

Olerup SSP[®] HLA-A*24

Product number:	101.422-24/03 – including <i>Taq</i> pol.
Lot number:	12G
Expiry date:	2011-September-01
Number of tests:	24 tests – Product No. 101.422-24 3 tests – Product No. 101.422-03
Number of wells per test:	82
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. 12G.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*[®] HLA-A*24 Lot

The HLA-A*24 specificity and interpretation tables have been updated for the HLA-A alleles described since the previous *Olerup SSP*[®] HLA-A*24 lot was made (Lot No. 63E).

Seven wells have been added to the HLA-A*24 kit,
wells **77 to 82**.

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

Well	5'-primer	3'-primer	Rationale
26	-	Added	Primer for the A*2496 allele.
30	-	Modified	Primer modified for increased specificity.
35	Added	-	Primer for the A*2488 allele.
47	Added	Added	Primer pair added for increased allele resolution.
48	-	Added	Primer for the A*2471 allele.
49	-	Added	Primer for the A*2491 allele.
65	Added	-	Primer for the A*2490N allele.
76	Added	Added	Primer for the A*2498 allele.
77	New	New	New primer pair for the A*2487 allele.
78	New	New	New primer pair for the A*2492 allele.
79	New	New	New primer pair for the A*2493 allele.
80	New	New	New primer pair for the A*2495 allele.
81	New	New	New primer pair for the A*2497 allele.
82	New	New	New primer pair for the A*2499 allele.

PRODUCT DESCRIPTION

HLA-A*24 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the HLA-A*2402 to A*2499 alleles.

PLATE LAYOUT

Each test consists of 82 PCR reactions in a 96 well PCR plate. Wells 83 to 96 are empty.

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

The 96 well PCR plate is marked with 'HLA-A*24'.

Well No. 1 is marked with '12G'.

The PCR plates are covered with a PCR-compatible aluminum foil.

INTERPRETATION

The interpretation of HLA-A*24 SSP subtypings will be influenced by all A*01, several A*02, five A*03, six A*11, all A*23, seven A*26, four A*29, several A*30, four A*31, three A*32, four A*33, the A*6610, several A*68, the A*7406 and the A*8001 alleles when present on the other haplotype. In addition, the B*0764, B*1512 and B*1519 alleles will be amplified by primer mixes 32 and 45. Moreover, the B*1827 allele will be amplified by mixes 2, 6, 25, 30 and 48.

UNIQUELY IDENTIFIED ALLELES

All the HLA-A*24 alleles, i.e. **A*2402 to A*2499**, recognized by the HLA Nomenclature Committee in July 2009¹ will give rise to unique amplification patterns by the primers in the HLA-A*24 subtyping kit.

The HLA-A*24 subtyping kit cannot distinguish the A*24020101, A*240202 to A*240209, A*240211, A*240212, A*240214 to A*240217 and A*240220 alleles and the A*240301 and A*240302 alleles.

¹HLA-A alleles listed on the IMGT/HLA web page 2009-July-17, release 2.26.0, www.ebi.ac.uk/imgt/hla.

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Lot-specific information

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24020102L,2403 = 24020102L,2433
2403,2411N = 2411N,2433
2403,2431 = 2431,2433
2403,2427 = 2427,2433
2403,2428 = 2428,2433
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Lot-specific information

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Lot-specific information

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Lot-specific information

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2448N, 2496 = 2454, 2496
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Lot-specific information

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2448N,2475 = 2448N,2490N = 2454,2475 = 2454,2490N
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2434,2475 = 2434,2490N

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Lot-specific information

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2415,2415 = 2415,2453
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2453,2457 = 2457,2457
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2402 = 24020101, 240202-240209, 240211-240217, 240220
2403 = 240301, 240302

