

Olerup SSP® HLA-Cw*05

Product number:	101.613-12 – including <i>Taq</i> polymerase
Lot number:	94F
Expiry date:	2011-June-01
Number of tests:	12
Number of wells per test:	23
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. 94F.

CHANGES COMPARED TO THE PREVIOUS OLERUP SSP® HLA-Cw*05 LOT

The HLA-Cw*05 specificity and interpretation tables have been updated for the HLA-Cw alleles described since the previous *Olerup SSP®* HLA-Cw*05 lot was made (Lot No. 54E).

Seven wells have been added to the HLA-Cw*05 kit,
wells **17 to 23**.

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

Well	5'-primer	3'-primer	rationale
11	New, moved	New, moved	New primer pair for the Cw*0525 allele.
11-15	Moved	Moved	Primer mixes in wells 11 – 15 moved to wells 12 - 16
17	New	New	New primer pair for the Cw*0518 allele.
18	New	New	New primer pair for the Cw*0519 allele.
19	New	New	New primer pair for the Cw*0520 allele.
20	New	New	New primer pair for the Cw*0521 allele.
21	New	New	New primer pair for the Cw*0522 allele.
22	New	New	New primer pair for the Cw*0523 allele.
23	New	New	New primer pair for the Cw*0524 allele.

PRODUCT DESCRIPTION

HLA-Cw*05 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the Cw*0501 to Cw*0525 alleles.

PLATE LAYOUT

Each test consists of 23 PCR reactions in a 24 well PCR plate. Well 24 is empty.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	empty

The 24 well cut PCR plate is marked with 'HLA-Cw*05' in silver/gray ink.

Well No. 1 is marked with the Lot No. '94F'.

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*05 SSP subtypings will be influenced by the Cw*0113, Cw*0605, nine Cw*07, the Cw*08, the Cw*1221 and the Cw*1705 alleles when present on the other haplotype. In addition, the A*2910 allele will be amplified by primer mix 6, the A*8001 allele will be weakly amplified by primer mix 11 and the B*1533 allele will be amplified by primer mixes 3 and 10.

UNIQUELY IDENTIFIED ALLELES

All the HLA-C*05 alleles, i.e. **Cw*0501 to Cw*0525**, recognized by the HLA Nomenclature Committee in May 2009¹ will give rise to unique amplification patterns by the primers in the HLA-Cw*05 subtyping kit².

The HLA-Cw*05 subtyping kit cannot distinguish the Cw*050101 to Cw*050104 alleles.

¹HLA-Cw alleles listed on the IMGT/HLA web page 2009-May-09, release 2.25.2, www.ebi.ac.uk/imgt/hla.

²The Cw*0518 will give rise to identical amplification pattern as the Cw*0810 allele with the HLA-Cw*05 subtyping kit. These two alleles can be distinguished by the HLA-C low resolution kit and/or the Cw*08 subtyping kit.

RESOLUTION IN HOMO- AND HETEROZYGOTES

The 24 HLA-Cw*05 alleles can be combined in 300 homozygous and heterozygous combinations. Eighty-seven of these genotypes do not give rise to unique amplification patterns.

+++----+	-----+	-----	0501,0517 = 0509,0511 = 0511,0517
++-+---+	-----	-----	0503,0505 = 0503,0516
++-+---+	-----	-----	0501,0503 = 0503,0503
+++++++	-----	-----	0504,0505 = 0504,0516
+++-+--	-----	-----	0501,0504 = 0504,0504 = 0504,0522
+++-----	-----	-----	0505,0506 = 0506,0516
+++-----	+-----	-----	0505,0507N = 0507N,0516
+++-----	-+-----	-----	0505,0508 = 0508,0516
+++-----	--+-----	-----	0505,0525 = 0516,0525
+++-----	---+-----	-----	0505,0510 = 0510,0516
+++-----	----+-----	-----	0505,0511 = 0511,0516
+++-----	-----+--	+-----	0505,0512 = 0512,0516
+++-----	-----+--	-----	0505,0515 = 0515,0516
+++-----	-----+--	-----	0505,0513 = 0513,0516
+++-----	-----++	-----	0505,0514 = 0514,0516
+++-----	-----	+-----	0505,0518 = 0516,0518
+++-----	-----	-+-----	0505,0519 = 0516,0519
+++-----	-----	--+-----	0505,0520 = 0516,0520
+++-----	-----	---+-----	0505,0521 = 0516,0521
+++-----	-----	----+-----	0505,0522 = 0516,0522
+++-----	-----	-----+--	0505,0523 = 0516,0523
+++-----	-----	-----++	0505,0524 = 0516,0524
+++-----	-----	-----	0501,0505 = 0501,0516 = 0505,0516 = 0516,0516
+++-----	-----	-----	0501,0506 = 0506,0506
+++-----	+-----	-----	0501,0507N = 0507N,0507N
+++-----	-+-----	-----	0501,0508 = 0508,0508
+++-----	--+-----	-----	0501,0525 = 0525,0525
+++-----	---+-----	-----	0501,0510 = 0510,0510
+++-----	----+-----	-----	0501,0511 = 0511,0511
+++-----	-----+--	+-----	0501,0512 = 0512,0515 = 0515,0518
+++-----	-----+--	-----	0501,0515 = 0515,0515
+++-----	-----+--	-----	0501,0513 = 0513,0513
+++-----	-----++	-----	0501,0514 = 0514,0514
+++-----	-----	-+-----	0501,0519 = 0519,0519
+++-----	-----	--+-----	0501,0520 = 0520,0520
+++-----	-----	---+-----	0501,0521 = 0521,0521
+++-----	-----	----+-----	0501,0522 = 0522,0522
+++-----	-----	-----+--	0501,0523 = 0523,0523
+++-----	-----	-----++	0501,0524 = 0524,0524
-++-----	----+-----	-----	0509,0517 = 0517,0517
-+-----	-----+--	+-----	0512,0512 = 0512,0518

