

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.: **36R**

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:	36R
Expiry date:	2015-March-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. 36R.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP[®]* HLA-C LOW RESOLUTION LOT (64N)

The Lot-specific information for HLA-C low resolution including and without *Taq* polymerase is 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. 64N**).

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

Well	5'-primer	3'-primer	rationale
1	Added	Added	Primer pairs added for the C*01:67 and 01:73 alleles.
14	-	Added	3'-primer added for the C*16:35 allele.
29	Added	Added	Primer pair added for the C*02:58 allele
30	Added	Added	Primer pairs added for the C*16:45 and 12:18:02 alleles.

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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.

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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*18:05 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. ‘36R’.

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*54:18 allele, primer mix 13 will amplify the B*67:02 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 four HLA-A alleles and seven HLA-B alleles and not by other HLA class I genes.

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UNIQUELY IDENTIFIED ALLELES

All the HLA-C alleles, i.e. **C*01:02 to C*18:05**, recognized by the HLA Nomenclature Committee in July 2012¹ 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 2012-July-12, release 3.9.0, www.ebi.ac.uk/imgt/hla.

²The C*01:05, 01:22 and 01:35-01:36 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*03:99 and C*14:42 alleles give rise to identical amplification patterns with the HLA-C low resolution primer set. These alleles can be separated by the respective high resolution primer sets.

The C*05:79 and C*08:10 alleles give rise to identical amplification patterns with the HLA-C low resolution primer set. These alleles can be separated by the respective high resolution primer sets.

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

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 and/or the HLA-C*14 high resolution primer set.

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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}
1¹⁰	90 bp, 155 bp	800 bp	*01:02:01-01:73, 04:71, B*54:18
2^{5,12}	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, 02:59-02:63, 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, 17:08-17:13, 18:03
3¹³	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, 02:42-02:63, 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, 03:162-03:163, 04:03, 04:06, 04:16, 04:80, 04:107, 05:58:01, 06:03:01, 07:96, 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, 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, 03:152-03:163, 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, 15:12
6^{12,13}	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, 02:46-02:63, 04:01:01:01-04:01:27, 04:01:29-04:01:41, 04:03-04:15:03, 04:17-04:20, 04:23-04:41, 04:43-04:102,

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			04:104-04:127, 05:26, 05:78, 07:02:09, 07:125, 15:11, 15:36, 16:34
7	390 bp, 445 bp	1070 bp	*05:01:01:01-05:01:21, 05:03-05:81, 08:10, 16:40
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, 06:77-06:87, 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
9⁷	245 bp, 425 bp	800 bp	*07:01:01:01-07:33N, 07:35-07:263
10^{8,10,13}	115 bp, 165 bp, 265 bp, 390 bp	800 bp	*01:43, 05:79, 07:101, 07:148, 07:161, 08:01:01-08:64
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, 02:42-02:63, 03:07, 03:15, 03:45, 03:130, 03:140, 03:163, 04:01:01:01-04:01:41, 04:03-04:10, 04:12-04:20, 04:23-04:28, 04:30-04:35, 04:37-04:54, 04:56-04:127, 05:01:01:01-05:01:21, 05:03-05:81, 06:02:01:01-06:02:01:02, 06:02:03-06:02:11, 06:02:13-06:10, 06:12-06:51, 06:53-06:87, 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, 15:02:01-15:06:03, 15:08-15:13, 15:15-15:19, 15:22-15:24, 15:26-15:42, 15:44-15:61, 16:02:01-16:02:09, 16:09, 16:12, 16:19, 16:25, 16:46-16:48, 17:01:01:01-17:13, 18:01-18:05
12^{10,11}	100 bp, 160 bp, 220 bp	800 bp	*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, 12:03:21-12:03:22, 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, 12:60-12:82, 14:02:08, 16:15:02
13^{9,10,11}	120 bp, 250 bp	800 bp	*01:21, 02:12, 02:49, 02:55, 04:01:01:01-04:01:41, 04:03-04:09N, 04:12-04:20, 04:23-04:35, 04:37-04:54, 04:56-04:127, 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 , 12:03:14-12:03:22, 12:04:02, 12:06-12:08, 12:10:01-12:20, 12:22-12:32, 12:34-12:48, 12:50-12:82, 15:03, 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, 17:01:04, B*67:02
14¹⁴	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, 06:82-06:87, 07:31, 07:125, 07:177,

