

101.519-12 – including *Taq* pol., IFU-01
101.519-12u – without *Taq* pol., IFU-02

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

Lot No.: **95S**

Lot-specific information

***Olerup SSP*[®] HLA-B*18**

Product number:	101.519-12 – including <i>Taq</i> polymerase 101.519-12u – without <i>Taq</i> polymerase
Lot number:	95S
Expiry date:	2016-April-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. 95S.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*[®] HLA-B*18 LOT (31R)

The HLA-B*18 kit is updated for new alleles to enable separation of:

- Confirmed¹ alleles as listed in the IMGT/HLA database
- Polymorphisms in exons outside of the region encoding the peptide binding domain
- Null and Alternatively expressed alleles

The Lot-specific information for HLA-B*18 including and without *Taq* polymerase is now described in one common Product Insert.

¹As described in section Uniquely Identified Alleles.

The HLA-B*18 specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup SSP*[®] HLA-B*18 lot was made (Lot No. 31R).

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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
4	Added	-	5'-primer added for increased yield of HLA-specific PCR product.
5	Added	-	5'-primer added for the B*18:72 allele.
7	-	Added	3'-primer added for the B*18:74N allele.
8	Added	Added	Primer pair added for the B*18:81 allele.
12	-	Added	3'-primer added for the B*18:77 allele.
22	-	Added	3'-primer added for the B*18:77 allele.
25	-	Added	3'-primer added for the B*18:54 allele.
26	-	-	Exchanged positive control primer pair, for decreased tendencies of primer oligomer formation.

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PRODUCT DESCRIPTION

HLA-B*18 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*18:01 to B*18:91 alleles.

PLATE LAYOUT

Each 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 cut PCR plate is marked with 'HLA-B*18' in silver/gray ink.

Well No. 1 is marked with the Lot No. '95S'.

A faint row of numbers is seen between wells 1 and 2 or wells 7 and 8 of the PCR trays. These stem from the manufacture of the trays, and should be disregarded.

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

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

INTERPRETATION

The interpretation of HLA-B*18 SSP subtypings will be influenced by most B*07, most B*08, twelve B*13, the B*14, several B*15, most B*27, several B*35, most B*37, most B*38, most B*39, several B*40, most B*41, most B*42, most B*44, most B*45, six B*46, the B*47, eight B*48, most B*49, the B*50, most B*51, most B*52, four B*53, most B*54, most B*55, ten B*56, nine B*57, six B*58, most B*59, the B*67, the B*73:01, most B*78 and the B*83:01 alleles when present on the other haplotype. In addition, the A*24:02:37 and A*26:01:16 alleles will be amplified by primer mixes 11 and 26, the A*24:220 allele will be amplified by primer mix 9, the A*26:68, C*01:09, C*02:02:14, C*06:02:27, C*07:22, C*07:138 and C*12:03:16 alleles will be amplified by primer mix 16, the A*66:04 allele will be weakly amplified by primer mix 13, the C*01:30 and C*12:87 alleles will be amplified by primer mixes 13 and 15, the C*02:02:19, C*02:06, C*02:23, C*02:36 and C*15:42 alleles will be amplified by primer mix 8, the C*08:51 allele will be amplified by primer mixes 2, 13 and 15, the C*15:24 allele will be amplified by primer mix 24 and the C*15:39 allele will be amplified by primer mixes 15, 21 and 22.

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UNIQUELY IDENTIFIED ALLELES

All the HLA-B*18 alleles, i.e. **B*18:01 to B*18:91**, recognized by the HLA Nomenclature Committee in July 2013 will be amplified by the primers in the HLA-B*18 subtyping kit¹.

The HLA-B*18 kit enables separation of the confirmed HLA-B*18 alleles as listed in the IMGT/HLA database. An HLA allele is listed as confirmed by IMGT/HLA if it has been sequenced by more than a single laboratory or from multiple sources. Current allele confirmation status for HLA-B*18 alleles is listed below.

The HLA-B*18 kit also enables identification of polymorphisms in exons outside of the region encoding the peptide binding domain and of null and alternatively expressed alleles

The HLA-B*18 kit cannot distinguish the silent mutations in the B*18:01:01-18:01:18, the B*18:07:01-18:07:02 or the B*18:44:01-18:44:02 alleles.

The B*18:34 and 18:52 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 30.

The B*18:36 and 18:67 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 11.

The B*18:37 and 18:46 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 27.

The B*18:38 and 18:45 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 28.

The B*18:40 and 18:51 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 23.

The B*18:42 and 18:43 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 26.

¹HLA-B alleles listed on the IMGT/HLA web page 2013-July-25, release 3.13.1, www.ebi.ac.uk/imgt/hla.

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ALLELE CONFIRMATION STATUS

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

¹ Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2013-July-25, release 3.13.1, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 110 alleles generate 59 amplification patterns that can be combined in 1770 homozygous and heterozygous combinations. 968 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.

```

+-----+ --+----- ----- +-----+ *18:10, *18:10 = *18:10, *18:11
-+----- --+----- ----+---- +-----+ *18:09, *18:54 = *18:54, *18:54
+-----+ --+----- ----- +-----+ *18:10, *18:35 = *18:11, *18:35 = *18:35, *18:35
++----- ----- ----+---- -----+ *18:01:01:01, *18:28 = *18:28, *18:28
++----- ----- ----+---- -----+ *18:01:01:01, *18:49 = *18:49, *18:49
++----- ----- ----+---- -----+ *18:01:01:01, *18:34 = *18:34, *18:34
++----- ----- ----+---- -----+ *18:01:01:01, *18:47 = *18:47, *18:47
++----- ----- ----+---- -----+ *18:01:01:01, *18:38 = *18:38, *18:38
++----- ----- ----+---- -----+ *18:01:01:01, *18:37 = *18:37, *18:37
++----- ----- ----+---- -----+ *18:01:01:01, *18:42 = *18:42, *18:42

```

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++-----	-----	-----	+	-----	*18:01:01:01, *18:48 = *18:48, *18:48
++-----	-----	-----	+	-----	*18:01:01:01, *18:26 = *18:26, *18:26
++-----	-----	-----	+	-----	*18:01:01:01, *18:40 = *18:40, *18:40
++-----	-----	-----	+	-----	*18:01:01:01, *18:22 = *18:01:01:01, *18:33 = *18:22, *18:33 = *18:33, *18:33
++-----	-----	-----	+	-----	*18:01:01:01, *18:06 = *18:01:01:01, *18:39 = *18:06, *18:06 = *18:06, *18:39
++-----	-----	-----	+	-----	*18:01:01:01, *18:29 = *18:01:01:01, *18:32 = *18:29, *18:32 = *18:32, *18:32
++-----	-----	-----	+	-----	*18:01:01:01, *18:18 = *18:18, *18:18
++-----	-----	-----	+	-----	*18:01:01:01, *18:17N = *18:17N, *18:17N
++-----	-----	-----	+	-----	*18:01:01:01, *18:14 = *18:01:01:01, *18:68 = *18:14, *18:68 = *18:68, *18:68
++-----	-----	-----	+	-----	*18:01:01:01, *18:13 = *18:01:01:01, *18:44:01 = *18:13, *18:13 = *18:13, *18:44:01
++-----	-----	-----	+	-----	*18:01:01:01, *18:12 = *18:12, *18:12
++-----	-----	-----	+	-----	*18:01:01:01, *18:09 = *18:01:01:01, *18:11 = *18:01:01:01, *18:36 = *18:09, *18:11 = *18:09, *18:36 = *18:11, *18:36 = *18:36, *18:36
++-----	-----	-----	+	-----	*18:01:01:01, *18:23N = *18:23N, *18:23N
++-----	-----	-----	+	-----	*18:01:01:01, *18:08 = *18:01:01:01, *18:27 = *18:08, *18:08 = *18:08, *18:27
++-----	-----	-----	+	-----	*18:01:01:01, *18:81 = *18:81, *18:81
++-----	-----	-----	+	-----	*18:01:01:01, *18:07:01 = *18:07:01, *18:07:01
++-----	-----	-----	+	-----	*18:01:01:01, *18:05 = *18:05, *18:05
++-----	-----	-----	+	-----	*18:01:01:01, *18:24 = *18:01:01:01, *18:72 = *18:24, *18:24 = *18:24, *18:72
++-----	-----	-----	+	-----	*18:10, *18:21 = *18:11, *18:21 = *18:21, *18:21
++-----	-----	-----	+	-----	*18:01:01:01, *18:78 = *18:37, *18:38 = *18:37, *18:78 = *18:38, *18:78 = *18:78, *18:78
++-----	-----	-----	+	-----	*18:01:01:01, *18:61 = *18:26, *18:40 = *18:26, *18:61 = *18:40, *18:61 = *18:61, *18:61
++-----	-----	-----	+	-----	*18:22, *18:28 = *18:28, *18:33
++-----	-----	-----	+	-----	*18:22, *18:49 = *18:33, *18:49
++-----	-----	-----	+	-----	*18:22, *18:34 = *18:33, *18:34
++-----	-----	-----	+	-----	*18:22, *18:47 = *18:33, *18:47
++-----	-----	-----	+	-----	*18:22, *18:38 = *18:33, *18:38
++-----	-----	-----	+	-----	*18:22, *18:37 = *18:33, *18:37
++-----	-----	-----	+	-----	*18:22, *18:42 = *18:33, *18:42
++-----	-----	-----	+	-----	*18:22, *18:48 = *18:33, *18:48
++-----	-----	-----	+	-----	*18:22, *18:26 = *18:26, *18:33
++-----	-----	-----	+	-----	*18:22, *18:40 = *18:33, *18:40
++-----	-----	-----	+	-----	*18:20, *18:22 = *18:20, *18:33
++-----	-----	-----	+	-----	*18:06, *18:28 = *18:28, *18:39
++-----	-----	-----	+	-----	*18:06, *18:49 = *18:39, *18:49
++-----	-----	-----	+	-----	*18:06, *18:34 = *18:34, *18:39
++-----	-----	-----	+	-----	*18:06, *18:47 = *18:39, *18:47
++-----	-----	-----	+	-----	*18:06, *18:38 = *18:38, *18:39
++-----	-----	-----	+	-----	*18:06, *18:37 = *18:37, *18:39
++-----	-----	-----	+	-----	*18:06, *18:42 = *18:39, *18:42
++-----	-----	-----	+	-----	*18:06, *18:48 = *18:39, *18:48
++-----	-----	-----	+	-----	*18:06, *18:26 = *18:26, *18:39
++-----	-----	-----	+	-----	*18:01:01:01, *18:53 = *18:06, *18:40 = *18:06, *18:53 = *18:39, *18:40 = *18:39, *18:53 = *18:40, *18:53 = *18:53, *18:53
++-----	-----	-----	+	-----	*18:06, *18:22 = *18:06, *18:33 = *18:33, *18:39
++-----	-----	-----	+	-----	*18:06, *18:20 = *18:20, *18:39
++-----	-----	-----	+	-----	*18:28, *18:29 = *18:28, *18:32
++-----	-----	-----	+	-----	*18:29, *18:49 = *18:32, *18:49
++-----	-----	-----	+	-----	*18:29, *18:34 = *18:32, *18:34
++-----	-----	-----	+	-----	*18:29, *18:47 = *18:32, *18:47
++-----	-----	-----	+	-----	*18:29, *18:38 = *18:32, *18:38
++-----	-----	-----	+	-----	*18:29, *18:37 = *18:32, *18:37
++-----	-----	-----	+	-----	*18:29, *18:42 = *18:32, *18:42
++-----	-----	-----	+	-----	*18:29, *18:48 = *18:32, *18:48

