Lot No.: 74N **Lot-specific information**

Olerup SSP® HLA-C*15

Product number:	**101.626-12 – including *Taq* polymerase** **101.626-12u – without *Taq* polymerase**
Lot number:	**74N**
Expiry date:	**2014-November-01**
Number of tests:	**12**
Number of wells per test:	**27**
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. 74N.

CHANGES COMPARED TO THE PREVIOUS *OLERUP* SSP®
HLA-C*15 LOT (06M)

The HLA-C*15 kit is updated for new alleles to enable separation of:

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

Three wells have been added to the HLA-C*15 kit, wells **25 to 27**.

The Lot-specific information for HLA-C*15 including and without *Taq* polymerase is now described in one common Product Insert.

[1]As described in section Uniquely Identified Alleles.

The HLA-C*15 specificity and interpretation tables have been updated for the HLA-C alleles described since the previous *Olerup* SSP® HLA-C*15 lot was made **(Lot No. 06M)**.

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

Lot No.: 74N **Lot-specific information**

Well	5'-primer	3'-primer	rationale
13	-	-	Exchanged positive control primer pair.
19	Moved	Moved	Primer pair moved to well 27.
25	New	New	New primer pair for the C*15:52 allele.
26	New	New	New primer pair for the C*15:56 allele.
27	Added	Exchanged	Primer pair from well 19, exchanged 3'-primer to decrease primer oligomer formation.

Lot No.: 74N **Lot-specific information**

PRODUCT DESCRIPTION

HLA-C*15 SSP typing

CONTENT

The primer set contains 5'- and 3'-primers for identifying the C*15:02 to C*15:56 alleles.

PLATE LAYOUT

Each HLA-C*15 test consists of 27 PCR reactions in a 32 well cut PCR plate.
Wells 28 to 32 are 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**	**empty**	**empty**	**empty**	**empty**	**empty**

The 32 well PCR plate is marked with 'HLA-C*15' in silver/gray ink.
Well No. 1 is marked with the Lot No. '74N'.
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 heat-sealed 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

The interpretation of HLA-C*15 SSP subtypings will be influenced by four C*01, the C*02, most C*03, the C*04, the C*05, most C*06, most C*07, the C*08, the C*12, the C*14, the C*16, the C*17 and two C*18 alleles, when present on the other haplotype.
In addition, primer mix 7 amplifies the B*35:08:02, 35:08:05 and B*67:02 02 alleles, primer mix 8 weakly amplifies the B*07:78, B*13:18, B*13:31, B*13:41, B*15:73, B*54:10, B*54:20, B*55:09, B*55:21, B*55:37 and B*55:52 alleles, primer mix 12 amplifies the B*40:164 allele, primer mix 14 amplifies the B*46:11, B*46:18, B*56:08 and B*56:14 alleles, primer mix 18 amplifies the B*15:200, B*51:115 and B*58:05 alleles and primer mix 26 amplifies the B*35:132 allele.

UNIQUELY IDENTIFIED ALLELES

All the HLA-C*15 alleles, i.e. **C*15:02 to C*15:56**, recognized by the HLA Nomenclature Committee in January 2012[1] will be amplified by the primers in the HLA-C*15 SSP kit.

The HLA-C*15 kit enables separation of the confirmed HLA-C*15 alleles as listed in the IMGT/HLA database. An HLA allele is listed as confirmed by IMGT/HLA if it has been sequenced by more than a single laboratory or from multiple sources. Current allele confirmation status for HLA-C*15 alleles is listed below.

Lot No.: 74N **Lot-specific information**

The HLA-C*15 kit also enables identification of polymorphisms in exons outside of the region encoding the peptide binding domain and of null and alternatively expressed alleles

The C*15:31 and C*15:33 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 18.
The C*15:32Q and C*15:41 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 24.
The C*15:34 and C*15:39 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 17.
The C*15:35 and C*15:47 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 21.
The C*15:44 and C*15:45 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 20.

The HLA-C*15 subtyping kit cannot distinguish the following silent mutations: C*15:02:01 to C*15:02:07 alleles, the C*15:05:01 to C*15:05:06 alleles, the C*15:06:01 to C*15:06:03 alleles or the C*15:10:01 and C*15:10:02 alleles.

[1]HLA-C alleles listed on the IMGT/HLA web page 2012-January-12, release 3.7.0, www.ebi.ac.uk/imgt/hla.

ALLELE CONFIRMATION STATUS

Allele	Status[1]	Allele	Status[1]	Allele	Status[1]	Allele	Status[1]
C*15:02:01	**Confirmed**	**C*15:09**	**Confirmed**	C*15:29	Unconfirmed	C*15:49	Unconfirmed
C*15:02:02	Unconfirmed	C*15:10:01	Unconfirmed	**C*15:30**	**Confirmed**	C*15:50	Unconfirmed
C*15:02:03	**Confirmed**	**C*15:10:02**	**Confirmed**	**C*15:31**	**Confirmed**	C*15:51	Unconfirmed
C*15:02:04	**Confirmed**	**C*15:11**	**Confirmed**	**C*15:32Q**	**Confirmed**	**C*15:52**	**Confirmed**
C*15:02:05	**Confirmed**	C*15:12	Unconfirmed	**C*15:33**	**Confirmed**	C*15:53	Unconfirmed
C*15:02:06	Unconfirmed	**C*15:13**	**Confirmed**	C*15:34	Unconfirmed	C*15:54	Unconfirmed
C*15:02:07	**Confirmed**	C*15:15	Unconfirmed	C*15:35	Unconfirmed	C*15:55	Unconfirmed
C*15:03	Unconfirmed	C*15:16	Unconfirmed	**C*15:36**	**Confirmed**	**C*15:56**	**Confirmed**
C*15:04	**Confirmed**	**C*15:17**	**Confirmed**	C*15:37	Unconfirmed		
C*15:05:01	Unconfirmed	C*15:18	Unconfirmed	C*15:38	Unconfirmed		
C*15:05:02	**Confirmed**	**C*15:19**	**Confirmed**	**C*15:39**	**Confirmed**		
C*15:05:03	Unconfirmed	C*15:20	Unconfirmed	**C*15:40**	**Confirmed**		
C*15:05:04	Unconfirmed	C*15:21	Unconfirmed	C*15:41	Unconfirmed		
C*15:05:05	Unconfirmed	**C*15:22**	**Confirmed**	**C*15:42**	**Confirmed**		
C*15:05:06	**Confirmed**	**C*15:23**	**Confirmed**	C*15:43	Unconfirmed		
C*15:06:01	**Confirmed**	**C*15:24**	**Confirmed**	C*15:44	Unconfirmed		
C*15:06:02	**Confirmed**	C*15:25	Unconfirmed	C*15:45	Unconfirmed		
C*15:06:03	Unconfirmed	**C*15:26**	**Confirmed**	C*15:46	Unconfirmed		
C*15:07	**Confirmed**	**C*15:27**	**Confirmed**	C*15:47	Unconfirmed		
C*15:08	Unconfirmed	**C*15:28**	**Confirmed**	C*15:48	Unconfirmed		

[1]Allele status "confirmed" or "unconfirmed" as listed on the IMGT/HLA web page 2012-January-12, release 3.7.0, www.ebi.ac.uk/imgt/hla.

Lot No.: 74N **Lot-specific information**

RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 68 alleles generate 43 amplification patterns that can be combined in 946 homozygous and heterozygous combinations. 500 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.

