

Olerup SSP[®] HLA-A*03

Product number:	101.413-24u/04u – without <i>Taq</i> pol.
Lot number:	05K
Expiry date:	2012-May-01
Number of tests:	24 tests – Product No. 101.413-24u 4 tests – Product No. 101.413-04u
Number of wells per test:	48
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. 05K.

**CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP[®]*
HLA-A*03 LOT**

The HLA-A*03 specificity and interpretation tables have been updated for the HLA-A alleles described since the previous *Olerup SSP[®]* HLA-A*03 lot was made (Lot No. 47F).

The amplification patterns for some rare HLA-A*03 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
7	-	Added	Primer for the A*03:69N allele.
9	Added	Added	Primer pair for the A*03:72 allele.
10	-	Added	Primer for the A*03:60 allele.
14	Added	Added	Primer pair for the A*03:59 allele.
18	-	Added	Primers for the A*03:50, A*03:64 and A*03:66 alleles.
20	-	Added	Primer for the A*03:61 allele.
21	-	Added	Primer for the A*03:74 allele.
23	Added	-	Primers for the A*03:56 and A*03:75 alleles.
27	Added	-	Primer for the A*03:71 allele.
28	Added	Added	Primer pair for the A*03:63 allele.
30	-	Added	Primer for the A*03:49 allele.
31	Added	-	Primer for the A*03:56 allele.
32	-	Added	Primer for the A*03:67 allele.

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

33	-	Added	Primer for the A*03:62 allele.
34	Added	Added	Primer pair for the A*03:58 allele.
35	-	Added	Primer for the A*03:55 allele.
36	-	Added	Primer for the A*03:70 allele.
37	-	Added	Primer for the A*03:48 allele.
38	-	Added	Primer for the A*03:73 allele.
41	Added	Added	Primer pair for the A*03:68N allele.
43	Added	Added	Primer pair for the A*03:47 and A*03:76 alleles.
44	-	Added	Primer for the A*03:51 allele.
46	Added	-	Primer for the A*03:52 and A*03:53 alleles.
48	Added	-	Primer for the A*03:52 and A*03:54 alleles.

PRODUCT DESCRIPTION

HLA-A*03 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the A*03:01 to A*03:76 alleles.

PLATE LAYOUT

Each test consists of 48 PCR reactions in a 48 well 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

The 48 well cut PCR plate is marked with 'HLA-A*03' in silver/gray ink.

Well No. 1 is marked with the Lot No. '05K'.

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.

Please note: When removing each 48 well PCR plate, make sure that the remaining plates stay covered. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

INTERPRETATION

The interpretation of HLA-A*03 SSP subtypings will be influenced by most A*01, most A*02, the A*11, two A*23, twelve A*24, the A*25:03, eight A*26, the A*29, most A*30, most A*31, most A*32, most A*33, the A*34, the A*36, most A*66, most A*68, the A*69:01, the A*74 and the A*80 alleles when present on the other haplotype. In addition, the C*07:35 allele is amplified by primer mix 46 and the C*07:86 allele is amplified by primer mix 48.

UNIQUELY IDENTIFIED ALLELES

All the HLA-A*03 alleles, i.e. **A*03:01 to A*03:76**, recognized by the HLA Nomenclature Committee in April 2010¹ will give rise to unique amplification patterns by the primers in the HLA-A*03 subtyping kit.

The HLA-A*03 subtyping kit cannot distinguish the A*03:01:01:01, 03:01:01:03 to 03:01:07, 03:01:09 to 03:01:11, 03:01:13 and the 03:01:15 to 03:01:17 alleles.

The A*03:16 and A*03:61 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 20.

The A*03:17 and A*03:74 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 21.

The A*03:20, and A*03:47 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 43.

The A*03:25 and A*03:71 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 27.

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

The A*03:27 and A*03:49 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 30.

The A*03:33 and A*03:70 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 36.

The A*03:38 and A*03:68N alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 41.

The A*03:44 and A*03:53 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 46.

¹HLA-A alleles listed on the IMGT/HLA web page 2010-April-01, release 3.0.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

The 76 HLA-A*03 alleles will generate 71 different amplification patterns, as some alleles have patterns that only differ in size of specific PCR product, that can be combined in 2556 homozygous and heterozygous combinations. 1551 of these genotypes do not give rise to unique amplification patterns. The different sizes of the specific PCR products generated by primer mixes 10, 14, 18, 20, 21, 23, 27, 28, 30, 32 to 39, 41, 43, 44, 46 and 48 were not considered in these calculations.

