

101.549-06– including *Taq* polymerase, IFU-01
101. 549-06u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **73N**

Lot-specific information

Olerup SSP® HLA-B*53

Product number:	101.549-06 – including <i>Taq</i> polymerase 101.549-06u – without <i>Taq</i> polymerase
Lot number:	73N
Expiry date:	2014-November-01
Number of tests:	6
Number of wells per test:	20
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. 73N.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*® HLA-B*53 LOT (15L).

The HLA-B*53 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

The Lot-specific information for HLA-B*53 including and without *Taq* polymerase is now described in one common Product Insert.

¹As described in section Uniquely Identified Alleles.

The HLA-B*53 specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup SSP*® HLA-B*53 lot was made (**Lot No. 15L**).

The HLA-B*53 primer set is unchanged compared to the previous lot.

Change in revision R01 compared to R00:

1. Primer mix 15 amplifies the B*35:02:01-35:02:04 alleles. This has been corrected in the specificity and amplification tables.

Change in revision R02 compared to R01:

1. Primer mix 15 amplifies the B*35:129N allele. This has been corrected in the specificity and amplification tables.

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PRODUCT DESCRIPTION

HLA-B*53 SSP typing

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*53:01 to B*53:27 alleles.

PLATE LAYOUT

Each HLA-B*53 test consists of 20 PCR reactions in a 24 well cut PCR plate. Wells 21 to 24 are empty.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	empty	empty	empty	empty

The 24 well PCR plate is marked with 'HLA-B*53' in silver/gray ink.

Well No. 1 is marked with the Lot No. '73N'.

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 24 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-B*53 SSP subtypings will be influenced by the B*07, fifteen B*08, the B*13, the B*14, most B*15, the B*18, the B*27, the B*35, the B*37, the B*38, the B*39, the B*40, two B*41, two B*42, the B*44, the B*45, the B*46, the B*47, the B*48, the B*49, the B*50, the B*51, the B*52, the B*54, the B*55, the B*56, the B*57, the B*58, the B*59, the B*67, the B*78, the B*81, the B*82 and the B*83:01 alleles when present on the other haplotype.

In addition, the A*02:188 and A*24:174 alleles will be weakly amplified by primer mix 10, the C*03:12, C*03:19, C*03:26 and C*03:102 alleles will be weakly amplified by primer mix 4, the C*03:28, C*03:49 and C*14:20 alleles will be amplified by primer mix 20, the C*03:36 and C*03:77 alleles will be amplified by mix 9, the C*04:08 and C*05:39 alleles will be amplified by primer mixes 4 and 20, the C*04:34 allele will be amplified by primer mixes 4 and 9, the C*05:27, C*08:41, C*15:15 and C*17:07 alleles will be amplified by primer mix 4, the C*06:20 and C*07:81 alleles will be weakly amplified by primer mix 11, the C*07:68, C*07:140 and 07:151 alleles will be amplified by primer mix 5, the C*07:168 allele will be amplified by primer mix 7 and weakly by primer mix 11, the C*08:08 allele will be amplified by primer mix 14 and the C*15:39 allele will be amplified by primer mix 2.

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Lot-specific information

UNIQUELY IDENTIFIED ALLELES

All the HLA-B*53, i.e. **B*53:01 to B*53:27**, recognized by the HLA Nomenclature Committee in January 2012¹ will be amplified by the primers in the HLA-B*53 SSP kit².

The HLA-B*53 kit enables separation of the confirmed HLA-B*53 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-B*53 alleles is listed below.

The HLA-B*53 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*53 subtyping cannot distinguish the following silent mutations: the B*53:01:01-53:01:05 alleles, the *53:08:01-53:08:02 and the B*53:17:01-53:17:02 alleles.

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

²The B*53:19 and the B*52:03 and B*52:10:01-52:10:02 alleles give rise to identical amplification patterns with the HLA-B*53 subtyping kit. These four alleles can be distinguished by the HLA-B low resolution kit and/or the HLA-B*52 subtyping kit.

ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹
B*53:01:01	Confirmed	B*53:14	Unconfirmed
B*53:01:02	Unconfirmed	B*53:15	Confirmed
B*53:01:03	Unconfirmed	B*53:16	Unconfirmed
B*53:01:04	Unconfirmed	B*53:17:01	Unconfirmed
B*53:01:05	Confirmed	B*53:17:02	Unconfirmed
B*53:01:06	Unconfirmed	B*53:18	Confirmed
B*53:01:07	Unconfirmed	B*53:19	Confirmed
B*53:02	Unconfirmed	B*53:20	Confirmed
B*53:03	Unconfirmed	B*53:21	Unconfirmed
B*53:04	Unconfirmed	B*53:22	Confirmed
B*53:05	Confirmed	B*53:23	Unconfirmed
B*53:06	Unconfirmed	B*53:24	Confirmed
B*53:07	Unconfirmed	B*53:25	Unconfirmed
B*53:08:01	Unconfirmed	B*53:26	Unconfirmed
B*53:08:02	Unconfirmed	B*53:27	Unconfirmed
B*53:09	Confirmed		
B*53:10	Unconfirmed		
B*53:11	Unconfirmed		
B*53:12	Unconfirmed		
B*53:13	Unconfirmed		

¹Allele 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.

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RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 33 alleles generate 24 amplification patterns that can be combined in 300 homozygous and heterozygous combinations. 178 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.

+-----+ +-----+ ----	*53:04, *53:07 = *53:07, *53:07
-----+ +-----+ ----	*53:09, *53:09 = *53:09, *53:13
-----+ +-----+ ----	*53:12, *53:12 = *53:12, *53:13
+-----+ +-----+ -+-	*53:01:01, *53:23 = *53:23, *53:23
+-----+ +-----+ -+-	*53:01:01, *53:21 = *53:21, *53:21
+-----+ +-----+ +--	*53:01:01, *53:20 = *53:20, *53:20
+-----+ +-----+ ----	*53:01:01, *53:17:01 = *53:01:01, *53:19 = *53:17:01, *53:17:01 = *53:17:01, *53:19
+-----+ +-----+ ----	*53:01:01, *53:14 = *53:14, *53:14
+-----+ +-----+ ----	*53:11, *53:22 = *53:11, *53:24 = *53:22, *53:24
+-----+ +-----+ ----	*53:01:01, *53:13 = *53:01:01, *53:22 = *53:13, *53:22
+-----+ +-----+ ----	*53:01:01, *53:04 = *53:01:01, *53:18 = *53:04, *53:18 = *53:18, *53:18
+-----+ +-----+ ----	*53:01:01, *53:03 = *53:01:01, *53:15 = *53:03, *53:15 = *53:15, *53:15
+-----+ +-----+ ----	*53:06, *53:06 = *53:06, *53:08:01
+-----+ +-----+ ----	*53:17:01, *53:24 = *53:19, *53:24
+-----+ +-----+ ----	*53:17:01, *53:23 = *53:19, *53:23
+-----+ +-----+ ----	*53:17:01, *53:21 = *53:19, *53:21
+-----+ +-----+ ----	*53:17:01, *53:20 = *53:19, *53:20
+-----+ +-----+ ----	*53:14, *53:17:01 = *53:14, *53:19
+-----+ +-----+ ----	*53:01:01, *53:10 = *53:10, *53:10 = *53:10, *53:14
+-----+ +-----+ ----	*53:01:01, *53:11 = *53:13, *53:24
+-----+ +-----+ ----	*53:13, *53:23 = *53:22, *53:23
+-----+ +-----+ ----	*53:13, *53:21 = *53:21, *53:22
+-----+ +-----+ ----	*53:13, *53:20 = *53:20, *53:22
+-----+ +-----+ ----	*53:01:01, *53:09 = *53:09, *53:17:01 = *53:09, *53:19 = *53:09, *53:22 = *53:13, *53:17:01 = *53:13, *53:19 = *53:17:01, *53:22
+-----+ +-----+ ----	*53:13, *53:14 = *53:14, *53:22
+-----+ +-----+ ----	*53:01:01, *53:12 = *53:12, *53:22
+-----+ +-----+ ----	*53:04, *53:24 = *53:18, *53:24
+-----+ +-----+ ----	*53:04, *53:23 = *53:18, *53:23
+-----+ +-----+ ----	*53:04, *53:21 = *53:18, *53:21
+-----+ +-----+ ----	*53:04, *53:20 = *53:18, *53:20
+-----+ +-----+ ----	*53:04, *53:17:01 = *53:17:01, *53:18 = *53:18, *53:19
+-----+ +-----+ ----	*53:04, *53:14 = *53:14, *53:18
+-----+ +-----+ ----	*53:01:01, *53:07 = *53:07, *53:18
+-----+ +-----+ ----	*53:04, *53:13 = *53:13, *53:18 = *53:18, *53:22
+-----+ +-----+ ----	*53:03, *53:24 = *53:15, *53:24
+-----+ +-----+ ----	*53:03, *53:23 = *53:15, *53:23
+-----+ +-----+ ----	*53:03, *53:21 = *53:15, *53:21
+-----+ +-----+ ----	*53:03, *53:20 = *53:15, *53:20
+-----+ +-----+ ----	*53:03, *53:17:01 = *53:03, *53:19 = *53:15, *53:17:01 = *53:15, *53:19
+-----+ +-----+ ----	*53:03, *53:14 = *53:14, *53:15
+-----+ +-----+ ----	*53:03, *53:08:01 = *53:08:01, *53:15
+-----+ +-----+ ----	*53:16, *53:16 = *53:16, *53:24
+-----+ +-----+ ----	*53:01:01, *53:05 = *53:03, *53:05 = *53:05, *53:05 = *53:05, *53:15

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+--+-----	++++-----+	----	*53:03, *53:22 = *53:13, *53:15 = *53:15, *53:22
+--+-----	++++-----+	----	*53:03, *53:04 = *53:03, *53:18 = *53:04, *53:15 = *53:15, *53:18
++-----+	++++-----+	----	*53:01:01, *53:02 = *53:02, *53:02
+-----+	++++-----+	----	*53:10, *53:17:01 = *53:10, *53:19
+-----+	++++-----+	----	*53:09, *53:24 = *53:11, *53:17:01 = *53:11, *53:19
+-----+	++++-----+	----	*53:10, *53:13 = *53:10, *53:22
+-----+	++++-----+	----	*53:12, *53:17:01 = *53:12, *53:19
+-----+	++++-----+	----	*53:04, *53:10 = *53:07, *53:10 = *53:07, *53:14 = *53:10, *53:18
+-----+	++++-----+	----	*53:04, *53:11 = *53:11, *53:18
+-----+	++++-----+	----	*53:04, *53:09 = *53:09, *53:18
+-----+	++++-----+	----	*53:04, *53:12 = *53:12, *53:18
+-----+	++++-----+	----	*53:03, *53:10 = *53:10, *53:15
+-----+	++++-----+	----	*53:01:01, *53:16 = *53:03, *53:16 = *53:05, *53:16 = *53:05, *53:24 = *53:15, *53:16
+-----+	++++-----+	----	*53:05, *53:17:01 = *53:05, *53:19
+-----+	++++-----+	----	*53:11, *53:16 = *53:16, *53:22
+-----+	++++-----+	----	*53:05, *53:12 = *53:05, *53:13 = *53:05, *53:22 = *53:12, *53:15
+-----+	++++-----+	----	*53:03, *53:07 = *53:07, *53:15
+-----+	++++-----+	----	*53:04, *53:05 = *53:05, *53:18
+-----+	++++-----+	----	*53:02, *53:17:01 = *53:02, *53:19
+-----+	++++-----+	----	*53:01:01, *53:06 = *53:02, *53:06 = *53:02, *53:08:01
+-----+	++++-----+	----	*53:02, *53:12 = *53:02, *53:13 = *53:02, *53:22
+-----+	++++-----+	----	*53:02, *53:04 = *53:02, *53:18
+-----+	++++-----+	----	*53:02, *53:03 = *53:02, *53:05 = *53:02, *53:15
+-----+	++++-----+	----	*53:16, *53:17:01 = *53:16, *53:19
+-----+	++++-----+	----	*53:05, *53:11 = *53:12, *53:16 = *53:13, *53:16
+-----+	++++-----+	----	*53:04, *53:16 = *53:16, *53:18
+-----+	++++-----+	----	*53:06, *53:12 = *53:06, *53:13
+-----+	++++-----+	----	*53:03, *53:06 = *53:05, *53:06 = *53:06, *53:15

