

Olerup SSP® HLA-Cw*03

Product number:	101.611-12 – including <i>Taq</i> polymerase
Lot number:	39F
Expiry date:	2010-December-01
Number of tests:	12
Number of wells per test:	32
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. 39F.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*® HLA-Cw*03 LOT

The HLA-Cw*03 specificity and interpretation tables have been updated for the HLA-Cw alleles described since the previous *Olerup SSP*® HLA-Cw*03 lot was made (Lot No. Y28).

One well have been added to the HLA-Cw*03 kit,
well **32**.

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

Well	5'-primer	3'-primer	rationale
20	Added	Added	Primer pair added for the Cw*0347 allele.
29	Added	-	Primer added for the Cw*0350 allele.
32	New	New	New primer pair for the Cw*0348 allele.

Change in revision R02 compared to R01:

1. The Cw*0328 and Cw*0349 alleles are weakly amplified by primer mix 6.

PRODUCT DESCRIPTION

HLA-Cw*03 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the HLA-Cw*0302 to Cw*0350 alleles.

PLATE LAYOUT

Each test consists of 32 PCR reactions in a 32 well cut PCR plate.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32

The 32 well cut PCR plate is marked with 'HLA-Cw*03' in silver/gray ink. Well No. 1 is marked with the Lot Number '39F'.

The PCR plates are heat-sealed with a PCR-compatible foil.

Please note: When removing each 32 well PCR plate, make sure that the remaining plates stay sealed. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

INTERPRETATION

The interpretation of HLA-Cw*03 SSP subtypings will be influenced by the one Cw*01, the Cw*02, the Cw*04, the Cw*06, several Cw*07, two Cw*12, the Cw*14, the Cw*15, the Cw*17 and Cw*18 alleles when present on the other haplotype. In addition, the B*1596 allele is amplified by primer mixes 5, 6 and 26.

UNIQUELY IDENTIFIED ALLELES

All the HLA-Cw*03 alleles, i.e. **Cw*0302 to Cw*0350**, recognized by the HLA Nomenclature Committee in October 2008¹ will give rise to unique amplification patterns by the primers in the HLA-Cw*03 subtyping kit.

The HLA-Cw*03 subtyping kit cannot distinguish the Cw*030201 to Cw*030203 alleles, the Cw*030301 to Cw*030305 alleles, the Cw*030401 to Cw*030407 alleles or the Cw*033801 and Cw*033802 alleles.

¹HLA-Cw alleles listed on the IMGT/HLA web page 2008-October-10, release 2.23.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

The 49 HLA-Cw*03 alleles will give rise to 50 different amplification patterns that can be combined in 1 275 homozygous and heterozygous combinations. 354 of these genotypes do not give rise to unique amplification patterns. The different sizes of the specific PCR products generated by the primers in vials 6, 7, 13, 19, 20, 25, 26 and 29 have not been considered in these calculations.

+++++--+	-----+-	-----	-+-----	0313, 0340 = 0335, 0343
+++++--+	-----+-	-----	-----	0305, 0343 = 0317, 0343
+++++--+	-----+-	-----	-----	0302, 0321 = 0306, 0343 = 0321, 0340
+++++---	-----+-	-----	-----	0302, 0322Q = 0303, 0342 = 0309, 0343 = 0322Q, 0340 = 0322Q, 0342 = 0342, 0343
+++++--+	++-+--+	-----+	-----	0303, 0315 = 0315, 0343
+++++--+	--+--+	-----	-----	0302, 0331 = 0308, 0343 = 0331, 0340
+++++--+	---+--+	-----	--+-----	0302, 031101 = 031101, 0340
+++++--+	-----++	-----	-----	0302, 0312 = 0312, 0340 = 0319, 0343
+++++--+	-----+-	+-----	-----	0302, 0320N = 0320N, 0340
+++++--+	-----+-	--+-----	-----	0303, 0333 = 0324, 0343 = 0333, 0343
+++++--+	-----+-	-----+	-----	0302, 0349 = 0328, 0343 = 0340, 0349
+++++--+	-----+-	-----+	-----	0302, 0330 = 0330, 0340
+++++--+	-----+-	-----	-+-----	0303, 0336 = 0334, 0343 = 0336, 0343
+++++--+	-----+-	-----	--+-----	0302, 031102 = 031102, 0340 = 0337, 0343
+++++--+	-----+-	-----	---+-----	0316, 0343 = 0341, 0343
+++++--+	-----+-	-----	-----+	0302, 0350 = 0340, 0350
+++++--+	-----+-	-----	-----	0302, 0303 = 0302, 0343 = 0303, 0340 = 0304, 0343 = 0314, 0343 = 0340, 0343
+++-+--+	-----+-	-----	-+-----	0302, 0313 = 0313, 0336
++-++-+	-----+-	-----	-----	0305, 0342 = 0317, 0342
++-++-+	-----+-	-----	-----	0305, 0340 = 0314, 0317 = 0317, 0340
++-+--+	-----+-	-----	-----	0302, 0306 = 0306, 0340
++-+--+	+++-+--+	-----+	-----	0308, 0315 = 0315, 0329
++-+--+	-+--+	-----	-----	0302, 0329 = 0329, 0340
++-+--+	--+--+	-----	-----	0302, 0308 = 0308, 0340
++-+--+	---+--+	-----	-----+	0302, 0339 = 0339, 0340
++-+--+	---+--+	-----	-----	0302, 0318 = 0318, 0340
++-+--+	++-+--+	-----+	-----	0309, 0315 = 0315, 0342
++-+--+	-----+-	--+-----	-----	0309, 0333 = 0324, 0342 = 0333, 0342
++-+--+	-----+-	-----	-+-----	0309, 0336 = 0334, 0342 = 0336, 0342
++-+--+	-----+-	-----	---+-----	0316, 0342 = 0341, 0342
++-+--+	-----+-	-----	-----	0302, 0309 = 0302, 0342 = 0304, 0342 = 0309, 0340 =

