

## Olerup SSP<sup>®</sup> HLA-Cw\*02

Product number:	101.622-12 – including <i>Taq</i> polymerase
Lot number:	74F
Expiry date:	2011-April-01
Number of tests:	12
Number of wells per test:	16
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. 74F.**

### CHANGES COMPARED TO THE PREVIOUS OLERUP SSP<sup>®</sup> HLA-Cw\*02 LOT

The HLA-Cw\*02 specificity and interpretation tables have been updated for the HLA-Cw alleles described since the previous *Olerup SSP<sup>®</sup>* HLA-Cw\*02 lot was made (**Lot No. 12E**).

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

Well	5'-primer	3'-primer	rationale
4	Added	-	Primer added for the Cw*0221 allele.
5	Added	-	Primer added for the Cw*0222 allele.
10	Added	-	Primer added for the Cw*0221 allele.
11	-	-	Exchanged positive control primer pair.
12	Added	-	Primer added for increased yield of specific PCR product.
13	Added	Added	Primer pair added for the Cw*0223 allele.
15	Added	Added	Primer pair added for the Cw*0221 allele.

## PRODUCT DESCRIPTION

### HLA-Cw\*02 SSP typing

#### INTENDED USE

The primer set contains 5'- and 3'-primers for identifying the Cw\*0202 to Cw\*0223 alleles.

#### PLATE LAYOUT

Each HLA-Cw\*02 test consists of sixteen 10 µl PCR reactions in a 16 well cut PCR plate.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

The 16 well PCR plate is marked with 'Cw\*02' in silver/gray ink.

Well No. 1 is marked with the Lot No. '74F'.

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

**Please note:** When removing each 16 well PCR plate, make sure that the remaining plates stay sealed. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

#### INTERPRETATION

The interpretation of HLA-Cw\*02 SSP subtypings will be influenced by other HLA-Cw alleles, as primer mixes 1, 5, 6, 8, 10, 12 and 16 amplify non-HLA-Cw\*02 alleles. In addition, primer mix 3 will amplify the B\*2734 and B\*400602 alleles and also weakly the B\*570302 allele. Primer mix 5 will amplify the B\*070207 allele. Primer mix 16 will amplify the B\*5802 allele.

#### UNIQUELY IDENTIFIED ALLELES

All the HLA-Cw\*02 alleles, i.e. **Cw\*0202 to Cw\*0223**, recognized by the HLA Nomenclature Committee in January 2009<sup>1</sup> will be amplified by the primers in the HLA-Cw\*02 SSP kit.

The HLA-Cw\*02 subtyping kit cannot distinguish the Cw\*020201 to Cw\*020203 and Cw\*020206 alleles.

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

#### RESOLUTION IN HOMO- AND HETEROZYGOTES

The 22 phenotypically different HLA-Cw\*02 alleles give rise to 23 different amplification patterns. These can be combined in 276 homozygous and heterozygous combinations. 185 of these genotypes do not give rise to unique amplification patterns. The different lengths of the specific PCR products generated by primer mixes 3, 5, 11, 12, 13 and 15 were not considered in these calculations.

+++---- ++-----      0205,0220 = 0220,0222  
+++---- ++-----      0206,0220 = 0219,0220