SPECIFICITY TABLE

HLA-A*03 SSP subtyping

Specificities and sizes of the PCR products of the 48 primer mixes used for HLA-A*03 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-A*03 alleles ³	Other amplified HLA-A alleles ⁴
1	235 bp	800 bp	*03:01:01:01-03:04, 03:06-03:09, 03:11N-03:17, 03:19-03:39, 03:41, 03:43-03:74, 03:76	*32:04, 36:02
2⁶	225 bp	1070 bp	*03:01:01:01-03:01:11, 03:01:12 ^w , 03:01:13-03:07, 03:09-03:11N, 03:13-03:31, 03:33-03:35, 03:37-03:40, 03:42-03:56, 03:58, 03:60-03:71, 03:73-03:76	*01:13, 02:34 ^w -02:35:03 ^w , 02:56:01 ^w -02:56:02 ^w , 02:62 ^w , 02:103 ^w , 34:08, 74:13
3⁶	205 bp	1070 bp	*03:01:01:01-03:01:13, 03:01:15-03:01:17, 03:03N-03:06, 03:08-03:09, 03:11N-03:17, 03:19-03:30, 03:33-03:41, 03:43-03:53, 03:55-03:63, 03:67-03:72, 03:74	*11:25, 32:04, 34:02-34:04, 34:07-34:08
4	215 bp	800 bp	*03:02, 03:10, 03:31-03:32, 03:65, 03:69N, 03:73, 03:76	*01:12, 01:19, 01:25, 11:01:01-11:07, 11:09-11:22, 11:27, 11:29-11:30, 11:32-11:34, 11:36-11:43, 11:45-11:49, 11:51-11:59, 24:51, 24:92
5	185 bp	800 bp	*03:03N	
6	275 bp	1070 bp	*03:04	
7	225 bp	1070 bp	*03:06, 03:69N	
8	240 bp	1070 bp	*03:01:01:01-03:01:07, 03:01:09-03:11N, 03:13-03:40, 03:42-03:56, 03:58-03:76	*01:13, 01:28, 02:01:01:01-02:01:15, 02:01:17-02:01:19, 02:01:21-02:04, 02:07, 02:09, 02:11-02:13, 02:15N-02:20:02, 02:22:01-02:22:02, 02:24-02:27, 02:29-02:40, 02:42-02:43N,

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

				02:45-02:50, 02:52-02:53N, 02:55-02:56:02, 02:58- 02:60, 02:62-02:71, 02:73- 02:77, 02:80, 02:82N- 02:83N, 02:85-02:86, 02:88N-02:90, 02:92- 02:97:02, 02:101-02:105, 02:107, 02:109-02:111, 02:113N-02:121, 02:123, 02:125N, 02:128, 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, 02:181-02:183, 02:185- 02:199, 11:43, 24:19, 24:28, 24:44, 24:89, 29:19, 30:01:01-30:01:03, 30:11:01-30:11:02, 30:13- 30:20, 30:23-30:24, 30:26, 30:30-30:31, 30:35-30:37, 31:01:02-31:01:05, 31:01:07-31:06, 31:09, 31:11-31:31, 33:01:01- 33:01:03, 33:03:01-33:12, 33:14-33:16, 33:18-33:29, 34:08, 68:29, 68:45, 74:01- 74:09, 74:11-74:14N, 80:02
9	230 bp	1070 bp	*03:05, 03:10, 03:42, 03:72	*02:156, 11:04, 11:35, 24:19, 30:01:01-30:04, 30:06-30:20, 30:22-30:27N, 30:29-30:37, 31:03-31:04, 34:02-34:04, 34:07-34:08, 36:01, 36:05, 68:45
10^{5,8}	65 bp, 205 bp	800 bp	*03:02, 03:07, 03:10, 03:31-03:32, 03:42, 03:60, 03:73, 03:76	*01:12, 01:19, 01:21, 02:156, 11:31, 11:35, 24:92, 30:04, 30:06, 30:09, 30:17, 30:29, 31:03-31:04
11	225 bp	800 bp	*03:08, 03:32, 03:41	*01:01:01-01:01:14, 01:03-01:04N, 01:06, 01:08- 01:12, 01:14-01:16N, 01:18N-01:19, 01:21-01:42, 01:44-01:55, 02:48, 02:81, 02:90, 02:124, 02:146, 25:03, 26:20, 32:01:01- 32:02, 32:03 ^w , 32:04-32:06, 32:08 ^w , 32:09-32:16, 32:18-

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

				32:22, 36:01-36:05, 74:01-74:04, 74:08-74:12N, 74:14N, 80:01 ^w , 80:02
12	190 bp	1070 bp	*03:09	*02:01:09, 02:06:07, 02:50, 02:122, 11:06, 11:18, 24:28, 24:89, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 29:19, 33:24, 68:05, 68:15, 68:20, 74:06
13	145 bp	800 bp	*03:01:01:02N	
14 ^{5,9}	105 bp, 235 bp	1070 bp	*03:11N, 03:59	
15	225 bp	1070 bp	*03:12	*02:78, 11:01:01-11:02:01, 11:02:02 ^w , 11:02:03-11:05, 11:06 ^w , 11:07-11:16, 11:20-11:27, 11:29-11:39, 11:41-11:42, 11:44, 11:46, 11:48-11:59, 30:08, 34:01:01-34:07, 66:01-66:02, 66:04, 66:06-66:10, 66:12-66:13, 68:01:01-68:02:04, 68:06-68:14, 68:16-68:19, 68:21-68:28, 68:30, 68:32-68:35, 68:37-68:44, 68:47-68:49N, 69:01
16	275 bp	1070 bp	*03:14	
17 ^{6,7}	215 bp	800 bp	*03:01:01:01-03:01:17, 03:03N-03:09, 03:11N-03:17, 03:19-03:30, 03:33-03:49, 03:51-03:64, 03:67-03:68N, 03:70-03:72, 03:74	*01:06, 02:156, 11:24:01-11:25, 11:31, 11:35, 30:01:01-30:03, 30:07-30:16, 30:18-30:20, 30:22-30:27N, 30:30-30:37, 31:03-31:04, 32:04, 34:02-34:04, 34:07-34:08, 80:01-80:02
18 ^{5,10}	135 bp, 210 bp	1070 bp	*03:13, 03:50, 03:64, 03:66	*11:08, 11:44, 30:04, 30:06, 30:17, 30:29, 36:02
19	230 bp	1070 bp	*03:15, 03:19	
20 ^{5,11}	60 bp, 175 bp	1070 bp	*03:16, 03:61	
21 ^{5,12}	130 bp, 195 bp	1070 bp	*03:17, 03:74	*02:156, 24:51, 24:92
22	250 bp	1070 bp	*03:18	*01:01:01:01-01:02, 01:04N, 01:06-01:19, 01:21-01:55, 11:27, 11:38-11:39, 24:51, 24:92, 80:01-80:02
23 ^{5,13}	95 bp, 185 bp, 210 bp, 240 bp	1070 bp	*03:19, 03:22, 03:56, 03:75	*24:18, 36:02

