

## Olerup SSP<sup>®</sup> HLA-Cw high resolution for frequent alleles

Product number:	101.707-12 – including <i>Taq</i> polymerase 101.707-12u – without <i>Taq</i> polymerase
Lot number:	07E
Expiry date:	2010-February-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. 07E.**

### CHANGES COMPARED TO THE PREVIOUS OLERUP SSP<sup>®</sup> HLA-CW HIGH RESOLUTION LOT

The HLA-Cw high resolution specificity and interpretation tables have been updated for the HLA-Cw alleles described since the previous *Olerup SSP<sup>®</sup>* HLA-Cw\*high resolution lot was made (**Lot No. X28**).

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

Well	5'-primer	3'-primer	rationale
8	-	Added	Primer added for the Cw*0220 allele.
11	-	1 modified, 1 added	Primer improved for increased yield of specific PCR product. Primer added for the Cw*0346 allele.
12	Added	Added	Primer pair added for the Cw*0753 allele.
15	-	Added	Primer added for the Cw*030407 allele.
21	Removed	-	Superfluous primer removed.
23	-	-	Changed to the 800 bp internal control primer pair.
25	Exchanged	Exchanged	New primer pair for the Cw*0341 allele.
27	-	Added	Primer added for the Cw*0430 allele.
28	-	Added	Primer improved for increased yield of specific PCR product.
33	Added	-	Primer improved for increased yield of

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			specific PCR product.
37	Added	Added	Primer pair added for the Cw*0750 allele.
43	Modified	-	Primer modified for increased specificity.
45	Added	-	Primer added for the Cw*0347 allele.
46	2 added	-	Primers added for increased yield of specific PCR product.
51	-	Added	Primer for the Cw*0119 allele added.
65	Added	Added	Primer pair for the Cw*0428 allele added.
79	Added	-	Primer added for the Cw*1521 allele.
80	Added	-	Primer added for the Cw*0344 allele.
88	-	Added	Primer for the Cw*0431 allele added.

Well **96** contains Negative Control primer pairs, that will amplify more than 95% of the *Olerup* SSP<sup>®</sup> 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
<b>5'-primer<sup>1</sup></b>	<b>164</b>	<b>340</b>	<b>440</b>	<b>45</b>	<b>45</b>	<b>43</b>
	5'-CAC <sup>3'</sup>	5'-Agg <sup>3'</sup>	5'-TTA <sup>3'</sup>	5'-Tg g <sup>3'</sup>	5'-Tg g <sup>3'</sup>	5'-Tg g <sup>3'</sup>
<b>3'-primer<sup>2</sup></b>	<b>231</b>	<b>2<sup>nd</sup> I</b>	<b>507</b>	<b>59</b>	<b>58</b>	<b>57</b>
	5'-TgC <sup>3'</sup>	5'-AAA <sup>3'</sup>	5'-TTg <sup>3'</sup>	5'-CTC <sup>3'</sup>	5'-ggC <sup>3'</sup>	5'-CTC <sup>3'</sup>
<b>A*</b>	<b>+</b>	<b>+</b>	<b>+</b>			
<b>B*</b>	<b>+</b>	<b>+</b>	<b>+</b>			
<b>Cw*</b>	<b>+</b>	<b>+</b>	<b>+</b>			
<b>DRB1</b>				<b>+</b>	<b>+</b>	
<b>DRB3</b>				<b>+</b>	<b>+</b>	
<b>DRB5</b>				<b>+</b>		
<b>DQB1</b>					<b>+</b>	
<b>DPB1</b>						<b>+</b>

<sup>1</sup>The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2<sup>nd</sup> or 3<sup>rd</sup> 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](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.

<sup>2</sup>The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2<sup>nd</sup> or 3<sup>rd</sup> exon or the 2<sup>nd</sup> 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](http://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 for all currently recognized HLA-Cw alleles and have good resolution for frequently encountered HLA-Cw genotypes.

#### 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

The 96 well PCR plate is marked with 'Cw "high"'.  
Well No. 1 is marked with '07E'.

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

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

Well 96 – Negative Control.

#### 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.

#### UNIQUELY IDENTIFIED ALLELES

All the HLA-Cw alleles, i.e. **Cw\*0102 to Cw\*1803**, recognized by the HLA Nomenclature Committee in January 2008<sup>1</sup> 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\*0116, Cw\*0117, Cw\*0118 and Cw\*0119  
Cw\*0203 and Cw\*0218  
Cw\*0204 and Cw\*0214

Cw\*0205 and Cw\*0217  
Cw\*0306 and Cw\*0328  
Cw\*0309 and Cw\*0323  
Cw\*0321 and Cw\*0322Q

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Cw\*0334 and Cw\*0344  
Cw\*0337 and Cw\*0346  
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\*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\*0733N and Cw\*0751  
Cw\*0747 and Cw\*0748  
Cw\*0804 and Cw\*0813  
Cw\*1509 and Cw\*1519  
Cw\*1511 and Cw\*1517

<sup>1</sup>HLA-Cw alleles listed on the IMGT/HLA web page 2008-January-11, release 2.20.0, [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla).

### RESOLUTION IN HOMO- AND HETEROZYGOTES

The HLA-Cw high resolution for frequent alleles kit can generate 249 different amplification patterns, that can be combined in 31 125 genotypes. 2 778 of these genotypes do not give rise to unique amplification patterns.

```
++-----+ 0106,0213 = 0106,0216
++-----+ 0102,0706 = 0106,0706
++-----+ 0106,0306 = 0106,0326
++-----+ 0102,1513 = 0106,1502 = 0106,1513
++-----+ 0106,0724 = 0116,0718
++-----+ 0102,0718 = 0106,0701 = 0106,0718
++-----+ 0102,0719 = 0106,0719
++-----+ 0102,0106 = 0106,0106
++-----+ 0107,0213 = 0107,0216
++-----+ 0107,0306 = 0107,0326
++-----+ 0107,0608 = 0110,0610
++-----+ 0102,0610 = 0107,0602 = 0107,0610
++-----+ 0102,1609 = 0107,1602 = 0107,1609
++-----+ 0102,0107 = 0107,0107
++-----+ 0108,0705 = 0115,0731
++-----+ 0108,0213 = 0108,0216
++-----+ 0108,0306 = 0108,0326
++-----+ 0102,0517 = 0108,0517 = 0113,0517
++-----+ 0108,1212 = 0113,1213
++-----+ 0102,0731 = 0108,0727 = 0108,0731
++-----+ 0102,0723 = 0108,0702 = 0108,0723
++-----+ 0102,0703 = 0108,0703
++-----+ 0102,1213 = 0108,1203 = 0108,1213
++-----+ 0102,1219 = 0108,1219
++-----+ 0102,0108 = 0108,0108
++-----+ 0115,0213 = 0115,0216
++-----+ 0102,0333 = 0115,0302 = 0115,0333
++-----+ 0109,0302 = 0109,0333
```

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0114,0324 = 0115,0307
0115,0306 = 0115,0326
0109,0306 = 0109,0326
0102,0324 = 0115,0304 = 0115,0324
0109,0304 = 0109,0324
0109,0606 = 0115,0602
0109,1604 = 0115,1604
0102,0705 = 0115,0705 = 0115,0727
0102,0104 = 0104,0115
0102,0109 = 0109,0115
0102,0115 = 0115,0115
0109,0705 = 0109,0727
0114,0213 = 0114,0216
0113,0213 = 0113,0216
0110,0213 = 0110,0216
0116,0213 = 0116,0216
0102,0213 = 0102,0216
0102,0205 = 0110,0205
0102,0605 = 0110,0605
0102,1216 = 0110,1216
0102,0603 = 0114,0603
0102,0315 = 0114,0315
0114,0308 = 0114,0329
0102,0345 = 0114,0332 = 0114,0345
0114,0306 = 0114,0326
0102,0307 = 0114,0304 = 0114,0307 = 0114,0310
0113,0306 = 0113,0326
0110,0306 = 0110,0326
0116,0306 = 0116,0326
0102,0306 = 0102,0326
0114,1507 = 0114,1521
0102,0724 = 0116,0701 = 0116,0724
0102,0513 = 0114,0501 = 0114,0513
0102,0114 = 0114,0114
0102,0608 = 0110,0602 = 0110,0608
0102,0509 = 0113,0509
0102,0745 = 0113,0745
0102,1212 = 0113,1203 = 0113,1212
0102,0815 = 0113,0815
0102,0113 = 0113,0113
0102,0814 = 0110,0814
0102,0110 = 0110,0110



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0102,0116 = 0116,0116
0703,0737 = 0723,0737
0213,1408 = 0216,1408
0213,0405 = 0216,0405
0105,0213 = 0105,0216
0307,0405 = 0310,0405
0105,0306 = 0105,0326
0504,1408 = 0514,1408
040401,1408 = 040402,1408
0713,1408 = 0747,1408
0702,1408 = 0737,140203 = 0737,1408
1402,1408 = 140202,1408
0401,1408 = 0405,140203 = 0405,1408
0105,140203 = 0105,1408
140203,1606 = 1408,1606
140203,1408 = 1408,1408
0405,1402 = 0405,1404
040401,0405 = 040402,0405
0405,0742 = 0424,0737
0401,0737 = 0405,0702 = 0405,0737
0401,1606 = 0405,1606
0105,0401 = 0105,0405
0401,0405 = 0405,0405
0504,0737 = 0514,0737
0504,1606 = 0514,1606
0105,0733N = 0112,0737
0105,0702 = 0105,0737
0713,1606 = 0747,1606
0702,1606 = 0737,1606
0713,0737 = 0737,0747
0702,0737 = 0737,0737
0703,0706 = 0706,0731
0718,0723 = 0719,0731
0703,0718 = 0718,0731
0703,0719 = 0719,0723
0208,0706 = 0208,0718
0304,0706 = 0337,0706 = 0337,0718
0603,0706 = 0603,0718
0403,0706 = 0416,0706 = 0416,0718
0706,1502 = 0706,1513
0706,151002 = 0718,151002
0303,0706 = 0311,0706 = 0311,0718



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0706,0721 = 0706,0736
0504,0706 = 0514,0706
0706,0713 = 0706,0747
0701,0706 = 070105,0706 = 0706,0706 = 0706,0718
0307,1513 = 0310,1513
0701,1513 = 0718,1502 = 0718,1513
0719,1502 = 0719,1513
0612,1513 = 0615,1513
1504,1513 = 1509,1513 = 1513,1520
1507,1513 = 1513,1521
1502,1513 = 1513,1513
0719,0721 = 0719,0736
0718,0721 = 0718,0736
0710,0718 = 0719,0743
0504,0718 = 0514,0718
0504,0719 = 0514,0719
0713,0718 = 0718,0747
0702,0718 = 0719,0727
0701,0719 = 0718,0719
0701,0718 = 070105,0718 = 0718,0718
0713,0719 = 0719,0747
070105,0719 = 0719,0719
0307,0610 = 0310,0610
0307,1609 = 0310,1609
0504,0610 = 0514,0610
0610,0713 = 0610,0747
0602,1609 = 0610,1602 = 0610,1609
0602,0610 = 0610,0610
0504,1609 = 0514,1609
0713,1609 = 0747,1609
1602,1609 = 1609,1609
0703,0705 = 0705,0731
0703,0746 = 0723,0746
0307,0517 = 0310,0517
0703,0753 = 0731,0753
1207,1213 = 1207,1219
0703,0736 = 0731,0736
0703,0709 = 0709,0731
0703,0707 = 0707,0731
120304,1213 = 120304,1219
0517,0701 = 0517,070105
0703,0752 = 0731,0752