SPECIFICITY TABLE

HLA-A*24 SSP subtyping

Specificities and sizes of the PCR products of the 82 primer mixes used for HLA-A*24 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-A*24 alleles	Other amplified HLA Class I alleles ³
1 ⁷	210 bp	800 bp	*24020101-240212, 240213 ^w , 240214-240217, 240220-2411N, 241301-2415, 2417-2432, 2434-2464, 2466-2475, 2477-2499	*230101-2321, 3319, 8001 ^w
2	245 bp	1070 bp	*240301, 240302, 2410, 2418, 2422, 2433, 2494	*021701, 021702, 9208, 9210, 2304, 2907, B*1827
3	210 bp	800 bp	*24020101-240217, 240220-2405, 2407-2411N, 2417, 2419-2421, 2423, 2425-2450, 2455, 2456, 2458-2463, 2466-2486N, 2488-2490N, 2493, 2495-2499	*3319
4 ⁵	220 bp	1070 bp	*2406, 241301, 2418, 2422, 2424, 2494	*021701, 021702, 9208, 9210, 230101-2313, 2315-2321, 2907
5	175 bp	1070 bp	*24020101-240217, 240220-2404, 2406-2411N, 241301, 241302, 2417-2423, 2425-2450, 2454-2456, 2458-2463, 2466-2491, 2493, 2495-2499	*021701 ^w , 021702 ^w , 2314, 3319
6 ⁵	175 bp	1070 bp	*2405, 2424	*230101-2313, 2315-2321, 2907, B*1827
7	335 bp	1070 bp	*24020101-240217, 240220-240302, 2405-2411N, 241301, 241302, 2417, 2418, 2420-2427, 2429-2443,	*230101-2321

			2445N-2450, 2452, 2454-2456, 2458-2464, 2466-2488, 2490N, 2491, 2493-2499	
8⁴	75 bp	1070 bp	*2404	
9	225 bp	800 bp	*2407, 2419, 2424	*2313, 300101, 300102, 301101, 301102, 3014L- 3020, 3023-3026, 6845
10	370 bp	1070 bp	*24020101-240217, 240220-2406, 2408- 2411N, 241301, 241302, 2417, 2418, 2420-2423, 2425-2450, 2452, 2454-2456, 2458- 2464, 2466-2491, 2493- 2499	*0210, 021701, 021702, 0239, 9208, 9210, 9248, 230101-2312, 2314-2321, 3319
11⁸	200 bp, 245 bp	1070 bp	*2408, 2442, 2461, 2489	*0276, 3022
12	235 bp	1070 bp	*2425	*2305
13	160 bp	1070 bp	*24020101-240217, 240220, 2404-2409N, 2411N, 241301-2415, 2417, 2419, 2420, 2423- 2432, 2434-2464, 2466- 2474, 2476-2493, 2495- 2499	*0219, 0236, 0237, 0254, 230101, 2302, 2305-2321, 3319, 6826
14⁴	105 bp	1070 bp	*2409N	
15	385 bp	800 bp	*2414, 2415, 2451, 2453, 2457, 2492	*0246, 0248, 0270, 9229, 0330, 3007, 3108, 3205, 3321
16⁴	85 bp	1070 bp	*2417, 2441	*2907
17	230 bp	1070 bp	*2410, 2446	*2310
18	275 bp	1070 bp	*24020102L	
19⁷	195 bp	1070 bp	*24020101-240209, 240211-240217, 240220-2411N, 241301- 2415, 2417-2432, 2434- 2464, 2466-2499	*230101-2321, 3319
20^{6,7}	470 bp	1070 bp	*2411N	*0104N, 0321N, 1121N, 2307N
21	155 bp	800 bp	*2431	
22⁴	125 bp	800 bp	*2427	
23	190 bp	800 bp	*2428, 2430, 2442, 2489	*020109, 0250, 9222, 0309, 1106,

