

Olerup SSP[®] DRB1*07

Product numbers:	101.118-24 – including <i>Taq</i> polymerase
Lot number:	26M
Expiry date:	2014-February-01
Number of tests:	24
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. 26M.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*[®] DRB1*07 LOT

The DRB1*07 specificity and interpretation tables have been updated for the DRB1 alleles described since the previous *Olerup SSP*[®] DRB1*07 lot (Lot No. 29K) was made.

One well has been added to the DRB1*07 kit,
well **16**.

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

Well	5'-primer	3'-primer	rationale
10	-	Added	3'-primer added for the DRB1*07:18 allele.
12	Added		5'-primer added for the DRB1*07:21 allele.
13	Added		5'-primer added for the DRB1*07:21 allele.
16	New	New	New primer pairs for the DRB1*07:18 and DRB1*07:20 alleles.

PRODUCT DESCRIPTION

DRB1*07 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the DRB1*07:01 to DRB1*07:21 alleles.

PLATE LAYOUT

Each 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 cut PCR plate is marked with ‘DRB1*07’ in silver/gray ink.

Well No. 1 is marked with the Lot No. ‘26M’.

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

The PCR plates are covered with a PCR-compatible foil.

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

INTERPRETATION

The interpretation of DRB1*07 PCR-SSP subtypings will only be influenced the DRB1*04:90 and 09:08 alleles, when present on the other haplotype. Thus, the interpretation of DRB1*07 subtypings is only marginally influenced by other groups of DRB1 alleles.

UNIQUELY IDENTIFIED ALLELES

All the DRB1*07 alleles, i.e. **DRB1*07:01 to DRB1*07:21**, recognized by the HLA Nomenclature Committee in April 2011¹ will give rise to unique amplification patterns by the primers in the DRB1*07 subtyping kit.

The DRB1*07 subtyping kit cannot distinguish the DRB1*07:01:01:01 to DRB1*07:01:03 alleles.

¹DRB1 alleles listed on the IMGT/HLA web page 2011-April-08, release 3.4.0.

RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 23 alleles generate 20 amplification patterns that can be combined in 210 homozygous and heterozygous combinations. 131 of these genotypes do not give rise to unique amplification patterns. The different lengths of the specific PCR products were not considered in these calculations.

++++-----	*07:03, *07:10N = *07:04, *07:09 = *07:09, *07:10N
+++-+-----	*07:03, *07:05 = *07:05, *07:09 = *07:09, *07:11
+++--+-	*07:03, *07:06 = *07:06, *07:09
+++-----+	*07:03, *07:07 = *07:07, *07:09
+++-----+	*07:03, *07:08 = *07:08, *07:09
+++-----+	*07:03, *07:08 = *07:08, *07:09
+++-----+	*07:03, *07:12 = *07:09, *07:12
+++-----+	*07:03, *07:18 = *07:09, *07:18
+++-----+	*07:03, *07:13 = *07:09, *07:13
+++-----+	*07:03, *07:14 = *07:09, *07:14
+++-----+	*07:03, *07:21 = *07:09, *07:21
+++-----+	*07:03, *07:15 = *07:09, *07:15
+++-----+	*07:03, *07:16 = *07:09, *07:16
+++-----+	*07:03, *07:17 = *07:09, *07:17
+++-----+	*07:03, *07:19 = *07:09, *07:19
+++-----+	*07:03, *07:20 = *07:09, *07:20
+++-----+	*07:01:01:01, *07:03 = *07:01:01:01, *07:09 = *07:03, *07:09 = *07:09, *07:09
+++-----+	*07:04, *07:05 = *07:05, *07:10N = *07:10N, *07:11
+++-----+	*07:04, *07:06 = *07:06, *07:10N
+++-----+	*07:04, *07:07 = *07:07, *07:10N
+++-----+	*07:04, *07:08 = *07:08, *07:10N
+++-----+	*07:04, *07:12 = *07:10N, *07:12
+++-----+	*07:04, *07:18 = *07:10N, *07:18
+++-----+	*07:04, *07:13 = *07:10N, *07:13
+++-----+	*07:04, *07:14 = *07:10N, *07:14
+++-----+	*07:04, *07:21 = *07:10N, *07:21
+++-----+	*07:04, *07:15 = *07:10N, *07:15
+++-----+	*07:04, *07:16 = *07:10N, *07:16
+++-----+	*07:04, *07:17 = *07:10N, *07:17
+++-----+	*07:04, *07:19 = *07:10N, *07:19
+++-----+	*07:04, *07:20 = *07:10N, *07:20
+++-----+	*07:01:01:01, *07:04 = *07:01:01:01, *07:10N = *07:04, *07:10N = *07:10N, *07:10N
+++-----+	*07:05, *07:06 = *07:06, *07:11
+++-----+	*07:05, *07:07 = *07:07, *07:11
+++-----+	*07:05, *07:08 = *07:08, *07:11
+++-----+	*07:05, *07:12 = *07:11, *07:12
+++-----+	*07:05, *07:18 = *07:11, *07:18
+++-----+	*07:05, *07:13 = *07:11, *07:13
+++-----+	*07:05, *07:14 = *07:11, *07:14
+++-----+	*07:05, *07:21 = *07:11, *07:21
+++-----+	*07:05, *07:15 = *07:11, *07:15
+++-----+	*07:05, *07:16 = *07:11, *07:16
+++-----+	*07:05, *07:17 = *07:11, *07:17
+++-----+	*07:05, *07:19 = *07:11, *07:19
+++-----+	*07:05, *07:20 = *07:11, *07:20
+++-----+	*07:01:01:01, *07:05 = *07:01:01:01, *07:11 = *07:05, *07:05 = *07:05, *07:11
+++-----+	*07:01:01:01, *07:06 = *07:06, *07:06
+++-----+	*07:01:01:01, *07:07 = *07:07, *07:07
+++-----+	*07:01:01:01, *07:08 = *07:08, *07:08
+++-----+	*07:01:01:01, *07:12 = *07:12, *07:12
+++-----+	*07:01:01:01, *07:18 = *07:13, *07:18 = *07:13, *07:20 = *07:18, *07:18 =