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0703,0730 = 0730,0731
0703,0720 = 0720,0731
0703,0744 = 0731,0744
0703,0724 = 0724,0731
0703,0726 = 0726,0731
0703,0722 = 0722,0731
0703,0740 = 0731,0740
0703,0728 = 0728,0731
0701,0703 = 0701,0731 = 070105,0731
0703,0716 = 0716,0731
0703,0721 = 0721,0731
0710,0731 = 0723,0743
0703,0743 = 0731,0743
0703,0710 = 0710,0723
0504,0731 = 0514,0731
0504,0723 = 0514,0723
0504,0703 = 0514,0703
0504,1213 = 0514,1213
0504,1219 = 0514,1219
0517,1203 = 0517,1212 = 0517,1213
1212,1213 = 1212,1219
1213,1214 = 1213,1220
1211,1213 = 1211,1219
0727,1213 = 0731,1203 = 0731,1213
0713,1213 = 0747,1213
0702,1213 = 0723,1203 = 0723,1213
0703,1203 = 0703,1213
1205,1213 = 1205,1219
1206,1213 = 1206,1219
1213,1215 = 1215,1219
120402,1213 = 120402,1219
1203,1213 = 1203,1219 = 120302,1213 = 1213,1213 = 1213,1219
0703,0714 = 0714,0731
0517,0702 = 0517,0723 = 0517,0747
0517,0703 = 0517,0727 = 0517,0731
0517,1214 = 0517,1219
0703,0750 = 0723,0750
0713,0731 = 0731,0747
0702,0731 = 0723,0727 = 0723,0731
0727,1219 = 0731,1219
0703,0727 = 0703,0731 = 0727,0731 = 0731,0731
0703,0742 = 0723,0742



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0703,0729 = 0723,0729
0703,0749 = 0723,0749
0703,0733N = 0723,0733N
0703,0725 = 0723,0725
0703,0715 = 0715,0723
0713,1219 = 0747,1219
0702,1219 = 0723,1219
0703,0739 = 0723,0739
0703,0713 = 0703,0747 = 0713,0723 = 0723,0747
0702,0703 = 0702,0723 = 0703,0723 = 0723,0723
0303,0333 = 0324,0343
0309,0333 = 0324,0342
0302,0324 = 0304,0333 = 0324,0333 = 0324,0340
0314,0333 = 0333,0340
0333,0743 = 0336,0705
0333,0401 = 0333,0412
0333,0504 = 0333,0514
0104,0302 = 0104,0333
0302,0705 = 0333,0705 = 0333,0727
0333,0713 = 0333,0747
0302,0333 = 0333,0333
0104,0304 = 0104,0324
0306,0324 = 0324,0326
0304,0705 = 0324,0705 = 0324,0727
0304,0324 = 0324,0324
0701,0705 = 070105,0705
0504,0705 = 0514,0705
0104,0504 = 0104,0514
0104,1214 = 0104,1218
0104,0705 = 0104,0727
0104,0713 = 0104,0747
0104,1202 = 0104,120302
0705,0713 = 0705,0747
0705,0705 = 0705,0727
0220,0307 = 0220,0310
0203,0307 = 0203,0310
0203,0602 = 0203,0607 = 0216,0607
0205,0607 = 0220,0608
0202,0607 = 0220,0602 = 0220,0607
0203,0504 = 0203,0514
0220,0504 = 0220,0514
0203,1604 = 0220,1604



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0203,0213 = 0213,0220					
0203,1202 = 0220,1218					
0220,1507 = 0220,1521					
0202,0203 = 0203,0210 = 0203,0220 = 0216,0220					
0220,0713 = 0220,0747					
0202,0220 = 0210,0220 = 0220,0220					
0203,0713 = 0203,0747					
0203,1507 = 0203,1521					
0203,0203 = 0203,0216					
0204,0307 = 0204,0310					
0204,0504 = 0204,0514					
0213,0605 = 0216,0605					
0202,0605 = 0204,0605					
0202,1216 = 0204,1216					
0204,1218 = 0216,1210					
0204,1507 = 0204,1521					
0204,0713 = 0204,0747					
0202,1210 = 0204,1202 = 0204,1210					
0202,0204 = 0204,0204 = 0204,0210					
0207,0307 = 0207,0310					
0207,0803 = 0207,0806					
0207,1507 = 0207,1521					
0207,0715 = 0211,0746					
0202,0746 = 0207,0702 = 0207,0746					
0202,0207 = 0207,0210					
0208,0303 = 0208,0311					
0208,0307 = 0208,0310					
0208,0304 = 0208,0337					
0208,0603 = 0208,120401					
0213,0416 = 0216,0416					
0208,0403 = 0208,0416					
0208,0504 = 0208,0514					
0208,1507 = 0208,1521					
0208,151001 = 0208,151002					
0208,0713 = 0208,0747					
0202,0208 = 0208,0210					
0213,0412 = 0216,0412					
0209,0307 = 0209,0310					
0215,0307 = 0215,0310					
0213,0307 = 0213,0310					
0205,0307 = 0205,0310					
0211,0307 = 0211,0310					



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0206,0307 = 0206,0310
0202,0307 = 0202,0310
0219,0307 = 0219,0310
0216,0307 = 0216,0310
0219,0306 = 0219,0326
0212,0304 = 0212,0338
0206,0304 = 0206,0334
0202,0325 = 0215,0325
0202,0327 = 0215,0327
0212,0305 = 0212,0327
0202,0305 = 0215,0305
0213,0418 = 0216,0418
0213,0510 = 0216,0510
0213,1409 = 0216,1409
0202,1409 = 0215,1405 = 0215,1409
0213,1407N = 0216,1407N
0213,1404 = 0216,1404
0213,1402 = 0216,1402
0213,1405 = 0216,1405
0213,140203 = 0216,140203
0213,1403 = 0216,1403
0213,1801 = 0216,1801
0213,1802 = 0216,1802
0213,0513 = 0216,0513
0213,0604 = 0213,0606 = 0216,0606
0205,0604 = 0216,0608
0202,0608 = 0205,0602 = 0205,0608
0206,0612 = 0206,0615
0202,0612 = 0219,0612
0202,0615 = 0219,0615
0213,0407 = 0216,0407
0202,0407 = 0209,0401 = 0209,0407
0213,0408 = 0216,0408
0213,041501 = 0216,041501
0202,041501 = 0215,041501 = 0215,041502
0213,0410 = 0216,0410
0213,0411 = 0216,0411
0213,0403 = 0216,0403
0213,0424 = 0216,0424
0213,0428 = 0216,0428
0213,0423 = 0216,0423
0213,0420 = 0216,0420

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0213,0401 = 0216,0401
0213,041502 = 0216,041502
0213,0429 = 0216,0429
0209,0504 = 0209,0514
0209,1507 = 0209,1521
0209,0713 = 0209,0747
0202,0209 = 0209,0209 = 0209,0210
0215,0504 = 0215,0514
0215,1507 = 0215,1521
0202,0714 = 0215,0714 = 0215,0727
0215,0713 = 0215,0747
0202,0215 = 0210,0215 = 0215,0215
0213,0503 = 0216,0503
0213,0504 = 0213,0514 = 0216,0504 = 0216,0514
0213,0807 = 0216,0807
0205,0504 = 0205,0514
0211,0504 = 0211,0514
0212,0504 = 0212,0514
0202,0504 = 0202,0514
0213,0507N = 0216,0507N
0213,0505 = 0216,0505
0213,0506 = 0216,0506
0213,0805 = 0216,0805
0213,0516 = 0216,0516
0213,0812 = 0216,0812
0213,0501 = 0216,0501
0213,0802 = 0216,0802
0213,0509 = 0216,0509
0213,0815 = 0216,0815
0202,0809 = 0211,0809 = 0211,0811
0213,0512 = 0216,0512
0213,0713 = 0213,0747
0112,0213 = 0112,0216
0213,1202 = 0213,1218
0202,1604 = 0213,1604 = 0216,1604
0213,140202 = 0216,140202
0213,1507 = 0213,1521
0213,1508 = 0216,1508
0103,0213 = 0103,0216
0213,1209 = 0216,1209
0202,0213 = 0210,0213 = 0213,0213 = 0213,0216
0205,1507 = 0205,1521



Lot No.: **07E**

Lot-specific information

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

0211,1507	=	0211,1521
0202,1218	=	0216,1202
0212,1507	=	0212,1521
0202,1518	=	0219,1518
0202,1506	=	0219,1509
0202,1507	=	0202,1521
0206,1504	=	0206,1509
0219,1507	=	0219,1521
0206,1507	=	0206,1521
0206,0216	=	0206,1520
0202,0216	=	0210,0216
0205,0713	=	0205,0747
0202,0205	=	0205,0205 = 0205,0210
0202,0729	=	0219,0749
0211,0713	=	0211,0747
0202,0715	=	0211,0702 = 0211,0715
0212,0713	=	0212,0747
0202,0713	=	0202,0747
0202,0211	=	0210,0211 = 0211,0211
0202,1215	=	0206,1203
0202,0212	=	0210,0212
0202,0206	=	0206,0210
0202,0219	=	0210,0219
0202,0202	=	0202,0210
0216,0713	=	0216,0747
0216,1507	=	0216,1521
0307,0607	=	0310,0607
0504,0607	=	0514,0607
0607,0713	=	0607,0747
0602,0607	=	0607,0607
0307,0605	=	0310,0605
0602,0605	=	0605,0608
0608,1210	=	120401,1216
0602,1216	=	0608,1216
0504,1216	=	0514,1216
0504,0605	=	0514,0605
0504,1210	=	0514,1210
1214,1216	=	1216,1218
0605,0713	=	0605,0747
0605,1202	=	0605,1210
0605,1209	=	0605,1221
0713,1216	=	0747,1216