				1118, 2312, 2603, 2606, 2621, 2630, 2919, 3208, 3324, 6805, 6815, 6820, 7406
24	240 bp	800 bp	*2419, 2428, 2444, 2489	*0276, 300101, 300102, 301101, 301102, 3013- 3020, 3023, 3024, 3026, 6845
25	220 bp	1070 bp	*241301, 241302, 2418, 2424, 2456, 2494	*021701, 021702, 9208, 9210, 230101, 230301- 2321, 2907, B*1827
26^{4,9}	90 bp, 220 bp	800 bp	*2422, 2496	
27^{4,7,10}	80 bp, 370 bp	800 bp	*2414, 2432	*0246, 0248, 0270, 9229, 3205
28	155 bp	800 bp	*2435	
29	210 bp	800 bp	*2408, 2429, 2442, 2489	*0276, 3022
30^{4,11}	125 bp, 200 bp	800 bp	*2421, 2459	*230301, 230302, 2907, B*1827
31	155 bp	800 bp	*2437	
32	225 bp	1070 bp	*2415, 2441, 2451, 2492	*01010101-0104N, 0106-0135, 0137, 1127, 1138, 1139, 2629, 3213, 6610, B*0764^w, B*1512^w, B*1519^w
33⁴	100 bp	1070 bp	*2439	
34	195 bp	800 bp	*2436N	
35	200 bp	800 bp	*2445N, 2488	
36^{4,7}	115 bp	1070 bp	*2447	
37	210 bp	1070 bp	*2448N, 2454	
38	145 bp	800 bp	*2449	
39	210 bp	800 bp	*2450	*9229
40	225 bp	1070 bp	*2408, 2420, 2488	
41	200 bp	1070 bp	*2426, 2462	*2629, 3105, 3213, 3310, 6610
42	200 bp	1070 bp	*2424, 2467	*2616, 6845
43	160 bp	800 bp	*2443	
44	250 bp	800 bp	*2451, 2457, 2492	*01010101-0104N,

				0106-0119, 0121-0135, 0137, 0318, 1127, 1138, 1139, 2629, 2903, 3105, 3213, 3310, 6610, 6826, 8001
45	250 bp	1070 bp	*2414, 2452	*0120, 0219, 0236, 0237, 0254, 2629, 6610, B*0764, B*1512, B*1519
46^{4,5}	110 bp	1070 bp	*2415, 2441, 2451, 2492	*0250, 0273, 0293, 9222, 9256, 2610, 68020101-680202, 6815, 6818N, 6825, 6827, 6828, 6831, 6834, 6840, 6844, 6848
47¹²	200 bp, 410 bp	800 bp	*2418, 2426, 2456	*0330, 3007, 3108, 3205
48	195 bp	1070 bp	*2424, 2471	*230101-2321, 2907, B*1827
49¹³	215 bp, 245 bp	1070 bp	*2423, 2491	
50	235 bp	800 bp	*2434	
51	215 bp	800 bp	*2438	
52⁷	240 bp	800 bp	*2440N	
53	230 bp	1070 bp	*2455	
54	165 bp	1070 bp	*2458	
55	240 bp	1070 bp	*2460N	
56	270 bp	1070 bp	*2463	
57	135 bp	1070 bp	*2464	
58	195 bp	1070 bp	*2466	
59	255 bp	1070 bp	*2468	
60	275 bp	800 bp	*2469	
61⁴	105 bp	800 bp	*2470	
62⁴	125 bp	800 bp	*2472	*9206, 9245
63	135 bp	1070 bp	*2473	
64	170 bp	1070 bp	*2474	
65^{4,14}	80 bp, 235 bp	1070 bp	*2475, 2490N	*0288N
66	200 bp	800 bp	*2477	
67	230 bp	1070 bp	*2479	
68	285 bp	800 bp	*2478	

69⁴	105 bp	1070 bp	*2480	
70	250 bp	1070 bp	*2481	
71	260 bp	800 bp	*2482	*2913, 3107, 3108, 3110
72⁴	120 bp	1070 bp	*2483N	
73⁴	100 bp	1070 bp	*2484N	
74	200 bp	1070 bp	*2485	
75	290 bp	1070 bp	*2486N	
76^{7,15}	170 bp, 260 bp	1070 bp	*2476, 2498	
77	210 bp	800 bp	*2406, 2487	*2302
78	140 bp	800 bp	*2457, 2492	*0250, 0273, 9222, 9256, 0317, 2610, 680101-6843, 6845-6848
79	255 bp	1070 bp	*2414, 2493	*0120, 0219, 0236, 0237, 0254
80	220 bp	1070 bp	*2495	
81	210 bp	1070 bp	*2497	
82	190 bp	1070 bp	*2499	

¹Alleles 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*24 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.