Lot No.: 39F

Lot-specific Information

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				0309, 0342 = 0314, 0342 =
				0340, 0342 = 0342, 0342
++-+-----	++-+----++	-----+--	+-----	0315, 0332 = 0315, 0338 =
				0315, 0345
++-+-----	++-+----++	-----+--	-----	0304, 0315 = 0307, 0315 =
				0310, 0315 = 0314, 0315 =
				0315, 0340
++-+-----	++-+----++	-----	+-----	0302, 0345 = 0340, 0345
++-+-----	++-+----++	-----	-----	0302, 0307 = 0307, 0340
++-+-----	-+----++	-----	-----	0302, 0310 = 0310, 0340
++-+-----	-----++-	-----	-----	0302, 0319 = 0319, 0340
++-+-----	-----++-	-+-----	-----	0302, 0323 = 0323, 0340
++-+-----	-----++-	--+-----	-+-----	0324, 0336 = 0333, 0334
++-+-----	-----++-	--+-----	-----	0302, 0324 = 0304, 0333 =
				0314, 0333 = 0324, 0333 =
				0324, 0340 = 0333, 0340
++-+-----	-----++-	---+-----	-----	0302, 0347 = 0340, 0347
++-+-----	-----++-	-----+--	-----	0302, 0326 = 0326, 0340
++-+-----	-----++-	-----+--	+-----	0302, 0338 = 0338, 0340
++-+-----	-----++-	-----+--	-----	0302, 0328 = 0328, 0340
++-+-----	-----++-	-----	+-----	0302, 0332 = 0332, 0340
++-+-----	-----++-	-----	-+-----	0302, 0334 = 0304, 0336 =
				0314, 0336 = 0334, 0336 =
				0334, 0340 = 0336, 0340
++-+-----	-----++-	-----	--+-----	0302, 0337 = 0337, 0340
++-+-----	-----++-	-----	---+-----	0314, 0316 = 0316, 0340 =
				0340, 0341
++-+-----	-----++-	-----	-----+--	0302, 0346 = 0340, 0346
++-+-----	-----++-	-----	-----+--	0302, 0344 = 0340, 0344
++-+-----	-----++-	-----	-----+--	0302, 0348 = 0340, 0348
++-+-----	-----++-	-----	-----	0302, 0304 = 0302, 0314 =
				0302, 0340 = 0304, 0340 =
				0314, 0340 = 0340, 0340
++-+-----	-----+--	-----	-----	0304, 0314 = 0314, 0314
++-+-----	++-+----++	-----+--	-----	0305, 0315 = 0315, 0317 =
				0315, 0327
++-+-----	-----++-	--+-----	-----	0305, 0333 = 0317, 0333
++-+-----	-----++-	-----	-+-----	0302, 0335 = 0305, 0336 =
				0317, 0336 = 0335, 0336
++-+-----	-----++-	-----	-----	0302, 0305 = 0302, 0317
++-+-----	++-+----++	-----+--	---+-----	0315, 0316 = 0315, 0341
++-+-----	++-+----++	-----+--	-----	0302, 0315 = 0315, 0315
++-+-----	-----++-	--+-----	---+-----	0316, 0333 = 0333, 0341
++-+-----	-----++-	--+-----	-----	0302, 0333 = 0333, 0333
++-+-----	-----++-	-----	-+-----	0316, 0336 = 0336, 0341
++-+-----	-----++-	-----	-+-----	0302, 0336 = 0336, 0336
++-+-----	-----++-	-----	---+-----	0302, 0316 = 0302, 0341
+-----+	-----+--	-----	-+-----	0306, 0313 = 0321, 0335
+-----+	-----+--	-----	-+-----	0309, 0313 = 0322Q, 0335
+-----+	--+-----	-----	-+-----	0308, 0313 = 0331, 0335
+-----+	-----+--	-----	-+-----	0312, 0335 = 0313, 0319
+-----+	-----+--	-----	-+-----	0313, 0328 = 0335, 0349
+-----+	-----+--	-----	-+-----	031102, 0335 = 0313, 0337

