

## Olerup SSP<sup>®</sup> HLA-A\*03

Product number:	101.413-24/04 – including <i>Taq</i> pol.
Lot number:	47F
Expiry date:	2011-February-01
Number of tests:	24 tests – Product No. 101.413-24 4 tests – Product No. 101.413-04
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. 47F.**

### CHANGES COMPARED TO THE PREVIOUS OLERUP SSP<sup>®</sup> 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<sup>®</sup>* HLA-A\*03 lot was made (Lot No. 21E).

Six wells have been added to the HLA-A\*03 kit,  
wells **43 to 48**.

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

Well	5'-primer	3'-primer	rationale
3	-	Modified	Modified primer for improved specificity
17	-	-	Exchanged positive control primer pair.
18	Moved	Moved	Primer pair moved to well 43.
20	Moved	Moved	Primer pair moved to well 43.
39	Added	Added	Primer pair for the A*0345 allele.
42	-	-	Exchanged positive control primer pair.
43	Added	Added	Primer pair for the A*0320 allele from wells 18 and 20.
44	New	New	Primer pair for the A*0340 allele.
45	New	New	Primer pair for the A*0343 allele.
46	New	New	Primer pair for the A*0344 allele.
47	New	New	Primer pair for the A*0341 allele.
48	New	New	Primer pair for the A*0346 allele.

## PRODUCT DESCRIPTION

### HLA-A\*03 SSP subtyping

#### CONTENT

The primer set contains 5'- and 3'-primers for identifying the A\*0301 to A\*0346 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. ‘47F’.

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, all A\*11, two A\*23, several A\*24, the A\*2503, seven A\*26, the A\*29, the A\*30, most A\*31, the A\*32, most A\*33, most A\*34, the A\*36, the A\*66, most A\*68, the A\*6901, the A\*74 and the A\*8001 alleles when present on the other haplotype.

#### UNIQUELY IDENTIFIED ALLELES

All the HLA-A\*03 alleles, i.e. **A\*0301 to A\*0346**, recognized by the HLA Nomenclature Committee in January 2009<sup>1</sup> 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\*03010101, A\*03010103, A\*030102 to A\*030107, 030109 and 030110 alleles.

<sup>1</sup>HLA-A alleles listed on the IMGT/HLA web page 2009-January-16, release 2.24.0, [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla).

#### RESOLUTION IN HOMO- AND HETEROZYGOTES

The 46 HLA-A\*03 alleles will generate 48 different amplification patterns that can be combined in 1176 homozygous and heterozygous combinations. 206 of these genotypes do not give rise to unique amplification patterns. The different sizes of the specific PCR products generated by primer mixes 23 and 39 were not considered in these calculations.

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Lot-specific information

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++++---+	++-----	+-----	----+---	-----+	-----	0310,0336N = 0310,0345
++++---+	++-----	+-----	----+---	-----	-----	0301,0310 = 030108,0310 = 0302,0305
++++---+	-++-----	+-----	----+---	--+-----	-----	0301,0332 = 030108,0332
++++---+	-+-----	+-----	----+---	-+-----	-----	0331,0336N = 0331,0345
++++---+	-+-----	+-----	----+---	-+-----	-----	0301,0331 = 030108,0331
++++---+	-+-----	+-----	----+---	-----+	-----	0302,0336N = 0302,0345
++++---+	-+-----	+-----	----+---	-----	-----	0301,0302 = 030108,0302
++++---+	-----	+-----	----+---	-----+	-----	0303N,0336N = 0303N,0345
++++---+	-----	+-----	----+---	-----	-----	0301,0303N = 030108,0303N = 0303N,0303N
++++---+	-----	+-----	----+---	-----+	-----	0304,0336N = 0304,0345
++++---+	-----	+-----	----+---	-----	-----	0301,0304 = 030108,0304 = 0304,0304
++++---+	-----	+-----	----+---	-----+	-----	0306,0336N = 0306,0345
++++---+	-----	+-----	----+---	-----	-----	0301,0306 = 030108,0306 = 0306,0306
++++---+	++F-----	+-----	----+---	-----+	-----	0336N,0342 = 0342,0345
++++---+	++-----	+-----	----+---	-----	-----	0301,0342 = 030108,0342 = 0305,0307
++++---+	+-----	+-----	----+---	-----+	-----	0305,0336N = 0305,0345
++++---+	+-----	+-----	----+---	-----	-----	0301,0305 = 030108,0305
++++---+	-+-----	+-----	----+---	-----+	-----	0307,0336N = 0307,0345
++++---+	-+-----	+-----	----+---	-----	-----	0301,0307 = 030108,0307
++++---+	-+-----	+-----	----+---	-----	-----	0301,0308 = 030108,0308
++++---+	---+-----	+-----	----+---	-----+	-----	0309,0336N = 0309,0345
++++---+	---+-----	+-----	----+---	-----	-----	0301,0309 = 030108,0309 = 0309,0309
++++---+	---+-----	+-----	----+---	-----+	-----	03010102N,0336N = 03010102N,0345
++++---+	---+-----	+-----	----+---	-----	-----	0301,03010102N = 03010102N,03010102N = 03010102N,030108
++++---+	---+-----	+-----	----+---	-----+	-----	0311N,0336N = 0311N,0345
++++---+	---+-----	+-----	----+---	-----	-----	0301,0311N = 030108,0311N = 0311N,0311N
++++---+	-----+	+-----	----+---	-----+	-----	0314,0336N = 0314,0345
++++---+	-----+	+-----	----+---	-----	-----	0301,0314 = 030108,0314 = 0314,0314
++++---+	-----	++-----	----+---	-----+	-----	0313,0336N = 0313,0345
++++---+	-----	++-----	----+---	-----	-----	0301,0313 = 030108,0313 = 0313,0313
++++---+	-----	+--+-----	----+---	-----+	-----	0319,0336N = 0319,0345
++++---+	-----	+--+-----	----+---	-----	-----	0301,0319 = 030108,0319 = 0315,0319 = 0315,0322 = 0319,0319 = 0319,0322
++++---+	-----	+--+-----	----+---	-----+	-----	0315,0336N = 0315,0345
++++---+	-----	+--+-----	----+---	-----	-----	0301,0315 = 030108,0315 = 0315,0315
++++---+	-----	+--+-----	----+---	-----+	-----	0316,0336N = 0316,0345
++++---+	-----	+--+-----	----+---	-----	-----	0301,0316 = 030108,0316 = 0316,0316
++++---+	-----	+--+-----	----+---	-----+	-----	0317,0336N = 0317,0345
++++---+	-----	+--+-----	----+---	-----	-----	0301,0317 = 030108,0317 = 0317,0317
++++---+	-----	+--+-----	----+---	-----+	-----	0318,0336N = 0318,0345
++++---+	-----	+--+-----	----+---	-----	-----	0301,0318 = 030108,0318
++++---+	-----	+--+-----	----+---	-----+	-----	0322,0336N = 0322,0345
++++---+	-----	+--+-----	----+---	-----	-----	0301,0322 = 030108,0322 = 0322,0322
++++---+	-----	+--+-----	----+---	-----+	-----	0321N,0336N = 0321N,0345
++++---+	-----	+--+-----	----+---	-----	-----	0301,0321N = 030108,0321N = 0321N,0321N
++++---+	-----	+--+-----	----+---	-----+	-----	0323,0336N = 0323,0345