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

24	470 bp	1070 bp	*03:21N	*01:04N, 11:21N, 23:07N, 24:11N
25	155 bp	1070 bp	*03:23	*02:01:09, 02:06:07, 02:35:03, 02:50, 02:122, 24:08, 24:42, 24:89, 26:07:01-26:07:02, 33:08, 74:04
26	200 bp	1070 bp	*03:24	*01:51, 02:55, 25:03, 26:20, 32:15, 34:08
27 ^{5,14}	95 bp, 145 bp	1070 bp	*03:25, 03:71	
28 ¹⁵	170 bp, 495 bp	1070 bp	*03:26, 03:41, 03:63	*36:02
29 ⁵	100 bp	1070 bp	*03:01:01:01-03:07, 03:09-03:28, 03:30- 03:31, 03:33, 03:35, 03:37-03:40, 03:42- 03:61, 03:64-03:76	*02:34-02:35:03, 02:56:01- 02:56:02, 02:62, 02:78, 02:103, 11:12, 23:13, 24:07, 24:24, 29:01:01:01-29:18, 29:21-29:22, 30:01:01- 30:01:03, 30:08, 30:11:01- 30:11:02, 30:14L-30:20, 30:23-30:26, 30:30, 30:35- 30:37, 32:17, 66:02, 66:12, 68:01:01-68:02:04, 68:06- 68:14, 68:16-68:19, 68:21- 68:30, 68:32-68:39, 68:41- 68:49N, 69:01, 74:13
30 ^{5,16}	130 bp, 210 bp	1070 bp	*03:27, 03:49	
31	220 bp	800 bp	*03:28, 03:56	*36:02
32 ¹⁷	150 bp, 220 bp	1070 bp	*03:29, 03:67	
33 ¹⁸	210 bp, 285 bp	1070 bp	*03:30, 03:62	*32:05
34 ^{5,19}	125 bp, 160 bp	1070 bp	*03:31, 03:58	
35 ²⁰	235 bp, 275 bp	1070 bp	*03:32, 03:55	*31:21, 74:07
36 ²¹	160 bp, 210 bp	1070 bp	*03:33, 03:70	
37 ^{5,22}	95 bp, 225 bp	1070 bp	*03:34, 03:48	
38 ²³	165 bp, 250 bp	800 bp	*03:35, 03:73	
39 ²⁴	200 bp, 235 bp	1070 bp	*03:36N, 03:45	
40	240 bp	1070 bp	*03:37	

41 ²⁵	185 bp, 275 bp	1070 bp	*03:38, 03:68N	
42	220 bp	800 bp	*03:39	
43 ²⁶	150 bp, 260 bp	1070 bp	*03:20, 03:47, 03:76	
44 ²⁷	165 bp, 240 bp	1070 bp	*03:40, 03:51	
45	150 bp	1070 bp	*03:43	
46 ^{5,28}	115 bp, 190 bp	1070 bp	*03:44, 03:52-03:53	*02:164, 30:30, 31:19, C*07:35
47	240 bp	1070 bp	*03:41, 03:57	*01:01:01:01-01:01:03, 01:01:05-01:01:12, 01:01:14, 01:03-01:04N, 01:06, 01:08-01:12, 01:14- 01:19, 01:21-01:23, 01:25- 01:27N, 01:29-01:42, 01:44- 01:55, 36:01-36:05, 74:10, 80:01
48 ^{5,29}	70 bp, 110 bp, 145 bp	1070 bp	*03:46, 03:52, 03:54	*31:19, C*07:86

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*03 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 inherent 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.

²The 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*03 subtyping.

In addition, wells number 4, 5, 10, 11, 13, 17, 31, 38 and 42 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.

³The A*03:16 and A*03:61 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 20.

The A*03:17 and A*03:74 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 21.

The A*03:20, and A*03:47 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 43.

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

The A*03:25 and A*03:71 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 27.

The A*03:27 and A*03:49 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 30.

The A*03:33 and A*03:70 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 36.

The A*03:38 and A*03:68N alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 41.

The A*03:44 and A*03:53 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 46.

⁴Due to the sharing of sequence motifs between HLA-A alleles non-HLA-A*03 alleles will be amplified by primer mixes 1 to 4, 8 to 12, 15, 17, 18, 21 to 26, 28, 29, 31, 33, 35 and 46 to 48. In addition, the C*07:35 allele is amplified by primer mix 46 and the C*07:86 allele is amplified by primer mix 48.

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

⁶Primer mix 2, 3 and 17 may give a lower yield of specific PCR product than the other A*03 primer mixes.

⁷Primer mix 17 may give rise to nonspecific amplifications.

⁸Primer mix 10: Specific PCR fragment of 65 bp in A*03:60 allele. Specific PCR fragment of 205 bp in the A*03:02, 03:07, 03:10, 03:31-03:32, 03:42, 03:73 and A*03:76 and in the A*01:12, 01:19, 01:21, 02:156, 11:31, 11:35, 24:92, 30:04, 30:06, 30:09, 30:17, 30:29 and 31:03-31:04 alleles.

