101.128-12 – including *Taq* polymerase, IFU-01
101.128-12u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for **"Instructions for Use" (IFU)**

Lot No.: 41X

Lot-specific information

Olerup SSP® DRB1*12

Product number:	**101.128-12 – including *Taq* polymerase** **101.128-12u – without *Taq* polymerase**
Lot number:	**41X**
Expiry date:	**2017-April-01**
Number of tests:	**12**
Number of wells per test:	**23+1**
Storage - pre-aliquoted primers:	**dark at -20ºC**
- PCR Master Mix:	**-20ºC**
- Adhesive PCR seals	**RT**
- Product Insert	**RT**

This Product Description is only valid for Lot No. 41X.

Complete product documentation consists of generic Instructions for Use (IFU), lot specific Product Insert, Worksheet and Certificate.

CHANGES COMPARED TO THE PREVIOUS *OLERUP* SSP® DRB1*12 LOT (80S)

The DRB1*12 kit is updated to enable separation of:

- Confirmed DRB1*12 alleles as listed in the IMGT/HLA database[1]
- Polymorphisms in exons outside of the region encoding the peptide binding domain
- Null and Alternatively expressed alleles

A well containing Negative Control primer pairs has been added.

The format of the Product Insert and Worksheet have been changed.

[1]As described in section Uniquely Identified Alleles.

The DRB1*12 primer set, specificity and interpretation tables have been updated for the DRB1 alleles described since the previous *Olerup* SSP® DRB1*12 lot was made **(Lot No. 80S)**. The kit design is based on IMGT/HLA database 3.17.0.

As of lot series V, the Specificity Table is included in the lot-specific Product Insert, and the Interpretation Table is included in the Worksheet.

101.128-12 – including *Taq* polymerase, IFU-01
101.128-12u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for **"Instructions for Use" (IFU)**

Lot No.: 41X **Lot-specific information**

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

Well	5'-primer	3'-primer	rationale
5	-	Added	3'-primer added for the DRB1*12:02:06 allele.
15	-	Added	3'-primer added from well 24.
24	Removed	Moved	3'-primer moved to well 15, 5'-primer removed, Negative Control.

Change in revision R01 compared to R00:

1. Primer mix 8 does not amplify the DRB1*08:14 allele. This has been corrected in the Specificity and Interpretation Tables.

Well **24** contains Negative Control primer pairs, that will amplify more than 95% of the *Olerup* SSP® HLA Class I, DRB, DQB1, DPB1 and DQA1 amplicons as well as all the amplicons generated by the control primer pairs matching the human growth hormone gene.

HLA-specific PCR product sizes range from 75 to 200 base pairs.
The PCR product generated by the positive control primer pair is 430 base pairs.

Length of PCR product	**105**	**200**	**105**	**80**	**75**	**80**	**85**
5'-primer[1]	**164**	**340**	**440**	**45**	**45**	**43**	**36**
	5'-CAC3'	**5'-Agg3'**	**5'-TTA3'**	**5'-Tgg3'**	**5'-Tgg3'**	**5'-Tgg3'**	**5'-TAC3'**
							36
							5'-TAT3'
3'-primer[2]	**231**	**2nd I**	**507**	**59**	**58**	**57**	**47**
	5'-TgC3'	**5'-AAA3'**	**5'-TTg3'**	**5'-CTC3'**	**5'-ggC3'**	**5'-CTC3'**	**5'-ACA3'**
							48
							5'-gCA3'
							48
							5'-gCC3'
							52
							5'-TgT3'
A*	**+**	**+**	**+**				
B*	**+**	**+**	**+**				
C*	**+**	**+**	**+**				
DRB1				**+**	**+**		
DRB3				**+**	**+**		
DRB5				**+**			
DQB1					**+**		
DPB1						**+**	
DQA1							**+**

[1]The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2nd or 3rd exon, matching the specificity-determining 3'-end of the primer is given. Nucleotide and codonnumbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

[2]The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2nd or 3rd exon or the 2nd intron, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide and codon numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

Lot No.: 41X **Lot-specific information**

PRODUCT DESCRIPTION

DRB1*12 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the DRB1*12:01 to DRB1*12:49 alleles.

