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Lot No.: 65R Lot-specific information

Olerup SSP® HLA-B*55

Product number: 101.570-06 – including *Taq* polymerase

101.570-06u - without *Tag* polymerase

Lot number: 65R

Expiry date: 2015-June-01

Number of tests: 6 Number of wells per test: 32

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. 65R.

CHANGES COMPARED TO THE PREVIOUS OLERUP SSP® HLA-B*55 Lot (04N)

The HLA-B*55 kit is updated for new alleles to enable separation of:

- Confirmed¹ 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

One well has been added to the HLA-B*55 kit, well 32.

The Lot-specific information for HLA-B*55 including and without *Taq* polymerase is described in one common Product Insert.

The HLA-B*55 specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup* SSP® HLA-B*55 lot was made **(Lot No. 04N)**.

¹As described in section Uniquely Identified Alleles.

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The primers of the wells detailed below has been added, exchanged or modified.

Well	5'-primer	3'-primer	rationale
9	-	Modified	Increased yield of HLA-specific PCR
			product.
10	Exchanged	-	Improved allelic resolution.
18	-	Modified	Increased yield of HLA-specific PCR
			product.
20	Moved	Moved	One primer pair moved to well 25, to
			decrease primer oligomer formation.
25	-	Added,	One added 3'-primer from well 20, one 3'-
		moved	primer moved to well 30 for improved
			allelic resolution.
29	-	Added	3'-primer added for the B*55:55N allele.
30	Added	Added	Primer pair from well 25.
32	New	New	New primer pair for the B*55:50 allele.

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PRODUCT DESCRIPTION

HLA-B*55 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*55:01 to B*55:57 alleles.

PLATE LAYOUT

Each test consists of 32 PCR reactions in a 32 well PCR plate.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32

The 32 well PCR plate is marked with 'HLA-B*55' in silver/gray ink.

Well No. 1 is marked with the Lot No. '65R'.

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-B*55 SSP subtypings will be influenced by most B*07, most B*08, the B*13, three B*14, several B*15, most B*18, four B*27, the B*35, the B*37, three B*38, several B*39, several B*40, the B*41, the B*42, fifteen B*44, the B*45, the B*46, four B*48, the B*49, the B*50, the B*51, the B*52, the B*53, the B*54, the B*56, fifteen B*57, the B*58, the B*59, the B*67, the B*73, the B*78, the B*81, the B*82 and the B*83:01 alleles when present on the other haplotype. In addition, the C*02:56, C*06:20, C*07:81 and C*07:168 alleles will be amplified by primer mix 2, the C*03:70 and C*03:127 alleles will be amplified by primer mix 7, the C*07:01:22, C*07:02:31, C*08:16:02 and C*15:02:06 alleles will be amplified by primer mix 10 and the C*08:08 allele will be amplified by primer mix 5.

UNIQUELY IDENTIFIED ALLELES

All the HLA-B*55 alleles, i.e. **B*55:01 to B*55:57**, recognized by the HLA Nomenclature Committee in October 2012¹ will be amplified by the primers in the HLA-B*55 subtyping kit².

The HLA-B*55 kit enables separation of the confirmed HLA-B*55 alleles as listed in the IMGT/HLA database. An HLA allele is listed as confirmed by IMGT/HLA if

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it has been sequenced by more than a single laboratory or from multiple sources. Current allele confirmation status for HLA-B*55 alleles is listed below.

The HLA-B*55 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 HLA-B*55 subtyping kit cannot separate the silent mutations in the B*55:01:01-55:01:06 and 55:01:08-55:01:10 alleles or the *55:02:01-55:02:06 alleles.

¹HLA-B alleles listed on the IMGT/HLA web page 2012-October-17, release 3.10.0, www.ebi.ac.uk/imgt/hla.

ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
B*55:01:01	Confirmed	B*55:08	Confirmed	B*55:28	Unconfirmed	B*55:48	Unconfirmed
B*55:01:02	Unconfirmed	B*55:09	Unconfirmed	B*55:29	Confirmed	B*55:49	Unconfirmed
B*55:01:03	Confirmed	B*55:10	Confirmed	B*55:30	Unconfirmed	B*55:50	Confirmed
B*55:01:04	Confirmed	B*55:11	Unconfirmed	B*55:31	Confirmed	B*55:51	Unconfirmed
B*55:01:05	Confirmed	B*55:12	Confirmed	B*55:32	Unconfirmed	B*55:52	Unconfirmed
B*55:01:06	Confirmed	B*55:13	Unconfirmed	B*55:33	Confirmed	B*55:53	Unconfirmed
B*55:01:07	Unconfirmed	B*55:14	Unconfirmed	B*55:34	Confirmed	B*55:54	Unconfirmed
B*55:01:08	Unconfirmed	B*55:15	Unconfirmed	B*55:35	Unconfirmed	B*55:55N	Unconfirmed
B*55:01:09	Unconfirmed	B*55:16	Confirmed	B*55:36	Confirmed	B*55:56	Unconfirmed
B*55:01:10	Unconfirmed	B*55:17	Confirmed	B*55:37	Confirmed	B*55:57	Unconfirmed
B*55:02:01	Confirmed	B*55:18	Confirmed	B*55:38	Unconfirmed		
B*55:02:02	Unconfirmed	B*55:19	Unconfirmed	B*55:39	Unconfirmed		
B*55:02:03	Confirmed	B*55:20	Confirmed	B*55:40	Unconfirmed		
B*55:02:04	Unconfirmed	B*55:21	Unconfirmed	B*55:41	Unconfirmed		
B*55:02:05	Unconfirmed	B*55:22	Unconfirmed	B*55:42	Unconfirmed		
B*55:02:06	Unconfirmed	B*55:23	Confirmed	B*55:43	Unconfirmed		
B*55:03	Unconfirmed	B*55:24	Unconfirmed	B*55:44	Unconfirmed		
B*55:04	Confirmed	B*55:25	Confirmed	B*55:45	Confirmed		
B*55:05	Unconfirmed	B*55:26	Unconfirmed	B*55:46	Unconfirmed		
B*55:07	Confirmed	B*55:27	Unconfirmed	B*55:47	Unconfirmed]	

¹Allele status "confirmed" or "unconfirmed" as listed on the IMGT/HLA web page 2012-October-17, release 3.10.0, www.ebi.ac.uk/imgt/hla.

²The HLA-B*55 primer set cannot separate the B*55:07 and the B*54:01:02 alleles. These alleles can be distinguished by the HLA-B low resolution kit and/or the HLA-B*54 high resolution kit.

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RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 70 alleles generate 54 amplification patterns that can be combined in 1485 homozygous and heterozygous combinations. 679 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.

```
*55:04, *55:49 = *55:49, *55:49
                                     *55:46, *55:46 = *55:46, *55:57
++-----
++----+ -----+ ------
                                     *55:32, *55:32 = *55:32, *55:57
++-----
                                     *55:56, *55:56 = *55:56, *55:57
++----- -----+- +------
                                     *55:28, *55:28 = *55:28, *55:57
                                     *55:02:01, *55:02:01 = *55:02:01, *55:57

*55:01:01, *55:01:01 = *55:01:01, *55:01:07 = *55:01:01, *55:57 = *55:01:07, *55:57
++----
+++----
                                     *55:01:07, *55:24 = *55:24, *55:24
+++----
-+---- ------ ++-----
                                     *55:34, *55:34 = *55:34, *55:47
++----+
                                     *55:13, *55:13 = *55:13, *55:32 = *55:13, *55:57
++-----
                                     *55:23, *55:23 = *55:23, *55:32 = *55:23, *55:57
                                     *55:21, *55:21 = *55:21, *55:57
*55:17, *55:28 = *55:17, *55:57
*55:20, *55:28 = *55:20, *55:56 = *55:20, *55:57 = *55:28, *55:56
++-----
++-----
++-----
++----+
                                     *55:02:01, *55:50 = *55:50, *55:50 = *55:50, *55:57
++-----
                                     *55:02:01, *55:35 = *55:35, *55:35 = *55:35, *55:57
++----- ----+-- ------
                                     *55:02:01, *55:39 = *55:39, *55:39 = *55:39, *55:57
++---- ---+-+- ----- ---+---
                                     *55:02:01, *55:41 = *55:41, *55:41 = *55:41, *55:57
*55:02:01, *55:42 = *55:02:01, *55:47 = *55:42, *55:42 = *55:42, *55:47 =
++----- ----+-+- ------ -+-----
                                     *55:42, *55:57 = *55:47, *55:57
++---- ---+-+- ----- +-----
                                     *55:02:01, *55:26 = *55:26, *55:26 = *55:26, *55:57
++-----
                                     *55:02:01, *55:16 = *55:16, *55:16 = *55:16, *55:57
++----
                                     *55:02:01, *55:37 = *55:37, *55:37 = *55:37, *55:57
++---- ---+-+- --+----
                                     *55:02:01, *55:30 = *55:30, *55:30 = *55:30, *55:57
++----
                                     *55:02:01, *55:19 = *55:19, *55:19 = *55:19, *55:57
++-----
                                     *55:02:01, *55:22 = *55:02:01, *55:48 = *55:22, *55:48 = *55:22, *55:57 =
                                     *55:48, *55:48 = *55:48, *55:57
++-----
                                     *55:02:01, *55:07 = *55:07, *55:07 = *55:07, *55:57
++----+ ----+- ------
                                     *55:02:01, *55:12 = *55:12, *55:12 = *55:12, *55:57
+++----
                                     *55:01:01, *55:38 = *55:01:07, *55:38 = *55:38, *55:57
+++----
                                     *55:01:01, *55:55N = *55:01:07, *55:55N = *55:55N, *55:55N = *55:55N,
+++---- ----+- ----- ---+---
                                     *55:01:01, *55:44 = *55:01:07, *55:44 = *55:44, *55:44 = *55:44, *55:57
+++----
                                     *55:01:01, *55:46 = *55:01:07, *55:46
                                     *55:01:01, *55:45 = *55:01:07, *55:45 = *55:45, *55:45 = *55:45, *55:57
+++---- ------
+++---- +-----
                                     *55:01:01, *55:40 = *55:01:07, *55:40 = *55:40, *55:40 = *55:40, *55:57
+++----
                                     *55:01:01, *55:32 = *55:01:01, *55:33 = *55:01:07, *55:32 = *55:01:07,
                                     *55:33 = *55:32, *55:33 = *55:33, *55:33 = *55:33, *55:57
                                     *55:01:01, *55:29 = *55:01:07, *55:29 = *55:29, *55:29 = *55:29, *55:57 *55:01:01, *55:52 = *55:01:07, *55:52 = *55:52, *55:52 = *55:52, *55:57
+++----
+++----
+++----
                                     *55:01:01, *55:56 = *55:01:07, *55:56
+++----
                                     *55:01:01, *55:36 = *55:01:07, *55:36 = *55:36, *55:36 = *55:36, *55:57
+++----
                                     *55:01:01, *55:31 = *55:01:07, *55:31 = *55:31, *55:31 = *55:31, *55:57
                                     *55:01:01, *55:28 = *55:01:07, *55:28
*55:01:01, *55:02:01 = *55:01:07, *55:02:01
+++----
+++----
+++----
                                     *55:01:07, *55:09 = *55:09, *55:09 = *55:09, *55:24
+++----
                                     *55:01:01, *55:15 = *55:01:01, *55:24 = *55:01:07, *55:15 = *55:15, *55:15 =
                                     *55:15, *55:24 = *55:15, *55:57 = *55:24, *55:57
+++----
                                     *55:01:07, *55:22 = *55:22, *55:24
                                     *55:01:01, *55:11 = *55:01:01, *55:14 = *55:01:07, *55:11 = *55:11, *55:11 =
+++---- +----+- ------
                                     *55:11, *55:14 = *55:11, *55:57
                                     *55:01:01, *55:05 = *55:01:07, *55:05 = *55:05, *55:05 = *55:05, *55:57 *55:01:01, *55:03 = *55:01:07, *55:03 = *55:03, *55:03 = *55:03, *55:57
+++--+-- -------
++++----
```