Lot No.: **07E**

Lot-specific information

www.olerup.com

040401,0416 = 040402,0416									
0403,0416 = 0416,0416									
1504,151002 = 1509,151002									
1507,151002 = 151002,1521									
151001,151002 = 151002,151002									
0311,0721 = 0311,0736									
0303,0311 = 0311,0311									
0313,0340 = 0335,0343									
0302,0321 = 0303,0342 = 0309,0343 = 0321,0340 = 0321,0342									
0302,0330 = 0330,0340									
0302,0320N = 0320N,0340									
0302,0331 = 0308,0343 = 0331,0340									
0302,0303 = 0303,0340 = 0304,0343									
0302,0312 = 0312,0340 = 0319,0343									
0302,0343 = 0314,0343 = 0340,0343									
0302,0313 = 0313,0336									
0314,0317 = 0317,0340									
0340,0736 = 0342,0701 = 0342,0736									
0308,0315 = 0315,0329									
0302,0329 = 0329,0340									
0302,0339 = 0339,0340									
0302,0308 = 0308,0340									
0302,0318 = 0318,0340									
0342,0401 = 0342,0412									
0342,0504 = 0342,0514									
0340,0721 = 0342,0721									
0342,0713 = 0342,0747									
0302,0309 = 0304,0342 = 0309,0340 = 0309,0342									
0302,0342 = 0314,0342 = 0340,0342 = 0342,0342									
0304,0315 = 0307,0315 = 0310,0315 = 0315,0332 = 0315,0338 = 0315,0345									
0314,0315 = 0315,0340									
0302,0345 = 0336,0345 = 0340,0345									
0302,0332 = 0332,0336 = 0332,0340									
0314,0336 = 0336,0340									
0302,0307 = 0307,0340									
0302,0310 = 0310,0340									
0307,0412 = 0310,0412									
0314,1409 = 0340,1409									
0314,1405 = 0340,1405									
0340,0401 = 0340,0412									
0340,0504 = 0340,0514									
0314,0316 = 0316,0340									



Lot No.: **07E**

Lot-specific information

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

0302,0306 = 0306,0340									
0302,0326 = 0326,0340									
0302,0347 = 0340,0347									
0340,0713 = 0340,0747									
0302,0338 = 0338,0340									
0302,0334 = 0334,0340									
0302,0304 = 0304,0340									
0302,0319 = 0319,0340									
0302,0314 = 0302,0340 = 0314,0340 = 0340,0340									
0314,0401 = 0314,0412									
0314,0504 = 0314,0514									
0314,0713 = 0314,0747									
0305,0315 = 0315,0327									
0315,0317 = 0315,0335									
0302,0335 = 0317,0336 = 0335,0336									
0315,0401 = 0315,0412									
0315,0504 = 0315,0514									
0315,0501 = 0315,0513									
0315,1507 = 0315,1521									
0315,0727 = 0315,0743									
0315,0713 = 0315,0747									
0315,0702 = 0315,0710									
0302,0315 = 0315,0315 = 0315,0336									
0302,0614 = 0336,0614									
0336,0401 = 0336,0412									
0336,0504 = 0336,0514									
0302,0743 = 0336,0727 = 0336,0743									
0336,0713 = 0336,0747									
0302,0710 = 0336,0702 = 0336,0710									
0302,0336 = 0336,0336									
0302,0401 = 0302,0412 = 0316,0412									
0302,0504 = 0302,0514									
0302,0713 = 0302,0747									
0309,0313 = 0321,0335									
0306,0313 = 0313,0326									
0308,0313 = 0331,0335									
0312,0335 = 0313,0319									
0303,0335 = 0304,0313									
0306,0321 = 0321,0326									
0308,0321 = 0309,0331									
0309,0312 = 0319,0321									
0303,0309 = 0304,0321 = 0309,0321									



Lot No.: **07E**

Lot-specific information

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

0303,0329 = 0310,0331 = 0329,0331
0331,1509 = 0331,1520
0306,0330 = 0326,0330
0306,0320N = 0320N,0326
0306,0331 = 0326,0331
0303,0306 = 0303,0326
0308,0312 = 0319,0331
0303,0308 = 0304,0331 = 0308,0331
0303,0319 = 0304,0312 = 0312,0334
0307,1512 = 0310,1512
1504,1512 = 1509,1512 = 1512,1520
1507,1512 = 1512,1521
0306,0335 = 0326,0335
0306,0317 = 0317,0326
0306,0327 = 0325,0338 = 0326,0327
0304,0325 = 0305,0306 = 0305,0326 = 0306,0325 = 0325,0326
0304,0327 = 0305,0338 = 0327,0338
0329,0721 = 0329,0736
0308,0721 = 0308,0736
0304,0736 = 0309,0701 = 0309,0736
0308,0345 = 0329,0345
0329,0401 = 0329,0428
0308,0513 = 0329,0501 = 0329,0513
0329,1202 = 0329,1208
0329,1203 = 0329,1206
0306,0329 = 0326,0329
0329,1509 = 0329,1520
0329,1507 = 0329,1521
0307,0709 = 0310,0709
0307,0707 = 0310,0707
0307,0308 = 0307,0329
0304,0329 = 0308,0310 = 0308,0329 = 0310,0329 = 0329,0329
0308,1509 = 0308,1520
0308,0401 = 0308,0428
0308,1202 = 0308,1208
0308,1203 = 0308,1206
0306,0339 = 0326,0339
0306,0308 = 0308,0326
0306,0318 = 0318,0326
0304,0308 = 0308,0308
0306,0309 = 0309,0326
0304,0721 = 0309,0721



Lot No.: **07E**

Lot-specific information

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

0304,0309 = 0309,0309
0332,0513 = 0345,0501 = 0345,0513
0307,0614 = 0310,0614
0306,0345 = 0326,0345
0345,1507 = 0345,1521
0345,0727 = 0345,0743
0345,0702 = 0345,0710
0304,0345 = 0307,0332 = 0307,0345 = 0310,0345 = 0332,0345 = 0345,0345
0306,0332 = 0326,0332
0332,0727 = 0332,0743
0332,0702 = 0332,0710
0304,0332 = 0332,0332
0307,0418 = 0310,0418
0307,0510 = 0310,0510
0307,1404 = 0310,1404
0307,0407 = 0310,0407
0307,0408 = 0310,0408
0307,041501 = 0310,041501
0307,0410 = 0310,0410
0307,0403 = 0310,0403
0307,0424 = 0310,0424
0307,1801 = 0310,1801
0307,1802 = 0310,1802
0307,0428 = 0310,0428
0307,0423 = 0310,0423
0307,0420 = 0310,0420
0307,0401 = 0310,0401
0307,041502 = 0310,041502
0307,1803 = 0310,1803
0307,0503 = 0310,0503
0307,0504 = 0310,0504
0307,0514 = 0310,0514
0307,0507N = 0310,0507N
0307,0505 = 0310,0505
0306,0513 = 0307,0506 = 0310,0506
0307,0516 = 0310,0516
0304,0513 = 0307,0501 = 0307,0513 = 0310,0501 = 0310,0513
0307,0508 = 0310,0508
0307,0509 = 0310,0509
0307,0512 = 0310,0512
0307,0606 = 0310,0606
0307,0608 = 0310,0608



Lot No.: **07E**

Lot-specific information

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

0307,0609 = 0310,0609									
0307,0612 = 0310,0612									
0307,0615 = 0310,0615									
0307,0602 = 0310,0602									
0307,1221 = 0310,1221									
0307,1508 = 0310,1508									
0307,1209 = 0310,1209									
0307,120402 = 0310,120402									
0307,120401 = 0310,120401									
0307,1205 = 0310,1205									
0210,0307 = 0210,0310									
0307,0413 = 0310,0413									
0307,0406 = 0310,0406									
0307,040401 = 0310,040401									
0307,0414 = 0310,0414									
0307,1515 = 0310,1515									
0307,0511 = 0310,0511									
0307,0810 = 0310,0810									
0306,0307 = 0307,0326									
0306,0310 = 0310,0326									
0307,0604 = 0310,0604									
0307,1704 = 0310,1704									
0307,1503 = 0310,1503									
0307,1516 = 0310,1516									
0307,1703 = 0310,1703									
0307,1701 = 0310,1701									
0307,1702 = 0310,1702									
0307,1518 = 0310,1518									
0307,1509 = 0310,1509									
0307,1505 = 0310,1505									
0307,1507 = 0307,1521									
0310,1507 = 0310,1521									
0307,1502 = 0310,1502									
0307,1506 = 0310,1506									
0307,1520 = 0310,1520									
0307,1511 = 0310,1511									
0307,1504 = 0310,1504									
0307,151001 = 0310,151001									
0307,040402 = 0310,040402									
0307,0749 = 0310,0749									
0307,1602 = 0310,1602									
0304,0307 = 0307,0307 = 0307,0310									

Lot No.: **07E**

Lot-specific information

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

0304,0310 = 0310,0310								
0304,0403 = 0338,0403								
0304,1508 = 0334,1508								
0304,0406 = 0338,0406								
0306,1518 = 0326,1518								
0306,1506 = 0326,1506								
0304,1503 = 0338,1503								
0304,1516 = 0338,1516								
0306,0612 = 0326,0612								
0306,0615 = 0326,0615								
0304,0506 = 0306,0501 = 0306,0506								
0326,0501 = 0326,0506								
0304,0805 = 0306,0805								
0112,0306 = 0112,0326								
0304,0611 = 0347,0611								
0304,1211 = 0347,1203 = 0347,1211								
0304,1215 = 0334,1215								
0306,0341 = 0326,0341								
0304,0745 = 0347,0745								
0304,0711 = 0347,0711								
0304,0704 = 0347,0704								
0304,0712 = 0347,0712								
0306,0347 = 0326,0347								
0306,0729 = 0326,0729								
0306,0338 = 0326,0338								
0306,0334 = 0326,0334								
0304,0306 = 0304,0326 = 0306,0306 = 0306,0326								
0304,0347 = 0347,0347								
0304,0338 = 0338,0338								
0304,0319 = 0319,0334								
0304,0334 = 0334,0334								
0335,1202 = 0335,1217								
0335,1203 = 0335,1207								
0335,0727 = 0335,0743								
0335,0702 = 0335,0710								
0305,0403 = 0327,0403								
0305,0406 = 0327,0406								
0305,1503 = 0327,1503								
0305,1516 = 0327,1516								
0325,1405 = 0325,1409								
0327,1405 = 0327,1409								
0305,1405 = 0305,1409 = 0317,1409								



Lot No.: **07E**

Lot-specific information

www.olerup.com

0317,1202 = 0317,1217									
0317,1203 = 0317,1207									
0325,041501 = 0325,041502									
0327,041501 = 0327,041502									
0305,041501 = 0305,041502									
0305,0506 = 0325,0501 = 0325,0506									
0305,0805 = 0325,0805									
0325,1202 = 0325,1217									
0325,1203 = 0325,1207									
0327,1202 = 0327,1217									
0305,1202 = 0305,1217									
0327,1203 = 0327,1207									
0305,1203 = 0305,1207									
0325,0714 = 0325,0727									
0305,0325 = 0325,0325									
0327,0714 = 0327,0727									
0305,0714 = 0305,0727									
0305,0327 = 0327,0327									
0721,0753 = 0736,0753									
0720,1509 = 0720,1520									
0504,0753 = 0514,0753									
0713,0753 = 0747,0753									
0701,0753 = 070105,0753 = 0753,0753									
0612,1515 = 0615,1515									
0513,1507 = 0513,1521									
0612,1503 = 0615,1503									
0612,1516 = 0615,1516									
0612,1521 = 0615,1521									
0602,1518 = 0612,1502 = 0612,1518 = 0615,1502 = 0615,1506 = 0615,1509 = 0615,1518									
0602,1506 = 0612,1504 = 0612,1506 = 0612,1509									
0612,1511 = 0615,1511									
0612,1508 = 0615,1508									
0401,1515 = 0408,1502 = 0408,1515									
0403,1507 = 0403,1521									
0401,0406 = 0403,040401 = 0403,040402									
0504,1518 = 0514,1518									
0504,1509 = 0514,1509									
0504,1520 = 0514,1520									
0504,1504 = 0514,1504									
0210,0504 = 0210,0514									
1504,1508 = 1508,1509 = 1508,1520									
0103,1509 = 0103,1520									