+--+---- -------+ -------- ---	*15:20, *15:27 = *15:27, *15:27
-+-+---- ------+- -------- --+	*15:04, *15:30 = *15:30, *15:30
+------- --++-+-- -------- ---	*15:17, *15:43 = *15:43, *15:43
+------- +-+--+-- -------- ---	*15:11, *15:11 = *15:11, *15:17
+-+----- --+--+-- -------- ---	*15:16, *15:16 = *15:16, *15:17
++---+-- ------+- -------- ---	*15:06:01, *15:06:01 = *15:06:01, *15:40
++-+---- ------+- -------- ---	*15:04, *15:09 = *15:04, *15:20 = *15:09, *15:09 = *15:09, *15:20
++------ --+---+- -------- -+-	*15:02:01, *15:56 = *15:56, *15:56
++------ --+---+- -------- +--	*15:02:01, *15:52 = *15:52, *15:52
++------ --+---+- -------+ ---	*15:02:01, *15:32Q = *15:32Q, *15:32Q
++------ --+---+- -----+-- ---	*15:02:01, *15:38 = *15:38, *15:38
++------ --+---+- ----+--- ---	*15:02:01, *15:35 = *15:35, *15:35
++------ --+---+- ---+---- ---	*15:02:01, *15:44 = *15:44, *15:44
++------ --+---+- --+----- ---	*15:02:01, *15:42 = *15:42, *15:42
++------ --+---+- -+------ ---	*15:02:01, *15:31 = *15:31, *15:31
++------ --+---+- +------- ---	*15:02:01, *15:34 = *15:34, *15:34
++------ --+---++ -------- ---	*15:02:01, *15:15 = *15:15, *15:15
++------ --+---++- -------- ---	*15:02:01, *15:13 = *15:02:01, *15:17 = *15:13, *15:13 = *15:13, *15:17
++------ --+-+-+- -------- ---	*15:02:01, *15:12 = *15:02:01, *15:24 = *15:12, *15:12 = *15:12, *15:24
++------ +-+---+- -------- ---	*15:02:01, *15:18 = *15:18, *15:18
++-----+ --+---+- -------- ---	*15:02:01, *15:08 = *15:08, *15:08
++---+-- ----+-+- -------- ---	*15:06:01, *15:24 = *15:24, *15:40
++---+-- --+---+- -------- ---	*15:02:01, *15:06:01 = *15:02:01, *15:37 = *15:02:01, *15:40 = *15:06:01, *15:37 = *15:37, *15:37 = *15:37, *15:40
++--+--- ------+- ------+- ---	*15:05:01, *15:29 = *15:29, *15:29
++--+--- ------+- --+----- ---	*15:05:01, *15:46 = *15:46, *15:46
++--+--- ------+- +------- ---	*15:05:01, *15:36 = *15:36, *15:36
++--+--- +-----+- -------- ---	*15:05:01, *15:23 = *15:23, *15:23
++--++-- ------+- -------- ---	*15:05:01, *15:06:01 = *15:05:01, *15:22 = *15:05:01, *15:40 = *15:06:01, *15:22 = *15:22, *15:22 = *15:22, *15:40
++-+---- ------+- -------- --+	*15:09, *15:30 = *15:20, *15:30
++-+---- ------++ -------- ---	*15:04, *15:27 = *15:09, *15:27
++-+---- ----+-+- -------- ---	*15:04, *15:24 = *15:09, *15:24 = *15:20, *15:24
++-+---- --+---+- -------- ---	*15:02:01, *15:04 = *15:02:01, *15:09 = *15:02:01, *15:20
++-+---+ ------+- -------- ---	*15:04, *15:19 = *15:09, *15:19 = *15:19, *15:19 = *15:19, *15:20
++-+-+-- ------+- -------- ---	*15:04, *15:06:01 = *15:06:01, *15:09 = *15:06:01, *15:20 = *15:09, *15:40 = *15:20, *15:40
++-++--- ------+- -------- ---	*15:04, *15:05:01 = *15:05:01, *15:09 = *15:05:01, *15:20
+++----- --+---+- -------- ---	*15:02:01, *15:03 = *15:03, *15:03
+-+---+- --++-+-- -------- ---	*15:16, *15:25 = *15:17, *15:25 = *15:25, *15:43
++------ --+--++- -------- -+-	*15:13, *15:56 = *15:17, *15:56
++------ --+--++- -------- +--	*15:13, *15:52 = *15:17, *15:52
++------ --+--++- -------+ ---	*15:13, *15:32Q = *15:17, *15:32Q
++------ --+--++- -----+-- ---	*15:13, *15:38 = *15:17, *15:38
++------ --+--++- ----+--- ---	*15:13, *15:35 = *15:17, *15:35
++------ --+--++- ---+---- ---	*15:13, *15:44 = *15:17, *15:44
++------ --+--++- --+----- ---	*15:13, *15:42 = *15:17, *15:42
++------ --+--++- -+------ ---	*15:13, *15:31 = *15:17, *15:31

Lot No.: 74N

				Lot-specific information
++------	--+--++-	+-------	---	*15:13, *15:34 = *15:17, *15:34
++------	--+--+++	--------	---	*15:13, *15:15 = *15:15, *15:17
++------	--+-+-+-	--------	-+-	*15:12, *15:56 = *15:24, *15:56
++------	--+-+-+-	--------	+--	*15:12, *15:52 = *15:24, *15:52
++------	--+-+-+-	-------+	---	*15:12, *15:32Q = *15:24, *15:32Q
++------	--+-+-+-	------+-	---	*15:12, *15:48 = *15:24, *15:48
++------	--+-+-+-	-----+--	---	*15:12, *15:38 = *15:24, *15:38
++------	--+-+-+-	----+---	---	*15:12, *15:35 = *15:24, *15:35
++------	--+-+-+-	---+----	---	*15:12, *15:44 = *15:24, *15:44
++------	--+-+-+-	--+-----	---	*15:12, *15:42 = *15:24, *15:42
++------	--+-+-+-	-+------	---	*15:12, *15:31 = *15:24, *15:31
++------	--+-+-+-	+-------	---	*15:12, *15:34 = *15:24, *15:34
++------	--+-+-++	--------	---	*15:12, *15:15 = *15:15, *15:24
++------	--+-+++-	--------	---	*15:12, *15:13 = *15:12, *15:17 = *15:13, *15:24 = *15:17, *15:24
++------	--++-++-	--------	---	*15:02:01, *15:43 = *15:13, *15:43
++------	-++-+-+-	--------	---	*15:10:01, *15:12 = *15:10:01, *15:24
++------	+-+-+-+-	--------	---	*15:02:01, *15:11 = *15:11, *15:13 = *15:11, *15:18 = *15:13, *15:18 = *15:17, *15:18
++------	+-+-+-+-	--------	---	*15:12, *15:18 = *15:18, *15:24
++------+	--+--++-	--------	---	*15:08, *15:13 = *15:08, *15:17
++------+	--+-+-+-	--------	---	*15:08, *15:12 = *15:08, *15:24
++-----+-	--+-+-+-	--------	---	*15:02:01, *15:07 = *15:02:01, *15:21 = *15:07, *15:21 = *15:21, *15:21
++-----+-	--++-+--	--------	---	*15:07, *15:17 = *15:07, *15:43
++---+--	--+---+-	--------	-+-	*15:06:01, *15:56 = *15:37, *15:56 = *15:40, *15:56
++---+--	--+---+-	--------	+--	*15:06:01, *15:52 = *15:37, *15:52 = *15:40, *15:52
++---+--	--+---+-	-------+	---	*15:06:01, *15:32Q = *15:32Q, *15:37 = *15:32Q, *15:40
++---+--	--+---+-	------+-	---	*15:06:01, *15:48 = *15:37, *15:48 = *15:40, *15:48
++---+--	--+---+-	-----+--	---	*15:06:01, *15:38 = *15:37, *15:38 = *15:38, *15:40
++---+--	--+---+-	----+---	---	*15:06:01, *15:35 = *15:35, *15:37 = *15:35, *15:40
++---+--	--+---+-	---+----	---	*15:06:01, *15:44 = *15:37, *15:44 = *15:40, *15:44
++---+--	--+---+-	--+-----	---	*15:06:01, *15:42 = *15:37, *15:42 = *15:40, *15:42
++---+--	--+---+-	-+------	---	*15:06:01, *15:31 = *15:31, *15:37 = *15:31, *15:40
++---+--	--+---+-	+-------	---	*15:06:01, *15:34 = *15:34, *15:37 = *15:34, *15:40
++---+--	--+---++	--------	---	*15:02:01, *15:26 = *15:06:01, *15:15 = *15:06:01, *15:26 = *15:15, *15:26 = *15:15, *15:37 = *15:15, *15:40 = *15:26, *15:26 = *15:26, *15:37 = *15:26, *15:40
++---+--	--+---++	--------	---	*15:06:01, *15:13 = *15:06:01, *15:17 = *15:13, *15:37 = *15:13, *15:40 = *15:17, *15:37 = *15:17, *15:40
++---+--	--+-+-+-	--------	---	*15:06:01, *15:12 = *15:12, *15:37 = *15:12, *15:40 = *15:24, *15:37
++---+--	-+---+-	--------	---	*15:06:01, *15:10:01 = *15:10:01, *15:37 = *15:10:01, *15:40
++---+--	+-+---+-	--------	---	*15:06:01, *15:18 = *15:18, *15:37 = *15:18, *15:40
++---+-+	--+---+-	--------	---	*15:06:01, *15:08 = *15:08, *15:37 = *15:08, *15:40
++--+---	--+---+-	------+-	---	*15:02:01, *15:29 = *15:05:01, *15:48 = *15:29, *15:48
++--+---	--+---+-	--+-----	---	*15:02:01, *15:46 = *15:05:01, *15:42 = *15:42, *15:46
++--+---	--+---+-	+-------	---	*15:02:01, *15:36 = *15:05:01, *15:34 = *15:34, *15:36
++--+---	--+--++-	--------	---	*15:05:01, *15:13 = *15:05:01, *15:17
++--+---	+-+---+-	--------	---	*15:02:01, *15:23 = *15:05:01, *15:18 = *15:18, *15:23
++--++--	-------+	------+-	---	*15:06:01, *15:29 = *15:22, *15:29 = *15:29, *15:40
++--++--	-------+	--+-----	---	*15:06:01, *15:46 = *15:22, *15:46 = *15:40, *15:46
++--++--	-------+	+-------	---	*15:06:01, *15:36 = *15:22, *15:36 = *15:36, *15:40
++--++--	--+---+-	--------	---	*15:02:01, *15:22 = *15:05:01, *15:37 = *15:22, *15:37
++--++--	+------+-	--------	---	*15:06:01, *15:23 = *15:22, *15:23 = *15:23, *15:40
++-+----	--+---+-	--------	-+-	*15:04, *15:56 = *15:09, *15:56 = *15:20, *15:56
++-+----	--+---+-	--------	+--	*15:04, *15:52 = *15:09, *15:52 = *15:20, *15:52
++-+----	--+---+-	-------+	---	*15:04, *15:32Q = *15:09, *15:32Q = *15:20, *15:32Q