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15¹³	130 bp, 255 bp	800 bp	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, 14:15-14:16, 16:04:01, 16:29, 16:33, 16:35, 16:42, 16:48 *02:02:01 ^w , 02:02:02-02:02:03, 02:02:05-02:13, 02:15- 02:26:03, 02:28-02:40, 02:42-02:63, 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, 05:01:01:01-05:01:21, 05:03-05:19, 05:21-05:42, 05:44:01-05:77, 05:79-05:81, 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, 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, 15:44-15:61, 16:02:01- 16:02:09, 16:09, 16:12, 16:19, 16:25, 16:37, 16:46-16:48, 17:01:01:01-17:13
16¹²	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, 14:13-14:40, 14:43, 16:40, A*30:62
17^{9,10}	110 bp, 325 bp	800 bp	*02:06, 03:81, 04:108, 04:112, 05:36, 07:123, 07:173, 12:08, 12:15, 12:81, 15:02:01-15:13, 15:15-15:19, 15:21- 15:24, 15:26-15:61, 16:20
18¹²	180 bp, 210 bp, 240 bp	1070 bp	*02:13, 02:18, 02:33, 02:49, 04:01:01:01-04:01:22, 04:01:24-04:01:41, 04:03-04:10, 04:12-04:20, 04:23- 04:32, 04:34-04:106, 04:108-04:115N, 04:117-04:127, 05:17, 05:25, 05:42, 05:55, 05:68, 05:79, 06:05, 06:31, 06:76:02, 07:02:09, 07:31, 07:177, 08:01:01-08:01:08, 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, 12:14:01-12:14:02, 12:28, 12:58, 14:10, 14:15, 15:12, 15:25, 16:01:01-16:02:09, 16:04:01, 16:06-16:39, 16:41- 16:42, 16:44-16:52
19^{11,15}	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, 17:01:01:01-17:13
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-01:73, 03:58, 03:86, 03:94, 03:99, 04:37, 05:16, 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, 14:29-14:43, 16:04:01, 16:29, 16:33, 16:42, 18:01- 18:05, 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, 03:03:01-03:04:30, 03:06-03:12, 03:14, 03:18-03:24, 03:26, 03:28-03:32, 03:34, 03:37-03:59, 03:61-03:70, 03:72-03:83, 03:85, 03:87-03:88, 03:90-03:93, 03:96,

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			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, 03:155-03:163, 04:01:01:01-04:01:15, 04:01:17-04:01:41, 04:03-04:20, 04:24-04:53, 04:55-04:71, 04:73-04:107, 04:109-04:127, 05:01:01:01-05:01:21, 05:03, 05:05-05:21, 05:23-05:81, 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, 08:49-08:64, 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, 15:59-15:61, 16:45, 17:01:01:01-17:13, 18:01-18:05
22^{12,15}	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, 03:157-03:163, 04:32, 04:77, 06:03:01, 07:96, 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, 06:02:03-06:02:21, 06:04-06:75, 06:78-06:87, 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, 07:247-07:263, 12:16, 18:01-18:05
24^{10,13}	95 bp	800 bp	*02:02:01-02:02:03, 02:02:06-02:02:12, 02:02:15-02:02:24, 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, 02:59-02:63, 12:03:17
25	260 bp, 360 bp	1070 bp	*04:01:01:01-04:01:41, 04:03-04:20, 04:23-04:127, 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-01:73, 03:58, 03:86, 03:94, 03:99, 04:37, 05:16, 05:42, 05:46, 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, 14:29-14:43, 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, 08:11-08:64, 12:02:01-12:03:03, 12:03:05-12:03:08, 12:03:10-12:03:22, 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 , 12:73-12:82, 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, 16:01:03-16:01:10, 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, 16:49-16:52, B*35:08:02, 35:08:05, B*67:02

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

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 “Instructions for Use” (IFU)