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Lot-specific information

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*07:18, *07:20
++----- +------ *07:01:01:01, *07:13 = *07:13, *07:13
++----- --+----- *07:01:01:01, *07:14 = *07:14, *07:14
++----- ----+---- *07:01:01:01, *07:21 = *07:15, *07:16 = *07:15, *07:21 = *07:16, *07:21 = *07:21, *07:21
++----- ---+---- *07:01:01:01, *07:15 = *07:15, *07:15
++----- ----+---- *07:01:01:01, *07:16 = *07:16, *07:16
++----- -----+- *07:01:01:01, *07:17 = *07:17, *07:17
++----- -----+- *07:01:01:01, *07:19 = *07:19, *07:19
++----- -----+ *07:01:01:01, *07:20 = *07:20, *07:20
+++----- ----- *07:03, *07:10N = *07:04, *07:09 = *07:09, *07:10N
+++----- ----- *07:03, *07:05 = *07:05, *07:09 = *07:09, *07:11
+++----- ----- *07:03, *07:06 = *07:06, *07:09
+++----- ----- *07:03, *07:07 = *07:07, *07:09
+++----- ----- *07:03, *07:08 = *07:08, *07:09
+++----- ----- *07:03, *07:12 = *07:09, *07:12
+++----- +----- *07:03, *07:13 = *07:09, *07:13
+++----- --+---- *07:03, *07:14 = *07:09, *07:14
+++----- ---+---- *07:03, *07:15 = *07:09, *07:15
+++----- ----+---- *07:03, *07:16 = *07:09, *07:16
+++----- -----+- *07:03, *07:17 = *07:09, *07:17
+++----- -----+ *07:03, *07:19 = *07:09, *07:19
+++----- ----- *07:01:01:01, *07:03 = *07:01:01:01, *07:09 = *07:03, *07:09 = *07:09, *07:09
+++----- ----- *07:04, *07:05 = *07:05, *07:10N = *07:10N, *07:11
+++----- ----- *07:04, *07:06 = *07:06, *07:10N
+++----- ----- *07:04, *07:07 = *07:07, *07:10N
+++----- ----- *07:04, *07:08 = *07:08, *07:10N
+++----- +----- *07:04, *07:12 = *07:10N, *07:12
+++----- --+---- *07:04, *07:13 = *07:10N, *07:13
+++----- ---+---- *07:04, *07:14 = *07:10N, *07:14
+++----- ----+---- *07:04, *07:15 = *07:10N, *07:15
+++----- -----+- *07:04, *07:16 = *07:10N, *07:16
+++----- -----+ *07:04, *07:17 = *07:10N, *07:17
+++----- -----+ *07:04, *07:19 = *07:10N, *07:19
+++----- ----- *07:01:01:01, *07:04 = *07:01:01:01, *07:10N = *07:04, *07:10N = *07:10N, *07:10N
+++----- ----- *07:05, *07:06 = *07:06, *07:11
+++----- ----- *07:05, *07:07 = *07:07, *07:11
+++----- ----- *07:05, *07:08 = *07:08, *07:11
+++----- +----- *07:05, *07:12 = *07:11, *07:12
+++----- --+---- *07:05, *07:13 = *07:11, *07:13
+++----- ---+---- *07:05, *07:14 = *07:11, *07:14
+++----- ----+---- *07:05, *07:15 = *07:11, *07:15
+++----- -----+- *07:05, *07:16 = *07:11, *07:16
+++----- -----+ *07:05, *07:17 = *07:11, *07:17
+++----- -----+ *07:05, *07:19 = *07:11, *07:19
+++----- ----- *07:01:01:01, *07:05 = *07:01:01:01, *07:11 = *07:05, *07:05 = *07:05, *07:11
+++----- ----- *07:01:01:01, *07:06 = *07:06, *07:06
+++----- +----- *07:01:01:01, *07:07 = *07:07, *07:07
+++----- ----- *07:01:01:01, *07:08 = *07:08, *07:08
+++----- +----- *07:01:01:01, *07:12 = *07:12, *07:12
+++----- --+---- *07:01:01:01, *07:13 = *07:13, *07:13
+++----- ---+---- *07:01:01:01, *07:14 = *07:14, *07:14
+++----- ----+---- *07:01:01:01, *07:15 = *07:15, *07:15
+++----- -----+- *07:01:01:01, *07:16 = *07:16, *07:16
+++----- -----+ *07:01:01:01, *07:17 = *07:17, *07:17
+++----- -----+ *07:01:01:01, *07:19 = *07:19, *07:19

