

101.601.24/12 – including *Taq* pol., IFU-01
101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

Olerup SSP® HLA-C low resolution

Product number:	101.601-24/12 – including <i>Taq</i> pol. 101.601-24u/12u – without <i>Taq</i> pol.
Lot number:	41S
Expiry date:	2015-November-01
Number of tests:	24 tests – Product No. 101.601-24/24u 12 tests – Product No. 101.601-12/12u
Number of wells per test:	31 + 1
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. 41S.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*® HLA-C LOW RESOLUTION LOT (63R)

The Lot-specific information for HLA-C low resolution including and without *Taq* polymerase is now described in one common Product Insert.

The HLA-C low resolution specificity and interpretation tables have been updated for the HLA-C alleles described since the previous *Olerup SSP*® HLA-C low resolution lot was made (**Lot No. 63R**).

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

Well	5'-primer	3'-primer	rationale
7	Added		5'-primer added for increased yield of HLA-specific PCR product.
10	-	Exchanged	3'-primer exchanged for improved resolution of the C*05:79 and C*08:10 alleles.
16	-	Added	3'-primer added for the C*14:42 allele.
24	Added	Added	5'-primer and 3'-primer added for the C*12:21 and 12:33 alleles.

101.601.24/12 – including *Taq* pol., IFU-01
101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

Well **32** contains Negative Control primer pairs, that will amplify more than 95% of the *Olerup* SSP® HLA Class I, DRB, DQB1 and DPB1 amplicons as well as the amplicons generated by a control primer pair.

PCR product sizes range from 75 to 430 base pairs.

The PCR product generated by the control primer pair is 430 base pairs.

Length of PCR product	105	200	105	80	75	80
5'-primer¹	164	340	440	45	45	43
	5'-CAC ^{3'}	5'-Agg ^{3'}	5'-TTA ^{3'}	5'-Tgg ^{3'}	5'-Tgg ^{3'}	5'-Tgg ^{3'}
3'-primer²	231	2nd I	507	59	58	57
	5'-TgC ^{3'}	5'-AAA ^{3'}	5'-TTg ^{3'}	5'-CTC ^{3'}	5'-ggC ^{3'}	5'-CTC ^{3'}
A*	+	+	+			
B*	+	+	+			
C*	+	+	+			
DRB1				+	+	
DRB3				+	+	
DRB5				+		
DQB1					+	
DPB1						+

¹The 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. 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.

²The 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 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.

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

PRODUCT DESCRIPTION

HLA-C-low resolution SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for grouping the HLA-C*01:02 to C*18:06 alleles into the groups C*01:xx to C*18:xx.

PLATE LAYOUT

Each test consists of 32 PCR reactions in a 32 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	24
25	26	27	28	29	30	31	32

Wells 1 to 31 – HLA-C low resolution primers.

Well 32 – Negative Control.

The 32 well cut PCR plate is marked with ‘HLA-C low’ in silver/gray ink.

Well No. 1 is marked with the Lot No. ‘41S’.

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 32 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

Only HLA-C alleles will be amplified by the HLA-C low resolution typing kit, except that primer mix 1 will amplify the B*39:76 and B*54:18 alleles, primer mix 13 will amplify the B*67:02 allele, primer mix 15 will amplify the B*35:222 allele, primer mix 16 will amplify the A*30:62 allele, primer mixes 20 and 26 will amplify the B*14:03 allele, primer mix 27 will amplify the B*35:08:02, B*35:08:05 and B*67:02 alleles, primer mix 29 will amplify the B*58:02 allele and primer mix 30 will amplify the A*24:96, A*24:106, A*24:174 and B*46:25 alleles. Thus, the interpretation of HLA-C low resolution typings is only influenced by these thirteen alleles and not by other HLA class I genes.

UNIQUELY IDENTIFIED ALLELES

All the HLA-C alleles, i.e. **C*01:02 to C*18:06**, recognized by the HLA Nomenclature Committee in January 2013¹ will be amplified by the primers in the HLA-C low resolution SSP kit². The HLA-C alleles will be grouped into the C*01xx to C*18xx groups.

¹HLA-C alleles listed on the IMGT/HLA web page 2013-January-11, release 3.11.0, www.ebi.ac.uk/imgt/hla.

101.601.24/12 – including *Taq* pol., IFU-01
101.601.24u/12u – without *Taq* pol., IFU-02

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

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

²The C*01:05, 01:22 and 01:36 and the B*39:76 and the B*54:18 alleles give rise to identical amplification patterns with the HLA-C low resolution primer set. These alleles are separated by the HLA-B low primer set.

The C*12:18:02 and the C*16:43 alleles give rise to identical amplification patterns with the HLA-C low resolution primer set. These alleles are separated by the HLA-C*12 or the HLA-C*16 primer set.

The C*14:06, 14:09 and 14:28 and the A*30:62 alleles give rise to identical amplification patterns with the HLA-C low resolution primer set. These alleles are separated by the HLA-A low primer set.

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

SPECIFICITY TABLE

HLA-C low resolution SSP typing

Specificities and sizes of the PCR products of the 31+1 primer mixes used for HLA-C low resolution SSP typing

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA class I alleles ^{3,4}
1¹³	90 bp, 155 bp	800 bp	*01:02:01-01:75, 04:71, B*39:76, B*54:18
2^{5,15}	130 bp, 200 bp, 270 bp, 300 bp	800 bp	*01:10, 01:43, 02:02:01-02:02:03, 02:02:05-02:40, 02:42-02:57, 02:59-02:67, 04:32, 04:77, 06:08, 07:101, 07:148, 07:161, 08:31, 14:25, 15:42, 16:29, 16:50, 17:01:01:01-17:06, 17:08-17:16, 17:18-17:19, 18:03
3¹⁶	280 bp	800 bp	*02:02:01-02:02:03, 02:02:05-02:03, 02:04 ^w , 02:05-02:13, 02:14 ^w , 02:15-02:25Q, 02:26:02-02:40, 02:42-02:67, 03:02:01-03:02:09, 03:04:01:01-03:04:25, 03:04:27-03:10, 03:14-03:17, 03:19, 03:23-03:29, 03:32-03:38:02, 03:40:01-03:42, 03:44-03:48, 03:51, 03:54, 03:57, 03:60, 03:63-03:64:01, 03:65, 03:70-03:74, 03:77-03:78, 03:80, 03:82, 03:84, 03:87, 03:89-03:95, 03:98, 03:100-03:101, 03:104-03:111, 03:113-03:115, 03:117-03:118, 03:121N, 03:123, 03:125, 03:128-03:131, 03:134-03:136, 03:138-03:140, 03:143, 03:145-03:149, 03:153-03:155, 03:157, 03:159, 03:162-03:164, 03:169, 03:172-03:174, 03:178-03:181, 03:183-03:184, 04:03, 04:06, 04:16, 04:80, 04:107, 05:58:01, 06:03:01, 07:96:01-07:96:02, 12:03:23, 15:02:01-15:09, 15:10:02-15:11, 15:13, 15:15-15:19, 15:21-15:22, 15:24-15:35, 15:37-15:60, 15:62, 15:64-15:66, 16:34
4⁶	170 bp, 275 bp	1070 bp	*03:02:01-03:04:06, 03:04:08-03:15, 03:17-03:40:03, 03:42-03:57, 03:59-03:79, 03:81-03:85, 03:87-03:93, 03:95-03:98, 03:100-03:109, 03:111-03:112, 03:114-03:150, 03:152-03:164, 03:166-03:185, 07:242
5	280 bp	800 bp	*03:03:01-03:03:19, 03:11:01-03:13, 03:20N-03:22Q, 03:30-03:31, 03:43:01-03:43:02, 03:49-03:50, 03:52-03:53, 03:55-03:56, 03:58-03:59, 03:61-03:62, 03:66, 03:67 ^w , 03:68-03:69, 03:75-03:76, 03:79, 03:81, 03:83, 03:85-03:86, 03:88, 03:96-03:97, 03:102-03:103, 03:112, 03:116:01-03:116:02, 03:119-03:120, 03:122, 03:124, 03:126-03:127, 03:132-03:133, 03:141-03:142, 03:150-03:152, 03:158, 03:160-03:161, 03:165, 03:167-03:168, 03:171, 03:175-03:177, 03:185, 15:12

