

Lot No.: **59G**

Lot-specific information

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Olerup SSP[®] HLA-Cw high resolution for frequent alleles

Product number: 101.707-12 – including *Taq* polymerase
Lot number: 59G
Expiry date: 2012-January-01
Number of tests: 12
Number of wells per test: 95 + 1
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. 59G.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*[®] HLA-CW HIGH RESOLUTION LOT

The specificity and interpretation tables are based on the same release of the HLA database, release 2.22.0, 2008-July-11, www.ebi.ac.uk/imgt/hla, as the previous *Olerup SSP*[®] HLA-Cw*high resolution lot (**95E**). All the HLA-Cw alleles recognized in July 2008 will be amplified by the primers in this kit

The primers of the wells detailed below have been exchanged, added or modified compared to the previous lot (**95E**).

Well	5'-primer	3'-primer	rationale
18	Modified	-	Primer modified to amplify the Cw*0328 and Cw*0349 alleles.
19	-	Added	3'-primer added for increased yield of specific PCR product.
36	Modified	-	Improved specificity of specific primer pair.
57	-	Modified	Improved specificity of specific primer pair.

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Well **96** contains Negative Control primer pairs, that will amplify more than 95% of the *Olerup SSP*[®] HLA Class I, DRB, DQB1 and DPB1 amplicons as well as the amplicons generated by control primer pairs.

PCR product sizes range from 75 to 430 base pairs.
The PCR product generated by the control primer pair is 430 base pairs.

Length of PCR product	105	200	105	80	75	80
5'-primer¹	164	340	440	45	45	43
	5'-CAC ^{3'}	5'-Agg ^{3'}	5'-TTA ^{3'}	5'-Tg g ^{3'}	5'-Tg g ^{3'}	5'-Tg g ^{3'}
3'-primer²	231	2nd I	507	59	58	57
	5'-TgC ^{3'}	5'-AAA ^{3'}	5'-TTg ^{3'}	5'-CTC ^{3'}	5'-ggC ^{3'}	5'-CTC ^{3'}
A*	+	+	+			
B*	+	+	+			
Cw*	+	+	+			
DRB1				+	+	
DRB3				+	+	
DRB5				+		
DQB1					+	
DPB1						+

¹The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2nd or 3rd exon, matching the specificity-determining 3'-end of the primer is given. Nucleotide and codon 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 for HLA class I genes and the codon for HLA class II genes, in the 2nd or 3rd exon or the 2nd intron, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide and codon numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

PRODUCT DESCRIPTION

HLA-Cw high resolution for frequent alleles SSP typing

CONTENT

The primer set contains 5'- and 3'-primers for identifying the Cw*0102 to Cw*1803 alleles and will generate unique amplification patterns and have good resolution for all frequently encountered HLA-Cw genotypes currently recognized.

PLATE LAYOUT

Each HLA-Cw high resolution for frequent alleles test consists of 96 PCR reactions in a 96 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
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88
89	90	91	92	93	94	95	96

Wells 1 to 95 - HLA-Cw high resolution primers.

Well 96 – Negative Control.

The 96 well PCR plate is marked with ‘HLA-Cw “HIGH”’ in silver/gray ink.

Well No. 1 is marked with the Lot No. ‘59G’.

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

A faint row of numbers is seen between wells 1 and 2 or wells 7 and 8 of the PCR trays. These stem from the manufacture of the trays, and should be disregarded.

INTERPRETATION

A few HLA-A and HLA-B alleles will be amplified by primer mixes 6, 8, 10, 16, 18, 19, 31, 34, 40, 43, 44, 48, 52, 59, 61, 70, 77, 79, 80 and 81 due to the sharing of sequence motifs between HLA Class I loci.

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UNIQUELY IDENTIFIED ALLELES

All the HLA-Cw alleles, i.e. **Cw*0102 to Cw*1803**, recognized by the HLA Nomenclature Committee in July 2008¹ will be amplified by the primers in the HLA-Cw high resolution for frequent alleles SSP kit and will give rise to unique amplification patterns, with the exceptions that following alleles have the same amplification patterns:

Cw*0106 and Cw*0111
Cw*0115 and Cw*0120
Cw*0116, Cw*0117, Cw*0118 and Cw*0119
Cw*0203 and Cw*0218
Cw*0204, Cw*0214 and Cw*0221
Cw*0205 and Cw*0217
Cw*0306 and Cw*0328
Cw*0309 and Cw*0323
Cw*0321 and Cw*0322Q
Cw*0337 and Cw*0346
Cw*040401 and Cw*0434
Cw*0407 and Cw*0427
Cw*0408, Cw*0409N and Cw*0430
Cw*041502 and Cw*0417
Cw*0418 and Cw*0419
Cw*0423 and Cw*0431

Cw*0424, Cw*0425 and Cw*0426
Cw*0506 and Cw*0515
Cw*0514, Cw*0516 and Cw*0519
Cw*0608 and Cw*0613
Cw*0615 and Cw*0616N
Cw*0703 and Cw*0717
Cw*0715 and Cw*0738
Cw*0722 and Cw*0735
Cw*0725 and Cw*0732N
Cw*0730 and Cw*0740
Cw*0733N and Cw*0751
Cw*0737 and Cw*0754
Cw*0747 and Cw*0748
Cw*1509 and Cw*1519
Cw*1511 and Cw*1517

¹HLA-Cw alleles listed on the IMGT/HLA web page 2008-July-11, release 2.22.0, www.ebi.ac.uk/imgt/hla.

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SPECIFICITY TABLE

HLA-Cw high resolution for frequent alleles SSP typing

Specificities and sizes of the PCR products of the 95 primer mixes used for HLA-Cw high resolution for frequent alleles SSP typing

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-Cw alleles ³	Other amplified HLA Class I alleles ⁴
1 ⁵	90 bp	800 bp	010201-010205, 0106-0111, 0113-0120, 0122	
2 ⁵	95, 215 bp	1070 bp	0105, 0405, 0737, 0754, 1408, 1606	
3 ⁶	200, 290, 360, 565 bp	1070 bp	0106, 0111, 0706, 0718, 0719, 1513	
4 ⁵	100, 200 bp	1070 bp	0107, 0610, 1609	
5 ^{5,6}	150, 210, 300 bp	1070 bp	0108, 0517, 0703, 0717, 0723, 0731, 1213, 1219	
6 ^{5,7}	105, 150, 210, 260 bp	800 bp	0104, 0109, 0115, 0120, 0324, 0333, 0705	B*9529, B*2725, B*2736
7	200 bp	1070 bp	020201-020203, 020205-0209, 0211-0222	
8 ⁵	105, 135 bp	800 bp	0203, 0218, 0220, 0607	B*2734, B*400602, B*570302^w
9 ⁵	140 bp	1070 bp	0204, 0214, 0221, 0605, 1210, 1216, 1611	
10 ^{5,6}	105, 130, 270 bp	800 bp	0207, 0746, 0806, 1610	B*5608, B*5614
11 ⁵	75, 155, 505 bp	800 bp	0208, 031101-031102, 0337, 0346, 0416, 0603, 0706, 151002	
12 ⁵	70, 280 bp	800 bp	020201-020203, 020205-0222, 030201-030203, 030401-0310, 0314-0317, 0319, 0323-0329, 0332-033802, 0340-0342, 0344-0348, 0403, 0406, 0416, 0603, 0753, 150201-1509, 151002, 1511, 1513, 1515-1521	
13	220 bp	1070 bp	030201-030203, 0314, 0315, 0333, 0336, 0340, 0342, 0343, 0412	
14	280 bp	800 bp	030301-030305, 031101-0313, 0320N-0322Q, 0330, 0331, 0343, 0349, 0350, 1512	
15	275 bp	1070 bp	030301-030407, 0306-0312,	