*53:01:01 = *53:01:01-53:01:05 and 53:25-53:27

*53:08:01 = *53:08:01-53:08:02

*53:17:01 = *53:17:01-53:17:02

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SPECIFICITY TABLE

HLA-B*53 SSP subtyping

Specificities and sizes of the PCR products of the 20 primer mixes used for HLA-B*53 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-B*53 alleles ³	Other amplified HLA Class I alleles ⁴
1	145 bp	800 bp	*53:01:01-53:02, 53:04-53:08:02, 53:10, 53:14-53:27	*18:67, 38:06-38:07, 44:06, 49:03, 51:01:01-51:24:04, 51:26-51:46, 51:48-51:53, 51:55-51:77, 51:79-51:103, 51:105-51:111, 51:113-51:126, 52:01:01:01-52:01:10, 52:03-52:15, 52:17-52:19, 52:21-52:27, 58:01:01-58:02, 58:04-58:16, 58:18-58:35
2	270 bp	1070 bp	*53:02, 53:06	*14:10, 18:22, 35:21, 35:24:01-35:24:02, 35:81, 35:96, 35:109, 35:157, 37:04:01-37:04:02, 40:28, 51:04, 51:46, 51:56:01-51:56:02, 57:14, 58:09, C*15:39
3^{8,9}	135 bp, 290 bp	800 bp	*53:03, 53:05, 53:15-53:16	*08:49, 08:60, 08:76, 18:54, 18:67, 27:52, 37:01:01-37:01:05, 37:01:07-37:05, 37:07-37:09, 37:12-37:13, 37:15-37:27, 37:30N-37:31, 42:13, 52:09
4⁶	190 bp	800 bp	*53:04, 53:07, 53:18	*13:03, 13:48, 14:19, 14:27, 15:58, 15:73, 15:133, 15:137, 15:229, 35:03:01-35:03:05, 35:03:07-35:03:10, 35:06, 35:13, 35:36, 35:38, 35:55-35:56, 35:59, 35:70, 35:74-35:75, 35:84-35:85, 35:98, 35:106, 35:109, 35:127-35:128, 35:136, 35:150-35:153, 35:155-35:156, 35:160, 35:163, 35:167, 35:169, 35:179, 35:181, 38:30, 39:32-39:33, 40:71, 44:10, 44:15, 44:18, 44:117 ^w , 45:01-45:02, 45:04-45:07, 45:11-45:13, 46:11, 49:01:01-49:03, 49:06, 49:08-49:17, 49:19N-49:20, 50:01:01-50:02, 50:04-50:13, 50:15, 51:13:01-51:13:02, 51:15, 51:62, 51:92, 51:106, 52:14, 52:25, 54:03, 56:01:01-56:02, 56:04, 56:07-56:08, 56:11, 56:13-56:14, 56:16-56:17, 56:20:01-56:20:02, 56:22, 56:24-56:30, 58:33-58:34, 59:04, 82:01-82:03, C*03:12^w, C*03:19^w, C*03:26^w, C*03:102^w, C*04:08, C*04:34, C*05:27, C*05:39, C*08:41, C*15:15, C*17:07
5	150 bp	800 bp	*53:09, 53:11-53:13, 53:22	*08:28, 08:35, 08:37, 15:51, 15:179, 15:199, 15:218Q, 18:09, 18:56, 35:115, 37:10, 42:09, 44:17, 44:83, 44:134, 45:09, 51:54, 51:78,

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				51:97, 52:20, 57:24, C*07:68, C*07:140, C*07:151
6¹⁰	205 bp, 235 bp	800 bp	*53:02, 53:05- 53:06, 53:12, 53:16	*13:25, 15:38:01-15:38:02, 15:115, 15:185, 18:01:01-18:09, 18:12-18:15, 18:17N-18:20, 18:22-18:25, 18:27-18:34, 18:36-18:40, 18:42- 18:55, 18:57, 18:59-18:60, 18:62-18:68, 35:21, 35:24:01-35:24:02, 39:43, 44:15, 44:109, 51:37, 51:45, 51:63, 51:97, 56:31, 57:14, 58:09
7⁶	130 bp	800 bp	*53:07, 53:10	*15:32, 18:18, 37:01:01-37:01:08, 37:03N- 37:06, 37:08, 37:10-37:11, 37:13-37:18, 37:20- 37:31, 39:09, C*07:168
8⁶	170 bp	1070 bp	*53:06, 53:08:01- 53:08:02	*07:02:01-07:24, 07:26-07:47, 07:49N-07:50, 07:52-07:144, 08:20, 08:53, 08:79, 13:16, 13:20, 13:31, 13:48, 14:01:01-14:28, 15:01:01:01-15:01:04, 15:01:06-15:04, 15:06- 15:19, 15:21, 15:23-15:30, 15:32-15:40, 15:42- 15:47, 15:49-15:50, 15:53-15:54, 15:56-15:58, 15:60-15:74, 15:76-15:82, 15:85, 15:87, 15:89- 15:90, 15:92-15:99, 15:101-15:104, 15:106, 15:108-15:110, 15:112-15:113, 15:115-15:122, 15:125-15:129, 15:131-15:135, 15:137-15:144, 15:146-15:150, 15:152-15:154, 15:156-15:161, 15:163-15:175, 15:177-15:178, 15:180-15:184, 15:187, 15:189-15:199, 15:201-15:217, 15:219-15:221, 15:223, 15:225-15:234, 15:236, 15:238, 18:15, 18:19, 18:21, 18:30, 18:57, 27:04:01-27:04:03, 27:06, 27:10, 27:15, 27:18, 27:20-27:21, 27:24-27:25, 27:40, 27:54, 27:63, 27:66N, 27:68-27:69, 27:79, 27:86, 35:11:01- 35:11:02, 35:14:01-35:14:02, 35:21, 35:43:01- 35:44, 35:58, 35:67, 35:79, 35:86, 35:96, 35:99, 35:102, 35:117-35:118, 35:135, 35:167, 35:43:02, 37:07, 37:13, 38:10, 38:32, 39:18, 39:35-39:36, 40:05, 40:15-40:16, 40:23, 40:26, 40:28, 40:32, 40:51, 40:95, 40:98, 40:148, 40:158, 40:161, 40:174, 44:76, 44:79, 46:01:01-46:05, 46:07N-46:08, 46:10, 46:12, 46:14-46:17, 46:20, 46:22-46:24, 46:27-46:30, 48:05, 48:08, 48:15, 48:25, 49:01:01-49:10, 49:12-49:20, 50:01:01-50:02, 50:04-50:15, 51:01:01-51:04, 51:06:01-51:07:02, 51:11N- 51:14, 51:16-51:18, 51:21-51:24:04, 51:26- 51:30, 51:32-51:39, 51:41N, 51:43, 51:45-51:46, 51:48-51:52, 51:55-51:72, 51:74-51:80, 51:82- 51:92, 51:94-51:96, 51:98N-51:107, 51:109- 51:114, 51:116-51:119, 51:121, 51:123-51:126,

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				52:01:01:01-52:02, 52:04-52:09, 52:11-52:18, 52:20-52:27, 54:06, 54:20, 55:01:01-55:01:08, 55:03, 55:05, 55:09, 55:11, 55:14-55:15, 55:17, 55:21, 55:24-55:25, 55:28-55:29, 55:31, 55:33, 55:36, 55:38, 55:40, 55:44-55:45, 55:52-55:53, 56:03, 56:05:01-56:06, 56:21, 56:25, 56:32, 57:09, 57:13, 57:22, 58:06, 58:08:01-58:08:02, 58:19, 78:01:01-78:03, 78:05-78:07
9^{5,7}	75 bp	1070 bp	*53:01:01-53:05, 53:07, 53:09-53:27	*08:21, 08:25, 13:03-13:04, 15:05:01-15:05:02, 15:20, 15:31, 15:48, 15:51, 15:55, 15:84, 15:91, 15:107, 15:123, 15:136, 15:151, 15:155, 15:179, 15:185, 15:222, 15:235, 15:237, 18:36, 18:56, 18:58, 27:38, 27:47, 27:76, 35:01:01:01-35:01:21, 35:01:23-35:03:05, 35:03:07-35:10, 35:12:01-35:13, 35:16-35:20:02, 35:22-35:30, 35:32:01-35:32:02, 35:34, 35:36-35:42:02, 35:45-35:57, 35:59, 35:61-35:64, 35:68:01-35:72, 35:74-35:78, 35:80-35:85, 35:89-35:92, 35:94-35:95, 35:97-35:98, 35:100-35:101:02, 35:103-35:116, 35:119-35:134N, 35:136-35:139, 35:141-35:156, 35:158-35:166, 35:168-35:179, 35:181-35:184, 35:186, 38:30, 39:32-39:33, 40:63, 40:71, 40:92, 41:17, 44:02:01:01-44:02:07, 44:02:08 ^w , 44:02:09-44:03:14, 44:05:01, 44:05:03-44:15, 44:17-44:20, 44:22-44:29, 44:32-44:55, 44:57-44:63, 44:65-44:75, 44:77-44:78, 44:80-44:91, 44:93-44:100, 44:101 ^w , 44:103-44:111, 44:113-44:123, 44:125-44:131, 44:133-44:139, 45:01-45:07, 45:09, 45:12-45:13, 46:09, 46:11, 46:13:01-46:13:03, 46:19, 46:25-46:26, 48:02:01-48:02:02, 49:11, 51:05, 51:08-51:09:02, 51:15, 51:19-51:20, 51:40, 51:42, 51:44N, 51:54, 51:73, 51:97, 51:108, 51:122, 52:03, 52:10:01-52:10:02, 52:19, 54:03, 55:08, 55:51, 56:01:01-56:02, 56:04, 56:07-56:09, 56:11, 56:13-56:17, 56:20:01-56:20:02, 56:22, 56:24, 56:26-56:30, 57:01:01-57:01:02, 57:01:04-57:01:11, 57:02:01-57:08, 57:10-57:12, 57:14-57:21, 57:23-57:24, 57:27-57:29, 57:31-57:42, 57:44-57:45, 57:47-57:52, 58:01:01-58:02, 58:04, 58:07, 58:09-58:18, 58:21-58:26, 58:28-58:34, 58:36, 59:04, 78:04, 82:01-82:03, 83:01, C*03:36, C*03:77, C*04:34

101.549-06– including *Taq* polymerase, IFU-01101. 549-06u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

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10	150 bp	1070 bp	*53:01:01- 53:03, 53:05, 53:09-53:10, 53:11 ^w , 53:12- 53:15, 53:16 ^w , 53:17:01- 53:18, 53:20- 53:21, 53:23, 53:24 ^w , 53:25- 53:27	*13:04, 13:10, 13:26, 15:05:01-15:05:02, 15:20, 15:31, 15:52, 15:55, 15:84 ^w , 15:91, 15:107, 15:114, 15:123-15:124, 15:136, 15:151, 15:155, 15:185-15:186, 15:222, 15:235, 15:237 ^w , 18:01:01-18:12, 18:13 ^w , 18:14, 18:17N-18:18, 18:20, 18:22-18:25, 18:27-18:29, 18:31-18:40, 18:42-18:55, 18:58- 18:60, 18:62-18:68, 27:41, 35:01:01:01- 35:01:29, 35:05:01-35:05:02, 35:07, 35:08:01 ^w - 35:08:05 ^w , 35:10, 35:15-35:17, 35:19-35:20:02, 35:23-35:30, 35:32:01-35:32:02, 35:35, 35:37, 35:40N-35:42:02, 35:45 ^w , 35:46-35:54, 35:57, 35:61 ^w -35:62 ^w , 35:63-35:64, 35:66 ^w , 35:68:01- 35:69, 35:71-35:72, 35:76-35:78, 35:80 ^w , 35:82, 35:89-35:94, 35:97, 35:100 ^w , 35:101:01- 35:101:02, 35:103-35:104, 35:105 ^w , 35:107- 35:108:02, 35:110-35:114, 35:116, 35:119- 35:126, 35:130N-35:134N, 35:137-35:140, 35:142 ^w , 35:143-35:148, 35:158 ^w , 35:159, 35:161, 35:165N-35:166, 35:168, 35:170- 35:171, 35:173N, 35:174 ^w , 35:175, 35:176 ^w , 35:177-35:178, 35:180, 35:186, 39:07, 39:43, 40:03, 40:20, 40:38, 40:52, 40:59-40:60, 40:105, 40:159, 44:43:01-44:43:02, 46:06, 46:13:01-46:13:03, 46:19, 46:21:01-46:21:02, 46:26, 48:02:01-48:02:02, 48:14, 48:23, 54:09, 54:14, 55:23, 55:32, 56:09, 56:18, 56:31, 57:01:01-57:01:12, 57:06, 57:08, 57:10-57:11, 57:14-57:16, 57:18, 57:19 ^w , 57:20-57:21, 57:23, 57:25-57:26, 57:27 ^w , 57:29, 57:31, 57:33-57:38, 57:40-57:41, 57:43-57:45, 57:47- 57:52, 58:01:01-58:02, 58:04, 58:07, 58:09- 58:18, 58:21, 58:22 ^w , 58:23-58:26, 58:29- 58:33, 58:35-58:36, A*02:188^w, A*24:174^w
11^{5,7}	85 bp	800 bp	*53:01:01- 53:03, 53:05- 53:06, 53:08:01- 53:18, 53:20- 53:27	*13:04, 13:10 ^w , 13:26, 15:01:01:01-15:01:04, 15:01:06-15:01:24, 15:02:01 ^w -15:02:05 ^w , 15:03:01-15:05:02, 15:06 ^w , 15:07:01-15:08, 15:11:01-15:12, 15:13:01 ^w , 15:13:02-15:16:03, 15:18:01-15:20, 15:21 ^w , 15:23-15:24, 15:25:01 ^w -15:25:03 ^w , 15:26N-15:29, 15:31 ^w , 15:32, 15:34-15:35, 15:36 ^w , 15:38:01-15:40, 15:43, 15:44 ^w , 15:46-15:47, 15:49-15:54, 15:55 ^w , 15:56-15:57, 15:60-15:62, 15:64-15:71, 15:74-15:76, 15:79N-15:82, 15:84-15:85, 15:87, 15:88 ^w -15:89 ^w , 15:91-15:98, 15:101- 15:105, 15:106 ^w , 15:108-15:111N, 15:112 ^w , 15:113-15:115, 15:117-15:120, 15:121 ^w ,