Lot No.: 74N

				Lot-specific information
++-+----	--+---+-	------+-	---	*15:04, *15:48 = *15:09, *15:48
++-+----	--+---+-	-----+--	---	*15:04, *15:38 = *15:09, *15:38 = *15:20, *15:38
++-+----	--+---+-	----+---	---	*15:04, *15:35 = *15:09, *15:35 = *15:20, *15:35
++-+----	--+---+-	---+----	---	*15:04, *15:44 = *15:09, *15:44 = *15:20, *15:44
++-+----	--+---+-	--+-----	---	*15:04, *15:42 = *15:09, *15:42 = *15:20, *15:42
++-+----	--+---+-	-+------	---	*15:04, *15:31 = *15:09, *15:31 = *15:20, *15:31
++-+----	--+---+-	+-------	---	*15:04, *15:34 = *15:09, *15:34 = *15:20, *15:34
++-+----	--+---++	--------	---	*15:02:01, *15:27 = *15:04, *15:15 = *15:09, *15:15 = *15:15, *15:20 = *15:15, *15:27
++-+----	--+--++-	--------	---	*15:04, *15:13 = *15:04, *15:17 = *15:09, *15:13 = *15:09, *15:17 = *15:13, *15:20
++-+----	--+-+-+-	--------	---	*15:04, *15:12 = *15:09, *15:12 = *15:12, *15:20
++-+----	-+----+-	--------	---	*15:04, *15:10:01 = *15:09, *15:10:01
++-+----	+-+---+-	--------	---	*15:04, *15:18 = *15:09, *15:18 = *15:18, *15:20
++-+---+	--+---+-	--------	---	*15:02:01, *15:19 = *15:04, *15:08 = *15:08, *15:09 = *15:08, *15:19 = *15:08, *15:20
++-+-+--	-------+	--------	---	*15:06:01, *15:27 = *15:27, *15:40
++-+-+--	--+---+-	--------	---	*15:04, *15:37 = *15:09, *15:37 = *15:20, *15:37
++-+-+-+	-------+	--------	---	*15:06:01, *15:19 = *15:19, *15:40
++-++---	-------+	------+-	---	*15:04, *15:29 = *15:09, *15:29 = *15:20, *15:29
++-++---	-------+	--+-----	---	*15:04, *15:46 = *15:09, *15:46 = *15:20, *15:46
++-++---	-------+	+-------	---	*15:04, *15:36 = *15:09, *15:36 = *15:20, *15:36
++-++---	+------+	--------	---	*15:04, *15:23 = *15:09, *15:23 = *15:20, *15:23
++-+++--	-------+	--------	---	*15:04, *15:22 = *15:09, *15:22 = *15:20, *15:22
+++-----	--+--++-	--------	---	*15:02:01, *15:16 = *15:03, *15:13 = *15:03, *15:16 = *15:03, *15:17 = *15:13, *15:16
+++-----	--+-+-+-	--------	---	*15:03, *15:12 = *15:03, *15:24
+++-----	--++---+	--------	---	*15:02:01, *15:28 = *15:03, *15:28 = *15:28, *15:28
+++--+--	--+---+-	--------	---	*15:03, *15:06:01 = *15:03, *15:37 = *15:03, *15:40
+++----	--+---+-	--------	---	*15:03, *15:04 = *15:03, *15:09 = *15:03, *15:20
++------	--+++-+-	--------	---	*15:12, *15:43 = *15:24, *15:43
++------	+-+-+++-	--------	---	*15:11, *15:12 = *15:11, *15:24
++----+-	--++---+	--------	-+-	*15:07, *15:56 = *15:21, *15:56
++----+-	--++---+	--------	+--	*15:07, *15:52 = *15:21, *15:52
++----+-	--++---+	-------+	---	*15:07, *15:32Q = *15:21, *15:32Q
++----+-	--++--+-	-----+--	---	*15:07, *15:38 = *15:21, *15:38
++----+-	--++--+-	----+---	---	*15:07, *15:35 = *15:21, *15:35
++----+-	--++--+-	---+----	---	*15:07, *15:44 = *15:21, *15:44
++----+-	--++--+-	--+-----	---	*15:07, *15:42 = *15:21, *15:42
++----+-	--++--+-	-+------	---	*15:07, *15:31 = *15:21, *15:31
++----+-	--++--+-	+-------	---	*15:07, *15:34 = *15:21, *15:34
++----+-	--++--++	--------	---	*15:07, *15:15 = *15:15, *15:21
++----+-	--++--++	--------	---	*15:07, *15:13 = *15:13, *15:21 = *15:17, *15:21 = *15:21, *15:43
++----+-	--++-+-+	--------	---	*15:07, *15:12 = *15:07, *15:24 = *15:12, *15:21 = *15:21, *15:24
++----+-	-++--+-+	--------	---	*15:07, *15:10:01 = *15:10:01, *15:21
++----+-	+-++--+-	--------	---	*15:07, *15:18 = *15:18, *15:21
++----++	--++--+-	--------	---	*15:07, *15:08 = *15:08, *15:21
++---+--	--+--+++	--------	---	*15:13, *15:26 = *15:17, *15:26
++---+--	--+-+-++	--------	---	*15:12, *15:26 = *15:24, *15:26
++---+--	--++-++-	--------	---	*15:06:01, *15:43 = *15:37, *15:43 = *15:40, *15:43
++---+--	+-+--++-	--------	---	*15:06:01, *15:11 = *15:11, *15:37 = *15:11, *15:40
++---++-	--++--+-	--------	---	*15:06:01, *15:07 = *15:06:01, *15:21 = *15:07, *15:37 = *15:07, *15:40 = *15:21, *15:37 = *15:21, *15:40
++--+---	--+---+-	--+---+-	---	*15:29, *15:42 = *15:46, *15:48
++--+---	--+---+-	+-----+-	---	*15:29, *15:34 = *15:36, *15:48
++--+---	--+---+-	+-+-----	---	*15:34, *15:46 = *15:36, *15:42
++--+---	--+--++-	------+-	---	*15:13, *15:29 = *15:17, *15:29

Lot No.: 74N **Lot-specific information**

++−−+−−−	−−+−−++−	−−+−−−−−	−−−	*15:13, *15:46 = *15:17, *15:46
++−−+−−−	−−+−−++−	+−−−−−−−	−−−	*15:13, *15:36 = *15:17, *15:36
++−−+−−−	+−+−−−+−	−−−−−−+−	−−−	*15:18, *15:29 = *15:23, *15:48
++−−+−−−	+−+−−−+−	−−+−−−−−	−−−	*15:18, *15:46 = *15:23, *15:42
++−−+−−−	+−+−−−+−	+−−−−−−−	−−−	*15:18, *15:36 = *15:23, *15:34
++−−+−−−	+−+−−++−	−−−−−−−−	−−−	*15:05:01, *15:11 = *15:11, *15:23 = *15:13, *15:23 = *15:17, *15:23
++−−+−+−	−−+−−−+−	−−−−−−−−	−−−	*15:05:01, *15:07 = *15:05:01, *15:21
++−−++−−	−−+−−−+−	−−−−−−+−	−−−	*15:22, *15:48 = *15:29, *15:37
++−−++−−	−−+−−−+−	−−+−−−−−	−−−	*15:22, *15:42 = *15:37, *15:46
++−−++−−	−−+−−−+−	+−−−−−−−	−−−	*15:22, *15:34 = *15:36, *15:37
++−−++−−	−−+−−−++	−−−−−−−−	−−−	*15:05:01, *15:26 = *15:15, *15:22 = *15:22, *15:26
++−−++−−	−−+−−++−	−−−−−−−−	−−−	*15:13, *15:22 = *15:17, *15:22
++−−++−−	+−+−−−+−	−−−−−−−−	−−−	*15:18, *15:22 = *15:23, *15:37
++−+−−−−	−−+−−++−	−−−−−−−−	−−+	*15:13, *15:30 = *15:17, *15:30
++−+−−−−	−−+−++−−	−−−−−−−−	−−−	*15:04, *15:43 = *15:09, *15:43
++−+−−−−	+−+−−++−	−−−−−−−−	−−−	*15:04, *15:11 = *15:09, *15:11
++−+−−−+	−−+−−−++	−−−−−−−−	−−−	*15:08, *15:27 = *15:15, *15:19
++−+−−−+	−−+−−++−	−−−−−−−−	−−−	*15:13, *15:19 = *15:17, *15:19
++−+−−+−	−−+−−−+−	−−−−−−−−	−−−	*15:04, *15:07 = *15:04, *15:21 = *15:07, *15:09 = *15:09, *15:21 = *15:20, *15:21
++−+−+−−	−−+−−−++	−−−−−−−−	−−−	*15:04, *15:26 = *15:09, *15:26 = *15:20, *15:26 = *15:26, *15:27 = *15:27, *15:37
+++−−−−−	−−+−++−	−−−−−−−−	−−−	*15:12, *15:16 = *15:16, *15:24
+++−−−−−	−−+−++−	−−−−−−−−	−−−	*15:03, *15:43 = *15:13, *15:28 = *15:16, *15:28 = *15:17, *15:28 = *15:28, *15:43
+++−−−−−	−−+−−+−	−−−−−−−−	−−−	*15:12, *15:28 = *15:24, *15:28
+++−−−−−	+−+−−++−	−−−−−−−−	−−−	*15:03, *15:11 = *15:16, *15:18
+++−−−+−	−−+−−−+−	−−−−−−−−	−−−	*15:02:01, *15:25 = *15:03, *15:07 = *15:03, *15:21 = *15:03, *15:25 = *15:07, *15:28 = *15:21, *15:25 = *15:21, *15:28 = *15:25, *15:28
+++−−+−−	−−+−−++−	−−−−−−−−	−−−	*15:06:01, *15:16 = *15:16, *15:37 = *15:16, *15:40
+++−−+−−	−−+−−−+−	−−−−−−−−	−−−	*15:06:01, *15:28 = *15:28, *15:37 = *15:28, *15:40
+++−−−−−	−−+−−++−	−−−−−−−−	−−−	*15:04, *15:16 = *15:09, *15:16
+++−−−−−	−−+−−−+−	−−−−−−−−	−−−	*15:04, *15:28 = *15:09, *15:28 = *15:20, *15:28
++−−−++−	−−+−−−++	−−−−−−−−	−−−	*15:07, *15:26 = *15:21, *15:26
++−−+−+−	−−+−−−+−	−−−−−−+−	−−−	*15:07, *15:29 = *15:21, *15:29
++−−+−+−	−−+−−−+−	−−+−−−−−	−−−	*15:07, *15:46 = *15:21, *15:46
++−−+−+−	−−+−−−+−	+−−−−−−−	−−−	*15:07, *15:36 = *15:21, *15:36
++−−+−+−	+−+−−−+−	−−−−−−−−	−−−	*15:07, *15:23 = *15:21, *15:23
++−−+++−	−−+−−−+−	−−−−−−−−	−−−	*15:07, *15:22 = *15:21, *15:22
++−+−−+−	−−+−−−+−	−−−−−−−−	−−+	*15:07, *15:30 = *15:21, *15:30
++−+−−++	−−+−−−+−	−−−−−−−−	−−−	*15:07, *15:19 = *15:19, *15:21
+++−−−+−	−−+−−++−	−−−−−−−−	−−−	*15:13, *15:25 = *15:16, *15:21