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			0314, 0318-0324, 0326, 0328-0332, 0334, 0337-0340, 0342-0350	
16	245, 275 bp	1070 bp	0305, 0313, 0317, 0325, 0327, 0335, 1207, 1217	B*1596
17^{5,8}	110, 185, 555 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, 0755N-0757, 120304	
18⁵	90, 185, 225, 255 bp	1070 bp	0309, 0321-0323, 0328, 0342, 0349, 0721, 0736	B*1596
19⁵	105, 265, 295, 530 bp	1070 bp	0313, 0315, 0332, 0335, 0336, 0345, 0614, 0710, 0743	B*1596
20⁷	250 bp	800 bp	0114, 020201 ^w , 020202-020203, 020205-0203, 0204 ^w , 0205-0213, 0214 ^w , 0215-0222, 0307, 0310, 0315, 0329, 0345, 0403, 0406, 0416, 0513, 0603, 150201-1506, 1508, 1509, 151002-1513, 1515-1521	
21	190, 220, 250, 285 bp	800 bp	0330, 0350, 0418, 0419, 0510, 1512	
22⁵	80, 140 bp	1070 bp	030201-030203, 0315-0317, 0333, 0336, 0340, 0342, 0343, 140201, 140203-1409	
23⁵	150, 240 bp	800 bp	0114, 0307, 0310, 0315, 0329, 0345, 0513, 06020101-06020102, 060203-0604, 0606-0610, 0612-0617, 0707, 0709, 120401, 1701-1704, 1801-1803	
24	250 bp	1070 bp	010201-0121, 020201-020203, 020205-020206, 0204-0215, 0217, 0219-0222, 04010101-040105, 0403, 0405, 0407-0412, 041501-0420, 0423-0433, 050101-050104, 0503-0510, 0512-0516, 0518, 0519, 06020101-06020102, 060203, 0603, 0605-0617, 0802, 0805, 0807, 0812, 0815, 120201-1213, 1215-1217, 1221, 140201-1405, 1407N-1409, 1508, 160401, 1801-1803	

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25	170 bp	1070 bp	0316, 0341, 04010101-040104, 0403, 040401, 0405-0420, 0423- 0434, 140201, 140203-1409, 1801-1803	
26⁵	145, 170 bp	800 bp	0209, 0407, 0427	
27^{5,8}	135, 170, 225 bp	1070 bp	0408, 0409N, 0430, 1515	
28	200 bp	800 bp	0413, 0708	
29⁵	130, 190, 290 bp	800 bp	0215, 0305, 0325, 0327, 041501, 0714, 1409	
30	155 bp	1070 bp	050101-050104, 0503-0508, 0510, 0511, 0513-0516, 0519, 0741, 0802, 0804, 0805, 0807, 0812, 0813	
31⁵	150, 285 bp	800 bp	0113, 0509, 0517, 0745, 0815, 1212	B*1533, B*350802
32⁵	120, 180, 210 bp	1070 bp	0348, 0503, 0752, 1607	
33	225 bp	1070 bp	0504, 0809, 0811	
34	220, 275 bp	1070 bp	0410, 0411, 0505, 0507N, 0808	A*2910
35	265 bp	1070 bp	050101-050104, 0503, 0504, 0506-0508, 0510-0516, 0518, 0519, 070401-070402, 0711, 0712, 0741, 080101-0814, 0816	
36⁵	90, 120, 160, 210 bp	1070 bp	0306, 0325, 0326, 0328, 0349, 0506, 0515, 0805	
37⁵	80, 130, 195, 235, 280 bp	800 bp	0514, 0516, 0519, 070401- 070402, 0711, 0750, 0807, 0812	
38	250 bp	800 bp	0315, 0332, 0345, 0403, 0406, 0416, 0720	
39	240 bp	1070 bp	0339, 06020101-06020102, 060203, 0604-0616N, 1216	
40⁶	250 bp	1070 bp	0122, 0203, 0213, 0216, 0218, 040401-040402, 0406, 0413, 0434, 0511, 0517, 0604, 080101- 080102, 0803, 0804, 0806, 0808- 0811, 0813, 0814, 0816, 1214, 1218, 1220, 1406, 150201-1507, 1509-1513, 1515-1521, 160401, 1701-1704	B*5802
41	165 bp	1070 bp	050101-050104, 0503-0519, 0605, 0810, 1221	

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42	250 bp	1070 bp	010201-0103, 0105-0108, 0110-0120, 0213, 04010101-040105, 0403, 0405, 0407-0412, 041501-0420, 0423-0433, 050101-050104, 0503-0507N, 0509, 0510, 0512-0516, 0518, 0519, 0605, 0606, 0802, 0805, 0807, 0812, 0815, 1209, 140201-1405, 1407N-1409, 1508, 160401, 1801, 1802	
43⁵	100, 155, 240 bp	1070 bp	0110, 0121, 0205, 0217, 031101-031102, 0339, 0605, 0608, 0613, 0756, 0814, 1216	B*6702
44^{5,6,9}	90, 135, 160 bp	1070 bp	0222, 0320N, 0414, 0508, 0609, 1608, 1704, 1803	B*9537
45^{5,6}	140, 255 bp	1070 bp	0347, 0611, 070401-070402, 0711, 0712, 0745, 1211	
46	290 bp	800 bp	0517, 070101-070104, 070106-070109, 0705-0707, 0709, 0714, 0716, 0718, 0720-0722, 0724, 0726-0728, 0730, 0731, 0735, 0736, 0740, 0743, 0744, 0752, 0753, 0755N	
47⁵	110 bp	800 bp	070101-070109, 0706, 0709, 0718-0722, 0724, 0726, 0728, 0730, 0735, 0736, 0740, 0744, 0752, 0753, 0755N, 0757	
48	185 bp	1070 bp	07020101-070202, 0710, 0713, 0715, 0719, 0723, 0725, 0729, 0732N, 0733N, 0737-0739, 0742, 0746-0751, 0754, 0756	B*4060
49⁵	85, 130, 170, 250 bp	1070 bp	0424-0426, 0742, 0744	
50	240, 425 bp	1070 bp	0617, 0707, 0709, 0729, 0749, 1801-1803	
51	240, 275 bp	1070 bp	0116-0119, 0121, 0724	
52⁵	130 bp	1070 bp	050101-050104, 0503-0508, 0510-0516, 0518, 0519, 0712, 0741, 080101-0806, 0808-0814, 0816	A*2910
53⁵	80, 115, 265 bp	1070 bp	0512, 0711, 0813, 0816	
54	395 bp	1070 bp	0617, 07020101-0705, 0708, 0710-0715, 0717, 0723, 0725, 072701-072702, 0729, 0731-0733N, 0737-0739, 0741-0743, 0745-0751, 0754, 0756, 1801-	