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*24 subtyping.

In addition, wells number 3, 9, 15, 21, 22, 23, 24, 26, 27, 28, 29, 30, 31, 34, 35, 38, 39, 43, 44, 47, 50, 51, 52, 60, 61, 62, 66, 68, 71, 77 and 78 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.

³Due to the sharing of sequence motifs between HLA-A alleles some non-HLA-A*24 alleles will be amplified by primer mixes 1 to 7, 9 to 13, 15 to 17, 19, 20, 23 to 25, 27, 29, 30, 32, 39, 41, 42, 44 to 48, 62, 65, 71 and 77 to 79. In addition, the B*0764, B*1512 and B*1519 alleles will be

amplified by primer mixes 32 and 45, and the B*1827 allele will be amplified by mixes 2, 6, 25, 30 and 48.

We assume that unknown 4th exon A*23 and A*24 nucleotide sequences are conserved within the A*23/A*24 allele group.

⁴Short specific PCR fragments are less intense and not as sharp as longer specific bands.

⁵Primer mixes 4, 6, 46 and 48 may yield less specific PCR products than the other A*24 primer mixes.

⁶Primer mix 20 may give rise to a primer oligomer artefact.

⁷Primer mixes 1, 19, 20, 27, 36, 52 and 76 may give rise to nonspecific amplifications.

⁸Primer mix 11: Specific PCR fragment of 200 bp in the A*2408, A*2442 and 2489 and the A*0276 and A*3002 alleles. Specific PCR fragment of 245 bp in the A*2461 allele.

⁹Primer mix 26: Specific PCR fragment of 90 bp in the A*2496 allele. Specific PCR fragment of 220 bp in the A*2422 allele.

¹⁰Primer mix 27: Specific PCR fragment of 80 bp in the A*2432 and A*3205 alleles. Specific PCR fragment of 370 bp in the A*2414, A*0246, A*0248, A*0270 and A*9229 alleles.

¹¹Primer mix 30: Specific PCR fragment of 125 bp in the A*2421 and the A*230301-230302, A*2907 and B*1827 alleles. Specific PCR fragment of 200 bp in the A*2459 allele.

¹²Primer mix 47: Specific PCR fragment of 200 bp in the A*2418 and 2456 alleles. Specific PCR fragment of 410 bp in the A*2426 and the A*0330, 3007, 3108 and 3205 alleles.

¹³Primer mix 49: Specific PCR fragment of 215 bp in the A*2491 allele. Specific PCR fragment of 245 bp in the A*2423 allele.

¹⁴Primer mix 65: Specific PCR fragment of 80 bp in the A*2475 allele. Specific PCR fragment of 235 bp in the A*2490N and the A*0288N alleles.

¹⁵Primer mix 76: Specific PCR fragment of 170 bp in the A*2476 allele. Specific PCR fragment of 260 bp in the A*2498 allele.

'w', might be weakly amplified.

