

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **96S**

Lot-specific information

Olerup SSP[®] HLA-B*48

Product number:	101.546-06 – including <i>Taq</i> polymerase 101.546-06u – without <i>Taq</i> polymerase
Lot number:	96S
Expiry date:	2016-May-01
Number of tests:	6
Number of wells per test:	16
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. 96S.

**CHANGES COMPARED TO THE PREVIOUS OLERUP SSP[®]
HLA-B*48 LOT (67R).**

The HLA-B*48 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*48 including and without *Taq* polymerase is now described in one common Product Insert.

¹As described in section Uniquely Identified Alleles.

The HLA-B*48 specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup SSP[®]* HLA-B*48 lot was made (**Lot No. 67R**).

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

Well	5'-primer	3'-primer	rationale
11	Exchanged	-	5'-primer exchanged to resolve the B*48:10 allele and the B*08:17, B*08:54, B*38:03, B*39:02:01-39:02:02, B*39:08, B*39:13:01 and B*41:22 alleles.

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PRODUCT DESCRIPTION**HLA-B*48 SSP typing****CONTENT**

The primer set contains 5'- and 3'-primers for identifying the B*48:01 to B*48:32 alleles.

PLATE LAYOUT

Each HLA-B*48 test consists of 16 PCR reactions in a 16 well cut PCR plate.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

The 16 well PCR plate is marked with ‘HLA-B*48’ in silver/gray ink.

Well No. 1 is marked with the Lot No. ‘96S’.

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 16 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*48 SSP subtypings will be influenced by the B*07, the B*08, most B*13, most B*14, several B*15, most B*18, several B*27, most B*35, the B*37, the B*38, the B*39, most B*40, the B*41, the B*42, most B*44, most B*45, nine B*46, the B*49, the B*50, several B*51, the B*52, the B*53, most B*54, most B*55, most B*56, most B*57, most 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 A*26:01:19^W, C*02:68, C*06:21 and C*15:24 alleles will be amplified by primer mix 13, the C*02:23 allele will be amplified by primer mixes 5 and 16, the C*02:60 allele will be amplified by primer mixes 9, 10 and 14, the C*03:05, C*03:25, C*03:27, C*03:143, C*03:167 and C*08:08 alleles will be amplified by primer mix 10, the C*03:102 allele will be amplified by primer mix 4, the C*03:175, C*03:199, C*15:09, C*15:19, C*15:27 and C*15:61 alleles will be amplified by primer mix 7, the C*04:77 allele will be amplified by primer mixes 5, 8 and 16, the C*07:38:01-07:38:02 alleles will be amplified by primer mix 5, the C*07:123 and C*07:173 alleles will be amplified by primer mix 12 and the C*07:294 allele will be amplified by primer mix 12 and 14.

UNIQUELY IDENTIFIED ALLELES

All the HLA-B*48 alleles, i.e. **B*48:01 to B*48:32**, recognized by the HLA Nomenclature Committee in October 2013¹ will be amplified by the primers in the HLA-B*48 SSP kit².

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The HLA-B*48 kit enables separation of the confirmed HLA-B*48 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*48 alleles is listed below.

The HLA-B*48 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 B*48:09 and B*48:11 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 14.

The B*48:18 and B*48:29 alleles can be distinguished by the different sizes of the specific PCR product generated by primer mix 15.

The B*48:19 and B*48:27 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 9.

The B*48 primer set cannot separate the silent mutations in the B*48:01:01- 48:01:04, the B*48:02:01- 48:02:03 and the B*48:03:01-48:03:02 alleles.

¹HLA-B alleles listed on the IMGT/HLA web page 2013-October-11, release 3.14.0, www.ebi.ac.uk/imgt/hla.

²The B*48 primer set cannot separate the B*48:06 and B*81:02 alleles. These two alleles can be distinguished by the HLA-B low resolution and/or HLA-B*81 kits.

The B*48 primer set cannot separate the B*48:10 and the B*39:13:02 and B*42:11 alleles. These alleles can be distinguished by the HLA-B low resolution and/or HLA-B*39 and HLA-B*42 kits.

ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹
B*48:01:01	Confirmed	B*48:15	Unconfirmed
B*48:01:02	Unconfirmed	B*48:16	Unconfirmed
B*48:01:03	Unconfirmed	B*48:17	Confirmed
B*48:01:04	Unconfirmed	B*48:18	Confirmed
B*48:02:01	Confirmed	B*48:19	Unconfirmed
B*48:02:02	Unconfirmed	B*48:20	Unconfirmed
B*48:02:03	Confirmed	B*48:21	Unconfirmed
B*48:03:01	Confirmed	B*48:22	Unconfirmed
B*48:03:02	Confirmed	B*48:23	Unconfirmed
B*48:04	Confirmed	B*48:24	Confirmed
B*48:05	Confirmed	B*48:25	Unconfirmed
B*48:06	Unconfirmed	B*48:26	Unconfirmed
B*48:07	Confirmed	B*48:27	Unconfirmed
B*48:08	Unconfirmed	B*48:28	Unconfirmed
B*48:09	Unconfirmed	B*48:29	Unconfirmed
B*48:10	Unconfirmed	B*48:30	Unconfirmed
B*48:11	Unconfirmed	B*48:31	Unconfirmed
B*48:12	Confirmed	B*48:32	Unconfirmed
B*48:13	Unconfirmed		
B*48:14	Unconfirmed		

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2013-October-11, release 3.14.0, www.ebi.ac.uk/imgt/hla.

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RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 37 alleles generate 27 amplification patterns that can be combined in 378 homozygous and heterozygous combinations. 215 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.

```

+----- +-+--+  *48:10, *48:12 = *48:12, *48:12
+----- +-+--+  *48:10, *48:13 = *48:13, *48:13
+--+--+  +-----  *48:02:01, *48:25 = *48:25, *48:25
+++----- +-----+  *48:28, *48:28 = *48:28, *48:31
+++----- +-+--+  *48:01:01, *48:01:01 = *48:01:01, *48:31
+----- +-+--+  *48:10, *48:14 = *48:12, *48:14 = *48:14, *48:14
+--+--+  +-----+  *48:04, *48:10 = *48:04, *48:13
+--+--+  +-----+  *48:04, *48:24 = *48:24, *48:24
+----- +-----+  *48:03:01, *48:23 = *48:23, *48:23
+----- +-----+  *48:03:01, *48:17 = *48:17, *48:17
+----- +-----+  *48:03:01, *48:21 = *48:03:01, *48:26 = *48:21, *48:26 = *48:26,
*48:26
+++----- +-+--+  *48:01:01, *48:15 = *48:01:01, *48:28 = *48:15, *48:15 = *48:15,
*48:28 = *48:15, *48:31
+++----- +-+--+  *48:01:01, *48:18 = *48:18, *48:18 = *48:18, *48:31
+++----- +-+--+  *48:01:01, *48:09 = *48:09, *48:09 = *48:09, *48:31
+++----- +-+--+  *48:01:01, *48:10 = *48:10, *48:31
+++----- +-+--+  *48:01:01, *48:22 = *48:22, *48:22 = *48:22, *48:31
+++----- +-+--+  *48:01:01, *48:04 = *48:04, *48:31
+++----- +-----+  *48:01:01, *48:19 = *48:19, *48:19 = *48:19, *48:31
+++----- +-----+  *48:01:01, *48:07 = *48:01:01, *48:16 = *48:07, *48:07 = *48:07,
*48:16 = *48:07, *48:31 = *48:16, *48:31
+++----- +-----+  *48:01:01, *48:20 = *48:01:01, *48:21 = *48:20, *48:20 = *48:20,
*48:21 = *48:20, *48:31 = *48:21, *48:31
+++----- +-+--+  *48:01:01, *48:03:01 = *48:03:01, *48:31
++++----- +-+--+  *48:01:01, *48:02:01 = *48:02:01, *48:31
+-----+--+ +--+--+  *48:05, *48:05 = *48:05, *48:08 = *48:05, *48:10
+--+--+  +-----+  *48:04, *48:08 = *48:08, *48:24
+--+--+  +-----+  *48:10, *48:24 = *48:13, *48:24
+-----+--+ +-----+  *48:21, *48:23 = *48:23, *48:26
+-----+--+ +-----+  *48:17, *48:21 = *48:17, *48:26
+----- +-----+  *48:15, *48:18 = *48:18, *48:28
+----- +-----+  *48:09, *48:15 = *48:09, *48:28
+----- +-----+  *48:10, *48:15 = *48:10, *48:28
+----- +-+--+  *48:01:01, *48:12 = *48:10, *48:18 = *48:12, *48:18 = *48:12, *48:31
+----- +-----+  *48:15, *48:22 = *48:22, *48:28
+----- +-----+  *48:04, *48:15 = *48:04, *48:28
+----- +-+--+  *48:01:01, *48:13 = *48:13, *48:31
+----- +-----+  *48:01:01, *48:08 = *48:08, *48:15 = *48:08, *48:19 = *48:08, *48:28 =
*48:08, *48:31 = *48:15, *48:19 = *48:19, *48:28
+++-----+ +-----+  *48:01:01, *48:24 = *48:04, *48:19 = *48:19, *48:24 = *48:24, *48:31
+++-----+ +-----+  *48:07, *48:15 = *48:07, *48:28 = *48:15, *48:16 = *48:16, *48:28
+++-----+ +-----+  *48:07, *48:18 = *48:16, *48:18
+++-----+ +-----+  *48:07, *48:09 = *48:09, *48:16
+++-----+ +-----+  *48:07, *48:10 = *48:10, *48:16
+++-----+ +-----+  *48:07, *48:22 = *48:16, *48:22
+++-----+ +-----+  *48:04, *48:07 = *48:04, *48:16
+++-----+ +-----+  *48:07, *48:19 = *48:16, *48:19
+++-----+ +-----+  *48:15, *48:20 = *48:15, *48:21 = *48:20, *48:28 = *48:21, *48:28
+++-----+ +-----+  *48:18, *48:20 = *48:18, *48:21