Lot No.: 74F

Lot-specific Information

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+++----- +++-----+ 0202,0218 = 0203,0209 = 0209,0218 =  
0218,0220  
+++----- +-+----- 0211,0220 = 0214,0220  
+++----- +-+----- 0212,0220 = 0220,0223  
+++----- +-+-----+ 0202,0203 = 0203,0220 = 0216,0220  
+++----- +-+----- 0202,0220 = 020205,0220 = 0210,0220 =  
0220,0220  
++-++----- +-+-----+ 0205,0221 = 0221,0222  
++-++----- +-+----- 0204,0205 = 0204,0222  
++-++----- +-+-----+ 0206,0221 = 0219,0221  
++-++----- +-+----- 0204,0206 = 0204,0219  
++-++----- +-+-----+ 0211,0221 = 0214,0221  
++-++----- +-+----- 0204,0211 = 0204,0214  
++-++----- +-+-----+ 0212,0221 = 0221,0223  
++-++----- +-+----- 0204,0212 = 0204,0223  
++-++----- +-+-----+ 0202,0221 = 020205,0221 = 0204,0215 =  
0204,0221 = 0210,0221 = 0215,0221 =  
0221,0221  
++-++----- +-+----- 0202,0204 = 020205,0204 = 0204,0204 =  
0204,0210  
++-++----- +-+----- 0205,0219 = 0206,0222 = 0219,0222  
++-++----- +-+----- 0205,0207 = 0207,0222  
++-++----- +-+----- 0205,0208 = 0208,0222  
++-++----- +++----- 0205,0209 = 0209,0222  
++-++----- +-+----- 0202,0217 = 0205,0211 = 0211,0217 =  
0211,0222 = 0214,0222 = 0217,0222  
++-++----- +-+-----+ 0205,0223 = 0212,0222 = 0222,0223  
++-++----- +-+-----+ 0205,0213 = 0213,0222  
++-++----- +-+-----+ 0205,0215 = 0215,0222  
++-++----- +-+----- 0202,0205 = 0202,0222 = 020205,0222 =  
0205,0222 = 0210,0222 = 0222,0222  
++-++----- +-+----- 0206,0207 = 0207,0219  
++-++----- +-+----- 0206,0208 = 0208,0219  
++-++----- +++----- 0206,0209 = 0209,0219  
++-++----- +-+----- 0206,0211 = 0211,0219 = 0214,0219  
++-++----- +-+----- 0206,0223 = 0212,0219 = 0219,0223  
++-++----- +-+----- 0206,0213 = 0213,0219  
++-++----- +-+-----+ 0206,0215 = 0215,0219  
++-++----- +-+----- 0202,0206 = 0202,0219 = 020205,0219 =  
0206,0219 = 0210,0219 = 0219,0219  
++-++----- +-+----- 0207,0211 = 0207,0214  
++-++----- +-+----- 0207,0212 = 0207,0223  
++-++----- +-+----- 0202,0207 = 020205,0207 = 0207,0207 =  
0207,0210  
++-++----- +-+----- 0208,0211 = 0208,0214  
++-++----- +-+----- 0208,0212 = 0208,0223  
++-++----- +-+----- 0202,0208 = 020205,0208 = 0208,0208 =  
0208,0210  
++-++----- +++----- 0209,0211 = 0209,0214  
++-++----- +++----- 0209,0212 = 0209,0223  
++-++----- +++----- 0202,0209 = 020205,0209 = 0209,0209 =  
0209,0210  
++-++----- +-+----- 0211,0212 = 0211,0223 = 0214,0223



Lot No.: **74F**

Lot-specific Information

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++-----	++-+----	0211,0213 = 0213,0214
++-----	++-+----	0211,0215 = 0214,0215
++-----	++-+----	0202,0211 = 0202,0214 = 020205,0211 =
		0210,0211 = 0211,0211 = 0211,0214
++-----	++-+----	0212,0213 = 0213,0223
++-----	++-+----	0212,0215 = 0215,0223
++-----	++-+----	0202,0212 = 0202,0223 = 020205,0223 =
		0210,0223 = 0212,0223 = 0223,0223
++-----	++-+----	0202,0213 = 020205,0213 = 0210,0213 =
		0213,0213
++-----	++-+----	0202,0215 = 020205,0215 = 0210,0215 =
		0215,0215
++-----	++-+----	0202,0202 = 0202,020205 = 0202,0210
+--+-----	+++-----	020205,0218 = 0210,0218
+--+-----	+++-----	020205,0203 = 0203,0210
+--+-----	+++-----	020205,0217 = 0205,0214 = 0205,0217 =
		0210,0217 = 0214,0217 = 0217,0217
+--+-----	+++-----	020205,0205 = 0205,0205 = 0205,0210
+--+-----	+++-----	020205,0206 = 0206,0206 = 0206,0210
+--+-----	+++-----	020205,0214 = 0210,0214 = 0214,0214
+--+-----	+++-----	020205,0212 = 0210,0212 = 0212,0212
+--+-----	+++-----	020205,0216 = 0210,0216
+--+-----	+++-----	020205,020205 = 020205,0210
--+-----	+++-----	0203,0218 = 0216,0218 = 0218,0218
--+-----	+++-----	0203,0203 = 0203,0216

0202 = 020201-020203 and 020206

## SPECIFICITY TABLE

### HLA-Cw\*02 SSP subtyping

Specificities and sizes of the PCR products of the 16 primer mixes used for HLA-Cw\*02 SSP subtyping

