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101.413-24u/04u – without *Taq* polymerase		General **"Instructions for Use"**
		IFU-02 Rev. No. 02 can be downloaded from
Lot No.: **38M**	Lot-specific information	**www.olerup-ssp.com**

Olerup SSP® HLA-A*03

Product number:	**101.413-24u/04u – without *Taq* pol.**
Lot number:	**38M**
Expiry date:	**2013-December-01**
Number of tests:	**24 tests – Product No. 101.413-24u**
	4 tests – Product No. 101.413-04u
Number of wells per test:	**48**
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. 38M.

CHANGES COMPARED TO THE PREVIOUS *OLERUP* SSP® HLA-A*03 LOT

The HLA-A*03 specificity and interpretation tables have been updated for the HLA-A alleles described since the previous *Olerup* SSP® HLA-A*03 lot was made **(Lot No. 05K)**.

> The amplification patterns for some rare HLA-A*03 alleles only differ by the length of the specific PCR products.

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

Well	5'-primer	3'-primer	rationale
3	Added	-	Increased yield of HLA-specific PCR product.

Change in revision R01 compared to R00:
1.   The HLA-A*03:01:02 and A*34:02:02 alleles are not amplified by primer mix 3. This has been revised in the Specificity and Interpretation Tables.
Change in revision R02 compared to R01:
1.   Primer mix 28 does not amplify the A*03:26 allele. Thus, this lot of the HLA-A*03 subtyping kit cannot distinguish the A*03:26 and the A*03:01:01:01, 03:01:01:03-03:01:01:03, 03:01:03-03:01:07, 03:01:09-03:01:11, 03:01:13, 03:01:15-03:01:17 alleles.

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PRODUCT DESCRIPTION

HLA-A*03 SSP subtyping

CONTENT
The primer set contains 5'- and 3'-primers for identifying the A*03:01 to A*03:76 alleles.

PLATE LAYOUT
Each test consists of 48 PCR reactions in a 48 well PCR plate.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48

The 48 well cut PCR plate is marked with 'HLA-A*03' in silver/gray ink.
Well No. 1 is marked with the Lot No. '38M'.
A faint row of numbers is seen between wells 1 and 2 or wells 7 and 8 of the PCR trays. These stem from the manufacture of the trays, and should be disregarded.
The PCR plates are covered with a PCR-compatible foil.
Please note: When removing each 48 well PCR plate, make sure that the remaining plates stay covered. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

INTERPRETATION
The interpretation of HLA-A*03 SSP subtypings will be influenced by most A*01, most A*02, the A*11, two A*23, twelve A*24, the A*25:03, eight A*26, the A*29, most A*30, most A*31, most A*32, most A*33, the A*34, the A*36, most A*66, most A*68, the A*69:01, the A*74 and the A*80 alleles when present on the other haplotype. In addition, the C*07:35 allele is amplified by primer mix 46 and the C*07:86 allele is amplified by primer mix 48.

UNIQUELY IDENTIFIED ALLELES
All the HLA-A*03 alleles, i.e. **A*03:01 to A*03:76**, recognized by the HLA Nomenclature Committee in April 2010[1] will give rise to unique amplification patterns by the primers in the HLA-A*03 subtyping kit.
The HLA-A*03 subtyping kit cannot distinguish the A*03:01:01:01, 03:01:01:03 to 03:01:07, 03:01:09 to 03:01:11, 03:01:13 and the 03:01:15 to 03:01:17 alleles.
The A*03:16 and A*03:61 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 20.
The A*03:17 and A*03:74 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 21.
The A*03:20, and A*03:47 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 43.
The A*03:25 and A*03:71 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 27.

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The A*03:27 and A*03:49 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 30.
The A*03:33 and A*03:70 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 36.
The A*03:38 and A*03:68N alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 41.
The A*03:44 and A*03:53 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 46.

[1]HLA-A alleles listed on the IMGT/HLA web page 2010-April-01, release 3.0.0, www.ebi.ac.uk/imgt/hla.
[2]This lot of the HLA-A*03 subtyping kit cannot distinguish the A*03:26 and the A*03:01:01:01, 03:01:01:03-03:01:01:03, 03:01:03-03:01:07, 03:01:09-03:01:11, 03:01:13, 03:01:15-03:01:17 alleles.

RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 153 alleles generate 71 amplification patterns that can be combined in 2556 homozygous and heterozygous combinations. 1551 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.

```
++++--++ ++------ +------- ----+--- -------- -------   *03:06, *03:10 = *03:42, *03:69N
++++--++ +------- +------- ----+--- -------- -------   *03:05, *03:69N = *03:69N, *03:72
++++--++ -+------ +------- ----+--- -------- -------   *03:02, *03:06 = *03:07, *03:69N = *03:60, *03:69N
++++--++ -----+-- +------- ----+--- -------- -------   *03:11N, *03:69N = *03:59, *03:69N
++++--++ -------- ++------ ----+--- -------- -------   *03:13, *03:69N = *03:64, *03:69N
++++--++ -------- +------- ---++--- -------- -------   *03:26, *03:69N = *03:63, *03:69N
++++--++ -------- +------- ----+--+ -------- -------   *03:29, *03:69N = *03:67, *03:69N
++++--++ -------- +------- ----+--- +------- -------   *03:30, *03:69N = *03:62, *03:69N
++++--++ -------- +------- ----+--- ----+--- -------   *03:34, *03:69N = *03:48, *03:69N
++++--++ -------- +------- ----+--- ------+- -------   *03:36N, *03:69N = *03:45, *03:69N
++++--++ -------- +------- ----+--- -------- ---+----   *03:40, *03:69N = *03:51, *03:69N
++++--++ -------- +------- ----+--- -------- -------+   *03:46, *03:69N = *03:54, *03:69N
++++--++ -------- +------- ----+--- -------- -------   *03:01:01:01, *03:69N = *03:01:08, *03:69N = *03:01:14, *03:69N
                                                       = *03:06, *03:65 = *03:06, *03:69N
++++--++ -------- -+------ ----+--- -------- -------   *03:50, *03:69N = *03:66, *03:69N
++++--++ -------- -------- -------- -------- -------   *03:65, *03:69N = *03:69N, *03:69N
++++---+ ++---+-- +------- ----+--- -------- -------   *03:10, *03:11N = *03:10, *03:59
++++---+ ++------ +------- ---++--- -------- -------   *03:10, *03:26 = *03:10, *03:63
++++---+ ++------ +------- ----+--+ -------- -------   *03:10, *03:29 = *03:10, *03:67
++++---+ ++------ +------- ----+--- +------- -------   *03:10, *03:30 = *03:10, *03:62
++++---+ ++------ +------- ----+--- -+------ -------   *03:05, *03:31 = *03:10, *03:58 = *03:31, *03:72
++++---+ ++------ +------- ----+--- ----+--- -------   *03:10, *03:34 = *03:10, *03:48
++++---+ ++------ +------- ----+--- -----+-- -------   *03:05, *03:73 = *03:10, *03:35 = *03:72, *03:73
++++---+ ++------ +------- ----+--- ------+- -------   *03:10, *03:36N = *03:10, *03:45
++++---+ ++------ +------- ----+--- -------- --+-----   *03:05, *03:76 = *03:10, *03:20 = *03:72, *03:76
++++---+ ++------ +------- ----+--- -------- -------   *03:01:01:01, *03:10 = *03:01:08, *03:10 = *03:02, *03:05 =
                                                       *03:02, *03:72 = *03:10, *03:60 = *03:10, *03:72
++++---+ +------- +------- ----+--- -------- -------   *03:05, *03:65 = *03:65, *03:72
++++---+ -+++---- +------- ----+--- --+----- ---+----   *03:32, *03:40 = *03:32, *03:51
++++---+ -+++---- +------- ----+--- --+----- -------   *03:01:01:01, *03:32 = *03:01:08, *03:32 = *03:32, *03:55 =
                                                       *03:32, *03:60
++++---+ -+---+-- +------- ----+--- -+------ -------   *03:11N, *03:31 = *03:31, *03:59
++++---+ -+---+-- +------- ----+--- -----+-- -------   *03:11N, *03:73 = *03:59, *03:73
++++---+ -+---+-- +------- ----+--- -------- --+-----   *03:11N, *03:76 = *03:59, *03:76
++++---+ -+---+-- +------- -------- -------- -------   *03:02, *03:11N = *03:02, *03:59
++++---+ -+------ +------- ---++--- -+------ -------   *03:26, *03:31 = *03:31, *03:63
++++---+ -+------ +------- ---++--- -----+-- -------   *03:26, *03:73 = *03:63, *03:73
++++---+ -+------ +------- ---++--- -------- --+-----   *03:26, *03:76 = *03:63, *03:76
++++---+ -+------ +------- ---++--- -------- -------   *03:02, *03:26 = *03:02, *03:63
++++---+ -+------ +------- ----+--+ -+------ -------   *03:29, *03:31 = *03:31, *03:67
++++---+ -+------ +------- ----+--+ -----+-- -------   *03:29, *03:73 = *03:67, *03:73
++++---+ -+------ +------- ----+--+ -------- --+-----   *03:29, *03:76 = *03:67, *03:76
++++---+ -+------ +------- ----+--+ -------- -------   *03:02, *03:29 = *03:02, *03:67
```