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

6¹⁶	130 bp, 330 bp	800 bp	*02:02:01-02:02:03, 02:02:05-02:02:12, 02:02:14-02:20, 02:22-02:25Q, 02:27:01-02:38N, 02:40, 02:42-02:44, 02:46-02:67, 04:01:01:01-04:01:27, 04:01:29-04:01:48, 04:03-04:15:03, 04:17-04:20, 04:23-04:41, 04:43-04:102, 04:104-04:139, 04:141-04:144, 05:26, 05:78, 07:02:09, 07:125, 15:11, 15:36, 16:34
7⁷	165 bp, 390 bp, 445 bp	1070 bp	*04:129, 05:01:01:01-05:01:26, 05:03-05:87, 06:05, 06:67, 08:10, 12:21, 12:33, 16:40, 16:53, 17:05
8	130 bp, 355 bp	800 bp	*02:06, 02:47, 06:02:01:01-06:02:01:02, 06:02:03-06:16N, 06:18-06:31, 06:33-06:76:01, 06:77-06:93, 06:96, 12:03:09, 12:15, 15:02:01-15:03, 15:07-15:08, 15:10:01- 15:13, 15:15-15:18, 15:21, 15:26, 15:28, 15:31-15:35, 15:37-15:39, 15:41-15:45, 15:47-15:53, 15:56-15:58, 15:60, 15:62-15:64
9⁸	245 bp, 425 bp	800 bp	*07:01:01:01-07:33N, 07:35-07:294, 07:296-07:299
10^{9,13,16}	115 bp, 165 bp, 390 bp	800 bp	*01:43, 07:101, 07:148, 07:161, 08:01:01-08:63, 08:65- 08:74
11	340 bp	1070 bp	*01:14, 01:59, 02:02:01-02:02:03, 02:02:05-02:11, 02:13- 02:26:03, 02:28-02:40, 02:42-02:67, 03:07, 03:15, 03:45, 03:130, 03:140, 03:163, 04:01:01:01-04:01:48, 04:03- 04:10, 04:12-04:20, 04:23-04:28, 04:30-04:35, 04:37- 04:54, 04:56-04:144, 05:01:01:01-05:01:26, 05:03-05:87, 06:02:01:01-06:02:01:02, 06:02:03-06:02:11, 06:02:13- 06:10, 06:12-06:51, 06:53:01-06:96, 07:07, 07:09, 07:49, 07:76, 07:210, 07:238, 07:247, 08:10, 12:04:01-12:05, 12:09, 12:21, 12:33, 12:41, 12:54, 12:60, 14:04, 14:12, 14:49, 15:02:01-15:06:03, 15:08-15:13, 15:15-15:19, 15:22-15:24, 15:26-15:42, 15:44-15:66, 16:02:01- 16:02:09, 16:09, 16:12, 16:19, 16:25, 16:46-16:48, 17:01:01:01-17:19, 18:01-18:06
12^{10,13}	100 bp, 160 bp, 220 bp	800 bp	*01:02:18, 01:04, 01:21, 06:76:02, 12:02:01-12:03:01:02, 12:03:03-12:03:07, 12:03:09-12:03:15, 12:03:17-12:03:19, 12:03:21-12:03:25, 12:04:02-12:08, 12:10:01-12:13, 12:14:02-12:18:01, 12:19-12:25, 12:27-12:32, 12:34- 12:58, 12:60-12:94, 14:02:08, 16:15:02
13^{13,14}	120 bp, 250 bp	800 bp	*01:21, 02:12, 02:49, 02:55, 04:01:01:01-04:01:48, 04:03- 04:09N, 04:12-04:20, 04:23-04:35, 04:37-04:54, 04:56- 04:144, 05:42, 05:46, 06:76:02, 07:02:09, 07:125, 08:05, 08:21, 08:25, 12:02:01-12:03:03, 12:03:05-12:03:08, 12:03:10-12:03:12, 12:03:13 ^w , 12:03:14-12:03:23, 12:03:24 ^w , 12:03:25, 12:04:02, 12:06-12:08, 12:10:01- 12:20, 12:22-12:32, 12:34-12:48, 12:50-12:94, 15:03,

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

			15:16, 15:25, 16:01:01-16:02:09, 16:06-16:28, 16:30N-16:32, 16:34, 16:36-16:39, 16:41, 16:43-16:47, 16:49-16:52, 16:54, 17:01:04, B*67:02
14¹⁷	160 bp, 215 bp	800 bp	*01:04, 01:09, 02:05, 02:17, 04:42, 06:02:01:01-06:02:01:02, 06:02:03-06:02:15, 06:02:17-06:03:02, 06:07-06:13, 06:15-06:34, 06:36-06:39, 06:41-06:71, 06:73-06:78, 06:80, 06:82-06:96, 07:31:01-07:31:02, 07:125, 07:177, 12:03:01:01-12:07, 12:11-12:13, 12:15, 12:19, 12:23, 12:25-12:26, 12:28-12:29, 12:31-12:35, 12:37-12:39N, 12:42Q-12:43, 12:45-12:48, 12:50-12:55, 12:57-12:63, 12:65-12:66, 12:70-12:71, 12:75-12:79, 12:81-12:82, 12:87-12:94, 14:15-14:16, 16:04:01, 16:29, 16:33, 16:35, 16:42, 16:48, 16:55
15¹⁶	130 bp, 255 bp	800 bp	*02:02:01 ^w , 02:02:02-02:02:03, 02:02:05-02:13, 02:15-02:26:03, 02:28-02:40, 02:42-02:64, 02:66-02:67, 03:07, 03:10, 03:15, 03:29, 03:45, 03:163, 04:03, 04:06, 04:16, 04:37, 04:80, 04:103, 04:107, 05:01:01:01-05:01:26, 05:03-05:19, 05:21-05:42, 05:44:01-05:77, 05:79-05:87, 06:03:01-06:03:02, 06:76:01-06:76:02, 08:10, 12:04:01-12:05, 12:09, 12:21, 12:33, 12:41, 12:60, 12:72, 14:45, 15:02:01-15:06:03, 15:08-15:13, 15:15-15:19, 15:21-15:22, 15:24, 15:26-15:35, 15:37-15:42, 15:44-15:62, 15:64-15:66, 16:02:01-16:02:09, 16:09, 16:12, 16:19, 16:25, 16:37, 16:46-16:48, 17:01:01:01-17:19, B*35:222
16¹⁵	255 bp, 445 bp	1070 bp	*04:11, 04:29, 04:36, 04:55, 04:114, 07:64, 12:55, 14:02:01-14:11, 14:13-14:48, 16:40, 16:53, A*30:62
17^{11,13}	110 bp, 325 bp	800 bp	*02:06, 03:81, 03:175, 04:108, 04:112, 05:36, 06:89, 07:123, 07:173, 07:294, 12:08, 12:15, 12:81, 15:02:01-15:13, 15:15-15:19, 15:21-15:24, 15:26-15:66, 16:20
18¹⁵	180 bp, 210 bp, 240 bp	1070 bp	*02:13, 02:18, 02:33, 02:49, 04:01:01:01-04:01:22, 04:01:24-04:01:48, 04:03-04:10, 04:12-04:20, 04:23-04:32, 04:34-04:106, 04:108-04:115N, 04:117-04:129, 04:131-04:144, 05:17, 05:25, 05:42, 05:55, 05:68, 05:79, 06:05, 06:31, 06:76:02, 07:02:09, 07:31:01-07:31:02, 07:177, 08:01:01-08:01:09, 08:03:01-08:03:02, 08:06, 08:08-08:11, 08:14, 08:16:01-08:16:02, 08:20-08:22, 08:24, 08:26N, 08:28, 08:36N, 08:38, 08:40-08:42, 08:44, 08:46, 08:50, 08:56-08:61, 08:65, 08:72, 12:14:01-12:14:02, 12:28, 12:58, 14:10, 14:15, 15:12, 15:25, 15:62, 15:65, 16:01:01-16:02:09, 16:04:01, 16:06-16:39, 16:41-16:42, 16:44-16:52, 16:54-16:55
19¹⁸	225 bp, 250 bp	800 bp	*01:60, 04:58, 05:23, 05:62, 08:07, 08:47, 12:14:01-12:14:02, 14:17, 15:25, 15:65, 17:01:01:01-17:19
20	215 bp, 425 bp	800 bp	*01:02:01-01:03, 01:06-01:08, 01:10-01:20, 01:23-01:34, 01:37N-01:48, 01:51-01:54, 01:56N-01:75, 03:58, 03:86,