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++-----	-----	-+-----	-----	*18:26, *18:29 = *18:26, *18:32
++-----	-----	-+-----	-----	*18:29, *18:40 = *18:32, *18:40
++-----	-----	-+-----	-----	*18:22, *18:29 = *18:22, *18:32 = *18:29, *18:33 = *18:32, *18:33
++-----	-----	-+-----	-----	*18:20, *18:29 = *18:20, *18:32
++-----	-----	-+-----	-----	*18:06, *18:29 = *18:06, *18:32 = *18:29, *18:39 = *18:32, *18:39
++-----	-----	-+-----	-----	*18:18, *18:22 = *18:18, *18:33
++-----	-----	-+-----	-----	*18:06, *18:18 = *18:18, *18:39
++-----	-----	-+-----	-----	*18:18, *18:29 = *18:18, *18:32
++-----	-----	-+-----	-----	*18:17N, *18:22 = *18:17N, *18:33
++-----	-----	-+-----	-----	*18:06, *18:17N = *18:17N, *18:39
++-----	-----	-+-----	-----	*18:17N, *18:29 = *18:17N, *18:32
++-----	-----	-+-----	-----	*18:01:01:01, *18:15 = *18:15, *18:15 = *18:15, *18:29 = *18:15, *18:32
++-----	-----	-+-----	-----	*18:01:01:01, *18:31 = *18:18, *18:31 = *18:31, *18:31
++-----	-----	-+-----	-----	*18:14, *18:28 = *18:28, *18:68
++-----	-----	-+-----	-----	*18:14, *18:49 = *18:49, *18:68
++-----	-----	-+-----	-----	*18:14, *18:34 = *18:34, *18:68
++-----	-----	-+-----	-----	*18:14, *18:47 = *18:47, *18:68
++-----	-----	-+-----	-----	*18:14, *18:38 = *18:38, *18:68
++-----	-----	-+-----	-----	*18:14, *18:37 = *18:37, *18:68
++-----	-----	-+-----	-----	*18:01:01:01, *18:25 = *18:14, *18:25 = *18:14, *18:42 = *18:25, *18:25 =
++-----	-----	-+-----	-----	*18:25, *18:42 = *18:25, *18:68 = *18:42, *18:68
++-----	-----	-+-----	-----	*18:14, *18:48 = *18:48, *18:68
++-----	-----	-+-----	-----	*18:14, *18:26 = *18:26, *18:68
++-----	-----	-+-----	-----	*18:14, *18:40 = *18:40, *18:68
++-----	-----	-+-----	-----	*18:14, *18:33 = *18:22, *18:68 = *18:33, *18:68
++-----	-----	-+-----	-----	*18:14, *18:20 = *18:20, *18:68
++-----	-----	-+-----	-----	*18:06, *18:14 = *18:06, *18:68 = *18:39, *18:68
++-----	-----	-+-----	-----	*18:14, *18:29 = *18:14, *18:32 = *18:29, *18:68 = *18:32, *18:68
++-----	-----	-+-----	-----	*18:14, *18:18 = *18:18, *18:68
++-----	-----	-+-----	-----	*18:14, *18:17N = *18:17N, *18:68
++-----	-----	-+-----	-----	*18:13, *18:28 = *18:28, *18:44:01
++-----	-----	-+-----	-----	*18:13, *18:49 = *18:44:01, *18:49
++-----	-----	-+-----	-----	*18:13, *18:34 = *18:34, *18:44:01
++-----	-----	-+-----	-----	*18:13, *18:47 = *18:44:01, *18:47
++-----	-----	-+-----	-----	*18:13, *18:38 = *18:38, *18:44:01
++-----	-----	-+-----	-----	*18:13, *18:37 = *18:37, *18:44:01
++-----	-----	-+-----	-----	*18:13, *18:42 = *18:42, *18:44:01
++-----	-----	-+-----	-----	*18:13, *18:48 = *18:44:01, *18:48
++-----	-----	-+-----	-----	*18:13, *18:26 = *18:26, *18:44:01
++-----	-----	-+-----	-----	*18:13, *18:40 = *18:40, *18:44:01
++-----	-----	-+-----	-----	*18:13, *18:22 = *18:13, *18:33 = *18:33, *18:44:01
++-----	-----	-+-----	-----	*18:13, *18:20 = *18:20, *18:44:01
++-----	-----	-+-----	-----	*18:06, *18:13 = *18:06, *18:44:01 = *18:13, *18:39
++-----	-----	-+-----	-----	*18:13, *18:29 = *18:13, *18:32 = *18:29, *18:44:01 = *18:32, *18:44:01
++-----	-----	-+-----	-----	*18:13, *18:18 = *18:18, *18:44:01
++-----	-----	-+-----	-----	*18:13, *18:17N = *18:17N, *18:44:01
++-----	-----	-+-----	-----	*18:13, *18:14 = *18:13, *18:68 = *18:44:01, *18:68
++-----	-----	-+-----	-----	*18:01:01:01, *18:73 = *18:12, *18:37 = *18:12, *18:73 = *18:37, *18:73 =
++-----	-----	-+-----	-----	*18:73, *18:73
++-----	-----	-+-----	-----	*18:01:01:01, *18:77 = *18:12, *18:22 = *18:12, *18:33 = *18:12, *18:77 =
++-----	-----	-+-----	-----	*18:22, *18:77 = *18:33, *18:77 = *18:77, *18:77
++-----	-----	-+-----	-----	*18:06, *18:12 = *18:12, *18:39
++-----	-----	-+-----	-----	*18:12, *18:29 = *18:12, *18:32
++-----	-----	-+-----	-----	*18:12, *18:14 = *18:12, *18:68
++-----	-----	-+-----	-----	*18:12, *18:13 = *18:12, *18:44:01
++-----	-----	-+-----	-----	*18:09, *18:28 = *18:11, *18:28 = *18:28, *18:36
++-----	-----	-+-----	-----	*18:09, *18:49 = *18:11, *18:49 = *18:36, *18:49
++-----	-----	-+-----	-----	*18:09, *18:34 = *18:11, *18:34 = *18:34, *18:36
++-----	-----	-+-----	-----	*18:09, *18:47 = *18:11, *18:47 = *18:36, *18:47
++-----	-----	-+-----	-----	*18:09, *18:38 = *18:11, *18:38 = *18:36, *18:38
++-----	-----	-+-----	-----	*18:09, *18:37 = *18:11, *18:37 = *18:36, *18:37
++-----	-----	-+-----	-----	*18:09, *18:42 = *18:11, *18:42 = *18:36, *18:42
++-----	-----	-+-----	-----	*18:01:01:01, *18:54 = *18:09, *18:48 = *18:11, *18:48 = *18:11, *18:54 =

101.519-12 – including *Taq* pol., IFU-01
101.519-12u – without *Taq* pol., IFU-02

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Lot No.: 95S

Lot-specific information

++-----	--+-----	-----++	-----	*18:36, *18:48 = *18:36, *18:54 = *18:48, *18:54
++-----	--+-----	-----++	-----	*18:09, *18:26 = *18:11, *18:26 = *18:26, *18:36
++-----	--+-----	-----++	-----	*18:09, *18:40 = *18:11, *18:40 = *18:36, *18:40
++-----	--+-----	-----++	-----	*18:09, *18:22 = *18:09, *18:33 = *18:11, *18:33 = *18:22, *18:36 = *18:33, *18:36
++-----	--+-----	-----++	-----	*18:09, *18:20 = *18:20, *18:36
++-----	--+-----	-----++	-----	*18:06, *18:09 = *18:06, *18:11 = *18:06, *18:36 = *18:09, *18:39 = *18:36, *18:39
++-----	--+-----	-----++	-----	*18:09, *18:32 = *18:11, *18:29 = *18:11, *18:32 = *18:29, *18:36 = *18:32, *18:36
++-----	--+-----	-----++	-----	*18:09, *18:18 = *18:11, *18:18 = *18:18, *18:36
++-----	--+-----	-----++	-----	*18:09, *18:17N = *18:11, *18:17N = *18:17N, *18:36
++-----	--+-----	-----++	-----	*18:09, *18:14 = *18:09, *18:68 = *18:11, *18:68 = *18:14, *18:36 = *18:36, *18:68
++-----	--+-----	-----++	-----	*18:09, *18:13 = *18:09, *18:44:01 = *18:11, *18:13 = *18:13, *18:36 = *18:36, *18:44:01
++-----	--+-----	-----++	-----	*18:09, *18:12 = *18:11, *18:12 = *18:12, *18:36
++-----	--+-----	-----++	-----	*18:22, *18:23N = *18:23N, *18:33
++-----	--+-----	-----++	-----	*18:06, *18:23N = *18:23N, *18:39
++-----	--+-----	-----++	-----	*18:23N, *18:29 = *18:23N, *18:32
++-----	--+-----	-----++	-----	*18:14, *18:23N = *18:23N, *18:68
++-----	--+-----	-----++	-----	*18:13, *18:23N = *18:23N, *18:44:01
++-----	--+-----	-----++	-----	*18:09, *18:23N = *18:11, *18:23N = *18:23N, *18:36
++-----	--+-----	-----++	-----	*18:08, *18:28 = *18:27, *18:28
++-----	--+-----	-----++	-----	*18:08, *18:49 = *18:27, *18:49
++-----	--+-----	-----++	-----	*18:08, *18:34 = *18:27, *18:34
++-----	--+-----	-----++	-----	*18:08, *18:47 = *18:27, *18:47
++-----	--+-----	-----++	-----	*18:08, *18:38 = *18:27, *18:38
++-----	--+-----	-----++	-----	*18:08, *18:37 = *18:27, *18:37
++-----	--+-----	-----++	-----	*18:08, *18:42 = *18:27, *18:42
++-----	--+-----	-----++	-----	*18:08, *18:48 = *18:27, *18:48
++-----	--+-----	-----++	-----	*18:08, *18:26 = *18:26, *18:27
++-----	--+-----	-----++	-----	*18:08, *18:40 = *18:27, *18:40
++-----	--+-----	-----++	-----	*18:01:01:01, *18:75 = *18:08, *18:22 = *18:08, *18:33 = *18:08, *18:75 = *18:22, *18:75 = *18:27, *18:33 = *18:27, *18:75 = *18:33, *18:75 = *18:75, *18:75
++-----	--+-----	-----++	-----	*18:08, *18:20 = *18:20, *18:27
++-----	--+-----	-----++	-----	*18:06, *18:08 = *18:06, *18:27 = *18:08, *18:39
++-----	--+-----	-----++	-----	*18:08, *18:29 = *18:08, *18:32 = *18:27, *18:29 = *18:27, *18:32
++-----	--+-----	-----++	-----	*18:08, *18:18 = *18:18, *18:27
++-----	--+-----	-----++	-----	*18:08, *18:17N = *18:17N, *18:27
++-----	--+-----	-----++	-----	*18:08, *18:14 = *18:08, *18:68 = *18:27, *18:68
++-----	--+-----	-----++	-----	*18:08, *18:13 = *18:08, *18:44:01 = *18:13, *18:27
++-----	--+-----	-----++	-----	*18:08, *18:12 = *18:12, *18:27
++-----	--+-----	-----++	-----	*18:08, *18:09 = *18:08, *18:11 = *18:08, *18:36 = *18:09, *18:27 = *18:27, *18:36
++-----	--+-----	-----++	-----	*18:08, *18:23N = *18:23N, *18:27
++-----	--+-----	-----++	-----	*18:01:01:01, *18:50 = *18:47, *18:50 = *18:47, *18:81 = *18:50, *18:50 = *18:50, *18:81
++-----	--+-----	-----++	-----	*18:22, *18:81 = *18:33, *18:81
++-----	--+-----	-----++	-----	*18:06, *18:81 = *18:39, *18:81
++-----	--+-----	-----++	-----	*18:29, *18:81 = *18:32, *18:81
++-----	--+-----	-----++	-----	*18:14, *18:81 = *18:68, *18:81
++-----	--+-----	-----++	-----	*18:13, *18:81 = *18:44:01, *18:81
++-----	--+-----	-----++	-----	*18:01:01:01, *18:10 = *18:09, *18:10 = *18:09, *18:81 = *18:10, *18:36 = *18:10, *18:81 = *18:11, *18:81 = *18:36, *18:81
++-----	--+-----	-----++	-----	*18:08, *18:81 = *18:27, *18:81
++-----	--+-----	-----++	-----	*18:01:01:01, *18:79 = *18:07:01, *18:49 = *18:07:01, *18:79 = *18:49, *18:79 = *18:79, *18:79
++-----	--+-----	-----++	-----	*18:07:01, *18:22 = *18:07:01, *18:33
++-----	--+-----	-----++	-----	*18:06, *18:07:01 = *18:07:01, *18:39
++-----	--+-----	-----++	-----	*18:07:01, *18:29 = *18:07:01, *18:32
++-----	--+-----	-----++	-----	*18:07:01, *18:14 = *18:07:01, *18:68

101.519-12 – including *Taq* pol., IFU-01
101.519-12u – without *Taq* pol., IFU-02

