Olerup SSP® HLA-C*06

Product number:	**101.614-12 – including *Taq* polymerase**
Lot number:	**31M**
Expiry date:	**2014-January-01**
Number of tests:	**12**
Number of wells per test:	**31**
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. 31M.

CHANGES COMPARED TO THE PREVIOUS *OLERUP* SSP® HLA-C*06 LOT

The HLA-C*06 specificity and interpretation tables have been updated for the HLA-C alleles described since the previous *Olerup* SSP® HLA-C*06 lot was made **(Lot No. 08K)**.

Seven wells have been added to the HLA-C*06 kit,
wells **25 to 31.**
The amplification patterns for some rare HLA-C*06 alleles
only differ by the length of the specific PCR products.

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

Well	5'-primer	3'-primer	rationale
5	-	-	Exchanged positive control primer pair.
25	New	New	Primer pair for the C*06:38 allele.
26	New	New	Primer pair for the C*06:39 allele.
27	New	New	Primer pairs for the C*06:40 and C*06:42 alleles.
28	New	New	Primer pair for the C*06:41 alleles.
29	New	New	Primer pair for the C*06:43 alleles.
30	New	New	Primer pair for the C*06:44 allele.
31	New	New	Primer pair for the C*06:45 allele.

PRODUCT DESCRIPTION

HLA-C*06 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the HLA-C*06:02 to HLA-C*06:45 alleles.

PLATE LAYOUT

Each test consists of 31 PCR reactions in a 32 well PCR plate. Well 32 is empty.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
9	**10**	**11**	**12**	**13**	**14**	**15**	**16**
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**
25	**26**	**27**	**28**	**29**	**30**	**31**	**empty**

The 32 well cut PCR plate is marked with 'HLA-C*06' in silver/gray ink.
Well No. 1 is marked with the Lot No. '31M'.
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 covered. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

INTERPRETATION

The interpretation of HLA-C*06 SSP subtypings will be influenced by the C*01, seven C*02, the C*03, most C*04, the C*05, several C*07, the C*08, most C*12, the C*14, the C*15, two C*16, the C*17 and the C*18 alleles when present on the other haplotype. In addition, the B*58:02 allele will be amplified by primer mix 4, the B*15:137 allele will be amplified by the primer mix 9, the B*15:193 allele will be amplified by the primer mix 10 and 11, the B*08:56, B*15:142 and B*51:68 alleles will be amplified by primer mix 19 and the B*13:31, B*15:58, B*15:73, B*15:137, B*39:36 and B*55:21 alleles will be amplified by primer mix 24.

UNIQUELY IDENTIFIED ALLELES

All the HLA-C*06 alleles, i.e. **C*06:02 to C*06:45**, recognized by the HLA Nomenclature Committee in July 2010[1] will give rise to unique amplification patterns by the primers in the HLA-C*06 subtyping kit.
The HLA-C*06 SSP subtyping kit cannot distinguish the C*06:02:01:01, 06:02:01:02 and the C*06:02:03 to 06:02:05 alleles.
The C*06:07 and C*06:33 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 7.
The C*06:16N and C*06:21 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 16.
The C*06:24 and C*06:37 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 17.

The C*06:25 and C*06:36 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 21.
The C*06:27 and C*06:29 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 20.
The C*06:28 and C*06:32 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 19.

[1]HLA-C alleles listed on the IMGT/HLA web page 2010-July-16, release 3.1.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 73 alleles generate 38 amplification patterns that can be combined in 741 homozygous and heterozygous combinations. 208 of these genotypes do not give rise to unique amplification patterns. The different lengths of the specific PCR products were not considered in these calculations.

+++-++-- -------- -------- -------	*06:03, *06:05 = *06:05, *06:18 = *06:06, *06:18
+++-+--- +------- -------- -------	*06:03, *06:23 = *06:17, *06:18 = *06:18, *06:23
+++-+--- -------- -------+ -------	*06:18, *06:34 = *06:18, *06:35
+++-+--- -------- -------- --+----	*06:18, *06:40 = *06:18, *06:42
+++-+--- -------- -------- -------	*06:02:01:01, *06:18 = *06:03, *06:18 = *06:18, *06:18
+++----- -------- -------+ -------	*06:03, *06:34 = *06:03, *06:35
+++----- -------- -------- --+----	*06:03, *06:40 = *06:03, *06:42
++--++-- +------- -------- -------	*06:05, *06:17 = *06:05, *06:23 = *06:06, *06:23
++--+--- +------- -------+ -------	*06:09, *06:23 = *06:23, *06:34 = *06:23, *06:35
++--+--- +------- -------- --+----	*06:23, *06:40 = *06:23, *06:42
++--+--- +------- -------- -------	*06:02:01:01, *06:23 = *06:17, *06:23 = *06:23, *06:23
++-----+- ---+---+ -------- -------	*06:07, *06:20 = *06:16N, *06:19 = *06:19, *06:20
++-----+- ---+---- -------+ -------	*06:19, *06:34 = *06:19, *06:35
++-----+- ---+---- -------- --+----	*06:19, *06:40 = *06:19, *06:42
++-----+- ---+---- -------- -------	*06:02:01:01, *06:19 = *06:07, *06:12 = *06:07, *06:19 = *06:12, *06:19 = *06:19, *06:19
++-----+- -------- -------+ -------	*06:07, *06:34 = *06:07, *06:35
++-----+- -------- -------- --+----	*06:07, *06:40 = *06:07, *06:42
++-----+- -------- -------- -------	*06:02:01:01, *06:07 = *06:07, *06:07
++-----+ -------- -------+ -------	*06:08, *06:34 = *06:08, *06:35
++-----+ -------- -------- --+----	*06:08, *06:40 = *06:08, *06:42
++-----+ -------- -------- -------	*06:02:01:01, *06:08 = *06:08, *06:08
++------ +------- -------+ --+----	*06:09, *06:40 = *06:09, *06:42
++------ +------- -------+ -------	*06:02:01:01, *06:09 = *06:09, *06:09 = *06:09, *06:17 = *06:09, *06:34 = *06:09, *06:35 = *06:17, *06:34 = *06:17, *06:35
++------ +------- -------- --+----	*06:17, *06:40 = *06:17, *06:42
++------ -++----- -------+ -------	*06:22, *06:34 = *06:22, *06:35
++------ -++----- -------- --+----	*06:22, *06:40 = *06:22, *06:42
++------ -++----- -------- -------	*06:02:01:01, *06:22 = *06:10, *06:11 = *06:10, *06:22 = *06:11, *06:22 = *06:22, *06:22
++------ -+------ -------+ -------	*06:10, *06:34 = *06:10, *06:35
++------ -+------ -------- --+----	*06:10, *06:40 = *06:10, *06:42
++------ -+------ -------- -------	*06:02:01:01, *06:10 = *06:10, *06:10
++------ --+----- -------+ -------	*06:11, *06:34 = *06:11, *06:35
++------ --+----- -------- --+----	*06:11, *06:40 = *06:11, *06:42