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+++++++	-----	+-----	+---+---	-----	-----	0301,0323 = 030108,0323 = 0323,0323
+++++++	-----	+-----	-+---+---	-----+	-----	0324,0336N = 0324,0345
+++++++	-----	+-----	-+---+---	-----	-----	0301,0324 = 030108,0324 = 0324,0324
+++++++	-----	+-----	-+---+---	-----+	-----	0325,0336N = 0325,0345
+++++++	-----	+-----	-+---+---	-----	-----	0301,0325 = 030108,0325 = 0325,0325
+++++++	-----	+-----	---++---	-----+	-----	0326,0336N = 0326,0345
+++++++	-----	+-----	---++---	-----	-----	0301,0326 = 030108,0326 = 0326,0326
+++++++	-----	+-----	---++---	-----+	-----	0327,0336N = 0327,0345
+++++++	-----	+-----	---++---	-----	-----	0301,0327 = 030108,0327 = 0327,0327
+++++++	-----	+-----	---++---	-----+	-----	0328,0336N = 0328,0345
+++++++	-----	+-----	---++---	-----	-----	0301,0328 = 030108,0328 = 0328,0328
+++++++	-----	+-----	---++---	-----	-----	0301,0329 = 030108,0329
+++++++	-----	+-----	---++---	+-----+	-----	0330,0336N = 0330,0345
+++++++	-----	+-----	---++---	+-----	-----	0301,0330 = 030108,0330 = 0330,0330
+++++++	-----	+-----	---++---	---++---	-----	0333,0336N = 0333,0345
+++++++	-----	+-----	---++---	---++---	-----	0301,0333 = 030108,0333 = 0333,0333
+++++++	-----	+-----	---++---	---++---	-----	0301,0334 = 030108,0334
+++++++	-----	+-----	---++---	---++---	-----	0335,0336N = 0335,0345
+++++++	-----	+-----	---++---	---++---	-----	0301,0335 = 030108,0335 = 0335,0335
+++++++	-----	+-----	---++---	-----++	-----	0336N,0337 = 0337,0345
+++++++	-----	+-----	---++---	-----+	+-----	0336N,0338 = 0338,0345
+++++++	-----	+-----	---++---	-----+	+-----	0336N,0339 = 0339,0345
+++++++	-----	+-----	---++---	-----+	+-----	0320,0336N = 0320,0345
+++++++	-----	+-----	---++---	-----+	---+-----	0336N,0340 = 0340,0345
+++++++	-----	+-----	---++---	-----+	---+-----	0336N,0343 = 0343,0345
+++++++	-----	+-----	---++---	-----+	---+-----	0336N,0344 = 0344,0345
+++++++	-----	+-----	---++---	-----+	---+-----	0336N,0346 = 0345,0346
+++++++	-----	+-----	---++---	-----+	-----	0301,0336N = 0301,0345 = 030108,0336N = 030108,0345 = 0336N,0345 = 0345,0345
+++++++	-----	+-----	---++---	-----+	-----	0301,0337 = 030108,0337 = 0337,0337
+++++++	-----	+-----	---++---	-----	+-----	0301,0338 = 030108,0338 = 0338,0338
+++++++	-----	+-----	---++---	-----	+-----	0301,0339 = 030108,0339 = 0339,0339
+++++++	-----	+-----	---++---	-----	---+-----	0301,0320 = 030108,0320 = 0320,0320
+++++++	-----	+-----	---++---	-----	---+-----	0301,0340 = 030108,0340
+++++++	-----	+-----	---++---	-----	---+-----	0301,0343 = 030108,0343 = 0343,0343
+++++++	-----	+-----	---++---	-----	---+-----	0301,0344 = 030108,0344 = 0344,0344
+++++++	-----	+-----	---++---	-----	---+-----	0301,0346 = 030108,0346 = 0346,0346
+++++++	-----	+-----	---++---	-----	-----	0301,0301 = 0301,030108
+++++++	++-----	+-----	---++---	-----	-----	0302,0342 = 0307,0310
+++++++	+-----	-----	---++---	+-----	-----	0302,0331 = 0331,0331

(0301 = 03010101, 03010103, 030102 to 030107, 030109 and 030110)