*07:01:01:01 = *07:01:01:01-07:01:03

SPECIFICITY TABLE

DRB1*07 SSP subtyping

Specificities and sizes of the PCR products of the 16 primer mixes used for DRB1*07 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified DRB1*07 alleles	Amplified non-DRB1*07 alleles ³
1 ⁵	235 bp	515 bp	*07:01:01:01-07:01:03, 07:03-07:21	
2	185 bp	430 bp	*07:01:01:01-07:01:03, 07:05-07:10N, 07:12-07:21	
3	185 bp	430 bp	*07:03, 07:09	
4 ^{4,6}	90 bp, 230 bp	515 bp	*07:04, 07:10N	
5 ⁷	190 bp, 230 bp	430 bp	*07:05, 07:11	
6	170 bp	430 bp	*07:06	
7	165 bp	430 bp	*07:07	
8	165 bp	430 bp	*07:08	
9 ^{4,5}	105 bp	430 bp	*07:12	*04:90, 09:08
10 ⁸	165 bp, 220 bp	515 bp	*07:13, 07:18	
11 ⁴	105 bp	515 bp	*07:14	
12	210 bp	430 bp	*07:15, 07:21	
13	210 bp	430 bp	*07:16, 07:21	
14	215 bp	430 bp	*07:17	
15	150 bp	430 bp	*07:19	
16 ⁹	220 bp, 260 bp	430 bp	*07:18, 07:20	

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 DRB*07 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.

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Lot-specific information

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The two different control primer pairs give rise to either an internal positive control band of 430 base pairs, for most wells, or a band of 515 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the longer, 515 bp, internal positive control band in order to help in the correct orientation of the DRB1*01 subtyping.

In addition, wells number 4, 10 and 11 contain the primer pair giving rise to the longer, 515 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 sharing of sequence motifs, the DRB1*04:90 and 09:08 alleles are amplified by primer mix 9.

⁴Specific PCR fragments shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR bands.

⁵Primer mixes 1 and 9 may have tendencies of giving rise to primer oligomer artefacts.

⁶Primer mix 4: Specific PCR fragment of 90 bp in the DRB1*07:10N allele. Specific PCR fragment of 230 bp in the DRB1*07:04 allele.

⁷Primer mix 5: Specific PCR fragment of 190 bp in the DRB1*07:05 allele. Specific PCR fragment of 230 bp in the DRB1*07:11 allele.

⁸Primer mix 10: Specific PCR fragment of 165 bp in the DRB1*07:13 allele. Specific PCR fragment of 220 bp in the DRB1*07:18 allele.