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 101. 549-06u – without *Taq* polymerase, IFU-02

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			15:122-15:127, 15:128 ^w , 15:129, 15:131-15:132, 15:134-15:136, 15:138, 15:139 ^w , 15:140, 15:142-15:143, 15:144 ^w , 15:145-15:149N, 15:151-15:155, 15:156 ^w , 15:157-15:161, 15:163-15:167, 15:169, 15:170 ^w , 15:171-15:176, 15:178-15:187, 15:189-15:195, 15:197-15:203, 15:204 ^w , 15:205-15:207, 15:209N-15:212, 15:213 ^w -15:214 ^w , 15:215, 15:217-15:223, 15:225-15:228, 15:231-15:232, 15:234-15:238, 18:01:01-18:01:03, 18:01:05-18:15, 18:17N-18:19, 18:20 ^w , 18:22-18:25, 18:27-18:39, 18:42-18:60, 18:62-18:68, 27:41, 35:01:01:01-35:01:29, 35:05:01-35:05:02, 35:07-35:08:05, 35:10-35:11:02, 35:14:01-35:17, 35:19-35:21, 35:23-35:30, 35:32:01-35:32:02, 35:35, 35:37, 35:40N-35:43:01, 35:45-35:52, 35:54, 35:57-35:58, 35:61-35:63, 35:66-35:69, 35:71-35:72, 35:76-35:80, 35:82, 35:86, 35:89-35:94, 35:97, 35:99-35:105, 35:107-35:108:02, 35:110-35:113, 35:115-35:117, 35:119-35:126, 35:130N-35:135, 35:137-35:148, 35:158-35:159, 35:161, 35:165N-35:166, 35:168, 35:170-35:171, 35:173N, 35:175-35:178, 35:180, 35:43:02, 35:186, 39:07, 39:43, 40:158, 44:17, 44:43:01-44:43:02, 45:09, 46:01:01-46:01:05, 46:01:07-46:05, 46:07N-46:10, 46:12-46:17, 46:19-46:30, 48:02:01-48:02:02, 48:14, 48:25, 49:04, 49:05 ^w , 51:37, 51:45, 51:63, 51:97, 54:06, 54:09, 54:14, 55:14, 55:23, 55:32, 56:03, 56:09, 56:18, 56:31-56:32, 57:01:01-57:01:04, 57:01:06-57:01:12, 57:06, 57:08, 57:10-57:11, 57:14-57:16, 57:18-57:27, 57:29-57:30, 57:33-57:38, 57:40-57:41, 57:43-57:45, 57:48-57:52, 58:01:01-58:01:02, 58:01:04-58:02, 58:04-58:07, 58:09-58:19, 58:21-58:26, 58:29-58:33, 58:35-58:36, C*06:20^w, C*07:81^w, 07:168^w
12⁵	105 bp	1070 bp	*07:78, 13:02:01-13:03, 13:08Q-13:09, 13:14-13:16, 13:18-13:19, 13:27, 13:30-13:34, 13:37-13:38, 13:40-13:42, 13:44-13:45, 13:48-13:49N, 15:42, 35:60, 44:15, 44:18, 45:01, 45:03-45:08, 45:10-45:13, 46:11, 46:18, 49:01:01-49:03, 49:06-49:17, 49:19N-49:20, 50:01:01-50:02, 50:04-50:08, 50:10-50:11, 50:13, 50:15, 51:15, 52:25, 54:01:01-54:03, 54:05N, 54:07-54:08N, 54:10, 54:12-54:13, 54:16-54:24, 55:01:01-55:01:03,

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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				55:01:05-55:01:06, 55:01:08-55:03, 55:05, 55:07, 55:09-55:12, 55:15-55:16, 55:18-55:19, 55:21-55:22, 55:24-55:26, 55:29-55:31, 55:33-55:38, 55:40-55:41, 55:43, 55:45-55:48, 55:50, 55:52, 55:54, 56:01:01-56:01:04, 56:07-56:08, 56:13-56:14, 56:16-56:17, 56:19N-56:20:02, 56:23-56:30, 59:01:01:01-59:01:01:02, 59:04-59:05
13⁵	90 bp	1070 bp		*58:01:01-58:02, 58:04-58:35
14^{5,7,11}	95 bp, 130 bp	1070 bp	*53:10, 53:14	*07:09, 07:11, 07:17, 07:115, 08:28, 08:35, 08:37, 08:69, 14:05, 15:07:01-15:07:02, 15:55, 15:68, 18:14, 35:51, 35:58, 35:66, 35:72, 39:24:01-39:24:02, 39:37, 40:03, 41:18, 42:09, 46:12, C*08:08
15^{5,7,8,12}	105 bp, 205 bp	800 bp	*53:09, 53:17:01- 53:17:02, 53:19	*15:202, 18:01:01-18:06, 18:08-18:15, 18:17N-18:28, 18:30-18:32, 18:34-18:36, 18:38-18:47, 18:49-18:65, 18:67-18:68, 35:02:01-35:02:04, 35:20:01-35:20:02, 35:28, 35:72, 35:81, 35:83, 35:95, 35:129N, 35:154, 35:162, 37:01:01-37:01:05, 37:01:07-37:05, 37:07-37:20, 37:22-37:25, 37:27, 37:29-37:31, 44:83, 44:134, 45:12, 49:03, 52:01:01:01-52:01:10, 52:03-52:05, 52:07-52:15, 52:17-52:21, 52:24-52:27
16	160 bp	1070 bp	*53:01:01- 53:10, 53:12- 53:15, 53:17:01- 53:21, 53:23, 53:25-53:27	*07:26, 07:34, 07:43, 07:48, 07:80, 07:131, 08:13, 08:25, 08:55, 13:01:01-13:04, 13:06-13:17, 13:19-13:23, 13:25-13:30, 13:32-13:40, 13:42-13:45, 13:47-13:52, 14:01:01-14:02:06, 14:04-14:28, 15:02:01-15:03:03, 15:05:01-15:06, 15:09-15:10:02, 15:13:01-15:13:02, 15:16:01-15:18:04, 15:20-15:21, 15:23, 15:25:01-15:25:03, 15:29, 15:31, 15:36-15:37, 15:39:01-15:40, 15:42, 15:44, 15:48, 15:52, 15:55, 15:61-15:62, 15:64, 15:67, 15:69, 15:72, 15:74, 15:80, 15:86, 15:88 ^w , 15:89-15:91, 15:93, 15:95, 15:98, 15:103, 15:106-15:108, 15:112, 15:114-15:115, 15:119, 15:121, 15:123-15:124, 15:127, 15:131-15:134, 15:136, 15:138-15:139, 15:151, 15:153, 15:155-15:156, 15:158, 15:161-15:162, 15:170, 15:173, 15:176 ^w , 15:177, 15:185-15:186, 15:188, 15:194-15:198, 15:200 ^w , 15:204, 15:208, 15:210, 15:213-15:214, 15:216, 15:219-15:220, 15:222-15:224, 15:226N, 15:229-15:230, 15:235, 15:238, 18:01:01-18:12, 18:14-18:15, 18:17N-18:18, 18:20, 18:22-18:29, 18:31-18:55, 18:57-18:68, 27:01-27:21, 27:23-27:24, 27:26-27:44, 27:46, 27:48-27:86,

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35:01:01:01-35:07, 35:09:01-35:13, 35:15-35:17, 35:19-35:37, 35:39-35:42:02, 35:46-35:60, 35:63-35:65Q, 35:68:01-35:72, 35:74-35:78, 35:81-35:85, 35:88-35:98, 35:101:01-35:101:02, 35:103-35:104, 35:106-35:114, 35:116, 35:119-35:134N, 35:136-35:141, 35:143-35:155, 35:157, 35:159-35:162, 35:165N, 35:167-35:168, 35:170-35:171, 35:173N, 35:175, 35:177-35:184, 35:186, 37:02, 38:01:01-38:23, 38:25-38:29, 38:31-38:37, 39:01:01:01-39:01:01:02L, 39:01:03-39:07, 39:09-39:10:02, 39:12-39:17, 39:19:01-39:20, 39:22-39:32, 39:34-39:35, 39:37-39:68, 40:01:01-40:14:03, 40:18-40:22N, 40:24-40:31, 40:33-40:40, 40:42-40:97, 40:99-40:127, 40:129-40:135, 40:137-40:160, 40:162-40:180, 44:03:01-44:03:14, 44:07, 44:10, 44:13, 44:26, 44:29-44:32, 44:36-44:40, 44:43:01-44:43:02, 44:45-44:47, 44:50, 44:54, 44:57, 44:60-44:61N, 44:64:01-44:65, 44:69, 44:77, 44:79, 44:81-44:82, 44:85, 44:92, 44:94, 44:96, 44:98, 44:103, 44:105, 44:107-44:111, 44:114-44:115, 44:120, 44:122, 44:124-44:125, 44:128-44:130, 44:135, 46:06, 46:08, 46:11, 46:13:01-46:13:03, 46:18-46:19, 46:21:01-46:21:02, 46:26, 47:01:01:01-47:08, 48:01:01-48:04, 48:06-48:07, 48:09-48:18, 48:20-48:23, 48:25-48:27, 49:01:01, 49:01:02^w, 49:01:03-49:20, 50:01:01-50:01:02, 50:02, 50:04-50:15, 51:01:01-51:04, 51:06:01-51:07:02, 51:09:01-51:19, 51:21-51:24:04, 51:26-51:28, 51:30-51:35, 51:37-51:43, 51:45-51:46, 51:48-51:52, 51:53^w, 51:56:01-51:60, 51:62-51:71, 51:72^w, 51:73-51:81, 51:83-51:86, 51:87^w, 51:88-51:90, 51:91^w, 51:92-51:96, 51:98N-51:119, 51:120^w, 51:121-51:126, 52:01:01:01-52:18, 52:20, 52:22-52:23, 52:25-52:27, 54:01:01-54:05N, 54:07-54:09, 54:11-54:19, 54:21-54:24, 55:01:01-55:05, 55:07-55:08, 55:10-55:19, 55:22-55:36, 55:38-55:51, 55:53, 55:54^w, 56:01:01-56:02, 56:04-56:12, 56:14-56:32, 57:01:01-57:01:12, 57:03:01-57:03:02, 57:06-57:08, 57:10-57:11, 57:14-57:18, 57:20-57:23, 57:25-57:26, 57:29, 57:31-57:41, 57:43-57:52, 58:01:01-58:02, 58:04-58:21, 58:23-58:36, 59:01:01:01-59:05, 67:01:01-67:03, 78:01:01-78:07, 81:01-81:05

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17	275 bp	1070 bp	*53:20	
18⁷	140 bp	1070 bp	*53:21	*07:134, 18:01:01-18:03, 18:05-18:15, 18:17N-18:24, 18:26-18:36, 18:38-18:47, 18:49-18:65, 18:67, 27:52, 35:50, 35:84, 35:162, 37:01:01-37:05, 37:07-37:27, 37:29-37:30N, 38:06-38:07, 39:19:01-39:19:02, 51:57, 51:103, 51:116
19⁵	125 bp	1070 bp	*53:23	*07:65, 07:134, 08:32, 18:03, 35:29, 35:69, 35:76, 35:136, 35:186 ^w , 39:19:01-39:19:02, 51:20, 56:06, 78:01:01-78:01:02, 78:03, 78:07
20⁵	60 bp	1070 bp	*53:11, 53:16, 53:24	*07:20, 07:24, 07:60, 15:65, 15:84, 15:99, 15:221, 15:237, 35:08:01-35:08:05, 35:18, 35:45, 35:61, 35:80, 35:99-35:100, 35:105, 35:142, 35:156, 35:158, 35:164, 35:172, 35:174, 35:176, 39:33, 44:28:01-44:28:02, 44:76, 51:05, 51:29, 51:54, 52:24, 57:02:01-57:02:02, 57:04-57:05, 57:12, 57:19, 57:28N, 57:30, 57:42, 58:22, C*03:28, 03:49, C*04:08, C*05:39, C*14:20

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*53 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 inherent feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated.

