

101.418-12/04 – including *Taq* pol., IFU-01
101.418-12u/04– without *Taq* pol., IFU-02

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

Lot No.: **10S**

Lot-specific information
Olerup SSP® HLA-A*68

Product number:	101.418-12/04 – including <i>Taq</i> pol. 101.418-12u/04u – without <i>Taq</i> pol.
Lot number:	10S
Expiry date:	2015-October-01
Number of tests:	12 tests – Product No. 101.418-12/12u 4 tests – Product No. 101.418-04/04u
Number of wells per test:	46
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. 10S.

**CHANGES COMPARED TO THE PREVIOUS OLERUP SSP®
HLA-A*68 LOT (36N)**

The HLA-A*68 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

Four wells have been added to the HLA-A*68 kit, wells **43 to 46**.

The Lot-specific information for HLA-A*68 including and without *Taq* polymerase is now described in one common Product Insert.

¹As described in section Uniquely Identified Alleles.

The HLA-A*68 specificity and interpretation tables have been updated for the HLA-A alleles described since the previous *Olerup SSP®* HLA-A*68 lot was made (**Lot No. 36N**).

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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
14	Moved, exchanged	Moved	Primer pair moved to well 45, to decrease primer oligomer formation, exchanged 5'-primer for resolution of the the A*68:13:02 allele.
25	Moved	Moved	Primer pair moved to well 46, for improved specificity.
29	-	Modified	Increased yield of specific PCR product.
30	-	Modified	Increased yield of specific PCR product.
32	-	-	Exchanged positive control primer pair,
36	Modified	-	Increased yield of specific PCR product.
43	New	New	New primer pair for the A*68:94N allele.
44	New	New	New primer pair for the A*68:96 allele.
45	New	New	Primer pair from well 14.
46	New	New	Primer pair from well 25

Change in revision R01 compared to R00:

1. Primer mix 11 may faintly amplify the A*02:06:05, 02:06:09, 02:122, 11:70, 11:121 and 26:07:01-26:07:02 alleles. A foot note has been added in the Specificity Table.

Change in revision R02 compared to R01:

1. Primer mix 23 weakly amplifies the A*68:26 allele. This has been corrected in the Specificity and Interpretation Tables.

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PRODUCT DESCRIPTION

HLA-A*68 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the A*68:01 to A*68:99 alleles. The HLA-A*69:01 allele is also identified.

PLATE LAYOUT

Each test consists of 46 PCR reactions in a 48 well cut PCR plate. Wells 47 to 48 are empty.

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
33	34	35	36	37	38	39	40
41	42	43	44	45	46	empty	empty

The 48 well cut PCR plate is marked with 'HLA-A*68' in silver gray ink. Well No. 1 is marked with the Lot No '10S'.

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 48 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-A*68 SSP subtypings will be influenced by most A*01, several A*02, the A*03, the A*11, four A*23, fifteen A*24, the A*25, the A*26, the A*29, three A*30, four A*31, five A*32, five A*33, the A*34, the A*36, the A*43:01, the A*66, the A*74:13 and the A*80 as well as by the A*69:01 allele when present on the other haplotype. In addition, the B*27:25 and C*02:07 alleles will be amplified by primer mix 17, the B*27:45 allele will be amplified by primer mixes 17 and 21, the B*27:45 will be amplified by primer mix 21, the B*44:03:19 allele will be amplified by primer mix 29 and the C*03:82 allele will be amplified by primer mix 1.

UNIQUELY IDENTIFIED ALLELES

All the HLA-A*68 alleles, i.e. **A*68:01 to A*68:99 as well as the A*69:01 allele**, recognized by the HLA Nomenclature Committee in January 2013¹ will be amplified by the primers in the HLA-A*68 subtyping kit².

The HLA-A*68 kit enables separation of the confirmed HLA-A*68 alleles as listed in the IMGT/HLA database. An HLA allele is listed as confirmed by IMGT/HLA if

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it has been sequenced by more than a single laboratory or from multiple sources. Current allele confirmation status for HLA-A*68 alleles is listed below.

The HLA-A*68 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-A*68 subtyping kit cannot distinguish the following silent mutations: the A*68:01:01:01-68:01:01:02, 68:01:03-68:01:05, 68:01:07-68:01:12 and 68:01:18, the A*68:01:02 and 68:01:06, the 68:01:15-68:01:17, the A*68:02:01:01-68:02:05, the A*68:03:01-68:03:02 and the 68:13:01-68:13:02 alleles.

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

²The A*68:01:14 and the A*34:02:01-34:02:02 alleles give rise to identical amplification patterns with the HLA-A*68 subtyping kit. These alleles can be distinguished by e.g. the HLA-A low resolution kit.

The A*68:27 and the A*66:16 and A*66:18 alleles give rise to identical amplification patterns with the HLA-A*68 subtyping kit. These alleles can be distinguished by e.g. the HLA-A low resolution kit and/or the HLA-A*66 subtyping kit.

The A*68:66 and 68:75 and the A*03:50 and 03:66 alleles give rise to identical amplification patterns with the HLA-A*68 subtyping kit. These alleles can be distinguished by e.g. the HLA-A low resolution kit and/or the HLA-A*03 subtyping kit.

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ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
A*68:01:01:01	Confirmed	A*68:13:02	Unconfirmed	A*68:52	Unconfirmed	A*68:92	Unconfirmed
A*68:01:01:02	Unconfirmed	A*68:14	Unconfirmed	A*68:53	Confirmed	A*68:93	Unconfirmed
A*68:01:02	Confirmed	A*68:15	Confirmed	A*68:54	Confirmed	A*68:94N	Unconfirmed
A*68:01:03	Unconfirmed	A*68:16	Confirmed	A*68:55	Confirmed	A*68:95	Unconfirmed
A*68:01:04	Unconfirmed	A*68:17	Confirmed	A*68:56	Unconfirmed	A*68:96	Unconfirmed
A*68:01:05	Unconfirmed	A*68:18N	Unconfirmed	A*68:57	Unconfirmed	A*68:97	Unconfirmed
A*68:01:06	Confirmed	A*68:19	Confirmed	A*68:58	Unconfirmed	A*68:98	Unconfirmed
A*68:01:07	Unconfirmed	A*68:20	Unconfirmed	A*68:59N	Confirmed	A*68:99	Unconfirmed
A*68:01:08	Confirmed	A*68:21:01	Unconfirmed	A*68:60	Confirmed		
A*68:01:09	Unconfirmed	A*68:21:02	Unconfirmed	A*68:61	Unconfirmed		
A*68:01:10	Unconfirmed	A*68:22	Unconfirmed	A*68:62	Unconfirmed		
A*68:01:11	Unconfirmed	A*68:23	Unconfirmed	A*68:63	Unconfirmed		
A*68:01:12	Unconfirmed	A*68:24	Confirmed	A*68:64	Unconfirmed		
A*68:01:13	Unconfirmed	A*68:25	Confirmed	A*68:65	Confirmed		
A*68:01:14	Unconfirmed	A*68:26	Unconfirmed	A*68:66	Unconfirmed		
A*68:01:15	Unconfirmed	A*68:27	Confirmed	A*68:67	Confirmed		
A*68:01:16	Unconfirmed	A*68:28	Unconfirmed	A*68:68	Confirmed		
A*68:01:17	Unconfirmed	A*68:29	Unconfirmed	A*68:69	Unconfirmed		
A*68:01:18	Unconfirmed	A*68:30	Unconfirmed	A*68:70	Unconfirmed		
A*68:02:01:01	Confirmed	A*68:31	Confirmed	A*68:71	Unconfirmed		
A*68:02:01:02	Unconfirmed	A*68:32	Unconfirmed	A*68:72	Unconfirmed		
A*68:02:01:03	Unconfirmed	A*68:33	Confirmed	A*68:73	Unconfirmed		
A*68:02:02	Confirmed	A*68:34	Unconfirmed	A*68:74	Unconfirmed		
A*68:02:03	Confirmed	A*68:35	Confirmed	A*68:75	Unconfirmed		
A*68:02:04	Confirmed	A*68:36	Confirmed	A*68:76	Unconfirmed		
A*68:02:05	Unconfirmed	A*68:37	Confirmed	A*68:77	Unconfirmed		
A*68:03:01	Confirmed	A*68:38	Unconfirmed	A*68:78	Unconfirmed		
A*68:03:02	Unconfirmed	A*68:39	Unconfirmed	A*68:79	Unconfirmed		
A*68:03:03	Confirmed	A*68:40	Confirmed	A*68:80	Confirmed		
A*68:04	Unconfirmed	A*68:41	Unconfirmed	A*68:81	Unconfirmed		
A*68:05	Confirmed	A*68:42	Unconfirmed	A*68:82	Unconfirmed		
A*68:06	Confirmed	A*68:43	Unconfirmed	A*68:83	Unconfirmed		
A*68:07	Confirmed	A*68:44	Confirmed	A*68:84	Unconfirmed		
A*68:08:01	Unconfirmed	A*68:45	Unconfirmed	A*68:85	Unconfirmed		
A*68:08:02	Confirmed	A*68:46	Confirmed	A*68:86	Unconfirmed		
A*68:09	Unconfirmed	A*68:47	Unconfirmed	A*68:87	Unconfirmed		
A*68:10	Confirmed	A*68:48	Unconfirmed	A*68:88	Unconfirmed		
A*68:11N	Confirmed	A*68:49N	Unconfirmed	A*68:89	Unconfirmed		
A*68:12	Confirmed	A*68:50	Unconfirmed	A*68:90	Unconfirmed		
A*68:13:01	Confirmed	A*68:51	Unconfirmed	A*68:91	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.

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RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 128 alleles generate 72 amplification patterns that can be combined in 2628 homozygous and heterozygous combinations. 1325 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.

--+-----	-----+	+-----	-----	-----	-----	*68:31, *68:31 = *68:31, *68:92
+--+-----	-----+	+-----	-----	-----	-----	*68:02:01:01, *68:02:01:01 = *68:02:01:01, *68:92
--+--+---	-----+	+-----	-----	-----	-----	*68:15, *68:15 = *68:15, *68:31 = *68:15, *68:92
-+-----	-----	-----++	-----	-----	-----	*68:03:03, *68:03:03 = *68:03:03, *68:57
-+-----	-----	-----++	-----	-----	-----	*68:36, *68:36 = *68:36, *68:57
-+--+-----	-----	-----++	-----	-----	-----	*68:03:01, *68:03:01 = *68:03:01, *68:57
+-----	-----	-----++	-----	-----	-----	*68:66, *68:88 = *68:88, *68:88
+-----	-----+	-----++	-----	-----	-----	*68:13:01, *68:13:01 = *68:13:01, *68:66
+-----	-----+	-----++	-----	-----	-----	*68:10, *68:10 = *68:10, *68:66
+-----+	-----	-----++	-----	-----	-----	*68:07, *68:07 = *68:07, *68:66
+--+-----	-----	-----++	-----	-----	-----	*68:30, *68:30 = *68:30, *68:66
+--+-----	-----	+-----	-----	-----	-+-----	*68:02:01:01, *68:60 = *68:60, *68:60 = *68:60, *68:92
+--+-----	-----	+-----	-----	-----	+-----	*68:02:01:01, *68:80 = *68:80, *68:80 = *68:80, *68:92
+--+-----	-----	+-----	-----	-----	+-----	*68:02:01:01, *68:67 = *68:67, *68:67 = *68:67, *68:92
+--+-----	-----	+-----	-----	-----	+-----	*68:02:01:01, *68:27 = *68:27, *68:92
+--+-----	-----	+-----	-----	-----	+-----	*68:02:01:01, *68:53 = *68:53, *68:53 = *68:53, *68:92
+--+-----	-----	+-----	-----	-----	+-----	*68:02:01:01, *68:48 = *68:48, *68:48 = *68:48, *68:92
+--+-----	-----	+-----	-----	-----	+-----	*68:02:01:01, *68:54 = *68:54, *68:54 = *68:54, *68:92
+--+-----	-----	+-----	-----	-----	+-----	*68:02:01:01, *68:44 = *68:44, *68:44 = *68:44, *68:92
+--+-----	-----	+-----	-----	-----	+-----	*68:02:01:01, *68:34 = *68:34, *68:34 = *68:34, *68:92
+--+-----	-----	+-----	-----	-----	+-----	*68:02:01:01, *68:49N = *68:49N, *68:49N = *68:49N, *68:92
+--+-----	-----	+-----	-----	-----	+-----	*68:02:01:01, *68:28 = *68:28, *68:28 = *68:28, *68:92
+--+-----	-----+	+-----	-----	-----	-----	*68:02:01:01, *68:31 = *68:02:01:01, *68:40 = *68:31, *68:40 = *68:40, *68:40 = *68:40, *68:92
+--+-----	-----+	+-----	-----	-----	-----	*68:02:01:01, *68:81 = *68:81, *68:81 = *68:81, *68:92
+--+-----	-----+	+-----	-----	-----	-----	*68:02:01:01, *68:51 = *68:51, *68:51 = *68:51, *68:92
+--+-----	+-----	+-----	-----	-----	-----	*68:02:01:01, *68:18N = *68:18N, *68:18N = *68:18N, *68:92
+--+-----	+-----	+-----	-----	-----	-----	*68:02:01:01, *68:06 = *68:06, *68:92
+--+-----	-----	-----++	-----	-----	-----	*68:01:02, *68:01:02 = *68:01:02, *68:57 = *68:01:02, *68:66 = *68:57, *68:66
-+--+-----	-----	-----++	-----	-----	-----	*68:03:03, *68:04 = *68:04, *68:04 = *68:04, *68:57
-+--+-----	-----	-----++	-----	-----	-----	*68:03:01, *68:05 = *68:05, *68:05 = *68:05, *68:57
+-----	-----	+-----++	-----	-----	-----	*68:27, *68:66 = *68:27, *68:88
+-----	-----+	-----++	-----	-----	-----	*68:10, *68:14 = *68:14, *68:14 = *68:14, *68:66
+--+-----	-----	+-----++	-----	-----	-----	*68:02:01:01, *68:66 = *68:66, *68:92
+--+-----	-----	+-----	-----	-----	-+-----	*68:31, *68:60 = *68:40, *68:60
+--+-----	-----	+-----	-----	-----	+-----	*68:31, *68:80 = *68:40, *68:80
+--+-----	-----	+-----	-----	-----	+-----	*68:31, *68:67 = *68:40, *68:67
+--+-----	-----	+-----	-----	-----	+-----	*68:27, *68:31 = *68:27, *68:40
+--+-----	-----	+-----	-----	-----	+-----	*68:31, *68:53 = *68:40, *68:53
+--+-----	-----	+-----	-----	-----	+-----	*68:31, *68:48 = *68:40, *68:48
+--+-----	-----	+-----	-----	-----	+-----	*68:31, *68:54 = *68:40, *68:54
+--+-----	-----	+-----	-----	-----	+-----	*68:31, *68:44 = *68:40, *68:44
+--+-----	-----	+-----	-----	-----	+-----	*68:31, *68:34 = *68:34, *68:40
+--+-----	-----	+-----	-----	-----	+-----	*68:31, *68:49N = *68:40, *68:49N
+--+-----	-----	+-----	-----	-----	+-----	*68:28, *68:31 = *68:28, *68:40
+--+-----	-----	+-----	-----	-----	+-----	*68:31, *68:81 = *68:40, *68:81
+--+-----	-----	+-----	-----	-----	+-----	*68:31, *68:51 = *68:40, *68:51
+--+-----	+-----	+-----	-----	-----	-----	*68:18N, *68:31 = *68:18N, *68:40
+--+-----	+-----	+-----	-----	-----	-----	*68:06, *68:31 = *68:06, *68:40
+--+-----	+-----	+-----	-----	-----	-----	*68:02:01:01, *68:15 = *68:15, *68:40
+--+-----	-----	-----++	-----	-----	-----	*68:01:02, *68:52 = *68:52, *68:52 = *68:52, *68:57 = *68:52, *68:66
+--+-----	-----	-----++	-----	-----	-----	*68:01:02, *68:41 = *68:41, *68:41 = *68:41, *68:57 = *68:41,