Lot No.: **07E**

Lot-specific information

www.olerup.com

1507,1508 = 1508,1521
1215,1504 = 1215,1509
1203,1502 = 120402,1521
0210,1507 = 0210,1521
0210,0713 = 0210,0747
0406,1507 = 0406,1521
040401,0406 = 040402,0406
1504,1515 = 1509,1515 = 1515,1520
1507,1515 = 1515,1521
1502,1515 = 1515,1515
0729,1518 = 0749,1518
0729,1509 = 0749,1506
0713,1518 = 0747,1518
0713,1509 = 0747,1509
0713,1520 = 0747,1520
0713,1504 = 0747,1504
1504,1516 = 1509,1516
1503,1504 = 1503,1509 = 1503,1520
1507,1516 = 1516,1521
1503,1507 = 1503,1521
1502,1516 = 1503,1511
1504,1505 = 1505,1509 = 1505,1520
1507,1518 = 1518,1521
1502,1518 = 1504,1518 = 1506,1518 = 1509,1518 = 1518,1518 = 1518,1520
1504,1506 = 1506,1509 = 1506,1520
1502,1601 = 1521,1602
1504,1507 = 1504,1521 = 1507,1509 = 1507,1520 = 1509,1521 = 1520,1521
1504,1511 = 1509,1511
1504,151001 = 1509,151001
1502,1504 = 1502,1509 = 1502,1520
1504,1509 = 1504,1520 = 1509,1509 = 1509,1520
1505,1507 = 1505,1521
1506,1507 = 1506,1521
1507,1511 = 1511,1521
1502,1507 = 1502,1521
1507,1521 = 1521,1521
0316,0504 = 0316,0514
0316,1402 = 0316,140202
0316,040401 = 0316,040402
0316,0713 = 0316,0747
0612,1507 = 0615,1507
0341,040401 = 0341,040402

Lot No.: **07E**

Lot-specific information

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

0343,0721 = 0343,0736					
0343,0401 = 0343,0412					
0343,0504 = 0343,0514					
0343,0713 = 0343,0747					
0412,1402 = 0412,1404					
040401,0412 = 040402,0412					
0401,0412 = 0412,0412					
0330,0721 = 0330,0736					
0320N,0721 = 0320N,0736					
0331,0721 = 0331,0736					
0303,0721 = 0303,0736 = 0321,0701 = 0321,0721 = 0321,0736					
0312,0721 = 0312,0736					
0303,0321 = 0321,0321					
0303,1512 = 0330,1512					
0303,0418 = 0330,0401 = 0330,0418					
0303,0510 = 0330,0501 = 0330,0510					
0303,0330 = 0330,0330					
0303,1803 = 0320N,1803					
0303,0609 = 0320N,0609					
0303,1704 = 0320N,1701 = 0320N,1704					
0331,0401 = 0331,0428					
0303,0508 = 0320N,0508					
0331,1202 = 0331,1208					
0331,1203 = 0331,1206					
0303,0414 = 0320N,0414					
0303,1608 = 0320N,1601 = 0320N,1608					
0303,0320N = 0320N,0320N					
0303,0331 = 0331,0331					
0313,0721 = 0313,0736					
0313,1202 = 0313,1217					
0313,1203 = 0313,1207					
0313,0727 = 0313,0743					
0313,0702 = 0313,0710					
0612,1512 = 0615,1512					
0401,1512 = 0418,1512					
0501,1512 = 0510,1512					
0339,0721 = 0339,0736					
0318,0721 = 0318,0736					
0504,1217 = 0514,1217					
0504,1207 = 0514,1207					
1214,1217 = 1217,1218					
1207,1214 = 1207,1220					



HLA-Cw high resolution for frequent alleles  
101.707-12 – including *Taq* polymerase  
101.707-12u – without *Taq* polymerase

Product Insert

Lot No.: 07E

Lot-specific information

www.olerup.com

0713,1217 = 0747,1217
0713,1207 = 0747,1207
1206,1217 = 1207,1208
1202,1207 = 1203,1217 = 1207,1217
1202,1217 = 1217,1217
1203,1207 = 120302,1207 = 1207,1207
0707,0721 = 0707,0736
0709,0721 = 0709,0736
0504,0736 = 0514,0736
0721,120304 = 0736,120304
0721,0752 = 0736,0752
0721,0730 = 0730,0736
0720,0721 = 0720,0736
0713,0736 = 0736,0747
0721,0744 = 0736,0744
0721,0724 = 0724,0736
0721,0726 = 0726,0736
0716,0721 = 0716,0736
0721,0722 = 0722,0736
0721,0740 = 0736,0740
0721,0728 = 0728,0736
0701,0721 = 0701,0736 = 070105,0721 = 070105,0736 = 0721,0736 = 0736,0736
0701,0743 = 070105,0743
0701,1407N = 0730,1402 = 0730,1407N
0701,1802 = 0709,1802
0701,1801 = 0709,1801
0707,1802 = 0716,1802
0707,1801 = 0716,1801
0701,1803 = 0709,1803
0707,1803 = 0716,1803
0504,0709 = 0514,0709
0504,0707 = 0514,0707
0709,0713 = 0709,0747
0702,0709 = 0709,0749
0707,0726 = 0709,0726
0701,0707 = 070105,0707 = 0707,0709 = 0709,0716
0701,0709 = 070105,0709 = 0709,0709
0707,0713 = 0707,0747
0702,0707 = 0707,0733N = 0707,0749
0707,0707 = 0707,0716
0401,0744 = 0424,0701 = 0424,0744
0503,0730 = 0504,0752 = 0514,0752



Lot No.: **07E**

Lot-specific information

www.olerup.com

0501,0752 = 0503,0701 = 0503,0752
0504,0720 = 0514,0720
0504,0744 = 0514,0744
0504,0724 = 0514,0724
0504,0726 = 0514,0726
0504,0722 = 0514,0722
0504,0740 = 0514,0740
0501,0730 = 0504,0701 = 0504,0730 = 0514,0701 = 0514,0730
0504,0716 = 0514,0716
0504,070105 = 0514,070105
0504,120304 = 0514,120304
0701,0807 = 0730,0807
120304,1214 = 120304,1220
0713,120304 = 0747,120304
1203,120304 = 120302,120304
0701,0714 = 070105,0714
0713,0752 = 0747,0752
0701,1607 = 0752,1607
0701,0752 = 070105,0752 = 0752,0752
0701,0809 = 0730,0809
0701,0811 = 0730,0801 = 0730,0811
0701,0711 = 0711,0730
0701,0704 = 0704,0730
0713,0730 = 0730,0747
0701,0730 = 070105,0730 = 0730,0730
0713,0720 = 0720,0747
0701,0720 = 070105,0720 = 0720,0720
0722,0742 = 0725,0744
0739,0744 = 0740,0742
0713,0744 = 0728,0742 = 0744,0747
0701,0742 = 0702,0744 = 0742,0744
0713,0724 = 0724,0747
0713,0726 = 0726,0747
0702,0726 = 0726,0733N
0722,0739 = 0725,0740
0713,0722 = 0722,0747 = 0725,0728
0701,0725 = 0702,0722 = 0722,0725
0713,0740 = 0728,0739 = 0740,0747
0701,0739 = 0702,0740 = 0739,0740
0701,0713 = 0701,0747 = 0702,0728 = 0728,0747
0701,0744 = 070105,0744 = 0744,0744
0701,0724 = 070105,0724 = 0724,0724



**Lot No.: 07E**

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0701,0727 = 070105,0727
0701,0726 = 070105,0726 = 0716,0726 = 0726,0726
0701,0716 = 070105,0716
0701,0722 = 070105,0722 = 0722,0722
0701,0740 = 070105,0740 = 0740,0740
0701,0728 = 070105,0728
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0713,0716 = 0716,0747
0702,0716 = 0716,0733N
070105,0713 = 070105,0747
0504,0721 = 0514,0721
0713,0721 = 0721,0747
0504,0614 = 0514,0614
0614,0727 = 0614,0743
0614,0713 = 0614,0747
0614,0702 = 0614,0710
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0727,0743 = 0743,0743
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0702,0710 = 0710,0710
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0513,1209 = 0513,1221
0501,0513 = 0513,0513
0418,1402 = 0418,1404
0410,0510 = 0418,0507N
0401,0510 = 0418,0501 = 0418,0510
040401,0418 = 040402,0418
0401,0418 = 0418,0418
0505,0510 = 0507N,0510
0510,1209 = 0510,1221
0501,0510 = 0510,0510
0407,1402 = 0407,1404
0408,1402 = 0408,1404
0413,1402 = 0413,1404
0504,1409 = 0514,1409
040401,1409 = 040402,1409
0714,1405 = 0714,1409 = 0727,1409
0713,1409 = 0747,1409
0401,1409 = 041501,1402 = 041501,1404



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041501,1405 = 041501,1409 = 041502,1409
1402,1409 = 140202,1409
1405,1409 = 1409,1409
0504,1406 = 0514,1406
0504,1404 = 0514,1404
0501,1407N = 0504,1402 = 0504,1407N = 0514,1402 = 0514,1407N
0504,1405 = 0514,1405
0504,1403 = 0514,1403
0504,140203 = 0514,140203
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0809,1402 = 0809,1407N
0801,1407N = 0811,1402 = 0811,1407N
0711,1402 = 0711,1407N
0704,1402 = 0704,1407N
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0713,1407N = 0747,1407N
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040401,1405 = 040402,1405
1402,1406 = 140202,1406
0414,1402 = 0414,1404
0713,1403 = 0747,1403
0713,140203 = 0747,140203
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0423,1402 = 0423,1404
0420,1402 = 0420,1404
0401,1402 = 0401,1404
1402,1404 = 140202,1404 = 1404,1404
1402,1405 = 140202,1405
1402,1402 = 1402,140202
0713,1406 = 0747,1406
040401,1406 = 040402,1406