Lot No.: 39F

Lot-specific Information

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+---+---+---	-----+--	-----+--	-+-----	0303, 0335 = 0304, 0313 = 0313, 0334
+---+---+---	-----+--	-----+--	-----+--	0306, 0322Q = 0309, 0321
+---+---+---	---+---+--	-----+--	-----+--	0306, 0331 = 0308, 0321
+---+---+---	-----+--	-----+--	-----+--	0306, 0312 = 0319, 0321
+---+---+---	-----+--	-----+--	-----+--	0306, 0349 = 0321, 0328
+---+---+---	-----+--	-----+--	---+-----	0306, 031102 = 0321, 0337
+---+---+---	-----+--	-----+--	-----+--	0303, 0306 = 0304, 0321 = 0306, 0321
+---+---+---	---+---+--	-----+--	-----+--	0308, 0322Q = 0309, 0331
+---+---+---	-----+--	-----+--	-----+--	0309, 0312 = 0319, 0322Q
+---+---+---	-----+--	-----+--	-----+--	0309, 0349 = 0322Q, 0328
+---+---+---	-----+--	-----+--	---+-----	0309, 031102 = 0322Q, 0337
+---+---+---	-----+--	-----+--	-----+--	0303, 0309 = 0304, 0322Q = 0309, 0322Q
+---+---+---	---+---+--	-----+--	-----+--	0303, 0329 = 0310, 0331 = 0329, 0331
+---+---+---	---+---+--	-----+--	-----+--	0308, 0312 = 0319, 0331
+---+---+---	---+---+--	-----+--	-----+--	0308, 0349 = 0328, 0331
+---+---+---	---+---+--	-----+--	---+-----	0308, 031102 = 0331, 0337
+---+---+---	---+---+--	-----+--	-----+--	0303, 0308 = 0304, 0331 = 0308, 0331
+---+---+---	---+---+--	-----+--	---+-----	0304, 031101 = 031101, 0337
+---+---+---	-----+--	-----+--	-----+--	0312, 0328 = 0319, 0349
+---+---+---	-----+--	-----+--	---+-----	031102, 0319 = 0312, 0337
+---+---+---	-----+--	-----+--	-----+--	0303, 0319 = 0304, 0312 = 0312, 0319
+---+---+---	-----+--	-----+--	---+-----	031102, 0328 = 0337, 0349
+---+---+---	-----+--	-----+--	-----+--	0303, 0328 = 0304, 0349 = 0328, 0349
+---+---+---	-----+--	-----+--	---+-----	0303, 0337 = 0304, 031102 = 031102, 0337
+---+---+---	-----+--	-----+--	-+-----	0305, 0313 = 0313, 0335
+---+---+---	-----+--	---+-----	-+-----	0325, 0334 = 0335, 0347
+---+---+---	-----+--	---+-----	-----+--	0304, 0325 = 0305, 0347 = 0325, 0347
+---+---+---	-----+--	-----+--	+-----	0305, 0338 = 0327, 0332 = 0327, 0338
+---+---+---	-----+--	-----+--	-+-----	0304, 0335 = 0305, 0334 = 0334, 0335
+---+---+---	-----+--	-----+--	-----+--	0304, 0306 = 0306, 0306
+---+---+---	+++-----	-----+--	+-----	0308, 0345 = 0329, 0345
+---+---+---	+++-----	-----+--	-----+--	0307, 0308 = 0307, 0329
+---+---+---	---+---+--	-----+--	-----+--	0304, 0329 = 0308, 0310 = 0308, 0329 = 0310, 0329 = 0329, 0329
+---+---+---	---+---+--	-----+--	-----+--	0304, 0308 = 0308, 0308
+---+---+---	-----+--	-----+--	-----+--	0304, 0309 = 0309, 0309
+---+---+---	+++-----	-----+--	+-----	0307, 0338 = 0338, 0345
+---+---+---	+++-----	-----+--	+-----	0304, 0345 = 0307, 0332 = 0307, 0345 = 0310, 0345 = 0332, 0345 = 0345, 0345



Lot No.: 39F

Lot-specific Information

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+---+-----	++-----++	-----	-----	0304,0307 = 0307,0307 = 0307,0310
+---+-----	-+-----++	-----	-----	0304,0310 = 0310,0310
+---+-----	-----+-	-----	-----	0304,0319 = 0319,0319
+---+-----	-----+-	+-----	-----	0304,0323 = 0323,0323
+---+-----	-----+-	-+-----	-----	0304,0324 = 0324,0324
+---+-----	-----+-	---+-----	-----	0304,0347 = 0347,0347
+---+-----	-----+-	-----+	-----	0304,0326 = 0326,0326
+---+-----	-----+-	-----+	+-----	0304,0338 = 0332,0338 = 0338,0338
+---+-----	-----+-	-----+	-----	0304,0328 = 0328,0328
+---+-----	-----+-	-----	+-----	0304,0332 = 0332,0332
+---+-----	-----+-	-----	-+-----	0304,0334 = 0334,0334
+---+-----	-----+-	-----	---+-----	0304,0337 = 0337,0337
+---+-----	-----+-	-----	-----+-	0304,0346 = 0346,0346
+---+-----	-----+-	-----	-----+-	0304,0344 = 0344,0344
+---+-----	-----+-	-----	-----+	0304,0348 = 0348,0348
+---+-----	-----+-	-----	---+-----	0305,0316 = 0316,0317 = 0317,0341
+---+-----	-----+-	-----	-----	0305,0317 = 0317,0317
+---+-----	-----+-	---+-----	-----	0305,0325 = 0325,0325
+---+-----	-----+-	-----+	-----	0305,0327 = 0327,0327
+---+-----	-----+-	-----	-+-----	0305,0335 = 0335,0335
+-----	-----+-	-----	---+-----	0316,0316 = 0316,0341
-+++-----	-----+-	-----	-----	0303,0343 = 0343,0343
--++-----	-----+-	-----	-----	0303,0321 = 0321,0321
--++-----	-----+-	-----	-----	0303,0322Q = 0322Q,0322Q
--++-----	---+-----	-----	-----	0303,0331 = 0331,0331
--++-----	---+-----	-----	---+-----	031101,0339 = 031101,0350 = 031102,0339
--++-----	---+-----	-----	---+-----	0303,031101 = 031101,031101 = 031101,031102 = 031101,0318 = 031102,0318
--++-----	---+-----	-----	---+-----	0303,0339 = 0318,0350 = 0339,0350
--++-----	-----+-	-----	-----	0303,0312 = 0312,0312
--++-----	-----+-	+-----	-----	0303,0320N = 0320N,0320N
--++-----	-----+-	-----+	-----	0303,0349 = 0349,0349
--++-----	-----+-	-----+	-----	0303,0330 = 0330,0330
--++-----	-----+-	-----	---+-----	0303,031102 = 031102,031102
--++-----	-----+-	-----	---+-----	0303,0350 = 0350,0350
--++-----	---+-----	-----	---+-----	0318,0339 = 0339,0339