```

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+++---+--- ---+---+--- *48:09, *48:20 = *48:09, *48:21
 +++---+--- ---+---+--- *48:20, *48:22 = *48:21, *48:22
 +++---+--- ---+---+--- *48:04, *48:20 = *48:04, *48:21
 +++---+--- +++---+--- *48:19, *48:20 = *48:19, *48:21
 +++---+--- ---+---+--- *48:07, *48:20 = *48:07, *48:21 = *48:16, *48:20 = *48:16, *48:21
 +++---+--- ---+---+--- *48:06, *48:20 = *48:06, *48:21
 +++---+--- ---+---+--- *48:03:01, *48:15 = *48:03:01, *48:28
 +++---+--- ---+---+--- *48:01:01, *48:23 = *48:03:01, *48:22 = *48:22, *48:23 = *48:23,
 *48:31
 +++---+--- ---+---+--- *48:01:01, *48:17 = *48:03:01, *48:07 = *48:03:01, *48:16 = *48:07,
 *48:17 = *48:16, *48:17 = *48:17, *48:31
 +++---+--- ---+---+--- *48:01:01, *48:26 = *48:03:01, *48:20 = *48:20, *48:26 = *48:26,
 *48:31
 +++---+--- ---+---+--- *48:02:01, *48:15 = *48:02:01, *48:28
 +++---+--- ---+---+--- *48:02:01, *48:07 = *48:02:01, *48:16
 +++---+--- ---+---+--- *48:01:01, *48:25 = *48:02:01, *48:06 = *48:06, *48:25 = *48:25,
 *48:31
 +++---+--- ---+---+--- *48:12, *48:15 = *48:12, *48:28
 +++---+--- ---+---+--- *48:01:01, *48:14 = *48:09, *48:12 = *48:09, *48:14 = *48:14, *48:18 =
 *48:14, *48:31
 +++---+--- ---+---+--- *48:13, *48:15 = *48:13, *48:28
 +++---+--- +++---+--- *48:15, *48:24 = *48:24, *48:28
 +++---+--- ---+---+--- *48:07, *48:12 = *48:12, *48:16
 +++---+--- ---+---+--- *48:07, *48:13 = *48:13, *48:16
 +++---+--- +++---+--- *48:07, *48:08 = *48:08, *48:16
 +++---+--- +++---+--- *48:07, *48:24 = *48:16, *48:24
 +++---+--- +++---+--- *48:20, *48:24 = *48:21, *48:24
 +++---+--- ---+---+--- *48:15, *48:23 = *48:23, *48:28
 +++---+--- ---+---+--- *48:15, *48:17 = *48:17, *48:28
 +++---+--- ---+---+--- *48:07, *48:23 = *48:16, *48:23 = *48:17, *48:22
 +++---+--- ---+---+--- *48:15, *48:26 = *48:26, *48:28
 +++---+--- ---+---+--- *48:20, *48:23 = *48:22, *48:26
 +++---+--- ---+---+--- *48:07, *48:26 = *48:16, *48:26 = *48:17, *48:20
 +++---+--- ---+---+--- *48:15, *48:25 = *48:25, *48:28
 +++---+--- ---+---+--- *48:07, *48:25 = *48:16, *48:25
 +++---+--- +++---+--- *48:04, *48:05 = *48:05, *48:24
 +++---+--- +++---+--- *48:03:01, *48:05 = *48:05, *48:26
 +++---+--- ---+---+--- *48:14, *48:15 = *48:14, *48:28
 +++---+--- ---+---+--- *48:07, *48:14 = *48:14, *48:16
 +++---+--- +++---+--- *48:01:01, *48:05 = *48:05, *48:15 = *48:05, *48:19 = *48:05, *48:20 =
 *48:05, *48:28 = *48:05, *48:31
 +++---+--- +++---+--- *48:05, *48:07 = *48:05, *48:16
 +---+

*48:01:01 = *48:01:01-48:01:04 and 48:32
 *48:02:01 = *48:02:01-48:02:03
 *48:03:01 = *48:03:01-48:03:02
 *48:06 = *48:06 and 81:02
 *48:09 = *48:09 and 48:11
 *48:10 = *48:10 and 39:13:02 and 42:11
 *48:18 = *48:18 and 48:29
 *48:19 = *48:19 and 48:27
 *48:22 = *48:22 and 48:30

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SPECIFICITY TABLE**HLA-B*48 SSP subtyping**

Specificities and sizes of the PCR products of the 16 primer mixes used for HLA-B*48 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-B*48 alleles ³	Other amplified HLA-B alleles ⁴
1	385 bp	800 bp	*48:01:01-48:05, 48:07-48:15, 48:17-48:32	*08:17, 08:38, 08:54, 08:101, 15:68, 38:03-38:04, 38:25, 39:02:01-39:02:02, 39:08, 39:13:01-39:13:02, 39:22-39:23, 39:49, 40:01:01-40:01:31, 40:07, 40:09 [?] , 40:11:01 [?] -40:11:02 [?] , 40:14:01 [?] -40:15 [?] , 40:16, 40:18 [?] -40:19 [?] , 40:21 [?] -40:22N [?] , 40:23, 40:24 [?] , 40:26 [?] -40:38 [?] , 40:42 [?] -40:50 [?] , 40:51, 40:52 [?] -40:58 [?] , 40:59-40:60, 40:61 [?] -40:65 [?] , 40:66, 40:67 [?] , 40:71 [?] , 40:72:01-40:73, 40:74 [?] -40:76 [?] , 40:77, 40:78 [?] , 40:79, 40:80 [?] -40:88 [?] , 40:90 [?] -40:93 [?] , 40:95 [?] -40:96 [?] , 40:98 [?] -40:105 [?] , 40:107 [?] -40:121 [?] , 40:123 [?] , 40:124:01, 40:124:02 [?] -40:137 [?] , 40:138-40:140, 40:141 [?] , 40:145 [?] , 40:146-40:147, 40:148 [?] -40:149 [?] , 40:150, 40:151 [?] , 40:152-40:153, 40:154 [?] , 40:155N, 40:156 [?] -40:165 [?] , 40:167 [?] -40:171 [?] , 40:172, 40:173 [?] -40:185 [?] , 40:186, 40:187 [?] -40:213 [?] , 40:215 [?] -40:228 [?] , 40:230 [?] -40:231 [?] , 40:233 [?] -40:243 [?] , 40:245 [?] -40:249 [?] , 41:01-41:29, 42:11, 44:18, 45:01-45:05, 45:07-45:14, 49:01:01-49:25, 50:01:01-50:02, 50:04-50:14, 50:16-50:20, 50:31-50:34
2	145 bp	800 bp	*48:01:01-48:01:04, 48:03:01-48:03:02, 48:06-48:07, 48:09, 48:11, 48:15-48:23, 48:26-48:32	*07:174, 07:202, 27:36, 40:01:01-40:01:29, 40:01:31, 40:07, 40:10:01-40:10:02, 40:12, 40:21-40:23, 40:25, 40:30-40:31, 40:33-40:34, 40:36, 40:38, 40:42-40:43, 40:45-40:49, 40:52, 40:54-40:55, 40:59-40:61, 40:63, 40:66-40:67, 40:69, 40:73-40:74, 40:76, 40:79-40:81, 40:84, 40:87:01-40:88, 40:100-40:102, 40:106, 40:112-40:114, 40:116-40:118N, 40:123-40:126, 40:128, 40:132, 40:134-40:135, 40:137-40:141, 40:146-40:147, 40:149-40:156, 40:160:01-40:160:02,

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3	175 bp	800 bp	*48:01:01-48:01:04, 48:04, 48:06-48:07, 48:09, 48:11, 48:15-48:16, 48:18-48:20, 48:22, 48:24, 48:27-48:32	*07:174, 07:202, 27:24, 40:31, 40:45, 40:80, 81:01-81:06
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6^{5,9}	90 bp, 170 bp, 285 bp	1070 bp	*48:05, 48:20-48:21, 48:26	*07:197, 27:36
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9^{5,12}	75 bp, 215 bp	800 bp	*48:05, 48:08, 48:19, 48:24, 48:27	*07:02:01-07:02:25, 07:02:27-07:02:38, 07:03, 07:05:01-07:06, 07:08-07:11, 07:13, 07:15-07:17, 07:20-07:24, 07:27-07:33:02, 07:35-07:42, 07:44, 07:46-07:47, 07:49N-07:51, 07:53-07:65, 07:67N-07:76, 07:79, 07:81-07:83, 07:85-07:130, 07:132-07:134, 07:136, 07:138-07:145, 07:148-07:161N, 07:165-07:177, 07:179-07:192, 07:194-07:195, 07:199-07:204, 08:20, 08:40, 08:70, 08:77, 08:79, 15:07:01-15:07:02, 15:45, 15:68, 15:126, 15:207, 35:66, 35:232, 37:07, 40:15-40:16, 40:32, 40:98, 46:12, C*02:60
10⁶	290 bp	800 bp	*48:04, 48:13, 48:24	*07:33:01, 07:53, 07:60, 07:100, 07:139, 13:71, 14:05, 14:13, 15:07:01-15:07:02, 15:45, 15:55, 15:68, 15:126, 15:207, 18:14, 18:22, 27:07:01-27:07:04, 27:11,

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12^{5,13}	110 bp, 135 bp	1070 bp	*48:22-48:23, 48:30	*07:143, 13:23, 13:55, 15:71, 15:116, 15:124, 15:175, 15:204, 15:225, 18:01:01:01-18:01:12, 18:01:14-18:03, 18:05-18:15, 18:17N-18:24, 18:26-18:42, 18:44:01-18:94N, 27:75, 35:50, 35:84, 35:162, 35:231, 37:01:01-37:01:06, 37:01:08-37:42N, 40:52, 40:59, 40:83, 40:185, 40:209, 40:248, 42:02, 42:09, 42:17-42:18, 46:06, 46:14, 46:43, 49:03, 51:116, 51:151, 57:39, 57:59, 58:05, 58:41, 73:01-73:02, C*07:123, C*07:173, C*07:294
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15^{6,15}	140 bp, 435 bp	1070 bp	*48:12, 48:14, 48:18, 48:29	*07:36, 07:38, 07:68:01-07:68:03, 07:81, 07:100, 07:180, 08:03, 08:52, 08:71, 08:78, 14:05, 14:13, 15:07:01-15:07:02, 15:45, 15:55, 15:68, 15:126, 15:207, 18:14, 27:32, 35:05:01-35:05:03, 35:22, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 35:199, 35:232, 38:01:01-38:01:07, 38:05-38:07, 38:09-38:14, 38:16, 38:19-38:22, 38:24-38:28, 38:30-38:34N, 38:36-38:42, 39:03, 39:14, 39:24:01-39:24:02, 39:29, 39:37, 39:76, 40:19 [?] , 40:35, 40:71, 40:109 [?] , 40:117 [?] , 41:24, 42:10, 42:17, 44:18, 44:54, 44:106, 44:135, 44:158, 46:12, 49:01:01-49:01:04, 49:03-49:26, 51:64, 53:14, 58:18
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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*48 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.

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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*48 SSP subtyping.

In addition, wells number 2 to 4 and 9 to 11 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band.

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

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 sharing of sequence motifs between HLA-B alleles non-HLA-B*48 alleles will be amplified by all HLA-B*48 primer mixes. In addition, the A*26:01:19^w, C*02:68, C*06:21 and C*15:24 alleles will be amplified by primer mix 13, the C*02:23 allele will be amplified by primer mixes 5 and 16, the C*02:60 allele will be amplified by primer mixes 9, 10 and 14, the C*03:05, C*03:25, C*03:27, C*03:143, C*03:167 and C*08:08 alleles will be amplified by primer mix 10, the C*03:102 allele will be amplified by primer mix 4, the C*03:175, C*03:199, C*15:09, C*15:19, C*15:27 and C*15:61 alleles will be amplified by primer mix 7, the C*04:77 allele will be amplified by primer mixes 5, 8 and 16, the C*07:38:01-07:38:02 alleles will be amplified by primer mix 5, the C*07:123 and C*07:173 alleles will be amplified by primer mix 12 and the C*07:294 allele will be amplified by primer mix 12 and 14.

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

⁶Primer mixes 8, 10 and 15 may have tendencies of unspecific amplifications.

⁷Primer mix 13 might faintly amplify the B*13 alleles.

⁸Primer mix 5: Specific PCR fragment of 230 bp in the B*48:26 and the B*07:197 and 27:36 alleles. Specific PCR fragment of 285 bp in the B*48:03:01-48:03:02, 48:17, 48:23 and the B*07:07, 07:12, 07:14, 07:18:01-07:18:02, 07:77, 07:137, 07:162-07:163, 07:193, 15:138, 15:241, 18:35, 40:01:01-40:01:17, 40:01:19-40:01:31, 40:07, 40:10:01-40:10:02, 40:12, 40:14:01-40:14:03, 40:21-40:23, 40:25, 40:33, 40:36, 40:38, 40:42-40:43, 40:46-40:49, 40:52, 40:54-40:55, 40:59-40:63, 40:65-40:67, 40:69, 40:72:01-40:74, 40:76-40:77, 40:79, 40:81, 40:84, 40:87:01-40:88, 40:100-40:102, 40:106, 40:108, 40:112-40:114, 40:116-40:118N, 40:121, 40:123, 40:125, 40:126, 40:128, 40:132, 40:134-40:141, 40:146-40:147, 40:149-40:156, 40:158, 40:160:01-40:160:02, 40:166, 40:168, 40:170-40:172, 40:175, 40:179, 40:182-40:183, 40:185-40:188, 40:191-40:199, 40:204, 40:207-40:208, 40:210, 40:212-40:213, 40:215-40:218, 40:221-40:223, 40:227-40:228, 40:231, 40:234-40:242, 40:245, 40:247, 40:249, 41:08, 44:31, 44:150, 46:06 and in the C*02:23, C*04:77, C*07:38:01-07:38:02 alleles. Specific PCR fragment of 230 and 285 bp in the B*15:230 and 40:124:01-40:124:02 alleles.