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Lot-specific information

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Well No.	1	2	3	4	5	6	7	8	9	10	11	12
5'-primer(s) ¹	650	368	368	368	368	368	317	265	98	282	98	28
	5'-CCC 3'	5'-gTT 3'	5'-gTT 3'	5'-gTT 3'	5'-gTT 3'	5'-gTT 3'	5'-gCT 3'	5'-CAG 3'	5'-CTC 3'	5'-CAC 3'	5'-CTC 3'	5'-TCg 3'
3'-primer(s) ²	819	570	539	538	502	502	368	299	282	368	256	92
	5'-ggT 3'	5'-CAC 3'	5'-TCT 3'	5'-CAA 3'	5'-CTT 3'	5'-CTg 3'	5'-CAA 3'	5'-TCg 3'	5'-gAC 3'	5'-CAA 3'	5'-CCC 3'	5'-AAC 3'
				538					282		303	
				5'-CCA 3'					5'-gAC 3'		5'-AgT 3'	
				555								
				5'-CCA 3'								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Well No.	13	14	15	16	17	18	19	20	21	22	23	24
5'-primer(s) ¹	453	678	265	368	368	2 nd I	678	3 rd I	144	485	144	98
	5'-AAA 3'	5'-AgA 3'	5'-CAG 3'	5'-gTT 3'	5'-gTT 3'	5'-CgA 3'	5'-AgA 3'	5'-ATA 3'	5'-gCC 3'	5'-CAG 3'	5'-gCC 3'	5'-CTC 3'
3'-primer(s) ²	570	742	368	413	559	570	831	621	259	570	292	299
	5'-CCg 3'	5'-CTA 3'	5'-CAT 3'	5'-gCC 3'	5'-CCg 3'	5'-CCg 3'	5'-TCC 3'	5'-ggg 3'	5'-CTg 3'	5'-CCg 3'	5'-gTg 3'	5'-CCA 3'
	570				559						292	
	5'-CAg 3'				5'-CCg 3'						5'-gTg 3'	
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
5'-primer(s) ¹	368	368	265	98	98	368	98	385	368	98	98	242
	5'-gTT 3'	5'-gTT 3'	5'-CAG 3'	5'-CTC 3'	5'-CTC 3'	5'-gTT 3'	5'-CTC 3'	5'-ggC 3'	5'-gTT 3'	5'-CTC 3'	5'-CTT 3'	5'-gCT 3'
											105	
											5'-Tgg 3'	
3'-primer(s) ²	527	419	302	214	265	453	212	570	427	250	265	317
	5'-CCT 3'	5'-CgA 3'	5'-ggC 3'	5'-CCA 3'	5'-CCg 3'	5'-TCg 3'	5'-gCA 3'	5'-CCg 3'	5'-gTA 3'	5'-CA 3'	5'-CCC 3'	5'-ggA 3'
	539	545	355			527						
	5'-TCA 3'	5'-AgA 3'	5'-gAC 3'			5'-CCg 3'						
	555											
	5'-CCA 3'											
Well No.	25	26	27	28	29	30	31	32	33	34	35	36

Well No.	37	38	39	40	41	42	43	44	45	46	47	48
5'-primer(s) ¹	368	160	98	28	404	98	368	355	362	385	28	368
	5'-gTT 3'	5'-ACT 3'	5'-CTA 3'	5'-TCg 3'	5'-CCA 3'	5'-CTC 3'	5'-gTT 3'	5'-CCA 3'	5'-gAg 3'	5'-ggC 3'	5'-TCC 3'	5'-gTT 3'
					414			363	362		368	
					5'-CAG 3'			5'-ATA 3'	5'-gAg 3'		5'-gTT 3'	
3'-primer(s) ²	532	265	265	81	570	259	488	570	570	453	265	524
	5'-CTA 3'	5'-CCC 3'	5'-CCC 3'	5'-gAT 3'	5'-CCg 3'	5'-gTT 3'	5'-CCT 3'	5'-CCg 3'	5'-CCg 3'	5'-TCT 3'	5'-CCC 3'	5'-CAC 3'
	544										527	524
	5'-ggg 3'										5'-CCT 3'	5'-CAC 3'
Well No.	37	38	39	40	41	42	43	44	45	46	47	48

Well No.	49	50	51	52	53	54	55	56	57	58	59	60
5'-primer(s) ¹	368	98	90	630	368	98	98	28	361	414	368	28
	5'-gTT 3'	5'-CTC 3'	5'-AgC 3'	5'-AAg 3'	5'-gTT 3'	5'-CTC 3'	5'-CTC 3'	5'-TCg 3'	5'-AgT 3'	5'-gAA 3'	5'-gTT 3'	5'-TCg 3'
3'-primer(s) ²	542	290	265	831	559	221	295	127	453	570	582	131
	5'-CTT 3'	5'-CAA 3'	5'-CCC 3'	5'-TCC 3'	5'-CTC 3'	5'-ACA 3'	5'-TCA 3'	5'-CTT 3'	5'-TCT 3'	5'-CCg 3'	5'-TAg 3'	5'-ggA 3'
	570											
	5'-CAg 3'											
Well No.	49	50	51	52	53	54	55	56	57	58	59	60