⁹Primer mix 16: Specific PCR fragment of 220 bp in the DRB1*07:18 allele. Specific PCR fragment of 260 bp in the DRB1*07:20 allele.

INTERPRETATION TABLE								
DRB1*07 PCR-SSP subtyping								
Amplification patterns of the DRB1*07:01 to *07:21 alleles								
	Well ⁵							
	1	2	3	4	5	6	7	8
Length of spec.	235	185	185	90	190	170	165	165
PCR product				230	230			
Length of int.	515	430	430	515	430	430	430	430
pos. control ¹								
5'-primer(s) ²	14(127) 5' -ATA 3'	29(174) 5' -AgA 3'	29(174) 5' -AgT 3'	14(127) 5' -ATA 3'	14(127) 5' -ATA 3'	14(127) 5' -ATA 3'	14(127) 5' -ATA 3'	37(196) 5' -Agg 3'
	14(127) 5' -ATA 3'		30(175) 5' -gAT 3'					
3'-primer(s) ³	78(319) 5' -CAC 3'	78(319) 5' -CAC 3'	78(319) 5' -CAC 3'	29(174) 5' -..T 3'	64(278) 5' -TCC 3'	57(257) 5' -CAg 3'	55(250) 5' -CCA 3'	78(319) 5' -CAC 3'
	78(319) 5' -gTA 3'			77(317) 5' -AAT 3'	77(317) 5' -Agg 3'			
Well No.	1	2	3	4	5	6	7	8
DRB1 allele ⁴								
*07:01:01:01-07:01:03	1	2						
*07:03	1		3					
*07:04	1			4				
*07:05	1	2			5			
*07:06	1	2				6		
*07:07	1	2					7	
*07:08	1	2						8
*07:09	1	2	3					
*07:10N	1	2		4				
*07:11	1				5			
*07:12	1	2						
*07:13	1	2						
*07:14	1	2						
*07:15	1	2						
*07:16	1	2						
*07:17	1	2						
*07:18	1	2						
*07:19	1	2						
*07:20	1	2						
*07:21	1	2						
*04:90, 09:08								
DRB1 allele ⁴								
Well No.	1	2	3	4	5	6	7	8

INTERPRETATION TABLE								
DRB1*07 PCR-SSP subtyping								
Amplification patterns of the DRB1*07:01 to *07:21 alleles								
Well ⁵								
9	10	11	12	13	14	15	16	
105	165	105	210	210	215	150	220	Length of spec. PCR product
	220						260	
430	515	515	430	430	430	430	430	Length of int. pos. control ¹
57(256)	14(127)	14(127)	20(145)	20(145)	14(127)	14(127)	14(127)	5'-primer(s) ²
5' -CTA 3'	5' -ATA 3'	5' -ATA 3'	5' -ACC 3'	5' -ACC 3'	5' -ATA 3'	5' -ATA 3'	5' -ATA 3'	
			21(149)	23(154)				
			5' -gAA 3'	5' -Agg 3'				
78(319)	55(251)	35(191)	78(319)	78(319)	72(301)	50(235)	73(304)	3'-primer(s) ³
5' -CAC 3'	5' -gCA 3'	5' -CCC 3'	5' -CAC 3'	5' -CAC 3'	5' -CCA 3'	5' -CAA 3'	5' -gCT 3'	
	73(304)						86(344)	
	5' -gCT 3'						5' -CAT 3'	
9	10	11	12	13	14	14	16	Well No. DRB1 allele ⁴
								*07:01:01:01-07:01:03
								*07:03
								*07:04
								*07:05
								*07:06
								*07:07
								*07:08
								*07:09
								*07:10N
								*07:11
9								*07:12
	10							*07:13
		11						*07:14
			12					*07:15
				13				*07:16
					14			*07:17
	10						16	*07:18
						15		*07:19
							16	*07:20
			12	13				*07:21
9								*04:90, 09:08
								DRB1 allele ⁴
9	10	11	12	13	14	15	16	Well No.

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 430 base pairs, for most wells, or a band of 515 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the longer, 515 bp, internal positive control band in order to help in the correct orientation of the DRB1*07 subtyping.

In addition, wells number 4, 10 and 11 contain the primer pair giving rise to the longer, 515 bp, internal positive control band in order to allow kit identification.

²The codon, or in parenthesis the nucleotide, in the 2nd exon, matching the specificity-determining 3'-end of the primer is given. Codon and 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 codon, and in parenthesis the nucleotide, in the 2nd exon, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Codon and 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.