0302 = 030201-030203
0303 = 030301-030305
0304 = 030401-030407
0338 = 033801-033802

SPECIFICITY TABLE

HLA-Cw*03 SSP subtyping

Specificities and sizes of the PCR products of the 32 primer mixes used for HLA-Cw*03 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-Cw*03 alleles ³	Other amplified HLA Class I alleles ⁴
1⁵	280 bp	800 bp	030201-030203, 030401-0310, 0314-0317, 0319, 0323-0329, 0332-033802, 0340-0342, 0344-0348	020201-020203, 020205-0203, 0204 ^{weakly} , 0205-0213, 0214 ^{weakly} , 0215-0222, 0403, 0406, 0416, 0603, 150201-1511, 1513, 1515-1521
2	210 bp	1070 bp	030201-030203, 0314, 0315, 0333, 0336, 0340, 0342, 0343	
3	280 bp	800 bp	030301-030305, 031101-0313, 0320N-0322Q, 0330, 0331, 0343, 0349, 0350	1512
4	275 bp	1070 bp	030301-030407, 0306-0312, 0314, 0318-0324, 0326, 0328-0332, 0334, 0337-0340, 0342-0350	
5	275 bp	1070 bp	0305, 0313, 0317, 0325, 0327, 0335	B*1596
6^{6,9}	90, 215 bp	800 bp	0306, 0321, 0328 ^{weakly} , 0349 ^{weakly}	B*1596
7^{5,6,10}	110, 185 bp	1070 bp	030301-030305, 0308, 031101-0313, 0318, 0320N-0322Q, 0329-0331, 0339, 0343, 0349, 0350	070101-070109, 0706, 0707, 0709, 0716, 0718-0720, 0722, 0724, 0726, 0728, 0730, 0735, 0736, 0740, 0744, 0752, 0753, 0755-0760
8	250 bp	1070 bp	0309, 0322Q, 0342	

Lot No.: **39F**

Lot-specific Information

www.olerup.com

9	240 bp	1070 bp	0307, 0315, 0345	020201-020203, 020205-0203, 0204 ^{weakly} , 0205- 0211, 0213, 0214 ^{weakly} , 0215- 0222, 0403, 0406, 0416, 0603, 150201-1506, 1508, 1509, 151002-1513, 1515-1520
10⁷	250 bp	800 bp	0307, 0310, 0315, 0329, 0345	020201 ^{weakly} , 020202-020203, 020205-0203, 0204 ^{weakly} , 0205- 0213, 0214 ^{weakly} , 0215-0222, 0403, 0406, 0416, 0603, 150201-1506, 1508, 1509, 151002-1513, 1515-1521
11	415 bp	1070 bp	0308, 0329, 0331	1208
12	260 bp	1070 bp	031101, 0318, 0339	0756, 0760, 1512
13^{6,11}	80, 140 bp	1070 bp	030201-030203, 0315-0317, 0333, 0336, 0340, 0342, 0343	140201, 140203- 1411
14	210 bp	1070 bp	0312, 0319	
15⁶	135 bp	1070 bp	030201-0317, 0319-033802, 0340-0350	0603 ^{weakly}
16	150 bp	1070 bp	0307, 0310, 0315, 0329, 0345	0114, 06020101- 06020102, 060203- 0604, 0606-0610, 0612-0618, 0707, 0709, 120401, 1701- 1704, 1801-1803
17⁶	90 bp	1070 bp	0320N	
18	225 bp	1070 bp	0323	
19^{6,7,12}	105, 260 bp	800 bp	0324, 0333	
20^{8,13}	165, 255 bp	1070 bp	0325, 0347	
21	210 bp	1070 bp	0326	
22	195 bp	800 bp	0315, 0327, 033801-033802	0212, 0403, 0406, 0416, 0720, 1503, 1516

Lot No.: **39F**

Lot-specific Information

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23 ⁶	90 bp	1070 bp	0328, 0349	
24	200 bp	1070 bp	0330	
25 ¹⁴	295, 345 bp	1070 bp	0332, 033801- 033802, 0345	0614, 0710, 0743, 1503, 1516
26 ^{6,8,15}	70, 105, 265 bp	1070 bp	0313, 0334-0336	B*1596
27 ⁶	80 bp	1070 bp	031101-031102, 0337	0603
28 ⁸	170 bp	1070 bp	0316, 0341	04010101-040104, 040106, 0403-0420, 0423-0436, 140201, 140203-1411, 1801-1803
29 ¹⁶	250, 285 bp	1070 bp	0339, 0350	0756, 0760
30	165 bp	1070 bp	0346	
31	210 bp	800 bp	0344	
32	180 bp	1070 bp	0348	

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-Cw*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.