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

			03:94, 03:99, 04:37, 05:16, 05:85, 06:05-06:06, 06:17, 06:31, 07:07, 07:09, 07:49, 07:76, 07:210, 07:238, 07:247, 08:12, 12:09, 12:24, 14:02:01-14:05, 14:07N, 14:10-14:14, 14:17-14:27, 14:29-14:49, 16:04:01, 16:29, 16:33, 16:42, 16:53, 16:55, 18:01-18:06, B*14:03
21	325 bp, 380 bp	1070 bp	*01:03, 01:24, 01:34, 01:49-01:50, 01:55, 02:22, 02:62, 03:03:01-03:04:35, 03:06-03:12, 03:14, 03:18-03:24, 03:26, 03:28-03:32, 03:34, 03:37:01-03:59, 03:61-03:70, 03:72-03:83, 03:85, 03:87-03:88, 03:90-03:93, 03:96, 03:98, 03:100-03:107, 03:109, 03:111-03:120, 03:122-03:131, 03:133-03:134, 03:136-03:138, 03:140-03:145, 03:147-03:153, 03:155-03:166, 03:168, 03:170-03:176, 03:179-03:185, 04:01:01:01-04:01:15, 04:01:17-04:01:48, 04:03-04:20, 04:24-04:53, 04:55-04:71, 04:73-04:107, 04:109-04:144, 05:01:01:01-05:01:26, 05:03, 05:05-05:21, 05:23-05:87, 06:09, 06:14, 06:35, 06:72, 07:10, 07:28, 07:41, 07:43, 07:184, 07:196, 08:01:01-08:08, 08:10, 08:12-08:47, 08:49-08:63, 08:65-08:74, 12:31, 12:44, 15:02:01-15:13, 15:15-15:19, 15:21, 15:23-15:36, 15:38-15:54, 15:56-15:57, 15:59-15:64, 15:66, 16:45, 17:01:01:01-17:19, 18:01-18:06
22^{15,18}	135 bp	1070 bp	*03:02:01-03:04:24, 03:04:27-03:17, 03:19-03:38:02, 03:40:01-03:64:01, 03:65-03:66, 03:67 ^w , 03:68-03:98, 03:100-03:136, 03:138-03:143, 03:146-03:155, 03:157-03:165, 03:167-03:169, 03:171, 03:173-03:181, 03:183-03:185, 04:32, 04:77, 06:03:01, 07:96:01-07:96:02, 14:25, 15:02:10, 15:43, 18:03
23	155 bp, 235 bp	1070 bp	*04:42, 06:02:01:01-06:02:01:02, 06:02:03-06:02:25, 06:04-06:75, 06:78-06:96, 07:01:01:01-07:02:07, 07:02:09-07:02:28, 07:02:30-07:25, 07:27:01-07:32N, 07:35-07:38:02, 07:41-07:63, 07:65-07:91, 07:93-07:95, 07:97-07:138, 07:140-07:151, 07:153-07:155, 07:157-07:176, 07:178-07:209, 07:211-07:237, 07:239-07:245, 07:247-07:266, 07:268-07:294, 07:297-07:299, 12:16, 18:01-18:06
24¹³	95 bp, 475 bp, 590 bp	800 bp	*02:02:01-02:02:03, 02:02:06-02:02:12, 02:02:15-02:02:25, 02:04, 02:07-02:09, 02:11, 02:13, 02:15, 02:19-02:27:01, 02:28-02:31, 02:34-02:40, 02:42-02:50, 02:52N-02:57, 02:59-02:67, 05:16, 06:05, 06:67, 08:02:02, 08:12, 12:03:17, 12:21, 12:33
25¹²	260 bp, 360 bp	1070 bp	*04:01:01:01-04:01:48, 04:03-04:20, 04:23-04:144, 05:78, 16:34
26	155 bp, 220 bp	1070 bp	*01:02:01-01:03, 01:06-01:08, 01:10-01:20, 01:23-01:34, 01:37N-01:48, 01:51-01:54, 01:56N-01:75, 03:58, 03:86, 03:94, 03:99, 04:37, 04:129, 05:16, 05:42, 05:46, 05:85,

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

			06:05-06:06, 06:67, 07:101, 07:148, 07:161, 08:05, 08:12, 08:21, 12:09, 12:24, 14:02:01-14:05, 14:07N, 14:10-14:14, 14:17-14:27, 14:29-14:49, 16:53, 17:05, B*14:03
27	140 bp	1070 bp	*01:21, 02:12 ^w , 02:27:01-02:27:02, 03:04:25, 04:11, 04:29, 04:36, 04:55, 07:02:09, 08:01:01-08:09, 08:11-08:63, 08:65-08:74, 12:02:01-12:03:03, 12:03:05-12:03:08, 12:03:10-12:03:23, 12:03:24 ^w , 12:03:25, 12:06-12:08, 12:10:01-12:20, 12:22-12:26, 12:28-12:32, 12:34-12:40, 12:42Q-12:53, 12:55-12:59, 12:61-12:71, 12:72 ^w , 12:73-12:94, 14:02:03, 14:03, 14:08, 14:10, 14:22, 14:35N, 14:38, 14:41, 15:07, 15:21 ^w , 15:25, 16:01:01, 16:01:03-16:01:13, 16:04:01, 16:06-16:08, 16:10-16:11, 16:13-16:18, 16:20-16:24, 16:26-16:36, 16:37 ^w , 16:38-16:45, 16:49-16:55, B*35:08:02, B*35:08:05, B*67:02
28¹⁵	210 bp, 555 bp	1070 bp	*03:58, 03:86, 03:94, 03:99, 05:85, 14:02:01-14:04, 14:07N, 14:10-14:14, 14:17-14:27, 14:29-14:34, 14:35N ^w , 14:36-14:44, 14:46-14:49, 15:37, 16:18
29¹⁴	175 bp, 270 bp	1070 bp	*01:35, 02:58, 03:08, 03:29, 03:31, 04:08, 04:34, 05:27, 05:39, 06:96, 07:20, 07:96:01-07:96:02, 07:263, 08:41, 12:83, 14:20, 15:02:01-15:09, 15:12-15:13, 15:15, 15:18-15:19, 15:21-15:24, 15:26, 15:28-15:42, 15:44-15:62, 15:64-15:66, 17:07, B*58:02
30¹⁵	160 bp, 370 bp, 540 bp	1070 bp	*01:21, 02:12, 02:49, 02:55, 04:14-04:15:01, 04:15:03, 04:68, 07:01:07, 07:04:03, 07:14, 07:27:02, 07:31:02, 07:53, 07:199:02, 07:216, 12:02:01-12:02:02, 12:02:04-12:02:07, 12:02:09, 12:08, 12:14:01-12:14:02, 12:16-12:18:02, 12:22, 12:27, 12:30, 12:36, 12:40-12:41, 12:56, 12:64, 12:67-12:69, 12:72-12:74, 12:80N, 12:83-12:86, 16:01:01-16:02:09, 16:06-16:28, 16:30N-16:32, 16:34, 16:36-16:39, 16:41, 16:43-16:47, 16:49-16:52, 16:54, A*24:96, A*24:106, A*24:174, B*46:25
31	520 bp	1070 bp	*01:14, 02:02:01-02:02:03, 02:02:05-02:02:25, 02:04-02:15, 02:17, 02:19-02:26:03, 02:28-02:40, 02:42-02:64, 02:66-02:67, 04:01:01:01-04:01:48, 04:03, 04:05, 04:07-04:10, 04:12, 04:15:01-04:20, 04:23-04:28, 04:30-04:33, 04:35, 04:37-04:54, 04:56-04:57, 04:59Q-04:67, 04:69-04:110, 04:112-04:113, 04:115N-04:121, 04:123N-04:144, 05:01:01:01-05:01:26, 05:03-05:10, 05:12-05:16, 05:18:01-05:19, 05:21-05:26, 05:28-05:31, 05:33-05:50, 05:52-05:61, 05:63-05:67, 05:69, 05:71-05:78, 05:80-05:87, 06:02:01:01-06:02:01:02, 06:02:03-06:03:02, 06:05-06:10, 06:12-06:39, 06:41-06:51, 06:53:01-06:78, 06:80-06:81, 06:83-06:96, 12:04:01-12:05, 12:09, 12:21, 12:33, 12:41, 12:60, 12:72, 14:12, 14:49, 15:08, 17:17, 18:01-18:06
32¹⁹	-	-	Negative Control

101.601.24/12 – including *Taq* pol., IFU-01
101.601.24u/12u – without *Taq* pol., IFU-02

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

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

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-C low resolution 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 respective lengths of the HLA-specific PCR product(s) are given for the alleles amplified by these primer mixes.

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-C low resolution typing.

In addition, wells number 2, 3, 5, 6, 8 to 10, 12 to 15, 17, 19, 20 and 24 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.

³For several HLA Class I alleles 1st and/or 4th 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. We assume that unknown sequences in these regions are conserved within allelic groups.

⁴Due to sharing of sequence motifs primer mix 1 will amplify the B*54:18 and B*54:18 alleles, primer mix 13 will amplify the B*67:02 allele, primer mix 15 will amplify the B*35:222 allele, primer mix 16 will amplify the A*30:62 allele, primer mixes 20 and 26 will amplify the B*14:03 allele, primer mix 27 will amplify the B*35:08:02, B*35:08:05 and B*67:02 alleles, primer mix 29 will amplify the B*58:02 allele and primer mix 30 will amplify the A*24:96, A*24:106, A*24:174 and B*46:25 alleles.

⁵Primer mix 2 will for most C*02 alleles give rise to two specific PCR fragments.

⁶Primer mix 4 will for most C*03 alleles give rise to two specific PCR fragments.

⁷Primer mix 7 will for most C*05 alleles give rise to two specific PCR fragments.

⁸Primer mix 9 will for most C*07 alleles give rise to two specific PCR fragments.

⁹Primer mix 10 will for most C*08 alleles give rise to multiple specific PCR fragments.

¹⁰Primer mix 12 will for most C*12 alleles give rise to two specific PCR fragments.

¹¹Primer mix 17 will for most C*15 alleles give rise to two specific PCR fragments.

¹²Primer mix 25 will for most C*04 alleles give rise to two specific PCR fragments.

¹³HLA-specific PCR products shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR products.

¹⁴Primer mixes 13 and 29 may have tendencies of unspecific amplifications.

¹⁵Primer mixes 2, 16, 18, 22, 28 and 30 have a tendency to giving rise to primer oligomer formation.

¹⁶Primer mixes 3, 6, 10 and 15 may give rise to a lower yield of HLA-specific PCR product than the other HLA-C low primer mixes.

¹⁷Primer mix 14 might faintly amplify most C*01 and the C*14 alleles.

¹⁸Primer mixes 19 and 22 might generate a false band of about 500 base pairs. This band should be disregarded when interpreting HLA-C low resolution typings.

