

Olerup SSP[®] HLA-Cw*15

Product number:	101.626-12 – including <i>Taq</i> polymerase
Lot number:	75F
Expiry date:	2011-March-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. 75F.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP[®]* HLA-Cw*15 Lot

The HLA-Cw*15 specificity and interpretation tables have been updated for the HLA-Cw alleles described since the previous *Olerup SSP[®]* HLA-Cw*15 lot was made (**Lot No. 20E**).

The HLA-Cw*15 primer set is unchanged compared to the previous lot (**Lot No. 20E**).

PRODUCT DESCRIPTION

HLA-Cw*15 SSP typing

CONTENT

The primer set contains 5'- and 3'-primers for identifying the Cw*1502 to Cw*1521 alleles.

PLATE LAYOUT

Each HLA-Cw*15 test consists of 16 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*15' in silver/gray ink.

Well No. 1 is marked with the Lot No. '75F'.

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*15 SSP subtypings will be influenced by HLA-Cw*01, HLA-Cw*02, HLA-Cw*03, HLA-Cw*04, HLA-Cw*05, HLA-Cw*06, HLA-Cw*07, HLA-Cw*08, HLA-Cw*12, HLA-Cw*14, HLA-Cw*16 and HLA-Cw*17 alleles, when present on the other haplotype. In addition, primer mix 7 amplifies the B*350802 and B*6702 alleles, primer mix 8 weakly amplifies the B*1318, B*1573, B*5410, B*5509 and B*5521 alleles and primer mix 14 amplifies the B*4611, B*4618 and B*5614 alleles.

UNIQUELY IDENTIFIED ALLELES

All the HLA-Cw*15 alleles, i.e. **Cw*1502 to Cw*1521**, recognized by the HLA Nomenclature Committee in January 2009¹ will be amplified by the primers in the HLA-Cw*15 SSP kit.

The HLA-Cw*15 subtyping kit cannot distinguish the Cw*150201 and Cw*150204 alleles, the Cw*150501 to Cw*150504 alleles or the Cw*151001 and Cw*151002 alleles.

¹HLA-Cw alleles listed on the IMGT/HLA web page 2009-January-16, release 2.24.0, www.ebi.ac.uk/imgt/hla.

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Lot-specific information

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RESOLUTION IN HOMO- AND HETEROZYGOTES

The nineteen phenotypically different HLA-Cw*15 alleles can be combined in 190 homozygous and heterozygous combinations. 128 of these genotypes do not give rise to unique amplification patterns. The different lengths of the specific PCR products generated by primer mixes 8, 9 and 14 were not considered in these calculations.

++++----- --+-----	1504,1516 = 1509,1516
++++----- --+-----	1503,1504 = 1503,1509 = 1503,1520
++++----- --+-----	1503,1507 = 1503,1521
++++----- ++-----	1503,1511 = 1503,1518
++++----- --+-----	1502,1516 = 1503,1513 = 1503,1516 =
	1503,1517 = 1513,1516
++++----- --+-----	1502,1503 = 1503,1503
++++----- -----	1504,1505 = 1505,1509 = 1505,1520
++++----- -----	1504,1506 = 1506,1509 = 1506,1520
++++----- --+-----	1507,1519 = 1519,1521
++++----- --+-----	1504,1507 = 1504,1521 = 1507,1509 =
	1509,1521 = 1520,1521
++++----- ++-----	1511,1519 = 1518,1519
++++----- --+-----	1513,1519 = 1517,1519
++++----- --+-----	1502,1519 = 1504,1508 = 1508,1509 =
	1508,1519 = 1508,1520
++++----- -----	1504,1519 = 1509,1519 = 1519,1519 =
	1519,1520
++++----- ++-----	1504,1511 = 1504,1518 = 1509,1511 =
	1509,1518 = 1518,1520
++++----- ++-----	1504,1510 = 1509,1510
++++----- --+-----	1504,1512 = 1509,1512 = 1512,1520
++++----- --+-----	1504,1513 = 1504,1517 = 1509,1513 =
	1509,1517 = 1513,1520
++++----- --+-----	1504,1515 = 1509,1515 = 1515,1520
++++----- --+-----	1502,1504 = 1502,1509 = 1502,1520
++++----- -----	1504,1509 = 1504,1520 = 1509,1509 =
	1509,1520
++++----- --+-----	1505,1507 = 1505,1521
++++----- ++-----	1505,1511 = 1505,1518
++++----- --+-----	1505,1513 = 1505,1517
++++----- --+-----	1506,1507 = 1506,1521
++++----- ++-----	1506,1511 = 1506,1518
++++----- --+-----	1506,1513 = 1506,1517
++++----- --+-----	1507,1508 = 1508,1521
++++----- ++-----	1507,1518 = 1511,1521 = 1518,1521
++++----- --+-----	1507,1510 = 1510,1521
++++----- --+-----	1507,1512 = 1512,1521
++++----- --+-----	1507,1513 = 1513,1521 = 1517,1521
++++----- --+-----	1507,1515 = 1515,1521
++++----- --+-----	1502,1507 = 1502,1521 = 1507,1521 =
	1521,1521
++++----- ++-----	1508,1511 = 1508,1518
++++----- --+-----	1508,1513 = 1508,1517
++++----- --+-----	1502,1508 = 1508,1508
++++----- ++-----	1511,1512 = 1512,1518