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Lot No.: 95S

Lot-specific information

++-----+-	-----+--	-----+--	-----+--	*18:07:01, *18:13 = *18:07:01, *18:44:01
++-----+-	-----+--	-----+--	-----+--	*18:01:01:01, *18:41 = *18:07:01, *18:12 = *18:07:01, *18:41 = *18:12,
				*18:41 = *18:41, *18:41
++-----+-	-----+--	-----+--	-----+--	*18:07:01, *18:09 = *18:07:01, *18:11 = *18:07:01, *18:36
++-----+-	-----+--	-----+--	-----+--	*18:07:01, *18:08 = *18:07:01, *18:27
++-----+-	-----+--	-----+--	-----+--	*18:05, *18:22 = *18:05, *18:33
++-----+-	-----+--	-----+--	-----+--	*18:05, *18:06 = *18:05, *18:39
++-----+-	-----+--	-----+--	-----+--	*18:05, *18:29 = *18:05, *18:32
++-----+-	-----+--	-----+--	-----+--	*18:05, *18:14 = *18:05, *18:68
++-----+-	-----+--	-----+--	-----+--	*18:05, *18:13 = *18:05, *18:44:01
++-----+-	-----+--	-----+--	-----+--	*18:05, *18:09 = *18:05, *18:11 = *18:05, *18:36
++-----+-	-----+--	-----+--	-----+--	*18:05, *18:08 = *18:05, *18:27
++-----+-	-----+--	-----+--	-----+--	*18:24, *18:28 = *18:28, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:24, *18:49 = *18:49, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:24, *18:34 = *18:34, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:24, *18:47 = *18:47, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:24, *18:38 = *18:38, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:24, *18:37 = *18:37, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:24, *18:42 = *18:42, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:24, *18:48 = *18:48, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:24, *18:26 = *18:26, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:24, *18:40 = *18:40, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:22, *18:24 = *18:22, *18:72 = *18:24, *18:33 = *18:33, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:20, *18:24 = *18:20, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:06, *18:24 = *18:06, *18:72 = *18:24, *18:39 = *18:39, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:24, *18:29 = *18:24, *18:32 = *18:32, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:18, *18:24 = *18:18, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:17N, *18:24 = *18:17N, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:14, *18:24 = *18:14, *18:72 = *18:24, *18:68 = *18:68, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:13, *18:24 = *18:13, *18:72 = *18:24, *18:44:01 = *18:44:01, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:12, *18:24 = *18:12, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:09, *18:24 = *18:11, *18:24 = *18:11, *18:72 = *18:24, *18:36 =
				*18:36, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:23N, *18:24 = *18:23N, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:08, *18:24 = *18:08, *18:72 = *18:24, *18:27 = *18:27, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:24, *18:81 = *18:72, *18:81
++-----+-	-----+--	-----+--	-----+--	*18:07:01, *18:24 = *18:07:01, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:05, *18:24 = *18:05, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:03, *18:22 = *18:03, *18:33
++-----+-	-----+--	-----+--	-----+--	*18:03, *18:06 = *18:03, *18:39
++-----+-	-----+--	-----+--	-----+--	*18:03, *18:14 = *18:03, *18:68
++-----+-	-----+--	-----+--	-----+--	*18:03, *18:13 = *18:03, *18:44:01
++-----+-	-----+--	-----+--	-----+--	*18:03, *18:11 = *18:03, *18:36
++-----+-	-----+--	-----+--	-----+--	*18:03, *18:08 = *18:03, *18:27
++-----+-	-----+--	-----+--	-----+--	*18:02, *18:29 = *18:02, *18:32
++-----+-	-----+--	-----+--	-----+--	*18:02, *18:09 = *18:02, *18:36
++-----+-	-----+--	-----+--	-----+--	*18:02, *18:24 = *18:02, *18:72
++-----+-	-----+--	-----+--	-----+--	*18:22, *18:78 = *18:33, *18:78
++-----+-	-----+--	-----+--	-----+--	*18:22, *18:61 = *18:33, *18:61
++-----+-	-----+--	-----+--	-----+--	*18:06, *18:78 = *18:39, *18:78
++-----+-	-----+--	-----+--	-----+--	*18:06, *18:61 = *18:26, *18:53 = *18:39, *18:61 = *18:53, *18:61
++-----+-	-----+--	-----+--	-----+--	*18:22, *18:53 = *18:33, *18:53
++-----+-	-----+--	-----+--	-----+--	*18:29, *18:78 = *18:32, *18:78
++-----+-	-----+--	-----+--	-----+--	*18:29, *18:61 = *18:32, *18:61
++-----+-	-----+--	-----+--	-----+--	*18:29, *18:53 = *18:32, *18:53
++-----+-	-----+--	-----+--	-----+--	*18:15, *18:22 = *18:15, *18:33
++-----+-	-----+--	-----+--	-----+--	*18:06, *18:15 = *18:15, *18:39
++-----+-	-----+--	-----+--	-----+--	*18:22, *18:31 = *18:31, *18:33
++-----+-	-----+--	-----+--	-----+--	*18:06, *18:31 = *18:31, *18:39
++-----+-	-----+--	-----+--	-----+--	*18:15, *18:18 = *18:15, *18:31 = *18:29, *18:31 = *18:31, *18:32
++-----+-	-----+--	-----+--	-----+--	*18:14, *18:78 = *18:68, *18:78
++-----+-	-----+--	-----+--	-----+--	*18:14, *18:61 = *18:61, *18:68
++-----+-	-----+--	-----+--	-----+--	*18:22, *18:25 = *18:25, *18:33

101.519-12 – including *Taq* pol., IFU-01
101.519-12u – without *Taq* pol., IFU-02

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Lot No.: 95S

Lot-specific information

++-----	-----+-	---+-----	-+-----	*18:06, *18:25 = *18:25, *18:39
++-----	-----+-	---+-----	-----	*18:14, *18:53 = *18:53, *18:68
++-----	-----+-	---+-----	-+-----	*18:25, *18:29 = *18:25, *18:32
++-----	-----+-	---+-----	-----	*18:14, *18:15 = *18:15, *18:68
++-----	-----+-	---+-----	-----	*18:14, *18:31 = *18:31, *18:68
++-----	-----+-	---+-----	---+-----	*18:13, *18:78 = *18:44:01, *18:78
++-----	-----+-	---+-----	-----	*18:13, *18:61 = *18:44:01, *18:61
++-----	-----+-	---+-----	-----	*18:13, *18:53 = *18:44:01, *18:53
++-----	-----+-	---+-----	-----	*18:01:01:01, *18:30 = *18:13, *18:15 = *18:13, *18:30 = *18:15, *18:30 =
				*18:15, *18:44:01 = *18:29, *18:30 = *18:30, *18:30 = *18:30, *18:32 =
				*18:30, *18:44:01
++-----	-----+-	---+-----	-----	*18:13, *18:31 = *18:31, *18:44:01
++-----	-----+-	---+-----	-----	*18:01:01:01, *18:19 = *18:13, *18:19 = *18:17N, *18:19 = *18:19, *18:19
				= *18:19, *18:44:01
++-----	-----+-	---+-----	-+-----	*18:13, *18:25 = *18:25, *18:44:01
++-----	-----+-	---+-----	---+-----	*18:12, *18:78 = *18:38, *18:73 = *18:73, *18:78
++-----	-----+-	---+-----	-+-----	*18:22, *18:73 = *18:33, *18:73 = *18:37, *18:77 = *18:73, *18:77
++-----	-----+-	---+-----	-+-----	*18:06, *18:73 = *18:39, *18:73
++-----	-----+-	---+-----	-----	*18:06, *18:77 = *18:39, *18:77
++-----	-----+-	---+-----	-+-----	*18:29, *18:73 = *18:32, *18:73
++-----	-----+-	---+-----	-----	*18:29, *18:77 = *18:32, *18:77
++-----	-----+-	---+-----	-+-----	*18:14, *18:73 = *18:68, *18:73
++-----	-----+-	---+-----	-----	*18:14, *18:77 = *18:68, *18:77
++-----	-----+-	---+-----	-+-----	*18:13, *18:73 = *18:44:01, *18:73
++-----	-----+-	---+-----	-----	*18:13, *18:77 = *18:44:01, *18:77
++-----	-----+-	---+-----	-+-----	*18:09, *18:78 = *18:11, *18:78 = *18:36, *18:78
++-----	-----+-	---+-----	-----	*18:09, *18:61 = *18:11, *18:61 = *18:36, *18:61
++-----	-----+-	---+-----	-+-----	*18:22, *18:54 = *18:33, *18:54
++-----	-----+-	---+-----	-+-----	*18:06, *18:54 = *18:39, *18:54
++-----	-----+-	---+-----	-----	*18:09, *18:53 = *18:11, *18:53 = *18:36, *18:53
++-----	-----+-	---+-----	-----	*18:01:01:01, *18:57 = *18:09, *18:15 = *18:09, *18:57 = *18:11, *18:15 =
				*18:11, *18:57 = *18:15, *18:36 = *18:15, *18:57 = *18:29, *18:57 =
				*18:32, *18:57 = *18:36, *18:57 = *18:57, *18:57
++-----	-----+-	---+-----	-----	*18:09, *18:31 = *18:11, *18:31 = *18:31, *18:36
++-----	-----+-	---+-----	-+-----	*18:09, *18:25 = *18:11, *18:25 = *18:25, *18:36
++-----	-----+-	---+-----	-+-----	*18:14, *18:54 = *18:54, *18:68
++-----	-----+-	---+-----	-+-----	*18:13, *18:54 = *18:44:01, *18:54
++-----	-----+-	---+-----	-----	*18:09, *18:73 = *18:11, *18:73 = *18:36, *18:73
++-----	-----+-	---+-----	-----	*18:09, *18:77 = *18:11, *18:77 = *18:36, *18:77
++-----	-----+-	---+-----	-+-----	*18:08, *18:78 = *18:27, *18:78
++-----	-----+-	---+-----	-----	*18:08, *18:61 = *18:27, *18:61
++-----	-----+-	---+-----	-----	*18:08, *18:53 = *18:27, *18:53
++-----	-----+-	---+-----	-----	*18:06, *18:75 = *18:39, *18:75
++-----	-----+-	---+-----	-----	*18:29, *18:75 = *18:32, *18:75
++-----	-----+-	---+-----	-----	*18:08, *18:15 = *18:15, *18:27
++-----	-----+-	---+-----	-----	*18:08, *18:31 = *18:27, *18:31
++-----	-----+-	---+-----	-+-----	*18:08, *18:25 = *18:25, *18:27
++-----	-----+-	---+-----	-----	*18:14, *18:75 = *18:68, *18:75
++-----	-----+-	---+-----	-----	*18:13, *18:75 = *18:44:01, *18:75
++-----	-----+-	---+-----	-+-----	*18:08, *18:73 = *18:27, *18:73
++-----	-----+-	---+-----	-----	*18:08, *18:77 = *18:12, *18:75 = *18:27, *18:77 = *18:75, *18:77
++-----	-----+-	---+-----	-+-----	*18:08, *18:54 = *18:27, *18:54
++-----	-----+-	---+-----	-----	*18:09, *18:75 = *18:11, *18:75 = *18:36, *18:75
++-----	-----+-	---+-----	-----	*18:22, *18:50 = *18:33, *18:50
++-----	-----+-	---+-----	-----	*18:06, *18:50 = *18:39, *18:50
++-----	-----+-	---+-----	-----	*18:29, *18:50 = *18:32, *18:50
++-----	-----+-	---+-----	-----	*18:14, *18:50 = *18:50, *18:68
++-----	-----+-	---+-----	-----	*18:13, *18:50 = *18:44:01, *18:50
++-----	-----+-	---+-----	-----	*18:09, *18:50 = *18:10, *18:47 = *18:10, *18:50 = *18:11, *18:50 =
				*18:36, *18:50
++-----	-----+-	---+-----	-+-----	*18:01:01:01, *18:35 = *18:09, *18:35 = *18:10, *18:48 = *18:10, *18:54 =
				*18:35, *18:36 = *18:35, *18:48 = *18:35, *18:54 = *18:35, *18:81 =
				*18:54, *18:81

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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Lot No.: 95S