PLATE LAYOUT

Each test consists of 24 PCR reactions in a 24 well cut PCR plate.

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

The 24 well cut PCR plate is marked with 'DRB1*12' in silver/gray ink.
Well No. 1 is marked with the Lot No. '41X'.
Wells 1 to 23 – DRB1*12 high resolution primers.
Well 24 – Negative Control (NC).
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 24 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

Due to the sharing of sequence motifs between DRB1 alleles, non-DRB1*12 alleles will be amplified by primer mixes 1 to 6, 8, 10 to 12, 14, 16, 19 and 21 to 23.
For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the phenotypically different DRB1*12 alleles, i.e. **DRB1*12:01 to DRB1*12:49**, recognized by the HLA Nomenclature Committee in July 2014[1,2] will be amplified by the primers in the DRB1*12 subtyping kit.

The DRB1*12 kit enables separation of the confirmed DRB1*12 alleles as listed in the IMGT/HLA database. An HLA allele is listed as confirmed by IMGT/HLA if it has been sequenced by more than a single laboratory or from multiple sources. Current allele confirmation status for DRB1*12 alleles is listed below.

The DRB1*12 kit also enables identification of polymorphisms in exons outside of the region encoding the peptide binding domain and of null and alternatively expressed alleles.

Lot No.: 41X **Lot-specific information**

The DRB1*12 subtyping kit cannot distinguish the following silent mutations: the DRB1*12:01:01 and 12:01:04-12:01:05 alleles, the DRB1*12:01:02-12:01:03 alleles, the DRB1*12:02:01 and 12:02:03-12:02:06 alleles or the DRB1*12:16:01 and 12:16:03 alleles.

[1]DRB1 alleles listed on the IMGT/HLA web page 2014-July-25, release 3.17.0, www.ebi.ac.uk/imgt/hla.
[2]Alleles that have been deleted from or renamed in the official WHO HLA Nomenclature up to and including the last IMGT/HLA database release can be retrieved from web page http://hla.alleles.org/alleles/deleted.html.

ALLELE CONFIRMATION STATUS

Allele	Status[1]	Allele	Status[1]	Allele	Status[1]
DRB1*12:01:01	**Confirmed**	DRB1*12:19	Unconfirmed	DRB1*12:49	Unconfirmed
DRB1*12:01:02	Unconfirmed	**DRB1*12:20**	**Confirmed**		
DRB1*12:01:03	Unconfirmed	DRB1*12:21	Unconfirmed		
DRB1*12:01:04	Unconfirmed	DRB1*12:22	Unconfirmed		
DRB1*12:01:05	Unconfirmed	DRB1*12:23	Unconfirmed		
DRB1*12:02:01	**Confirmed**	**DRB1*12:24N**	**Confirmed**		
DRB1*12:02:02	**Confirmed**	DRB1*12:25	Unconfirmed		
DRB1*12:02:03	Unconfirmed	DRB1*12:26	Unconfirmed		
DRB1*12:02:04	Unconfirmed	**DRB1*12:27**	**Confirmed**		
DRB1*12:02:05	Unconfirmed	DRB1*12:28	Unconfirmed		
DRB1*12:02:06	Unconfirmed	DRB1*12:29	Unconfirmed		
DRB1*12:03:02	Unconfirmed	DRB1*12:30	Unconfirmed		
DRB1*12:03:03	Unconfirmed	DRB1*12:31N	Unconfirmed		
DRB1*12:04	**Confirmed**	DRB1*12:32	Unconfirmed		
DRB1*12:05	Unconfirmed	DRB1*12:33	Unconfirmed		
DRB1*12:06	Unconfirmed	DRB1*12:34	Unconfirmed		
DRB1*12:07	Unconfirmed	DRB1*12:35	Unconfirmed		
DRB1*12:08	**Confirmed**	DRB1*12:36	Unconfirmed		
DRB1*12:09	Unconfirmed	DRB1*12:37	Unconfirmed		
DRB1*12:10	Unconfirmed	DRB1*12:38	Unconfirmed		
DRB1*12:11	**Confirmed**	DRB1*12:39	Unconfirmed		
DRB1*12:12	Unconfirmed	DRB1*12:40	Unconfirmed		
DRB1*12:13	Unconfirmed	DRB1*12:41	Unconfirmed		
DRB1*12:14	Unconfirmed	DRB1*12:42	Unconfirmed		
DRB1*12:15	Unconfirmed	DRB1*12:43	Unconfirmed		
DRB1*12:16:01	Unconfirmed	DRB1*12:44	Unconfirmed		
DRB1*12:16:02	Unconfirmed	DRB1*12:45	Unconfirmed		
DRB1*12:16:03	Unconfirmed	DRB1*12:46	Unconfirmed		
DRB1*12:17	Unconfirmed	DRB1*12:47	Unconfirmed		
DRB1*12:18	Unconfirmed	DRB1*12:48	Unconfirmed		