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			1803	
55	165, 220, 340, 465 bp	800 bp	0112, 0121, 0411, 0433, 0707, 0716, 0726, 0733N, 0751	
56⁵	100, 125, 250 bp	800 bp	0722, 0725, 0732N, 0735	
57⁶	155 bp	1070 bp	0512, 0518, 080101-080102, 0803, 0806, 0808-0811, 0814, 0816	
58⁵	110 bp	1070 bp	0803, 0806, 0814	
59⁵	110, 150, 230, 275 bp	1070 bp	0211, 0334, 0432, 0715, 0738, 0809, 1407N, 1803	B*4060
60⁵	105 bp	1070 bp	050101-050104, 0503-0507N, 0510, 0512-0516, 0518, 0519, 0741, 0802, 0805, 0807, 0812	
61⁶	235 bp	800 bp	0212, 0315, 0327, 033801-033802, 0403, 0406, 0416, 0603, 0726, 0805, 120201-120402, 1206-1208, 1210-1215, 1217-1220, 1503, 1516, 1701-1704	B*0713, B*0715, B*6702
62⁵	100 bp	800 bp	0104, 0121, 120201-120203, 1208, 1210, 1216-1218	
63	220 bp	800 bp	0104, 0109, 0205, 0217, 06020101-06020102, 060203, 0603, 0607-0613, 0615-0617, 12030101-1207, 1211-1213, 1215, 160401	
64^{5,8}	130 bp	1070 bp	020201-020203, 020205-0211, 0213-0222, 0410, 0411, 050101-050104, 0503-0519, 0605, 080101-0804, 0806-0816, 1205, 1209, 1221, 140203, 1403, 1408, 150201-150204, 1504-1513, 1515, 1517-1521, 160101, 160103, 1602, 160401, 1606-1611	
65⁵	150, 190, 415 bp	1070 bp	0308, 0329, 0331, 0428, 1206, 1208	
66	155 bp	1070 bp	12030101-12030102, 120303-120306, 120402-1207, 1211-1213, 1215, 1220	
67⁵	145 bp	800 bp	140201-140202, 140204, 1404-1407N, 1409	
68⁵	145 bp	800 bp	04010101-040105, 040401-0405, 0407-041502, 0417-0420, 0423-0434, 140203, 1403, 1408	
69	245 bp	800 bp	04010101-040105, 040401-0405,	

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			0407-0410, 0412-041502, 0417-0420, 0423-0428, 0430-0434, 1404	
70	210 bp	800 bp	04010101-040105, 0403, 0405, 0407-0412, 0416, 0418-0420, 0423-0433, 140201-1404, 1407N, 1408, 1801, 1802	B*1584
71⁵	130 bp	1070 bp	030201-030407, 0306-0313, 0315-0324, 0326, 0328-0350, 041501-041502, 0417, 1405, 1409	
72^{5,8}	110 bp	1070 bp	020201-020203, 020205-0207, 0209-0222, 0403, 0406, 0416, 1403, 150201-1509, 1511-1513, 1515-1521	
73	210, 330 bp	1070 bp	0206, 0612, 1215, 150201-1503, 150501-1513, 1515-1521	
74⁵	90, 175 bp	1070 bp	0103, 0308, 0329, 0331, 0720, 150201-1509, 1512, 1513, 1515, 1518, 1519, 1521	
75⁵	145, 195 bp	1070 bp	0212, 0315, 0327, 033801-033802, 0403, 0406, 0416, 0720, 0757, 1503, 1516	
76	320 bp	800 bp	0104, 0121, 020201-020203, 020205-0205, 0208-0218, 0220, 0221, 030201-030203, 0314-0316, 0333, 0336, 0340, 0342, 0343, 0504, 06020101-06020102, 060203-0608, 0610-0617, 070101-0703, 0705-0710, 0714-072702, 0730-0733N, 0735-0740, 0742-0744, 0746-0757, 0809, 0811, 120201-1214, 1216-1221, 140201-1409, 1504, 1509, 1518-1520, 160101-1602, 160401, 1606-1609, 1611	
77^{5,8}	100 bp	800 bp	150501-150504	B*4036^w, B*4086^w, B*4807^w
78	210, 240, 315, 360 bp	1070 bp	010201-010205, 0105-0120, 0122, 0219, 030301-031102, 0313, 0317, 0318, 0320N-0325, 0327-0332, 0334, 0335, 0337-0339, 0341, 0344-0350, 0612, 0615, 0616N, 0729, 1506, 1518	
79⁵	140 bp	1070 bp	0121, 0212, 0411, 0429, 080101-0809, 0811-0816, 120201-	B*350802, B*6702

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			120303, 120305-120306, 1206-1208, 1210-1220, 140203, 1403, 1408, 1507, 1521, 160101, 160103, 160401, 1606-1608, 1610, 1611	
80^{5,7}	70, 160, 210 bp	800 bp	0206, 0312, 0319, 0334, 0344, 1215, 1508	B*1318^w, B*1573^w, B*5410^w, B*5509^w, B*5521^w
81	435 bp	1070 bp	0206, 0312, 0319, 1215, 1511, 1516, 1517	B*4611, B*5608, B*5614
82⁸	165 bp	1070 bp	0208, 0318, 04010101-040105, 040401-0405, 0407-041502, 0417-0420, 0423-0434, 050101-050104, 0503-0519, 080101-0813, 0815, 0816, 120201-1215, 1217-1221, 140201-140204, 1404-1409, 151001-151002, 160101-1602, 160401, 1606-1611, 1701-1704	
83	240, 315, 360 bp	800 bp	0206, 0312, 0319, 0615, 0616N, 1215, 150201-1503, 1507, 1508, 151001-1513, 1515-1518, 1521	
84	205 bp	800 bp	160101-1602, 160401, 1608-1611	
85	340 bp	1070 bp	0114, 020201-020203, 020205-0211, 0213-0222, 0307, 0315, 0345, 04010101-040105, 0403-0410, 0412-0420, 0423-0428, 0430-0434, 050101-050104, 0503-0519, 06020101-06020102, 060203-0610, 0612-0617, 0707, 0709, 0749, 0810, 120401-1205, 1209, 1221, 1404, 150201-1506, 1508-1513, 1515-1520, 1602, 1609, 1701-1704, 1801-1803	
86⁵	150, 415 bp	1070 bp	0730, 0739, 0740	
87	160 bp	1070 bp	0753, 160101-1602, 1606-1609, 1611	
88⁵	85, 195 bp	1070 bp	0423, 0431	
89	345 bp	800 bp	010201-0120, 0122, 030201-0350, 06020101-06020102, 060203-0604, 0606-0616N, 120304, 120401, 140201-	