0501 = 050101 to 050104

SPECIFICITY TABLE

HLA-Cw*05 SSP subtyping

Specificities and sizes of the PCR products of the 23 primer mixes used for HLA-Cw*05 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-Cw*05 alleles	Other amplified HLA Class I alleles ^{3,4}
1	155 bp	800 bp	05010101-050104, 0503-0508, 0510, 0511, 0513-0516, 0519-0525,	0741, 0802, 0804, 0805, 0807, 0812, 0813, 0817-0819, 0823
2	165 bp	1070 bp	05010101-050104, 0503-0525	0605, 0810, 1221, 1705
3	155 bp	1070 bp	0509, 0517	0113, 0815, B*1533
4 ⁵	120 bp	800 bp	0503	0752
5	225 bp	1070 bp	0504	0768, 0809, 0811
6	270 bp	1070 bp	0505, 0516	0812, A*2910
7	265 bp	1070 bp	05010101-050104, 0503, 0504, 0506-0508, 0510-0516, 0518-0525	070401-070403, 0711, 0712, 0741, 0763, 0768, 080101-0814, 0816-0823
8 ⁵	85 bp	800 bp	0506	
9	285 bp	1070 bp	0507N	
10 ⁵	95 bp	1070 bp	0508	B*1533
11	205 bp	1070 bp	0525	0605, A*8001 ^{weakly}
12 ⁵	285 bp	1070 bp	0510	
13 ⁵	95 bp	1070 bp	0511, 0517	0804, 0813
14	120 bp	1070 bp	0512, 0515	
15	240 bp	1070 bp	0513	
16	195 bp	1070 bp	0514	
17	155 bp	1070 bp	0512, 0518	080101-080102, 0803, 0806, 0808-0811, 0814, 0816, 0820-0822
18	235 bp	1070 bp	0519	
19	175 bp	800 bp	0520	080101-0809, 0811, 0812, 0814, 0815, 0817, 0819-0823
20	380 bp	1070 bp	0521	

21	230 bp	1070 bp	0504, 0522	070401-070403, 0711, 0712, 0763 0768, 0809, 0811
22	100 bp	800 bp	0523	0807
23	85 bp	1070 bp	0524	

¹Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-Cw*05 SSP subtypings.

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.

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*05 subtyping.

In addition, wells number 4, 8 19 and 22 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

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

³Due to the sharing of sequence motifs between HLA-Cw alleles non-HLA-Cw*05 alleles will be amplified by primer mixes 1 to 7, 10, 11, 13, 17, 19, 21 and 22.

The Cw*0518 will give rise to identical amplification pattern as the Cw*0810 allele with the HLA-Cw*05 subtyping kit. These two alleles can be distinguished by the HLA-C low resolution kit and/or the Cw*08 subtyping kit.

⁴Due to the sharing of sequence motifs between HLA class I genes, the A*2910 allele by primer mix 6, the A*8001 will be weakly amplified by primer mix 11 and the B*1533 allele will be amplified by primer mixes 3 and 10.

⁵Specific PCR fragments shorter than 125 base pairs have a lower intensity than longer PCR bands.