⁹Primer mix 6: Specific PCR fragment of 90 bp in the B*48:20 allele. Specific PCR fragment of 170 bp in the B*48:05 allele. Specific PCR fragment of 285 bp in the B*48:21 and 48:26 and the B*07:197 and 27:36 alleles.

¹⁰Primer mix 7: Specific PCR fragment of 150 bp in the B*48:25 and in the B*15:03:01-15:03:04, 15:16:01-15:16:03, 15:18:01-15:18:05, 15:23, 15:29, 15:39:01-15:40, 15:47:01^w-15:47:02^w, 15:49^w, 15:61-15:62, 15:64:01-15:64:02, 15:65^w, 15:67, 15:69, 15:72, 15:74, 15:80, 15:93, 15:95, 15:98, 15:103, 15:108, 15:115, 15:119, 15:127, 15:131-15:132, 15:134, 15:138, 15:153, 15:158, 15:161, 15:173, 15:176, 15:194-15:195, 15:197-15:198, 15:210, 15:220, 15:221^w, 15:223, 15:226N, 15:238, 15:242, 15:254-15:255, 15:263, 15:266, 15:268, 15:274, 15:281-15:282, 15:288, 15:290, 18:15, 18:21^w, 18:30^w, 18:57, 35:11:01-35:11:02, 35:11:03^w, 35:21, 35:58, 35:99^w, 35:188, 35:232^w, 46:03^w, 46:08, 49:04, 51:37, 51:45, 53:06, 53:08:01-53:08:02, 53:28, 55:14, 56:32, 57:13^w, 57:22,

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Lot-specific information

58:06, 58:19, 58:46 and in the C*03:175, C*03:199, C*15:09, C*15:19, C*15:27, C*15:61 alleles. Specific PCR fragment of 385 bp in the B*48:06 and the B*07:02:01-07:02:39, 07:03-07:08, 07:10, 07:12, 07:14-07:15, 07:16, 07:17-07:64, 07:66-07:122, 07:124-07:131, 07:133-07:180, 07:182N-07:204 08:01:01-08:05, 08:07-08:09, 08:11-08:16, 08:18-08:37, 08:39-08:53:02, 08:55-08:100, 08:102-08:113, 14:01:01-14:03, 14:05-14:37, 38:01:01-38:02:05, 38:05-38:24, 38:26, 38:27-38:45, 39:01:01:01-39:01:01:03, 39:01:03-39:01:16, 39:03-39:07, 39:09-39:10:01, 39:11-39:12, 39:14-39:20, 39:24:01-39:48, 39:50-39:77, 39:79-39:83, 40:232[?], 42:01:01-42:02, 42:04-42:10, 42:12-42:20, 49:26, 50:15, 67:01:01-67:01:03, 67:03, 73:01-73:02 and 81:02 alleles. Specific PCR fragment of 150 and 385 bp in the B*07:09, 07:11 and 07:162 alleles.

¹¹Primer mix 8: Specific PCR fragment of 85 bp in the B*48:16 allele. Specific PCR fragment of 225 bp in the B*48:07 and 48:17 and in the B*07:78, 07:115, 40:36, 40:48 and 40:77 and the C*04:77 alleles.

¹²Primer mix 9: Specific PCR fragment of 75 bp in the B*48:27, 08:77 allele. Specific PCR fragment of 215 bp in the B*48:05, 48:08, 48:19 and 48:24 and in the B*07:02:01-07:02:25, 07:02:27-07:02:38, 07:03, 07:05:01-07:06, 07:08-07:11, 07:13, 07:15-07:17, 07:20-07:24, 07:27-07:33:02, 07:35-07:42, 07:44, 07:46-07:47, 07:49N-07:51, 07:53-07:65, 07:67N-07:73 07:75-07:76, 07:79, 07:81-07:83, 07:85-07:130, 07:132-07:134, 07:136, 07:138-07:145, 07:148-07:161N, 07:165-07:177, 07:179-07:192, 07:194-07:195, 07:199-07:204, 08:20, 08:40, 08:70, 08:79, 15:07:01-15:07:02, 15:45, 15:68, 15:126, 15:207, 35:66, 35:232, 37:07, 40:15-40:16, 40:32, 40:98 and 46:12 and in the C*02:60 alleles. Specific PCR fragment of 75 and 215 bp in the 07:74 allele.

¹³Primer mix 12: Specific PCR fragment of 110 bp in the B*48:22 and 48:30 and the B*07:143, 13:23, 13:55, 15:71, 15:175, 15:204, 15:225, 18:01:01:01-18:01:12, 18:01:14-18:03, 18:05-18:15, 18:17N-18:24, 18:26-18:42, 18:44:01-18:87, 18:89-18:94N, 27:75, 35:50, 35:84, 35:162, 35:231, 37:01:01-37:01:06, 37:01:08-37:42N, 40:83, 40:185, 40:209, 40:248, 42:02, 42:09, 42:17-42:18, 46:14, 49:03, 51:116, 51:151, 57:39, 58:41 and 73:01-73:02 alleles. Specific PCR fragment of 135 bp in the B*48:23 and the B*15:116, 15:124, 40:52, 40:59, 46:06, 46:43, 57:59, 58:05 and in the C*07:123, C*07:173, C*07:294 alleles. Specific PCR fragment of 110 bp and 135 bp in the B*18:88 allele.

¹⁴Primer mix 14: Specific PCR fragment of 100 bp in the B*48:09 and 48:14 and the B*07:09, 07:11, 07:17, 08:28, 08:35, 08:37, 15:07:01-15:07:02, 15:55, 15:68, 15:126, 15:207, 18:14, 35:05:01-35:05:03, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 35:114, 35:232, 40:03, 40:105, 41:24, 42:09, 46:12, 53:14, 58:18 and in the C*02:60 and C*07:294 alleles. Specific Specific PCR fragment of 250 bp in the B*48:11 allele.

¹⁵Primer mix 15: Specific PCR fragment of 140 bp in the B*48:12, 48:14, 48:29, 07:68:01-07:68:03, 07:100, 08:71, 14:05, 14:13, 15:07:01-15:07:02, 15:45, 15:55, 15:68, 15:126, 15:207, 18:14, 27:32, 35:05:01-35:05:03, 35:22, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 35:199, 35:232, 39:03, 39:14, 39:24:01-39:24:02, 39:29, 39:37, 39:76, 40:35, 40:71, 41:24, 42:10, 42:17, 44:54, 44:106, 44:135, 44:158, 46:12, 51:64, 53:14 and 58:18 alleles. Specific PCR fragment of 435 bp in the B*48:18 and the B*07:36, 07:38, 07:81, 07:180, 08:03, 08:52, 08:78, 38:01:01-38:01:07, 38:05-38:07, 38:09-38:14, 38:16, 38:20-38:22, 38:24-38:28, 38:30-38:34N, 38:36-38:42, 40:19[?], 40:109[?], 40:117[?], 44:18, 49:01:01-49:01:04 and 49:03-49:26 alleles. Specific PCR fragment of 140 and 435 bp in the B*38:19 allele.

‘w’, might be weakly amplified.

‘?’ , nucleotide sequence information not available for the primer matching sequence.

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Lot No.: **96S**

Lot-specific information

INTERPRETATION TABLE								
HLA-B*48 SSP subtyping								
Amplification patterns of the B*48:01 to 48:32 alleles								
	Well ¹⁰							
	1	2	3	4	5	6	7	8
Length of spec. PCR product(s)	385	145	175	150	230	90	150	85
					285	170	385	225
						285		
Length of int. pos. control ¹	800	800	800	800	1070	1070	1070	1070
5'-primer(s) ²	44	499	363	355	363	144	44	260
	5'-ggC ³	5'-TCT ³	5'-AgC ³	5'-TCA ³	5'-Agg ³	5'-TCC ³	5'-ggC ³	5'-ggT ³
					363	225	419	419
					5'-Agg ³	5'-Tgc ³	5'-gTC ³	5'-gTT ³
					418	363		419
					5'-Agg ³	5'-AAT ³		5'-gTT ³
3'-primer(s) ³	259	605	499	463	605	272	259	302
	5'-CTC ³	5'-gCT ³	5'-gga ³	5'-gCT ³	5'-gCT ³	5'-Tgg ³	5'-gTT ³	5'-ggC ³
						605	259	605
						5'-gCT ³	5'-gTT ³	5'-gCT ³
							527	
							5'-CCT ³	
Well No.	1	2	3	4	5	6	7	8
HLA-B allele ⁴								
*48:01:01-48:01:04, 48:32	1	2	3					
*48:02:01-48:02:03	1			4				
*48:03:01-48:03:02	1	2			5			
*48:04	1		3					
*48:05	1					6		
*48:06, 81:02 ⁵		2	3				7	
*48:07	1	2	3					8
*48:08	1							
Well No.	1	2	3	4	5	6	7	8

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Lot-specific information

INTERPRETATION TABLE								
HLA-B*48 SSP subtyping								
Amplification patterns of the B*48:01 to 48:32 alleles								
Well ¹⁰								
9	10	11	12	13	14	15	16	
75	290	150	110	140	100	140	130	Length of spec. PCR product(s)
215			135		250	435		
800	800	800	1070	1070	1070	1070	1070	Length of int. pos. control ¹
363	363	165	97	397	363	44	161	5'-primer(s) ²
5'-AgC ^{3'}	5'-AgC ^{3'}	5'-ACC ^{3'}	5'-TCC ^{3'}	5'-gCT ^{3'}	5'-AgC ^{3'}	5'-ggC ^{3'}	5'-Cgg ^{3'}	
	363		419	412	693	363	527	
	5'-AgC ^{3'}		5'-gTC ^{3'}	5'-ATA ^{3'}	5'-ggT ^{3'}	5'-AgC ^{3'}	5'-TgA ^{3'}	
398	610	272	165	499	419	309	259	3'-primer(s) ³
5'-ggC ^{3'}	5'-CTg ^{3'}	5'-Tgg ^{3'}	5'-Tgg ^{3'}	5'-ggT ^{3'}	5'-Cgg ^{3'}	5'-ATC ^{3'}	5'-CTC ^{3'}	
537			512		572	463	605	
5'-Agg ^{3'}			5'-CCA ^{3'}		5'-gCA ^{3'}	5'-gCT ^{3'}	5'-gCT ^{3'}	
539					755			
5'-TCC ^{3'}					5'-CAA ^{3'}			
9	10	11	12	13	14	15	16	Well No.
								HLA-B allele ⁴
		11						*48:01:01-48:01:04, 48:32
		11						*48:02:01-48:02:03
		11						*48:03:01-48:03:02
	10	11						*48:04
9		11		13			16	*48:05
								*48:06, 81:02 ⁵
		11						*48:07
9		11					16	*48:08
9	10	11	12	13	14	15	16	Well No.