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++-----	-----	-----++	-----	-----	-----	-----	*68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:96 = *68:57, *68:96 = *68:66, *68:96 = *68:96, *68:96
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:45 = *68:45, *68:45 = *68:45, *68:57 = *68:45, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:01:01, *68:01:01:01 = *68:01:01:01, *68:01:02 = *68:01:01:01, *68:01:14 = *68:01:01:01, *68:03:03 = *68:01:01:01, *68:57 = *68:01:01:01, *68:66 = *68:01:01:01, *68:88 = *68:01:02, *68:01:14 = *68:01:02, *68:03:03 = *68:01:02, *68:88 = *68:01:14, *68:03:03 = *68:01:14, *68:57 = *68:01:14, *68:66 = *68:01:14, *68:88 = *68:01:14, *68:88 = *68:03:03, *68:66 = *68:03:03, *68:88 = *68:57, *68:88
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:16 = *68:16, *68:16 = *68:16, *68:57 = *68:16, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:36 = *68:36, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:33 = *68:33, *68:33 = *68:33, *68:57 = *68:33, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:29 = *68:29, *68:29 = *68:29, *68:57 = *68:29, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:24 = *68:24, *68:24 = *68:24, *68:57 = *68:24, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:23 = *68:23, *68:23 = *68:23, *68:57 = *68:23, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:19 = *68:19, *68:19 = *68:19, *68:57 = *68:19, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:13:01 = *68:13:01, *68:57
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:12 = *68:12, *68:12 = *68:12, *68:57 = *68:12, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:11N = *68:11N, *68:11N = *68:11N, *68:57 = *68:11N, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:10 = *68:01:02, *68:17 = *68:10, *68:17 = *68:10, *68:57 = *68:17, *68:17 = *68:17, *68:57 = *68:17, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:09 = *68:09, *68:57 = *68:09, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:14, *68:08:01 = *68:01:14, *68:08:02 = *68:08:01, *68:08:01 = *68:08:01, *68:08:02
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:08:02 = *68:01:02, *68:47 = *68:08:02, *68:47 = *68:08:02, *68:57 = *68:08:02, *68:66 = *68:47, *68:47 = *68:47, *68:57 = *68:47, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:07 = *68:01:02, *68:46 = *68:07, *68:46 = *68:07, *68:57 = *68:46, *68:46 = *68:46, *68:57 = *68:46, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:06 = *68:01:02, *68:32 = *68:06, *68:32 = *68:06, *68:57 = *68:32, *68:32 = *68:32, *68:57 = *68:32, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:03:01 = *68:01:02, *68:30 = *68:03:01, *68:30 = *68:03:01, *68:66 = *68:30, *68:57
++-----	-----	-----++	-----	-----	-----	-----	*68:01:02, *68:39 = *68:39, *68:39 = *68:39, *68:57 = *68:39, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:03:01, *68:20 = *68:05, *68:20 = *68:20, *68:20 = *68:20, *68:57
++-----	-----	-----++	-----	-----	-----	-----	*68:02:01:01, *68:88 = *68:88, *68:92
++-----	-----	-----++	-----	-----	-----	-----	*68:31, *68:66 = *68:40, *68:66
++-----	-----	-----++	-----	-----	-----	-----	*68:02:01:01, *68:13:01 = *68:13:01, *68:92
++-----	-----	-----++	-----	-----	-----	-----	*68:02:01:01, *68:10 = *68:10, *68:92
++-----	-----	-----++	-----	-----	-----	-----	*68:02:01:01, *68:07 = *68:07, *68:92
++-----	-----	-----++	-----	-----	-----	-----	*68:02:01:01, *68:30 = *68:30, *68:92
++-----	-----	-----++	-----	-----	-----	-----	*68:01:01:01, *68:52 = *68:01:14, *68:52 = *68:03:03, *68:52 = *68:52, *68:88
++-----	-----	-----++	-----	-----	-----	-----	*68:01:01:01, *68:41 = *68:01:14, *68:41 = *68:03:03, *68:41 = *68:41, *68:88
++-----	-----	-----++	-----	-----	-----	-----	*68:01:01:01, *68:96 = *68:01:14, *68:96 = *68:03:03, *68:96 = *68:88, *68:96



101.418-12/04 – including *Taq* pol., IFU-01
101.418-12u/04– without *Taq* pol., IFU-02

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Lot-specific information

++-----	-----++	-----	-----	-----	*68:01:01:01, *68:94N = *68:01:02, *68:94N = *68:01:14, *68:94N = *68:03:03, *68:94N = *68:57, *68:94N = *68:66, *68:94N = *68:88, *68:94N = *68:94N, *68:94N
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:45 = *68:01:14, *68:45 = *68:03:03, *68:45 = *68:45, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:68 = *68:01:02, *68:68 = *68:01:14, *68:68 = *68:03:03, *68:68 = *68:57, *68:68 = *68:66, *68:68 = *68:68, *68:68 = *68:68, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:59N = *68:01:02, *68:59N = *68:01:14, *68:59N = *68:03:03, *68:59N = *68:57, *68:59N = *68:59N, *68:59N = *68:59N, *68:66 = *68:59N, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:55 = *68:01:02, *68:55 = *68:01:14, *68:55 = *68:03:03, *68:55 = *68:55, *68:55 = *68:55, *68:57 = *68:55, *68:66 = *68:55, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:16 = *68:01:14, *68:16 = *68:03:03, *68:16 = *68:16, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:36 = *68:01:01:01, *68:42 = *68:01:02, *68:42 = *68:01:14, *68:36 = *68:01:14, *68:42 = *68:03:03, *68:42 = *68:36, *68:42 = *68:36, *68:88 = *68:42, *68:42 = *68:42 = *68:57 = *68:42, *68:66 = *68:42, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:35 = *68:01:02, *68:35 = *68:01:14, *68:35 = *68:03:03, *68:35 = *68:35, *68:35 = *68:35, *68:57 = *68:35, *68:66 = *68:35, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:43 = *68:01:02, *68:43 = *68:01:14, *68:43 = *68:03:03, *68:43 = *68:43, *68:43 = *68:43, *68:57 = *68:43, *68:66 = *68:43, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:33 = *68:01:14, *68:33 = *68:03:03, *68:33 = *68:33, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:29 = *68:01:14, *68:29 = *68:03:03, *68:29 = *68:29, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:24 = *68:01:14, *68:24 = *68:03:03, *68:24 = *68:24, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:23 = *68:01:14, *68:23 = *68:03:03, *68:23 = *68:23, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:22 = *68:01:02, *68:22 = *68:01:14, *68:22 = *68:03:03, *68:22 = *68:22, *68:22 = *68:22, *68:57 = *68:22, *68:66 = *68:22, *68:88
++-----	-----++	-----	-----	-----	*68:01:02, *68:65 = *68:57, *68:65 = *68:65, *68:66
++-----	-----++	-----	-----	-----	*68:01:02, *68:21:01 = *68:21:01, *68:21:01 = *68:21:01, *68:57 = *68:21:01, *68:66
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:27 = *68:01:02, *68:27 = *68:03:03, *68:27 = *68:27, *68:57
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:19 = *68:01:14, *68:19 = *68:03:03, *68:19 = *68:19, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:13:01 = *68:01:14, *68:13:01 = *68:03:03, *68:13:01
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:12 = *68:01:14, *68:12 = *68:03:03, *68:12 = *68:12, *68:88
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:11N = *68:01:14, *68:11N = *68:03:03, *68:11N = *68:11N, *68:88
++-----	-----++	-----	-----	-----	*68:01:02, *68:38 = *68:11N, *68:38 = *68:38, *68:38 = *68:38, *68:57 = *68:38, *68:66
++-----	-----++	-----	-----	-----	*68:10, *68:52 = *68:17, *68:52
++-----	-----++	-----	-----	-----	*68:10, *68:41 = *68:17, *68:41
++-----	-----++	-----	-----	-----	*68:10, *68:96 = *68:17, *68:96
++-----	-----++	-----	-----	-----	*68:10, *68:45 = *68:17, *68:45
++-----	-----++	-----	-----	-----	*68:01:01:01, *68:10 = *68:01:01:01, *68:17 = *68:01:14, *68:10 = *68:01:14, *68:17 = *68:03:03, *68:10 = *68:03:03, *68:17 = *68:17, *68:88
++-----	-----++	-----	-----	-----	*68:10, *68:16 = *68:16, *68:17
++-----	-----++	-----	-----	-----	*68:10, *68:36 = *68:17, *68:36
++-----	-----++	-----	-----	-----	*68:10, *68:33 = *68:17, *68:33
++-----	-----++	-----	-----	-----	*68:10, *68:29 = *68:17, *68:29



101.418-12/04 – including *Taq* pol., IFU-01
101.418-12u/04– without *Taq* pol., IFU-02

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++-----	---+-----	-----+++	-----	-----	-----	*68:10, *68:24 = *68:17, *68:24
++-----	---+-----	-----+++	-----	-----	-----	*68:10, *68:23 = *68:17, *68:23
++-----	---+-----	-----+++	-----	-----	-----	*68:01:02, *68:14 = *68:10, *68:19 = *68:14, *68:17 = *68:14, *68:19 = *68:14, *68:57 = *68:17, *68:19
++-----	---+-----	-----+++	-----	-----	-----	*68:10, *68:12 = *68:12, *68:17
++-----	---+-----	-----+++	-----	-----	-----	*68:10, *68:11N = *68:11N, *68:17
++-----	---+-----	-----+++	-----	-----	-----	*68:01:01:01, *68:09 = *68:03:03, *68:09 = *68:09, *68:88
++-----	---+-----	-----+++	-----	-----	-----	*68:09, *68:10 = *68:09, *68:17
++-----	---+-----	-----+++	-----	-----	-----	*68:01:14, *68:63 = *68:08:01, *68:63 = *68:08:02, *68:63 = *68:63, *68:63
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:52 = *68:47, *68:52
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:41 = *68:41, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:96 = *68:47, *68:96
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:45 = *68:45, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:01:01:01, *68:08:01 = *68:01:01:01, *68:08:02 = *68:01:01:01, *68:47 = *68:01:02, *68:08:01 = *68:01:14, *68:47 = *68:03:03, *68:08:01 = *68:03:03, *68:08:02 = *68:03:03, *68:47 = *68:08:01, *68:47 = *68:08:01, *68:57 = *68:08:01, *68:66 = *68:08:01, *68:88 = *68:08:02, *68:88 = *68:47, *68:88
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:16 = *68:16, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:36 = *68:36, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:33 = *68:33, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:29 = *68:29, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:24 = *68:24, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:23 = *68:23, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:08:01, *68:27 = *68:08:02, *68:27
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:19 = *68:19, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:13:01 = *68:13:01, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:12 = *68:12, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:11N = *68:11N, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:08:02, *68:10 = *68:08:02, *68:17 = *68:10, *68:47 = *68:17, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:52 = *68:46, *68:52
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:41 = *68:41, *68:46
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:96 = *68:46, *68:96
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:45 = *68:45, *68:46
++-----	---+-----	-----+++	-----	-----	-----	*68:01:01:01, *68:07 = *68:01:01:01, *68:46 = *68:01:14, *68:07 = *68:01:14, *68:46 = *68:03:03, *68:07 = *68:03:03, *68:46 = *68:46, *68:88
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:16 = *68:16, *68:46
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:36 = *68:36, *68:46
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:33 = *68:33, *68:46
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:29 = *68:29, *68:46
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:24 = *68:24, *68:46
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:23 = *68:23, *68:46
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:19 = *68:19, *68:46
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:12 = *68:12, *68:46
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:11N = *68:11N, *68:46
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:17 = *68:10, *68:46 = *68:17, *68:46
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:09 = *68:09, *68:46
++-----	---+-----	-----+++	-----	-----	-----	*68:07, *68:08:02 = *68:07, *68:47 = *68:08:02, *68:46 = *68:46, *68:47
++-----	---+-----	-----+++	-----	-----	-----	*68:06, *68:52 = *68:32, *68:52
++-----	---+-----	-----+++	-----	-----	-----	*68:06, *68:41 = *68:32, *68:41
++-----	---+-----	-----+++	-----	-----	-----	*68:06, *68:96 = *68:32, *68:96
++-----	---+-----	-----+++	-----	-----	-----	*68:06, *68:45 = *68:32, *68:45
++-----	---+-----	-----+++	-----	-----	-----	*68:01:01:01, *68:06 = *68:01:01:01, *68:32 = *68:01:14, *68:32 = *68:03:03, *68:06 = *68:03:03, *68:32 = *68:32, *68:88
++-----	---+-----	-----+++	-----	-----	-----	*68:06, *68:16 = *68:16, *68:32
++-----	---+-----	-----+++	-----	-----	-----	*68:06, *68:36 = *68:32, *68:36
++-----	---+-----	-----+++	-----	-----	-----	*68:06, *68:33 = *68:32, *68:33



