

101.612-12 – including *Taq* pol.  
101.612-12u – without *Taq* pol.

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“Instructions for Use” (IFU)

Lot No.: **79N**

Lot-specific information  
**Olerup SSP<sup>®</sup> HLA-C\*04**

Product number:	101.612-12 – including <i>Taq</i> polymerase 101.612-12u – without <i>Taq</i> polymerase
Lot number:	79N
Expiry date:	2015-January-01
Number of tests:	12
Number of wells per test:	47
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. 79N.**

**CHANGES COMPARED TO THE PREVIOUS OLERUP SSP<sup>®</sup>  
HLA-C\*04 LOT (12M)**

The HLA-C\*04 specificity and interpretation tables have been updated for the HLA-C alleles described since the previous *Olerup SSP<sup>®</sup>* HLA-C\*04 lot was made (Lot No. 12M).

The HLA-C\*04 kit is updated for new alleles to enable separation of:

- Confirmed<sup>1</sup> alleles as listed in the IMGT/HLA database
- Polymorphisms in exons outside of the region encoding the peptide binding domain
- Null and Alternatively expressed alleles

The Lot-specific information for HLA-C\*04 including and without *Taq* polymerase is now described in one common Product Insert.

<sup>1</sup>As described in section Uniquely Identified Alleles.

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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
10	-	Added	Improved yield of HLA-specific PCR product.
18	-	Added	3'-primer added for the C*04:94:01-04:94:02 alleles.
25	-	Added	3'-primer added for the C*04:94:01-04:94:02 alleles.
31	Added	Added	Primer pair added for the C*04:95N allele.
34	-	Added	3'-primer added for the C*04:96 allele.
39	Added	Added	Primer pair added for the C*04:95N allele.
41	Added	Added	Primer pair added for the C*04:105N allele.
43	-	Modified, added	Improved specificity of primer pair, 3'-primer added for the C*04:88N allele.
45	Added	-	5'-primer added for the C*04:103 allele.
46	Added	Added	Primer pair added for the C*04:93N allele.
47	Exchanged	Exchanged, added	Exchanged primer pair for improved specificity, 3'-primer added for the C*04:106 allele.

Change in revision R01 compared to R00:

1. Primer mix 1 may amplify the C\*04:110 allele. This has been corrected in the Specificity and Interpretation Tables.

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## PRODUCT DESCRIPTION

### HLA-C\*04 SSP subtyping

#### CONTENT

The primer set contains 5'- and 3'-primers for identifying the HLA-C\*04:01 to HLA-C\*04:112 alleles.

#### PLATE LAYOUT

Each test consists of 47 PCR reactions in a 48 well PCR plate. Well 48 is 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	47	empty

The 48 well cut PCR plate is marked with 'HLA-C\*04' in silver/gray ink.

Well No. 1 is marked with the Lot No. '79N'.

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-C\*04 SSP subtypings will be influenced by other HLA-C alleles, as primer mixes 1, 2, 4, 5, 7, 8, 10 to 12, 14 to 20, 24, 25, 30, 33, 34, 39, 41, 42 and 47 amplify non-HLA-C\*04 alleles. In addition, the A\*24:96 and A\*24:146 alleles will be amplified by primer mix 15, the A\*33:52 allele will be amplified by primer mix 20, the B\*07:90 allele will be amplified by primer mix 30, the B\*15:27:01-15:27:03 and 15:109 alleles will be amplified by primer mixes 18 and 25, the B\*15:78:03 allele will be amplified by primer mix 16, the B\*40:100 allele will be amplified by primer mixes 32 and 33 and the B\*58:02 allele will be amplified by primer mixes 5 and 8.

#### UNIQUELY IDENTIFIED ALLELES

All the HLA-C\*04 alleles, i.e. **C\*04:01 to C\*04:112**, recognized by the HLA Nomenclature Committee in April 2012<sup>1</sup> will be amplified by the primers in the HLA-C\*04 kit<sup>2</sup>.

The HLA-C\*04 kit enables separation of the confirmed HLA-C\*04 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-C\*04 alleles is listed below.

The HLA-C\*04 kit also enables identification of polymorphisms in exons outside of the region encoding the peptide binding domain and of null and alternatively expressed alleles.

In this lot of the HLA-C\*04 subtyping kit, primer mix 42 does not amplify the C\*04:82 allele. Thus, this lot of the HLA-C\*04 subtyping kit cannot distinguish the C\* 04:01:01:01-04:01:09, 04:01:11-04:01:22, 04:01:24-04:01:27 and 04:01:29-04:01:37 alleles and the C\*04:82 allele.

The HLA-C\*04 primer set cannot distinguish the following silent mutations: the C\*04:01:01:01-04:01:09, 04:01:11-04:01:22, 04:01:24-04:01:27 and 04:01:29-04:01:37 alleles, the C\*04:01:10 and 04:01:23 alleles, the C\*04:04:01-04:04:02 alleles, the C\*04:15:01 and 04:15:03 alleles and the C\*04:94:01-04:94:02 alleles.

The C\*04:15:02, C\*04:44 and C\*04:47 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 20.

The C\*04:23, C\*04:38 and C\*04:39 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 21.

The C\*04:25, C\*04:40 and C\*04:41 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 23.

The C\*04:46 and C\*04:50 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 27.

The C\*04:48 and C\*04:75 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 28.

The C\*04:54 and C\*04:105N alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 41.

The C\*04:56 and C\*04:64 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 40.

The C\*04:59Q and C\*04:78 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 32.

The C\*04:61 and C\*04:96 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 34.

The C\*04:62 and C\*04:76 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 35.

The C\*04:65 and C\*04:72 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 33.

The C\*04:67 and C\*04:93N alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 46.

The C\*04:81 and C\*04:88N alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 43.

The C\*04:84 and C\*04:106 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 47.

<sup>1</sup>HLA-C alleles listed on the IMGT/HLA web page 2012-April-12, release 3.8.0, [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla).

<sup>2</sup>The HLA-C\*04 primer set cannot separate the C\*04:03 and 02:49 alleles or the C\*04:107 and the C\*02:12 and 02:55 alleles. These alleles can be distinguished by the HLA-C low resolution kit and/or the HLA-C\*02 high resolution kit.

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### ALLELE CONFIRMATION STATUS

Allele	Status <sup>1</sup>	Allele	Status <sup>1</sup>	Allele	Status <sup>1</sup>	Allele	Status <sup>1</sup>
<b>C*04:01:01:01</b>	<b>Confirmed</b>	<b>C*04:03</b>	<b>Confirmed</b>	C*04:42	Unconfirmed	C*04:82	Unconfirmed
C*04:01:01:02	Unconfirmed	<b>C*04:04:01</b>	<b>Confirmed</b>	<b>C*04:43</b>	<b>Confirmed</b>	<b>C*04:83</b>	<b>Confirmed</b>
C*04:01:01:03	Unconfirmed	C*04:04:02	Unconfirmed	C*04:44	Unconfirmed	C*04:84	Unconfirmed
C*04:01:01:04	Unconfirmed	C*04:05	Unconfirmed	<b>C*04:45</b>	<b>Confirmed</b>	C*04:85	Unconfirmed
C*04:01:02	Unconfirmed	<b>C*04:06</b>	<b>Confirmed</b>	C*04:46	Unconfirmed	C*04:86	Unconfirmed
C*04:01:03	Unconfirmed	<b>C*04:07</b>	<b>Confirmed</b>	<b>C*04:47</b>	<b>Confirmed</b>	C*04:87	Unconfirmed
<b>C*04:01:04</b>	<b>Confirmed</b>	<b>C*04:08</b>	<b>Confirmed</b>	<b>C*04:48</b>	<b>Confirmed</b>	C*04:88N	Unconfirmed
C*04:01:05	Unconfirmed	<b>C*04:09N</b>	<b>Confirmed</b>	C*04:49	Unconfirmed	C*04:89	Unconfirmed
C*04:01:06	Unconfirmed	<b>C*04:10</b>	<b>Confirmed</b>	C*04:50	Unconfirmed	C*04:90	Unconfirmed
C*04:01:07	Unconfirmed	C*04:11	Unconfirmed	C*04:51	Unconfirmed	C*04:91	Unconfirmed
<b>C*04:01:08</b>	<b>Confirmed</b>	C*04:12	Unconfirmed	<b>C*04:52</b>	<b>Confirmed</b>	C*04:92	Unconfirmed
<b>C*04:01:09</b>	<b>Confirmed</b>	<b>C*04:13</b>	<b>Confirmed</b>	C*04:53	Unconfirmed	C*04:93N	Unconfirmed
<b>C*04:01:10</b>	<b>Confirmed</b>	<b>C*04:14</b>	<b>Confirmed</b>	<b>C*04:54</b>	<b>Confirmed</b>	<b>C*04:94:01</b>	<b>Confirmed</b>
<b>C*04:01:11</b>	<b>Confirmed</b>	C*04:15:01	Unconfirmed	C*04:55	Unconfirmed	C*04:94:02	Unconfirmed
<b>C*04:01:12</b>	<b>Confirmed</b>	<b>C*04:15:02</b>	<b>Confirmed</b>	<b>C*04:56</b>	<b>Confirmed</b>	C*04:95N	Unconfirmed
<b>C*04:01:13</b>	<b>Confirmed</b>	C*04:15:03	Unconfirmed	C*04:57	Unconfirmed	<b>C*04:96</b>	<b>Confirmed</b>
<b>C*04:01:14</b>	<b>Confirmed</b>	<b>C*04:16</b>	<b>Confirmed</b>	<b>C*04:58</b>	<b>Confirmed</b>	C*04:97	Unconfirmed
<b>C*04:01:15</b>	<b>Confirmed</b>	C*04:17	Unconfirmed	<b>C*04:59Q</b>	<b>Confirmed</b>	C*04:98	Unconfirmed
<b>C*04:01:16</b>	<b>Confirmed</b>	C*04:18	Unconfirmed	C*04:60	Unconfirmed	C*04:99	Unconfirmed
C*04:01:17	Unconfirmed	C*04:19	Unconfirmed	<b>C*04:61</b>	<b>Confirmed</b>	C*04:100	Unconfirmed
C*04:01:18	Unconfirmed	C*04:20	Unconfirmed	<b>C*04:62</b>	<b>Confirmed</b>	C*04:101	Unconfirmed
C*04:01:19	Unconfirmed	C*04:23	Unconfirmed	<b>C*04:63</b>	<b>Confirmed</b>	C*04:102	Unconfirmed
C*04:01:20	Unconfirmed	C*04:24	Unconfirmed	C*04:64	Unconfirmed	<b>C*04:103</b>	<b>Confirmed</b>
<b>C*04:01:21</b>	<b>Confirmed</b>	C*04:25	Unconfirmed	<b>C*04:65</b>	<b>Confirmed</b>	C*04:104	Unconfirmed
C*04:01:22	Unconfirmed	<b>C*04:26</b>	<b>Confirmed</b>	C*04:66	Unconfirmed	C*04:105N	Unconfirmed
C*04:01:23	Unconfirmed	<b>C*04:27</b>	<b>Confirmed</b>	C*04:67	Unconfirmed	C*04:106	Unconfirmed
C*04:01:24	Unconfirmed	C*04:28	Unconfirmed	<b>C*04:68</b>	<b>Confirmed</b>	C*04:107	Unconfirmed
C*04:01:25	Unconfirmed	<b>C*04:29</b>	<b>Confirmed</b>	<b>C*04:69</b>	<b>Confirmed</b>	C*04:108	Unconfirmed
C*04:01:26	Unconfirmed	C*04:30	Unconfirmed	C*04:70	Unconfirmed	C*04:109	Unconfirmed
C*04:01:27	Unconfirmed	C*04:31	Unconfirmed	C*04:71	Unconfirmed	C*04:110	Unconfirmed
<b>C*04:01:28</b>	<b>Confirmed</b>	<b>C*04:32</b>	<b>Confirmed</b>	C*04:72	Unconfirmed	C*04:111	Unconfirmed
C*04:01:29	Unconfirmed	<b>C*04:33</b>	<b>Confirmed</b>	C*04:73	Unconfirmed	C*04:112	Unconfirmed
<b>C*04:01:30</b>	<b>Confirmed</b>	C*04:34	Unconfirmed	<b>C*04:74</b>	<b>Confirmed</b>		
C*04:01:31	Unconfirmed	C*04:35	Unconfirmed	C*04:75	Unconfirmed		
C*04:01:32	Unconfirmed	<b>C*04:36</b>	<b>Confirmed</b>	C*04:76	Unconfirmed		
<b>C*04:01:33</b>	<b>Confirmed</b>	<b>C*04:37</b>	<b>Confirmed</b>	<b>C*04:77</b>	<b>Confirmed</b>		
C*04:01:34	Unconfirmed	<b>C*04:38</b>	<b>Confirmed</b>	C*04:78	Unconfirmed		
C*04:01:35	Unconfirmed	<b>C*04:39</b>	<b>Confirmed</b>	C*04:79	Unconfirmed		
C*04:01:36	Unconfirmed	<b>C*04:40</b>	<b>Confirmed</b>	C*04:80	Unconfirmed		
C*04:01:37	Unconfirmed	C*04:41	Unconfirmed	<b>C*04:81</b>	<b>Confirmed</b>		

<sup>1</sup> Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2012-April-12, release 3.8.0, [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla).

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**RESOLUTION IN HOMO- AND HETEROZYGOTES**

A total of 152 alleles generate 76 amplification patterns that can be combined in 2926 homozygous and heterozygous combinations. 1672 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.