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-Cw*03 subtyping.

In addition, wells number 3, 6, 10, 19, 22 and 31 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.

⁴Due to the sharing of sequence motifs between HLA-Cw alleles the primer pairs in wells 1, 3, 7, 9 to 13, 15, 16, 22, 25 and 27 to 29 will amplify some non-HLA-Cw*03 alleles. In addition, the B*1596 allele will be amplified by primer mixes 5, 6 and 26.

⁵The primer pairs in well 1 and 7 may yield less specific PCR product than the other HLA-Cw*03 primer pairs.

⁶Short specific PCR fragments are less intense and not as sharp as longer specific bands.

⁷Primer mixes 10 and 19 may give rise to primer oligomer formation.

⁸Primer mixes 20, 26 and 28 may give rise to nonspecific amplifications.

Lot No.: **39F**

Lot-specific Information

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⁹Primer mix 6: Specific PCR fragment of 90 bp in the Cw*0321 and B*1596 alleles. Specific PCR fragment of 215 bp in the Cw*0306 alleles.

¹⁰Primer mix 7: Specific PCR fragment of 110 bp in the Cw*0308 and 0329 and the Cw*070101-070109, 0706, 0707, 0709, 0716, 0718-0720, 0722, 0724, 0726, 0728, 0730, 0735, 0736, 0740, 0744, 0752, 0753, 0755N and 0757 to 0759 alleles. Specific PCR fragment of 185 bp in the Cw*030301-030305, 031101-0313, 0318, 0320N to 0322Q, 0330, 0339, 0343, 0349, 0350 and the 0756 alleles. Specific PCR fragments of 110 and 185 bp in the Cw*0331 and Cw*0760 allele.

¹¹Primer mix 13: Specific PCR fragment of 80 bp in the Cw*030201-030203, 0315, 0316, 0333, 0336, 0340, 0342 and 0343 and the Cw* 1409 alleles. Specific PCR fragment of 140 bp in the Cw*0317 allele. Specific PCR fragments of 80 and 140 bp in the 140201, 140403 to 1408, 1410 and the 1411 alleles.

¹²Primer mix 19: Specific PCR fragment of 105 bp in the Cw*0324 allele. Specific PCR fragment of 260 bp in the Cw*0333 allele.

¹³Primer mix 20: Specific PCR fragment of 165 bp in the Cw*0325 allele. Specific PCR fragment of 255 bp in the Cw*0347 allele.

¹⁴Primer mix 25: Specific PCR fragment of 295 bp in the Cw*0332 and 0345 alleles. Specific PCR fragment of 345 bp in the Cw*033801-033802 and the Cw*1503 and 1516 alleles. Specific PCR fragments of 295 and 345 bp in the Cw*0614, 0710 and 0743 alleles.

¹⁵Primer mix 26: Specific PCR fragment of 70 bp in the Cw*0334 allele. Specific PCR fragment of 105 bp in the Cw*0336 allele. Specific PCR fragment of 265 bp in the Cw*0313 and 0335 and the B*1596 alleles.

¹⁶Primer mix 29: Specific PCR fragment of 250 bp in the Cw*0350 allele. Specific PCR fragment of 285 bp in the Cw*0339 and the Cw*0756 and 0760 alleles.

INTERPRETATION TABLE

HLA-Cw*03 SSP subtyping

Amplification patterns of the Cw*0302 to Cw*0350 alleles

	Well ⁵															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Length of spec.	280	210	280	275	275	90	110	250	240	250	415	260	80	210	135	150
PCR product						215	185						140			
Length of int.	800	1070	800	1070	1070	800	1070	1070	1070	800	1070	1070	1070	1070	1070	1070
pos. control ¹																
5'-primer(s) ²	106	419	105	355	355	413	201	374	105	105	28	126	361	420	105	201
	5'-CTg ³	5'-gTC ³	5'-gCT ³	5'-TCA ³	5'-CCC ³	5'-TgT ³	5'-CCg ³	5'-CTA ³	5'-gCT ³	5'-gCT ³	5'-TCA ³	5'-ggA ³	5'-AgT ³	5'-TTA ³	5'-gCT ³	5'-CCg ³
						539		379					419			
						5'-gTg ³		5'-ACC ³					5'-gTC ³			
3'-primer(s) ³	343	589	343	589	589	589	270	589	302	312	270	343	459	589	201	312
	5'-ACC ³	5'-CTT ³	5'-ACT ³	5'-CTT ³	5'-CTT ³	5'-CTT ³	5'-TAG ³	5'-CTT ³	5'-ggT ³	5'-AgT ³	5'-TAG ³	5'-ACT ³	5'-AgA ³	5'-CTT ³	5'-CTC ³	5'-AGT ³
							343									
							5'-ACT ³									
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-Cw* allele ⁴																
*030201-030203	1	2											13		15	
*030301-030305			3	4			7								15	
*030401-030407	1			4											15	
*0305	1				5										15	
*0306	1			4		6									15	
*0307	1			4					9	10					15	16
*0308	1			4			7				11				15	
*0309	1			4				8							15	
*0310	1			4						10					15	16
*031101			3	4			7					12			15	
*031102			3	4			7								15	
*0312			3	4			7							14	15	
*0313			3		5		7								15	
*0314	1	2		4											15	
*0315	1	2							9	10			13		15	16
*0316	1												13		15	
*0317	1				5								13		15	
*0318				4			7					12				
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