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040401,1801 = 040402,1801									
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040401,1803 = 040402,1803									
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0504,0608 = 0514,0608									
0504,0612 = 0514,0612									
0504,0615 = 0514,0615									
0504,0602 = 0514,0602									
0504,0606 = 0514,0606									
0504,120401 = 0514,120401									
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0602,1604 = 0604,1604 = 0606,1604									
0609,1701 = 0609,1704									
0602,1220 = 0604,1203									
0602,1214 = 0604,120302									
0612,151001 = 0615,151001									
0606,0713 = 0606,0747									
0608,0713 = 0608,0747									
0602,0608 = 0608,0608									
0602,1608 = 0609,1601 = 0609,1608									
0612,0729 = 0612,0749									
0615,0729 = 0615,0749									
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0602,0713 = 0602,0747									
0612,1215 = 0615,1215									
0602,0612 = 0612,0612									
0602,0615 = 0615,0615									
0713,120401 = 0747,120401									
040401,1704 = 0414,1704									
0604,0713 = 0604,0747									
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040401,0407 = 040402,0407									
0401,0407 = 0407,0407									

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040401,0408 = 040402,0408
0401,0408 = 0408,0408
040401,041501 = 040402,041501
041501,0714 = 041501,0727 = 041502,0714
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0411,0505 = 0429,0505
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0411,0801 = 0411,0808 = 0429,0808
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0401,0420 = 0420,0420
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0501,1607 = 0503,1607
0503,1209 = 0503,1221
0501,0503 = 0503,0503
0505,0809 = 0507N,0809



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0504,0808 = 0505,0811 = 0507N,0811
0505,0711 = 0507N,0711
0505,0704 = 0507N,0704
0504,0505 = 0504,0507N
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0504,0704 = 0504,0712
0501,0704 = 0514,0704 = 0514,0712
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0504,0733N = 0514,0733N
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0504,0702 = 0514,0702
0504,1208 = 0514,1208
0504,1202 = 0514,1202
0504,1206 = 0514,1206
0504,1203 = 0514,1203
0504,120402 = 0514,120402
0504,120302 = 0514,120302
0504,1205 = 0514,1205
0504,140202 = 0514,140202
0504,1601 = 0514,1601

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0504,0802 = 0504,0807
0504,160102 = 0514,160102
0504,1602 = 0514,1602
0501,0504 = 0504,0504 = 0504,0514 = 0504,1209 = 0504,1221 = 0514,1209 = 0514,1221
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0505,0814 = 0507N,0814
0505,0803 = 0507N,0803
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0505,0802 = 0507N,0802
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0501,0805 = 0506,0805
0506,1209 = 0506,1221
0501,0506 = 0506,0506
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0511,0812 = 0516,0804
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0516,1209 = 0516,1221
0501,0812 = 0516,0802 = 0516,0812
0501,0516 = 0516,0516
0702,0812 = 0750,0802 = 0750,0812
0802,0812 = 0812,0812
0501,0801 = 0802,0810
0501,0804 = 0511,0802
0501,1209 = 0501,1221
0508,1601 = 0508,1608
0509,0801 = 0810,0815
1212,1214 = 1212,1220



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0509,1203 = 0509,1212					
0509,1209 = 0509,1221					
0815,120402 = 1209,1212					
0815,1203 = 0815,1212					
0745,1203 = 0745,1211 = 0745,1212					
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0704,1203 = 0704,1211					
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0713,140202 = 0747,140202					
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1203,1211 = 120302,1211 = 1211,1211					
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0713,1203 = 0747,1203					
0713,120402 = 0747,120402					
0713,120302 = 0747,120302					
0713,1205 = 0747,1205					
1202,1206 = 1203,1208 = 1206,1208					
1202,1208 = 1208,1208					
1203,1602 = 120402,1601					



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1203,1205 = 120302,1205
1203,1206 = 120302,1206 = 1206,1206
1203,1215 = 120302,1215
1203,120402 = 120302,120402
1203,1203 = 1203,120302
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040401,0414 = 040402,0414
040401,040401 = 040401,040402
0414,1601 = 0414,1608
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0713,0714 = 0714,0747
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0713,1607 = 0747,1607
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0713,0809 = 0747,0809
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0801,0814 = 0803,0814
0801,0803 = 0803,0803
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0713,1218 = 0747,1218
0713,1220 = 0747,1220
0713,1214 = 0747,1214
1214,1218 = 1218,1218
1214,1220 = 1220,1220
0713,1608 = 0747,1608
1601,1608 = 1608,1608
0713,0727 = 0727,0747
0713,0742 = 0742,0747
0702,0742 = 0742,0742
0713,0749 = 0747,0749
0702,0749 = 0749,0749
0713,0733N = 0733N,0747
0702,0733N = 0733N,0733N



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0713,0725 = 0725,0747
0702,0725 = 0725,0725
0713,0715 = 0715,0747
0702,0715 = 0715,0715
0713,1601 = 0747,1601
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0713,0739 = 0739,0747
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0702,0713 = 0702,0747 = 0713,0747 = 0747,0747

0106 = 0106 and 0111  
 0116 = 0116, 0117, 0118 and 0119  
 0203 = 0203 and 0218  
 0204 = 0204 and 0214  
 0205 = 0205 and 0217  
 0306 = 0306 and 0328  
 0309 = 0309 and 0323  
 0321 = 0321 and 0322Q  
 0334 = 0334 and 0344  
 0337 = 0337 and 0346  
 0407 = 0407 and 0427  
 0408 = 0408, 0409N and 0430  
 041502 = 041502 and 0417  
 0418 = 0418 and 0419

0423 = 0423 and 0431  
 0424 = 0424, 0425 and 0426  
 0506 = 0506 and 0515  
 0608 = 0608 and 0613  
 0615 = 0615 and 0616N  
 0703 = 0703 and 0717  
 0715 = 0715 and 0738  
 0722 = 0722 and 0735  
 0725 = 0725 and 0732N  
 0733N = 0733N and 0751  
 0747 = 0747 and 0748  
 0804 = 0804 and 0813  
 1509 = 1509 and 1519  
 1511 = 1511 and 1517



## 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 <sup>1</sup>	Size of control band <sup>2</sup>	Amplified HLA-Cw alleles <sup>3</sup>	Other amplified HLA Class I alleles <sup>4</sup>
1 <sup>5</sup>	90 bp	<b>800 bp</b>	010201-010205, 0106-0111, 0113-0119	
2 <sup>5</sup>	95, 215 bp	1070 bp	0105, 0405, 0737, 1408, 1606	
3 <sup>6</sup>	200, 290, 360, 565 bp	1070 bp	0106, 0111, 0706, 0718, 0719, 1513	
4 <sup>5</sup>	100, 200 bp	1070 bp	0107, 0610, 1609	
5 <sup>5</sup>	150, 210, 300 bp	1070 bp	0108, 0517, 0703, 0717, 0723, 0731, 1213, 1219	
6 <sup>5</sup>	105, 210, 260 bp	<b>800 bp</b>	0104, 0109, 0115, 0324, 0333, 0705	<b>B*9529, B*2725, B*2736</b>
7	200 bp	1070 bp	020201-020203, 020205-0209, 0211-0220	
8 <sup>5</sup>	105, 135 bp	<b>800 bp</b>	0203, 0218, 0220, 0607	<b>B*2734, B*400602, B*570302<sup>wea</sup> kly</b>
9 <sup>5</sup>	150 bp	1070 bp	0204, 0214, 0605, 1210, 1216	
10 <sup>5</sup>	105, 130, 270 bp	<b>800 bp</b>	0207, 0746, 0806, 1610	<b>B*5608, B*5614</b>
11 <sup>5</sup>	75, 155, 505 bp	<b>800 bp</b>	0208, 031101-031102, 0337, 0346, 0416, 0603, 0706, 151002	
12 <sup>5</sup>	70, 280 bp	<b>800 bp</b>	020201-020203, 020205-0220, 030201-030203, 030401-0310, 0314-0317, 0319, 0323-0329, 0332-033802, 0340-0342, 0344-0347, 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	<b>800 bp</b>	030301-030305, 031101-0313, 0320N-0322Q, 0330, 0331, 0343,	

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			1512	
<b>15<sup>6</sup></b>	275 bp	1070 bp	030301-030407, 0306-0312, 0314, 0318-0324, 0326, 0328-0332, 0334, 0337-0340, 0342-0347	
<b>16</b>	245, 275 bp	1070 bp	0305, 0313, 0317, 0325, 0327, 0335, 1207, 1217	<b>B*1596</b>
<b>17<sup>5,8</sup></b>	110, 185, 555 bp	1070 bp	030301-030305, 0308, 031101-0313, 0318, 0320N-0322Q, 0329-0331, 0339, 0343, 070101-070109, 0706, 0707, 0709, 0716, 0718-0720, 0722, 0724, 0726, 0728, 0730, 0735, 0736, 0740, 0744, 0752, 0753, 120304	
<b>18<sup>5</sup></b>	90, 185, 225, 255 bp	1070 bp	0309, 0321-0323, 0342, 0721, 0736	<b>B*1596</b>
<b>19<sup>5</sup></b>	105, 265, 295, 530 bp	1070 bp	0313, 0315, 0332, 0335, 0336, 0345, 0614, 0710, 0743	<b>B*1596</b>
<b>20</b>	250 bp	<b>800 bp</b>	0114, 020201 <sup>weakly</sup> , 020202-020203, 020205-0203, 0204 <sup>weakly</sup> , 0205-0213, 0214 <sup>weakly</sup> , 0215-0220, 0307, 0310, 0315, 0329, 0345, 0403, 0406, 0416, 0513, 0603, 150201-1506, 1508, 1509, 151002-1513, 1515-1521	
<b>21</b>	190, 220, 285 bp	<b>800 bp</b>	0330, 0418, 0419, 0510, 1512	
<b>22<sup>5</sup></b>	80, 140 bp	1070 bp	030201-030203, 0315-0317, 0333, 0336, 0340, 0342, 0343, 140201, 140203-1409	
<b>23<sup>5</sup></b>	150, 240 bp	<b>800 bp</b>	0114, 0307, 0310, 0315, 0329, 0345, 0513, 06020101-0604, 0606-0610, 0612-0616N, 0707, 0709, 120401, 1701-1704, 1801-1803	
<b>24<sup>6</sup></b>	250 bp	1070 bp	010201-0119, 020201-020203, 020205-020206, 0204-0215, 0217, 0219, 0220, 04010101-040104, 0403, 0405, 0407-0412, 041501-0420, 0423-0431, 050101-050104, 0503-0510, 0512-0516, 06020101-0603, 0605-0616N, 0802, 0805, 0807, 0812, 0815, 120201-1213, 1215-1217, 1221, 140201-1405, 1407N-1409, 1508, 160401, 1801-1803	