⁹Primer mix 14: Specific PCR fragment of 105 bp in the A*03:11N allele. Specific PCR fragment of 235 bp in the A*03:59 allele.

¹⁰Primer mix 18: Specific PCR fragment of 135 bp in the A*03:13 allele. Specific PCR fragment of 210 bp in the A* 03:50, 03:64 and 03:66 and the A*11:08, 11:44, 30:04, 30:06, 30:17, 30:29 and 36:02 alleles.

¹¹Primer mix 20: Specific PCR fragment of 60 bp in the A*03:61 allele. Specific PCR fragment of 175 bp in the A*03:16 allele.

¹²Primer mix 21: Specific PCR fragment of 130 bp in the A*03:17 and the A*02:156, 24:51 and 24:92 alleles. Specific PCR fragment of 195 bp in the A*03:74 allele.

¹³Primer mix 23: Specific PCR fragment of 95 bp in the A*03:22 allele. Specific PCR fragment of 185 bp in the A*03:19 and in the A*24:18 alleles. Specific PCR fragment of 210 bp in the A* 03:56 and in the A*36:02 alleles. Specific PCR fragment of 240 bp in the A*03:75 and in the A*24:18 alleles.

¹⁴Primer mix 27: Specific PCR fragment of 95 bp in the A*03:71 allele. Specific PCR fragment of 145 bp in the A*03:25 allele.

¹⁵Primer mix 28: Specific PCR fragment of 170 bp in the A*03:26 allele. Specific PCR fragment of 495 bp in the A*03:41 and 03:63 and in the A*36:02 alleles.

¹⁶Primer mix 30: Specific PCR fragment of 130 bp in the A*03:27 allele. Specific PCR fragment of 210 bp in the A*03:49 allele.

¹⁷Primer mix 32: Specific PCR fragment of 150 bp in the A*03:67 allele. Specific PCR fragment of 220 bp in the A*03:29 allele.

¹⁸Primer mix 33: Specific PCR fragment of 210 bp in the A*03:30 and the A*32:05 alleles. Specific PCR fragment of 285 bp in the A*03:62 allele.

¹⁹Primer mix 34: Specific PCR fragment of 125 bp in the A*03:58 allele. Specific PCR fragment of 160 bp in the A*03:31 allele.

²⁰Primer mix 35: Specific PCR fragment of 235 bp in the A*03:32 and the A*31:21 and 74:07 alleles. Specific PCR fragment of 275 bp in the A*03:55 allele.

²¹Primer mix 36: Specific PCR fragment of 160 bp in the A*03:33 allele. Specific PCR fragment of 210 bp in the A* 03:70 allele.

²²Primer mix 37: Specific PCR fragment of 95 bp in the A*03:48 allele. Specific PCR fragment of 225 bp in the A* 03:34 allele.

²³Primer mix 38: Specific PCR fragment of 165 bp in the A*03:35 allele. Specific PCR fragment of 250 bp in the A*03:73 allele.

²⁴Primer mix 39: Specific PCR fragment of 200 bp in the A* 03:36N allele. Specific PCR fragment of 235 bp in the A*03:45 allele.

²⁵Primer mix 41: Specific PCR fragment of 185 bp in the A* 03:38 allele. Specific PCR fragment of 275 bp in the A*03:68N allele.

²⁶Primer mix 43: Specific PCR fragment of 150 bp in the A*03:20 allele. Specific PCR fragment of 260 bp in the A*03:47 and 03:76 alleles.

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

²⁷Primer mix 44: Specific PCR fragment of 165 bp in the A*03:51 allele. Specific PCR fragment of 240 bp in the A*03:40 allele.

²⁸Primer mix 46: Specific PCR fragment of 115 bp in A*03:44 and 03:52 and the A*02:164 and 31:19 alleles. Specific PCR fragment of 190 bp in A*03:53 and the A*30:30 and in the C*07:35 alleles.

²⁹Primer mix 48: Specific PCR fragment of 70 bp in the A*03:54 allele. Specific PCR fragment of 110 bp in the A*03:52 and the A*31:19 alleles. Specific PCR fragment of 145 bp in the A*03:46 and in the C*07:86 alleles.

'w', may be weakly amplified.

INTERPRETATION TABLE

HLA-A*03 SSP subtyping

Amplification patterns of the A*03:01 to A*03:76 alleles

	Well ¹²																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Length of spec.	235	225	205	215	185	275	225	240	230	65	225	190	145	105	225	275	215	135	230	60	130	250	95	470	
PCR product										205				235				210		175	195		185		
Length of int. pos. control ¹	800	1070	1070	800	800	1070	1070	1070	1070	800	800	1070	800	1070	1070	1070	800	1070	1070	1070	1070	1070	1070	1070	
5'-primer(s) ²	5'-ATA ^{3'} 363	5'-CTT ^{3'} 98	5'-ATA ^{3'} 363	5'-ATA ^{3'} 363	5'-Tgg ^{3'} 382	5'-ATA ^{3'} 363	5'-ATA ^{3'} 363	5'-ACA ^{3'} 102	5'-CTC ^{3'} 98	5'-ATA ^{3'} 363	5'-CTT ^{3'} 98	5'-GCC ^{3'} 144	5'-gga ^{3'} 4 th 1	5'-TCC ^{3'} 28	5'-CTA ^{3'} 98	5'-CTT ^{3'} 98	5'-ATA ^{3'} 363	5'-ATA ^{3'} 363	5'-gTT ^{3'} 368	5'-ATA ^{3'} 363	5'-ATA ^{3'} 363	5'-ATA ^{3'} 363	5'-CCC ^{3'} 355	5'-ATA ^{3'} 3 rd 1	
3'-primer(s) ³	5'-Tgg ^{3'} 557	5'-gAC ^{3'} 282	5'-CCT ^{3'} 527	5'-TCT ^{3'} 539	5'-CCT ^{3'} 527	5'-CCg ^{3'} 595	5'-CTA ^{3'} 538	5'-CCA ^{3'} 299	5'-gAC ^{3'} 282	5'-CCA ^{3'} 527	5'-gAT ^{3'} 388	5'-gAg ^{3'} 282	5'-gTg ^{3'} 292	5'-ACA ^{3'} 899	5'-TCT ^{3'} 426	5'-gAC ^{3'} 282	5'-TCA ^{3'} 539	5'-gCg ^{3'} 528	5'-CCA ^{3'} 455	5'-CCA ^{3'} 555	5'-gAA ^{3'} 496	5'-TCT ^{3'} 453	5'-CCg ^{3'} 570	5'-CCA ^{3'} 555	5'-g99 ^{3'} 621
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
HLA-A allele																									