## 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 <sup>1</sup>	Size of control band <sup>2</sup>	Amplified HLA-A*03 alleles	Other amplified HLA-A alleles <sup>3</sup>
<b>1</b>	235 bp	<b>800 bp</b>	03010101-0304, 0306-0309, 0311N-0317, 0319-0339, 0341, 0343-0346	3204, 3602
<b>2<sup>5</sup></b>	225 bp	1070 bp	03010101-0307, 0309-0311N, 0313-0331, 0333-0335, 0337-0340, 0342-0346	0113, 0234-023503 <sup>weakly</sup> , 025601-025602 <sup>weakly</sup> , 0262 <sup>weakly</sup> , 9203 <sup>weakly</sup> , 3408, 7413
<b>3</b>	205 bp	1070 bp	03010101-030110, 0303N-0306, 0308, 0309, 0311N-0317, 0319-0330, 0333-0341, 0343-0346	1125, 3204, 3402-3404, 3407, 3408
<b>4</b>	215 bp	<b>800 bp</b>	0302, 0310, 0331, 0332	0112, 0119, 0125, 110101-1107, 1109-1122, 1127, 1129, 1130, 1132-1134, 1136-1140, 2451, 2492
<b>5</b>	185 bp	<b>800 bp</b>	0303N	
<b>6</b>	275 bp	1070 bp	0304	
<b>7</b>	235 bp	1070 bp	0306	
<b>8</b>	240 bp	1070 bp	03010101-030107, 030109-0311N, 0313-0340, 0342-0346	0113, 0128, 02010101-020115, 020117-020119, 020121-0204, 0207, 0209, 0211-0213, 0215N-022002, 0222, 0224-0227, 0229-0240, 0242, 0243N, 0245-0250, 0252, 0253N, 0255-025602, 0258-0260, 0262-0271, 0273-0277, 0280, 0282N, 0283N, 0285, 0286, 0288N-0290, 0292-0297, 9201-9205, 9207, 9209-9211, 9213N-

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				9221, 9223, 9225N, 9228, 9230-9235, 9238- 9241, 9245, 9247-9253, 9255,9256, 2419, 2428, 2444, 2489, 2919, 300101-300102, 301101-301102, 3013- 3020, 3023, 3024, 3026, 310102-3106, 3109, 3111-3124, 3301, 330301-3312, 3314- 3316, 3318-3323, 3408, 6829, 6845, 7401-7409, 7411-7413
<b>9</b>	235 bp	1070 bp	0305, 0310, 0342	9256, 1104, 1135, 300101-3004, 3006- 3013, 3015-3020, 3022- 3027N, 3103, 3104, 3402-3404, 3407, 3408, 3601
<b>10</b>	205 bp	<b>800 bp</b>	0302, 0307, 0310, 0331, 0332, 0342	0112, 0119, 9256, 1131, 1135, 2492, 3004, 3006, 3009, 3017, 3103, 3104
<b>11<sup>6</sup></b>	225 bp	<b>800 bp</b>	0308, 0332, 0341	01010101-010105, 0103, 0104N, 0106, 0107 <sup>weakly</sup> , 0108-0112, 0114-0116N, 0118N, 0119, 0122N, 0123, 0125-0133, 2503, 320101-3202, 3203 <sup>weakly</sup> , 3204-3206, 3208 <sup>weakly</sup> , 3209-3216, 3218, 3601-3604, 7401- 7404, 7408-7412N, 8001 <sup>weakly</sup>
<b>12</b>	190 bp	1070 bp	0309	020109, 0250, 9222, 1106, 1118, 2428, 2489, 2603, 2606, 2621, 2630, 2919, 6805, 6815, 6820, 7406
<b>13<sup>4</sup></b>	145 bp	<b>800 bp</b>	03010102N	
<b>14<sup>4</sup></b>	105 bp	1070 bp	0311N	
<b>15</b>	225 bp	1070 bp	0312	0278, 110101-110201, 110202 <sup>weakly</sup> , 110203- 1105, 1106 <sup>weakly</sup> , 1107- 1116, 1120-1127, 1129-

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				1139, 3008, 340101-3407, 6601, 6602, 6604, 6606-6608, 680101-680202, 6806-6814, 6816-6819, 6821-6828, 6830, 6832-6835, 6837-6844, 6846 <sup>weakly</sup> , 6901
<b>16</b>	275 bp	1070 bp	0314	
<b>17<sup>5,7</sup></b>	215 bp	<b>800 bp</b>	03010101-030110, 0303N-0309, 0311N-0317, 0319-0330, 0333-0346	0106, 9256, 112401-1125, 1131, 1135, 300101-3003, 3007-3016, 3018-3020, 3022-3027N, 3103, 3104, 3204, 3402-3404, 3407, 3408, 8001
<b>18<sup>4</sup></b>	135 bp	1070 bp	0313	
<b>19</b>	230 bp	1070 bp	0315, 0319	
<b>20</b>	175 bp	1070 bp	0316	
<b>21<sup>4</sup></b>	130 bp	1070 bp	0317	9256, 2451, 2492
<b>22</b>	250 bp	1070 bp	0318	01010101-0102, 0104N, 0106-0119, 0121-0133, 1127, 1138, 1139, 2451, 2492, 8001
<b>23<sup>4,8</sup></b>	95, 185 bp	1070 bp	0319, 0322	2418
<b>24</b>	470 bp	1070 bp	0321N	0104N, 1121N, 2307N, 2411N
<b>25</b>	155 bp	1070 bp	0323	020109, 023503, 0250, 9222, 2408, 2442, 2489, 260701-260702, 3308, 3309, 6830, 7404
<b>26</b>	200 bp	1070 bp	0324	0255 <sup>weakly</sup> , 2503, 2620 <sup>weakly</sup> , 3215, 3408
<b>27<sup>4</sup></b>	145 bp	1070 bp	0325	
<b>28</b>	170 bp	1070 bp	0326	
<b>29<sup>4</sup></b>	100 bp	1070 bp	03010101-0307, 0309-0328, 0330, 0331, 0333, 0335, 0337-0340, 0342-0346	0234-023503, 025601-025602, 0262, 0278, 9203, 1112, 2313, 2407, 2424, 29010101-2918, 300101-300102, 3008, 301101-301102, 3014L-3020, 3023-3026, 3217, 6602, 680101-680202, 6806-6814, 6816-6819, 6821-6830, 6832-6839, 6841-