Lot No.: **36R**

Lot-specific information

28	210 bp, 555 bp	1070 bp	*03:58, 03:86, 03:94, 03:99, 14:02:01-14:04, 14:07N, 14:10-14:14, 14:17-14:27, 14:29-14:34, 14:35N ^W , 14:36- 14:43, 15:37, 16:18
29¹¹	175 bp, 270 bp	1070 bp	*01:35, 02:58, 03:08, 03:29, 03:31, 04:08, 04:34, 05:27, 05:39, 07:20, 07:96, 07:263, 08:41, 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, 15:44-15:61, 17:07, B*58:02
30	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, 07:53, 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, 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, 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, 02:02:05-02:02:24, 02:04- 02:15, 02:17, 02:19-02:26:03, 02:28-02:40, 02:42-02:63, 04:01:01:01-04:01:41, 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-04:127, 05:01:01:01- 05:01:21, 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, 05:80-05:81, 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, 06:53-06:78, 06:80-06:81, 06:83-06:87, 12:04:01-12:05, 12:09, 12:21, 12:33, 12:41, 12:60, 12:72, 14:12, 15:08, 18:01-18:05
32¹⁶	-	-	Negative Control

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 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 specific PCR product(s) of the alleles amplified by these primer mixes are given.

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

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

PCR fragments migrating faster than the control bands, but slower than a 400 bp fragment may be seen in some gel read-outs. Such bands can be disregarded and do not influence the interpretation of the SSP typings. Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an inherent feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated.

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

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

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Lot No.: 36R**Lot-specific information**

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-C alleles 1st and 4th exon or 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 allele, primer mix 13 will amplify the B*67:02 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 9 will for most C*07 alleles give rise to two specific PCR fragments.

⁸Primer mix 10 will for most C*08 alleles give rise to multiple specific PCR fragments.

⁹Primer mix 17 will for most C*15 alleles give rise to two specific PCR fragments.

¹⁰Specific PCR fragments shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR bands.

¹¹Primer mixes 12, 13, 19 and 29 may give rise to unspecific amplification.

¹²Primer mixes 2, 6, 16, 18 and 22 have a tendency of giving rise to primer oligomer formation.

¹³Primer mixes 3, 6, 10, 15 and 24 may give a lower yield of HLA-specific PCR product than the other HLA-C low resolution primer mixes.

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

¹⁵Primer 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.

¹⁶Primer 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.

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

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Lot No.: **36R**

Lot-specific information

INTERPRETATION TABLE																
HLA-C low resolution SSP typing																
Amplification patterns of the C*01:02 to C*18:05 alleles																
	Well ¹⁰															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Length of spec.	90	130	280	170	280	130	390	130	245	115	340	100	120	160	130	255
PCR product(s)	150	200		275		330	445	355	425	165		160	250	215	255	445
		270								265		220				
		300								390						
Length of int.	800	800	800	1070	800	800	1070	800	800	800	1070	800	800	800	800	1070
pos. control ¹																
5'-primer(s) ²	89	47	105	355	105	47	1 st	28	47	1 st	1 st	361	201	97	98	98
	5'-gAA ^{3'}	5'-Agg ^{3'}	5'-gCT ^{3'}	5'-TCA ^{3'}	5'-gCT ^{3'}	5'-Agg ^{3'}	5'-CgA ^{3'}	5'-TCA ^{3'}	5'-Agg ^{3'}	5'-CgA ^{3'}	5'-CgA ^{3'}	5'-AgT ^{3'}	5'-CCA ^{3'}	5'-TCg ^{3'}	5'-CTA ^{3'}	5'-CTC ^{3'}
	98	89		459		112	527	2 nd	648	176		419	218	361	368	527
	5'-CTT ^{3'}	5'-gAA ^{3'}		5'-gAT ^{3'}		5'-CCT ^{3'}	5'-TgA ^{3'}	5'-CCA ^{3'}	5'-CAC ^{3'}	5'-gCA ^{3'}		5'-gTC ^{3'}	5'-ggA ^{3'}	5'-AgT ^{3'}	5'-gTg ^{3'}	5'-TgA ^{3'}
		2 nd				118				527			2 nd			
		5'-CCA ^{3'}				5'-CCA ^{3'}				5'-TAC ^{3'}			5'-CCA ^{3'}			
		703														
		5'-CTA ^{3'}														
3'-primer(s) ³	142	176	343	589	343	201	302	213	302	175	302	474	289	218	312	311
	5'-TgA ^{3'}	5'-ACT ^{3'}	5'-C ^{3'}	5'-CTT ^{3'}	5'-T ^{3'}	5'-CTT ^{3'}	5'-ggT ^{3'}	5'-Cgg ^{3'}	5'-ggC ^{3'}	5'-CCg ^{3'}	5'-ggT ^{3'}	5'-gCA ^{3'}	5'-AgC ^{3'}	5'-gCT ^{3'}	5'-AgT ^{3'}	5'-ggT ^{3'}
	201	559	343			218	3 rd	420	853	302	304	477	289	527	459	3 rd
	5'-CTT ^{3'}	5'-CTC ^{3'}	5'-g ^{3'}			5'-gCT ^{3'}	5'-gCA ^{3'}	5'-gCT ^{3'}	5'-CAT ^{3'}	5'-ggC ^{3'}	5'-CAA ^{3'}	5'-gCA ^{3'}	5'-AgC ^{3'}	5'-CCg ^{3'}	5'-AgA ^{3'}	5'-gCA ^{3'}
	201	861								601		538	539	538		
	5'-CTC ^{3'}	5'-TCg ^{3'}								5'-CTT ^{3'}		5'-gCA ^{3'}	5'-TCT ^{3'}	5'-CCA ^{3'}		
														538		
														5'-gCA ^{3'}		
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