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Lot-specific information

++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:06, *68:29 = *68:29, *68:32
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:06, *68:24 = *68:24, *68:32
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:06, *68:23 = *68:23, *68:32
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:06, *68:19 = *68:19, *68:32
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:06, *68:12 = *68:12, *68:32
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:06, *68:11N = *68:11N, *68:32
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:06, *68:17 = *68:10, *68:32 = *68:17, *68:32
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:06, *68:47 = *68:08:02, *68:32 = *68:32, *68:47
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:06, *68:46 = *68:07, *68:32 = *68:32, *68:46
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:01:01:01, *68:04 = *68:01:01:01, *68:25 = *68:01:02, *68:04 = *68:01:02, *68:25 = *68:01:14, *68:04 = *68:01:14, *68:25 = *68:03:03, *68:25 = *68:04, *68:25 = *68:04, *68:66 = *68:04, *68:88 = *68:25, *68:25 = *68:25, *68:57 = *68:25, *68:66 = *68:25, *68:88
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:52 = *68:30, *68:52
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:41 = *68:30, *68:41
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:96 = *68:30, *68:96
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:45 = *68:30, *68:45
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:01:01:01, *68:03:01 = *68:01:01:01, *68:30 = *68:01:14, *68:03:01 = *68:01:14, *68:30 = *68:03:01, *68:88 = *68:03:03, *68:30
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:16 = *68:16, *68:30
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:33 = *68:30, *68:33
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:29 = *68:29, *68:30
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:24 = *68:24, *68:30
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:23 = *68:23, *68:30
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:19 = *68:19, *68:30
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:12 = *68:12, *68:30
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:11N = *68:11N, *68:30
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:10 = *68:03:01, *68:17 = *68:17, *68:30
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:09 = *68:09, *68:30
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:08:02 = *68:03:01, *68:47 = *68:08:02, *68:30 = *68:30, *68:47
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:07 = *68:03:01, *68:46 = *68:30, *68:46
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:06 = *68:03:01, *68:32 = *68:30, *68:32
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:01:02, *68:05 = *68:05, *68:30 = *68:05, *68:66
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:01:01:01, *68:39 = *68:01:14, *68:39 = *68:03:03, *68:39 = *68:39, *68:88
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:01:14, *68:02:01:01 = *68:01:14, *68:92
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:01:02, *68:02:01:01 = *68:01:02, *68:92 = *68:02:01:01, *68:39 = *68:02:01:01, *68:57 = *68:39, *68:92
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:10, *68:39 = *68:17, *68:39
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:02:01:01, *68:09 = *68:09, *68:92
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:08:02, *68:39 = *68:39, *68:47
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:02:01:01, *68:08:02 = *68:08:02, *68:18N = *68:08:02, *68:92
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:07, *68:39 = *68:39, *68:46
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:06, *68:39 = *68:32, *68:39
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:03:01, *68:39 = *68:30, *68:39
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:05, *68:92 = *68:20, *68:92
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:31, *68:88 = *68:40, *68:88
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:13:01, *68:31 = *68:13:01, *68:40
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:10, *68:31 = *68:10, *68:40
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:02:01:01, *68:14 = *68:10, *68:81 = *68:14, *68:81 = *68:14, *68:92
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:07, *68:31 = *68:07, *68:40
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:30, *68:31 = *68:30, *68:40
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:36, *68:94N = *68:42, *68:94N
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:36, *68:68 = *68:42, *68:68
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:36, *68:59N = *68:42, *68:59N
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:36, *68:55 = *68:42, *68:55
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:35, *68:36 = *68:35, *68:42
++-----+ - - - - - + - - - - - + - - - - - + - - - - - + - - - - - +	*68:36, *68:43 = *68:42, *68:43



101.418-12/04 – including *Taq* pol., IFU-01
101.418-12u/04– without *Taq* pol., IFU-02

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Lot No.: 10S

Lot-specific information

++-----	-----	---+---+	-----	-----	-----	*68:22, *68:36 = *68:22, *68:42
++-----	-----	---+---+	-----	-----	-----	*68:01:01:01, *68:65 = *68:01:14, *68:65 = *68:03:03, *68:65 = *68:65, *68:88
++-----	-----	---+---+	-----	-----	-----	*68:01:01:01, *68:21:01 = *68:01:14, *68:21:01 = *68:03:03, *68:21:01 = *68:21:01, *68:88
++-----	-----	---+---+	-----	-----	-----	*68:27, *68:36 = *68:27, *68:42
++-----	-----	---+---+	-----	-----	-----	*68:01:01:01, *68:50 = *68:01:02, *68:50 = *68:01:14, *68:50 = *68:03:03, *68:50 = *68:12, *68:50 = *68:50, *68:50 = *68:50, *68:57 = *68:50, *68:66 = *68:50, *68:88
++-----	-----	---+---+	-----	-----	-----	*68:01:01:01, *68:38 = *68:01:14, *68:38 = *68:03:03, *68:38 = *68:11N, *68:35 = *68:35, *68:38 = *68:38, *68:88
++-----	-----	---+---+	-----	-----	-----	*68:10, *68:94N = *68:17, *68:94N
++-----	-----	---+---+	-----	-----	-----	*68:10, *68:68 = *68:17, *68:68
++-----	-----	---+---+	-----	-----	-----	*68:10, *68:59N = *68:17, *68:59N
++-----	-----	---+---+	-----	-----	-----	*68:10, *68:55 = *68:17, *68:55
++-----	-----	---+---+	-----	-----	-----	*68:10, *68:42 = *68:17, *68:42
++-----	-----	---+---+	-----	-----	-----	*68:10, *68:35 = *68:17, *68:35
++-----	-----	---+---+	-----	-----	-----	*68:10, *68:43 = *68:17, *68:43
++-----	-----	---+---+	-----	-----	-----	*68:10, *68:22 = *68:17, *68:22
++-----	-----	---+---+	-----	-----	-----	*68:10, *68:65 = *68:17, *68:65
++-----	-----	---+---+	-----	-----	-----	*68:10, *68:21:01 = *68:17, *68:21:01
++-----	-----	---+---+	-----	-----	-----	*68:01:01:01, *68:14 = *68:01:14, *68:14 = *68:03:03, *68:14
++-----	-----	---+---+	-----	-----	-----	*68:10, *68:38 = *68:17, *68:38
++-----	-----	---+---+	-----	-----	-----	*68:01:14, *68:26 = *68:09, *68:26
++-----	-----	---+---+	-----	-----	-----	*68:08:01, *68:94N = *68:08:02, *68:94N = *68:47, *68:94N
++-----	-----	---+---+	-----	-----	-----	*68:08:01, *68:68 = *68:08:02, *68:68 = *68:47, *68:68
++-----	-----	---+---+	-----	-----	-----	*68:08:01, *68:59N = *68:08:02, *68:59N = *68:47, *68:59N
++-----	-----	---+---+	-----	-----	-----	*68:08:01, *68:55 = *68:08:02, *68:55 = *68:47, *68:55
++-----	-----	---+---+	-----	-----	-----	*68:01:01:01, *68:63 = *68:01:02, *68:63 = *68:03:03, *68:63 = *68:08:01, *68:36 = *68:08:01, *68:42 = *68:08:02, *68:42 = *68:36, *68:63 = *68:42, *68:47 = *68:42, *68:63 = *68:47, *68:63 = *68:57, *68:63 = *68:63, *68:66 = *68:63, *68:88
++-----	-----	---+---+	-----	-----	-----	*68:08:01, *68:35 = *68:08:02, *68:35 = *68:35, *68:47
++-----	-----	---+---+	-----	-----	-----	*68:08:01, *68:43 = *68:08:02, *68:43 = *68:43, *68:47
++-----	-----	---+---+	-----	-----	-----	*68:08:01, *68:22 = *68:08:02, *68:22 = *68:22, *68:47
++-----	-----	---+---+	-----	-----	-----	*68:08:02, *68:65 = *68:47, *68:65
++-----	-----	---+---+	-----	-----	-----	*68:08:02, *68:21:01 = *68:21:01, *68:47
++-----	-----	---+---+	-----	-----	-----	*68:08:02, *68:38 = *68:38, *68:47
++-----	-----	---+---+	-----	-----	-----	*68:08:01, *68:10 = *68:08:01, *68:17
++-----	-----	---+---+	-----	-----	-----	*68:08:02, *68:14 = *68:14, *68:47
++-----	-----	---+---+	-----	-----	-----	*68:07, *68:94N = *68:46, *68:94N
++-----	-----	---+---+	-----	-----	-----	*68:07, *68:68 = *68:46, *68:68
++-----	-----	---+---+	-----	-----	-----	*68:07, *68:59N = *68:46, *68:59N
++-----	-----	---+---+	-----	-----	-----	*68:07, *68:55 = *68:46, *68:55
++-----	-----	---+---+	-----	-----	-----	*68:07, *68:42 = *68:42, *68:46
++-----	-----	---+---+	-----	-----	-----	*68:07, *68:35 = *68:35, *68:46
++-----	-----	---+---+	-----	-----	-----	*68:07, *68:43 = *68:43, *68:46
++-----	-----	---+---+	-----	-----	-----	*68:07, *68:22 = *68:22, *68:46
++-----	-----	---+---+	-----	-----	-----	*68:07, *68:65 = *68:46, *68:65
++-----	-----	---+---+	-----	-----	-----	*68:07, *68:21:01 = *68:21:01, *68:46
++-----	-----	---+---+	-----	-----	-----	*68:07, *68:38 = *68:38, *68:46
++-----	-----	---+---+	-----	-----	-----	*68:07, *68:08:01 = *68:08:01, *68:46
++-----	-----	---+---+	-----	-----	-----	*68:06, *68:94N = *68:32, *68:94N
++-----	-----	---+---+	-----	-----	-----	*68:06, *68:68 = *68:32, *68:68
++-----	-----	---+---+	-----	-----	-----	*68:06, *68:59N = *68:32, *68:59N
++-----	-----	---+---+	-----	-----	-----	*68:06, *68:55 = *68:32, *68:55
++-----	-----	---+---+	-----	-----	-----	*68:06, *68:42 = *68:32, *68:42
++-----	-----	---+---+	-----	-----	-----	*68:06, *68:35 = *68:32, *68:35
++-----	-----	---+---+	-----	-----	-----	*68:06, *68:43 = *68:32, *68:43
++-----	-----	---+---+	-----	-----	-----	*68:06, *68:22 = *68:22, *68:32
++-----	-----	---+---+	-----	-----	-----	*68:06, *68:21:01 = *68:21:01, *68:32
++-----	-----	---+---+	-----	-----	-----	*68:06, *68:38 = *68:32, *68:38
++-----	-----	---+---+	-----	-----	-----	*68:04, *68:52 = *68:25, *68:52



101.418-12/04 – including *Taq* pol., IFU-01
101.418-12u/04– without *Taq* pol., IFU-02

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Lot No.: 10S

Lot-specific information

++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:41 = *68:25, *68:41
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:96 = *68:25, *68:96
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:94N = *68:25, *68:94N
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:45 = *68:25, *68:45
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:68 = *68:25, *68:68
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:59N = *68:25, *68:59N
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:55 = *68:25, *68:55
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:16 = *68:16, *68:25
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:42 = *68:25, *68:36 = *68:25, *68:42
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:35 = *68:25, *68:35
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:43 = *68:25, *68:43
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:33 = *68:25, *68:33
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:29 = *68:25, *68:29
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:24 = *68:24, *68:25
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:23 = *68:23, *68:25
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:22 = *68:22, *68:25
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:27 = *68:25, *68:27
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:19 = *68:19, *68:25
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:13:01 = *68:13:01, *68:25
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:12 = *68:12, *68:25
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:11N = *68:11N, *68:25
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:10 = *68:04, *68:17 = *68:10, *68:25 = *68:17, *68:25
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:09 = *68:09, *68:25
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:08:01 = *68:04, *68:08:02 = *68:04, *68:47 = *68:08:01, *68:25 = *68:08:02, *68:25 = *68:25, *68:47
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:07 = *68:04, *68:46 = *68:07, *68:25 = *68:25, *68:46
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:04, *68:06 = *68:04, *68:32 = *68:06, *68:25 = *68:25, *68:32
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:03:01, *68:94N = *68:30, *68:94N
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:03:01, *68:68 = *68:30, *68:68
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:03:01, *68:59N = *68:30, *68:59N
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:03:01, *68:55 = *68:30, *68:55
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:03:01, *68:42 = *68:30, *68:42
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:03:01, *68:35 = *68:30, *68:35
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:03:01, *68:43 = *68:30, *68:43
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:03:01, *68:22 = *68:22, *68:30
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:03:01, *68:65 = *68:30, *68:65
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:03:01, *68:21:01 = *68:21:01, *68:30
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:03:01, *68:38 = *68:30, *68:38
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:03:01, *68:08:01 = *68:08:01, *68:30
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:01:01:01, *68:05 = *68:01:14, *68:05 = *68:05, *68:88
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:01:02, *68:20 = *68:20, *68:30 = *68:20, *68:66
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:05, *68:10 = *68:05, *68:17
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:05, *68:08:02 = *68:05, *68:47
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:05, *68:07 = *68:05, *68:46
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:05, *68:06 = *68:05, *68:32
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:03:01, *68:25 = *68:04, *68:30 = *68:25, *68:30
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:02:01:01, *68:52 = *68:52, *68:92
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:02:01:01, *68:41 = *68:41, *68:92
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:02:01:01, *68:96 = *68:92, *68:96
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:01:02, *68:60 = *68:39, *68:60 = *68:57, *68:60
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:02:01:01, *68:45 = *68:45, *68:92
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:01:02, *68:80 = *68:39, *68:80 = *68:57, *68:80
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:01:02, *68:67 = *68:39, *68:67 = *68:57, *68:67
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:01:01:01, *68:02:01:01 = *68:01:01:01, *68:92 = *68:02:01:01, *68:03:03 = *68:27, *68:39
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:02:01:01, *68:16 = *68:16, *68:92
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:01:02, *68:53 = *68:39, *68:53 = *68:53, *68:57
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:01:02, *68:48 = *68:39, *68:48 = *68:48, *68:57
++-+-----	-----++-	-----++-	-----++-	-----++-	*68:01:02, *68:54 = *68:02:01:01, *68:36 = *68:36, *68:54 = *68:39, *68:54 = *68:54, *68:57



101.418-12/04 – including *Taq* pol., IFU-01
101.418-12u/04– without *Taq* pol., IFU-02