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Lot No.: **96S**

Lot-specific information

Length of spec.	385	145	175	150	230	90	150	85
PCR product(s)					285	170	385	225
						285		
Well No.	1	2	3	4	5	6	7	8
*48:09, 48:11 ⁷	1	2	3					
*48:10, 39:13:02, 42:11 ⁶	1							
*48:12	1							
*48:13	1							
*48:14	1							
*48:15	1	2	3					
*48:16		2	3					8
*48:17	1	2			5			8
*48:18 , 48:29 ⁸	1	2	3					
*48:19, 48:27 ⁹	1	2	3					
*48:20	1	2	3			6		
*48:21	1	2				6		
*48:22, 48:30	1	2	3					
*48:23	1	2			5			
*48:24	1		3					
*48:25	1			4			7	
*48:26	1	2			5	6		
*48:28	1	2	3					
*48:31	1	2	3					
*07:02:01-07:02:25, 07:02:27-07:02:38, 07:03, 07:08, 07:10, 07:15-07:16, 07:20-07:24, 07:28-07:31, 07:35, 07:37, 07:39, 07:41-07:42, 07:44, 07:46-07:47, 07:49N, 07:55-07:59, 07:61-07:64, 07:67N, 07:70-07:76, 07:79, 07:82-07:83, 07:85-07:96:02, 07:98-07:99, 07:101-07:104, 07:106-07:111N, 07:113-07:114, 07:116-07:121, 07:124-07:130, 07:133-07:134, 07:136, 07:141-07:142, 07:144-07:145, 07:148-07:154, 07:156-07:161N, 07:166-07:173, 07:175, 07:177, 07:179, 07:184-07:192, 07:194-07:195, 07:199-07:201N, 07:203-07:204							7	
*07:02:26, 07:02:39, 07:04, 07:26, 07:43, 07:45, 07:52, 07:66, 07:84, 07:131, 07:135N, 07:146-07:147, 07:178, 07:196, 07:198							7	
*07:05:01-07:06, 07:32, 07:69, 07:97, 07:105, 07:112, 07:138, 07:140, 07:176, 07:182N, 08:79							7	
*07:07, 07:12, 07:14, 07:18:01-07:18:02, 07:77, 07:162-07:163, 07:193					5		7	
*07:09, 07:11, 07:17							7	
*07:13, 07:54, 07:65, 07:132, 07:181N								
Well No.	1	2	3	4	5	6	7	8

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Lot No.: **96S**

Lot-specific information

75	290	150	110	140	100	140	130	Length of spec.
215			135		250	435		PCR product(s)
9	10	11	12	13	14	15	16	Well No.
		11			14			*48:09, 48:11 ⁷
		11		13				*48:10, 39:13:02, 42:11 ⁶
		11		13		15		*48:12
	10	11		13				*48:13
		11		w	14	15		*48:14
		11					16	*48:15
		11						*48:16
		11						*48:17
		11				15		*48:18, 48:29 ⁸
9		11						*48:19, 48:27 ⁹
		11						*48:20
		11						*48:21
		11	12					*48:22, 48:30
		11	12					*48:23
9	10	11						*48:24
		11						*48:25
		11						*48:26
							16	*48:28
								*48:31
9							16	*07:02:01-07:02:25, 07:02:27-07:02:38, 07:03, 07:08, 07:10, 07:15-07:16, 07:20-07:24, 07:28-07:31, 07:35, 07:37, 07:39, 07:41-07:42, 07:44, 07:46-07:47, 07:49N, 07:55-07:59, 07:61-07:64, 07:67N, 07:70-07:76, 07:79, 07:82-07:83, 07:85-07:96:02, 07:98-07:99, 07:101-07:104, 07:106-07:111N, 07:113-07:114, 07:116-07:121, 07:124-07:130, 07:133-07:134, 07:136, 07:141-07:142, 07:144-07:145, 07:148-07:154, 07:156-07:161N, 07:166-07:173, 07:175, 07:177, 07:179, 07:184-07:192, 07:194-07:195, 07:199-07:201N, 07:203-07:204
							16	*07:02:26, 07:02:39, 07:04, 07:26, 07:43, 07:45, 07:52, 07:66, 07:84, 07:131, 07:135N, 07:146-07:147, 07:178, 07:196, 07:198
9				13			16	*07:05:01-07:06, 07:32, 07:69, 07:97, 07:105, 07:112, 07:138, 07:140, 07:176, 07:182N, 08:79
							16	*07:07, 07:12, 07:14, 07:18:01-07:18:02, 07:77, 07:162-07:163, 07:193
9					14		16	*07:09, 07:11, 07:17
9							16	*07:13, 07:54, 07:65, 07:132, 07:181N
9	10	11	12	13	14	15	16	Well No.

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for
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Lot-specific information

Length of spec.	385	145	175	150	230	90	150	85
PCR product(s)					285	170	385	225
						285		
Well No.	1	2	3	4	5	6	7	8
*07:19, 07:25, 07:48, 07:164, 08:01:12, 08:07, 08:12:02, 08:14, 08:64, 08:74, 08:83, 08:87, 08:89, 08:107, 08:111, 14:01:01-14:03, 14:06:01-14:09, 14:11-14:12, 14:14-14:37, 15:03:01-15:03:02, 15:03:04, 15:16:01-15:16:03, 15:18:01-15:18:05, 15:23, 15:29, 15:61, 15:64:01-15:64:02, 15:67, 15:69, 15:72, 15:74, 15:93, 15:95, 15:98, 15:103, 15:108, 15:115, 15:119, 15:127, 15:131-15:132, 15:134, 15:153, 15:158, 15:161, 15:173, 15:176, 15:197-15:198, 15:210, 15:220, 15:226N, 15:238, 15:242, 15:254-15:255, 15:263, 15:266, 15:268, 15:274, 15:281-15:282, 15:290, 38:29, 39:07, 39:15, 39:17, 39:25N, 39:43-39:44, 39:55, 42:16, 42:20, 46:08, 50:15, 51:37, 51:45, 56:32, 58:06, 58:46, C*03:175, C*03:199, C*15:09, C*15:19, C*15:27, C*15:61							7	
*07:27, 07:50							7	
*07:33:01, 07:60, 07:139							7	
*07:33:02, 07:51, 07:122, 07:155, 07:165							7	
*07:34, 07:80							7	
*07:36, 07:38, 07:68:01-07:68:03, 07:81, 07:180							7	
*07:40, 08:20, 08:40, 08:70, 08:77							7	
*07:53							7	
*07:78							7	8
*07:100							7	
*07:115							7	8
*07:123								
*07:137					5		7	
*07:143							7	
*07:174		2	3				7	
*07:183							w	
*07:197					5	6	7	
*07:202		2	3				7	
Well No.	1	2	3	4	5	6	7	8

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **96S**

Lot-specific information

75	290	150	110	140	100	140	130	Length of spec.
215			135		250	435		PCR product(s)
9	10	11	12	13	14	15	16	Well No.
								*07:19, 07:25, 07:48, 07:164, 08:01:12, 08:07, 08:12:02, 08:14, 08:64, 08:74, 08:83, 08:87, 08:89, 08:107, 08:111, 14:01:01-14:03, 14:06:01-14:09, 14:11-14:12, 14:14-14:37, 15:03:01-15:03:02, 15:03:04, 15:16:01-15:16:03, 15:18:01-15:18:05, 15:23, 15:29, 15:61, 15:64:01-15:64:02, 15:67, 15:69, 15:72, 15:74, 15:93, 15:95, 15:98, 15:103, 15:108, 15:115, 15:119, 15:127, 15:131-15:132, 15:134, 15:153, 15:158, 15:161, 15:173, 15:176, 15:197-15:198, 15:210, 15:220, 15:226N, 15:238, 15:242, 15:254-15:255, 15:263, 15:266, 15:268, 15:274, 15:281-15:282, 15:290, 38:29, 39:07, 39:15, 39:17, 39:25N, 39:43-39:44, 39:55, 42:16, 42:20, 46:08, 50:15, 51:37, 51:45, 56:32, 58:06, 58:46, C*03:175, C*03:199, C*15:09, C*15:19, C*15:27, C*15:61
9		11					16	*07:27, 07:50
9	10							*07:33:01, 07:60, 07:139
9								*07:33:02, 07:51, 07:122, 07:155, 07:165
				13			16	*07:34, 07:80
9						15	16	*07:36, 07:38, 07:68:01-07:68:03, 07:81, 07:180
9				13				*07:40, 08:20, 08:40, 08:70, 08:77
9	10			13				*07:53
				13			16	*07:78
9	10					15		*07:100
9							16	*07:115
9				13			16	*07:123
				13			16	*07:137
9			12				16	*07:143
9							16	*07:174
9							16	*07:183
							16	*07:197
9								*07:202
9	10	11	12	13	14	15	16	Well No.

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **96S**

Lot-specific information

Length of spec.	385	145	175	150	230	90	150	85
PCR product(s)					285	170	385	225
						285		
Well No.	1	2	3	4	5	6	7	8
*08:01:01-08:01:11, 08:01:13-08:02, 08:04-08:05, 08:08N-08:09, 08:11-08:12:01, 08:12:03-08:13, 08:15-08:16, 08:18-08:19N, 08:21-08:27, 08:29-08:34, 08:36, 08:39, 08:41-08:48, 08:50-08:51, 08:53:01-08:53:02, 08:55-08:63, 08:65-08:69, 08:72N-08:73, 08:75-08:76, 08:80-08:82N, 08:85-08:86N, 08:88, 08:90-08:100, 08:102-08:106, 08:108-08:110, 08:112-08:113, 38:02:01-38:02:05, 38:08, 38:15, 38:17-38:18, 38:23, 38:35, 38:43-38:45, 39:01:01:01-39:01:01:03, 39:01:03-39:01:16, 39:04-39:06:03, 39:09-39:10:01, 39:11-39:12, 39:16, 39:18-39:20, 39:26-39:28, 39:30-39:36, 39:38Q-39:41, 39:45-39:48, 39:50-39:54, 39:57-39:75, 39:77, 39:79-39:83, 42:01:01-42:01:03, 42:04-42:07, 42:12-42:13, 42:15, 42:19, 67:01:01-67:01:03, 67:03							7	
*08:03, 08:52, 08:71, 08:78, 38:01:01, 38:01:03-38:01:07, 38:05-38:07, 38:09-38:14, 38:16, 38:21, 38:24, 38:26-38:28, 38:30-38:34N, 38:36-38:37, 38:39-38:42, 42:10							7	
*08:10, 15:09, 15:229, 15:243, 15:252, 27:20, 27:27, 35:09:01-35:09:03, 35:18, 35:44, 35:60, 35:87-35:88, 39:10:02, 39:78, 40:04, 40:06:01:01-40:06:07, 40:68, 40:70, 40:244, 44:166, 46:11, 46:18, 51:01:01-51:01:18, 51:01:20-51:01:30, 51:01:32-51:02:02, 51:02:04-51:03, 51:05-51:06:02, 51:08-51:16, 51:19-51:24:05, 51:26, 51:28-51:36, 51:38-51:41N, 51:43-51:44N, 51:48-51:55, 51:57-51:63, 51:65-51:74, 51:76-51:80, 51:82-51:83, 51:86-51:89, 51:91, 51:95-51:115, 51:117-51:121, 51:123-51:129, 51:131-51:134, 51:136-51:138, 51:140-51:145, 51:147, 51:149N-51:150, 51:152-51:154, 52:01:13, 52:06:01-52:06:02, 52:22-52:23, 54:01:01-54:05N, 54:07-54:08N, 54:10, 54:12-54:13, 54:17-54:21, 54:23-54:26, 54:28-54:30, 55:01:01-55:03, 55:05, 55:07-55:13, 55:15-55:22, 55:24-55:26, 55:28-55:40, 55:42-55:45, 55:47-55:48, 55:52-55:57, 55:59-55:60, 56:01:01-56:02, 56:04-56:08, 56:10, 56:13-56:17, 56:19N-56:30, 56:33-56:43, 58:08:01-58:08:02, 58:20, 59:01:01:01-59:06, 67:02, 78:01:01-78:04, 78:07, 82:01-82:03, C*02:68, C*06:21, C*15:24								
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Well No.	1	2	3	4	5	6	7	8