¹⁹Primer mix 32 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicon generated by a control primer pair. PCR product sizes range from 75 to 200 base pairs. The PCR product generated by the control primer pair is 430 base pairs.

‘w’, might be weakly amplified.

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

Lot-specific information

CE

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

INTERPRETATION TABLE																											
HLA-C low resolution SSP typing																											
Amplification patterns of the C*01:02 to C*18:06 alleles																											
Well ⁸																											
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32												
110	180	225	215	325	135	155	95	260	155	140	210	175	160	520	Negative Control	Length of spec. PCR product(s)											
325	210	250	425	380		235	475	360	220		555	270	370														
	240						590						540														
800	1070	800	800	1070	1070	1070	800	1070	1070	1070	1070	1070	1070	1070		Length of int. pos. control ¹											
201	201	2nd I	47	355	105	97	176	28	176	201	98	134	289	312		5'-primer(s) ²											
5' -CCA ³	5' -CCA ³	5' -CCA ³	5' -Agg ³	5' -TCA ³	5' -gCT ³	5' -TCg ³	5' -gCA ³	5' -TCA ³	5' -gCA ³	5' -CCA ³	5' -CTA ³	5' -CCA ³	5' -Agg ³	5' -AAA ³													
409	2nd I		361	412	459	97	486		361		368	2nd I	418														
5' -ggC ³	5' -CCA ³		5' -AgT ³	5' -ATA ³	5' -gAT ³	5' -TTg ³	5' -ACA ³		5' -AgT ³		5' -gTT ³	5' -CCA ³	5' -Agg ³														
	361												419														
	5' -AgT ³												419														
													419														
													5' -gTT ³														
270	341	512	302	3rd I	201	213	361	112	289	302	361	270	369	539	Negative Control	3'-primer(s) ³											
5' -TAg ³	5' -CgT ³	5' -CCA ³	5' -ggT ³	5' -CTC ³	5' -CTC ³	5' -Cgg ³	5' -CCA ³	5' -CCA ³	5' -AgC ³	5' -ggC ³	5' -CCA ³	5' -TAg ³	5' -CCg ³	5' -TCC ³													
3rd I	343	538	527		559	289	474	118	289		538	559	539														
5' -CTC ³	5' -T ³	5' -gTC ³	5' -CCg ³	5' -CTC ³	5' -AgC ³	5' -gCA ³	5' -gCT ³	5' -AgC ³	5' -CCg ³		5' -CAG ³	5' -TCT ³															
	343		538			289	538	218	538																		
	5' -g ³		5' -CCg ³			5' -AgC ³	5' -CCA ³	5' -gCT ³	5' -CCg ³																		
	527																										
	5' -CCg ³																										
	527																										
	5' -CCg ³																										
	527																										
	5' -CCg ³																										
	530																										
	5' -CCA ³																										
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.											

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele ⁴																
*01:02:01-01:02:17, 01:06-01:08, 01:11-01:13, 01:15-01:20, 01:23, 01:25-01:33, 01:37N-01:42, 01:44- 01:48, 01:51-01:54, 01:56N-01:58, 01:61-01:75	1															
*01:02:18	1											12				
*01:03, 01:24, 01:34	1															
*01:04	1											12		14		
*01:05, 01:22, 01:36, B*39:76, B*54:18 ⁵	1															
*01:09	1													14		
*01:10	1	2														
*01:14	1										11					
*01:21	1											12	13			
*01:35	1															
*01:43	1	2								10						
*01:49-01:50, 01:55	1															
*01:59	1										11					
*01:60	1															
*02:02:01		2	3			6					11				w	
*02:02:02-02:02:03, 02:02:06- 02:02:12, 02:02:15-02:02:25, 02:07- 02:09, 02:11, 02:15, 02:19-02:20, 02:23-02:25Q, 02:28-02:31, 02:34- 02:38N, 02:40, 02:42-02:44, 02:46, 02:48, 02:50, 02:52N-02:54, 02:56- 02:57, 02:59-02:61, 02:63-02:64, 02:66-02:67		2	3			6					11				15	
*02:02:05, 02:02:14, 02:10, 02:32, 02:51		2	3			6					11				15	
*02:02:13		2	3								11				15	
*02:03, 02:16:01-02:16:02		2	3			6					11				15	
*02:04		2	w			6					11				15	
*02:05, 02:17		2	3			6					11			14	15	
*02:06		2	3			6		8			11				15	
*02:12		2	3			6							13		15	
*02:13		2	3			6					11				15	
*02:14		2	w			6					11					
*02:18		2	3			6					11				15	
*02:21, 02:26:02-02:26:03, 02:39, 02:45		2	3								11				15	
*02:22, 02:62		2	3			6					11				15	
*02:26:01		2									11				15	
*02:27:01		2	3			6										
*02:27:02		2	3			6										
*02:33		2	3			6					11				15	
*02:47		2	3			6		8			11				15	
*02:49		2	3			6					11		13		15	
*02:55		2	3			6					11		13		15	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																HLA-C allele ⁴
			20						26							*01:02:01-01:02:17, 01:06-01:08, 01:11-01:13, 01:15-01:20, 01:23, 01:25-01:33, 01:37N-01:42, 01:44- 01:48, 01:51-01:54, 01:56N-01:58, 01:61-01:75
			20						26							*01:02:18
			20	21					26							*01:03, 01:24, 01:34
																*01:04
																*01:05, 01:22, 01:36, B*39:76, B*54:18 ⁵
																*01:09
			20						26							*01:10
			20						26					31		*01:14
										27			30			*01:21
												29				*01:35
			20						26							*01:43
				21												*01:49-01:50, 01:55
			20						26							*01:59
		19	20						26							*01:60
							24							31		*02:02:01
							24							31		*02:02:02-02:02:03, 02:02:06- 02:02:12, 02:02:15-02:02:25, 02:07- 02:09, 02:11, 02:15, 02:19-02:20, 02:23-02:25Q, 02:28-02:31, 02:34- 02:38N, 02:40, 02:42-02:44, 02:46, 02:48, 02:50, 02:52N-02:54, 02:56- 02:57, 02:59-02:61, 02:63-02:64, 02:66-02:67
														31		*02:02:05, 02:02:14, 02:10, 02:32, 02:51
														31		*02:02:13
																*02:03, 02:16:01-02:16:02
							24							31		*02:04
														31		*02:05, 02:17
17														31		*02:06
									w				30	31		*02:12
	18						24							31		*02:13
														31		*02:14
	18															*02:18
							24							31		*02:21, 02:26:02-02:26:03, 02:39, 02:45
				21			24							31		*02:22, 02:62
							24							31		*02:26:01
							24			27						*02:27:01
										27						*02:27:02
	18													31		*02:33
							24							31		*02:47
	18						24						30	31		*02:49
							24						30	31		*02:55
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Negative Control

