:28, 68:31, 68:34, 68:40**			+			+										+												+												
***68:05, 68:20**	+					+					+	+																+												
***68:06**						+																						+												
***68:08:01-68:08:02**					+																							+												
***68:09**																			+									+												
***68:12**						+																																		
***68:14**						+																						+												
***68:15**	+		+			+						+				+												+												
***68:23**			+			+																						+												
***68:25**						+										+												+												
***68:26**																			+			+						+												
***68:30**				+		+																						+												
***68:33**						+																						+												
***68:42**						+				+																		+												
***68:44**						+										+												+												
***68:48**			+													+												+												
***68:49N**						+										+																								
***69:01**			+		+																																			
***74:06**	+	+									+																													
***80:01**	w																																							
B*15:67																																								
B*15:173																																								
Well No.																																								
HLA-A allele[2]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Well No.																																								
HLA-A allele[2]	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
***68:01:01-68:01:07, 68:03:01-68:04, 68:07, 68:10-68:11N, 68:13, 68:16-68:17, 68:19, 68:21-68:22, 68:24, 68:29, 68:32, 68:35-68:39, 68:41, 68:43, 68:45-68:47**																																								
***68:02:01:01-68:02:04, 68:18N, 68:27-68:28, 68:31, 68:34, 68:40**																																								
***68:05, 68:20**																																								
***68:06**																																								
***68:08:01-68:08:02**																																								
***68:09**																																								
***68:12**																																								
***68:14**																																								
***68:15**																																								
***68:23**																																								
***68:25**																																								
***68:26**																																								
***68:30**																																								
***68:33**																																								
***68:42**																																								
***68:44**																																								
***68:48**																																								
***68:49N**																																								
***69:01**																																								
***74:06**																																								
***80:01**																																								
B*15:67																																								
B*15:173																																								
Well No.																																								
HLA-A allele[2]	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

[1]The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.
Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-A*02 subtyping.
In addition, wells number 6, 10, 13 to 16, 23, 26, 28, 30, 31, 34, 38, 42 to 44, 47, 50, 52, 54, 58, 59, 62, 63, 66, 67, 70, 71, 74, 76, 77, 83 to 86, 88 to 91 and 93 to 95 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.
[2]The sequence of A*020116 has been renamed to A*02:134.
The sequence of A*02:01:20 has been shown to be identical to A*02:01:18
The sequence of the A*02:23 allele has been shown to be identical to A*02:22:01.
The sequence of the A*02:98 allele has been shown to be identical to A*02:96.
The A*02:100 has never been assigned.
[3]The A*02:150 and 02:197 alleles may can be distinguished by the different sizes of the specific PCR products generated by primer mix 94.
[4]The A*02:153 and 02:196 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 96.

4 5 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 7 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9	Well No.
9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6	HLA-A allele[2]
+ +	*68:01:01-68:01:07, 68:03:01-68:04, 68:07, 68:10-68:11N, 68:13, 68:16-68:17, 68:19, 68:21-68:22, 68:24, 68:29, 68:32, 68:35-68:39, 68:41, 68:43, 68:45-68:47
+ + +	*68:02:01:01-68:02:04, 68:18N, 68:27-68:28, 68:31, 68:34, 68:40
+ + + +	*68:05, 68:20
+ + +	*68:06
+ +	*68:08:01-68:08:02
+ +	*68:09
+	*68:12
+ + +	*68:14
+ + +	*68:15
+ +	*68:23
+ + +	*68:25
+ +	*68:26
+ +	*68:30
+	*68:33
+ +	*68:42
+	*68:44
+ +	*68:48
+	*68:49N
	*69:01
+ +	*74:06
w	*80:01
+	*B15:67*
+	*B15:173*
4 5 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 7 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9	Well No.
9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6	HLA-A allele[2]

[5]Primer mix 8: Specific PCR fragment of 415 bp in the A*02:02, 02:05:01-02:05:03, 02:14, 02:47, 02:63, 02:102, 02:115, 02:154-02:155, 02:172, 02:179 and 02:186 alleles. Specific PCR fragment of 505 bp in the A*02:32N allele.
Primer mix 11: Specific PCR fragment of 225 bp in the A*02:89 allele. Specific PCR fragment of 350 bp in the A*02:04, 02:17:01-02:17:02, 02:57, 02:65, 02:89, 02:108, 02:110 and 02:152 and the A*23:12, 24:28, 24:30, 24:42, 24:89, 29:19, 32:08, 33:24, 68:05, 68:20 and 74:06 alleles.
Primer mix 11 may give rise to a long fragment of approx. 600 bp in some HLA-A alleles. This band should not be considered in the interpretatation of HLA-A*02 typings.
Primer mix 12: Specific PCR fragment of 195 bp in A*02:85 allele. Specific PCR fragment of 235 bp in the A*02:05:01-02:06:09, 02:08, 02:10, 02:14, 02:21, 02:28, 02:41, 02:44, 02:51, 02:54, 02:57, 02:61, 02:72, 02:79, 02:84, 02:91, 02:99, 02:106, 02:108, 02:122, 02:126-02:127, 02:137, 02:142-02:144, 02:154, 02:169-02:170, 02:172 and 02:178-02:180 and the A*11:06, 11:18, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 68:05, 68:15, 68:20 alleles.
Primer mix 14: Specific PCR fragment of 95 bp in A*02:91 allele. Specific PCR fragment of 170 bp in the A*02:07, 02:15N, 02:18, 02:103, 02:112, 02:130 and 02:191 alleles.
Primer mix 15: Specific PCR fragment of 125 bp in the A*02:21 and 02:186 alleles. Specific PCR fragment of 265 bp in the A*02:87, 02:112, 02:129 and 02:136 alleles. Specific PCR fragment of 305 bp in the A*02:96 allele.
Primer mix 16: Specific PCR fragment of 110 bp in the A*02:50, 02:73, 02:93, 02:122, 02:156 and 02:172 and the A*24:15, 24:41, 24:51, 24:92, 26:10, 68:02:01:01-68:02:04, 68:15, 68:18N, 68:25, 68:27-68:28, 68:31, 68:34, 68:40, 68:44 and 68:48-68:49N alleles. Specific PCR fragment of 155 bp in the A*02:09 and 02:49 alleles.
Primer mix 17: Specific PCR fragment of 205 bp in the A*02:83N allele. Specific PCR fragment of 360 bp in the A*02:10, 02:17:01-02:17:02, 02:39, 02:108, 02:110 and 02:148 and the A*23:12, 24:28, 24:30, 24:42 and 24:89 alleles.