INTERPRETATION TABLE												
HLA-Cw*05 subtyping												
Amplification patterns of the Cw*0501 to 0525 alleles												
	Well											
	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec.	155	165	155	120	225	270	265	85	285	95	205	285
PCR product												
Length of int.	800	1070	1070	800	1070	1070	1070	800	1070	1070	1070	1070
pos. control ¹												
5'-primer(s) ²	485	176	485	3 rd I	419	361	379	176	355	485	176	355
	5'-CAA ^{3'}	5'-gCA ^{3'}	5'-CAA ^{3'}	5'-TgT ^{3'}	5'-gTC ^{3'}	5'-AgT ^{3'}	5'-ACC ^{3'}	5'-gCA ^{3'}	5'-CC ^{3'}	5'-CAA ^{3'}	5'-gCA ^{3'}	5'-TCA ^{3'}
						379						
						5'-ACg ^{3'}						
3'-primer(s) ³	601	302	601	668	601	601	601	221	601	538	341	601
	5'-CTT ^{3'}	5'-ggT ^{3'}	5'-CTC ^{3'}	5'-TgA ^{3'}	5'-CTT ^{3'}	5'-CTT ^{3'}	5'-CTT ^{3'}	5'-ACC ^{3'}	5'-CTT ^{3'}	5'-CCA ^{3'}	5'-CgT ^{3'}	5'-CTT ^{3'}
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
HLA-Cw allele ⁴												
*05010101-050104	1	2					7					
*0503	1	2		4			7					
*0504	1	2			5		7					
*0505	1	2				6						
*0506	1	2					7	8				
*0507N	1	2					7		9			
*0508	1	2					7			10		
*0509		2	3									
*0510	1	2					7					12
*0511	1	2					7					
*0512		2					7					
*0513	1	2					7					
*0514	1	2					7					
*0515	1	2					7					
*0516	1	2				6	7					
*0517		2	3									
*0518, 0810 ⁵		2					7					
*0519	1	2					7					
*0520	1	2					7					
*0521	1	2					7					
*0522	1	2					7					
*0523	1	2					7					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

INTERPRETATION TABLE											
HLA-Cw*05 subtyping											
Amplification patterns of the Cw*0501 to 0525 alleles											
Well											
13	14	15	16	17	18	19	20	21	22	23	
95	120	240	195	155	235	175	380	230	100	85	Length of spec. PCR product
1070	1070	1070	1070	1070	1070	800	1070	1070	800	1070	Length of int. pos. control ¹
485	176	115	446	486	406	176	322	412	453	176	5'-primer(s) ²
5'-CAA ^{3'}	5'-gCA ^{3'}	5'-ggA ^{3'}	5'-CgT ^{3'}	5'-ACg ^{3'}	5'-gCC ^{3'}	5'-gCA ^{3'}	5'-gCC ^{3'}	5'-ATg ^{3'}	5'-AAT ^{3'}	5'-gCA ^{3'}	
	453										
	5'-AAT ^{3'}										
538	256	312	601	601	601	311	419	601	512	218	3'-primer(s) ³
5'-CAg ^{3'}	5'-CCA ^{3'}	5'-AgT ^{3'}	5'-CTT ^{3'}	5'-CTT ^{3'}	5'-CTT ^{3'}	5'-ggT ^{3'}	5'-CgA ^{3'}	5'-CTT ^{3'}	5'-CCA ^{3'}	5'-gCC ^{3'}	
	527										
	5'-CCA ^{3'}										
13	14	15	16	17	18	19	20	21	22	23	Well No. HLA-Cw allele ⁴
											*05010101-050104
											*0503
								21			*0504
											*0505
											*0506
											*0507N
											*0508
											*0509
13											*0510
	14			17							*0511
		15									*0512
			16								*0513
	14										*0514
											*0515
											*0516
13											*0517
				17							*0518, 0810 ⁵
					18						*0519
						19					*0520
							20				*0521
								21			*0522
									22		*0523
13	14	15	16	17	18	19	20	21	22	23	Well No.

Lot No.: **94F**

Lot-specific information

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Length of spec.	155	165	155	120	225	270	265	85	285	95	205	285
PCR product												
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*0524	1	2					7					
*0525	1	2					7				11	
*0113			3									
*0605		2									11	
*070401-070403, 0711, 0712, 0763							7					
*0741, 0818	1						7					
*0752				4								
*0768					5		7					
*080101-080102, 0803, 0806, 0808, 0814, 0820-0822							7					
*0802, 0805, 0817, 0819, 0823	1						7					
*0804	1						7					
*0807	1						7					
*0809, 0811					5		7					
*0812	1					6	7					
*0813	1						7					
*0815			3									
*0816							7					
*1221, 1705		2										
HLA-Cw allele ⁴												
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
A*2910						6						
A*8001											w	
B*1533			3							10		
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

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*05 subtyping.