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```
++++---+ -+------ +------- ----+--- ++------ -------   *03:30, *03:31 = *03:31, *03:62
++++---+ -+------ +------- ----+--- +----+-- -------   *03:30, *03:73 = *03:62, *03:73
++++---+ -+------ +------- ----+--- +------- --+-+--   *03:30, *03:76 = *03:62, *03:76
++++---+ -+------ +------- ----+--- +------- -------   *03:02, *03:30 = *03:02, *03:62
++++---+ -+------ +------- ----+--- -+--+--- -------   *03:31, *03:34 = *03:31, *03:48
++++---+ -+------ +------- ----+--- -+--+-- -------    *03:31, *03:35 = *03:58, *03:73
++++---+ -+------ +------- ----+--- -+----+- -------   *03:31, *03:36N = *03:31, *03:45
++++---+ -+------ +------- ----+--- -+------ --+----   *03:20, *03:31 = *03:58, *03:76
++++---+ -+------ +------- ----+--- -+------ ---+----  *03:31, *03:40 = *03:31, *03:51
++++---+ -+------ +------- ----+--- -+------ -------   *03:01:01:01, *03:31 = *03:01:08, *03:31 = *03:02, *03:58 =
                                                       *03:31, *03:58 = *03:31, *03:60
++++---+ -+------ +------- ----+--- ----++-- -------   *03:34, *03:73 = *03:48, *03:73
++++---+ -+------ +------- ----+--- ----+--- --+----   *03:34, *03:76 = *03:48, *03:76
++++---+ -+------ +------- ----+--- ----+--- -------   *03:02, *03:34 = *03:02, *03:48
++++---+ -+------ +------- ----+--- -----++- -------   *03:36N, *03:73 = *03:45, *03:73
++++---+ -+------ +------- ----+--- -----+-- --+----   *03:20, *03:73 = *03:35, *03:76
++++---+ -+------ +------- ----+--- -----+-- ---+----  *03:40, *03:73 = *03:51, *03:73
++++---+ -+------ +------- ----+--- -----+-- -------   *03:01:01:01, *03:73 = *03:01:08, *03:73 = *03:02, *03:35 =
                                                       *03:35, *03:73 = *03:60, *03:73
++++---+ -+------ +------- ----+--- ------+- --+----   *03:36N, *03:76 = *03:45, *03:76
++++---+ -+------ +------- ----+--- ------+- -------   *03:02, *03:36N = *03:02, *03:45
++++---+ -+------ +------- ----+--- -------- --++----  *03:40, *03:76 = *03:51, *03:76
++++---+ -+------ +------- ----+--- -------- --+-----  *03:01:01:01, *03:76 = *03:01:08, *03:76 = *03:02, *03:20 =
                                                       *03:20, *03:76 = *03:60, *03:76
++++---+ -+------ +------- ----+--- -------- ---+----  *03:02, *03:40 = *03:02, *03:51
++++---+ -+------ +------- ----+--- -------- -------   *03:01:01:01, *03:02 = *03:01:08, *03:02 = *03:02, *03:60 =
                                                       *03:60, *03:65
++++---+ -----+-- +------- ----+--- -------- -------   *03:11N, *03:65 = *03:59, *03:65
++++---+ -------- +------- ---++--- -------- -------   *03:26, *03:65 = *03:63, *03:65
++++---+ -------- +------- ----+-+ -------- -------    *03:29, *03:65 = *03:65, *03:67
++++---+ -------- +------- ----+--- +------- -------   *03:30, *03:65 = *03:62, *03:65
++++---+ -------- +------- ----+--- ----+--- -------   *03:34, *03:65 = *03:48, *03:65
++++---+ -------- +------- ----+--- -----+- -------    *03:36N, *03:65 = *03:45, *03:65
++++---+ -------- +------- ----+--- -------- ---+----  *03:40, *03:65 = *03:51, *03:65
++++---+ -------- +------- ----+--- -------- -------   *03:01:01:01, *03:65 = *03:01:08, *03:65
+++-+--+ +------- +------- ----+--- -------- -------   *03:03N, *03:05 = *03:03N, *03:72
+++-+--+ -+------ +------- ----+--- -------- -------   *03:03N, *03:07 = *03:03N, *03:60
+++-+--+ -----+-- +------- ----+--- -------- -------   *03:03N, *03:11N = *03:03N, *03:59
+++-+--+ -------- ++------ ----+--- -------- -------   *03:03N, *03:13 = *03:03N, *03:50 = *03:03N, *03:64 = *03:03N,
                                                       *03:66
+++-+--+ -------- +-----+- ----+--- -------- -------   *03:03N, *03:22 = *03:03N, *03:75
+++-+--+ -------- +------- ---++--- -------- -------   *03:03N, *03:26 = *03:03N, *03:63
+++-+--+ -------- +------- ----+-+ -------- -------    *03:03N, *03:29 = *03:03N, *03:67
+++-+--+ -------- +------- ----+--- +------- -------   *03:03N, *03:30 = *03:03N, *03:62
+++-+--+ -------- +------- ----+--- ----+--- -------   *03:03N, *03:34 = *03:03N, *03:48
+++-+--+ -------- +------- ----+--- -----+- -------    *03:03N, *03:36N = *03:03N, *03:45
+++-+--+ -------- +------- ----+--- -------- ---+----  *03:03N, *03:40 = *03:03N, *03:51
+++-+--+ -------- +------- ----+--- -------- -------+  *03:03N, *03:46 = *03:03N, *03:54
+++-+--+ -------- +------- ----+--- -------- -------   *03:01:01:01, *03:03N = *03:01:08, *03:03N = *03:01:14, *03:03N
                                                       = *03:03N, *03:03N