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			140202, 140204, 1404-1407N, 1409, 160102, 1702, 1704 [?]
90	350 bp	800 bp	1701, 1703, 1704 [?]
91⁵	70, 170, 240, 270 bp	800 bp	0517, 0713, 0728, 0747, 0748, 0755N, 1702, 1704 [?]
92⁹	155, 300 bp	1070 bp	0420, 1703, 1704 [?]
93^{5,8,9}	90, 210 bp	1070 bp	1406, 1701, 1704 [?]
94	560 bp	1070 bp	070101-0733N, 0735-0757, 1801, 1803 [?]
95	220 bp	1070 bp	04010101-040105, 0403-0420, 0423-0434, 1802, 1803 [?]
96¹⁰	-	-	Negative Control

¹ Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-Cw high resolution for frequent alleles SSP typings. When the primers in a primer mix can give rise to specific PCR products of more than one length this is indicated if the size difference is 20 base pairs or more. Size differences shorter than 20 base pairs are not given. For high resolution SSP kits the respective lengths of the specific PCR product(s) of the alleles amplified by these primer mixes are given.

Nonspecific amplifications, i.e. a ladder or a smear of bands, may sometimes be seen. GC-rich primers have a higher tendency of giving rise to nonspecific amplifications than other primers.

PCR fragments longer than the control bands may sometimes be observed. Such bands should be disregarded and do not influence the interpretation of the SSP typings.

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

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

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

Well numbers 1, 6, 8, 10 to 12, 14, 20, 21, 23, 26, 28, 29, 31, 37, 38, 46, 47, 55, 56, 61 to 63, 67 to 70, 76, 77, 80, 83, 84 and 89 to 91 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the orientation and identification of the HLA-Cw high resolution for frequent alleles SSP typing.

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

³ The Cw*0101, Cw*0201, Cw*020204, Cw*0301, Cw*0402, Cw*0421, Cw*0422, Cw*0502, Cw*0601, Cw*060202, Cw*0734, Cw*1101, Cw*1201, Cw*1301, Cw*1401, Cw*1501, Cw*1514, Cw*1603, Cw*16042 and Cw*1605 alleles have deleted or renamed.

⁴ A few HLA-A and HLA-B alleles will be amplified by primer mixes 6, 8, 10, 16, 18, 19, 31, 34, 40, 43, 44, 48, 52, 59, 61, 70, 77, 79, 80 and 81 due to the sharing of sequence motifs between HLA Class I loci.

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

⁶ Primer mixes 3, 5, 10, 40, 44, 45, 57 and 61 have a tendency of giving rise to non-specific amplifications.

⁷ Primer mixes 6, 20 and 80 have a tendency of giving rise to primer oligomer formation.

⁸ Primer mixes 17, 27, 64, 72, 77, 82 and 93 may give rise to less specific PCR product than the other HLA-Cw high resolution primer mixes.

⁹ Primer mixes 44, 92 and 93 may give rise to a long unspecific amplification product. This band should be disregarded when interpreting the typing results.

¹⁰ Primer mix 96 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by control primer pairs. PCR product sizes range from 75 to 200 base pairs. The PCR product generated by the control primer pair is 430 base pairs.

'w', might be weakly amplified.

'?', nucleotide sequence information not available for the primer matching sequence.

Lot No.: **59G**

Lot-specific information

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Well No.									1 1 1 1 1 1 1 1								1 1 1 2 2 2 2 2 2 2 2 2 3 3 3 3								3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4													
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
*030401-030407										+	+																											
*0305										+	+	+																										
*0306										+	+	+																										
*0307										+	+	+																										
*0308										+	+	+																										
*0309										+	+	+																										
*0310										+	+	+																										
*031101-031102										+	+	+																										
*0312										+	+	+																										
*0313										+	+	+																										
*0314										+	+	+																										
*0315										+	+	+																										
*0316										+	+	+																										
*0317										+	+	+																										
*0318										+	+	+																										
*0319										+	+	+																										
*0320N										+	+	+																										
*0321, 0322Q										+	+	+																										
*0323										+	+	+																										
*0324										+	+	+																										
*0325										+	+	+																										
*0326										+	+	+																										
*0327										+	+	+																										
*0328										+	+	+																										
*0329										+	+	+																										
*0330, 0350										+	+	+																										
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*0332										+	+	+																										
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*033801-033802										+	+	+																										
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*0340										+	+	+																										
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*0342										+	+	+																										
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*0345										+	+	+																										
*0347										+	+	+																										
*0348										+	+	+																										
*0349										+	+	+																										
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*0403										+	+	+																										
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*040402										+	+	+																										
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*0407, 0427										+	+	+																										
*0408, 0409N, 0430										+	+	+																										
*0410										+	+	+																										
*0411										+	+	+																										
*0412										+	+	+																										
*0413										+	+	+																										
*0414										+	+	+																										



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Lot-specific information

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4 5 5 5 5 5 5						5 5 5 6 6 6 6				6 6 6 6 7 7 7				7 7 7 7 7 7 8				8 8 8 8 8 8 8				8 9 9 9 9 9 9						Well No.
9 0 1 2 3 4 5 6						7 8 9 0 1 2 3 4				5 6 7 8 9 0 1 2				3 4 5 6 7 8 9 0				1 2 3 4 5 6 7 8				9 0 1 2 3 4 5 6						
																								*030401-030407				
																								*0305				
																								*0306				
																								*0307				
																								*0308				
																								*0309				
																								*0310				
																								*031101-031102				
																								*0312				
																								*0313				
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																								*0315				
																								*0316				
																								*0317				
																								*0318				
																								*0319				
																								*0320N				
																								*0321, 0322Q				
																								*0323				
																								*0324				
																								*0325				
																								*0326				
																								*0327				
																								*0328				
																								*0329				
																								*0330, 0350				
																								*0331				
																								*0332				
																								*0333				
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																								*0336				
																								*0337, 0346				
																								*033801-033802				
																								*0339				
																								*0340				
																								*0341				
																								*0342				
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																								*0347				
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																								*0403				
																								*040401, 0434				
																								*040402				
																								*0405				
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																								*0407, 0427				
																								*0408, 0409N, 0430				
																								*0410				
																								*0411				
																								*0412				
																								*0413				
																								*0414				