Primer Mix	Size of spec. PCR product <sup>1</sup>	Size of control band <sup>2</sup>	Amplified HLA-Cw*02 alleles	Other amplified HLA Class I alleles <sup>3</sup>
<b>1</b>	250 bp	<b>800 bp</b>	020201-020203, 020205-020206, 0204-0215, 0217, 0219-0223	0104, 0109, 0121, 0508, 06020101-06020102, 060203, 0603, 0607-0619, 120201-1208, 1210-1213, 1215-1217, 1221, 160401, 1803
<b>2<sup>4</sup></b>	95 bp	<b>800 bp</b>	020201-020203, 020206, 0204, 0207-0209, 0211, 0213, 0215, 0219-0223	
<b>3<sup>4,5,6</sup></b>	95, 135 bp	<b>800 bp</b>	0203, 0218, 0220	<b>B*2734, B*400602, B*570302<sup>weakly</sup></b>
<b>4<sup>5</sup></b>	140 bp	1070 bp	0204, 0221	
<b>5<sup>5,7</sup></b>	145, 240 bp	1070 bp	0205, 0217, 0222	0110, 0608, <b>B*070207</b>
<b>6</b>	160 bp	<b>800 bp</b>	0206, 0219	0109, 0321, 1215
<b>7<sup>4</sup></b>	130 bp	<b>800 bp</b>	0207	1610
<b>8<sup>4</sup></b>	70 bp	1070 bp	0208	151002
<b>9</b>	200 bp	1070 bp	020201-020203, 020205-0209, 0211-0223	
<b>10<sup>4</sup></b>	125 bp	1070 bp	020201-020203, 020205-0223	0403, 0406, 1511
<b>11<sup>4,8</sup></b>	80, 170 bp	<b>800 bp</b>	0209, 0218	
<b>12<sup>9</sup></b>	150, 230 bp	1070 bp	0211, 0214, 0217	0605 <sup>weakly</sup> , 1216
<b>13<sup>10</sup></b>	160, 225 bp	1070 bp	0212, 0223	
<b>14<sup>4</sup></b>	80 bp	<b>800 bp</b>	0213	
<b>15<sup>4,11</sup></b>	130, 190 bp	1070 bp	0215, 0221	
<b>16</b>	250 bp	1070 bp	0203, 0216, 0218	0122, 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, 1701-1705,  
**B\*5802**

<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 Cw\*02 low resolution 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.

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-Cw\*02 SSP subtyping.

In addition, wells number 2, 3, 6, 7, 11 and 14 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band.

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

<sup>3</sup>Due to the sharing of sequence motifs between HLA Class I alleles some non-HLA-Cw\*02 alleles will be amplified by primer mixes 1, 5, 6, 8, 10, 12 and 16. In addition, the B\*2734 and B\*400602 alleles and weakly the B\*570302 allele will be amplified by primer mix 3, the B\*070207 allele by primer mix 5 and the B\*5802 allele by primer mix 16.

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

<sup>5</sup>Primer mixes 3, 4 and 5 may give rise to nonspecific amplifications.

<sup>6</sup>Primer mix 3: Specific PCR fragment of 95 bp in the Cw\*0203 and Cw\*0218 and the B\*2734, B\*400602 and B\*570302<sup>weakly</sup> alleles. Specific PCR fragment of 135 bp in the Cw\*0220 allele.

<sup>7</sup>Primer mix 5: Specific PCR fragment of 145 bp in the Cw\*0222 and in the B\*070207 alleles. Specific PCR fragment of 240 bp in the Cw\*0205, Cw\*0217 and in the Cw\*0110 and Cw\*0608 alleles.

<sup>8</sup>Primer mix 11: Specific PCR fragment of 80 bp in the Cw\*0218 allele. Specific PCR fragment of 170 bp in the Cw\*0209 allele.

<sup>9</sup>Primer mix 12: Specific PCR fragment of 150 bp in the Cw\*0211, Cw\*0214 and the Cw\*0605<sup>weakly</sup> and Cw\*1216 alleles. Specific PCR fragment of 230 bp in the Cw\*0217 allele.

<sup>10</sup>Primer mix 13: Specific PCR fragment of 160 bp in the Cw\*0223 allele. Specific PCR fragment of 225 bp in the Cw\*0212 allele.