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<b>25<sup>5</sup></b>	170 bp	1070 bp	0316, 0341, 04010101-040104, 0403, 040401, 0405-0420, 0423- 0431, 140201, 140203-1409, 1801- 1803	
<b>26<sup>5</sup></b>	145, 170 bp	<b>800 bp</b>	0209, 0407, 0427	
<b>27<sup>5,8</sup></b>	135, 170, 225 bp	1070 bp	0408, 0409N, 0430, 1515	
<b>28</b>	200 bp	<b>800 bp</b>	0413, 0708	
<b>29<sup>5</sup></b>	130, 190, 290 bp	<b>800 bp</b>	0215, 0305, 0325, 0327, 041501, 0714, 1409	
<b>30</b>	155 bp	1070 bp	050101-050104, 0503-0508, 0510, 0511, 0513-0516, 0741, 0802, 0804, 0805, 0807, 0812, 0813	
<b>31<sup>5</sup></b>	150, 285 bp	<b>800 bp</b>	0113, 0509, 0517, 0745, 0815, 1212	<b>B*1533, B*350802</b>
<b>32<sup>5</sup></b>	120, 210 bp	1070 bp	0503, 0752, 1607	
<b>33<sup>5</sup></b>	140, 210 bp	1070 bp	0504, 0514, 070401-070402, 0711, 0730, 0807, 0809, 0811, 1407N	
<b>34</b>	220, 275 bp	1070 bp	0410, 0411, 0505, 0507N, 0808	<b>A*2910</b>
<b>35</b>	265 bp	1070 bp	050101-050104, 0503, 0504, 0506- 0508, 0510-0516, 070401-070402, 0711, 0712, 0741, 080101-0814	
<b>36<sup>5</sup></b>	90, 120, 160, 210 bp	1070 bp	0306, 0325, 0326, 0328, 0506, 0515, 0805	
<b>37<sup>5</sup></b>	80, 280 bp	<b>800 bp</b>	0516, 0750, 0812	
<b>38</b>	250 bp	<b>800 bp</b>	0315, 0332, 0345, 0403, 0406, 0416, 0720	
<b>39</b>	240 bp	1070 bp	0339, 06020101-060203, 0604- 0616N, 1216	
<b>40</b>	250 bp	1070 bp	0203, 0213, 0216, 0218, 040401- 040402, 0406, 0413, 0511, 0517, 0604, 080101-080102, 0803, 0804, 0806, 0808-0811, 0813, 0814, 1214, 1218, 1220, 1406, 150201- 1507, 1509-1513, 1515-1521, 160401, 1701-1704	<b>B*5802</b>
<b>41</b>	165 bp	1070 bp	050101-050104, 0503-0517, 0605, 0810, 1221	
<b>42</b>	250 bp	1070 bp	010201-0103, 0105-0108, 0110- 0119, 0213, 04010101-040104,	

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Lot-specific information

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			0403, 0405, 0407-0412, 041501-0420, 0423-0431, 050101-050104, 0503-0507N, 0509, 0510, 0512-0516, 0605, 0606, 0802, 0805, 0807, 0812, 0815, 1209, 140201-1405, 1407N-1409, 1508, 160401, 1801, 1802	
<b>43<sup>5</sup></b>	100, 155, 240 bp	1070 bp	0110, 0205, 0217, 0605, 0608, 0613, 0814, 1216	<b>B*6702</b>
<b>44<sup>5</sup></b>	90, 135, 160 bp	1070 bp	0320N, 0414, 0508, 0609, 1608, 1704, 1803	<b>B*9537</b>
<b>45<sup>5</sup></b>	140, 255 bp	1070 bp	0347, 0611, 070401-070402, 0711, 0712, 0745, 1211	
<b>46</b>	290 bp	<b>800 bp</b>	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	
<b>47<sup>5</sup></b>	110 bp	<b>800 bp</b>	070101-070109, 0706, 0709, 0718-0722, 0724, 0726, 0728, 0730, 0735, 0736, 0740, 0744, 0752, 0753	
<b>48</b>	185 bp	1070 bp	07020101-07020103, 0710, 0713, 0715, 0719, 0723, 0725, 0729, 0732N, 0733N, 0737-0739, 0742, 0746-0751	<b>B*4060</b>
<b>49<sup>5</sup></b>	85, 130, 170, 250 bp	1070 bp	0424-0426, 0742, 0744	
<b>50<sup>7</sup></b>	240, 425 bp	1070 bp	0707, 0709, 0729, 0749, 1801-1803	
<b>51</b>	240, 275 bp	1070 bp	0116-0119, 0724	
<b>52<sup>5</sup></b>	130 bp	1070 bp	050101-050104, 0503-0508, 0510-0516, 0712, 0741, 080101-0806, 0808-0814	<b>A*2910</b>
<b>53<sup>5</sup></b>	80, 115 bp	1070 bp	0512, 0711	
<b>54</b>	395 bp	1070 bp	07020101-0705, 0708, 0710-0715, 0717, 0723, 0725, 072701-072702, 0729, 0731-0733N, 0737-0739, 0741-0743, 0745-0751, 1801-1803	
<b>55</b>	220, 340, 465 bp	<b>800 bp</b>	0112, 0707, 0716, 0726, 0733N, 0751	
<b>56<sup>5</sup></b>	100, 125, 250 bp	<b>800 bp</b>	0722, 0725, 0732N, 0735	
<b>57<sup>5</sup></b>	115 bp	1070 bp	080101-080102, 0803, 0806, 0808-	

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Lot-specific information

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			0811, 0814	
<b>58<sup>5</sup></b>	110 bp	1070 bp	0803, 0806, 0814	
<b>59<sup>5</sup></b>	110, 150, 230, 275 bp	1070 bp	0211, 0715, 0738, 0809	<b>B*4060</b>
<b>60<sup>5</sup></b>	105 bp	1070 bp	050101-050104, 0503-0507N, 0510, 0512-0516, 0741, 0802, 0805, 0807, 0812	
<b>61</b>	235 bp	<b>800 bp</b>	0212, 0315, 0327, 033801-033802, 0403, 0406, 0416, 0603, 0726, 0805, 120201-120402, 1206-1208, 1210-1215, 1217-1220, 1503, 1516, 1701-1704	<b>B*0713, B*0715, B*6702</b>
<b>62<sup>5</sup></b>	100 bp	<b>800 bp</b>	0104, 120201-120203, 1208, 1210, 1216-1218	
<b>63</b>	220 bp	<b>800 bp</b>	0104, 0109, 0205, 0217, 06020101- 0603, 0607-0613, 0615, 0616N, 12030101-1207, 1211-1213, 1215, 160401	
<b>64<sup>5,8</sup></b>	130 bp	1070 bp	020201-020203, 020205-0211, 0213-0220, 0410, 0411, 050101- 050104, 0503-0517, 0605, 080101- 0804, 0806-0815, 1205, 1209, 1221, 140203, 1403, 1408, 150201- 150204, 1504-1513, 1515, 1517- 1521, 160101, 160103, 1602, 160401, 1606-1610	
<b>65<sup>5</sup></b>	150, 190, 415 bp	1070 bp	0308, 0329, 0331, 0428, 1206, 1208	
<b>66</b>	155 bp	1070 bp	12030101-12030102, 120303- 120305, 120402-1207, 1211-1213, 1215, 1220	
<b>67<sup>5</sup></b>	145 bp	<b>800 bp</b>	140201-140202, 140204, 1404- 1407N, 1409	
<b>68<sup>5</sup></b>	145 bp	<b>800 bp</b>	04010101-040104, 040401-0405, 0407-041502, 0417-0420, 0423- 0431, 140203, 1403, 1408	
<b>69</b>	245 bp	<b>800 bp</b>	04010101-040104, 040401-0405, 0407-0410, 0412-041502, 0417- 0420, 0423-0428, 0430, 0431, 1404	
<b>70</b>	210 bp	<b>800 bp</b>	04010101-040104, 0403, 0405, 0407-0412, 0416, 0418-0420, 0423- 0431, 140201-1404, 1407N, 1408, 1801, 1802	<b>B*1584</b>
<b>71<sup>5</sup></b>	130 bp	1070 bp	030201-030407, 0306-0313, 0315- 0324, 0326, 0328-0347, 041501- 041502, 0417, 1405, 1409	



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<b>72<sup>5,7</sup></b>	110 bp	1070 bp	020201-020203, 020205-0207, 0209-0220, 0403, 0406, 0416, 1403, 150201-1509, 1511-1513, 1515-1521	
<b>73</b>	210, 330 bp	1070 bp	0206, 0612, 1215, 150201-1503, 150501-1513, 1515-1521	
<b>74<sup>5</sup></b>	90, 175 bp	1070 bp	0103, 0308, 0329, 0331, 0720, 150201-1509, 1512, 1513, 1515, 1518, 1519, 1521	
<b>75</b>	195 bp	<b>800 bp</b>	0212, 0315, 0327, 033801-033802, 0403, 0406, 0416, 0720, 1503, 1516	
<b>76</b>	320 bp	<b>800 bp</b>	0104, 020201-020203, 020205- 0205, 0208-0218, 0220, 030201- 030203, 0314-0316, 0333, 0336, 0340, 0342, 0343, 0504, 06020101- 0608, 0610-0616N, 070101-0703, 0705-0710, 0714-072702, 0730- 0733N, 0735-0740, 0742-0744, 0746-0753, 0809, 0811, 120201- 1214, 1216-1221, 140201-1409, 1504, 1509, 1518-1520, 160101- 1602, 160401, 1606-1609	
<b>77<sup>5</sup></b>	100 bp	<b>800 bp</b>	150501-150504	<b>B*4036<sup>weakly</sup>,</b> <b>B*4807<sup>weakly</sup></b>
<b>78</b>	210, 240, 315, 360 bp	1070 bp	010201-010205, 0105-0119, 0219, 030301-031102, 0313, 0317, 0318, 0320N-0325, 0327-0332, 0334, 0335, 0337-0339, 0341, 0344-0347, 0612, 0615, 0616N, 0729, 1506, 1518	
<b>79<sup>5</sup></b>	140 bp	1070 bp	0212, 0411, 0429, 080101-0809, 0811-0815, 120201-120303, 120305, 1206-1208, 1210-1220, 140203, 1403, 1408, 1507, 1521, 160101, 160103, 160401, 1606- 1608, 1610	<b>B*350802,</b> <b>B*6702</b>
<b>80<sup>5,7</sup></b>	70, 160, 210 bp	<b>800 bp</b>	0206, 0312, 0319, 0334, 0344, 1215, 1508	<b>B*1318<sup>weakly</sup>,</b> <b>B*1573<sup>weakly</sup>,</b> <b>B*5410<sup>weakly</sup>,</b> <b>B*5509<sup>weakly</sup>,</b> <b>B*5521<sup>weakly</sup></b>
<b>81</b>	435 bp	1070 bp	0206, 0312, 0319, 1215, 1511, 1516, 1517	<b>B*4611,</b> <b>B*5608,</b> <b>B*5614</b>
<b>82<sup>8</sup></b>	165 bp	<b>800 bp</b>	0208, 0318, 04010101-040104, 040401-0405, 0407-041502, 0417-	