Primer mix 23: Specific PCR fragment of 135 bp in the A*02:31 and 02:161 alleles. Specific PCR fragment of 180 bp in the A*02:17:01-02:17:02, 02:108 and 02:110 and the A*24:94 alleles.
Primer mix 26: Specific PCR fragment of 125 bp in the A*02:33 allele. Specific PCR fragment of 165 bp in the A*02:52 allele. Specific PCR fragment of 260 bp in the A*02:198 allele.
Primer mix 27: Specific PCR fragment of 95 bp in the A*02:28, 02:155 and 02:185 and the A*30:13 and 30:16 alleles.
Specific PCR fragments of 145 bp in A*02:10, 02:50, 02:52, 02:73, 02:93, 02:95, 02:110, 02:114, 02:117, 02:122, 02:156, 11:16, 11:35, 11:57, 68:01:01-68:11N, 68:13-68:48 alleles.
Primer mix 29: Specific PCR fragment of 220 bp in the A*02:45-02:46, 02:48, 02:56:01^{w}-02:56:02^{w}, 02:78^{w}, 02:92, 02:103^{w}, 02:129, 02:169^{w} and 02:195^{w} alleles. Specific PCR fragment of 300 bp in A*02:180 allele.
Primer mix 30: Specific PCR fragment of 130 bp in the A*02:163 allele. Specific PCR fragment of 160 bp in A*02:43N and 02:104 alleles.
Primer mix 31: Specific PCR fragment of 95 bp in A*02:82N and in the A*23:08N alleles. Specific PCR fragments of 220 bp in A*02:45, 02:56:01-02:56:02, 02:78, 02:103, 02:169 and 02:195 alleles.
Primer mix 32: Specific PCR fragment of 205 bp in the A*02:176 allele. Specific PCR fragment of 230 bp in the A*02:46, 02:48, 02:70 and 02:129 alleles. Specific PCR fragment of 255 bp in the A*02:47 allele.
Primer mix 33: Specific PCR fragment of 230 bp in A*02:165 and 02:168 alleles. Specific PCR fragments of 325 bp in A*02:19, 02:36-02:37 and 02:54 alleles.
Primer mix 34: Specific PCR fragment of 120 bp in the A*02:88N allele. Specific PCR fragment of 180 bp in the A*02:34-02:35:02, 02:56:01-02:56:02, 02:62, 02:78, 02:103 and in the A*30:01:01-30:01:03, 30:08, 30:11:01-30:11:02, 30:14L-30:20, 30:23-30:24, 30:26, 30:30-30:31 and 30:35-30:37 alleles.
Primer mix 34 may give rise to a long fragment of approx. 600 bp in some HLA-A alleles. This band should not be considered in the interpretation of HLA-A*02 typings.
Primer mix 35: Specific PCR fragment of 110 bp in A*02:40, 02:51, 02:130 and in the A*23:01:01-23:01:02, 23:02^{w}, 23:04-23:13, 23:14^{w}, 23:15-23:23, 23:25 and 24:24 alleles. Specific PCR fragment of 155 bp in A*02:77 allele.
Primer mix 36: Specific PCR fragment of 85 bp in A*02:94N allele. Specific PCR fragments of 445 bp in the A*02:24, 02:65, 02:135, 02:137 and 02:152 and in the A*03:09, 11:06, 11:18, 25:11, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 26:36, 29:19, 30:13, 30:16, 32:08, 33:24, 74:06 and 80:01^{w} alleles.
Primer mix 39: Specific PCR fragment of 75 bp in the A*02:18 allele. Specific PCR fragment of 165 bp in the A*02:159 allele. Specific PCR fragment of 200 bp in the A*02:170 allele.
Primer mix 40: Specific PCR fragment of 90 bp in the A*02:67 allele. Specific PCR fragment of 210 bp in the A*02:40, 02:51 and 02:130 and in the A*29:22 and 33:22 alleles.
Primer mix 43: Specific PCR fragment of 180 bp in the A*02:71 allele. Specific PCR fragment of 225 bp in the A*02:03:01-02:03:02, 02:22:01-02:22:02, 02:49, 02:104, 02:117, 02:136, 02:148 and 02:191 and in the A*26:22 and 66:09 alleles.
Primer mix 45: Specific PCR fragment of 105 bp in the A*02:60 allele. Specific PCR fragment of 185 bp in the A*02:19, 02:39, 02:44, 02:79 and 02:86 and in the A*01:20, 24:14 and 24:93 alleles.
Primer mix 46: Specific PCR fragment of 70 bp in the A*02:66 allele. Specific PCR fragment of 150 bp in the A*02:181 allele. Specific PCR fragment of 205 bp in the A*02:61 allele.
Primer mix 54: Specific PCR fragment of 240 bp in the A*02:189-02:190 alleles. Specific PCR fragment of 350 bp in A*02:74:01- 02:74:02 alleles.
Primer mix 56: Specific PCR fragment of 150 bp in the A*02:175 and 02:181 alleles. Specific PCR fragment of 275 bp in A*02:53N, 02:81 and 02:124 alleles.
Primer mix 57: Specific PCR fragment of 105 bp in the A*02:42 allele. Specific PCR fragment of 145 bp in A*02:160 and 02:175 alleles.
Primer mix 64: Specific PCR fragment of 125 bp in the A*02:106 and 02:145 and in the A*24:72 alleles. Specific PCR fragment of 175 bp in A*02:164 and in the A*01:44 and 03:44 alleles. Specific PCR fragment of 260 bp in A*02:187 allele.
Primer mix 65: Specific PCR fragment of 145 bp in the A*02:160 allele. Specific PCR fragment of 185 bp in A*02:107 allele.