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Lot No.: 10S

Lot-specific information

+++-----	-----+	+-----+	-----+	-----	*68:01:02, *68:44 = *68:39, *68:44 = *68:44, *68:57
+++-----	-----	+-----+	-----+	-----	*68:01:02, *68:34 = *68:34, *68:39 = *68:34, *68:57
+++-----	-----	+-----+	-----+	-----	*68:01:02, *68:49N = *68:02:01:01, *68:33 = *68:33, *68:49N = *68:33, *68:92 = *68:39, *68:49N = *68:49N, *68:57
+++-----	-----	+-----+	-----+	-----	*68:02:01:01, *68:29 = *68:29, *68:92
+++-----	-----	+-----+	-----	-----	*68:01:02, *68:28 = *68:02:01:01, *68:24 = *68:24, *68:28 = *68:24, *68:92 = *68:28, *68:39 = *68:28, *68:57
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:23 = *68:23, *68:92
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:65 = *68:65, *68:92
+++-----	-----	+-----+	-----	-----	*68:01:14, *68:31 = *68:01:14, *68:40
+++-----	-----	+-----+	-----	-----	*68:01:02, *68:31 = *68:01:02, *68:40 = *68:31, *68:39 = *68:39, *68:40 = *68:40, *68:57
+++-----	-----	+-----+	-----	-----	*68:01:02, *68:81 = *68:02:01:01, *68:19 = *68:19, *68:81 = *68:19, *68:92 = *68:39, *68:81 = *68:57, *68:81
+++-----	-----	+-----+	-----	-----	*68:01:02, *68:51 = *68:02:01:01, *68:12 = *68:12, *68:51 = *68:12, *68:92 = *68:39, *68:51 = *68:51, *68:57
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:11N = *68:11N, *68:92
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:17 = *68:17, *68:92
+++-----	-----	+-----+	-----	-----	*68:09, *68:31 = *68:09, *68:40
+++-----	-----	+-----+	-----	-----	*68:01:14, *68:18N = *68:02:01:01, *68:08:01 = *68:08:01, *68:18N = *68:08:01, *68:92
+++-----	-----	+-----+	-----	-----	*68:01:02, *68:18N = *68:02:01:01, *68:47 = *68:18N, *68:39 = *68:18N, *68:47 = *68:18N, *68:57 = *68:47, *68:92
+++-----	-----	+-----+	-----	-----	*68:08:02, *68:31 = *68:08:02, *68:40
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:46 = *68:46, *68:92
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:32 = *68:32, *68:92
+++-----	-----	+-----+	-----	-----	*68:04, *68:39 = *68:25, *68:39
+++-----	-----	+-----+	-----	-----	*68:03:01, *68:15 = *68:05, *68:15 = *68:05, *68:31 = *68:15, *68:20 = *68:20, *68:31
+++-----	-----	+-----+	-----	-----	*68:14, *68:31 = *68:14, *68:40
+++-----	-----	+-----+	-----	-----	*68:36, *68:50 = *68:42, *68:50
+++-----	-----	+-----+	-----	-----	*68:10, *68:50 = *68:17, *68:50
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:26 = *68:01:02, *68:26 = *68:03:03, *68:26 = *68:26, *68:57 = *68:26, *68:66 = *68:26, *68:88
+++-----	-----	+-----+	-----	-----	*68:08:01, *68:50 = *68:08:02, *68:50 = *68:47, *68:50
+++-----	-----	+-----+	-----	-----	*68:10, *68:63 = *68:17, *68:63
+++-----	-----	+-----+	-----	-----	*68:08:01, *68:26 = *68:08:02, *68:26
+++-----	-----	+-----+	-----	-----	*68:07, *68:50 = *68:46, *68:50
+++-----	-----	+-----+	-----	-----	*68:07, *68:63 = *68:46, *68:63
+++-----	-----	+-----+	-----	-----	*68:06, *68:50 = *68:32, *68:50
+++-----	-----	+-----+	-----	-----	*68:04, *68:65 = *68:25, *68:65
+++-----	-----	+-----+	-----	-----	*68:04, *68:21:01 = *68:21:01, *68:25
+++-----	-----	+-----+	-----	-----	*68:04, *68:50 = *68:25, *68:50
+++-----	-----	+-----+	-----	-----	*68:04, *68:38 = *68:25, *68:38
+++-----	-----	+-----+	-----	-----	*68:04, *68:14 = *68:14, *68:25
+++-----	-----	+-----+	-----	-----	*68:04, *68:63 = *68:25, *68:63
+++-----	-----	+-----+	-----	-----	*68:03:01, *68:50 = *68:30, *68:50
+++-----	-----	+-----+	-----	-----	*68:03:01, *68:63 = *68:30, *68:63
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:20 = *68:01:14, *68:20 = *68:05, *68:27 = *68:20, *68:27 = *68:20, *68:88
+++-----	-----	+-----+	-----	-----	*68:10, *68:20 = *68:17, *68:20
+++-----	-----	+-----+	-----	-----	*68:08:02, *68:20 = *68:20, *68:47
+++-----	-----	+-----+	-----	-----	*68:07, *68:20 = *68:20, *68:46
+++-----	-----	+-----+	-----	-----	*68:06, *68:20 = *68:20, *68:32
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:94N = *68:92, *68:94N
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:60 = *68:03:03, *68:60
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:80 = *68:03:03, *68:80
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:68 = *68:68, *68:92
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:67 = *68:03:03, *68:67
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:59N = *68:59N, *68:92
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:55 = *68:55, *68:92
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:53 = *68:03:03, *68:53
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:48 = *68:03:03, *68:48



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+++-----	-----+	+-----+	-----+	-----	*68:01:01:01, *68:54 = *68:02:01:01, *68:42 = *68:03:03,
+++-----	-----	+-----+	-----	-----	*68:54 = *68:42, *68:54 = *68:42, *68:92
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:44 = *68:02:01:01, *68:35 = *68:03:03,
+++-----	-----	+-----+	-----	-----	*68:44 = *68:35, *68:44 = *68:35, *68:92
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:34 = *68:02:01:01, *68:43 = *68:03:03,
+++-----	-----	+-----+	-----	-----	*68:34 = *68:34, *68:43 = *68:43, *68:92
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:49N = *68:03:03, *68:49N
+++-----	-----	+-----+	-----	-----	*68:33, *68:54 = *68:36, *68:49N
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:28 = *68:03:03, *68:28
+++-----	-----	+-----+	-----	-----	*68:24, *68:54 = *68:28, *68:36
+++-----	-----	+-----+	-----	-----	*68:24, *68:49N = *68:28, *68:33
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:22 = *68:22, *68:92
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:21:01 = *68:21:01, *68:53 = *68:21:01,
+++-----	-----	+-----+	-----	-----	*68:92
+++-----	-----	+-----+	-----	-----	*68:31, *68:52 = *68:40, *68:52
+++-----	-----	+-----+	-----	-----	*68:31, *68:41 = *68:40, *68:41
+++-----	-----	+-----+	-----	-----	*68:31, *68:96 = *68:40, *68:96
+++-----	-----	+-----+	-----	-----	*68:31, *68:45 = *68:40, *68:45
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:31 = *68:01:01:01, *68:40 = *68:03:03,
+++-----	-----	+-----+	-----	-----	*68:40
+++-----	-----	+-----+	-----	-----	*68:16, *68:31 = *68:16, *68:40
+++-----	-----	+-----+	-----	-----	*68:31, *68:33 = *68:33, *68:40
+++-----	-----	+-----+	-----	-----	*68:29, *68:31 = *68:29, *68:40
+++-----	-----	+-----+	-----	-----	*68:24, *68:31 = *68:24, *68:40
+++-----	-----	+-----+	-----	-----	*68:23, *68:31 = *68:23, *68:40
+++-----	-----	+-----+	-----	-----	*68:31, *68:65 = *68:40, *68:65
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:81 = *68:03:03, *68:81
+++-----	-----	+-----+	-----	-----	*68:19, *68:54 = *68:36, *68:81
+++-----	-----	+-----+	-----	-----	*68:19, *68:49N = *68:33, *68:81
+++-----	-----	+-----+	-----	-----	*68:19, *68:28 = *68:24, *68:81
+++-----	-----	+-----+	-----	-----	*68:19, *68:31 = *68:19, *68:40
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:51 = *68:03:03, *68:51
+++-----	-----	+-----+	-----	-----	*68:12, *68:54 = *68:36, *68:51
+++-----	-----	+-----+	-----	-----	*68:12, *68:49N = *68:33, *68:51
+++-----	-----	+-----+	-----	-----	*68:12, *68:28 = *68:24, *68:51
+++-----	-----	+-----+	-----	-----	*68:12, *68:31 = *68:12, *68:40
+++-----	-----	+-----+	-----	-----	*68:12, *68:81 = *68:19, *68:51
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:38 = *68:11N, *68:44 = *68:38, *68:44 =
+++-----	-----	+-----+	-----	-----	*68:38, *68:92
+++-----	-----	+-----+	-----	-----	*68:11N, *68:31 = *68:11N, *68:40
+++-----	-----	+-----+	-----	-----	*68:17, *68:31 = *68:17, *68:40
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:26 = *68:26, *68:92
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:63 = *68:08:01, *68:54 = *68:18N, *68:63 =
+++-----	-----	+-----+	-----	-----	*68:54, *68:63 = *68:63, *68:92
+++-----	-----	+-----+	-----	-----	*68:01:01:01, *68:18N = *68:03:03, *68:18N
+++-----	-----	+-----+	-----	-----	*68:18N, *68:36 = *68:47, *68:54
+++-----	-----	+-----+	-----	-----	*68:18N, *68:33 = *68:47, *68:49N
+++-----	-----	+-----+	-----	-----	*68:18N, *68:24 = *68:28, *68:47
+++-----	-----	+-----+	-----	-----	*68:08:01, *68:31 = *68:08:01, *68:40
+++-----	-----	+-----+	-----	-----	*68:31, *68:47 = *68:40, *68:47
+++-----	-----	+-----+	-----	-----	*68:18N, *68:19 = *68:47, *68:81
+++-----	-----	+-----+	-----	-----	*68:12, *68:18N = *68:47, *68:51
+++-----	-----	+-----+	-----	-----	*68:31, *68:46 = *68:40, *68:46
+++-----	-----	+-----+	-----	-----	*68:31, *68:32 = *68:32, *68:40
+++-----	-----	+-----+	-----	-----	*68:01:02, *68:15 = *68:15, *68:39
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:04 = *68:02:01:01, *68:25 = *68:25, *68:92
+++-----	-----	+-----+	-----	-----	*68:02:01:01, *68:05 = *68:02:01:01, *68:20 = *68:20, *68:39
+++-----	-----	+-----+	-----	-----	*68:26, *68:36 = *68:26, *68:42
+++-----	-----	+-----+	-----	-----	*68:10, *68:26 = *68:17, *68:26
+++-----	-----	+-----+	-----	-----	*68:07, *68:26 = *68:26, *68:46
+++-----	-----	+-----+	-----	-----	*68:04, *68:26 = *68:25, *68:26
+++-----	-----	+-----+	-----	-----	*68:03:01, *68:26 = *68:26, *68:30
+++-----	-----	+-----+	-----	-----	*68:35, *68:54 = *68:42, *68:44



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+++-----	-----+	+-----+	---+-----	-----	*68:34, *68:42 = *68:43, *68:54
+++-----	-----	+-----+	---+-----	-----	*68:34, *68:35 = *68:43, *68:44
+++-----	-----+	+-----+	---+-----	---+-----	*68:31, *68:94N = *68:40, *68:94N
+++-----	-----+	+-----+	---+-----	-----	*68:31, *68:68 = *68:40, *68:68
+++-----	-----+	+-----+	---+-----	-----	*68:31, *68:59N = *68:40, *68:59N
+++-----	-----+	+-----+	---+-----	-----	*68:31, *68:55 = *68:40, *68:55
+++-----	-----+	+-----+	---+-----	-----	*68:31, *68:42 = *68:40, *68:42
+++-----	-----+	+-----+	---+-----	-----	*68:31, *68:35 = *68:35, *68:40
+++-----	-----+	+-----+	---+-----	-----	*68:31, *68:43 = *68:40, *68:43
+++-----	-----+	+-----+	---+-----	-----	*68:22, *68:31 = *68:22, *68:40
+++-----	-----+	+-----+	---+-----	-----	*68:21:01, *68:31 = *68:21:01, *68:40
+++-----	-----+	+-----+	---+-----	-----	*68:02:01:01, *68:50 = *68:48, *68:50 = *68:50, *68:51 = *68:50, *68:92
+++-----	---+-----+	+-----+	---+-----	-----	*68:31, *68:38 = *68:38, *68:40
+++-----	-+-----+	+-----	-----	---+-----	*68:26, *68:31 = *68:26, *68:40
+++-----	+-----+	+-----+	---+-----	-----	*68:31, *68:63 = *68:40, *68:63
+++-----	-----	+-----+	---+-----	---+-----	*68:04, *68:60 = *68:25, *68:60
+++-----	-----	+-----+	---+-----	---+-----	*68:04, *68:80 = *68:25, *68:80
+++-----	-----	+-----+	---+-----	-----	*68:04, *68:67 = *68:25, *68:67
+++-----	-----	+-----+	---+-----	-----	*68:04, *68:53 = *68:25, *68:53
+++-----	-----	+-----+	---+-----	-----	*68:04, *68:48 = *68:25, *68:48
+++-----	-----	+-----+	---+-----	-----	*68:04, *68:54 = *68:25, *68:54
+++-----	-----	+-----+	---+-----	-----	*68:04, *68:44 = *68:25, *68:44
+++-----	-----	+-----+	---+-----	-----	*68:04, *68:34 = *68:25, *68:34
+++-----	-----	+-----+	---+-----	-----	*68:04, *68:49N = *68:25, *68:49N
+++-----	-----	+-----+	---+-----	-----	*68:04, *68:28 = *68:25, *68:28
+++-----	-----+	+-----+	---+-----	-----	*68:04, *68:40 = *68:25, *68:31 = *68:25, *68:40
+++-----	-----+	+-----+	---+-----	-----	*68:04, *68:81 = *68:25, *68:81
+++-----	-----+	+-----+	---+-----	-----	*68:04, *68:51 = *68:25, *68:51
+++-----	+-----	+-----+	---+-----	-----	*68:04, *68:18N = *68:18N, *68:25
+++++-----	-----	+-----+	---+-----	---+-----	*68:05, *68:60 = *68:20, *68:60
+++++-----	-----	+-----+	---+-----	---+-----	*68:05, *68:80 = *68:20, *68:80
+++++-----	-----	+-----+	---+-----	-----	*68:05, *68:67 = *68:20, *68:67
+++++-----	-----	+-----+	---+-----	-----	*68:05, *68:53 = *68:20, *68:53
+++++-----	-----	+-----+	---+-----	-----	*68:05, *68:48 = *68:20, *68:48
+++++-----	-----	+-----+	---+-----	-----	*68:05, *68:54 = *68:20, *68:54
+++++-----	-----	+-----+	---+-----	-----	*68:05, *68:44 = *68:20, *68:44
+++++-----	-----	+-----+	---+-----	-----	*68:05, *68:34 = *68:20, *68:34
+++++-----	-----	+-----+	---+-----	-----	*68:05, *68:49N = *68:20, *68:49N
+++++-----	-----	+-----+	---+-----	-----	*68:05, *68:28 = *68:20, *68:28
+++++-----	-----+	+-----+	---+-----	-----	*68:05, *68:40 = *68:20, *68:40
+++++-----	-----+	+-----+	---+-----	-----	*68:05, *68:81 = *68:20, *68:81
+++++-----	-----+	+-----+	---+-----	-----	*68:05, *68:51 = *68:20, *68:51
+++++-----	+-----	+-----+	---+-----	-----	*68:05, *68:18N = *68:18N, *68:20
+++++-----	-----+	+-----+	---+-----	-----	*68:31, *68:50 = *68:40, *68:50

- *68:01:01:01 = *68:01:01:01-68:01:01:02, 68:01:03-68:01:05, 68:01:07-68:01:12, 68:01:18 and 68:21:02, 68:56, 68:58, 68:72, 68:79 and 68:87
- *68:01:02 = *68:01:02, 68:01:06, 68:01:13, 68:01:15-68:01:17 and 68:37, 68:69-68:71, 68:73, 68:76, 68:83, 68:85, 68:89, 68:91, 68:93, 68:95 and 68:98-68:99
- *68:02:01:01 = *68:02:01:01-68:02:05 and 68:62, 68:64, 68:74, 68:77-68:78, 68:82, 68:86 and 68:97
- *68:03:01 = *68:03:01-68:03:02
- *68:13:01 = *68:13:01-68:13:02
- *68:54 = *68:54 and 68:61
- *68:57 = *68:57, 68:84 and 68:90
- *68:66 = *68:66 and 68:75