+++-----	---+-----	-----	-----	-----	-----	*04:03, *04:03 = *04:03, *04:107
++-----	---+-----	-----	-----	-----	-----	*04:14, *04:14 = *04:14, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:04:01, *04:04:01 = *04:04:01, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:16, *04:16 = *04:16, *04:103
+++-----	---+-----	-----	-----	-----	-----	*04:03, *04:103 = *04:103, *04:107
+++-----	---+-----	-----	-----	-----	-----	*04:03, *04:42 = *04:42, *04:107
+++-----	---+-----	-----	-----	-----	-----	*04:03, *04:80 = *04:80, *04:80 = *04:80, *04:107
+++-----	---+-----	-----	-----	-----	-----	*04:03, *04:06 = *04:06, *04:107
+++-----	---+-----	-----	-----	-----	-----	*04:01:28, *04:71 = *04:71, *04:71
+++-----	---+-----	-----	-----	-----	-----	*04:01:28, *04:10 = *04:10, *04:10
+++-----	---+-----	-----	-----	-----	-----	*04:01:28, *04:03 = *04:01:28, *04:107
+++-----	---+-----	-----	-----	-----	-----	*04:07, *04:07 = *04:07, *04:27 = *04:07, *04:87 = *04:27, *04:87
+++-----	---+-----	-----	-----	-----	-----	*04:03, *04:87 = *04:87, *04:107
+++-----	---+-----	-----	-----	-----	-----	*04:01:10, *04:52 = *04:52, *04:52
+++-----	---+-----	-----	-----	-----	-----	*04:01:10, *04:33 = *04:33, *04:33
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:01:01:01 = *04:01:01:01, *04:01:10 = *04:01:01:01,
						*04:01:28 = *04:01:01:01, *04:87 = *04:01:01:01, *04:111 =
						*04:01:10, *04:01:28 = *04:01:10, *04:87 = *04:01:10, *04:111 =
						*04:01:28, *04:87 = *04:01:28, *04:111 = *04:87, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:14, *04:68 = *04:68, *04:68 = *04:68, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:04:01, *04:34 = *04:34, *04:34 = *04:34, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:04:01, *04:06 = *04:06, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:03, *04:16 = *04:16, *04:107
+++-----	---+-----	-----	-----	-----	-----	*04:11, *04:55 = *04:55, *04:55
+++-----	---+-----	-----	-----	-----	-----	*04:01:28, *04:11 = *04:01:28, *04:36 = *04:10, *04:11 = *04:10,
						*04:36 = *04:11, *04:36 = *04:36, *04:36
+++-----	---+-----	-----	-----	-----	-----	*04:03, *04:71 = *04:71, *04:107
+++-----	---+-----	-----	-----	-----	-----	*04:03, *04:10 = *04:10, *04:107
+++-----	---+-----	-----	-----	-----	-----	*04:07, *04:103 = *04:27, *04:103
+++-----	---+-----	-----	-----	-----	-----	*04:07, *04:42 = *04:27, *04:42
+++-----	---+-----	-----	-----	-----	-----	*04:03, *04:07 = *04:03, *04:27 = *04:07, *04:107
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:84 = *04:01:10, *04:84 = *04:01:28, *04:84 =
						*04:84, *04:84 = *04:84, *04:87 = *04:84, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:67 = *04:01:10, *04:67 = *04:01:28, *04:67 =
						*04:67, *04:67 = *04:67, *04:87 = *04:67, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:66 = *04:01:01:01, *04:103 = *04:01:10, *04:66 =
						*04:01:10, *04:103 = *04:01:28, *04:66 = *04:66, *04:66 = *04:66,
						*04:87 = *04:66, *04:103 = *04:66, *04:111 = *04:103, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:60 = *04:01:10, *04:60 = *04:01:28, *04:60 =
						*04:60, *04:60 = *04:60, *04:87 = *04:60, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:81 = *04:01:10, *04:81 = *04:01:28, *04:81 =
						*04:81, *04:81 = *04:81, *04:87 = *04:81, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:69 = *04:01:10, *04:69 = *04:01:28, *04:69 =
						*04:69, *04:69 = *04:69, *04:87 = *04:69, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:54 = *04:01:10, *04:54 = *04:01:28, *04:54 =
						*04:54, *04:54 = *04:54, *04:87 = *04:54, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:56 = *04:01:10, *04:56 = *04:01:28, *04:56 =
						*04:56, *04:56 = *04:56, *04:87 = *04:56, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:71 = *04:01:01:01, *04:79 = *04:01:10, *04:71 =
						*04:01:10, *04:79 = *04:01:28, *04:79 = *04:71, *04:79 = *04:71,
						*04:87 = *04:71, *04:111 = *04:79, *04:79 = *04:79, *04:87 = *04:79,
						*04:111
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:83 = *04:01:10, *04:83 = *04:01:28, *04:83 =
						*04:83, *04:83 = *04:83, *04:87 = *04:83, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:73 = *04:01:10, *04:73 = *04:01:28, *04:73 =
						*04:73, *04:73 = *04:73, *04:87 = *04:73, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:57 = *04:01:10, *04:57 = *04:01:28, *04:57 =
						*04:57, *04:57 = *04:57, *04:87 = *04:57, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:62 = *04:01:10, *04:62 = *04:01:28, *04:62 =
						*04:62, *04:62 = *04:62, *04:87 = *04:62, *04:111
+++-----	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:61 = *04:01:10, *04:61 = *04:01:28, *04:61 =
						*04:61, *04:61 = *04:61, *04:87 = *04:61, *04:111



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+++-----	-----	-----	-----	-----	*04:01:01:01, *04:65 = *04:01:10, *04:65 = *04:01:28, *04:65 = *04:65, *04:65 = *04:65, *04:87 = *04:65, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:59Q = *04:01:10, *04:59Q = *04:01:28, *04:59Q = *04:59Q, *04:59Q = *04:59Q, *04:87 = *04:59Q, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:51 = *04:01:10, *04:51 = *04:01:28, *04:51 = *04:51, *04:51 = *04:51, *04:87 = *04:51, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:53 = *04:01:10, *04:53 = *04:01:28, *04:53 = *04:53, *04:53 = *04:53, *04:87 = *04:53, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:49 = *04:01:10, *04:49 = *04:01:28, *04:49 = *04:49, *04:49 = *04:49, *04:87 = *04:49, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:48 = *04:01:10, *04:48 = *04:01:28, *04:48 = *04:48, *04:48 = *04:48, *04:87 = *04:48, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:46 = *04:01:10, *04:46 = *04:01:28, *04:46 = *04:46, *04:46 = *04:46, *04:87 = *04:46, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:45 = *04:01:10, *04:45 = *04:01:28, *04:45 = *04:45, *04:45 = *04:45, *04:87 = *04:45, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:43 = *04:01:10, *04:43 = *04:01:28, *04:43 = *04:43, *04:43 = *04:43, *04:87 = *04:43, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:26 = *04:01:01:01, *04:42 = *04:01:10, *04:26 = *04:01:10, *04:42 = *04:01:28, *04:26 = *04:26, *04:26 = *04:26, *04:42 = *04:26, *04:87 = *04:26, *04:111 = *04:42, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:25 = *04:01:10, *04:25 = *04:01:28, *04:25 = *04:25, *04:25 = *04:25, *04:87 = *04:25, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:24 = *04:01:10, *04:24 = *04:01:28, *04:24 = *04:24, *04:24 = *04:24, *04:87 = *04:24, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:23 = *04:01:10, *04:23 = *04:01:28, *04:23 = *04:23, *04:23 = *04:23, *04:87 = *04:23, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:15:02 = *04:01:10, *04:15:02 = *04:01:28, *04:15:02 = *04:15:02, *04:15:02 = *04:15:02, *04:87 = *04:15:02, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:20 = *04:01:10, *04:20 = *04:01:28, *04:20 = *04:20, *04:20 = *04:20, *04:87 = *04:20, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:19/04:70 = *04:01:10, *04:19/04:70 = *04:01:28, *04:19/04:70 = *04:19/04:70, *04:19/04:70 = *04:19/04:70, *04:87 = *04:19/04:70, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:15:01 = *04:01:10, *04:15:01 = *04:01:28, *04:15:01 = *04:15:01, *04:15:01 = *04:15:01, *04:87 = *04:15:01, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:14 = *04:01:01:01, *04:28 = *04:01:10, *04:14 = *04:01:10, *04:28 = *04:01:28, *04:14 = *04:01:28, *04:28 = *04:14, *04:28 = *04:14, *04:87 = *04:28, *04:28 = *04:28, *04:87 = *04:28, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:18 = *04:01:10, *04:18 = *04:01:28, *04:18 = *04:18, *04:18 = *04:18, *04:87 = *04:18, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:12 = *04:01:01:01, *04:52 = *04:01:10, *04:12 = *04:01:28, *04:12 = *04:01:28, *04:52 = *04:12, *04:12 = *04:12, *04:52 = *04:12, *04:87 = *04:12, *04:111 = *04:52, *04:87 = *04:52, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:29 = *04:01:01:01, *04:33 = *04:01:10, *04:29 = *04:01:28, *04:29 = *04:01:28, *04:33 = *04:29, *04:29 = *04:29, *04:33 = *04:29, *04:87 = *04:29, *04:111 = *04:33, *04:87 = *04:33, *04:111
+++-----	-----	-----	-----	-----	*04:01:10, *04:11 = *04:11, *04:33
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:10 = *04:01:01:01, *04:31 = *04:01:10, *04:10 = *04:01:10, *04:31 = *04:01:28, *04:31 = *04:10, *04:31 = *04:10, *04:87 = *04:10, *04:111 = *04:31, *04:31 = *04:31, *04:87 = *04:31, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:09N = *04:01:10, *04:09N = *04:01:28, *04:09N = *04:09N, *04:09N = *04:09N, *04:87 = *04:09N, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:08 = *04:01:10, *04:08 = *04:01:28, *04:08 = *04:08, *04:08 = *04:08, *04:87 = *04:08, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:07 = *04:01:01:01, *04:27 = *04:01:01:01, *04:32 = *04:01:10, *04:07 = *04:01:10, *04:32 = *04:01:28, *04:07 = *04:07, *04:32 = *04:07, *04:111 = *04:27, *04:32 = *04:27, *04:111 = *04:32, *04:32 = *04:32, *04:87 = *04:32, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:05 = *04:01:10, *04:05 = *04:01:28, *04:05 = *04:05, *04:05 = *04:05, *04:87 = *04:05, *04:111
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:04:01 = *04:01:10, *04:04:01 = *04:01:28, *04:04:01 = *04:04:01, *04:87
+++-----	-----	-----	-----	-----	*04:01:01:01, *04:03 = *04:01:01:01, *04:107 = *04:01:10, *04:03 =



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----	----	----	----	----	*04:03, *04:111 = *04:107, *04:111
----	----	----	----	----	*04:04:01, *04:13 = *04:13, *04:13 = *04:13, *04:111
----	----	----	----	----	*04:11, *04:103 = *04:36, *04:103
----	----	----	----	----	*04:11, *04:71 = *04:36, *04:71
----	----	----	----	----	*04:11, *04:42 = *04:36, *04:42
----	----	----	----	----	*04:01:28, *04:55 = *04:10, *04:55 = *04:36, *04:55
----	----	----	----	----	*04:03, *04:11 = *04:03, *04:36 = *04:36, *04:107
----	----	----	----	----	*04:07, *04:16 = *04:16, *04:27
----	----	----	----	----	*04:07, *04:80 = *04:27, *04:80
----	----	----	----	----	*04:06, *04:07 = *04:06, *04:27
----	----	----	----	----	*04:66, *04:84 = *04:84, *04:103
----	----	----	----	----	*04:66, *04:67 = *04:67, *04:103
----	----	----	----	----	*04:60, *04:66 = *04:60, *04:103
----	----	----	----	----	*04:66, *04:81 = *04:81, *04:103
----	----	----	----	----	*04:66, *04:69 = *04:69, *04:103
----	----	----	----	----	*04:54, *04:66 = *04:54, *04:103
----	----	----	----	----	*04:56, *04:66 = *04:56, *04:103
----	----	----	----	----	*04:71, *04:84 = *04:79, *04:84
----	----	----	----	----	*04:67, *04:71 = *04:67, *04:79
----	----	----	----	----	*04:66, *04:71 = *04:66, *04:79 = *04:79, *04:103
----	----	----	----	----	*04:60, *04:71 = *04:60, *04:79
----	----	----	----	----	*04:71, *04:81 = *04:79, *04:81
----	----	----	----	----	*04:69, *04:71 = *04:69, *04:79
----	----	----	----	----	*04:54, *04:71 = *04:54, *04:79
----	----	----	----	----	*04:56, *04:71 = *04:56, *04:79
----	----	----	----	----	*04:66, *04:83 = *04:83, *04:103
----	----	----	----	----	*04:71, *04:83 = *04:79, *04:83
----	----	----	----	----	*04:66, *04:73 = *04:73, *04:103
----	----	----	----	----	*04:71, *04:73 = *04:73, *04:79
----	----	----	----	----	*04:01:01:01, *04:74 = *04:01:10, *04:74 = *04:01:28, *04:74 =
----	----	----	----	----	*04:73, *04:74 = *04:73, *04:83 = *04:74, *04:74 = *04:74, *04:83 =
----	----	----	----	----	*04:74, *04:87 = *04:74, *04:111
----	----	----	----	----	*04:57, *04:66 = *04:57, *04:103
----	----	----	----	----	*04:57, *04:71 = *04:57, *04:79
----	----	----	----	----	*04:01:01:01, *04:63 = *04:01:10, *04:63 = *04:01:28, *04:63 =
----	----	----	----	----	*04:57, *04:63 = *04:57, *04:73 = *04:63, *04:63 = *04:63, *04:73 =
----	----	----	----	----	*04:63, *04:87 = *04:63, *04:111
----	----	----	----	----	*04:62, *04:66 = *04:62, *04:103
----	----	----	----	----	*04:62, *04:71 = *04:62, *04:79
----	----	----	----	----	*04:61, *04:66 = *04:61, *04:103
----	----	----	----	----	*04:61, *04:71 = *04:61, *04:79
----	----	----	----	----	*04:65, *04:66 = *04:65, *04:103
----	----	----	----	----	*04:65, *04:71 = *04:65, *04:79
----	----	----	----	----	*04:59Q, *04:66 = *04:59Q, *04:103
----	----	----	----	----	*04:59Q, *04:71 = *04:59Q, *04:79
----	----	----	----	----	*04:51, *04:66 = *04:51, *04:103
----	----	----	----	----	*04:01:01:01, *04:95N = *04:01:10, *04:95N = *04:01:28, *04:95N =
----	----	----	----	----	*04:51, *04:71 = *04:51, *04:79 = *04:51, *04:95N = *04:71, *04:95N =
----	----	----	----	----	*04:79, *04:95N = *04:87, *04:95N = *04:95N, *04:95N = *04:95N,
----	----	----	----	----	*04:111
----	----	----	----	----	*04:53, *04:66 = *04:53, *04:103
----	----	----	----	----	*04:53, *04:71 = *04:53, *04:79
----	----	----	----	----	*04:49, *04:66 = *04:49, *04:103
----	----	----	----	----	*04:49, *04:71 = *04:49, *04:79
----	----	----	----	----	*04:48, *04:66 = *04:48, *04:103
----	----	----	----	----	*04:48, *04:71 = *04:48, *04:79
----	----	----	----	----	*04:46, *04:66 = *04:46, *04:103
----	----	----	----	----	*04:46, *04:71 = *04:46, *04:79
----	----	----	----	----	*04:45, *04:66 = *04:45, *04:103
----	----	----	----	----	*04:45, *04:71 = *04:45, *04:79
----	----	----	----	----	*04:43, *04:66 = *04:43, *04:103
----	----	----	----	----	*04:43, *04:71 = *04:43, *04:79
----	----	----	----	----	*04:26, *04:84 = *04:42, *04:84
----	----	----	----	----	*04:26, *04:67 = *04:42, *04:67
----	----	----	----	----	*04:26, *04:66 = *04:26, *04:103 = *04:42, *04:66
----	----	----	----	----	*04:26, *04:60 = *04:42, *04:60
----	----	----	----	----	*04:26, *04:81 = *04:42, *04:81
----	----	----	----	----	*04:26, *04:69 = *04:42, *04:69
----	----	----	----	----	*04:26, *04:54 = *04:42, *04:54
----	----	----	----	----	*04:26, *04:56 = *04:42, *04:56
----	----	----	----	----	*04:26, *04:71 = *04:26, *04:79 = *04:42, *04:79