++------ --+----- -------- -------	*06:02:01:01, *06:11 = *06:11, *06:11
++------ ---+---+ -------+ -------	*06:20, *06:34 = *06:20, *06:35
++------ ---+---+ -------- --+----	*06:20, *06:40 = *06:20, *06:42
++------ ---+---+ -------- -------	*06:02:01:01, *06:20 = *06:12, *06:16N = *06:12, *06:20 = *06:16N, *06:20 = *06:20, *06:20
++------ ---+---- -------+ -------	*06:12, *06:34 = *06:12, *06:35
++------ ---+---- -------- --+----	*06:12, *06:40 = *06:12, *06:42
++------ ---+---- -------- -------	*06:02:01:01, *06:12 = *06:12, *06:12
++------ ----+--- -------+ -------	*06:13, *06:34 = *06:13, *06:35
++------ ----+--- -------- --+----	*06:13, *06:40 = *06:13, *06:42
++------ ----+--- -------- -------	*06:02:01:01, *06:13 = *06:13, *06:13
++------ ------+- -------+ -------	*06:15, *06:34 = *06:15, *06:35
++------ ------+- -------- --+----	*06:15, *06:40 = *06:15, *06:42
++------ ------+- -------- -------	*06:02:01:01, *06:15 = *06:15, *06:15
++------ -------+ -------+ -------	*06:16N, *06:34 = *06:16N, *06:35
++------ -------+ -------- --+----	*06:16N, *06:40 = *06:16N, *06:42
++------ -------+ -------- -------	*06:02:01:01, *06:16N = *06:16N, *06:16N
++------ -------- +------+ -------	*06:24, *06:34 = *06:24, *06:35
++------ -------- +------- --+----	*06:24, *06:40 = *06:24, *06:42
++------ -------- +------- -------	*06:02:01:01, *06:24 = *06:24, *06:24
++------ -------- -+-----+ -------	*06:26, *06:34 = *06:26, *06:35
++------ -------- -+------ --+----	*06:26, *06:40 = *06:26, *06:42
++------ -------- -+------ -------	*06:02:01:01, *06:26 = *06:26, *06:26
++------ -------- --+----+ -------	*06:28, *06:34 = *06:28, *06:35
++------ -------- --+----- --+----	*06:28, *06:40 = *06:28, *06:42
++------ -------- --+----- -------	*06:02:01:01, *06:28 = *06:28, *06:28
++------ -------- ---+---+ -------	*06:27, *06:34 = *06:27, *06:35
++------ -------- ---+---- --+----	*06:27, *06:40 = *06:27, *06:42
++------ -------- ---+---- -------	*06:02:01:01, *06:27 = *06:27, *06:27
++------ -------- ----+--+ -------	*06:25, *06:34 = *06:25, *06:35
++------ -------- ----+--- --+----	*06:25, *06:40 = *06:25, *06:42
++------ -------- ----+--- -------	*06:02:01:01, *06:25 = *06:25, *06:25
++------ -------- -----+-+ -------	*06:30, *06:34 = *06:30, *06:35
++------ -------- -----+-- --+----	*06:30, *06:40 = *06:30, *06:42
++------ -------- -----+-- -------	*06:02:01:01, *06:30 = *06:30, *06:30
++------ -------- ------++ -------	*06:31, *06:34 = *06:31, *06:35
++------ -------- ------+- --+----	*06:31, *06:40 = *06:31, *06:42
++------ -------- ------+- -------	*06:02:01:01, *06:31 = *06:31, *06:31
++------ -------- -------+ +------	*06:34, *06:38 = *06:35, *06:38
++------ -------- -------+ -+-----	*06:34, *06:39 = *06:35, *06:39
++------ -------- -------+ --+----	*06:34, *06:40 = *06:34, *06:42 = *06:35, *06:42
++------ -------- -------+ ---+---	*06:34, *06:41 = *06:35, *06:41
++------ -------- -------+ ----+--	*06:34, *06:43 = *06:35, *06:43
++------ -------- -------+ -----+-	*06:34, *06:44 = *06:35, *06:44
++------ -------- -------+ ------+	*06:34, *06:45 = *06:35, *06:45
++------ -------- -------+ -------	*06:02:01:01, *06:34 = *06:02:01:01, *06:35 = *06:34, *06:34 = *06:34, *06:35
++------ -------- -------- +-+----	*06:38, *06:40 = *06:38, *06:42
++------ -------- -------- +------	*06:02:01:01, *06:38 = *06:38, *06:38
++------ -------- -------- -++----	*06:39, *06:40 = *06:39, *06:42
++------ -------- -------- -+-----	*06:02:01:01, *06:39 = *06:39, *06:39
++------ -------- -------- --++---	*06:40, *06:41 = *06:41, *06:42
++------ -------- -------- --+-+--	*06:40, *06:43 = *06:42, *06:43
++------ -------- -------- --+--+-	*06:40, *06:44 = *06:42, *06:44
++------ -------- -------- --+---+	*06:40, *06:45 = *06:42, *06:45
++------ -------- -------- --+----	*06:02:01:01, *06:40 = *06:02:01:01, *06:42 = *06:40, *06:42 = *06:42, *06:42

```
++------ -------- -------- ---+---  *06:02:01:01, *06:41 = *06:41, *06:41
++------ -------- -------- ----+--  *06:02:01:01, *06:43 = *06:43, *06:43
++------ -------- -------- -----+-  *06:02:01:01, *06:44 = *06:44, *06:44
++------ -------- -------- ------+  *06:02:01:01, *06:45 = *06:45, *06:45
+---++-- -------- -------- -------  *06:05, *06:05 = *06:05, *06:06
```