⁴The DRB1*0702 allele has been shown to be identical to DRB1*07:01:01:01.

⁵Primer mix 4: Specific PCR fragment of 90 bp in the DRB1*07:10N allele. Specific PCR fragment of 230 bp in the DRB1*07:04 allele.

Primer mix 5: Specific PCR fragment of 190 bp in the DRB1*07:05 allele. Specific PCR fragment of 230 bp in the DRB1*07:11 allele.

Primer mix 10: Specific PCR fragment of 165 bp in the DRB1*07:13 allele. Specific PCR fragment of 220 bp in the DRB1*07:18 allele.

Primer mix 16: Specific PCR fragment of 220 bp in the DRB1*07:18 allele. Specific PCR fragment of 260 bp in the DRB1*07:20 allele.

CELL LINE VALIDATION SHEET																			
DRB1*07 SSP subtyping kit																			
				Well															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				201186701	201186702	201186703	201186704	201186705	201186706	201186707	201186708	201186709	201186710	201186711	201186712	201186713	201186714	201186715	201186716
	IHWC cell line	DRB1	Production No.																
1	9001 SA	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*15:02	*04:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324	*15:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353 SM	*04:07	*08:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025 DEU	*04:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR	*04:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3	*04:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT	*07:01		+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB	*07:01		+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA	*08:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB	*09:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*11:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540	*03:01	*13:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257 32367	*09:01	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16	*12:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*13:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA	*14:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*13:02	*14:54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL	*08:03	*14:14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH	*11:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9	*07:01		+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*04:05	*10:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB	*04:16	*07:01	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU	*07:01		+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG	*13:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B	*04:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF	*11:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO	*04:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17	*04:03	*04:06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB	*13:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL	*14:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML	*03:01	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134 WHONP199	*07:01	*09:01	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301	*13:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089	*08:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526	*09:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM	*14:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO	*07:01		+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU	*15:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*11:04	*12:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303 TER-ND	*01:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CERTIFICATE OF ANALYSIS

Olerup SSP® DRB1*07 SSP

Product numbers: 101.118-24 – including *Taq* polymerase
Lot number: 26M
Expiry date: 2014-February-01
Number of tests: 24
Number of wells per test: 16

Well specifications:

Well No.	Production No.	Well No.	Production No.
1	2011-867-01	9	2011-867-09
2	2011-867-02	10	2011-867-10
3	2011-867-03	11	2011-867-11
4	2011-867-04	12	2011-867-12
5	2011-867-05	13	2011-867-13
6	2011-867-06	14	2011-867-14
7	2011-867-07	15	2011-867-15
8	2011-867-08	16	2011-867-16

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

No DNAs carrying the alleles to be amplified by primer solutions 3 to 16 were available. The specificities of the primers in primer solutions 4, 5, 6 and 9 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solutions 3, 8, 12 and 13 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 7, 10, 11 and 14 to 16 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solutions 4 and 5, one 3'-primer was not possible to test. In addition, one 3'-primer in primer solution 1 was tested by separately adding one additional 5'-primer.

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

Date of approval: 2011-August-31

Approved by:

Quality Control, Supervisor

Lot No.: **26M**

Lot-specific information

www.olerup-ssp.com

Declaration of Conformity

Product name: *Olerup* SSP® DRB1*07
Product number: 101.118-24
Lot number: 26M

Intended use: DRB1*07 high resolution histocompatibility testing

Manufacturer: *Olerup* SSP AB
Franzengatan 5
SE-112 51 Stockholm, Sweden
Phone: +46-8-717 88 27
Fax: +46-8-717 88 18

We, *Olerup* SSP AB, hereby declare that this product, to which this Declaration of Conformity relates is in conformity with the following Standard(s) and other normative document(s) ISO 9001:2008 and ISO 13485:2003, following the provisions of the 98/79/EC Directive on *in vitro* diagnostic medical devices, Annex II List B, conformity assessed using Annex IV, as transposed into the national laws of the Member States of the European Union.

The Technical Documentation File is maintained at *Olerup* SSP AB, Franzengatan 5, SE-112 51 Stockholm, Sweden.

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

Notified Body: Lloyd's Register Quality Assurance Limited, Hiramford, Middlemarch Office Village, Siskin Drive, Coventry CV3 4FJ, United Kingdom. (Notified Body number: 0088.)

Stockholm , Sweden
2011-August-31

Ann-Cathrin Jareman
Head of QA and Regulatory Affairs

Lot No.: **26M**

Lot-specific information

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