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Lot-specific information

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4 5 5 5 5 5 5 5	5 5 5 6 6 6 6 6	6 6 6 6 6 7 7 7	7 7 7 7 7 7 7 8	8 8 8 8 8 8 8 8	8 9 9 9 9 9 9 9	Well No.
9 0 1 2 3 4 5 6	7 8 9 0 1 2 3 4	5 6 7 8 9 0 1 2	3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8	9 0 1 2 3 4 5 6	
		+	+	+		*041501
		+	+	+		*041502
		+		+		*0416
		+	+			*0417
		+		+		*0418, 0419
		+		+		*0420
		+		+		*0423, 0431
		+		+		*0424-0426
		+		+		*0428
		+		+		*0429
		+		+		*0432
		+		+		*0433
						*050101-050104
						*0503
						*0504
						*0505
						*0506
						*0507N
						*0508
						*0509
						*0510
						*0511
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						*0513
						*0514, 0516, 0519
						*0515
						*0517
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						*06020101-060203
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						*0604
						*0605
						*0606
						*0607
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						*0609
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						*0614
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						*0617
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						*070105
						*07020101-070202
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						*070401-070402
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						*0706
						*0707
						*0708
						*0709
						*0710
						*0711
						*0712
						*0713
						*0714



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4 5 5 5 5 5 5				5 5 5 6 6 6 6				6 6 6 6 6 7 7 7				7 7 7 7 7 7 7 8				8 8 8 8 8 8 8 8				8 9 9 9 9 9 9 9				Well No.
9 0 1 2 3 4 5 6				7 8 9 0 1 2 3 4				5 6 7 8 9 0 1 2				3 4 5 6 7 8 9 0				1 2 3 4 5 6 7 8				9 0 1 2 3 4 5 6				
																								*0715
						+																		*0716
																								*0718
																								*0719
																								*0720
																								*0721
																								*0722
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																								*0725, 0732N
																								*0726
																								*072701-072702
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																								*0733N, 0751
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																								*0736
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																								*12030101-12030102, 120303, 120305, 120306
																								*120302
4 5 5 5 5 5 5				5 5 5 6 6 6 6				6 6 6 6 6 7 7 7				7 7 7 7 7 7 7 8				8 8 8 8 8 8 8 8				8 9 9 9 9 9 9 9				Well No.
9 0 1 2 3 4 5 6				7 8 9 0 1 2 3 4				5 6 7 8 9 0 1 2				3 4 5 6 7 8 9 0				1 2 3 4 5 6 7 8				9 0 1 2 3 4 5 6				

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Well No.	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4
Cw allele ²	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8							
*1701																																													
*1702																																													
*1703																																													
*1704																																													
*1801																																													
*1802																																													
*1803																																													
A*2910																																													
B*0713, 0715																																													
B*1318, 1573																																													
B*1533																																													
B*1584																																													
B*1596																																													
B*2725, 2736																																													
B*2734, 400602																																													
B*350802																																													
B*4036, 4086, 4807																																													
B*4060																																													
B*4611																																													
B*5410, 5509, 5521																																													
B*5608, 5614																																													
B*570302																																													
B*5802																																													
B*6702																																													
B*9529																																													
B*9537																																													

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 1, 6, 8, 10 to 12, 14, 20, 21, 23, 26, 28, 29, 31, 37, 38, 46, 47, 55, 56, 61 to 63, 67 to 70, 76, 77, 80, 83, 84 and 89 to 91 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the orientation and identification of the HLA-Cw high resolution for frequent alleles SSP typing.

²The Cw*0101, Cw*0201, Cw*020204, Cw*0301, Cw*0402, Cw*0421, Cw*0422, Cw*0502, Cw*0601, Cw*060202, Cw*0734, Cw*1101, Cw*1201, Cw*1301, Cw*1401, Cw*1501, Cw*1514, Cw*1603, Cw*16042 and Cw*1605 alleles have deleted or renamed.

³Primer mix 96 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by control primer pairs. PCR product sizes range from 75 to 200 base pairs. The PCR product generated by the control primer pair is 430 base pairs.

'w', might be weakly amplified.

'?', nucleotide sequence information not available for the primer matching sequence.



Lot No.: 59G

Lot-specific information

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Well No.																																												
4 5 5 5 5 5 5					5 5 5 6 6 6 6				6 6 6 6 6 7 7 7				7 7 7 7 7 7 8				8 8 8 8 8 8 8				8 9 9 9 9 9 9																							
9 0 1 2 3 4 5 6					7 8 9 0 1 2 3 4				5 6 7 8 9 0 1 2				3 4 5 6 7 8 9 0				1 2 3 4 5 6 7 8				9 0 1 2 3 4 5 6																							
																	+				+				+					*1701														
																	+				+				+					*1702														
																	+				+				+					*1703														
																	+				+				??					*1704														
+																					+				+				+					*1801										
+																					+				+				+					*1802										
+																					+				+				??					*1803										
Well No.																																												
Cw allele ²																																												
+																																		A*2910										
																																		B*0713, 0715										
																																		B*1318, 1573										
																																		B*1533										
																																		B*1584										
																																		B*1596										
																																		B*2725, 2736										
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																																		B*4036, 4086, 4807										
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																																		B*5608, 5614										
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																																		B*5802										
																																		B*6702										
																																		B*9529										
																																		B*9537										
Well No.																																												