*06:02:01:01 = *06:02:01:01-06:02:01:02, 06:02:03-06:02:08
*06:07 = *06:07 and 06:33
*06:16N = *06:16N and 06:21
*06:24 = *06:24 and 06:37
*06:25 = *06:25 and 06:36
*06:27 = *06:27 and 06:29
*06:28 = *06:28 and 06:32

SPECIFICITY TABLE

HLA-C*06 SSP subtyping

Specificities and sizes of the PCR products of the 31 primer mixes used for HLA-C*06 SSP subtyping

Primer Mix	Size of spec. PCR product[1]	Size of control band[2]	Amplified HLA-C*06 alleles[3]	Other amplified HLA Class I alleles[4]
1	240 bp	**800 bp**	*06:02:01:01-06:02:01:02, 06:02:03-06:02:08, 06:04-06:16N, 06:18-06:45	*03:39, 03:67, 04:42, 05:43, 12:16, 16:21
2	220 bp	**800 bp**	*06:02:01:01-06:02:01:02, 06:02:03-06:03, 06:07-06:13, 06:15-06:34, 06:36-06:39, 06:41-06:45	*01:04, 01:09, 02:05, 02:17, 12:03:01:01-12:07, 12:11-12:13, 12:15, 12:23, 12:25-12:26, 12:28-12:29, 12:31-12:35, 12:37-12:39N, 12:42Q-12:43, 14:16, 16:04:01
3[5]	135 bp	1070 bp	*06:03, 06:18	*02:02:13, 03:02:01-03:04:14, 03:04:16-03:17, 03:19-03:38:02, 03:40-03:66, 03:67[W], 03:68-03:94, 07:96
4	250 bp	1070 bp	*06:04	*01:22, 01:35, 05:11, 05:17, 05:27, 08:01:01-08:01:02, 08:03:01-08:04, 08:06, 08:08-08:11, 08:13-08:14, 08:16, 08:20-08:22, 08:24, 08:26N, 08:36N, 12:14:01-12:14:02, 12:18, 12:20, 14:06, 14:15, 15:02:01-15:07, 15:09-15:13, 15:15-15:24, 15:26-15:35, 17:01:01:01-17:07, **B*58:02**
5[8]	165 bp, 220 bp	1070 bp	*06:05, 06:18, 06:23	*01:04, 01:09, 02:21, 05:01:01:01-05:01:13, 05:03-05:28, 05:30-05:45, 08:10, 12:21, 12:33, 17:05
6	250 bp	1070 bp	*06:05-06:06	*01:02:01-01:03, 01:05-01:08, 01:10-01:20, 01:23-01:34, 01:36-01:40, 02:32, 04:01:01:01-04:01:21, 04:03, 04:05, 04:07-04:12, 04:15:01-04:20, 04:23-04:33,

				04:35-04:47, 04:49-04:57, 04:59Q-04:67, 04:69-04:70, 05:01:01:01-05:01:13, 05:03-05:07N, 05:09-05:10, 05:12-05:16, 05:18-05:26, 05:28-05:45, 08:02:01-08:02:04, 08:05, 08:07, 08:12, 08:15:01, 08:17-08:19, 08:23, 08:25, 08:28, 08:30, 08:32-08:35, 12:09, 12:24, 14:02:01-14:05, 14:07N-14:14, 14:17-14:21N, 15:08, 18:01-18:02
7[5,9]	110 bp, 185 bp, 235 bp	1070 bp	*06:07, 06:19, 06:33	
8	240 bp	1070 bp	*06:08	*01:10, 02:05, 02:17
9[10]	165 bp, 210 bp, 435 bp	1070 bp	*06:09, 06:17, 06:23	*01:04, 01:09, 02:22, 05:08, 07:07, 07:09, 07:76, 08:27, 08:29, 08:31, 12:31, 18:01-18:03, **B*15:137**
10[6]	190 bp	**800 bp**	*06:10, 06:22	*07:107, **B*15:193**
11[5,11]	130 bp, 185 bp	1070 bp	*06:11, 06:22	*07:04:01-07:04:04, 07:11-07:12, 07:45, 07:63, 07:68, 07:101, 07:107, 07:139, 07:142, 12:03:09, **B*15:193**
12[6,12]	195 bp, 275 bp	1070 bp	*06:12, 06:19-06:20	*01:32, 07:81
13	155 bp	1070 bp	*06:13	
14	305 bp	1070 bp	*06:14	*03:32, 03:45, 07:43, 15:25
15	360 bp	**800 bp**	*06:15	
16[7,13]	235 bp, 275 bp, 340 bp	1070 bp	*06:16N, 06:20-06:21	*01:32, 07:81
17[7,14]	160 bp, 225 bp	1070 bp	*06:24, 06:37	*01:20
18	220 bp	1070 bp	*06:26	
19[5,15]	85 bp, 160 bp	**800 bp**	*06:28, 06:32	*02:14, 03:67, 04:42, 05:43, 07:20, 07:73, 15:23, 16:21, **B*08:56, B*15:142, B*51:68**
20[5,16]	115 bp, 275 bp	1070 bp	*06:27, 06:29	*07:134
21[17]	190 bp, 380 bp	1070 bp	*06:25, 06:36	
22	170 bp	1070 bp	*06:30	*02:02:13, 12:03:09
23	205 bp	1070 bp	*06:31	*16:04:01

