

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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

Lot No.: **26S**

Lot-specific information

Olerup SSP[®] HLA-C*12

Product number:	101.624-12 – including <i>Taq</i> polymerase 101.624-12u – without <i>Taq</i> polymerase
Lot number:	26S
Expiry date:	2015-October-01
Number of tests:	12
Number of wells per test:	32
Storage - pre-aliquoted primers:	dark at -20°C
- PCR Master Mix:	-20°C
- Adhesive PCR seals	RT
- Product Insert	RT

This Product Description is only valid for Lot No. 26S.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*[®] HLA-C*12 Lot (49N)

The HLA-C*12 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-C*12 including and without *Taq* polymerase is now described in one common Product Insert.

¹As described in section Uniquely Identified Alleles.

The HLA-C*12 specificity and interpretation tables have been updated for the HLA-C alleles described since the previous *Olerup SSP*[®] HLA-C*12 lot was made (**Lot No. 49N**).

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

Well	5'-primer	3'-primer	rationale
8	-	Added	3'-primer added for the C*12:80N allele.
15	Moved	Moved	Primer pair moved to well 22 for improved specificity, exchanged positive control primer pair
22	Added	Added	Primer pair added from well 15.
25	Exchanged	-	5'-primer exchanged for the C*12:02:08 allele.
27	Added	Added	Primer pair added for the C*12:03:19 allele.
31	-	Added	3'-primers added for the C*12:80N and C*12:84N alleles.

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PRODUCT DESCRIPTION

HLA-C*12 SSP typing

CONTENT

The primer set contains 5'- and 3'-primers for identifying the C*12:02 to C*12:94 alleles.

PLATE LAYOUT

Each HLA-C*12 test consists of 32 PCR reactions in a 32 well cut PCR plate.

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

The 32 well PCR plate is marked with 'HLA-C*12' in silver/gray ink.

Well No. 1 is marked with the Lot No. '26S'.

A faint row of numbers is seen between wells 1 and 2 or wells 7 and 8 of the PCR trays. These stem from the manufacture of the trays, and should be disregarded. The PCR plates are covered with a PCR-compatible foil.

The PCR plates are heat-sealed with a PCR-compatible foil.

Please note: When removing each 32 well PCR plate, make sure that the remaining plates stay sealed. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

INTERPRETATION

The interpretation of HLA-C*12 SSP subtypings will be influenced by other HLA-C alleles, as primer mixes 1 to 19, 21 to 28, 30 and 32 amplify non-HLA-C*12 alleles. In addition, primer mix 1 amplifies the B*07:13, B*07:15, B*07:160 and B*67:02 alleles, primer mix 9 amplifies the B*07:13 and B*67:02 alleles, primer mix 11 amplifies the B*14:03 allele, primer mix 12 amplifies the B*35:08:02, B*35:08:05 and B*67:02 alleles, primer mix 14 amplifies the B*67:02 allele, primer mix 15 amplifies the B*35:08:02 and B*35:08:05 alleles, primer mix 19 amplifies the B*18:77 and B*40:29 alleles, primer mix 21 amplifies the B*58:02 allele, primer mix 29 amplifies the B*57:30 allele, primer mix 31 amplifies the A*26:67 and A*68:95 alleles and primer mix 32 amplifies the A*02:211:01, A*68:46 and A*68:76 alleles.

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UNIQUELY IDENTIFIED ALLELES

All the HLA-C*12 alleles, i.e. **C*12:02 to C*12:94**, recognized by the HLA Nomenclature Committee in January 2013¹ will be amplified by the primers in the HLA-C*12 SSP kit².

The HLA-C*12 kit enables separation of the confirmed HLA-C*12 alleles as listed in the IMGT/HLA database. An HLA allele is listed as confirmed by IMGT/HLA if it has been sequenced by more than a single laboratory or from multiple sources. Current allele confirmation status for HLA-C*12 alleles is listed below.

The HLA-C*12 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-C*12 subtyping kit cannot distinguish the following silent mutations: the C*12:02:01-12:02:05, 12:02:07 and 12:02:09 alleles, the C*12:02:06 and 12:02:08, the C*12:03:01:01-12:03:01:02, 12:03:03, 12:03:05-12:03:07, 12:03:10-12:03:12, 12:03:14-12:03:15, 12:03:17-12:03:18, 12:03:21-12:03:23 and 12:03:25 alleles, the C*12:03:02, 12:03:08, 12:03:16 and 12:03:20 alleles, the *12:03:04 and 12:03:09 alleles or the *12:10:01-12:10:02 alleles.

The C*12:06, 12:48 and 12:81 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 6.

The C*12:29 and 12:38 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 29.

The C*12:30 and 12:36 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 27.

The C*12:32 and 12:34 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 30.

The C*12:45 and 12:50 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 28.

¹HLA-C alleles listed on the IMGT/HLA web page 2013-January-11, release 3.11.0, www.ebi.ac.uk/imgt/hla.

²The HLA-C*12 primer set cannot separate the C*12:09, C*05:16 and C*05:85 alleles, the C*12:16 and C*01:21 alleles, the C*12:18:02 and C*08:21 or the C*12:33 and the C*02:05 and C*02:17 alleles. These alleles can be distinguished by the HLA-C low resolution kit and the HLA-C*01, HLA-C*02, HLA-C*05 or HLA-C*08 kit, respectively.

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ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
C*12:02:01	Unconfirmed	C*12:03:21	Unconfirmed	C*12:25	Confirmed	C*12:55	Unconfirmed	C*12:85	Unconfirmed
C*12:02:02	Confirmed	C*12:03:22	Confirmed	C*12:26	Unconfirmed	C*12:56	Unconfirmed	C*12:86	Unconfirmed
C*12:02:03	Unconfirmed	C*12:03:23	Unconfirmed	C*12:27	Confirmed	C*12:57	Unconfirmed	C*12:87	Unconfirmed
C*12:02:04	Confirmed	C*12:03:24	Unconfirmed	C*12:28	Confirmed	C*12:58	Unconfirmed	C*12:88	Unconfirmed
C*12:02:05	Unconfirmed	C*12:03:25	Unconfirmed	C*12:29	Unconfirmed	C*12:59	Unconfirmed	C*12:89	Unconfirmed
C*12:02:06	Unconfirmed	C*12:04:01	Unconfirmed	C*12:30	Confirmed	C*12:60	Unconfirmed	C*12:90	Unconfirmed
C*12:02:07	Unconfirmed	C*12:04:02	Confirmed	C*12:31	Unconfirmed	C*12:61	Unconfirmed	C*12:91	Unconfirmed
C*12:02:08	Unconfirmed	C*12:05	Confirmed	C*12:32	Unconfirmed	C*12:62	Unconfirmed	C*12:92	Unconfirmed
C*12:02:09	Unconfirmed	C*12:06	Unconfirmed	C*12:33	Unconfirmed	C*12:63	Confirmed	C*12:93	Unconfirmed
C*12:03:01:01	Confirmed	C*12:07	Confirmed	C*12:34	Confirmed	C*12:64	Unconfirmed	C*12:94	Unconfirmed
C*12:03:01:02	Unconfirmed	C*12:08	Unconfirmed	C*12:35	Confirmed	C*12:65	Unconfirmed		
C*12:03:02	Unconfirmed	C*12:09	Confirmed	C*12:36	Unconfirmed	C*12:66	Unconfirmed		
C*12:03:03	Unconfirmed	C*12:10:01	Unconfirmed	C*12:37	Confirmed	C*12:67	Unconfirmed		
C*12:03:04	Confirmed	C*12:10:02	Unconfirmed	C*12:38	Confirmed	C*12:68	Unconfirmed		
C*12:03:05	Confirmed	C*12:11	Unconfirmed	C*12:39N	Confirmed	C*12:69	Unconfirmed		
C*12:03:06	Unconfirmed	C*12:12	Unconfirmed	C*12:40	Unconfirmed	C*12:70	Unconfirmed		
C*12:03:07	Unconfirmed	C*12:13	Confirmed	C*12:41	Unconfirmed	C*12:71	Unconfirmed		
C*12:03:08	Confirmed	C*12:14:01	Unconfirmed	C*12:42Q	Confirmed	C*12:72	Unconfirmed		
C*12:03:09	Confirmed	C*12:14:02	Unconfirmed	C*12:43	Confirmed	C*12:73	Unconfirmed		
C*12:03:10	Confirmed	C*12:15	Unconfirmed	C*12:44	Confirmed	C*12:74	Unconfirmed		
C*12:03:11	Confirmed	C*12:16	Confirmed	C*12:45	Unconfirmed	C*12:75	Unconfirmed		
C*12:03:12	Confirmed	C*12:17	Unconfirmed	C*12:46N	Unconfirmed	C*12:76	Unconfirmed		
C*12:03:13	Confirmed	C*12:18:01	Unconfirmed	C*12:47	Confirmed	C*12:77	Unconfirmed		
C*12:03:14	Confirmed	C*12:18:02	Unconfirmed	C*12:48	Unconfirmed	C*12:78	Unconfirmed		
C*12:03:15	Confirmed	C*12:19	Confirmed	C*12:49	Unconfirmed	C*12:79	Unconfirmed		
C*12:03:16	Unconfirmed	C*12:20	Unconfirmed	C*12:50	Confirmed	C*12:80N	Unconfirmed		
C*12:03:17	Confirmed	C*12:21	Confirmed	C*12:51	Unconfirmed	C*12:81	Unconfirmed		
C*12:03:18	Unconfirmed	C*12:22	Unconfirmed	C*12:52	Unconfirmed	C*12:82	Unconfirmed		
C*12:03:19	Confirmed	C*12:23	Confirmed	C*12:53	Unconfirmed	C*12:83	Unconfirmed		
C*12:03:20	Unconfirmed	C*12:24	Confirmed	C*12:54	Confirmed	C*12:84N	Unconfirmed		

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2013-January-11, release 3.11.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 130 alleles generate 58 amplification patterns that can be combined in 1711 homozygous and heterozygous combinations. 866 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.

```

-++++-+  +-----+  +-----+  +-----+  *12:05, *12:05 = *12:05, *12:33
+-----+  +-----+  +-----+  +-----+  *12:14:01, *12:14:01 = *12:14:01, *12:18:02
+-----+  +-----+  +-----+  +-----+  *12:18:02, *12:20 = *12:20, *12:20
+-----+  +-----+  +-----+  +-----+  *12:28, *12:28 = *12:28, *12:58
+-----+  +-----+  +-----+  +-----+  *12:58, *12:63 = *12:63, *12:63
+-----+  +-----+  +-----+  +-----+  *12:03:02, *12:26 = *12:26, *12:26
+-----+  +-----+  +-----+  +-----+  *12:03:01:01, 12:03:13, 12:03:24, *12:03:01:01, 12:03:13,
12:03:24 = *12:03:01:01, 12:03:13, 12:03:24, *12:03:02 =
*12:03:01:01, 12:03:13, 12:03:24, *12:55 = *12:03:01:01,
12:03:13, 12:03:24, *12:58 = *12:03:02, *12:55 = *12:03:02,
*12:58 = *12:55, *12:58
+-----+  +-----+  +-----+  +-----+  *12:02:01, 12:72, *12:84N = *12:84N, *12:84N
+-----+  +-----+  +-----+  +-----+  *12:02:01, 12:72, *12:86 = *12:86, *12:86
+-----+  +-----+  +-----+  +-----+  *12:02:01, 12:72, *12:30 = *12:30, *12:30
+-----+  +-----+  +-----+  +-----+  *12:02:01, 12:72, *12:44 = *12:44, *12:44