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```
-+---- ------ ++----
                                  *55:18, *55:34 = *55:18, *55:47
++-----
                                  *55:21, *55:23 = *55:21, *55:32
++-----
                                  *55:23, *55:27 = *55:23, *55:28 = *55:27, *55:27 = *55:27, *55:28 = *55:27,
                                  *55:32 = *55:27, *55:57
++-----
                                  *55:02:01, *55:43 = *55:43, *55:43 = *55:43, *55:46 = *55:43, *55:57
++-----
                                  *55:42, *55:50 = *55:47, *55:50
++----- ---+-+- ------ -+---+--
                                  *55:35, *55:42 = *55:35, *55:47
                                  *55:39, *55:42 = *55:39, *55:47
*55:41, *55:42 = *55:41, *55:47
++---- ------ -+---
++----- ---+-+- ----- -+-+----
                                  *55:42, *55:46 = *55:46, *55:47
++----- ---+-+- ----- -++----
++----- ++-----
                                  *55:02:01, *55:34 = *55:26, *55:34 = *55:26, *55:42 = *55:26, *55:47 =
                                  *55:34, *55:42 = *55:34, *55:57
++-----
                                  *55:32, *55:42 = *55:32, *55:47
                                  *55:16, *55:42 = *55:16, *55:47
*55:37, *55:42 = *55:37, *55:47
++----- ----+- -----+- -+----
++----
++-----
                                  *55:02:01, *55:23 = *55:23, *55:37 = *55:32, *55:37
++-----
                                  *55:02:01, *55:21 = *55:16, *55:21 = *55:16, *55:37 = *55:21, *55:37
++----- ----+-- ---+----
                                  *55:42, *55:56 = *55:47, *55:56
++----- ----+-- --+----
                                  *55:30, *55:42 = *55:30, *55:47
                                  *55:19, *55:42 = *55:19, *55:47
++----- ----+-- -+-----
*55:02:01, *55:18 = *55:18, *55:19 = *55:18, *55:26 = *55:18, *55:57 =
                                  *55:19, *55:26
++----- ----+-- +-----
                                  *55:02:01, *55:17 = *55:17, *55:35 = *55:28, *55:35
++---- ---+-+- +----- -+----
                                  *55:28, *55:42 = *55:28, *55:47
++----
                                  *55:02:01, *55:10 = *55:10, *55:10 = *55:10, *55:57
++-----
                                  *55:22, *55:50 = *55:48, *55:50
++----- --+-+- ------ ----+--
                                  *55:22, *55:35 = *55:35, *55:48
++-----
                                  *55:22, *55:39 = *55:39, *55:48
*55:22, *55:41 = *55:41, *55:48
++----
++---- --+-+- ----- --+---
                                  *55:22, *55:46 = *55:46, *55:48
++---- --+-+- ----- -+----
                                  *55:22, *55:42 = *55:22, *55:47 = *55:42, *55:48 = *55:47, *55:48
++----- --+-+- ------ +-----
                                  *55:22, *55:26 = *55:26, *55:48
++-----
                                  *55:22, *55:32 = *55:32, *55:48
                                  *55:16, *55:22 = *55:16, *55:48
*55:22, *55:37 = *55:37, *55:48
++-----
++----
++---- --+-+- ---+---
                                  *55:22, *55:56 = *55:48, *55:56
++-----
                                  *55:22, *55:30 = *55:30, *55:48
++----
                                  *55:19, *55:22 = *55:19, *55:48
++-----
                                  *55:22, *55:28 = *55:28, *55:48
                                  *55:07, *55:42 = *55:07, *55:47
*55:07, *55:22 = *55:07, *55:48
*55:14, *55:42 = *55:14, *55:47
++---- -+--+- ----- -+----
++----
++---- +---+- ----- -+----
++----- -+----
                                  *55:12, *55:42 = *55:12, *55:47
++----+ --+-+- ------
                                  *55:12, *55:22 = *55:12, *55:48
++---+- ----+-- ----- -+----
                                  *55:08, *55:42 = *55:08, *55:47
++--+-- ----+- ----- -+----
                                  *55:04, *55:42 = *55:04, *55:47
+++----
                                  *55:01:01, *55:13 = *55:01:07, *55:13 = *55:13, *55:33
+++----
                                  *55:32, *55:38 = *55:33, *55:38
+++----
                                  *55:32, *55:55N = *55:33, *55:55N
+++----
                                  *55:32, *55:44 = *55:33, *55:44
+++---- ----+- -----+ -+----
                                  *55:32, *55:45 = *55:33, *55:45
+++---- -----+ +-----
                                  *55:32, *55:40 = *55:33, *55:40
                                  *55:29, *55:32 = *55:29, *55:33
+++----
+++----
                                  *55:01:01, *55:23 = *55:01:07, *55:23 = *55:23, *55:33 = *55:23, *55:52 =
                                  *55:32, *55:52 = *55:33, *55:52
+++----
                                  *55:01:01, *55:21 = *55:01:07, *55:21 = *55:21, *55:29 = *55:21, *55:52 =
                                  *55:29, *55:52
+++----
                                  *55:32, *55:36 = *55:33, *55:36
+++----
                                  *55:31, *55:32 = *55:31, *55:33
                                  *55:01:01, *55:17 = *55:01:07, *55:17 = *55:28, *55:38
*55:01:01, *55:20 = *55:01:07, *55:20
+++---- ------
+++----
+++----
                                  *55:01:01, *55:50 = *55:01:07, *55:50
```

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```
+++----
                                    *55:01:01, *55:35 = *55:01:07, *55:35 = *55:02:01, *55:38 = *55:35, *55:38
+++---- ----+--
                                    *55:01:01, *55:39 = *55:01:07, *55:39 = *55:02:01, *55:55N = *55:39,
                                    *55:01:01, *55:41 = *55:01:07, *55:41 = *55:02:01, *55:44 = *55:41, *55:44
+++----
+++---- ------
                                    *55:01:01, *55:42 = *55:01:01, *55:47 = *55:01:07, *55:42 = *55:01:07,
                                    *55:47 = *55:02:01, *55:45 = *55:42, *55:45 = *55:45, *55:47
                                    *55:01:01, *55:26 = *55:01:07, *55:26 = *55:02:01, *55:40 = *55:26, *55:40 *55:01:01, *55:16 = *55:01:07, *55:16 = *55:02:01, *55:29 = *55:16, *55:29 *55:01:01, *55:37 = *55:01:07, *55:37 = *55:02:01, *55:52 = *55:37, *55:52 *55:01:01, *55:30 = *55:01:07, *55:30 = *55:02:01, *55:36 = *55:30, *55:36
+++---- ------- +-----
+++----
+++----
+++----
+++----
                                    *55:01:01, *55:19 = *55:01:07, *55:19 = *55:02:01, *55:31 = *55:19, *55:31
+++----
                                    *55:15, *55:38 = *55:24, *55:38
+++---- --+---
                                    *55:15, *55:55N = *55:24, *55:55N
                                    *55:15, *55:44 = *55:24, *55:44
*55:15, *55:46 = *55:24, *55:46
+++---- --+----
+++----
+++---- --+---- -----
                                    *55:15, *55:45 = *55:24, *55:45
+++---- --+---- +-----
                                    *55:15, *55:40 = *55:24, *55:40
+++----
                                    *55:15, *55:32 = *55:15, *55:33 = *55:24, *55:32 = *55:24, *55:33
+++----
                                    *55:15, *55:29 = *55:24, *55:29
+++----
                                    *55:01:01, *55:09 = *55:09, *55:15 = *55:09, *55:52 = *55:09, *55:57 =
                                    *55:15, *55:52 = *55:24, *55:52
*55:15, *55:56 = *55:24, *55:56
+++----
+++----
                                    *55:15, *55:36 = *55:24, *55:36
+++----
                                    *55:15, *55:31 = *55:24, *55:31
                                    *55:15, *55:28 = *55:24, *55:28
+++----
+++----
                                    *55:01:01, *55:22 = *55:01:01, *55:48 = *55:01:07, *55:48 = *55:02:01,
                                    *55:15 = *55:02:01, *55:24 = *55:15, *55:22 = *55:15, *55:48 = *55:24,
                                    *55:48
+++----
                                    *55:01:01, *55:07 = *55:01:07, *55:07
+++---- +----+- ------ ----+---
                                    *55:11, *55:55N = *55:14, *55:55N
+++---- +----+- ----- ---+---
                                    *55:11, *55:44 = *55:14, *55:44
+++---- +----+- ------ -+----
                                    *55:11, *55:45 = *55:14, *55:45
+++---- +----+- ----- +-----
                                    *55:11, *55:40 = *55:14, *55:40
                                    *55:11, *55:32 = *55:11, *55:33 = *55:14, *55:33 
*55:11, *55:29 = *55:14, *55:29
+++---- +----+ -----+ -----
+++----
+++---- +----+- ----+-- -----
                                    *55:11, *55:52 = *55:14, *55:52
+++---- +----+- --+----
                                    *55:11, *55:36 = *55:14, *55:36
+++---- +----+- -+-----
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                                    *55:14, *55:25 = *55:14, *55:31 = *55:25, *55:25 = *55:25, *55:31 = *55:25,
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+++--+- -----+ -----+ -----
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++-----
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++----
                                    *55:21, *55:42 = *55:21, *55:47
++----- ++-----
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++----- ----+-- +----- -+----
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++----
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++-----
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++-----
                                    *55:22, *55:43 = *55:43, *55:48
```