				6846, 6901, 7413
<b>30<sup>4</sup></b>	130 bp	1070 bp	0327	
<b>31</b>	230 bp	<b>800 bp</b>	0328	
<b>32</b>	220 bp	1070 bp	0329	
<b>33</b>	210 bp	1070 bp	0330	3205
<b>34</b>	160 bp	1070 bp	0331	
<b>35</b>	235 bp	1070 bp	0332	3121, 7407
<b>36</b>	160 bp	1070 bp	0333	
<b>37</b>	225 bp	1070 bp	0334	
<b>38</b>	165 bp	<b>800 bp</b>	0335	
<b>39<sup>9</sup></b>	200, 235 bp	1070 bp	0336N, 0345	
<b>40</b>	245 bp	1070 bp	0337	
<b>41</b>	185 bp	1070 bp	0338	
<b>42</b>	220 bp	<b>800 bp</b>	0339	
<b>43</b>	155 bp	1070 bp	0320	
<b>44</b>	240 bp	1070 bp	0340	
<b>45</b>	150 bp	1070 bp	0343	
<b>46<sup>4</sup></b>	115 bp	1070 bp	0344	
<b>47</b>	240 bp	1070 bp	0341	01010101-010103, 010105, 0103, 0104N, 0106, 0108-0112, 0114- 0119, 0121-0123, 0125- 0127, 0129-0133, 3601- 3604, 7410, 8001
<b>48<sup>4</sup></b>	145 bp	1070 bp	0346	

<sup>1</sup> 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 length 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.

<sup>2</sup>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\*03 subtyping.

In addition, wells number 4, 5, 10, 11, 13, 17, 31, 38 and 42 contain the primer pair giving rise to



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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.

<sup>3</sup>Due 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, 21 to 26, 29, 33, 35 and 47.

<sup>4</sup>Short specific PCR fragments are less intense and not as sharp as longer specific bands.

<sup>5</sup>Primer mixes 2 and 17 may yield somewhat less specific PCR product than the other A\*03 primer mixes.

<sup>6</sup>Primer mix 11 may give rise to a faint band in A\*02-positive samples.

<sup>7</sup>Primer mix 17 may give rise to nonspecific amplifications.

<sup>8</sup>Primer mix 23: Specific PCR fragment of 95 bp in A\*0322 allele. Specific PCR fragment of 185 bp in A\*0319 and A\*2418 alleles.

<sup>9</sup>Primer mix 39: Specific PCR fragment of 200 bp in A\*0336N allele. Specific PCR fragment of 235 bp in A\*0345 alleles.

INTERPRETATION TABLE																								
HLA-A*03 SSP subtyping																								
Amplification patterns of the A*0301 to A*0346 alleles																								
	Well <sup>4</sup>																							
	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	235	240	235	205	225	190	145	105	225	275	215	135	230	175	130	250	95	470
PCR product																							185	
Length of int. pos. control <sup>1</sup>	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) <sup>2</sup>	363	98	363	363	382	363	363	102	363	363	98	144	4 <sup>th</sup>	363	98	98	363	363	368	363	363	363	413	3 <sup>rd</sup>
	5'-ATA <sup>3</sup>	5'-CTT <sup>3</sup>	5'-ATA <sup>3</sup>	5'-ATA <sup>3</sup>	5'-Tgg <sup>3</sup>	5'-ATA <sup>3</sup>	5'-ATA <sup>3</sup>	5'-ACA <sup>3</sup>	5'-ATA <sup>3</sup>	5'-ATA <sup>3</sup>	5'-CTT <sup>3</sup>	5'-gCC <sup>3</sup>	5'-gga <sup>3</sup>	5'-ATA <sup>3</sup>	5'-CTA <sup>3</sup>	5'-CTT <sup>3</sup>	5'-ATA <sup>3</sup>	5'-ATA <sup>3</sup>	5'-gTT <sup>3</sup>	5'-ATA <sup>3</sup>	5'-ATA <sup>3</sup>	5'-ATA <sup>3</sup>	5'-CCA <sup>3</sup>	5'-ATA <sup>3</sup>
								102															502	
								5'-ACA <sup>3</sup>															5'-CCC <sup>3</sup>	
3'-primer(s) <sup>3</sup>	555	282	527	539	527	595	557	299	555	527	282	292	899	426	282	333	539	455	555	496	453	570	555	621
	5'-CCA <sup>3</sup>	5'-gAC <sup>3</sup>	5'-CCT <sup>3</sup>	5'-TCT <sup>3</sup>	5'-CCT <sup>3</sup>	5'-CCg <sup>3</sup>	5'-Tgg <sup>3</sup>	5'-CCA <sup>3</sup>	5'-CCC <sup>3</sup>	5'-CCA <sup>3</sup>	5'-gAg <sup>3</sup>	5'-gTg <sup>3</sup>	5'-ACA <sup>3</sup>	5'-TCT <sup>3</sup>	5'-gAC <sup>3</sup>	5'-CTg <sup>3</sup>	5'-TCA <sup>3</sup>	5'-CCA <sup>3</sup>	5'-CCA <sup>3</sup>	5'-gAA <sup>3</sup>	5'-TCT <sup>3</sup>	5'-CCg <sup>3</sup>	5'-CCA <sup>3</sup>	5'-ggg <sup>3</sup>
	557							299																
	5'-Tgg <sup>3</sup>							5'-CCA <sup>3</sup>																
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																								
*03010101, 03010103-030107, 030109-030110	1	2	3					8									17							
*03010102N	1	2	3					8					13				17							
*030108	1	2	3														17							
*0302	1	2		4				8		10														
*0303N	1	2	3		5			8									17							
*0304	1	2	3			6		8									17							
*0305		2	3					8	9								17							
*0306	1	2	3				7	8									17							
*0307	1	2						8		10							17							
*0308	1		3					8			11						17							
*0309	1	2	3					8				12					17							
*0310		2		4				8	9	10														
*0311N	1	2	3					8						14			17							
*0312	1		3												15		17							
*0313	1	2	3					8									17	18						
*0314	1	2	3					8								16	17							
*0315	1	2	3					8									17		19					
*0316	1	2	3					8									17			20				
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