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

Length of spec.	235	225	205	215	185	275	225	240	230	65	225	190	145	105	225	275	215	135	230	60	130	250	95	470
PCR product										205				235				210		175	195		185	
																							210	
																							240	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
HLA-A allele																								
*03:01:01:01, 03:01:01:03-03:01:07, 03:01:09-03:01:11, 03:01:13, 03:01:15-03:01:17	1	2	3					8									17							
*03:01:01:02N	1	2	3					8					13				17							
*03:01:08	1	2	3														17							
*03:01:12	1	w	3					8									17							
*03:01:14	1	2						8									17							
*03:02	1	2		4				8		10														
*03:03N	1	2	3		5			8									17							
*03:04	1	2	3			6		8									17							
*03:05		2	3					8	9								17							
*03:06	1	2	3				7	8									17							
*03:07	1	2						8		10							17							
*03:08	1		3					8			11						17							
*03:09	1	2	3					8				12					17							
*03:10		2		4				8	9	10														
*03:11N	1	2	3					8						14			17							
*03:12	1		3												15		17							
*03:13	1	2	3					8									17	18						
*03:14	1	2	3					8								16	17							
*03:15	1	2	3					8									17		19					
*03:16, 03:61 ⁴	1	2	3					8									17			20				
*03:17, 03:74 ⁵	1	2	3					8									17				21			
*03:18		2						8														22		
*03:19	1	2	3					8									17		19				23	
*03:20, 03:47 ⁶	1	2	3					8									17							
*03:21N	1	2	3					8									17							24
*03:22	1	2	3					8									17						23	
*03:23	1	2	3					8									17							
*03:24	1	2	3					8									17							
*03:25, 03:71 ⁷	1	2	3					8									17							
*03:26	1	2	3					8									17							
*03:27, 03:49 ⁸	1	2	3					8									17							
*03:28	1	2	3					8									17							
*03:29	1	2	3					8									17							
*03:30	1	2	3					8									17							
*03:31	1	2		4				8		10														
*03:32	1			4				8		10	11													
*03:33, 03:70 ⁹	1	2	3					8									17							
*03:34	1	2	3					8									17							
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

Lot-specific information																Length of spec. PCR product								
155	200	95	170	100	130	220	150	210	125	235	160	95	165	200	240	185	220	150	165	150	115	240	70	
		145	495		210	220		285	160	275	210	225	250	235		275		260	240			190	110	145
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Well No.
				29																				HLA-A allele
				29																				*03:01:01:01, 03:01:01:03-03:01:07, 03:01:09-03:01:11, 03:01:13, 03:01:15-03:01:17
				29																				*03:01:01:02N
				29																				*03:01:08
				29																				*03:01:12
				29																				*03:01:14
				29																				*03:02
				29																				*03:03N
				29																				*03:04
				29																				*03:05
				29																				*03:06
				29																				*03:07
				29																				*03:08
				29																				*03:09
				29																				*03:10
				29																				*03:11N
				29																				*03:12
				29																				*03:13
				29																				*03:14
				29																				*03:15
				29																				*03:16, 03:61 ⁴
				29																				*03:17, 03:74 ⁵
				29																				*03:18
				29																				*03:19
				29													43							*03:20, 03:47 ⁶
				29																				*03:21N
				29																				*03:22
25				29																				*03:23
	26			29																				*03:24
		27		29																				*03:25, 03:71 ⁷
			28	29																				*03:26
				29	30																			*03:27, 03:49 ⁸
				29		31																		*03:28
							32																	*03:29
				29				33																*03:30
				29					34															*03:31
										35														*03:32
				29							36													*03:33, 03:70 ⁹
												37												*03:34
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Well No.