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++-----
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++---- --+-+- -+-----
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*55:21, *55:33 = *55:23, *55:29
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++-++--- ----+-- ------
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+++----
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*55:39, *55:45 = *55:42, *55:55N = *55:47, *55:55N
+++---- ----+--
+++---- ----+-- ----- -+-+---
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+++---- ----+--
                                  *55:26, *55:38 = *55:35, *55:40
+++---- ----+-- ----- +---+---
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                                  *55:16, *55:44 = *55:29, *55:41
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+++----
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+++----
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+++---- ----+-- +-----
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*55:16, *55:52 = *55:29, *55:37
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+++---- ------
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+++---- ---+-- --+----
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*55:30, *55:52 = *55:36, *55:37
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+++---- ----+-- -+----
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Lot-specific information

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+++----
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*55:12, *55:15 = *55:12, *55:24
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++++---- ----+-- ------
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++++---
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*55:22, *55:27 = *55:27, *55:48
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+++----
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+++---- --+-+- ----- ++-----
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+++---- --+-+- ------
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+++---- --+-+- -+-----
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*55:10, *55:15 = *55:10, *55:24
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+++---- +---+- -+---- -+----
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+++---- +---+- -+---- +-----
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+++---- +-+-+- -+----
                                    *55:22, *55:25 = *55:25, *55:48
```

^{*55:01:01 = *55:01:01-55:01:06} and 55:01:08-55:01:10 and 55:53-55:54

^{*55:02:01 = *55:02:01-55:02:06}

^{*55:08 = *55:08} and 55:51

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SPECIFICITY TABLE

HLA-B*55 SSP subtyping

Specificities and sizes of the PCR products of the 32 primer mixes used for HLA-B*55 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA- B*55 alleles ³	Other amplified HLA Class I alleles ⁴
1	400 bp	800 bp	*55:01:01-55:05, 55:07-55:17, 55:19- 55:33, 55:35-55:46, 55:48-55:57	*07:65, 35:76, 40:166 [?] , 44:90, 54:01:01-54:06, 54:08N-54:23, 54:25-54:28, 56:01:01-56:07, 56:08 ^w , 56:09-56:13, 56:15-56:16, 56:18-56:22, 56:24-56:32, 56:34-56:38N, 81:01, 81:03 [?] -81:04N [?] , 81:06 [?] , 82:01-82:03, 83:01
25	125 bp	1070 bp	*55:01:01-55:03, 55:05, 55:07, 55:09-55:13, 55:15- 55:16, 55:18-55:19, 55:21-55:37, 55:39- 55:48, 55:50, 55:52-55:57	*13:01:01-13:04, 13:06-13:09, 13:11-13:20, 13:22:01-13:23, 13:25-13:34, 13:36-13:61, 13:63N, 14:22, 15:16:01-15:16:03, 15:20, 15:34, 15:42, 15:62, 15:67, 15:85-15:86, 15:95, 15:137, 15:194, 15:222, 15:254, 18:22, 18:52, 27:14, 35:01:01:01-35:05:02, 35:06-35:08:06, 35:10-35:11:03, 35:13-35:15, 35:19-35:21, 35:23-35:30, 35:33-35:38, 35:40N-35:42:02, 35:45-35:50, 35:52, 35:54-35:58, 35:60, 35:62-35:63, 35:65Q-35:66, 35:68:01-35:72, 35:74-35:78, 35:80-35:85, 35:89-35:98, 35:100-35:101:02, 35:103-35:112, 35:115-35:116, 35:119-35:124, 35:126-35:134N, 35:136-35:148, 35:150-35:163, 35:166-35:173N, 35:175-35:178, 35:180-35:184, 35:186-35:195, 35:197-35:198, 35:200, 35:202-35:204, 35:206-35:207, 35:209-35:214, 35:216N-35:220, 40:28, 44:10, 44:15, 44:18, 44:48, 45:01-45:14, 46:11, 46:18, 46:33, 48:02:01-48:02:03, 48:25, 49:01:01-49:25, 50:01:01, 50:01:03-50:02, 50:05-50:19, 51:15, 51:56:01-51:56:02, 53:01:01-53:06, 53:08:01-53:29, 54:01:01-54:05N, 54:07-54:08N, 54:10, 54:12-54:14, 54:16-54:28, 56:01:01-56:01:03, 56:02, 56:07-56:11, 56:13-56:17, 56:19N, 56:22-56:26,

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3	150 bp	1070 bp	*55:01:01-55:01:10, 55:03, 55:05, 55:09, 55:11, 55:15, 55:24-55:25, 55:29, 55:31, 55:33, 55:36, 55:38, 55:40, 55:44-55:45, 55:52 ^w , 55:53- 55:55N	*07:78 ^w , 13:16, 13:20, 13:48, 15:42, 51:62, 51:106, 52:25, 54:20 ^w , 56:25, 56:37
4	235 bp	1070 bp	*55:03, 55:49	*08:15, 35:74, 35:186, 40:73, 46:01:01-46:04, 46:06-46:36, 46:38
5	235 bp	800 bp	*55:04, 55:49	*07:19, 07:31, 07:34, 07:43, 08:01:01-08:05, 08:07-08:08N, 08:10, 08:13-08:15, 08:17-08:20, 08:22-08:24, 08:26-08:39, 08:41-08:48, 08:50-08:59, 08:61-08:78, 08:80-08:83, 08:85-08:88, 08:90-08:105, 14:05, 14:13, 18:14, 18:22 ^w , 35:87, 37:09, 38:19, 39:03, 39:14, 39:24:01-39:24:02, 39:29, 39:37, 39:76, 40:39, 41:02:01-41:02:04, 41:04, 41:10-41:11, 41:13, 41:15, 41:18, 41:23-41:24, 42:01:01-42:02, 42:05:01-42:12, 42:14-42:17, C*08:08
6 ⁵ 7	100 bp 180 bp	1070 bp 1070 bp	*55:05 *55:08, 55:51	*07:20, 07:24, 07:60, 07:100, 07:131, 08:21, 08:25, 13:62, 15:09-15:10:02, 15:30, 15:37, 15:45, 15:48, 15:63, 15:90, 15:99, 15:150, 15:243, 15:248, 27:76, 35:02:01-35:02:05, 35:04:01-35:04:03, 35:09:01-35:09:03, 35:12:01-35:12:03, 35:18, 35:22, 35:34, 35:39, 35:44, 35:81, 35:83, 35:95, 35:129N, 35:149, 35:154, 35:162, 35:172, 35:182-35:184, 35:199, 35:201, 35:211, 35:220, 40:05, 40:26, 40:28, 40:63, 40:92, 40:174, 41:17, 44:62, 44:77, 44:82, 44:107, 44:123, 49:18, 50:14, 51:01:01-51:01:14, 51:01:16-51:01:31, 51:01:33-51:09:02, 51:11N-51:12, 51:18-51:20,

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8	425 bp	800 bp	*55:12	
98	215 bp, 375 bp	1070 bp	*55:11, 55:14, 55:25 ^w	
10 ⁵	70 bp	1070 bp	*55:07	*07:13, 54:01:02, 67:02, C*07:01:22 , C*07:02:31 , C*08:16:02 , C*15:02:06
11 ^{5,9}	90 bp, 125 bp, 180 bp	1070 bp	*55:09, 55:15, 55:22, 55:24, 55:48	*07:78, 13:01:01-13:02:15, 13:07N-13:09, 13:11, 13:14-13:20, 13:22:01-13:23, 13:25, 13:27-13:34, 13:36-13:45, 13:47, 13:49N-13:50, 13:52, 13:54-13:58, 13:60-13:61, 13:63N, 40:48, 45:10, 49:07, 54:26
12	210 bp	1070 bp	*55:10	*07:02:01-07:02:27, 07:02:29-07:02:37, 07:04-07:07, 07:09, 07:11-07:12, 07:14-07:15, 07:17-07:26, 07:28, 07:30-07:31, 07:33-07:36, 07:39-07:49N, 07:51-07:64, 07:66-07:68:03, 07:73-07:82, 07:84, 07:87-07:124, 07:126-07:142, 07:143 ^w , 07:144-07:176, 38:26, 42:01:01-42:01:03, 42:04-42:06, 42:08, 42:10, 42:12-42:16, 42:17 ^w , 56:35 ^w , 67:01:01-67:01:02, 67:03, 81:01-81:04N, 81:06
13	150 bp	1070 bp	*55:02:01-55:02:06, 55:07, 55:10, 55:12, 55:16, 55:18-55:19, 55:22, 55:26, 55:30, 55:34-55:35, 55:37 ^w , 55:39, 55:41-55:43, 55:47- 55:48, 55:50	*13:01:01-13:03, 13:06-13:09, 13:11-13:12, 13:14-13:15, 13:17, 13:18 ^w , 13:19, 13:22:01-13:23, 13:25, 13:27-13:30, 13:32-13:34, 13:36-13:40, 13:42-13:45, 13:47, 13:49N-13:50, 13:52-13:58, 13:60-13:61, 13:63N, 15:86, 15:224, 35:60, 40:48, 40:71, 44:10, 46:11, 46:18, 49:11, 51:15, 54:01:01-54:03, 54:05N, 54:07-54:08N, 54:10 ^w , 54:12-54:13, 54:17-54:19, 54:21-54:28,

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14	215 bp	800 bp		59:01:01:02, 59:04-59:05 *07:02:19, 15:01:04, 37:01:04, 40:94, 51:01:18, 54:01:01, 54:01:03-54:28, 58:01:08
15	245 bp	1070 bp	*55:01:01-55:01:06, 55:01:08-55:03, 55:05, 55:07, 55:10-55:13, 55:15- 55:21, 55:23, 55:25-55:48, 55:50, 55:52-55:57	*08:09, 08:84, 13:46, 13:53, 15:42, 15:83, 35:60, 39:06:01-39:06:02, 39:34, 39:57, 39:62, 39:64, 41:01, 41:05-41:07, 41:09, 41:12, 41:14, 41:16, 41:20-41:22, 41:25, 42:04, 45:08, 46:18, 51:21, 51:36, 51:101, 51:143, 54:01:01-54:02, 54:04-54:05N, 54:07-54:08N, 54:10-54:25, 54:27-54:28, 56:23, 59:01:01:01-59:03, 59:05, 78:07
16	245 bp	1070 bp		*13:03-13:04, 13:48, 13:62, 15:04, 15:16:01-15:16:03, 15:67, 15:95, 15:137, 15:155, 15:222, 15:254, 35:37, 39:33, 41:17, 44:15, 44:18, 44:20, 44:47, 44:100, 45:01-45:07, 45:09, 45:11-45:14, 46:11, 46:32, 49:01:01-49:06, 49:08-49:25, 50:01:01-50:02, 50:04-50:11, 50:13-50:16, 50:18-50:19, 51:01:01-51:01:31, 51:01:33-51:03, 51:05, 51:07:01-51:20, 51:22-51:24:04, 51:26-51:30, 51:32-51:33, 51:35, 51:37-51:41N, 51:43-51:44N, 51:48-51:55, 51:57-51:58, 51:60-51:61:02, 51:63, 51:65-51:80, 51:83-51:92, 51:94-51:100, 51:102-51:134, 51:136-51:138, 51:140-51:142, 51:145-51:147, 52:01:01:01-52:07, 52:09-52:31, 54:03, 56:01:01-56:01:04, 56:05:01-56:08, 56:13-56:17, 56:20:01-56:22, 56:24-56:30, 56:33-56:38N, 58:08:01-58:08:02, 59:04, 78:01:01-78:06
17 ⁵	105 bp	1070 bp	*55:17, 55:20, 55:27-55:28	*07:84, 08:09, 08:84, 13:35, 13:59, 13:62, 15:83, 27:14, 27:81, 40:06:01:01-40:06:06, 40:44, 40:53, 40:70, 40:75, 40:83, 40:93, 40:95-40:96, 40:103, 40:109-40:110, 40:127, 40:131, 40:148, 40:161-40:162, 40:165, 40:167, 40:177,

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10				40:190, 41:01, 41:05-41:07, 41:09, 41:12, 41:14, 41:16-41:17, 41:20-41:22, 41:25, 42:04, 44:20, 44:47, 44:100, 49:18, 50:14, 51:01:01-51:03, 51:05, 51:07:01-51:12, 51:14, 51:16-51:24:04, 51:26-51:34, 51:36, 51:38-51:41N, 51:43-51:44N, 51:48-51:55, 51:57-51:58, 51:60-51:61:02, 51:65-51:80, 51:82-51:91, 51:93-51:96, 51:98N, 51:100-51:105, 51:107-51:130, 51:132, 51:134, 51:136-51:138, 51:140-51:147, 52:01:01:01-52:13, 52:15-52:24, 52:26-52:31, 54:04, 54:11, 54:15, 56:05:01-56:06, 56:15, 56:21, 58:08:01-58:08:02, 59:02, 78:01:01-78:07
18 ¹⁰	215 bp, 310 bp, 415 bp	800 bp	*55:18-55:19, 55:25 ^w , 55:31	*40:10:01-40:10:02, 56:23, 59:01:01:01- 59:05
19	205 bp	1070 bp	*55:30, 55:36	*15:244, 39:54, C*03:70, C*03:127