```

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++-----	+---+-----	-----	-----	*12:02:01, 12:72, *12:19 = *12:02:01, 12:72, *12:22 = *12:19, *12:22 = *12:22, *12:22
++-----	+---+-----	+-----	-----	*12:02:01, 12:72, *12:17 = *12:02:01, 12:72, *12:27 = *12:17, *12:17 = *12:17, *12:27
++-----	+---+-----	-----	-----	*12:02:01, 12:72, *12:10:01 = *12:10:01, *12:10:01
++-----+	+---+-----	-----	-----	*12:02:01, 12:72, *12:40 = *12:40, *12:40
++---+---	+---+-----	-----	-----	*12:02:01, 12:72, *12:08 = *12:08, *12:08
+-----	++++-----	-----+	-----	*12:18:02, *12:24 = *12:20, *12:24
+-----	++++-----	-----	-----+	*12:03:01:01, 12:03:13, 12:03:24, *12:37 = *12:03:02, *12:37 = *12:37, *12:37 = *12:37, *12:55 = *12:37, *12:58
+-----	++++-----	-----	-----+	*12:03:01:01, 12:03:13, 12:03:24, *12:47 = *12:03:02, *12:47 = *12:47, *12:47 = *12:47, *12:55 = *12:47, *12:58
+-----	++++-----	-----	-----+	*12:03:01:01, 12:03:13, 12:03:24, *12:32 = *12:03:02, *12:32 = *12:32, *12:32 = *12:32, *12:55 = *12:32, *12:58
+-----	++++-----	-----	-----+	*12:03:01:01, 12:03:13, 12:03:24, *12:29 = *12:03:02, *12:29 = *12:29, *12:29 = *12:29, *12:55 = *12:29, *12:58
+-----	++++-----	-----	-----+	*12:03:01:01, 12:03:13, 12:03:24, *12:45 = *12:03:02, *12:45 = *12:45, *12:45 = *12:45, *12:55 = *12:45, *12:58
+-----	++++-----	-----	+-----	*12:02:06, *12:03:01:01, 12:03:13, 12:03:24 = *12:02:06, *12:39N = *12:02:06, *12:55 = *12:02:06, *12:58 = *12:03:01:01, 12:03:13, 12:03:24, *12:39N = *12:03:02, *12:39N = *12:39N, *12:39N = *12:39N, *12:55 = *12:39N, *12:58
+-----	++++-----	-----+	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:28 = *12:03:01:01, 12:03:13, 12:03:24, *12:43 = *12:03:02, *12:28 = *12:03:02, *12:43 = *12:28, *12:43 = *12:28, *12:55 = *12:43, *12:43 = *12:43, *12:55 = *12:43, *12:58
+-----	++++-----	-----+	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:26 = *12:03:01:01, 12:03:13, 12:03:24, *12:63 = *12:03:02, *12:63 = *12:26, *12:55 = *12:26, *12:58 = *12:26, *12:63 = *12:55, *12:63
+-----	++++-----	-----+	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:23 = *12:03:02, *12:23 = *12:23, *12:23 = *12:23, *12:55 = *12:23, *12:58
+-----	++++-----	-----+	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:18:02 = *12:03:01:01, 12:03:13, 12:03:24, *12:20 = *12:03:02, *12:20 = *12:18:02, *12:55 = *12:18:02, *12:58 = *12:20, *12:55 = *12:20, *12:58
+-----	++++-----	-----+	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:19 = *12:03:01:01, 12:03:13, 12:03:24, *12:46N = *12:03:02, *12:46N = *12:19, *12:46N = *12:19, *12:55 = *12:19, *12:58 = *12:46N, *12:46N = *12:46N, *12:55 = *12:46N, *12:58
+-----	++++-----	-----+	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:25 = *12:03:02, *12:25 = *12:25, *12:25 = *12:25, *12:55 = *12:25, *12:58
+-----	++++-----	+-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:35 = *12:03:02, *12:35 = *12:35, *12:35 = *12:35, *12:55 = *12:35, *12:58
+-----	++++-----	+-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:03:04 = *12:03:02, *12:03:04 = *12:03:04, *12:55 = *12:03:04, *12:58
+-----	++++-----+	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:13 = *12:03:02, *12:13 = *12:13, *12:13 = *12:13, *12:55 = *12:13, *12:58
+-----	++++-----+	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:12 = *12:03:02, *12:12 = *12:12, *12:12 = *12:12, *12:55 = *12:12, *12:58
+-----	++++-----+	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:11 = *12:03:02, *12:11 = *12:11, *12:11 = *12:11, *12:55 = *12:11, *12:58
+-----	++++-----	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:31 = *12:03:02, *12:31 = *12:31, *12:31 = *12:31, *12:55 = *12:31, *12:58
+-----	++++-----	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:24 = *12:03:02, *12:24 = *12:24, *12:24 = *12:24, *12:55 = *12:24, *12:58
+-----+	++++-----	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:07 = *12:03:02, *12:07 = *12:07, *12:07 = *12:07, *12:55 = *12:07, *12:58
+-----+	++++-----	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:06 = *12:03:02, *12:06 = *12:06, *12:06 = *12:06, *12:55 = *12:06, *12:58
+-----	++++-----	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:04:01 = *12:04:01, *12:55 = *12:04:01, *12:58
+-----+	++++-----	-----	-----	*12:04:01, *12:04:02 = *12:04:02, *12:04:02
+-----	++++-----	-----+	-----	*12:19, *12:84N = *12:22, *12:84N
+-----	++++-----	-----+	-----	*12:19, *12:86 = *12:22, *12:86



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++-----	+---+-----	---+-----	---+-----	*12:19, *12:30 = *12:22, *12:30
++-----	+---+-----	---+-----	---+-----	*12:19, *12:44 = *12:22, *12:44
++-----	+---+-----	---+-----	---+-----	*12:02:01, 12:72, *12:18:01 = *12:18:01, *12:18:01 = *12:18:01, *12:18:02
++-----	+---+-----	---+-----	---+-----	*12:17, *12:84N = *12:27, *12:84N
++-----	+---+-----	---+-----	---+-----	*12:17, *12:86 = *12:27, *12:86
++-----	+---+-----	---+-----	---+-----	*12:17, *12:30 = *12:27, *12:30
++-----	+---+-----	---+-----	---+-----	*12:17, *12:44 = *12:27, *12:44
++-----	+---+-----	---+-----	---+-----	*12:02:06, *12:17 = *12:02:06, *12:27
++-----	+---+-----	---+-----	---+-----	*12:17, *12:18:02 = *12:18:02, *12:27
++-----	+---+-----	---+-----	---+-----	*12:17, *12:19 = *12:17, *12:22 = *12:19, *12:27 = *12:22, *12:27
++-----	+---+-----	---+-----	---+-----	*12:16, *12:19 = *12:16, *12:22
++-----	+---+-----	---+-----	---+-----	*12:16, *12:17 = *12:16, *12:27
++-----	+---+-----	---+-----	---+-----	*12:10:01, *12:19 = *12:10:01, *12:22
++-----	+---+-----	---+-----	---+-----	*12:10:01, *12:17 = *12:10:01, *12:27
++-----	+---+-----	---+-----	---+-----	*12:02:01, 12:72, *12:80N = *12:40, *12:80N = *12:40, *12:84N = *12:80N, *12:80N = *12:80N, *12:84N
++-----	+---+-----	---+-----	---+-----	*12:19, *12:40 = *12:22, *12:40
++-----	+---+-----	---+-----	---+-----	*12:17, *12:40 = *12:27, *12:40
++-----	+---+-----	---+-----	---+-----	*12:08, *12:19 = *12:08, *12:22
++-----	+---+-----	---+-----	---+-----	*12:08, *12:17 = *12:08, *12:27
++-----	+---+-----	---+-----	---+-----	*12:19, *12:49 = *12:22, *12:49
++-----	+---+-----	---+-----	---+-----	*12:17, *12:49 = *12:27, *12:49
++-----	+---+-----	---+-----	---+-----	*12:02:01, 12:72, *12:03:19 = *12:03:02, *12:03:19 = *12:03:02, *12:30 = *12:03:19, *12:03:19 = *12:03:19, *12:30
++-----	+---+-----	---+-----	---+-----	*12:03:02, *12:17 = *12:03:02, *12:27
++-----	+---+-----	---+-----	---+-----	*12:02:01, 12:72, *12:03:01:01, 12:03:13, 12:03:24 = *12:02:01, 12:72, *12:55 = *12:02:01, 12:72, *12:58
++-----	+---+-----	---+-----	---+-----	*12:05, *12:55 = *12:33, *12:55
++-----	+---+-----	---+-----	---+-----	*12:03:01:01, 12:03:13, 12:03:24, *12:42Q = *12:03:02, *12:42Q = *12:29, *12:42Q = *12:29, *12:47 = *12:42Q, *12:42Q = *12:42Q, *12:47 = *12:42Q, *12:55 = *12:42Q, *12:58
++-----	+---+-----	---+-----	---+-----	*12:02:06, *12:37 = *12:37, *12:39N
++-----	+---+-----	---+-----	---+-----	*12:02:06, *12:47 = *12:39N, *12:47
++-----	+---+-----	---+-----	---+-----	*12:02:06, *12:32 = *12:32, *12:39N
++-----	+---+-----	---+-----	---+-----	*12:02:06, *12:29 = *12:29, *12:39N
++-----	+---+-----	---+-----	---+-----	*12:02:06, *12:45 = *12:39N, *12:45
++-----	+---+-----	---+-----	---+-----	*12:28, *12:37 = *12:37, *12:43
++-----	+---+-----	---+-----	---+-----	*12:28, *12:47 = *12:43, *12:47
++-----	+---+-----	---+-----	---+-----	*12:28, *12:32 = *12:32, *12:43
++-----	+---+-----	---+-----	---+-----	*12:28, *12:29 = *12:29, *12:43
++-----	+---+-----	---+-----	---+-----	*12:28, *12:45 = *12:43, *12:45
++-----	+---+-----	---+-----	---+-----	*12:02:06, *12:28 = *12:02:06, *12:43 = *12:28, *12:39N = *12:39N, *12:43
++-----	+---+-----	---+-----	---+-----	*12:26, *12:37 = *12:37, *12:63
++-----	+---+-----	---+-----	---+-----	*12:26, *12:47 = *12:47, *12:63
++-----	+---+-----	---+-----	---+-----	*12:26, *12:32 = *12:32, *12:63
++-----	+---+-----	---+-----	---+-----	*12:26, *12:29 = *12:29, *12:63
++-----	+---+-----	---+-----	---+-----	*12:26, *12:45 = *12:45, *12:63
++-----	+---+-----	---+-----	---+-----	*12:02:06, *12:63 = *12:26, *12:39N = *12:39N, *12:63
++-----	+---+-----	---+-----	---+-----	*12:26, *12:28 = *12:26, *12:43 = *12:43, *12:63
++-----	+---+-----	---+-----	---+-----	*12:02:06, *12:23 = *12:23, *12:39N
++-----	+---+-----	---+-----	---+-----	*12:23, *12:28 = *12:23, *12:43
++-----	+---+-----	---+-----	---+-----	*12:23, *12:26 = *12:23, *12:63
++-----	+---+-----	---+-----	---+-----	*12:18:02, *12:37 = *12:20, *12:37
++-----	+---+-----	---+-----	---+-----	*12:18:02, *12:47 = *12:20, *12:47
++-----	+---+-----	---+-----	---+-----	*12:18:02, *12:32 = *12:20, *12:32
++-----	+---+-----	---+-----	---+-----	*12:18:02, *12:29 = *12:20, *12:29
++-----	+---+-----	---+-----	---+-----	*12:18:02, *12:45 = *12:20, *12:45
++-----	+---+-----	---+-----	---+-----	*12:18:02, *12:39N = *12:20, *12:39N
++-----	+---+-----	---+-----	---+-----	*12:18:02, *12:28 = *12:18:02, *12:43 = *12:20, *12:28 = *12:20, *12:43



101.624-12 – including *Taq* polymerase, IFU-01
101. 624-12u – without *Taq* polymerase, IFU-02

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

Lot No.: 26S

Lot-specific information

+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:18:02, *12:63 = *12:20, *12:26 = *12:20, *12:63
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:18:02, *12:23 = *12:20, *12:23
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:19, *12:37 = *12:37, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:19, *12:47 = *12:46N, *12:47
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:19, *12:32 = *12:32, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:19, *12:29 = *12:29, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:19, *12:45 = *12:45, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	+ - - - - - - -	*12:02:06, *12:46N = *12:19, *12:39N = *12:39N, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:19, *12:28 = *12:19, *12:43 = *12:28, *12:46N = *12:43, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:19, *12:63 = *12:26, *12:46N = *12:46N, *12:63
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:19, *12:23 = *12:23, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:18:02, *12:46N = *12:20, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	+ - - - - - - -	*12:02:06, *12:25 = *12:25, *12:39N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:25, *12:28 = *12:25, *12:43
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:25, *12:26 = *12:25, *12:63
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:18:02, *12:25 = *12:20, *12:25
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:19, *12:25 = *12:25, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	+ - - - - - - -	*12:02:06, *12:35 = *12:35, *12:39N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:28, *12:35 = *12:35, *12:43
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:26, *12:35 = *12:35, *12:63
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:18:02, *12:35 = *12:20, *12:35
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:19, *12:35 = *12:35, *12:46N
+ + + + + + + +	+ + + + + + + +	+ - - - - - - -	+ - - - - - - -	*12:02:06, *12:03:04 = *12:03:04, *12:39N
+ + + + + + + +	+ + + + + + + +	+ - - - - - - -	- - - - - - - -	*12:03:04, *12:28 = *12:03:04, *12:43
+ + + + + + + +	+ + + + + + + +	+ - - - - - - -	- - - - - - - -	*12:03:04, *12:26 = *12:03:04, *12:63
+ + + + + + + +	+ + + + + + + +	+ - - - - - - -	- - - - - - - -	*12:03:04, *12:18:02 = *12:03:04, *12:20
+ + + + + + + +	+ + + + + + + +	+ - - - - - - -	- - - - - - - -	*12:03:04, *12:19 = *12:03:04, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	+ - - - - - - -	*12:02:06, *12:13 = *12:13, *12:39N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:13, *12:28 = *12:13, *12:43
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:13, *12:26 = *12:13, *12:63
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:03:01:01, 12:03:13, 12:03:24, *12:14:01 = *12:13, *12:14:01 = *12:13, *12:18:02 = *12:13, *12:20 = *12:14:01, *12:55 = *12:14:01, *12:58
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:13, *12:19 = *12:13, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	+ - - - - - - -	*12:02:06, *12:12 = *12:12, *12:39N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:12, *12:28 = *12:12, *12:43
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:12, *12:26 = *12:12, *12:63
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:12, *12:18:02 = *12:12, *12:20
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:12, *12:19 = *12:12, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	+ - - - - - - -	*12:02:06, *12:11 = *12:11, *12:39N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:11, *12:28 = *12:11, *12:43
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:11, *12:26 = *12:11, *12:63
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:11, *12:18:02 = *12:11, *12:20
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:11, *12:19 = *12:11, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	+ - - - - - - -	*12:02:06, *12:31 = *12:31, *12:39N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:28, *12:31 = *12:31, *12:43
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:26, *12:31 = *12:31, *12:63
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:18:02, *12:31 = *12:20, *12:31
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:19, *12:31 = *12:31, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:24, *12:28 = *12:24, *12:43
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:24, *12:26 = *12:24, *12:63
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	+ - - - - - - -	*12:02:06, *12:07 = *12:07, *12:39N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:07, *12:28 = *12:07, *12:43
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:07, *12:26 = *12:07, *12:63
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:03:01:01, 12:03:13, 12:03:24, *12:15 = *12:03:02, *12:15 = *12:07, *12:15 = *12:07, *12:23 = *12:15, *12:15 = *12:15, *12:23 = *12:15, *12:55 = *12:15, *12:58
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:07, *12:18:02 = *12:07, *12:20
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:07, *12:19 = *12:07, *12:46N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	+ - - - - - - -	*12:02:06, *12:06 = *12:06, *12:39N
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:06, *12:28 = *12:06, *12:43
+ + + + + + + +	+ + + + + + + +	- - - - + + + -	- - - - - - - -	*12:06, *12:26 = *12:06, *12:63



101.624-12 – including *Taq* polymerase, IFU-01
101. 624-12u – without *Taq* polymerase, IFU-02