[1]Allele status "confirmed" or "unconfirmed" as listed on the IMGT/HLA web page 2014-July-25, release 3.17.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in DRB1*12 homo- and heterozygotes is available upon request.

101.128-12 – including *Taq* polymerase, IFU-01
101.128-12u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for **"Instructions for Use" (IFU)**

Lot No.: 41X **Lot-specific information**

SPECIFICITY TABLE

DRB1*12 SSP subtyping

Specificities and sizes of the PCR products of the 23+1 primer mixes used for DRB1*12 SSP subtyping

Primer Mix	Size of spec. PCR product[1]	Size of control band[2]	Amplified DRB1*12 alleles[3]	Other amplified DRB1 alleles[4]
1	135 bp	**515 bp**	*12:01:01-12:20, 12:22-12:37, 12:39-12:41, 12:43-12:49	*03:92, 08:17, 08:28, 08:37, 08:45, 11:67, 13:17, 13:175, 14:138
2	215 bp	430 bp	*12:01:01-12:21, 12:23-12:41, 12:44-12:49	*08:05, 08:18, 08:24-08:25, 08:31, 08:40-08:41, 08:47, 13:17, 13:116, 13:175, 14:31, 14:52
3	165 bp	430 bp	*12:09, 12:48[w]	*03:92, 08:02:01-08:02:04, 08:04:01-08:04:05, 08:04:07, 08:09, 08:13, 08:21, 08:24, 08:28, 08:30:01, 08:30:03, 08:42, 08:44-08:45, 13:17, 13:116, 13:175, 14:15, 14:52, 14:126
4[5]	105 bp	430 bp	*12:01:01-12:04, 12:06-12:13, 12:16:01-12:37, 12:39-12:41, 12:43-12:49	*08:32, 08:53
5	170 bp	**515 bp**	*12:01:01-12:03:03, 12:05-12:08, 12:10-12:17, 12:19-12:32, 12:34-12:41, 12:43-12:45	*08:19, 08:25, 08:34, 08:52
6	250 bp	430 bp	*12:01:01-12:02:06, 12:04-12:15, 12:17-12:18, 12:20-12:21, 12:23-12:38, 12:40-12:41, 12:43-12:49	*08:12, 08:22, 14:28
7	215 bp	430 bp	*12:01:01-12:02:06, 12:04-12:07, 12:09-12:12, 12:13[w], 12:14-12:15, 12:17-12:18, 12:20-12:21, 12:24N-12:26, 12:28-12:36, 12:38, 12:40-12:49	
8	195 bp	430 bp	*12:01:01-12:01:05, 12:03:02-12:06, 12:08-12:11, 12:14, 12:17, 12:22, 12:24N-12:25, 12:28-12:30, 12:34-12:36, 12:38-12:41, 12:46-12:48	*08:03:02-08:03:04, 08:10, 08:12, 08:15, 08:18-08:19, 08:23, 08:25, 08:27, 08:29-08:30:03, 08:32-08:38, 08:40, 08:45-08:47, 08:49, 08:51, 08:53, 08:56, 08:58
9	165 bp	430 bp	*12:01:01, 12:01:04-12:02:01, 12:02:03-12:02:06, 12:03:03-12:04, 12:06-12:13, 12:16:02, 12:17-12:21, 12:23-12:37, 12:39-12:42, 12:44-12:49	