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-B*53 subtyping.

In addition, wells number 3 to 7, 11 and 15 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-B alleles 1st 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 1st exon and the introns are conserved within allelic groups.

⁴Due to the sharing of sequence motifs between HLA-B alleles non-HLA-B*53 alleles will be amplified by all B*53 primer mixes except primer mix 17. In addition, the A*02:188 and A*24:174 alleles will be weakly amplified by primer mix 10, the C*03:12, C*03:19, C*03:26 and C*03:102 alleles will be weakly amplified by primer mix 4, the C*03:28, C*03:49 and C*14:20 alleles will be amplified by primer mix 20, the C*03:36 and

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C*03:77 alleles will be amplified by mix 9, the C*04:08 and C*05:39 alleles will be amplified by primer mixes 4 and 20, the C*04:34 allele will be amplified by primer mixes 4 and 9, the C*05:27, C*08:41, C*15:15 and C*17:07 alleles will be amplified by primer mix 4, the C*06:20 and C*07:81 alleles will be weakly amplified by primer mix 11, the C*07:68, C*07:140 and 07:151 alleles will be amplified by primer mix 5, the C*07:168 allele will be amplified by primer mix 7 and weakly by primer mix 11, the C*08:08 allele will be amplified by primer mix 14 and the C*15:39 allele will be amplified by primer mix 2.

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

⁶Primer mix 4, 7 and 8 have a tendency of giving rise to nonspecific amplifications..

⁷Primer mixes 9, 11, 14, 15 and 18 may give a lower yield of specific PCR product than the other HLA-B*53 primer mixes.

⁸Primer mixes 3 and 15 may have tendencies of primer dimer formation.

⁹Primer mix 3: Specific PCR fragment of 135 bp in the B*53:03, 53:05 and 53:16 and the B*18:54, 18:67, 27:52, 37:01:01-37:01:05, 37:01:07-37:05, 37:07-37:09, 37:12-37:13, 37:15-37:27, 37:30N-37:31 and 52:09 alleles. Specific PCR fragment of 290 bp in the B*53:15 and the 08:49, 08:60, 08:76 and 42:13 alleles.

¹⁰Primer mix 6: Specific PCR fragment of 205 bp in the B*53:02 and 53:06 and the B*15:38:01-15:38:02, 15:185, 18:01:01-18:09, 18:12-18:15, 18:17N-18:20, 18:22-18:25, 18:27-18:34, 18:36-18:40, 18:42-18:55, 18:57, 18:59-18:60, 18:62-18:68, 35:21, 35:24:01-35:24:02, 39:43, 51:37, 51:45, 51:63, 51:97, 56:31, 57:14 and 58:09 alleles. Specific PCR fragment of 235 bp in the the B*53:05, 53:12 and 53:16 and the B*13:25, 15:115, 44:15 and 44:109 alleles.

¹¹Primer mix 14: Specific PCR fragment of 95 bp in the B*53:14 and the B*07:09, 07:11, 07:17, 07:115, 08:28, 08:35, 08:37, 08:69, 14:05, 15:07:01-15:07:02, 15:55, 15:68, 18:14, 35:51, 35:58, 35:66, 35:72, 39:24:01-39:24:02, 39:37, 40:03, 41:18, 42:09 and 46:12 and in the C*08:08 alleles. Specific PCR fragment of 130 bp in the B*53:10 allele.

¹²Primer mix 15: Specific PCR fragment of 105 bp in the B *53:09, 53:17:01-53:17:02, 15:202, 18:01:01-18:06, 18:08-18:15, 18:17N-18:28, 18:30-18:32, 18:34-18:36, 18:38-18:47, 18:49-18:65, 18:67-18:68, 35:20:01-35:20:02, 35:28, 35:72, 37:01:01-37:01:05, 37:01:07-37:05, 37:07-37:20, 37:22-37:25, 37:27, 37:29-37:31, 44:83, 44:134, 49:03, 52:01:01:01-52:01:10, 52:03-52:05, 52:07-52:15, 52:17-52:21, 52:24-52:27 alleles. Specific PCR fragment of 205 bp in the B*53:19, 35:81, 35:83, 35:154, 35:162, 45:12 alleles. Specific PCR fragments of 105 and 205 bp in the B*35:95 allele.

‘w’, might be weakly amplified.

101.549-06– including *Taq* polymerase, IFU-01101. 549-06u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: 73N

Lot-specific information

INTERPRETATION TABLE												
HLA-B*53 SSP subtyping												
Amplification patterns of the B*53:01 to B*53:27 alleles												
	Well ⁶											
	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec. PCR product(s)	145	270	135	190	150	205	130	170	75	150	85	105
Length of int. pos. control ¹	800	1070	290	800	800	800	800	1070	1070	1070	800	1070
5'-primer(s) ²	206	355	206	49	206	106	106	527	527	419	419	357
	5'-gAC 3'	5'-TCA 3'	5'-gAC 3'	5'-CAG 3'	5'-gAC 3'	5'-CCA 3'	5'-CCA 3'	5'-TgA 3'	5'-TgT 3'	5'-gTC 3'	5'-gTC 3'	5'-Tgg 3'
			355	419	419	419	368					
			5'-TCA 3'	5'-gTT 3'	5'-gTC 3'	5'-gTC 3'	5'-gTC 3'					
				419			368					
				5'-gTT 3'			5'-gTC 3'					
				419								
				5'-gTT 3'								
3'-primer(s) ³	309	583	301	79	309	302	197	3 rd	559	527	463	420
	5'-ATC 3'	5'-gTg 3'	5'-gTC 3'	5'-gTA 3'	5'-gTg 3'	5'-ggC 3'	5'-gAA 3'	5'-TAT 3'	5'-CAG 3'	5'-CCA 3'	5'-gCT 3'	5'-gCT 3'
			302	559	538	583	463			527		
			5'-ggC 3'	5'-CAG 3'	5'-gTC 3'	5'-gTg 3'	5'-gCT 3'			5'-CCA 3'		
			603									
			5'-gTg 3'									
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
HLA-B allele ⁴												
*53:01:01-53:01:05, 53:25-53:27	1								9	10	11	
*53:02	1	2				6			9	10	11	
*53:03			3						9	10	11	
*53:04	1			4					9			
*53:05	1		3			6			9	10	11	
*53:06	1	2				6		8			11	
*53:07	1			4			7		9			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

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Lot No.: 73N

Lot-specific information

INTERPRETATION TABLE									
HLA-B*53 SSP subtyping									
Amplification patterns of the B*53:01 to B*53:27 alleles									
Well ⁶									
13	14	15	16	17	18	19	20		
90	95	105	160	275	140	125	60	Length of spec. PCR product(s)	
	130	205						Length of int. pos. control ¹	
1070	1070	800	1070	1070	1070	1070	1070		
209	106	206	539	77	106	209	539	5'-primer(s) ²	
5' -ggA 3'	5' -CCA 3'	5' -gAC 3'	5' -gCT 3'	5' -CTT 3'	5' -CCg 3'	5' -ggA 3'	5' -gCg 3'		
	363	397							
	5' -AgC 3'	5' -gCT 3'							
256	197	272	3 rd I	309	206	292	559	3'-primer(s) ³	
5' -CTC 3'	5' -gAA 3'	5' -Tgg 3'	5' -TAT 3'	5' -ATC 3'	5' -CCg 3'	5' -gTC 3'	5' -CAg 3'		
256	419	559				292			
5' -CCC 3'	5' -Cgg 3'	5' -CAg 3'				5' -gTC 3'			
	419								
	5' -CgA 3'								
13	14	15	16	17	18	19	20	Well No.	
								HLA-B allele ⁴	
			16					*53:01:01-53:01:05, 53:25-53:27	
			16					*53:02	
			16					*53:03	
			16					*53:04	
			16					*53:05	
			16					*53:06	
			16					*53:07	
13	14	15	16	17	18	19	20	Well No.	

101.549-06– including *Taq* polymerase, IFU-01101. 549-06u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **73N**

Lot-specific information

Length of spec.	145	270	135	190	150	205	130	170	75	150	85	105
PCR product(s)			290			235						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*53:08:01-53:08:02	1							8			11	
*53:09					5				9	10	11	
*53:10	1						7		9	10	11	
*53:11					5				9	w	11	
*53:12					5	6			9	10	11	
*53:13					5				9	10	11	
*53:14	1								9	10	11	
*53:15	1		3						9	10	11	
*53:16	1		3			6			9	w	11	
*53:17:01-53:17:02	1								9	10	11	
*53:18	1			4					9	10	11	
*53:19 , 52:03, 52:10:01-52:10:02 ⁵	1								9			
*53:20	1								9	10	11	
*53:21	1								9	10	11	
*53:22	1				5				9		11	
*53:23	1								9	10	11	
*53:24	1								9	w	11	
*07:02:01-07:08, 07:10, 07:12-07:16, 07:18:01-07:19, 07:21-07:23, 07:27-07:33, 07:35-07:42, 07:44-07:47, 07:49N-07:50, 07:52-07:59, 07:61-07:64, 07:66-07:77, 07:79, 07:81-07:114, 07:116-07:130, 07:132- 07:133, 07:135N-07:144, 08:20, 08:53, 08:79, 14:03, 15:30, 15:33, 15:45, 15:63, 15:77- 15:78:03, 15:116, 15:141, 15:150, 15:168, 15:233, 27:25, 35:44, 35:118, 39:18, 39:36, 40:15-40:16, 40:23, 40:32, 40:98, 40:161, 46:01:06, 48:05, 48:08, 57:09, 57:13								8				
*07:09, 07:11, 07:17, 07:115								8				
*07:20, 07:24, 07:60, 15:99, 44:76								8				
*07:26, 07:34, 07:43, 07:80, 07:131, 13:20, 14:01:01-14:02:06, 14:04, 14:06:01-14:09, 14:11-14:18, 14:20-14:26, 14:28, 15:09- 15:10:02, 15:17:01:01-15:17:02, 15:37, 15:72, 15:90, 15:177, 15:196, 15:208, 15:216, 15:230, 27:04:01-27:04:03, 27:06, 27:10, 27:15, 27:18, 27:20-27:21, 27:24, 27:40, 27:54, 27:63, 27:66N, 27:68-27:69, 27:79, 27:86, 38:10, 38:32, 39:35, 40:05, 40:26, 40:51, 40:95, 40:148, 40:174, 44:79, 48:15, 49:18, 50:14, 51:104, 51:112, 52:02, 52:16, 55:01:04, 55:01:07, 55:17, 55:28, 55:44, 55:53, 56:05:01-56:05:02, 56:21, 78:02:01- 78:02:02, 78:05-78:06								8				
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

101.549-06– including *Taq* polymerase, IFU-01101. 549-06u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **73N**

Lot-specific information

90	95	105	160	275	140	125	60	Length of spec.
	130	205						PCR product(s)
13	14	15	16	17	18	19	20	Well No.
			16					*53:08:01-53:08:02
		15	16					*53:09
	14		16					*53:10
							20	*53:11
			16					*53:12
			16					*53:13
	14		16					*53:14
			16					*53:15
							20	*53:16
		15	16					*53:17:01-53:17:02
			16					*53:18
		15	16					*53:19 , 52:03, 52:10:01-52:10:02 ⁵
			16	17				*53:20
			16		18			*53:21
								*53:22
			16			19		*53:23
							20	*53:24
								*07:02:01-07:08, 07:10, 07:12-07:16, 07:18:01-07:19, 07:21-07:23, 07:27-07:33, 07:35-07:42, 07:44-07:47, 07:49N-07:50, 07:52-07:59, 07:61-07:64, 07:66-07:77, 07:79, 07:81-07:114, 07:116-07:130, 07:132- 07:133, 07:135N-07:144, 08:20, 08:53, 08:79, 14:03, 15:30, 15:33, 15:45, 15:63, 15:77- 15:78:03, 15:116, 15:141, 15:150, 15:168, 15:233, 27:25, 35:44, 35:118, 39:18, 39:36, 40:15-40:16, 40:23, 40:32, 40:98, 40:161, 46:01:06, 48:05, 48:08, 57:09, 57:13
	14							*07:09, 07:11, 07:17, 07:115
							20	*07:20, 07:24, 07:60, 15:99, 44:76
			16					*07:26, 07:34, 07:43, 07:80, 07:131, 13:20, 14:01:01-14:02:06, 14:04, 14:06:01-14:09, 14:11-14:18, 14:20-14:26, 14:28, 15:09- 15:10:02, 15:17:01:01-15:17:02, 15:37, 15:72, 15:90, 15:177, 15:196, 15:208, 15:216, 15:230, 27:04:01-27:04:03, 27:06, 27:10, 27:15, 27:18, 27:20-27:21, 27:24, 27:40, 27:54, 27:63, 27:66N, 27:68-27:69, 27:79, 27:86, 38:10, 38:32, 39:35, 40:05, 40:26, 40:51, 40:95, 40:148, 40:174, 44:79, 48:15, 49:18, 50:14, 51:104, 51:112, 52:02, 52:16, 55:01:04, 55:01:07, 55:17, 55:28, 55:44, 55:53, 56:05:01-56:05:02, 56:21, 78:02:01- 78:02:02, 78:05-78:06
13	14	15	16	17	18	19	20	Well No.