<b>INTERPRETATION TABLE</b>																								
<b>HLA-A*03 SSP subtyping</b>																								
<b>Amplification patterns of the A*0301 to A*0346 alleles</b>																								
<b>Well<sup>4</sup></b>																								
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
155	200	145	170	100	130	230	220	210	160	235	160	225	165	200	245	185	220	155	240	150	115	240	145	Length of spec.
														235										PCR product
1070	1070	1070	1070	1070	1070	800	1070	1070	1070	1070	1070	1070	800	1070	1070	1070	800	1070	1070	1070	1070	1070	1070	Length of int. pos. control <sup>1</sup>
144	98	179	874	282	363	365	98	98	418	98	98	98	363	98	801	363	376	890	363	418	484	98	457	5'-primer(s) <sup>2</sup>
5'-gCC <sup>3</sup>	5'-CTT <sup>3</sup>	5'-gTg <sup>3</sup>	5'-CCg <sup>3</sup>	5'-Cag <sup>3</sup>	5'-ATA <sup>3</sup>	5'-AAC <sup>3</sup>	5'-CTT <sup>3</sup>	5'-CTT <sup>3</sup>	5'-AgT <sup>3</sup>	5'-CTT <sup>3</sup>	5'-CTT <sup>3</sup>	5'-CTT <sup>3</sup>	5'-ATA <sup>3</sup>	5'-CTT <sup>3</sup>	5'-AAC <sup>3</sup>	5'-ATA <sup>3</sup>	5'-gCT <sup>3</sup>	5'-gAA <sup>3</sup>	5'-ATA <sup>3</sup>	5'-AgC <sup>3</sup>	5'-ACT <sup>3</sup>	5'-CTT <sup>3</sup>	5'-AgAC <sup>3</sup>	
														650										
														5'-CCC <sup>3</sup>										
256	259	282	899	341	454	555	278	265	539	290	217	281	487	259	899	506	555	899	561	527	559	299	559	3'-primer(s) <sup>3</sup>
5'-CCC <sup>3</sup>	5'-gTT <sup>3</sup>	5'-gAC <sup>3</sup>	5'-ACA <sup>3</sup>	5'-Cgg <sup>3</sup>	5'-CTg <sup>3</sup>	5'-CCA <sup>3</sup>	5'-ggA <sup>3</sup>	5'-CCC <sup>3</sup>	5'-TCT <sup>3</sup>	5'-CAA <sup>3</sup>	5'-CgA <sup>3</sup>	5'-ACg <sup>3</sup>	5'-Cgg <sup>3</sup>	5'-CTC <sup>3</sup>	5'-ACA <sup>3</sup>	5'-Tgg <sup>3</sup>	5'-CCA <sup>3</sup>	5'-ACA <sup>3</sup>	5'-Cag <sup>3</sup>	5'-CCT <sup>3</sup>	5'-CgT <sup>3</sup>	5'-TCg <sup>3</sup>	5'-CgT <sup>3</sup>	
														845										
														5'-AgT <sup>3</sup>										
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.
																								HLA-A allele
				29																				*03010101, 03010103- 030107, 030109-030110
				29																				*03010102N
				29																				*030108
				29																				*0302
				29																				*0303N
				29																				*0304
				29																				*0305
				29																				*0306
				29																				*0307
				29																				*0308
				29																				*0309
				29																				*0310
				29																				*0311N
				29																				*0312
				29																				*0313
				29																				*0314
				29																				*0315
				29																				*0316
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.

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Length of spec.	235	225	205	215	185	275	235	240	235	205	225	190	145	105	225	275	215	135	230	175	130	250	95	470
PCR product																							185	
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
*0317	1	2	3					8									17				21			
*0318		2						8															22	
*0319	1	2	3					8									17		19				23	
*0320	1	2	3					8									17							
*0321N	1	2	3					8									17							24
*0322	1	2	3					8									17						23	
*0323	1	2	3					8									17							
*0324	1	2	3					8									17							
*0325	1	2	3					8									17							
*0326	1	2	3					8									17							
*0327	1	2	3					8									17							
*0328	1	2	3					8									17							
*0329	1	2	3					8									17							
*0330	1	2	3					8									17							
*0331	1	2		4				8		10														
*0332	1			4				8		10	11													
*0333	1	2	3					8									17							
*0334	1	2	3					8									17							
*0335	1	2	3					8									17							
*0336N	1		3					8									17							
*0337	1	2	3					8									17							
*0338	1	2	3					8									17							
*0339	1	2	3					8									17							
*0340		2	3					8									17							
*0341	1		3								11						17							
*0342		2						8	9	10							17							
*0343	1	2	3					8									17							
*0344	1	2	3					8									17							
*0345	1	2	3					8									17							
*0346	1	2	3					8									17							
*01010101-010103, 010105, 0108-0111N, 0114-0116N, 0118N, 0122N, 0123, 0126, 0127N, 0129-0133											11												22	
*010104											11												22	
*0102, 0124																							22	
*0103, 3603, 3604, 7410											11													
*0104N											11												22	24
*0106											11						17						22	
*0107											w												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