+++--+-+ +------- +------- ----+--- -------- -------   *03:04:01, *03:05 = *03:04:01, *03:72
+++--+-+ -+------ +------- ----+--- -------- -------   *03:04:01, *03:07 = *03:04:01, *03:60
+++--+-+ -----+-- +------- ----+--- -------- -------   *03:04:01, *03:11N = *03:04:01, *03:59
+++--+-+ -------- ++------ ----+--- -------- -------   *03:04:01, *03:13 = *03:04:01, *03:50 = *03:04:01, *03:64 =
                                                       *03:04:01, *03:66
+++--+-+ -------- +-----+- ----+--- -------- -------   *03:04:01, *03:22 = *03:04:01, *03:75
+++--+-+ -------- +------- ---++--- -------- -------   *03:04:01, *03:26 = *03:04:01, *03:63
+++--+-+ -------- +------- ----+-+ -------- -------    *03:04:01, *03:29 = *03:04:01, *03:67
+++--+-+ -------- +------- ----+--- +------- -------   *03:04:01, *03:30 = *03:04:01, *03:62
+++--+-+ -------- +------- ----+--- ----+--- -------   *03:04:01, *03:34 = *03:04:01, *03:48
+++--+-+ -------- +------- ----+--- -----+- -------    *03:04:01, *03:36N = *03:04:01, *03:45
+++--+-+ -------- +------- ----+--- -------- ---+----  *03:04:01, *03:40 = *03:04:01, *03:51
+++--+-+ -------- +------- ----+--- -------- -------+  *03:04:01, *03:46 = *03:04:01, *03:54
+++--+-+ -------- +------- ----+--- -------- -------   *03:01:01:01, *03:04:01 = *03:01:08, *03:04:01 = *03:01:14,
                                                       *03:04:01 = *03:04:01, *03:04:01
+++---++ +------- +------- ----+--- -------- -------   *03:05, *03:06 = *03:06, *03:72
+++---++ -+------ +------- ----+--- -------- -------   *03:06, *03:07 = *03:06, *03:60
+++---++ -----+-- +------- ----+--- -------- -------   *03:06, *03:11N = *03:06, *03:59
+++---++ -------- ++------ ----+--- -------- -------   *03:06, *03:13 = *03:06, *03:50 = *03:06, *03:64 = *03:06, *03:66
+++---++ -------- +-----+- ----+--- -------- -------   *03:06, *03:22 = *03:06, *03:75
+++---++ -------- +------- ---++--- -------- -------   *03:06, *03:26 = *03:06, *03:63
+++---++ -------- +------- ----+-+ -------- -------    *03:06, *03:29 = *03:06, *03:67
+++---++ -------- +------- ----+--- +------- -------   *03:06, *03:30 = *03:06, *03:62
```

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```
+++---++ ------- +------- ----+--- ----+--- -------    *03:06, *03:34 = *03:06, *03:48
+++---++ ------- +------- ----+--- ------+- -------    *03:06, *03:36N = *03:06, *03:45
+++---++ ------- +------- ----+--- -------- ---+----   *03:06, *03:40 = *03:06, *03:51
+++---++ ------- +------- ----+--- -------- ------+    *03:06, *03:46 = *03:06, *03:54
+++---++ ------- +------- ----+--- -------- -------    *03:01:01:01, *03:06 = *03:01:08, *03:06 = *03:01:14, *03:06 =
                                                       *03:06, *03:06
+++---+ ++---+-- +------- ----+--- -------- -------    *03:11N, *03:42 = *03:42, *03:59
+++---+ ++---+-- ++------ ----+--- -------- -------    *03:13, *03:42 = *03:42, *03:50
+++---+ ++------ +------- ---+++-- -------- -------    *03:26, *03:42 = *03:42, *03:63
+++---+ ++------ +------- ----+--+ -------- -------    *03:29, *03:42 = *03:42, *03:67
+++---+ ++------ +------- ----+--- +------- -------    *03:30, *03:42 = *03:42, *03:62
+++---+ ++------ +------- ----+--- ----+--- -------    *03:34, *03:42 = *03:42, *03:48
+++---+ ++------ +------- ----+--- ------+- -------    *03:36N, *03:42 = *03:42, *03:45
+++---+ ++------ +------- ----+--- -------- -------    *03:01:01:01, *03:42 = *03:01:08, *03:42 = *03:05, *03:07 =
                                                       *03:05, *03:60 = *03:07, *03:72 = *03:42, *03:60 = *03:42, *03:72 =
                                                       *03:60, *03:72
+++---+ +--+---- +------- ----+--- -------- -------    *03:05, *03:09 = *03:09, *03:72
+++---+ +---+--- +------- ----+--- -------- -------    *03:01:01:02N, *03:05 = *03:01:01:02N, *03:72
+++---+ +----+-- +------- ----+--- -------- -------    *03:05, *03:11N = *03:05, *03:59 = *03:11N, *03:72
+++---+ +------+ +------- ----+--- -------- -------    *03:05, *03:14 = *03:14, *03:72
+++---+ +------- ++------ ----+--- -------- -------    *03:05, *03:13 = *03:05, *03:50 = *03:05, *03:64 = *03:05, *03:66 =
                                                       *03:13, *03:72 = *03:50, *03:72 = *03:64, *03:72 = *03:66, *03:72
+++---+ +------- +-+---+- ----+--- -------- -------    *03:05, *03:19 = *03:19, *03:72
+++---+ +------- +-+---- ----+--- -------- -------     *03:05, *03:15 = *03:15, *03:72
+++---+ +------- +--+--- ----+--- -------- -------     *03:05, *03:16 = *03:16, *03:72