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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Lot No.: **73N**

Lot-specific information

Length of spec.	145	270	135	190	150	205	130	170	75	150	85	105
PCR product(s)			290			235						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*07:48, 08:13, 08:55, 13:01:01-13:01:06, 13:06-13:07N, 13:11-13:13, 13:17, 13:21- 13:23, 13:28-13:29, 13:35-13:36, 13:39, 13:43, 13:47, 13:50-13:52, 15:86, 15:162, 15:188, 15:224, 27:01-27:03, 27:05:02- 27:05:17, 27:07:01-27:09, 27:11-27:14, 27:16- 27:17, 27:19, 27:23, 27:26-27:37, 27:39, 27:42-27:44, 27:46, 27:48-27:51, 27:53, 27:55-27:62, 27:64N-27:65N, 27:67, 27:70- 27:75, 27:77-27:78, 27:80-27:85, 35:03:06, 35:31, 35:33, 35:65Q, 35:88, 38:01:01-38:05, 38:08-38:09, 38:11-38:23, 38:25-38:29, 38:31, 38:33-38:37, 39:01:01:01- 39:01:01:02L, 39:01:03-39:06:02, 39:10:01- 39:10:02, 39:12-39:17, 39:20, 39:22-39:23, 39:25N-39:31, 39:34, 39:38Q-39:42, 39:44- 39:68, 40:01:01-40:02:12, 40:04, 40:06:01:01-40:14:03, 40:18-40:19, 40:21- 40:22N, 40:24-40:25, 40:27:01-40:27:02, 40:29-40:31, 40:33-40:37, 40:39-40:40, 40:42- 40:50, 40:53-40:58, 40:61-40:62, 40:64- 40:70, 40:72:01-40:91, 40:93-40:94, 40:96- 40:97, 40:99-40:104, 40:106-40:127, 40:129- 40:135, 40:137-40:147, 40:149-40:157, 40:160, 40:162-40:173, 40:175-40:180, 44:30- 44:31, 44:64:01-44:64:02, 44:92, 44:124, 47:01:01:01-47:08, 48:01:01-48:01:03, 48:03:01-48:04, 48:06-48:07, 48:09-48:13, 48:16-48:18, 48:20-48:22, 48:26-48:27, 54:04, 54:11, 54:15, 55:04, 55:13, 55:27, 55:39, 55:42, 55:49, 56:10, 56:12, 57:46, 59:02-59:03, 67:01:01-67:03, 81:01-81:05												
*07:65								8				
*07:78, 13:31, 54:20, 55:09, 55:21, 55:52								8				12
*07:134								8				
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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Lot No.: **73N**

Lot-specific information

90	95	105	160	275	140	125	60	Length of spec. PCR product(s)
13	14	15	16	17	18	19	20	Well No.
			16					*07:48, 08:13, 08:55, 13:01:01-13:01:06, 13:06-13:07N, 13:11-13:13, 13:17, 13:21- 13:23, 13:28-13:29, 13:35-13:36, 13:39, 13:43, 13:47, 13:50-13:52, 15:86, 15:162, 15:188, 15:224, 27:01-27:03, 27:05:02- 27:05:17, 27:07:01-27:09, 27:11-27:14, 27:16- 27:17, 27:19, 27:23, 27:26-27:37, 27:39, 27:42-27:44, 27:46, 27:48-27:51, 27:53, 27:55-27:62, 27:64N-27:65N, 27:67, 27:70- 27:75, 27:77-27:78, 27:80-27:85, 35:03:06, 35:31, 35:33, 35:65Q, 35:88, 38:01:01-38:05, 38:08-38:09, 38:11-38:23, 38:25-38:29, 38:31, 38:33-38:37, 39:01:01:01- 39:01:01:02L, 39:01:03-39:06:02, 39:10:01- 39:10:02, 39:12-39:17, 39:20, 39:22-39:23, 39:25N-39:31, 39:34, 39:38Q-39:42, 39:44- 39:68, 40:01:01-40:02:12, 40:04, 40:06:01:01-40:14:03, 40:18-40:19, 40:21- 40:22N, 40:24-40:25, 40:27:01-40:27:02, 40:29-40:31, 40:33-40:37, 40:39-40:40, 40:42- 40:50, 40:53-40:58, 40:61-40:62, 40:64- 40:70, 40:72:01-40:91, 40:93-40:94, 40:96- 40:97, 40:99-40:104, 40:106-40:127, 40:129- 40:135, 40:137-40:147, 40:149-40:157, 40:160, 40:162-40:173, 40:175-40:180, 44:30- 44:31, 44:64:01-44:64:02, 44:92, 44:124, 47:01:01:01-47:08, 48:01:01-48:01:03, 48:03:01-48:04, 48:06-48:07, 48:09-48:13, 48:16-48:18, 48:20-48:22, 48:26-48:27, 54:04, 54:11, 54:15, 55:04, 55:13, 55:27, 55:39, 55:42, 55:49, 56:10, 56:12, 57:46, 59:02-59:03, 67:01:01-67:03, 81:01-81:05
						19		*07:65
								*07:78, 13:31, 54:20, 55:09, 55:21, 55:52
					18	19		*07:134
13	14	15	16	17	18	19	20	Well No.

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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Lot No.: **73N**

Lot-specific information

Length of spec.	145	270	135	190	150	205	130	170	75	150	85	105
PCR product(s)			290			235						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*08:21, 27:47, 41:17, 44:02:01:01-44:02:07, 44:02:09-44:02:21, 44:05:01, 44:05:03, 44:08-44:09, 44:11-44:12, 44:14, 44:19N-44:20, 44:22-44:25, 44:27:01-44:27:02, 44:33-44:35, 44:41:01-44:42, 44:44, 44:48-44:49, 44:51-44:53, 44:55, 44:58N-44:59, 44:62-44:63, 44:66-44:68, 44:70-44:75, 44:78, 44:80, 44:84, 44:86-44:91, 44:93, 44:95, 44:97, 44:99-44:100, 44:104, 44:106, 44:113, 44:116, 44:118-44:119, 44:121, 44:123, 44:126-44:127, 44:131, 44:133, 44:136-44:139, 83:01, C*03:36, C*03:77									9			
*08:25, 15:48, 27:38, 27:76, 35:04:01-35:04:03, 35:09:01-35:09:03, 35:12:01-35:12:03, 35:22, 35:34, 35:39, 35:149, 35:182-35:184, 40:63, 40:92, 44:03:01-44:03:14, 44:07, 44:13, 44:26, 44:29, 44:32, 44:36-44:40, 44:45-44:47, 44:50, 44:54, 44:57, 44:60-44:61N, 44:65, 44:69, 44:77, 44:81-44:82, 44:85, 44:94, 44:96, 44:98, 44:103, 44:105, 44:107-44:108N, 44:110-44:111, 44:114-44:115, 44:120, 44:122, 44:125, 44:128-44:130, 44:135, 55:08, 55:51, 56:15, 57:03:01-57:03:02, 57:07, 57:17, 57:32, 57:39, 78:04									9			
*08:28, 08:35, 08:37, 42:09					5							
*08:32												
*08:49, 08:60, 08:76, 42:13			3									
*08:69, 41:18, C*08:08												
*13:02:01-13:02:12, 13:08Q-13:09, 13:14-13:15, 13:19, 13:27, 13:30, 13:32-13:34, 13:37-13:38, 13:40, 13:42, 13:44-13:45, 13:49N, 35:60, 46:18, 54:01:01-54:02, 54:05N, 54:07-54:08N, 54:12-54:13, 54:16-54:19, 54:21-54:24, 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, 55:41, 55:43, 55:46-55:48, 55:50, 56:19N, 56:23, 59:01:01:01-59:01:01:02, 59:05												12
*13:03, 46:11, 49:11, 54:03, 56:01:01-56:01:04, 56:07-56:08, 56:14, 56:16-56:17, 56:20:01-56:20:02, 56:24, 56:26-56:30, 59:04				4					9			12
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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Lot No.: **73N**

Lot-specific information

90	95	105	160	275	140	125	60	Length of spec. PCR product(s)
130	205							
13	14	15	16	17	18	19	20	Well No.
								*08:21, 27:47, 41:17, 44:02:01:01-44:02:07, 44:02:09-44:02:21, 44:05:01, 44:05:03, 44:08- 44:09, 44:11-44:12, 44:14, 44:19N-44:20, 44:22-44:25, 44:27:01-44:27:02, 44:33-44:35, 44:41:01-44:42, 44:44, 44:48-44:49, 44:51- 44:53, 44:55, 44:58N-44:59, 44:62-44:63, 44:66-44:68, 44:70-44:75, 44:78, 44:80, 44:84, 44:86-44:91, 44:93, 44:95, 44:97, 44:99-44:100, 44:104, 44:106, 44:113, 44:116, 44:118-44:119, 44:121, 44:123, 44:126-44:127, 44:131, 44:133, 44:136- 44:139, 83:01, C*03:36, C*03:77
			16					*08:25, 15:48, 27:38, 27:76, 35:04:01- 35:04:03, 35:09:01-35:09:03, 35:12:01- 35:12:03, 35:22, 35:34, 35:39, 35:149, 35:182- 35:184, 40:63, 40:92, 44:03:01-44:03:14, 44:07, 44:13, 44:26, 44:29, 44:32, 44:36- 44:40, 44:45-44:47, 44:50, 44:54, 44:57, 44:60-44:61N, 44:65, 44:69, 44:77, 44:81- 44:82, 44:85, 44:94, 44:96, 44:98, 44:103, 44:105, 44:107-44:108N, 44:110-44:111, 44:114-44:115, 44:120, 44:122, 44:125, 44:128-44:130, 44:135, 55:08, 55:51, 56:15, 57:03:01-57:03:02, 57:07, 57:17, 57:32, 57:39, 78:04
	14							*08:28, 08:35, 08:37, 42:09
						19		*08:32
								*08:49, 08:60, 08:76, 42:13
	14							*08:69, 41:18, C*08:08
			16					*13:02:01-13:02:12, 13:08Q-13:09, 13:14- 13:15, 13:19, 13:27, 13:30, 13:32-13:34, 13:37-13:38, 13:40, 13:42, 13:44-13:45, 13:49N, 35:60, 46:18, 54:01:01-54:02, 54:05N, 54:07-54:08N, 54:12-54:13, 54:16- 54:19, 54:21-54:24, 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, 55:41, 55:43, 55:46-55:48, 55:50, 56:19N, 56:23, 59:01:01:01-59:01:01:02, 59:05
			16					*13:03, 46:11, 49:11, 54:03, 56:01:01- 56:01:04, 56:07-56:08, 56:14, 56:16-56:17, 56:20:01-56:20:02, 56:24, 56:26-56:30, 59:04
13	14	15	16	17	18	19	20	Well No.