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SPECIFICITY TABLE

HLA-A*68 SSP subtyping

Specificities and sizes of the PCR products of the 46 primer mixes used for HLA-A*68 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-A*68 alleles ³	Other amplified HLA-A alleles ⁴
1⁶	195 bp	800 bp	*68:01:01:01- 68:02:05, 68:06- 68:14, 68:16-68:19, 68:21:01-68:30, 68:32-68:35, 68:37- 68:45, 68:46 ^w , 68:47- 68:56, 68:58-68:83, 68:85-68:89, 68:91, 68:93-68:99	*01:13, 02:34-02:35:03, 02:56:01-02:56:02, 02:62, 02:78, 02:103, 03:01:01:01- 03:01:08, 03:01:10-03:01:22, 03:01:24-03:07, 03:09-03:31, 03:33-03:35, 03:37-03:40, 03:42-03:56, 03:58-03:88, 03:90-03:106, 03:109-03:110, 03:112-03:141, 03:143-03:151, 03:153-03:160, 03:162N, 11:01:01-11:01:45, 11:03- 11:13, 11:15:01-11:15:02, 11:20-11:27, 11:29-11:37, 11:39, 11:41-11:44, 11:46- 11:50Q, 11:52Q, 11:54-11:56, 11:58-11:70, 11:72-11:76, 11:79-11:97, 11:99N-11:100, 11:102-11:105, 11:107- 11:109N, 11:112, 11:114- 11:120, 11:122-11:133, 11:135-11:139, 24:19, 30:18, 30:55, 34:01:01-34:10N, 66:01-66:02, 66:04, 66:06- 66:10, 66:12-66:14, 66:16- 66:19, 69:01, 74:13, C*03:82
2	435 bp	1070 bp	*68:01:01:01- 68:01:18, 68:03:01- 68:05, 68:08:01- 68:09, 68:11N-68:12, 68:16-68:17, 68:19- 68:26, 68:29, 68:32- 68:33, 68:35-68:39, 68:41-68:43, 68:45- 68:47, 68:50, 68:52, 68:55-68:59N, 68:63, 68:65, 68:68-68:73, 68:76, 68:79, 68:83-	*01:51, 03:24, 11:10, 33:18:01- 33:18:02, 34:02:01-34:04, 34:07-34:09

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			68:85, 68:87, 68:89-68:91, 68:93-68:96, 68:98-68:99	
3	195 bp	1070 bp	*68:02:01:01-68:02:05, 68:15, 68:18N, 68:28, 68:31, 68:34, 68:39-68:40, 68:44, 68:48-68:49N, 68:51, 68:53-68:54, 68:60-68:62, 68:64, 68:67, 68:74, 68:77-68:78, 68:80-68:82, 68:86, 68:92, 68:97	
4⁹	180 bp, 225 bp	1070 bp	*68:03:01-68:03:02, 68:05, 68:20, 68:30	*02:06:05
5¹⁰	140 bp, 235 bp	800 bp	*68:04, 68:25	*02:339, 11:98, 33:51, 66:15
6	230 bp	1070 bp	*68:05, 68:15, 68:20	*02:06:05, 02:122, 02:143
7	145 bp	1070 bp	*68:06, 68:32	*02:52
8¹¹	160 bp, 240 bp	800 bp	*68:07, 68:46	
9^{7,12}	150 bp, 195 bp, 250 bp	800 bp	*68:08:01-68:08:02, 68:18N, 68:47, 68:63	*25:19, 26:43:01-26:43:02, 34:02:03, 34:03 [?] -34:04 [?] , 34:06 [?] -34:09 [?] , 66:06
10	165 bp	800 bp	*68:09, 68:26	*01:12, 01:19, 03:10, 11:01:01-11:01:34, 11:01:36-11:07, 11:10-11:21N, 11:26-11:27, 11:29-11:30, 11:32-11:34, 11:36-11:43, 11:45-11:49, 11:51-11:52Q, 11:54-11:58, 11:60-11:93, 11:95-11:111, 11:114-11:115N, 11:117-11:129, 11:131-11:133, 11:135-11:139, 24:17, 24:41, 24:208, 29:05, 29:33
11^{13,24}	160 bp, 200 bp	800 bp	*68:10, 68:14, 68:17	*02:358
12¹⁴	205 bp, 405 bp	1070 bp	*68:11N, 68:38	
13¹⁵	210 bp, 240 bp	800 bp	*68:12, 68:50-68:51	*26:18
14	150 bp	800 bp	*68:13:01-68:13:02	*11:103, 32:39
15¹⁶	145 bp, 205 bp	1070 bp	*68:14, 68:19, 68:81	*02:121, 02:237, 03:17:01, 23:47, 24:18, 24:204, 24:213, B*44:59:02
16	215 bp	1070 bp	*68:15, 68:31, 68:40	*02:122, 02:143

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17⁶	175 bp	1070 bp	*68:02:01:01- 68:02:05, 68:15, 68:18N, 68:20, 68:27- 68:28, 68:31, 68:34, 68:40, 68:44, 68:48- 68:49N, 68:51, 68:53- 68:54, 68:60-68:62, 68:64, 68:67, 68:74, 68:77-68:78, 68:80- 68:82, 68:86, 68:92, 68:97	*02:02 ^w , 02:03:01-02:03:04, 02:05:01 ^w -02:05:05 ^w , 02:05:06, 02:08 ^w , 02:22:01-02:22:02, 02:47 ^w , 02:49-02:50, 02:63 ^w , 02:102 ^w , 02:104, 02:115 ^w , 02:117, 02:122, 02:135- 02:136, 02:148, 02:154 ^w - 02:155 ^w , 02:172 ^w , 02:179 ^w , 02:186 ^w , 02:191, 02:209 ^w , 02:230, 02:232 ^w , 02:253, 02:258, 02:264, 02:267, 02:281, 02:286 ^w , 02:315, 02:320 ^w , 02:323, 02:324 ^w , 02:337 ^w , 02:344 ^w , 02:345, 02:355, 02:359 ^w , 02:370, 02:373N ^w , 02:376, 02:382, 02:402, 23:02, 24:06, 24:87, 24:138, 24:167, 25:01:01- 25:03, 25:05-25:11, 25:13- 25:18, 25:20-25:22, 26:01:01- 26:01:04, 26:01:07-26:07:02, 26:09-26:26, 26:28-26:39, 26:41-26:42, 26:45-26:47, 26:49-26:66, 26:68-26:72, 26:74-26:80, 26:82-26:84, 31:30, 32:10, 34:01:01- 34:01:02, 34:05, 43:01, 66:01- 66:05, 66:07-66:19, B*27:25 , B*27:45 , C*02:07
18¹⁷	200 bp, 225 bp	800 bp	*68:21:01, 68:26, 68:65	*01:01:01:01-01:04N, 01:06- 01:29, 01:31N-01:33, 01:35- 01:71, 01:73-01:78, 01:80- 01:101, 01:103-01:126, 03:04:01, 03:18, 03:97, 03:122, 03:135, 11:27, 11:38- 11:39, 11:94, 23:53, 24:17, 24:41, 24:208, 29:03, 29:33, 80:01:01:01-80:02
19	325 bp	1070 bp	*68:22	*33:63
20⁵	90 bp	1070 bp	*68:23	*01:20, 01:66, 01:73, 02:114, 02:246, 02:279, 03:95, 29:22
21¹⁸	165 bp, 215 bp	1070 bp	*68:24, 68:28	*02:49, 24:87, 66:19, B*27:45
22	165 bp	800 bp	*68:01:01:01- 68:01:13, 68:01:15- 68:01:18,	*01:01:01:01 ^w -01:01:51 ^w , 01:02 ^w -01:04N ^w , 01:07 ^w - 01:11N ^w , 01:13 ^w -01:18N ^w ,

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Lot-specific information

			68:03:01-68:05, 68:07, 68:10-68:14, 68:16-68:17, 68:19- 68:25, 68:29-68:30, 68:32-68:33, 68:35- 68:39, 68:41-68:43, 68:45-68:47, 68:50, 68:52, 68:55-68:59N, 68:65-68:66, 68:68- 68:73, 68:75-68:76, 68:79, 68:83-68:85, 68:87-68:91, 68:93- 68:96, 68:98-68:99	01:20 ^w -01:24 ^w , 01:26 ^w -01:29 ^w , 01:31N ^w -01:33 ^w , 01:35 ^w - 01:52N ^w , 01:54 ^w -01:64 ^w , 01:66 ^w -01:69:01 ^w , 01:70 ^w - 01:78 ^w , 01:80 ^w -01:83:01 ^w , 01:84 ^w -01:97 ^w , 01:98, 01:99 ^w , 01:101 ^w -01:122 ^w , 02:229, 03:18 ^w , 03:50, 03:66, 11:08, 11:44, 29:28, 36:01 ^w , 36:02, 36:03 ^w -36:05 ^w
23	185 bp	1070 bp	*68:01:01:01- 68:01:18, 68:03:01- 68:05, 68:07-68:14, 68:16-68:17, 68:19- 68:25, 68:26 ^w , 68:29- 68:30, 68:32-68:33, 68:35-68:39, 68:41- 68:43, 68:45-68:47, 68:50, 68:52, 68:55- 68:59N, 68:63, 68:66, 68:68-68:73, 68:75- 68:76, 68:79, 68:83- 68:85, 68:87-68:91, 68:93-68:96, 68:98- 68:99	*02:114, 02:229, 02:246, 02:279, 03:01:01:01-03:01:29, 03:01:31-03:17:02, 03:20- 03:39, 03:41-03:42, 03:44- 03:52, 03:54-03:81, 03:83- 03:96, 03:99-03:102, 03:104, 03:106-03:121, 03:123-03:134, 03:136-03:162N, 11:04, 11:35, 11:130, 29:01:01:01- 29:02:01:02, 29:02:03- 29:02:13, 29:04-29:31, 29:34- 29:50, 30:26, 31:03-31:04, 31:06, 32:04, 32:30, 32:32, 33:18:01-33:18:02, 34:02:01- 34:04, 34:07-34:10N, 36:01- 36:03, 36:05
24	375 bp	1070 bp		*02:55, 26:22, 33:22, 66:09, 69:01
25	240 bp	1070 bp	*68:29	*02:243, 24:82
26^{5,19}	100 bp, 185 bp	1070 bp	*68:33, 68:49N	
27²⁰	185 bp, 235 bp	1070 bp	*68:34, 68:43	*02:385
28²¹	200 bp, 230 bp	1070 bp	*68:35, 68:38, 68:44	
29^{5,6,22}	80 bp, 250 bp	800 bp	*68:36-68:37, 68:42, 68:54, 68:61, 68:63 ^w	*02:03:01-02:03:04, 02:26 ^w , 02:99 ^w , 02:117, 02:148, 02:171:02 ^w , 02:253, 02:258, 02:264, 02:281, 02:315, 02:323, 02:345, 02:355, 02:370, 02:402, 03:01:38, 11:25 ^w , 26:01:17, B*44:03:19
30²³	145 bp,	1070 bp	68:37	*02:117, 02:135, 25:01:01-

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Lot-specific information

	245 bp			25:07, 25:10-25:22, 26:01:01-26:01:14, 26:01:16-26:01:25, 26:01:27-26:10, 26:12-26:13, 26:15-26:17, 26:19-26:27, 26:29-26:39, 26:41-26:43:02, 26:45-26:46, 26:48-26:72, 26:74-26:84, 34:01:01-34:01:02, 34:05, 43:01, 66:01-66:15, 66:17, 66:19
31⁶	220 bp	1070 bp	*68:48, 68:50	*25:01:01-25:04, 25:06-25:07, 25:09-25:21, 26:01:01-26:01:25, 26:01:27-26:10, 26:12-26:43:02, 26:45-26:46, 26:48-26:53, 26:55-26:84, 34:01:01-34:01:02, 34:02:03, 34:03 [?] -34:09 [?] , 43:01, 66:01-66:15, 66:17, 66:19
32⁸	175 bp	800 bp	*68:21:01, 68:53	*02:74:02, 02:159, 23:25
33	150 bp	1070 bp	*68:16	
34	165 bp	1070 bp	*68:55	
35	140 bp	1070 bp	*68:59N	
36	195 bp	1070 bp	*68:01:01:01-68:01:01:02, 68:01:03-68:01:05, 68:01:07-68:01:12, 68:01:14, 68:01:18, 68:03:03-68:04, 68:08:01, 68:21:02-68:22, 68:25-68:27, 68:35, 68:42-68:43, 68:50, 68:55-68:56, 68:58-68:59N, 68:63, 68:68, 68:72, 68:79, 68:87-68:88, 68:94N	*11:10, 25:01:01-25:01:03, 25:01:05-25:02, 25:04-25:14, 25:16, 25:18-25:22, 26:01:01-26:06, 26:08-26:15, 26:17-26:18, 26:21-26:34, 26:36-26:43:02, 26:45-26:63, 26:65-26:71N, 26:73-26:82, 26:84, 33:51, 34:01:01-34:07, 34:09-34:10N, 66:01-66:19, 69:01
37	285 bp	1070 bp	*68:26, 68:65	*26:29, 26:49, 66:10
38	145 bp	1070 bp	*68:67	
39	180 bp	1070 bp	*68:68	
40	195 bp	1070 bp	*68:80	*24:141
41	200 bp	1070 bp	*68:45	*24:24, 24:67, 26:16
42	130 bp	1070 bp	*68:60	
43	365 bp	1070 bp	*68:94N	*26:71N
44	185 bp	1070 bp	*68:96	
45	150 bp	1070 bp	*68:41	*01:126
46⁵	110 bp	1070 bp	*68:52	*02:396

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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-A*68 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-A*68 subtyping.

In addition, wells number 5, 8 to 11, 13, 14, 18, 22, 29 and 32 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-A alleles non-HLA-A*68 alleles will be amplified by primer mixes 1, 2, 4 to 7, 9 to 11, 13 to 25, 27, 29 to 32, 36, 37, 40, 41, 43 and 45 to 46. In addition, the B*27:25 and C*02:07 alleles will be amplified by primer mix 17, the B*27:45 allele will be amplified by primer mixes 17 and 21, the B*27:45 will be amplified by primer mix 21, the B*44:03:19 allele will be amplified by primer mix 29 and the C*03:82 allele will be amplified by primer mix 1.

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

⁶Primer mixes 1, 17, 29 and 31 may give rise to a lower yield of HLA-specific PCR product than the other A*68 primer mixes.

⁷Primer mix 9 may have tendencies of unspecific amplifications.

⁸Primer mix 32 have a tendency to giving rise to primer oligomer formation.

⁹Primer mix 4: Specific PCR fragment of 180 bp in the A*68:30 allele. Specific PCR fragment of 225 bp in the A*68:03:01-68:03:02, A*68:05 and A*68:20 alleles. Specific PCR fragment of 180 and 225 bp in the A*02:06:05 allele.

¹⁰Primer mix 5: Specific PCR fragment of 140 bp in the A*68:25 and the A*02:339 allele. Specific PCR fragment of 235 bp in the A*68:04 and the A*11:98, 33:51 and 66:15 alleles.

¹¹Primer mix 8: Specific PCR fragment of 160 bp in the A*68:07 allele. Specific PCR fragment of 240 bp in the A*68:46 allele.