24[18]	160 bp, 210 bp	1070 bp	*06:09, 06:34-06:35	*02:22, 05:08, 08:27, 08:29, 08:31, 12:31, 18:03, **B*13:31, B*15:58, B*15:73, B*15:137, B*39:36, B*55:21**
25[5]	85 bp	1070 bp	*06:38	
26[5]	130 bp	1070 bp	*06:39	
27[19]	190 bp, 225 bp	1070 bp	*06:40, 06:42	
28[5]	90 bp	1070 bp	*06:41	*12:32
29	175 bp	1070 bp	*06:43	
30[5]	100 bp	1070 bp	*06:44	
31	155 bp	1070 bp	*06:45	

[1]Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-C*06 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 20 base pairs or more. Size differences shorter than 20 base pairs are not given. For high resolution SSP kits the respective lengths of the specific PCR product(s) of the alleles amplified by these primer mixes are given.
Nonspecific amplifications, i.e. a ladder or a smear of bands, may sometimes be seen. GC-rich primers have a higher tendency of giving rise to nonspecific amplifications than other primers.
PCR fragments longer than the control bands may sometimes be observed. Such bands should be disregarded and do not influence the interpretation of the SSP typings.
PCR fragments migrating faster than the control bands, but slower than a 400 bp fragment may be seen in some gel read-outs. Such bands can be disregarded and do not influence the interpretation of the SSP typings.
Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an inherit feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated.
[2]The internal positive control primer pairs amplify segments of the human growth hormone gene. The 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*06 subtyping.
In addition, wells number 2, 10, 15 and 19 contain the primer pair giving rise to the shorter, 800 bp, internal positive control in order to allow kit identification.
In the presence of a specific amplification the intensity of the control band often decreases.
[3]The C*06:07 and C*06:33 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 7.
The C*06:16N and C*06:21 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 16.
The C*06:24 and C*06:37 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 17.
The C*06:25 and C*06:36 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 21.
The C*06:27 and C*06:29 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 20.
The C*06:28 and C*06:32 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 19.
[4]Due to the sharing of sequence motifs between HLA-C alleles non-HLA-C*06 alleles will be amplified by primer mixes 1 to 6, 8 to 12, 14, 16, 17, 19, 20, 22 to 24 and 28. In addition, the B*58:02 allele will be amplified by primer mix 4, the B*15:137 allele will be amplified by the

primer mix 9, the B*15:193 allele will be amplified by the primer mix 10 and 11, the B*08:56, B*15:142 and B*51:68 alleles will be amplified by primer mix 19 and the B*13:31, B*15:58, B*15:73, B*15:137, B*39:36 and B*55:21 alleles will be amplified by primer mix 24.

[5]Short specific PCR fragments are less intense and not as sharp as longer specific bands.

[6]Primer mixes 10 and 12 have a tendency of giving rise to non-specific amplifications.

[7]Primer mixes 16 and 17 has a tendency of giving rise to primer oligomer formation.

[8]Primer mix 5: Specific PCR fragment of 165 bp in the C*06:05 and the C*05:01:01:01-05:01:13, 05:03-05:28, 05:30-05:45, 08:10, 12:21, 12:33 and 17:05 alleles. Specific PCR fragment of 220 bp in the C*06:18 and 06:23 and the C*01:04, 01:09 and 02:21 alleles.

[9]Primer mix 7: Specific PCR fragment of 110 bp in the C*06:07 allele. Specific PCR fragment of 185 bp in the C*06:19 allele. Specific PCR fragment of 235 bp in the C*06:33 allele.

[10]Primer mix 9: Specific PCR fragment of 165 bp in the C*06:09 and in the C*02:22, 05:08, 08:27, 08:29, 08:31 and 12:31 alleles, and in addition in the B*15:137 allele. Specific PCR fragment of 210 bp in the C*06:23 and the C*01:04 and 01:09 alleles. Specific PCR fragment of 435 bp in the C*06:17, 07:07, 07:09, 07:76, 18:01-18:02 alleles. Specific PCR fragments of 165 and 435 bp in the C*18:03 allele.

[11]Primer mix 11: Specific PCR fragment of 130 bp in the C*06:11 and the C*07:04:01-07:04:04, 07:11-07:12, 07:45, 07:63, 07:68, 07:101, 07:139, 07:142 and 12:03:09 alleles. Specific PCR fragment of 185 bp in the C*06:22 and C*07:107 and in the B*15:193 allele.

[12]Primer mix 12: Specific PCR fragment of 185 bp in the C*06:19 allele. Specific PCR fragment of 205 bp in the C*06:12 allele. Specific PCR fragment of 275 bp in the C*06:20 and in the C*01:32 and 07:81 alleles.