CE 0088

101.128-12 – including *Taq* polymerase, IFU-01
101.128-12u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for **"Instructions for Use" (IFU)**

Lot No.: 41X **Lot-specific information**

10	195 bp	430 bp	*12:02:01-12:02:06, 12:13, 12:15-12:16:03, 12:18-12:21, 12:23, 12:26-12:27, 12:31N-12:33, 12:37, 12:43-12:45, 12:49	*08:01:01-08:01:05, 08:02:01-08:02:04, 08:04:01-08:09, 08:11, 08:16-08:17, 08:21-08:22, 08:24, 08:26, 08:28, 08:31, 08:39, 08:41-08:44, 08:50, 08:52, 08:54-08:55, 11:67, 14:15, 14:73
11	250 bp	430 bp	*12:03:02-12:03:03, 12:19	*03:92, 08:04:01, 08:04:02[w]-08:04:03[w], 08:04:04-08:04:07, 08:06, 08:10, 08:28, 08:31, 08:54, 11:67, 13:17, 13:116, 13:175, 14:04, 14:11, 14:15, 14:31, 14:50, 14:52, 14:73, 14:76, 14:79, 14:107, 14:120, 14:126, 14:138, 14:145, 14:148, 14:152N
12[6]	170 bp	430 bp	*12:04, 12:49	*08:31, 08:41, 11:67, 14:11, 14:148
13[5]	115 bp 185 bp 255 bp	**515 bp**	*12:24N *12:05, 12:14-12:15 *12:20	
14	135 bp	**515 bp**	*12:06	*15:01:01:01[w]-15:01:16[w], 15:01:18[w]-15:112[w], 16:01:01[w]-16:05:02[w], 16:07[w]-16:24[w]
15	170 bp 200 bp	**515 bp**	*12:18, 12:47 *12:07	
16[5,7]	80 bp 115 bp	430 bp	*12:08, 12:23, 12:27 *12:31N	*08:53, 11:76, 11:114, 13:34, 13:64, 13:136, 13:174, 14:41, 14:77, 14:110, 15:102
17[5,7]	90 bp	430 bp	*12:10, 12:25	
18[5]	90 bp 135 bp	**515 bp**	*12:26 *12:11	
19	195 bp	430 bp	*12:12	*08:13, 08:48
20	220 bp	430 bp	*12:13, 12:23	
21[5]	110 bp	430 bp	*12:01:01-12:13, 12:15-12:28, 12:30-12:35, 12:37, 12:39-12:41, 12:43-12:44, 12:46-12:49	*08:32, 08:53
22[5]	105 bp 220 bp	430 bp	*12:21, 12:38 *12:16:01-12:16:03, 12:22, 12:39	*08:32 *08:32, 13:145
23[5,6]	110 bp	430 bp	*12:17, 12:25	*01:01:01-01:63
24[8]			**Negative Control**	

[1]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 DRB1*12 SSP typings.
When the primers in a primer mix can give rise to HLA-specific PCR products of more than one length this is indicated if the size difference is more than 20 base pairs. Size differences of 20 base pairs or less are not given. For high resolution SSP kits, the alleles listed are specified according to amplicon length.
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.

101.128-12 – including *Taq* polymerase, IFU-01
101.128-12u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for **"Instructions for Use" (IFU)**

Lot No.: 41X **Lot-specific information**

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 inherit 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.

[2]The internal positive control primer pairs amplify segments of the human growth hormone gene. The internal positive control bands are 430 or 515 base pairs respectively, well distribution as outlined in the table. Well number 1 contains the longer, 515 bp, internal positive control band. The well distribution of the internal controls can help in orientation of the kit on gel photo, as well as allow for kit identification. In the presence of a specific amplification the intensity of the control band often decreases.

[3]For several DRB1 alleles 1st and/or 3rd exon(s) and beyond, as well as intron nucleotide sequences, are not available. In these instances it is not known whether some of the primers of the SSP sets are completely matched with the target sequences or not. Assumption is made that unknown sequences in these regions are conserved within allelic groups.