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Lot-specific information

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Primer Table

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
5'-primer(s)¹	368	98	368	142	361	105	703	232	92	206	105	105
	5'-g Tg 3'	5'-C TC 3'	5'-g Tg 3'	5'-TC C 3'	5'-Ag T 3'	5'-gCT 3'	5'-CT A 3'	5'-Ag A 3'	5'-g Tg 3'	5'-A gA 3'	5'-gCT 3'	5'-gCT 3'
		356	757	244	504	363		486	97	2nd I	992	512
		5'-C CC 3'	5'-CC C 3'	5'-Cg C 3'	5'-CAC 3'	5'-AAT 3'		5'-ACA 3'	5'-TC g 3'	5'-C CA 3'	5'-T AA 3'	5'-g TT 3'
		368	956	406	512	368			113			
		5'-g TC 3'	5'-g gT 3'	5'-gC A 3'	5'-g Tg 3'	5'-g Tg 3'			5'-C CA 3'			
									368			
									5'-g TT 3'			
3'-primer(s)²	419	154	527	302	473	167	861	302	201	270	134	343
	5'-Cg T 3'	5'-CAg 3'	5'-CC A 3'	5'-gg T 3'	5'-CA A 3'	5'-AC C 3'	5'-T Cg 3'	5'-gg T 3'	5'-C TT 3'	5'-T AC 3'	5'-Ag C 3'	5'-C 3'
		427	619	559	523	323		538	477	418	142	539
		5'-gTg 3'	5'-TTT 3'	5'-CgT 3'	5'-ACA 3'	5'-Ag C 3'		5'-CAg 3'	5'-g CA 3'	5'-gTC 3'	5'-T gA 3'	5'-TC T 3'
		538	956		538	479		578		559	218	
		5'-CCg 3'	5'-CA g 3'		5'-gCA 3'	5'-CC A 3'		5'-Tg T 3'		5'-Cg C 3'	5'-gC T 3'	
		539	1043		618	512					231	
		5'-TC T 3'	5'-CA A 3'		5'-C T 3'	5'-CC A 3'					5'-C 3'	
						538					1016	
						5'-CCA 3'					5'-CA C 3'	
						595						
						5'-CC T 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	112	105	355	98	201	122	341	89	133	361	115	2nd I
	5'-CC T 3'	5'-gCT 3'	5'-TC A 3'	5'-C TA 3'	5'-CCg 3'	5'-C CA 3'	5'-g gA 3'	5'-g AA 3'	5'-CC T 3'	5'-Ag T 3'	5'-gg A 3'	5'-C CA 3'
	419			355		199	363	105	201	419	201	
	5'-g TC 3'			5'-CC C 3'		5'-gT T 3'	5'-Agg 3'	5'-gCT 3'	5'-CCA 3'	5'-g TC 3'	5'-CCg 3'	
						374	527	115	355			
						5'-C TA 3'	5'-T gT 3'	5'-gg A 3'	5'-TC A 3'			
						379			368			
						5'-AC C 3'			5'-g TT 3'			
						406						
						5'-gC A 3'						
						539						
						5'-g Tg 3'						
3'-primer(s)²	295	343	589	295	270	341	353	312	343	459	312	539
	5'-TCC 3'	5'-T 3'	5'-CTT 3'	5'-TCC 3'	5'-T Ag 3'	5'-Cg T 3'	5'-T gA 3'	5'-A gT 3'	5'-T 3'	5'-A gA 3'	5'-A gT 3'	5'-TC C 3'
	589		589	301	343	589	589		514			
	5'-CTT 3'		5'-CTT 3'	5'-gCC 3'	5'-T 3'	5'-CTT 3'	5'-CTT 3'		5'-CTT 3'			
			589	474					550			
			5'-CTT 3'	5'-g CA 3'					5'-CA T 3'			
									601			
									5'-CTT 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	459	112	560	368	369	485	201	105	419	112	379	176
	5'-gAT 3'	5'-CC T 3'	5'-C CT 3'	5'-g TT 3'	5'-TAC 3'	5'-C AA 3'	5'-CCA 3'	5'-gCT 3'	5'-g TC 3'	5'-CC T 3'	5'-AC C 3'	5'-g CA 3'
		486	1018				355	369		355		413
		5'-ACA 3'	5'-gTg 3'				5'-CC T 3'	5'-TAC 3'		5'-C C 3'		5'-T gT 3'
							485	3rd I		363		420
							5'-C AA 3'	5'-TgT 3'		5'-AgC 3'		5'-TTC 3'
										379		467
										5'-AC g 3'		5'-C TT 3'
												539
												5'-g Cg 3'
3'-primer(s)²	589	218	3rd I	527	459	601	299	242	601	289	601	221
	5'-CTC 3'	5'-gC g 3'	5'-AC g 3'	5'-CC g 3'	5'-A gA 3'	5'-CTT 3'	5'-TC T 3'	5'-CC A 3'	5'-CTT 3'	5'-AgT 3'	5'-CTT 3'	5'-AC C 3'
		613	3rd I		518		601	539		601		256
		5'-gCA 3'	5'-gg A 3'		5'-CC A 3'		5'-CTC 3'	5'-TC T 3'		5'-CTT 3'		5'-CCA 3'
			1052		616			668				289
			5'-Tg g 3'		5'-Tg T 3'			5'-Tg A 3'				5'-AgC 3'
			1092									589
			5'-T TA 3'									5'-CTT 3'
Well No.	25	26	27	28	29	30	31	32	33	34	35	36



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Well No.	37	38	39	40	41	42	43	44	45	46	47	48
5'-primer(s)¹	361	134	28	2nd I	176	2nd I	142	19	86	368	270	368
	5'-Ag T 3' 406	5'-C CA 3'	5'-TC A 3'	5'-C CA 3'	5'-g CA 3'	5'-C CA 3'	5'-TC T 3' 361	5'-CC T 3' 126	5'-C AA 3' 213	5'-g TA 3'	5'-AAC 3'	5'-g TC 3'
	5'-gC C 3' 446						5'-Ag T 3'	5'-ggA 3' 412	5'-CCC 3' 368			
	5'-C gT 3' 512							5'-AT A 3'	5'-g TC 3'			
	5'-g TT 3' 1049											
	5'-C 3'											
3'-primer(s)²	601	341	97	527	302	527	201	70	302	618	341	512
	5'-CTT 3' 1087	5'-Cg T 3'	5'-gTC 3'	5'-CC g 3' 539	5'-gg T 3'	5'-CC g 3'	5'-C TT 3' 343	5'-gg C 3' 220	5'-gg C 3' 474	5'-C T 3'	5'-Cg T 3'	5'-CC A 3'
	5'-Ag T 3'			5'-TC A 3'		5'-CCg 3'	5'-T 3' 475	5'-Cg A 3' 239	5'-g CA 3'			
							5'-ggT 3' 559	5'-gC g 3' 538				
							5'-CTC 3'	5'-CCA 3' 539				
								5'-TC T 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	89	47	89	512	1st I	47	47	410	486	527	368	539
	5'-g AT 3' 127	5'-A gg 3' 419	5'-g AA 3' 385	5'-g Tg 3'	5'-Cg A 3' 453	5'-A gg 3'	5'-A gg 3' 218	5'-g Tg 3' 524	5'-ACg 3'	5'-T AC 3'	5'-g TC 3' 449	5'-g Cg 3'
	5'-gg A 3' 172	5'-g TA 3'	5'-gg T 3'		5'-AAT 3' 1049		5'-g gA 3' 368	5'-C CA 3' 539			5'-C CA 3' 459	
	5'-TC C 3' 410				5'-g 3'		5'-g TA 3'	5'-g Tg 3' 560			5'-gAT 3' 527	
	5'-g TT 3' 486							5'-C AC 3'			5'-T AC 3'	
	5'-TAC 3'											
3'-primer(s)²	218	302	278	601	175	270	90	618	601	595	559	601
	5'-gC T 3' 618	5'-gg T 3' 618	5'-g gT 3' 287	5'-CTT 3'	5'-CC g 3' 527	5'-T AC 3'	5'-Ag 3' 97	5'-C T 3'	5'-CTT 3'	5'-CCT 3'	5'-CTC 3' 585	5'-CTT 3'
	5'-C T 3'	5'-C T 3'	5'-TCg 3' 289		5'-CC A 3'		5'-gTA 3' 341				5'-AgT 3' 598	
			5'-AgC 3' 301		5'-AgC 3'		5'-Cg g 3' 3rd I				5'-CTC 3' 603	
			5'-gC A 3' 618				5'-AT g 3'				5'-T Tg 3'	
			5'-C T 3'									
Well No.	49	50	51	52	53	54	55	56	57	58	59	60