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele ⁴																
*02:58			3			6					11				15	
*02:65		2	3			6					11					
*03:02:01-03:02:09, 03:05, 03:17, 03:25, 03:27, 03:33, 03:35-03:36, 03:60, 03:71, 03:84, 03:89, 03:95, 03:108, 03:121N, 03:135, 03:139, 03:146, 03:154, 03:169, 03:178			3	4												
*03:03:01-03:03:19, 03:11:01-03:12, 03:20N-03:22Q, 03:30, 03:43:01- 03:43:02, 03:49-03:50, 03:52-03:53, 03:55-03:56, 03:59, 03:61-03:62, 03:66, 03:68-03:69, 03:75-03:76, 03:79, 03:83, 03:85, 03:88, 03:96, 03:102-03:103, 03:112, 03:116:01- 03:116:02, 03:119-03:120, 03:122, 03:124, 03:126-03:127, 03:133, 03:141-03:142, 03:150, 03:152, 03:158, 03:160-03:161, 03:168, 03:171, 03:176, 03:185				4	5											
*03:04:01:01-03:04:06, 03:04:08- 03:04:24, 03:04:27-03:04:35, 03:06, 03:09, 03:14, 03:19, 03:23-03:24, 03:26, 03:28, 03:32, 03:34, 03:37:01- 03:38:02, 03:40:01-03:40:03, 03:42, 03:44, 03:46-03:48, 03:51, 03:54, 03:57, 03:63-03:64:01, 03:65, 03:70, 03:72-03:74, 03:77-03:78, 03:82, 03:87, 03:90-03:93, 03:98, 03:100- 03:101, 03:104-03:107, 03:109, 03:111, 03:114-03:115, 03:117- 03:118, 03:123, 03:125, 03:128- 03:129, 03:131, 03:134, 03:136, 03:138, 03:143, 03:147-03:149, 03:153, 03:155, 03:157, 03:159, 03:162, 03:164, 03:173-03:174, 03:179-03:181, 03:183-03:184			3	4												
*03:04:07, 03:41, 03:80, 03:113			3													
*03:04:25			3	4												
*03:04:26, 03:18, 03:39, 03:64:02, 03:137, 03:144, 03:156, 03:166, 03:170, 03:182				4												
*03:07, 03:45, 03:163			3	4							11				15	
*03:08			3	4												
*03:10			3	4											15	
*03:13, 03:97, 03:132, 03:167, 03:177				4	5											
*03:15			3	4							11				15	
*03:16, 03:110			3													
*03:29			3	4											15	
*03:31				4	5											
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																HLA-C allele ⁴
												29		31		*02:58
							24									*02:65
					22											*03:02:01-03:02:09, 03:05, 03:17, 03:25, 03:27, 03:33, 03:35-03:36, 03:60, 03:71, 03:84, 03:89, 03:95, 03:108, 03:121N, 03:135, 03:139, 03:146, 03:154, 03:169, 03:178
				21	22											*03:03:01-03:03:19, 03:11:01-03:12, 03:20N-03:22Q, 03:30, 03:43:01- 03:43:02, 03:49-03:50, 03:52-03:53, 03:55-03:56, 03:59, 03:61-03:62, 03:66, 03:68-03:69, 03:75-03:76, 03:79, 03:83, 03:85, 03:88, 03:96, 03:102-03:103, 03:112, 03:116:01- 03:116:02, 03:119-03:120, 03:122, 03:124, 03:126-03:127, 03:133, 03:141-03:142, 03:150, 03:152, 03:158, 03:160-03:161, 03:168, 03:171, 03:176, 03:185
				21	22											*03:04:01:01-03:04:06, 03:04:08- 03:04:24, 03:04:27-03:04:35, 03:06, 03:09, 03:14, 03:19, 03:23-03:24, 03:26, 03:28, 03:32, 03:34, 03:37:01- 03:38:02, 03:40:01-03:40:03, 03:42, 03:44, 03:46-03:48, 03:51, 03:54, 03:57, 03:63-03:64:01, 03:65, 03:70, 03:72-03:74, 03:77-03:78, 03:82, 03:87, 03:90-03:93, 03:98, 03:100- 03:101, 03:104-03:107, 03:109, 03:111, 03:114-03:115, 03:117- 03:118, 03:123, 03:125, 03:128- 03:129, 03:131, 03:134, 03:136, 03:138, 03:143, 03:147-03:149, 03:153, 03:155, 03:157, 03:159, 03:162, 03:164, 03:173-03:174, 03:179-03:181, 03:183-03:184
				21	22											*03:04:07, 03:41, 03:80, 03:113
				21						27						*03:04:25
				21												*03:04:26, 03:18, 03:39, 03:64:02, 03:137, 03:144, 03:156, 03:166, 03:170, 03:182
				21	22											*03:07, 03:45, 03:163
				21	22							29				*03:08
				21	22											*03:10
					22											*03:13, 03:97, 03:132, 03:167, 03:177
					22											*03:15
					22											*03:16, 03:110
				21	22							29				*03:29
				21	22							29				*03:31
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Negative Control

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele ⁴																
*03:58					5											
*03:67				4	w											
*03:81, 03:175				4	5											
*03:86					5											
*03:94			3													
*03:99																
*03:130, 03:140			3	4							11					
*03:145, 03:172			3	4												
*03:151, 03:165					5											
*04:01:01:01-04:01:15, 04:01:17-04:01:22, 04:01:24-04:01:27, 04:01:29-04:01:48, 04:05, 04:07, 04:09N, 04:12, 04:15:02, 04:17-04:20, 04:24-04:28, 04:30-04:31, 04:35, 04:38-04:41, 04:43-04:53, 04:56-04:57, 04:59Q-04:67, 04:69-04:70, 04:73-04:76, 04:78-04:79, 04:81-04:102, 04:104-04:106, 04:109-04:110, 04:113, 04:115N, 04:117-04:121, 04:123N-04:128, 04:131-04:139, 04:141-04:144						6					11		13			
*04:01:16, 04:23, 04:54, 04:72						6					11		13			
*04:01:23, 04:33, 04:116, 04:130						6					11		13			
*04:01:28, 04:140											11		13			
*04:03, 04:80			3			6					11		13		15	
*04:04:01-04:04:02, 04:13, 04:111, 04:122						6					11		13			
*04:06			3			6					11		13		15	
*04:08						6					11		13			
*04:10						6					11					
*04:11						6										16
*04:14, 04:68						6					11		13			
*04:15:01, 04:15:03						6					11		13			
*04:16			3								11		13		15	
*04:29						6							13			16
*04:32, 04:77		2				6					11		13			
*04:34						6					11		13			
*04:36, 04:55						6										16
*04:37						6					11		13		15	
*04:42											11		13	14		
*04:58						6					11		13			
*04:71	1					6					11		13			
*04:103											11		13		15	
*04:107			3			6					11		13		15	
*04:108						6					11		13			
*04:112						6					11		13			
*04:114						6					11		13			16
*04:129						6	7				11		13			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																HLA-C allele ⁴
			20	21	22				26		28					*03:58
				21	w											*03:67
17				21	22											*03:81, 03:175
			20		22				26		28					*03:86
			20		22				26		28					*03:94
			20						26		28					*03:99
				21	22											*03:130, 03:140
				21												*03:145, 03:172
				21	22											*03:151, 03:165
																*04:01:01-04:01:15, 04:01:17-04:01:22, 04:01:24-04:01:27, 04:01:29-04:01:48, 04:05, 04:07, 04:09N, 04:12, 04:15:02, 04:17-04:20, 04:24-04:28, 04:30-04:31, 04:35, 04:38-04:41, 04:43-04:53, 04:56-04:57, 04:59Q-04:67, 04:69-04:70, 04:73-04:76, 04:78-04:79, 04:81-04:102, 04:104-04:106, 04:109-04:110, 04:113, 04:115N, 04:117-04:121, 04:123N-04:128, 04:131-04:139, 04:141-04:144
	18			21				25						31		*04:01:16, 04:23, 04:54, 04:72
				21				25						31		*04:01:23, 04:33, 04:116, 04:130
	18			21				25						31		*04:01:28, 04:140
	18			21				25						31		*04:03, 04:80
	18			21				25								*04:04:01-04:04:02, 04:13, 04:111, 04:122
	18			21				25								*04:06
	18			21				25				29		31		*04:08
	18			21				25						31		*04:10
				21				25		27						*04:11
	18			21				25					30			*04:14, 04:68
	18			21				25					30	31		*04:15:01, 04:15:03
	18			21				25						31		*04:16
	18			21				25		27						*04:29
	18			21	22			25						31		*04:32, 04:77
	18			21				25				29				*04:34
	18			21				25		27						*04:36, 04:55
	18		20	21				25	26					31		*04:37
	18			21		23		25						31		*04:42
	18	19		21				25								*04:58
	18			21				25						31		*04:71
	18			21				25						31		*04:103
				21				25						31		*04:107
17	18							25						31		*04:108
17	18			21				25						31		*04:112
	18			21				25								*04:114
	18			21				25	26					31		*04:129
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Negative Control

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele ⁴																
*05:01:01:01-05:01:26, 05:03, 05:05-05:10, 05:12-05:15, 05:18:01-05:19, 05:21, 05:24, 05:28-05:31, 05:33-05:35, 05:37-05:38, 05:40-05:41, 05:44:01-05:45, 05:47-05:50, 05:52-05:54, 05:56-05:57, 05:58:02-05:61, 05:63-05:67, 05:69, 05:71-05:77, 05:80-05:84, 05:86-05:87							7				11				15	
*05:04:01-05:04:02, 05:22:01-05:22:02							7				11				15	
*05:11, 05:32, 05:51Q, 05:70							7				11				15	
*05:16							7				11				15	
*05:17, 05:68, 05:79							7				11				15	
*05:20							7				11					
*05:23							7				11				15	
*05:25, 05:55							7				11				15	
*05:26						6	7				11				15	
*05:27							7				11				15	
*05:36							7				11				15	
*05:39							7				11				15	
*05:42							7				11		13		15	
*05:43							7				11					
*05:46							7				11		13		15	
*05:58:01			3				7				11				15	
*05:62							7				11				15	
*05:78						6	7				11					
*05:85							7				11				15	
*06:02:01:01-06:02:01:02, 06:02:03-06:02:11, 06:02:13-06:02:15, 06:02:17-06:02:25, 06:07, 06:10, 06:12-06:13, 06:15-06:16N, 06:18-06:30, 06:33-06:34, 06:36-06:39, 06:41-06:51, 06:53:01-06:66, 06:68-06:71, 06:73-06:75, 06:78, 06:80, 06:83-06:88, 06:90-06:93								8			11			14		
*06:02:12								8						14		
*06:02:16, 06:81								8			11					
*06:03:01			3					8			11			14	15	
*06:03:02, 06:76:01								8			11			14	15	
*06:04, 06:40, 06:79N								8			11					
*06:05							7	8			11					
*06:06								8			11					
*06:08		2						8			11			14		
*06:09								8			11			14		
*06:11, 06:52								8						14		
*06:14, 06:35, 06:72								8			11					
*06:17											11			14		
*06:31								8			11			14		
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																HLA-C allele ⁴
				21										31		*05:01:01:01-05:01:26, 05:03, 05:05-05:10, 05:12-05:15, 05:18:01-05:19, 05:21, 05:24, 05:28-05:31, 05:33-05:35, 05:37-05:38, 05:40-05:41, 05:44:01-05:45, 05:47-05:50, 05:52-05:54, 05:56-05:57, 05:58:02-05:61, 05:63-05:67, 05:69, 05:71-05:77, 05:80-05:84, 05:86-05:87
														31		*05:04:01-05:04:02, 05:22:01-05:22:02
				21												*05:11, 05:32, 05:51Q, 05:70
			20	21			24		26					31		*05:16
	18			21												*05:17, 05:68, 05:79
				21												*05:20
		19		21										31		*05:23
	18			21										31		*05:25, 05:55
				21										31		*05:26
				21								29				*05:27
17				21										31		*05:36
				21								29		31		*05:39
	18			21					26					31		*05:42
				21										31		*05:43
				21					26					31		*05:46
				21										31		*05:58:01
		19		21												*05:62
				21				25						31		*05:78
			20	21					26		28			31		*05:85
																*06:02:01:01-06:02:01:02, 06:02:03-06:02:11, 06:02:13-06:02:15, 06:02:17-06:02:25, 06:07, 06:10, 06:12-06:13, 06:15-06:16N, 06:18-06:30, 06:33-06:34, 06:36-06:39, 06:41-06:51, 06:53:01-06:66, 06:68-06:71, 06:73-06:75, 06:78, 06:80, 06:83-06:88, 06:90-06:93
						23								31		*06:02:12
						23								31		*06:02:16, 06:81
					22									31		*06:03:01
						23								31		*06:03:02, 06:76:01
	18		20			23	24		26					31		*06:04, 06:40, 06:79N
			20			23			26					31		*06:05
						23								31		*06:06
				21		23								31		*06:08
						23								31		*06:09
				21		23								31		*06:11, 06:52
						23								31		*06:14, 06:35, 06:72
			20			23								31		*06:17
	18		20			23								31		*06:31
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Negative Control