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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

Lot No.: **73N**

Lot-specific information

Length of spec.	145	270	135	190	150	205	130	170	75	150	85	105
PCR product(s)			290			235						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*13:04, 15:05:01-15:05:02, 15:20, 15:91, 15:123, 15:136, 15:151, 15:155, 15:222, 15:235, 35:01:01:01-35:01:21, 35:01:23-35:01:29, 35:05:01-35:05:02, 35:07, 35:10, 35:16-35:17, 35:19, 35:23, 35:25-35:27, 35:30, 35:32:01-35:32:02, 35:37, 35:40N-35:42:02, 35:46-35:49, 35:52, 35:54, 35:57, 35:63, 35:68:01-35:68:02, 35:71, 35:77-35:78, 35:82, 35:89-35:92, 35:94, 35:97, 35:101:01-35:101:02, 35:103-35:104, 35:107-35:108:02, 35:110-35:113, 35:116, 35:119-35:126, 35:130N-35:134N, 35:137-35:139, 35:143-35:148, 35:159, 35:161, 35:165N, 35:168, 35:170-35:171, 35:173N, 35:175, 35:177-35:178, 44:43:01-44:43:02, 46:13:01-46:13:03, 46:19, 46:26, 48:02:01-48:02:02, 56:09, 57:01:01-57:01:02, 57:01:04, 57:01:06-57:01:11, 57:06, 57:08, 57:10-57:11, 57:15-57:16, 57:18, 57:20-57:21, 57:23, 57:29, 57:33-57:38, 57:40-57:41, 57:44-57:45, 57:48-57:52, 58:36									9	10	11	
*13:10										10	w	
*13:16, 15:42, 49:07, 55:01:01-55:01:03, 55:01:05-55:01:06, 55:01:08, 55:03, 55:05, 55:11, 55:15, 55:24-55:25, 55:29, 55:31, 55:33, 55:36, 55:38, 55:40, 55:45								8				12
*13:18, 13:41, 45:08, 45:10, 54:10, 55:37												12
*13:25						6						
*13:26, 15:52, 15:114, 15:124, 15:186, 27:41, 35:01:22, 35:15, 35:35, 35:93, 35:140, 35:180, 39:07, 46:21:01-46:21:02, 48:14, 54:09, 54:14, 55:23, 55:32, 56:18, 57:01:03, 57:01:12, 57:25-57:26, 57:43										10	11	
*13:48, 49:01:01, 49:01:03-49:02, 49:06, 49:08-49:10, 49:12-49:17, 49:19N-49:20, 50:01:01-50:01:02, 50:02, 50:04-50:08, 50:10-50:11, 50:13, 50:15, 56:25				4				8				12
*14:05								8				
*14:10, 35:96, 40:28		2						8				
*14:19, 14:27, 15:133, 15:229, 35:167, 50:09, 50:12				4				8				
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **73N**

Lot-specific information

90	95	105	160	275	140	125	60	Length of spec. PCR product(s)
13	14	15	16	17	18	19	20	Well No.
			16					*13:04, 15:05:01-15:05:02, 15:20, 15:91, 15:123, 15:136, 15:151, 15:155, 15:222, 15:235, 35:01:01:01-35:01:21, 35:01:23- 35:01:29, 35:05:01-35:05:02, 35:07, 35:10, 35:16-35:17, 35:19, 35:23, 35:25-35:27, 35:30, 35:32:01-35:32:02, 35:37, 35:40N- 35:42:02, 35:46-35:49, 35:52, 35:54, 35:57, 35:63, 35:68:01-35:68:02, 35:71, 35:77- 35:78, 35:82, 35:89-35:92, 35:94, 35:97, 35:101:01-35:101:02, 35:103-35:104, 35:107- 35:108:02, 35:110-35:113, 35:116, 35:119- 35:126, 35:130N-35:134N, 35:137-35:139, 35:143-35:148, 35:159, 35:161, 35:165N, 35:168, 35:170-35:171, 35:173N, 35:175, 35:177-35:178, 44:43:01-44:43:02, 46:13:01- 46:13:03, 46:19, 46:26, 48:02:01-48:02:02, 56:09, 57:01:01-57:01:02, 57:01:04, 57:01:06- 57:01:11, 57:06, 57:08, 57:10-57:11, 57:15- 57:16, 57:18, 57:20-57:21, 57:23, 57:29, 57:33-57:38, 57:40-57:41, 57:44-57:45, 57:48- 57:52, 58:36
			16					*13:10
			16					*13:16, 15:42, 49:07, 55:01:01-55:01:03, 55:01:05-55:01:06, 55:01:08, 55:03, 55:05, 55:11, 55:15, 55:24-55:25, 55:29, 55:31, 55:33, 55:36, 55:38, 55:40, 55:45
								*13:18, 13:41, 45:08, 45:10, 54:10, 55:37
			16					*13:25
			16					*13:26, 15:52, 15:114, 15:124, 15:186, 27:41, 35:01:22, 35:15, 35:35, 35:93, 35:140, 35:180, 39:07, 46:21:01-46:21:02, 48:14, 54:09, 54:14, 55:23, 55:32, 56:18, 57:01:03, 57:01:12, 57:25-57:26, 57:43
			16					*13:48, 49:01:01, 49:01:03-49:02, 49:06, 49:08-49:10, 49:12-49:17, 49:19N-49:20, 50:01:01-50:01:02, 50:02, 50:04-50:08, 50:10- 50:11, 50:13, 50:15, 56:25
	14		16					*14:05
			16					*14:10, 35:96, 40:28
			16					*14:19, 14:27, 15:133, 15:229, 35:167, 50:09, 50:12
13	14	15	16	17	18	19	20	Well No.

101.549-06– including *Taq* polymerase, IFU-01101. 549-06u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **73N**

Lot-specific information

Length of spec.	145	270	135	190	150	205	130	170	75	150	85	105
PCR product(s)			290			235						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*15:01:01:01-15:01:04, 15:01:06-15:01:24, 15:04, 15:08, 15:11:01-15:12, 15:14-15:15, 15:19, 15:24, 15:26N-15:28, 15:34-15:35, 15:43, 15:46-15:47, 15:49-15:50, 15:53-15:54, 15:56-15:57, 15:60, 15:66, 15:70-15:71, 15:76, 15:79N, 15:81-15:82, 15:85, 15:87, 15:92, 15:94N, 15:96-15:97, 15:101-15:102, 15:104, 15:109-15:110, 15:113, 15:117-15:118, 15:120, 15:122, 15:125-15:126, 15:129, 15:135, 15:140, 15:142-15:143, 15:146-15:149N, 15:152, 15:154, 15:157, 15:159-15:160, 15:163-15:167, 15:169, 15:171-15:172, 15:174-15:175, 15:178, 15:180-15:184, 15:187, 15:189-15:193, 15:201, 15:203, 15:205-15:207, 15:209N, 15:211-15:212, 15:215, 15:217, 15:225, 15:227-15:228, 15:231-15:232, 15:234, 15:236, 35:14:01-35:14:02, 35:43:01, 35:67, 35:79, 35:86, 35:102, 35:117, 35:135, 35:43:02, 46:01:01-46:01:05, 46:01:07-46:05, 46:07N, 46:10, 46:14-46:17, 46:20, 46:22-46:24, 46:27-46:30, 54:06, 56:03								8			11	
*15:02:01-15:02:05, 15:06, 15:13:01, 15:21, 15:25:01-15:25:03, 15:36, 15:44, 15:89, 15:106, 15:112, 15:121, 15:139, 15:156, 15:170, 15:204, 15:213-15:214, 49:05								8			w	
*15:03:01-15:03:03, 15:13:02, 15:16:01-15:16:03, 15:18:01-15:18:04, 15:23, 15:29, 15:39:01-15:40, 15:61-15:62, 15:64, 15:67, 15:69, 15:74, 15:80, 15:93, 15:95, 15:98, 15:103, 15:108, 15:119, 15:127, 15:131-15:132, 15:134, 15:138, 15:153, 15:158, 15:161, 15:173, 15:194-15:195, 15:197-15:198, 15:210, 15:219-15:220, 15:223, 15:226N, 15:238, 35:11:01-35:11:02, 40:158, 46:08, 48:25, 49:04, 55:14, 56:32, 57:22								8			11	
*15:07:01-15:07:02, 15:68, 46:12								8			11	
*15:31									9	10	w	
*15:32							7	8			11	
*15:38:01-15:38:02						6		8			11	
*15:51, 15:179, 35:115, 44:17, 45:09, 57:24					5				9		11	
*15:55									9	10	w	
*15:58, 15:73, 15:137				4				8				
*15:65, 15:221, 35:99								8			11	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **73N**

Lot-specific information

90	95	105	160	275	140	125	60	Length of spec.
	130	205						PCR product(s)
13	14	15	16	17	18	19	20	Well No.
								*15:01:01:01-15:01:04, 15:01:06-15:01:24, 15:04, 15:08, 15:11:01-15:12, 15:14-15:15, 15:19, 15:24, 15:26N-15:28, 15:34-15:35, 15:43, 15:46-15:47, 15:49-15:50, 15:53-15:54, 15:56-15:57, 15:60, 15:66, 15:70-15:71, 15:76, 15:79N, 15:81-15:82, 15:85, 15:87, 15:92, 15:94N, 15:96-15:97, 15:101-15:102, 15:104, 15:109-15:110, 15:113, 15:117-15:118, 15:120, 15:122, 15:125-15:126, 15:129, 15:135, 15:140, 15:142-15:143, 15:146-15:149N, 15:152, 15:154, 15:157, 15:159-15:160, 15:163-15:167, 15:169, 15:171-15:172, 15:174-15:175, 15:178, 15:180-15:184, 15:187, 15:189-15:193, 15:201, 15:203, 15:205-15:207, 15:209N, 15:211-15:212, 15:215, 15:217, 15:225, 15:227-15:228, 15:231-15:232, 15:234, 15:236, 35:14:01-35:14:02, 35:43:01, 35:67, 35:79, 35:86, 35:102, 35:117, 35:135, 35:43:02, 46:01:01-46:01:05, 46:01:07-46:05, 46:07N, 46:10, 46:14-46:17, 46:20, 46:22-46:24, 46:27-46:30, 54:06, 56:03
			16					*15:02:01-15:02:05, 15:06, 15:13:01, 15:21, 15:25:01-15:25:03, 15:36, 15:44, 15:89, 15:106, 15:112, 15:121, 15:139, 15:156, 15:170, 15:204, 15:213-15:214, 49:05
			16					*15:03:01-15:03:03, 15:13:02, 15:16:01-15:16:03, 15:18:01-15:18:04, 15:23, 15:29, 15:39:01-15:40, 15:61-15:62, 15:64, 15:67, 15:69, 15:74, 15:80, 15:93, 15:95, 15:98, 15:103, 15:108, 15:119, 15:127, 15:131-15:132, 15:134, 15:138, 15:153, 15:158, 15:161, 15:173, 15:194-15:195, 15:197-15:198, 15:210, 15:219-15:220, 15:223, 15:226N, 15:238, 35:11:01-35:11:02, 40:158, 46:08, 48:25, 49:04, 55:14, 56:32, 57:22
	14							*15:07:01-15:07:02, 15:68, 46:12
			16					*15:31
								*15:32
								*15:38:01-15:38:02
								*15:51, 15:179, 35:115, 44:17, 45:09, 57:24
	14		16					*15:55
								*15:58, 15:73, 15:137
							20	*15:65, 15:221, 35:99
13	14	15	16	17	18	19	20	Well No.

101.549-06– including *Taq* polymerase, IFU-01101. 549-06u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **73N**

Lot-specific information

Length of spec.	145	270	135	190	150	205	130	170	75	150	85	105
PCR product(s)			290			235						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*15:75, 15:105, 15:111N, 15:145											11	
*15:84, 15:237, 35:08:01-35:08:05, 35:45, 35:61, 35:80, 35:100, 35:105, 35:142, 35:158, 35:176, 57:19									9	w	11	
*15:88											w	
*15:107, 35:53N, 35:64, 35:114, 57:01:05, 57:31, 57:47									9	10		
*15:115						6		8			11	
*15:128, 15:144								8			w	
*15:176, 15:200											11	
*15:185						6			9	10	11	
*15:199					5			8			11	
*15:202								8			11	
*15:218Q					5						11	
*18:01:01-18:01:03, 18:01:05-18:02, 18:05- 18:06, 18:08, 18:12, 18:17N, 18:23N-18:24, 18:27-18:28, 18:31-18:32, 18:34, 18:38- 18:39, 18:42-18:47, 18:49-18:53, 18:55, 18:59-18:60, 18:62-18:65						6				10	11	
*18:01:04, 18:40						6				10		
*18:03						6				10	11	
*18:04, 18:25, 18:68						6				10	11	
*18:07:01-18:07:02, 18:29, 18:33						6				10	11	
*18:09					5	6				10	11	
*18:10-18:11, 18:35										10	11	
*18:13						6				w	11	
*18:14						6				10	11	
*18:15, 18:57						6		8			11	
*18:18						6	7			10	11	
*18:19, 18:30						6		8			11	
*18:20						6				10	w	
*18:21								8				
*18:22		2				6				10	11	
*18:26, 18:41, 18:61												
*18:36						6			9	10	11	
*18:37, 18:48, 18:66, 39:43, 56:31						6				10	11	
*18:54			3			6				10	11	
*18:56					5				9		11	
*18:58									9	10	11	
*18:67	1		3			6				10	11	
*27:52			3									
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **73N**

Lot-specific information

90	95	105	160	275	140	125	60	Length of spec. PCR product(s)
13	14	15	16	17	18	19	20	Well No.
								*15:75, 15:105, 15:111N, 15:145
							20	*15:84, 15:237, 35:08:01-35:08:05, 35:45, 35:61, 35:80, 35:100, 35:105, 35:142, 35:158, 35:176, 57:19
			w					*15:88
			16					*15:107, 35:53N, 35:64, 35:114, 57:01:05, 57:31, 57:47
			16					*15:115
								*15:128, 15:144
			w					*15:176, 15:200
			16					*15:185
		15						*15:199
								*15:202
								*15:218Q
		15	16		18			*18:01:01-18:01:03, 18:01:05-18:02, 18:05- 18:06, 18:08, 18:12, 18:17N, 18:23N-18:24, 18:27-18:28, 18:31-18:32, 18:34, 18:38- 18:39, 18:42-18:47, 18:49-18:53, 18:55, 18:59-18:60, 18:62-18:65
		15	16		18			*18:01:04, 18:40
		15	16		18	19		*18:03
		15	16					*18:04, 18:25, 18:68
			16		18			*18:07:01-18:07:02, 18:29, 18:33
		15	16		18			*18:09
		15	16		18			*18:10-18:11, 18:35
		15			18			*18:13
14	15	16			18			*18:14
		15	16		18			*18:15, 18:57
		15	16		18			*18:18
		15			18			*18:19, 18:30
		15	16		18			*18:20
		15			18			*18:21
		15	16		18			*18:22
		15	16		18			*18:26, 18:41, 18:61
		15	16		18			*18:36
			16					*18:37, 18:48, 18:66, 39:43, 56:31
		15	16		18			*18:54
		15			18			*18:56
		15	16		18			*18:58
		15	16		18			*18:67
			16		18			*27:52
13	14	15	16	17	18	19	20	Well No.