Primer mix 67: Specific PCR fragment of 105 bp in the A*02:177 allele. Specific PCR fragment of 130 bp in A*02:111 allele.
Primer mix 68: Specific PCR fragment of 215 bp in the A*02:113N allele. Specific PCR fragment of 260 bp in A*02:184 allele.
Primer mix 69: Specific PCR fragment of 170 bp in the A*02:114 allele. Specific PCR fragment of 335 bp in A*02:166 allele.
Primer mix 70: Specific PCR fragment of 125 bp in the A*02:115 allele. Specific PCR fragment of 280 bp in A*02:53N and 02:192 alleles.
Primer mix 72: Specific PCR fragment of 110 bp in the A*02:183 allele. Specific PCR fragment of 230 bp in A*02:189 allele. Specific PCR fragment of 260 bp in the A*02:19, 02:44, 02:118, 02:135, 02:149, 02:152 and 02:190 alleles.
Primer mix 73: Specific PCR fragment of 200 bp in the A*02:119 allele. Specific PCR fragment of 250 bp in A*02:158 allele.
Primer mix 74: Specific PCR fragment of 175 bp in the A*02:120 allele. Specific PCR fragment of 260 bp in A*02.187 allele.
Primer mix 75: Specific PCR fragment of 165 bp in the A*02:166 allele. Specific PCR fragment of 205 bp in the A*02:121 and the A*68:14 alleles.
Primer mix 77: Specific PCR fragment of 85 bp in the A*02:123 allele. Specific PCR fragment of 110 bp in the A*02:162 allele.
Primer mix 78: Specific PCR fragment of 75 bp in the A*02:193 allele. Specific PCR fragment of 240 bp in the A*02:124 allele.
Primer mix 79: Specific PCR fragment of 225 bp in the A*02:125N allele. Specific PCR fragment of 270 bp in A*02:53N, 02:184 and 02:192 alleles.
Primer mix 80: Specific PCR fragment of 135 bp in the A*02:194 allele. Specific PCR fragment of 230 bp in A*02:126 allele.
Primer mix 81: Specific PCR fragment of 110 bp in the A*02:183 allele. Specific PCR fragment of 235 bp in A*02:165 allele. Specific PCR fragment of 315 bp in A*02:127 and 02:167 alleles.
Primer mix 82: Specific PCR fragment of 130 bp in the A*02:131 allele. Specific PCR fragment of 295 bp in the A*02:199 allele.
Primer mix 86: Specific PCR fragment of 180 bp in the A*02:135 allele. Specific PCR fragment of 255 bp in the A*02:174 allele.
Primer mix 88: Specific PCR fragment of 130 bp in the A*02:188 and the B*15:67 alleles. Specific PCR fragment of 240 bp in the A*02:139 allele.
Primer mix 89: Specific PCR fragment of 115 bp in the A*02:140 and the A*33:15 alleles. Specific PCR fragment of 295 bp in the A*02:182 allele.
Primer mix 90: Specific PCR fragment of 100 bp in the A*02:72 allele. Specific PCR fragment of 130 bp in the A*02:161 allele. Specific PCR fragment of 190 bp in the A*02:141 allele.
Primer mix 92: Specific PCR fragment of 180 bp in the A*02:173 allele. Specific PCR fragment of 260 bp in the A*02:146 allele.
Primer mix 93: Specific PCR fragment of 130 bp in the A*02:163 allele. Specific PCR fragment of 250 bp in the A*02:147 and the A*24:73 and B*15:173 alleles. Specific PCR fragment of 295 bp in the A*02:157 allele.
Primer mix 94: Specific PCR fragment of 210 bp in the A*02:150 allele. Specific PCR fragment of 360 bp in A*02:197 allele.
Primer mix 96: Specific PCR fragment of 135 bp in the A*02:196 allele. Specific PCR fragment of 250 bp in A*02:153 allele.
'w', might be weakly amplified.