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155	200	145	170	100	130	230	220	210	160	235	160	225	165	200	245	185	220	155	240	150	115	240	145	Length of spec.	
														235											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																				*0317	
				29																				*0318	
				29																				*0319	
				29														43						*0320	
				29																				*0321N	
				29																				*0322	
25				29																				*0323	
	26			29																				*0324	
		27		29																				*0325	
			28	29																				*0326	
				29	30																			*0327	
				29		31																		*0328	
							32																	*0329	
				29				33																*0330	
				29					34															*0331	
										35														*0332	
				29							36													*0333	
												37												*0334	
				29									38											*0335	
														39										*0336N	
				29											40									*0337	
				29												41								*0338	
				29													42							*0339	
				29															44					*0340	
																						47		*0341	
				29																				*0342	
				29																	45			*0343	
				29																		46		*0344	
				29										39										*0345	
				29																			48	*0346	
																						47		*01010101-010103, 010105, 0108-0111N, 0114-0116N, 0118N, 0122N, 0123, 0126, 0127N, 0129-0133	
																								*010104	
																								*0102, 0124	
																						47		*0103, 3603, 3604, 7410	
																						47		*0104N	
																						47		*0106	
																								*0107	
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.	

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Length of spec.	235	225	205	215	185	275	235	240	235	205	225	190	145	105	225	275	215	135	230	175	130	250	95	470	
PCR product																								185	
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	
*0112, 0119				4						10	11													22	
*0113		2						8																22	
*0117, 0121																								22	
*0125				4							11													22	
*0128								8			11													22	
020110-020115, 020117-020119, 020121-0204, 0207, 0209, 0211-0213, 0215N-022002, 0222, 0224-0227, 0229-0233, 0236-0240, 0242, 0243N, 0245-0249, 0252, 0253N, 0258-0260, 0263-0271, 0273-0277, 0280, 0282N, 0283N, 0285, 0286, 0288N-0290, 0292-0297, 9201, 9202, 9204, 9205, 9207, 9209-9211, 9213N-9221, 9223, 9225N, 9228, 9230-9235, 9238-9241, 9245, 9247-9253, 9255, 2419, 2444, 310102-3102, 3105, 3106, 3109, 3111-3120, 3122-3124, 3301, 330301-3307, 3310-3312, 3314-3316, 3318-3323, 7405								8																	
*020109, 0250, 2489								8			12														
*0234-023502, 025601-025602, 0262, 9203		w						8																	
*023503		w						8																	
*0255								8																	
*0278, 6602, 680101-680202, 6806-6814, 6816-6819, 6821-6828, 6832-6835, 6837-6839, 6841-6844, 6901															15										
*9222												12													
*9256								8	9	10							17						21		
*110101-110201, 110203-1103, 1105, 1107, 1109-1111, 1113-1116, 1120, 1122, 1129, 1130, 1132-1134, 1136, 1137				4											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	

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155	200	145	170	100	130	230	220	210	160	235	160	225	165	200	245	185	220	155	240	150	115	240	145	Length of spec.	
														235											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.	
																						47		*0112, 0119	
																									*0113
																						47		*0117, 0121	
																						47		*0125	
																								*0128	
																								020110-020115, 020117-020119, 020121-0204, 0207, 0209, 0211-0213, 0215N-022002, 0222, 0224-0227, 0229-0233, 0236-0240, 0242, 0243N, 0245-0249, 0252, 0253N, 0258-0260, 0263-0271, 0273-0277, 0280, 0282N, 0283N, 0285, 0286, 0288N, 0290, 0292-0297, 9201, 9202, 9204, 9205, 9207, 9209-9211, 9213N-9221, 9223, 9225N, 9228, 9230-9235, 9238-9241, 9245, 9247-9253, 9255, 2419, 2444, 310102-3102, 3105, 3106, 3109, 3111-3120, 3122-3124, 3301, 330301-3307, 3310-3312, 3314-3316, 3318-3323, 7405	
25																								*020109, 0250, 2489	
				29																					*0234-023502, 025601-025602, 0262, 9203
25				29																				*023503	
	w																							*0255	
				29																				*0278, 6602, 680101-680202, 6806-6814, 6816-6819, 6821-6828, 6832-6835, 6837-6839, 6841-6844, 6901	
25																								*9222	
																								*9256	
																								*110101-110201, 110203-1103, 1105, 1107, 1109-1111, 1113-1116, 1120, 1122, 1129, 1130, 1132-1134, 1136, 1137	
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.	

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Length of spec.	235	225	205	215	185	275	235	240	235	205	225	190	145	105	225	275	215	135	230	175	130	250	95	470
PCR product																							185	
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
*110202				4											w									
*1104				4					9						15									
*1106				4								12			w									
*1108, 1123, 1126, 340101 340102, 3405, 3406, 6601, 6604, 6606-6608, 6840															15									
*1112				4											15									
*1117, 1119, 1140				4																				
*1118				4								12												
*1121N				4											15									24
*112401-112402															15		17							
*1125			3												15		17							
*1127, 1138, 1139				4											15							22		
*1131										10					15		17							
*1135									9	10					15		17							
*2307N, 2411N																								24
*2313, 2407, 2424, 29010101-2918, 3217, 6836																								
*2408, 2442, 260701- 260702																								
*2418																							23	
*2428, 2919, 7406								8				12												
*2451				4																		21	22	
*2492				4						10												21	22	
*2503, 3215												11												
*2603, 2606, 2621, 2630, 6805, 6815, 6820												12												
*2620																								
*300101-300102, 301101- 301102, 3015, 3016, 3018- 3020, 3023, 3024, 3026								8	9								17							
*300201-3003, 3007, 3010, 3012, 3022, 3027N									9								17							
*3004, 3006									9	10														
*3008									9						15		17							
*3009									9	10							17							
*3013								8	9								17							
*3014L								8									17							
*3017								8	9	10														
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