[13]Primer mix 16: Specific PCR fragment of 235 bp in the C*06:16N allele. Specific PCR fragment of 275 bp in the C*06:20 and in the C*01:32 and 07:81 alleles. Specific PCR fragment of 340 bp in the C*06:21 allele.

[14]Primer mix 17: Specific PCR fragment of 160 bp in the C*06:37 and the C*01:20 alleles. Specific PCR fragment of 225 bp in the C*06:24 allele.

[15]Primer mix 19: Specific PCR fragment of 85 bp in the C*06:28 and the C*02:14, 03:67, 04:42, 05:43, 07:20, 07:73, 15:23 and 16:21 and in the B*08:56, B*15:142 and B*51:68 alleles. Specific PCR fragment of 160 bp in the C*06:32 allele.

[16]Primer mix 20: Specific PCR fragment of 115 bp in the C*06:29 and the C*07:134 alleles. Specific PCR fragment of 275 bp in the C*06:27 allele.

[17]Primer mix 21: Specific PCR fragment of 190 bp in the C*06:36 allele. Specific PCR fragment of 380 bp in the C*06:25 allele.

[18]Primer mix 24: Specific PCR fragment of 160 bp in the C*06:09 and 06:34 and the C*02:22, 05:08, 08:27, 08:29, 08:31, 12:31 and 18:03 and in the B*13:31, B*15:58, B*15:73, B*15:137, B*39:36 and B*55:21 alleles. Specific PCR fragment of 210 bp in the C*06:35 allele.

[19]Primer mix 27: Specific PCR fragment of 190 bp in the C *06:42 allele. Specific PCR fragment of 225 bp in the C *06:40 allele.

'w', may be weakly amplified.

INTERPRETATION TABLE

HLA-C*06 SSP subtyping

Amplification patterns of the C*06:02 to C*06:45 alleles

	Well[11]															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Length of spec.	240	220	135	250	165	250	110	240	165	190	130	195	155	305	360	235
PCR product(s)					220		185		210		185	275				275
							235		435							340
Length of int.	800	800	1070	1070	1070	1070	1070	1070	1070	800	1070	1070	1070	1070	800	1070
pos. control[1]																
5'-primer(s)[2]	28	361	105	2nd I	113	2nd I	107	361	47	142	213	157	361	341	376	397
	5'-TCA 3'	5'-AgT 3'	5'-gCT 3'	5'-CCA 3'	5'-CCA 3'	5'-CCA 3'	5'-CgA 3'	5'-AgT 3'	5'-Agg 3'	5'-TCC 3'	5'-CCC 3'	5'-TgA 3'	5'-AgT 3'	5'-ggA 3'	5'-gCT 3'	5'-gCT 3'
			113		176		157		368	419	419	463				463
			5'-CCA 3'		5'-gCA 3'		5'-TgA 3'		5'-gTg 3'	5'-gTC 3'	5'-gTC 3'	5'-TgA 3'				5'-TgA 3'
					368		232		412			529				501
					5'-gTg 3'		5'-AgA 3'		5'-ATA 3'			5'-AgA 3'				5'-..C 3'
3'-primer(s)[3]	97	538	201	539	302	538	302	559	312	302	302	302	475	353	3rd I	3rd I
	5'-gTC 3'	5'-CCA 3'	5'-CTC 3'	5'-TCA 3'	5'-ggT 3'	5'-CCg 3'	5'-ggT 3'	5'-CTC 3'	5'-AgT 3'	5'-ggT 3'	5'-ggC 3'	5'-ggT 3'	5'-ggT 3'	5'-TgA 3'	5'-CTC 3'	5'-CTC 3'
					538				538	565	565	3rd I				
					5'-CCA 3'				5'-CCA 3'	5'-CAT 3'	5'-CAT 3'	5'-CTC 3'				
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele[4]																
***06:02:01:01-06:02:01:02, 06:02:03-06:02:08**	1	2														
***06:03**		2	3													
***06:04**	1			4												
***06:05**	1				5	6										
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

INTERPRETATION TABLE

HLA-C*06 SSP subtyping

Amplification patterns of the C*06:02 to C*06:45 alleles

Well[11]															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
160	220	85	115	190	170	205	160	85	130	190	90	175	100	155	Length of spec.
225		160	275	380			210			225					PCR product(s)
1070	1070	800	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	Length of int.
															pos. control[1]
361	122	97	97	28	213	361	368	361	211	361	490	406	213	187	5'-primer(s)[2]
5'-AgT 3'	5'-CCT 3'	5'-TCg 3'	5'-TCg 3'	5'-TCA 3'	5'-CCC 3'	5'-AgT 3'	5'-gTC 3'	5'-AgT 3'	5'-AgT 3'	5'-AgT 3'	5'-CgT 3'	5'-gCA 3'	5'-CCC 3'	5'-gCT 3'	
			361	388			419								
			5'-AgT 3'	5'-CCA 3'			5'-gTT 3'								
479	302	142	172	239	341	527	538	404	302	511	538	538	270	302	3'-primer(s)[3]
5'-CCA 3'	5'-ggT 3'	5'-TgC 3'	5'-CAT 3'	5'-gCT 3'	5'-Cgg 3'	5'-CCg 3'	5'-CCA 3'	5'-CAA 3'	5'-ggT 3'	5'-CCg 3'	5'-CCA 3'	5'-CCA 3'	5'-TAg 3'	5'-ggT 3'	
547		214	595	538						544					
5'-gTg 3'		5'-CCA 3'	5'-CCA 3'	5'-CCA 3'						5'-ggT 3'					
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.
															HLA-C allele[4]
															*06:02:01:01-06:02:01:02, 06:02:03-06:02:08
															*06:03
															*06:04
															*06:05
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.