INTERPRETATION TABLE																
HLA-Cw*03 SSP subtyping																
Amplification patterns of the Cw*0302 to Cw*0350 alleles																
Well⁵																
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
90	225	105	165	210	195	90	200	295	70	80	170	250	165	210	180	Length of spec.
		260	255					345	105			285				PCR product
								265								
1070	1070	800	1070	1070	800	1070	1070	1070	1070	1070	1070	1070	1070	800	1070	Length of int.
																pos. control ¹
19	406	105	86	420	134	539	355	289	363	105	459	97	105	421	105	5'-primer(s) ²
5'-CCT ³	5'-gCA ³	5'-gCT ³	5'-CAA ³	5'-TTC ³	5'-CCA ³	5'-gCg ³	5'-TCA ³	5'-Agg ³	5'-Agg ³	5'-gCT ³	5'-gAT ³	5'-TCg ³	5'-gCT ³	5'-ACC ³	5'-gCT ³	
			467					341	527			133				
			5'-CTT ³					5'-ggA ³	5'-TgT ³			5'-CCT ³				
								560								
								5'-CgA ³								
70	589	167	302	589	289	589	514	353	589	142	589	343	231	589	242	3'-primer(s) ³
5'-ggC ³	5'-CTT ³	5'-ACC ³	5'-ggC ³	5'-CTT ³	5'-AgC ³	5'-CTT ³	5'-CTT ³	5'-TgA ³	5'-CTT ³	5'-TgA ³	5'-CTC ³	5'-ACT ³	5'-CTC ³	5'-CTT ³	5'-CCA ³	
		323	589													
		5'-AgC ³	5'-CTT ³													
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																HLA-Cw* allele ⁴
																*030201-030203
																*030301-030305
																*030401-030407
																*0305
																*0306
																*0307
																*0308
																*0309
																*0310
										27						*031101
										27						*031102
																*0312
									26							*0313
																*0314
					22											*0315
											28					*0316
																*0317
																*0318
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Lot No.: **39F**

Lot-specific Information

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Length of spec.	280	210	280	275	275	90	110	250	240	250	415	260	80	210	135	150
PCR product						215	185						140			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*0319	1			4										14	15	
*0320N			3	4			7								15	
*0321			3	4		6	7								15	
*0322Q			3	4			7	8							15	
*0323	1			4											15	
*0324	1			4											15	
*0325	1				5										15	
*0326	1			4											15	
*0327	1				5										15	
*0328	1			4		w									15	
*0329	1			4			7			10	11				15	16
*0330			3	4			7								15	
*0331			3	4			7				11				15	
*0332	1			4											15	
*0333	1	2											13		15	
*0334	1			4											15	
*0335	1				5										15	
*0336	1	2											13		15	
*0337	1			4											15	
*033801-033802	1			4											15	
*0339				4			7					12				
*0340	1	2		4									13		15	
*0341	1														15	
*0342	1	2		4				8					13		15	
*0343		2	3	4			7						13		15	
*0344	1			4											15	
*0345	1			4					9	10					15	16
*0346	1			4											15	
*0347	1			4											15	
*0348	1			4											15	
*0349			3	4		w	7								15	
*0350			3	4			7								15	
*0114, 06020101-060102, 060203, 0604, 0606-0610, 0612, 0613, 0615-0618, 120401, 1701-1704																16
*020201	1								9	w						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16



Lot No.: **39F**

Lot-specific Information

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90	225	105	165	210	195	90	200	295	70	80	170	250	165	210	180	Length of spec. PCR product
		260	255					345	105			285				
									265							
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
17																*0319
																*0320N
																*0321
																*0322Q
	18															*0323
		19														*0324
			20													*0325
				21												*0326
					22											*0327
						23										*0328
							24									*0329
																*0330
								25								*0331
																*0332
	19															*0333
									26							*0334
									26							*0335
									26							*0336
										27						*0337
					22			25								*033801-033802
												29				*0339
																*0340
											28					*0341
																*0342
																*0343
														31		*0344
								25								*0345
													30			*0346
			20													*0347
															32	*0348
						23										*0349
												29				*0350
																*0114, 06020101- 060102, 060203, 0604, 0606-0610, 0612, 0613, 0615- 0618, 120401, 1701- 1704 *020201
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.