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Well No.	61	62	63	64	65	66	67	68	69	70	71	72
5'-primer(s)¹	368	530	409	186	420	98	678	368	98	359	98	699
	5'-gTT 3'	5'-ggT 3'	5'-ggC 3'	5'-AgA 3'	5'-TAg 3'	5'-CTC 3'	5'-AgA 3'	5'-gTT 3'	5'-CTC 3'	5'-CCT 3'	5'-CAC 3'	5'-TAA 3'
					575							
					5'-gCg 3'							
3'-primer(s)²	434	616	502	317	616	256	866	614	163	570	317	777
	5'-CCC 3'	5'-CgT 3'	5'-CTT 3'	5'-ggA 3'	5'-CgT 3'	5'-CTg 3'	5'-gAT 3'	5'-TgT 3'	5'-Cgg 3'	5'-CCg 3'	5'-ggA 3'	5'-gCA 3'
Well No.	61	62	63	64	65	66	67	68	69	70	71	72

Well No.	73	74	75	76	77	78	79	80	81	82
5'-primer(s)¹	368	368	368	368	368	355	355	88	368	368
	5'-gTT 3'	5'-gTT 3'	5'-gTT 3'	5'-gTT 3'	5'-gTT 3'	5'-CCA 3'	5'-CCg 3'	5'-Tgg 3'	5'-gTT 3'	5'-gTT 3'
				650						
				5'-cCT 3'						
3'-primer(s)²	426	525	616	587	539	453	570	265	536	517
	5'-TCT 3'	5'-ACT 3'	5'-CgT 3'	5'-CCC 3'	5'-TCC 3'	5'-TCT 3'	5'-CCg 3'	5'-CCC 3'	5'-gCC 3'	5'-CgT 3'
				777						
				5'-gCA 3'						
Well No.	73	74	75	76	77	78	79	80	81	82

¹The nucleotide position, in the 1st, 2nd, 3rd or 4th exons or the 2nd or 3rd 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.

²The nucleotide position, in the 2nd, 3rd or 4th exons, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

CELL LINE VALIDATION SHEET																				
HLA-A*24 SSP subtyping kit																				
				Lot No.:	Well															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
					200846501	200846502	200846503	200846504	200846505	200846506	200846507	200846508	200846509	200846510	200846511	200846512	200846513	200846514	200846515	200846516
	IHWC cell line	A*	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	9025 DEU	*3101			-	-	-	-	-	-	-	-	-	-	-	-	-			
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			-	+	-	+	W	-	-	-	-	+	-	-	-			
22	9056 KOSE	*0201			-	-	-	-	-	-	-	-	-	-	-	-	-			
23	9124 IHL	*0201	*3401		-	-	12	-	-	-	-	-	-	-	-	-	-			
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			-	+	-	+	W	-	-	-	-	+	-	-	-			
39	9315 CML	*0101	*0301		-	-	-	-	-	-	-	-	-	-	-	-	-			
40	9134 WHONP199	*0207	*3001		-	-	-	-	-	-	-	-	+	-	-	-	-			
41	9055 H0301	*0301			-	-	-	-	-	-	-	-	-	-	-	-	-			
42	9066 TAB089	*0207			-	-	-	-	-	-	-	-	-	-	-	-	-			
43	9076 T7526	*0206	*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*24 SSP subtyping kit																			
			Lot No.:	Well															
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
				200846517	200846518	200846519	200846520	200846521	200846522	200846523	200846524	200846525	200962126	200846527	200846528	200846529	200962130	200846531	200846532
	IHWC cell line	A*	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	9025 DEU	*3101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	*0206	*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*24 SSP subtyping kit																			
				Well															
				33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
				200962133	200846534	200962135	200846536	200846537	200846538	200846539	200846540	200846541	200846542	200846543	200846544	200846545	200846546	200962147	200962148
			Lot No.:																
	IHWC cell line	A*	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	9025 DEU	*3101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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	*0206	*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*24 SSP subtyping kit																			
				Well															
				49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
				200962149	200846550	200846551	200962152	200846553	200846554	200846555	200846556	200846557	200962158	200846559	200846560	200846561	200846562	200846563	200846564
			Lot No.:																
	IHWC cell line	A*	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	9025 DEU	*3101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	*0206	*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*24 SSP subtyping kit																						
				Lot No.:	Well																	
					65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82
					200962165	200846566	200846567	200846568	200846569	200846570	200846571	200846572	200846573	200846574	200846575	200962176	200962177	200962178	200962179	200962180	200962181	200962182
	IHWC cell line	A*	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	9025 DEU	*3101			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	*0206	*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*24 SSP