+++---+ +------- +---+--- ----+--- -------- -------    *03:05, *03:17 = *03:17, *03:72
+++---+ +------- +------+- ----+-+- -------- -------   *03:05, *03:56 = *03:56, *03:72
+++---+ +------- +------+- ----+--- -------- -------   *03:05, *03:22 = *03:22, *03:72 = *03:72, *03:75
+++---+ +------- +------+ ----+--- -------- -------    *03:05, *03:21N = *03:21N, *03:72
+++---+ +------- +------- +---+--- -------- -------    *03:05, *03:23:01 = *03:23:01, *03:72
+++---+ +------- +------- -+--+--- -------- -------    *03:05, *03:24 = *03:24, *03:72
+++---+ +------- +------- --+-+--- -------- -------    *03:05, *03:25 = *03:25, *03:72
+++---+ +------- +------- ---++--- -------- -------    *03:05, *03:26 = *03:05, *03:63 = *03:26, *03:72 = *03:63, *03:72
+++---+ +------- +------- ----++-- -------- -------    *03:05, *03:27 = *03:27, *03:72
+++---+ +------- +------- ----+-+- -------- -------    *03:05, *03:28 = *03:28, *03:72
+++---+ +------- +------- ----+--+ -------- -------    *03:05, *03:29 = *03:05, *03:67 = *03:29, *03:72 = *03:67, *03:72
+++---+ +------- +------- ----+--- +------- -------    *03:05, *03:30 = *03:05, *03:62 = *03:30, *03:72 = *03:62, *03:72
+++---+ +------- +------- ----+--- -+------ -------    *03:05, *03:58 = *03:58, *03:72
+++---+ +------- +------- ----+--- --+----- -------    *03:05, *03:55 = *03:55, *03:72
+++---+ +------- +------- ----+--- ---+---- -------    *03:05, *03:33 = *03:33, *03:72
+++---+ +------- +------- ----+--- ----+--- -------    *03:05, *03:34 = *03:05, *03:48 = *03:34, *03:72 = *03:48, *03:72
+++---+ +------- +------- ----+--- -----+-- -------    *03:05, *03:35 = *03:35, *03:72
+++---+ +------- +------- ----+--- ------+- -------    *03:05, *03:36N = *03:05, *03:45 = *03:45, *03:72
+++---+ +------- +------- ----+--- -------+ -------    *03:05, *03:37 = *03:37, *03:72
+++---+ +------- +------- ----+--- -------- +------    *03:05, *03:38 = *03:38, *03:72
+++---+ +------- +------- ----+--- -------- -+-----    *03:05, *03:39 = *03:39, *03:72
+++---+ +------- +------- ----+--- -------- --+----    *03:05, *03:20 = *03:20, *03:72
+++---+ +------- +------- ----+--- -------- ---+----   *03:05, *03:51 = *03:40, *03:72 = *03:51, *03:72
+++---+ +------- +------- ----+--- -------- ----+---   *03:05, *03:43 = *03:43, *03:72
+++---+ +------- +------- ----+--- -------- -----+-+   *03:05, *03:52 = *03:52, *03:72
+++---+ +------- +------- ----+--- -------- -----+--   *03:05, *03:44 = *03:44, *03:72
+++---+ +------- +------- ----+--- -------- -------+   *03:05, *03:46 = *03:05, *03:54 = *03:46, *03:72 = *03:54, *03:72
+++---+ +------- +------- ----+--- -------- -------    *03:01:01:01, *03:05 = *03:01:01:01, *03:72 = *03:01:08, *03:05 =
                                                       *03:01:08, *03:72 = *03:01:14, *03:05 = *03:01:14, *03:72 =
                                                       *03:05, *03:72
+++----+ -++----- +------- ---+++-- -------- ------+-  *03:07, *03:41 = *03:41, *03:60
+++----+ -++----- +------- ----+--- -------- -------   *03:07, *03:08 = *03:08, *03:60
+++----+ -+-+---- +------- ----+--- -------- -------   *03:07, *03:09 = *03:09, *03:60
+++----+ -+--+--- +------- ----+--- -------- -------   *03:01:01:02N, *03:07 = *03:01:01:02N, *03:60
+++----+ -+---+-- +------- ----+--- -------- -------   *03:07, *03:11N = *03:07, *03:59 = *03:11N, *03:60 = *03:59,
                                                       *03:60
+++----+ -+----+- +------- ----+--- -------- -------   *03:07, *03:12 = *03:12, *03:60
+++----+ -+-----+ +------- ----+--- -------- -------   *03:07, *03:14 = *03:14, *03:60
+++----+ -+------ ++------ ----+--- -------- -------   *03:07, *03:13 = *03:07, *03:50 = *03:13, *03:60 = *03:50, *03:60 =
                                                       *03:60, *03:64 = *03:60, *03:66
+++----+ -+------ +-+---+- ----+--- -------- -------   *03:07, *03:19 = *03:19, *03:60
+++----+ -+------ +-+---- ----+--- -------- -------    *03:07, *03:15 = *03:15, *03:60
+++----+ -+------ +--+--- ----+--- -------- -------    *03:07, *03:16 = *03:16, *03:60
+++----+ -+------ +---+--- ----+--- -------- -------   *03:07, *03:17 = *03:17, *03:60
+++-A--+ -+------ +------+- ----+-+- ------- -------   *03:07, *03:56 = *03:56, *03:60
+++----+ -+------ +------+- ----+--- -------- -------  *03:07, *03:22 = *03:22, *03:60 = *03:60, *03:75
+++----+ -+------ +------+ ----+--- -------- -------   *03:07, *03:21N = *03:21N, *03:60
+++----+ -+------ +------- +---+--- -------- -------   *03:07, *03:23:01 = *03:23:01, *03:60
```