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++----- +-+-----	1511,1513 = 1513,1518 = 1517,1518
++----- +-+-----	1511,1515 = 1515,1518
++----- +-+-----	1502,1511 = 1502,1518 = 1511,1518 = 1518,1518
++----- ---+-----	1512,1513 = 1512,1517
++----- ---+-----	1502,1512 = 1512,1512
++----- ---+-----	1513,1515 = 1515,1517
++----- ---+-----	1502,1513 = 1502,1517 = 1513,1513 = 1513,1517
++----- ---+-----	1502,1515 = 1515,1515
+-+----- ---+-----	1516,1516 = 1516,1517

1502 = 150201-150204

1505 = 150501-150502

1510 = 151001-151002

SPECIFICITY TABLE

HLA-Cw*15 SSP subtyping

Specificities and sizes of the PCR products of the 16 primer mixes used for HLA-Cw*15 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-Cw*15 alleles	Other amplified HLA Class I alleles ³
1	330 bp	800 bp	150201-1503, 150501-1513, 1515-1521	0206, 1215
2	175 bp	1070 bp	150201-1509, 1512, 1513, 1515, 1518, 1519, 1521	0308, 0329, 0331, 0720
3	195 bp	1070 bp	1503, 1516	0212 ^{weakly} , 0315 ^{weakly} , 0327 ^{weakly} , 033801-033802 ^{weakly} , 0403, 0406, 0416 ^{weakly} , 0720 ^{weakly}
4	320 bp	1070 bp	1504, 1509, 1519, 1520	0104, 0121, 020201-020203, 020205-0205, 0208-0218, 0220, 0221, 030201-030203, 0314-0316, 0333, 0336, 0340, 0342, 034301-034302, 0504, 06020101-06020102, 060203-0608, 0610-0619, 070101-0703, 0705-0710, 0714-072702, 0730-0733N, 0735-0740, 0742-0744, 0746-0762, 0764, 0809, 0811, 120201-1214, 1216-1221, 140201-1411, 160101-1602, 160401, 1606-1609, 1611, 1612
5 ^{4,5}	100 bp	1070 bp	150501-150504	
6	320 bp	1070 bp	1506	010201-010206, 0105-0120, 0122, 0219, 030301-0305, 0307-031102, 0313, 0317, 0318, 0320N-0325, 0327-0332, 0334, 0335, 0337-0339, 0341, 0344-