*15:02:01 = *15:02:01-15:02:07 and 15:49-15:51 and 15:53
*15:05:01 = *15:05:01-15:05:06 and 15:54
*15:06:01 = * *15:06:01-15:06:03 and 15:55
*15:10:01 = *15:10:01-15:10:02
*15:31 = *15:31 and 15:33
*15:32Q = *15:32Q and 15:41
*15:34 = *15:34 and 15:39
*15:35 = *15:35 and 15:47
*15:44 = *15:44 and 15:45

Lot No.: 74N **Lot-specific information**

SPECIFICITY TABLE

HLA-C*15 SSP subtyping

Specificities and sizes of the PCR products of the 27 primer mixes used for HLA-C*15 SSP subtyping

Primer Mix	Size of spec. PCR product[1]	Size of control band[2]	Amplified HLA-C*15 alleles[3]	Other amplified HLA Class I alleles[4]
1	325 bp	**800 bp**	*15:02:01-15:03, 15:05:01-15:13, 15:15-15:24, 15:26-15:29, 15:31-15:39, 15:41-15:56	*02:06, 02:23, 02:36, 03:81, 07:123, 07:173, 12:15, 16:20
2	175 bp	1070 bp	*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, 15:44-15:56	*03:08, 03:29, 03:31, 07:20, 07:96
3[5,9]	70 bp, 195 bp	1070 bp	*15:03, 15:16, 15:25[W], 15:28	*02:12[W], 02:49, 02:55, 03:15, 03:27[W], 03:38:01[W]-03:38:02[W], 03:69[W], 03:130, 03:136[W], 04:03, 04:06, 04:16, 04:80, 04:107, 07:20[W], 07:96[W], 07:127[W]
4	315 bp	1070 bp	*15:04, 15:09, 15:19-15:20, 15:27, 15:30	*01:04, 01:21, 01:54, 02:02:01-02:02:03, 02:02:05-02:05, 02:08-02:18, 02:20-02:21, 02:24-02:40, 02:42-02:46, 02:48-02:55, 03:02:01-03:02:08, 03:14-03:16, 03:33, 03:36, 03:40:01-03:40:02, 03:42-03:43:02, 03:60, 03:71, 03:84, 03:89, 03:95, 03:108, 03:110, 03:119, 03:121N, 03:132, 03:139, 04:54, 05:04, 06:02:01:01-06:02:01:02, 06:02:03-06:08, 06:10-06:33, 06:35-06:37, 06:39-06:69, 07:01:01-07:03, 07:05-07:10, 07:14-07:27:02, 07:30-07:33N, 07:35-07:40, 07:42-07:44, 07:46-07:62, 07:64-07:100, 07:102-07:138, 07:140-07:141, 07:143-07:176, 07:178-07:180, 07:182-07:183, 07:185-07:198N, 07:200-07:218,

Lot No.: 74N **Lot-specific information**

				07:220, 08:09, 08:11, 12:02:01-12:14:02, 12:16-12:30, 12:32-12:68, 14:02:01-14:25, 14:27-14:34, 16:01:01-16:02:09, 16:04, 16:06-16:09, 16:11-16:44
5[5,6]	100 bp	1070 bp	*15:05:01-15:05:06, 15:22-15:23, 15:29, 15:36, 15:46, 15:54	
6[10]	305 bp, 345 bp, 370 bp	1070 bp	*15:06:01-15:06:03, 15:22, 15:26, 15:37, 15:40, 15:55	
7	140 bp	**800 bp**	*15:07, 15:21, 15:25	*01:21, 02:12, 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, 08:11-08:56, 12:02:01-12:03:03, 12:03:05-12:03:08, 12:03:10-12:03:20, 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, 12:61-12:68, 14:02:03, 14:03, 14:08, 14:10, 14:22, 16:01:01, 16:01:03-16:01:07, 16:04, 16:06-16:08, 16:10-16:11, 16:13-16:18, 16:20-16:24, 16:26-16:44, **B*35:08:02, B*35:08:05, B*67:02**
8[11]	160 bp, 185 bp	1070 bp	*15:08, 15:19	*02:06, 02:47, 12:15, **B*07:78^{W}, B*13:18^{W}, B*13:31^{W}, B*13:41^{W}, B*15:73^{W}, B*54:10^{W}, B*54:20^{W}, B*55:09^{W}, B*55:21^{W}, B*55:37^{W}, B*55:52^{W}**
9[12]	135 bp, 305 bp	1070 bp	*15:11, 15:18, 15:23	*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, 02:46-02:55, 04:03, 04:06, 04:42, 04:80, 04:107, 05:26, 05:43, 06:05, 07:02:09, 08:37, 12:16, 16:21, 16:34
10	170 bp	1070 bp	*15:10:01-15:10:02	*02:08, 03:18, 03:64, 04:01:01:01-04:01:02, 04:01:04-04:01:36, 04:04:01-04:05, 04:07-04:15:03, 04:17-04:20, 04:23-04:79, 04:81-04:106,

Lot No.: 74N **Lot-specific information**

				05:01:01:01-05:01:18, 05:03-05:57, 05:59-05:72, 06:28, 07:64, 07:73, 07:92, 07:172, 08:01:01-08:13, 08:15:01-08:56, 12:02:01-12:15, 12:17-12:68, 14:02:01-14:02:09, 14:04-14:09, 14:11-14:17, 14:19-14:21N, 14:23-14:34, 16:01:01-16:02:09, 16:04, 16:06-16:33, 16:35-16:44, 17:01:01:01-17:11, 18:04
11	315 bp	**800 bp**	*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	*02:06, 02:47, 03:12, 03:19, 03:102, 12:15
12[5,13]	100 bp, 240 bp	1070 bp	*15:07, 15:21, 15:25, 15:28, 15:43	*02:12, 02:27:01-02:27:02, 03:02:01-03:03:14, 03:03:15[w], 03:03:16-03:04:16, 03:04:18-03:06, 03:08-03:14, 03:16-03:17, 03:19-03:38:02, 03:40:01-03:44, 03:46-03:66, 03:68-03:98, 03:100-03:114, 03:116-03:129, 03:131-03:133, 03:135-03:136, 03:138-03:139, 07:96, 16:34, **B*40:164**
13[5,14]	125 bp, 185 bp	1070 bp	*15:12, 15:24	*04:52, 04:55, 04:89, 05:47, 05:55, 12:58, 14:10
14[15]	130 bp, 440 bp	**800 bp**	*15:11, 15:13, 15:16-15:17, 15:43	*02:06, 02:47, 03:12, 03:19, 03:102, 12:15, **B*46:11, B*46:18, B*56:08, B*56:14**
15[5]	85 bp	1070 bp	*15:02:01-15:06:03, 15:08-15:10:02, 15:12-15:13, 15:15, 15:18-15:19, 15:21-15:24, 15:26, 15:28-15:42, 15:44-15:47, 15:49-15:56	*03:29, 05:36, 06:44, 07:07, 07:09, 18:05
16[5,16]	90 bp, 165 bp, 345 bp	1070 bp	*15:15, 15:26-15:27	
17[8,17]	140 bp, 215 bp, 295 bp	1070 bp	*15:34, 15:36, 15:39	*01:30, 08:51

Lot No.: 74N **Lot-specific information**

18[5,7,18]	85 bp, 160 bp	1070 bp	*15:31, 15:33	*07:123, 07:173, **B*15:200, B*51:115, B*58:05**
19[19]	165 bp, 355 bp	1070 bp	*15:42, 15:46	
20[5,20]	120 bp, 235 bp	1070 bp	*15:44-15:45	
21[21]	170 bp, 445 bp	1070 bp	*15:35, 15:47	*02:35, 05:21
22	225 bp	**800 bp**	*15:38	
23[6,22]	175 bp, 545 bp	1070 bp	*15:29, 15:48	*08:22, 08:56
24[23]	175 bp, 380 bp	1070 bp	*15:32Q, 15:41	
25	225 bp	1070 bp	*15:52	
26	205 bp	1070 bp	*15:56	**B*35:132**
27	330 bp	1070 bp	*15:30	*07:174

[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 C*15 high 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 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*15 SSP subtyping.
In addition, wells number 7, 11, 14 and 22 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band.
In the presence of a specific amplification the intensity of the control band often decreases.
[3]For several HLA-C*15 alleles 4th, 5th and 6th 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 the 4th, 5th and 6th exon or in introns are conserved within allelic groups.
[4]Due to the sharing of sequence motifs between HLA Class I alleles non-HLA-C*15 alleles will be amplified by most primer mixes. In addition, primer mix 7 amplifies the B*35:08:02, 35:08:05 and B*67:02 02 alleles, primer mix 8 weakly amplifies the B*07:78, B*13:18, B*13:31, B*13:41, B*15:73, B*54:10, B*54:20, B*55:09, B*55:21, B*55:37 and B*55:52 alleles, primer mix 12 amplifies the B*40:164 allele, primer mix 14 amplifies the B*46:11, B*46:18, B*56:08 and

Lot No.: 74N **Lot-specific information**

B*56:14 alleles, primer mix 18 amplifies the B*15:200, B*51:115 and B*58:05 alleles and primer mix 26 amplifies the B*35:132 allele.