In addition, wells number 4, 8, 19 and 22 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

²The nucleotide position, in the 2nd or 3rd exon or the 3rd 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, 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.: **94F**

Lot-specific information

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95	120	240	195	155	235	175	380	230	100	85	Length of spec. PCR product
13	14	15	16	17	18	19	20	21	22	23	Well No.
										23	*0524
											*0525
											*0113
											*0605
								21			*070401-070403, 0711, 0712, 0763
											*0741, 0818
											*0752
								21			*0768
				17		19					*080101-0803, 0806, 0814, 0820- 0822
						19					*0802, 0805, 0817, 0819, 0823
13						19					*0804
						19			22		*0807
				17		19		21			*0809, 0811
						19					*0812
13											*0813
						19					*0815
				17							*0816
											*1221, 1705
											HLA-Cw allele ⁴
13	14	15	16	17	18	19	20	21	22	23	Well No.
											A*2910
											A*8001
											B*1533
13	14	15	16	17	18	19	20	21	22	23	Well No.

⁴The HLA-Cw*0502 nucleotide sequence has been deleted as it is identical to Cw*0509.

⁵The Cw*0518 will give rise to identical amplification pattern as the Cw*0810 allele with the HLA-Cw*05 subtyping kit. These two alleles can be distinguished by the HLA-C low resolution kit and/or the Cw*08 subtyping kit.

CELL LINE VALIDATION SHEET																				
HLA-Cw*05 SSP subtyping kit																				
				Well																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				Prod. No.:	200732201	200732202	200732203	200845804	200960405	200732206	200960407	200845808	200732209	200732210	200960411	200960412	200732213	200960414	200732215	200732216
	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	9025 DEU		*0401		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3		*0102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT		*1601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB		*0602		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM		*0102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA		*0102	*0304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB		*0304		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007		*0202		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM395354		*0303	*0701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257 32367		*0102	*0705	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16		*0701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005		*0304		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA		*0303		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL		*0102	*1502	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9		*0802		+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
26	9285 WT49		*0701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007		*0704	*1505	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB		*0501	*1601	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
29	9050 MOU		*1601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH		*1701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF		*0501		+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
32	9297 HAG		*1701	*1703	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B		*0304		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO		*0501		+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
36	9024 KT17		*0303	*0401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB		*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL		*0303		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML		*0202	*0701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134 WHONP199		*0602		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301		*0802		+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
42	9066 TAB089		*0102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526		*0102	*0801	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
44	9057 TEM		*1203		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO		*0602	*1701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU		*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO		*0704	*1502	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
48	9303 TER-ND		*0401	*1601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CELL LINE VALIDATION SHEET					Well							
HLA-Cw*05 SSP subtyping kit					17	18	19	20	21	22	23	
				Prod. No.:	200960417	200960418	200960419	200960420	200960421	200960422	200960423	
	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	9025 DEU		*0401		-	-	-	-	-	-	-	
9	9026 YAR		*1203		-	-	-	-	-	-	-	
10	9107 LKT3		*0102		-	-	-	-	-	-	-	
11	9051 PITOUT		*1601		-	-	-	-	-	-	-	
12	9052 DBB		*0602		-	-	-	-	-	-	-	
13	9004 JESTHOM		*0102		-	-	-	-	-	-	-	
14	9071 OLGA		*0102	*0304	-	-	-	-	-	-	-	
15	9075 DKB		*0304		-	-	-	-	-	-	-	
16	9037 SWEIG007		*0202		-	-	-	-	-	-	-	
17	9282 CTM395354		*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*05 SSP

Product number: 101.613-12 – including *Taq* polymerase
Lot number: 94F
Expiry date: 2011-June-01
Number of tests: 12
Number of wells per test: 23

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2007-322-01	9	2007-322-09	17	2009-604-17
2	2007-322-02	10	2007-322-10	18	2009-604-18
3	2007-322-03	11	2009-604-11	19	2009-604-19
4	2008-458-04	12	2009-604-12	20	2009-604-20
5	2009-604-05	13	2007-322-13	21	2009-604-21
6	2007-322-06	14	2009-604-14	22	2009-604-22
7	2009-604-07	15	2007-322-15	23	2009-604-23
8	2008-458-08	16	2007-322-16		

The specificity of each primer solution of the kit has been tested against 48 well characterized cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 4 to 6, 8 to 12, 14 to 16, 18, 20, 22 and 23 were available. The specificities of the primers in primer solutions 5, 6, 10 to 12, 14 and 22 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solutions 4, 8 and 23 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solutions 9, 15, 16, 18 and 20 it was only possible to test the 3'-primer, the 5'-primer was not possible to test. In primer solution 14, one 3'-primer was not possible to test.

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

Date of approval: 2009-July-01

Approved by:

Quality Control, Supervisor

Declaration of Conformity

Product name: *Olerup* SSP® HLA-Cw*05
Product number: 101.613-12
Lot number: 94F

Intended use: HLA-Cw*05 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-July-01

Olle Olerup
Managing Director

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