205	220 bp	1070 bp	*55:20, 55:56	*08:09, 08:84, 13:46, 15:83, 41:01, 41:05-41:07, 41:09, 41:12, 41:14, 41:16-41:17, 41:20-41:22, 41:25, 42:04, 44:15, 44:18, 44:20, 44:100, 45:01-45:14, 51:08, 51:20, 51:36, 51:44N, 51:97, 51:141, 52:19, 56:13
21	270 bp	800 bp	*55:10	*18:01:01:01-18:03, 18:05-18:15, 18:18-18:28, 18:30-18:79, 18:81-18:83, 27:75, 35:25, 35:124-35:125, 35:142, 35:162, 37:01:01-37:21, 37:23-37:37, 40:149 [?] , 44:130, 44:156, 51:116, 52:16, 52:27, 54:21, 56:16, 57:58, 58:12, 81:01, 81:03 [?] -81:06 [?] , 82:01-82:03, 83:01
22 ^{5,11}	95 bp, 225 bp	800 bp	*55:09, 55:21, 55:23, 55:27, 55:37, 55:52	*07:78, 07:84, 13:04, 13:18, 13:31, 13:35, 13:41, 15:04, 15:16:01-15:16:03, 15:67, 15:95, 15:137, 15:155, 15:222, 15:254, 35:37, 39:33, 40:44, 40:159, 40:161, 41:21, 44:20, 44:47, 44:100, 45:09, 46:32, 49:04-49:05, 51:05, 51:29, 51:37, 51:54, 51:61:01-51:61:02, 51:82, 51:90, 51:92, 52:12, 52:21, 52:24, 52:26, 54:10, 54:14-54:15, 54:20
23 ¹²	165 bp, 220 bp	1070 bp	*55:16, 55:21, 55:29	*07:143, 13:31, 13:41, 15:04, 15:137, 40:166, 42:02, 42:09, 42:17, 45:06, 46:32, 51:61:01-51:61:02, 52:21, 54:02, 56:35

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Lot No.: 65R Lot-specific information

24 ^{5,13}	100 bp, 235 bp	1070 bp	*55:13, 55:23, 55:27, 55:32-55:33	*07:84, 13:04, 13:35, 13:46, 15:04, 15:16:01-15:16:03, 15:67, 15:95, 15:137, 15:155, 15:222, 15:254, 35:37, 39:06:01-39:06:02, 39:33-39:34, 39:50, 39:57, 39:62, 39:64, 40:44, 40:86, 40:159, 41:21, 44:20, 44:47, 44:100, 45:02, 45:09, 46:32, 49:04-49:05, 50:09, 51:13:01-51:13:02, 51:37, 51:63, 51:90, 51:92, 51:97, 52:12, 52:14, 52:26, 54:14-54:15, 56:22, 59:03, 73:01-73:02
25 ^{6,14}	280 bp,	1070 bp	*55:18, 55:26,	*40:10:01-40:10:02
	380 bp	1070 50	55:34, 55:40	40.10.01 40.10.02
26 ^{5,6,15}	75 bp, 310 bp, 400 bp	1070 bp	*55:34, 55:42, 55:45, 55:47	
27 ^{5,16}	95 bp, 170 bp	1070 bp	*55:43, 55:46	*51:127, 54:16
28 ^{5,6,7}	100 bp	800 bp	*55:41, 55:44	*13:46, 15:137, 73:01-73:02
29 ^{5,17}	110 bp, 235 bp	1070 bp	*55:39, 55:55N	*51:133
30 ^{5,6,18}	105 bp, 220 bp	1070 bp	*55:17, 55:35, 55:38	*08:09, 08:84, 15:76, 15:83, 15:101, 39:06:02, 39:34, 39:57, 39:62, 39:64, 42:04, 51:21, 51:36, 51:101, 51:143, 78:07
31 ^{5,19}	105 bp, 170 bp	800 bp	*55:13, 55:43	*13:46, 15:137, 39:06:01-39:06:02, 39:33-39:34, 39:50, 39:57, 39:62, 39:64, 40:86, 45:02, 50:09, 51:13:01-51:13:02, 51:92, 51:127, 52:14, 56:22, 59:03, 73:01-73:02
32 ⁵	95 bp	1070 bp	*55:50	*08:83, 13:06, 13:53, 18:74N, 18:78, 38:38

¹Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-B*55 SSP typings.

When the primers in a primer mix can give rise to HLA-specific PCR products of more than one length this is indicated if the size difference is more than 20 base pairs. Size differences of 20 base pairs or less are not given. For high resolution SSP kits the respective lengths of the HLA-specific PCR product(s) are given for the alleles amplified by these primer mixes.

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

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

PCR fragments migrating faster than the control bands, but slower than a 400 bp fragment may be seen in some gel read-outs. Such bands can be disregarded and do not influence the interpretation of the SSP typings.

Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an inherit feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low



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amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated.

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

Well number 1 contains the primer pair giving rise to the longer, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-B*55 subtyping.

In addition, wells number 5, 8, 14, 18, 21, 22, 28 and 31 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

In the presence of a specific amplification the intensity of the control band often decreases.

³For several HLA Class I alleles 1st and/or 4th exon(s) and beyond, as well as intron nucleotide sequences, are not available. In these instances it is not known whether some of the primers of the SSP sets are completely matched with the target sequences or not. We assume that unknown sequences in these regions are conserved within allelic groups.

⁴Due to the sharing of sequence motifs between HLA-B alleles non-HLA-B*55 alleles will be amplified by primer mixes 1 to 5, 7, 10 to 25 and 27 to 32. In addition, the C*02:56, C*06:20, C*07:81 and C*07:168 alleles will be amplified by primer mix 2, the C*03:70 and C*03:127 alleles will be amplified by primer mix 19, the C*03:81 and C*03:152 alleles will be amplified by primer mix 7, the C*07:01:22, C*07:02:31, C*08:16:02 and C*15:02:06 alleles will be amplified by primer mix 10 and the C*08:08 allele will be amplified by primer mix 5.

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

⁶Primer mixes 25, 26, 28 and 30 may have tendencies of unspecific amplifications.

⁷Primer mix 28 has a tendency of giving rise to primer oligomer formation.

⁸Primer mix 9: Specific PCR fragment of 215 bp in the B*55:25^w allele. Specific PCR fragment of 375 bp in the B*55:11 and 55:14 alleles.

⁹Primer mix 11: Specific PCR fragment of 90 bp in the B*55:48 allele. Specific PCR fragment of 125 bp in the B*55:15 allele. Specific PCR fragment of 180 bp in the B*55:09, 55:22 and 55:24 and the B*07:78, 13:01:01-13:02:15, 13:07N-13:09, 13:11, 13:14-13:20, 13:22:01-13:23, 13:25, 13:27-13:34, 13:36-13:45, 13:47, 13:49N-13:50, 13:52, 13:54-13:58, 13:60-13:61, 13:63N, 40:48, 45:10, 49:07 and 54:26 alleles.

¹⁰Primer mix 18: Specific PCR fragment of 215 bp in the B*55:25^w allele. Specific PCR fragment of 310 bp in the B*55:19 allele. Specific PCR fragment of 415 bp in the B*55:18 and 55:31 and the B*40:10:01-40:10:02, 56:23 and 59:01:01:01-59:05 alleles.

¹¹Primer mix 22: Specific PCR fragment of 95 bp in the B*55:23 and 55:27 and the B*13:04, 13:35, 15:16:01-15:16:03, 15:67, 15:95, 15:155, 15:222, 15:254, 35:37, 40:44, 40:159, 41:21, 44:20, 44:47, 44:100, 45:09, 49:04-49:05, 51:37, 51:90, 51:92, 52:12, 52:26 and 54:14-54:15 alleles. Specific PCR fragment of 225 bp in the B*55:09, 55:21, 55:37 and 55:52 and the B*07:78, 13:18, 13:31, 13:41, 15:137, 39:33, 40:161, 51:05, 51:29, 51:54, 51:61:01-51:61:02, 51:82, 52:21, 52:24, 54:10 and 54:20 alleles. Specific PCR fragment of 95 and 225 bp in the B*07:84, 15:04 and 46:32 alleles.

¹²Primer mix 23: Specific PCR fragment of 165 bp in the B*55:29 allele. Specific PCR fragment of 220 bp in the B*55:16 and 55:21 and the B*07:143, 13:31, 13:41, 15:04, 15:137, 40:166, 42:02, 42:09, 42:17, 45:06, 46:32, 51:61:01-51:61:02, 52:21, 54:02 and 56:35 alleles.

¹³Primer mix 24: Specific PCR fragment of 100 bp in the B*55:13, 55:23, 55:27 and 55:32 and the B*07:84, 13:04, 13:35, 13:46, 15:04, 15:16:01-15:16:03, 15:67, 15:95, 15:137, 15:155, 15:222, 15:254, 35:37, 39:06:01-39:06:02, 39:33-39:34, 39:50, 39:57, 39:62, 39:64, 40:44, 40:86, 40:159, 41:21, 44:20, 44:47, 44:100, 45:02, 45:09, 46:32, 49:04-49:05, 50:09, 51:13:01-51:13:02, 51:37, 51:63, 51:90, 51:92, 51:97, 52:12, 52:14, 52:26, 54:14-54:15, 56:22, 59:03 and 73:01-73:02 alleles. Specific PCR fragment of 235 bp in the B*55:33 allele.

¹⁴Primer mix 25: Specific PCR fragment of 280 bp in the B*55:26 allele. Specific PCR fragment of 380 bp in the B*55:18, 55:34 and 55:40 and the B*40:10:01-40:10:02 alleles.

¹⁵Primer mix 26: Specific PCR fragment of 75 bp in the B*55:42 allele. Specific PCR fragment of 310 bp in the B*55:45 allele. Specific PCR fragment of 400 bp in the B*55:34 and 55:47 alleles. ¹⁶Primer mix 27: Specific PCR fragment of 95 bp in the B*55:46 and the B*54:16 alleles. Specific PCR fragment of 170 bp in the B*55:43 and the B*51:127 alleles.

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¹⁷Primer mix 29: Specific PCR fragment of 110 bp in the B*55:39 and the B*51:133 alleles. Specific PCR fragment of 235 bp in the B*55:55N allele.

¹⁸Primer mix 30: Specific PCR fragment of 105 bp in the B*55:35 and the B*15:76 and 15:101 alleles. Specific PCR fragment of 220 bp in the B*55:17 and 55:38 and the B*08:09, 08:84, 15:83, 39:06:02, 39:34, 39:57, 39:62, 39:64, 42:04, 51:21, 51:36, 51:101, 51:143 and 78:07 alleles.

¹⁹Primer mix 31: Specific PCR fragment of 105 bp in the B*55:13 and the B*13:46, 15:137, 39:06:01-39:06:02, 39:33-39:34, 39:50, 39:57, 39:62, 39:64, 40:86, 45:02, 50:09, 51:13:01-51:13:02, 51:92, 52:14, 56:22, 59:03 and 73:01-73:02 alleles. PCR fragment of 170 bp in the B*55:43 and the B*51:127 alleles.

^{*?*,} nucleotide sequence of the primer matching region is not known.

^{&#}x27;w', may be weakly amplified.

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INT	ERF	PRI	ET.	ΔΤ		JТ	ΔR	ΙF								
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*55:01:01-55:01:06, 55:01:08-																
55:01:10, 55:53-55:54	1	2	3												15	
*55:01:07	1	2	3													
* 55:02:01- 55:02:06	1	2	_										13		15	
*55:03	1	2	3	4											15	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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								INT	ΓEF	RPI	RE	TA	TIC	N.	TA	BLE
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					Am	plifi	icati									B*55:57 alleles
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17	18	19	20	21	22	23		1	26	27	28	29	30	31	32	
105	215	205	220	270	95	165	100	280	75	95	100	110	105	105	95	Length of spec.
	310				225	220	235	380	310	170		235	220	170		PCR product(s)
	415								400							
1070	800	1070	1070	800	800	1070	1070	1070	1070	1070	800	1070	1070	800	1070	Length of int.
10	8	10	9	8	8	10	9	10	9	10	8	10	10	8	10	pos. control ¹
357	48	134	357	41	357	97	357	48	41	357		357		357	506	5'-primer(s) ²
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17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																HLA-B allele ^{4,5}