Length of spec.	240	220	135	250	165	250	110	240	165	190	130	195	155	305	360	235
PCR product(s)					220		185		210		185	275				275
							235		435							340
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
***06:06**	**1**					**6**										
***06:07, 06:33**[5]	**1**	**2**					**7**									
***06:08**	**1**	**2**						**8**								
***06:09**	**1**	**2**							**9**							
***06:10**	**1**	**2**								**10**						
***06:11**	**1**	**2**									**11**					
***06:12**	**1**	**2**										**12**				
***06:13**	**1**	**2**											**13**			
***06:14**	**1**													**14**		
***06:15**	**1**	**2**													**15**	
***06:16N, 06:21**[6]	**1**	**2**														**16**
***06:17**		**2**							**9**							
***06:18**	**1**	**2**	**3**		**5**											
***06:19**	**1**	**2**					**7**					**12**				
***06:20**	**1**	**2**										**12**				**16**
***06:22**	**1**	**2**								**10**	**11**					
***06:23**	**1**	**2**			**5**				**9**							
***06:24, 06:37**[7]	**1**	**2**														
***06:25, 06:36**[8]	**1**	**2**														
***06:26**	**1**	**2**														
***06:27, 06:29**[9]	**1**	**2**														
***06:28, 06:32**[10]	**1**	**2**														
***06:30**	**1**	**2**														
***06:31**	**1**	**2**														
***06:34**	**1**	**2**														
***06:35**	**1**															
***06:38**	**1**	**2**														
***06:39**	**1**	**2**														
***06:40**	**1**															
***06:41**	**1**	**2**														
***06:42**	**1**	**2**														
***06:43**	**1**	**2**														
***06:44**	**1**	**2**														
***06:45**	**1**	**2**														
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

160	220	85	115	190	170	205	160	85	130	190	90	175	100	155	Length of spec.
225		160	275	380			210			225					PCR product(s)
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.
															*06:06
															*06:07, 06:33[5]
															*06:08
							24								*06:09
															*06:10
															*06:11
															*06:12
															*06:13
															*06:14
															*06:15
															*06:16N, 06:21[6]
															*06:17
															*06:18
															*06:19
															*06:20
															*06:22
															*06:23
17															*06:24, 06:37[7]
				21											*06:25, 06:36[8]
	18														*06:26
			20												*06:27, 06:29[9]
		19													*06:28, 06:32[10]
					22										*06:30
						23									*06:31
							24								*06:34
							24								*06:35
								25							*06:38
									26						*06:39
										27					*06:40
											28				*06:41
										27					*06:42
												29			*06:43
													30		*06:44
														31	*06:45
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.

Length of spec.	**240**	**220**	**135**	**250**	**165**	**250**	**110**	**240**	**165**	**190**	**130**	**195**	**155**	**305**	**360**	**235**
PCR product(s)					**220**		**185**		**210**		**185**	**275**				**275**
							235		**435**							**340**
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
***01:02:01-01:03, 01:05-01:08, 01:11-01:19, 01:23-01:31, 01:33-01:34, 01:36-01:40, 02:32, 04:01:01:01-04:01:21, 04:03, 04:05, 04:07-04:12, 04:15:01-04:20, 04:23-04:33, 04:35-04:41, 04:43-04:47, 04:49-04:57, 04:59Q-04:67, 04:69-04:70, 05:29, 08:02:01-08:02:04, 08:05, 08:07, 08:12, 08:15:01, 08:17-08:19, 08:23, 08:25, 08:28, 08:30, 08:32-08:35, 12:09, 12:24, 14:02:01-14:05, 14:07N-14:14, 14:17-14:21N, 15:08**						**6**										
***01:04, 01:09**		**2**			**5**				**9**							
***01:10**						**6**		**8**								
***01:20**						**6**										
01:22, 01:35, 08:01:01-08:01:02, 08:03:01-08:04, 08:06, 08:08-08:09, 08:11, 08:13-08:14, 08:16, 08:20-08:22, 08:24, 08:26N, 08:36N, 12:14:01-12:14:02, 12:18, 12:20, 14:06, 14:15, 15:02:01-15:07, 15:09-15:13, 15:15-15:22, 15:24, 15:26-15:35, 17:01:01:01-17:04, 17:06-17:07, *B*58:02				**4**												
***01:32**						**6**						**12**				**16**
***02:02:13**			**3**													
***02:05, 02:17**		**2**						**8**								
02:14, 07:20, 07:73, *B*08:56, *B*15:142, *B*51:68																
***02:21, 12:21**					**5**											
02:22, 08:27, 08:29, 08:31, 18:03, *B*15:137									**9**							
***03:02:01-03:04:14, 03:04:16-03:17, 03:19-03:31, 03:33-03:38:02, 03:40-03:44, 03:46-03:66, 03:68-03:94, 07:96**			**3**													
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