<sup>11</sup>Primer mix 15: Specific PCR fragment of 130 bp in the Cw\*0221 allele. Specific PCR fragment of 190 bp in the Cw\*0215 allele.



<b>HLA-Cw*02 SSP subtyping</b>								
<b>Amplification patterns for the HLA-Cw*0202 to 0223 alleles</b>								
	Well <sup>5</sup>							
	1	2	3	4	5	6	7	8
Length of spec.	250	95	95	140	145	160	130	70
PCR product			135		240			
Length of int.	800	800	800	1070	1070	800	800	1070
pos. control <sup>1</sup>								
5'-primer(s) <sup>2</sup>	2 <sup>nd</sup>	486	486	92	361	419	2 <sup>nd</sup>	105
	5'-CCA <sup>3'</sup>	5'-ACA <sup>3'</sup>	5'-ACA <sup>3'</sup>	5'-gTg <sup>3'</sup>	5'-AgT <sup>3'</sup>	5'-gTA <sup>3'</sup>	5'-CCA <sup>3'</sup>	5'-gCT <sup>3'</sup>
				113	453	420		
				5'-CCA <sup>3'</sup>	5'-AAT <sup>3'</sup>	5'-TTA <sup>3'</sup>		
3'-primer(s) <sup>3</sup>	538	538	538	201	559	538	418	134
	5'-CCA <sup>3'</sup>	5'-CCA <sup>3'</sup>	5'-CAg <sup>3'</sup>	5'-CTT <sup>3'</sup>	5'-CTC <sup>3'</sup>	5'-CCA <sup>3'</sup>	5'-gTC <sup>3'</sup>	5'-AgC <sup>3'</sup>
			578					
			5'-TgT <sup>3'</sup>					
Well No.	1	2	3	4	5	6	7	8
HLA-Cw allele <sup>4</sup>								
*020201-020203, 020206	1	2						
*020205	1							
*0203			3					
*0204	1	2		4				
*0205	1				5			
*0206	1					6		
*0207	1	2					7	
*0208	1	2						8
*0209	1	2						
*0210	1							
*0211	1	2						
*0212	1							
*0213	1	2						
*0214	1							
*0215	1	2						
*0216								
*0217	1				5			
*0218			3					
*0219	1	2				6		
*0220	1	2	3					
Well No.	1	2	3	4	5	6	7	8



<b>INTERPRETATION TABLE</b>							
<b>HLA-Cw*02 SSP subtyping</b>							
<b>Amplification patterns for the HLA-Cw*0202 to 0223 alleles</b>							
<b>Well<sup>5</sup></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>
<b>200</b>	<b>125</b>	<b>80</b>	<b>150</b>	<b>160</b>	<b>80</b>	<b>130</b>	<b>250</b>
		<b>170</b>	<b>230</b>	<b>225</b>		<b>190</b>	
<b>1070</b>	<b>1070</b>	<b>800</b>	<b>1070</b>	<b>1070</b>	<b>800</b>	<b>1070</b>	<b>1070</b>
<b>703</b>	<b>113</b>	<b>486</b>	<b>97</b>	<b>118</b>	<b>486</b>	<b>113</b>	<b>2<sup>nd</sup> I</b>
5'-CTA <sup>3'</sup>	5'-CCA <sup>3'</sup>	5'-ACA <sup>3'</sup>	5'-TCg <sup>3'</sup>	5'-CCA <sup>3'</sup>	5'-ACA <sup>3'</sup>	5'-CCA <sup>3'</sup>	5'-CCA <sup>3'</sup>
	<b>118</b>		<b>368</b>	<b>486</b>		<b>369</b>	
	5'-CCA <sup>3'</sup>		5'-gTT <sup>3'</sup>	5'-ACA <sup>3'</sup>		5'-TAC <sup>3'</sup>	
			<b>449</b>				
			5'-CCA <sup>3'</sup>				
<b>861</b>	<b>201</b>	<b>527</b>	<b>201</b>	<b>302</b>	<b>527</b>	<b>201</b>	<b>539</b>
5'-TCg <sup>3'</sup>	5'-CTT <sup>3'</sup>	5'-CCg <sup>3'</sup>	5'-CTT <sup>3'</sup>	5'-ggC <sup>3'</sup>	5'-CCg <sup>3'</sup>	5'-CTT <sup>3'</sup>	5'-TCA <sup>3'</sup>
		<b>613</b>	<b>559</b>	<b>603</b>		<b>518</b>	
		5'-gCA <sup>3'</sup>	5'-CTC <sup>3'</sup>	5'-TTg <sup>3'</sup>		5'-CCA <sup>3'</sup>	
<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
<b>9</b>	<b>10</b>						
<b>9</b>	<b>10</b>						
<b>9</b>	<b>10</b>					<b>16</b>	
<b>9</b>	<b>10</b>						
<b>9</b>	<b>10</b>						
<b>9</b>	<b>10</b>						
<b>9</b>	<b>10</b>						
<b>9</b>	<b>10</b>						
<b>9</b>	<b>10</b>						
<b>9</b>	<b>10</b>	<b>11</b>					
	<b>10</b>						
<b>9</b>	<b>10</b>		<b>12</b>				
<b>9</b>	<b>10</b>			<b>13</b>			
<b>9</b>	<b>10</b>				<b>14</b>		
<b>9</b>	<b>10</b>		<b>12</b>				
<b>9</b>	<b>10</b>					<b>15</b>	
<b>9</b>	<b>10</b>						<b>16</b>
<b>9</b>	<b>10</b>		<b>12</b>				
<b>9</b>	<b>10</b>	<b>11</b>					<b>16</b>
<b>9</b>	<b>10</b>						
<b>9</b>	<b>10</b>						
<b>9</b>	<b>10</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>