Lot-specific information

++-----+	---+-----	-----+	-----+	*18:10, *18:29 = *18:10, *18:32
++-----+	++-----	-----+	-----+	*18:08, *18:50 = *18:27, *18:50
++-----+	-----+	-----+	-----+	*18:01:01:01, *18:74N = *18:07:01, *18:74N = *18:07:01, *18:78 = *18:37,
				*18:74N = *18:38, *18:74N = *18:74N, *18:74N = *18:74N, *18:78
++-----+	-----+	-----+	-----+	*18:22, *18:79 = *18:33, *18:79
++-----+	-----+	-----+	-----+	*18:06, *18:79 = *18:39, *18:79
++-----+	-----+	-----+	-----+	*18:29, *18:79 = *18:32, *18:79
++-----+	-----+	-----+	-----+	*18:14, *18:79 = *18:68, *18:79
++-----+	-----+	-----+	-----+	*18:13, *18:79 = *18:44:01, *18:79
++-----+	-----+	-----+	-----+	*18:12, *18:79 = *18:41, *18:49 = *18:41, *18:79
++-----+	-----+	-----+	-----+	*18:07:01, *18:73 = *18:37, *18:41 = *18:41, *18:73
++-----+	-----+	-----+	-----+	*18:07:01, *18:77 = *18:22, *18:41 = *18:33, *18:41 = *18:41, *18:77
++-----+	-----+	-----+	-----+	*18:06, *18:41 = *18:39, *18:41
++-----+	-----+	-----+	-----+	*18:29, *18:41 = *18:32, *18:41
++-----+	-----+	-----+	-----+	*18:14, *18:41 = *18:41, *18:68
++-----+	-----+	-----+	-----+	*18:13, *18:41 = *18:41, *18:44:01
++-----+	-----+	-----+	-----+	*18:09, *18:79 = *18:11, *18:79 = *18:36, *18:79
++-----+	-----+	-----+	-----+	*18:09, *18:41 = *18:11, *18:41 = *18:36, *18:41
++-----+	-----+	-----+	-----+	*18:08, *18:79 = *18:27, *18:79
++-----+	-----+	-----+	-----+	*18:08, *18:41 = *18:27, *18:41
++-----+	-----+	-----+	-----+	*18:24, *18:78 = *18:72, *18:78
++-----+	-----+	-----+	-----+	*18:24, *18:61 = *18:61, *18:72
++-----+	-----+	-----+	-----+	*18:24, *18:53 = *18:53, *18:72
++-----+	-----+	-----+	-----+	*18:15, *18:24 = *18:15, *18:72
++-----+	-----+	-----+	-----+	*18:24, *18:31 = *18:31, *18:72
++-----+	-----+	-----+	-----+	*18:01:01:01, *18:04 = *18:04, *18:04 = *18:04, *18:14 = *18:04, *18:24 =
				*18:04, *18:25 = *18:04, *18:42 = *18:04, *18:68 = *18:04, *18:72 =
				*18:24, *18:25 = *18:25, *18:72
				*18:24, *18:73 = *18:72, *18:73
				*18:24, *18:77 = *18:72, *18:77
				*18:24, *18:75 = *18:72, *18:75
				*18:24, *18:50 = *18:50, *18:72
				*18:10, *18:24 = *18:10, *18:72
				*18:24, *18:79 = *18:72, *18:79
				*18:24, *18:41 = *18:41, *18:72
				*18:22, *18:30 = *18:30, *18:33
				*18:06, *18:30 = *18:30, *18:39
				*18:18, *18:30 = *18:30, *18:31
				*18:19, *18:22 = *18:19, *18:33
				*18:06, *18:19 = *18:19, *18:39
				*18:15, *18:19 = *18:17N, *18:30 = *18:19, *18:29 = *18:19, *18:30 =
				*18:19, *18:32
				*18:18, *18:19 = *18:19, *18:31
				*18:14, *18:30 = *18:30, *18:68
				*18:14, *18:19 = *18:19, *18:68
				*18:15, *18:54 = *18:48, *18:57 = *18:54, *18:57
				*18:22, *18:57 = *18:33, *18:57
				*18:06, *18:57 = *18:39, *18:57
				*18:18, *18:57 = *18:31, *18:57
				*18:14, *18:57 = *18:57, *18:68
				*18:09, *18:30 = *18:11, *18:30 = *18:13, *18:57 = *18:30, *18:36 =
				*18:30, *18:57 = *18:44:01, *18:57
				*18:09, *18:19 = *18:11, *18:19 = *18:19, *18:36
				*18:08, *18:30 = *18:27, *18:30
				*18:08, *18:19 = *18:19, *18:27
				*18:08, *18:57 = *18:27, *18:57
				*18:35, *18:47 = *18:35, *18:50 = *18:50, *18:54
				*18:29, *18:35 = *18:32, *18:35
				*18:01:01:01, *18:21 = *18:09, *18:21 = *18:21, *18:29 = *18:21, *18:32 =
				*18:21, *18:36 = *18:21, *18:40 = *18:21, *18:81
				*18:10, *18:15 = *18:10, *18:57 = *18:57, *18:81
				*18:49, *18:74N = *18:74N, *18:79 = *18:78, *18:79
				*18:22, *18:74N = *18:33, *18:74N

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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++-----+	-----	---+-----	---+-----	*18:06, *18:74N = *18:39, *18:74N
++-----+	-----	---+-----	---+-----	*18:29, *18:74N = *18:32, *18:74N
++-----+	-----	---+-----	---+-----	*18:14, *18:74N = *18:68, *18:74N
++-----+	-----	---+-----	---+-----	*18:13, *18:74N = *18:44:01, *18:74N
++-----+	-----	---+-----	---+-----	*18:12, *18:74N = *18:41, *18:74N = *18:41, *18:78 = *18:73, *18:74N
++-----+	-----	---+-----	---+-----	*18:09, *18:74N = *18:11, *18:74N = *18:36, *18:74N
++-----+	-----	---+-----	---+-----	*18:08, *18:74N = *18:27, *18:74N
++-----+	-----	---+-----	---+-----	*18:04, *18:22 = *18:04, *18:33
++-----+	-----	---+-----	---+-----	*18:04, *18:06 = *18:04, *18:39
++-----+	-----	---+-----	---+-----	*18:04, *18:29 = *18:04, *18:32
++-----+	-----	---+-----	---+-----	*18:24, *18:30 = *18:30, *18:72
++-----+	-----	---+-----	---+-----	*18:19, *18:24 = *18:19, *18:72
++-----+	-----	---+-----	---+-----	*18:04, *18:13 = *18:04, *18:44:01
++-----+	-----	---+-----	---+-----	*18:24, *18:57 = *18:57, *18:72
++-----+	-----	---+-----	---+-----	*18:04, *18:09 = *18:04, *18:11 = *18:04, *18:36
++-----+	-----	---+-----	---+-----	*18:04, *18:08 = *18:04, *18:27
++-----+	-----	---+-----	---+-----	*18:24, *18:35 = *18:35, *18:72
++-----+	-----	---+-----	---+-----	*18:24, *18:74N = *18:72, *18:74N
++-----+	-----	---+-----	---+-----	*18:21, *18:47 = *18:21, *18:50
++-----+	-----	---+-----	---+-----	*18:21, *18:48 = *18:21, *18:54
++-----+	-----	---+-----	---+-----	*18:21, *18:26 = *18:21, *18:61
++-----+	-----	---+-----	---+-----	*18:06, *18:21 = *18:21, *18:53
++-----+	-----	---+-----	---+-----	*18:15, *18:35 = *18:35, *18:57
++-----+	-----	---+-----	---+-----	*18:15, *18:21 = *18:21, *18:57
++-----+	-----	---+-----	---+-----	*18:21, *18:24 = *18:21, *18:72

*18:01:01:01 = *18:01:01:01-18:01:18 and 18:55, 18:59-18:60, 18:62-18:66, 18:70-18:71, 18:76, 18:80 and 18:82-18:91

*18:07:01 = *18:07:01-18:07:02

*18:11 = *18:11, 18:56 and 18:58

*18:34 = *18:34 and 18:52

*18:36 = *18:36 and 18:67

*18:37 = *18:37 and 18:46

*18:38 = *18:38 and 18:45

*18:40 = *18:40 and 18:51

*18:42 = *18:42 and 18:43

*18:44:01 = *18:44:01-18:44:02

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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Lot-specific information
SPECIFICITY TABLE

HLA-B*18 SSP subtyping

Specificities and sizes of the PCR products of the 32 primer mixes used for
 HLA-B*18 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-B*18 alleles ³	Other amplified HLA Class I alleles ⁴
1	170 bp	800 bp	*18:01:01:01-18:02, 18:04-18:08, 18:10-18:15, 18:17N-18:28, 18:30-18:53, 18:55-18:71, 18:73-18:91	*48:28
2	260 bp	800 bp	*18:01:01:01-18:01:18, 18:03-18:09, 18:12-18:13, 18:15, 18:17N-18:20, 18:23N-18:26, 18:28-18:34, 18:36-18:38, 18:40-18:43, 18:45-18:55, 18:57, 18:59-18:68, 18:70-18:91	*14:06:01-14:06:02, 14:08, 15:37-15:38:02, 15:185, 39:32, 39:43, 39:48, 40:51, 40:113, 40:163, 51:06:01-51:06:02, 51:45, 51:62, 51:135, 56:31, C*08:51
3	260 bp	800 bp	*18:02	*27:28, 27:62
4⁵	100 bp	800 bp	*18:03	*39:39:02
5^{5,9}	115 bp, 140 bp	1070 bp	*18:04, 18:24, 18:72	*15:64:02, 35:02:02 ^w , 35:20:02 ^w , 39:39:02
6	130 bp	1070 bp	*18:05	
7^{5,10}	90 bp, 150 bp, 230 bp	1070 bp	*18:07:01-18:07:02, 18:41, 18:74N, 18:79	
8	180 bp	1070 bp	*18:10, 18:21, 18:35, 18:50, 18:81	*07:02:01-07:04, 07:07-07:13, 07:15-07:16, 07:18:01-07:18:02, 07:21-07:23, 07:25-07:27, 07:29-07:30, 07:33:01-07:33:02, 07:35-07:39, 07:41-07:42, 07:44-07:52, 07:54-07:59, 07:61-07:68:03, 07:70-07:77, 07:79, 07:81-07:89, 07:91-07:95, 07:98-07:99, 07:101-07:104, 07:106-07:111N, 07:113-07:114, 07:116-07:122, 07:124-07:130, 07:132-07:136, 07:139, 07:141-07:175, 07:177-07:181N, 07:183-07:196, 07:198, 13:26, 13:35, 15:40, 15:47:01-15:47:02, 15:49, 15:52, 15:114, 15:117, 15:124, 15:138,

101.519-12 – including *Taq* pol., IFU-01101.519-12u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

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				15:214, 15:238, 15:241, 27:34, 27:41, 35:15, 35:33, 35:66, 35:86, 37:07, 40:03, 40:18, 40:20, 40:24, 40:31-40:33, 40:44, 40:52, 40:59, 40:98, 40:120, 40:150, 40:159, 46:06, 46:25, 46:30, 48:08, 48:23, 57:13, 57:25, 57:29, 58:37, C*02:02:19, C*02:06, C*02:23, C*02:36, C*15:42
9^{5,11}	125 bp, 255 bp	1070 bp	*18:08, 18:27, 18:75	A*24:220
10^{5,7}	85 bp	800 bp	*18:23N	*44:108N
11^{5,12}	125 bp, 610 bp, 635 bp	1070 bp	*18:09-18:11, 18:21, 18:35-18:36, 18:54, 18:56-18:58, 18:67	*15:64:02, 35:02:02, 35:20:02, 39:39:02, 44:03:12, A*24:02:37, A*26:01:16
12^{5,13}	85 bp, 140 bp	1070 bp	*18:12, 18:41, 18:73, 18:77	*48:28
13^{5,14}	85 bp, 265 bp	1070 bp	*18:13, 18:19, 18:30, 18:44:01-18:44:02	*14:01:01-14:02:08, 14:03-14:04, 14:07N, 14:09, 14:11-14:12, 14:14-14:36, 15:38:01-15:38:02, 51:29, 51:61:01-51:61:02, 51:82, 52:21, 52:24, A*66:04^w, C*01:30, C*08:51, C*12:87
14¹⁵	170 bp, 260 bp	1070 bp	*18:04, 18:14, 18:25, 18:68	*14:05, 14:13, 15:64:02, 35:02:02, 35:20:02, 40:174, 44:03:12, 51:64
15^{5,6}	100 bp	1070 bp	*18:15, 18:19, 18:30-18:31, 18:57	*13:62, 14:01:01-14:37, 15:37-15:38:02, 35:21, 35:96, 35:188, 40:28, 40:51, 40:174, 49:09, 51:01:01-51:01:42, 51:03-51:04, 51:06:01-51:07:02, 51:11N-51:14, 51:16-51:18, 51:21-51:22, 51:24:01-51:24:04, 51:26-51:30, 51:32-51:33, 51:35, 51:37-51:39, 51:41N, 51:43, 51:45-51:46, 51:48-51:52, 51:55-51:58, 51:60-51:72, 51:74-51:80, 51:82-51:92, 51:94-51:96, 51:98N-51:107, 51:109-51:114, 51:116-51:119, 51:121, 51:123-51:138, 51:140, 51:142, 51:145, 51:147, 51:149N-51:152, 51:154, 52:01:01:01-52:02:01, 52:04-52:09, 52:12-52:18, 52:20-52:28, 52:30-52:31, 53:06, 53:28, 56:05:01-56:06, 56:21, 58:08:01-58:08:02, 78:01:01-78:03, 78:05-78:07, C*01:30, C*08:51, C*12:87, C*15:39

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16^{5,16}	95 bp, 360 bp	1070 bp	*18:17N, 18:19	*08:70, 13:31, 13:41, 15:27:03, 15:38:02, 15:269, 35:14:01, 35:62, 35:163, 39:36, 44:146, 46:01:03, 51:61:02, 52:21, 55:21, A*26:68, C*01:09, C*02:02:14, C*06:02:27, C*07:22, C*07:138, C*12:03:16
17^{5,17}	100 bp, 255 bp	1070 bp	*18:18, 18:31	*52:28
18^{5,7,18}	85 bp, 555 bp, 580 bp	1070 bp	*18:15, 18:21 ^w , 18:29, 18:30 ^w , 18:32, 18:57	*15:64:02, 15:71, 15:175, 15:204, 15:225, 35:50, 35:231, 37:22, 41:12, 46:14, 49:03, 51:151, 54:02, 55:16, 56:35, 57:39, 58:41
19^{5,19}	105 bp, 160 bp, 405 bp	1070 bp	*18:06, 18:39, 18:53	
20⁶	290 bp	1070 bp	*18:20	*07:14, 07:17, 07:28, 07:96:01- 07:96:02, 07:115, 07:197, 08:14, 08:28, 08:49, 08:74, 08:87, 08:111, 13:10, 13:46, 13:51, 14:01:01-14:12, 14:14-14:22, 14:24-14:37, 15:02:01- 15:02:06, 15:06, 15:13:01-15:13:02, 15:17:01:01-15:17:02, 15:21, 15:25:01-15:25:03, 15:31, 15:36, 15:44, 15:55, 15:77, 15:88-15:89, 15:106, 15:112, 15:121, 15:128, 15:137, 15:139, 15:144, 15:156, 15:162, 15:168, 15:170, 15:177, 15:196, 15:204, 15:208, 15:213- 15:214, 15:216, 15:230, 15:233, 15:240, 15:250, 15:265, 15:271, 15:273, 27:01-27:06, 27:08-27:10, 27:12-27:19, 27:21, 27:23, 27:25- 27:26, 27:28-27:32, 27:35-27:40, 27:42, 27:44-27:104, 27:106, 35:164, 35:215, 37:01:01-37:06, 37:08, 37:10-37:11, 37:13-37:34, 37:36- 37:37, 38:22, 39:17, 40:09, 40:42, 40:60, 40:89, 40:124:01-40:124:02, 40:172, 40:180, 42:20, 44:02:01:01- 44:09, 44:11-44:13, 44:15-44:16, 44:18-44:30, 44:32-44:42, 44:44, 44:46-44:50, 44:52N-44:61N, 44:63- 44:76, 44:78-44:81, 44:83-44:106, 44:108N-44:121, 44:124-44:134, 44:136-44:165, 44:167-44:181,