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7⁴	140 bp	800 bp	1507, 1521	0350, 0729 0121, 0212 ^{weakly} , 0411, 0429, 0436, 080101- 0809, 0811-0819, 120201-120303, 120305-120306, 1206- 1208, 1210-1220, 140203, 1403, 1408, 1410, 160101, 160103, 160401, 1606-1608, 1610, 1611, B*350802, B*6702
8⁶	160, 185 bp	1070 bp	1508, 1519	0206, 1215, B*1318^{weakly}, B*1573^{weakly}, B*5410^{weakly}, B*5509^{weakly}, B*5521^{weakly}
9^{4,7}	125, 310 bp	1070 bp	1511, 1518	020201-020203, 020205-0220, 0222, 0223, 0403, 0406
10	165 bp	1070 bp	151001-151002	0208, 0318, 04010101- 040102, 040104- 040106, 040401-0405, 0407-041502, 0417- 0420, 0423-0437, 05010101-050104, 0503-0523, 080101- 0813, 0815-0819, 120201-1215, 1217- 1221, 140201-140204, 1404-1409, 1411, 160101-1602, 160401, 1606-1612, 1701-1705
11	320 bp	800 bp	150201-1503, 1507, 1508, 151001-1513, 1515-1518, 1521	0206, 0312, 0319, 1215
12	240 bp	1070 bp	1507, 1521	0212, 030201-0306, 0308-0314, 0316, 0317, 0319-033802, 0340- 0344, 0346-0350
13	185 bp	1070 bp	1512	1410
14^{4,5,8}	145, 435 bp	800 bp	1513, 1516, 1517	0319, B*4611, B*4618, B*5614

15⁴	85 bp	1070 bp	150201-1506, 1508-151002, 1512, 1513, 1515, 1518, 1519, 1521	0329, 0707, 0709
16	165 bp	1070 bp	1515	

¹Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of Cw*15 high 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 length of the specific PCR product(s) of the alleles amplified by these primer mixes are given.

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

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

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

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

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-Cw*15 SSP subtyping.

In addition, wells number 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.

³Due to the sharing of sequence motifs between HLA Class I alleles some non-HLA-Cw*15 alleles will be amplified by all primer mixes. In addition, the B*350802 and the B*6702 alleles will be amplified by primer mix 7, the B*1318, B*1573, B*5410, B*5509 and B*5521 alleles will be weakly amplified by primer mix 8, the B*4611, B*4618 and B*5614 alleles will be amplified by primer mix 14.

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

⁵Primer mixes 5 and 14 may yield somewhat less specific PCR products than the other HLA-Cw*15 primer mixes.

⁶Primer mix 8: Specific PCR fragment of the 160 bp in the Cw*1508, and the Cw*0206, Cw*1215, B*1318, B*1573, B*5410, B*5509 and B*5521 alleles. Specific PCR fragment of 185 bp in the Cw*1519 allele.

⁷Primer mix 9: Specific PCR fragment of 125 bp in the Cw*1511 and the Cw*020201-020203, Cw*020205-020206, Cw*0203-0220, Cw*0222, Cw*0223, Cw*0403 and Cw*0406 alleles. Specific PCR fragment of 310 bp in the Cw*1518 allele.

⁸Primer mix 14: Specific PCR fragment of 145 bp in the Cw*1513 allele. Specific PCR fragment of 435 bp the Cw*1516 and Cw*1517 and in the Cw*0319, B*4611, B*4618 and B*5614 alleles.

INTERPRETATION TABLE								
HLA-Cw*15 SSP subtyping								
Amplification patterns of the HLA-Cw*1502 to 1521 alleles								
	Well⁵							
	1	2	3	4	5	6	7	8
Length of spec.	330	175	195	320	100	320	140	160
PCR product								185
Length of int.	800	1070	1070	1070	1070	1070	800	1070
pos. control¹								
5'-primer²	409	134	134	419	420	419	201	125
	5'-ggC ^{3'}	5'-CCA ^{3'}	5'-CCA ^{3'}	5'-gTC ^{3'}	5'-TTC ^{3'}	5'-gTA ^{3'}	5'-CCA ^{3'}	5'-CgA ^{3'}
								420
								5'-TTA ^{3'}
3'-primer³	3rd I	270	289	3rd I	477	3rd I	302	270
	5'-CTC ^{3'}	5'-TAg ^{3'}	5'-AgC ^{3'}	5'-CTC ^{3'}	5'-gCg ^{3'}	5'-CTC ^{3'}	5'-ggC ^{3'}	5'-TAg ^{3'}
								539
								5'-TCC ^{3'}
Well No.	1	2	3	4	5	6	7	8
HLA-Cw allele⁴								
*150201-150204	1	2						
*1503	1	2	3					
*1504		2		4				
*150501-150504	1	2			5			
*1506	1	2				6		
*1507	1	2					7	
*1508	1	2						8
*1509	1	2		4				
*151001-151002	1							
*1511	1							
*1512	1	2						
*1513	1	2						
*1515	1	2						
*1516	1		3					
*1517	1							
*1518	1	2						
*1519	1	2		4				8
*1520	1			4				
*1521	1	2					7	
*010201-010206, 0105-0120, 0122, 0307, 0339, 0345, 0729						6		
Well No.	1	2	3	4	5	6	7	8