																* 55:01:01-55:01:06, 55:01:08-55:01:10, 55:53-55:54
																*55:01:07
																* 55:02:01- 55:02:06
																*55:03
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

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Length of spec.	400	125	150	235	235	100	180	425	215	70	90	210	150	215	245	245
PCR product(s)									375		125					
											180					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*55:04	1				5											
*55:05	1	2	3			6									15	
* 55:07, 54:01:02 ⁶	1	2								10			13		15	
* 55:08, 55:51	1						7									
*55:09	1	2	3								11					
*55:10	1	2										12	13		15	
*55:11	1	2	3						9						15	
*55:12	1	2						8					13		15	
*55:13	1	2													15	
*55:14	1								9							
*55:15	1	2	3								11				15	
*55:16	1	2											13		15	
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*55:28	1	2													15	
*55:29	1	2	3												15	
*55:30	1	2											13		15	
*55:31	1	2	3												15	
*55:32	1	2													15	
*55:33	1	2	3												15	
*55:34		2											13		15	
*55:35	1	2											13		15	
*55:36	1	2	3												15	
*55:37	1	2											w		15	
*55:38	1		3												15	
*55:39	1	2											13		15	
*55:40	1	2	3												15	
*55:41	1	2											13		15	
*55:42	1	2											13		15	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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Lot No.: **65R**

Lot-specific information

105	215	205	220	270	95	165	100	280	75	95	100	110	105	105	95	Length of spec.
	310				225	220	235	380	310	170		235	220	170		PCR product(s)
	415								400							, , , , , , , , , , , , , , , , , , , ,
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																*55:04
																*55:05
																*55:07, 54:01:02 ⁶
																* 55:08, 55:51
					22											*55:09
				21												*55:10
																*55:11
																*55:12
							24							31		*55:13
																*55:14
																*55:15
						23										*55:16
17													30			*55:17
	18							25								*55:18
	18															*55:19
17			20													*55:20
					22	23										*55:21
																*55:22
					22		24									*55:23
																*55:24
	W															*55:25
								25								*55:26
17					22		24									*55:27
17																*55:28
						23										*55:29
		19														*55:30
	18															*55:31
							24									*55:32
							24									*55:33
								25	26							*55:34
													30			*55:35
		19														*55:36
					22											*55:37
													30			*55:38
												29				*55:39
								25								*55:40
											28					*55:41
									26							*55:42
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

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Length of spec.	400	125	150	235	235	100	180	425	215	70	90	210	150	215	245	245
PCR product(s)									375		125					
											180					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*55:43	1	2											13		15	
*55:44	1	2	3												15	
*55:45	1	2	3												15	
*55:46	1	2													15	
*55:47		2											13		15	
*55:48	1	2									11		13		15	
*55:49	1			4	5											
*55:50	1	2											13		15	
*55:52	1	2	W												15	
*55:55N	1	2	3												15	
*55:56	1	2													15	
*55:57	1	2													15	
*07:02:01-07:02:18, 07:02:20-																
07:02:27, 07:02:29-07:02:37, 07:04-																
07:07, 07:09, 07:11-07:12, 07:14-																
07:15, 07:17-07:18:02, 07:21-																
07:23, 07:25-07:26, 07:28, 07:30,																
07:33, 07:35-07:36, 07:39-07:42,																
07:44-07:49N, 07:51-07:59, 07:61-												12				
07:64, 07:66-07:68:03, 07:73-																
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07:101-07:124, 07:126-07:130,																
07:132-07:142, 07:144-07:176,																
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67:03, 81:02																
*07:02:19												12		14		
*07:13, 67:02, <i>C*07:01:22</i> ,																
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07:131							7					12				
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56:31-56:32	1															
*07:78			w								11	12				
*07:84												12				
*07:143												w				
Well No.	1	2	3	4	5	6	7	8	9	10	11		13	14	15	16
TTCII ITU:			J	4	7	U	-	U	J	10	11	14	13	14	ıJ	10

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Lot No.: 65R Lot

Lot-spec	\ifia	infar	matian
LOI-SDEC	HIG	HHOH	nation

105	215	205	220	270	95	165	100	280	75	95	100	110	105	105	95	Length of spec.
	310				225	220	235	380	310	170		235	220	170		PCR product(s)
	415								400							
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
										27				31		*55:43
											28					*55:44
									26							*55:45
										27						*55:46
									26							*55:47
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															32	*55:50
					22											*55:52
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			20													*55:56
																*55:57
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																07:02:27, 07:02:29-07:02:37, 07:04-
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																07:64, 07:66-07:68:03, 07:73-
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																67:03, 81:02
																*07:02:19
																*07:13, 67:02, <i>C*07:01:22</i> ,
																C*07:02:31, C*08:16:02,
																C*15:02:06
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																42:01:01-42:01:03, 42:05:01-42:06,
																42:08, 42:10, 42:12, 42:14-42:16
																*07:20, 07:24, 07:60, 07:100,
																07:131
																*07:65, 44:90, 56:03, 56:12, 56:18,
																56:31-56:32
					22											*07:78
17					22		24									*07:84
						23										*07:143
17	18	19	20	21	22		24	25	26	27	28	20	30	31	32	Well No.
1 /	10	1 3	20	<u>~ I</u>		23		23	20	<u> </u>	20	<u> </u>	JU	JI	JZ	AACII IAO.

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Lot No.: 65R Lot-specific information

Length of spec.	400	125	150	235	235	100	180	425	215	70	90	210	150	215	245	245
PCR product(s)									375		125					
											180					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*08:01:01-08:05, 08:07-08:08N,																
08:10, 08:13-08:14, 08:17-08:20,																
08:22-08:24, 08:26-08:39, 08:41-																
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08:80-08:82N, 08:85-08:88, 08:90-																
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39:03, 39:14, 39:24:01-39:24:02,																
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41:02:01-41:02:04, 41:04, 41:10-																
41:11, 41:13, 41:15, 41:18, 41:23-																
41:24, 42:07, 42:11, <i>C*08:08</i>																
*08:09, 08:84, 15:83, 51:36															15	
*08:15				4	5											
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35:12:01-35:12:03, 35:18, 35:22,																
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35:201, 40:05, 40:26, 40:63, 40:92,							7									
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51:06:02, 51:46, 51:59, 51:64,																
51:135, 51:139, 51:148, 57:02:01-																
57:03:02, 57:07, 57:09, 57:12,																
57:17, 57:28N, 57:39, 57:42, 57:46,																
57:57, C*03:81, C*03:152																
*08:83					5											
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13:22:01-13:23, 13:25, 13:27-																
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49:05		_			_	_	_			4.0	4 4	4.0	4.0	4 .	4 =	4.0
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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105	215	205	220	270	95	165	100	280	75	95	100	110	105	105	95	Length of spec.
	310				225	220	235	380	310	170		235	220	170		PCR product(s)
	415								400							
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																*08:01:01-08:05, 08:07-08:08N, 08:10, 08:13-08:14, 08:17-08:20, 08:22-08:24, 08:26-08:39, 08:41-08:48, 08:50-08:59, 08:61-08:78,
																08:80-08:82N, 08:85-08:88, 08:90- 08:105, 14:05, 14:13, 35:87, 38:19, 39:03, 39:14, 39:24:01-39:24:02,
																39:29, 39:37, 39:76, 40:39, 41:02:01-41:02:04, 41:04, 41:10- 41:11, 41:13, 41:15, 41:18, 41:23-
																41:24, 42:07, 42:11, <i>C*08:08</i>
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																*08:15
															32	*08:21, 08:25, 15:09-15:10:02, 15:30, 15:37, 15:45, 15:48, 15:63, 15:90, 15:99, 15:150, 15:243, 15:248, 27:76, 35:09:01-35:09:03, 35:12:01-35:12:03, 35:18, 35:22, 35:39, 35:44, 35:149, 35:199, 35:201, 40:05, 40:26, 40:63, 40:92, 40:174, 44:62, 44:77, 44:82, 44:107, 44:123, 51:04, 51:06:01-51:06:02, 51:46, 51:59, 51:64, 51:135, 51:139, 51:148, 57:02:01-57:03:02, 57:07, 57:09, 57:12, 57:17, 57:28N, 57:39, 57:42, 57:46, 57:57, C*03:81, C*03:152
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																13:22:01-13:23, 13:25, 13:27- 13:30, 13:32-13:34, 13:36-13:40, 13:42-13:45, 13:47, 13:49N-13:50, 13:52, 13:54-13:58, 13:60-13:61,
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																56:33 *13:04, 15:16:01-15:16:03, 15:67,
					22		24									15:95, 15:222, 15:254, 35:37, 49:04-
4-	4.5	4.5	66	6.1			6.1	65	-	<u> </u>				0.1	00	49:05
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

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Length of spec.	400	125	150	235	235	100	180	425	215	70	90	210	150	215	245	245
PCR product(s)									375		125					
											180					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*13:06		2											13			
*13:12, 15:86, 44:10		2											13			
*13:13, 13:26, 13:51, 14:22, 15:20,																
15:34, 15:62, 15:85, 15:194,																
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35:03:12, 35:05:01-35:05:02, 35:06-																
35:08:06, 35:10-35:11:03, 35:13-																