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155	200	145	170	100	130	230	220	210	160	235	160	225	165	200	245	185	220	155	240	150	115	240	145	Length of spec.	
														235											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.	
																								*110202	
																								*1104	
																								*1106	
																								*1108, 1123, 1126, 340101 340102, 3405, 3406, 6601, 6604, 6606-6608, 6840	
				29																				*1112	
																								*1117, 1119, 1140	
																								*1118	
																								*1121N	
																								*112401-112402	
																								*1125	
																								*1127, 1138, 1139	
																								*1131	
																								*1135	
																								*2307N, 2411N	
				29																				*2313, 2407, 2424, 29010101-2918, 3217, 6836	
25																								*2408, 2442, 260701- 260702	
																								*2418	
																								*2428, 2919, 7406	
																								*2451	
																								*2492	
	26																							*2503, 3215	
																								*2603, 2606, 2621, 2630, 6805, 6815, 6820	
	w																							*2620	
				29																				*300101-300102, 301101- 301102, 3015, 3016, 3018- 3020, 3023, 3024, 3026	
																								*300201-3003, 3007, 3010, 3012, 3022, 3027N	
				29																				*3004, 3006	
																								*3008	
																								*3009	
				29																				*3013	
				29																				*3014L	
																								*3017	
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	235	240	235	205	225	190	145	105	225	275	215	135	230	175	130	250	95	470
PCR product																							185	
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
*3025									9								17							
*3103, 3104								8	9	10							17							
*3121, 7407								8																
*320101-3202, 3206, 3209-3214, 3216, 3218											11													
*3203, 3208											w													
*3204	1		3								11						17							
*3205											11													
*3308, 3309								8																
*3402-3404, 3407			3						9						15		17							
*3408		2	3					8	9								17							
*3601									9		11													
*3602	1										11													
*6829, 6845								8																
*6830															15									
*6846															w									
*7401-7403, 7408, 7409, 7411, 7412N								8			11													
*7404								8			11													
*7413		2						8																
*8001											w						17					22		
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

<sup>1</sup>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\*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.

<sup>2</sup>The nucleotide position, in the 2<sup>nd</sup>, 3<sup>rd</sup> or 4<sup>th</sup> exon or 3<sup>rd</sup> or 4<sup>th</sup> intron, matching the specificity-determining 3'-end of the primer is given. Nucleotide numbering as on the [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.

<sup>3</sup>The nucleotide position, in 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> or 5<sup>th</sup> 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](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.

Lot No.: **47F**

Lot-specific information

www.olerup.com

155	200	145	170	100	130	230	220	210	160	235	160	225	165	200	245	185	220	155	240	150	115	240	145	Length of spec.	
														235											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																					*3025
																									*3103, 3104
										35															*3121, 7407
																									*320101-3202, 3206, 3209 3214, 3216, 3218
																									*3203, 3208
																									*3204
								33																	*3205
25																									*3308, 3309
																									*3402-3404, 3407
	26																								*3408
																							47		*3601
																							47		*3602
				29																					*6829, 6845
25				29																					*6830
				29																					*6846
																									*7401-7403, 7408, 7409, 7411, 7412N
25																									*7404
				29																					*7413
																							47		*8001
																									HLA-A allele
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.	

<sup>4</sup>Primer mix 23: Specific PCR fragment of 95 bp in A\*0322 allele. Specific PCR fragment of 185 bp in A\*0319 and A\*2418 alleles.  
Primer mix 39: Specific PCR fragment of 200 bp in A\*0336N allele. Specific PCR fragment of 235 bp in A\*0345 alleles.  
'w', may be weakly amplified.

				Well															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Prod. No.:				200628201	200628202	200855103	200842604	200628205	200628206	200628207	200628208	200628209	200855110	200855111	200628212	200628213	200628214	200628215	200855116
IHCW cell line		A*																	
1	9001	SA	*2402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*0201	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
3	9011	E4181324	*0101	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
4	9275	GU373	*3001	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-
5	9009	KAS011	*0101	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
6	9353	SM	*0201	*2603	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-
7	9020	QBL	*2601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9007	DEM	*0201	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
9	9026	YAR	*2601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*2402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*2902	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*0201	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*0201	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
14	9071	OLGA	*3101	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
15	9075	DKB	*2402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*2902	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*0301	*8001	+	+	+	-	-	-	+	-	-	W	-	-	-	-	-
18	9257	32367	*3303	*7401	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-
19	9038	BM16	*0201	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
20	9059	SLE005	*0201	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
21	9064	AMALA	*0217	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
22	9056	KOSE	*0201	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
23	9124	IHL	*0201	*3401	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-
24	9035	JBUSH	*3201	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
25	9049	IBW9	*3301	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
26	9285	WT49	*0205	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
27	9191	CH1007	*2410	*2901	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*0201	*2902	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
29	9050	MOU	*2902	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*3001	*6802	-	-	-	-	-	-	+	+	-	-	-	-	-	+	-
31	9019	DUCAF	*3002	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
32	9297	HAG	*0201	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
33	9098	MT14B	*3101	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
34	9104	DHIF	*3101	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
35	9302	SSTO	*3201	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
36	9024	KT17	*0206	*1101	-	-	+	-	-	-	+	-	-	-	-	-	-	+	-
37	9065	HHKB	*0301	-	+	+	+	-	-	-	+	-	-	-	-	-	-	-	-
38	9099	LZL	*0217	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
39	9315	CML	*0101	*0301	+	+	+	-	-	-	+	-	-	+	-	-	-	-	-
40	9134	WHONP199	*0207	*3001	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-
41	9055	H0301	*0301	-	+	+	+	-	-	-	+	-	-	-	-	-	-	-	-
42	9066	TAB089	*0207	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
43	9076	T7526	*0207	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
44	9057	TEM	*6601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
45	9239	SHJO	*2301	*2402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*0301	-	+	+	+	-	-	-	+	-	-	-	-	-	-	-	-
47	9045	TUBO	*0216	*0301	+	+	+	-	-	-	+	-	-	-	-	-	-	-	-
48	9303	TER-ND	*0201	*1101	-	-	-	+	-	-	+	-	-	-	-	-	-	+	-