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

[6]Primer mixes 5 and 23 may give a lower yield of HLA-specific PCR products than the other HLA-C*15 primer mixes.

[7]Primer mix 18 may have tendencies of primer oligomer formation.

[8]Primer mix 17 may have a tendency of giving rise to nonspecific amplifications.

[9]Primer mix 3: Specific PCR fragment of 70 bp in the C*15:28 allele. Specific PCR fragment of 195 bp in the C*15:03, 15:16 and 15:25[w] and in the C*02:12[w], 02:49, 02:55, 03:15, 03:27[w], 03:38:01[w]-03:38:02[w], 03:69[w], 03:130, 03:136[w], 04:03, 04:06, 04:16, 04:80, 04:107, 07:20[w], 07:96[w] and 07:127[w] alleles.

[10]Primer mix 6: Specific PCR fragment of 305 bp in the C*15:06:01-15:06:03, 15:40 and 15:55 alleles. Specific PCR fragment of 345 bp in the C*15:26 allele. Specific PCR fragment of 370 bp in the C*15:22, 15:37 and 15:55 alleles.

[11]Primer mix 8: Specific PCR fragment of 160 bp in the C*15:08 and in the C*02:06, 02:47 and 12:15 and the B*07:78[w], B*13:18[w], 13:31[w], 13:41[w], B*15:73[w], B*54:10[w], B*54:20[w], B*55:09[w], B*55:21[w], B*55:37[w] and B*55:52[w] alleles. Specific PCR fragment of 185 bp in the C*15:19 allele.

[12]Primer mix 9: Specific PCR fragment of 135 bp in the C*15:11 and 15:23 and in the C*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, 02:46-02:55, 04:03, 04:06, 04:42, 04:80, 04:107, 05:26, 05:43, 06:05, 07:02:09, 08:37, 12:16, 16:21 and 16:34 alleles. Specific PCR fragment of 305 bp in the C*15:18 allele.

[13]Primer mix 12: Specific PCR fragment of 100 bp in the C*15:28 allele. Specific PCR fragment of 240 bp in the C*15:07, 15:21, 15:25 and 15:43 and in the C*02:12, 02:27:01-02:27:02, 03:02:01-03:03:14, 03:03:15w, 03:03:16-03:04:16, 03:04:18-03:06, 03:08-03:14, 03:16-03:17, 03:19-03:38:02, 03:40:01-03:44, 03:46-03:66, 03:68-03:98, 03:100-03:114, 03:116-03:129, 03:131-03:133, 03:135-03:136, 03:138-03:139, 07:96 and 16:34 and in the B*40:164 alleles.

[14]Primer mix 13: Specific PCR fragment of 125 bp in the C*15:24 and the C*04:89 and 05:47 alleles. Specific PCR fragment of 185 bp in the C*15:12 and in the C*04:52, 04:55, 05:55, 12:58 and 14:10 alleles.

[15]Primer mix 14: Specific PCR fragment of 130 bp in the C*15:13 allele. Specific PCR fragment of 440 bp the C*15:11, 15:16-15:17 and 15:43 and the C*02:06, 02:47, 03:12, 03:19, 03:102 and 12:15 and in the B*46:11, B*46:18, B*56:08 and B*56:14 alleles.

[16]Primer mix 16: Specific PCR fragment of 90 bp in the C*15:27 allele. Specific PCR fragment of 165 bp in the C*15:15 allele. Specific PCR fragment of 345 bp in the C*15:26 allele.

[17]Primer mix 17: Specific PCR fragment of 140 bp in the C*15:34 allele. Specific PCR fragment of 215 bp in the C*15:36 allele. Specific PCR fragment of 295 bp in the C*15:39 and the C*01:30 and 08:51 alleles.

[18]Primer mix 18: Specific PCR fragment of 85 bp in the C*15:33 allele. Specific PCR fragment of 160 bp in the C*15:31 and the C*07:123 and 07:173 and in the B*15:200, B*51:115 and B*58:05 alleles.

[19]Primer mix 19: Specific PCR fragment of 165 bp in the C*15:42 allele. Specific PCR fragment of 355 bp in the C*15:46 allele.

[20]Primer mix 20: Specific PCR fragment of 120 bp in the C*15:44 allele. Specific PCR fragment of 235 bp in the C*15:45 allele.

[21]Primer mix 21: Specific PCR fragment of 170 bp in the C*15:47 allele. Specific PCR fragment of 445 bp in the C*15:35 and the C*02:35 and 05:21 alleles.

[22]Primer mix 23: Specific PCR fragment of 175 bp in the C*15:48 allele. Specific PCR fragment of 545 bp in the C*15:29 and in the C*08:22 and 08:56 alleles.

[23]Primer mix 24: Specific PCR fragment of 175 bp in the C*15:32Q allele. Specific PCR fragment of 380 bp in the C*15:41 allele.

'w', might be weakly amplified.

Lot No.: 74N **Lot-specific information**

INTERPRETATION TABLE

HLA-C*15 SSP subtyping

Amplification patterns of the HLA-C*15:02 to 15:56 alleles

	Well[11]															
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Length of spec.	**325**	**175**	**70**	**315**	**100**	**305**	**140**	**160**	**135**	**170**	**315**	**100**	**125**	**130**	**85**	**90**
PCR product(s)			**195**			**345**		**185**	**305**			**240**	**185**	**440**		**165**
						370										**345**
Length of int. pos. control[1]	**800**	**1070**	**1070**	**1070**	**1070**	**1070**	**800**	**1070**	**1070**	**1070**	**800**	**1070**	**1070**	**800**	**1070**	**1070**
5'-primer[2]	**409**	**134**	**134**	**419**	**420**	**355**	**201**	**125**	**97**	**1st I**	**420**	**105**	**201**	**270**	**270**	**261**
	5' -ggC 3'	5' -CCA 3'	5' -CCA 3'	5' -gTC 3'	5' -TTC 3'	5' -CCC 3'	5' -CCA 3'	5' -CgA 3'	5' -TCg 3'	5' -CgA 3'	5' -TTA 3'	5' -gCT 3'	5' -CCA 3'	5' -AAg 3'	5' -AAC 3'	5' -AAC 3'
						379		**420**	**118**				**2nd I**	**757**		**379**
						5' -ACg 3'		5' -TTA 3'	5' -CCA 3'				5' -CCA 3'	5' -CCC 3'		5' -ACg 3'
						419			**430**							**560**
						5' -gTA 3'			5' -ACC 3'							5' -CCT 3'
3'-primer[3]	**3rd I**	**270**	**164**	**3rd I**	**477**	**3rd I**	**302**	**270**	**201**	**134**	**3rd I**	**164**	**343**	**420**	**312**	**312**
	5' -CTC 3'	5' -TAg 3'	5' -gCA 3'	5' -CTC 3'	5' -gCg 3'	5' -ggA 3'	5' -ggC 3'	5' -TAg 3'	5' -CTT 3'	5' -AgC 3'	5' -CTC 3'	5' -gCA 3'	5' -T 3'	5' -gCT 3'	5' -AgT 3'	5' -AgT 3'
			289				**302**	**539**	**3rd I**			**302**	**412**	**846**		**3rd I**
			5' -AgC 3'				5' -ggC 3'	5' -TCC 3'	5' -CTC 3'			5' -ggC 3'	5' -gTT 3'	5' -CAC 3'		5' -ggA 3'
												302				
												5' -ggC 3'				
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
HLA-C allele[4,5]																
***15:02:01-15:02:07**, 15:49-15:51, 15:53	**1**	**2**									**11**				**15**	
*15:03	**1**	**2**	**3**								**11**				**15**	
***15:04**		**2**		**4**											**15**	
*15:05:01-**15:05:06**, 15:54	**1**	**2**			**5**										**15**	
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

Lot No.: 74N **Lot-specific information**

INTERPRETATION TABLE

HLA-C*15 SSP subtyping

Amplification patterns of the HLA-C*15:02 to 15:56 alleles

Well[11]											
17	18	19	20	21	22	23	24	25	26	27	
140	85	165	120	170	225	175	175	225	205	330	Length of spec.
215	160	355	235	445		545	380				PCR product(s)
295											
1070	1070	1070	1070	1070	800	1070	1070	1070	1070	1070	Length of int. pos. control[1]
98	409	368	105	322	128	134	356	409	409	404	5'-primer[2]
5'-CTC 3'	5'-ggC 3'	5'-gTC 3'	5'-gCT 3'	5'-gCC 3'	5'-AgT 3'	5'-CCA 3'	5'-CAA 3'	5'-ggC 3'	5'-ggC 3'	5'-CCA 3'	
2nd I		560		715		972	562				
5'-CCA 3'		5'-CgA 3'		5'-CAg 3'		5'-CTA 3'	5'-Cgg 3'				
270	455	3rd I	186	477	312	266	3rd I	595	575	3rd I	3'-primer[3]
5'-TAg 3'	5'-CCA 3'	5'-ggA 3'	5'-TCC 3'	5'-gCg 3'	5'-AgT 3'	5'-TCA 3'	5'-CTC 3'	5'-CCg 3'	5'-ggg 3'	5'-CTC 3'	
427	527		299	846		1034					
5'-gTT 3'	5'-CCg 3'		5'-TCT 3'	5'-CAC 3'		5'-AgT 3'					
583											
5'-gTg 3'											
17	18	19	20	21	22	23	24	25	26	27	Well No.
											HLA-C allele[4,5]
											***15:02:01-15:02:07**, 15:49-15:51, 15:53
											*15:03
											***15:04**
											*15:05:01-**15:05:06**, 15:54
17	18	19	20	21	22	23	24	25	26	27	Well No.