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Lot No.: 26S

Lot-specific information

+-----+	++++--	-----	-----	*12:06, *12:18:02 = *12:06, *12:20
+-----+	++++--	-----	-----	*12:06, *12:19 = *12:06, *12:46N
+-----+	++++--	-----	-----	*12:04:01, *12:28 = *12:04:01, *12:43
+-----+	++++--	-----	-----	*12:04:01, *12:54 = *12:04:02, *12:54 = *12:54, *12:54
+-----+	++++--	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:04:02 = *12:03:02, *12:04:02 = *12:04:02, *12:55 = *12:04:02, *12:58
+-----+	++++--	-----	-----	*12:05, *12:58 = *12:33, *12:58
+-----+	++++--	-----	-----	*12:04:01, *12:05 = *12:04:02, *12:05 = *12:04:02, *12:33
+-----+	++++--	-----	-----	*12:18:01, *12:19 = *12:18:01, *12:22
+-----+	++++--	-----	-----	*12:17, *12:18:01 = *12:18:01, *12:27
+-----+	++++--	-----	-----	*12:02:01, 12:72, *12:14:02 = *12:14:01, *12:14:02 = *12:14:01, *12:18:01 = *12:14:02, *12:14:02 = *12:14:02, *12:18:01 = *12:14:02, *12:18:02
+-----+	++++--	-----	-----	*12:14:01, *12:17 = *12:14:01, *12:27
+-----+	++++--	-----	-----	*12:17, *12:20 = *12:20, *12:27
+-----+	++++--	-----	-----	*12:17, *12:24 = *12:24, *12:27
+-----+	++++--	-----	-----	*12:19, *12:80N = *12:22, *12:80N
+-----+	++++--	-----	-----	*12:17, *12:80N = *12:27, *12:80N
+-----+	++++--	-----	-----	*12:19, *12:41 = *12:22, *12:41
+-----+	++++--	-----	-----	*12:03:19, *12:26 = *12:26, *12:30
+-----+	++++--	-----	-----	*12:03:19, *12:19 = *12:03:19, *12:22
+-----+	++++--	-----	-----	*12:03:19, *12:17 = *12:03:19, *12:27
+-----+	++++--	-----	-----	*12:17, *12:26 = *12:26, *12:27
+-----+	++++--	-----	-----	*12:02:01, 12:72, *12:47 = *12:03:01:01, 12:03:13, 12:03:24, *12:84N = *12:47, *12:84N = *12:55, *12:84N = *12:58, *12:84N *12:02:01, 12:72, *12:29 = *12:03:01:01, 12:03:13, 12:03:24, *12:86 = *12:29, *12:86 = *12:55, *12:86 = *12:58, *12:86 *12:03:01:01, 12:03:13, 12:03:24, *12:03:19 = *12:03:01:01, 12:03:13, 12:03:24, *12:30 = *12:03:19, *12:55 = *12:03:19, *12:58 = *12:30, *12:55 = *12:30, *12:58
+-----+	++++--	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:44 = *12:44, *12:55 = *12:44, *12:58
+-----+	++++--	-----	-----	*12:02:01, 12:72, *12:28 = *12:02:01, 12:72, *12:43
+-----+	++++--	-----	-----	*12:02:01, 12:72, *12:46N = *12:03:01:01, 12:03:13, 12:03:24, *12:22 = *12:22, *12:46N = *12:22, *12:55 = *12:22, *12:58
+-----+	++++--	-----	-----	*12:02:01, 12:72, *12:35 = *12:03:01:01, 12:03:13, 12:03:24, *12:17 = *12:03:01:01, 12:03:13, 12:03:24, *12:27 = *12:17, *12:35 = *12:17, *12:55 = *12:17, *12:58 = *12:27, *12:35 = *12:27, *12:55 = *12:27, *12:58
+-----+	++++--	-----	-----	*12:02:01, 12:72, *12:11 = *12:03:01:01, 12:03:13, 12:03:24, *12:16 = *12:11, *12:16 = *12:16, *12:58
+-----+	++++--	-----	-----	*12:02:01, 12:72, *12:31 = *12:03:01:01, 12:03:13, 12:03:24, *12:10:01 = *12:10:01, *12:31 = *12:10:01, *12:55 = *12:10:01, *12:58
+-----+	++++--	-----	-----	*12:02:01, 12:72, *12:07 = *12:03:01:01, 12:03:13, 12:03:24, *12:40 = *12:07, *12:40 = *12:40, *12:55 = *12:40, *12:58
+-----+	++++--	-----	-----	*12:02:01, 12:72, *12:06 = *12:03:01:01, 12:03:13, 12:03:24, *12:08 = *12:06, *12:08 = *12:08, *12:55 = *12:08, *12:58
+-----+	++++--	-----	-----	*12:03:19, *12:04:01 = *12:04:01, *12:30
+-----+	++++--	-----	-----	*12:02:06, *12:42Q = *12:39N, *12:42Q
+-----+	++++--	-----	-----	*12:28, *12:42Q = *12:42Q, *12:43
+-----+	++++--	-----	-----	*12:26, *12:42Q = *12:42Q, *12:63
+-----+	++++--	-----	-----	*12:18:02, *12:42Q = *12:20, *12:42Q
+-----+	++++--	-----	-----	*12:19, *12:42Q = *12:42Q, *12:46N
+-----+	++++--	-----	-----	*12:14:01, *12:28 = *12:14:01, *12:43
+-----+	++++--	-----	-----	*12:02:06, *12:15 = *12:15, *12:39N
+-----+	++++--	-----	-----	*12:15, *12:28 = *12:15, *12:43
+-----+	++++--	-----	-----	*12:15, *12:26 = *12:15, *12:63
+-----+	++++--	-----	-----	*12:15, *12:18:02 = *12:15, *12:20
+-----+	++++--	-----	-----	*12:15, *12:19 = *12:15, *12:46N
+-----+	++++--	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:54 = *12:03:02, *12:54 = *12:04:02, *12:37 = *12:37, *12:54 = *12:54, *12:55 = *12:54, *12:58



101.624-12 – including *Taq* polymerase, IFU-01
101. 624-12u – without *Taq* polymerase, IFU-02

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Lot No.: 26S

Lot-specific information

+-----+	++++--	-----	+-----	*12:02:06, *12:04:02 = *12:04:02, *12:39N
+-----+	++++--	-----	-----	*12:04:02, *12:28 = *12:04:02, *12:43
+-----+	++++--	-----	-----	*12:04:02, *12:26 = *12:04:02, *12:63
+-----+	++++--	-----	-----	*12:04:02, *12:18:02 = *12:04:02, *12:20
+-----+	++++--	-----	-----	*12:04:02, *12:19 = *12:04:02, *12:46N
+-----+	++++--	-----	-----	*12:05, *12:28 = *12:28, *12:33
+-----+	++++--	-----	-----	*12:05, *12:63 = *12:33, *12:63
+-----+	++++--	-----	-----	*12:05, *12:54 = *12:33, *12:54
+-----+	++++--	-----	-----	*12:03:04, *12:05 = *12:03:04, *12:33
+-----+	++++--	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:05 = *12:03:01:01, 12:03:13, 12:03:24, *12:33 = *12:03:02, *12:05
++-----	++-----	--++--	-----	*12:14:02, *12:19 = *12:14:02, *12:22
++-----	++-----	--++--	-----	*12:14:02, *12:17 = *12:14:02, *12:27
+++-----	+++-----	-----	-----	*12:02:01, 12:72, *12:42Q = *12:29, *12:84N = *12:42Q, *12:84N = *12:42Q, *12:86 = *12:47, *12:86
+++-----	+++-----	-----	-----	*12:03:19, *12:37 = *12:30, *12:37
+++-----	+++-----	-----	-----	*12:03:19, *12:47 = *12:30, *12:47
+++-----	+++-----	-----	-----	*12:03:19, *12:32 = *12:30, *12:32
+++-----	+++-----	-----	-----	*12:03:19, *12:29 = *12:29, *12:30
+++-----	+++-----	-----	-----	*12:03:19, *12:45 = *12:30, *12:45
+++-----	+++-----	-----	-----	*12:03:19, *12:39N = *12:30, *12:39N
+++-----	+++-----	-----	-----	*12:28, *12:84N = *12:43, *12:84N
+++-----	+++-----	-----	-----	*12:28, *12:86 = *12:43, *12:86
+++-----	+++-----	-----	-----	*12:03:19, *12:28 = *12:03:19, *12:43 = *12:28, *12:30 = *12:30, *12:43
+++-----	+++-----	-----	-----	*12:28, *12:44 = *12:43, *12:44
+++-----	+++-----	-----	-----	*12:03:19, *12:63 = *12:30, *12:63
+++-----	+++-----	-----	-----	*12:03:19, *12:23 = *12:23, *12:30
+++-----	+++-----	-----	-----	*12:22, *12:47 = *12:46N, *12:84N
+++-----	+++-----	-----	-----	*12:22, *12:29 = *12:46N, *12:86
+++-----	+++-----	-----	-----	*12:03:19, *12:46N = *12:30, *12:46N
+++-----	+++-----	-----	-----	*12:22, *12:28 = *12:22, *12:43
+++-----	+++-----	-----	-----	*12:03:19, *12:25 = *12:25, *12:30
+++-----	+++-----	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:18:01 = *12:18:01, *12:25 = *12:18:01, *12:55 = *12:18:01, *12:58
+++-----	+++-----	-----	-----	*12:17, *12:37 = *12:27, *12:37
+++-----	+++-----	-----	-----	*12:17, *12:47 = *12:27, *12:47 = *12:35, *12:84N
+++-----	+++-----	-----	-----	*12:17, *12:32 = *12:27, *12:32
+++-----	+++-----	-----	-----	*12:17, *12:29 = *12:27, *12:29 = *12:35, *12:86
+++-----	+++-----	-----	-----	*12:17, *12:45 = *12:27, *12:45
+++-----	+++-----	-----	-----	*12:03:19, *12:35 = *12:30, *12:35
+++-----	+++-----	-----	-----	*12:17, *12:39N = *12:27, *12:39N
+++-----	+++-----	-----	-----	*12:17, *12:28 = *12:17, *12:43 = *12:27, *12:28 = *12:27, *12:43
+++-----	+++-----	-----	-----	*12:17, *12:63 = *12:27, *12:63
+++-----	+++-----	-----	-----	*12:17, *12:23 = *12:23, *12:27
+++-----	+++-----	-----	-----	*12:17, *12:46N = *12:22, *12:35 = *12:27, *12:46N
+++-----	+++-----	-----	-----	*12:17, *12:25 = *12:25, *12:27
+++-----	+++-----	-----	-----	*12:03:04, *12:03:19 = *12:03:04, *12:30
+++-----	+++-----	-----	-----	*12:03:19, *12:13 = *12:13, *12:30
+++-----	+++-----	-----	-----	*12:13, *12:17 = *12:13, *12:27
+++-----	+++-----	-----	-----	*12:03:19, *12:12 = *12:12, *12:30
+++-----	+++-----	-----	-----	*12:12, *12:17 = *12:12, *12:27
+++-----	+++-----	-----	-----	*12:11, *12:84N = *12:16, *12:47
+++-----	+++-----	-----	-----	*12:11, *12:86 = *12:16, *12:29
+++-----	+++-----	-----	-----	*12:03:19, *12:11 = *12:11, *12:30
+++-----	+++-----	-----	-----	*12:16, *12:28 = *12:16, *12:43
+++-----	+++-----	-----	-----	*12:11, *12:22 = *12:16, *12:46N
+++-----	+++-----	-----	-----	*12:11, *12:17 = *12:11, *12:27 = *12:16, *12:35
+++-----	+++-----	-----	-----	*12:10:01, *12:47 = *12:31, *12:84N
+++-----	+++-----	-----	-----	*12:10:01, *12:29 = *12:31, *12:86
+++-----	+++-----	-----	-----	*12:03:19, *12:31 = *12:30, *12:31
+++-----	+++-----	-----	-----	*12:10:01, *12:28 = *12:10:01, *12:43



101.624-12 – including *Taq* polymerase, IFU-01
101. 624-12u – without *Taq* polymerase, IFU-02