35:15, 35:19-35:21, 35:23-																
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35:42:02, 35:45-35:50, 35:52,																
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35:85, 35:89-35:94, 35:96-35:98,																
35:100-35:101:02, 35:103-35:112,																
35:115-35:116, 35:119-35:123,																
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35:163, 35:166-35:171, 35:173N,																
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*13:18		2									11		w			
*13:31, 13:41		2									11					
*13:35, 40:44																
*13:46		2													15	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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105	215	205	220	270	95	165	100	280	75	95	100	110	105	105	95	Length of spec.
	310				225	220	235	380	310	170		235	220	170		PCR product(s)
	415								400							
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
															32	*13:06
																*13:12, 15:86, 44:10
																*13:13, 13:26, 13:51, 14:22, 15:20,
																15:34, 15:62, 15:85, 15:194,
																35:01:01:01-35:01:36, 35:03:01-
																35:03:12, 35:05:01-35:05:02, 35:06-
																35:08:06, 35:10-35:11:03, 35:13-
																35:15, 35:19-35:21, 35:23-
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																35:35-35:36, 35:38, 35:40N-
																35:42:02, 35:45-35:50, 35:52,
																35:54-35:58, 35:62-35:63, 35:65Q-
																35:66, 35:68:01-35:72, 35:75,
																35:77-35:78, 35:80, 35:82, 35:84-
																35:85, 35:89-35:94, 35:96-35:98,
																35:100-35:101:02, 35:103-35:112,
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																58:01:09-58:02, 58:04-58:07,
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			20				24				28			31		*13:46
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

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Length of spec.	400	125	150	235	235	100	180	425	215	70	90	210	150	215	245	245
PCR product(s)									375		125					
											180					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*13:48		2	3													16
*13:53		2											13		15	
*13:59, 27:14		2														
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*18:14, 37:09					5											
*18:22		2			W											
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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105	215	205	220	270	95	165	100	280	75	95	100	110	105	105	95	Length of spec.
	310				225	220	235	380	310	170		235	220	170		PCR product(s)
	415								400							
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																*13:48
															32	*13:53
17																*13:59, 27:14
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																51:01:31, 51:01:33-51:03, 51:07:01-
																51:07:02, 51:09:01-51:09:02,
																51:11N-51:12, 51:18-51:19, 51:22-
																51:24:04, 51:26-51:28, 51:30,
																51:32-51:33, 51:38-51:41N, 51:43,
																51:48-51:53, 51:55, 51:57-51:58,
17																51:60, 51:65-51:80, 51:83-51:84,
17																51:86-51:89, 51:91, 51:94-51:96, 51:98N, 51:100, 51:102-51:105,
																51:96N, 51:100, 51:102-51:103, 51:107-51:115, 51:117-51:126,
																51:128-51:130, 51:132, 51:134,
																51:136-51:138, 51:140, 51:142,
																51:145-51:147, 52:01:01:01-52:07,
																52:09-52:11, 52:13, 52:15, 52:17-
																52:18, 52:20, 52:22-52:23, 52:28-
																52:31, 58:08:01-58:08:02, 78:01:01-
																78:06
																*15:01:04, 40:94
					22	23	24									*15:04
																*15:42
													30			*15:76, 15:101
					22	23	24				28			31		*15:137
					22		24									*15:155, 51:37
																*15:224, 40:71
		19														*15:244, 39:54, <i>C*03:70, C*03:127</i>
																*18:01:01:01-18:03, 18:05-18:13,
																18:15, 18:18-18:21, 18:23N-18:28,
																18:30-18:51, 18:53-18:73, 18:75-
				21												18:77, 18:79, 18:81-18:83, 27:75,
																35:125, 37:01:01-37:01:03,
																37:01:05-37:08, 37:10-37:21, 37:23-
																37:37, 44:130, 44:156, 57:58
				21												*18:14, 37:09
				21												*18:22
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

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Length of spec.	400	125	150	235	235	100	180	425	215	70	90	210	150	215	245	245
PCR product(s)									375		125					
											180					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*18:52, 35:25, 35:124, 35:142,		2														
58:12																
*18:74N, 18:78																
*27:81, 40:06:01:01-40:06:06,																
40:53, 40:70, 40:75, 40:83, 40:93,																
40:95-40:96, 40:103, 40:109-																
40:110, 40:127, 40:131, 40:148,																
40:162, 40:165, 40:167, 40:177,																
40:190, 51:01:32, 51:10, 51:16,																
51:31, 51:34, 51:93, 51:144, 52:08																
*35:02:01-35:02:05, 35:04:01-																
35:04:03, 35:34, 35:81, 35:83,																
35:95, 35:129N, 35:154, 35:172,		2					7									
35:182-35:184, 35:211, 35:220,																
40:28, 51:56:01-51:56:02, 53:19,																
57:05, 58:28 *35:60		2											13		15	
*35:74, 35:186, 46:33		2		4									13		13	
*35:76, 56:09, 56:11	1	2		_												
*35:162	•	2					7									
*37:01:04		_					•							14		
*38:38																
*39:06:01															15	
*39:06:02, 39:34, 39:57, 39:62,																
39:64															15	
*39:33, 51:92																16
*39:50, 40:86																
*40:10:01-40:10:02																
*40:48											11		13			
*40:73, 46:01:01-46:04, 46:06-																
46:10, 46:12-46:17, 46:19-46:31,				4												
46:34-46:36, 46:38																
*40:149, 81:05																
*40:159																
*40:161, 51:82																
*40:166	?															
*41:01, 41:05-41:07, 41:09, 41:12,															15	
41:14, 41:16, 41:20, 41:22, 41:25															13	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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

105	215	205	220	270	95	165	100	280	75	95	100	110	105	105	95	Length of spec.
	310				225	220	235	380	310	170		235	220	170		PCR product(s)
	415								400							
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
				21												*18:52, 35:25, 35:124, 35:142,
				۷١												58:12
				21											32	*18:74N, 18:78
																*27:81, 40:06:01:01-40:06:06,
																40:53, 40:70, 40:75, 40:83, 40:93,
																40:95-40:96, 40:103, 40:109-
17																40:110, 40:127, 40:131, 40:148,
																40:162, 40:165, 40:167, 40:177,
																40:190, 51:01:32, 51:10, 51:16,
																51:31, 51:34, 51:93, 51:144, 52:08
																*35:02:01-35:02:05, 35:04:01-
																35:04:03, 35:34, 35:81, 35:83,
																35:95, 35:129N, 35:154, 35:172,
																35:182-35:184, 35:211, 35:220,
																40:28, 51:56:01-51:56:02, 53:19,
																57:05, 58:28
																*35:60
																*35:74, 35:186, 46:33
																*35:76, 56:09, 56:11
				21												*35:162
				21												*37:01:04
															32	*38:38
							24							31		*39:06:01
							24						30	31		*39:06:02, 39:34, 39:57, 39:62,
																39:64
					22		24							31		*39:33, 51:92
							24							31		*39:50, 40:86
	18							25								*40:10:01-40:10:02
																*40:48
																*40:73, 46:01:01-46:04, 46:06-
																46:10, 46:12-46:17, 46:19-46:31,
																46:34-46:36, 46:38
				?												*40:149, 81:05
					22		24									*40:159
17					22											*40:161, 51:82
						23										*40:166
17			20													*41:01, 41:05-41:07, 41:09, 41:12,
																41:14, 41:16, 41:20, 41:22, 41:25
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

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

Length of spec.	400	125	150	235	235	100	180	425	215	70	90	210	150	215	245	245
PCR product(s)									375		125					
											180					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*41:17, 51:08, 51:20, 51:44N,							7									16
51:141, 52:19																10
*41:21															15	
*42:02, 42:09					5											
*42:04												12			15	
*42:17					5							W				
*44:15, 44:18, 45:01, 45:03-45:05,		2														16
45:07, 45:11-45:14																10
*44:20, 44:100																16
*44:47, 52:26																16
*45:02		2														16
*45:06		2														16
*45:08		2													15	
*45:09		2														16
*45:10		2									11					
*46:11		2		4									13			16
*46:18		2		4									13		15	
*46:32				4												16
*49:01:01-49:03, 49:06, 49:08-																
49:10, 49:12-49:17, 49:19N-49:25,																
50:01:01, 50:01:03-50:02, 50:05-		2														16
50:08, 50:10-50:11, 50:13, 50:15-																
50:16, 50:18-50:19																
*49:07		2									11					
*49:18, 50:14		2					7									16
*50:01:02, 50:04																16
*50:09		2														16
*51:01:15, 51:14, 51:17, 51:85																16
*51:01:18							7							14		16
*51:05, 51:29, 51:54, 52:24							7									16
*51:13:01-51:13:02, 52:14																16
*51:21, 51:101, 51:143, 78:07															15	
*51:35, 51:99, 51:131							7									16
*51:61:01-51:61:02, 52:21							7									16
*51:62			3													
*51:63																16
*51:90, 52:12							7									16
*51:97																16
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Visit <u>www.olerup-ssp.com</u> for "Instructions for Use" (IFU)

Lot No.: **65R**

Lot-specific information

105	215	205	220	270	95	165	100	280	75	95	100	110	105	105	95	Length of spec.
	310				225	220	235	380	310	170		235	220	170		PCR product(s)
	415								400							
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