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Lot-specific information

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			0420, 0423-0431, 050101-050104, 0503-0517, 080101-0813, 0815, 120201-1215, 1217-1221, 140201-140204, 1404-1409, 151001-151002, 160101-1602, 160401, 1606-1610, 1701-1704
<b>83</b>	240, 315, 360 bp	<b>800 bp</b>	0206, 0312, 0319, 0615, 0616N, 1215, 150201-1503, 1507, 1508, 151001-1513, 1515-1518, 1521
<b>84</b>	205 bp	<b>800 bp</b>	160101-1602, 160401, 1608-1610
<b>85</b>	340 bp	1070 bp	0114, 020201-020203, 020205-0211, 0213-0220, 0307, 0315, 0345, 04010101-040104, 0403-0410, 0412-0420, 0423-0428, 0430, 0431, 050101-050104, 0503-0517, 06020101-0610, 0612-0616N, 0707, 0709, 0749, 0810, 120401-1205, 1209, 1221, 1404, 150201-1506, 1508-1513, 1515-1520, 1602, 1609, 1701-1704, 1801-1803
<b>86</b>	415 bp	1070 bp	0739, 0740
<b>87</b>	160 bp	1070 bp	0753, 160101-1602, 1606-1609
<b>88<sup>5</sup></b>	85, 195 bp	1070 bp	0423, 0431
<b>89</b>	345 bp	<b>800 bp</b>	010201-0119, 030201-0347, 06020101-0604, 0606-0616N, 120304, 120401, 140201-140202, 140204, 1404-1407N, 1409, 160102, 1702, 1704 <sup>?</sup>
<b>90</b>	350 bp	<b>800 bp</b>	1701, 1703, 1704 <sup>?</sup>
<b>91<sup>5</sup></b>	70, 170, 240, 270 bp	<b>800 bp</b>	0517, 0713, 0728, 0747, 0748, 1702, 1704 <sup>?</sup>
<b>92</b>	155, 300 bp	1070 bp	0420, 1703, 1704 <sup>?</sup>
<b>93<sup>5</sup></b>	90, 210 bp	1070 bp	1406, 1701, 1704 <sup>?</sup>
<b>94</b>	560 bp	1070 bp	070101-0733N, 0735-0753, 1801, 1803 <sup>?</sup>
<b>95</b>	220 bp	1070 bp	04010101-040104, 0403-0420, 0423-0431, 1802, 1803 <sup>?</sup>

<sup>1</sup>Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-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 length of the specific PCR product(s) of the alleles amplified by these primer mixes are given.

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

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

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

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

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

Well 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, 75 to 77, 80, 82 to 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.

<sup>3</sup>The Cw\*0101, Cw\*0201, Cw\*020204, Cw\*0301, Cw\*0402, Cw\*0421, Cw\*0422, Cw\*0502, Cw\*0601, 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.

<sup>4</sup>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.

<sup>5</sup>Short specific PCR fragments are less intense and not as sharp as longer specific bands.

<sup>6</sup>Primer mix 3, 15 and 24 have a tendency of giving rise to non-specific amplifications.

<sup>7</sup>Primer mixes 50, 72 and 80 have a tendency of giving rise to primer oligomer formation.

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



























## Primer Table

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
<b>5'-primer(s)<sup>1</sup></b>	<b>368</b>	<b>98</b>	<b>368</b>	<b>142</b>	<b>361</b>	<b>105</b>	<b>703</b>	<b>232</b>	<b>92</b>	<b>206</b>	<b>105</b>	<b>105</b>
	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'
		<b>356</b>	<b>757</b>	<b>244</b>	<b>504</b>	<b>363</b>		<b>486</b>	<b>97</b>	<b>2nd I</b>	<b>992</b>	<b>512</b>
		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'
		<b>368</b>	<b>956</b>	<b>406</b>	<b>512</b>	<b>368</b>			<b>368</b>			
		5'-g TC 3'	5'-g gT 3'	5'-gC A 3'	5'-g Tg 3'	5'-g Tg 3'			5'-g TT 3'			
<b>3'-primer(s)<sup>2</sup></b>	<b>419</b>	<b>154</b>	<b>527</b>	<b>302</b>	<b>473</b>	<b>167</b>	<b>861</b>	<b>302</b>	<b>201</b>	<b>270</b>	<b>134</b>	<b>343</b>
	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'
		<b>538</b>	<b>619</b>	<b>559</b>	<b>523</b>	<b>323</b>		<b>538</b>	<b>477</b>	<b>418</b>	<b>142</b>	<b>539</b>
		5'-CCg 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'
		<b>539</b>	<b>956</b>		<b>538</b>	<b>512</b>		<b>578</b>		<b>559</b>	<b>218</b>	
		5'-TC T 3'	5'-CA g 3'		5'-gCA 3'	5'-CC A 3'		5'-Tg T 3'		5'-CgC 3'	5'-gC T 3'	
			<b>1043</b>		<b>618</b>	<b>538</b>					<b>231</b>	
			5'-CA A 3'		5'-C T 3'	5'-CCA 3'					5'-... C 3'	
						<b>595</b>					<b>1016</b>	
						5'-CC T 3'					5'-CA C 3'	
<b>Well No.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>

Well No.	13	14	15	16	17	18	19	20	21	22	23	24
<b>5'-primer(s)<sup>1</sup></b>	<b>112</b>	<b>105</b>	<b>355</b>	<b>98</b>	<b>201</b>	<b>122</b>	<b>341</b>	<b>89</b>	<b>201</b>	<b>361</b>	<b>115</b>	<b>2nd I</b>
	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'-CCA 3'	5'-Ag T 3'	5'-gg A 3'	5'-C CA 3'
	<b>419</b>			<b>355</b>		<b>199</b>	<b>363</b>	<b>105</b>	<b>355</b>	<b>419</b>	<b>201</b>	
	5'-g TC 3'			5'-CC C 3'		5'-gT T 3'	5'-Agg 3'	5'-gCT 3'	5'-TC A 3'	5'-g TC 3'	5'-CCg 3'	
						<b>374</b>	<b>527</b>	<b>115</b>	<b>368</b>			
						5'-C TA 3'	5'-T gT 3'	5'-gg A 3'	5'-g TT 3'			
						<b>379</b>						
						5'-AC C 3'						
						<b>406</b>						
						5'-gC A 3'						
						<b>539</b>						
						5'-g Tg 3'						
<b>3'-primer(s)<sup>2</sup></b>	<b>295</b>	<b>343</b>	<b>589</b>	<b>295</b>	<b>270</b>	<b>341</b>	<b>353</b>	<b>312</b>	<b>343</b>	<b>459</b>	<b>312</b>	<b>539</b>
	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'
	<b>589</b>		<b>589</b>	<b>301</b>	<b>343</b>	<b>589</b>	<b>589</b>		<b>514</b>			
	5'-CTT 3'		5'-CTT 3'	5'-gCC 3'	5'-T 3'	5'-CTT 3'	5'-CTT 3'		5'-CTT 3'			
				<b>589</b>	<b>474</b>				<b>550</b>			
				5'-CTT 3'	5'-g CA 3'				5'-CA T 3'			
									<b>601</b>			
									5'-CTT 3'			
<b>Well No.</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
<b>5'-primer(s)<sup>1</sup></b>	<b>459</b>	<b>112</b>	<b>560</b>	<b>368</b>	<b>369</b>	<b>485</b>	<b>201</b>	<b>369</b>	<b>419</b>	<b>112</b>	<b>379</b>	<b>176</b>
	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'-TAC 3'	5'-g TC 3'	5'-CC T 3'	5'-AC C 3'	5'-g CA 3'
		<b>486</b>	<b>1018</b>				<b>355</b>	<b>3rd I</b>	<b>446</b>	<b>355</b>		<b>413</b>
		5'-ACA 3'	5'-g Tg 3'				5'-CC T 3'	5'-Tg T 3'	5'-C gT 3'	5'-C C 3'		5'-T gT 3'
							<b>485</b>		<b>512</b>	<b>363</b>		<b>420</b>
							5'-C AA 3'		5'-g TT 3'	5'-AgC 3'		5'-TTC 3'
										<b>379</b>		<b>467</b>
										5'-AC g 3'		5'-C TT 3'
												<b>539</b>
												5'-g Cg 3'
<b>3'-primer(s)<sup>2</sup></b>	<b>589</b>	<b>218</b>	<b>3rd I</b>	<b>527</b>	<b>459</b>	<b>601</b>	<b>299</b>	<b>539</b>	<b>527</b>	<b>289</b>	<b>601</b>	<b>221</b>
	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'-TC T 3'	5'-CC C 3'	5'-AgT 3'	5'-CTT 3'	5'-AC C 3'
		<b>613</b>	<b>3rd I</b>		<b>518</b>		<b>601</b>	<b>668</b>	<b>585</b>	<b>601</b>		<b>256</b>
		5'-gCA 3'	5'-gg A 3'		5'-CC A 3'		5'-CTC 3'	5'-Tg A 3'	5'-AgT 3'	5'-CTT 3'		5'-CCA 3'
			<b>1052</b>		<b>616</b>				<b>601</b>			<b>289</b>
			5'-Tg g 3'		5'-Tg T 3'				5'-CTT 3'			5'-AgC 3'
			<b>1092</b>									<b>589</b>
			5'-T TA 3'									5'-CTT 3'
<b>Well No.</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>





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Well No.	37	38	39	40	41	42	43	44	45	46	47	48
<b>5'-primer(s)<sup>1</sup></b>	<b>361</b>	<b>134</b>	<b>28</b>	<b>2nd I</b>	<b>176</b>	<b>2nd I</b>	<b>142</b>	<b>19</b>	<b>86</b>	<b>368</b>	<b>270</b>	<b>368</b>
	5'-Ag T 3'	5'-C CA 3'	5'-TC A 3'	5'-C CA 3'	5'-g CA 3'	5'-C CA 3'	5'-TC T 3'	5'-CC T 3'	5'-C AA 3'	5'-g TA 3'	5'-AAC 3'	5'-g TC 3'
	<b>1049</b>						<b>361</b>	<b>126</b>	<b>213</b>			
	5'-C 3'						5'-Ag T 3'	5'-ggA 3'	5'-CCC 3'			
								<b>412</b>	<b>368</b>			
								5'-AT A 3'	5'-g TC 3'			
<b>3'-primer(s)<sup>2</sup></b>	<b>601</b>	<b>341</b>	<b>97</b>	<b>527</b>	<b>302</b>	<b>527</b>	<b>201</b>	<b>70</b>	<b>302</b>	<b>618</b>	<b>341</b>	<b>512</b>
	5'-CTT 3'	5'-Cg T 3'	5'-gTC 3'	5'-CC g 3'	5'-gg T 3'	5'-CC g 3'	5'-C TT 3'	5'-gg C 3'	5'-gg C 3'	5'-C T 3'	5'-Cg T 3'	5'-CC A 3'
	<b>1087</b>			<b>539</b>		<b>538</b>	<b>475</b>	<b>220</b>	<b>474</b>			
	5'-Ag T 3'			5'-TC A 3'		5'-CCg 3'	5'-ggT 3'	5'-Cg A 3'	5'-g CA 3'			
							<b>559</b>	<b>239</b>				
							5'-CTC 3'	5'-gC g 3'				
								<b>538</b>				
								5'-CCA 3'				
								<b>539</b>				
								5'-TC T 3'				
<b>Well No.</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>	<b>46</b>	<b>47</b>	<b>48</b>