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **96S**

Lot-specific information

75	290	150	110	140	100	140	130	Length of spec.
215			135		250	435		PCR product(s)
9	10	11	12	13	14	15	16	Well No.
				13				*08:01:01-08:01:11, 08:01:13-08:02, 08:04-08:05, 08:08N-08:09, 08:11-08:12:01, 08:12:03-08:13, 08:15-08:16, 08:18-08:19N, 08:21-08:27, 08:29-08:34, 08:36, 08:39, 08:41-08:48, 08:50-08:51, 08:53:01-08:53:02, 08:55-08:63, 08:65-08:69, 08:72N-08:73, 08:75-08:76, 08:80-08:82N, 08:85-08:86N, 08:88, 08:90-08:100, 08:102-08:106, 08:108-08:110, 08:112-08:113, 38:02:01-38:02:05, 38:08, 38:15, 38:17-38:18, 38:23, 38:35, 38:43-38:45, 39:01:01:01-39:01:01:03, 39:01:03-39:01:16, 39:04-39:06:03, 39:09-39:10:01, 39:11-39:12, 39:16, 39:18-39:20, 39:26-39:28, 39:30-39:36, 39:38Q-39:41, 39:45-39:48, 39:50-39:54, 39:57-39:75, 39:77, 39:79-39:83, 42:01:01-42:01:03, 42:04-42:07, 42:12-42:13, 42:15, 42:19, 67:01:01-67:01:03, 67:03
				13		15		*08:03, 08:52, 08:71, 08:78, 38:01:01, 38:01:03-38:01:07, 38:05-38:07, 38:09-38:14, 38:16, 38:21, 38:24, 38:26-38:28, 38:30-38:34N, 38:36-38:37, 38:39-38:42, 42:10
				13				*08:10, 15:09, 15:229, 15:243, 15:252, 27:20, 27:27, 35:09:01-35:09:03, 35:18, 35:44, 35:60, 35:87-35:88, 39:10:02, 39:78, 40:04, 40:06:01:01-40:06:07, 40:68, 40:70, 40:244, 44:166, 46:11, 46:18, 51:01:01-51:01:18, 51:01:20-51:01:30, 51:01:32-51:02:02, 51:02:04-51:03, 51:05-51:06:02, 51:08-51:16, 51:19-51:24:05, 51:26, 51:28-51:36, 51:38-51:41N, 51:43-51:44N, 51:48-51:55, 51:57-51:63, 51:65-51:74, 51:76-51:80, 51:82-51:83, 51:86-51:89, 51:91, 51:95-51:115, 51:117-51:121, 51:123-51:129, 51:131-51:134, 51:136-51:138, 51:140-51:145, 51:147, 51:149N-51:150, 51:152-51:154, 52:01:13, 52:06:01-52:06:02, 52:22-52:23, 54:01:01-54:05N, 54:07-54:08N, 54:10, 54:12-54:13, 54:17-54:21, 54:23-54:26, 54:28-54:30, 55:01:01-55:03, 55:05, 55:07-55:13, 55:15-55:22, 55:24-55:26, 55:28-55:40, 55:42-55:45, 55:47-55:48, 55:52-55:57, 55:59-55:60, 56:01:01-56:02, 56:04-56:08, 56:10, 56:13-56:17, 56:19N-56:30, 56:33-56:43, 58:08:01-58:08:02, 58:20, 59:01:01:01-59:06, 67:02, 78:01:01-78:04, 78:07, 82:01-82:03, C*02:68, C*06:21, C*15:24
				13				*08:17, 08:38, 08:54, 08:101, 38:03-38:04, 39:02:01-39:02:02, 39:08, 39:13:01, 39:22, 41:01-41:03:02, 41:05-41:07, 41:09, 41:11-41:14, 41:16-41:17, 41:19-41:20, 41:22-41:23, 41:26-41:29, 45:12, 45:14
9	10	11	12	13	14	15	16	Well No.

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for
“Instructions for Use” (IFU)Lot No.: **96S**

Lot-specific information

Length of spec.	385	145	175	150	230	90	150	85
PCR product(s)					285	170	385	225
						285		
Well No.	1	2	3	4	5	6	7	8
*08:28, 08:37							7	
*08:35							7	
*08:49, 14:10, 15:62, 15:80, 35:11:01-35:11:02, 35:21, 35:188, 53:06, 53:08:01-53:08:02, 55:14, 57:22, 58:19				4			7	
*08:84, 39:56							7	
*13:01:01-13:01:06, 13:06-13:07N, 13:12:01-13:13, 13:17, 13:20, 13:25-13:26, 13:28-13:29, 13:36, 13:39, 13:43, 13:50-13:52, 13:57, 13:60-13:61, 13:63N, 15:02:01-15:02:06, 15:13:01-15:13:02, 15:20, 15:25:01-15:25:03, 15:36, 15:77, 15:85, 15:88-15:89, 15:106, 15:112, 15:121, 15:144, 15:154, 15:165, 15:170, 15:213-15:214, 15:240, 15:250, 15:265, 15:271, 15:283, 15:289, 15:291, 35:20:01-35:20:02, 35:28, 35:226, 44:60, 44:83-44:84, 53:09, 53:17:01-53:17:02				4				
*13:02:01-13:02:15, 13:04, 13:08-13:11, 13:14-13:16, 13:18-13:19, 13:21, 13:27, 13:31-13:35, 13:37-13:38, 13:41-13:42, 13:44, 13:46-13:47, 13:49N, 13:53, 13:56N, 13:58-13:59, 13:64-13:70, 15:01:01:01-15:01:03, 15:01:06-15:01:08, 15:01:10-15:01:33, 15:04-15:06, 15:12, 15:14-15:15, 15:19, 15:24:01-15:24:02, 15:26N-15:28, 15:31-15:35, 15:38:01-15:38:02, 15:43, 15:46, 15:50, 15:57, 15:60, 15:63, 15:70, 15:75, 15:78:01-15:79N, 15:81-15:82, 15:84, 15:87, 15:92, 15:94N, 15:96, 15:102, 15:104-15:105, 15:107, 15:109-15:111N, 15:113, 15:117-15:118, 15:120, 15:122, 15:125, 15:128-15:129, 15:135-15:137, 15:140-15:142, 15:145-15:147, 15:155, 15:157, 15:159-15:160, 15:163-15:164, 15:166-15:167, 15:169, 15:171-15:172, 15:174, 15:178-15:179, 15:181N-15:185, 15:187, 15:190N, 15:192-15:193, 15:199, 15:201-15:203, 15:205-15:206, 15:211, 15:217-15:219, 15:227-15:228, 15:231-15:234, 15:237, 15:239, 15:244-15:249, 15:251, 15:256-15:262N, 15:264, 15:267, 15:269-15:270, 15:272N, 15:276-15:280, 15:285-15:287, 52:01:11, 52:12, 52:26								
*13:03, 13:45, 13:48, 13:62, 15:30, 15:42, 15:48, 15:58, 15:73, 15:83, 15:86, 15:150, 15:188, 15:224, 51:07:01-51:07:02, 52:01:01:01-52:01:10, 52:01:12, 52:01:14-52:05, 52:07-52:11, 52:13-52:21, 52:24-52:25, 52:27-52:32, 78:05-78:06								
*13:22:01-13:22:02, 35:95				4				
Well No.	1	2	3	4	5	6	7	8

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **96S**

Lot-specific information

75	290	150	110	140	100	140	130	Length of spec. PCR product(s)
215			135		250	435		
9	10	11	12	13	14	15	16	Well No.
					14			*08:28, 08:37
				13	14			*08:35
								*08:49, 14:10, 15:62, 15:80, 35:11:01-35:11:02, 35:21, 35:188, 53:06, 53:08:01-53:08:02, 55:14, 57:22, 58:19
				w				*08:84, 39:56
		11						*13:01:01-13:01:06, 13:06-13:07N, 13:12:01-13:13, 13:17, 13:20, 13:25-13:26, 13:28-13:29, 13:36, 13:39, 13:43, 13:50-13:52, 13:57, 13:60-13:61, 13:63N, 15:02:01- 15:02:06, 15:13:01-15:13:02, 15:20, 15:25:01-15:25:03, 15:36, 15:77, 15:85, 15:88-15:89, 15:106, 15:112, 15:121, 15:144, 15:154, 15:165, 15:170, 15:213-15:214, 15:240, 15:250, 15:265, 15:271, 15:283, 15:289, 15:291, 35:20:01- 35:20:02, 35:28, 35:226, 44:60, 44:83-44:84, 53:09, 53:17:01-53:17:02
		11						*13:02:01-13:02:15, 13:04, 13:08-13:11, 13:14-13:16, 13:18-13:19, 13:21, 13:27, 13:31-13:35, 13:37-13:38, 13:41-13:42, 13:44, 13:46-13:47, 13:49N, 13:53, 13:56N, 13:58-13:59, 13:64-13:70, 15:01:01:01-15:01:03, 15:01:06-15:01:08, 15:01:10-15:01:33, 15:04-15:06, 15:12, 15:14-15:15, 15:19, 15:24:01-15:24:02, 15:26N- 15:28, 15:31-15:35, 15:38:01-15:38:02, 15:43, 15:46, 15:50, 15:57, 15:60, 15:63, 15:70, 15:75, 15:78:01- 15:79N, 15:81-15:82, 15:84, 15:87, 15:92, 15:94N, 15:96, 15:102, 15:104-15:105, 15:107, 15:109-15:111N, 15:113, 15:117-15:118, 15:120, 15:122, 15:125, 15:128-15:129, 15:135-15:137, 15:140-15:142, 15:145-15:147, 15:155, 15:157, 15:159-15:160, 15:163-15:164, 15:166-15:167, 15:169, 15:171-15:172, 15:174, 15:178-15:179, 15:181N- 15:185, 15:187, 15:190N, 15:192-15:193, 15:199, 15:201- 15:203, 15:205-15:206, 15:211, 15:217-15:219, 15:227- 15:228, 15:231-15:234, 15:237, 15:239, 15:244-15:249, 15:251, 15:256-15:262N, 15:264, 15:267, 15:269-15:270, 15:272N, 15:276-15:280, 15:285-15:287, 52:01:11, 52:12, 52:26
		11		13				*13:03, 13:45, 13:48, 13:62, 15:30, 15:42, 15:48, 15:58, 15:73, 15:83, 15:86, 15:150, 15:188, 15:224, 51:07:01- 51:07:02, 52:01:01:01-52:01:10, 52:01:12, 52:01:14- 52:05, 52:07-52:11, 52:13-52:21, 52:24-52:25, 52:27- 52:32, 78:05-78:06
		11		13				*13:22:01-13:22:02, 35:95
9	10	11	12	13	14	15	16	Well No.