160	220	85	115	190	170	205	160	85	130	190	90	175	100	155	Length of spec.
225		160	275	380			210			225					PCR product(s)
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.
															*01:02:01-01:03, 01:05-01:08, 01:11-01:19, 01:23-01:31, 01:33-01:34, 01:36-01:40, 02:32, 04:01:01:01-04:01:21, 04:03, 04:05, 04:07-04:12, 04:15:01-04:20, 04:23-04:33, 04:35-04:41, 04:43-04:47, 04:49-04:57, 04:59Q-04:67, 04:69-04:70, 05:29, 08:02:01-08:02:04, 08:05, 08:07, 08:12, 08:15:01, 08:17-08:19, 08:23, 08:25, 08:28, 08:30, 08:32-08:35, 12:09, 12:24, 14:02:01-14:05, 14:07N-14:14, 14:17-14:21N, 15:08
															*01:04, 01:09
															*01:10
17															*01:20
															*01:22, 01:35, 08:01:01-08:01:02, 08:03:01-08:04, 08:06, 08:08-08:09, 08:11, 08:13-08:14, 08:16, 08:20-08:22, 08:24, 08:26N, 08:36N, 12:14:01-12:14:02, 12:18, 12:20, 14:06, 14:15, 15:02:01-15:07, 15:09-15:13, 15:15-15:22, 15:24, 15:26-15:35, 17:01:01:01-17:04, 17:06-17:07, ***B*58:02***
															*01:32
					22										*02:02:13
															*02:05, 02:17
		19													*02:14, 07:20, 07:73, ***B*08:56, B*15:142, B*51:68***
															*02:21, 12:21
							24								*02:22, 08:27, 08:29, 08:31, 18:03, ***B*15:137***
															*03:02:01-03:04:14, 03:04:16-03:17, 03:19-03:31, 03:33-03:38:02, 03:40-03:44, 03:46-03:66, 03:68-03:94, 07:96
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.

Length of spec.	240	220	135	250	165	250	110	240	165	190	130	195	155	305	360	235
PCR product(s)					220		185		210		185	275				275
							235		435							340
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
***03:32, 03:45**			3											14		
***03:39, 12:16**	1															
***03:67**	1		w													
***04:42**	1					6										
***05:01:01:01-05:01:13, 05:03-05:07N, 05:09-05:10, 05:12-05:16, 05:18-05:26, 05:28, 05:30-05:42, 05:44-05:45**					5	6										
***05:08**					5				9							
***05:11, 05:17, 05:27, 08:10, 17:05**				4	5											
***05:43**	1				5	6										
***07:04:01-07:04:04, 07:11-07:12, 07:45, 07:63, 07:68, 07:101, 07:139, 07:142**											11					
***07:07, 07:09, 07:76**									9							
***07:43, 15:25**														14		
***07:81**												12				16
07:107, *B*15:193										10	11					
***07:134**																
***12:03:01:01-12:03:08, 12:03:10-12:07, 12:11-12:13, 12:15, 12:23, 12:25-12:26, 12:28-12:29, 12:34-12:35, 12:37-12:39N, 12:42Q-12:43, 14:16**		2														
***12:03:09**		2									11					
***12:31**		2							9							
***12:32**		2														
***12:33**		2			5											
***15:23**				4												
***16:04:01**		2														
***16:21**	1															
***18:01-18:02**						6			9							
B*13:31, B*15:58, B*15:73, B*39:36, B*55:21																
HLA-C allele[4]																
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

160	220	85	115	190	170	205	160	85	130	190	90	175	100	155	Length of spec.
225		160	275	380			210			225					PCR product(s)
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.
															*03:32, 03:45
															*03:39, 12:16
		19													*03:67
		19													*04:42
															*05:01:01:01-05:01:13, 05:03-05:07N, 05:09-05:10, 05:12-05:16, 05:18-05:26, 05:28, 05:30-05:42, 05:44-05:45
							24								*05:08
															*05:11, 05:17, 05:27, 08:10, 17:05
		19													*05:43
															*07:04:01-07:04:04, 07:11-07:12, 07:45, 07:63, 07:68, 07:101, 07:139, 07:142
															*07:07, 07:09, 07:76
															*07:43, 15:25
															*07:81
															*07:107, *B*15:193*
			20												*07:134
															*12:03:01:01-12:03:08, 12:03:10-12:07, 12:11-12:13, 12:15, 12:23, 12:25-12:26, 12:28-12:29, 12:34-12:35, 12:37-12:39N, 12:42Q-12:43, 14:16
					22										*12:03:09
							24								*12:31
											28				*12:32
															*12:33
		19													*15:23
						23									*16:04:01
		19													*16:21
															*18:01-18:02
							24								*B*13:31, B*15:58, B*15:73, B*39:36, B*55:21*
															HLA-C allele[4]
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.