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

Length of spec.	235	225	205	215	185	275	225	240	230	65	225	190	145	105	225	275	215	135	230	60	130	250	95	470
PCR product										205				235				210	175		195		185	
																							210	
																							240	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*03:35	1	2	3					8									17							
*03:36N	1		3					8									17							
*03:37	1	2	3					8									17							
*03:38, 03:68N ¹⁰	1	2	3					8									17							
*03:39	1	2	3					8									17							
*03:40			2	3				8									17							
*03:41	1		3								11						17							
*03:42		2						8	9	10							17							
*03:43	1	2	3					8									17							
*03:44, 03:53 ¹¹	1	2	3					8									17							
*03:45	1	2	3					8									17							
*03:46	1	2	3					8									17							
*03:48	1	2	3					8									17							
*03:50	1	2	3					8										18						
*03:51	1	2	3					8									17							
*03:52	1	2	3					8									17							
*03:54	1	2						8									17							
*03:55	1	2	3					8									17							
*03:56	1	2	3					8									17						23	
*03:57	1		3														17							
*03:58	1	2	3					8									17							
*03:59	1		3					8					14				17							
*03:60	1	2	3					8	10								17							
*03:62	1	2	3					8									17							
*03:63	1	2	3					8									17							
*03:64	1	2						8									17	18						
*03:65	1	2		4				8																
*03:66	1	2						8										18						
*03:67	1	2	3					8									17							
*03:69N	1	2	3	4			7	8																
*03:72	1		3					8	9								17							
*03:73	1	2		4				8		10														
*03:75		2						8															23	
*03:76	1	2		4				8		10														
*01:01:01:01-01:01:03, 01:01:05-01:01:12, 01:01:14, 01:08-01:11N, 01:14-01:16N, 01:18N, 01:22N-01:23, 01:26- 01:27N, 01:29-01:42, 01:44- 01:50, 01:52N-01:55											11												22	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

155 200 95 170 100 130 220 150 210 125 235 160 95 165 200 240 185 220 150 165 150 115 240 70																Length of spec.							
		145	495		210	220	285	160	275	210	225	250	235		275	260	240		190	110		PCR product	
25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48																Well No.							
				29								38											*03:35
												39											*03:36N
				29								40											*03:37
				29											41								*03:38, 03:68N ¹⁰
				29											42								*03:39
				29												44							*03:40
			28																	47			*03:41
				29																			*03:42
				29														45					*03:43
				29														46					*03:44, 03:53 ¹¹
				29								39											*03:45
				29																	48		*03:46
				29							37												*03:48
				29																			*03:50
				29												44							*03:51
				29														46		48			*03:52
				29																	48		*03:54
				29								35											*03:55
				29		31																	*03:56
				29																47			*03:57
				29							34												*03:58
				29																			*03:59
				29																			*03:60
										33													*03:62
			28																				*03:63
				29																			*03:64
				29																			*03:65
				29																			*03:66
				29																			*03:67
				29			32																*03:69N
				29																			*03:72
				29									38										*03:73
				29																			*03:75
				29													43						*03:76
																				47			*01:01:01:01-01:01:03, 01:01:05-01:01:12, 01:01:14, 01:08-01:11N, 01:14-01:16N, 01:18N, 01:22N-01:23, 01:26- 01:27N, 01:29-01:42, 01:44- 01:50, 01:52N-01:55
25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48																Well No.							

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

Length of spec.	235	225	205	215	185	275	225	240	230	65	225	190	145	105	225	275	215	135	230	60	130	250	95	470
PCR product										205				235				210		175	195		185	
																							210	
																							240	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*01:01:04, 01:01:13, 01:24											11											22		
*01:02, 01:07, 01:43																						22		
*01:03, 36:03-36:04, 74:10											11													
*01:04N											11											22		24
*01:06											11						17					22		
*01:12, 01:19				4						10	11											22		
*01:13		2						8														22		
*01:17																						22		
*01:21										10	11											22		
*01:25				4							11											22		
*01:28								8			11											22		
*01:51											11											22		
*02:01:01:01-02:01:08, 02:01:10-02:01:15, 02:01:17- 02:01:19, 02:01:21-02:04, 02:07, 02:09, 02:11-02:13, 02:15N-02:20:02, 02:22:01- 02:22:02, 02:24-02:27, 02:29- 02:33, 02:36-02:40, 02:42- 02:43N, 02:45-02:47, 02:49, 02:52-02:53N, 02:58-02:60, 02:63-02:71, 02:73-02:77, 02:80, 02:82N-02:83N, 02:85- 02:86, 02:88N-02:89, 02:92- 02:97:02, 02:101-02:102, 02:104-02:105, 02:107, 02:109-02:111, 02:113N-02:121, 02:123, 02:125N, 02:128, 02:130- 02:135, 02:138-02:141, 02:145, 02:147-02:153, 02:155, 02:157-02:163, 02:165-02:168, 02:171:01- 02:171:02, 02:173-02:177, 02:181-02:183, 02:185- 02:199, 24:44, 31:01:02- 31:01:05, 31:01:07-31:02, 31:05-31:06, 31:09, 31:11- 31:18, 31:20, 31:22-31:31, 33:01:01-33:01:03, 33:03:01- 33:07, 33:09-33:12, 33:14- 33:16, 33:18-33:23, 33:25- 33:29, 74:05								8																
								8																
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

Length of spec.	235	225	205	215	185	275	225	240	230	65	225	190	145	105	225	275	215	135	230	60	130	250	95	470
PCR product										205				235				210		175	195		185	
																							210	
																							240	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*02:01:09, 02:50, 24:89								8				12												
*02:06:07, 02:122												12												
*02:34-02:35:02, 02:56:01-02:56:02, 02:62, 02:103		w						8																
*02:35:03		w						8																
*02:48, 02:90, 74:01-74:03, 74:08-74:09, 74:11-74:12N, 74:14N								8			11													
*02:55								8																
*02:78, 66:02, 66:12, 68:01:01-68:02:04, 68:06-68:14, 68:16-68:19, 68:21-68:28, 68:30, 68:32-68:35, 68:37-68:39, 68:41-68:44, 68:47-68:49N, 69:01															15									
*02:81, 02:124, 02:146, 32:01:01-32:02, 32:06, 32:09-32:14, 32:16, 32:18-32:22											11													
*02:156								8	9	10							17					21		
*02:164								8																
*11:01:01-11:02:01, 11:02:03-11:03, 11:05, 11:07, 11:09-11:11, 11:13-11:16, 11:20, 11:22, 11:29-11:30, 11:32-11:34, 11:36-11:37, 11:41-11:42, 11:46, 11:48-11:49, 11:51-11:59				4											15									
*11:02:02				4												w								
*11:04				4					9							15								
*11:06				4								12				w								
*11:08, 11:44																15		18						
*11:12				4												15								
*11:17, 11:19, 11:40, 11:45, 11:47				4																				
*11:18				4								12												
*11:21N				4												15								24
*11:23, 11:26, 11:50Q, 34:01:01-34:01:02, 34:05-34:06, 66:01, 66:04, 66:06-66:10, 66:13, 68:40																15								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