Length of spec.	280	210	280	275	275	90	110	250	240	250	415	260	80	210	135	150
PCR product						215	185						140			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*020202-020203, 020205-0203, 0205- 0211, 0213, 0215- 0222, 150201- 150204, 1504-1506, 1508, 1509, 151002- 1511, 1513, 1515, 1517-1520	1								9	10						
*0204, 0214	w								w	w						
*0212	1									10						
*04010101-040104, 040401, 0405, 0407- 041502, 0417-0420, 0423-0436																
*0403, 0406, 0416	1								9	10						
*0603	1								9	10					w	16
*0614																16
*070101-070109, 0706, 0716, 0718, 0719, 0722, 0724, 0726, 0728, 0730, 0735, 0736, 0740, 0744, 0752, 0753, 0755N, 0757-0759							7									
*0707, 0709							7									16
*0710, 0743																
*0720							7									
*0756, 0760							7					12				
*1208											11					
*140201, 140203- 1411													13			
*1503, 1516	1								9	10						
*1507	1															
*1512			3						9	10		12				
*1521	1									10						
*1801-1803																16
HLA-Cw* allele ⁴																
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B*1596					5	6										
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Lot No.: **39F**

Lot-specific Information

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90	225	105	165	210	195	90	200	295	70	80	170	250	165	210	180	Length of spec. PCR product
		260	255					345	105			285				
									265							
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																*020202-020203, 020205-0203, 0205- 0211, 0213, 0215- 0222, 150201- 150204, 1504-1506, 1508, 1509, 151002- 1511, 1513, 1515, 1517-1520 *0204, 0214 *0212
					22											
											28					*04010101-040104, 040401, 0405, 0407- 041502, 0417-0420, 0423-0436
					22						28					*0403, 0406, 0416 *0603 *0614
										27						
								25								*070101-070109, 0706, 0716, 0718, 0719, 0722, 0724, 0726, 0728, 0730, 0735, 0736, 0740, 0744, 0752, 0753, 0755N, 0757-0759 *0707, 0709 *0710, 0743 *0720 *0756, 0760
								25								
					22							29				*1208 *140201, 140203- 1411 *1503, 1516 *1507 *1512 *1521 *1801-1803
											28					
					22			25								
											28					
											28					
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	HLA-Cw* allele ⁴ Well No.
									26							B*1596
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Lot No.: **39F**

Lot-specific Information

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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-Cw*03 subtyping.

In addition, Wells number 3, 6, 10, 19, 22 and 31 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 1st, 2nd or 3rd exons, 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 the 1st, 2nd or 3rd 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.

⁴The nucleotide sequence of the HLA-Cw*0301 allele has been shown to be identical to Cw*0304.

⁵Primer mix 6: Specific PCR fragment of 90 bp in the Cw*0321 and B*1596 alleles. Specific PCR fragment of 215 bp in the Cw*0306 alleles.

Primer mix 7: Specific PCR fragment of 110 bp in the Cw*0308 and 0329 and the Cw*070101-070109, 0706, 0707, 0709, 0716, 0718-0720, 0722, 0724, 0726, 0728, 0730, 0735, 0736, 0740, 0744, 0752, 0753, 0755N and 0757 to 0759 alleles. Specific PCR fragment of 185 bp in the Cw*030301-030305, 031101-0313, 0318, 0320N to 0322Q, 0330, 0339, 0343, 0349, 0350 and the 0756 alleles. Specific PCR fragments of 110 and 185 bp in the Cw*0331 and the Cw*0760 alleles.

Primer mix 13: Specific PCR fragment of 80 bp in the Cw*030201-030203, 0315, 0316, 0333, 0336, 0340, 0342 and 0343 and the Cw* 1409 alleles. Specific PCR fragment of 140 bp in the Cw*0317 allele. Specific PCR fragments of 80 and 140 bp in the 140201, 140403 to 1408, 1410 and the 1411 alleles.

Primer mix 19: Specific PCR fragment of 105 bp in the Cw*0324 allele. Specific PCR fragment of 260 bp in the Cw*0333 allele.

Primer mix 20: Specific PCR fragment of 165 bp in the Cw*0325 allele. Specific PCR fragment of 255 bp in the Cw*0347 allele.

Primer mix 25: Specific PCR fragment of 295 bp in the Cw*0332 and 0345 alleles. Specific PCR fragment of 345 bp in the Cw*033801-033802 and the Cw*1503 and 1516 alleles. Specific PCR fragments of 295 and 345 bp in the Cw*0614, 0710 and 0743 alleles.

Primer mix 26: Specific PCR fragment of 70 bp in the Cw*0334 allele. Specific PCR fragment of 105 bp in the Cw*0336 allele. Specific PCR fragment of 265 bp in the Cw*0313 and 0335 and the B*1596 alleles.

Primer mix 29: Specific PCR fragment of 250 bp in the Cw*0350 allele. Specific PCR fragment of 285 bp in the Cw*0339 and the Cw*0756 and 0760 alleles.

'w', might be weakly amplified.