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+++-----	+++----	-----	-----	*12:10:01, *12:46N = *12:22, *12:31
+++-----	+++----	-----	-----	*12:10:01, *12:35 = *12:17, *12:31 = *12:27, *12:31
+++-----	+++----	-----	-----	*12:10:01, *12:11 = *12:16, *12:31
+++-----+	+++----	-----	-----+	*12:03:01:01, 12:03:13, 12:03:24, *12:80N = *12:07, *12:80N = *12:07, *12:84N = *12:40, *12:47 = *12:47, *12:80N = *12:55, *12:80N = *12:58, *12:80N
+++-----+	+++----	-----	-----+	*12:07, *12:86 = *12:29, *12:40
+++-----+	+++----	-----	-----+	*12:03:19, *12:07 = *12:07, *12:30
+++-----+	+++----	-----+	-----	*12:28, *12:40 = *12:40, *12:43
+++-----+	+++----	-----+	-----	*12:02:01, 12:72, *12:15 = *12:15, *12:40 = *12:23, *12:40
+++-----+	+++----	-----+	-----	*12:07, *12:22 = *12:40, *12:46N
+++-----+	+++----	-----	-----	*12:07, *12:17 = *12:07, *12:27 = *12:35, *12:40
+++-----+	+++----	-----	-----	*12:07, *12:16 = *12:11, *12:40
+++-----+	+++----	-----	-----	*12:07, *12:10:01 = *12:31, *12:40
+++-----+	+++----	-----	-----+	*12:06, *12:84N = *12:08, *12:47
+++-----+	+++----	-----	-----+	*12:06, *12:86 = *12:08, *12:29
+++-----+	+++----	-----	-----+	*12:03:19, *12:06 = *12:06, *12:30
+++-----+	+++----	-----+	-----	*12:08, *12:28 = *12:08, *12:43
+++-----+	+++----	-----+	-----	*12:06, *12:22 = *12:08, *12:46N
+++-----+	+++----	-----	-----	*12:06, *12:17 = *12:06, *12:27 = *12:08, *12:35
+++-----+	+++----	-----	-----	*12:06, *12:16 = *12:08, *12:11
+++-----+	+++----	-----	-----	*12:06, *12:10:01 = *12:08, *12:31
+++-----+	+++----	-----	-----	*12:06, *12:40 = *12:07, *12:08
+++-----+	+++----	-----	-----	*12:02:01, 12:72, *12:04:02 = *12:03:01:01, 12:03:13, 12:03:24, *12:41 = *12:41, *12:55 = *12:41, *12:58
+-----+	+++----	-----	+-----+	*12:02:06, *12:54 = *12:39N, *12:54
+-----+	+++----	-----+	-----+	*12:28, *12:54 = *12:43, *12:54
+-----+	+++----	-----+	-----+	*12:26, *12:54 = *12:54, *12:63
+-----+	+++----	-----+	-----+	*12:18:02, *12:54 = *12:20, *12:54
+-----+	+++----	-----+	-----+	*12:19, *12:54 = *12:46N, *12:54
+-----+	+++----	-----	-----+	*12:05, *12:37 = *12:33, *12:37
+-----+	+++----	-----	-----+	*12:05, *12:47 = *12:33, *12:47
+-----+	+++----	-----	-----+	*12:05, *12:32 = *12:32, *12:33
+-----+	+++----	-----	-----+	*12:05, *12:29 = *12:29, *12:33
+-----+	+++----	-----	-----+	*12:05, *12:45 = *12:33, *12:45
+-----+	+++----	-----	+-----	*12:02:06, *12:05 = *12:05, *12:39N = *12:33, *12:39N
+-----+	+++----	-----+	-----	*12:05, *12:43 = *12:33, *12:43
+-----+	+++----	-----+	-----	*12:05, *12:23 = *12:23, *12:33
+-----+	+++----	-----+	-----	*12:05, *12:18:02 = *12:05, *12:20 = *12:20, *12:33
+-----+	+++----	-----+	-----	*12:05, *12:19 = *12:05, *12:46N = *12:33, *12:46N
+-----+	+++----	-----	-----	*12:05, *12:25 = *12:25, *12:33
+-----+	+++----	-----	-----	*12:05, *12:35 = *12:33, *12:35
+-----+	+++----	-----	-----	*12:05, *12:13 = *12:13, *12:33
+-----+	+++----	-----	-----	*12:05, *12:12 = *12:12, *12:33
+-----+	+++----	-----	-----	*12:05, *12:11 = *12:11, *12:33
+-----+	+++----	-----	-----	*12:05, *12:31 = *12:31, *12:33
+-----+	+++----	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:09 = *12:05, *12:24 = *12:24, *12:33
+-----+	+++----	-----	-----	*12:05, *12:07 = *12:07, *12:33
+-----+	+++----	-----	-----	*12:05, *12:06 = *12:06, *12:33
+++-----	+++----	-----	-----+	*12:03:19, *12:42Q = *12:30, *12:42Q
+++-----	+++----	-----	-----	*12:18:01, *12:28 = *12:18:01, *12:43
+++-----	+++----	-----	-----+	*12:17, *12:42Q = *12:27, *12:42Q
+++-----	+++----	-----	-----	*12:03:01:01, 12:03:13, 12:03:24, *12:14:02 = *12:13, *12:14:02 = *12:13, *12:18:01 = *12:14:02, *12:25 = *12:14:02, *12:55 = *12:14:02, *12:58
+++-----+	+++----	-----	-----+	*12:29, *12:80N = *12:40, *12:42Q = *12:42Q, *12:80N
+++-----+	+++----	-----	-----+	*12:28, *12:80N = *12:43, *12:80N
+++-----+	+++----	-----	-----+	*12:15, *12:80N = *12:15, *12:84N = *12:23, *12:80N
+++-----+	+++----	-----	-----	*12:03:19, *12:15 = *12:15, *12:30
+++-----+	+++----	-----	-----	*12:15, *12:17 = *12:15, *12:27
+++-----+	+++----	-----	-----+	*12:02:01, 12:72, *12:54 = *12:37, *12:41
+++-----+	+++----	-----	-----+	*12:04:02, *12:84N = *12:41, *12:47



101.624-12 – including *Taq* polymerase, IFU-01
 101. 624-12u – without *Taq* polymerase, IFU-02

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+++++--+	+++-----	-----	-----+	*12:04:02, *12:86 = *12:29, *12:41
+++++--+	+++-----	-----	---+-----	*12:03:19, *12:04:02 = *12:04:02, *12:30
+++++--+	+++-----	-----+	-----	*12:28, *12:41 = *12:41, *12:43
+++++--+	+++-----	---+-----	-----	*12:04:02, *12:22 = *12:41, *12:46N
+++++--+	+++-----	-+-----	-----	*12:04:02, *12:17 = *12:35, *12:41
+++++--+	+++-----	-----	-----	*12:04:02, *12:16 = *12:11, *12:41
+++++--+	+++-----	-----	-----	*12:04:02, *12:10:01 = *12:31, *12:41
+++++--+	+++-----	-----	-----	*12:04:02, *12:40 = *12:07, *12:41
+++++--+	+++-----	-----	-----	*12:04:02, *12:08 = *12:06, *12:41
+++++--+	+++-----	-----	---+-----	*12:03:19, *12:33 = *12:30, *12:33
+++++--+	+++-----	-----	-----	*12:02:01, 12:72, *12:05 = *12:04:02, *12:49
+++++--+	+++-----	-----	-----+	*12:05, *12:42Q = *12:33, *12:42Q
+-----+	+++-----	-----+	+-----	*12:03:01:01, 12:03:13, 12:03:24, *12:21 = *12:21, *12:23 = *12:21, *12:39N
+-----+	+++-----	-----+	-----	*12:05, *12:15 = *12:15, *12:33
+++-----	+++-----	---+-----	-----	*12:14:02, *12:28 = *12:14:02, *12:43
+++++--+	+++-----	-----	---+-----	*12:03:19, *12:54 = *12:30, *12:54
+++++--+	+++-----	-----	---+-----	*12:03:19, *12:05 = *12:05, *12:30
+-----+	+++-----	-----+	+-----	*12:07, *12:21 = *12:15, *12:21

- *12:02:01 = *12:02:01-12:02:05, 12:02:07, 12:02:09 and 12:56, 12:64, 12:67-12:69, 12:73-12:74, 12:85.
- *12:02:06 = *12:02:06 and 12:02:08
- *12:03:01:01 = *12:03:01:01-12:03:01:02, 12:03:03, 12:03:05-12:03:07, 12:03:10-12:03:12, 12:03:14-12:03:15, 12:03:17-12:03:18, 12:03:21-12:03:23, 12:03:25 and 12:51-12:53, 12:57, 12:61-12:62, 12:65-12:66, 12:70-12:71, 12:75-12:79, 12:82 and 12:87-12:94
- *12:03:02 = *12:03:02, 12:03:08, 12:03:16, 12:03:20 and 12:59
- *12:03:04 = *12:03:04, 12:03:09
- *12:04:02 = *12:04:02 and 12:60
- *12:06 = *12:06 and 12:48 and 12:81
- *12:10:01 = *12:10:01-12:10:02
- *12:18:01 = *12:18:01 and 12:83
- *12:29 = *12:29 and 12:38
- *12:30 = *12:30 and 12:36
- *12:32 = *12:32 and 12:34
- *12:45 = *12:45 and 12:50



101.624-12 – including *Taq* polymerase, IFU-01101.624-12u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

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Lot-specific information
SPECIFICITY TABLE

HLA-C*12 SSP subtyping

Specificities and sizes of the PCR products of the 32 primer mixes used for HLA-C*12 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-C*12 alleles ³	Other amplified HLA Class I alleles ⁴
1⁶	235 bp	800 bp	*12:02:01-12:03:12, 12:03:13 ^W , 12:03:14-12:04:02, 12:06-12:08, 12:10:01-12:15, 12:17-12:20, 12:22-12:32, 12:34-12:48, 12:50-12:54, 12:56-12:94	*02:12, 02:49, 02:55, 03:15, 03:27, 03:38:01-03:38:02, 03:53, 03:69, 03:130, 03:136, 03:163, 04:03, 04:06, 04:16, 04:80, 04:103, 04:107, 05:42, 05:46, 06:03:01-06:03:02, 06:76:01-06:76:02, 07:26, 07:92, 07:96:01-07:96:02, 08:05, 08:21, 08:25, 15:03, 15:16, 15:25, 16:15:01-16:15:02, 16:25, 17:01:01:01-17:19, B*07:13, B*07:15, B*07:160, B*67:02
2⁵	100 bp	1070 bp	*12:02:01-12:02:05, 12:02:07, 12:02:09, 12:03:19, 12:08, 12:10:01-12:10:02, 12:14:02, 12:16-12:18:01, 12:22, 12:27, 12:30, 12:36, 12:40-12:41, 12:44, 12:49, 12:56, 12:64, 12:67-12:69, 12:72-12:74, 12:80N, 12:83-12:86	*01:04, 01:21
3	220 bp	800 bp	*12:03:01:01-12:07, 12:11-12:13, 12:15, 12:23, 12:25-12:26, 12:28-12:29, 12:31-12:35, 12:37-12:39N, 12:42Q-12:43, 12:45-12:48, 12:50-12:55, 12:57-12:63, 12:65-12:66, 12:70-12:71, 12:75-12:79, 12:81-12:82, 12:87-12:94	*01:04, 01:09, 02:05, 02:17, 06:02:01:01-06:02:01:02, 06:02:03-06:02:15, 06:02:17-06:03:02, 06:07-06:13, 06:15-06:34, 06:36-06:39, 06:41-06:71, 06:73-06:78, 06:80, 06:82-06:96, 14:16, 16:04:01, 16:29, 16:33, 16:42, 16:55

101.624-12 – including *Taq* polymerase, IFU-01
 101.624-12u – without *Taq* polymerase, IFU-02

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4	340 bp	1070 bp	*12:04:01-12:05, 12:09, 12:21, 12:33, 12:41, 12:54, 12:60	*01:14, 01:59, 02:02:01- 02:02:03, 02:02:05-02:02:11, 02:02:13-02:11, 02:13- 02:26:03, 02:28-02:40, 02:42-02:67, 03:07, 03:15, 03:45, 03:130, 03:140, 03:163, 04:01:01:01- 04:01:28, 04:01:30-04:01:48, 04:03-04:10, 04:12-04:20, 04:23-04:28, 04:30-04:35, 04:37-04:54, 04:56-04:144, 05:01:01:01-05:01:26, 05:03-05:87, 06:02:01:01- 06:02:01:02, 06:02:03- 06:02:11, 06:02:13-06:10, 06:12-06:51, 06:53:01- 06:96, 07:07, 07:09, 07:49, 07:76, 07:210, 07:238, 07:247, 08:10, 14:04, 14:12, 14:49, 15:02:01-15:06:03, 15:08-15:13, 15:15-15:19, 15:22-15:24, 15:26-15:42, 15:44-15:66, 16:02:01- 16:02:09, 16:09, 16:12, 16:19, 16:25, 16:46-16:48, 17:01:01:01-17:19, 18:01- 18:06
5 ⁶	130 bp	1070 bp	*12:05, 12:09, 12:21, 12:33, 12:49	*02:02:01-02:02:03, 02:02:05-02:02:07, 02:02:09-02:02:12, 02:02:14-02:02:20, 02:02:21 ^w , 02:02:22-02:11, 02:13-02:40, 02:42-02:48, 02:50-02:54, 02:56-02:62, 02:64-02:67, 03:04:25, 04:10-04:11, 04:36, 04:55, 05:01:01:01-05:01:11, 05:01:13-05:01:23, 05:01:24 ^w , 05:01:25- 05:01:26, 05:03-05:29:01, 05:30-05:41, 05:43-05:45, 05:47-05:87, 06:05, 08:01:01-08:02:02, 08:02:04-08:04:03, 08:06- 08:20, 08:22-08:24, 08:26N- 08:63, 08:65-08:72, 08:74, 14:02:03, 14:03, 14:08,

101.624-12 – including *Taq* polymerase, IFU-01
 101.624-12u – without *Taq* polymerase, IFU-02

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				14:10, 14:22, 14:35N, 14:38, 14:41, 15:02:01-15:02:09, 15:02:11-15:02:15, 15:04-15:13, 15:15, 15:17-15:19, 15:21-15:24, 15:26-15:42, 15:44, 15:45 ^W , 15:46-15:66, 16:01:01, 16:01:03-16:02:09, 16:04:01, 16:06-16:14, 16:16Q-16:24, 16:26-16:55
6^{5,9}	75 bp, 150 bp, 415 bp	1070 bp	*12:06, 12:08, 12:48, 12:81	*03:08, 03:29, 03:31, 04:112, 05:36, 06:44
7	140 bp	800 bp	*12:04:02-12:05, 12:09, 12:21, 12:33, 12:41, 12:54, 12:60	*02:02:01-02:02:03, 02:02:05-02:02:07, 02:02:09-02:02:11, 02:02:14-02:11, 02:13- 02:26:03, 02:28-02:40, 02:42-02:62, 02:64-02:67, 04:01:01:01-04:01:09, 04:01:11-04:01:22, 04:01:24-04:01:28, 04:01:30-04:01:48, 04:03- 04:10, 04:12-04:20, 04:23- 04:28, 04:30-04:35, 04:37- 04:54, 04:56-04:129, 04:131-04:144, 05:01:01:01- 05:01:11, 05:01:13-05:01:23, 05:01:24 ^W , 05:01:25- 05:01:26, 05:03-05:29:01, 05:30-05:87, 06:05, 06:76:02, 08:10, 15:02:01- 15:02:09, 15:02:11-15:06:03, 15:08-15:13, 15:15-15:19, 15:22-15:24, 15:26-15:42, 15:44-15:66, 16:02:01- 16:02:09, 16:09, 16:12, 16:19, 16:25, 16:46-16:48, 17:01:04
8^{5,10}	95 bp, 155 bp, 195 bp, 245 bp	1070 bp	*12:07, 12:15, 12:40, 12:80N	*15:02:14, 16:14
9⁵	95 bp	1070 bp	*12:02:01-12:04:02, 12:06-12:08, 12:10:01- 12:20, 12:22-12:27, 12:29-12:32, 12:34-	*01:17, 01:21, 02:12, 02:55, 03:27, 03:38:01-03:38:02, 03:130, 03:163, 04:33, 04:107, 05:46, 06:30, 07:07,

101.624-12 – including *Taq* polymerase, IFU-01
 101.624-12u – without *Taq* polymerase, IFU-02