Primers

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec.	360	230	175	80	125	75	175	415	105	115	225	195
PCR product								505			350	235
Length of int. pos. control[1]	800	1070	1070	1070	1070	800	1070	1070	1070	800	1070	1070
5'-primer(s)[2]	292	102	362	200	453	506	402	270	453	453	292	98
	5' -CTC 3'	5' -ACA 3'	5' -gAg 3'	5' -CCA 3'	5' -AAA 3'	5' -gCA 3'	5' -CTg 3'	5' -AAA 3'	5' -AAA 3'	5' -AAA 3'	5' -CTC 3'	5' -CTA 3'
			362								648	362
			5' -gAg 3'								5' -CAA 3'	5' -gAg 3'
3'-primer(s)[3]	368	292	497	240	539	539	538	402	517	527	362	292
	5' -CAT 3'	5' -gTg 3'	5' -Tgg 3'	5' -ggA 3'	5' -TCA 3'	5' -TCC 3'	5' -CCA 3'	5' -CgC 3'	5' -CgT 3'	5' -CCT 3'	5' -TCA 3'	5' -gTg 3'
				241			538	493			362	518
				5' -CgC 3'			5' -CAA 3'	5' -CTA 3'			5' -TCA 3'	5' -CCA 3'
											831	
											5' -TCC 3'	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Well No.	13	14	15	16	17	18	19	20	21	22	23	24
Length of spec.	145	95	125	110	205	175	125	295	220	160	135	115
PCR product		170	265	155	360						180	
			305									
Length of int. pos. control[1]	800	800	800	800	1070	1070	1070	1070	1070	1070	800	1070
5'-primer(s)[2]	98	368	78	385	292	144	453	2nd I	666	453	194	453
	5' -CTA 3'	5' -gTg 3'	5' -TCT 3'	5' -ggC 3'	5' -CTC 3'	5' -gCA 3'	5' -AAA 3'	5' -CCA 3'	5' -gAA 3'	5' -AAA 3'	5' -Cgg 3'	5' -AAA 3'
	355	445		666	666						205	
	5' -CCT 3'	5' -TCT 3'		5' -gAA 3'	5' -gAA 3'						5' -ggg 3'	
											368	
											5' -gTT 3'	
3'-primer(s)[3]	200	497	160	453	368	268	538	538	843	570	292	527
	5' -TCC 3'	5' -Tgg 3'	5' -gTT 3'	5' -TCT 3'	5' -CAA 3'	5' -TTg 3'	5' -CTg 3'	5' -CCg 3'	5' -gTT 3'	5' -CCg 3'	5' -gTg 3'	5' -CCg 3'
	453		160	779	829	290					506	
	5' -TCT 3'		5' -gTg 3'	5' -CTT 3'	5' -CTA 3'	5' -CAA 3'					5' -TgT 3'	
			302									
			5' -ggT 3'									
			343									
			5' -A 3'									
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec.	145	125	95	235	220	130	95	205	230	120	110	85
PCR product		165	145		300	160	220	230	325	180	155	445
		260						255				
Length of int. pos. control[1]	1070	800	1070	800	1070	800	800	1070	1070	800	1070	1070
5'-primer(s)[2]	453	2nd I	238	78	78	529	78	78	2nd I	144	453	292
	5' -AAA 3'	5' -CCA 3'	5' -AgA 3'	5' -TCT 3'	5' -TCT 3'	5' -TgA 3'	5' -TCT 3'	5' -TCT 3'	5' -CCA 3'	5' -gCA 3'	5' -AAA 3'	5' -CTC 3'
			391			666	564			420		
			5' -ACg 3'			5' -gAA 3'	5' -TgA 3'			5' -TAg 3'		
			391									
			5' -ACg 3'									
3'-primer(s)[3]	559	368	292	270	257	616	256	241	473	282	524	335
	5' -CTC 3'	5' -CAg 3'	5' -gTg 3'	5' -ACg 3'	5' -CCT 3'	5' -CgT 3'	5' -CTg 3'	5' -CgT 3'	5' -CgA 3'	5' -gAC 3'	5' -CAC 3'	5' -.gC 3'
		411	497	270	337	781	616	265	482	282	569	453
		5' -TCA 3'	5' -Tgg 3'	5' -ACA 3'	5' -CTg 3'	5' -CCC 3'	5' -CgT 3'	5' -CCC 3'	5' -Tgg 3'	5' -gAC 3'	5' -ACA 3'	5' -TCg 3'
		505				791		290	570	497		
		5' -gTA 3'				5' -AgT 3'		5' -gAC 3'	5' -CCg 3'	5' -Tgg 3'		
Well No.	25	26	27	28	29	30	31	32	33	34	35	36