[4]Due to the sharing of sequence motifs between DRB1 alleles, non-DRB1*12 alleles will be amplified by primer mixes 1 to 6, 8, 10 to 12, 14, 16, 19 and 21 to 23.

[5]HLA-specific PCR products shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR products.

[6]Primer mixes 12 and 23 have a tendency to giving rise to primer oligomer formation.

[7]Primer mixes 16 and 17 may have tendencies of unspecific amplifications.

[8]Primer mix 24 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by the control primer pairs matching the human growth hormone gene. HLA-specific PCR product sizes range from 75 to 200 base pairs and the PCR product generated by the HGH positive control primer pair is 430 base pairs.

'w', may be weakly amplified.

101.128-12 – including *Taq* polymerase, IFU-01
101.128-12u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for **"Instructions for Use" (IFU)**

Lot No.: 41X **Lot-specific information**

PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec. PCR product	135	215	165	105	170	250	215	195	165	195	250	170
Length of int. pos. control[1]	515	430	430	430	515	430	430	430	430	430	430	430
5'-primer(s)[2]	15(133)	15(133)	15(133)	15(133)	15(133)	15(133)	26(165)	15(133)	36(196)	15(133)	15(133)	15(133)
	5' -gTT 3'	5' -gTT 3'	5' -gTT 3'	5' -gTT 3'	5' -gTT 3'	5' -gTT 3'	5' -TTA 3'	5' -gTT 3'	5' -AgC 3'	5' -gTT 3'	5' -gTT 3'	5' -gTT 3'
3'-primer(s)[3]	47(227)	73(307)	57(257)	36(196)	57(257)	85(341)	85(341)	66(286)	78(321)	66(286)	85(341)	58(260)
	5' -ggA 3'	5' -CgC 3'	5' -CAT 3'	5' -gAg 3'	5' -CgA 3'	5' -CAg 3'	5' -CAg 3'	5' -gAT 3'	5' -CAA 3'	5' -gAA 3'	5' -CAA 3'	5' -CCT 3'
					57(257)							
					5' -CgA 3'							
					58(261)							
					5' -TCC 3'							
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Well No.	13	14	15	16	17	18	19	20	21	22	23
Length of spec.	115	135	170	80	90	90	195	220	110	105	110
PCR product	185		200	115		135				220	
	255										
Length of int. pos. control[1]	515	515	515	430	430	515	430	430	430	430	430
5'-primer(s)[2]	13(125)	149(534)	15(133)	13(127)	-16(40)	15(133)	15(133)	24(160)	15(133)	26(165)	64(280)
	5' -gTg 3'	5' -CAg 3'	5' -gTT 3'	5' -gTT 3'	5' -CAA 3'	5' -gTT 3'	5' -gTT 3'	5' -TgT 3'	5' -gTT 3'	5' -TTA 3'	5' -AgC 3'
	37(197)			24(160)	64(280)			25(161)			152(543)
	5' -gTT 3'			5' -TgT 3'	5' -AgC 3'			5' -gCT 3'			5' -gAT 3'
	61(269)			26(165)							
	5' -CTA 3'			5' -TTC 3'							
3'-primer(s)[3]	85(341)	181(630)	58(262)	37(199)	-3(79)	32(182)	66(286)	85(341)	37(199)	47(227)	85(341)
	5' -CAg 3'	5' -CTT 3'	5' -CTg 3'	5' -CAg 3'	5' -AgC 3'	5' -TAC 3'	5' -gAg 3'	5' -CAg 3'	5' -CAg 3'	5' -ggT 3'	5' -CAg 3'
			69(293)		85(341)	46(226)			42(213)	86(344)	179(624)
			5' -CTC 3'		5' -CAg 3'	5' -gAg 3'			5' -TCA 3'	5' -CAC 3'	5' -ACA 3'
Well No.	13	14	15	16	17	18	19	20	21	22	23

[1]The internal positive control primer pairs amplify segments of the human growth hormone gene. The internal positive control bands are 430 or 515 base pairs respectively, well distribution as outlined in the table. Well number 1 contains the longer, 515 bp, internal positive control band. The well distribution of the internal controls can help in orientation of the kit on gel photo, as well as allow for kit identification. In the presence of a specific amplification the intensity of the control band often decreases.