47			20													*41:17, 51:08, 51:20, 51:44N,
17			20													51:141, 52:19
17			20		22		24									*41:21
						23										*42:02, 42:09
17			20										30			*42:04
						23										*42:17
			20													*44:15, 44:18, 45:01, 45:03-45:05,
			20													45:07, 45:11-45:14
17			20		22		24									*44:20, 44:100
17					22		24									*44:47, 52:26
			20				24							31		*45:02
			20			23										*45:06
			20													*45:08
			20		22		24									*45:09
			20													*45:10
																*46:11
																*46:18
					22	23	24									*46:32
																*49:01:01-49:03, 49:06, 49:08-
																49:10, 49:12-49:17, 49:19N-49:25,
																50:01:01, 50:01:03-50:02, 50:05-
																50:08, 50:10-50:11, 50:13, 50:15-
																50:16, 50:18-50:19
																*49:07
17																*49:18, 50:14
																*50:01:02, 50:04
							24							31		*50:09
17																*51:01:15, 51:14, 51:17, 51:85
17																*51:01:18
17					22											*51:05, 51:29, 51:54, 52:24
							24							31		*51:13:01-51:13:02, 52:14
17													30			*51:21, 51:101, 51:143, 78:07
																*51:35, 51:99, 51:131
17					22	23										*51:61:01-51:61:02, 52:21
																*51:62
							24									*51:63
17					22		24									*51:90, 52:12
			20				24									*51:97
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

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

Length of spec.	400	125	150	235	235	100	180	425	215	70	90	210	150	215	245	245
PCR product(s)									375		125					
											180					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*51:106, 52:25			3													16
*51:116, 52:16, 52:27							7									16
*51:127							7									16
*51:133							7									16
*54:01:01, 54:01:03, 54:05N,																
54:08N, 54:12-54:13, 54:17-54:19,	1	2											13	14	15	
54:22-54:23, 54:25, 54:27-54:28																
*54:02	1	2											13	14	15	
*54:03	1	2											13	14		16
*54:04	1	2												14	15	
*54:06, 54:09	1													14		
*54:07, 54:24		2											13	14	15	
*54:10	1	2											w	14	15	
*54:11	1													14	15	
*54:14	1	2												14	15	
*54:15	1													14	15	
*54:16	1	2												14	15	
*54:20	1	2	w											14	15	
*54:21	1	2											13	14	15	
*54:26	1	2									11		13	14		
*56:01:01-56:01:03, 56:07, 56:24,																
56:26, 56:28N-56:29, 56:34, 56:36,	1	2											13			16
56:38N																
*56:01:04, 56:20:01-56:20:02,	1												13			16
56:27	<u>'</u>												13			10
*56:02, 56:10, 56:19N	1	2											13			
*56:04	1												13			
*56:05:01-56:06, 56:21	1						7									16
*56:08	w	2											13			16
*56:13	1	2														16
*56:15	1	2					7									16
*56:16	1	2											13			16
*56:22	1	2														16
*56:23, 59:01:01:01-59:01:01:02,		2											13		15	
59:05													13		13	
*56:25, 56:37	1	2	3													16
*56:30	1	2														16
*56:35	1	2										w	13			16
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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

Lot No.: **65R**

Lot-specific information

105	215	205	220	270	95	165	100	280	75	95	100	110	105	105	95	Length of spec.
	310				225	220	235	380	310	170		235	220	170		PCR product(s)
	415								400							
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																*51:106, 52:25
17				21												*51:116, 52:16, 52:27
17										27				31		*51:127
												29				*51:133
																*54:01:01, 54:01:03, 54:05N,
																54:08N, 54:12-54:13, 54:17-54:19,
																54:22-54:23, 54:25, 54:27-54:28
						23										*54:02
																*54:03
17																*54:04
																*54:06, 54:09
																*54:07, 54:24
					22											*54:10
17																*54:11
					22		24									*54:14
17					22		24									*54:15
										27						*54:16
					22											*54:20
				21												*54:21
																*54:26
																*56:01:01-56:01:03, 56:07, 56:24,
																56:26, 56:28N-56:29, 56:34, 56:36,
																56:38N
																*56:01:04, 56:20:01-56:20:02,
																56:27
																*56:02, 56:10, 56:19N
																*56:04
17																*56:05:01-56:06, 56:21
																*56:08
			20													*56:13
17																*56:15
				21												*56:16
							24							31		*56:22
	40															*56:23, 59:01:01:01-59:01:01:02,
	18															59:05
																*56:25, 56:37
																*56:30
						23										*56:35
17	18	19	20	21	22	_	24	25	26	27	28	29	30	31	32	Well No.

Visit <u>www.olerup-ssp.com</u> for "Instructions for Use" (IFU)

Lot No.: 65R Lot-specific information

Length of spec.	400	125	150	235	235	100	180	425	215	70	90	210	150	215	245	245
PCR product(s)									375		125					
											180					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*58:01:08		2												14		
*59:02															15	
*59:03		2													15	
*59:04		2											13			16
*73:01-73:02																
*81:01	1											12				
*81:03-81:04N, 81:06	?											12				
*82:01-82:03	1	2														
*83:01	1															
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

¹The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the longer, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-B*55 subtyping.

In addition, wells number 5, 8, 14, 18, 21, 22, 28 and 31 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

In the presence of a specific amplification the intensity of the control band often decreases.

²The codon, in the 1st, 2nd or 3rd exon or the 1st intron, matching the specificity-determining 3'-end of the primer is given. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

³The codon, in the 2nd or 3rd exon, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

⁴The B*5506 sequence was shown to contain errors and identical to B*55:04.

⁵HLA-B*55 alleles in bold lettering are listed as confirmed alleles on the on the IMGT/HLA web page www.ebi.ac.uk/imgt/hla. release 3.10.0. October 2012.

www.ebi.ac.uk/imgt/hla, release 3.10.0, October 2012.
⁶The HLA-B*55 primer set cannot separate the B*55:07 and the B*54:01:02 alleles. These alleles can be distinguished by the HLA-B low resolution kit and/or the HLA-B*54 high resolution kit.

⁷Primer mix 9: Specific PCR fragment of 215 bp in the B*55:25^w allele. Specific PCR fragment of 375 bp in the B*55:11 and 55:14 alleles.

Primer mix 11: Specific PCR fragment of 90 bp in the B*55:48 allele. Specific PCR fragment of 125 bp in the B*55:15 allele. Specific PCR fragment of 180 bp in the B*55:09, 55:22 and 55:24 and the B*07:78, 13:01:01-13:02:15, 13:07N-13:09, 13:11, 13:14-13:20, 13:22:01-13:23, 13:25, 13:27-13:34, 13:36-13:45, 13:47, 13:49N-13:50, 13:52, 13:54-13:58, 13:60-13:61, 13:63N, 40:48, 45:10, 49:07 and 54:26 alleles.

Primer mix 18: Specific PCR fragment of 215 bp in the B*55:25^w allele. Specific PCR fragment of 310 bp in the B*55:19 allele. Specific PCR fragment of 415 bp in the B*55:18 and 55:31 and the B*40:10:01-40:10:02, 56:23 and 59:01:01-59:05 alleles.

Primer mix 22: Specific PCR fragment of 95 bp in the B*55:23 and 55:27 and the B*13:04, 13:35, 15:16:01-15:16:03, 15:67, 15:95, 15:155, 15:222, 15:254, 35:37, 40:44, 40:159, 41:21, 44:20, 44:47, 44:100, 45:09, 49:04-49:05, 51:37, 51:90, 51:92, 52:12, 52:26 and 54:14-54:15 alleles. Specific PCR fragment of 225 bp in the B*55:09, 55:21, 55:37 and 55:52 and the B*07:78, 13:18, 13:31, 13:41, 15:137, 39:33, 40:161, 51:05, 51:29, 51:54, 51:61:01-51:61:02, 51:82, 52:21, 52:24, 54:10 and 54:20 alleles. Specific PCR fragment of 95 and 225 bp in the B*07:84, 15:04 and 46:32 alleles.

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

Lot No.: 65R Lot-specific information

105	215	205	220	270	95	165	100	280	75	95	100	110	105	105	95	Length of spec.
	310				225	220	235	380	310	170		235	220	170		PCR product(s)
	415								400							
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																*58:01:08
17	18															*59:02
	18						24							31		*59:03
	18															*59:04
							24				28			31		*73:01-73:02
				21												*81:01
				?												*81:03-81:04N, 81:06
				21												*82:01-82:03
				21												*83:01
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Primer mix 23: Specific PCR fragment of 165 bp in the B*55:29 allele. Specific PCR fragment of 220 bp in the B*55:16 and 55:21 and the B*07:143, 13:31, 13:41, 15:04, 15:137, 40:166, 42:02, 42:09, 42:17, 45:06, 46:32, 51:61:01-51:61:02, 52:21, 54:02 and 56:35 alleles.

Primer mix 24: Specific PCR fragment of 100 bp in the B*55:13, 55:23, 55:27 and 55:32 and the B*07:84, 13:04, 13:35, 13:46, 15:04, 15:16:01-15:16:03, 15:67, 15:95, 15:137, 15:155, 15:222, 15:254, 35:37, 39:06:01-39:06:02, 39:33-39:34, 39:50, 39:57, 39:62, 39:64, 40:44, 40:86, 40:159, 41:21, 44:20, 44:47, 44:100, 45:02, 45:09, 46:32, 49:04-49:05, 50:09, 51:13:01-51:13:02, 51:37, 51:63, 51:90, 51:92, 51:97, 52:12, 52:14, 52:26, 54:14-54:15, 56:22, 59:03 and 73:01-73:02 alleles. Specific PCR fragment of 235 bp in the B*55:33 allele.

Primer mix 25: Specific PCR fragment of 280 bp in the B*55:26 allele. Specific PCR fragment of 380 bp in the B*55:18, 55:34 and 55:40 and the B*40:10:01-40:10:02 alleles.

Primer mix 26: Specific PCR fragment of 75 bp in the B*55:42 allele. Specific PCR fragment of 310 bp in the B*55:45 allele. Specific PCR fragment of 400 bp in the B*55:34 and 55:47 alleles. Primer mix 27: Specific PCR fragment of 95 bp in the B*55:46 and the B*54:16 alleles. Specific PCR fragment of 170 bp in the B*55:43 and the B*51:127 alleles.

Primer mix 29: Specific PCR fragment of 110 bp in the B*55:39 and the B*51:133 alleles. Specific PCR fragment of 235 bp in the B*55:55N allele.