Lot No.: **74F**

Lot-specific Information

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Length of spec.	250	95	95	140	145	160	130	70
PCR product			135		240			
Well No.	1	2	3	4	5	6	7	8
*0221	1	2		4				
*0222	1	2			5			
*0223	1	2						
*0104, 0121, 0508, 06020101-06020102, 060203, 0603, 0607, 0609- 0619, 120201-1208, 1210- 1213, 1217, 1221, 160401, 1803	1							
*0109, 1215	1					6		
*0110					5			
*0122, 040401-040402, 0413, 0434, 0511, 0517, 0604, 080101-080102, 0803, 0804, 0806, 0808- 0811, 0813, 0814, 0816, 1214, 1218, 1220, 1406, 150201-1507, 1509, 151001, 1512, 1513, 1515- 1521, 1701-1705								
*0321						6		
*0403								
*0406, 1511								
*0605								
*0608	1				5			
*1216	1							
*151002								8
*1610							7	
HLA-Cw allele <sup>4</sup>								
Well No.	1	2	3	4	5	6	7	8
B*070207					5			
B*2734, B*400602			3					
B*570302			w					
B*5802								
Well No.	1	2	3	4	5	6	7	8

Lot No.: **74F**

Lot-specific Information

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200	125	80	150	160	80	130	250	Length of spec.
		170	230	225		190		PCR product
9	10	11	12	13	14	15	16	Well No.
9	10					15		*0221
9	10							*0222
9	10			13				*0223
								*0104, 0121, 0508, 06020101-06020102, 060203, 0603, 0607, 0609- 0619, 120201-1208, 1210- 1213, 1217, 1221, 160401, 1803
								*0109, 1215
								*0110
							16	*0122, 040401-040402, 0413, 0434, 0511, 0517, 0604, 080101-080102, 0803, 0804, 0806, 0808- 0811, 0813, 0814, 0816, 1214, 1218, 1220, 1406, 150201-1507, 1509, 151001, 1512, 1513, 1515- 1521, 1701-1705
								*0321
	10							*0403
	10						16	*0406, 1511
			w					*0605
								*0608
			12					*1216
							16	*151002
								*1610
<b>HLA-Cw allele<sup>4</sup></b>								
9	10	11	12	13	14	15	16	Well No.
								B*070207
								B*2734, B*400602
								B*570302
							16	B*5802
9	10	11	12	13	14	15	16	Well No.

<sup>1</sup>The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-Cw\*02 SSP subtyping.

In addition, wells number 2, 3, 6, 7, 11 and 14 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band.

<sup>2</sup>The nucleotide position, 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. Nucleotide numbering as on the [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.

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

<sup>4</sup>Cw\*0201 has been deleted as it was identical to Cw\*020202.