Lot No.: 74N **Lot-specific information**

Length of spec.	**325**	**175**	**70**	**315**	**100**	**305**	**140**	**160**	**135**	**170**	**315**	**100**	**125**	**130**	**85**	**90**
PCR product(s)			**195**			**345**		**185**	**305**			**240**	**185**	**440**		**165**
						370										**345**
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
*__15:06:01__-15:06:03, 15:55	**1**	**2**				**6**									**15**	
***15:07**	**1**	**2**					**7**				**11**	**12**				
*15:08	**1**	**2**						**8**			**11**				**15**	
***15:09**	**1**	**2**		**4**											**15**	
*15:10:01-**15:10:02**	**1**									**10**	**11**				**15**	
***15:11**	**1**								**9**		**11**			**14**		
*15:12	**1**	**2**									**11**		**13**		**15**	
***15:13**	**1**	**2**									**11**			**14**	**15**	
*15:15	**1**	**2**									**11**				**15**	**16**
*15:16	**1**		**3**								**11**			**14**		
***15:17**	**1**										**11**			**14**		
*15:18	**1**	**2**							**9**		**11**				**15**	
***15:19**	**1**	**2**		**4**				**8**							**15**	
*15:20	**1**			**4**												
*15:21	**1**	**2**					**7**				**11**	**12**			**15**	
***15:22**	**1**	**2**			**5**	**6**									**15**	
***15:23**	**1**	**2**			**5**				**9**						**15**	
***15:24**	**1**	**2**											**13**		**15**	
*15:25			**w**				**7**					**12**				
***15:26**	**1**	**2**				**6**					**11**				**15**	**16**
***15:27**	**1**			**4**												**16**
***15:28**	**1**	**2**	**3**								**11**	**12**			**15**	
*15:29	**1**	**2**			**5**										**15**	
***15:30**		**2**		**4**											**15**	
***15:31, 15:33**[6]	**1**	**2**									**11**				**15**	
***__15:32Q__**, 15:41[7]	**1**	**2**									**11**				**15**	
*15:34, **15:39**[8]	**1**	**2**									**11**				**15**	
*15:35, 15:47[9]	**1**	**2**									**11**				**15**	
*15:36	**1**	**2**			**5**										**15**	
*15:37	**1**	**2**				**6**					**11**				**15**	
*15:38	**1**	**2**									**11**				**15**	
***15:40**		**2**				**6**									**15**	
***15:42**	**1**	**2**									**11**				**15**	
*15:43	**1**										**11**	**12**		**14**		
*15:44, 15:45[10]	**1**	**2**									**11**				**15**	
*15:46	**1**	**2**			**5**										**15**	
*15:48	**1**	**2**									**11**					
***15:52**	**1**	**2**									**11**				**15**	
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

Lot No.: 74N **Lot-specific information**

140	85	165	120	170	225	175	175	225	205	330	**Length of spec.**
215	160	355	235	445		545	380				**PCR product(s)**
295											
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**Well No.**
											*15:06:01-15:06:03, 15:55
											***15:07**
											*15:08
											***15:09**
											*15:10:01-***15:10:02**
											***15:11**
											*15:12
											***15:13**
											*15:15
											*15:16
											***15:17**
											*15:18
											***15:19**
											*15:20
											*15:21
											***15:22**
											***15:23**
											***15:24**
											*15:25
											***15:26**
											***15:27**
											***15:28**
						23					*15:29
										27	***15:30**
	18										***15:31, 15:33**[6]
							24				***15:32Q**, 15:41[7]
17											*15:34, ***15:39**[8]
				21							*15:35, 15:47[9]
17											*15:36
											*15:37
					22						*15:38
											***15:40**
		19									***15:42**
											*15:43
			20								*15:44, 15:45[10]
		19									*15:46
						23					*15:48
								25			***15:52**
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**Well No.**

Lot No.: 74N **Lot-specific information**

Length of spec.	**325**	**175**	**70**	**315**	**100**	**305**	**140**	**160**	**135**	**170**	**315**	**100**	**125**	**130**	**85**	**90**
PCR product(s)			**195**			**345**		**185**	**305**			**240**	**185**	**440**		**165**
						370										**345**
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
***15:56**	**1**	**2**									**11**				**15**	
*01:04, 01:54, 02:02:13, 02:21, 02:26:01-02:26:03, 02:39, 02:45, 06:02:01:01-06:02:01:02, 06:02:03-06:04, 06:06-06:08, 06:10-06:27, 06:29-06:33, 06:35-06:37, 06:39-06:43, 06:45-06:69, 07:01:01-07:02:08, 07:02:10-07:03, 07:05-07:06, 07:08, 07:10, 07:14-07:19, 07:21-07:27:02, 07:30-07:33N, 07:35-07:40, 07:42-07:44, 07:46-07:62, 07:65-07:72, 07:74-07:91, 07:93-07:95, 07:97-07:100, 07:102-07:122, 07:124-07:126, 07:128-07:138, 07:140-07:141, 07:143-07:171, 07:175-07:176, 07:178-07:180, 07:182-07:183, 07:185-07:198N, 07:200-07:218, 07:220, 14:18				**4**												
*01:21, 14:03, 14:22				**4**			**7**									
*01:30																
*02:02:01-02:02:03, 02:02:05-02:02:12, 02:02:14-02:05, 02:09-02:11, 02:13-02:18, 02:20, 02:24-02:25Q, 02:28-02:34, 02:37-02:38N, 02:40, 02:42-02:44, 02:46, 02:48, 02:50-02:54, 06:05				**4**					**9**							
*02:06	**1**							**8**	**9**		**11**			**14**		
*02:07, 02:19, 02:22									**9**							
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

Lot No.: 74N **Lot-specific information**

140	85	165	120	170	225	175	175	225	205	330	**Length of spec.**
215	160	355	235	445		545	380				**PCR product(s)**
295											
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**Well No.**
									26		***15:56**
											*01:04, 01:54, 02:02:13, 02:21, 02:26:01-02:26:03, 02:39, 02:45, 06:02:01:01-06:02:01:02, 06:02:03-06:04, 06:06-06:08, 06:10-06:27, 06:29-06:33, 06:35-06:37, 06:39-06:43, 06:45-06:69, 07:01:01-07:02:08, 07:02:10-07:03, 07:05-07:06, 07:08, 07:10, 07:14-07:19, 07:21-07:27:02, 07:30-07:33N, 07:35-07:40, 07:42-07:44, 07:46-07:62, 07:65-07:72, 07:74-07:91, 07:93-07:95, 07:97-07:100, 07:102-07:122, 07:124-07:126, 07:128-07:138, 07:140-07:141, 07:143-07:171, 07:175-07:176, 07:178-07:180, 07:182-07:183, 07:185-07:198N, 07:200-07:218, 07:220, 14:18
											*01:21, 14:03, 14:22
17											*01:30
											*02:02:01-02:02:03, 02:02:05-02:02:12, 02:02:14-02:05, 02:09-02:11, 02:13-02:18, 02:20, 02:24-02:25Q, 02:28-02:34, 02:37-02:38N, 02:40, 02:42-02:44, 02:46, 02:48, 02:50-02:54, 06:05
											*02:06
											*02:07, 02:19, 02:22
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**Well No.**

Lot No.: 74N **Lot-specific information**

Length of spec.	**325**	**175**	**70**	**315**	**100**	**305**	**140**	**160**	**135**	**170**	**315**	**100**	**125**	**130**	**85**	**90**
PCR product(s)			**195**			**345**		**185**	**305**			**240**	**185**	**440**		**165**
						370										**345**
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
*02:08				**4**					**9**	**10**						
*02:12			**w**	**4**			**7**		**9**			**12**				
*02:23	**1**								**9**							
*02:27:01-02:27:02, 16:34				**4**			**7**		**9**			**12**				
*02:35				**4**					**9**							
*02:36	**1**			**4**					**9**							
*02:47								**8**	**9**		**11**			**14**		
*02:49, 02:55			**3**	**4**					**9**							
*03:02:01-03:02:08, 03:14, 03:16, 03:33, 03:36, 03:40:01-03:40:02, 03:42-03:43:02, 03:60, 03:71, 03:84, 03:89, 03:95, 03:108, 03:110, 03:119, 03:121N, 03:132, 03:139				**4**								**12**				
*03:03:01-03:03:14, 03:03:16-03:04:16, 03:04:18-03:04:24, 03:05-03:06, 03:09-03:11:02, 03:13, 03:17, 03:20N-03:26, 03:28, 03:30, 03:32, 03:34-03:35, 03:37, 03:41, 03:44, 03:46-03:59, 03:61-03:63, 03:65-03:66, 03:68, 03:70, 03:72-03:80, 03:82-03:83, 03:85-03:88, 03:90-03:94, 03:96-03:98, 03:100-03:101, 03:103-03:107, 03:109, 03:111-03:114, 03:116-03:118, 03:120, 03:122-03:129, 03:131, 03:133, 03:135, 03:138, *B*40:164*												**12**				
*03:03:15												**w**				
*03:04:25							**7**					**12**				
*03:08, 03:31		**2**										**12**				
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