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Lot-specific information

			12:48, 12:50-12:57, 12:59-12:62, 12:64- 12:94	07:16, 07:51, 07:181, 08:05, 08:21, 08:25, 14:04, 15:03, 15:16, 16:15:01-16:15:02, 16:25, 17:01:01:01-17:10, 17:12-17:14, 17:16-17:19, B*07:13, B*67:02
10	155 bp	1070 bp	*12:03:01:01- 12:03:01:02, 12:03:03- 12:03:07, 12:03:09- 12:03:15, 12:03:17- 12:03:18, 12:03:21- 12:03:25, 12:04:02- 12:07, 12:11-12:13, 12:15, 12:20, 12:23- 12:25, 12:28-12:29, 12:31-12:32, 12:34- 12:35, 12:37-12:39N, 12:42Q-12:43, 12:45- 12:48, 12:50-12:55, 12:57-12:58, 12:60- 12:63, 12:65-12:66, 12:70-12:71, 12:75- 12:79, 12:81-12:82, 12:87-12:94	*01:02:18, 06:76:02, 14:02:08, 16:15:02
11⁸	220 bp	1070 bp	*12:09, 12:24	*01:02:01-01:03, 01:06- 01:08, 01:10-01:20, 01:23- 01:34, 01:37N-01:48, 01:51- 01:54, 01:56N-01:75, 03:58, 03:86, 03:94, 03:99, 04:37, 05:16, 05:85, 06:05-06:06, 08:12, 14:02:01-14:05, 14:07N, 14:10-14:14, 14:17- 14:27, 14:29-14:49, 16:53, B*14:03
12	140 bp	1070 bp	*12:02:01-12:03:03, 12:03:05-12:03:08, 12:03:10-12:03:23, 12:03:24 ^w , 12:03:25, 12:06-12:08, 12:10:01- 12:20, 12:22-12:26, 12:28-12:32, 12:34- 12:40, 12:42Q-12:53, 12:55-12:59, 12:61- 12:71, 12:72 ^w , 12:73- 12:94	*01:21, 02:12 ^w , 02:27:01- 02:27:02, 03:04:25, 04:11, 04:29, 04:36, 04:55, 07:02:09, 08:01:01-08:09, 08:11-08:63, 08:65-08:74, 14:02:03, 14:03, 14:08, 14:10, 14:22, 14:35N, 14:38, 14:41, 15:07, 15:21 ^w , 15:25, 16:01:01, 16:01:03-16:01:13, 16:04:01, 16:06-16:08, 16:10-16:11, 16:13-16:18, 16:20-16:24, 16:26-16:36, 16:37 ^w , 16:38-16:45, 16:49-

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Lot-specific information

				16:55, B*35:08:02 , B*35:08:05 , B*67:02
13 ^{5,11}	105 bp, 150 bp	1070 bp	*12:10:01-12:10:02, 12:31	*04:01:05, 14:02:08
14 ^{5,12}	100 bp, 145 bp	1070 bp	*12:11, 12:16	*01:21, 02:42, 04:140, 06:05 ^W , 07:02:09, 08:14, 15:63, B*67:02
15 ⁸	140 bp	1070 bp	*12:12	*08:73, B*35:08:02 , B*35:08:05
16 ¹³	185 bp, 225 bp	1070 bp	*12:13-12:14:02	*01:60, 04:58, 05:23, 05:62, 08:07, 08:47, 14:17, 15:65, 17:01:01:01-17:19
17	565 bp	1070 bp	*12:03:04, 12:03:09	*01:02:18, 14:02:08
18 ¹⁴	145 bp, 165 bp, 245 bp, 270 bp	1070 bp	*12:17, 12:27, 12:35	*03:53, 04:12
19 ⁵	100 bp	1070 bp	*12:14:02, 12:18:01, 12:25, 12:83	*03:104, 07:01:20, 07:01:27, 07:02:38, B*18:77 , B*40:29
20 ^{5,15}	105 bp, 170 bp, 220 bp	1070 bp	*12:19, 12:22, 12:46N	
21	250 bp	1070 bp	*12:14:01-12:14:02, 12:18:01-12:18:02, 12:20, 12:83	*01:22, 01:35, 05:11, 05:17, 05:27, 05:68, 05:79, 06:04, 08:01:01-08:01:09, 08:03:01-08:04:03, 08:06, 08:08-08:11, 08:13-08:14, 08:16:01-08:16:02, 08:20- 08:22, 08:24, 08:26N, 08:36N, 08:38-08:42, 08:44, 08:46, 08:50, 08:54, 08:56- 08:61, 08:65-08:66, 08:72, 14:06, 14:15, 15:02:01- 15:07, 15:09-15:13, 15:15- 15:19, 15:21-15:24, 15:26- 15:50, 15:52-15:66, 16:35, 16:40, 16:48, 17:01:01:01- 17:16, 17:18-17:19, B*58:02
22 ^{5,16}	95 bp, 110 bp, 590 bp	1070 bp	*12:15, 12:21, 12:23	*15:02:14
23	140 bp	1070 bp	*12:26, 12:63	*16:36
24 ¹⁷	185 bp, 425 bp	1070 bp	*12:28, 12:43	*04:01:05, 06:76:02

101.624-12 – including *Taq* polymerase, IFU-01101.624-12u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

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Lot-specific information

25 ^{5,18}	80 bp, 155 bp	1070 bp	*12:02:06, 12:02:08, 12:21, 12:39N	*04:01:05, 08:02:02
26	355 bp	800 bp	*12:44	*03:38:01-03:38:02, 03:69, 03:130, 03:136, 03:163, 04:80, 04:100, 06:14, 07:10, 07:43, 07:196, 15:03, 15:16, 15:25
27 ^{5,19}	100 bp, 155 bp, 205 bp	1070 bp	*12:03:19, 12:30, 12:36	*01:04, 07:214
28 ^{7,20}	275 bp, 350 bp	1070 bp	*12:45, 12:50	*01:32, 02:56, 03:102, 05:81, 06:20, 06:87, 07:24, 07:81, 07:168, 07:218, 16:13
29 ^{5,21}	125 bp, 185 bp, 210 bp	1070 bp	*12:29, 12:38, 12:42Q, 12:86	B*57:50
30 ^{5,22}	90 bp, 230 bp	1070 bp	*12:32, 12:34	*06:41
31 ^{5,23}	120 bp, 145 bp, 190 bp	1070 bp	*12:42Q, 12:47, 12:80N, 12:84N	A*26:67, A*68:95
32 ^{5,24}	50 bp, 115 bp	1070 bp	*12:37, 12:54	*01:59, 02:65, 03:130, 03:140, 04:114, 05:20, 06:82, 07:49, 07:204, 07:210, 07:238, 07:247, 14:04, A*02:211:01, A*68:46, A*68:76

¹ Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-C*12 high resolution SSP typings.

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

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

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

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

Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an 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.

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control

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band in order to help in the correct orientation of the HLA-C*12 SSP subtyping.

In addition, wells number 3, 7 and 26 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

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

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

⁴Due to the sharing of sequence motifs between HLA Class I alleles non-HLA-C*12 alleles will be amplified by primer mixes 1 to 19, 21 to 28, 30 and 32. In addition, primer mix 1 amplifies the B*07:13, B*07:15, B*07:160 and B*67:02 alleles, primer mix 9 amplifies the B*07:13 and B*67:02 alleles, primer mix 11 amplifies the B*14:03 allele, primer mix 12 amplifies the B*35:08:02, B*35:08:05 and B*67:02 alleles, primer mix 14 amplifies the B*67:02 allele, primer mix 15 amplifies the B*35:08:02 and B*35:08:05 alleles, primer mix 19 amplifies the B*18:77 and B*40:29 alleles, primer mix 21 amplifies the B*58:02 allele, primer mix 29 amplifies the B*57:30 allele, primer mix 31 amplifies the A*26:67 and A*68:95 alleles and primer mix 32 amplifies the A*02:211:01, A*68:46 and A*68:76 alleles.

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

⁶Primer mixes 1 and 5 may give rise to a lower yield of HLA-specific PCR product than the other C*12 primer mixes.

⁷Primer mixes 8 and 28 have a tendency to giving rise to primer oligomer formation.

⁸In primer mix 11, the positive control band may be weaker than for other HLA-C*12 primer mixes.

⁹Primer mix 6: Specific PCR fragment of 75 bp in the C*12:48 allele. Specific PCR fragment of 150 bp in the C*12:06 allele. Specific PCR fragment of 415 bp in the C*12:08 and 12:81 and in the C*03:08, 03:29, 03:31, 04:112, 05:36 and 06:44 alleles.

¹⁰Primer mix 8: Specific PCR fragment of 95 bp in the C*12:15 and the C*15:02:14 alleles. Specific PCR fragment of 155 bp in the C*12:40 and in the C*16:14 alleles. Specific PCR fragment of 195 bp in the C*12:80N allele. Specific PCR fragment of 245 bp in the C*12:07 allele.

¹¹Primer mix 13: Specific PCR fragment of 105 bp in the C*12:31 allele. Specific PCR fragment of 150 bp in the C*12:10:01-12:10:02 and C*14:02:08 alleles. PCR fragment of 105 and 150 bp in the C*04:01:05 allele.

¹²Primer mix 14: Specific PCR fragment of 100 bp in the C*12:16 and the C*01:21, 02:42, 04:140, 06:05^w, 07:02:09, 08:14, 15:63 and in the B*67:02 alleles. Specific PCR fragment of 145 bp in the C*12:11 allele.

¹³Primer mix 16: Specific PCR fragment of 185 bp in the C*12:13 allele. Specific PCR fragment of 225 bp in C*12:14:01-12:14:02 and the C*01:60, 04:58, 05:23, 05:62, 08:07, 08:47, 14:17, 15:65 and 17:01:01:01-17:19 alleles.

¹⁴Primer mix 18: Specific PCR fragment of 145 bp in the C*04:12 allele. Specific PCR fragment of 245 bp in C*03:53 allele. Specific PCR fragments of 145 bp and 245 bp in the C*12:17 and C*12:27 alleles. Specific PCR fragment of 165 and 270 bp in C*12:35 allele. All specific bands may not always be visible.

¹⁵Primer mix 20: Specific PCR fragment of 105 bp in the C*12:46N allele. Specific PCR fragment of 170 bp in the C*12:22 allele. Specific PCR fragment of 220 bp in C*12:19 allele.

¹⁶Primer mix 22: Specific PCR fragment of 95 bp in the C*12:15 and the C*15:02:14 alleles. Specific PCR fragment of 110 bp in the C*12:23 allele. Specific PCR fragments of 590 bp in C*12:21 allele.

¹⁷Primer mix 24: Specific PCR fragment of 185 bp in the C*12:43 allele. Specific PCR fragment of 425 bp in C*12:28 and the C*04:01:05 and 06:76:02 alleles.

¹⁸Primer mix 25: Specific PCR fragment of 80 bp in the C*12:39N allele. Specific PCR fragment of 155 bp in the C*12:02:06, 12:02:08 and 12:21 and the C*04:01:05 and 08:02:02 alleles.

¹⁹Primer mix 27: Specific PCR fragment of 100 bp in the C*12:30 and the C*07:214 alleles. Specific PCR fragment of 155 bp in the C*12:03:19 and the C*01:04 alleles. Specific PCR fragment of 205 bp in C*12:36 allele.

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²⁰Primer mix 28: Specific PCR fragment of 275 bp in the C*12:50 and the C*01:32, 02:56, 03:102, 06:20, 07:81 and 07:168 alleles. Specific PCR fragment of 350 bp in C*12:45 and the C*05:81, 06:87, 07:24, 07:218 and 16:13 alleles.

²¹Primer mix 29: Specific PCR fragment of 125 bp in the C*12:38 and the B*57:50 alleles. Specific PCR fragment of 185 bp in the C*12:42Q allele. Specific PCR fragments of 210 bp in C*12:29 and 12:86 alleles.

²²Primer mix 30: Specific PCR fragment of 90 bp in the C*12:32 and in the C*06:41 alleles. Specific PCR fragment of 230 bp in C*12:34 allele.

²³Primer mix 31: Specific PCR fragment of 120 bp in the C*12:47 and the A*26:67 and A*68:95 alleles. Specific PCR fragment of 145 bp in the C *12:84N allele. Specific PCR fragment of 190 bp in the C*12:42Q and 12:80N alleles.

²⁴Primer mix 32: Specific PCR fragment of 50 bp in the C*12:54 and the C01:59, 02:65, 03:130, 03:140, 04:114, 05:20, 06:82, 07:49, 07:210, 07:238, 07:247 and 14:04 and in the A*68:46 alleles. Specific PCR fragment of 115 bp in C*12:37 and the C*07:204 and in the A*02:211:01 and A*68:76 allele.

‘w’, might be weakly amplified.