101.549-06– including *Taq* polymerase, IFU-01101. 549-06u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **73N**

Lot-specific information

Length of spec.	145	270	135	190	150	205	130	170	75	150	85	105
PCR product(s)			290			235						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*35:02:01-35:02:04, 35:83, 35:95, 35:129N, 35:154									9			
*35:03:01-35:03:05, 35:03:07-35:03:10, 35:06, 35:13, 35:36, 35:55-35:56, 35:59, 35:70, 35:74-35:75, 35:85, 35:98, 35:106, 35:127-35:128, 35:150-35:153, 35:155, 35:160, 35:179, 35:181, 39:32, 40:71, 44:10, 56:02, 56:04, 56:11, 56:22				4					9			
*35:18, 35:164, 35:172, 44:28:01-44:28:02, 57:02:01-57:02:02, 57:04-57:05, 57:12, 57:28N, 57:42									9			
*35:20:01-35:20:02, 35:28									9	10	11	
*35:21		2				6		8			11	
*35:24:01-35:24:02, 57:14		2				6			9	10	11	
*35:29, 35:69, 35:76									9	10	11	
*35:38, 35:163, 35:169, 38:30, 45:02, 82:01-82:03, C*04:34				4					9			
*35:50									9	10	11	
*35:51									9	10	11	
*35:58								8			11	
*35:62, 57:27									9	w	11	
*35:66										w	11	
*35:72									9	10	11	
*35:81		2							9			
*35:84				4					9			
*35:109		2		4					9			
*35:136				4					9			
*35:141									9		11	
*35:156, 39:33				4					9			
*35:157		2										
*35:162									9			
*35:166									9	10	11	
*35:174									9	w		
*35:186									9	10	11	
*37:01:01-37:01:05, 37:01:07-37:01:08, 37:03N, 37:05, 37:08, 37:15-37:18, 37:20, 37:22-37:25, 37:27, 37:30N			3				7					
*37:01:06							7					
*37:02			3									
*37:04:01-37:04:02		2	3				7					
*37:06, 37:28							7					
*37:07			3					8				
*37:09, 37:12, 37:19			3									
*37:10					5		7					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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

Lot No.: **73N**

Lot-specific information

90	95	105	160	275	140	125	60	Length of spec. PCR product(s)
130	205							
13	14	15	16	17	18	19	20	Well No.
		15	16					*35:02:01-35:02:04, 35:83, 35:95, 35:129N, 35:154
			16					*35:03:01-35:03:05, 35:03:07-35:03:10, 35:06, 35:13, 35:36, 35:55-35:56, 35:59, 35:70, 35:74-35:75, 35:85, 35:98, 35:106, 35:127-35:128, 35:150-35:153, 35:155, 35:160, 35:179, 35:181, 39:32, 40:71, 44:10, 56:02, 56:04, 56:11, 56:22
							20	*35:18, 35:164, 35:172, 44:28:01-44:28:02, 57:02:01-57:02:02, 57:04-57:05, 57:12, 57:28N, 57:42
		15	16					*35:20:01-35:20:02, 35:28
			16					*35:21
			16					*35:24:01-35:24:02, 57:14
			16			19		*35:29, 35:69, 35:76
								*35:38, 35:163, 35:169, 38:30, 45:02, 82:01- 82:03, C*04:34
			16		18			*35:50
	14		16					*35:51
	14		16					*35:58
								*35:62, 57:27
	14		16					*35:66
	14	15	16					*35:72
		15	16					*35:81
			16		18			*35:84
			16					*35:109
			16			19		*35:136
			16					*35:141
							20	*35:156, 39:33
			16					*35:157
		15	16		18			*35:162
								*35:166
							20	*35:174
			16			w		*35:186
		15			18			*37:01:01-37:01:05, 37:01:07-37:01:08, 37:03N, 37:05, 37:08, 37:15-37:18, 37:20, 37:22-37:25, 37:27, 37:30N
					18			*37:01:06
		15	16		18			*37:02
		15			18			*37:04:01-37:04:02
								*37:06, 37:28
		15			18			*37:07
		15			18			*37:09, 37:12, 37:19
		15			18			*37:10
13	14	15	16	17	18	19	20	Well No.

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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

Lot No.: **73N**

Lot-specific information

Length of spec.	145	270	135	190	150	205	130	170	75	150	85	105
PCR product(s)			290			235						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*37:11, 37:14, 37:29							7					
*37:13			3				7	8				
*37:21, 37:26			3				7					
*37:31			3				7					
*38:06-38:07	1											
*39:09							7					
*39:19:01-39:19:02												
*39:24:01-39:24:02, 39:37												
*40:03										10		
*40:20, 40:38, 40:52, 40:59-40:60, 40:105, 40:159, 46:06, 48:23										10		
*44:02:08, 44:101									w			
*44:06, 51:08, 51:44N	1								9			
*44:15				4		6			9			12
*44:18, 45:01, 45:04-45:07, 45:13, 56:13				4					9			12
*44:83, 44:134					5				9			
*44:109						6			9			
*44:117				w					9			
*45:03									9			12
*45:11				4								12
*45:12				4					9			12
*46:09, 46:25									9		11	
*49:01:02				4				8				12
*49:03, 52:25	1			4				8				12
*50:01:03				4				8				12
*51:01:01-51:03, 51:06:01-51:07:02, 51:11N- 51:12, 51:14, 51:16-51:18, 51:21-51:24:04, 51:26-51:28, 51:30, 51:32-51:35, 51:38- 51:39, 51:41N, 51:43, 51:48-51:52, 51:58- 51:60, 51:64-51:71, 51:74-51:77, 51:79- 51:80, 51:83-51:86, 51:88-51:90, 51:94- 51:96, 51:98N-51:102, 51:105, 51:107, 51:109-51:111, 51:113-51:114, 51:117- 51:119, 51:121, 51:123-51:126, 52:06:01- 52:06:02, 52:22-52:23	1							8				
*51:04, 51:46, 51:56:01-51:56:02	1	2						8				
*51:05	1								9			
*51:09:01-51:09:02, 51:19, 51:40, 51:42, 51:73, 51:108, 51:122	1								9			
*51:10, 51:31, 51:81, 51:93, 51:115	1											
*51:13:01-51:13:02, 51:62, 51:92, 51:106	1			4				8				
*51:15	1			4					9			12
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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

Lot No.: **73N**

Lot-specific information

90	95	105	160	275	140	125	60	Length of spec. PCR product(s)
13	14	15	16	17	18	19	20	Well No.
		15			18			*37:11, 37:14, 37:29
		15			18			*37:13
					18			*37:21, 37:26
		15						*37:31
			16		18			*38:06-38:07
			16					*39:09
			16		18	19		*39:19:01-39:19:02
	14		16					*39:24:01-39:24:02, 39:37
	14		16					*40:03
			16					*40:20, 40:38, 40:52, 40:59-40:60, 40:105, 40:159, 46:06, 48:23
								*44:02:08, 44:101
								*44:06, 51:08, 51:44N
								*44:15
								*44:18, 45:01, 45:04-45:07, 45:13, 56:13
		15						*44:83, 44:134
			16					*44:109
								*44:117
								*45:03
								*45:11
		15						*45:12
								*46:09, 46:25
			w					*49:01:02
		15	16					*49:03, 52:25
								*50:01:03
			16					*51:01:01-51:03, 51:06:01-51:07:02, 51:11N- 51:12, 51:14, 51:16-51:18, 51:21-51:24:04, 51:26-51:28, 51:30, 51:32-51:35, 51:38- 51:39, 51:41N, 51:43, 51:48-51:52, 51:58- 51:60, 51:64-51:71, 51:74-51:77, 51:79- 51:80, 51:83-51:86, 51:88-51:90, 51:94- 51:96, 51:98N-51:102, 51:105, 51:107, 51:109-51:111, 51:113-51:114, 51:117- 51:119, 51:121, 51:123-51:126, 52:06:01- 52:06:02, 52:22-52:23
			16					*51:04, 51:46, 51:56:01-51:56:02
							20	*51:05
			16					*51:09:01-51:09:02, 51:19, 51:40, 51:42, 51:73, 51:108, 51:122
			16					*51:10, 51:31, 51:81, 51:93, 51:115
			16					*51:13:01-51:13:02, 51:62, 51:92, 51:106
			16					*51:15
13	14	15	16	17	18	19	20	Well No.

101.549-06– including *Taq* polymerase, IFU-01101. 549-06u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **73N**

Lot-specific information

Length of spec.	145	270	135	190	150	205	130	170	75	150	85	105
PCR product(s)			290			235						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*51:20	1								9			
*51:29	1							8				
*51:36, 51:55, 51:61, 51:82	1							8				
*51:37, 51:45, 51:63	1					6		8			11	
*51:53, 51:120	1											
*51:54					5				9			
*51:57, 51:103, 51:116	1							8				
*51:72, 51:87, 51:91	1							8				
*51:78					5			8				
*51:97	1				5	6			9		11	
*52:01:01:01-52:01:10, 52:04-52:05, 52:07-52:08, 52:11-52:13, 52:15, 52:17-52:18, 52:26-52:27	1							8				
*52:09	1		3					8				
*52:14	1			4				8				
*52:19	1								9			
*52:20					5			8				
*52:21	1							8				
*52:24	1							8				
*55:54												12
*56:06, 78:01:01-78:01:02, 78:03, 78:07								8				
*57:30											11	
*58:01:01-58:01:02, 58:01:04-58:02, 58:04, 58:07, 58:10N-58:16, 58:18, 58:21, 58:23-58:26, 58:29-58:32	1								9	10	11	
*58:01:03	1								9	10		
*58:05	1										11	
*58:06, 58:19	1							8			11	
*58:08:01-58:08:02	1							8				
*58:09	1	2				6			9	10	11	
*58:17N									9	10	11	
*58:20, 58:27	1											
*58:22	1								9	w	11	
*58:28	1								9			
*58:33	1			4					9	10	11	
*58:34	1			4					9			
*58:35	1									10	11	
A*02:188, A*24:174										w		
C*03:12, 03:19, 03:26, 03:102				w								
C*03:28, 03:49, C*14:20												
C*04:08, C*05:39				4								
C*05:27, C*08:41, C*15:15, C*17:07				4								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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

Lot No.: **73N**

Lot-specific information

90	95	105	160	275	140	125	60	Length of spec. PCR product(s)
13	14	15	16	17	18	19	20	Well No.
	130	205				19		*51:20
							20	*51:29
								*51:36, 51:55, 51:61, 51:82
			16					*51:37, 51:45, 51:63
			w					*51:53, 51:120
							20	*51:54
			16		18			*51:57, 51:103, 51:116
			w					*51:72, 51:87, 51:91
			16					*51:78
								*51:97
		15	16					*52:01:01:01-52:01:10, 52:04-52:05, 52:07- 52:08, 52:11-52:13, 52:15, 52:17-52:18, 52:26-52:27
		15	16					*52:09
		15	16					*52:14
		15						*52:19
		15	16					*52:20
		15						*52:21
		15					20	*52:24
			w					*55:54
			16			19		*56:06, 78:01:01-78:01:02, 78:03, 78:07
							20	*57:30
13			16					*58:01:01-58:01:02, 58:01:04-58:02, 58:04, 58:07, 58:10N-58:16, 58:18, 58:21, 58:23- 58:26, 58:29-58:32
13			16					*58:01:03
13			16					*58:05
13			16					*58:06, 58:19
13			16					*58:08:01-58:08:02
13			16					*58:09
13			16					*58:17N
13			16					*58:20, 58:27
13							20	*58:22
13			16					*58:28
13			16					*58:33
13			16					*58:34
13			16					*58:35
								A*02:188, A*24:174
								C*03:12, 03:19, 03:26, 03:102
							20	C*03:28, 03:49, C*14:20
							20	C*04:08, C*05:39
								C*05:27, C*08:41, C*15:15, C*17:07
13	14	15	16	17	18	19	20	Well No.