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 “Instructions for Use” (IFU)

Lot No.: **36R**

Lot-specific information

INTERPRETATION TABLE															
HLA-C low resolution SSP typing															
Amplification patterns of the C*01:02 to C*18:05 alleles															
Well ¹⁰															
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	Length of spec. PCR product(s)
325	210	250	425	380		235		360	220		555	270	370		
	240												540		
800	1070	800	800	1070	1070	1070	800	1070	1070	1070	1070	1070	1070	1070	Length of int. pos. control ¹
201	201	2 nd	47	355	105	97	486	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'-ACA ^{3'}	5'-TCA ^{3'}	5'-gCA ^{3'}	5'-CCA ^{3'}	5'-CTA ^{3'}	5'-CCA ^{3'}	5'-Agg ^{3'}	5'-AAA ^{3'}	
409	2 nd		361	412	459	97			361		368	2 nd	418		
5'-ggC ^{3'}	5'-CCA ^{3'}		5'-AgT ^{3'}	5'-ATA ^{3'}	5'-gAT ^{3'}	5'-TTg ^{3'}			5'-AgT ^{3'}		5'-gTT ^{3'}	5'-CCA ^{3'}	5'-Agg ^{3'}		
	361												419		
	5'-AgT ^{3'}												5'-gTC ^{3'}		
													419		
													5'-gTT ^{3'}		
270	341	512	302	3 rd	201	213	538	112	289	302	361	270	369	539	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'}	
3 rd	343	538	527		559	289		118	289		538	559	539		
5'-CTC ^{3'}	5'-T ^{3'}	5'-gTC ^{3'}	5'-CCg ^{3'}		5'-CTC ^{3'}	5'-AgC ^{3'}		5'-gCT ^{3'}	5'-AgC ^{3'}		5'-CCg ^{3'}	5'-CAg ^{3'}	5'-TCT ^{3'}		
	343		538			289		218	538						
	5'-g ^{3'}		5'-CCg ^{3'}			5'-AgC ^{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.

Negative Control



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

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Lot No.: **36R**

Lot-specific information

Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele⁴																
*01:02:01-01:02:16, 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, 01:61-01:73	1															
*01:03, 01:24, 01:34	1															
*01:04	1											12		14		
*01:05, 01:22, 01:36, <i>B*54:18</i> 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, 02:02:15-02:02:24, 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		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
*02:58			3			6						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

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Lot No.: **36R**

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							*01:02:01-01:02:16, 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, 01:61-01:73
			20	21					26							*01:03, 01:24, 01:34
																*01:04
																*01:05, 01:22, 01:36, <i>B*54:18</i> 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, 02:02:15-02:02:24, 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
														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
												29		31		*02:58
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