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+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:83 = *04:42, *04:83
+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:73 = *04:42, *04:73
+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:57 = *04:42, *04:57
+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:62 = *04:42, *04:62
+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:61 = *04:42, *04:61
+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:65 = *04:42, *04:65
+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:59Q = *04:42, *04:59Q
+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:51 = *04:42, *04:51
+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:53 = *04:42, *04:53
+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:49 = *04:42, *04:49
+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:48 = *04:42, *04:48
+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:46 = *04:42, *04:46
+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:45 = *04:42, *04:45
+++-----	---+-----+	-----	-----+--	-----	*04:26, *04:43 = *04:42, *04:43
+++-----	---+-----+	-----	-----+--	-----	*04:25, *04:66 = *04:25, *04:103
+++-----	---+-----+	-----	-----+--	-----	*04:25, *04:71 = *04:25, *04:79
+++-----	---+-----+	-----	-----+--	-----	*04:25, *04:26 = *04:25, *04:42
+++-----	---+-----+	-----	-----+--	-----	*04:24, *04:66 = *04:24, *04:103
+++-----	---+-----+	-----	-----+--	-----	*04:24, *04:71 = *04:24, *04:79
+++-----	---+-----+	-----	-----+--	-----	*04:24, *04:26 = *04:24, *04:42
+++-----	---+-----+	-----	-----+--	-----	*04:23, *04:66 = *04:23, *04:103
+++-----	---+-----+	-----	-----+--	-----	*04:23, *04:71 = *04:23, *04:79
+++-----	---+-----+	-----	-----+--	-----	*04:23, *04:26 = *04:23, *04:42
+++-----	---+-----+	-----	-----+--	-----	*04:15:02, *04:66 = *04:15:02, *04:103
+++-----	---+-----+	-----	-----+--	-----	*04:15:02, *04:71 = *04:15:02, *04:79
+++-----	---+-----+	-----	-----+--	-----	*04:15:02, *04:26 = *04:15:02, *04:42
+++-----	---+-----+	-----	-----+--	-----	*04:20, *04:66 = *04:20, *04:103
+++-----	---+-----+	-----	-----+--	-----	*04:20, *04:71 = *04:20, *04:79
+++-----	---+-----+	-----	-----+--	-----	*04:20, *04:26 = *04:20, *04:42
+++-----	---+-----+	-----	-----+--	-----	*04:19/04:70, *04:66 = *04:19/04:70, *04:103
+++-----	---+-----+	-----	-----+--	-----	*04:19/04:70, *04:71 = *04:19/04:70, *04:79
+++-----	---+-----+	-----	-----+--	-----	*04:01:01:01, *04:94:01 = *04:01:10, *04:94:01 = *04:01:28, *04:94:01 = *04:19/04:70, *04:43 = *04:19/04:70, *04:94:01 = *04:43, *04:94:01 = *04:87, *04:94:01 = *04:94:01, *04:94:01 = *04:94:01, *04:111
+++-----	---+-----+	-----	-----+--	-----	*04:19/04:70, *04:26 = *04:19/04:70, *04:42
+++-----	---+-----+	-----	-----+--	-----	*04:01:01:01, *04:17 = *04:01:10, *04:17 = *04:01:28, *04:17 = *04:15:02, *04:17 = *04:17, *04:17 = *04:17, *04:87 = *04:17, *04:111
+++-----	---+-----+	-----	-----+--	-----	*04:15:01, *04:66 = *04:15:01, *04:103
+++-----	---+-----+	-----	-----+--	-----	*04:15:01, *04:71 = *04:15:01, *04:79
+++-----	---+-----+	-----	-----+--	-----	*04:15:01, *04:26 = *04:15:01, *04:42
+++-----	---+-----+	-----	-----+--	-----	*04:01:01:01, *04:37 = *04:01:10, *04:37 = *04:01:28, *04:37 = *04:15:01, *04:20 = *04:15:01, *04:37 = *04:20, *04:37 = *04:37, *04:37 = *04:37, *04:87 = *04:37, *04:111
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:84 = *04:28, *04:84
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:67 = *04:28, *04:67
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:66 = *04:14, *04:103 = *04:28, *04:66 = *04:28, *04:103
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:60 = *04:28, *04:60
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:81 = *04:28, *04:81
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:69 = *04:28, *04:69
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:54 = *04:28, *04:54
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:56 = *04:28, *04:56
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:71 = *04:14, *04:79 = *04:28, *04:71 = *04:28, *04:79
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:83 = *04:28, *04:83
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:73 = *04:28, *04:73
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:57 = *04:28, *04:57
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:62 = *04:28, *04:62
+++-----	---+-----+	-----	-----+--	-----	*04:01:01:01, *04:68 = *04:01:10, *04:68 = *04:01:28, *04:68 = *04:14, *04:61 = *04:28, *04:61 = *04:28, *04:68 = *04:61, *04:68 = *04:68, *04:87
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:65 = *04:28, *04:65
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:59Q = *04:28, *04:59Q
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:51 = *04:28, *04:51
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:53 = *04:28, *04:53
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:49 = *04:28, *04:49
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:48 = *04:28, *04:48
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:46 = *04:28, *04:46
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:45 = *04:28, *04:45
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:43 = *04:28, *04:43
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:26 = *04:14, *04:42 = *04:26, *04:28 = *04:28, *04:42
+++-----	---+-----+	-----	-----+--	-----	*04:14, *04:25 = *04:25, *04:28



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Lot No.: 79N

Lot-specific information

+++-----	-+-----+	-----+--	-----	-----	-----	*04:14, *04:24 = *04:24, *04:28
+++-----	-+-----+	-----+--	-----	-----	-----	*04:14, *04:23 = *04:23, *04:28
+++-----	-+-----+	-----+--	-----	-----	-----	*04:14, *04:15:02 = *04:15:02, *04:28
+++-----	-+-----+	-----+--	-----	-----	-----	*04:14, *04:20 = *04:20, *04:28
+++-----	-+-----+	-----+--	-----	-----	-----	*04:14, *04:19/04:70 = *04:19/04:70, *04:28
+++-----	-+-----+	-----+--	-----	-----	-----	*04:14, *04:15:01 = *04:15:01, *04:28
+++-----	-+-----+	-----+--	-----	-----	-----	*04:01:01:01, *04:16 = *04:01:10, *04:16 = *04:16, *04:18 = *04:16, *04:66 = *04:16, *04:111 = *04:18, *04:66 = *04:18, *04:103
+++-----	-+-----+	-----+--	-----	-----	-----	*04:18, *04:71 = *04:18, *04:79
+++-----	-+-----+	-----+--	-----	-----	-----	*04:18, *04:26 = *04:18, *04:42
+++-----	-+-----+	-----+--	-----	-----	-----	*04:14, *04:18 = *04:18, *04:28
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:84 = *04:52, *04:84
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:67 = *04:52, *04:67
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:66 = *04:12, *04:103 = *04:52, *04:66 = *04:52, *04:103
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:60 = *04:52, *04:60
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:81 = *04:52, *04:81
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:69 = *04:52, *04:69
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:54 = *04:52, *04:54
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:56 = *04:52, *04:56
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:71 = *04:12, *04:79 = *04:52, *04:71 = *04:52, *04:79
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:83 = *04:52, *04:83
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:73 = *04:52, *04:73
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:57 = *04:52, *04:57
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:62 = *04:52, *04:62
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:61 = *04:52, *04:61
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:65 = *04:52, *04:65
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:59Q = *04:52, *04:59Q
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:51 = *04:51, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:53 = *04:52, *04:53
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:49 = *04:49, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:48 = *04:48, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:46 = *04:46, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:45 = *04:45, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:43 = *04:43, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:26 = *04:12, *04:42 = *04:26, *04:52 = *04:42, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:25 = *04:25, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:24 = *04:24, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:23 = *04:23, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:15:02 = *04:15:02, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:20 = *04:20, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:19/04:70 = *04:19/04:70, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:15:01 = *04:15:01, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:14 = *04:12, *04:28 = *04:14, *04:52 = *04:28, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:12, *04:18 = *04:18, *04:52
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:84 = *04:33, *04:84
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:67 = *04:33, *04:67
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:66 = *04:29, *04:103 = *04:33, *04:66 = *04:33, *04:103
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:60 = *04:33, *04:60
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:81 = *04:33, *04:81
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:69 = *04:33, *04:69
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:54 = *04:33, *04:54
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:56 = *04:33, *04:56
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:71 = *04:29, *04:79 = *04:33, *04:71 = *04:33, *04:79
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:83 = *04:33, *04:83
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:73 = *04:33, *04:73
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:57 = *04:33, *04:57
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:62 = *04:33, *04:62
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:61 = *04:33, *04:61
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:65 = *04:33, *04:65
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:59Q = *04:33, *04:59Q
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:51 = *04:33, *04:51
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:53 = *04:33, *04:53
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:49 = *04:33, *04:49
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:48 = *04:33, *04:48
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:46 = *04:33, *04:46
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:45 = *04:33, *04:45
+++-----	-+-----+	-----+--	-----	-----	-----	*04:29, *04:43 = *04:33, *04:43
+++-----	-+-----+	-----+--	-----	-----	-----	*04:26, *04:29 = *04:26, *04:33 = *04:29, *04:42 = *04:33, *04:42
+++-----	-+-----+	-----+--	-----	-----	-----	*04:25, *04:29 = *04:25, *04:33
+++-----	-+-----+	-----+--	-----	-----	-----	*04:24, *04:29 = *04:24, *04:33
+++-----	-+-----+	-----+--	-----	-----	-----	*04:23, *04:29 = *04:23, *04:33



101.612-12 – including *Taq* pol.  
101.612-12u– without *Taq* pol.

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Lot No.: 79N

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+++-----	---+-----	-----	-----	-----	*04:15:02, *04:29 = *04:15:02, *04:33
+++-----	---+-----	-----	-----	-----	*04:20, *04:29 = *04:20, *04:33
+++-----	---+-----	-----	-----	-----	*04:19/04:70, *04:29 = *04:19/04:70, *04:33
+++-----	---+-----	-----	-----	-----	*04:15:01, *04:29 = *04:15:01, *04:33
+++-----	---+-----	-----	-----	-----	*04:14, *04:29 = *04:14, *04:33 = *04:28, *04:29 = *04:28, *04:33
+++-----	---+-----	-----	-----	-----	*04:18, *04:29 = *04:18, *04:33
+++-----	---+-----	-----	-----	-----	*04:12, *04:29 = *04:12, *04:33 = *04:29, *04:52
+++-----	---+-----	-----	-----	-----	*04:01:10, *04:55 = *04:11, *04:52 = *04:33, *04:55 = *04:52, *04:55
+++-----	---+-----	-----	-----	-----	*04:10, *04:84 = *04:31, *04:84
+++-----	---+-----	-----	-----	-----	*04:10, *04:67 = *04:31, *04:67
+++-----	---+-----	-----	-----	-----	*04:10, *04:66 = *04:31, *04:66 = *04:31, *04:103
+++-----	---+-----	-----	-----	-----	*04:10, *04:60 = *04:31, *04:60
+++-----	---+-----	-----	-----	-----	*04:10, *04:81 = *04:31, *04:81
+++-----	---+-----	-----	-----	-----	*04:10, *04:69 = *04:31, *04:69
+++-----	---+-----	-----	-----	-----	*04:10, *04:54 = *04:31, *04:54
+++-----	---+-----	-----	-----	-----	*04:10, *04:56 = *04:31, *04:56
+++-----	---+-----	-----	-----	-----	*04:10, *04:79 = *04:31, *04:71 = *04:31, *04:79
+++-----	---+-----	-----	-----	-----	*04:10, *04:83 = *04:31, *04:83
+++-----	---+-----	-----	-----	-----	*04:10, *04:73 = *04:31, *04:73
+++-----	---+-----	-----	-----	-----	*04:10, *04:57 = *04:31, *04:57
+++-----	---+-----	-----	-----	-----	*04:10, *04:62 = *04:31, *04:62
+++-----	---+-----	-----	-----	-----	*04:10, *04:61 = *04:31, *04:61
+++-----	---+-----	-----	-----	-----	*04:10, *04:65 = *04:31, *04:65
+++-----	---+-----	-----	-----	-----	*04:10, *04:59Q = *04:31, *04:59Q
+++-----	---+-----	-----	-----	-----	*04:10, *04:51 = *04:31, *04:51
+++-----	---+-----	-----	-----	-----	*04:10, *04:53 = *04:31, *04:53
+++-----	---+-----	-----	-----	-----	*04:10, *04:49 = *04:31, *04:49
+++-----	---+-----	-----	-----	-----	*04:10, *04:48 = *04:31, *04:48
+++-----	---+-----	-----	-----	-----	*04:10, *04:46 = *04:31, *04:46
+++-----	---+-----	-----	-----	-----	*04:10, *04:45 = *04:31, *04:45
+++-----	---+-----	-----	-----	-----	*04:10, *04:43 = *04:31, *04:43
+++-----	---+-----	-----	-----	-----	*04:10, *04:26 = *04:26, *04:31 = *04:31, *04:42
+++-----	---+-----	-----	-----	-----	*04:10, *04:25 = *04:25, *04:31
+++-----	---+-----	-----	-----	-----	*04:10, *04:24 = *04:24, *04:31
+++-----	---+-----	-----	-----	-----	*04:10, *04:23 = *04:23, *04:31
+++-----	---+-----	-----	-----	-----	*04:10, *04:15:02 = *04:15:02, *04:31
+++-----	---+-----	-----	-----	-----	*04:10, *04:20 = *04:20, *04:31
+++-----	---+-----	-----	-----	-----	*04:10, *04:19/04:70 = *04:19/04:70, *04:31
+++-----	---+-----	-----	-----	-----	*04:10, *04:15:01 = *04:15:01, *04:31
+++-----	---+-----	-----	-----	-----	*04:10, *04:14 = *04:10, *04:28 = *04:14, *04:31 = *04:28, *04:31
+++-----	---+-----	-----	-----	-----	*04:10, *04:18 = *04:18, *04:31
+++-----	---+-----	-----	-----	-----	*04:10, *04:12 = *04:10, *04:52 = *04:12, *04:31 = *04:31, *04:52
+++-----	---+-----	-----	-----	-----	*04:01:01:01, *04:11 = *04:01:01:01, *04:36 = *04:01:10, *04:36 = *04:10, *04:29 = *04:10, *04:33 = *04:11, *04:29 = *04:11, *04:31 = *04:11, *04:87 = *04:11, *04:111 = *04:29, *04:31 = *04:29, *04:36 = *04:31, *04:33 = *04:31, *04:36 = *04:33, *04:36 = *04:36, *04:87 = *04:36, *04:111
+++-----	---+-----	-----	-----	-----	*04:09N, *04:66 = *04:09N, *04:103
+++-----	---+-----	-----	-----	-----	*04:09N, *04:71 = *04:09N, *04:79
+++-----	---+-----	-----	-----	-----	*04:01:01:01, *04:30 = *04:01:10, *04:30 = *04:01:28, *04:30 = *04:09N, *04:26 = *04:09N, *04:30 = *04:09N, *04:42 = *04:26, *04:30 = *04:30, *04:30 = *04:30, *04:42 = *04:30, *04:87 = *04:30, *04:111
+++-----	---+-----	-----	-----	-----	*04:01:01:01, *04:35 = *04:01:10, *04:35 = *04:01:28, *04:35 = *04:09N, *04:20 = *04:09N, *04:35 = *04:20, *04:35 = *04:35, *04:35 = *04:35, *04:87 = *04:35, *04:111
+++-----	---+-----	-----	-----	-----	*04:09N, *04:14 = *04:09N, *04:28
+++-----	---+-----	-----	-----	-----	*04:09N, *04:12 = *04:09N, *04:52
+++-----	---+-----	-----	-----	-----	*04:09N, *04:29 = *04:09N, *04:33
+++-----	---+-----	-----	-----	-----	*04:09N, *04:10 = *04:09N, *04:31
+++-----	---+-----	-----	-----	-----	*04:08, *04:66 = *04:08, *04:103
+++-----	---+-----	-----	-----	-----	*04:08, *04:71 = *04:08, *04:79
+++-----	---+-----	-----	-----	-----	*04:08, *04:26 = *04:08, *04:42
+++-----	---+-----	-----	-----	-----	*04:08, *04:14 = *04:08, *04:28
+++-----	---+-----	-----	-----	-----	*04:08, *04:12 = *04:08, *04:52
+++-----	---+-----	-----	-----	-----	*04:08, *04:29 = *04:08, *04:33
+++-----	---+-----	-----	-----	-----	*04:08, *04:10 = *04:08, *04:31
+++-----	---+-----	-----	-----	-----	*04:07, *04:84 = *04:27, *04:84 = *04:32, *04:84
+++-----	---+-----	-----	-----	-----	*04:07, *04:67 = *04:27, *04:67 = *04:32, *04:67
+++-----	---+-----	-----	-----	-----	*04:07, *04:66 = *04:27, *04:66 = *04:32, *04:66 = *04:32, *04:103
+++-----	---+-----	-----	-----	-----	*04:07, *04:60 = *04:27, *04:60 = *04:32, *04:60



101.612-12 – including *Taq* pol.  
101.612-12u– without *Taq* pol.