101.624-12 – including *Taq* polymerase, IFU-01
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Lot-specific information

INTERPRETATION TABLE																
HLA-C*12 SSP subtyping																
Amplification patterns of the C*12:02 to 12:94 alleles																
	Well ¹⁵															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Length of spec.	235	100	220	340	130	75	140	95	95	155	220	140	105	100	140	185
PCR product(s)						415		155					150	145		225
Length of int. pos. control ¹	800	1070	800	1070	1070	1070	800	1070	1070	1070	1070	1070	1070	1070	1070	1070
5'-primer(s) ²	98	419	361	1 st I	201	28	201	98	289	361	361	201	368	142	201	2 nd I
	5'-CTA 3'	5'-gTC 3'	5'-AgT 3'	5'-CgA 3'	5'-CCA 3'	5'-TCA 3'	5'-CCA 3'	5'-CTA 3'	5'-Agg 3'	5'-AgT 3'	5'-AgT 3'	5'-CCA 3'	5'-gTT 3'	5'-TCT 3'	5'-CCA 3'	5'-CCA 3'
						431		420					412	368		
						5'-CgT 3'		5'-TTA 3'					5'-ATA 3'	5'-gTC 3'		
						504										
						5'-CAT 3'										
3'-primer(s) ³	289	477	538	302	289	270	302	214	341	474	538	302	474	201	299	473
	5'-AgC 3'	5'-gCA 3'	5'-CCA 3'	5'-ggT 3'	5'-AgT 3'	5'-TAG 3'	5'-ggT 3'	5'-CCA 3'	5'-Cgg 3'	5'-gCA 3'	5'-CCg 3'	5'-ggC 3'	5'-gCA 3'	5'-CTT 3'	5'-TCT 3'	5'-CAA 3'
	289				289	538		251					477	474		512
	5'-AgC 3'				5'-AgT 3'	5'-CCA 3'		5'-CCT 3'					5'-gCA 3'	5'-gCA 3'		5'-CCA 3'
	295							301								
	5'-TCC 3'							5'-gCC 3'								
	474							474								
	5'-gCA 3'															
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.624-12 – including *Taq* polymerase, IFU-01
 101. 624-12u – without *Taq* polymerase, IFU-02

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Lot-specific information

INTERPRETATION TABLE															
HLA-C*12 SSP subtyping															
Amplification patterns of the C*12:02 to 12:94 alleles															
Well ¹⁵															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
565	145	100	105	250	95	140	185	80	355	100	275	125	90	120	50
	245		220		590		425	155		205	350	210	230	145	115
	270														
1070	1070	1070	1070	1070	1070	1070	1070	1070	800	1070	1070	1070	1070	1070	1070
5'-CCg ^{3'}	5'-CTA ^{3'}	5'-CCC ^{3'}	5'-CCA ^{3'}	5'-CCA ^{3'}	5'-gCA ^{3'}	5'-CCA ^{3'}	5'-CTA ^{3'}	5'-TgA ^{3'}	5'-Agg ^{3'}	5'-gAC ^{3'}	5'-ggT ^{3'}	5'-gTC ^{3'}	5'-gTg ^{3'}	5'-CTA ^{3'}	5'-gAA ^{3'}
201	98	257	201	2 nd	176	201	98	252	289	127	385	419	347	98	302
	201	477	361		420	368	341	361		228	463		490	419	379
	5'-CCA ^{3'}	5'-gCT ^{3'}	5'-AgT ^{3'}		5'-TTA ^{3'}	5'-gTA ^{3'}	5'-gGA ^{3'}	5'-AgA ^{3'}		5'-ATg ^{3'}	5'-TgA ^{3'}		5'-CgT ^{3'}	5'-gTC ^{3'}	5'-ACC ^{3'}
					5'-Cgg ^{3'}					5'-AgT ^{3'}					
474	295	311	332	539	474	288	241	289	353	289	3 rd	505	538	175	312
5'-gCA ^{3'}	5'-TCC ^{3'}	5'-ggT ^{3'}	5'-TCC ^{3'}	5'-TCA ^{3'}	5'-gCA ^{3'}	5'-gCg ^{3'}	5'-CgT ^{3'}	5'-AgC ^{3'}	5'-TgA ^{3'}	5'-AgC ^{3'}	5'-CTC ^{3'}	5'-gCC ^{3'}	5'-CCA ^{3'}	5'-CCA ^{3'}	5'-Agg ^{3'}
	308	538	426		658	476	474	474		477		564		201	453
	5'-TCg ^{3'}	5'-Cag ^{3'}	5'-TCC ^{3'}		5'-gTg ^{3'}	5'-CgA ^{3'}	5'-gCA ^{3'}	5'-gCA ^{3'}		5'-gCA ^{3'}		5'-ACC ^{3'}		5'-CTT ^{3'}	5'-TCT ^{3'}
	326		538									587		251	
	5'-TgC ^{3'}		5'-gCA ^{3'}									5'-CCC ^{3'}		5'-CCT ^{3'}	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
															Well No.



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Length of spec. PCR product(s)	235	100	220	340	130	75	140	95	95	155	220	140	105	100	140	185
						150		155					150	145		225
						415		195								
								245								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-C allele ^{4,5}																
*12:02:01-12:02:05, 12:02:07, 12:02:09, 12:56, 12:64, 12:67-12:69, 12:73-12:74, 12:85	1	2							9			12				
*12:02:06, 12:02:08	1								9			12				
*12:03:01:01-12:03:01:02, 12:03:03, 12:03:05-12:03:07, 12:03:10-12:03:12, 12:03:14- 12:03:15, 12:03:17-12:03:18, 12:03:21-12:03:23, 12:03:25, 12:51-12:53, 12:57, 12:61- 12:62, 12:65-12:66, 12:70- 12:71, 12:75-12:79, 12:82, 12:87-12:94	1		3						9	10		12				
*12:03:02, 12:03:08, 12:03:16, 12:03:20, 12:59	1		3						9			12				
*12:03:04, 12:03:09	1		3						9	10						
*12:03:13	w		3						9	10		12				
*12:03:19	1	2	3						9			12				
*12:03:24	1		3						9	10		w				
*12:04:01	1		3	4					9							
*12:04:02, 12:60	1		3	4			7		9	10						
*12:05			3	4	5		7			10						
*12:06, 12:48, 12:81 ¹⁰	1		3			6			9	10		12				
*12:07	1		3					8	9	10		12				
*12:08	1	2				6			9			12				
*12:09, 05:16, 05:85 ⁶				4	5		7				11					
*12:10:01-12:10:02	1	2							9			12	13			
*12:11	1		3						9	10		12		14		
*12:12	1		3						9	10		12			15	
*12:13	1		3						9	10		12				16
*12:14:01	1								9			12				16
*12:14:02	1	2							9			12				16
*12:15	1		3					8	9	10		12				
*12:16, 01:21 ⁷		2							9			12		14		
*12:17	1	2							9			12				
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.624-12 – including *Taq* polymerase, IFU-01
 101.624-12u – without *Taq* polymerase, IFU-02

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Lot-specific information

565	145	100	105	250	110	140	185	80	355	100	275	125	90	120	50	Length of spec. PCR product(s)
	165		170		590		425	155		155	350	185	230	145	115	
	245		220							205		210		190		
	270															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No. HLA-C allele ^{4,5}
																*12:02:01-12:02:05, 12:02:07, 12:02:09, 12:56, 12:64, 12:67-12:69, 12:73-12:74, 12:85
								25								*12:02:06, 12:02:08
																*12:03:01:01 -12:03:01:02, 12:03:03, 12:03:05 -12:03:07, 12:03:10-12:03:12, 12:03:14- 12:03:15, 12:03:17 -12:03:18, 12:03:21-12:03:23, 12:03:25, 12:51-12:53, 12:57, 12:61- 12:62, 12:65-12:66, 12:70- 12:71, 12:75-12:79, 12:82, 12:87-12:94
																*12:03:02, 12:03:08 , 12:03:16, 12:03:20, 12:59
17																*12:03:04, 12:03:09
																*12:03:13
										27						*12:03:19
																*12:03:24
																*12:04:01
																*12:04:02 , 12:60
																*12:05
																*12:06, 12:48, 12:81 ¹⁰
																*12:07
																*12:08
																*12:09 , 05:16, 05:85 ⁶
																*12:10:01-12:10:02
																*12:11
																*12:12
																*12:13
				21												*12:14:01
		19		21												*12:14:02
					22											*12:15
																*12:16 , 01:21 ⁷
	18															*12:17
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.



101.624-12 – including *Taq* polymerase, IFU-01
 101.624-12u – without *Taq* polymerase, IFU-02

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

Lot No.: **26S**

Lot-specific information

Length of spec. PCR product(s)	235	100	220	340	130	75	140	95	95	155	220	140	105	100	140	185
						150		155					150	145		225
						415		195								
								245								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*12:18:01, 12:83	1	2							9			12				
*12:18:02, 08:21 ⁸	1								9			12				
*12:19	1								9			12				
*12:20	1								9	10		12				
*12:21				4	5		7									
*12:22	1	2							9			12				
*12:23	1		3						9	10		12				
*12:24	1								9	10	11	12				
*12:25	1		3						9	10		12				
*12:26	1		3						9			12				
*12:27	1	2							9							
*12:28	1		3							10		12				
*12:29, 12:38 ¹¹	1		3						9	10		12				
*12:30, 12:36 ¹²	1	2							9			12				
*12:31	1		3						9	10		12	13			
*12:32, 12:34 ¹³	1		3						9	10		12				
*12:33, 02:05, 02:17 ⁹			3	4	5		7									
*12:35	1		3						9	10		12				
*12:37	1		3						9	10		12				
*12:39N	1		3						9	10		12				
*12:40	1	2						8	9			12				
*12:41	1	2		4			7		9							
*12:42Q	1		3						9	10		12				
*12:43	1		3						9	10		12				
*12:44	1	2							9			12				
*12:45, 12:50 ¹⁴	1		3						9	10		12				
*12:46N	1		3						9	10		12				
*12:47	1		3						9	10		12				
*12:49		2			5							12				
*12:54	1		3	4			7		9	10						
*12:55			3						9	10		12				
*12:58	1		3							10		12				
*12:63	1		3							10		12				
*12:72	1	2							9			w				
*12:80N	1	2						8	9			12				
*12:84N	1	2							9			12				
*12:86	1	2							9			12				
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.624-12 – including *Taq* polymerase, IFU-01
 101.624-12u – without *Taq* polymerase, IFU-02

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

Lot No.: **26S**

Lot-specific information

565	145	100	105	250	110	140	185	80	355	100	275	125	90	120	50	Length of spec. PCR product(s)
	165		170		590		425	155		155	350	185	230	145	115	
	245		220							205		210		190		
	270															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
		19		21												*12:18:01, 12:83
				21												*12:18:02, 08:21 ⁸
			20													*12:19
				21												*12:20
					22			25								*12:21
			20													*12:22
					22											*12:23
																*12:24
		19														*12:25
						23										*12:26
	18															*12:27
							24									*12:28
												29				*12:29, 12:38 ¹¹
										27						*12:30, 12:36 ¹²
																*12:31
													30			*12:32, 12:34 ¹³
																*12:33, 02:05, 02:17 ⁹
	18															*12:35
															32	*12:37
								25								*12:39N
																*12:40
																*12:41
												29		31		*12:42Q
							24									*12:43
								26								*12:44
											28					*12:45, 12:50 ¹⁴
			20													*12:46N
														31		*12:47
																*12:49
															32	*12:54
																*12:55
																*12:58
						23										*12:63
																*12:72
														31		*12:80N
														31		*12:84N
												29				*12:86
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.



101.624-12 – including *Taq* polymerase, IFU-01101.624-12u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **26S**

Lot-specific information

Length of spec. PCR product(s)	235	100	220	340	130	75	140	95	95	155	220	140	105	100	140	185
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
						150		155					150	145		225
						415		195								
								245								
*01:02:01-01:02:17, 01:03, 01:06-01:08, 01:10-01:13, 01:15-01:16, 01:18-01:20, 01:23-01:31, 01:33-01:34, 01:37N-01:48, 01:51-01:54, 01:56N-01:58, 01:61-01:75, 03:58, 03:86, 03:94, 03:99, 14:02:01-14:02:02, 14:02:04- 14:02:07, 14:02:09-14:02:11, 14:05, 14:07N, 14:11, 14:13- 14:14, 14:18-14:21N, 14:23- 14:27, 14:29-14:34, 14:36- 14:37, 14:39-14:40, 14:42- 14:48, <i>B*14:03</i>											11					
*01:02:18										10	11					
*01:04		2	3													
*01:09, 06:02:12, 06:11, 06:52, 14:16			3													
*01:14, 06:06, 14:12, 14:49				4							11					
*01:17									9		11					
*01:22, 01:35, 14:06, 14:15, 15:43, <i>B*58:02</i>																
*01:32											11					
*01:59				4							11					
*01:60, 14:17											11					16
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.624-12 – including *Taq* polymerase, IFU-01
 101.624-12u – without *Taq* polymerase, IFU-02

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

Lot No.: **26S**

Lot-specific information

565	145	100	105	250	110	140	185	80	355	100	275	125	90	120	50	Length of spec. PCR product(s)
	165		170		590		425	155		155	350	185	230	145	115	
	245		220							205		210		190		
	270															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																*01:02:01-01:02:17, 01:03, 01:06-01:08, 01:10-01:13, 01:15-01:16, 01:18-01:20, 01:23-01:31, 01:33-01:34, 01:37N-01:48, 01:51-01:54, 01:56N-01:58, 01:61-01:75, 03:58, 03:86, 03:94, 03:99, 14:02:01-14:02:02, 14:02:04-14:02:07, 14:02:09-14:02:11, 14:05, 14:07N, 14:11, 14:13-14:14, 14:18-14:21N, 14:23-14:27, 14:29-14:34, 14:36-14:37, 14:39-14:40, 14:42-14:48, B*14:03
17										27						*01:02:18
																*01:04
																*01:09, 06:02:12, 06:11, 06:52, 14:16
																*01:14, 06:06, 14:12, 14:49
				21												*01:17
											28					*01:22, 01:35, 14:06, 14:15, 15:43, B*58:02
															32	*01:32
																*01:59
																*01:60, 14:17
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.