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Lot No.: **36R**

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																
*03:02:01-03:02:09, 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			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				4	5											
*03:04:01:01-03:04:06, 03:04:08-03:04:24, 03:04:27-03:04:30, 03:06, 03:09, 03:14, 03:19, 03:23-03:24, 03:26, 03:28, 03:32, 03:34, 03:37-03:38:02, 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			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				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				4	5											
*03:15			3	4							11				15	
*03:16, 03:110			3													
*03:29			3	4											15	
*03:31				4	5											
*03:58					5											
*03:67				4	w											
*03:81				4	5											
*03:86					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

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Lot No.: **36R**

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
					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
				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
				21	22											*03:04:01:01-03:04:06, 03:04:08- 03:04:24, 03:04:27-03:04:30, 03:06, 03:09, 03:14, 03:19, 03:23-03:24, 03:26, 03:28, 03:32, 03:34, 03:37- 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
				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
				21	22											*03:07, 03:45, 03:163
				21	22							29				*03:08
				21	22											*03:10
					22											*03:13, 03:97, 03:132
					22											*03:15
					22											*03:16, 03:110
				21	22							29				*03:29
				21	22							29				*03:31
			20	21	22				26		28					*03:58
				21	w											*03:67
17				21	22											*03:81
			20		22				26		28					*03:86
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.: **36R**

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																
*03:94			3													
*03:99, 14:42 ⁶																
*03:130, 03:140			3	4							11					
*03:145			3	4												
*03:151					5											
*04:01:01:01-04:01:15, 04:01:17-04:01:22, 04:01:24-04:01:27, 04:01:29-04:01:41, 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-04:127						6					11		13			
*04:01:16, 04:23, 04:54, 04:72						6					11		13			
*04:01:23, 04:33, 04:116						6					11		13			
*04:01:28											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
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.: **36R**

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		22				26		28					*03:94
			20						26		28					*03:99, 14:42 ⁶
				21	22											*03:130, 03:140
				21												*03:145
				21	22											*03:151
	18			21				25						31		*04:01:01:01-04:01:15, 04:01:17-04:01:22, 04:01:24-04:01:27, 04:01:29-04:01:41, 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-04:127
	18							25						31		*04:01:16, 04:23, 04:54, 04:72
				21				25						31		*04:01:23, 04:33, 04:116
	18			21				25						31		*04:01:28
	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
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.: **36R**

Lot-specific information

Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele⁴																
*05:01:01:01-05:01:21, 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, 05:80-05:81							7				11				15	
*05:04, 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							7				11				15	
*05:20							7				11				15	
*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				15	
*05:46							7				11		13		15	
*05:58:01			3				7				11				15	
*05:62							7				11				15	
*05:78						6	7				11				15	
*05:79, 08:10 ⁷							7			10	11				15	
*06:02:01:01-06:02:01:02, 06:02:03-06:02:11, 06:02:13-06:02:15, 06:02:17-06:02:21, 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, 06:53-06:66, 06:68-06:71, 06:73-06:75, 06:78, 06:80, 06:83-06:87								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								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		
*06:32											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.: **36R**

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		*05:01:01:01-05:01:21, 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, 05:80-05:81
														31		*05:04, 05:22:01-05:22:02
				21												*05:11, 05:32, 05:51Q, 05:70
			20	21					26					31		*05:16
	18			21												*05:17, 05:68
				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
	18			21												*05:79, 08:10 ⁷
														31		*06:02:01:01-06:02:01:02, 06:02:03-06:02:11, 06:02:13-06:02:15, 06:02:17-06:02:21, 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, 06:53-06:66, 06:68-06:71, 06:73-06:75, 06:78, 06:80, 06:83-06:87
														31		*06:02:12
														31		*06:02:16, 06:81
					22									31		*06:03:01
														31		*06:03:02, 06:76:01
						23										*06:04, 06:40, 06:79N
	18		20			23			26					31		*06:05
			20			23			26					31		*06:06
						23								31		*06:08
				21		23								31		*06:09
						23										*06:11, 06:52
				21		23								31		*06:14, 06:35, 06:72
			20			23								31		*06:17
	18		20			23								31		*06:31
						23								31		*06:32
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.: **36R**