Length of spec.	235	225	205	215	185	275	225	240	230	65	225	190	145	105	225	275	215	135	230	60	130	250	95	470
PCR product										205				235				210		175	195		185	
																							210	
																							240	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*11:31										10					15		17							
*11:35									9	10					15		17							
*11:43				4				8																
*23:07N, 24:11N																								24
*23:13, 24:07, 24:24, 29:01:01:01-29:18, 29:21- 29:22, 32:17, 68:36, 68:46																								
*24:08, 24:42, 26:07:01- 26:07:02																								
*24:18																								23
*24:19								8	9															
*24:28, 29:19, 33:24, 74:06								8				12												
*24:51				4																	21	22		
*24:92				4						10											21	22		
*25:03, 26:20, 32:15											11													
*26:03:01-26:03:02, 26:06, 26:21, 26:30, 68:05, 68:15, 68:20												12												
*30:01:01-30:01:03, 30:11:01- 30:11:02, 30:14L-30:16, 30:18- 30:20, 30:23-30:24, 30:26, 30:35-30:37								8	9										17					
*30:02:01-30:03, 30:07, 30:10, 30:12, 30:22, 30:27N, 30:32- 30:34									9										17					
*30:04, 30:06, 30:29									9	10									18					
*30:08									9						15		17							
*30:09									9	10							17							
*30:13, 30:31								8	9								17							
*30:17								8	9	10									18					
*30:25									9										17					
*30:30								8	9										17					
*31:03-31:04								8	9	10									17					
*31:19								8																
*31:21, 74:07								8																
*32:03, 32:08											w													
*32:04	1		3							11							17							
*32:05										11														
*33:08								8																
*34:02-34:04, 34:07			3						9						15		17							
*34:08		2	3					8	9								17							
*36:01, 36:05									9	11														
*36:02	1									11									18				23	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

																Length of spec. PCR product									
155	200	95	170	100	130	220	150	210	125	235	160	95	165	200	240	185	220	150	165	150	115	240	70		
		145	495		210	220		285	160	275	210	225	250	235		275		260	240			190	110	145	
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Well No.	
																									*11:31
																									*11:35
																									*11:43
																									*23:07N, 24:11N
				29																					*23:13, 24:07, 24:24, 29:01:01:01-29:18, 29:21- 29:22, 32:17, 68:36, 68:46
25																									*24:08, 24:42, 26:07:01- 26:07:02
																									*24:18
																									*24:19
																									*24:28, 29:19, 33:24, 74:06
																									*24:51
																									*24:92
	26																								*25:03, 26:20, 32:15
																									*26:03:01-26:03:02, 26:06, 26:21, 26:30, 68:05, 68:15, 68:20
				29																					*30:01:01-30:01:03, 30:11:01- 30:11:02, 30:14L-30:16, 30:18- 30:20, 30:23-30:24, 30:26, 30:35-30:37
																									*30:02:01-30:03, 30:07, 30:10, 30:12, 30:22, 30:27N, 30:32- 30:34
																									*30:04, 30:06, 30:29
				29																					*30:08
																									*30:09
																									*30:13, 30:31
				29																					*30:17
				29																					*30:25
				29																	46				*30:30
																									*31:03-31:04
																					46	48			*31:19
										35															*31:21, 74:07
																									*32:03, 32:08
																									*32:04
								33																	*32:05
25																									*33:08
																									*34:02-34:04, 34:07
	26																								*34:08
																						47			*36:01, 36:05
			28			31																47			*36:02
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Well No.	

Length of spec.	235	225	205	215	185	275	225	240	230	65	225	190	145	105	225	275	215	135	230	60	130	250	95	470
PCR product										205				235				210		175	195		185	
																							210	
																							240	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*68:29								8																
*68:45								8	9															
*74:04								8			11													
*74:13		2						8																
*80:01											w						17					22		
*80:02								8			11						17					22		
C*07:35																								
C*07:86																								
HLA-A allele																								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

¹The 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*03 subtyping.

In addition, wells number 4, 5, 10, 11, 13, 17, 31, 38 and 42 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

²The nucleotide position, in the 2nd, 3rd or 4th exon or 3rd or 4th 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.

³The nucleotide position, in 2nd, 3rd, 4th or 5th exon, 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.

⁴The A*03:16 and A*03:61 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 20.

⁵The A*03:17 and A*03:74 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 21.

⁶The A*03:20, and A*03:47 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 43.

⁷The A*03:25 and A*03:71 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 27.

⁸The A*03:27 and A*03:49 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 30.

⁹The A*03:33 and A*03:70 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 36.

¹⁰The A*03:38 and A*03:68N alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 41.

¹¹The A*03:44 and A*03:53 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 46.