101.624-12 – including *Taq* polymerase, IFU-01101. 624-12u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **26S**

Lot-specific information

Length of spec.	235	100	220	340	130	75	140	95	95	155	220	140	105	100	140	185
PCR product(s)						150		155					150	145		225
						415		195								
								245								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*02:02:01-02:02:03, 02:02:05-02:02:07, 02:02:09-02:02:11, 02:02:14-02:02:20, 02:02:22-02:04, 02:06-02:11, 02:13-02:16:02, 02:18-02:26:03, 02:28-02:40, 02:43-02:48, 02:50-02:54, 02:57-02:62, 02:64, 02:66-02:67, 04:10, 05:01:01-05:01:11, 05:01:13-05:01:23, 05:01:25-05:01:26, 05:03-05:10, 05:12-05:15, 05:18:01-05:19, 05:21-05:22:02, 05:24-05:26, 05:28-05:29:01, 05:30-05:35, 05:37-05:41, 05:43-05:45, 05:47-05:61, 05:63-05:67, 05:69-05:78, 05:80, 05:82-05:84, 05:86-05:87, 15:08, 15:51, 16:02:01-16:02:09, 16:09, 16:12, 16:19, 16:46-16:47				4	5		7									
*02:02:08, 02:02:13, 02:63, 03:07, 03:45, 04:01:10, 04:01:23, 04:130, 05:01:12, 05:29:02, 06:02:16, 06:35, 06:40, 06:72, 06:79N, 06:81, 07:09, 07:76, 18:01-18:06				4												
*02:02:12					5											
*02:02:21				4	w		7									
*02:12	1								9			w				
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.624-12 – including *Taq* polymerase, IFU-01
 101. 624-12u – without *Taq* polymerase, IFU-02

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

Lot No.: **26S**

Lot-specific information

565	145	100	105	250	110	140	185	80	355	100	275	125	90	120	50	Length of spec. PCR product(s)
	165		170		590		425	155		155	350	185	230	145	115	
	245		220							205		210		190		
	270															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																*02:02:01-02:02:03, 02:02:05-02:02:07, 02:02:09-02:02:11, 02:02:14-02:02:20, 02:02:22-02:04, 02:06-02:11, 02:13-02:16:02, 02:18-02:26:03, 02:28-02:40, 02:43-02:48, 02:50-02:54, 02:57-02:62, 02:64, 02:66-02:67, 04:10, 05:01:01:01-05:01:11, 05:01:13-05:01:23, 05:01:25-05:01:26, 05:03-05:10, 05:12-05:15, 05:18:01-05:19, 05:21-05:22:02, 05:24-05:26, 05:28-05:29:01, 05:30-05:35, 05:37-05:41, 05:43-05:45, 05:47-05:61, 05:63-05:67, 05:69-05:78, 05:80, 05:82-05:84, 05:86-05:87, 15:08, 15:51, 16:02:01-16:02:09, 16:09, 16:12, 16:19, 16:46-16:47
																*02:02:08, 02:02:13, 02:63, 03:07, 03:45, 04:01:10, 04:01:23, 04:130, 05:01:12, 05:29:02, 06:02:16, 06:35, 06:40, 06:72, 06:79N, 06:81, 07:09, 07:76, 18:01-18:06
																*02:02:12
																*02:02:21
																*02:12
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.



101.624-12 – including *Taq* polymerase, IFU-01101.624-12u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **26S**

Lot-specific information

Length of spec.	235	100	220	340	130	75	140	95	95	155	220	140	105	100	140	185
PCR product(s)						150		155					150	145		225
						415		195								
								245								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*02:27:01-02:27:02, 03:04:25, 04:11, 04:36, 04:55, 08:02:01, 08:02:04-08:02:09, 08:15:01-08:15:02, 08:17-08:19, 08:23, 08:27-08:35, 08:37, 08:43, 08:45, 08:48-08:49, 08:51-08:53, 08:55N, 08:62-08:63, 08:67-08:71, 08:74, 14:08, 16:01:01, 16:01:03-16:01:13, 16:06-16:08, 16:10-16:11, 16:16Q-16:18, 16:20-16:24, 16:26-16:28, 16:30N-16:32, 16:34, 16:38-16:39, 16:41, 16:43-16:45, 16:49-16:52, 16:54					5							12				
*02:42				4	5		7							14		
*02:49, 04:03, 04:06, 04:16, 04:103, 05:42	1			4			7									
*02:55, 04:107, 05:46, 16:25	1			4			7		9							
*02:56, 05:81				4	5		7									
*02:65, 05:20				4	5		7									
*03:08, 03:29, 03:31						6										
*03:15	1			4												
*03:27, B*07:13	1								9							
*03:38:01-03:38:02	1								9							
*03:53	1															
*03:69, 03:136	1															
*03:102, 07:24, 07:81, 07:168, 07:218																
*03:104, 07:01:20, 07:01:27, 07:02:38, B*18:77, B*40:29																
*03:130	1			4					9							
*03:140, 07:49, 07:210, 07:238, 07:247				4												
*03:163	1			4					9							
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.624-12 – including *Taq* polymerase, IFU-01
 101.624-12u – without *Taq* polymerase, IFU-02

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

Lot No.: **26S**

Lot-specific information

565	145	100	105	250	110	140	185	80	355	100	275	125	90	120	50	Length of spec. PCR product(s)
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
	165		170		590		425	155		155	350	185	230	145	115	*02:27:01-02:27:02, 03:04:25, 04:11, 04:36, 04:55, 08:02:01, 08:02:04-08:02:09, 08:15:01-08:15:02, 08:17-08:19, 08:23, 08:27-08:35, 08:37, 08:43, 08:45, 08:48-08:49, 08:51-08:53, 08:55N, 08:62-08:63, 08:67-08:71, 08:74, 14:08, 16:01:01, 16:01:03-16:01:13, 16:06-16:08, 16:10-16:11, 16:16Q-16:18, 16:20-16:24, 16:26-16:28, 16:30N-16:32, 16:34, 16:38-16:39, 16:41, 16:43-16:45, 16:49-16:52, 16:54
	245		220							205		210		190		*02:42
	270															*02:49, 04:03, 04:06, 04:16, 04:103, 05:42
																*02:55, 04:107, 05:46, 16:25
											28					*02:56, 05:81
															32	*02:65, 05:20
																*03:08, 03:29, 03:31
																*03:15
																*03:27, B*07:13
								26								*03:38:01-03:38:02
18																*03:53
								26								*03:69, 03:136
											28					*03:102, 07:24, 07:81, 07:168, 07:218
	19															*03:104, 07:01:20, 07:01:27, 07:02:38, B*18:77, B*40:29
								26							32	*03:130
															32	*03:140, 07:49, 07:210, 07:238, 07:247
								26								*03:163
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.



101.624-12 – including *Taq* polymerase, IFU-01101. 624-12u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **26S**

Lot-specific information

Length of spec.	235	100	220	340	130	75	140	95	95	155	220	140	105	100	140	185
PCR product(s)						150		155					150	145		225
						415		195								
								245								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*04:01:01:01-04:01:04, 04:01:06-04:01:09, 04:01:11- 04:01:22, 04:01:24-04:01:28, 04:01:30-04:01:48, 04:04:01- 04:05, 04:07-04:09N, 04:13- 04:15:03, 04:17-04:20, 04:23- 04:28, 04:30-04:32, 04:34- 04:35, 04:38-04:54, 04:56- 04:57, 04:59Q-04:79, 04:81- 04:99, 04:101-04:102, 04:104- 04:106, 04:108-04:111, 04:113, 04:115N-04:129, 04:131-04:139, 04:141-04:144				4			7									
*04:01:05				4			7						13			
*04:12				4			7									
*04:29, 08:02:03												12				
*04:33				4			7		9							
*04:37				4			7				11					
*04:58				4			7									16
*04:80	1			4			7									
*04:100				4			7									
*04:112				4		6	7									
*04:114				4			7									
*04:140				4			7						14			
*05:01:24				4	w		w									
*05:11, 05:17, 05:27, 05:68, 05:79, 08:10, 15:02:01- 15:02:09, 15:02:11-15:02:13, 15:02:15, 15:04-15:06:03, 15:09-15:13, 15:15, 15:17- 15:19, 15:22-15:24, 15:26- 15:42, 15:44, 15:46-15:50, 15:52-15:62, 15:64, 15:66, 16:48				4	5		7									
*05:23, 05:62				4	5		7									16
*05:36				4	5	6	7									
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.624-12 – including *Taq* polymerase, IFU-01
 101. 624-12u – without *Taq* polymerase, IFU-02

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

Lot No.: **26S**

Lot-specific information

565	145	100	105	250	110	140	185	80	355	100	275	125	90	120	50	Length of spec. PCR product(s)
	165		170		590		425	155		155	350	185	230	145	115	
	245		220							205				190		
	270															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																*04:01:01-04:01:04, 04:01:06-04:01:09, 04:01:11- 04:01:22, 04:01:24-04:01:28, 04:01:30-04:01:48, 04:04:01- 04:05, 04:07-04:09N, 04:13- 04:15:03, 04:17-04:20, 04:23- 04:28, 04:30-04:32, 04:34- 04:35, 04:38-04:54, 04:56- 04:57, 04:59Q-04:79, 04:81- 04:99, 04:101-04:102, 04:104- 04:106, 04:108-04:111, 04:113, 04:115N-04:129, 04:131-04:139, 04:141-04:144
							24	25								*04:01:05
	18															*04:12
																*04:29, 08:02:03
																*04:33
																*04:37
																*04:58
									26							*04:80
									26							*04:100
																*04:112
															32	*04:114
																*04:140
																*05:01:24
				21												*05:11, 05:17, 05:27, 05:68, 05:79, 08:10, 15:02:01- 15:02:09, 15:02:11-15:02:13, 15:02:15, 15:04-15:06:03, 15:09-15:13, 15:15, 15:17- 15:19, 15:22-15:24, 15:26- 15:42, 15:44, 15:46-15:50, 15:52-15:62, 15:64, 15:66, 16:48
																*05:23, 05:62
																*05:36
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.



101.624-12 – including *Taq* polymerase, IFU-01101. 624-12u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **26S**

Lot-specific information

Length of spec.	235	100	220	340	130	75	140	95	95	155	220	140	105	100	140	185
PCR product(s)						150		155					150	145		225
						415		195								
								245								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*06:02:01:01-06:02:01:02, 06:02:03-06:02:11, 06:02:13- 06:02:15, 06:02:17-06:02:25, 06:07-06:10, 06:12-06:13, 06:15-06:19, 06:21-06:29, 06:31-06:34, 06:36-06:39, 06:42-06:43, 06:45-06:51, 06:53:01-06:71, 06:73-06:75, 06:77-06:78, 06:80, 06:83- 06:86, 06:88-06:96			3	4												
*06:03:01-06:03:02, 06:76:01	1		3	4												
*06:04, 15:02:10				4												
*06:05				4	5		7				11			w		
*06:14				4												
*06:20, 06:87			3	4												
*06:30			3	4					9							
*06:41			3	4												
*06:44			3	4		6										
*06:76:02	1		3	4			7			10						
*06:82			3	4												
*07:02:09												12		14		
*07:07				4					9							
*07:10, 07:43, 07:196																
*07:16, 07:51, 07:181									9							
*07:26, 07:92, 07:96:01- 07:96:02, B*07:15, B*07:160	1															
*07:204, A*02:211:01, A*68:46, A*68:76																
*07:214																
*08:01:01-08:01:09, 08:03:01- 08:04:03, 08:06, 08:08-08:09, 08:11, 08:13, 08:16:01- 08:16:02, 08:20, 08:22, 08:24, 08:26N, 08:36N, 08:38-08:42, 08:44, 08:46, 08:50, 08:54, 08:56-08:61, 08:65-08:66, 08:72, 15:07, 16:35, 16:40					5							12				
*08:02:02					5							12				
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.624-12 – including *Taq* polymerase, IFU-01
 101. 624-12u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **26S**

Lot-specific information

565	145	100	105	250	110	140	185	80	355	100	275	125	90	120	50	Length of spec. PCR product(s)
	165		170		590		425	155		155	350	185	230	145	115	
	245		220							205		210		190		
	270															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																*06:02:01:01-06:02:01:02, 06:02:03-06:02:11, 06:02:13- 06:02:15, 06:02:17-06:02:25, 06:07-06:10, 06:12-06:13, 06:15-06:19, 06:21-06:29, 06:31-06:34, 06:36-06:39, 06:42-06:43, 06:45-06:51, 06:53:01-06:71, 06:73-06:75, 06:77-06:78, 06:80, 06:83- 06:86, 06:88-06:96
				21												*06:03:01-06:03:02, 06:76:01 *06:04, 15:02:10 *06:05
								26								*06:14
										28						*06:20, 06:87 *06:30
												30				*06:41
							24									*06:44 *06:76:02
															32	*06:82 *07:02:09
																*07:07 *07:10, 07:43, 07:196 *07:16, 07:51, 07:181
								26								*07:26, 07:92, 07:96:01- 07:96:02, B*07:15, B*07:160
															32	*07:204, A*02:211:01, A*68:46, A*68:76
										27						*07:214
				21												*08:01:01-08:01:09, 08:03:01- 08:04:03, 08:06, 08:08-08:09, 08:11, 08:13, 08:16:01- 08:16:02, 08:20, 08:22, 08:24, 08:26N, 08:36N, 08:38-08:42, 08:44, 08:46, 08:50, 08:54, 08:56-08:61, 08:65-08:66, 08:72, 15:07, 16:35, 16:40
								25								*08:02:02
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.



101.624-12 – including *Taq* polymerase, IFU-01101.624-12u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

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Lot No.: **26S**

Lot-specific information

Length of spec.	235	100	220	340	130	75	140	95	95	155	220	140	105	100	140	185
PCR product(s)						150		155					150	145		225
						415		195								
								245								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*08:05, 08:25, 16:15:01	1								9			12				
*08:07, 08:47					5							12				16
*08:12, 14:02:03, 14:03, 14:10, 14:22, 14:35N, 14:38, 14:41, 16:53					5						11	12				
*08:14					5							12		14		
*08:73, B*35:08:02, B*35:08:05												12				15
*14:02:08										10	11		13			
*14:04				4					9		11					
*15:02:14				4	5		7	8								
*15:03, 15:16	1			4			7		9							
*15:21					5							w				
*15:25	1											12				
*15:45				4	w		7									
*15:63				4	5		7							14		
*15:65				4	5		7									16
*16:04:01, 16:29, 16:33, 16:42, 16:55			3		5							12				
*16:13					5							12				
*16:14					5		8					12				
*16:15:02	1								9	10		12				
*16:36					5							12				
*16:37					5							w				
*17:01:01:01-17:01:03, 17:01:05-17:10, 17:12-17:14, 17:16, 17:18-17:19	1			4					9							16
*17:01:04	1			4			7		9							16
*17:11, 17:15	1			4												16
*17:17	1			4					9							16
A*26:67, A*68:95																
B*57:50																
B*67:02	1								9			12		14		
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.624-12 – including *Taq* polymerase, IFU-01101.624-12u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **26S**

Lot-specific information

565	145	100	105	250	110	140	185	80	355	100	275	125	90	120	50	Length of spec. PCR product(s)
	165		170		590		425	155		155	350	185	230	145	115	
	245		220							205		210		190		
	270															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																*08:05, 08:25, 16:15:01
																*08:07, 08:47
																*08:12, 14:02:03, 14:03, 14:10, 14:22, 14:35N, 14:38, 14:41, 16:53
				21												*08:14
																*08:73, B*35:08:02, B*35:08:05
17																*14:02:08
															32	*14:04
				21	22											*15:02:14
				21					26							*15:03, 15:16
				21												*15:21
									26							*15:25
				21												*15:45
				21												*15:63
				21												*15:65
																*16:04:01, 16:29, 16:33, 16:42, 16:55
											28					*16:13
																*16:14
																*16:15:02
						23										*16:36
																*16:37
				21												*17:01:01:01-17:01:03, 17:01:05-17:10, 17:12-17:14, 17:16, 17:18-17:19
				21												*17:01:04
				21												*17:11, 17:15
																*17:17
														31		A*26:67, A*68:95
												29				B*57:50
																B*67:02
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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Lot No.: 26S**Lot-specific information**

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-C*12 SSP subtyping.