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele ⁴																
*06:32, 06:94-06:95											11			14		
*06:67							7	8			11			14		
*06:76:02											11	12	13	14	15	
*06:77								8			11			14		
*06:82								8			11			14		
*06:89								8			11			14		
*06:96								8			11			14		
*07:01:01:01-07:01:06, 07:01:08-07:02:07, 07:02:10-07:02:28, 07:02:30-07:04:02, 07:04:04-07:06, 07:08, 07:11-07:13, 07:15-07:19, 07:21-07:25, 07:27:01, 07:29-07:30, 07:32N, 07:35-07:38:02, 07:42, 07:44-07:48, 07:50-07:52, 07:54-07:63, 07:65-07:75, 07:77-07:91, 07:93-07:95, 07:97-07:100, 07:102-07:122, 07:124, 07:126-07:138, 07:140-07:147, 07:149-07:151, 07:153-07:155, 07:157-07:160, 07:162-07:172, 07:174-07:176, 07:178-07:183, 07:185-07:195, 07:197-07:199:01, 07:200-07:209, 07:211-07:215, 07:217-07:237, 07:239-07:241, 07:243-07:245, 07:248-07:262, 07:264N-07:266, 07:268-07:293, 07:297-07:299									9							
*07:01:07, 07:04:03, 07:14, 07:27:02, 07:53, 07:199:02, 07:216									9							
*07:02:08, 07:02:29, 07:26, 07:33N, 07:39-07:40, 07:92, 07:139, 07:152N, 07:156, 07:246, 07:267, 07:296									9							
*07:02:09						6			9				13			
*07:07, 07:09, 07:49, 07:76, 07:247									9		11					
*07:10, 07:28, 07:41, 07:43, 07:184, 07:196									9							
*07:20, 07:263									9							
*07:31:01									9					14		
*07:31:02									9					14		
*07:64									9							16
*07:96:01-07:96:02			3						9							
*07:101, 07:148, 07:161		2							9	10						
*07:123, 07:173, 07:294									9							
*07:125						6			9				13	14		
*07:177									9					14		
*07:210, 07:238									9		11					
*07:242				4					9							
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.	
																HLA-C allele ⁴	
						23								31	Negative Control	*06:32, 06:94-06:95	
						23	24		26					31		*06:67	
	18													31		*06:76:02	
														31		*06:77	
						23										*06:82	
17						23								31		*06:89	
						23						29		31		*06:96	
						23											*07:01:01:01-07:01:06, 07:01:08-07:02:07, 07:02:10-07:02:28, 07:02:30-07:04:02, 07:04:04-07:06, 07:08, 07:11-07:13, 07:15-07:19, 07:21-07:25, 07:27:01, 07:29-07:30, 07:32N, 07:35-07:38:02, 07:42, 07:44-07:48, 07:50-07:52, 07:54-07:63, 07:65-07:75, 07:77-07:91, 07:93-07:95, 07:97-07:100, 07:102-07:122, 07:124, 07:126-07:138, 07:140-07:147, 07:149-07:151, 07:153-07:155, 07:157-07:160, 07:162-07:172, 07:174-07:176, 07:178-07:183, 07:185-07:195, 07:197-07:199:01, 07:200-07:209, 07:211-07:215, 07:217-07:237, 07:239-07:241, 07:243-07:245, 07:248-07:262, 07:264N-07:266, 07:268-07:293, 07:297-07:299
							23							30			*07:01:07, 07:04:03, 07:14, 07:27:02, 07:53, 07:199:02, 07:216
	18						23				27						*07:02:09
			20				23										*07:07, 07:09, 07:49, 07:76, 07:247
				21			23										*07:10, 07:28, 07:41, 07:43, 07:184, 07:196
							23						29				*07:20, 07:263
	18						23										*07:31:01
	18						23							30			*07:31:02
																	*07:64
					22							29				*07:96:01-07:96:02	
						23			26							*07:101, 07:148, 07:161	
17						23										*07:123, 07:173, 07:294	
						23										*07:125	
	18															*07:177	
			20													*07:210, 07:238	
						23										*07:242	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		32	Well No.

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele ⁴																
*08:01:01-08:01:09, 08:03:01-08:03:02, 08:06, 08:08, 08:14, 08:16:01-08:16:02, 08:20, 08:22, 08:24, 08:26N, 08:28, 08:36N, 08:38, 08:40, 08:42, 08:44, 08:46, 08:50, 08:56-08:61, 08:65, 08:72										10						
*08:02:01, 08:02:03-08:02:09, 08:04:01-08:04:03, 08:13, 08:15:01-08:15:02, 08:17-08:19, 08:23, 08:27, 08:29-08:30, 08:32-08:35, 08:37, 08:39, 08:43, 08:45, 08:49, 08:51-08:55N, 08:62-08:63, 08:66-08:71, 08:73-08:74										10						
*08:02:02										10						
*08:05										10			13			
*08:07, 08:47										10						
*08:09, 08:11										10						
*08:10							7			10	11				15	
*08:12										10						
*08:21										10			13			
*08:25										10			13			
*08:31		2								10						
*08:41										10						
*08:48										10						
*12:02:01-12:02:02, 12:02:04-12:02:07, 12:02:09, 12:17-12:18:01, 12:22, 12:30, 12:36, 12:40, 12:56, 12:64, 12:67-12:69, 12:73-12:74, 12:80N, 12:84N-12:86												12	13			
*12:02:03, 12:02:08, 12:10:01-12:10:02, 12:20												12	13			
*12:03:01:01-12:03:01:02, 12:03:03, 12:03:05-12:03:07, 12:03:10-12:03:12, 12:03:14-12:03:15, 12:03:18-12:03:19, 12:03:21-12:03:22, 12:03:25, 12:06-12:07, 12:11-12:13, 12:19, 12:23, 12:25, 12:29, 12:32, 12:34-12:35, 12:37-12:39N, 12:42Q-12:43, 12:45-12:48, 12:50-12:53, 12:57, 12:61-12:63, 12:65-12:66, 12:70-12:71, 12:75-12:79, 12:82, 12:87-12:94												12	13	14		
*12:03:02, 12:03:08, 12:03:16, 12:03:20, 12:26, 12:59													13	14		
*12:03:04												12		14		
*12:03:09							8					12		14		
*12:03:13												12	w	14		
*12:03:17												12	13	14		
*12:03:23			3									12	13	14		
*12:03:24												12	w	14		
*12:04:01											11			14	15	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																HLA-C allele ⁴
	18			21						27						*08:01:01-08:01:09, 08:03:01-08:03:02, 08:06, 08:08, 08:14, 08:16:01-08:16:02, 08:20, 08:22, 08:24, 08:26N, 08:28, 08:36N, 08:38, 08:40, 08:42, 08:44, 08:46, 08:50, 08:56-08:61, 08:65, 08:72
				21						27						*08:02:01, 08:02:03-08:02:09, 08:04:01-08:04:03, 08:13, 08:15:01-08:15:02, 08:17-08:19, 08:23, 08:27, 08:29-08:30, 08:32-08:35, 08:37, 08:39, 08:43, 08:45, 08:49, 08:51-08:55N, 08:62-08:63, 08:66-08:71, 08:73-08:74
				21			24			27						*08:02:02
				21					26	27						*08:05
		19		21						27						*08:07, 08:47
	18									27						*08:09, 08:11
	18			21												*08:10
			20	21			24		26	27						*08:12
	18			21					26	27						*08:21
				21						27						*08:25
				21						27						*08:31
	18			21						27		29				*08:41
										27						*08:48
										27			30			*12:02:01-12:02:02, 12:02:04-12:02:07, 12:02:09, 12:17-12:18:01, 12:22, 12:30, 12:36, 12:40, 12:56, 12:64, 12:67-12:69, 12:73-12:74, 12:80N, 12:84N-12:86
										27						*12:02:03, 12:02:08, 12:10:01-12:10:02, 12:20
										27						*12:03:01:01-12:03:01:02, 12:03:03, 12:03:05-12:03:07, 12:03:10-12:03:12, 12:03:14-12:03:15, 12:03:18-12:03:19, 12:03:21-12:03:22, 12:03:25, 12:06-12:07, 12:11-12:13, 12:19, 12:23, 12:25, 12:29, 12:32, 12:34-12:35, 12:37-12:39N, 12:42Q-12:43, 12:45-12:48, 12:50-12:53, 12:57, 12:61-12:63, 12:65-12:66, 12:70-12:71, 12:75-12:79, 12:82, 12:87-12:94
										27						*12:03:02, 12:03:08, 12:03:16, 12:03:20, 12:26, 12:59
																*12:03:04
																*12:03:09
										27						*12:03:13
							24			27						*12:03:17
										27						*12:03:23
										w						*12:03:24
														31		*12:04:01
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Negative Control