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 101.519-12u – without *Taq* pol., IFU-02

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				45:01-45:08, 45:10-45:13, 47:01:01:01-47:08, 48:17, 48:26, 49:01:01-49:03, 49:05-49:26, 50:01:01-50:02, 50:04-50:20, 50:31- 50:33, 51:42, 51:85, 52:26, 53:07, 54:15, 55:41, 55:58, 57:04-57:05, 57:32, 57:41, 83:01
21	215 bp	1070 bp	*18:01:01:01-18:09, 18:12-18:15, 18:17N- 18:19, 18:22-18:34, 18:36-18:55, 18:57, 18:59-18:91	*13:15, 13:62, 14:13, 14:23, 15:37- 15:38:02, 15:185, 35:21, 35:24:01- 35:24:02, 35:81, 35:96, 35:109, 35:157, 35:188, 35:190, 35:233, 39:32, 39:43, 39:48, 40:28, 40:51, 40:113, 40:163, 40:174, 51:01:01- 51:01:42, 51:03-51:04, 51:06:01- 51:09:02, 51:11N-51:14, 51:16, 51:19-51:22, 51:24:01-51:24:04, 51:26-51:33, 51:35, 51:37-51:39, 51:41N, 51:43-51:46, 51:48-51:53, 51:55-51:58, 51:60-51:80, 51:82- 51:84, 51:86-51:92, 51:94-51:107, 51:109-51:142, 51:145, 51:147, 51:149N-51:154, 52:01:01:01- 52:02:01, 52:04-52:10:02, 52:12- 52:25, 52:27-52:31, 53:02, 53:06, 53:28, 56:05:01-56:06, 56:21, 56:31, 56:34, 57:14, 58:08:01-58:09, 78:01:01-78:03, 78:05-78:07, C*15:39
22^{5,20}	125 bp, 150 bp, 270 bp	800 bp	*18:22, 18:33, 18:69 ^w , 18:75, 18:77	*14:10, 35:21, 35:24:01-35:24:02, 35:81, 35:96, 35:109, 35:157, 35:188, 35:190, 35:233, 37:04:01 ^w -37:04:02 ^w , 40:28, 51:04, 51:46, 51:56:01- 51:56:02, 51:139, 53:02, 53:06, 53:28, 57:14, 58:09, C*15:39
23²¹	150 bp, 515 bp	1070 bp	*18:21, 18:40, 18:51, 18:53, 18:61	
24	190 bp	1070 bp	*18:26, 18:61	*07:34, 08:01:01-08:05, 08:08N- 08:10, 08:12:01-08:13, 08:15-08:20, 08:22-08:24, 08:26-08:27, 08:29- 08:36, 08:38-08:39, 08:41-08:48, 08:50-08:73, 08:75-08:76, 08:78, 08:80-08:86N, 08:88, 08:90-08:106, 08:109-08:110, 13:06, 13:53, 14:13, 15:42, 15:83, 15:86, 15:188, 15:224, 15:252, 35:60, 35:87, 37:12, 38:01:01, 38:01:03-38:01:05,

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25 ^{5,22}	75 bp, 185 bp	1070 bp	*18:35, 18:48, 18:54	*07:68:01-07:68:03, 15:138, 15:230, 15:241, 35:66, 40:77, 40:87:01-40:87:02, 40:121, 40:158, 40:222, 40:237, 44:150, 48:12, 48:14, 48:26, 48:29
26 ^{5,23}	90 bp, 180 bp	800 bp	*18:04, 18:25, 18:42-18:43	*15:64:02, 35:02:02, 35:20:02, 39:39:02, 44:03:12, A*24:02:37, A*26:01:16
27 ^{5,24}	80 bp, 135 bp	800 bp	*18:37, 18:46, 18:73-18:74N, 18:78	*07:109, 13:10, 13:26, 48:28
28 ^{5,25}	100 bp, 180 bp	800 bp	*18:38, 18:45, 18:74N, 18:78	*08:83, 13:10-13:11, 38:38, 40:91, 40:197
29 ^{5,8,26}	65 bp, 120 bp	1070 bp	*18:47, 18:50	*13:15, 40:113, 51:16, 51:31, 51:82, 52:08, 73:01
30 ^{6,7,27}	145 bp, 420 bp	800 bp	*18:34, 18:52	
31	135 bp	1070 bp	*18:49, 18:79	*35:27, 35:56, 35:185, 35:203, 37:05, 78:06
32	175 bp	1070 bp	*18:28	*15:250, 40:226

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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Lot No.: 95S

Lot-specific information

¹Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-B*18 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.

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-B*18 subtyping.

In addition, wells number 2 to 4, 10, 22, 26 to 28 and 30 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

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

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

⁴Due to the sharing of sequence motifs between HLA-B alleles non-HLA-B*18 alleles will be amplified by primer mixes 1 to 5, 8, 10 to 18, 20 to 22, 24 to 29, 31 and 32. In addition, the A*24:02:37 and A*26:01:16 alleles will be amplified by primer mixes 11 and 26, the A*24:220 allele will be amplified by primer mix 9, the A*26:68, C*01:09, C*02:02:14, C*06:02:27, C*07:22, C*07:138 and C*12:03:16 alleles will be amplified by primer mix 16, the A*66:04 allele will be weakly amplified by primer mix 13, the C*01:30 and C*12:87 alleles will be amplified by primer mixes 13 and 15, the C*02:02:19, C*02:06, C*02:23, C*02:36 and C*15:42 alleles will be amplified by primer mix 8, the C*08:51 allele will be amplified by primer mixes 2, 13 and 15, the C*15:24 allele will be amplified by primer mix 24 and the C*15:39 allele will be amplified by primer mixes 15, 21 and 22.

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

⁶Primer mixes 15, 20 and 30 may have tendencies of unspecific amplifications.

⁷Primer mixes 10, 18 and 30 have a tendency to giving rise to primer oligomer formation.

⁸Primer mix 29 may give rise to a lower yield of HLA-specific PCR product than the other B*18 primer mixes.

⁹Primer mix 5: Specific PCR fragment of 115 bp in the B*18:72 and in the B*15:64:02, 35:02:02^w, 35:20:02^w and 39:39:02 alleles. Specific PCR fragment of 140 bp in the B*18:04 and 18:24 alleles.

¹⁰Primer mix 7: Specific PCR fragment of 90 bp in the B*18:41 allele. Specific PCR fragment of 150 bp in the B*18:07:01-18:07:02 and 18:79 alleles. Specific PCR fragment of 230 bp in the B*18:74N allele.

¹¹Primer mix 9: Specific PCR fragment of 125 bp in the B*18:75 allele. Specific PCR fragment of 255 bp in the B*18:08 and 18:27 and the A*24:220 alleles.

¹²Primer mix 11: Specific PCR fragment of 125 bp in the B*18:09, 18:54 and 18:67 alleles. Specific PCR fragment of 610 bp in the B*18:36 and 18:57 alleles. Specific PCR fragment of 635 bp in the B*18:10-18:11, 18:21 and 18:35 and the B*39:39:02 alleles. Specific PCR fragment of 610 and 635 bp in the B*18:56 and 18:58 and the A*26:01:16, B*15:64:02, B*35:02:02 and 35:20:02 alleles. Specific PCR fragment of 125 and 635 bp in the the A*24:02:37 allele. Specific PCR fragment of 125, 610 and 635 bp in the B*44:03:12 allele.

101.519-12 – including *Taq* pol., IFU-01
101.519-12u – without *Taq* pol., IFU-02

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Lot No.: 95S**Lot-specific information**

¹³Primer mix 12: Specific PCR fragment of 85 bp in the B*18:41 and 18:73 alleles. Specific PCR fragment of 140 bp in the B*18:12 and 18:77 and the B*48:28 alleles.

¹⁴Primer mix 13: Specific PCR fragment of 85 bp in the B*18:13, 18:19 and 18:30 and the B*15:38:01-15:38:02, 51:29, 51:61:01-51:61:02, 51:82, 52:21 and 52:24 and in the A*66:04^w, C*08:51 and C*12:87 alleles. Specific PCR fragment of 265 bp in the B*18:44:01-18:44:02 and the B*14:01:01-14:02:08, 14:04, 14:07N, 14:09, 14:11-14:12 and 14:14-14:36 and in the C*12:87 alleles. Specific PCR fragment of 85 and 265 bp in the B*14:03 and C*01:30 alleles.

¹⁵Primer mix 14: Specific PCR fragment of 170 bp in the B*18:04, 18:25 and 18:68 and the B*15:64:02, 35:02:02, 35:20:02 and 44:03:12 alleles. Specific PCR fragment of 260 bp in the B*18:14 and the B*14:05, 14:13, 40:174 and 51:64 alleles.

¹⁶Primer mix 16: Specific PCR fragment of 95 bp in the B*18:19 and the B*08:70, 13:31, 13:41, 15:27:03, 15:38:02, 15:269, 35:14:01, 35:62, 35:163, 39:36, 44:146, 46:01:03, 51:61:02, 52:21 and 55:21 and in the A*26:68, C*01:09, C*02:02:14, C*06:02:27, C*07:22, C*07:138 and C*12:03:16 alleles. Specific PCR fragment of 360 bp in the B*18:17N allele.

¹⁷Primer mix 17: Specific PCR fragment of 100 bp in the B*18:31 and the B*52:28 alleles. Specific PCR fragment of 255 bp in the B*18:18 allele.

¹⁸Primer mix 18: Specific PCR fragment of 85 bp in the B*18:29 and the B*15:71, 15:175, 15:204, 15:225, 35:50, 35:231, 37:22, 41:12, 46:14, 49:03, 51:151, 54:02, 55:16, 56:35, 57:39 and 58:41 alleles. Specific PCR fragment of 555 bp in the B*18:32 allele. Specific PCR fragment of 580 bp in the B*18:15, 18:21^w, 18:30^w, 18:57 and 15:64:02 alleles.

¹⁹Primer mix 19: Specific PCR fragment of 105 bp in the B*18:06 allele. Specific PCR fragment of 160 bp in the B*18:53 allele. Specific PCR fragment of 405 bp in the B*18:39 allele.

²⁰Primer mix 22: Specific PCR fragment of 125 bp in the B*18:75 allele. Specific PCR fragment of 150 bp in the B*18:33 and 18:77 alleles. Specific PCR fragment of 270 bp in the B*18:22 and 18:69^w and the B*14:10, 35:21, 35:24:01-35:24:02, 35:81, 35:96, 35:109, 35:157, 35:188, 35:190, 35:233, 37:04:01^w-37:04:02^w, 40:28, 51:04, 51:46, 51:56:01-51:56:02, 51:139, 53:02, 53:06, 53:28, 57:14 and 58:09 and in the C*15:39 alleles.

²¹Primer mix 23: Specific PCR fragment of 150 bp in the B*18:51 and 18:53 alleles. Specific PCR fragment of 515 bp in the B*18:21, 18:40 and 18:61 alleles.

²²Primer mix 25: Specific PCR fragment of 75 bp in the B*18:48 allele. Specific PCR fragment of 185 bp in the B*18:35 and 18:54 and the B*07:68:01-07:68:03, 15:138, 15:230, 15:241, 35:66, 40:77, 40:87:01-40:87:02, 40:121, 40:158, 40:222, 40:237, 44:150, 48:12, 48:14, 48:26 and 48:29 alleles.

²³Primer mix 26: Specific PCR fragment of 90 bp in the B*18:42 allele. Specific PCR fragment of 180 bp in the B*18:04, 18:25 and 18:43 and the B*15:64:02, 35:02:02, 35:20:02, 39:39:02 and 44:03:12 and in the A*24:02:37 and A*26:01:16 alleles.

²⁴Primer mix 27: Specific PCR fragment of 80 bp in the B*18:37 and 18:73 and the B*07:109 and 48:28 alleles. Specific PCR fragment of 135 bp in the B*18:46, 18:74N and 18:78 and the B*13:10 and 13:26 alleles.