Well No.	37	38	39	40	41	42	43	44	45	46	47	48
Length of spec.	140	125	75	90	185	225	180	155	105	70	165	110
PCR product			165	210			225		185	150		
			200							205		
Length of int.	1070	800	1070	1070	1070	800	800	800	1070	1070	800	1070
pos. control[1]												
5'-primer(s)[2]	453	414	453	355	355	98	355	125	355	78	78	419
	5' -AAA 3'	5' -CAg 3'	5' -AAA 3'	5' -CCg 3'	5' -CCC 3'	5' -CTT 3'	5' -CCg 3'	5' -CgA 3'	5' -CCg 3'	5' -TCT 3'	5' -TCT 3'	5' -gTC 3'
					692					746		431
					5' -gAA 3'					5' -gAT 3'		5' -CgC 3'
3'-primer(s)[3]	542	497	485	403	506	282	494	240	419	187	203	497
	5' -CTT 3'	5' -Tgg 3'	5' -CCT 3'	5' -gCA 3'	5' -TgT 3'	5' -gAC 3'	5' -TCC 3'	5' -ggA 3'	5' -CgA 3'	5' -gTg 3'	5' -TCA 3'	5' -Tgg 3'
	559		578	524	831	282	539		497	241		
	5' -CCg 3'		5' -Tgg 3'	5' -CAC 3'	5' -TCC 3'	5' -gAC 3'	5' -TCC 3'		5' -TgA 3'	5' -CgC 3'		
			613							777		
			5' -gCA 3'							5' -gCA 3'		
Well No.	37	38	39	40	41	42	43	44	45	46	47	48

Well No.	49	50	51	52	53	54	55	56	57	58	59	60
Length of spec.	145	145	410	185	225	240	200	150	105	255	145	345
PCR product						350		275	145			
Length of int.	1070	800	1070	800	1070	800	1070	1070	1070	800	800	1070
pos. control[1]												
5'-primer(s)[2]	453	-111	292	98	355	2nd I	81	78	78	78	666	292
	5' -AAA 3'	5' -ATC 3'	5' -CTC 3'	5' -CTC 3'	5' -CCC 3'	5' -CCA 3'	5' -CAg 3'	5' -TCT 3'	5' -TCT 3'	5' -TCT 3'	5' -gAA 3'	5' -CTC 3'
3'-primer(s)[3]	559	4	418	240	538	475	240	187	142	292	768	355
	5' -CCg 3'	5' -ggC 3'	5' -gTC 3'	5' -ggA 3'	5' -CAA 3'	5' -CgA 3'	5' -ggA 3'	5' -gTg 3'	5' -TgA 3'	5' -gTC 3'	5' -gTg 3'	5' -gAT 3'
						497		187	184		768	
						5' -Tgg 3'		5' -gTA 3'	5' -gCC 3'		5' -gTA 3'	
						595		302	187			
						5' -CCg 3'		5' -ggC 3'	5' -gTA 3'			
						595		324				
						5' -CCT 3'		5' -TAC 3'				
Well No.	49	50	51	52	53	54	55	56	57	58	59	60

Well No.	61	62	63	64	65	66	67	68	69	70	71	72
Length of spec.	185	180	160	125	145	170	105	215	170	125	260	110
PCR product				175	185		130	260	335	280		230
				260								260
Length of int.	1070	800	800	1070	1070	800	800	1070	1070	800	800	1070
pos. control[1]												
5'-primer(s)[2]	355	666	420	395	78	112	406	78	2nd I	78	78	2nd I
	5' -CCA 3'	5' -gAA 3'	5' -TAT 3'	5' -gCA 3'	5' -TCT 3'	5' -CCT 3'	5' -gCA 3'	5' -TCT 3'	5' -CCA 3'	5' -TCT 3'	5' -TCT 3'	5' -CCA 3'
				484			431					
				5' -ACT 3'			5' -CgC 3'					
				530								
				5' -ggT 3'								
3'-primer(s)[3]	497	806	538	616	184	240	497	251	413	164	298	353
	5' -Tgg 3'	5' -CCA 3'	5' -CAA 3'	5' -CgT 3'	5' -gCC 3'	5' -ggA 3'	5' -Tgg 3'	5' -CCT 3'	5' -gCC 3'	5' -gCT 3'	5' -CAg 3'	5' -CgA 3'
					221			299	578	319		475
					5' -ACA 3'			5' -CCT 3'	5' -TgT 3'	5' -gCT 3'		5' -CgA 3'
												506
												5' -TgC 3'
Well No.	61	62	63	64	65	66	67	68	69	70	71	72

Well No.	73	74	75	76	77	78	79	80	81	82	83	84
Length of spec.	200	175	165	230	85	75	225	135	110	130	100	180
PCR product	250	260	205		110	240	270	230	235	295		
									315			
Length of int. pos. control[1]	1070	800	1070	800	800	1070	1070	1070	1070	1070	800	800
5'-primer(s)[2]	78	104	453	48	78	417	78	359	2nd I	341	808	78
	5' -TCT 3'	5' -ATA 3'	5' -AAA 3'	5' -gCT 3'	5' -TCT 3'	5' -CAC 3'	5' -TCT 3'	5' -CCg 3'	5' -CCA 3'	5' -ggg 3'	5' -CgA 3'	5' -TCT 3'
		395			385	666		666		666		484
		5' -gCA 3'			5' -ggA 3'	5' -gAA 3'		5' -gAA 3'		5' -gAA 3'		5' -ACT 3'
3'-primer(s)[3]	239	240	578	106	121	453	260	453	353	355	868	221
	5' -gAT 3'	5' -ggA 3'	5' -TgT 3'	5' -CAT 3'	5' -gCA 3'	5' -TCT 3'	5' -T.T 3'	5' -TCT 3'	5' -CgA 3'	5' -gAC 3'	5' -CAA 3'	5' -ACC 3'
	289	616	616		453	866	299	853	482	755		616
	5' -AgC 3'	5' -CgT 3'	5' -CgC 3'		5' -TCT 3'	5' -AAA 3'	5' -CCT 3'	5' -CAT 3'	5' -Tgg 3'	5' -CCA 3'		5' -CgT 3'
							319		559			
							5' -gCT 3'		5' -CTT 3'			
Well No.	73	74	75	76	77	78	79	80	81	82	83	84