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Lot No.: 79N

Lot-specific information

+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:81 = *04:27, *04:81 = *04:32, *04:81
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:69 = *04:27, *04:69 = *04:32, *04:69
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:54 = *04:27, *04:54 = *04:32, *04:54
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:56 = *04:27, *04:56 = *04:32, *04:56
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:71 = *04:07, *04:79 = *04:27, *04:71 = *04:27, *04:79 = *04:32, *04:71 = *04:32, *04:79
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:83 = *04:27, *04:83 = *04:32, *04:83
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:73 = *04:27, *04:73 = *04:32, *04:73
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:57 = *04:27, *04:57 = *04:32, *04:57
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:62 = *04:27, *04:62 = *04:32, *04:62
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:61 = *04:27, *04:61 = *04:32, *04:61
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:65 = *04:27, *04:65 = *04:32, *04:65
+++++--	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:77 = *04:01:10, *04:77 = *04:01:28, *04:77 = *04:07, *04:59Q = *04:07, *04:77 = *04:27, *04:59Q = *04:27, *04:77 = *04:32, *04:59Q = *04:32, *04:77 = *04:59Q, *04:77 = *04:77, *04:87 = *04:77, *04:111
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:51 = *04:27, *04:51 = *04:32, *04:51
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:53 = *04:27, *04:53 = *04:32, *04:53
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:49 = *04:27, *04:49 = *04:32, *04:49
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:48 = *04:27, *04:48 = *04:32, *04:48
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:46 = *04:27, *04:46 = *04:32, *04:46
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:45 = *04:27, *04:45 = *04:32, *04:45
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:43 = *04:27, *04:43 = *04:32, *04:43
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:26 = *04:26, *04:27 = *04:26, *04:32 = *04:32, *04:42
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:25 = *04:25, *04:27 = *04:25, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:24 = *04:24, *04:27 = *04:24, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:23 = *04:23, *04:27 = *04:23, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:15:02 = *04:15:02, *04:27 = *04:15:02, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:20 = *04:20, *04:27 = *04:20, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:19/04:70 = *04:19/04:70, *04:27 = *04:19/04:70, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:15:01 = *04:15:01, *04:27 = *04:15:01, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:14 = *04:07, *04:28 = *04:14, *04:27 = *04:14, *04:32 = *04:27, *04:28 = *04:28, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:18 = *04:18, *04:27 = *04:18, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:12 = *04:07, *04:52 = *04:12, *04:27 = *04:12, *04:32 = *04:32, *04:52
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:29 = *04:07, *04:33 = *04:27, *04:29 = *04:29, *04:32 = *04:32, *04:33
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:10 = *04:07, *04:31 = *04:10, *04:27 = *04:10, *04:32 = *04:27, *04:31 = *04:31, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:09N = *04:09N, *04:27 = *04:09N, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:07, *04:08 = *04:08, *04:27 = *04:08, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:05, *04:66 = *04:05, *04:103
+++++--	---+-----	-----	-----	-----	-----	*04:05, *04:71 = *04:05, *04:79
+++++--	---+-----	-----	-----	-----	-----	*04:05, *04:26 = *04:05, *04:42
+++++--	---+-----	-----	-----	-----	-----	*04:05, *04:14 = *04:05, *04:28
+++++--	---+-----	-----	-----	-----	-----	*04:05, *04:12 = *04:05, *04:52
+++++--	---+-----	-----	-----	-----	-----	*04:05, *04:29 = *04:05, *04:33
+++++--	---+-----	-----	-----	-----	-----	*04:05, *04:10 = *04:05, *04:31
+++++--	---+-----	-----	-----	-----	-----	*04:05, *04:07 = *04:05, *04:27 = *04:05, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:04:01, *04:66 = *04:04:01, *04:103
+++++--	---+-----	-----	-----	-----	-----	*04:04:01, *04:71 = *04:04:01, *04:79
+++++--	---+-----	-----	-----	-----	-----	*04:04:01, *04:26 = *04:04:01, *04:42
+++++--	---+-----	-----	-----	-----	-----	*04:04:01, *04:12 = *04:04:01, *04:52
+++++--	---+-----	-----	-----	-----	-----	*04:04:01, *04:29 = *04:04:01, *04:33
+++++--	---+-----	-----	-----	-----	-----	*04:04:01, *04:10 = *04:04:01, *04:31
+++++--	---+-----	-----	-----	-----	-----	*04:01:01:01, *04:34 = *04:01:10, *04:34 = *04:01:28, *04:34 = *04:04:01, *04:08 = *04:08, *04:34 = *04:34, *04:87
+++++--	---+-----	-----	-----	-----	-----	*04:04:01, *04:07 = *04:04:01, *04:27 = *04:04:01, *04:32
+++++--	---+-----	-----	-----	-----	-----	*04:03, *04:84 = *04:84, *04:107
+++++--	---+-----	-----	-----	-----	-----	*04:03, *04:67 = *04:67, *04:107
+++++--	---+-----	-----	-----	-----	-----	*04:03, *04:66 = *04:66, *04:107
+++++--	---+-----	-----	-----	-----	-----	*04:03, *04:60 = *04:60, *04:107
+++++--	---+-----	-----	-----	-----	-----	*04:03, *04:81 = *04:81, *04:107
+++++--	---+-----	-----	-----	-----	-----	*04:03, *04:69 = *04:69, *04:107
+++++--	---+-----	-----	-----	-----	-----	*04:03, *04:54 = *04:54, *04:107
+++++--	---+-----	-----	-----	-----	-----	*04:03, *04:56 = *04:56, *04:107
+++++--	---+-----	-----	-----	-----	-----	*04:03, *04:79 = *04:79, *04:107
+++++--	---+-----	-----	-----	-----	-----	*04:03, *04:83 = *04:83, *04:107
+++++--	---+-----	-----	-----	-----	-----	*04:03, *04:73 = *04:73, *04:107
+++++--	---+-----	-----	-----	-----	-----	*04:03, *04:57 = *04:57, *04:107



101.612-12 – including *Taq* pol.  
101.612-12u– without *Taq* pol.

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++++-----	---+-----	-----	---+-----	-----	*04:03, *04:62 = *04:62, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:61 = *04:61, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:65 = *04:65, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:59Q = *04:59Q, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:51 = *04:51, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:53 = *04:53, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:49 = *04:49, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:48 = *04:48, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:46 = *04:46, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:45 = *04:45, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:43 = *04:43, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:26 = *04:26, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:25 = *04:25, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:24 = *04:24, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:23 = *04:23, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:15:02 = *04:15:02, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:20 = *04:20, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:19/04:70 = *04:19/04:70, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:01:01:01, *04:80 = *04:01:10, *04:80 = *04:80, *04:111
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:15:01 = *04:15:01, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:14 = *04:03, *04:28 = *04:14, *04:107 = *04:28, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:18 = *04:18, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:12 = *04:03, *04:52 = *04:12, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:29 = *04:03, *04:33 = *04:29, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:31 = *04:31, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:09N = *04:09N, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:08 = *04:08, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:32 = *04:32, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:03, *04:05 = *04:05, *04:107
++++-----	---+-----	-----	---+-----	-----	*04:01:01:01, *04:06 = *04:01:10, *04:06 = *04:03, *04:04:01 = *04:04:01, *04:107
---+-----	---+-----	-----	---+-----	-----	*04:04:01, *04:58 = *04:13, *04:58 = *04:58, *04:58 = *04:58, *04:111
---+-----	---+-----	-----	---+-----	-----	*04:13, *04:14 = *04:13, *04:68
---+-----	---+-----	-----	---+-----	-----	*04:11, *04:16 = *04:16, *04:36
---+-----	---+-----	-----	---+-----	-----	*04:11, *04:80 = *04:36, *04:80
---+-----	---+-----	-----	---+-----	-----	*04:06, *04:11 = *04:06, *04:36
---+-----	---+-----	-----	---+-----	-----	*04:66, *04:74 = *04:74, *04:103
---+-----	---+-----	-----	---+-----	-----	*04:71, *04:74 = *04:74, *04:79
---+-----	---+-----	-----	---+-----	-----	*04:63, *04:66 = *04:63, *04:103
---+-----	---+-----	-----	---+-----	-----	*04:63, *04:71 = *04:63, *04:79
---+-----	---+-----	-----	---+-----	-----	*04:57, *04:74 = *04:63, *04:74 = *04:63, *04:83
---+-----	---+-----	-----	---+-----	-----	*04:66, *04:95N = *04:95N, *04:103
---+-----	---+-----	-----	---+-----	-----	*04:26, *04:74 = *04:42, *04:74
---+-----	---+-----	-----	---+-----	-----	*04:26, *04:63 = *04:42, *04:63
---+-----	---+-----	-----	---+-----	-----	*04:26, *04:95N = *04:42, *04:95N
---+-----	---+-----	-----	---+-----	-----	*04:66, *04:94:01 = *04:94:01, *04:103
---+-----	---+-----	-----	---+-----	-----	*04:71, *04:94:01 = *04:79, *04:94:01
---+-----	---+-----	-----	---+-----	-----	*04:26, *04:94:01 = *04:42, *04:94:01
---+-----	---+-----	-----	---+-----	-----	*04:17, *04:66 = *04:17, *04:103
---+-----	---+-----	-----	---+-----	-----	*04:17, *04:71 = *04:17, *04:79
---+-----	---+-----	-----	---+-----	-----	*04:17, *04:26 = *04:17, *04:42
---+-----	---+-----	-----	---+-----	-----	*04:37, *04:66 = *04:37, *04:103
---+-----	---+-----	-----	---+-----	-----	*04:37, *04:71 = *04:37, *04:79
---+-----	---+-----	-----	---+-----	-----	*04:26, *04:37 = *04:37, *04:42
---+-----	---+-----	-----	---+-----	-----	*04:14, *04:74 = *04:28, *04:74
---+-----	---+-----	-----	---+-----	-----	*04:14, *04:63 = *04:28, *04:63
---+-----	---+-----	-----	---+-----	-----	*04:66, *04:68 = *04:68, *04:103
---+-----	---+-----	-----	---+-----	-----	*04:68, *04:71 = *04:68, *04:79
---+-----	---+-----	-----	---+-----	-----	*04:14, *04:95N = *04:28, *04:95N
---+-----	---+-----	-----	---+-----	-----	*04:26, *04:68 = *04:42, *04:68
---+-----	---+-----	-----	---+-----	-----	*04:14, *04:94:01 = *04:28, *04:94:01
---+-----	---+-----	-----	---+-----	-----	*04:14, *04:17 = *04:17, *04:28
---+-----	---+-----	-----	---+-----	-----	*04:14, *04:37 = *04:28, *04:37
---+-----	---+-----	-----	---+-----	-----	*04:14, *04:16 = *04:16, *04:28
---+-----	---+-----	-----	---+-----	-----	*04:12, *04:74 = *04:52, *04:74
---+-----	---+-----	-----	---+-----	-----	*04:12, *04:63 = *04:52, *04:63
---+-----	---+-----	-----	---+-----	-----	*04:12, *04:95N = *04:52, *04:95N
---+-----	---+-----	-----	---+-----	-----	*04:12, *04:94:01 = *04:52, *04:94:01
---+-----	---+-----	-----	---+-----	-----	*04:12, *04:17 = *04:17, *04:52
---+-----	---+-----	-----	---+-----	-----	*04:12, *04:37 = *04:37, *04:52
---+-----	---+-----	-----	---+-----	-----	*04:12, *04:68 = *04:52, *04:68



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+++-----	-++-+-	-----	-----	-----	-----	*04:12, *04:16 = *04:16, *04:52
+++-----	-++-+-	-----	-----	-----	-----	*04:29, *04:74 = *04:33, *04:74
+++-----	-++-+-	-----	-----	-----	-----	*04:29, *04:63 = *04:33, *04:63
+++-----	-++-+-	-----	-----	-----	-----	*04:29, *04:95N = *04:33, *04:95N
+++-----	-++-+-	-+-	+	-----	-----	*04:29, *04:94:01 = *04:33, *04:94:01
+++-----	-++-+-	-+-	+	-----	-----	*04:17, *04:29 = *04:17, *04:33
+++-----	-++-+-	-+-	+	-----	-----	*04:29, *04:37 = *04:33, *04:37
+++-----	-++-+-	-+-	+	-----	-----	*04:29, *04:68 = *04:33, *04:68
+++-----	-++-+-	-+-	+	-----	-----	*04:16, *04:29 = *04:16, *04:33
+++-----	-++-+-	-+-	+	-----	-----	*04:10, *04:74 = *04:31, *04:74
+++-----	-++-+-	-+-	+	-----	-----	*04:10, *04:63 = *04:31, *04:63
+++-----	-++-+-	-+-	+	-----	-----	*04:10, *04:95N = *04:31, *04:95N
+++-----	-++-+-	-+-	+	-----	-----	*04:10, *04:94:01 = *04:31, *04:94:01
+++-----	-++-+-	-+-	+	-----	-----	*04:10, *04:17 = *04:17, *04:31
+++-----	-++-+-	-+-	+	-----	-----	*04:10, *04:37 = *04:31, *04:37
+++-----	-++-+-	-+-	+	-----	-----	*04:10, *04:68 = *04:31, *04:68
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:84 = *04:36, *04:84
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:67 = *04:36, *04:67
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:66 = *04:36, *04:66
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:60 = *04:36, *04:60
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:81 = *04:36, *04:81
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:69 = *04:36, *04:69
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:54 = *04:36, *04:54
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:56 = *04:36, *04:56
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:79 = *04:36, *04:79
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:83 = *04:36, *04:83
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:73 = *04:36, *04:73
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:57 = *04:36, *04:57
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:62 = *04:36, *04:62
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:61 = *04:36, *04:61
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:65 = *04:36, *04:65
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:59Q = *04:36, *04:59Q
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:51 = *04:36, *04:51
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:53 = *04:36, *04:53
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:49 = *04:36, *04:49
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:48 = *04:36, *04:48
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:46 = *04:36, *04:46
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:45 = *04:36, *04:45
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:43 = *04:36, *04:43
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:26 = *04:26, *04:36
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:25 = *04:25, *04:36
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:24 = *04:24, *04:36
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:23 = *04:23, *04:36
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:15:02 = *04:15:02, *04:36
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:20 = *04:20, *04:36
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:19/04:70 = *04:19/04:70, *04:36
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:15:01 = *04:15:01, *04:36
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:14 = *04:11, *04:28 = *04:14, *04:36 = *04:28, *04:36
+++-----	-++-+-	-+-	+	-----	-----	*04:11, *04:18 = *04:18, *04:36
+++-----	-++-+-	-+-	+	-----	-----	*04:01:01:01, *04:55 = *04:11, *04:12 = *04:12, *04:36 = *04:12, *04:55 = *04:29, *04:55 = *04:31, *04:55 = *04:36, *04:52 = *04:55, *04:87 = *04:55, *04:111
+++-----	-++-+-	-+-	+	-----	-----	*04:30, *04:66 = *04:30, *04:103
+++-----	-++-+-	-+-	+	-----	-----	*04:30, *04:71 = *04:30, *04:79
+++-----	-++-+-	-+-	+	-----	-----	*04:35, *04:66 = *04:35, *04:103
+++-----	-++-+-	-+-	+	-----	-----	*04:35, *04:71 = *04:35, *04:79
+++-----	-++-+-	-+-	+	-----	-----	*04:20, *04:30 = *04:26, *04:35 = *04:30, *04:35 = *04:35, *04:42
+++-----	-++-+-	-+-	+	-----	-----	*04:09N, *04:37 = *04:15:01, *04:35 = *04:35, *04:37
+++-----	-++-+-	-+-	+	-----	-----	*04:14, *04:30 = *04:28, *04:30
+++-----	-++-+-	-+-	+	-----	-----	*04:14, *04:35 = *04:28, *04:35
+++-----	-++-+-	-+-	+	-----	-----	*04:12, *04:30 = *04:30, *04:52
+++-----	-++-+-	-+-	+	-----	-----	*04:12, *04:35 = *04:35, *04:52
+++-----	-++-+-	-+-	+	-----	-----	*04:29, *04:30 = *04:30, *04:33
+++-----	-++-+-	-+-	+	-----	-----	*04:29, *04:35 = *04:33, *04:35
+++-----	-++-+-	-+-	+	-----	-----	*04:10, *04:30 = *04:30, *04:31
+++-----	-++-+-	-+-	+	-----	-----	*04:10, *04:35 = *04:31, *04:35
+++-----	-++-+-	-+-	+	-----	-----	*04:09N, *04:11 = *04:09N, *04:36
+++-----	-++-+-	-+-	+	-----	-----	*04:08, *04:11 = *04:08, *04:36
+++-----	-++-+-	-+-	+	-----	-----	*04:07, *04:74 = *04:27, *04:74 = *04:32, *04:74
+++-----	-++-+-	-+-	+	-----	-----	*04:07, *04:63 = *04:27, *04:63 = *04:32, *04:63
+++-----	-++-+-	-+-	+	-----	-----	*04:66, *04:77 = *04:77, *04:103