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																
*06:67								8			11			14		
*06:76:02											11	12	13	14	15	
*06:77								8			11			14		
*06:82								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									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									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									9					14		
*07:64									9							16
*07:96			3						9							
*07:101, 07:148, 07:161		2							9	10						
*07:123, 07:173									9							
*07:125						6			9				13	14		
*07:177									9					14		
*07:210, 07:238									9		11					
*07:242				4					9							
*08:01:01-08:01:08, 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										10						
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.: **36R**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
						23			26					31		HLA-C allele ⁴
	18													31		*06:67
														31		*06:76:02
														31		*06:77
						23										*06:82
						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
						23							30			*07:01:07, 07:04:03, 07:14, 07:27:02, 07:53, 07:199:02, 07:216
																*07:02:08, 07:02:29, 07:26, 07:33N, 07:39-07:40, 07:92, 07:139, 07:152N, 07:156, 07:246
	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
																*07:64
					22							29				*07:96
						23			26							*07:101, 07:148, 07:161
17						23										*07:123, 07:173
						23										*07:125
	18															*07:177
			20													*07:210, 07:238
						23										*07:242
	18			21						27						*08:01:01-08:01:08, 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
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.: **36R**

Lot-specific information

Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele⁴																
*08:02:01-08:02:07, 08:04:01-08:04:02, 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, 08:62-08:64										10						
*08:05										10			13			
*08:07, 08:47										10						
*08:09, 08:11										10						
*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	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, 12:06-12:07, 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	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		
*12:04:01, 12:33											11			14	15	
*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			
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.: **36R**

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
																*08:02:01-08:02:07, 08:04:01-08:04:02, 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, 08:62-08:64
																*08:05
																*08:07, 08:47
																*08:09, 08:11
																*08:12
																*08:21
																*08:25
																*08:31
																*08:41
																*08:48
																*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
																*12:02:03, 12:02:08, 12:10:01-12:10:02, 12:20
																*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, 12:06-12:07, 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
																*12:03:02, 12:03:08, 12:03:16, 12:03:20, 12:26, 12:59
																*12:03:04
																*12:03:09
																*12:03:13
																*12:03:17
																*12:04:01, 12:33
																*12:04:02, 12:60
																*12:05
																*12:08
																*12:09
																*12:14:01
																*12:14:02
																*12:15
																*12:16
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

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 “Instructions for Use” (IFU)

Lot No.: **36R**

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																
*12:18:02, 16:43 ⁸													13			
*12:21											11	12			15	
*12:24												12	13			
*12:27												12	13			
*12:28, 12:58												12	13	14		
*12:31												12	13	14		
*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		
*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, 14:43																16
*14:02:03, 14:03, 14:22, 14:38																16
*14:02:08												12				16
*14:04											11					16
*14:05																16
*14:06, 14:09, 14:28, A*30:62 ⁹																16
*14:08																16
*14:10																16
*14:12											11					16
*14:15														14		16
*14:16														14		16
*14:17																16
*14:20																16
*14:25		2														16
*14:35N																16
*14:41																
*15:02:01-15:02:09, 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			3					8			11				15	
*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			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	
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.: **36R**

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
										27			30			*12:18:02, 16:43 ⁸
														31		*12:21
			20						26	27						*12:24
													30			*12:27
	18									27						*12:28, 12:58
				21						27						*12:31
													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
			20						26		28					*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, 14:43
			20						26	27	28					*14:02:03, 14:03, 14:22, 14:38
			20						26		28					*14:02:08
			20						26		28					*14:04
			20						26							*14:05
																*14:06, 14:09, 14:28, A*30:62 ⁹
										27						*14:08
	18		20						26	27	28					*14:10
			20						26		28				31	*14:12
	18															*14:15
																*14:16
		19	20						26		28					*14:17
			20						26		28		29			*14:20
			20		22				26		28					*14:25
			20						26	27	w					*14:35N
			20						26	27	28					*14:41
17				21									29			*15:02:01-15:02:09, 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
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
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	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.: **36R**

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																
*15:12					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	
*16:01:01, 16:01:03-16:01:10, 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													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														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			
*17:01:01:01-17:01:03, 17:01:05-17:04, 17:06, 17:08-17:13		2									11				15	
*17:01:04		2									11		13		15	
*17:05		2									11				15	
*17:07											11				15	
*18:01-18:02, 18:04-18:05											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*58:02 B*67:02																13
HLA-C allele ⁴																
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