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **96S**

Lot-specific information

Length of spec.	385	145	175	150	230	90	150	85
PCR product(s)					285	170	385	225
						285		
Well No.	1	2	3	4	5	6	7	8
*13:23, 15:204, 37:01:01-37:01:06, 37:01:09, 37:03N-37:06, 37:08, 37:10-37:11, 37:13-37:20, 37:22-37:25, 37:27-37:42N				4				
*13:40								
*13:55, 15:71, 15:116, 15:175, 15:225, 18:72, 37:01:08, 37:02								
*13:71								
*14:05, 39:29							7	
*14:13, 38:19, 39:03, 39:14, 39:24:01-39:24:02, 39:37, 39:76							7	
*15:03:03, 15:39:01-15:40, 15:195, 15:288							7	
*15:07:01-15:07:02, 15:126, 15:207								
*15:21, 15:44, 15:139, 27:19, 27:30, 35:01:01:01-35:01:38, 35:03:01-35:03:12, 35:07-35:08:06, 35:10, 35:13-35:15, 35:19, 35:23-35:27, 35:29:01-35:29:02, 35:33-35:36, 35:38-35:42:02, 35:45-35:49, 35:52, 35:54-35:57, 35:61:01-35:63, 35:65Q, 35:69-35:71, 35:74, 35:76-35:78, 35:80, 35:82, 35:85, 35:90-35:94, 35:96, 35:98, 35:100-35:101:02, 35:103-35:112, 35:115-35:116, 35:120-35:124, 35:126, 35:128, 35:130N-35:134N, 35:136-35:145N, 35:147-35:148, 35:150, 35:152-35:153, 35:155-35:156, 35:158-35:161, 35:163, 35:165N-35:171, 35:173N, 35:175-35:181, 35:186-35:187, 35:189-35:198, 35:200, 35:202-35:204, 35:206-35:210, 35:212-35:219, 35:221-35:225, 35:227-35:229, 35:236-35:240, 37:01:07, 44:02:01:01-44:09, 44:11-44:13, 44:16-44:17, 44:19N, 44:21-44:30, 44:32-44:40, 44:42-44:46, 44:48-44:52N, 44:55-44:59:02, 44:61N, 44:63-44:64:02, 44:66-44:76, 44:78-44:81, 44:84-44:98, 44:101-44:105, 44:107-44:109, 44:111-44:134, 44:136-44:137, 44:139-44:149N, 44:151-44:157, 44:159-44:165, 44:167-44:181, 44:183, 46:33, 51:42, 53:01:01-53:05, 53:07, 53:10-53:13, 53:15-53:16, 53:18, 53:20-53:27, 53:29-53:31, 56:09, 56:11, 57:01:01-57:01:04, 57:01:06-57:01:16, 57:04-57:06, 57:08, 57:10, 57:14-57:16, 57:18-57:20, 57:23-57:27, 57:29-57:30, 57:32-57:38, 57:40-57:41, 57:43-57:45, 57:48-57:56, 57:58, 57:60-57:62, 57:64-57:65, 57:67-57:68, 58:01:01-58:01:02, 58:01:04-58:01:14, 58:04, 58:09-58:15, 58:17N, 58:21-58:24, 58:29, 58:31N-58:37, 58:39N-58:40, 58:42, 58:44-58:45, 58:47-58:48, 83:01, C*03:102				4				
Well No.	1	2	3	4	5	6	7	8

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **96S**

Lot-specific information

75	290	150	110	140	100	140	130		Length of spec.
215			135		250	435			PCR product(s)
9	10	11	12	13	14	15	16		Well No.
		11	12						*13:23, 15:204, 37:01:01-37:01:06, 37:01:09, 37:03N-37:06, 37:08, 37:10-37:11, 37:13-37:20, 37:22-37:25, 37:27-37:42N
		11		w					*13:40
		11	12						*13:55, 15:71, 15:116, 15:175, 15:225, 18:72, 37:01:08, 37:02
	10	11							*13:71
	10					15			*14:05, 39:29
	10			13		15			*14:13, 38:19, 39:03, 39:14, 39:24:01-39:24:02, 39:37, 39:76
		11							*15:03:03, 15:39:01-15:40, 15:195, 15:288
9	10	11			14	15			*15:07:01-15:07:02, 15:126, 15:207
									*15:21, 15:44, 15:139, 27:19, 27:30, 35:01:01:01-35:01:38, 35:03:01-35:03:12, 35:07-35:08:06, 35:10, 35:13-35:15, 35:19, 35:23-35:27, 35:29:01-35:29:02, 35:33-35:36, 35:38-35:42:02, 35:45-35:49, 35:52, 35:54-35:57, 35:61:01-35:63, 35:65Q, 35:69-35:71, 35:74, 35:76-35:78, 35:80, 35:82, 35:85, 35:90-35:94, 35:96, 35:98, 35:100-35:101:02, 35:103-35:112, 35:115-35:116, 35:120-35:124, 35:126, 35:128, 35:130N-35:134N, 35:136-35:145N, 35:147-35:148, 35:150, 35:152-35:153, 35:155-35:156, 35:158-35:161, 35:163, 35:165N-35:171, 35:173N, 35:175-35:181, 35:186-35:187, 35:189-35:198, 35:200, 35:202-35:204, 35:206-35:210, 35:212-35:219, 35:221-35:225, 35:227-35:229, 35:236-35:240, 37:01:07, 44:02:01:01-44:09, 44:11-44:13, 44:16-44:17, 44:19N, 44:21-44:30, 44:32-44:40, 44:42-44:46, 44:48-44:52N, 44:55-44:59:02, 44:61N, 44:63-44:64:02, 44:66-44:76, 44:78-44:81, 44:84-44:98, 44:101-44:105, 44:107-44:109, 44:111-44:134, 44:136-44:137, 44:139-44:149N, 44:151-44:157, 44:159-44:165, 44:167-44:181, 44:183, 46:33, 51:42, 53:01:01-53:05, 53:07, 53:10-53:13, 53:15-53:16, 53:18, 53:20-53:27, 53:29-53:31, 56:09, 56:11, 57:01:01-57:01:04, 57:01:06-57:01:16, 57:04-57:06, 57:08, 57:10, 57:14-57:16, 57:18-57:20, 57:23-57:27, 57:29-57:30, 57:32-57:38, 57:40-57:41, 57:43-57:45, 57:48-57:56, 57:58, 57:60-57:62, 57:64-57:65, 57:67-57:68, 58:01:01-58:01:02, 58:01:04-58:01:14, 58:04, 58:09-58:15, 58:17N, 58:21-58:24, 58:29, 58:31N-58:37, 58:39N-58:40, 58:42, 58:44-58:45, 58:47-58:48, 83:01, C*03:102
9	10	11	12	13	14	15	16		Well No.

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **96S**

Lot-specific information

Length of spec.	385	145	175	150	230	90	150	85
PCR product(s)					285	170	385	225
						285		
Well No.	1	2	3	4	5	6	7	8
*15:45								
*15:47:01-15:47:02, 15:49, 15:221, 35:99, 46:03, 57:13							w	
*15:55, 35:72								
*15:65							w	
*15:68	1							
*15:124, 18:01:01:01-18:01:12, 18:01:14-18:03, 18:05-18:11, 18:13, 18:17N-18:20, 18:23N-18:24, 18:27-18:29, 18:31-18:34, 18:36-18:42, 18:44:01-18:56, 18:58-18:60, 18:62-18:68, 18:70-18:71, 18:73-18:94N, 27:75, 46:14, 46:43, C*07:123, C*07:173								
*15:138					5		7	
*15:194, 15:223, 53:28				4			7	
*15:230, C*02:23					5			
*15:241					5			
*18:12								
*18:14								
*18:15, 18:57							7	
*18:21, 18:30, 73:01-73:02							w	
*18:22				4				
*18:26, 18:61, 51:116, 51:151								
*18:35					5			
*18:69, 35:50, 35:84, 35:231, 37:21, 37:26, 57:59, 58:05, 58:41				4				
*27:07:01-27:07:04, 27:11, 27:33, 27:43, 35:31, 40:02:01-40:02:03, 40:02:05-40:02:09, 40:02:11-40:02:17, 40:05, 40:08, 40:13, 40:39-40:40, 40:94, 40:97, 40:122, 40:142N-40:144N, 40:214, 40:229, 51:81, 51:148, 55:04, 55:49, 55:51, 58:27								
*27:24			3					
*27:32, 35:199, 44:54, 44:106, 44:135, 44:158								
*27:34, 40:02:10, 40:89, C*03:05, C*03:25, C*03:27, C*03:143, C*03:167, C*08:08								
*27:36		2			5	6		
*35:02:01-35:02:06, 35:04:01-35:04:03, 35:06, 35:12:01-35:12:03, 35:59, 35:81, 35:83, 35:129N, 35:146, 35:149, 35:154, 35:157, 35:172, 35:182-35:184, 35:201, 35:211, 35:220, 35:233, 44:10, 44:14, 44:62, 44:77, 44:82, 51:04, 51:46, 51:56:01-51:56:02, 51:139, 53:19, 56:12, 57:02:01-57:03:02, 57:07, 57:09, 57:12, 57:17, 57:28N, 57:46, 57:57, 57:63, 57:66, 58:28				4				
Well No.	1	2	3	4	5	6	7	8

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **96S**

Lot-specific information

75	290	150	110	140	100	140	130	Length of spec. PCR product(s)
215			135		250	435		
9	10	11	12	13	14	15	16	Well No.
9	10	11				15		*15:45
								*15:47:01-15:47:02, 15:49, 15:221, 35:99, 46:03, 57:13
	10	11			14	15		*15:55, 35:72
		11						*15:65
9	10	11			14	15		*15:68
			12					*15:124, 18:01:01:01-18:01:12, 18:01:14-18:03, 18:05-18:11, 18:13, 18:17N-18:20, 18:23N-18:24, 18:27-18:29, 18:31-18:34, 18:36-18:42, 18:44:01-18:56, 18:58-18:60, 18:62-18:68, 18:70-18:71, 18:73-18:94N, 27:75, 46:14, 46:43, C*07:123, C*07:173
		11					16	*15:138
		11						*15:194, 15:223, 53:28
							16	*15:230, C*02:23
		11					16	*15:241
			12				16	*18:12
	10		12		14	15		*18:14
			12					*18:15, 18:57
			12					*18:21, 18:30, 73:01-73:02
	10		12					*18:22
			12	13				*18:26, 18:61, 51:116, 51:151
			12					*18:35
			12					*18:69, 35:50, 35:84, 35:231, 37:21, 37:26, 57:59, 58:05, 58:41
	10			13				*27:07:01-27:07:04, 27:11, 27:33, 27:43, 35:31, 40:02:01-40:02:03, 40:02:05-40:02:09, 40:02:11-40:02:17, 40:05, 40:08, 40:13, 40:39-40:40, 40:94, 40:97, 40:122, 40:142N-40:144N, 40:214, 40:229, 51:81, 51:148, 55:04, 55:49, 55:51, 58:27
	10							*27:24
	10					15		*27:32, 35:199, 44:54, 44:106, 44:135, 44:158
	10							*27:34, 40:02:10, 40:89, C*03:05, C*03:25, C*03:27, C*03:143, C*03:167, C*08:08
								*27:36
				13				*35:02:01-35:02:06, 35:04:01-35:04:03, 35:06, 35:12:01-35:12:03, 35:59, 35:81, 35:83, 35:129N, 35:146, 35:149, 35:154, 35:157, 35:172, 35:182-35:184, 35:201, 35:211, 35:220, 35:233, 44:10, 44:14, 44:62, 44:77, 44:82, 51:04, 51:46, 51:56:01-51:56:02, 51:139, 53:19, 56:12, 57:02:01-57:03:02, 57:07, 57:09, 57:12, 57:17, 57:28N, 57:46, 57:57, 57:63, 57:66, 58:28
9	10	11	12	13	14	15	16	Well No.