Well No.	85	86	87	88	89	90	91	92	93	94	95	96
Length of spec.	260	180	155	130	115	100	110	180	130	210	135	135
PCR product		255		240	295	130		260	250	360		250
						190			295			
Length of int. pos. control[1]	800	800	1070	800	800	800	800	1070	800	800	800	1070
5'-primer(s)[2]	666	2nd I	78	78	2nd I	143	385	78	364	124	412	78
	5' -gAA 3'	5' -CCA 3'	5' -TCT 3'	5' -TCT 3'	5' -CCA 3'	5' -CgT 3'	5' -ggC 3'	5' -TCT 3'	5' -ggT 3'	5' -gCA 3'	5' -ATg 3'	5' -TCT 3'
				419	652	205	385		409	2nd I		355
				5' -gTC 3'	5' -CTg 3'	5' -ggg 3'	5' -ggA 3'		5' -ggC 3'	5' -CCA 3'		5' -CCg 3'
						235			529			
						5' -AgA 3'			5' -TgA 3'			
3'-primer(s)[3]	884	423	193	277	542	292	453	218	616	292	506	172
	5' -ggA 3'	5' -TAA 3'	5' -Cgg 3'	5' -ggT 3'	5' -CTg 3'	5' -gTg 3'	5' -TCT 3'	5' -gCA 3'	5' -CgT 3'	5' -gTg 3'	5' -TgT 3'	5' -CAT 3'
		502		506	727			299		605		565
		5' -CTg 3'		5' -TgT 3'	5' -CCA 3'			5' -TCg 3'		5' -gCA 3'		5' -CAT 3'
Well No.	85	86	87	88	89	90	91	92	93	94	95	96

[1]The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.
Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-A*02 subtyping. .
In addition, wells number 6, 10, 13 to16, 23, 26, 28, 30, 31, 34, 38, 42 to 44, 47, 50, 52, 54, 58, 59, 62, 63, 66, 67, 70, 71, 74, 76, 77, 83 to 86, 88 to 91 and 93 to 95 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.
[2]The nucleotide position, in the 5' upstream region, 2nd, 3rd or 4th exons or the 2nd intron, matching the specificity-determining 3'-end of the primer is given. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.
[3]The nucleotide position, in the 2nd, 3rd or 4th exons, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

CELL LINE VALIDATION SHEET

HLA-A*02 SSP subtyping kit

					Well															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Lot No.:	201183401	201183402	200957803	201183404	201183405	201183406	200957807	200738508	201183409	201183410	200849411	201183412	201183413	200957814	200967115	200957816
	IHWC cell line		A*	A*																
1	9001	SA	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*02:01		+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*30:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*02:01	*26:03	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*02:01		+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*02:01		+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*03:01	*80:01	w	-	-	-	-	-	-	-	-	-	w	-	-	-	-	-
18	9257	32367	*33:03	*74:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*02:01		+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*02:01		+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*02:17		-	+	-	+	+	-	-	-	-	-	+	-	-	-	-	-
22	9056	KOSE	*02:01		+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*02:01	*34:01	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*33:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*02:05		+	-	+	-	-	+	+	+	-	-	-	+	+	-	-	-
27	9191	CH1007	*24:10	*29:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*02:01	*29:02	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*30:01	*68:02	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	+
31	9019	DUCAF	*30:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*02:01		+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*02:06	*11:01	+	-	+	+	+	-	-	-	-	-	-	+	-	-	-	-
37	9065	HHKB	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*02:17		-	+	-	+	+	-	-	-	-	-	+	-	-	-	-	-
39	9315	CML	*01:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*02:07	*30:01	-	+	+	+	+	-	-	-	-	-	-	-	-	+	-	-
41	9055	H0301	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*02:07		+	+	+	+	+	-	-	-	-	-	-	-	-	+	-	-
43	9076	T7526	*02:06	*02:07	+	+	+	+	+	-	-	-	-	-	-	+	-	+	-	-
44	9057	TEM	*66:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*23:01	*24:02	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	-
46	9013	SCHU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*02:16	*03:01	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*02:01	*11:01	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-