¹²Primer mix 9: Specific PCR fragment of 150 bp in the A*68:18N allele. Specific PCR fragment of 195 bp in the A*68:47 allele. Specific PCR fragment of 250 bp in the A*68:08:01-68:08:02 and 68:63 and the A*25:19, 26:43:01-26:43:02, 34:02:03, 34:03²-34:04², 34:06²-34:09² and A*66:06 alleles.

¹³Primer mix 11: Specific PCR fragment of 160 bp in the A*68:17 allele. Specific PCR fragment of 200 bp in the A*68:10 and A*68:14 and the A*02:358 alleles.

¹⁴Primer mix 12: Specific PCR fragment of 205 bp in the A*68:38 allele. Specific PCR fragment of 405 bp in the A*68:11N allele.

¹⁵Primer mix 13: Specific PCR fragment of 210 bp in the A*68:12 and A*68:50 alleles. Specific PCR fragment of 240 bp in the A*68:51 and 26:18 alleles.

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¹⁶Primer mix 15: Specific PCR fragment of 145 bp in the A*68:19 and in the A*02:237, 03:17:01, 24:18, 24:204 and 24:213 alleles. Specific PCR fragment of 205 bp in the A*68:14 and 68:81 and the A*02:121 and 23:47 and in the B*44:59:02 alleles.

¹⁷Primer mix 18: Specific PCR fragment of 200 bp in the A*68:26 and 68:65 and the A*01:01:01:01-01:04N, 01:06-01:29, 01:31N-01:33, 01:35-01:71, 01:73-01:78, 01:80-01:85, 01:87-01:101, 01:103-01:126, 03:18, 03:97, 03:122, 03:135, 11:27, 11:38-11:39, 11:94, 23:53, 24:17, 24:41, 24:208, 29:03, 29:33 and 80:01:01:01-80:02 alleles. Specific PCR fragment of 225 bp in the A*68:21:01 and the 03:04:01 alleles. Specific PCR fragment of 200 and 225 bp in the A*01:86 allele.

¹⁸Primer mix 21: Specific PCR fragment of 165 bp in the A*68:28 and in the A*02:49, 24:87 and 66:19 and in the B*27:45 alleles. Specific PCR fragment of 215 bp in the A*68:24 allele.

¹⁹Primer mix 26: Specific PCR fragment of 100 bp in the A*68:49N allele. Specific PCR fragment of 185 bp in the A*68:33 allele.

²⁰Primer mix 27: Specific PCR fragment of 185 bp in the A*68:34 and the A*02:385 allele. Specific PCR fragment of 235 bp in the A*68:43 allele.

²¹Primer mix 28: Specific PCR fragment of 200 bp in the A*68:35 and 68:38 alleles. Specific PCR fragment of 230 bp in the A*68:44 allele.

²²Primer mix 29: Specific PCR fragment of 80 bp in the A*68:42, 68:54, 68:61 and 68:63^w and the 02:03:01-02:03:04, 02:26^w, 02:99^w, 02:117, 02:148, 02:171:02^w, 02:253, 02:258, 02:264, 02:281, 02:315, 02:323, 02:345, 02:355, 02:370, 02:402, 03:01:38, 11:25^w and 26:01:17 alleles. Specific PCR fragment of 250 bp in the A*68:36 and 68:37 and in the B*44:03:19 alleles.

²³Primer mix 30: Specific PCR fragment of 145 bp in the A*02:117, 02:135, 25:01:01-25:07, 25:10-25:22, 26:01:01-26:01:14, 26:01:16-26:01:25, 26:01:27-26:10, 26:12-26:13, 26:15-26:17, 26:19-26:27, 26:29-26:39, 26:41-26:43:02, 26:45-26:46, 26:48-26:72, 26:74-26:84, 34:01:01-34:01:02, 34:05, 43:01, 66:01-66:15, 66:17 and 66:19 alleles. Specific PCR fragment of 245 bp in the A*68:37 allele.

^w, may be weakly amplified.

²⁴Primer mix 11 may faintly amplify the A*02:06:05, 02:06:09, 02:122, 11:70, 11:121 and 26:07:01-26:07:02 alleles.

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

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Lot-specific information

INTERPRETATION TABLE**HLA-A*68 SSP subtyping**

Amplification patterns of the A*68:01 to A*68:99 and the A*69:01 alleles

	Well ⁶																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Length of spec.	195	435	195	180	140	230	145	160	150	165	160	205	210	150	145	215	175	200	325	90	165	165	185	375
PCR product(s)				225	235			240	195		200	405	240		205			225			215			
Length of int.	800	1070	1070	1070	800	1070	1070	800	800	800	800	1070	800	800	1070	1070	1070	800	1070	1070	1070	800	1070	1070
pos. control ¹																								
5'-primer(s) ²	127	261	106	102	98	102	145	98	106	413	98	47	2 nd I	144	453	106	395	413	317	362	102	413	413	261
	5'-ggg 3'	5'-AAC 3'	5'-CCA 3'	5'-ACT 3'	5'-CTA 3'	5'-ACT 3'	5'-CCA 3'	5'-CTA 3'	5'-CCA 3'	5'-CCg 3'	5'-CTA 3'	5'-g.T 3'	5'-CCT 3'	5'-GCC 3'	5'-AAA 3'	5'-CCA 3'	5'-gCA 3'	5'-CCg 3'	5'-gCA 3'	5'-gAg 3'	5'-ACT 3'	5'-CCg 3'	5'-CCg 3'	5'-AAC 3'
					5'-gCC 3'	5'-CCA 3'	5'-gAA 3'	5'-AgC 3'	5'-CCT 3'		5'-ggT 3'	5'-gCA 3'					5'-CCA 3'	5'-CCA 3'		5'-gAg 3'	5'-CCA 3'			
3'-primer(s) ³	282	413	259	240	290	292	259	299	216	538	256	282	497	255	555	278	539	570	362	413	275	539	559	355
	5'-gAC 3'	5'-gCC 3'	5'-gTT 3'	5'-ggA 3'	5'-CAA 3'	5'-gTg 3'	5'-gTT 3'	5'-TCA 3'	5'-gCT 3'	5'-CTg 3'	5'-CTC 3'	5'-gAC 3'	5'-TgA 3'	5'-Cgg 3'	5'-CCA 3'	5'-ggC 3'	5'-TCC 3'	5'-CCg 3'	5'-TCA 3'	5'-gCC 3'	5'-CCC 3'	5'-TCC 3'	5'-CgT 3'	5'-gAC 3'
	5'-gAC 3'			5'-gAg 3'	5'-Tgg 3'		5'-TgT 3'	5'-TCC 3'	5'-CCA 3'		5'-CCA 3'	5'-CCA 3'	5'-TgA 3'		5'-CgC 3'	5'-gAg 3'		5'-CCg 3'			5'-CCg 3'			
			5'-gTg 3'	292					538				524			282					538			
									538															
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

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Lot-specific information

Length of spec.	195	435	195	180	140	230	145	160	150	165	160	205	210	150	145	215	175	200	325	90	165	165	185	375
PCR product(s)				225	235			240	195		200	405	240		205			225			215			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
HLA-A allele ⁴																								
*68:01:01:01-68:01:01:02, 68:01:03-68:01:05, 68:01:07-68:01:12, 68:01:18, 68:21:02, 68:56, 68:58, 68:72, 68:79, 68:87	1	2																				22	23	
*68:01:02, 68:01:06, 68:01:13, 68:01:15- 68:01:17, 68:69-68:71, 68:73, 68:76, 68:83, 68:85, 68:89, 68:91, 68:93, 68:95, 68:98-68:99	1	2																				22	23	
*68:01:14, 34:02:01- 34:02:02 ⁵	1	2																					23	
*68:02:01:01-68:02:05, 68:62, 68:64, 68:74, 68:77- 68:78, 68:82, 68:86, 68:97	1		3														17							
*68:03:01-68:03:02		2		4																		22	23	
*68:03:03		2																				22	23	
*68:04		2			5																	22	23	
*68:05		2		4		6																22	23	
*68:06	1						7																	
*68:07	1							8														22	23	
*68:08:01	1	2							9														23	
*68:08:02	1	2							9														23	
*68:09	1	2								10													23	
*68:10	1										11											22	23	
*68:11N	1	2										12										22	23	
*68:12	1	2											13									22	23	
*68:13:01-68:13:02	1													14								22	23	
*68:14	1										11				15							22	23	
*68:15			3			6										16	17							
*68:16	1	2																				22	23	
*68:17	1	2									11											22	23	
*68:18N	1		3						9								17							
*68:19	1	2													15							22	23	
*68:20		2		4		6											17					22	23	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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Lot-specific information

240	100	185	200	80	145	220	175	150	165	140	195	285	145	180	195	200	130	365	185	150	110	Length of spec. PCR product(s)	
185	235	230	250	245																			Well No. HLA-A allele ⁴
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46		
											36												*68:01:01:01-68:01:01:02, 68:01:03-68:01:05, 68:01:07-68:01:12, 68:01:18, 68:21:02, 68:56, 68:58, 68:72, 68:79, 68:87
																							*68:01:02, 68:01:06, 68:01:13, 68:01:15- 68:01:17, 68:69-68:71, 68:73, 68:76, 68:83, 68:85, 68:89, 68:91, 68:93, 68:95, 68:98-68:99
											36												*68:01:14, 34:02:01- 34:02:02 ⁵
																							*68:02:01:01-68:02:05, 68:62, 68:64, 68:74, 68:77- 68:78, 68:82, 68:86, 68:97
											36												*68:03:01-68:03:02 *68:03:03 *68:04 *68:05
											36												*68:06 *68:07 *68:08:01 *68:08:02
																							*68:09 *68:10 *68:11N *68:12
								33															*68:13:01-68:13:02 *68:14 *68:15 *68:16
																							*68:17 *68:18N *68:19 *68:20
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	

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 101.418-12u/04– without *Taq* pol., IFU-02

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Lot No.: **10S**

Lot-specific information

Length of spec.	195	435	195	180	140	230	145	160	150	165	160	205	210	150	145	215	175	200	325	90	165	165	185	375
PCR product(s)				225	235			240	250	195		200	405	240		205		225			215			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*68:21:01	1	2															18					22	23	
*68:22	1	2																19				22	23	
*68:23	1	2																	20			22	23	
*68:24	1	2																			21	22	23	
*68:25	1	2			5																	22	23	
*68:26	1	2							10								18						w	
*68:27, 66:16, 66:18 ⁶	1																17							
*68:28	1		3														17				21			
*68:29	1	2																				22	23	
*68:30	1			4																		22	23	
*68:31			3													16	17							
*68:32	1	2					7															22	23	
*68:33	1	2																				22	23	
*68:34	1		3														17							
*68:35	1	2																				22	23	
*68:36		2																				22	23	
*68:37	1	2																				22	23	
*68:38	1	2										12										22	23	
*68:39	1	2	3																			22	23	
*68:40	1		3													16	17							
*68:41	1	2																				22	23	
*68:42	1	2																				22	23	
*68:43	1	2																				22	23	
*68:44	1		3														17							
*68:45	1	2																				22	23	
*68:46	w	2						8														22	23	
*68:47	1	2							9													22	23	
*68:48	1		3														17							
*68:49N	1		3														17							
*68:50	1	2											13									22	23	
*68:51	1		3										13				17							
*68:52	1	2																				22	23	
*68:53	1		3														17							
*68:54, 68:61	1		3														17							
*68:55	1	2																				22	23	
*68:57, 68:84, 68:90		2																				22	23	
*68:59N	1	2																				22	23	
*68:60	1		3														17							
*68:63	1	2							9														23	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **10S**

Lot-specific information

Lot-specific information																				Length of spec. PCR product(s)			
240	100	185	200	80	145	220	175	150	165	140	195	285	145	180	195	200	130	365	185	150	110		
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	
	185	235	230	250	245																	*68:21:01	
							32					36											*68:22
																							*68:23
																							*68:24
											36												*68:25
											36	37											*68:26
											36												*68:27, 66:16, 66:18 ⁶
																							*68:28
25																							*68:29
																							*68:30
																							*68:31
																							*68:32
	26																						*68:33
		27																					*68:34
			28								36												*68:35
				29																			*68:36
				29	30																		*68:37
			28																				*68:38
																							*68:39
																							*68:40
																					45		*68:41
				29							36												*68:42
		27									36												*68:43
			28																				*68:44
																41							*68:45
																							*68:46
																							*68:47
						31																	*68:48
	26																						*68:49N
						31					36												*68:50
																							*68:51
																					46		*68:52
							32																*68:53
				29																			*68:54, 68:61
									34		36												*68:55
																							*68:57, 68:84, 68:90
										35	36												*68:59N
																	42						*68:60
				w							36												*68:63
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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

Lot No.: **10S**

Lot-specific information

Length of spec.	195	435	195	180	140	230	145	160	150	165	160	205	210	150	145	215	175	200	325	90	165	165	185	375
PCR product(s)				225	235			240	195		200	405	240		205			225			215			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*68:65	1	2															18				22			
*68:66, 68:75, 03:50, 03:66 ⁷	1																					22	23	
*68:67	1		3														17							
*68:68	1	2																				22	23	
*68:80	1		3														17							
*68:81	1		3												15		17							
*68:88	1																					22	23	
*68:92			3														17							
*68:94N	1	2																				22	23	
*68:96	1	2																				22	23	
*01:01:01:01-01:01:51, 01:02-01:04N, 01:07- 01:11N, 01:14-01:18N, 01:21-01:24, 01:26-01:29, 01:31N-01:33, 01:35- 01:50, 01:52N, 01:54- 01:64, 01:67-01:69:01, 01:70-01:71, 01:74-01:78, 01:80-01:83:01, 01:84- 01:97, 01:99, 01:101, 01:103-01:122																		18				w		
*01:01:52-01:01:53, 01:06, 01:25, 01:53N, 01:65, 01:69:02, 01:83:02, 01:100, 01:123N-01:125, 23:53, 29:03, 80:01:01:01- 80:02																		18						
*01:12, 01:19, 11:38, 24:17, 24:41, 24:208, 29:33										10								18						
*01:13, 03:18	1																	18				w		
*01:20, 01:66, 01:73																		18		20		w		
*01:51		2																18				w		
*01:72, 01:102, 36:04																						w		
*01:98																		18					22	
*01:126																		18						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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

Lot No.: **10S**

Lot-specific information

240	100	185	200	80	145	220	175	150	165	140	195	285	145	180	195	200	130	365	185	150	110	Length of spec. PCR product(s)	
	185	235	230	250	245																		
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	
												37											*68:65
																							*68:66, 68:75, 03:50, 03:66 ⁷
													38										*68:67
											36			39									*68:68
															40								*68:80
																							*68:81
											36												*68:88
																							*68:92
											36							43					*68:94N
																			44				*68:96
																							*01:01:01:01-01:01:51, 01:02-01:04N, 01:07- 01:11N, 01:14-01:18N, 01:21-01:24, 01:26-01:29, 01:31N-01:33, 01:35- 01:50, 01:52N, 01:54- 01:64, 01:67-01:69:01, 01:70-01:71, 01:74-01:78, 01:80-01:83:01, 01:84- 01:97, 01:99, 01:101, 01:103-01:122
																							*01:01:52-01:01:53, 01:06, 01:25, 01:53N, 01:65, 01:69:02, 01:83:02, 01:100, 01:123N-01:125, 23:53, 29:03, 80:01:01:01- 80:02
																							*01:12, 01:19, 11:38, 24:17, 24:41, 24:208, 29:33
																							*01:13, 03:18
																							*01:20, 01:66, 01:73
																							*01:51
																							*01:72, 01:102, 36:04
																							*01:98
																					45		*01:126
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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