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for
“Instructions for Use” (IFU)Lot No.: **96S**

Lot-specific information

Length of spec.	385	145	175	150	230	90	150	85
PCR product(s)					285	170	385	225
						285		
Well No.	1	2	3	4	5	6	7	8
*35:05:01-35:05:03, 35:51, 35:89, 35:97, 53:14, 58:18								
*35:11:03				4			w	
*35:16-35:17, 35:30, 35:113, 35:125, 35:164, 44:110				4				
*35:22, 51:64								
*35:58							7	
*35:66								
*35:114, 40:03								
*35:162, 57:39				4				
*35:232							w	
*37:07								
*37:09								
*37:12								
*38:01:02, 38:22, 38:38, 49:26							7	
*38:20				4			7	
*38:25	1							
*39:23, 39:49, 40:51, 41:04, 41:10, 41:18, 41:21, 45:01-45:05, 45:07-45:11, 45:13, 49:02, 50:01:01-50:02, 50:04-50:14, 50:16, 50:18-50:20, 50:31-50:34	1							
*39:42				4			7	
*40:01:01-40:01:17, 40:01:19-40:01:29, 40:01:31, 40:07, 40:60, 40:66, 40:73, 40:79, 40:124:01, 40:138-40:140, 40:146-40:147, 40:150, 40:152-40:153, 40:155N, 40:172, 40:186	1	2			5			
*40:01:18	1	2						
*40:01:30	1				5			
*40:02:04								
*40:09, 40:18, 40:24, 40:85, 40:91, 40:180	?							
*40:10:01, 40:12, 40:25, 40:69, 40:106, 40:166, 44:31		2			5			
*40:10:02		2			5			
*40:11:01-40:11:02, 40:26, 40:53, 40:64, 40:75, 40:86, 40:93, 40:95-40:96, 40:99, 40:103, 40:110, 40:127, 40:129, 40:148, 40:161-40:162, 40:165, 40:167, 40:177, 40:184, 40:190, 40:225, 40:230, 40:243	?							
*40:14:01-40:14:03, 40:121, 40:136, 40:237	?				5			
*40:15	?							
*40:16	1							
*40:19	?							
*40:21, 40:137	?	2			5			
Well No.	1	2	3	4	5	6	7	8

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **96S**

Lot-specific information

75	290	150	110	140	100	140	130	Length of spec.
215			135		250	435		PCR product(s)
9	10	11	12	13	14	15	16	Well No.
	10				14	15		*35:05:01-35:05:03, 35:51, 35:89, 35:97, 53:14, 58:18
								*35:11:03
	10							*35:16-35:17, 35:30, 35:113, 35:125, 35:164, 44:110
	10			13		15		*35:22, 51:64
	10				14	15		*35:58
9					14	15		*35:66
	10				14			*35:114, 40:03
			12	13				*35:162, 57:39
9	10				14	15		*35:232
9		11	12				16	*37:07
	10	11	12					*37:09
		11	12	13				*37:12
						15		*38:01:02, 38:22, 38:38, 49:26
				13		15		*38:20
				13		15		*38:25
								*39:23, 39:49, 40:51, 41:04, 41:10, 41:18, 41:21, 45:01-45:05, 45:07-45:11, 45:13, 49:02, 50:01:01-50:02, 50:04-50:14, 50:16, 50:18-50:20, 50:31-50:34
				13				*39:42
								*40:01:01-40:01:17, 40:01:19-40:01:29, 40:01:31, 40:07, 40:60, 40:66, 40:73, 40:79, 40:124:01, 40:138-40:140, 40:146-40:147, 40:150, 40:152-40:153, 40:155N, 40:172, 40:186
								*40:01:18
								*40:01:30
	10	11		13				*40:02:04
	10							*40:09, 40:18, 40:24, 40:85, 40:91, 40:180
								*40:10:01, 40:12, 40:25, 40:69, 40:106, 40:166, 44:31
		11						*40:10:02
				13				*40:11:01-40:11:02, 40:26, 40:53, 40:64, 40:75, 40:86, 40:93, 40:95-40:96, 40:99, 40:103, 40:110, 40:127, 40:129, 40:148, 40:161-40:162, 40:165, 40:167, 40:177, 40:184, 40:190, 40:225, 40:230, 40:243
				13				*40:14:01-40:14:03, 40:121, 40:136, 40:237
9				13			16	*40:15
9				13			16	*40:16
	10			13		?		*40:19
		11						*40:21, 40:137
9	10	11	12	13	14	15	16	Well No.

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **96S**

Lot-specific information

Length of spec.	385	145	175	150	230	90	150	85
PCR product(s)					285	170	385	225
						285		
Well No.	1	2	3	4	5	6	7	8
*40:22N, 40:33, 40:38, 40:42-40:43, 40:46-40:47, 40:49, 40:54-40:55, 40:61, 40:63, 40:67, 40:74, 40:76, 40:81, 40:84, 40:87:01-40:88, 40:100-40:102, 40:112-40:114, 40:116, 40:118N, 40:123, 40:124:02-40:126, 40:128, 40:132, 40:134-40:135, 40:141, 40:149, 40:151, 40:154, 40:156, 40:160:01-40:160:02, 40:168, 40:170-40:171, 40:175, 40:179, 40:182, 40:187-40:188, 40:191-40:197, 40:199, 40:204, 40:207-40:208, 40:210, 40:212-40:213, 40:215-40:218, 40:221-40:223, 40:227-40:228, 40:231, 40:234-40:236, 40:239-40:242, 40:245, 40:247, 40:249	?	2			5			
*40:23	1	2			5			
*40:27:01-40:27:02, 40:29, 40:37, 40:50, 40:56-40:58, 40:78, 40:82, 40:90, 40:104, 40:107, 40:111, 40:115, 40:119, 40:133Q, 40:145, 40:157, 40:164, 40:169, 40:173-40:174, 40:176, 40:181, 40:189, 40:200-40:203, 40:205-40:206, 40:211, 40:219-40:220, 40:224, 40:226, 40:246	?							
*40:28	?			4				
*40:30, 40:34, 40:233	?	2						
*40:31, 40:45, 40:80	?	2	3					
*40:32, 40:98	?							
*40:35, 40:71	?							
*40:36, 40:48	?	2			5			8
*40:44, 40:92, 40:120, 40:130-40:131, 40:159, 40:163, 40:178	?							
*40:52	?	2			5			
*40:59	1	2			5			
*40:62, 40:65, 40:108, 40:238	?				5			
*40:72:01-40:72:02	1				5			
*40:77	1				5			8
*40:83	?							
*40:105	?							
*40:109	?							
*40:117	?	2			5			
*40:158	?				5			
*40:183, 40:198	?	2			5			
*40:185	?	2			5			
*40:209, 40:248	?							
*40:232							?	
Well No.	1	2	3	4	5	6	7	8

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **96S**

Lot-specific information

75	290	150	110	140	100	140	130	Length of spec.
215			135		250	435		PCR product(s)
9	10	11	12	13	14	15	16	Well No.
								*40:22N, 40:33, 40:38, 40:42-40:43, 40:46-40:47, 40:49, 40:54-40:55, 40:61, 40:63, 40:67, 40:74, 40:76, 40:81, 40:84, 40:87:01-40:88, 40:100-40:102, 40:112-40:114, 40:116, 40:118N, 40:123, 40:124:02-40:126, 40:128, 40:132, 40:134-40:135, 40:141, 40:149, 40:151, 40:154, 40:156, 40:160:01-40:160:02, 40:168, 40:170-40:171, 40:175, 40:179, 40:182, 40:187-40:188, 40:191-40:197, 40:199, 40:204, 40:207-40:208, 40:210, 40:212-40:213, 40:215-40:218, 40:221-40:223, 40:227-40:228, 40:231, 40:234-40:236, 40:239-40:242, 40:245, 40:247, 40:249
							16	*40:23
	10			13				*40:27:01-40:27:02, 40:29, 40:37, 40:50, 40:56-40:58, 40:78, 40:82, 40:90, 40:104, 40:107, 40:111, 40:115, 40:119, 40:133Q, 40:145, 40:157, 40:164, 40:169, 40:173-40:174, 40:176, 40:181, 40:189, 40:200-40:203, 40:205-40:206, 40:211, 40:219-40:220, 40:224, 40:226, 40:246
				13				*40:28
								*40:30, 40:34, 40:233
								*40:31, 40:45, 40:80
9							16	*40:32, 40:98
	10			13		15		*40:35, 40:71
								*40:36, 40:48
								*40:44, 40:92, 40:120, 40:130-40:131, 40:159, 40:163, 40:178
			12					*40:52
			12					*40:59
								*40:62, 40:65, 40:108, 40:238
				w				*40:72:01-40:72:02
				w				*40:77
		11	12	13				*40:83
	10			13	14			*40:105
				13		?		*40:109
						?		*40:117
				13			16	*40:158
							16	*40:183, 40:198
		11	12					*40:185
	10	11	12	13				*40:209, 40:248
	10			13				*40:232
9	10	11	12	13	14	15	16	Well No.

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for
“Instructions for Use” (IFU)Lot No.: **96S**

Lot-specific information

Length of spec.	385	145	175	150	230	90	150	85
PCR product(s)					285	170	385	225
						285		
Well No.	1	2	3	4	5	6	7	8
*41:08	1				5			
*41:15	1							
*41:24	1							
*41:25	1							
*42:02, 42:18							7	
*42:08, 42:14							7	
*42:09							7	
*42:17							7	
*44:18, 49:01:01-49:01:04, 49:05-49:25	1							
*44:150				4	5			
*46:06		2			5			
*46:12								
*49:03	1							
*49:04	1						7	
*50:17	1			4				
*51:01:19, 51:75, A*26:01:19								
*57:42				4				
*81:01, 81:03-81:06		2	3					
C*02:60								
C*04:77					5			8
C*07:38:01-07:38:02					5			
C*07:294								
HLA-B allele								
Well No.	1	2	3	4	5	6	7	8

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*48 SSP subtyping.

In addition, wells number 2 to 4 and 9 to 11 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band.

²The nucleotide position, in the 1st, 2nd, 3rd or 4th 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, 3rd or 4th 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.

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for
“Instructions for Use” (IFU)Lot No.: **96S**

Lot-specific information

75	290	150	110	140	100	140	130	Length of spec. PCR product(s)
215			135		250	435		
9	10	11	12	13	14	15	16	Well No.
				13				*41:08
	10			13				*41:15
				13	14	15		*41:24
				w				*41:25
			12	13				*42:02, 42:18
	10			13				*42:08, 42:14
			12		14			*42:09
			12	13		15		*42:17
						15		*44:18, 49:01:01-49:01:04, 49:05-49:25
							16	*44:150
			12					*46:06
9	10				14	15		*46:12
		11	12			15		*49:03
						15		*49:04
								*50:17
				w				*51:01:19, 51:75, A*26:01:19
				w				*57:42
								*81:01, 81:03-81:06
9	10				14			C*02:60
							16	C*04:77
								C*07:38:01-07:38:02
			12		14			C*07:294
								HLA-B allele
9	10	11	12	13	14	15	16	Well No.

⁴HLA-B*48 alleles in bold lettering are listed as confirmed alleles on the on the IMGT/HLA web page www.ebi.ac.uk/imgt/hla, release 3.14.0, October 2013.

⁵The B*48 primer set cannot separate the B*48:06 and B*81:02 alleles. These two alleles can be distinguished by the HLA-B low resolution and/or HLA-B*81 kits.

⁶The B*48 primer set cannot separate the B*48:10 and the B*39:13:02 and B*42:11 alleles. These alleles can be distinguished by the HLA-B low resolution and/or HLA-B*39 and HLA-B*42 kits.

⁷The B*48:09 and B*48:11 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 14.

⁸The B*48:18 and B*48:29 alleles can be distinguished by the different sizes of the specific PCR product generated by primer mix 15.

⁹The B*48:19 and B*48:27 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 9.