[2]The nucleotide position 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.

[3]The nucleotide position 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.

101.128-12 – including *Taq* polymerase, IFU-01
101.128-12u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for
"Instructions for Use" (IFU)

Lot No.: 41X **Lot-specific information**

CELL LINE VALIDATION SHEET

DRB1*12 SSP subtyping kit[2]

					Well														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Prod. No.:	201203901	201203902	201203903	201203904	201442505	201203906	201203907	201203908	201203909	201203910	201203911	201203912	201203913	201203914	201442515	201203916
	IHWC cell line[1]		DRB1																	
1	9001	SA	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*15:02	*04:05	-	-	-	-	-	-	-	-	-	-	-	-	-	W	-	-
3	9011	E4181324	*15:02		-	-	-	-	-	-	-	-	-	-	-	-	-	W	-	-
4	9275	GU373	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	W	-	-
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		-	-	-	-	-	-	-	-	-	-	-	-	-	W	-	-
47	9045	TUBO	*11:04	*12:01	+	+	-	+	+	+	+	+	+	-	-	-	-	-	-	-
48	9303	TER-ND	*01:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.128-12 – including *Taq* polymerase, IFU-01
101.128-12u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for **"Instructions for Use" (IFU)**

Lot No.: 41X **Lot-specific information**

CELL LINE VALIDATION SHEET

DRB1*12 SSP subtyping kit[2]

					Well						
					17	18	19	20	21	22	23
				Prod. No.:	201203917	201203918	201203919	201203920	201203921	201203922	201203923
	IHWC cell line[1]		DRB1								
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		-	-	-		-	-	+

101.128-12 – including *Taq* polymerase, IFU-01
101.128-12u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for **"Instructions for Use" (IFU)**

Lot No.: 41X **Lot-specific information**

[1]The provided cell line HLA specificities are retrieved from the http://www.ihwg.org/hla web site. The specificity of an individual cell line may thus be subject to change.

[2]The specificity of each primer solution in the kit has been tested against 48 well characterized cell line DNAs and where applicable, additional cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 13, 15, 16, 18 to 20 and 22 were available. The specificities of the primers in primer solutions 16, 19, 20 and 22 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solutions 15 and 18 it was only possible to test the 5'-primer, the 3'-primers were not possible to test. In primer solutions 13 it was only possible to test the 3'-primer, the 5'-primers were not possible to test. In primer solutions 16, 17, 20 and 23 one 5'-primer was not possible to test. In primer solutions 5 and 21 one 3'-primer was not possible to test. One additional 3'-primer in primer solutions 5, 17 and 23 was tested by separately adding one additional 5'-primer.

101.128-12 – including *Taq* polymerase, IFU-01
101.128-12u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for **"Instructions for Use" (IFU)**

Lot No.: 41X **Lot-specific information**

101.128-12 – including *Taq* polymerase, IFU-01
101.128-12u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for **"Instructions for Use" (IFU)**

Lot No.: 41X **Lot-specific information**

101.128-12 – including *Taq* polymerase, IFU-01
101.128-12u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for **"Instructions for Use" (IFU)**

Lot No.: 41X **Lot-specific information**

ADDRESSES:

Manufacturer:
***Olerup* SSP AB**, Franzengatan 5, SE-112 51 Stockholm, Sweden.
Tel: +46-8-717 88 27
Fax: +46-8-717 88 18
E-mail: info-ssp@olerup.com
Web page: http://www.olerup-ssp.com

Distributed by:
Olerup GmbH, Löwengasse 47 / 6, AT-1030 Vienna, Austria.
Tel: +43-1-710 15 00
Fax: +43-1-710 15 00 10
E-mail: support-at@olerup.com
Web page: http://www.olerup.com

Olerup Inc., 901 S. Bolmar St., Suite R, West Chester, PA 19382
Tel: 1-877-OLERUP1
Fax: 610-344-7989
E-mail: info.us@olerup.com
Web page: http://www.olerup.com

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