Lot No.: **10S**

Lot-specific information

Length of spec.	195	435	195	180	140	230	145	160	150	165	160	205	210	150	145	215	175	200	325	90	165	165	185	375
PCR product(s)				225	235			240	195		200	405	240		205			225			215			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*02:02, 02:05:01- 02:05:05, 02:08, 02:47, 02:63, 02:102, 02:115, 02:154-02:155, 02:172, 02:179, 02:186, 02:209, 02:232, 02:286, 02:320, 02:324, 02:337, 02:344, 02:359, 02:373N																	w							
*02:03:01-02:03:04, 02:148, 02:253, 02:258, 02:264, 02:281, 02:315, 02:323, 02:345, 02:355, 02:370, 02:402																	17							
*02:05:06, 02:22:01- 02:22:02, 02:50, 02:104, 02:136, 02:191, 02:230, 02:267, 02:376, 02:382, 23:02, 24:06, 24:138, 24:167, 31:30, 32:10, <i>B*27:25, C*02:07</i>																	17							
*02:06:05				4		6																		
*02:26, 02:99, 02:171:02																								
*02:34-02:35:03, 02:56:01- 02:56:02, 02:62, 02:78, 02:103, 03:01:30, 03:19, 03:40, 03:43, 03:53, 03:82, 03:98, 03:103, 03:105, 11:01:35, 11:09, 11:22-11:24:02, 11:31, 11:50Q, 11:59, 11:112, 11:116, 24:19, 30:18, 30:55, 74:13, <i>C*03:82</i>	1																							
*02:49, 24:87, <i>B*27:45</i>																	17				21			
*02:52							7																	
*02:55, 33:22																								24
*02:74:02, 02:159, 23:25																								
*02:114, 02:246, 02:279, 29:22																				20			23	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **10S**

Lot-specific information

240	100	185	200	80	145	220	175	150	165	140	195	285	145	180	195	200	130	365	185	150	110	Length of spec.	
	185	235	230	250	245																		PCR product(s)
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	
																							*02:02, 02:05:01-02:05:05, 02:08, 02:47, 02:63, 02:102, 02:115, 02:154-02:155, 02:172, 02:179, 02:186, 02:209, 02:232, 02:286, 02:320, 02:324, 02:337, 02:344, 02:359, 02:373N
				29																			*02:03:01-02:03:04, 02:148, 02:253, 02:258, 02:264, 02:281, 02:315, 02:323, 02:345, 02:355, 02:370, 02:402
																							*02:05:06, 02:22:01-02:22:02, 02:50, 02:104, 02:136, 02:191, 02:230, 02:267, 02:376, 02:382, 23:02, 24:06, 24:138, 24:167, 31:30, 32:10, B*27:25, C*02:07
																							*02:06:05
				w																			*02:26, 02:99, 02:171:02
																							*02:34-02:35:03, 02:56:01-02:56:02, 02:62, 02:78, 02:103, 03:01:30, 03:19, 03:40, 03:43, 03:53, 03:82, 03:98, 03:103, 03:105, 11:01:35, 11:09, 11:22-11:24:02, 11:31, 11:50Q, 11:59, 11:112, 11:116, 24:19, 30:18, 30:55, 74:13, C*03:82
																							*02:49, 24:87, B*27:45
																							*02:52
																							*02:55, 33:22
							32																*02:74:02, 02:159, 23:25
																							*02:114, 02:246, 02:279, 29:22
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **10S**

Lot-specific information

Length of spec.	195	435	195	180	140	230	145	160	150	165	160	205	210	150	145	215	175	200	325	90	165	165	185	375
PCR product(s)				225	235			240	195		200	405	240		205			225			215			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*02:117																	17							
*02:121, 02:237, 23:47, 24:18, 24:204, 24:213, B*44:59:02															15									
*02:122						6										16	17							
*02:135																	17							
*02:143						6										16								
*02:229, 29:28, 36:02																						22	23	
*02:243, 24:82																								
*02:339					5																			
*02:358										11														
*02:385																								
*02:396																								
*03:01:01:01-03:01:08, 03:01:10-03:01:22, 03:01:24-03:01:29, 03:01:31-03:01:37, 03:02:01-03:03N, 03:04:02-03:07, 03:09, 03:11N-03:16, 03:17:02, 03:20-03:23:02, 03:25- 03:31, 03:33-03:35, 03:37- 03:39, 03:42, 03:44- 03:49, 03:51-03:52, 03:54- 03:56, 03:58-03:65, 03:67- 03:81, 03:83-03:88, 03:90- 03:94, 03:96, 03:99- 03:102, 03:104, 03:106, 03:109-03:110, 03:112- 03:121, 03:123-03:134, 03:136-03:141, 03:143- 03:151, 03:153-03:160, 03:162N, 11:35, 11:130	1																						23	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **10S**

Lot-specific information

240	100	185	200	80	145	220	175	150	165	140	195	285	145	180	195	200	130	365	185	150	110	Length of spec. PCR product(s)	
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	
				29	30																	*02:117	
																							*02:121, 02:237, 23:47, 24:18, 24:204, 24:213, B*44:59:02
																							*02:122
					30																		*02:135
																							*02:143
25																							*02:229, 29:28, 36:02
																							*02:243, 24:82
																							*02:339
		27																					*02:358
																							*02:385
																					46		*02:396
																							*03:01:01:01-03:01:08, 03:01:10-03:01:22, 03:01:24-03:01:29, 03:01:31-03:01:37, 03:02:01-03:03N, 03:04:02-03:07, 03:09, 03:11N-03:16, 03:17:02, 03:20-03:23:02, 03:25- 03:31, 03:33-03:35, 03:37- 03:39, 03:42, 03:44- 03:49, 03:51-03:52, 03:54- 03:56, 03:58-03:65, 03:67- 03:81, 03:83-03:88, 03:90- 03:94, 03:96, 03:99- 03:102, 03:104, 03:106, 03:109-03:110, 03:112- 03:121, 03:123-03:134, 03:136-03:141, 03:143- 03:151, 03:153-03:160, 03:162N, 11:35, 11:130
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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

Lot No.: **10S**

Lot-specific information

Length of spec.	195	435	195	180	140	230	145	160	150	165	160	205	210	150	145	215	175	200	325	90	165	165	185	375
PCR product(s)				225	235			240	195		200	405	240		205			225			215			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*03:01:09, 03:01:23, 03:08, 03:32, 03:36N, 03:41, 03:57, 03:89, 03:107-03:108, 03:111, 03:142, 03:152, 03:161N, 29:01:01:01-29:02:01:02, 29:02:03-29:02:13, 29:04, 29:06-29:21, 29:23-29:27, 29:29-29:31, 29:34-29:50, 30:26, 31:03-31:04, 31:06, 32:04, 32:30, 32:32																								23
*03:01:38	1																							23
*03:04:01	1																18							23
*03:10, 11:04	1								10															23
*03:17:01	1													15										23
*03:24	1	2																						23
*03:95	1																		20					23
*03:97, 03:122, 03:135, 11:94	1																18							
*11:01:01-11:01:34, 11:01:36-11:01:45, 11:03, 11:05-11:07, 11:11-11:13, 11:15:01-11:15:02, 11:20- 11:21N, 11:26, 11:29- 11:30, 11:32-11:34, 11:36- 11:37, 11:41-11:43, 11:46- 11:49, 11:52Q, 11:54- 11:56, 11:58, 11:60- 11:70, 11:72-11:76, 11:79- 11:93, 11:95-11:97, 11:99N-11:100, 11:102, 11:104-11:105, 11:107- 11:109N, 11:114- 11:115N, 11:117-11:120, 11:122-11:129, 11:131- 11:133, 11:135-11:139	1								10															
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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

Lot No.: **10S**

Lot-specific information

240	100	185	200	80	145	220	175	150	165	140	195	285	145	180	195	200	130	365	185	150	110	Length of spec.	
	185	235	230	250	245																		PCR product(s)
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	
																							*03:01:09, 03:01:23, 03:08, 03:32, 03:36N, 03:41, 03:57, 03:89, 03:107-03:108, 03:111, 03:142, 03:152, 03:161N, 29:01:01:01-29:02:01:02, 29:02:03-29:02:13, 29:04, 29:06-29:21, 29:23-29:27, 29:29-29:31, 29:34-29:50, 30:26, 31:03-31:04, 31:06, 32:04, 32:30, 32:32
				29																			*03:01:38
																							*03:04:01
																							*03:10, 11:04
																							*03:17:01
																							*03:24
																							*03:95
																							*03:97, 03:122, 03:135, 11:94
																							*11:01:01-11:01:34, 11:01:36-11:01:45, 11:03, 11:05-11:07, 11:11-11:13, 11:15:01-11:15:02, 11:20- 11:21N, 11:26, 11:29- 11:30, 11:32-11:34, 11:36- 11:37, 11:41-11:43, 11:46- 11:49, 11:52Q, 11:54- 11:56, 11:58, 11:60- 11:70, 11:72-11:76, 11:79- 11:93, 11:95-11:97, 11:99N-11:100, 11:102, 11:104-11:105, 11:107- 11:109N, 11:114- 11:115N, 11:117-11:120, 11:122-11:129, 11:131- 11:133, 11:135-11:139
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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

Lot No.: **10S**

Lot-specific information

Length of spec.	195	435	195	180	140	230	145	160	150	165	160	205	210	150	145	215	175	200	325	90	165	165	185	375
PCR product(s)				225	235			240	195		200	405	240		205			225			215			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*11:02:01-11:02:03, 11:14, 11:16-11:19, 11:40, 11:45, 11:51, 11:57, 11:71, 11:77- 11:78N, 11:101, 11:106, 11:110-11:111, 11:121									10															
*11:08, 11:44	1																				22			
*11:10	1	2							10															
*11:25	1																							
*11:27, 11:39	1								10								18							
*11:98					5				10															
*11:103	1								10				14											
*24:24, 24:67																								
*24:141																								
*25:01:01-25:01:03, 25:01:05-25:02, 25:06- 25:07, 25:10-25:11, 25:13- 25:14, 25:16, 25:18, 25:20- 25:21, 26:01:01-26:01:04, 26:01:07-26:01:14, 26:01:16, 26:01:18- 26:01:25, 26:01:27-26:06, 26:09-26:10, 26:12-26:13, 26:15, 26:17, 26:21, 26:23- 26:26, 26:30-26:34, 26:36- 26:39, 26:41-26:42, 26:45- 26:46, 26:50-26:53, 26:55- 26:63, 26:65-26:66, 26:68- 26:70, 26:74-26:80, 26:82, 26:84, 66:03, 66:05, 66:11																	17							
*25:01:04, 25:03, 25:15, 25:17, 26:07:01-26:07:02, 26:19-26:20, 26:35, 26:64, 26:72, 26:83, 43:01																	17							
*25:04, 25:12N, 26:01:05- 26:01:06, 26:08, 26:27, 26:48, 26:67, 26:81																								
*25:05, 25:22, 26:54																	17							
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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

Lot No.: **10S**

Lot-specific information

240	100	185	200	80	145	220	175	150	165	140	195	285	145	180	195	200	130	365	185	150	110	Length of spec.	
	185	235	230	250	245																		PCR product(s)
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	
																							*11:02:01-11:02:03, 11:14, 11:16-11:19, 11:40, 11:45, 11:51, 11:57, 11:71, 11:77- 11:78N, 11:101, 11:106, 11:110-11:111, 11:121
											36												*11:08, 11:44
				w																			*11:10
																							*11:25
																							*11:27, 11:39
																							*11:98
																							*11:103
																	41						*24:24, 24:67
															40								*24:141
																							*25:01:01-25:01:03, 25:01:05-25:02, 25:06- 25:07, 25:10-25:11, 25:13- 25:14, 25:16, 25:18, 25:20- 25:21, 26:01:01-26:01:04, 26:01:07-26:01:14, 26:01:16, 26:01:18- 26:01:25, 26:01:27-26:06, 26:09-26:10, 26:12-26:13, 26:15, 26:17, 26:21, 26:23- 26:26, 26:30-26:34, 26:36- 26:39, 26:41-26:42, 26:45- 26:46, 26:50-26:53, 26:55- 26:63, 26:65-26:66, 26:68- 26:70, 26:74-26:80, 26:82, 26:84, 66:03, 66:05, 66:11
																							*25:01:04, 25:03, 25:15, 25:17, 26:07:01-26:07:02, 26:19-26:20, 26:35, 26:64, 26:72, 26:83, 43:01
																							*25:04, 25:12N, 26:01:05- 26:01:06, 26:08, 26:27, 26:48, 26:67, 26:81
																							*25:05, 25:22, 26:54
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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Lot No.: **10S**

Lot-specific information

Length of spec.	195	435	195	180	140	230	145	160	150	165	160	205	210	150	145	215	175	200	325	90	165	165	185	375
PCR product(s)				225	235			240	195		200	405	240		205			225			215			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*25:08, 26:01:26, 26:11N, 26:47																	17							
*25:09, 26:01:15, 26:14, 26:28																	17							
*25:19, 26:43:01-26:43:02									9															
*26:01:17																	17							
*26:16																	17							
*26:18													13				17							
*26:22																	17						24	
*26:29, 26:49																	17							
*26:40, 26:73																								
*26:71N																	17							
*29:05									10														23	
*32:39														14										
*33:18:01-33:18:02		2																					23	
*33:51					5																			
*33:63																		19						
*34:01:01-34:01:02, 66:01-66:02, 66:04, 66:07-66:08, 66:12-66:14, 66:17	1																17							
*34:02:03	1	2							9														23	
*34:03-34:04, 34:07, 34:09	1	2							?														23	
*34:05	1																17							
*34:06	1								?															
*34:08	1	2							?														23	
*34:10N	1																						23	
*36:01, 36:03, 36:05																						w	23	
*66:06	1								9															
*66:09	1																17						24	
*66:10	1																17							
*66:15					5												17							
*66:19	1																17				21			
*69:01	1																						24	
<i>B*44:03:19</i>																								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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Lot No.: **10S**

Lot-specific information

240	100	185	200	80	145	220	175	150	165	140	195	285	145	180	195	200	130	365	185	150	110	Length of spec. PCR product(s)	
	185	235	230	250	245																		
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	
											36												*25:08, 26:01:26, 26:11N, 26:47
						31					36												*25:09, 26:01:15, 26:14, 26:28
					30	31					36												*25:19, 26:43:01-26:43:02
				29	30	31					36												*26:01:17
					30	31										41							*26:16
						31					36												*26:18
					30	31					36												*26:22
					30	31					36	37											*26:29, 26:49
						31					36												*26:40, 26:73
					30	31					36						43						*26:71N
																							*29:05
																							*32:39
																							*33:18:01-33:18:02
											36												*33:51
																							*33:63
					30	31					36												*34:01:01-34:01:02, 66:01-66:02, 66:04, 66:07-66:08, 66:12-66:14, 66:17
						31					36												*34:02:03
						?					36												*34:03-34:04, 34:07, 34:09
					30	?					36												*34:05
						?					36												*34:06
						?																	*34:08
											36												*34:10N
																							*36:01, 36:03, 36:05
					30	31					36												*66:06
					30	31					36												*66:09
					30	31					36	37											*66:10
					30	31					36												*66:15
					30	31					36												*66:19
											36												*69:01
				29																			B*44:03:19
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Well No.	