CE

0088

For *In Vitro* Diagnostic Use.

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101.413-24u/04u – without *Taq* polymerase | General **"Instructions for Use"**
| IFU-02 Rev. No. 02 can be downloaded from
Lot No.: 38M | **Lot-specific information** | **www.olerup-ssp.com**

```
+++---+ -+----- +------- -+--+--- ------- -------   *03:07, *03:24 = *03:24, *03:60
+++---+ -+----- +------- --+-+--- ------- -------   *03:07, *03:25 = *03:25, *03:60
+++---+ -+----- +------- ---+!--- ------- -------   *03:07, *03:26 = *03:07, *03:63 = *03:26, *03:60 = *03:60, *03:63
+++---+ -+----- +------- ----+!-- ------- -------   *03:07, *03:27 = *03:27, *03:60
+++---+ -+----- +------- ----+-+- ------- -------   *03:07, *03:28 = *03:28, *03:60
+++---+ -+----- +------- ----+--+ ------- -------   *03:07, *03:29 = *03:07, *03:67 = *03:29, *03:60 = *03:60, *03:67
+++---+ -+----- +------- ----+--+ +------ -------   *03:07, *03:30 = *03:07, *03:62 = *03:30, *03:60 = *03:60, *03:62
+++---+ -+----- +------- ----+--- -+----- -------   *03:07, *03:58 = *03:58, *03:60
+++---+ -+----- +------- ----+--- --+---- -------   *03:07, *03:55 = *03:55, *03:60
+++---+ -+----- +------- ----+--- ---+--- -------   *03:07, *03:33 = *03:33, *03:60
+++---+ -+----- +------- ----+--- ----+-- -------   *03:07, *03:34 = *03:07, *03:48 = *03:34, *03:60 = *03:48, *03:60
+++---+ -+----- +------- ----+--- -----+- -------   *03:07, *03:35 = *03:35, *03:60
+++---+ -+----- +------- ----+--- ------+- -------   *03:07, *03:36N = *03:07, *03:45 = *03:36N, *03:60 = *03:45,
                                                     *03:60
+++---+ -+----- +------- ----+--- -------+ -------   *03:07, *03:37 = *03:37, *03:60
+++---+ -+----- +------- ----+--- ------- +------   *03:07, *03:38 = *03:38, *03:60
+++---+ -+----- +------- ----+--- ------- -+-----   *03:07, *03:39 = *03:39, *03:60
+++---+ -+----- +------- ----+--- ------- --+----   *03:07, *03:20 = *03:20, *03:60
+++---+ -+----- +------- ----+--- ------- ---+---   *03:07, *03:40 = *03:07, *03:51 = *03:40, *03:60 = *03:51, *03:60
+++---+ -+----- +------- ----+--- ------- ----+--   *03:07, *03:43 = *03:43, *03:60
+++---+ -+----- +------- ----+--- ------- -----+-+  *03:07, *03:52 = *03:52, *03:60
+++---+ -+----- +------- ----+--- ------- -----+--  *03:07, *03:44 = *03:44, *03:60
+++---+ -+----- +------- ----+--- ------- ------+-  *03:07, *03:57 = *03:57, *03:60
+++---+ -+----- +------- ----+--- ------- -------+  *03:07, *03:46 = *03:46, *03:60 = *03:54, *03:60
+++---+ -+----- +------- ----+--- ------- --------  *03:01:01:01, *03:07 = *03:01:01:01, *03:60 = *03:01:08, *03:07 =
                                                     *03:01:08, *03:60 = *03:01:14, *03:60 = *03:07, *03:60 = *03:60,
                                                     *03:60
+++---+ --+----- ++------ ---++--- ------- -----+-  *03:13, *03:41 = *03:41, *03:50 = *03:41, *03:64 = *03:41, *03:66
+++---+ --+----- ++------ ---++--- ------- -----+-  *03:08, *03:13 = *03:08, *03:50 = *03:08, *03:64 = *03:08, *03:66
+++---+ --+----- +----+- ---++--- ------- -----+-   *03:22, *03:41 = *03:41, *03:75
+++---+ --+----- +----+- ---++--- ------- --------  *03:08, *03:22 = *03:08, *03:75
+++---+ --+----- +------- ----++-- ------- ---+-+-  *03:40, *03:41 = *03:41, *03:51
+++---+ --+----- +------- ----+--- ------- ------++ *03:41, *03:46 = *03:41, *03:54
+++---+ --+----- +------- ----+--- ------- -----+-  *03:01:01:01, *03:41 = *03:01:14, *03:41 = *03:26, *03:41
+++---+ --+----- +------- ----+--- ------- ---+---- *03:08, *03:40 = *03:08, *03:51
+++---+ --+----- +------- ----+--- ------- -------+ *03:08, *03:46 = *03:08, *03:54
+++---+ --+----- +------- ----+--- ------- -------- *03:01:01:01, *03:08 = *03:01:08, *03:08 = *03:01:14, *03:08
+++---+ ---+-+-- +------- ----+--- ------- -------- *03:09, *03:11N = *03:09, *03:59
+++---+ ---+----- ++------ ---++--- ------- -------- *03:09, *03:13 = *03:09, *03:50 = *03:09, *03:64 = *03:09, *03:66
+++---+ ---+----- +----+- ---++--- ------- --------  *03:09, *03:22 = *03:09, *03:75
+++---+ ---+----- +------- ---++--- ------- --------  *03:09, *03:26 = *03:09, *03:63
+++---+ ---+----- +------- ----+--+ ------- --------  *03:09, *03:29 = *03:09, *03:67
+++---+ ---+----- +------- ----+--+ +------ --------  *03:09, *03:30 = *03:09, *03:62
+++---+ ---+----- +------- ----+--- ----+-- --------  *03:09, *03:34 = *03:09, *03:48
+++---+ ---+----- +------- ----+--- ------+- --------  *03:09, *03:36N = *03:09, *03:45
+++---+ ---+----- +------- ----+--- ------- ---+----  *03:09, *03:40 = *03:09, *03:51
+++---+ ---+----- +------- ----+--- ------- -------+  *03:09, *03:46 = *03:09, *03:54
+++---+ ---+----- +------- ----+--- ------- --------  *03:01:01:01, *03:09 = *03:01:08, *03:09 = *03:01:14, *03:09 =
                                                      *03:09, *03:09
+++---+ ----++-- +------- ----+--- ------- --------  *03:01:01:02N, *03:11N = *03:01:01:02N, *03:59
+++---+ ----+--- ++------ ----+--- ------- --------  *03:01:01:02N, *03:13 = *03:01:01:02N, *03:50 = *03:01:01:02N,
                                                      *03:64 = *03:01:01:02N, *03:66
+++---+ ----+--- +----+- ----+--- ------- --------  *03:01:01:02N, *03:22 = *03:01:01:02N, *03:75
+++---+ ----+--- +------- ---++--- ------- --------  *03:01:01:02N, *03:26 = *03:01:01:02N, *03:63
+++---+ ----+--- +------- ----+--+ ------- --------  *03:01:01:02N, *03:29 = *03:01:01:02N, *03:67
+++---+ ----+--- +------- ----+--- +------ --------  *03:01:01:02N, *03:30 = *03:01:01:02N, *03:62
+++---+ ----+--- +------- ----+--- ----+-- --------  *03:01:01:02N, *03:34 = *03:01:01:02N, *03:48
+++---+ ----+--- +------- ----+--- ------+- --------  *03:01:01:02N, *03:36N = *03:01:01:02N, *03:45
+++---+ ----+--- +------- ----+--- ------- ---+----  *03:01:01:02N, *03:40 = *03:01:01:02N, *03:51
+++---+ ----+--- +------- ----+--- ------- -------+  *03:01:01:02N, *03:46 = *03:01:01:02N, *03:54
+++---+ ----+--- +------- ----+--- ------- --------  *03:01:01:01, *03:01:01:02N = *03:01:01:02N, *03:01:01:02N =
                                                      *03:01:01:02N, *03:01:08 = *03:01:01:02N, *03:01:14
+++---+ -----+-+ +------- ----+--- ------- --------  *03:11N, *03:14 = *03:14, *03:59
+++---+ -----+-- ++------ ----+--- ------- --------  *03:11N, *03:13 = *03:11N, *03:50 = *03:11N, *03:64 = *03:11N,
                                                      *03:66 = *03:13, *03:59 = *03:50, *03:59 = *03:59, *03:64 = *03:59,
                                                      *03:66
+++---+ -----+-- +-+---+- ----+--- ------- --------  *03:11N, *03:19 = *03:19, *03:59
+++---+ -----+-- +-+---+- ----+--- ------- --------  *03:11N, *03:15 = *03:15, *03:59
+++---+ -----+-- +--+--+- ----+--- ------- --------  *03:11N, *03:16 = *03:16, *03:59
+++---+ -----+-- +---+--- ----+--- ------- --------  *03:11N, *03:17 = *03:17, *03:59
+++---+ -----+-- +----+-- ----+--- ------- --------  *03:11N, *03:18 = *03:18, *03:59
+++---+ -----+-- +------+- ----+-+- ------- --------  *03:11N, *03:56 = *03:56, *03:59
+++---+ -----+-- +------+- ----+--- ------- --------  *03:11N, *03:22 = *03:11N, *03:75 = *03:22, *03:59 = *03:59,
```