CELL LINE VALIDATION SHEET

HLA-A*02 SSP subtyping kit

					Well														
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
				Lot No.:	201183417	201183418	200957819	200738520	200738521	201183422	201075223	200738524	201183425	201183426	200849427	201183428	201183429	201183430	200967131	201183432
	IHWC cell line		A*	A*																
1	9001	SA	*24:02		-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*30:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*02:01	*26:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*24:02		-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*24:02		-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*03:01	*80:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*33:03	*74:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*02:17		+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*02:01	*34:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*33:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*02:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*24:10	*29:01	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*02:01	*29:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*30:01	*68:02	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
31	9019	DUCAF	*30:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*02:06	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*02:17		+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
39	9315	CML	*01:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*02:07	*30:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*02:07		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*02:06	*02:07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*66:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*23:01	*24:02	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*02:16	*03:01	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
48	9303	TER-ND	*02:01	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CELL LINE VALIDATION SHEET

HLA-A*02 SSP subtyping kit

					Well															
					33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
				Lot No.:	201075233	200967134	201183435	201183436	200738537	200967138	200967139	200738540	200957841	200967142	201183443	201183444	201183445	200967146	200967147	200967148
	IHWC cell line		A*	A*																
1	9001	SA	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*30:01		-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*02:01	*26:03	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*03:01	*80:01	-	-	-	w	-	-	-	-	-	+	-	-	-	-	-	-
18	9257	32367	*33:03	*74:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*02:17		-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
22	9056	KOSE	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*02:01	*34:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*33:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*02:05		-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
27	9191	CH1007	*24:10	*29:01	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*02:01	*29:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*30:01	*68:02	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019	DUCAF	*30:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*02:06	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*03:01		-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
38	9099	LZL	*02:17		-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
39	9315	CML	*01:01	*03:01	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
40	9134	WHONP199	*02:07	*30:01	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*03:01		-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
42	9066	TAB089	*02:07		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*02:06	*02:07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*66:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*23:01	*24:02	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*03:01		-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
47	9045	TUBO	*02:16	*03:01	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
48	9303	TER-ND	*02:01	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CELL LINE VALIDATION SHEET

HLA-A*02 SSP subtyping kit

					Well													
					49	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**
				Lot No.:	200738549	200738550	200738551	200738552	200957853	201183454	200849455	200967156	201183457	200738558	200967159	201075260	201075261	200738562	200738563	200967164
	IHWC cell line		**A***	**A***																
1	9001	SA	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*30:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*02:01	*26:03	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
7	9020	QBL	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*03:01	*80:01	-	-	w	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*33:03	*74:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*02:17		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*02:01	*34:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*33:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*02:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*24:10	*29:01	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*02:01	*29:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*30:01	*68:02	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
31	9019	DUCAF	*30:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*02:06	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*02:17		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*01:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*02:07	*30:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*02:07		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*02:06	*02:07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*66:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*23:01	*24:02	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*02:16	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*02:01	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CELL LINE VALIDATION SHEET

HLA-A*02 SSP subtyping kit

					Well															
					65	**66**	**67**	**68**	**69**	**70**	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**
				Lot No.:	200967165	200957866	200967167	200967168	200967169	201183470	200967171	200967172	200967173	200967174	201075275	200957876	200967177	200967178	200967179	200967180
	IHWC cell line		**A***	**A***																
1	9001	SA	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*30:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*02:01	*26:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*03:01	*80:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*33:03	*74:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*02:01	*34:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*33:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*02:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*24:10	*29:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*02:01	*29:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*30:01	*68:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019	DUCAF	*30:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*02:06	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*01:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*02:07	*30:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*02:07		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*02:06	*02:07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*66:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*23:01	*24:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*02:16	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*02:01	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CELL LINE VALIDATION SHEET

HLA-A*02 SSP subtyping kit

					Well															
					81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
				Lot No.:	200967181	201075282	200738583	201075284	201183485	200967186	200849487	200967188	201075289	200967190	200967191	200967192	200967193	201075294	200957895	201075296
	IHWC cell line		A*	A*																
1	9001	SA	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*30:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*02:01	*26:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*03:01	*80:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*33:03	*74:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*02:01	*34:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*33:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*02:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*24:10	*29:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*02:01	*29:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*30:01	*68:02	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
31	9019	DUCAF	*30:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*02:06	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*01:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*02:07	*30:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*02:07		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*02:06	*02:07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*66:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*23:01	*24:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*02:16	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*02:01	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CERTIFICATE OF ANALYSIS

Olerup SSP® HLA-A*02 SSP

Product number: **101.412-24/04 – including *Taq* pol.**
Lot number: **17L**
Expiry date: **2013-September-01**
Number of tests: **24 tests – Product No. 101.412-24**
4 tests – Product No. 101.412-04
Number of wells per test: **96**