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Lot-specific information

+++---+	---+-----	-----+	-----+	-----	*04:71, *04:77 = *04:77, *04:79
+++---+	---+-----	-----	-----+	-----	*04:07, *04:95N = *04:27, *04:95N = *04:32, *04:95N
+++---+	---+-----	-----+	-----+	-----	*04:26, *04:77 = *04:42, *04:77
+++---+	---+-----	---+-----	---+-----	-----	*04:07, *04:94:01 = *04:27, *04:94:01 = *04:32, *04:94:01
+++---+	---+-----	---+-----	---+-----	-----	*04:07, *04:17 = *04:17, *04:27 = *04:17, *04:32
+++---+	---+-----	---+-----	-----	-----	*04:07, *04:37 = *04:27, *04:37 = *04:32, *04:37
+++---+	---+-----	-----	-----	-----	*04:07, *04:68 = *04:27, *04:68 = *04:32, *04:68
+++---+	---+-----	-----	-----	-----	*04:14, *04:77 = *04:28, *04:77
+++---+	---+-----	-----	-----	-----	*04:12, *04:77 = *04:52, *04:77
+++---+	---+-----	-----	-----	-----	*04:29, *04:77 = *04:33, *04:77
+++---+	---+-----	-----	-----	-----	*04:10, *04:77 = *04:31, *04:77
+++---+	---+-----	-----	-----	-----	*04:07, *04:11 = *04:07, *04:36 = *04:11, *04:32 = *04:27, *04:36 = *04:32, *04:36
+++---+	---+-----	-----	-----	-----	*04:07, *04:30 = *04:27, *04:30 = *04:30, *04:32
+++---+	---+-----	-----	-----	-----	*04:07, *04:35 = *04:27, *04:35 = *04:32, *04:35
+++---+	---+-----	-----	-----	-----	*04:05, *04:11 = *04:05, *04:36
+++---+	---+-----	-----	-----	-----	*04:01:01:01, *04:13 = *04:01:10, *04:13 = *04:01:28, *04:13 = *04:13, *04:18 = *04:13, *04:61 = *04:13, *04:87
+++---+	---+-----	-----	-----	-----	*04:04:01, *04:11 = *04:04:01, *04:36
+++---+	---+-----	-----	-----	-----	*04:34, *04:66 = *04:34, *04:103
+++---+	---+-----	-----	-----	-----	*04:34, *04:71 = *04:34, *04:79
+++---+	---+-----	-----	-----	-----	*04:26, *04:34 = *04:34, *04:42
+++---+	---+-----	-----	-----	-----	*04:12, *04:34 = *04:34, *04:52
+++---+	---+-----	-----	-----	-----	*04:29, *04:34 = *04:33, *04:34
+++---+	---+-----	-----	-----	-----	*04:10, *04:34 = *04:31, *04:34
+++---+	---+-----	-----	-----	-----	*04:07, *04:34 = *04:27, *04:34 = *04:32, *04:34
+++---+	---+-----	-----	-----	-----	*04:03, *04:74 = *04:74, *04:107
+++---+	---+-----	-----	-----	-----	*04:03, *04:63 = *04:63, *04:107
+++---+	---+-----	-----	-----	-----	*04:03, *04:95N = *04:95N, *04:107
+++---+	---+-----	-----	-----	-----	*04:03, *04:94:01 = *04:94:01, *04:107
+++---+	---+-----	-----	-----	-----	*04:03, *04:17 = *04:15:02, *04:80 = *04:17, *04:80 = *04:17, *04:107
+++---+	---+-----	-----	-----	-----	*04:03, *04:37 = *04:37, *04:107
+++---+	---+-----	-----	-----	-----	*04:03, *04:68 = *04:68, *04:107
+++---+	---+-----	-----	-----	-----	*04:14, *04:80 = *04:28, *04:80
+++---+	---+-----	-----	-----	-----	*04:12, *04:80 = *04:52, *04:80
+++---+	---+-----	-----	-----	-----	*04:29, *04:80 = *04:33, *04:80
+++---+	---+-----	-----	-----	-----	*04:03, *04:30 = *04:30, *04:107
+++---+	---+-----	-----	-----	-----	*04:03, *04:35 = *04:35, *04:107
+++---+	---+-----	-----	-----	-----	*04:03, *04:77 = *04:77, *04:107
+++---+	---+-----	-----	-----	-----	*04:06, *04:12 = *04:06, *04:52
+++---+	---+-----	-----	-----	-----	*04:06, *04:29 = *04:06, *04:33
+++---+	---+-----	-----	-----	-----	*04:03, *04:34 = *04:06, *04:08 = *04:34, *04:107
+++---+	---+-----	-----	-----	-----	*04:14, *04:58 = *04:58, *04:68
+++---+	---+-----	-----	-----	-----	*04:11, *04:74 = *04:36, *04:74
+++---+	---+-----	-----	-----	-----	*04:11, *04:63 = *04:36, *04:63
+++---+	---+-----	-----	-----	-----	*04:11, *04:95N = *04:36, *04:95N
+++---+	---+-----	-----	-----	-----	*04:11, *04:94:01 = *04:36, *04:94:01
+++---+	---+-----	-----	-----	-----	*04:11, *04:17 = *04:17, *04:36
+++---+	---+-----	-----	-----	-----	*04:11, *04:37 = *04:36, *04:37
+++---+	---+-----	-----	-----	-----	*04:11, *04:68 = *04:36, *04:68
+++---+	---+-----	-----	-----	-----	*04:14, *04:55 = *04:28, *04:55
+++---+	---+-----	-----	-----	-----	*04:11, *04:30 = *04:30, *04:36
+++---+	---+-----	-----	-----	-----	*04:11, *04:35 = *04:35, *04:36
+++---+	---+-----	-----	-----	-----	*04:11, *04:77 = *04:36, *04:77
+++---+	---+-----	-----	-----	-----	*04:07, *04:55 = *04:32, *04:55
+++---+	---+-----	-----	-----	-----	*04:13, *04:16 = *04:13, *04:66 = *04:13, *04:103
+++---+	---+-----	-----	-----	-----	*04:13, *04:71 = *04:13, *04:79
+++---+	---+-----	-----	-----	-----	*04:01:01:01, *04:58 = *04:01:10, *04:58 = *04:01:28, *04:58 = *04:13, *04:65 = *04:18, *04:58 = *04:58, *04:61 = *04:58, *04:65 = *04:58, *04:87
+++---+	---+-----	-----	-----	-----	*04:13, *04:26 = *04:13, *04:42
+++---+	---+-----	-----	-----	-----	*04:12, *04:13 = *04:13, *04:52
+++---+	---+-----	-----	-----	-----	*04:13, *04:29 = *04:13, *04:33
+++---+	---+-----	-----	-----	-----	*04:10, *04:13 = *04:13, *04:31
+++---+	---+-----	-----	-----	-----	*04:11, *04:34 = *04:34, *04:36
+++---+	---+-----	-----	-----	-----	*04:07, *04:13 = *04:13, *04:27 = *04:13, *04:32
+++---+	---+-----	-----	-----	-----	*04:03, *04:13 = *04:13, *04:107
+++---+	---+-----	-----	-----	-----	*04:16, *04:58 = *04:58, *04:66 = *04:58, *04:103
+++---+	---+-----	-----	-----	-----	*04:58, *04:71 = *04:58, *04:79
+++---+	---+-----	-----	-----	-----	*04:26, *04:58 = *04:42, *04:58
+++---+	---+-----	-----	-----	-----	*04:12, *04:58 = *04:52, *04:58



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+++++-----	-----	-----	+++++-----	-----	*04:29, *04:58 = *04:33, *04:58
+++++-----	-----	-----	+++++-----	-----	*04:10, *04:58 = *04:31, *04:58
+++++-----	-----	-----	+++++-----	-----	*04:11, *04:13 = *04:13, *04:36
+++++-----	-----	-----	+++++-----	-----	*04:07, *04:58 = *04:27, *04:58 = *04:32, *04:58
+++++-----	-----	-----	+++++-----	-----	*04:03, *04:58 = *04:58, *04:107
+++++-----	-----	-----	+++++-----	-----	*04:11, *04:58 = *04:36, *04:58

\*04:01:01:01 = \*04:01:01:01-04:01:09, 04:01:11-04:01:22, 04:01:24-04:01:27 and 04:01:29-04:01:37 and 04:85-04:86, 04:90-04:92, 04:97-04:99, 04:101-04:102, 04:104, 04:109-04:110 and 04:112

\*04:01:10 = \*04:01:10 and 04:01:23

\*04:04:01 = \*04:04:01-04:04:02

\*04:07 = \*04:07 and 04:89

\*04:15:01 = \*04:15:01 and 04:15:03

\*04:15:02 = \*04:15:02, 04:44 and 04:47

\*04:17 = \*04:17 and 04:100

\*04:23 = \*04:23, 04:38-04:39 and 04:108

\*04:25 = \*04:25, 04:40 and 04:41

\*04:46 = \*04:46 and 04:50

\*04:48 = \*04:48 and 04:75

\*04:54 = \*04:54 and 04:105N

\*04:56 = \*04:56 and 04:64

\*04:59Q = \*04:59Q and 04:78

\*04:61 = \*04:61 and 04:96

\*04:62 = \*04:62 and 04:76

\*04:65 = \*04:65 and 04:72

\*04:67 = \*04:67 and 04:93N

\*04:69 = \*04:69 and 04:82

\*04:81 = \*04:81 and 04:88N

\*04:84 = \*04:84 and 04:106

\*04:94:01 = \*04:94:01-04:94:02

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Lot-specific information  
**SPECIFICITY TABLE**

**HLA-C\*04 SSP subtyping**

Specificities and sizes of the PCR products of the 47 primer mixes used for HLA-C\*04 SSP subtyping

Primer Mix	Size of spec. PCR product <sup>1</sup>	Size of control band <sup>2</sup>	Amplified HLA-C*04 alleles <sup>3</sup>	Other amplified HLA Class I alleles <sup>4</sup>
1	250 bp	800 bp	*04:01:01:01-04:01:37, 04:03, 04:05, 04:07-04:12, 04:15:01-04:18, 04:19 <sup>w</sup> , 04:20, 04:23-04:33, 04:35-04:57, 04:59Q-04:67, 04:69-04:94:02, 04:95N <sup>w</sup> , 04:96-04:109, 04:110 <sup>?</sup> , 04:112	*01:02:01-01:21, 01:23-01:34, 01:36-01:66, 02:02:01-02:02:03, 02:02:05-02:02:22, 02:04-02:15, 02:17, 02:19-02:40, 02:42-02:56, 05:01:01:01-05:01:18, 05:03-05:10, 05:12-05:16, 05:18:01-05:26, 05:28-05:50, 05:52-05:61, 05:63-05:67, 05:69, 05:71-05:74, 06:02:01:01-06:02:01:02, 06:02:03-06:03:02, 06:05-06:39, 06:41-06:76, 08:02:01-08:02:07, 08:05, 08:07, 08:12, 08:15:01-08:15:02, 08:17-08:19, 08:23, 08:25, 08:27-08:35, 08:37, 08:43, 08:45, 08:47-08:49, 08:51-08:53, 08:55N, 12:02:01-12:13, 12:15-12:17, 12:21-12:76, 14:02:01-14:05, 14:07N-14:14, 14:16-14:37, 15:08, 16:04, 16:29, 16:33, 16:42, 18:01-18:05
2	220 bp	1070 bp	*04:01:01:01-04:01:27, 04:01:29-04:01:37, 04:04:01-04:05, 04:07-04:09N, 04:12 <sup>w</sup> , 04:13-04:15:03, 04:17-04:20, 04:23-04:35, 04:37-04:41, 04:43-04:54, 04:56-04:70, 04:72-04:79, 04:81-04:102, 04:104-04:106, 04:108-04:112	*07:64
3	145 bp	1070 bp	*04:01:01:01-04:01:37, 04:04:01-04:05, 04:08-04:15:03, 04:17-04:20, 04:23-04:26, 04:28-04:41, 04:43-04:79, 04:81-04:86, 04:88N,	