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                                                IFU-02 Rev. No. 02 can be downloaded from
Lot No.: 38M   **Lot-specific information**   **www.olerup-ssp.com**

```
                                                      *03:75
+++----+ -----+-- +------+ ----+--- ------- -------   *03:11N, *03:21N = *03:21N, *03:59
+++----+ -----+-- +------ +---+--- ------- -------    *03:11N, *03:23:01 = *03:23:01, *03:59
+++----+ -----+-- +------ -+--+--- ------- -------    *03:11N, *03:24 = *03:24, *03:59
+++----+ -----+-- +------ --+-+--- ------- -------    *03:11N, *03:25 = *03:25, *03:59
+++----+ -----+-- +------ --++--- ------- -------     *03:11N, *03:26 = *03:11N, *03:63 = *03:26, *03:59 = *03:59,
                                                      *03:63
+++----+ -----+-- +------ ----++-- ------- -------    *03:11N, *03:27 = *03:27, *03:59
+++----+ -----+-- +------ ----+-+- ------- -------    *03:11N, *03:28 = *03:28, *03:59
+++----+ -----+-- +------ ----+--+ ------- -------    *03:11N, *03:29 = *03:11N, *03:67 = *03:29, *03:59 = *03:59,
                                                      *03:67
+++----+ -----+-- +------ ----+--- +------ -------    *03:11N, *03:30 = *03:11N, *03:62 = *03:30, *03:59 = *03:59,
                                                      *03:62
+++----+ -----+-- +------ ----+--- -+----- -------    *03:11N, *03:58 = *03:58, *03:59
+++----+ -----+-- +------ ----+--- --+---- -------    *03:11N, *03:55 = *03:55, *03:59
+++----+ -----+-- +------ ----+--- ---+--- -------    *03:11N, *03:33 = *03:33, *03:59
+++----+ -----+-- +------ ----+--- ----+--- -------   *03:11N, *03:34 = *03:11N, *03:48 = *03:34, *03:59 = *03:48,
                                                      *03:59
+++----+ -----+-- +------ ----+--- -----+-- -------   *03:11N, *03:35 = *03:35, *03:59
+++----+ -----+-- +------ ----+--- ------+- -------   *03:11N, *03:36N = *03:11N, *03:45 = *03:45, *03:59
+++----+ -----+-- +------ ----+--- -------+ -------   *03:11N, *03:37 = *03:37, *03:59
+++----+ -----+-- +------ ----+--- ------- +------    *03:11N, *03:38 = *03:38, *03:59
+++----+ -----+-- +------ ----+--- ------- -+-----    *03:11N, *03:39 = *03:39, *03:59
+++----+ -----+-- +------ ----+--- ------- --+----    *03:11N, *03:20 = *03:20, *03:59
+++----+ -----+-- +------ ----+--- ------- ---+----   *03:11N, *03:40 = *03:11N, *03:51 = *03:40, *03:59 = *03:51,
                                                      *03:59
+++----+ -----+-- +------ ----+--- ------- ----+---   *03:11N, *03:43 = *03:43, *03:59
+++----+ -----+-- +------ ----+--- ------- -----+-+   *03:11N, *03:52 = *03:52, *03:59
+++----+ -----+-- +------ ----+--- ------- ------+-   *03:11N, *03:44 = *03:44, *03:59
+++----+ -----+-- +------ ----+--- ------- -------+   *03:11N, *03:46 = *03:11N, *03:54 = *03:46, *03:59 = *03:54,
                                                      *03:59
+++----+ -----+-- +------ ----+--- ------- -------    *03:01:01:01, *03:11N = *03:01:01:01, *03:59 = *03:01:08,
                                                      *03:11N = *03:01:08, *03:59 = *03:01:14, *03:11N = *03:01:14,
                                                      *03:59 = *03:11N, *03:11N = *03:11N, *03:59
+++----+ ------+- ++------ ----+--- ------- -------   *03:12, *03:13 = *03:12, *03:50 = *03:12, *03:64 = *03:12, *03:66
+++----+ ------+- +------+- ----+--- ------- -------  *03:12, *03:22 = *03:12, *03:75
+++----+ ------+- +------ ---++--- ------- -------    *03:12, *03:26 = *03:12, *03:63
+++----+ ------+- +------ ----+-+ ------- -------     *03:12, *03:29 = *03:12, *03:67
+++----+ ------+- +------ ----+--- +------ -------    *03:12, *03:30 = *03:12, *03:62
+++----+ ------+- +------ ----+--- ----+--- -------   *03:12, *03:34 = *03:12, *03:48
+++----+ ------+- +------ ----+--- ------- ---+----   *03:12, *03:40 = *03:12, *03:51
+++----+ ------+- +------ ----+--- ------- -------+   *03:12, *03:46 = *03:12, *03:54
+++----+ ------+- +------ ----+--- ------- -------    *03:01:01:01, *03:12 = *03:01:14, *03:12
+++----+ -------+ +------ ----+--- ------- -------    *03:13, *03:14 = *03:14, *03:50 = *03:14, *03:64 = *03:14, *03:66
+++----+ -------+ +------+- ----+--- ------- -------  *03:14, *03:22 = *03:14, *03:75
+++----+ -------+ +------ ---++--- ------- -------    *03:14, *03:26 = *03:14, *03:63
+++----+ -------+ +------ ----+-+ ------- -------     *03:14, *03:29 = *03:14, *03:67
+++----+ -------+ +------ ----+--- +------ -------    *03:14, *03:30 = *03:14, *03:62
+++----+ -------+ +------ ----+--- ----+--- -------   *03:14, *03:34 = *03:14, *03:48
+++----+ -------+ +------ ----+--- ------+- -------   *03:14, *03:36N = *03:14, *03:45
+++----+ -------+ +------ ----+--- ------- ---+----   *03:14, *03:40 = *03:14, *03:51
+++----+ -------+ +------ ----+--- ------- -------+   *03:14, *03:46 = *03:14, *03:54
+++----+ -------+ +------ ----+--- ------- -------    *03:01:01:01, *03:14 = *03:01:08, *03:14 = *03:01:14, *03:14 =
                                                      *03:14, *03:14
+++----+ -------- +++---+- ----+--- ------- -------   *03:13, *03:19 = *03:19, *03:50 = *03:19, *03:64 = *03:19, *03:66
+++----+ -------- +++----- ----+--- ------- -------   *03:13, *03:15 = *03:15, *03:50 = *03:15, *03:64 = *03:15, *03:66
+++----+ -------- ++-+--- ----+--- ------- -------    *03:13, *03:16 = *03:16, *03:50 = *03:16, *03:64 = *03:16, *03:66
+++----+ -------- ++-+--- ----+--- ------- -------    *03:13, *03:17 = *03:17, *03:50 = *03:17, *03:64 = *03:17, *03:66
+++----+ -------- +-----+- ----+-+ ------- -------    *03:13, *03:56 = *03:50, *03:56 = *03:56, *03:64 = *03:56, *03:66
+++----+ -------- +-----+- ----+--- ------- -------   *03:13, *03:22 = *03:13, *03:75 = *03:22, *03:50 = *03:22, *03:64 =
                                                      *03:22, *03:66
+++----+ -------- ++-----+ ----+--- ------- -------   *03:13, *03:21N = *03:21N, *03:50 = *03:21N, *03:64 = *03:21N,
                                                      *03:66
+++----+ -------- ++------ +---+--- ------- -------   *03:13, *03:23:01 = *03:23:01, *03:50 = *03:23:01, *03:64 =
                                                      *03:23:01, *03:66
+++----+ -------- ++------ -+--+--- ------- -------   *03:13, *03:24 = *03:24, *03:50 = *03:24, *03:64 = *03:24, *03:66
+++----+ -------- ++------ --+-+--- ------- -------   *03:13, *03:25 = *03:25, *03:50 = *03:25, *03:64 = *03:25, *03:66
+++----+ -------- ++------ --++--- ------- -------    *03:13, *03:26 = *03:13, *03:63 = *03:26, *03:50 = *03:26, *03:64 =
                                                      *03:26, *03:66 = *03:50, *03:63 = *03:63, *03:64 = *03:63, *03:66
+++----+ -------- ++------ ----++-- ------- -------   *03:13, *03:27 = *03:27, *03:50 = *03:27, *03:64 = *03:27, *03:66
+++----+ -------- ++------ ----+-+- ------- -------   *03:13, *03:28 = *03:28, *03:50 = *03:28, *03:64 = *03:28, *03:66
+++----+ -------- ++------ ----+--+ ------- -------   *03:13, *03:29 = *03:13, *03:67 = *03:29, *03:50 = *03:29, *03:64 =
                                                      *03:29, *03:66 = *03:50, *03:67 = *03:64, *03:67 = *03:66, *03:67
```