[1]The 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*06 subtyping.
In addition, wells number 2, 5, 10, 15 and 19 contain the primer pair giving rise to the shorter, 800 bp, internal positive control in order to allow kit identification.
[2]The nucleotide position, in the 1st, 2nd or 3rd exons or the 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.
[3]The nucleotide position, in the 2nd or 3rd exons 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.
[4]The sequence of the C*0601 allele has been shown to be identical to C*06:02.
The sequence of the C*060202 allele has been renamed to C*06:17.
[5]The C*06:07 and C*06:33 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 7.
[6]The C*06:16N and C*06:21 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 16.
[7]The C*06:24 and C*06:37 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 17.
[8]The C*06:25 and C*06:36 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 21.
[9]The C*06:27 and C*06:29 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 20.
[10]The C*06:28 and C*06:32 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 19.
[11]Primer mix 5: Specific PCR fragment of 165 bp in the C*06:05 and the C*05:01:01:01-05:01:13, 05:03-05:28, 05:30-05:45, 08:10, 12:21, 12:33 and 17:05 alleles. Specific PCR fragment of 220 bp in the C*06:18 and 06:23 and the C*01:04, 01:09 and 02:21 alleles.
Primer mix 7: Specific PCR fragment of 110 bp in the C*06:07 allele. Specific PCR fragment of 185 bp in the C*06:19 allele. Specific PCR fragment of 235 bp in the C*06:33 allele.
Primer mix 9: Specific PCR fragment of 165 bp in the C*06:09 and in the C*02:22, 05:08, 08:27, 08:29, 08:31 and 12:31 alleles, and in addition in the B*15:137 allele. Specific PCR fragment of 210 bp in the C*06:23 and the C*01:04 and 01:09 alleles. Specific PCR fragment of 435 bp in the C*06:17, 07:07, 07:09, 07:76, 18:01-18:02 alleles. Specific PCR fragments of 165 and 435 bp in the C*18:03 allele.
Primer mix 11: Specific PCR fragment of 130 bp in the C*06:11 and the C*07:04:01-07:04:04, 07:11-07:12, 07:45, 07:63, 07:68, 07:101, 07:139, 07:142 and 12:03:09 alleles. Specific PCR fragment of 185 bp in the C*06:22 and C*07:107 and in the B*15:193 allele.
Primer mix 12: Specific PCR fragment of 185 bp in the C*06:19 allele. Specific PCR fragment of 205 bp in the C*06:12 allele. Specific PCR fragment of 275 bp in the C*06:20 and in the C*01:32 and 07:81 alleles.
Primer mix 16: Specific PCR fragment of 235 bp in the C*06:16N allele. Specific PCR fragment of 275 bp in the C*06:20 and in the C*01:32 and 07:81 alleles. Specific PCR fragment of 340 bp in the C*06:21 allele.
Primer mix 17: Specific PCR fragment of 160 bp in the C*06:37 and the C*01:20 alleles. Specific PCR fragment of 225 bp in the C*06:24 allele.
Primer mix 19: Specific PCR fragment of 85 bp in the C*06:28 and the C*02:14, 03:67, 04:42, 05:43, 07:20, 07:73, 15:23 and 16:21 and in the B*08:56, B*15:142 and B*51:68 alleles. Specific PCR fragment of 160 bp in the C*06:32 allele.
Primer mix 20: Specific PCR fragment of 115 bp in the C*06:29 and the C*07:134 alleles. Specific PCR fragment of 275 bp in the C*06:27 allele.
Primer mix 21: Specific PCR fragment of 190 bp in the C*06:36 allele. Specific PCR fragment of 380 bp in the C*06:25 allele.
Primer mix 24: Specific PCR fragment of 160 bp in the C*06:09 and 06:34 and the C*02:22, 05:08, 08:27, 08:29, 08:31, 12:31 and 18:03 and in the B*13:31, B*15:58, B*15:73, B*15:137, B*39:36 and B*55:21 alleles. Specific PCR fragment of 210 bp in the C*06:35 allele.
Primer mix 27: Specific PCR fragment of 190 bp in the C *06:42 allele. Specific PCR fragment of 225 bp in the C *06:40 allele.
'w', may be weakly amplified.

CELL LINE VALIDATION SHEET

HLA-C*06 SSP subtyping kit

					Well														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Prod. No.:	201187201	201187202	201187203	201187204	201187205	201187206	201187207	201187208	201187209	201187210	201187211	201187212	201187213	201187214	201187215	201187216
	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	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-

CELL LINE VALIDATION SHEET

HLA-C*06 SSP subtyping kit

					Well														
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
				Prod. No.:	201187217	201187218	201187219	201187220	201187221	201187222	201187223	201187224	201187225	201187226	201187227	201187228	201187229	201187230	201187231
	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CERTIFICATE OF ANALYSIS

Olerup SSP® HLA-C*06 SSP

Product number: **101.614-12 – including *Taq* polymerase**
Lot number: **31M**
Expiry date: **2014-January-01**
Number of tests: **12**
Number of wells per test: **31**

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2011-872-01	13	2011-872-13	25	2011-872-25
2	2011-872-02	14	2011-872-14	26	2011-872-26
3	2011-872-03	15	2011-872-15	27	2011-872-27
4	2011-872-04	16	2011-872-16	28	2011-872-28
5	2011-872-05	17	2011-872-17	29	2011-872-29
6	2011-872-06	18	2011-872-18	30	2011-872-30
7	2011-872-07	19	2011-872-19	31	2011-872-31
8	2011-872-08	20	2011-872-20		
9	2011-872-09	21	2011-872-21		
10	2011-872-10	22	2011-872-22		
11	2011-872-11	23	2011-872-23		
12	2011-872-12	24	2011-872-24		

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

No DNAs carrying the alleles to be amplified by primer solutions 7, 8, 10, 12 to 22 and 24 to 31 were available. The specificity of the primers in primer solutions 8, 10, 12, 14, 16, 19, 21, 22, 24, 27 and 30 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solutions 13, 17, 20 and 25 it was only possible to test the 5'-primer, the 3'-primer was not possible to test. In primer solutions 7, 15, 18, 26, 28, 29 and 31 it was only possible to test the 3'-primer, the 5'-primer was not possible to test.
In primer solution 3, 5, 10, 12, 16 and 21 one or two 5'-primers were not possible to test, and in primer solutions 10, 11, 19, 21 and 27 one 3'-primer was not possible to test.
Additional primers in primers solutions 5, 9 and 11 were tested by separately adding one 5'-primer or one 3'-primer.

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

Date of approval: 2011-July-15

Approved by:

Quality Control, Supervisor

Declaration of Conformity

Product name: *Olerup* SSP® HLA-C*06
Product number: 101.614-12
Lot number: 31M

Intended use: HLA-C*06 high resolution histocompatibility testing

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

We, *Olerup* SSP AB, hereby declare that this product, to which this Declaration of Conformity relates is in conformity with the following Standard(s) and other normative document(s) ISO 9001:2008 and ISO 13485:2003, following the provisions of the 98/79/EC Directive on *in vitro* diagnostic medical devices, Annex 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.

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

Stockholm, Sweden
2011-July-15

Olle Olerup

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**.