²⁵Primer mix 28: Specific PCR fragment of 100 bp in the B*18:45 allele. Specific PCR fragment of 180 bp in the B*18:38, 18:74N and 18:78 and the B*08:83, 13:10-13:11, 38:38, 40:91 and 40:197 alleles.

²⁶Primer mix 29: Specific PCR fragment of 65 bp in the B*18:50 and the B*13:15, 40:113, 51:16, 51:31, 51:82, 52:08 and 73:01 alleles. Specific PCR fragment of 120 bp in the B*18:47 allele.

²⁷Primer mix 30: Specific PCR fragment of 145 bp in the B*18:34 allele. Specific PCR fragment of 420 bp in the B*18:52 allele.

‘w’, might be weakly amplified.

101.519-12 – including *Taq* pol., IFU-01
101.519-12u – without *Taq* pol., IFU-02

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Lot No.: 95S

Lot-specific information

INTERPRETATION TABLE																
HLA-B*18 SSP subtyping																
Amplification patterns of the B*18:01 to B*18:91 alleles																
	Well ¹²															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Length of spec.	170	260	260	100	115	130	90	180	125	85	125	85	85	170	100	95
PCR product(s)					140		150		255		610	140	265	260		360
Length of int.	800	800	800	800	1070	1070	1070	1070	1070	800	1070	1070	1070	1070	1070	1070
pos. control ¹																
5'-primer(s) ²	161	363	363	234	130	363	161	412	368	610	234	161	361	106	523	41
	5' -Cgg 3'	5' -Agg 3'	5' -AAT 3'	5' -CAA 3'	5' -AgT 3'	5' -Agg 3'	5' -Cgg 3'	5' -ATg 3'	5' -gTT 3'	5' -TgT 3'	5' -CAA 3'	5' -Cgg 3'	5' -AgT 3'	5' -CCA 3'	5' -CCg 3'	5' -CTA 3'
		363			141		363	3 rd I	368			363	539	363	527	486
		5' -Agg 3'			5' -ATT 3'		5' -Agg 3'	5' -Agg 3'	5' -gTg 3'			5' -Agg 3'	5' -gCg 3'	5' -AgC 3'	5' -TgA 3'	5' -ACC 3'
					5' -CgA 3'				5' -TCg 3'				5' -gTg 3'			
					161				499				539			
3'-primer(s) ³	292	583	583	292	234	453	272	559	583	3 rd I	317	197	583	234	583	234
	5' -gTA 3'	5' -gTg 3'	5' -gTg 3'	5' -gTC 3'	5' -TCT 3'	5' -TCC 3'	5' -TgA 3'	5' -CTC 3'	5' -gTg 3'	5' -TAT 3'	5' -ggA 3'	5' -gAg 3'	5' -gTg 3'	5' -TCT 3'	5' -gTg 3'	5' -TCT 3'
	292						414	704			559	257		583		538
	5' -gTA 3'						5' -TgC 3'	5' -CCA 3'			5' -Cag 3'	5' -TCg 3'		5' -gTg 3'		5' -CCA 3'
							553				583	259				
							5' -CTA 3'				5' -gTA 3'	5' -CTC 3'				
												414				
												5' -TgC 3'				
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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Lot No.: **95S**

Lot-specific information

INTERPRETATION TABLE																															
HLA-B*18 SSP subtyping																															
Amplification patterns of the B*18:01 to B*18:91 alleles																															
Well ¹²																															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32																
100	85	105	290	215	125	150	190	75	90	80	100	65	145	135	175	Length of spec.															
255	555	160			270	515		185	180	135	180	120	420			PCR product(s)															
1070	1070	1070	1070	1070	800	1070	1070	1070	800	800	800	1070	800	1070	1070	Length of int.															
																pos. control ¹															
368	97	234	409	409	161	234	412	161	97	161	161	103	234	206	523	5'-primer(s) ²															
5' -CCg 3'	5' -TCC 3'	5' -CAA 3'	5' -gTg 3'	5' -ggC 3'	5' -Cgg 3'	5' -CAA 3'	5' -ATA 3'	5' -Cgg 3'	5' -TCT 3'	5' -Cgg 3'	5' -Cgg 3'	5' -CCT 3'	5' -CAA 3'	5' -gAC 3'	5' -CCA 3'																
523	234	3 rd I		409	355	3 rd I		463	186	419	369	560	478																		
5' -CCg 3'	5' -CAA 3'	5' -Agg 3'	5' -gTg 3'	5' -ggC 3'	5' -TCA 3'	5' -Agg 3'		5' -TgA 3'	5' -AgA 3'	5' -gTC 3'	5' -TAC 3'	5' -CgA 3'	5' -CgA 3'																		
					499																										
					5' -TCg 3'																										
583	142	299	3 rd I	583	257	340	559	193	234	197	218	181	368	302	3 rd I	3'-primer(s) ³															
5' -gTg 3'	5' -TgC 3'	5' -TCA 3'	5' -TAT 3'	5' -gTg 3'	5' -TCg 3'	5' -ggT 3'	5' -CgT 3'	5' -CgT 3'	5' -TCT 3'	5' -gAg 3'	5' -gCT 3'	5' -gTA 3'	5' -CAT 3'	5' -ggT 3'	5' -TAT 3'																
505	353				272	463		301		204	502	583	583																		
5' -gCT 3'	5' -ggC 3'				5' -TgC 3'	5' -gCg 3'		5' -gTC 3'		5' -TCT 3'	5' -CTT 3'	5' -gTg 3'	5' -gTg 3'																		
527	685				583	685		605		506	506																				
5' -CCT 3'	5' -ggg 3'				5' -gTg 3'	5' -ggg 3'		5' -gCT 3'		5' -TgA 3'	5' -TgA 3'																				
518																															
5' -CCT 3'																															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.															

101.519-12 – including *Taq* pol., IFU-01101.519-12u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for
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Lot-specific information

Length of spec.	170	260	260	100	115	130	90	180	125	85	125	85	85	170	100	95
PCR product(s)					140		150		255		610	140	265	260		360
							230				635					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-B allele^{4,5}																
*18:01:01:01-18:01:18, 18:55, 18:59-18:60, 18:62-18:66, 18:70-18:71, 18:76, 18:80, 18:82-18:91	1	2														
*18:02	1		3													
*18:03		2		4												
*18:04	1	2			5									14		
*18:05	1	2				6										
*18:06	1	2														
*18:07:01-18:07:02	1	2					7									
*18:08	1	2							9							
*18:09		2									11					
*18:10	1						8				11					
*18:11, 18:56, 18:58	1										11					
*18:12	1	2										12				
*18:13	1	2											13			
*18:14	1													14		
*18:15	1	2													15	
*18:17N	1	2														16
*18:18	1	2														
*18:19	1	2											13		15	16
*18:20	1	2														
*18:21	1						8				11					
*18:22	1															
*18:23N	1	2								10						
*18:24	1	2			5											
*18:25	1	2												14		
*18:26	1	2														
*18:27	1								9							
*18:28	1	2														
*18:29		2														
*18:30	1	2											13		15	
*18:31	1	2													15	
*18:32	1	2														
*18:33	1	2														
*18:34, 18:52 ⁶	1	2														
*18:35	1						8				11					
*18:36, 18:67 ⁷	1	2									11					
*18:37, 18:46 ⁸	1	2														
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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Lot No.: **95S**

Lot-specific information

100	85	105	290	215	125	150	190	75	90	80	100	65	145	135	175	Length of spec. PCR product(s)
255	555	160			150	515		185	180	135	180	120	420			
	580	405			270											
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
																HLA-B allele ^{4,5}
				21												*18:01:01:01-18:01:18, 18:55, 18:59-18:60, 18:62-18:66, 18:70-18:71, 18:76, 18:80, 18:82-18:91
				21												*18:02
				21												*18:03
				21				26								*18:04
				21												*18:05
		19		21												*18:06
				21												*18:07:01-18:07:02
				21												*18:08
				21												*18:09
																*18:10
																*18:11, 18:56, 18:58
				21												*18:12
				21												*18:13
				21												*18:14
	18			21												*18:15
				21												*18:17N
17				21												*18:18
				21												*18:19
			20													*18:20
	w					23										*18:21
				21	22											*18:22
				21												*18:23N
				21												*18:24
				21				26								*18:25
				21		24										*18:26
				21												*18:27
				21										32		*18:28
	18			21												*18:29
	w			21												*18:30
17				21												*18:31
	18			21												*18:32
				21	22											*18:33
				21								30				*18:34, 18:52 ⁶
								25								*18:35
				21												*18:36, 18:67 ⁷
				21						27						*18:37, 18:46 ⁸
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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Lot No.: **95S**

Lot-specific information

Length of spec.	170	260	260	100	115	130	90	180	125	85	125	85	85	170	100	95
PCR product(s)					140		150		255		610	140	265	260		360
							230				635					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*18:38, 18:45 ⁹	1	2														
*18:39	1															
*18:40, 18:51 ¹⁰	1	2														
*18:41	1	2					7					12				
*18:42, 18:43 ¹¹	1	2														
*18:44:01-18:44:02	1												13			
*18:47	1	2														
*18:48	1	2														
*18:49	1	2														
*18:50	1	2						8								
*18:53	1	2														
*18:54		2										11				
*18:57	1	2									11				15	
*18:61	1	2														
*18:68	1	2												14		
*18:69	1															
*18:72		2			5											
*18:73	1	2										12				
*18:74N	1	2					7									
*18:75	1	2							9							
*18:77	1	2										12				
*18:78	1	2														
*18:79	1	2					7									
*18:81	1	2						8								
*07:02:01-07:04, 07:07-07:13, 07:15-07:16, 07:18:01-07:18:02, 07:21-07:23, 07:25-07:27, 07:29-07:30, 07:33:01-07:33:02, 07:35-07:39, 07:41-07:42, 07:44-07:52, 07:54-07:59, 07:61- 07:67N, 07:70-07:77, 07:79, 07:81-07:89, 07:91- 07:95, 07:98-07:99, 07:101-07:104, 07:106- 07:108, 07:110-07:111N, 07:113-07:114, 07:116- 07:122, 07:124-07:130, 07:132-07:136, 07:139, 07:141-07:175, 07:177-07:181N, 07:183-07:196, 07:198, 13:35, 15:40, 15:47:01-15:47:02, 15:49, 15:52, 15:114, 15:117, 15:124, 15:238, 27:34, 27:41, 35:15, 35:33, 35:86, 37:07, 40:03, 40:18, 40:20, 40:24, 40:31-40:33, 40:44, 40:52, 40:59, 40:98, 40:120, 40:150, 40:159, 46:06, 46:25, 46:30, 48:08, 48:23, 57:13, 57:25, 57:29, 58:37, C*02:02:19, C*02:06, C*02:23, C*02:36, C*15:42								8								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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

Lot No.: **95S**

Lot-specific information

Length of spec.	170	260	260	100	115	130	90	180	125	85	125	85	85	170	100	95
PCR product(s)					140		150		255		610	140	265	260		360
							230				635					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*07:14, 07:17, 07:28, 07:96:01-07:96:02, 07:115, 07:197, 08:14, 08:28, 08:49, 08:74, 08:87, 08:111, 13:46, 13:51, 15:02:01-15:02:06, 15:06, 15:13:01-15:13:02, 15:17:01:01-15:17:02, 15:21, 15:25:01-15:25:03, 15:31, 15:36, 15:44, 15:55, 15:77, 15:88-15:89, 15:106, 15:112, 15:121, 15:128, 15:137, 15:139, 15:144, 15:156, 15:162, 15:168, 15:170, 15:177, 15:196, 15:208, 15:213, 15:216, 15:233, 15:240, 15:265, 15:271, 15:273, 27:01-27:06, 27:08-27:10, 27:12-27:19, 27:21, 27:23, 27:25-27:26, 27:29-27:32, 27:35-27:40, 27:42, 27:44-27:61, 27:63-27:104, 27:106, 35:164, 35:215, 37:01:01-37:03N, 37:06, 37:08, 37:10-37:11, 37:13-37:21, 37:23-37:34, 37:36-37:37, 38:22, 39:17, 40:09, 40:42, 40:60, 40:89, 40:124:01-40:124:02, 40:172, 40:180, 42:20, 44:02:01:01-44:03:11, 44:03:13-44:09, 44:11-44:13, 44:15-44:16, 44:18-44:30, 44:32-44:42, 44:44, 44:46-44:50, 44:52N-44:61N, 44:63-44:76, 44:78-44:81, 44:83-44:106, 44:109-44:121, 44:124-44:134, 44:136-44:145, 44:147-44:149N, 44:151-44:165, 44:167-44:181, 45:01-45:08, 45:10-45:13, 47:01:01:01-47:08, 48:17, 49:01:01-49:02, 49:05-49:08, 49:10-49:26, 50:01:01-50:02, 50:04-50:20, 50:31-50:33, 51:42, 53:07, 54:15, 55:41, 55:58, 57:04-57:05, 57:32, 57:41, 83:01																
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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