Well No.	61	62	63	64	65	66	67	68	69	70	71	72
5'-primer(s)¹	98	419	361	201	28	361	98	98	98	368	368	134
	5'-C TA 3'	5'-g TC 3'	5'-Ag T 3'	5'-CCA 3'	5'-TC A 3' 431	5'-Ag T 3'	5'-C TC 3'	5'-C TC 3'	5'-C TC 3'	5'-g TT 3'	5'-g TA 3'	5'-C CA 3'
					5'-C gT 3' 697							
					5'-TC C 3'							
3'-primer(s)²	289	477	538	289	270	474	201	201	302	538	459	201
	5'-AgC 3' 295	5'-g CA 3'	5'-CCA 3'	5'-AgT 3'	5'-T Ag 3' 538	5'-g CA 3'	5'-C TC 3'	5'-C TT 3'	5'-gg T 3'	5'-CCg 3'	5'-A gA 3'	5'-C TT 3'
	5'-TCC 3'				5'-CCA 3' 846							
					5'-CAC 3'							
Well No.	61	62	63	64	65	66	67	68	69	70	71	72

Lot No.: **59G**

Lot-specific information

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Well No.	73	74	75	76	77	78	79	80	81	82	83	84
5'-primer(s)¹	409	134	134	419	420	376	201	420	270	1st I	376	361
	5'-gg C 3' 529	5'-C CA 3' 368	5'-C CA 3' 512	5'-g TC 3' 430	5'-TTC 3'	5'-gC T 3' 419	5'-CCA 3'	5'-TTA 3' 421	5'-AAg 3'	5'-Cg A 3'	5'-gC T 3' 420	5'-Ag T 3'
	5'-Ag A 3'	5'-g Tg 3'	5'-g TT 3'	5'-AC C 3'		5'-g TA 3' 430		5'-AC C 3' 560			5'-TTA 3' 501	
						5'-AC C 3' 501		5'-C gA 3'			5'-..C 3'	
						5'-..C 3' 529						
						5'-Ag A 3'						
3'-primer(s)²	3rd I	270	289	3rd I	477	3rd I	302	539	420	134	3rd I	527
	5'-CT C 3'	5'-T Ag 3'	5'-AgC 3'	5'-CT C 3'	5'-g Cg 3'	5'-CT C 3'	5'-gg C 3'	5'-TC C 3'	5'-g CT 3'	5'-Ag C 3'	5'-CT C 3'	5'-CC g 3'
		419	616					589				
		5'-Cg A 3'	5'-CgT 3'					5'-CTT 3'				
Well No.	73	74	75	76	77	78	79	80	81	82	83	84

Well No.	85	86	87	88	89	90	91	92	93	94	95
5'-primer(s)¹	1st I	47	419	368	28	20	28	70	20	956	895
	5'-Cg A 3'	5'-A gg 3'	5'-g TC 3'	5'-g TT 3'	5'-TC A 3'	5'-C CA 3'	5'-TC A 3'	5'-gg A 3'	5'-C CA 3'	5'-g gT 3'	5'-gg A 3'
		419					390	347	368		
		5'-g TC 3'					5'-gAA 3'	5'-g TA 3'	5'-g TT 3'		
							411				
							5'-TAg 3'				
							419				
							5'-g TT 3'				
							490				
							5'-Cg A 3'				
3'-primer(s)²	302	289	539	412	201	201	59	201	70	1034	956
	5'-gg T 3'	5'-AgT 3'	5'-TC T 3'	5'-gTC 3'	5'-C TC 3'	5'-C TC 3'	5'-Cg A 3'	5'-C TC 3'	5'-gg C 3'	5'-Ag C 3'	5'-CA g 3'
		527		521			618	459	539		
		5'-CC C 3'		5'-g gA 3'			5'-C T 3'	5'-A gA 3'	5'-TC A 3'		
Well No.	85	86	87	88	89	90	91	92	93	94	95

¹The nucleotide position, in the 1st, 2nd, 3rd, 4th, 5th, 6th or 7th exon or the 1st, 2nd or 3rd intron, matching the specificity-determining 3'-end of the 5'-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, 4th, 5th, 6th or 7th exon or the 3rd intron, matching the specificity-determining 3'-end of the 3'-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.

Lot No.: **59G**

Lot-specific information

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CELL LINE VALIDATION SHEET																				
HLA-Cw high resolution SSP primer set																				
				Well																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				Prod. No.:	2008-491-01	2008-497-02	2008-497-03	2008-497-04	2008-497-05	2008-497-06	2008-497-07	2008-497-08	2008-497-09	2008-497-10	2009-668-11	2008-497-12	2008-497-13	2009-668-14	2008-497-15	2009-668-16
IHWCell 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	9025	DEU	*0401		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	*0102	*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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Lot No.: **59G**

Lot-specific information

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CELL LINE VALIDATION SHEET																				
HLA-Cw high resolution SSP primer set																				
				Well																
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
				Prod. No.:	2008-497-17	2008-497-18	2009-668-19	2008-497-20	2008-497-21	2008-497-22	2008-497-23	2008-497-24	2008-497-25	2009-668-26	2008-497-27	2008-497-28	2008-497-29	2008-497-30	2008-497-31	2008-497-32
IHCW 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	9025	DEU	*0401	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-
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	*0102 *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	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-



Lot No.: **59G**

Lot-specific information

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CELL LINE VALIDATION SHEET					Well															
HLA-Cw high resolution SSP primer set					33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
				Prod. No.:	2009-668-33	2008-497-34	2008-497-35	2009-668-36	2008-497-37	2008-497-38	2008-497-39	2008-497-40	2008-497-41	2009-668-42	2008-497-43	2009-668-44	2008-497-45	2008-497-46	2008-497-47	2008-497-48
	IHCW 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	9025 DEU		*0401		-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
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		*0102	*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	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-



Lot No.: **59G**

Lot-specific information

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CELL LINE VALIDATION SHEET																			
HLA-Cw high resolution SSP primer set																			
			Prod. No.:	Well															
				49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
	IHWC cell line	Cw*		2008-497-49	2008-497-50	2008-497-51	2008-497-52	2008-497-53	2008-497-54	2008-497-55	2008-497-56	2009-668-57	2008-497-58	2008-497-59	2008-497-60	2008-497-61	2008-497-62	2008-497-63	2008-497-64
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	9025 DEU	*0401		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	*0102	*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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+



Lot No.: **59G**

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CELL LINE VALIDATION SHEET																					
HLA-Cw high resolution SSP primer set																					
				Prod. No.:	Well																
					65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
					2009-668-65	2008-497-66	2008-497-67	2008-497-68	2008-497-69	2008-497-70	2009-668-71	2009-668-72	2008-497-73	2008-497-74	2008-497-75	2008-497-76	2008-497-77	2008-497-78	2008-497-79	2008-497-80	
	IHWCell 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	9025 DEU		*0401		-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR		*1203		-	+	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-
10	9107 LKT3		*0102		-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
11	9051 PITOUT		*1601		-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-
12	9052 DBB		*0602		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
13	9004 JESTHOM		*0102		-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
14	9071 OPGA		*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		*0102	*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	-	-	-	+	+	+	-	-	-	-	-	+	-	-	+	-	-