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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Lot No.: 10S**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-A*68 subtyping.

In addition, wells number number 5, 8 to 11, 13, 14, 18, 22, 29 and 32 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, 3rd or 4th exon or the 2nd 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, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

⁴HLA-A*68 alleles in bold lettering are listed as confirmed alleles on the on the IMGT/HLA web page www.ebi.ac.uk/imgt/hla, release 3.11.0, January 2013.

⁵The A*68:01:14 and the A*34:02:01-34:02:02 alleles give rise to identical amplification patterns with the HLA-A*68 subtyping kit. These alleles can be distinguished by e.g. the HLA-A low resolution kit.

⁶The A*68:27 and the A*66:16 and A*66:18 alleles give rise to identical amplification patterns with the HLA-A*68 subtyping kit. These alleles can be distinguished by e.g. the HLA-A low resolution kit and/or the HLA-A*66 subtyping kit.

⁷The A*68:66 and 68:75 and the A*03:50 and 03:66 alleles give rise to identical amplification patterns with the HLA-A*68 subtyping kit. These alleles can be distinguished by e.g. the HLA-A low resolution kit and/or the HLA-A*03 subtyping kit.

⁸Primer mix 4: Specific PCR fragment of 180 bp in the A*68:30 allele. Specific PCR fragment of 225 bp in the A*68:03:01-68:03:02, A*68:05 and A*68:20 alleles. Specific PCR fragment of 180 and 225 bp in the A*02:06:05 allele.

Primer mix 5: Specific PCR fragment of 140 bp in the A*68:25 and the A*02:339 allele. Specific PCR fragment of 235 bp in the A*68:04 and the A*11:98, 33:51 and 66:15 alleles.

Primer mix 8: Specific PCR fragment of 160 bp in the A*68:07 allele. Specific PCR fragment of 240 bp in the A*68:46 allele.

Primer mix 9: Specific PCR fragment of 150 bp in the A*68:18N allele. Specific PCR fragment of 195 bp in the A*68:47 allele. Specific PCR fragment of 250 bp in the A*68:08:01-68:08:02 and 68:63 and the A*25:19, 26:43:01-26:43:02, 34:02:03, 34:03[?]-34:04[?], 34:06[?]-34:09[?] and A*66:06 alleles.

Primer mix 11: Specific PCR fragment of 160 bp in the A*68:17 allele. Specific PCR fragment of 200 bp in the A*68:10 and A*68:14 and the A*02:358 alleles.

Primer mix 12: Specific PCR fragment of 205 bp in the A*68:38 allele. Specific PCR fragment of 405 bp in the A*68:11N allele.

Primer mix 13: Specific PCR fragment of 210 bp in the A*68:12 and A*68:50 alleles. Specific PCR fragment of 240 bp in the A*68:51 and 26:18 alleles.

Primer mix 15: Specific PCR fragment of 145 bp in the A*68:19 and in the A*02:237, 03:17:01, 24:18, 24:204 and 24:213 alleles. Specific PCR fragment of 205 bp in the A*68:14 and 68:81 and the A*02:121 and 23:47 and in the B*44:59:02 alleles.

Primer mix 18: Specific PCR fragment of 200 bp in the A*68:26 and 68:65 and the A*01:01:01:01:01:04N, 01:06:01:29, 01:31N-01:33, 01:35-01:71, 01:73-01:78, 01:80-01:85, 01:87-01:101, 01:103-01:126, 03:18, 03:97, 03:122, 03:135, 11:27, 11:38-11:39, 11:94, 23:53, 24:17, 24:41, 24:208, 29:03, 29:33 and 80:01:01:01-80:02 alleles. Specific PCR fragment of 225 bp in the A*68:21:01 and the 03:04:01 alleles. Specific PCR fragment of 200 and 225 bp in the A*01:86 allele.

Primer mix 21: Specific PCR fragment of 165 bp in the A*68:28 and in the A*02:49, 24:87 and 66:19 and in the B*27:45 alleles. Specific PCR fragment of 215 bp in the A*68:24 allele.

Primer mix 26: Specific PCR fragment of 100 bp in the A*68:49N allele. Specific PCR fragment of 185 bp in the A*68:33 allele.

Primer mix 27: Specific PCR fragment of 185 bp in the A*68:34 and the A*02:385 allele. Specific PCR fragment of 235 bp in the A*68:43 allele.

Primer mix 28: Specific PCR fragment of 200 bp in the A*68:35 and 68:38 alleles. Specific PCR fragment of 230 bp in the A*68:44 allele.

Primer mix 29: Specific PCR fragment of 80 bp in the A*68:42, 68:54, 68:61 and 68:63^w and the 02:03:01-02:03:04, 02:26^w, 02:99^w, 02:117, 02:148, 02:171:02^w, 02:253, 02:258, 02:264, 02:281, 02:315, 02:323,

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Lot No.: 10S**Lot-specific information**

02:345, 02:355, 02:370, 02:402, 03:01:38, 11:25^w and 26:01:17 alleles. Specific PCR fragment of 250 bp in the A*68:36 and 68:37 and in the B*44:03:19 alleles.

Primer mix 30: Specific PCR fragment of 145 bp in the A*02:117, 02:135, 25:01:01-25:07, 25:10-25:22, 26:01:01-26:01:14, 26:01:16-26:01:25, 26:01:27-26:10, 26:12-26:13, 26:15-26:17, 26:19-26:27, 26:29-26:39, 26:41-26:43:02, 26:45-26:46, 26:48-26:72, 26:74-26:84, 34:01:01-34:01:02, 34:05, 43:01, 66:01-66:15, 66:17 and 66:19 alleles. Specific PCR fragment of 245 bp in the A*68:37 allele.

'w', may be weakly amplified.

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

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 101.418-12u/04– without *Taq* pol., IFU-02

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Lot No.: **10S**

Lot-specific information

CELL LINE VALIDATION SHEET																			
HLA-A*68 SSP subtyping kit																			
			Prod. No.:	Well															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				201297501	201297502	201297503	201297504	201297505	201297506	201297507	201297508	201297509	201297510	201297511	201297512	201297513	201316014	201297515	201297516
	IHWC cell line	A*																	
1	9001 SA	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373	*30:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353 SM	*02:01	*26:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025 DEU	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540	*03:01	*80:01	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257 32367	*33:03	*74:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA	*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL	*02:01	*34:01	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9	*33:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49	*02:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*24:10	*29:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB	*02:01	*29:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH	*30:01	*68:02	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF	*30:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17	*02:06	*11:01	+	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
37	9065 HHKB	*03:01		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL	*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML	*01:01	*03:01	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134 WHONP199	*02:07	*30:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301	*03:01		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089	*02:07		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526	*02:06	*02:07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM	*66:01		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO	*23:01	*24:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU	*03:01		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*02:16	*03:01	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303 TER-ND	*02:01	*11:01	+	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-

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 101.418-12u/04– without *Taq* pol., IFU-02

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Lot No.: **10S**

Lot-specific information

CELL LINE VALIDATION SHEET				HLA-A*68 SSP subtyping kit															
				Well															
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
				201297517	201297518	201297519	201297520	201297521	201297522	201297523	201297524	201316025	201297526	201297527	201297528	201316029	201316030	201297531	201316032
	IHWC cell line	A*	Prod. No.:																
1	9001 SA	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324	*01:01		-	+	-	-	-	W	-	-	-	-	-	-	-	-	-	-
4	9275 GU373	*30:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011	*01:01		-	+	-	-	-	W	-	-	-	-	-	-	-	-	-	-
6	9353 SM	*02:01	*26:03	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-
7	9020 QBL	*26:01		+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-
8	9025 DEU	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR	*26:01		+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-
10	9107 LKT3	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT	*29:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
12	9052 DBB	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*29:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540	*03:01	*80:01	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
18	9257 32367	*33:03	*74:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA	*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL	*02:01	*34:01	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-
24	9035 JBUSH	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9	*33:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49	*02:05		W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*24:10	*29:01	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB	*02:01	*29:02	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
29	9050 MOU	*29:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
30	9021 RSH	*30:01	*68:02	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF	*30:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17	*02:06	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB	*03:01		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
38	9099 LZL	*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML	*01:01	*03:01	-	+	-	-	-	W	+	-	-	-	-	-	-	-	-	-
40	9134 WHONP199	*02:07	*30:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301	*03:01		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
42	9066 TAB089	*02:07		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526	*02:06	*02:07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM	*66:01		+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-
45	9239 SHJO	*23:01	*24:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU	*03:01		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*02:16	*03:01	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
48	9303 TER-ND	*02:01	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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

Lot No.: 10S

Lot-specific information

CELL LINE VALIDATION SHEET				HLA-A*68 SSP subtyping kit														
				Well														
				33	34	35	36	37	38	39	40	41	42	43	44	45	46	
				Prod. No.:	201297533	201297534	201297535	201316036	201297537	201297538	201297539	201297540	201297541	201297542	201316043	201316044	201316045	201316046
	IHWC cell line	A*																
1	9001 SA	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2	9280 LK707	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	9011 E4181324	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4	9275 GU373	*30:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	9009 KAS011	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	9353 SM	*02:01	*26:03	-	-	-	+	-	-	-	-	-	-	-	-	-	-	
7	9020 QBL	*26:01		-	-	-	+	-	-	-	-	-	-	-	-	-	-	
8	9025 DEU	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	9026 YAR	*26:01		-	-	-	+	-	-	-	-	-	-	-	-	-	-	
10	9107 LKT3	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11	9051 PITOUT	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	9052 DBB	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13	9004 JESTHOM	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14	9071 OLGA	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	9075 DKB	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	9037 SWEIG007	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	9282 CTM3953540	*03:01	*80:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	9257 32367	*33:03	*74:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
19	9038 BM16	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
20	9059 SLE005	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
21	9064 AMALA	*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
22	9056 KOSE	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
23	9124 IHL	*02:01	*34:01	-	-	-	+	-	-	-	-	-	-	-	-	-	-	
24	9035 JBUSH	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	9049 IBW9	*33:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
26	9285 WT49	*02:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
27	9191 CH1007	*24:10	*29:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28	9320 BEL5GB	*02:01	*29:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	9050 MOU	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30	9021 RSH	*30:01	*68:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	9019 DUCAF	*30:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
32	9297 HAG	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
33	9098 MT14B	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
34	9104 DHIF	*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	9302 SSTO	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
36	9024 KT17	*02:06	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
37	9065 HHKB	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
38	9099 LZL	*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
39	9315 CML	*01:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
40	9134 WHONP199	*02:07	*30:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
41	9055 H0301	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
42	9066 TAB089	*02:07		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
43	9076 T7526	*02:06	*02:07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
44	9057 TEM	*66:01		-	-	-	+	-	-	-	-	-	-	-	-	-	-	
45	9239 SHJO	*23:01	*24:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
46	9013 SCHU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
47	9045 TUBO	*02:16	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
48	9303 TER-ND	*02:01	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

101.418-12/04 – including *Taq* pol., IFU-01
 101.418-12u/04– without *Taq* pol., IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **10S**

Lot-specific information

CERTIFICATE OF ANALYSIS

Olerup SSP® HLA-A*68 SSP

Product number: 101.418-12/04 – including *Taq* pol.
 101.418-12u/04u – without *Taq* pol.

Lot number: 10S

Expiry date: 2015-October-01

Number of tests: 12 tests – Product No. 101.418-12/12u
 4 tests – Product No. 101.418-04/04u

Number of wells per test: 46

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2012-975-01	17	2012-975-17	33	2012-975-33
2	2012-975-02	18	2012-975-18	34	2012-975-34
3	2012-975-03	19	2012-975-19	35	2012-975-35
4	2012-975-04	20	2012-975-20	36	2013-160-36
5	2012-975-05	21	2012-975-21	37	2012-975-37
6	2012-975-06	22	2012-975-22	38	2012-975-38
7	2012-975-07	23	2012-975-23	39	2012-975-39
8	2012-975-08	24	2012-975-24	40	2012-975-40
9	2012-975-09	25	2013-160-25	41	2012-975-41
10	2012-975-10	26	2012-975-26	42	2012-975-42
11	2012-975-11	27	2012-975-27	43	2013-160-43
12	2012-975-12	28	2012-975-28	44	2013-160-44
13	2012-975-13	29	2013-160-29	45	2013-160-45
14	2013-160-14	30	2013-160-30	46	2013-160-46
15	2012-975-15	31	2012-975-31		
16	2012-975-16	32	2013-160-32		

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, 7 to 9, 11 to 13, 15, 16, 19 to 21, 25 to 28, 32 to 35 and 37 to 46 were available. The specificities of the primers in primer solutions 5, 7 to 9, 11, 13, 15, 16, 20, 21, 25 to 27, 37 and 41 were tested by separately adding additional 5'-primers, respectively additional 3'-primers. The specificities of the 3'-primers in primer solutions 12, 19, 28, 34, 39, 42 and 46 were tested by separately adding one additional 5'-primer, it was not possible to test the 5'-primers. In primer solutions 14, 32, 33, 35, 38, 40 and 43 to 45 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solution 5, 7, 8, 11, 17 and 27 one of the 5'-primers was not possible to test. In primer solutions 8, 9, 15 to 16, 18, 21, 26 and 27 one or two of the 3'-primers were not possible to test. Additional primers in primer solutions 4, 6 and 29 were tested by separately adding either one additional 5'-primer, or one additional 3'-primer.

101.418-12/04 – including *Taq* pol., IFU-01
101.418-12u/04– without *Taq* pol., IFU-02

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Lot No.: **10S**

Lot-specific information

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

Date of approval: 2013-May-30

Approved by:

Production Quality Control

101.418-12/04 – including *Taq* pol., IFU-01
101.418-12u/04– without *Taq* pol., IFU-02

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Lot No.: **10S**

Lot-specific information

Declaration of Conformity

Product name: *Olerup* SSP® HLA-A*68
Product number: 101.418-12/12u, 04/04u
Lot number: 10S

Intended use: HLA-A*68 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, 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-May-30

Ann-Cathrin Jareman
Head of QA and Regulatory Affairs

101.418-12/04 – including *Taq* pol., IFU-01
101.418-12u/04– without *Taq* pol., IFU-02

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Lot No.: **10S**

Lot-specific information

101.418-12/04 – including *Taq* pol., IFU-01
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101.418-12/04 – including *Taq* pol., IFU-01
101.418-12u/04– without *Taq* pol., IFU-02

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Lot No.: **10S**

Lot-specific information

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