In addition, wells number 3, 7 and 26 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band.

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

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

⁴The HLA-Cw*1201 nucleotide sequence has been shown to be identical to C*12:02:02.

⁵HLA-C*12 alleles in bold lettering are listed as confirmed alleles on the IMGT/HLA web page www.ebi.ac.uk/imgt/hla, release 3.11.0, January 2013.

⁶The HLA-C*12 primer set cannot separate the C*12:09, C*05:16 and C*05:85 alleles. These alleles can be distinguished by the HLA-C low resolution kit and the HLA-C*01, HLA-C*02 or HLA-C*05 kit.

⁷The HLA-C*12 primer set cannot separate the C*12:16 and C*01:21 alleles. These alleles can be distinguished by the HLA-C low resolution kit and the HLA-C*02 kit.

⁸The HLA-C*12 primer set cannot separate the C*12:18:02 and C*08:21. These alleles can be distinguished by the HLA-C low resolution kit and the HLA-C*08 kit.

⁹The HLA-C*12 primer set cannot separate the C*12:33 and the C*02:05 and C*02:17 alleles. These alleles can be distinguished by the HLA-C low resolution kit and the HLA-C*02 kit.

¹⁰The C*12:06, 12:48 and 12:81 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 6.

¹¹The C*12:29 and 12:38 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 29.

¹²The C*12:30 and 12:36 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 27.

¹³The C*12:32 and 12:34 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 30.

¹⁴The C*12:45 and 12:50 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 28.

¹⁵Primer mix 6: Specific PCR fragment of 75 bp in the C*12:48 allele. Specific PCR fragment of 150 bp in the C*12:06 allele. Specific PCR fragment of 415 bp in the C*12:08 and 12:81 and in the C*03:08, 03:29, 03:31, 04:112, 05:36 and 06:44 alleles.

Primer mix 8: Specific PCR fragment of 95 bp in the C*12:15 and the C*15:02:14 alleles. Specific PCR fragment of 155 bp in the C*12:40 and in the C*16:14 alleles. Specific PCR fragment of 195 bp in the C*12:80N allele. Specific PCR fragment of 245 bp in the C*12:07 allele.

Primer mix 13: Specific PCR fragment of 105 bp in the C*12:31 allele. Specific PCR fragment of 150 bp in the C*12:10:01-12:10:02 and C*14:02:08 alleles. PCR fragment of 105 and 150 bp in the C*04:01:05 allele.

Primer mix 14: Specific PCR fragment of 100 bp in the C*12:16 and the C*01:21, 02:42, 04:140, 06:05^w, 07:02:09, 08:14, 15:63 and in the B*67:02 alleles. Specific PCR fragment of 145 bp in the C*12:11 allele.

Primer mix 16: Specific PCR fragment of 185 bp in the C*12:13 allele. Specific PCR fragment of 225 bp in C*12:14:01-12:14:02 and the C*01:60, 04:58, 05:23, 05:62, 08:07, 08:47, 14:17, 15:65 and 17:01:01:01-17:19 alleles.

Primer mix 18: Specific PCR fragment of 145 bp in the C*04:12 allele. Specific PCR fragment of 245 bp in C*03:53 allele. Specific PCR fragments of 145 bp and 245 bp in the C*12:17 and C*12:27 alleles. Specific PCR fragment of 165 and 270 bp in C*12:35 allele. All specific bands may not always be visible.

Primer mix 20: Specific PCR fragment of 105 bp in the C*12:46N allele. Specific PCR fragment of 170 bp in the C*12:22 allele. Specific PCR fragment of 220 bp in C*12:19 allele.

101.624-12 – including *Taq* polymerase, IFU-01
101. 624-12u – without *Taq* polymerase, IFU-02

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Lot No.: 26S**Lot-specific information**

Primer mix 22: Specific PCR fragment of 95 bp in the C*12:15 and the C*15:02:14 alleles
Specific PCR fragment of 110 bp in the C*12:23 allele. Specific PCR fragments of 590 bp in C*12:21 allele.

Primer mix 24: Specific PCR fragment of 185 bp in the C*12:43 allele. Specific PCR fragment of 425 bp in C*12:28 and the C*04:01:05 and 06:76:02 alleles.

Primer mix 25: Specific PCR fragment of 80 bp in the C*12:39N allele. Specific PCR fragment of 155 bp in the C*12:02:06, 12:02:08 and 12:21 and the C*04:01:05 and 08:02:02 alleles.

Primer mix 27: Specific PCR fragment of 100 bp in the C*12:30 and the C*07:214 alleles. Specific PCR fragment of 155 bp in the C*12:03:19 and the C*01:04 alleles. Specific PCR fragment of 205 bp in C*12:36 allele.

Primer mix 28: Specific PCR fragment of 275 bp in the C*12:50 and the C*01:32, 02:56, 03:102, 06:20, 07:81 and 07:168 alleles. Specific PCR fragment of 350 bp in C*12:45 and the C*05:81, 06:87, 07:24, 07:218 and 16:13 alleles.

Primer mix 29: Specific PCR fragment of 125 bp in the C*12:38 and the B*57:50 alleles. Specific PCR fragment of 185 bp in the C*12:42Q allele. Specific PCR fragments of 210 bp in C*12:29 and 12:86 alleles.

Primer mix 30: Specific PCR fragment of 90 bp in the C*12:32 and in the C*06:41 alleles. Specific PCR fragment of 230 bp in C*12:34 allele.

Primer mix 31: Specific PCR fragment of 120 bp in the C*12:47 and the A*26:67 and A*68:95 alleles. Specific PCR fragment of 145 bp in the C*12:84N allele. Specific PCR fragment of 190 bp in the C*12:42Q and 12:80N alleles.

Primer mix 32: Specific PCR fragment of 50 bp in the C*12:54 and the C01:59, 02:65, 03:130, 03:140, 04:114, 05:20, 06:82, 07:49, 07:210, 07:238, 07:247 and 14:04 and in the A*68:46 alleles. Specific PCR fragment of 115 bp in C*12:37 and the C*07:204 and in the A*02:211:01 and A*68:76 allele.

‘w’, might be weakly amplified.

101.624-12 – including *Taq* polymerase, IFU-01
 101.624-12u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **26S**

Lot-specific information

CELL LINE VALIDATION SHEET																				
HLA-C*12 SSP primer set																				
				Well																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				Prod. No.:	201182801	201317702	200968403	200968404	200968405	201182806	200968407	201317708	201182809	201182810	200968411	200968412	201182813	200968414	201317715	201182816
IHCW cell line		C*																		
1	9001	SA	*07:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*07:01	*15:05	-	-	-	+	+	-	+	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*12:02		+	+	-	-	-	-	-	-	+	-	-	+	-	-	-	-
4	9275	GU373	*03:04	*04:01	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*06:02		-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*03:04	*07:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*05:01		-	-	-	+	+	-	+	-	-	-	-	-	-	-	-	-
8	9025	DEU	*04:01		-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-
9	9026	YAR	*12:03		+	-	+	-	-	-	-	-	+	+	-	+	-	-	-	-
10	9107	LKT3	*01:02		-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
11	9051	PITOUT	*16:01		-	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-
12	9052	DBB	*06:02		-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*01:02		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
14	9071	OLGA	*01:02	*03:04	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
15	9075	DKB	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*02:02		-	-	-	+	+	-	+	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*03:03	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*01:02	*07:05	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
19	9038	BM16	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*12:03		+	-	+	-	-	-	-	-	+	+	-	+	-	-	-	-
23	9124	IHL	*01:02	*15:02	-	-	-	+	+	-	+	-	-	-	+	-	-	-	-	-
24	9035	JBUSH	*12:03		+	-	+	-	-	-	-	-	+	+	-	+	-	-	-	-
25	9049	IBW9	*08:02		-	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-
26	9285	WT49	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*07:04	*15:05	-	-	-	+	+	-	+	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*05:01	*16:01	-	-	-	+	+	-	+	-	-	-	-	+	-	-	-	-
29	9050	MOU	*16:01		-	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-
30	9021	RSH	*17:01		+	-	-	+	-	-	-	-	+	-	-	-	-	-	-	+
31	9019	DUCAF	*05:01		-	-	-	+	+	-	+	-	-	-	-	-	-	-	-	-
32	9297	HAG	*17:01	*17:03	+	-	-	+	-	-	-	-	+	-	-	-	-	-	-	+
33	9098	MT14B	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*12:03		+	-	+	-	-	-	-	-	+	+	-	+	-	-	-	-
35	9302	SSTO	*05:01		-	-	-	+	+	-	+	-	-	-	-	-	-	-	-	-
36	9024	KT17	*03:03	*04:01	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*02:02	*07:01	-	-	-	+	+	-	+	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*01:02	*06:02	-	-	+	+	-	-	-	-	-	-	+	-	-	-	-	-
41	9055	H0301	*08:02		-	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-
42	9066	TAB089	*01:02		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
43	9076	T7526	*01:02	*08:01	-	-	-	-	+	-	-	-	-	-	+	+	-	-	-	-
44	9057	TEM	*12:03		+	-	+	-	-	-	-	-	+	+	-	+	-	-	-	-
45	9239	SHJO	*06:02	*17:01	+	-	+	+	-	-	-	-	+	-	-	-	-	-	-	+
46	9013	SCHU	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*07:04	*15:02	-	-	-	+	+	-	+	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*04:01	*16:01	-	-	-	+	+	-	+	-	-	-	-	+	-	-	-	-



101.624-12 – including *Taq* polymerase, IFU-01
 101. 624-12u – without *Taq* polymerase, IFU-02

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Lot No.: **26S**

Lot-specific information

CELL LINE VALIDATION SHEET																				
HLA-C*12 SSP primer set																				
				Well																
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
				Prod. No.:	200968417	201182818	200968419	201182820	200968421	201317722	201298623	201182824	201317725	201182826	201317727	201182828	201182829	201298630	201317731	201298632
IHCW cell line			C*																	
1	9001	SA	*07:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*07:01	*15:05	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*12:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*03:04	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*03:04	*07:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*04:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*01:02	*03:04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*03:03	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*01:02	*07:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*01:02	*15:02	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*08:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*07:04	*15:05	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*05:01	*16:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*17:01		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
31	9019	DUCAF	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*17:01	*17:03	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*03:03	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*02:02	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*01:02	*06:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*08:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*01:02	*08:01	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*06:02	*17:01	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*07:04	*15:02	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*04:01	*16:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



101.624-12 – including *Taq* polymerase, IFU-01101.624-12u – without *Taq* polymerase, IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **26S**

Lot-specific information

CERTIFICATE OF ANALYSIS**Olerup SSP® HLA-C*12 SSP**Product number: **101.624-12 – including *Taq* polymerase****101.624-12u – without *Taq* polymerase**Lot number: **26S**Expiry date: **2015-October-01**Number of tests: **12**Number of wells per test: **32****Well specifications:**

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2011-828-01	13	2011-828-13	25	2013-177-25
2	2013-177-02	14	2009-684-14	26	2011-828-26
3	2009-684-03	15	2013-177-15	27	2013-177-27
4	2009-684-04	16	2011-828-16	28	2011-828-28
5	2009-684-05	17	2009-684-17	29	2011-828-29
6	2011-828-06	18	2011-828-18	30	2012-986-30
7	2009-684-07	19	2009-684-19	31	2013-177-31
8	2013-177-08	20	2011-828-20	32	2012-986-32
9	2011-828-09	21	2009-684-21		
10	2011-828-10	22	2013-177-22		
11	2009-684-11	23	2012-986-23		
12	2009-684-12	24	2011-828-24		

The specificity of each primer solution of the HLA-C*12 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, 8, 13 to 15, 17 to 20 and 22 to 32 were available. The specificities of the primers in primer solutions 6, 8, 13 to 15, 17, 19, 22, 24 to 28 and 32 were tested by separately adding additional 5'-primers, respectively additional 3'-primers.

In primer solutions 18, 20, 23, 29 and 31 it was only possible to test the 5'-primer, the 3'-primer was not possible to test.

In primer solution 30 it were only possible to test the 3'-primer, the 5'-primer was not possible to test.

In primer solutions 6, 14, 19, 25, 27 and 28 one or two 5'-primers were not possible to test, and in primer solutions 1, 8, 16, 22 and 24 one or two 3'-primers were not possible to test.

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

Date of approval: 2013-May-02

Approved by:

Production Quality Control

101.624-12 – including *Taq* polymerase, IFU-01
101. 624-12u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **26S**

Lot-specific information

Declaration of Conformity

Product name: *Olerup* SSP® HLA-C*12
Product number: 101.624-12/12u
Lot number: 26S

Intended use: HLA-C*12 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 III, as transposed into the national laws of the Member States of the European Union.

The Technical Documentation File is maintained at *Olerup* SSP AB, Franzengatan 5, SE-112 51 Stockholm, Sweden.

Stockholm, Sweden
2013-May-02

Ann-Cathrin Jareman
Head of QA and Regulatory Affairs

101.624-12 – including *Taq* polymerase, IFU-01
101. 624-12u – without *Taq* polymerase, IFU-02

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Lot No.: **26S**

Lot-specific information

101.624-12 – including *Taq* polymerase, IFU-01
101. 624-12u – without *Taq* polymerase, IFU-02

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101.624-12 – including *Taq* polymerase, IFU-01
101. 624-12u – without *Taq* polymerase, IFU-02

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

Lot No.: **26S**

Lot-specific information

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