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		04:90-04:102, 04:104-04:106, 04:108-04:112	
<b>4</b>	210 bp	1070 bp	*04:03, 04:06, 04:80, 04:107 *02:12, 02:49, 02:55
<b>5</b>	250 bp	1070 bp	*04:04:01-04:04:02, 04:06, 04:13, 04:34, 04:58 *01:22, 01:35, 02:03, 02:16:01-02:16:02, 02:18, 05:11, 05:17, 05:27, 05:68, 06:04, 08:01:01-08:01:05, 08:03:01-08:04:02, 08:06, 08:08-08:11, 08:13-08:14, 08:16:01-08:16:02, 08:20-08:22, 08:24, 08:26N, 08:36N, 08:38-08:42, 08:44, 08:46, 08:50, 08:54, 08:56-08:60, 12:14:01-12:14:02, 12:18:01-12:18:02, 12:20, 14:06, 14:15, 15:02:01-15:07, 15:09-15:13, 15:15-15:24, 15:26-15:50, 15:52-15:60, 16:35, 16:40, 17:01:01:01-17:11, <b>B*58:02</b>
<b>6<sup>5</sup></b>	95 bp	1070 bp	*04:05
<b>7<sup>6</sup></b>	145 bp	1070 bp	*04:07, 04:27, 04:32, 04:77, 04:89 *03:34, 03:142, 07:64, 14:25, 15:36, 18:03
<b>8</b>	270 bp	1070 bp	*04:08, 04:34 *01:35, 05:27, 05:39, 08:41, 14:20, 15:15, 17:07, <b>B*58:02</b>
<b>9<sup>5,9</sup></b>	110 bp, 180 bp, 220 bp	1070 bp	*04:09N, 04:30, 04:35
<b>10<sup>10</sup></b>	195 bp, 220 bp	1070 bp	*04:10-04:11, 04:31, 04:36, 04:55 *15:36
<b>11</b>	180 bp	1070 bp	*04:01:01:01-04:01:09, 04:01:11-04:01:22, 04:01:24-04:01:37, 04:03-04:10, 04:12-04:20, 04:23-04:26, 04:28-04:32, 04:34-04:51, 04:53-04:54, 04:56-04:106, 04:108-04:112 *02:49, 05:25, 05:42, 06:05, 07:02:09, 08:28, 12:28, 15:25, 16:26
<b>12<sup>5,11</sup></b>	125 bp, 165 bp	1070 bp	*04:11, 04:29, 04:33, 04:36, 04:55 *07:125
<b>13<sup>12</sup></b>	225 bp, 270 bp	1070 bp	*04:12, 04:52, 04:55
<b>14<sup>6,13</sup></b>	155 bp, 190 bp	1070 bp	*04:13, 04:16, 04:18, 04:58 *07:08, 07:108
<b>15</b>	180 bp	1070 bp	*04:14, 04:28, 04:68 *16:45, <b>A*24:96, A*24:146</b>

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<b>16</b>	130 bp	1070 bp	*04:15:01, 04:15:03, 04:37	*03:05, 03:25, 03:27, 03:135, 14:09, <b>B*15:78:03</b>
<b>17</b>	320 bp	1070 bp	*04:17, 04:80, 04:100	*01:50
<b>18</b> <sup>5,14</sup>	125 bp, 220 bp	1070 bp	*04:19, 04:70, 04:94:01- 04:94:02	*12:10:01-12:10:02, 18:03, <b>B*15:27:01-15:27:03, B*15:109</b>
<b>19</b> <sup>5,15</sup>	120 bp, 155 bp	1070 bp	*04:20, 04:35, 04:37	*03:135
<b>20</b> <sup>16</sup>	165 bp, 250 bp, 545 bp	1070 bp	*04:15:02, 04:17, 04:44, 04:47, 04:100	*15:36, <b>A*33:52</b>
<b>21</b> <sup>5,6,17</sup>	85 bp, 145 bp, 240 bp	1070 bp	*04:23, 04:38-04:39, 04:108	
<b>22</b>	130 bp	1070 bp	*04:24	
<b>23</b> <sup>5,18</sup>	85 bp, 145 bp, 215 bp	1070 bp	*04:25, 04:40-04:41	
<b>24</b> <sup>6</sup>	170 bp	1070 bp	*04:26, 04:30, 04:42	*07:125
<b>25</b>	200 bp	1070 bp	*04:43, 04:94:01- 04:94:02	*12:10:01-12:10:02, 18:03, <b>B*15:27:01-15:27:03, B*15:109</b>
<b>26</b> <sup>7</sup>	215 bp	<b>800 bp</b>	*04:45	
<b>27</b> <sup>5,19</sup>	125 bp, 285 bp	<b>800 bp</b>	*04:46, 04:50	
<b>28</b> <sup>5,20</sup>	120 bp, 215 bp	1070 bp	*04:48, 04:75	
<b>29</b>	185 bp	1070 bp	*04:49	
<b>30</b> <sup>5</sup>	75 bp	1070 bp	*04:53	*05:49, <b>B*07:90</b>
<b>31</b> <sup>21</sup>	130 bp, 180 bp	1070 bp	*04:51, 04:95N	
<b>32</b> <sup>5,22</sup>	105 bp, 235 bp, 275 bp	1070 bp	*04:59Q, 04:77-04:78	<b>B*40:100</b>
<b>33</b> <sup>5,23</sup>	80 bp, 180 bp	1070 bp	*04:58, 04:65, 04:72	*07:08, 07:108, B*40:100
<b>34</b> <sup>5,24</sup>	75 bp, 200 bp	1070 bp	*04:13, 04:58, 04:61, 04:68, 04:96	*07:08, 07:108
<b>35</b> <sup>5,25</sup>	85 bp, 175 bp	1070 bp	*04:62, 04:76	
<b>36</b> <sup>5</sup>	115 bp	1070 bp	*04:57, 04:63	
<b>37</b> <sup>5,26</sup>	110 bp, 135 bp	1070 bp	*04:63, 04:73-04:74	
<b>38</b> <sup>5,27</sup>	105 bp, 135 bp	1070 bp	*04:74, 04:83	

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<b>39</b> <sup>28</sup>	135 bp, 330 bp	1070 bp	*04:71, 04:79, 04:95N	*01:21
<b>40</b> <sup>29</sup>	140 bp, 270 bp	<b>800 bp</b>	*04:56, 04:64	
<b>41</b> <sup>6,30</sup>	135 bp, 280 bp	1070 bp	*04:54, 04:105N	*01:04, 01:54, 14:02:01-14:25, 14:27-14:37
<b>42</b> <sup>5,8</sup>	85 bp	1070 bp	*04:69	*16:12
<b>43</b> <sup>7,31</sup>	170 bp, 260 bp	1070 bp	*04:81, 04:88N	
<b>44</b>	135 bp	1070 bp	*04:60	
<b>45</b> <sup>32</sup>	135 bp, 160 bp	1070 bp	*04:16, 04:66, 04:103	
<b>46</b> <sup>5,33</sup>	125 bp, 300 bp	1070 bp	*04:67, 04:93N	
<b>47</b> <sup>6,7,34</sup>	155 bp, 240 bp	1070 bp	*04:84, 04:106	*07:167

<sup>1</sup> Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-C\*04 SSP typings.

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

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

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

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

Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an inherent feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated.

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-C\*04 subtyping.

In addition, wells number 26, 27 and 40 contains 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.

<sup>3</sup> For several HLA-C\*04 alleles 4<sup>th</sup> to 7<sup>th</sup> exon or intron nucleotide sequences are not available. In these instances it is not known whether some of the primers of the SSP sets are completely matched with the target sequences or not. We assume that unknown sequences in these areas are conserved within allelic groups.

<sup>4</sup> Due to the sharing of sequence motifs between HLA-C alleles non-HLA-C\*04 alleles will be amplified by primer mixes 1, 2, 4, 5, 7, 8, 10 to 12, 14 to 20, 24, 25, 30, 33, 34, 39, 41, 42 and 47. In addition, the A\*24:96 and A\*24:146 alleles will be amplified by primer mix 15, the A\*33:52 allele will be amplified by primer mix 20, the B\*07:90 allele will be amplified by primer mix 30, the B\*15:27:01-15:27:03 and 15:109 alleles will be amplified by primer mixes 18 and 25, the

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B\*15:78:03 allele will be amplified by primer mix 16, the B\*40:100 allele will be amplified by primer mixes 32 and 33 and the B\*58:02 allele will be amplified by primer mixes 5 and 8.

<sup>5</sup>Short specific PCR fragments are less intense and not as sharp as longer specific bands.

<sup>6</sup>Primer mixes 7, 14, 21, 24, 41 and 47 may give rise to primer oligomer formation.

<sup>7</sup>Primer mixes 26, 43 and 47 may have tendencies of unspecific amplification.

<sup>8</sup>Primer mix 42 may give rise to a long unspecific amplification product of approximately 525 bp. This should be disregarded when interpreting the C\*04 typings.

<sup>9</sup>Primer mix 9: Specific PCR fragment of 110 bp in the C\*04:35 allele. Specific PCR fragment of 180 bp in the C\*04:30 allele. Specific PCR fragment of 220 bp in the C\*04:09N allele.

<sup>10</sup>Primer mix 10: Specific PCR fragment of 195 bp in the C\*04:31 allele. Specific PCR fragment of 220 bp in the C\*04:10-04:11, 04:36 and 04:55 and the C\*15:36 alleles.

<sup>11</sup>Primer mix 12: Specific PCR fragment of 125 bp in the C\*04:29, 04:36 and 04:55 and the C\*07:125 alleles. Specific PCR fragment of 165 bp in the C\*04:33 allele. Specific PCR fragment of 125 and 165 bp in the C\*04:11 allele.

<sup>12</sup>Primer mix 13: Specific PCR fragment of 225 bp in the C\*04:12 allele. Specific PCR fragment of 270 bp in the C\*04:52 and 04:55 alleles.

<sup>13</sup>Primer mix 14: Specific PCR fragment of 155 bp in the C\*04:16 allele. Specific PCR fragment of 190 bp in the C\*04:13, 04:18 and 04:58 and the C\*07:08 and 07:108 alleles.

<sup>14</sup>Primer mix 18: Specific PCR fragment of 125 bp in the C\*04:70 allele. Specific PCR fragment of 220 bp in the C\*04:19 and 04:94:01-04:94:02 and the C\*12:10:01-12:10:02 and 18:03 and in the B\*15:27:01-15:27:03 and B\*15:109 alleles.

<sup>15</sup>Primer mix 19: Specific PCR fragment of 120 bp in the C\*04:35 and 04:37 alleles. Specific PCR fragment of 155 bp in the C\*04:20 and the C\*03:135 alleles.

<sup>16</sup>Primer mix 20: Specific PCR fragment of 165 bp in the C\*04:44 allele. Specific PCR fragment of 250 bp in the C\*04:47 allele. Specific PCR fragment of 545 bp in the C\*04:15:02, 04:17 and 04:100 and the C\*15:36 and the A\*33:52 alleles.

<sup>17</sup>Primer mix 21: Specific PCR fragment of 85 bp in the C\*04:23 and 04:108 alleles. Specific PCR fragment of 145 bp in the C\*04:38 allele. Specific PCR fragment of 240 bp in the C\*04:39 allele.

<sup>18</sup>Primer mix 23: Specific PCR fragment of 85 bp in the C\*04:25 allele. Specific PCR fragment of 145 bp in the C\*04:40 allele. Specific PCR fragment of 215 bp in the C\*04:41 allele.

<sup>19</sup>Primer mix 27: Specific PCR fragment of 125 bp in the C\*04:50 allele. Specific PCR fragment of 285 bp in the C\*04:46 allele.

<sup>20</sup>Primer mix 28: Specific PCR fragment of 120 bp in the C\*04:75 allele. Specific PCR fragment of 215 bp in the C\*04:48 allele.

<sup>21</sup>Primer mix 31: Specific PCR fragment of 130 bp in the C\*04:95N allele. Specific PCR fragment of 180 bp in the C\*04:51 allele.

<sup>22</sup>Primer mix 32: Specific PCR fragment of 105 bp in the C\*04:78 allele. Specific PCR fragment of 235 bp in the C\*04:59Q allele. Specific PCR fragment of 275 bp in the C\*04:77 and in the B\*40:100 alleles.

<sup>23</sup>Primer mix 33: Specific PCR fragment of 80 bp in the C\*04:72 allele. Specific PCR fragment of 180 bp in the C\*04:58 and 04:65 and the C\*07:08 and 07:108 and in the B\*40:100 alleles.

<sup>24</sup>Primer mix 34: Specific PCR fragment of 75 bp in the C\*04:96 allele. Specific PCR fragment of 200 bp in the C\*04:13, 04:58, 04:61 and 04:68 and the C\*07:08 and 07:108 alleles.

<sup>25</sup>Primer mix 35: Specific PCR fragment of 85 bp in the C\*04:62 allele. Specific PCR fragment of 175 bp in the C\*04:76 allele.

<sup>26</sup>Primer mix 37: Specific PCR fragment of 110 bp in the C\*04:63 and 04:73 alleles. Specific PCR fragment of 135 bp in the C\*04:74 allele.

<sup>27</sup>Primer mix 38: Specific PCR fragment of 105 bp in the C\*04:83 allele. Specific PCR fragment of 135 bp in the C\*04:74 allele.

<sup>28</sup>Primer mix 39: Specific PCR fragment of 135 bp in the C\*04:71 and 04:95N and the C\*01:21 alleles. Specific PCR fragment of 330 bp in the C\*04:79 allele.

<sup>29</sup>Primer mix 40: Specific PCR fragment of 140 bp in the C\*04:56 allele. Specific PCR fragment of 270 bp in the C\*04:64 allele.

<sup>30</sup>Primer mix 41: Specific PCR fragment of 135 bp in the C\*04:105N allele. Specific PCR fragment of 280 bp in the C\*04:54 and the C\*01:04, 01:54, 14:02:01-14:25 and 14:27-14:37 alleles.

<sup>31</sup>Primer mix 43: Specific PCR fragment of 170 bp in the C\*04:81 allele. Specific PCR fragment of 260 bp in the C\*04:88N allele.

101.612-12 – including *Taq* pol.  
101.612-12u– without *Taq* pol.

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**Lot No.: 79N****Lot-specific information**

<sup>32</sup>Primer mix 45: Specific PCR fragment of 135 bp in the C\*04:66 allele. Specific PCR fragment of 160 bp in the C\*04:16 and 04:103 alleles.

<sup>33</sup>Primer mix 46: Specific PCR fragment of 125 bp in the C\*04:93N allele. Specific PCR fragment of 300 bp in the C\*04:67 allele.

<sup>34</sup>Primer mix 47: Specific PCR fragment of 155 bp in the C\*04:84 and the C\*07:167 alleles. Specific PCR fragment of 240 bp in the C\*04:106 allele.

‘w’, may be weakly amplified.

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101.612-12u– without *Taq* pol.