101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele ⁴																
*12:04:02, 12:60											11	12	13	14	15	
*12:05											11	12		14	15	
*12:08												12	13			
*12:09											11				15	
*12:14:01													13			
*12:14:02												12	13			
*12:15								8				12	13	14		
*12:16												12	13			
*12:18:02, 16:43 ⁶													13			
*12:21							7				11	12			15	
*12:24												12	13			
*12:27												12	13			
*12:28, 12:58												12	13	14		
*12:31												12	13	14		
*12:33							7				11			14	15	
*12:41											11	12	13		15	
*12:44												12	13			
*12:49												12				
*12:54											11	12	13	14		
*12:55												12	13	14		16
*12:72												12	13		15	
*12:81												12	13	14		
*12:83												12	13			
*14:02:01-14:02:02, 14:02:04-14:02:07, 14:02:09-14:02:11, 14:07N, 14:11, 14:13-14:14, 14:18-14:19, 14:21N, 14:23-14:24:02, 14:26-14:27, 14:29-14:34, 14:36-14:37, 14:39-14:40, 14:42-14:44, 14:46-14:48																16
*14:02:03, 14:03, 14:22, 14:38, 14:41																16
*14:02:08												12				16
*14:04											11					16
*14:05																16
*14:06, 14:09, 14:28, A*30:62 ⁷																16
*14:08																16
*14:10																16
*14:12, 14:49											11					
*14:15														14		16
*14:16														14		16
*14:17																16
*14:20																16
*14:25			2													16
*14:35N																16
*14:45															15	16
*15:02:01-15:02:09, 15:02:11-15:02:15, 15:13, 15:15, 15:18, 15:26, 15:28, 15:31-15:35, 15:38-15:39, 15:41, 15:44-15:45, 15:47-15:53, 15:56-15:57, 15:60, 15:64				3				8			11				15	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																HLA-C allele ⁴
														31		*12:04:02, 12:60
														31		*12:05
17										27				30		*12:08
			20						26					31		*12:09
	18	19								27				30		*12:14:01
	18	19								27				30		*12:14:02
17										27						*12:15
						23				27				30		*12:16
										27				30		*12:18:02, 16:43 ⁶
							24								31	*12:21
			20						26	27						*12:24
														30		*12:27
	18									27						*12:28, 12:58
				21						27						*12:31
							24								31	*12:33
														30	31	*12:41
				21						27						*12:44
										27						*12:49
																*12:54
										27						*12:55
										w				30	31	*12:72
17										27						*12:81
										27		29	30			*12:83
			20						26		28					Negative Control
			20						26	27	28					
			20						26		28					
			20						26							
										27						
	18		20						26	27	28					
			20						26		28				31	
	18															
		19	20						26		28					
			20						26		28	29				
			20		22				26		28					
			20						26	27	w					
			20						26							
17				21								29				
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.



101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele ⁴																
*15:02:10			3					8			11				15	
*15:03			3					8			11		13		15	
*15:04-15:06:03, 15:09, 15:19, 15:24, 15:29-15:30, 15:40, 15:46, 15:54, 15:59, 15:66			3								11				15	
*15:07			3					8								
*15:08			3					8			11				15	
*15:10:01								8			11				15	
*15:10:02, 15:17			3					8			11				15	
*15:11			3			6		8			11				15	
*15:12					5			8			11				15	
*15:16			3					8			11		13		15	
*15:21			3					8							15	
*15:22, 15:55			3								11				15	
*15:23											11					
*15:25			3										13			
*15:27			3								11				15	
*15:36						6					11					
*15:37			3					8			11				15	
*15:42		2	3					8			11				15	
*15:43			3					8								
*15:58			3					8			11				15	
*15:61											11				15	
*15:62			3					8			11				15	
*15:63								8			11					
*15:65			3								11				15	
*16:01:01, 16:01:03-16:01:13, 16:06- 16:08, 16:10-16:11, 16:13-16:15:01, 16:16Q-16:17, 16:21-16:24, 16:26- 16:28, 16:30N-16:32, 16:36, 16:38- 16:39, 16:41, 16:44, 16:49, 16:51- 16:52, 16:54													13			
*16:01:02													13			
*16:02:01-16:02:09, 16:09, 16:12, 16:19, 16:25, 16:46-16:47											11		13		15	
*16:04:01, 16:33, 16:42, 16:55														14		
*16:15:02												12	13			
*16:18													13			
*16:20													13			
*16:29		2												14		
*16:34			3			6							13			
*16:35														14		
*16:37													13		15	
*16:40							7									16
*16:45													13			
*16:48											11			14	15	
*16:50		2											13			
*16:53							7									16
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																HLA-C allele ⁴
17				21	22							29				*15:02:10
17				21								29				*15:03
17				21								29				*15:04-15:06:03, 15:09, 15:19, 15:24, 15:29-15:30, 15:40, 15:46, 15:54, 15:59, 15:66
17				21						27		29				*15:07
17				21								29		31		*15:08
17				21												*15:10:01
17				21												*15:10:02, 15:17
17				21												*15:11
17	18			21								29				*15:12
17				21												*15:16
17				21						w		29				*15:21
17												29				*15:22, 15:55
17				21								29				*15:23
	18	19		21						27						*15:25
17				21												*15:27
17				21								29				*15:36
17											28	29				*15:37
17				21								29				*15:42
17				21	22											*15:43
17												29				*15:58
17				21								29				*15:61
17	18			21								29				*15:62
17				21												*15:63
17	18	19										29				*15:65
	18									27			30			*16:01:01, 16:01:03-16:01:13, 16:06- 16:08, 16:10-16:11, 16:13-16:15:01, 16:16Q-16:17, 16:21-16:24, 16:26- 16:28, 16:30N-16:32, 16:36, 16:38- 16:39, 16:41, 16:44, 16:49, 16:51- 16:52, 16:54
	18												30			*16:01:02
	18												30			*16:02:01-16:02:09, 16:09, 16:12, 16:19, 16:25, 16:46-16:47
	18		20							27						*16:04:01, 16:33, 16:42, 16:55
	18									27			30			*16:15:02
	18									27	28		30			*16:18
17	18									27			30			*16:20
	18		20							27						*16:29
	18							25		27			30			*16:34
	18									27						*16:35
	18									w			30			*16:37
										27						*16:40
	18			21						27			30			*16:45
	18															*16:48
	18									27			30			*16:50
			20						26	27						*16:53
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Negative Control

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele ⁴																
*17:01:01:01-17:01:03, 17:01:05-17:04, 17:06, 17:08-17:16, 17:18-17:19		2									11				15	
*17:01:04		2									11		13		15	
*17:05		2					7				11				15	
*17:07											11				15	
*17:17											11				15	
*18:01-18:02, 18:04-18:06											11					
*18:03		2									11					
A*24:96, A*24:106, A*24:174, B*46:25																
B*14:03																
B*35:08:02, B*35:08:05																
B*35:222															15	
B*58:02																
B*67:02													13			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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-C low resolution SSP typing.

In addition, wells number 2, 3, 5, 6, 8 to 10, 12 to 15, 17, 19, 20 and 24 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 1st, 2nd, 3rd or 4th exon or the 1st or 2nd 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.

⁴The sequence of the Cw*0101 allele has been shown to be identical to C*01:02:01.

The sequence of the Cw*0201 allele has been shown to be identical to C*02:02:02.

The sequence of the Cw*020204 allele has been shown to be identical to C*02:10.

The sequence of the Cw*021603 allele has been shown to be identical to C*02:16:02.

The sequence of the Cw*0301 allele has been shown to be identical to C*03:04:01:01.

The sequence of the Cw*0402 allele has been shown to be identical to C*04:01:01:01.

The sequence of the Cw*0421 allele has been renamed to C*04:15:02.

The sequence of the Cw*0422 allele has been renamed to C*04:21.

The sequence of the Cw*0502 allele has been shown to be identical to C*05:09.

The sequence of the Cw*0601 allele has been shown to be identical to C*06:02:01:01.