INTERPRETATION TABLE								
HLA-Cw*15 SSP subtyping								
Amplification patterns of the HLA-Cw*1502 to 1521 alleles								
Well ⁵								
9	10	11	12	13	14	15	16	
125	165	320	240	185	145	85	165	Length of spec.
310					435			PCR product
1070	1070	800	1070	1070	800	1070	1070	Length of int. pos. control ¹
118	1 st I	420	105	201	270	270	560	5'-primer ²
5'-CCA ^{3'}	5'-CgA ^{3'}	5'-TTA ^{3'}	5'-gCT ^{3'}	5'-CCA ^{3'}	5'-AAg ^{3'}	5'-AAC ^{3'}	5'-CCT ^{3'}	
430					757			
5'-ACC ^{3'}					5'-CCC ^{3'}			
201	134	3 rd I	302	343	420	312	3 rd I	3'-primer ³
5'-CTT ^{3'}	5'-AgC ^{3'}	5'-CTC ^{3'}	5'-ggC ^{3'}	5'-ACT ^{3'}	5'-gCT ^{3'}	5'-AgT ^{3'}	5'-ggA ^{3'}	
3 rd I					861			
5'-CTC ^{3'}					5'-TCg ^{3'}			
9	10	11	12	13	14	15	16	Well No.
								HLA-Cw allele ⁴
		11				15		*150201-150204
		11				15		*1503
						15		*1504
						15		*150501-150504
						15		*1506
		11	12					*1507
		11				15		*1508
						15		*1509
	10	11				15		*151001-151002
9		11						*1511
		11		13		15		*1512
		11			14	15		*1513
		11				15	16	*1515
		11			14			*1516
		11			14			*1517
9		11				15		*1518
						15		*1519
								*1520
		11	12			15		*1521
								*010201-010206, 0105-0120, 0122, 0307, 0339, 0345, 0729
9	10	11	12	13	14	15	16	Well No.

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Length of spec.	330	175	195	320	100	320	140	160
PCR product								185
Well No.	1	2	3	4	5	6	7	8
*0104, 0221, 06020101-06020102, 060203-0608, 0610-0619, 070101-0703, 0705, 0706, 0708, 0710, 0714-0719, 0721-072702, 0730-0733N, 0735-0740, 0742-0744, 0746-0762, 0764				4				
*0121, 1216, 1403				4		7		
*020201-020203, 020205-0205, 0209-0211, 0213-0218, 0220				4				
*0206	1							8
*0207, 0222, 0223								
*0208				4				
*0212			w	4			7	
*0219						6		
*030201-030203, 0314, 0316, 0333, 0336, 0340, 0342-034302				4				
*030301-0305, 0309-031102, 0313, 0317, 0320N-0325, 0328, 0330, 0332, 0334, 0335, 0337, 0341, 0344, 0346-0350						6		
*0306, 0326								
*0308, 0331		2				6		
*0312								
*0315			w	4				
*0318						6		
*0319								
*0327, 033801-033802			w			6		
*0329		2				6		
*04010101-040102, 040104-040106, 040401-0405, 0407-0410, 0412-041502, 0417-0420, 0423-0428, 0430-0435, 0437, 05010101-050104, 0503, 0505-0523, 0810, 1701-1705								
*0403, 0406			3					
*0411, 0429, 0436, 080101-0808, 0812, 0813, 0815-0819, 1610							7	
Well No.	1	2	3	4	5	6	7	8