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Lot No.: 79N

Lot-specific information

INTERPRETATION TABLE																											
HLA-C*04 SSP subtyping																											
Amplification patterns of the C*04:01 to C*04:112 alleles																											
		Well <sup>22</sup>																									
		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.		250	220	145	210	250	95	145	270	110	195	180	125	225	155	180	130	320	125	120	165	85	130	85	170		
PCR product(s)										180	220	165	270	190					220	155	250	145		145			
Length of int.		800	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	545	240	215	170		
pos. control <sup>1</sup>																											
5'-primer(s) <sup>2</sup>		5'-CCA <sup>3'</sup> 2 <sup>nd</sup> I	5'-CCT <sup>3'</sup> 112	5'-CCT <sup>3'</sup> 112	5'-CCA <sup>3'</sup> 118	5'-CCA <sup>3'</sup> 2 <sup>nd</sup> I	5'-CTC <sup>3'</sup> 98	5'-CCT <sup>3'</sup> 112	5'-CCA <sup>3'</sup> 2 <sup>nd</sup> I	5'-ACC <sup>3'</sup> 391	5'-CCT <sup>3'</sup> 112	5'-CCA <sup>3'</sup> 201	5'-ggA <sup>3'</sup> 218	5'-CCT <sup>3'</sup> 112	5'-gCT <sup>3'</sup> 105	5'-ATA <sup>3'</sup> 412	5'-gTg <sup>3'</sup> 368	5'-ACg <sup>3'</sup> 379	5'-ATg <sup>3'</sup> 228	5'-gTA <sup>3'</sup> 347	5'-CCT <sup>3'</sup> 112	5'-gTT <sup>3'</sup> 368	5'-ggA <sup>3'</sup> 127	5'-TCC <sup>3'</sup> 172	5'-gAT <sup>3'</sup> 89		
								459		1018	368				368	697	369		368	368				355	97		
								5'-gAT <sup>3'</sup>		5'-gTg <sup>3'</sup>	5'-gTT <sup>3'</sup>				5'-gTT <sup>3'</sup>	5'-TCC <sup>3'</sup>	5'-TAC <sup>3'</sup>			5'-gTg <sup>3'</sup>				5'-CCT <sup>3'</sup>	5'-TCg <sup>3'</sup>		
																								670	1018		
																				5'-ACC <sup>3'</sup>				5'-CCg <sup>3'</sup>	5'-gTg <sup>3'</sup>		
3'-primer(s) <sup>3</sup>		5'-TCC <sup>3'</sup> 539	5'-AgC <sup>3'</sup> 289	5'-gCT <sup>3'</sup> 218	5'-AgC <sup>3'</sup> 289	5'-TCA <sup>3'</sup> 539	5'-CAG <sup>3'</sup> 154	5'-gCg <sup>3'</sup> 218	5'-CAG <sup>3'</sup> 559	5'-AgA <sup>3'</sup> 459	5'-AgT <sup>3'</sup> 289	5'-CgT <sup>3'</sup> 341	5'-ggC <sup>3'</sup> 302	5'-TCC <sup>3'</sup> 295	5'-gCT <sup>3'</sup> 218	5'-TCT <sup>3'</sup> 539	5'-AgA <sup>3'</sup> 459	5'-ACg <sup>3'</sup> 3 <sup>rd</sup> I	5'-AgT <sup>3'</sup> 312	5'-AgA <sup>3'</sup> 459	5'-CCA <sup>3'</sup> 238	5'-gTC <sup>3'</sup> 412	5'-gCT <sup>3'</sup> 218	5'-gCT <sup>3'</sup> 218	5'-gCT <sup>3'</sup> 218	5'-gCT <sup>3'</sup> 218	5'-gCT <sup>3'</sup> 218
			5'-AgC <sup>3'</sup> 289		5'-AgC <sup>3'</sup> 289			5'-CTC <sup>3'</sup> 559		5'-Tgg <sup>3'</sup> 1052	5'-AgT <sup>3'</sup> 289	5'-Cgg <sup>3'</sup> 341	5'-T <sup>3'</sup> 343	5'-CTT <sup>3'</sup> 514	5'-CAC <sup>3'</sup> 846				5'-CCA <sup>3'</sup> 538	5'-gCT <sup>3'</sup> 319	5'-ggC <sup>3'</sup> 472				5'-AgA <sup>3'</sup> 459	5'-Tgg <sup>3'</sup> 1052	
										5'-TTA <sup>3'</sup> 1092	5'-ggA <sup>3'</sup> 521			5'-CCg <sup>3'</sup> 527					5'-CAT <sup>3'</sup> 550	5'-CAT <sup>3'</sup> 368	5'-CTg <sup>3'</sup> 568				5'-CAC <sup>3'</sup> 846		
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-C allele <sup>4,5</sup>																											





101.612-12 – including *Taq* pol.  
101.612-12u– without *Taq* pol.

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Lot-specific information

Length of spec.	250	220	145	210	250	95	145	270	110	195	180	125	225	155	180	130	320	125	120	165	85	130	85	170		
PCR product(s)									220	180	110	195	180	125	225	155	180	130	320	125	120	165	85	130	85	170
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-C allele <sup>4,5</sup>																										
*04:01:01:01-04:01:09, 04:01:11-04:01:22, 04:01:24- 04:01:27, 04:01:29- 04:01:37, 04:82, 04:85-04:86, 04:90- 04:92, 04:97-04:99, 04:101- 04:102, 04:104, 04:109, 04:112	1	2	3								11															
*04:01:10, 04:01:23	1	2	3																							
*04:01:28	1		3								11															
*04:03, 02:49 <sup>6</sup>	1			4							11															
*04:04:01-04:04:02		2	3		5						11															
*04:05	1	2	3			6					11															
*04:06				4	5						11															
*04:07, 04:89	1	2					7				11															
*04:08	1	2	3					8			11															
*04:09N	1	2	3						9		11															
*04:10	1		3							10	11															
*04:11	1		3							10		12														
*04:12	1	w	3								11		13													
*04:13		2	3		5						11		14													
*04:14		2	3								11			15												
*04:15:01, 04:15:03	1	2	3								11				16											
*04:15:02, 04:44, 04:47 <sup>8</sup>	1	2	3								11										20					
*04:16	1										11		14													
*04:17, 04:100	1	2	3								11					17				20						
*04:18	1	2	3								11		14													
*04:19	w	2	3								11							18								
*04:20	1	2	3								11								19							
*04:23, 04:38, 04:39, 04:108 <sup>9</sup>	1	2	3								11										21					
*04:24	1	2	3								11											22				
*04:25, 04:40, 04:41 <sup>10</sup>	1	2	3								11												23			
*04:26	1	2	3								11													24		
*04:27	1	2					7																			
*04:28	1	2	3								11				15											
*04:29	1	2	3								11	12														
*04:30	1	2	3						9		11													24		
*04:31	1	2	3							10	11															
*04:32	1	2	3				7				11															
*04:33	1	2	3									12														
*04:34		2	3		5			8			11															
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		



101.612-12 – including *Taq* pol.  
101.612-12u– without *Taq* pol.

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Lot-specific information

Length of spec.	250	220	145	210	250	95	145	270	110	180	125	225	155	180	130	320	125	120	165	85	130	85	170	
PCR product(s)									220	180	110	270	190				220	155	250	145		145		
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
*04:35	1	2	3						9		11								19					
*04:36	1		3							10	11	12												
*04:37	1	2	3								11				16				19					
*04:42	1										11													24
*04:43	1	2	3								11													
*04:45	1	2	3								11													
*04:46, 04:50 <sup>11</sup>	1	2	3								11													
*04:48, 04:75 <sup>12</sup>	1	2	3								11													
*04:49	1	2	3								11													
*04:51	1	2	3								11													
*04:52	1	2	3										13											
*04:53	1	2	3								11													
*04:54, 04:105N <sup>13</sup>	1	2	3								11													
*04:55	1		3							10		12	13											
*04:56, 04:64 <sup>14</sup>	1	2	3								11													
*04:57	1	2	3								11													
*04:58		2	3		5						11		14											
*04:59Q, 04:78 <sup>15</sup>	1	2	3								11													
*04:60	1	2	3								11													
*04:61, 04:96 <sup>16</sup>	1	2	3								11													
*04:62, 04:76 <sup>17</sup>	1	2	3								11													
*04:63	1	2	3								11													
*04:65, 04:72 <sup>18</sup>	1	2	3								11													
*04:66	1	2	3								11													
*04:67, 04:93N <sup>19</sup>	1	2	3								11													
*04:68		2	3								11			15										
*04:69	1	2	3								11													
*04:70	1	2	3								11								18					
*04:71	1		3								11													
*04:73	1	2	3								11													
*04:74	1	2	3								11													
*04:77	1	2	3				7				11													
*04:79	1	2	3								11													
*04:80	1			4							11								17					
*04:81, 04:88N <sup>20</sup>	1	2	3								11													
*04:83	1	2	3								11													
*04:84, 04:106 <sup>21</sup>	1	2	3								11													
*04:87	1	2									11													
*04:94:01-04:94:02	1	2	3								11								18					
*04:95N	w	2	3								11													
*04:103	1										11													
*04:107, 02:12, 02:55 <sup>7</sup>	1			4																				
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



101.612-12 – including *Taq* pol.  
 101.612-12u– without *Taq* pol.

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Lot-specific information

Length of spec.	250	220	145	210	250	95	145	270	110	195	180	125	225	155	180	130	320	125	120	165	85	130	85	170	
PCR product(s)									220	180	110	125	270	190	155	180	320	220	125	155	250	165	85	130	85
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	
*04:110	?	2	3								11														
*04:111		2	3								11														
*01:02:01-01:03, 01:05-01:20, 01:23-01:34, 01:36-01:49, 01:51-01:53, 01:55-01:66, 02:02:01-02:02:03, 02:02:05-02:02:22, 02:04-02:11, 02:13-02:15, 02:17, 02:19-02:40, 02:42-02:48, 02:50-02:54, 02:56, 05:01:01-05:01:18, 05:03-05:10, 05:12-05:16, 05:18:01-05:24, 05:26, 05:28-05:38, 05:40-05:41, 05:43-05:48N, 05:50, 05:52-05:61, 05:63-05:67, 05:69, 05:71-05:74, 06:02:01-01-06:02:01:02, 06:02:03-06:03:02, 06:06-06:39, 06:41-06:76, 08:02:01-08:02:07, 08:05, 08:07, 08:12, 08:15:01-08:15:02, 08:17-08:19, 08:23, 08:25, 08:27, 08:29-08:35, 08:37, 08:43, 08:45, 08:47-08:49, 08:51-08:53, 08:55N, 12:02:01-12:09, 12:11-12:13, 12:15-12:17, 12:21-12:27, 12:29-12:76, 14:26, 15:08, 16:04, 16:29, 16:33, 16:42, 18:01-18:02, 18:04-18:05	1																								
*01:04, 01:54, 14:02:01-14:05, 14:07N-14:08, 14:10-14:14, 14:16-14:19, 14:21N-14:24, 14:27-14:37	1																								
*01:21	1																								
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	



101.612-12 – including *Taq* pol.  
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200	215	125	120	185	75	130	105	80	75	85	115	110	105	135	140	135	85	170	135	135	125	155	Length of spec. PCR product(s)
		285	215			180	235	180	200	175		135	135	330	270	280		260		160	300	240	
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	Well No.
																							*04:110
																							*04:111
																							*01:02:01-01:03, 01:05-01:20, 01:23-01:34, 01:36-01:49, 01:51-01:53, 01:55-01:66, 02:02:01-02:02:03, 02:02:05-02:02:22, 02:04-02:11, 02:13-02:15, 02:17, 02:19-02:40, 02:42-02:48, 02:50-02:54, 02:56, 05:01:01:01-05:01:18, 05:03-05:10, 05:12-05:16, 05:18:01-05:24, 05:26, 05:28-05:38, 05:40-05:41, 05:43-05:48N, 05:50, 05:52-05:61, 05:63-05:67, 05:69, 05:71-05:74, 06:02:01:01-06:02:01:02, 06:02:03-06:03:02, 06:06-06:39, 06:41-06:76, 08:02:01-08:02:07, 08:05, 08:07, 08:12, 08:15:01-08:15:02, 08:17-08:19, 08:23, 08:25, 08:27, 08:29-08:35, 08:37, 08:43, 08:45, 08:47-08:49, 08:51-08:53, 08:55N, 12:02:01-12:09, 12:11-12:13, 12:15-12:17, 12:21-12:27, 12:29-12:76, 14:26, 15:08, 16:04, 16:29, 16:33, 16:42, 18:01-18:02, 18:04-18:05
																41							*01:04, 01:54, 14:02:01-14:05, 14:07N-14:08, 14:10-14:14, 14:16-14:19, 14:21N-14:24, 14:27-14:37
														39									*01:21
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	Well No.



101.612-12 – including *Taq* pol.  
101.612-12u– without *Taq* pol.

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Length of spec.	250	220	145	210	250	95	145	270	110	195	180	125	225	155	180	130	320	125	120	165	85	130	85	170
PCR product(s)									220	180	220	165	270	190				220	155	250	145		145	
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
*01:22, 02:03, 02:16:01-02:16:02, 02:18, 05:11, 05:17, 05:68, 06:04, 08:01:01-08:01:05, 08:03:01-08:04:02, 08:06, 08:08-08:11, 08:13-08:14, 08:16:01-08:16:02, 08:20-08:22, 08:24, 08:26N, 08:36N, 08:38-08:40, 08:42, 08:44, 08:46, 08:50, 08:54, 08:56-08:60, 12:14:01-12:14:02, 12:18:01-12:18:02, 12:20, 15:02:01-15:07, 15:09-15:13, 15:16-15:24, 15:26-15:35, 15:37-15:50, 15:52-15:60, 16:35, 16:40, 17:01:01:01-17:06, 17:08-17:11					5																			
*01:35, 05:27, 08:41, 15:15, 17:07, <i>B*58:02</i>					5			8																
*01:50	1																17							
*03:05, 03:25, 03:27, <i>B*15:78:03</i>																16								
*03:34, 03:142							7																	
*03:135																16			19					
*05:25, 05:42, 06:05, 08:28, 12:28	1										11													
*05:39	1							8																
*05:49	1																							
*07:02:09, 15:25, 16:26											11													
*07:08, 07:108														14										
*07:64		2					7																	
*07:125												12												24
*07:167																								
*12:10:01-12:10:02	1																	18						
*14:06, 14:15					5																			
*14:09	1															16								
*14:20	1							8																
*14:25	1						7																	
*15:36					5		7			10										20				
*16:12																								
*16:45, A*24:96, A*24:146															15									
*18:03	1						7											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



101.612-12 – including *Taq* pol.  
101.612-12u– without *Taq* pol.

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Lot No.: **79N**

Lot-specific information

Length of spec.	250	220	145	210	250	95	145	270	110	195	180	125	225	155	180	130	320	125	120	165	85	130	85	170
PCR product(s)									180	220		165	270	190				220	155	250	145		145	
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
<i>A*33:52</i>																				<b>20</b>				
<i>B*07:90</i>																								
<i>B*15:27:01-15:27:03</i> , <i>A*15:109</i> <i>B*40:100</i>																		<b>18</b>						
<b>HLA-C allele</b> <sup>4,5</sup>																								
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

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-C\*04 subtyping. .

In addition, wells number 26, 27 and 40 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

<sup>2</sup>The nucleotide position, in the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> or 6<sup>th</sup>, exon or in the 2<sup>nd</sup> and 3<sup>rd</sup> intron, matching the specificity-determining 3'-end of the primer is given. Nucleotide numbering as on the [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.

<sup>3</sup>The nucleotide position, in the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 6<sup>th</sup> or 7<sup>th</sup> exon or in the 3<sup>rd</sup> intron, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide numbering as on the [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.

<sup>4</sup>The nucleotide sequence of the Cw\*0402 allele has been shown to be identical to C\*04:01:01:01. The nucleotide sequence of the Cw\*0421 allele has been renamed C\*04:15:02.

The nucleotide sequence of the Cw\*0422 allele has been shown to be identical to C\*04:21.

<sup>5</sup>HLA-C\*04 alleles in bold lettering are listed as confirmed alleles on the IMGT/HLA web page [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla), release 3.8.0, April 2012.

<sup>6</sup>The HLA-C\*04 primer set cannot separate the C\*04:03 and 02:49 alleles. These alleles can be distinguished by the HLA-C low resolution kit and/or the HLA-C\*02 high resolution kit.

<sup>7</sup>The HLA-C\*04 primer set cannot separate the C\*04:107 and the C\*02:12 and 02:55 alleles. These alleles can be distinguished by the HLA-C low resolution kit and/or the HLA-C\*02 high resolution kit.

<sup>8</sup>The C\*04:15:02, C\*04:44 and C\*04:47 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 20.

<sup>9</sup>The C\*04:23, C\*04:38 and C\*04:39 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 21.

<sup>10</sup>The C\*04:25, C\*04:40 and C\*04:41 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 23.

<sup>11</sup>The C\*04:46 and C\*04:50 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 27.

<sup>12</sup>The C\*04:48 and C\*04:75 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 28.

<sup>13</sup>The C\*04:54 and C\*04:105N alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 41.