The sequence of the Cw*060202 allele has been renamed to C*06:17.

The C*07:295 allele has never been assigned.

The sequence of the Cw*0734 allele has been renamed to C*07:27:02.

The sequence of the C*08:64 allele has been renamed to C*08:33:03.

The sequence of the Cw*1101 allele has been shown to be in error.

The sequence of the Cw*1201 allele has been shown to be identical to C*12:02:02.

The sequence of Cw*1301 has been shown to be in error.

The sequence of the Cw*1401 allele has been shown to be identical to C*14:02:01.

The sequence of the Cw*1501 allele has been shown to be identical to C*15:02:01.

The sequence of the Cw*1514 allele has been shown to be identical to C*15:10:02.

The sequence of the C*15:20 allele has been shown to be identical to C*15:27.

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

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

The sequence of the Cw*1603 allele has been shown to be identical to C*14:03.

The sequence of the Cw*16042 allele has been shown to be identical to C*16:04:01.

The sequence of the Cw*1605 allele has been shown to be identical to C*16:04:01.

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																HLA-C allele ⁴
		19		21												*17:01:01-17:01:03, 17:01:05-17:04, 17:06, 17:08-17:16, 17:18-17:19
		19		21												*17:01:04
		19		21					26							*17:05
		19		21								29				*17:07
		19		21										31		*17:17
			20	21		23								31		*18:01-18:02, 18:04-18:06
			20	21	22	23								31		*18:03
													30			A*24:96, A*24:106, A*24:174, B*46:25
			20						26							B*14:03
										27						B*35:08:02, B*35:08:05
																B*35:222
												29				B*58:02
										27						B*67:02
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

⁵The C*01:05, 01:22 and 01:36 and the B*39:76 and the B*54:18 alleles give rise to identical amplification patterns with the HLA-C low resolution primer set. These alleles are separated by the HLA-B low primer set.

⁶The C*12:18:02 and the C*16:43 alleles give rise to identical amplification patterns with the HLA-C low resolution primer set. These alleles are separated by the HLA-C*12 or the HLA-C*16 primer set.

⁷The C*14:06, 14:09 and 14:28 and the A*30:62 alleles give rise to identical amplification patterns with the HLA-C low resolution primer set. These alleles are separated by the HLA-A low primer set.

⁸Primer mix 32 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by control primer pairs. PCR product sizes range from 75 to 200 base pairs. The PCR product generated by the control primer pair is 430 base pairs.

‘w’, might be weakly amplified.

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

Lot-specific information

[illegible]

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

CELL LINE VALIDATION SHEET																																	
HLA-C low resolution SSP primer set																																	
					Well																												
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31														
				Prod. No.:	201319217	201319218	201319219	201319220	201319221	201319222	201200323	201319224	201200325	201207926	201200327	201200328	201207929	201207930	201207931														
	IHWC cell line		C*																														
1	9001	SA	*07:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-													
2	9280	LK707	*07:01	*15:05	+	-	-	-	+	-	+	-	-	-	-	-	+	-	-	-													
3	9011	E4181324	*12:02		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-													
4	9275	GU373	*03:04	*04:01	-	+	-	-	+	+	-	-	+	-	-	-	-	-	-	+													
5	9009	KAS011	*06:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-													
6	9353	SM	*03:04	*07:02	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-													
7	9020	QBL	*05:01		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+													
8	9025	DEU	*04:01		-	+	-	-	+	-	-	-	+	-	-	-	-	-	-	+													
9	9026	YAR	*12:03		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-													
10	9107	LKT3	*01:02		-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-													
11	9051	PITOUT	*16:01		-	+	-	-	-	-	-	-	-	-	+	-	-	+	-	-	+	-											
12	9052	DBB	*06:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	-											
13	9004	JESTHOM	*01:02		-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-												
14	9071	OLGA	*01:02	*03:04	-	-	-	+	+	+	-	-	-	+	-	-	-	-	-	-	-												
15	9075	DKB	*03:04		-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-												
16	9037	SWEIG007	*02:02		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+												
17	9282	CTM3953540	*03:03	*07:01	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-												
18	9257	32367	*01:02	*07:05	-	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-												
19	9038	BM16	*07:01		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-												
20	9059	SLE005	*03:04		-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-												
21	9064	AMALA	*03:03		-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-												
22	9056	KOSE	*12:03		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-												
23	9124	IHL	*01:02	*15:02	+	-	-	+	+	-	-	-	-	+	-	-	+	-	-	-	-												
24	9035	JBUSH	*12:03		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-												
25	9049	IBW9	*08:02		-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-												
26	9285	WT49	*07:01		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-												
27	9191	CH1007	*07:04	*15:05	+	-	-	-	+	-	+	-	-	-	-	-	-	-	+	-	-												
28	9320	BEL5GB	*05:01	*16:01	-	+	-	-	+	-	-	-	-	-	+	-	-	-	+	-	+	-											
29	9050	MOU	*16:01		-	+	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-												
30	9021	RSH	*17:01		-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-												
31	9019	DUCAF	*05:01		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-											
32	9297	HAG	*17:01	*17:03	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-												
33	9098	MT14B	*03:04		-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-												
34	9104	DHIF	*12:03		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-												
35	9302	SSTO	*05:01		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-											
36	9024	KT17	*03:03	*04:01	-	+	-	-	+	+	-	-	+	-	-	-	-	-	-	-	+	-											
37	9065	HHKB	*07:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-												
38	9099	LZL	*03:03		-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-												
39	9315	CML	*02:02	*07:01	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-											
40	9134	WHONP199	*01:02	*06:02	-	-	-	+	-	-	+	-	-	+	-	+	-	-	-	-	+	-											
41	9055	H0301	*08:02		-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-												
42	9066	TAB089	*01:02		-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-												
43	9076	T7526	*01:02	*08:01	-	+	-	+	+	-	-	-	-	-	+	+	-	-	-	-	-												
44	9057	TEM	*12:03		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-												
45	9239	SHJO	*06:02	*17:01	-	-	+	-	+	-	+	-	-	-	-	-	-	-	-	-	+	-											
46	9013	SCHU	*07:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-												
47	9045	TUBO	*07:04	*15:02	+	-	-	-	+	-	+	-	-	-	-	-	-	+	-	-	-												
48	9303	TER-ND	*04:01	*16:01	-	+	-	-	+	-	-	-	+	-	+	-	-	+	-	-	+	-											

101.601.24/12 – including *Taq* pol., IFU-01
 101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

CERTIFICATE OF ANALYSIS

Olerup SSP® HLA-C low resolution SSP

Product number: 101.601-24/12 – including *Taq* pol.
 101.601-24u/12u – without *Taq* pol.
 Lot number: 41S
 Expiry date: 2015-November-01
 Number of tests: 24 tests – Product No. 101.601-24/24u
 12 tests – Product No. 101.601-12/12u
 Number of wells per test: 31 + 1

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2013-192-01	13	2013-192-13	25	2012-003-25
2	2013-192-02	14	2013-192-14	26	2012-079-26
3	2013-192-03	15	2013-192-15	27	2012-003-27
4	2013-192-04	16	2013-192-16	28	2012-003-28
5	2013-192-05	17	2013-192-17	29	2012-079-29
6	2013-192-06	18	2013-192-18	30	2012-079-30
7	2013-192-07	19	2013-192-19	31	2012-079-31
8	2013-192-08	20	2013-192-20		
9	2013-192-09	21	2013-192-21		
10	2013-192-10	22	2013-192-22		
11	2013-192-11	23	2012-003-23		
12	2013-192-12	24	2013-192-24		

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

Additional 5'-primers and 3'-primers in primer solutions 1, 2, 7, 14 to 16, 22, 24 and 28 to 29 were tested by separately adding one additional 3'-primer, respectively one additional 5'-primer. Additional 3'-primers in primer solution 18 and 19 were tested by separately adding one additional 5'-primer. Additional 5'-primers in primer solutions 6, 13 and 26 were tested by separately adding one additional 3'-primer.

In primer solution 23 one 5'-primer was not possible to test, and in primer solutions 3, 11, 12, 14, 16 and 18 one or two 3'-primers were not possible to test.

The negative control primer pairs, **Production No. 2013-165-01**, can detect contamination with PCR products diluted 10^{-7} .

101.601.24/12 – including *Taq* pol., IFU-01
101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

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

Date of approval: 2013-May-16

Approved by:

Production Quality Control

101.601.24/12 – including *Taq* pol., IFU-01
101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

Declaration of Conformity

Product name: Olerup SSP® HLA-C low resolution
Product number: 101.601-24/24u, -12/12u
Lot number: 41S

Intended use: HLA-C low 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 13485:2012, 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, Franzengatan 5, SE-112 51 Stockholm, Sweden.

Stockholm, Sweden
2013-May-16

Ann-Cathrin Jareman
Head of QA and Regulatory Affairs

101.601.24/12 – including *Taq* pol., IFU-01
101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

101.601.24/12 – including *Taq* pol., IFU-01
101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

101.601.24/12 – including *Taq* pol., IFU-01
101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

Lot-specific information

101.601.24/12 – including *Taq* pol., IFU-01
101.601.24u/12u – without *Taq* pol., IFU-02

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

Lot No.: **41S**

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**.