Well No.	49	50	51	52	53	54	55	56	57	58	59	60
<b>5'-primer(s)<sup>1</sup></b>	<b>89</b>	<b>47</b>	<b>89</b>	<b>512</b>	<b>453</b>	<b>47</b>	<b>47</b>	<b>410</b>	<b>527</b>	<b>527</b>	<b>368</b>	<b>539</b>
	5'-g AT 3'	5'-A gg 3'	5'-g AA 3'	5'-g Tg 3'	5'-AAT 3'	5'-A gg 3'	5'-A gg 3'	5'-g Tg 3'	5'-T AC 3'	5'-T AC 3'	5'-g TC 3'	5'-g Cg 3'
	<b>127</b>	<b>419</b>	<b>385</b>		<b>1049</b>		<b>368</b>	<b>524</b>			<b>449</b>	
	5'-gg A 3'	5'-g TA 3'	5'-gg T 3'		5'-g 3'		5'-g TA 3'	5'-C CA 3'			5'-C CA 3'	
	<b>172</b>							<b>539</b>			<b>527</b>	
	5'-TC C 3'							5'-g Tg 3'			5'-T AC 3'	
	<b>410</b>							<b>560</b>				
	5'-g TT 3'							5'-C AC 3'				
	<b>486</b>											
	5'-TAC 3'											
<b>3'-primer(s)<sup>2</sup></b>	<b>218</b>	<b>302</b>	<b>278</b>	<b>601</b>	<b>527</b>	<b>270</b>	<b>90</b>	<b>618</b>	<b>601</b>	<b>595</b>	<b>559</b>	<b>601</b>
	5'-gC T 3'	5'-gg T 3'	5'-g gT 3'	5'-CTT 3'	5'-CC A 3'	5'-T AC 3'	5'-Ag 3'	5'-C T 3'	5'-CTT 3'	5'-CCT 3'	5'-CTC 3'	5'-CTT 3'
	<b>618</b>	<b>618</b>	<b>287</b>		<b>1087</b>		<b>97</b>				<b>598</b>	
	5'-C T 3'	5'-C T 3'	5'-TCg 3'		5'-AgC 3'		5'-gTA 3'				5'-CTC 3'	
			<b>289</b>				<b>341</b>				<b>603</b>	
			5'-AgC 3'				5'-Cg g 3'				5'-T Tg 3'	
			<b>301</b>				<b>3rd I</b>					
			5'-gC A 3'				5'-AT g 3'					
			<b>618</b>									
			5'-C T 3'									
<b>Well No.</b>	<b>49</b>	<b>50</b>	<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>55</b>	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>

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



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

Well No.	85	86	87	88	89	90	91	92	93	94	95
<b>5'-primer(s)<sup>1</sup></b>	<b>1st I</b>	<b>47</b>	<b>419</b>	<b>368</b>	<b>28</b>	<b>20</b>	<b>28</b>	<b>70</b>	<b>20</b>	<b>956</b>	<b>895</b>
	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'
							<b>390</b>	<b>347</b>	<b>368</b>		
							5'-gAA 3'	5'-g TA 3'	5'-g TT 3'		
							<b>419</b>				
							5'-g TT 3'				
							<b>490</b>				
							5'-Cg A 3'				
<b>3'-primer(s)<sup>2</sup></b>	<b>302</b>	<b>289</b>	<b>539</b>	<b>412</b>	<b>201</b>	<b>201</b>	<b>59</b>	<b>201</b>	<b>70</b>	<b>1034</b>	<b>956</b>
	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'
				<b>521</b>			<b>618</b>	<b>459</b>	<b>539</b>		
				5'-g gA 3'			5'-C T 3'	5'-A gA 3'	5'-TC A 3'		
<b>Well No.</b>	<b>85</b>	<b>86</b>	<b>87</b>	<b>88</b>	<b>89</b>	<b>90</b>	<b>91</b>	<b>92</b>	<b>93</b>	<b>94</b>	<b>95</b>

<sup>1</sup>The nucleotide position, in the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup> or 7<sup>th</sup> exon or the 1<sup>st</sup>, 2<sup>nd</sup> or 3<sup>rd</sup> intron, matching the specificity-determining 3'-end of the 5'-primer is given. Nucleotide numbering as on the [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.

<sup>2</sup>The nucleotide position, in the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup> or 7<sup>th</sup> exon or the 3<sup>rd</sup> 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](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.



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<b>CELL LINE VALIDATION SHEET</b>																					
<b>HLA-Cw high resolution SSP primer set</b>																					
					<b>Well</b>																
					<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	
					Prod. No.:	200729301	200729302	200729303	200729304	200841005	200729306	200513007	200841008	200729309	200729310	200841011	200841012	200513013	200513014	200841015	200729316
<b>IHWCell line</b>			<b>Cw*</b>																		
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	*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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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CELL LINE VALIDATION SHEET					Well															
HLA-Cw high resolution SSP primer set					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
				Prod. No.:	200729317	200729318	200729319	200729320	200841021	200501922	200841023	200841024	200841025	200729326	200841027	200841028	200729329	200501930	200729331	200513032
	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	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		*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.: **07E**

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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.:	200841033	200729334	200501935	200729336	200841037	200729338	200501939	200729340	200501941	200729342	200841043	200729344	200841045	200841046	200501947	200501948
	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	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		*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	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-



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<b>CELL LINE VALIDATION SHEET</b>				<b>Well</b>																
<b>HLA-Cw high resolution SSP primer set</b>																				
			Prod. No.:	200729349	200501950	200841051	200729352	200729353	200501954	200729355	200729356	200501957	200501958	200729359	200501960	200729361	200501962	200501963	200513064	
	<b>IHWc cell line</b>	<b>Cw*</b>																		
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	*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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+



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CELL LINE VALIDATION SHEET																				
HLA-Cw high resolution SSP primer set																				
				Well																
				65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
				Prod. No.:	200841065	200501966	200513067	200501968	200501969	200501970	200501971	200729372	200513073	200729374	200729375	200729376	200729377	200729378	200841079	200841080
IHCcell 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	*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	-	-	-	+	+	+	-	-	-	-	-	-	+	-	-	+	-



<b>CELL LINE VALIDATION SHEET</b>																				
<b>HLA-Cw high resolution SSP primer set</b>																				
				<b>Well</b>																
				81	82	83	84	85	86	87	88	89	90	91	92	93	94	95		
				Prod. No.:	200841081	200501982	200729383	200501984	200501985	200729386	200501987	200841088	200501989	200501990	200729391	200729392	200513093	200501994	200513095	
<b>IHWC cell line</b>			<b>Cw*</b>																	
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	H-HKB	*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.: **07E**

Lot-specific information

Product Insert  
www.olerup.com

## CERTIFICATE OF ANALYSIS

### Olerup SSP<sup>®</sup> HLA-Cw high resolution for frequent alleles SSP

Product number: 101.707-12 – including *Taq* polymerase  
101.707-12u – without *Taq* polymerase  
Lot number: 07E  
Expiry date: 2010-February-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	2007-293-01	33	2008-410-33	65	2008-410-65
2	2007-293-02	34	2007-293-34	66	2005-019-66
3	2007-293-03	35	2005-019-35	67	2005-130-67
4	2007-293-04	36	2007-293-36	68	2005-019-68
5	2008-410-05	37	2008-410-37	69	2005-019-69
6	2007-293-06	38	2007-293-38	70	2005-019-70
7	2005-130-07	39	2005-019-39	71	2005-019-71
8	2008-410-08	40	2007-293-40	72	2007-293-72
9	2007-293-09	41	2005-019-41	73	2005-130-73
10	2007-293-10	42	2007-293-42	74	2007-293-74
11	2008-410-11	43	2008-410-43	75	2007-293-75
12	2008-410-12	44	2007-293-44	78	2007-293-76
13	2005-019-13	45	2008-410-45	77	2007-293-77
14	2005-019-14	46	2008-410-46	78	2007-293-78
15	2008-410-15	47	2005-019-47	79	2008-410-79
16	2007-293-16	48	2005-019-48	80	2008-410-80
17	2007-293-17	49	2007-293-49	81	2008-410-81
18	2007-293-18	50	2005-019-50	82	2005-019-82
19	2007-293-19	51	2008-410-51	83	2007-293-83
20	2007-293-20	52	2007-293-52	84	2005-019-84
21	2008-410-21	53	2007-293-53	85	2005-019-85
22	2005-019-22	54	2005-019-54	86	2007-293-86
23	2008-410-23	55	2007-293-55	87	2005-019-87
24	2008-410-24	56	2007-293-56	88	2008-410-88
25	2008-410-25	57	2005-019-57	89	2005-019-89
26	2007-293-26	58	2005-019-58	90	2005-019-90
27	2008-410-27	59	2007-293-59	91	2007-293-91
28	2008-410-28	60	2005-019-60	92	2007-293-92
29	2007-293-29	61	2007-293-61	93	2005-130-93
30	2005-019-30	62	2005-019-62	94	2005-019-94
31	2007-293-31	63	2005-019-63	95	2005-130-95
32	2005-130-32	64	2005-130-64		

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, 9, 10, 17, 18, 19, 21, 26, 31, 32, 34, 37, 43, 44, 49, 51, 53, 55, 56, 58, 59, 65, 74, 80, 81, 86, 88 and 91. The specificity of most of the primers in these solutions were tested by separately adding one or more additional 5'-primer, respectively one or more additional 3'-primer. In primer solutions 2, 3, 4, 5, 8, 9, 18, 20, 23, 31, 33, 34, 36, 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, 11, 13, 15, 16, 21, 26, 27, 29, 31, 32, 33, 36, 43, 44, 51, 55, 58, 59, 61 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, 27, 33, 36, 40, 42, 45, 50, 71, 74, 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. 2008-417-01**, can detect contamination with PCR products diluted  $10^{-7}$ .

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

**Date of approval:** 2008-February-22

**Approved by:**

**Quality Control, Supervisor**

## Declaration of Conformity

**Product name:** *Olerup* SSP<sup>®</sup> HLA-Cw high resolution for frequent alleles  
**Product number:** 101.707-12, 101.707-12u  
**Lot number:** 07E

**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 9001:2000, 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  
2008-February-22

Olle Olerup  
Managing Director

HLA-Cw high resolution for frequent alleles  
101.707-12 – including *Taq* polymerase  
101.707-12u – without *Taq* polymerase

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Lot No.: **07E**

Lot-specific information

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

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**E-mail:** [support-at@olerup.com](mailto:support-at@olerup.com)

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**Web page:** <http://www.olerup.com>

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