Lot No.: **75F**

Lot-specific information

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125	165	320	240	185	145	85	165	Length of spec.
310					435			PCR product
9	10	11	12	13	14	15	16	Well No.
								*0104, 0221, 06020101-06020102, 060203-0608, 0610-0619, 070101-0703, 0705, 0706, 0708, 0710, 0714-0719, 0721-072702, 0730-0733N, 0735-0740, 0742-0744, 0746-0762, 0764
								*0121, 1216, 1403
9								*020201-020203, 020205-0205, 0209-0211, 0213-0218, 0220
9		11						*0206
9								*0207, 0222, 0223
9	10							*0208
9			12					*0212
9								*0219
			12					*030201-030203, 0314, 0316, 0333, 0336, 0340, 0342-034302
			12					*030301-0305, 0309-031102, 0313, 0317, 0320N-0325, 0328, 0330, 0332, 0334, 0335, 0337, 0341, 0344, 0346-0350
			12					*0306, 0326
			12					*0308, 0331
		11	12					*0312
								*0315
	10							*0318
		11	12		14			*0319
			12					*0327, 033801-033802
			12			15		*0329
	10							*04010101-040102, 040104-040106, 040401-0405, 0407-0410, 0412-041502, 0417-0420, 0423-0428, 0430-0435, 0437, 05010101-050104, 0503, 0505-0523, 0810, 1701-1705
9								*0403, 0406
	10							*0411, 0429, 0436, 080101-0808, 0812, 0813, 0815-0819, 1610
9	10	11	12	13	14	15	16	Well No.

Lot No.: **75F**

Lot-specific information

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Length of spec.	330	175	195	320	100	320	140	160
PCR product								185
Well No.	1	2	3	4	5	6	7	8
*0416	w							
*0504, 120304, 120401-1205, 1209, 1221, 140201-140202, 140204, 1404-1407N, 1409, 1411, 160102, 1602, 1609, 1612				4				
*0707, 0709				4				
*0720		2	w	4				
*0809, 0811, 120201-120303, 120305-120306, 1206-1208, 1210-1214, 1217-1220, 140203, 1408, 160101, 160103, 160401,1606-1608, 1611				4			7	
*0814							7	
*1215	1						7	8
*1410				4			7	
HLA-Cw allele ⁴								
Well No.	1	2	3	4	5	6	7	8
B*1318, B*1573, B*5410, B*5509, B*5521								w
B*350802, B*6702							7	
B*4611, B*4618, B*5614								
Well No.	1	2	3	4	5	6	7	8

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-Cw*15 SSP subtyping.

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

²The nucleotide position, in the 2nd, 3rd or 4th exon or the 1st intron, matching the specificity-determining 3'-end of the primer is given. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

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

Lot No.: **75F**

Lot-specific information

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125	165	320	240	185	145	85	165	Length of spec.
310					435			PCR product
9	10	11	12	13	14	15	16	Well No.
								*0416
	10							*0504, 120304, 120401-1205, 1209, 1221, 140201-140202, 140204, 1404-1407N, 1409, 1411, 160102, 1602, 1609, 1612
					15			*0707, 0709
								*0720
	10							*0809, 0811, 120201-120303, 120305-120306, 1206-1208, 1210-1214, 1217-1220, 140203, 1408, 160101, 160103, 160401, 1606-1608, 1611
								*0814
	10	11						*1215
				13				*1410
9	10	11	12	13	14	15	16	HLA-Cw allele ⁴
								Well No.
								B*1318, B*1573, B*5410, B*5509, B*5521
								B*350802, B*6702
					14			B*4611, B*4618, B*5614
9	10	11	12	13	14	15	16	Well No.

⁴The HLA-Cw*1501 nucleotide sequence has been shown to be identical to Cw*1502.

The HLA-Cw*1514 nucleotide sequence has been renamed to B*151002.

⁵Primer mix 8: Specific PCR fragment of the 160 bp in the Cw*1508, Cw*0206 and Cw*1215 and the B*1318, B*1573, B*5410, B*5509 and B*5521 alleles. Specific PCR fragment of 185 bp in the Cw*1519 allele.

Primer mix 9: Specific PCR fragment of 125 bp in the Cw*1511 and the Cw*020201-020203, Cw*020205-020206, Cw*0203-0220, Cw*0222, Cw*0223, Cw*0403 and Cw*0406 alleles. Specific PCR fragment of 310 bp in the Cw*1518 allele.

Primer mix 14: Specific PCR fragment of 145 bp in the Cw*1513 allele. Specific PCR fragment of 435 bp the Cw*1516 and Cw*1517 and in the Cw*0319, B*4611, B*4618 and B*5614 alleles.

'w', might be weakly amplified.