Lot No.: 74N **Lot-specific information**

140	85	165	120	170	225	175	175	225	205	330	**Length of spec.**
215	160	355	235	445		545	380				**PCR product(s)**
295											
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**Well No.**
											*02:08
											*02:12
											*02:23
											*02:27:01-02:27:02, 16:34
				21							*02:35
											*02:36
											*02:47
											*02:49, 02:55
											*03:02:01-03:02:08, 03:14, 03:16, 03:33, 03:36, 03:40:01-03:40:02, 03:42-03:43:02, 03:60, 03:71, 03:84, 03:89, 03:95, 03:108, 03:110, 03:119, 03:121N, 03:132, 03:139
											*03:03:01-03:03:14, 03:03:16-03:04:16, 03:04:18-03:04:24, 03:05-03:06, 03:09-03:11:02, 03:13, 03:17, 03:20N-03:26, 03:28, 03:30, 03:32, 03:34-03:35, 03:37, 03:41, 03:44, 03:46-03:59, 03:61-03:63, 03:65-03:66, 03:68, 03:70, 03:72-03:80, 03:82-03:83, 03:85-03:88, 03:90-03:94, 03:96-03:98, 03:100-03:101, 03:103-03:107, 03:109, 03:111-03:114, 03:116-03:118, 03:120, 03:122-03:129, 03:131, 03:133, 03:135, 03:138, *B*40:164*
											*03:03:15
											*03:04:25
											*03:08, 03:31
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**Well No.**

Lot No.: 74N **Lot-specific information**

Length of spec. PCR product	325	175	70 195	315	100	305 345 370	140	160 185	135 305	170	315	100 240	125 185	130 440	85	90 165 345
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
*03:12, 03:19, 03:102											**11**	**12**		**14**		
*03:15			**3**	**4**												
*03:18, 04:01:01:01-04:01:02, 04:01:04-04:01:36, 04:04:01-04:05, 04:07-04:10, 04:12-04:15:03, 04:17-04:20, 04:23-04:28, 04:30-04:35, 04:37-04:41, 04:43-04:51, 04:53, 04:56-04:79, 04:81-04:88N, 04:90-04:106, 05:01:01:01-05:01:18, 05:03, 05:05-05:20, 05:22:01-05:25, 05:27-05:35, 05:37-05:42, 05:44-05:46, 05:48N-05:54, 05:56-05:57, 05:59-05:72, 08:10, 14:26, 17:01:01:01-17:11, 18:04										**10**						
*03:27, 03:38:01-03:38:02, 03:69, 03:136			**w**									**12**				
*03:29		**2**										**12**			**15**	
*03:64										**10**		**12**				
*03:81	**1**											**12**				
*03:130, 04:16			**3**													
*04:03, 04:06, 04:80, 04:107			**3**						**9**							
*04:11, 04:29, 04:36, 08:01:01-08:08, 08:12-08:13, 08:15:01-08:21, 08:23-08:36N, 08:38-08:50, 08:52N-08:55N, 12:31, 16:10							**7**			**10**						
*04:42, 05:26, 05:43									**9**	**10**						
*04:52, 04:89, 05:47, 05:55										**10**			**13**			
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

CE

Lot No.: 74N **Lot-specific information**

140	85	165	120	170	225	175	175	225	205	330	**Length of spec. PCR product**
215	160	355	235	445		545	380				
295											
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**Well No.**
											*03:12, 03:19, 03:102
											*03:15
											*03:18, 04:01:01:01-04:01:02, 04:01:04-04:01:36, 04:04:01-04:05, 04:07-04:10, 04:12-04:15:03, 04:17-04:20, 04:23-04:28, 04:30-04:35, 04:37-04:41, 04:43-04:51, 04:53, 04:56-04:79, 04:81-04:88N, 04:90-04:106, 05:01:01:01-05:01:18, 05:03, 05:05-05:20, 05:22:01-05:25, 05:27-05:35, 05:37-05:42, 05:44-05:46, 05:48N-05:54, 05:56-05:57, 05:59-05:72, 08:10, 14:26, 17:01:01:01-17:11, 18:04
											*03:27, 03:38:01-03:38:02, 03:69, 03:136
											*03:29
											*03:64
											*03:81
											*03:130, 04:16
											*04:03, 04:06, 04:80, 04:107
											*04:11, 04:29, 04:36, 08:01:01-08:08, 08:12-08:13, 08:15:01-08:21, 08:23-08:36N, 08:38-08:50, 08:52N-08:55N, 12:31, 16:10
											*04:42, 05:26, 05:43
											*04:52, 04:89, 05:47, 05:55
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**Well No.**

Lot No.: 74N **Lot-specific information**

Length of spec. PCR product	**325**	**175**	**70** **195**	**315**	**100**	**305** **345** **370**	**140**	**160**	**135** **305**	**170**	**315**	**100** **240**	**125** **185**	**130** **440**	**85**	**90** **165** **345**
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
*04:54, 05:04, 06:28, 07:64, 07:73, 07:92, 07:172, 12:03:04, 12:03:09, 12:04:01-12:05, 12:09, 12:21, 12:27, 12:33, 12:41, 12:54, 12:60, 14:02:01-14:02:02, 14:02:04-14:02:09, 14:04-14:07N, 14:09, 14:11-14:17, 14:19-14:21N, 14:23-14:25, 14:27-14:34, 16:01:02, 16:02:01-16:02:09, 16:09, 16:12, 16:19, 16:25				**4**						**10**						
*04:55							**7**			**10**			**13**			
*05:21										**10**						
*05:36										**10**					**15**	
*06:44, 07:07, 07:09				**4**											**15**	
*07:02:09, 12:16				**4**			**7**		**9**							
*07:20		**2**	**w**	**4**												
*07:96		**2**	**w**	**4**								**12**				
*07:123, 07:173	**1**			**4**												
*07:127			**w**	**4**												
*07:174				**4**												
*08:09, 08:11, 12:02:01-12:03:03, 12:03:05-12:03:08, 12:03:10-12:03:20, 12:06-12:08, 12:10:01-12:14:02, 12:17-12:20, 12:22-12:26, 12:28-12:30, 12:32, 12:34-12:40, 12:42Q-12:53, 12:55-12:57, 12:59, 12:61-12:68, 14:02:03, 14:08, 16:01:01, 16:01:03-16:01:07, 16:04, 16:06-16:08, 16:11, 16:13-16:18, 16:22-16:24, 16:26-16:33, 16:35-16:44				**4**			**7**			**10**						
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

Lot No.: 74N **Lot-specific information**

140	85	165	120	170	225	175	175	225	205	330	**Length of spec. PCR product**
215	160	355	235	445		545	380				
295											
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**Well No.**
											*04:54, 05:04, 06:28, 07:64, 07:73, 07:92, 07:172, 12:03:04, 12:03:09, 12:04:01-12:05, 12:09, 12:21, 12:27, 12:33, 12:41, 12:54, 12:60, 14:02:01-14:02:02, 14:02:04-14:02:09, 14:04-14:07N, 14:09, 14:11-14:17, 14:19-14:21N, 14:23-14:25, 14:27-14:34, 16:01:02, 16:02:01-16:02:09, 16:09, 16:12, 16:19, 16:25
											*04:55
				21							*05:21
											*05:36
											*06:44, 07:07, 07:09
											*07:02:09, 12:16
											*07:20
											*07:96
	18										*07:123, 07:173
											*07:127
										27	*07:174
											*08:09, 08:11, 12:02:01-12:03:03, 12:03:05-12:03:08, 12:03:10-12:03:20, 12:06-12:08, 12:10:01-12:14:02, 12:17-12:20, 12:22-12:26, 12:28-12:30, 12:32, 12:34-12:40, 12:42Q-12:53, 12:55-12:57, 12:59, 12:61-12:68, 14:02:03, 14:08, 16:01:01, 16:01:03-16:01:07, 16:04, 16:06-16:08, 16:11, 16:13-16:18, 16:22-16:24, 16:26-16:33, 16:35-16:44
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**Well No.**

Lot No.: 74N **Lot-specific information**

Length of spec. PCR product	**325**	**175**	**70** **195**	**315**	**100**	**305** **345** **370**	**140**	**160** **185**	**135** **305**	**170**	**315**	**100** **240**	**125** **185**	**130** **440**	**85**	**90** **165** **345**
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
*08:14, *B*35:08:02, B*35:08:05, B*67:02*							**7**									
*08:22, 08:56							**7**			**10**						
*08:37							**7**		**9**	**10**						
*08:51							**7**			**10**						
*12:15	**1**						**7**	**8**		**10**	**11**			**14**		
*12:58				**4**			**7**			**10**			**13**			
*14:10				**4**			**7**						**13**			
*16:20	**1**			**4**			**7**			**10**						
*16:21				**4**			**7**		**9**	**10**						
*18:05															**15**	
*B*07:78, B*13:18, B*13:31, B*13:41, B*15:73, B*54:10, B*54:20, B*55:09, B*55:21, B*55:37, B*55:52*								**w**								
*B*15:200, B*51:115, B*58:05*																
*B*35:132*																
*B*46:11, B*46:18, B*56:08, B*56:14*														**14**		
HLA-C allele[4,5]																
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**

[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*15 SSP subtyping.
In addition, wells number 7, 11, 14 and 22 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band.
[2]The nucleotide position, in the 2nd, 3rd, 4th or 5th 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.
[3]The nucleotide position, in the 2nd, 3rd, 4th or 6th 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.