¹⁰Primer mix 5: Specific PCR fragment of 230 bp in the B*48:26 and the B*07:197 and 27:36 alleles. Specific PCR fragment of 285 bp in the B*48:03:01-48:03:02, 48:17, 48:23 and the B*07:07, 07:12, 07:14, 07:18:01-07:18:02, 07:77, 07:137, 07:162-07:163, 07:193, 15:138, 15:241, 18:35, 40:01:01-40:01:17, 40:01:19-40:01:31, 40:07, 40:10:01-40:10:02, 40:12, 40:14:01-40:14:03, 40:21-40:23, 40:25, 40:33, 40:36, 40:38, 40:42-40:43, 40:46-40:49, 40:52, 40:54-40:55, 40:59-40:63, 40:65-40:67, 40:69, 40:72:01-40:74, 40:76-40:77, 40:79, 40:81, 40:84, 40:87:01-40:88, 40:100-40:102, 40:106, 40:108, 40:112-40:114, 40:116-40:118N, 40:121, 40:123, 40:125, 40:126, 40:128,

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Lot-specific information

40:132, 40:134-40:141, 40:146-40:147, 40:149-40:156, 40:158, 40:160:01-40:160:02, 40:166, 40:168, 40:170-40:172, 40:175, 40:179, 40:182-40:183, 40:185-40:188, 40:191-40:199, 40:204, 40:207-40:208, 40:210, 40:212-40:213, 40:215-40:218, 40:221-40:223, 40:227-40:228, 40:231, 40:234-40:242, 40:245, 40:247, 40:249, 41:08, 44:31, 44:150, 46:06 and in the C*02:23, C*04:77, C*07:38:01-07:38:02 alleles. Specific PCR fragment of 230 and 285 bp in the B*15:230 and 40:124:01-40:124:02 alleles.

Primer mix 6: Specific PCR fragment of 90 bp in the B*48:20 allele. Specific PCR fragment of 170 bp in the B*48:05 allele. Specific PCR fragment of 285 bp in the B*48:21 and 48:26 and the B*07:197 and 27:36 alleles.

Primer mix 7: Specific PCR fragment of 150 bp in the B*48:25 and in the B*15:03:01-15:03:04, 15:16:01-15:16:03, 15:18:01-15:18:05, 15:23, 15:29, 15:39:01-15:40, 15:47:01^w-15:47:02^w, 15:49^w, 15:61-15:62, 15:64:01-15:64:02, 15:65^w, 15:67, 15:69, 15:72, 15:74, 15:80, 15:93, 15:95, 15:98, 15:103, 15:108, 15:115, 15:119, 15:127, 15:131-15:132, 15:134, 15:138, 15:153, 15:158, 15:161, 15:173, 15:176, 15:194-15:195, 15:197-15:198, 15:210, 15:220, 15:221^w, 15:223, 15:226N, 15:238, 15:242, 15:254-15:255, 15:263, 15:266, 15:268, 15:274, 15:281-15:282, 15:288, 15:290, 18:15, 18:21^w, 18:30^w, 18:57, 35:11:01-35:11:02, 35:11:03^w, 35:21, 35:58, 35:99^w, 35:188, 35:232^w, 46:03^w, 46:08, 49:04, 51:37, 51:45, 53:06, 53:08:01-53:08:02, 53:28, 55:14, 56:32, 57:13^w, 57:22, 58:06, 58:19, 58:46 and in the C*03:175, C*03:199, C*15:09, C*15:19, C*15:27, C*15:61 alleles. Specific PCR fragment of 385 bp in the B*48:06 and the B*07:02:01-07:02:39, 07:03-07:08, 07:10, 07:12, 07:14-07:15, 07:16, 07:17-07:64, 07:66-07:122, 07:124-07:131, 07:133-07:180, 07:182N-07:204 08:01:01-08:05, 08:07-08:09, 08:11-08:16, 08:18-08:37, 08:39-08:53:02, 08:55-08:100, 08:102-08:113, 14:01:01-14:03, 14:05-14:37, 38:01:01-38:02:05, 38:05-38:24, 38:26, 38:27-38:45, 39:01:01:01-39:01:01:03, 39:01:03-39:01:16, 39:03-39:07, 39:09-39:10:01, 39:11-39:12, 39:14-39:20, 39:24:01-39:48, 39:50-39:77, 39:79-39:83, 40:232[?], 42:01:01-42:02, 42:04-42:10, 42:12-42:20, 49:26, 50:15, 67:01:01-67:01:03, 67:03, 73:01-73:02 and 81:02 alleles. Specific PCR fragment of 150 and 385 bp in the B*07:09, 07:11 and 07:162 alleles.

Primer mix 8: Specific PCR fragment of 85 bp in the B*48:16 allele. Specific PCR fragment of 225 bp in the B*48:07 and 48:17 and in the B*07:78, 07:115, 40:36, 40:48 and 40:77 and the C*04:77 alleles.

Primer mix 9: Specific PCR fragment of 75 bp in the B*48:27, 08:77 allele. Specific PCR fragment of 215 bp in the B*48:05, 48:08, 48:19 and 48:24 and in the B*07:02:01-07:02:25, 07:02:27-07:02:38, 07:03, 07:05:01-07:06, 07:08-07:11, 07:13, 07:15-07:17, 07:20-07:24, 07:27-07:33:02, 07:35-07:42, 07:44, 07:46-07:47, 07:49N-07:51, 07:53-07:65, 07:67N-07:73 07:75-07:76, 07:79, 07:81-07:83, 07:85-07:130, 07:132-07:134, 07:136, 07:138-07:145, 07:148-07:161N, 07:165-07:177, 07:179-07:192, 07:194-07:195, 07:199-07:204, 08:20, 08:40, 08:70, 08:79, 15:07:01-15:07:02, 15:45, 15:68, 15:126, 15:207, 35:66, 35:232, 37:07, 40:15-40:16, 40:32, 40:98 and 46:12 and in the C*02:60 alleles. Specific PCR fragment of 75 and 215 bp in the 07:74 allele.

Primer mix 12: Specific PCR fragment of 110 bp in the B*48:22 and 48:30 and the B*07:143, 13:23, 13:55, 15:71, 15:175, 15:204, 15:225, 18:01:01:01-18:01:12, 18:01:14-18:03, 18:05-18:15, 18:17N-18:24, 18:26-18:42, 18:44:01-18:87, 18:89-18:94N, 27:75, 35:50, 35:84, 35:162, 35:231, 37:01:01-37:01:06, 37:01:08-37:42N, 40:83, 40:185, 40:209, 40:248, 42:02, 42:09, 42:17-42:18, 46:14, 49:03, 51:116, 51:151, 57:39, 58:41 and 73:01-73:02 alleles. Specific PCR fragment of 135 bp in the B*48:23 and the B*15:116, 15:124, 40:52, 40:59, 46:06, 46:43, 57:59, 58:05 and in the C*07:123, C*07:173, C*07:294 alleles. Specific PCR fragment of 110 bp and 135 bp in the B*18:88 allele.

Primer mix 14: Specific PCR fragment of 100 bp in the B*48:09 and 48:14 and the B*07:09, 07:11, 07:17, 08:28, 08:35, 08:37, 15:07:01-15:07:02, 15:55, 15:68, 15:126, 15:207, 18:14, 35:05:01-35:05:03, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 35:114, 35:232, 40:03, 40:105, 41:24, 42:09, 46:12, 53:14, 58:18 and in the C*02:60 and C*07:294 alleles. Specific Specific PCR fragment of 250 bp in the B*48:11 allele.

Primer mix 15: Specific PCR fragment of 140 bp in the B*48:12, 48:14, 48:29, 07:68:01-07:68:03, 07:100, 08:71, 14:05, 14:13, 15:07:01-15:07:02, 15:45, 15:55, 15:68, 15:126, 15:207, 18:14, 27:32, 35:05:01-35:05:03, 35:22, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 35:199, 35:232, 39:03, 39:14, 39:24:01-39:24:02, 39:29, 39:37, 39:76, 40:35, 40:71, 41:24, 42:10, 42:17, 44:54, 44:106, 44:135, 44:158, 46:12, 51:64, 53:14 and 58:18 alleles. Specific PCR fragment of 435 bp in the B*48:18 and the B*07:36, 07:38, 07:81, 07:180, 08:03, 08:52, 08:78, 38:01:01-38:01:07, 38:05-38:07, 38:09-38:14, 38:16, 38:20-38:22, 38:24-38:28, 38:30-38:34N, 38:36-38:42, 40:19[?], 40:109[?],

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101.546-06u – without *Taq* pol., IFU-02

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40:117², 44:18, 49:01:01-49:01:04 and 49:03-49:26 alleles. Specific PCR fragment of 140 and 435 bp in the B*38:19 allele.

‘w’, might be weakly amplified.

‘?’ , nucleotide sequence information not available for the primer matching sequence.

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Lot No.: **96S**

Lot-specific information

CELL LINE VALIDATION SHEET																			
HLA-B*48 SSP primer set																			
				Well															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
			Prod. No.:	201325701	201325702	201325703	201325704	201325705	201325706	201325707	201325708	201325709	201325710	201325711	201325712	201325713	201325714	201325715	201325716
	IHC 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	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-

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Lot No.: **96S**

Lot-specific information

CERTIFICATE OF ANALYSIS

Olerup SSP® HLA-B*48 SSP

Product number: 101.546-06 – including *Taq* polymerase
 101.546-06u – without *Taq* polymerase

Lot number: 96S

Expiry date: 2016-May-01

Number of tests: 6

Number of wells per test: 16

Well specifications:

Well No.	Production No.	Well No.	Production No.
1	2013-257-01	9	2013-257-09
2	2013-257-02	10	2013-257-10
3	2013-257-03	11	2013-257-11
4	2013-257-04	12	2013-257-12
5	2013-257-05	13	2013-257-13
6	2013-257-06	14	2013-257-14
7	2013-257-07	15	2013-257-15
8	2013-257-08	16	2013-257-16

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

No DNAs carrying the alleles to be amplified by primer solutions 6 and 8 were available. The specificities of the primers in these primer solutions were tested by separately adding additional 3'-primers, respectively additional 5'-primers. In primer solutions 6 and 8, one or two 5'-primers were not possible to test, and in primer solutions 9 and 14 two 3'-primers were not possible to test. Additional 5'-primers in primer solutions 5, 12, 14 and 16 were tested by separately adding an additional 3'-primer, and one additional 3'-primer in primer solution 12 was tested by separately adding an additional 5'-primer.

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

Date of approval: 2013-December-13

Approved by:

Production Quality Control

101.546-06 – including *Taq* pol., IFU-01101.546-06u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for
“Instructions for Use” (IFU)Lot No.: **96S**

Lot-specific information

Declaration of Conformity

Product name: *Olerup* SSP® HLA-B*48**Product number:** 101.546-06/06u**Lot number:** 96S**Intended use:** HLA-B*48 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 13485:2012, 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-December-13

Ann-Cathrin Jareman
Head of QA and Regulatory Affairs

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101.546-06u – without *Taq* pol., IFU-02

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Lot No.: **96S**

Lot-specific information

ADDRESSES:

Manufacturer:

Olerup SSP AB, Franzengatan 5, SE-112 51 Stockholm, Sweden.

Tel: +46-8-717 88 27

Fax: +46-8-717 88 18

E-mail: info-ssp@olerup.com

Web page: <http://www.olerup-ssp.com>

Distributed by:

Olerup GmbH, Löwengasse 47 / 6, AT-1030 Vienna, Austria.

Tel: +43-1-710 15 00

Fax: +43-1-710 15 00 10

E-mail: support-at@olerup.com

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

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

Tel: 1-877-OLERUP1

Fax: 610-344-7989

E-mail: info.us@olerup.com

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

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