CELL LINE VALIDATION SHEET																					
HLA-Cw*15 SSP primer set																					
				Prod. No.:	Well																
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
					200730201	200730202	200958203	200730204	200730205	200730206	200842507	200730208	200842509	200730210	200730211	200842512	200958213	200730214	200842515	200730216	
	IHWC cell line		Cw*																		
1	9001 SA		*0702		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707		*0701	*1505	+	+	-	+	+	-	-	-	-	-	-	-	-	-	+	-	-
3	9011 E4181324		*1202		-	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-
4	9275 GU373		*0304	*0401	-	-	-	-	-	+	-	-	-	+	-	+	-	-	-	-	-
5	9009 KAS011		*0602		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353 SM		*0304	*0702	-	-	-	+	-	+	-	-	-	-	-	+	-	-	-	-	-
7	9020 QBL		*0501		-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
8	9007 DEM		*0602		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR		*1203		-	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-
10	9107 LKT3		*0102		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT		*1601		-	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-
12	9052 DBB		*0602		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM		*0102		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA		*0102	*0304	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-
15	9075 DKB		*0304		-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-
16	9037 SWEIG007		*0202		-	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-
17	9282 CTM3953540		*0303	*0701	-	-	-	+	-	+	-	-	-	-	-	+	-	-	-	-	-
18	9257 32367		*0102	*0705	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16		*0701		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005		*0304		-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-
21	9064 AMALA		*0303		-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-
22	9056 KOSE		*1203		-	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-
23	9124 IHL		*0102	*1502	+	+	-	+	-	-	-	-	-	-	+	-	-	-	+	-	-
24	9035 JBUSH		*1203		-	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-
25	9049 IBW9		*0802		-	-	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-
26	9285 WT49		*0701		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007		*0704	*1505	+	+	-	+	+	-	-	-	-	-	-	-	-	-	+	-	-
28	9320 BEL5GB		*0501	*1601	-	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-
29	9050 MOU		*1601		-	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-
30	9021 RSH		*1701		-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
31	9019 DUCAF		*0501		-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
32	9297 HAG		*1701	*1703	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
33	9098 MT14B		*0304		-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-
34	9104 DHIF		*1203		-	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-
35	9302 SSTO		*0501		-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
36	9024 KT17		*0303	*0401	-	-	-	-	-	+	-	-	-	+	-	+	-	-	-	-	-
37	9065 HHKB		*0702		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL		*0303		-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-
39	9315 CML		*0202	*0701	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-
40	9134 WHONP199		*0602		-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301		*0802		-	-	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-
42	9066 TAB089		*0102		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526		*0102	*0801	-	-	-	-	-	+	+	-	-	+	-	-	-	-	-	-	-
44	9057 TEM		*1203		-	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-
45	9239 SHJO		*0602	*1701	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-
46	9013 SCHU		*0702		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO		*0704	*1502	+	+	-	+	-	-	-	-	-	-	+	-	-	-	+	-	-
48	9303 TER-ND		*0401	*1601	-	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-



CERTIFICATE OF ANALYSIS

Olerup SSP[®] HLA-Cw*15 SSP

Product number: 101.626-12 – including *Taq* polymerase
Lot number: 75F
Expiry date: 2011-March-01
Number of tests: 12
Number of wells per test: 16

Well specifications:

Well No.	Production No.	Well No.	Production No.
1	2007-302-01	9	2008-425-09
2	2007-302-02	10	2007-302-10
3	2009-582-03	11	2007-302-11
4	2007-302-04	12	2008-425-12
5	2007-302-05	13	2009-582-13
6	2007-302-06	14	2007-302-14
7	2008-425-07	15	2008-425-15
8	2007-302-08	16	2007-302-16

The specificity of each primer solution of the HLA-Cw*15 primer set has been tested against 48 well characterized cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 8, 13, 14 and 16 were available. The specificity of the primers in primer solutions 8, 13, 14 and 16 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer mixes 8, 9 and 14 one of the 5'-primers could not be tested. In addition, one 3'-primer in primer solution 9 was tested by separately adding one 5'-primer.

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

Date of approval: 2009-May-26

Approved by:

Quality Control, Supervisor

Lot No.: **75F**

Lot-specific information

www.olerup.com

Declaration of Conformity

Product name: *Olerup* SSP® HLA-Cw*15
Product number: 101.626-12
Lot number: 75F

Intended use: HLA-Cw*15 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-26

Olle Olerup
Managing Director

Lot No.: **75F**

Lot-specific information

www.olerup.com

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