CELL LINE VALIDATION SHEET					Well																
HLA-Cw*03 SSP subtyping kit																					
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				Prod. No.:	200737001	200737002	200737003	200854204	200737005	200737006	200737007	200854208	200737009	200737010	200737011	200737012	200737013	200737014	200737015	200737016	
	IHWC cell line		Cw*																		
1	9001 SA		*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707		*0701	*1505	+	-	-	-	-	-	+	-	+	+	+	-	-	-	-	-	-
3	9011 E4181324		*1202		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373		*0304	*0401	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-
5	9009 KAS011		*0602		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
6	9353 SM		*0304	*0702	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-
7	9020 QBL		*0501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9007 DEM		*0602		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
9	9026 YAR		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3		*0102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT		*1601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB		*0602		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
13	9004 JESTHOM		*0102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA		*0102	*0304	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-
15	9075 DKB		*0304		+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-
16	9037 SWEIG007		*0202		+	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-
17	9282 CTM3953540		*0303	*0701	-	-	+	+	-	-	+	-	-	-	-	-	-	-	-	+	-
18	9257 32367		*0102	*0705	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16		*0701		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005		*0304		+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-
21	9064 AMALA		*0303		-	-	+	+	-	-	+	-	-	-	-	-	-	-	-	+	-
22	9056 KOSE		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL		*0102	*1502	+	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-
24	9035 JBUSH		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9		*0802		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49		*0701		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007		*0704	*1505	+	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-
28	9320 BEL5GB		*0501	*1601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU		*1601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH		*1701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
31	9019 DUCAF		*0501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG		*1701	*1703	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
33	9098 MT14B		*0304		+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-
34	9104 DHIF		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO		*0501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17		*0303	*0401	-	-	+	+	-	-	+	-	-	-	-	-	-	-	-	+	-
37	9065 HHKB		*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL		*0303		-	-	+	+	-	-	+	-	-	-	-	-	-	-	-	+	-
39	9315 CML		*0202	*0701	+	-	-	-	-	-	+	-	+	+	-	-	-	-	-	-	-
40	9134 WHONP199		*0602		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
41	9055 H0301		*0802		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089		*0102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526		*0102	*0801	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO		*0602	*1701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
46	9013 SCHU		*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO		*0704	*1502	+	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-
48	9303 TER-ND		*0401	*1601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



CELL LINE VALIDATION SHEET																					
HLA-Cw*03 SSP subtyping kit																					
				Prod. No.:	Well																
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
					200737017	200737018	200854219	200854220	200854221	200737022	200737023	200737024	200737025	200854226	200737027	200737028	200854229	200737030	200737031	200854232	
	IHWC cell line		Cw*																		
1	9001 SA		*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707		*0701	*1505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324		*1202		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373		*0304	*0401	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
5	9009 KAS011		*0602		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353 SM		*0304	*0702	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL		*0501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9007 DEM		*0602		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3		*0102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT		*1601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB		*0602		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM		*0102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA		*0102	*0304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB		*0304		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007		*0202		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540		*0303	*0701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257 32367		*0102	*0705	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16		*0701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005		*0304		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA		*0303		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL		*0102	*1502	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9		*0802		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49		*0701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007		*0704	*1505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB		*0501	*1601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU		*1601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH		*1701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF		*0501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG		*1701	*1703	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B		*0304		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO		*0501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17		*0303	*0401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB		*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL		*0303		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML		*0202	*0701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134 WHONP199		*0602		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301		*0802		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089		*0102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526		*0102	*0801	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO		*0602	*1701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU		*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO		*0704	*1502	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303 TER-ND		*0401	*1601	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-

CERTIFICATE OF ANALYSIS

Olerup SSP[®] HLA-Cw*03 SSP

Product number: 101.611-12 – including *Taq* polymerase
Lot number: 39F
Expiry date: 2010-December-01
Number of tests: 12
Number of wells per test: 32

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2007-370-01	13	2007-370-13	25	2007-370-25
2	2007-370-02	14	2007-370-14	26	2008-542-26
3	2007-370-03	15	2007-370-15	27	2007-370-27
4	2008-542-04	16	2007-370-16	28	2007-370-28
5	2007-370-05	17	2007-370-17	29	2008-542-29
6	2007-370-06	18	2007-370-18	30	2007-370-30
7	2007-370-07	19	2008-542-19	31	2007-370-31
8	2008-542-08	20	2008-542-20	32	2008-542-32
9	2007-370-09	21	2008-542-21		
10	2007-370-10	22	2007-370-22		
11	2007-370-11	23	2007-370-23		
12	2007-370-12	24	2007-370-24		

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, 12, 14, 17 to 21, 23 to 26, 29, 31 or 32 were available. The specificities of the primers in primer solutions 8, 11, 14, 21, 23, 25, 26 and 29 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solutions 12, 17, 18, 20 and 31 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 19, 24 and 32 it was only possible to test the 5'-primer, the 3'-primer was not possible to test. In primer solutions 8 and 29 it was not possible to test one of the 5'-primers. Finally, one 5'-primer in primer solution 7 was tested by separately adding an additional 3'-primer.

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

Date of approval: 2009-November-23

Approved by:

Quality Control, Supervisor

Lot No.: **39F**

Lot-specific Information

www.olerup.com

Declaration of Conformity

Product name: *Olerup* SSP® HLA-Cw*03
Product number: 101.611-12
Lot number: 39F

Intended use: HLA-Cw*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 III, 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.

Saltsjöbaden, Sweden
2009-November-23

Olle Olerup
Managing Director

Lot No.: **39F**

Lot-specific Information

www.olerup.com

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