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                                      IFU-02 Rev. No. 02 can be downloaded from
Lot No.: 38M   **Lot-specific information**   **www.olerup-ssp.com**

```
+++---+ -------- ++------ ----+--- +------- -------   *03:13, *03:30 = *03:13, *03:62 = *03:30, *03:50 = *03:30, *03:64 =
                                                      *03:30, *03:66 = *03:50, *03:62 = *03:62, *03:64 = *03:62, *03:66
+++---+ -------- ++------ ----+--- -+------ -------   *03:13, *03:58 = *03:50, *03:58 = *03:58, *03:64 = *03:58, *03:66
+++---+ -------- ++------ ----+--- --+----- -------   *03:13, *03:55 = *03:50, *03:55 = *03:55, *03:64 = *03:55, *03:66
+++---+ -------- ++------ ----+--- ---+---- -------   *03:13, *03:33 = *03:33, *03:50 = *03:33, *03:64 = *03:33, *03:66
+++---+ -------- ++------ ----+--- ----+--- -------   *03:13, *03:34 = *03:13, *03:48 = *03:34, *03:50 = *03:34, *03:64 =
                                                      *03:34, *03:66 = *03:48, *03:50 = *03:48, *03:64 = *03:48, *03:66
+++---+ -------- ++------ ----+--- -----+-- -------   *03:13, *03:35 = *03:35, *03:50 = *03:35, *03:64 = *03:35, *03:66
+++---+ -------- ++------ ----+--- ------+- -------   *03:13, *03:36N = *03:13, *03:45 = *03:36N, *03:50 = *03:36N,
                                                      *03:64 = *03:36N, *03:66 = *03:45, *03:50 = *03:45, *03:64 =
                                                      *03:45, *03:66
+++---+ -------- ++------ ----+--- -------+ -------   *03:13, *03:37 = *03:37, *03:50 = *03:37, *03:64 = *03:37, *03:66
+++---+ -------- ++------ ----+--- -------- +------   *03:13, *03:38 = *03:38, *03:50 = *03:38, *03:64 = *03:38, *03:66
+++---+ -------- ++------ ----+--- -------- -+-----   *03:13, *03:39 = *03:39, *03:50 = *03:39, *03:64 = *03:39, *03:66
+++---+ -------- ++------ ----+--- -------- --+----   *03:13, *03:20 = *03:20, *03:50 = *03:20, *03:64 = *03:20, *03:66
+++---+ -------- ++------ ----+--- -------- ---+----  *03:13, *03:40 = *03:13, *03:51 = *03:40, *03:50 = *03:40, *03:64 =
                                                      *03:40, *03:66 = *03:50, *03:51 = *03:51, *03:64 = *03:51, *03:66
+++---+ -------- ++------ ----+--- -------- ----+---  *03:13, *03:43 = *03:43, *03:50 = *03:43, *03:64 = *03:43, *03:66
+++---+ -------- ++------ ----+--- -------- -----+-+  *03:13, *03:52 = *03:50, *03:52 = *03:52, *03:64 = *03:52, *03:66
+++---+ -------- ++------ ----+--- -------- -----+-   *03:13, *03:44 = *03:44, *03:50 = *03:44, *03:64 = *03:44, *03:66
+++---+ -------- ++------ ----+--- -------- ------+-  *03:13, *03:57 = *03:50, *03:57 = *03:57, *03:64 = *03:57, *03:66
+++---+ -------- ++------ ----+--- -------- -------+  *03:13, *03:46 = *03:13, *03:54 = *03:46, *03:50 = *03:46, *03:64 =
                                                      *03:46, *03:66 = *03:50, *03:54
+++---+ -------- ++------ ----+--- -------- --------  *03:01:01:01, *03:13 = *03:01:01:01, *03:50 = *03:01:01:01, *03:64
                                                      = *03:01:01:01, *03:66 = *03:01:08, *03:13 = *03:01:08, *03:50 =
                                                      *03:01:08, *03:64 = *03:01:08, *03:66 = *03:01:14, *03:13 =
                                                      *03:01:14, *03:50 = *03:13, *03:13 = *03:13, *03:50 = *03:13,
                                                      *03:64 = *03:50, *03:66 = *03:13, *03:50, *03:64
+++---+ -------- +-+---+- ---++--- -------- --------  *03:19, *03:26 = *03:19, *03:63
+++---+ -------- +-+---+- ----+-+- -------- --------  *03:15, *03:56 = *03:19, *03:28 = *03:19, *03:56
+++---+ -------- +-+---+- ----+--+ -------- --------  *03:19, *03:29 = *03:19, *03:67
+++---+ -------- +-+---+- ----+--- +------- --------  *03:19, *03:30 = *03:19, *03:62
+++---+ -------- +-+---+- ----+--- ----+--- --------  *03:19, *03:34 = *03:19, *03:48
+++---+ -------- +-+---+- ----+--- ------+- --------  *03:19, *03:36N = *03:19, *03:45
+++---+ -------- +-+---+- ----+--- -------- ---+----  *03:19, *03:40 = *03:19, *03:51
+++---+ -------- +-+---+- ----+--- -------- -------+  *03:19, *03:46 = *03:19, *03:54
+++---+ -------- +-+---+- ----+--- -------- --------  *03:01:01:01, *03:19 = *03:01:08, *03:19 = *03:01:14, *03:19 =
                                                      *03:15, *03:19 = *03:15, *03:22 = *03:15, *03:75 = *03:19, *03:19 =
                                                      *03:19, *03:22 = *03:19, *03:75
+++---+ -------- +-+---- ---++--- -------- --------   *03:15, *03:26 = *03:15, *03:63
+++---+ -------- +-+---- ----+--+ -------- --------   *03:15, *03:29 = *03:15, *03:67
+++---+ -------- +-+---- ----+--- +------- --------   *03:15, *03:30 = *03:15, *03:62
+++---+ -------- +-+---- ----+--- ----+--- --------   *03:15, *03:34 = *03:15, *03:48
+++---+ -------- +-+---- ----+--- ------+- --------   *03:15, *03:36N = *03:15, *03:45
+++---+ -------- +-+---- ----+--- -------- ---+----   *03:15, *03:40 = *03:15, *03:51
+++---+ -------- +-+---- ----+--- -------- -------+   *03:15, *03:46 = *03:15, *03:54
+++---+ -------- +-+---- ----+--- -------- --------   *03:01:01:01, *03:15 = *03:01:08, *03:15 = *03:01:14, *03:15 =
                                                      *03:15, *03:15
+++---+ -------- +--+--+- ----+--- -------- --------  *03:16, *03:22 = *03:16, *03:75
+++---+ -------- +--+---- ---++--- -------- --------  *03:16, *03:26 = *03:16, *03:63
+++---+ -------- +--+---- ----+--+ -------- --------  *03:16, *03:29 = *03:16, *03:67
+++---+ -------- +--+---- ----+--- +------- --------  *03:16, *03:30 = *03:16, *03:62
+++---+ -------- +--+---- ----+--- ----+--- --------  *03:16, *03:34 = *03:16, *03:48
+++---+ -------- +--+---- ----+--- ------+- --------  *03:16, *03:36N = *03:16, *03:45
+++---+ -------- +--+---- ----+--- -------- ---+----  *03:16, *03:40 = *03:16, *03:51
+++---+ -------- +--+---- ----+--- -------- -------+  *03:16, *03:46 = *03:16, *03:54
+++---+ -------- +--+---- ----+--- -------- --------  *03:01:01:01, *03:16 = *03:01:08, *03:16 = *03:01:14, *03:16 =
                                                      *03:16, *03:16
+++---+ -------- +---+-+- ----+--- -------- --------  *03:17, *03:22 = *03:17, *03:75
+++---+ -------- +---+--- ---++--- -------- --------  *03:17, *03:26 = *03:17, *03:63
+++---+ -------- +---+--- ----+--+ -------- --------  *03:17, *03:29 = *03:17, *03:67
+++---+ -------- +---+--- ----+--- +------- --------  *03:17, *03:30 = *03:17, *03:62
+++---+ -------- +---+--- ----+--- ----+--- --------  *03:17, *03:34 = *03:17, *03:48
+++---+ -------- +---+--- ----+--- ------+- --------  *03:17, *03:36N = *03:17, *03:45
+++---+ -------- +---+--- ----+--- -------- ---+----  *03:17, *03:40 = *03:17, *03:51
+++---+ -------- +---+--- ----+--- -------- -------+  *03:17, *03:46 = *03:17, *03:54
+++---+ -------- +---+--- ----+--- -------- --------  *03:01:01:01, *03:17 = *03:01:08, *03:17 = *03:01:14, *03:17 =
                                                      *03:17, *03:17
+++---+ -------- +----+-- ---++--- -------- --------  *03:18, *03:26 = *03:18, *03:63
+++--+ -------- +----+-- ----+--+ ------- --------    *03:18, *03:29 = *03:18, *03:67
+++---+ -------- +----+-- ----+--- +------- --------  *03:18, *03:30 = *03:18, *03:62
+++---+ -------- +----+-- ----+--- ----+--- --------  *03:18, *03:34 = *03:18, *03:48
+++---+ -------- +----+-- ----+--- ------+- --------  *03:18, *03:36N = *03:18, *03:45
```