Lot No.: 74N **Lot-specific information**

140	85	165	120	170	225	175	175	225	205	330	**Length of spec. PCR product**
215	160	355	235	445		545	380				
295											
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**Well No.**
											*08:14, *B*35:08:02, B*35:08:05, B*67:02*
						23					*08:22, 08:56
											*08:37
17											*08:51
											*12:15
											*12:58
											*14:10
											*16:20
											*16:21
											*18:05
											*B*07:78, B*13:18, B*13:31, B*13:41, B*15:73, B*54:10, B*54:20, B*55:09, B*55:21, B*55:37, B*55:52*
	18										*B*15:200, B*51:115, B*58:05*
									26		*B*35:132*
											*B*46:11, B*46:18, B*56:08, B*56:14*
											HLA-C allele[4,5]
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**Well No.**

[4]The HLA-Cw*1501 nucleotide sequence has been shown to be identical to C*15:02:01.
The HLA-Cw*1514 nucleotide sequence has been renamed C*15:10:02.
[5]HLA-C*15 alleles in bold lettering are listed as confirmed alleles on the IMGT/HLA web page www.ebi.ac.uk/imgt/hla, release 3.7.0, January 2012.
[6]The C*15:31 and C*15:33 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 18.
[7]The C*15:32Q and C*15:41 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 24.
[8]The C*15:34 and C*15:39 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 17.
[9]The C*15:35 and C*15:47 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 21.
[10]The C*15:44 and C*15:45 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 20.
[11]Primer mix 3: Specific PCR fragment of 70 bp in the C*15:28 allele. Specific PCR fragment of 195 bp in the C*15:03, 15:16 and 15:25[W] and in the C*02:12[W], 02:49, 02:55, 03:15, 03:27[W], 03:38:01[W]-03:38:02[W], 03:69[W], 03:130, 03:136[W], 04:03, 04:06, 04:16, 04:80, 04:107, 07:20[W], 07:96[W] and 07:127[W] alleles.

Lot No.: 74N **Lot-specific information**

Primer mix 6: Specific PCR fragment of 305 bp in the C*15:06:01-15:06:03, 15:40 and 15:55 alleles. Specific PCR fragment of 345 bp in the C*15:26 allele. Specific PCR fragment of 370 bp in the C*15:22, 15:37 and 15:55 alleles.

Primer mix 8: Specific PCR fragment of 160 bp in the C*15:08 and in the C*02:06, 02:47 and 12:15 and the B*07:78^{w}, B*13:18^{w}, 13:31^{w}, 13:41^{w}, B*15:73^{w}, B*54:10^{w}, B*54:20^{w}, B*55:09^{w}, B*55:21^{w}, B*55:37^{w} and B*55:52^{w} alleles. Specific PCR fragment of 185 bp in the C*15:19 allele.

Primer mix 9: Specific PCR fragment of 135 bp in the C*15:11 and 15:23 and in the C*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, 02:46-02:55, 04:03, 04:06, 04:42, 04:80, 04:107, 05:26, 05:43, 06:05, 07:02:09, 08:37, 12:16, 16:21 and 16:34 alleles. Specific PCR fragment of 305 bp in the C*15:18 allele.

Primer mix 12: Specific PCR fragment of 100 bp in the C*15:28 allele. Specific PCR fragment of 240 bp in the C*15:07, 15:21, 15:25 and 15:43 and in the C*02:12, 02:27:01-02:27:02, 03:02:01-03:03:14, 03:03:15w, 03:03:16-03:04:16, 03:04:18-03:06, 03:08-03:14, 03:16-03:17, 03:19-03:38:02, 03:40:01-03:44, 03:46-03:66, 03:68-03:98, 03:100-03:114, 03:116-03:129, 03:131-03:133, 03:135-03:136, 03:138-03:139, 07:96 and 16:34 and in the B*40:164 alleles.

Primer mix 13: Specific PCR fragment of 125 bp in the C*15:24 and the C*04:89 and 05:47 alleles. Specific PCR fragment of 185 bp in the C*15:12 and in the C*04:52, 04:55, 05:55, 12:58 and 14:10 alleles.

Primer mix 14: Specific PCR fragment of 130 bp in the C*15:13 allele. Specific PCR fragment of 440 bp the C*15:11, 15:16-15:17 and 15:43 and the C*02:06, 02:47, 03:12, 03:19, 03:102 and 12:15 and in the B*46:11, B*46:18, B*56:08 and B*56:14 alleles.

Primer mix 16: Specific PCR fragment of 90 bp in the C*15:27 allele. Specific PCR fragment of 165 bp in the C*15:15 allele. Specific PCR fragment of 345 bp in the C*15:26 allele.

Primer mix 17: Specific PCR fragment of 140 bp in the C*15:34 allele. Specific PCR fragment of 215 bp in the C*15:36 allele. Specific PCR fragment of 295 bp in the C*15:39 and the C*01:30 and 08:51 alleles.

Primer mix 18: Specific PCR fragment of 85 bp in the C*15:33 allele. Specific PCR fragment of 160 bp in the C*15:31 and the C*07:123 and 07:173 and in the B*15:200, B*51:115 and B*58:05 alleles.

Primer mix 19: Specific PCR fragment of 165 bp in the C*15:42 allele. Specific PCR fragment of 355 bp in the C*15:46 allele.

Primer mix 20: Specific PCR fragment of 120 bp in the C*15:44 allele. Specific PCR fragment of 235 bp in the C*15:45 allele.

Primer mix 21: Specific PCR fragment of 170 bp in the C*15:47 allele. Specific PCR fragment of 445 bp in the C*15:35 and the C*02:35 and 05:21 alleles.

Primer mix 23: Specific PCR fragment of 175 bp in the C*15:48 allele. Specific PCR fragment of 545 bp in the C*15:29 and in the C*08:22 and 08:56 alleles.

Primer mix 24: Specific PCR fragment of 175 bp in the C*15:32Q allele. Specific PCR fragment of 380 bp in the C*15:41 allele.

'w', might be weakly amplified.

Lot No.: 74N **Lot-specific information**

CELL LINE VALIDATION SHEET

HLA-C*15 SSP primer set

					Well															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Prod. No.:	201071801	201071802	201071803	201071804	201071805	201071806	201071807	201071808	201071809	201071810	201071811	201071812	201201313	201071814	201071815	201184816
	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	*15:29	+	+	-	-	+	-	-	-	-	-	-	-	-	-	+	-
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	-	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-

Lot No.: 74N **Lot-specific information**

CELL LINE VALIDATION SHEET

HLA-C*15 SSP primer set

					Well										
					17	18	19	20	21	22	23	24	25	26	27
				Prod. No.:	201184817	201184818	201201319	201184820	201184821	201184822	201184823	201184824	201201325	201201326	201201327
	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	*15:29	-	-	-	-	-	-	+	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-	-

Lot No.: 74N **Lot-specific information**

CERTIFICATE OF ANALYSIS

Olerup SSP® HLA-C*15 SSP

Product number: **101.626-12 – including *Taq* polymerase**
101.626-12u – without *Taq* polymerase
Lot number: **74N**
Expiry date: **2014-November-01**
Number of tests: **12**
Number of wells per test: **27**

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2010-718-01	11	2010-718-11	21	2011-848-21
2	2010-718-02	12	2010-718-12	22	2011-848-22
3	2010-718-03	13	2012-013-13	23	2011-848-23
4	2010-718-04	14	2010-718-14	24	2011-848-24
5	2010-718-05	15	2010-718-15	25	2012-013-25
6	2010-718-06	16	2011-848-16	26	2012-013-26
7	2010-718-07	17	2011-848-17	27	2012-013-27
8	2010-718-08	18	2011-848-18		
9	2010-718-09	19	2012-013-19		
10	2010-718-10	20	2011-848-20		

The specificity of each primer solution of the HLA-C*15 primer set has been tested against 48 well characterized cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 6, 8, 13, 14, 16 to 22 and 24 to 27 were available. The specificity of the primers in primer solutions 6, 8, 13, 14 and 16 to 19 were tested by separately adding one 5'-primer, respectively one 3'-primer.
In primer solutions 20, 25 and 26 it was only possible to test the 5'-primer, the 3'-primers were not possible to test. In primer solutions 21, 22, 24 and 27 it was only possible to test the 3'-primers, the 5'-primers were not possible to test.
In primer mixes 8, 9 and 14 one of the 5'-primers could not be tested, and in primer mixes 3, 7, 12, 17, 18 and 23 one or two of the 3'-primers could not be tested. Additional primers in primer solutions 9 and 23 were tested by separately adding either one 5'-primer or one 3'-primer.

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

Date of approval: 2012-May-10

Approved by:

Production Quality Control

Lot No.: 74N **Lot-specific information**

Declaration of Conformity

Product name: *Olerup* SSP® HLA-C*15
Product number: 101.626-12/12u
Lot number: 74N

Intended use: HLA-C*15 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.

Stockholm, Sweden
2012-May-10

Ann-Cathrin Jareman
Head of QA and Regulatory Affairs

Lot No.: 74N **Lot-specific information**

Lot No.: 74N **Lot-specific information**

Lot No.: 74N **Lot-specific information**

Lot No.: 74N **Lot-specific information**

ADDRESSES:

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

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

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

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