¹²Primer mix 10: Specific PCR fragment of 65 bp in A*03:60 allele. Specific PCR fragment of 205 bp in the A*03:02, 03:07, 03:10, 03:31-03:32, 03:42, 03:73 and A*03:76 and in the A*01:12, 01:19, 01:21, 02:156, 11:31, 11:35, 24:92, 30:04, 30:06, 30:09, 30:17, 30:29 and 31:03-31:04 alleles.

Primer mix 14: Specific PCR fragment of 105 bp in the A*03:11N allele. Specific PCR fragment of 235 bp in the A*03:59 allele.

Primer mix 18: Specific PCR fragment of 135 bp in the A*03:13 allele. Specific PCR fragment of 210 bp in the A* 03:50, 03:64 and 03:66 and the A*11:08, 11:44, 30:04, 30:06, 30:17, 30:29 and 36:02 alleles.

Primer mix 20: Specific PCR fragment of 60 bp in the A*03:61 allele. Specific PCR fragment of 175 bp in the A*03:16 allele.

CELL LINE VALIDATION SHEET				HLA-A*03 SSP subtyping kit																
				Well																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				Prod. No.:	201072001	201072002	201072003	201072004	201072005	201072006	201072007	201072008	201072009	201072010	201072011	201072012	201072013	201072014	201072015	201072016
IHCW cell line		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*03 SSP subtyping kit																				
			Prod. No.:	Well																
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
				201072017	201072018	201072019	201072020	201072021	201072022	201072023	201072024	201072025	201072026	201072027	201072028	201072029	201072030	201072031	201072032	
	IHWC cell line		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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	+	-	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-
18	9257 32367		*33:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH		*32:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9		*33:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49		*02:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007		*24:10	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
28	9320 BEL5GB		*02:01	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
29	9050 MOU		*29:02	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
30	9021 RSH		*30:01	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB		*03:01	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
38	9099 LZL		*02:17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML		*01:01	+	-	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-
40	9134 WHONP199		*02:07	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
41	9055 H0301		*03:01	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
42	9066 TAB089		*02:07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526		*02:06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM		*66:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO		*23:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU		*03:01	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
47	9045 TUBO		*02:16	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
48	9303 TER-ND		*02:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CELL LINE VALIDATION SHEET																			
HLA-A*03 SSP subtyping kit																			
			Prod. No.:	Well															
				33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
				201072033	201072034	201072035	201072036	201072037	201072038	201072039	201072040	201072041	201072042	201072043	201072044	201072045	201072046	201072047	201072048
	IHWC cell line	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*03 SSP**

Product number: 101.413-24u/04u – without *Taq* pol.
Lot number: 05K
Expiry date: 2012-May-01
Number of tests: 24 tests – Product No. 101.413-24u
 4 tests – Product No. 101.413-04u
Number of wells per test: 48

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2010-720-01	17	2010-720-17	33	2010-720-33
2	2010-720-02	18	2010-720-18	34	2010-720-34
3	2010-720-03	19	2010-720-19	35	2010-720-35
4	2010-720-04	20	2010-720-20	36	2010-720-36
5	2010-720-05	21	2010-720-21	37	2010-720-37
6	2010-720-06	22	2010-720-22	38	2010-720-38
7	2010-720-07	23	2010-720-23	39	2010-720-39
8	2010-720-08	24	2010-720-24	40	2010-720-40
9	2010-720-09	25	2010-720-25	41	2010-720-41
10	2010-720-10	26	2010-720-26	42	2010-720-42
11	2010-720-11	27	2010-720-27	43	2010-720-43
12	2010-720-12	28	2010-720-28	44	2010-720-44
13	2010-720-13	29	2010-720-29	45	2010-720-45
14	2010-720-14	30	2010-720-30	46	2010-720-46
15	2010-720-15	31	2010-720-31	47	2010-720-47
16	2010-720-16	32	2010-720-32	48	2010-720-48

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 5 to 7, 13, 16, 19 to 21, 23, 25 to 28, 30 to 46 and 48 were available. The specificities of the primers in primer solutions 21, 23, 25, 26, 28, 31 to 35 and 43 to 45 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solutions 6, 7, 16, 20, 30, 36 to 39 and 41 it was only possible to test the 5'-primers, the 3'-primers were not possible to test.

In primer solutions 5, 13, 19, 27, 40, 42, 46 and 48 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer mixes 28, 31, 34 and 43 one 5'-primer was not possible to test, and in primer mixes 10, 14, 21, 32, 34, 35, 43 and 44 one or more 3'-primers were not possible to test. Additional 5'-primer in primer mix 14 was tested by separately adding one 3'-primer.

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

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

Date of approval: 2010-May-28

Approved by:

Quality Control, Supervisor

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com

Declaration of Conformity

Product name: *Olerup* SSP® HLA-A*03
Product number: 101.413-24u/04u
Lot number: 05K

Intended use: HLA-A*03 high resolution histocompatibility testing

Manufacturer: *Olerup* SSP AB
Hasselstigen 1
SE-133 33 Saltsjöbaden, 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, conformity assessed using Annex IV, as transposed into the national laws of the Member States of the European Union.

The Technical Documentation File is maintained at *Olerup* SSP AB, Hasselstigen 1, SE-133 33 Saltsjöbaden, 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.)

Saltsjöbaden, Sweden
2010-May-28

Olle Olerup
Managing Director

Lot No.: **05K**

Lot-specific information

www.olerup-ssp.com**ADDRESSES:****Manufacturer:****Olerup SSP AB**, Hasselstigen 1, SE-133 33 Saltsjöbaden, 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**.