<sup>14</sup>The C\*04:56 and C\*04:64 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 40.

<sup>15</sup>The C\*04:59Q and C\*04:78 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 32.

101.612-12 – including *Taq* pol.  
101.612-12u– without *Taq* pol.

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Lot No.: **79N**

Lot-specific information

200		215		125		120		185		75		130		105		80		75		85		115		110		105		135		140		135		85		170		135		135		125		155		Length of spec.	
				285		215						180		235		180		200		175				135		135		330		270		280				260		160		300		240		PCR product(s)			
												275																																			
25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		Well No.	
										30																																		A*33:52			
																																												B*07:90			
25																																												B*15:27:01-15:27:03, A*15:109			
												32		33																														B*40:100			
																																												HLA-C allele <sup>4,5</sup>			
25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		Well No.	

<sup>16</sup>The C\*04:61 and C\*04:96 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 34.

<sup>17</sup>The C\*04:62 and C\*04:76 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 35.

<sup>18</sup>The C\*04:65 and C\*04:72 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 33.

<sup>19</sup>The C\*04:67 and C\*04:93N alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 46.

<sup>20</sup>The C\*04:81 and C\*04:88N alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 43.

<sup>21</sup>The C\*04:84 and C\*04:106 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 47.

<sup>22</sup>Primer mix 9: Specific PCR fragment of 110 bp in the C\*04:35 allele. Specific PCR fragment of 180 bp in the C\*04:30 allele. Specific PCR fragment of 220 bp in the C\*04:09N allele.

Primer mix 10: Specific PCR fragment of 195 bp in the C\*04:31 allele. Specific PCR fragment of 220 bp in the C\*04:10-04:11, 04:36 and 04:55 and the C\*15:36 alleles.

Primer mix 12: Specific PCR fragment of 125 bp in the C\*04:29, 04:36 and 04:55 and the C\*07:125 alleles. Specific PCR fragment of 165 bp in the C\*04:33 allele. Specific PCR fragment of 125 and 165 bp in the C\*04:11 allele.

Primer mix 13: Specific PCR fragment of 225 bp in the C\*04:12 allele. Specific PCR fragment of 270 bp in the C\*04:52 and 04:55 alleles.

Primer mix 14: Specific PCR fragment of 155 bp in the C\*04:16 allele. Specific PCR fragment of 190 bp in the C\*04:13, 04:18 and 04:58 and the C\*07:08 and 07:108 alleles.

Primer mix 18: Specific PCR fragment of 125 bp in the C\*04:70 allele. Specific PCR fragment of 220 bp in the C\*04:19 and 04:94:01-04:94:02 and the C\*12:10:01-12:10:02 and 18:03 and in the B\*15:27:01-15:27:03 and B\*15:109 alleles.

Primer mix 19: Specific PCR fragment of 120 bp in the C\*04:35 and 04:37 alleles. Specific PCR fragment of 155 bp in the C\*04:20 and the C\*03:135 alleles.

Primer mix 20: Specific PCR fragment of 165 bp in the C\*04:44 allele. Specific PCR fragment of 250 bp in the C\*04:47 allele. Specific PCR fragment of 545 bp in the C\*04:15:02, 04:17 and 04:100 and the C\*15:36 and the A\*33:52 alleles.

Primer mix 21: Specific PCR fragment of 85 bp in the C\*04:23 and 04:108 alleles. Specific PCR fragment of 145 bp in the C\*04:38 allele. Specific PCR fragment of 240 bp in the C\*04:39 allele.

Primer mix 23: Specific PCR fragment of 85 bp in the C\*04:25 allele. Specific PCR fragment of 145 bp in the C\*04:40 allele. Specific PCR fragment of 215 bp in the C\*04:41 allele.

Primer mix 27: Specific PCR fragment of 125 bp in the C\*04:50 allele. Specific PCR fragment of 285 bp in the C\*04:46 allele.

Primer mix 28: Specific PCR fragment of 120 bp in the C\*04:75 allele. Specific PCR fragment of 215 bp in the C\*04:48 allele.

Primer mix 31: Specific PCR fragment of 130 bp in the C\*04:95N allele. Specific PCR fragment of 180 bp in the C\*04:51 allele.

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**Lot No.: 79N****Lot-specific information**

Primer mix 32: Specific PCR fragment of 105 bp in the C\*04:78 allele. Specific PCR fragment of 235 bp in the C\*04:59Q allele. Specific PCR fragment of 275 bp in the C\*04:77 and in the B\*40:100 alleles.

Primer mix 33: Specific PCR fragment of 80 bp in the C\*04:72 allele. Specific PCR fragment of 180 bp in the C\*04:58 and 04:65 and the C\*07:08 and 07:108 and in the B\*40:100 alleles.

Primer mix 34: Specific PCR fragment of 75 bp in the C\*04:96 allele. Specific PCR fragment of 200 bp in the C\*04:13, 04:58, 04:61 and 04:68 and the C\*07:08 and 07:108 alleles.

Primer mix 35: Specific PCR fragment of 85 bp in the C\*04:62 allele. Specific PCR fragment of 175 bp in the C\*04:76 allele.

Primer mix 37: Specific PCR fragment of 110 bp in the C\*04:63 and 04:73 alleles. Specific PCR fragment of 135 bp in the C\*04:74 allele.

Primer mix 38: Specific PCR fragment of 105 bp in the C\*04:83 allele. Specific PCR fragment of 135 bp in the C\*04:74 allele.

Primer mix 39: Specific PCR fragment of 135 bp in the C\*04:71 and 04:95N and the C\*01:21 alleles. Specific PCR fragment of 330 bp in the C\*04:79 allele.

Primer mix 40: Specific PCR fragment of 140 bp in the C\*04:56 allele. Specific PCR fragment of 270 bp in the C\*04:64 allele.

Primer mix 41: Specific PCR fragment of 135 bp in the C\*04:105N allele. Specific PCR fragment of 280 bp in the C\*04:54 and the C\*01:04, 01:54, 14:02:01-14:25 and 14:27-14:37 alleles.

Primer mix 43: Specific PCR fragment of 170 bp in the C\*04:81 allele. Specific PCR fragment of 260 bp in the C\*04:88N allele.

Primer mix 45: Specific PCR fragment of 135 bp in the C\*04:66 allele. Specific PCR fragment of 160 bp in the C\*04:16 and 04:103 alleles.

Primer mix 46: Specific PCR fragment of 125 bp in the C\*04:93N allele. Specific PCR fragment of 300 bp in the C\*04:67 allele.

Primer mix 47: Specific PCR fragment of 155 bp in the C\*04:84 and the C\*07:167 alleles. Specific PCR fragment of 240 bp in the C\*04:106 allele.

‘w’, may be weakly amplified.

101.612-12 – including *Taq* pol.  
 101.612-12u– without *Taq* pol.

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Lot No.: **79N**

Lot-specific information

<b>CELL LINE VALIDATION SHEET</b>																				
<b>HLA-C*04 SSP subtyping kit</b>																				
				Well																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				Prod. No.:	201070201	201070202	201070203	201201804	201070205	201070206	201070207	201070208	201070209	201201810	201070211	201070212	201070213	201205414	201070215	201070216
IHWC cell line		C*																		
1	9001	SA	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*07:01	*15:05	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*12:02		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*03:04	*04:01	+	+	+	-	-	-	-	-	-	-	+	-	-	-	-	-
5	9009	KAS011	*06:02		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*03:04	*07:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*05:01		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*04:01		+	+	+	-	-	-	-	-	-	-	+	-	-	-	-	-
9	9026	YAR	*12:03		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*01:02		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*06:02		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*01:02		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*01:02	*03:04	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*02:02		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*03:03	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*01:02	*07:05	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*12:03		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*01:02	*15:02	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*12:03		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*08:02		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*07:04	*15:05	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*05:01	*16:01	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*17:01		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
31	9019	DUCAF	*05:01		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*17:01	*17:03	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*12:03		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*05:01		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*03:03	*04:01	+	+	+	-	-	-	-	-	-	-	+	-	-	-	-	-
37	9065	HHKB	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*02:02	*07:01	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*01:02	*06:02	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*08:02		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*01:02		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*01:02	*08:01	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*12:03		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*06:02	*17:01	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*07:04	*15:02	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*04:01	*16:01	+	+	+	-	-	-	-	-	-	-	+	-	-	-	-	-



101.612-12 – including *Taq* pol.  
101.612-12u– without *Taq* pol.

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Lot No.: **79N**

Lot-specific information

<b>CELL LINE VALIDATION SHEET</b>																							
<b>HLA-C*04 SSP subtyping kit</b>																							
				Well																			
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32				
				Prod. No.:	201185317	201201818	201070219	201070220	201070221	201070222	201070223	201070224	201201825	201070226	201070227	201185328	201070229	201070230	201201831	201205432			
IHWC cell line		C*																					
1	9001	SA	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2	9280	LK707	*07:01	*15:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
3	9011	E4181324	*12:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4	9275	GU373	*03:04	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
5	9009	KAS011	*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
6	9353	SM	*03:04	*07:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
7	9020	QBL	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
8	9025	DEU	*04:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
9	9026	YAR	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
10	9107	LKT3	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
11	9051	PITOUT	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
12	9052	DBB	*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
13	9004	JESTHOM	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
14	9071	OLGA	*01:02	*03:04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
15	9075	DKB	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
16	9037	SWEIG007	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
17	9282	CTM3953540	*03:03	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
18	9257	32367	*01:02	*07:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
19	9038	BM16	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
20	9059	SLE005	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
21	9064	AMALA	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
22	9056	KOSE	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
23	9124	IHL	*01:02	*15:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
24	9035	JBUSH	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
25	9049	IBW9	*08:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
26	9285	WT49	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
27	9191	CH1007	*07:04	*15:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
28	9320	BEL5GB	*05:01	*16:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
29	9050	MOU	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
30	9021	RSH	*17:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
31	9019	DUCAF	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
32	9297	HAG	*17:01	*17:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
33	9098	MT14B	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
34	9104	DHIF	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
35	9302	SSTO	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
36	9024	KT17	*03:03	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
37	9065	HHKB	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
38	9099	LZL	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
39	9315	CML	*02:02	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
40	9134	WHONP199	*01:02	*06:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
41	9055	H0301	*08:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
42	9066	TAB089	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
43	9076	T7526	*01:02	*08:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
44	9057	TEM	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
45	9239	SHJO	*06:02	*17:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
46	9013	SCHU	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
47	9045	TUBO	*07:04	*15:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
48	9303	TER-ND	*04:01	*16:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

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Lot No.: **79N**

Lot-specific information

CELL LINE VALIDATION SHEET																			
HLA-C*04 SSP subtyping kit																			
				Well															
				33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	
				Prod. No.:	201185333	201201834	201205435	201185336	201205437	201205438	201201839	201185340	201201841	201205442	201201843	201185344	201201845	201205446	201201847
	IHWC cell line		C*																
1	9001 SA		*07:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707		*07:01	*15:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324		*12:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373		*03:04	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011		*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353 SM		*03:04	*07:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL		*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025 DEU		*04:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR		*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3		*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT		*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB		*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM		*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA		*01:02	*03:04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB		*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007		*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540		*03:03	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257 32367		*01:02	*07:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16		*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005		*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA		*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE		*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL		*01:02	*15:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH		*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9		*08:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49		*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007		*07:04	*15:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB		*05:01	*16:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU		*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH		*17:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF		*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG		*17:01	*17:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B		*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF		*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO		*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17		*03:03	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB		*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL		*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML		*02:02	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134 WHONP199		*01:02	*06:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301		*08:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089		*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526		*01:02	*08:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM		*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO		*06:02	*17:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU		*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO		*07:04	*15:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303 TER-ND		*04:01	*16:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.612-12 – including *Taq* pol.  
101.612-12u – without *Taq* pol.

Visit [www.olerup-ssp.com](http://www.olerup-ssp.com) for  
“Instructions for Use” (IFU)

Lot No.: **79N**

Lot-specific information  
**CERTIFICATE OF ANALYSIS**

**Olerup SSP® HLA-C\*04 SSP**

Product number: 101.612-12 – including *Taq* polymerase  
101.612-12u – without *Taq* polymerase  
Lot number: 79N  
Expiry date: 2015-January-01  
Number of tests: 12  
Number of wells per test: 47

**Well specifications:**

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2010-702-01	17	2011-853-17	33	2011-853-33
2	2010-702-02	18	2012-018-18	34	2012-018-34
3	2010-702-03	19	2010-702-19	35	2012-054-35
4	2012-018-04	20	2010-702-20	36	2011-853-36
5	2010-702-05	21	2010-702-21	37	2012-054-37
6	2010-702-06	22	2010-702-22	38	2012-054-38
7	2010-702-07	23	2010-702-23	39	2012-018-39
8	2010-702-08	24	2010-702-24	40	2011-853-40
9	2010-702-09	25	2012-018-25	41	2012-018-41
10	2012-018-10	26	2010-702-26	42	2012-054-42
11	2010-702-11	27	2010-702-27	43	2012-018-43
12	2010-702-12	28	2011-853-28	44	2011-853-44
13	2010-702-13	29	2010-702-29	45	2012-018-45
14	2012-054-14	30	2010-702-30	46	2012-054-46
15	2010-702-15	31	2012-018-31	47	2012-018-47
16	2010-702-16	32	2012-054-32		

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 6, 8, 10, 12, 13, 15, 17, 19 to 24, 26 to 40 and 42 to 47 were available. The specificity of the primers in primer solutions 8, 10, 12, 13, 15, 17, 19 to 21, 24, 28, 31 to 34, 39, 42 and 45 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solutions 6, 26, 27, 29, 35, 40, 43 and 47 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solutions 22, 23, 30, 36 to 38 and 44 and 46 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 9, 15, 18, 19, 24, 28, 31, 41, 42 and 45 one or two of the 5'-primers were not possible to test, and in primer solutions 9, 10, 13, 14, 18, 20, 21, 24, 25, 28, 31 to 34 and 39 one or two of the 3'-primers were not possible to test. Additional primers in primer solutions 7, 9, 14, 16, 18 and 41 were tested by separately adding one 5'-primer and/or one 3'-primer.

101.612-12 – including *Taq* pol.  
101.612-12u– without *Taq* pol.

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“Instructions for Use” (IFU)

Lot No.: **79N**

Lot-specific information

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

**Date of approval:** 2012-July-13

**Approved by:**

**Production Quality Control**

101.612-12 – including *Taq* pol.  
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Lot No.: **79N**

Lot-specific information  
**Declaration of Conformity**

**Product name:** *Olerup* SSP® HLA-C\*04  
**Product number:** 101.612-12/12u  
**Lot number:** 79N

**Intended use:** HLA-C\*04 high resolution histocompatibility testing

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

We, *Olerup* SSP AB, hereby declare that this product, to which this Declaration of Conformity relates is in conformity with the following Standard(s) and other normative document(s) ISO 9001:2008 and ISO 13485:2003, following the provisions of the 98/79/EC Directive on *in vitro* diagnostic medical devices, Annex III, as transposed into the national laws of the Member States of the European Union.

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

The Authorized Representative located within the Community is: *Olerup* SSP AB.

Stockholm, Sweden  
2012-July-13

Ann-Cathrin Jareman  
Head of QA and Regulatory Affairs

101.612-12 – including *Taq* pol.  
101.612-12u– without *Taq* pol.

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Lot No.: **79N**

Lot-specific information

101.612-12 – including *Taq* pol.  
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Lot No.: **79N**

Lot-specific information

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