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	
					200855117	200855118	200628219	200855120	200628221	200628222	200628223	200628224	200855125	200628226	200855127	200628228	200855129	200842630	200842631	200855132	
	IHWC cell line		A*																		
1	9001 SA		*2402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707		*0201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324		*0101		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373		*3001		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011		*0101		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
6	9353 SM		*0201	*2603	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL		*2601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9007 DEM		*0201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR		*2601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3		*2402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT		*2902		-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
12	9052 DBB		*0201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM		*0201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA		*3101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB		*2402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007		*2902		-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
17	9282 CTM3953540		*0301	*8001	+	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-
18	9257 32367		*3303	*7401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16		*0201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005		*0201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA		*0217		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE		*0201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL		*0201	*3401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH		*3201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9		*3301		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49		*0205		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007		*2410	*2901	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
28	9320 BEL5GB		*0201	*2902	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
29	9050 MOU		*2902		-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
30	9021 RSH		*3001	*6802	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
31	9019 DUCAF		*3002		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG		*0201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B		*3101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF		*3101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO		*3201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17		*0206	*1101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB		*0301		+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
38	9099 LZL		*0217		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML		*0101	*0301	+	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-
40	9134 WHONP199		*0207	*3001	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
41	9055 H0301		*0301		+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
42	9066 TAB089		*0207		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526		*0207		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM		*6601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO		*2301	*2402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU		*0301		+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
47	9045 TUBO		*0216	*0301	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
48	9303 TER-ND		*0201	*1101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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	
	IHWC cell line	A*			200842633	200842634	200855135	200842636	200842637	200842638	200855139	200842640	200842641	200855142	200855143	200855144	200855145	200855146	200855147	200855148	
1	9001 SA	*2402			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*0201			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324	*0101			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
4	9275 GU373	*3001			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011	*0101			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
6	9353 SM	*0201	*2603		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL	*2601			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9007 DEM	*0201			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR	*2601			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3	*2402			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT	*2902			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB	*0201			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM	*0201			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA	*3101			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB	*2402			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*2902			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540	*0301	*8001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
18	9257 32367	*3303	*7401		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16	*0201			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*0201			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA	*0217			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*0201			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL	*0201	*3401		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH	*3201			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9	*3301			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49	*0205			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*2410	*2901		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB	*0201	*2902		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU	*2902			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH	*3001	*6802		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF	*3002			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG	*0201			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B	*3101			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF	*3101			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO	*3201			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17	*0206	*1101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB	*0301			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL	*0217			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML	*0101	*0301		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
40	9134 WHONP199	*0207	*3001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301	*0301			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089	*0207			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526	*0207			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM	*6601			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO	*2301	*2402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU	*0301			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*0216	*0301		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303 TER-ND	*0201	*1101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## CERTIFICATE OF ANALYSIS

### Olerup SSP® HLA-A\*03 SSP

Product number: 101.413-24/04 – including *Taq* pol.  
Lot number: 47F  
Expiry date: 2011-February-01  
Number of tests: 24 tests – Product No. 101.413-24  
4 tests – Product No. 101.413-04  
Number of wells per test: 48

#### Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2006-282-01	17	2008-551-17	33	2008-426-33
2	2006-282-02	18	2008-551-18	34	2008-426-34
3	2008-551-03	19	2006-282-19	35	2008-551-35
4	2008-426-04	20	2008-551-20	36	2008-426-36
5	2006-282-05	21	2006-282-21	37	2008-426-37
6	2006-282-06	22	2006-282-22	38	2008-426-38
7	2006-282-07	23	2006-282-23	39	2008-551-39
8	2006-282-08	24	2006-282-24	40	2008-426-40
9	2006-282-09	25	2008-551-25	41	2008-426-41
10	2008-551-10	26	2006-282-26	42	2008-551-42
11	2008-551-11	27	2008-551-27	43	2008-551-43
12	2006-282-12	28	2006-282-28	44	2008-551-44
13	2006-282-13	29	2008-551-29	45	2008-551-45
14	2006-282-14	30	2008-426-30	46	2008-551-46
15	2006-282-15	31	2008-426-31	47	2008-551-47
16	2008-551-16	32	2008-551-32	48	2008-551-48

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, 6, 7, 13, 14, 16, 18 to 21, 23, 25 to 28, 30 to 46 and 48 were available. The specificities of the primers in primer solutions 19, 21, 23, 25, 26, 33, 35 and 45 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solutions 6, 7, 14, 16, 18, 20, 30, 32, 36 to 39, 41 and 44 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solutions 5, 13, 27, 28, 31, 34, 40, 42, 43, 46 and 48 it was only possible to test the 3'-primers, the 5'-primers were not possible to test.

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

**Date of approval:** 2009-May-26

**Approved by:**

**Quality Control, Supervisor**

Lot No.: **47F**

Lot-specific information

[www.olerup.com](http://www.olerup.com)

## Declaration of Conformity

**Product name:** *Olerup* SSP® HLA-A\*03  
**Product number:** 101.413-24/04  
**Lot number:** 47F

**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 9001:2000 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, 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  
2009-May-26

Olle Olerup  
Managing Director









Lot No.: **47F**

Lot-specific information

[www.olerup.com](http://www.olerup.com)

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