Lot No.: **95S**

Lot-specific information

100	85	105	290	215	125	150	190	75	90	80	100	65	145	135	175	Length of spec. PCR product(s)	
255	555	160			150	515		185	180	135	180	120	420				
	580	405			270												
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.	
			20													*07:14, 07:17, 07:28, 07:96:01-07:96:02, 07:115, 07:197, 08:14, 08:28, 08:49, 08:74, 08:87, 08:111, 13:46, 13:51, 15:02:01-15:02:06, 15:06, 15:13:01-15:13:02, 15:17:01:01-15:17:02, 15:21, 15:25:01-15:25:03, 15:31, 15:36, 15:44, 15:55, 15:77, 15:88-15:89, 15:106, 15:112, 15:121, 15:128, 15:137, 15:139, 15:144, 15:156, 15:162, 15:168, 15:170, 15:177, 15:196, 15:208, 15:213, 15:216, 15:233, 15:240, 15:265, 15:271, 15:273, 27:01-27:06, 27:08-27:10, 27:12-27:19, 27:21, 27:23, 27:25-27:26, 27:29-27:32, 27:35-27:40, 27:42, 27:44-27:61, 27:63-27:104, 27:106, 35:164, 35:215, 37:01:01-37:03N, 37:06, 37:08, 37:10-37:11, 37:13-37:21, 37:23-37:34, 37:36- 37:37, 38:22, 39:17, 40:09, 40:42, 40:60, 40:89, 40:124:01-40:124:02, 40:172, 40:180, 42:20, 44:02:01:01-44:03:11, 44:03:13-44:09, 44:11- 44:13, 44:15-44:16, 44:18-44:30, 44:32-44:42, 44:44, 44:46-44:50, 44:52N-44:61N, 44:63-44:76, 44:78-44:81, 44:83-44:106, 44:109-44:121, 44:124-44:134, 44:136-44:145, 44:147-44:149N, 44:151-44:165, 44:167-44:181, 45:01-45:08, 45:10-45:13, 47:01:01:01-47:08, 48:17, 49:01:01- 49:02, 49:05-49:08, 49:10-49:26, 50:01:01-50:02, 50:04-50:20, 50:31-50:33, 51:42, 53:07, 54:15, 55:41, 55:58, 57:04-57:05, 57:32, 57:41, 83:01	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.	

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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

Lot No.: **95S**

Lot-specific information

Length of spec.	170	260	260	100	115	130	90	180	125	85	125	85	85	170	100	95
PCR product(s)					140		150		255		610	140	265	260		360
							230				635					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*07:34, 08:01:01-08:05, 08:08N-08:10, 08:12:01-08:13, 08:15-08:20, 08:22-08:24, 08:26-08:27, 08:29-08:36, 08:38-08:39, 08:41-08:48, 08:50-08:69, 08:71-08:73, 08:75-08:76, 08:78, 08:80-08:82N, 08:84-08:86N, 08:88, 08:90-08:106, 08:109-08:110, 13:06, 13:53, 15:42, 15:83, 15:86, 15:188, 15:224, 15:252, 35:60, 35:87, 37:12, 38:01:01, 38:01:03-38:01:05, 38:01:07-38:07, 38:09-38:21, 38:23-38:28, 38:31-38:37, 38:39-38:43, 39:01:01:01-39:01:01:03, 39:01:03-39:06:03, 39:08-39:14, 39:16, 39:18-39:20, 39:22-39:24:02, 39:26-39:28, 39:30-39:31, 39:34-39:35, 39:37, 39:39:01, 39:41-39:42, 39:44-39:46, 39:51-39:54, 39:56-39:66, 39:68-39:73, 39:75-39:83, 40:39, 40:184, 40:199, 41:01-41:03:02, 41:05-41:09, 41:11, 41:13-41:16, 41:20, 41:22-41:28, 42:01:01-42:02, 42:04-42:08, 42:10-42:15, 42:17-42:19, 44:166, 46:18, 51:36, 51:143, 54:01:01-54:01:04, 54:04-54:05N, 54:07-54:08N, 54:10-54:13, 54:17-54:25, 54:27-54:30, 55:01:01-55:05, 55:07, 55:10-55:13, 55:15, 55:17-55:20, 55:25-55:26, 55:28-55:40, 55:42-55:45, 55:47-55:50, 55:52-55:57, 55:59, 56:10, 56:12, 56:23, 58:20, 59:01:01:01-59:03, 59:05-59:06, 67:01:01-67:03, C*15:24																
*07:68:01-07:68:03, 15:138, 15:241, 35:66								8								
*07:109, 13:26								8								
*08:70, 39:36, 55:21																16
*08:83, 38:38																
*13:10																
*13:11, 40:91, 40:197																
*13:15, 51:31																
*13:31, 13:41, 15:27:03, 15:269, 35:14:01, 35:62, 35:163, 46:01:03, A*26:68, C*01:09, C*02:02:14, C*06:02:27, C*07:22, C*07:138, C*12:03:16																16
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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

Lot No.: **95S**

Lot-specific information

100	85	105	290	215	125	150	190	75	90	80	100	65	145	135	175	Length of spec.
255	555	160			150	515		185	180	135	180	120	420			PCR product(s)
	580	405			270											
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
							24									*07:34, 08:01:01-08:05, 08:08N-08:10, 08:12:01-08:13, 08:15-08:20, 08:22-08:24, 08:26-08:27, 08:29-08:36, 08:38-08:39, 08:41-08:48, 08:50-08:59, 08:71-08:73, 08:75-08:76, 08:78, 08:80-08:82N, 08:84-08:86N, 08:88, 08:90-08:106, 08:109-08:110, 13:06, 13:53, 15:42, 15:83, 15:86, 15:188, 15:224, 15:252, 35:60, 35:87, 37:12, 38:01:01, 38:01:03-38:01:05, 38:01:07-38:07, 38:09-38:21, 38:23-38:28, 38:31-38:37, 38:39-38:43, 39:01:01:01-39:01:01:03, 39:01:03-39:06:03, 39:08-39:14, 39:16, 39:18-39:20, 39:22-39:24:02, 39:26-39:28, 39:30-39:31, 39:34-39:35, 39:37, 39:39:01, 39:41-39:42, 39:44-39:46, 39:51-39:54, 39:56-39:66, 39:68-39:73, 39:75-39:83, 40:39, 40:184, 40:199, 41:01-41:03:02, 41:05-41:09, 41:11, 41:13-41:16, 41:20, 41:22-41:28, 42:01:01-42:02, 42:04-42:08, 42:10-42:15, 42:17-42:19, 44:166, 46:18, 51:36, 51:143, 54:01:01-54:01:04, 54:04-54:05N, 54:07-54:08N, 54:10-54:13, 54:17-54:25, 54:27-54:30, 55:01:01-55:05, 55:07, 55:10-55:13, 55:15, 55:17-55:20, 55:25-55:26, 55:28-55:40, 55:42-55:45, 55:47-55:50, 55:52-55:57, 55:59, 56:10, 56:12, 56:23, 58:20, 59:01:01:01-59:03, 59:05-59:06, 67:01:01-67:03, C*15:24
								25								*07:68:01-07:68:03, 15:138, 15:241, 35:66
										27						*07:109, 13:26
							24									*08:70, 39:36, 55:21
							24				28					*08:83, 38:38
			20							27	28					*13:10
											28					*13:11, 40:91, 40:197
				21								29				*13:15, 51:31
																*13:31, 13:41, 15:27:03, 15:269, 35:14:01, 35:62, 35:163, 46:01:03, A*26:68, C*01:09, C*02:02:14, C*06:02:27, C*07:22, C*07:138, C*12:03:16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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

Lot No.: **95S**

Lot-specific information

Length of spec.	170	260	260	100	115	130	90	180	125	85	125	85	85	170	100	95
PCR product(s)					140		150		255		610	140	265	260		360
							230				635					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*13:62, 51:01:01-51:01:42, 51:03, 51:07:01-51:07:02, 51:11N-51:14, 51:22, 51:24:01-51:24:04, 51:26-51:28, 51:30, 51:32-51:33, 51:35, 51:37-51:39, 51:41N, 51:43, 51:48-51:52, 51:55, 51:57-51:58, 51:60, 51:63, 51:65-51:72, 51:74-51:80, 51:83-51:84, 51:86-51:92, 51:94-51:96, 51:98N-51:100, 51:102-51:107, 51:109-51:114, 51:116-51:119, 51:121, 51:123-51:134, 51:136-51:138, 51:140, 51:142, 51:145, 51:147, 51:149N-51:150, 51:152, 51:154, 52:01:01-52:02:01, 52:04-52:07, 52:09, 52:12-52:18, 52:20, 52:22-52:23, 52:25, 52:27, 52:30-52:31, 56:05:01-56:06, 56:21, 58:08:01-58:08:02, 78:01:01-78:03, 78:05															15	
*14:01:01-14:02:08, 14:03-14:04, 14:07N, 14:09, 14:11-14:12, 14:14-14:22, 14:24-14:36													13		15	
*14:02:09, 14:37, 49:09, 51:85, 52:26															15	
*14:05													14	15		
*14:06:01-14:06:02, 14:08		2													15	
*14:10															15	
*14:13													14	15		
*14:23, 51:29, 51:61:01, 52:24													13	15		
*15:37, 51:06:01-51:06:02, 51:45, 51:62, 51:135		2													15	
*15:38:01		2											13		15	
*15:38:02		2											13		15	16
*15:64:02					5					11			14			
*15:71, 15:175, 15:225, 35:50, 35:231, 46:14, 56:35, 57:39, 58:41																
*15:185, 39:32, 39:43, 56:31		2														
*15:204, 37:22, 49:03																
*15:214							8									
*15:230, 44:150, 48:26																
*15:250																
*27:28, 27:62			3													
*35:02:02, 35:20:02					w					11			14			
*35:21, 35:96, 35:188, 40:28, 51:04, 51:46, 51:56:01-51:56:02, 53:06, 53:28, C*15:39															15	
*35:24:01-35:24:02, 35:81, 35:109, 35:157, 35:190, 35:233, 51:139, 53:02, 57:14, 58:09																
*35:27, 35:56, 35:185, 35:203																
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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

Lot No.: **95S**

Lot-specific information

100	85	105	290	215	125	150	190	75	90	80	100	65	145	135	175	Length of spec. PCR product(s)
255	555	160			150	515		185	180	135	180	120	420			
	580	405			270											
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
				21												*13:62, 51:01:01-51:01:42, 51:03, 51:07:01-51:07:02, 51:11N-51:14, 51:22, 51:24:01-51:24:04, 51:26-51:28, 51:30, 51:32-51:33, 51:35, 51:37-51:39, 51:41N, 51:43, 51:48-51:52, 51:55, 51:57-51:58, 51:60, 51:63, 51:65-51:72, 51:74-51:80, 51:83-51:84, 51:86-51:92, 51:94-51:96, 51:98N-51:100, 51:102-51:107, 51:109-51:114, 51:116-51:119, 51:121, 51:123-51:134, 51:136-51:138, 51:140, 51:142, 51:145, 51:147, 51:149N-51:150, 51:152, 51:154, 52:01:01:01-52:02:01, 52:04-52:07, 52:09, 52:12-52:18, 52:20, 52:22-52:23, 52:25, 52:27, 52:30-52:31, 56:05:01-56:06, 56:21, 58:08:01-58:08:02, 78:01:01-78:03, 78:05
			20													*14:01:01-14:02:08, 14:03-14:04, 14:07N, 14:09, 14:11-14:12, 14:14-14:22, 14:24-14:36
			20													*14:02:09, 14:37, 49:09, 51:85, 52:26
			20													*14:05
			20													*14:06:01-14:06:02, 14:08
			20	22												*14:10
				21		24										*14:13
				21												*14:23, 51:29, 51:61:01, 52:24
				21												*15:37, 51:06:01-51:06:02, 51:45, 51:62, 51:135
				21												*15:38:01
				21												*15:38:02
18								26								*15:64:02
18																*15:71, 15:175, 15:225, 35:50, 35:231, 46:14, 56:35, 57:39, 58:41
				21												*15:185, 39:32, 39:43, 56:31
18		20														*15:204, 37:22, 49:03
		20														*15:214
		20						25								*15:230, 44:150, 48:26
		20												32		*15:250
		20														*27:28, 27:62
								26								*35:02:02, 35:20:02
				21	22											*35:21, 35:96, 35:188, 40:28, 51:04, 51:46, 51:56:01-51:56:02, 53:06, 53:28, C*15:39
				21	22											*35:24:01-35:24:02, 35:81, 35:109, 35:157, 35:190, 35:233, 51:139, 53:02, 57:14, 58:09
														31		*35:27, 35:56, 35:185, 35:203
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

101.519-12 – including *Taq* pol., IFU-01101.519-12u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **95S**