Cw\*02024 has been deleted as it was identical to Cw\*0210

<sup>5</sup>Primer mix 3: Specific PCR fragment of 95 bp in the Cw\*0203 and Cw\*0218 and the B\*2734, B\*400602 and B\*570302<sup>weakly</sup> alleles. Specific PCR fragment of 135 bp in the Cw\*0220 allele.

Primer mix 5: Specific PCR fragment of 145 bp in the Cw\*0222 and in the B\*070207 alleles. Specific PCR fragment of 240 bp in the Cw\*0205, Cw\*0217 and in the Cw\*0110 and Cw\*0608 alleles.

Primer mix 11: Specific PCR fragment of 80 bp in the Cw\*0218 allele. Specific PCR fragment of 170 bp in the Cw\*0209 allele.

Primer mix 12: Specific PCR fragment of 150 bp in the Cw\*0211, and Cw\*0214 and the Cw\*0605<sup>weakly</sup> and Cw\*1216 alleles. Specific PCR fragment of 230 bp in the Cw\*0217 allele.

Primer mix 13: Specific PCR fragment of 160 bp in the Cw\*0223 allele. Specific PCR fragment of 225 bp in the Cw\*0212 allele.

<sup>1</sup>Primer mix 15: Specific PCR fragment of 130 bp in the Cw\*0221 allele. Specific PCR fragment of 190 bp in the Cw\*0215 allele.

'w', might be weakly amplified.

CELL LINE VALIDATION SHEET																					
HLA-Cw*02 SSP primer set																					
				Prod. No.:	Well																
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
					200512901	200958102	200841403	200958104	200958105	200841406	200958107	200841408	200512909	200958110	200958111	200958112	200958113	200958114	200958115	200627416	
	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		*0602		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301		*0802		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089		*0102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526		*0102	*0801	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
44	9057 TEM		*1203		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
45	9239 SHJO		*0602	*1701	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
46	9013 SCHU		*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO		*0704	*1502	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
48	9303 TER-ND		*0401	*1601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## CERTIFICATE OF ANALYSIS

### Olerup SSP® HLA-Cw\*02 SSP

Product number: 101.622-12 – including *Taq* polymerase  
Lot number: 74F  
Expiry date: 2011-April-01  
Number of tests: 12  
Number of wells per test: 16

#### Well specifications:

Well No.	Production No.	Well No.	Production No.
1	2005-129-01	9	2005-129-09
2	2009-581-02	10	2009-581-10
3	2008-414-03	11	2009-581-11
4	2009-581-04	12	2009-581-12
5	2009-581-05	13	2009-581-13
6	2008-414-06	14	2009-581-14
7	2009-581-07	15	2009-581-15
8	2008-414-08	16	2006-274-16

The specificity of each primer solution of the HLA-Cw\*02 primer set has been tested against 48 well characterized IHWC cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 3 to 8 and 11 to 15 were available. The specificity of the primers in primer solutions 3, 5 to 8 and 11 to 15 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solution 4 it was only possible to test the 3'-primer, the 5'-primer was not possible to test. In primer solutions 3, 11 and 15 one of the 3'-primers was not possible to test. In primer solutions 10 and 12, one or two 5'-primers were not possible to test, and in primer solution 15, one 5'-primer and one 3'-primer was not possible to test.

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

**Date of approval:** 2009-May-25

**Approved by:**

Quality Control, Supervisor

Lot No.: **74F**

Lot-specific Information

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

## Declaration of Conformity

**Product name:** *Olerup* SSP® HLA-Cw\*02  
**Product number:** 101.622-12  
**Lot number:** 74F

**Intended use:** HLA-Cw\*02 high resolution histocompatibility testing

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

We, *Olerup* SSP AB, hereby declare that this product, to which this Declaration of Conformity relates is in conformity with the following Standard(s) and other normative document(s) ISO 9001:2000 and ISO 13485:2003, following the provisions of the 98/79/EC Directive on *in vitro* diagnostic medical devices, Annex III, as transposed into the national laws of the Member States of the European Union.

The Technical Documentation File is maintained at *Olerup* SSP AB, Hasselstigen 1, SE-133 33 Saltsjöbaden, Sweden.

The Authorized Representative located within the Community is: *Olerup* SSP AB.

Saltsjöbaden, Sweden  
2009-May-25

Olle Olerup  
Managing Director

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