Lot No.: **59G**

Lot-specific information

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CELL LINE VALIDATION SHEET																			
HLA-Cw high resolution SSP primer set																			
				Well															
				81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	
				2008-497-81	2008-497-82	2008-497-83	2008-497-84	2008-497-85	2008-497-86	2008-497-87	2008-497-88	2008-497-89	2008-497-90	2008-497-91	2008-497-92	2009-668-93	2008-497-94	2008-497-95	
		IHWC cell line		Cw*	Prod. No.:														
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	9025	DEU	*0401		-	+	-	-	+	-	-	-	-	-	-	-	-	-	+
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	*0102	*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	-	+	-	+	+	-	+	-	-	-	-	-	-	-	+



Lot No.: **59G**

Lot-specific information

www.olerup-ssp.com

CERTIFICATE OF ANALYSIS

Olerup SSP[®] HLA-Cw high resolution for frequent alleles SSP

Product number: 101.707-12 – including Taq polymerase

Lot number: 59G

Expiry date: 2012-January-01

Number of tests: 12

Number of wells per test: 95 + 1

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2008-497-01	33	2009-668-33	65	2009-668-65
2	2008-497-02	34	2008-497-34	66	2008-497-66
3	2008-497-03	35	2008-497-35	67	2008-497-67
4	2008-497-04	36	2009-668-36	68	2008-497-68
5	2008-497-05	37	2008-497-37	69	2008-497-69
6	2008-497-06	38	2008-497-38	70	2008-497-70
7	2008-497-07	39	2008-497-39	71	2009-668-71
8	2008-497-08	40	2008-497-40	72	2009-668-72
9	2008-497-09	41	2008-497-41	73	2008-497-73
10	2008-497-10	42	2009-668-42	74	2008-497-74
11	2009-668-11	43	2008-497-43	75	2008-497-75
12	2008-497-12	44	2009-668-44	78	2008-497-76
13	2008-497-13	45	2008-497-45	77	2008-497-77
14	2009-668-14	46	2008-497-46	78	2008-497-78
15	2008-497-15	47	2008-497-47	79	2008-497-79
16	2009-668-16	48	2008-497-48	80	2008-497-80
17	2008-497-17	49	2008-497-49	81	2008-497-81
18	2008-497-18	50	2008-497-50	82	2008-497-82
19	2009-668-19	51	2008-497-51	83	2008-497-83
20	2008-497-20	52	2008-497-52	84	2008-497-84
21	2008-497-21	53	2008-497-53	85	2008-497-85
22	2008-497-22	54	2008-497-54	86	2008-497-86
23	2008-497-23	55	2008-497-55	87	2008-497-87
24	2008-497-24	56	2008-497-56	88	2008-497-88
25	2008-497-25	57	2009-668-57	89	2008-497-89
26	2009-668-26	58	2008-497-58	90	2008-497-90
27	2008-497-27	59	2008-497-59	91	2008-497-91
28	2008-497-28	60	2008-497-60	92	2008-497-92
29	2008-497-29	61	2008-497-61	93	2009-668-93
30	2008-497-30	62	2008-497-62	94	2008-497-94
31	2008-497-31	63	2008-497-63	95	2008-497-95
32	2008-497-32	64	2008-497-64		

Lot No.: **59G**

Lot-specific information

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The specificity of each primer solution of the HLA-Cw high resolution for frequent alleles primer set has been tested against 48 well characterized IHWC cell line DNAs.

No DNAs carrying the alleles to be amplified by primer pairs in solutions 2, 4, 5, 8 to 10, 18, 19, 21, 32 to 34, 43, 44, 49, 51, 53, 55, 56, 58, 59, 65, 80, 81, 86, 88 and 91. The specificity of most of the primers in these solutions was tested by separately adding one or more additional 5'-primer, respectively one or more additional 3'-primer. In primer solutions 2 to 5, 8, 9, 18, 20, 21, 23, 31, 34, 36, 37, 44, 45, 49, 51, 56, 59, 65, 73, 76, 78, 80, 83, 91 and 92 one or more of the 5'-primers were not possible to test. In primer solutions 2, 3, 5, 6, 8, 10, 13, 15, 16, 21, 26, 27, 29, 32, 36, 43, 44, 51, 55, 58, 59, 61, 75, 79, 86 and 88 one or more of the 3'-primers were not possible to test. Additional 5'-primers or 3'-primers in primer solutions 3, 6, 11, 12, 13, 16, 17, 20, 26, 27, 31, 36, 37, 45, 46, 50, 71, 74, 75, 92 and 93 were tested by separately adding one or more additional 3'-primer, respectively one or more additional 5'-primer.

The negative control primer pairs, **Production No. 2009-614-01**, can detect contamination with PCR products diluted 10^{-7} .

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

Date of approval: 2010-January-22

Approved by:

Quality Control, Supervisor

Lot No.: **59G**

Lot-specific information

www.olerup-ssp.com

Declaration of Conformity

Product name: *Olerup* SSP® HLA-Cw high resolution for frequent alleles
Product number: 101.707-12
Lot number: 59G

Intended use: HLA-Cw high resolution for frequent alleles histo-
compatibility testing

Manufacturer: *Olerup* SSP AB
Hasselstigen 1
SE-133 33 Saltsjöbaden, Sweden
Phone: +46-8-717 88 27
Fax: +46-8-717 88 18

We, *Olerup* SSP AB, hereby declare that this product, to which this Declaration of Conformity relates is in conformity with the following Standard(s) and other normative document(s) ISO 9001:2008, ISO 17025:1999 and ISO 13485:2000, following the provisions of the 98/79/EC Directive on *in vitro* diagnostic medical devices, Annex III.

The Technical Construction 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
2010-January-22

Olle Olerup
Managing Director

Lot No.: **59G**

Lot-specific information

www.olerup-ssp.com

Lot No.: **59G**

Lot-specific information

www.olerup-ssp.com

ADDRESSES:

Manufacturer:

Olerup SSP AB, Hasselstigen 1, SE-133 33 Saltsjöbaden, Sweden.

Tel: +46-8-717 88 27

Fax: +46-8-717 88 18

E-mail: info-ssp@olerup.com

Web page: <http://www.olerup-ssp.com>

Distributed by:

Olerup GmbH, Löwengasse 47 / 6, AT-1030 Vienna, Austria.

Tel: +43-1-710 15 00

Fax: +43-1-710 15 00 10

E-mail: support-at@olerup.com

Web page: <http://www.olerup-ssp.com>

Olerup Inc., 901 S. Bolmar St., Suite R, West Chester, PA 19382

Tel: 1-877-OLERUP1

Fax: 610-344-7989

E-mail: info.us@olerup.com

Web page: <http://www.olerup-ssp.com>

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