101.549-06– including *Taq* polymerase, IFU-01101. 549-06u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **73N**

Lot-specific information

Length of spec.	145	270	135	190	150	205	130	170	75	150	85	105
PCR product(s)			290			235						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
<i>C*06:20, C*07:81</i>											w	
<i>C*07:68, 07:140, 07:151</i>					5							
<i>C*07:168</i>							7				w	
<i>C*15:39</i>		2										
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA- B*53 subtyping. In addition, wells number 3 to 7, 11 and 15 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 nucleotide position, in the 1st, 2nd or 3rd exon, matching the specificity-determining 3'-end of the primer is given. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

³The nucleotide position, in the 2nd or 3rd 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.

⁴HLA-B*53 alleles in bold lettering are listed as confirmed alleles on the on the IMGT/HLA web page www.ebi.ac.uk/imgt/hla, release 3.7.0, January 2012.

101.549-06– including *Taq* polymerase, IFU-01101. 549-06u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **73N**

Lot-specific information

90	95	105	160	275	140	125	60	Length of spec. PCR product(s)
	130	205						
13	14	15	16	17	18	19	20	Well No.
								C*06:20, C*07:81
								C*07:68, 07:140, 07:151
								C*07:168
								C*15:39
13	14	15	16	17	18	19	20	Well No.

⁵The B*53:19, B*52:03 and B*52:10:01-52:10:02 alleles give rise to identical amplification patterns with the HLA-B*53 subtyping kit. These four alleles can be distinguished by the HLA-B low resolution kit and/or the HLA-B*52 subtyping kit.

⁶Primer mix 3: Specific PCR fragment of 135 bp in the B*53:03, 53:05 and 53:16 and the B*18:54, 18:67, 27:52, 37:01:01-37:01:05, 37:01:07-37:05, 37:07-37:09, 37:12-37:13, 37:15-37:27, 37:30N-37:31 and 52:09 alleles. Specific PCR fragment of 290 bp in the B*53:15 and the 08:49, 08:60, 08:76 and 42:13 alleles.

Primer mix 6: Specific PCR fragment of 205 bp in the B*53:02 and 53:06 and the B*15:38:01-15:38:02, 15:185, 18:01:01-18:09, 18:12-18:15, 18:17N-18:20, 18:22-18:25, 18:27-18:34, 18:36-18:40, 18:42-18:55, 18:57, 18:59-18:60, 18:62-18:68, 35:21, 35:24:01-35:24:02, 39:43, 51:37, 51:45, 51:63, 51:97, 56:31, 57:14 and 58:09 alleles. Specific PCR fragment of 235 bp in the the B*53:05, 53:12 and 53:16 and the B*13:25, 15:115, 44:15 and 44:109 alleles.

Primer mix 14: Specific PCR fragment of 95 bp in the B*53:14 and the B*07:09, 07:11, 07:17, 07:115, 08:28, 08:35, 08:37, 08:69, 14:05, 15:07:01-15:07:02, 15:55, 15:68, 18:14, 35:51, 35:58, 35:66, 35:72, 39:24:01-39:24:02, 39:37, 40:03, 41:18, 42:09 and 46:12 and in the C*08:08 alleles. Specific PCR fragment of 130 bp in the B*53:10 allele.

Primer mix 15: Specific PCR fragment of 105 bp in the B *53:09, 53:17:01-53:17:02, 15:202, 18:01:01-18:06, 18:08-18:15, 18:17N-18:28, 18:30-18:32, 18:34-18:36, 18:38-18:47, 18:49-18:65, 18:67-18:68, 35:20:01-35:20:02, 35:28, 35:72, 37:01:01-37:01:05, 37:01:07-37:05, 37:07-37:20, 37:22-37:25, 37:27, 37:29-37:31, 44:83, 44:134, 49:03, 52:01:01-52:01:10, 52:03-52:05, 52:07-52:15, 52:17-52:21, 52:24-52:27 alleles. Specific PCR fragment of 205 bp in the B*53:19, 35:81, 35:83, 35:154, 35:162, 45:12 alleles. Specific PCR fragments of 105 and 205 bp in the B*35:95 allele.

‘w’, might be weakly amplified.

101.549-06– including *Taq* polymerase, IFU-01101. 549-06u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: 73N

Lot-specific information

CELL LINE VALIDATION SHEET															
HLA-B*53 SSP subtyping kit															
				Well											
				1	2	3	4	5	6	7	8	9	10	11	12
				16	15	14	13	12	11	10	9	8	7	6	5
				200966401	200966402	200966403	200966404	201183205	200966406	200966407	200966408	200966409	200966410	200966411	200966412
				200966413	200966414	200966415	200966416	200966417	200966418	200966419	200966420	200966421	200966422	200966423	200966424
				Prod. No.:											
IHWC cell line				B*											
1	9001	SA	*07:02		-	-	-	-	-	-	+	-	-	-	-
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	SM	*39:01	*51:01	+	-	-	-	-	-	+	-	-	-	-
7	9020	QBL	*18:01		-	-	-	-	+	-	-	-	+	+	-
8	9025	DEU	*35:01		-	-	-	-	-	-	-	+	+	+	-
9	9026	YAR	*38:01		-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*54:01		-	-	-	-	-	-	-	-	-	+	-
11	9051	PITOUT	*44:03		-	-	-	-	-	-	-	+	-	-	-
12	9052	DBB	*57:01		-	-	-	-	-	-	-	+	+	+	-
13	9025	JESTHOM	*27:05		-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*15:01	*15:20	-	-	-	-	-	-	+	+	+	+	-
15	9075	DKB	*40:01		-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*40:02		-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*08:01	*55:01	-	-	-	-	-	-	+	-	-	+	-
18	9257	32367	*14:01	*56:01	-	-	-	+	-	-	+	+	-	+	-
19	9038	BM16	*18:01		-	-	-	-	-	+	-	-	+	+	-
20	9059	SLE005	*40:01		-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*15:01		-	-	-	-	-	-	+	-	-	+	-
22	9056	KOSE	*35:03		-	-	-	+	-	-	-	+	-	-	-
23	9124	IHL	*40:02	*56:02	-	-	-	+	-	-	-	+	-	-	-
24	9035	JBUSH	*38:01		-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*14:02		-	-	-	-	-	-	+	-	-	-	-
26	9285	WT49	*58:01		+	-	-	-	-	-	-	+	+	+	-
27	9191	CH1007	*07:05	*51:01	+	-	-	-	-	-	+	-	-	-	-
28	9320	BEL5GB	*44:02	*44:03	-	-	-	-	-	-	-	+	-	-	-
29	9050	MOU	*44:03		-	-	-	-	-	-	-	+	-	-	-
30	9021	RSH	*42:01		-	-	-	-	-	-	-	-	-	-	-
31	9019	DUCAF	*18:01		-	-	-	-	-	+	-	-	+	+	-
32	9297	HAG	*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	LZL	*15:01		-	-	-	-	-	-	+	-	-	+	-
39	9315	CML	*08:01	*27:05	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*13:02	*46:01	-	-	-	-	-	-	+	-	-	+	-
41	9055	H0301	*14:02		-	-	-	-	-	-	+	-	-	-	-
42	9066	TAB089	*46:01		-	-	-	-	-	-	+	-	-	+	-
43	9076	T7526	*46:01		-	-	-	-	-	-	+	-	-	+	-
44	9057	TEM	*38:01		-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*42:01	*50:01	-	-	-	+	-	-	+	-	-	+	-
46	9013	SCHU	*07:02		-	-	-	-	-	-	+	-	-	-	-
47	9045	TUBO	*51:01		+	-	-	-	-	-	+	-	-	-	-
48	9303	TER-ND	*35:01	*44:03	-	-	-	-	-	-	-	+	+	+	-

101.549-06– including *Taq* polymerase, IFU-01
 101. 549-06u – without *Taq* polymerase, IFU-02

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Lot No.: **73N**

Lot-specific information

CELL LINE VALIDATION SHEET									
HLA-B*53 SSP subtyping kit									
					Well				
					17	18	19	20	
				Prod. No.:	201183217	201183218	201183219	201183220	
	IHWC cell line		B*						
1	9001	SA	*07:02		-	-	-	-	
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	SM	*39:01		*51:01	-	-	-	
7	9020	QBL	*18:01			-	+	-	
8	9025	DEU	*35:01			-	-	-	
9	9026	YAR	*38:01			-	-	-	
10	9107	LKT3	*54:01			-	-	-	
11	9051	PITOUT	*44:03			-	-	-	
12	9052	DBB	*57:01			-	-	-	
13	9025	JESTHOM	*27:05			-	-	-	
14	9071	OLGA	*15:01		*15:20	-	-	-	
15	9075	DKB	*40:01			-	-	-	
16	9037	SWEIG007	*40:02			-	-	-	
17	9282	CTM3953540	*08:01		*55:01	-	-	-	
18	9257	32367	*14:01		*56:01	-	-	-	
19	9038	BM16	*18:01			-	+	-	
20	9059	SLE005	*40:01			-	-	-	
21	9064	AMALA	*15:01			-	-	-	
22	9056	KOSE	*35:03			-	-	-	
23	9124	IHL	*40:02		*56:02	-	-	-	
24	9035	JBUSH	*38:01			-	-	-	
25	9049	IBW9	*14:02			-	-	-	
26	9285	WT49	*58:01			-	-	-	
27	9191	CH1007	*07:05		*51:01	-	-	-	
28	9320	BEL5GB	*44:02		*44:03	-	-	-	
29	9050	MOU	*44:03			-	-	-	
30	9021	RSH	*42:01			-	-	-	
31	9019	DUCAF	*18:01			-	+	-	
32	9297	HAG	*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	LZL	*15:01			-	-	-	
39	9315	CML	*08:01		*27:05	-	-	-	
40	9134	WHONP199	*13:02		*46:01	-	-	-	
41	9055	H0301	*14:02			-	-	-	
42	9066	TAB089	*46:01			-	-	-	
43	9076	T7526	*46:01			-	-	-	
44	9057	TEM	*38:01			-	-	-	
45	9239	SHJO	*42:01		*50:01	-	-	-	
46	9013	SCHU	*07:02			-	-	-	
47	9045	TUBO	*51:01			-	-	-	
48	9303	TER-ND	*35:01		*44:03	-	-	-	

101.549-06– including *Taq* polymerase, IFU-01
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Lot No.: **73N**

Lot-specific information

CERTIFICATE OF ANALYSIS

Olerup SSP® HLA-B*53 SSP

Product number: 101.549-06 – including *Taq* polymerase
101.549-06u – without *Taq* polymerase
Lot number: 73N
Expiry date: 2014-November-01
Number of tests: 6
Number of wells per test: 20

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2009-664-01	9	2009-664-09	17	2011-832-17
2	2009-664-02	10	2009-664-10	18	2011-832-18
3	2009-664-03	11	2009-664-11	19	2011-832-19
4	2009-664-04	12	2009-664-12	20	2011-832-20
5	2011-832-05	13	2009-664-13		
6	2009-664-06	14	2009-664-14		
7	2009-664-07	15	2009-664-15		
8	2009-664-08	16	2009-664-16		

The specificity of each primer solution of the HLA-B*53 primer set has been tested against 48 well characterized IHWC cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 2, 5 and 17 were available. The specificities of the primers in primer solutions 2 and 5 were tested by separately adding one additional 3'-primer, respectively one additional 5'-primer. In primer solution 17 it was only possible to test the 3'-primer, the 5'-primer was not possible to test.

In primer solutions 4, 6 and 13 one of the 3'-primers was not possible to test.

Additional primers in primer solutions 3, 6, 14 and 19 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: 2012-May-11

Approved by:

Production Quality Control

101.549-06– including *Taq* polymerase, IFU-01
101. 549-06u – without *Taq* polymerase, IFU-02

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Lot No.: **73N**

Lot-specific information

Declaration of Conformity

Product name: Olerup SSP® HLA-B*53
Product number: 101.549-06/06u
Lot number: 73N

Intended use: HLA-B*53 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
2012-May-11

Ann-Cathrin Jareman
Head of QA and Regulatory Affairs

101.549-06– including *Taq* polymerase, IFU-01
101. 549-06u – without *Taq* polymerase, IFU-02

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Lot No.: **73N**

Lot-specific information

101.549-06– including *Taq* polymerase, IFU-01
101. 549-06u – without *Taq* polymerase, IFU-02

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Lot-specific information

101.549-06– including *Taq* polymerase, IFU-01
101. 549-06u – without *Taq* polymerase, IFU-02

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Lot No.: **73N**

Lot-specific information

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