Lot-specific information

Length of spec.	170	260	260	100	115	130	90	180	125	85	125	85	85	170	100	95
PCR product(s)					140		150		255		610	140	265	260		360
							230				635					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*37:04:01-37:04:02																
*37:05																
*39:39:02				4	5						11					
*39:48, 40:163		2														
*40:51		2													15	
*40:77, 40:87:01-40:87:02, 40:121, 40:158, 40:222, 40:237, 48:12, 48:14, 48:29																
*40:113		2														
*40:174, 51:64														14	15	
*40:226																
*41:12, 54:02, 55:16																
*44:03:12											11			14		
*44:108N										10						
*44:146																16
*48:28	1											12				
*51:08-51:09:02, 51:19-51:20, 51:44N, 51:53, 51:73, 51:97, 51:115, 51:120, 51:122, 51:141, 52:10:01-52:10:02, 52:19, 52:29, 56:34																
*51:16, 52:08															15	
*51:17-51:18															15	
*51:21, 51:101, 78:07															15	
*51:61:02, 52:21													13		15	16
*51:82													13		15	
*51:151															15	
*51:153																
*52:28															15	
*73:01																
*78:06															15	
A*24:02:37, A*26:01:16											11					
A*24:220									9							
A*66:04													w			
C*01:30, C*12:87													13		15	
C*08:51		2											13		15	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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

Lot No.: **95S**

Lot-specific information

100	85	105	290	215	125	150	190	75	90	80	100	65	145	135	175	Length of spec.
255	555	160			150	515		185	180	135	180	120	420			PCR product(s)
	580	405			270											
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
			20		w											*37:04:01-37:04:02
			20											31		*37:05
							24		26							*39:39:02
				21			24									*39:48, 40:163
				21			24									*40:51
								25								*40:77, 40:87:01-40:87:02, 40:121, 40:158, 40:222, 40:237, 48:12, 48:14, 48:29
				21								29				*40:113
				21												*40:174, 51:64
														32		*40:226
18							24									*41:12, 54:02, 55:16
			20						26							*44:03:12
			20													*44:108N
			20													*44:146
									27							*48:28
				21												*51:08-51:09:02, 51:19-51:20, 51:44N, 51:53, 51:73, 51:97, 51:115, 51:120, 51:122, 51:141, 52:10:01-52:10:02, 52:19, 52:29, 56:34
				21								29				*51:16, 52:08
																*51:17-51:18
				21			24									*51:21, 51:101, 78:07
				21												*51:61:02, 52:21
				21								29				*51:82
18				21												*51:151
				21			24									*51:153
17				21												*52:28
												29				*73:01
				21										31		*78:06
									26							A*24:02:37, A*26:01:16
																A*24:220
																A*66:04
																C*01:30, C*12:87
																C*08:51
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

101.519-12 – including *Taq* pol., IFU-01
 101.519-12u – without *Taq* pol., IFU-02

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

Lot No.: **95S**

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-B*18 subtyping.

In addition, wells number 2 to 4, 10, 22, 26 to 28 and 30 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

²The nucleotide position, in the 1st, 2nd or 3rd exon 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 2nd, 3rd or 4th exon or 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 sequence of the B*1816 allele has been found to be identical to B*18:14.

⁵HLA-B*18 alleles in bold lettering are listed as confirmed alleles on the on the IMGT/HLA web page www.ebi.ac.uk/imgt/hla, release 3.13.1, July 2013.

⁶The B*18:34 and 18:52 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 30.

⁷The B*18:36 and 18:67 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 11.

⁸The B*18:37 and 18:46 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 27.

⁹The B*18:38 and 18:45 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 28.

¹⁰The B*18:40 and 18:51 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 23.

¹¹The B*18:42 and 18:43 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 26.

¹²Primer mix 5: Specific PCR fragment of 115 bp in the B*18:72 and in the B*15:64:02, 35:02:02^w, 35:20:02^w and 39:39:02 alleles. Specific PCR fragment of 140 bp in the B*18:04 and 18:24 alleles.

Primer mix 7: Specific PCR fragment of 90 bp in the B*18:41 allele. Specific PCR fragment of 150 bp in the B*18:07:01-18:07:02 and 18:79 alleles. Specific PCR fragment of 230 bp in the B*18:74N allele. Primer mix 9: Specific PCR fragment of 125 bp in the B*18:75 allele. Specific PCR fragment of 255 bp in the B*18:08 and 18:27 and the A*24:220 alleles.

Primer mix 11: Specific PCR fragment of 125 bp in the B*18:09, 18:54 and 18:67 alleles. Specific PCR fragment of 610 bp in the B*18:36 and 18:57 alleles. Specific PCR fragment of 635 bp in the B*18:10-18:11, 18:21 and 18:35 and the B*39:39:02 alleles. Specific PCR fragment of 610 and 635 bp in the B*18:56 and 18:58 and the A*26:01:16, B*15:64:02, B*35:02:02 and 35:20:02 alleles. Specific PCR fragment of 125 and 635 bp in the the A*24:02:37 allele. Specific PCR fragment of 125, 610 and 635 bp in the B*44:03:12 allele.

Primer mix 12: Specific PCR fragment of 85 bp in the B*18:41 and 18:73 alleles. Specific PCR fragment of 140 bp in the B*18:12 and 18:77 and the B*48:28 alleles.

Primer mix 13: Specific PCR fragment of 85 bp in the B*18:13, 18:19 and 18:30 and the B*15:38:01-15:38:02, 51:29, 51:61:01-51:61:02, 51:82, 52:21 and 52:24 and in the A*66:04^w, C*08:51 and C*12:87 alleles. Specific PCR fragment of 265 bp in the B*18:44:01-18:44:02 and the B*14:01:01-14:02:08, 14:04, 14:07N, 14:09, 14:11-14:12 and 14:14-14:36 and in the C*12:87 alleles. Specific PCR fragment of 85 and 265 bp in the B*14:03 and C*01:30 alleles.

Primer mix 14: Specific PCR fragment of 170 bp in the B*18:04, 18:25 and 18:68 and the B*15:64:02, 35:02:02, 35:20:02 and 44:03:12 alleles. Specific PCR fragment of 260 bp in the B*18:14 and the B*14:05, 14:13, 40:174 and 51:64 alleles.

Primer mix 16: Specific PCR fragment of 95 bp in the B*18:19 and the B*08:70, 13:31, 13:41, 15:27:03, 15:38:02, 15:269, 35:14:01, 35:62, 35:163, 39:36, 44:146, 46:01:03, 51:61:02, 52:21 and 55:21 and in the A*26:68, C*01:09, C*02:02:14, C*06:02:27, C*07:22, C*07:138 and C*12:03:16 alleles. Specific PCR fragment of 360 bp in the B*18:17N allele.

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Primer mix 17: Specific PCR fragment of 100 bp in the B*18:31 and the B*52:28 alleles. Specific PCR fragment of 255 bp in the B*18:18 allele.

Primer mix 18: Specific PCR fragment of 85 bp in the B*18:29 and the B*15:71, 15:175, 15:204, 15:225, 35:50, 35:231, 37:22, 41:12, 46:14, 49:03, 51:151, 54:02, 55:16, 56:35, 57:39 and 58:41 alleles. Specific PCR fragment of 555 bp in the B*18:32 allele. Specific PCR fragment of 580 bp in the B*18:15, 18:21^w, 18:30^w, 18:57 and 15:64:02 alleles.

Primer mix 19: Specific PCR fragment of 105 bp in the B*18:06 allele. Specific PCR fragment of 160 bp in the B*18:53 allele. Specific PCR fragment of 405 bp in the B*18:39 allele.

Primer mix 22: Specific PCR fragment of 125 bp in the B*18:75 allele. Specific PCR fragment of 150 bp in the B*18:33 and 18:77 alleles. Specific PCR fragment of 270 bp in the B*18:22 and 18:69^w and the B*14:10, 35:21, 35:24:01-35:24:02, 35:81, 35:96, 35:109, 35:157, 35:188, 35:190, 35:233, 37:04:01^w-37:04:02^w, 40:28, 51:04, 51:46, 51:56:01-51:56:02, 51:139, 53:02, 53:06, 53:28, 57:14 and 58:09 and in the C*15:39 alleles.

Primer mix 23: Specific PCR fragment of 150 bp in the B*18:51 and 18:53 alleles. Specific PCR fragment of 515 bp in the B*18:21, 18:40 and 18:61 alleles.

Primer mix 25: Specific PCR fragment of 75 bp in the B*18:48 allele. Specific PCR fragment of 185 bp in the B*18:35 and 18:54 and the B*07:68:01-07:68:03, 15:138, 15:230, 15:241, 35:66, 40:77, 40:87:01-40:87:02, 40:121, 40:158, 40:222, 40:237, 44:150, 48:12, 48:14, 48:26 and 48:29 alleles.

Primer mix 26: Specific PCR fragment of 90 bp in the B*18:42 allele. Specific PCR fragment of 180 bp in the B*18:04, 18:25 and 18:43 and the B*15:64:02, 35:02:02, 35:20:02, 39:39:02 and 44:03:12 and in the A*24:02:37 and A*26:01:16 alleles.

Primer mix 27: Specific PCR fragment of 80 bp in the B*18:37 and 18:73 and the B*07:109 and 48:28 alleles. Specific PCR fragment of 135 bp in the B*18:46, 18:74N and 18:78 and the B*13:10 and 13:26 alleles.

Primer mix 28: Specific PCR fragment of 100 bp in the B*18:45 allele. Specific PCR fragment of 180 bp in the B*18:38, 18:74N and 18:78 and the B*08:83, 13:10-13:11, 38:38, 40:91 and 40:197 alleles.

Primer mix 29: Specific PCR fragment of 65 bp in the B*18:50 and the B*13:15, 40:113, 51:16, 51:31, 51:82, 52:08 and 73:01 alleles. Specific PCR fragment of 120 bp in the B*18:47 allele.

Primer mix 30: Specific PCR fragment of 145 bp in the B*18:34 allele. Specific PCR fragment of 420 bp in the B*18:52 allele.

‘w’, might be weakly amplified.

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Lot-specific information

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101.519-12 – including *Taq* pol., IFU-01
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Lot No.: **95S**

Lot-specific information

CERTIFICATE OF ANALYSIS

Olerup SSP® HLA-B*18 SSP

Product number: 101.519-12 – including *Taq* polymerase
 101.519-12u – without *Taq* polymerase
 Lot number: 95S
 Expiry date: 2016-April-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	2010-769-01	13	2012-074-13	25	2013-256-25
2	2012-074-02	14	2010-769-14	26	2013-256-26
3	2010-769-03	15	2012-074-15	27	2013-256-27
4	2013-256-04	16	2010-769-16	28	2012-074-28
5	2013-256-05	17	2012-074-17	29	2013-256-29
6	2010-769-06	18	2010-769-18	30	2011-873-30
7	2013-256-07	19	2012-074-19	31	2013-256-31
8	2013-256-08	20	2010-769-20	32	2012-074-32
9	2013-256-09	21	2012-074-21		
10	2011-873-10	22	2013-256-22		
11	2010-769-11	23	2012-074-23		
12	2013-256-12	24	2010-769-24		

The specificity of each primer solution of the kit has been tested against 48 well characterized IHWC cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 5 to 7, 9 to 12, 14, 16 to 19, 22, 23, 25 to 28, 30 and 32 were available. The specificities of the primers in primer solutions 5, 7, 9, 11, 12, 14, 16 to 19, 22, 23, 25 to 28 and 30 were tested by separately adding additional 5'-primers, respectively 3'-primers. In primer solution 6 only the 5'-primer was possible to test, the 3'-primer was not possible to test. In primer solutions 10 and 32 only the 3'-primer was possible to test, the 5'-primer was not possible to test. In primer solutions 5, 9, 15 to 17, 21, 22, 26 and 30 one or two 5'-primers were not possible to test, and in primer solutions 1, 7, 8, 12, 18, 19, 22, 23, 27 to 29 one, two or three 3'-primers were not possible to test. Two respectively one additional 5'-primers in primer solutions 8, 13 and 29 were tested by separately adding one or two 3'-primers.

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

Date of approval: 2013-November-08

Approved by:

Production Quality Control

101.519-12 – including *Taq* pol., IFU-01
101.519-12u – without *Taq* pol., IFU-02

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Lot No.: **95S**

Lot-specific information

Declaration of Conformity

Product name: *Olerup* SSP® HLA-B*18
Product number: 101.519-12/12u
Lot number: 95S

Intended use: HLA-B*18 high resolution histocompatibility testing

Manufacturer: *Olerup* SSP AB
Franzengatan 5
SE-112 51 Stockholm, Sweden
Phone: +46-8-717 88 27
Fax: +46-8-717 88 18

We, *Olerup* SSP AB, hereby declare that this product, to which this Declaration of Conformity relates is in conformity with the following Standard(s) and other normative document(s) ISO 9001:2008 and ISO 13485:2012, following the provisions of the 98/79/EC Directive on *in vitro* diagnostic medical devices, Annex II List B, conformity assessed using Annex IV, as transposed into the national laws of the Member States of the European Union.

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

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

Stockholm, Sweden
2013-November-08

Ann-Cathrin Jareman
Head of QA and Regulatory Affairs

101.519-12 – including *Taq* pol., IFU-01
101.519-12u – without *Taq* pol., IFU-02

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Lot No.: **95S**

Lot-specific information

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