Primer mix 30: Specific PCR fragment of 105 bp in the B*55:35 and the B*15:76 and 15:101 alleles. Specific PCR fragment of 220 bp in the B*55:17 and 55:38 and the B*08:09, 08:84, 15:83, 39:06:02, 39:34, 39:57, 39:62, 39:64, 42:04, 51:21, 51:36, 51:101, 51:143 and 78:07 alleles.

Primer mix 31: Specific PCR fragment of 105 bp in the B*55:13 and the B*13:46, 15:137, 39:06:01-39:06:02, 39:33-39:34, 39:50, 39:57, 39:62, 39:64, 40:86, 45:02, 50:09, 51:13:01-51:13:02, 51:92, 52:14, 56:22, 59:03 and 73:01-73:02 alleles. PCR fragment of 170 bp in the B*55:43 and the B*51:127 alleles.

'w', may be weakly amplified.

'?', the nucleotide sequence of the primer matching region is not know.

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CELL LINE VALIDATION SHEET																				
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				ğ	150	15	130	15	113	13	130	130	121	121	100	130	100	100	100	118
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2	9280	LK707	*52:01	*73:01	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+
3	9011	E4181324	*52:01		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+
4	9275	GU373	*15:10	*53:01	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*37:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353		*39:01	*51:01	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+
7	9020		*18:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025		*35:01		-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026		*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107		*54:01		+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	-
11		PITOUT	*44:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052		*57:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13		JESTHOM	*27:05	+4= 00	-	-	-	-	-	-	-	-	•	-	-	-	-	-	-	-
14		OLGA	*15:01	*15:20	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075		*40:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16		SWEIG007	*40:02	*55.04	-	-	÷	-	-	-	-	-	-	-	-	-	-	-	÷	-
17		CTM3953540	*08:01	*55:01	+	+	+	-	-	-	-	-	-	-	-	-	-	-	+	-
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21		AMALA	*15:01		ι-	-	-	_	-	-	-		Ŀ	-	-			-	-	
22		KOSE	*35:03			+		-			-			-	E		-			-
23	9124		*40:02	*56:02	+	+		-	-		-	-	-	-		-	+	-		-
24		JBUSH	*38:01	30.02	<u> </u>	-	-	-	-	-	-	-	-	-	_	-	-	-	-	-
25	9049		*14:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26		WT49	*58:01		-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27		CH1007	*07:05	*51:01	-	-	-	-	-	-	+	-	-	-	-	+	-	-	-	+
28		BEL5GB	*44:02	*44:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050		*44:03	1 1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021		*42:01		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
31		DUCAF	*18:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297		*41:02		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*40:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*44:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*15:01	*35:01	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*07:02		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
38	9099		*15:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315		*08:01	*27:05	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
40		WHONP199	*13:02	*46:01	-	+	-	+	-	-	-	-	-	-	+	-	+	-	-	-
41		H0301	*14:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42		TAB089	*46:01		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
43		T7526	*46:01		-	-	-	+	-	-	-	-	<u> </u>	-	-	-	-	-	-	-
44	9057		*38:01		-	-	-	-	-	-	-	-	<u> </u>	-	-	-	-	-	-	-
45		SHJO	*42:01	*50:01	-	+	-	-	+	-	-	-	-	-	+	-	-	-	-	+
46		SCHU	*07:02		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
47		TUBO	*51:01		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+
48	9303	TER-ND	*35:01	*44:03	-	+	-	-	-	-	-	-	<u> </u>	-	-	-	-	-	-	-

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CELL LINE VALIDATION SHEET																				
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				Pro	201193017	201211118	201193019	201211120	20119302	201193022	201193023	201193024	201211125	201193026	201193027	201193028	201211129	201211130	201193037	201211132
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1	9001		*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2		LK707	*52:01	*73:01	+	-	-	-	-	-	-	+	-	-	-	+	-	-	+	-
3	9011	E4181324	*52:01		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*15:10	*53:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*37:01		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*39:01	*51:01	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020		*18:01		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
8	9025		*35:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026		*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107		*54:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11		PITOUT	*44:03		-	-	-	-	-	-	-	-	<u> </u>	-	-	-	-	-	-	-
12	9052		*57:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13		JESTHOM	*27:05	* 4 = 00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14		OLGA	*15:01	*15:20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075		*40:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16		SWEIG007	*40:02	*55.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17		CTM3953540	*08:01	*55:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 19	9257	32367	*14:01 *18:01	*56:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20		SLE005	*40:01		-	-	-	-	+	-	-	-	H	÷	-	-	-	-	÷	-
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22		KOSE	*35:03		-	-	-	-		-	-	-	-	-		-	-	-	-	-
23	9124		*40:02	*56:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	JBUSH	*38:01	00.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049		*14:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26		WT49	*58:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*07:05	*51:01	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*44:02	*44:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*44:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021		*42:01		-	-	-	-	-	-	-	-	•	-	-	-	-	-	-	-
31	9019	DUCAF	*18:01		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
32	9297		*41:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33		MT14B	*40:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104		*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35		SSTO	*44:02		-	-	-	-	-	-	-	-	<u> </u>	-	-	-	-	-	-	-
36	9024		*15:01	*35:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37		HHKB	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099		*15:01	*0= :=	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315		*08:01	*27:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40		WHONP199	*13:02	*46:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41		H0301 TAB089	*14:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42		TAB089	*46:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 44	9076		*46:01		-	-	-	-	-	-	-	-	l	-	-	-	-	-	-	-
44		SHJO	*38:01 *42:01	*50:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	÷	-
46		SCHU	*07:02	30.01	-				÷					÷						-
47		TUBO	*51:01		+				÷				Ē							-
48		TER-ND	*35:01	*44:03	-	-	-		E	-	-	-	-		H	H	-	-	-	-
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Lot No.: 65R Lot-specific information

CERTIFICATE OF ANALYSIS

Olerup SSP® HLA-B*55 SSP

Product number: 101.570-06 – including *Taq* polymerase

101.570-06u – without *Taq* polymerase

Lot number: 65R

Expiry date: 2015-June-01

Number of tests: 6 Number of wells per test: 32

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2011-930-01	13	2011-930-13	25	2012-111-25
2	2011-930-02	14	2011-930-14	26	2011-930-26
3	2011-930-03	15	2011-930-15	27	2011-930-27
4	2011-930-04	16	2011-930-16	28	2011-930-28
5	2011-930-05	17	2011-930-17	29	2012-111-29
6	2011-930-06	18	2012-111-18	30	2012-111-30
7	2011-930-07	19	2011-930-19	31	2011-930-31
8	2011-930-08	20	2012-111-20	32	2012-111-32
9	2012-111-09	21	2011-930-21		
10	2012-111-10	22	2011-930-22		
11	2011-930-11	23	2011-930-23		
12	2011-930-12	24	2011-930-24		

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 6, 8, 9, 10, 19, 25-27, 29, 30 and 32 were available. The specificities of the primers in primer solutions 8, 10, 19, 25-27, 30 and 32 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solution 6 it was only possible to test the 3'-primer, the 5'-primer was not possible to test. In primer solutions 9 and 29 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solutions 2, 11, 19 and 26 one 5'-primer was not possible to test, and in primer solutions 11, 18, 23 to 28 and 31 one to three 3'-primers were not possible to test. Additional primers in primer solutions 11 and 18 were tested by separately adding one additional 3'-primer and/or one additional 5'-primer.

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

Date of approval: 2013-January-11

Approved by:

Production Quality Control



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Lot No.: 65R Lot-specific information

Declaration of Conformity

Product name: Olerup SSP® HLA-B*55

Product number: 101.570-06/06u

Lot number: 65R

Intended use: HLA-B*55 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 II List B, conformity assessed using Annex IV, 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.

Notified Body: Lloyd's Register Quality Assurance Limited, Hiramford, Middlemarch Office Village, Siskin Drive, Coventry CV3 4FJ, United Kingdom. (Notified Body number: 0088.)

Stockholm, Sweden 2013-January-11

Ann-Cathrin Jareman Head of QA and Regulatory Affairs

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Lot No.: 65R Lot-specific information

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E-mail: support-at@olerup.com **Web page:** http://www.olerup.com

Olerup Inc., 901 S. Bolmar St., Suite R, West Chester, PA 19382

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E-mail: info.us@olerup.com

Web page: http://www.olerup.com

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