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2011-834-01	33	2010-752-33	65	2009-671-65
2	2011-834-02	34	2009-671-34	66	2009-578-66
3	2009-578-03	35	2011-834-35	67	2009-671-67
4	2011-834-04	36	2011-834-36	68	2009-671-68
5	2011-834-05	37	2007-385-37	69	2009-671-69
6	2011-834-06	38	2009-671-38	70	2011-834-70
7	2009-578-07	39	2009-671-39	71	2009-671-71
8	2007-385-08	40	2007-385-40	72	2009-671-72
9	2011-834-09	41	2009-578-41	73	2009-671-73
10	2011-834-10	42	2009-671-42	74	2009-671-74
11	2008-494-11	43	2011-834-43	75	2010-752-75
12	2011-834-12	44	2011-834-44	76	2009-578-76
13	2011-834-13	45	2011-834-45	77	2009-671-77
14	2009-578-14	46	2009-671-46	78	2009-671-78
15	2009-671-15	47	2009-671-47	79	2009-671-79
16	2009-578-16	48	2009-671-48	80	2009-671-80
17	2011-834-17	49	2007-385-49	81	2009-671-81
18	2011-834-18	50	2007-385-50	82	2010-752-82
19	2009-578-19	51	2007-385-51	83	2007-385-83
20	2007-385-20	52	2007-385-52	84	2010-752-84
21	2007-385-21	53	2009-578-53	85	2011-834-85
22	2011-834-22	54	2011-834-54	86	2009-671-86
23	2010-752-23	55	2008-494-55	87	2008-494-87
24	2007-385-24	56	2009-671-56	88	2009-671-88
25	2011-834-25	57	2011-834-57	89	2010-752-89
26	2011-834-26	58	2007-385-58	90	2009-671-90
27	2008-494-27	59	2009-671-59	91	2009-671-91
28	2011-834-28	60	2010-752-60	92	2009-671-92
29	2011-834-29	61	2010-752-61	93	2009-671-93
30	2011-834-30	62	2007-385-62	94	2010-752-94
31	2009-671-31	63	2007-385-63	95	2009-578-95
32	2011-834-32	64	2009-671-64	96	2010-752-96

The specificity of each primer solution of the kit has been tested against 48 well characterized IHWC cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 15, 20, 21, 24, 26, 29, 30, 32, 33, 38, 40, 44, 46 to 48, 50, 52, 54, 56, 57, 59, 63 to 74, 76 to 90 and 92 to 96 were available.
The specificities of the primers in primer solutions 15, 20, 26, 30, 32, 33, 40, 46, 52, 56, 57, 69, 72, 77, 78, 80, 82, 84, 88 and 92 to 95 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer.
In primer solutions 21, 24, 29, 47, 54, 59, 65, 68, 70, 71, 73, 76, 79, 81, 85 to 87, 89 and 96 it was only possible to test the 5'-primer, the 3'-primer were not possible to test.
In primer solutions 38, 44, 48, 63, 64, 66, 67, 74 and 90 it was only possible to test the 3'-primer, the 5'-primer was not possible to test.
In primer solutions 50 and 83 neither the 5'-primers nor the 3'-primers were possible to test.
In primer solutions 4, 8, 12, 15, 17, 18, 26, 28, 30, 32, 33, 35 to 37, 40, 43, 46, 56, 57, 69, 72, 75, 77, 78, 80, 82, 84, 88, 92 and 94 one or several of the 3'-primers were not possible to test.
In primer solutions 11, 13, 14, 23, 30, 34, 41, 46, 77, 78, 80, 82, 84, 91, 93 and 94 one or more of the 5'-primers were not possible to test.
Additional primers in primer solutions 10 to 13, 17, 23, 27, 31, 34 and 41 were tested by separately adding either one additional 3'-primer or one additional 5'-primer.

Results: No false positive or false negative amplifications were obtained.

Date of approval: 2011-July-08

Approved by:

Quality Control, Supervisor

Declaration of Conformity

Product name: *Olerup* SSP® HLA-A*02
Product number: 101.412-24/04
Lot number: 17L

Intended use: HLA-A*02 high resolution histocompatibility testing

Manufacturer: *Olerup* SSP AB
Franzengatan 5
SE-112 51 Stockholm, Sweden
Phone: +46-8-717 88 27
Fax: +46-8-717 88 18

We, *Olerup* SSP AB, hereby declare that this product, to which this Declaration of Conformity relates is in conformity with the following Standard(s) and other normative document(s) ISO 9001:2008 and ISO 13485:2003, following the provisions of the 98/79/EC Directive on *in vitro* diagnostic medical devices, Annex II List B, as transposed into the national laws of the Member States of the European Union.

The Technical Documentation File is maintained at *Olerup* SSP AB, Franzengatan 5, SE-112 51 Stockholm, Sweden.

The Authorized Representative located within the Community is: *Olerup* SSP AB.

Notified Body: Lloyd's Register Quality Assurance Limited, Hiramford, Middlemarch Office Village, Siskin Drive, Coventry CV3 4FJ, United Kingdom. (Notified Body number: 0088.)

Stockholm, Sweden

2011-July-08

Olle Olerup
Managing Director

ADDRESSES:

Manufacturer:
***Olerup* SSP AB**, Franzengatan 5, SE-112 51 Stockholm, Sweden.
Tel: +46-8-717 88 27
Fax: +46-8-717 88 18
E-mail: info-ssp@olerup.com
Web page: http://www.olerup-ssp.com

Distributed by:
Olerup GmbH, Löwengasse 47 / 6, AT-1030 Vienna, Austria.
Tel: +43-1-710 15 00
Fax: +43-1-710 15 00 10
E-mail: support-at@olerup.com
Web page: http://www.olerup.com

Olerup Inc., 901 S. Bolmar St., Suite R, West Chester, PA 19382
Tel: 1-877-OLERUP1
Fax: 610-344-7989
E-mail: info.us@olerup.com
Web page: http://www.olerup.com

For information on *Olerup* SSP distributors worldwide, contact **Olerup GmbH**.