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 “Instructions for Use” (IFU)

Lot No.: **36R**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																HLA-C allele⁴
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
	18									27			30			*16:01:01, 16:01:03-16:01:10, 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
	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
	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
		19		21												*17:01:01:01-17:01:03, 17:01:05-17:04, 17:06, 17:08-17:13
		19		21												*17:01:04
		19		21				26								*17:05
		19		21								29				*17:07
			20	21		23								31		*18:01-18:02, 18:04-18:05
			20	21	22	23								31		*18:03
			20							26			30			<i>A*24:96, A*24:106, A*24:174, B*46:25</i>
										27						<i>B*14:03</i>
												29				<i>B*35:08:02, B*35:08:05</i>
																<i>B*58:02</i>
										27						<i>B*67:02</i>
																HLA-C allele⁴
																Well No.

Negative Control



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

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“Instructions for Use” (IFU)

Lot No.: 36R**Lot-specific information**

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.

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.

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

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

The sequence of the Cw*0422 allele has been shown to be identical 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.

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

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

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 the Cw*1301 allele 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 renamed C*15:10:02.

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

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.

⁵The C*01:05, 01:22 and 01:35-01:36 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*03:99 and C*14:42 alleles give rise to identical amplification patterns with the HLA-C low resolution primer set. These alleles can be separated by the respective high resolution primer sets.

⁷The C*05:79 and C*08:10 alleles give rise to identical amplification patterns with the HLA-C low resolution primer set. These alleles can be separated by the respective high resolution primer sets.

⁸The *12:18:02 and C*16:43 alleles give rise to identical amplification patterns with the HLA-C low resolution primer set. These alleles can be separated by the respective high resolution primer sets

⁹The 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 and/or the HLA-C*14 high resolution primer set.

¹⁰Primer 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.

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

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Lot No.: **36R**

Lot-specific information

				CELL LINE VALIDATION SHEET															
				HLA-C low resolution SSP primer set															
				Well															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Prod. No.:				201207901	201188802	201188803	201188804	201188805	201200306	201200307	201200308	201188809	201188810	201188811	201200312	201204313	201204314	201200315	201200316
IHC 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	DJCAF	*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

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 “Instructions for Use” (IFU)

Lot No.: **36R**

Lot-specific information

				Well															
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
				Prod. No.:	201200317	201188818	201188819	201188820	201188821	201188822	201200323	201200324	201200325	201207926	201200327	201200328	201207929	201207930	201207931
IHC 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

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 “Instructions for Use” (IFU)

Lot No.: **36R**

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: 36R

Expiry date: 2015-March-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	2012-079-01	13	2012-043-13	25	2012-003-25
2	2011-888-02	14	2012-043-14	26	2012-079-26
3	2011-888-03	15	2012-003-15	27	2012-003-27
4	2011-888-04	16	2012-003-16	28	2012-003-28
5	2011-888-05	17	2012-003-17	29	2012-079-29
6	2012-003-06	18	2011-888-18	30	2012-079-30
7	2012-003-07	19	2011-888-19	31	2012-079-31
8	2012-003-08	20	2011-888-20		
9	2011-888-09	21	2011-888-21		
10	2011-888-10	22	2011-888-22		
11	2011-888-11	23	2012-003-23		
12	2012-003-12	24	2012-003-24		

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

Additional 5'-primers in primer solution 1, 2, 6, 7, 13 to 16, 22, 26, and 28 to 30 were tested by separately adding one 3'-primer. Additional 3'-primers in primer solutions 1, 2, 7, 10, 14 to 16, 18, 19, 22, 26, 28 and 29 were tested by separately adding one 5'-primer.

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

The negative control primer pairs, **Production No. 2012-002-01**, can detect contamination with PCR products diluted 10^{-7} .

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

Date of approval: 2012-October-01

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.: **36R**

Lot-specific information

Declaration of Conformity

Product name: Olerup SSP® HLA-C low resolution
Product number: 101.601-24/12
Lot number: 36R

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 13485:2004, 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
2012-October-01

Ann-Cathrin Jareman
Head of QA and Regulatory Affairs

101.601.24/12 – including *Taq* pol., IFU-01
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Lot No.: **36R**

Lot-specific information

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Lot No.: **36R**

Lot-specific information

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