Product number: 101.422-24/03 – including *Taq* pol.
Lot number: 12G
Expiry date: 2011-September-01
Number of tests: 24 tests – Product No. 101.422-24
3 tests – Product No. 101.422-03
Number of wells per test: 82

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2008-465-01	33	2009-621-33	65	2009-621-65
2	2008-465-02	34	2008-465-34	66	2008-465-66
3	2008-465-03	35	2009-621-35	67	2008-465-67
4	2008-465-04	36	2008-465-36	68	2008-465-68
5	2008-465-05	37	2008-465-37	69	2008-465-69
6	2008-465-06	38	2008-465-38	70	2008-465-70
7	2008-465-07	39	2008-465-39	71	2008-465-71
8	2008-465-08	40	2008-465-40	72	2008-465-72
9	2008-465-09	41	2008-465-41	73	2008-465-73
10	2008-465-10	42	2008-465-42	74	2008-465-74
11	2008-465-11	43	2008-465-43	75	2008-465-75
12	2008-465-12	44	2008-465-44	76	2009-621-76
13	2008-465-13	45	2008-465-45	77	2009-621-77
14	2008-465-14	46	2008-465-46	78	2009-621-78
15	2008-465-15	47	2009-621-47	79	2009-621-79
16	2008-465-16	48	2009-621-48	80	2009-621-80
17	2008-465-17	49	2009-621-49	81	2009-621-81
18	2008-465-18	50	2008-465-50	82	2009-621-82
19	2008-465-19	51	2008-465-51		
20	2008-465-20	52	2009-621-52		
21	2008-465-21	53	2008-465-53		
22	2008-465-22	54	2008-465-54		
23	2008-465-23	55	2008-465-55		
24	2008-465-24	56	2008-465-56		
25	2008-465-25	57	2008-465-57		
26	2009-621-26	58	2009-621-58		
27	2008-465-27	59	2008-465-59		
28	2008-465-28	60	2008-465-60		
29	2008-465-29	61	2008-465-61		
30	2009-621-30	62	2008-465-62		
31	2008-465-31	63	2008-465-63		
32	2008-465-32	64	2008-465-64		

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

No DNAs carrying the alleles to be amplified by primer solutions 8, 11, 14, 21, 22, 26 to 29, 31, 33 to 36, 38 to 43, 45, 47, 49 to 77 and 79 to 82 were available. The specificities of the primers in primer solutions 8, 11, 26, 27, 29, 39, 41, 42, 45, 47, 53, 56 to 58, 63, 71, 76, 77, 79 and 82 were tested by separately adding one or two additional 5'-primer(s), respectively one or two additional 3'-primer(s). In primer solutions 14, 21, 28, 31, 33, 34, 40, 43, 49, 50, 54, 55, 59 to 61, 66 to 69, 73 to 75 and 81 it was only possible to test the 5'primer, one of the 3'-primers was not possible to test. In primer solutions 22, 35, 36, 38, 51, 52, 62, 64, 65, 70, 72 and 80 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In addition, one or two primers in primer solution 4, 11, 13, 23, 37, 41 and 76 were not possible to test. Additional 3'-primers in primer solutions 4, 25 and 30 were tested by separately adding additional 5'-primers.

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

Date of approval: 2009-September-07

Approved by:

Quality Control, Supervisor

Declaration of Conformity

Product name: *Olerup* SSP® HLA-A*24
Product number: 101.422-24/03
Lot number: 12G

Intended use: HLA-A*24 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-September-07

Olle Olerup

Lot No.: **12G**

Lot-specific information

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