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IFU-02 Rev. No. 02 can be downloaded from

Lot No.: 38M **Lot-specific information** **www.olerup-ssp.com**

```
+++----+ -------- +----+-- ----+--- ------- -------   *03:01:01:01, *03:18 = *03:01:08, *03:18
+++----+ -------- +----++ ----+--- ------- -------   *03:21N, *03:22 = *03:21N, *03:75
+++----+ -------- +------+ +---+--- ------- -------   *03:22, *03:23:01 = *03:23:01, *03:75
+++----+ -------- +------+ -+--+--- ------- -------   *03:22, *03:24 = *03:24, *03:75
+++----+ -------- +------+ ---+++-- ------- -------   *03:22, *03:25 = *03:25, *03:75
+++----+ -------- +------+ ---+++-- ------- -------   *03:26, *03:56 = *03:56, *03:63
+++----+ -------- +------+ ---+++-- ------- -------   *03:22, *03:26 = *03:22, *03:63 = *03:26, *03:75 = *03:63, *03:75
+++----+ -------- +------+ ----++-- ------- -------   *03:22, *03:27 = *03:27, *03:75
+++----+ -------- +------+ ----+-++ ------- -------   *03:29, *03:56 = *03:56, *03:67
+++----+ -------- +------+ ----+-+- +------ -------   *03:30, *03:56 = *03:56, *03:62
+++----+ -------- +------+ ----+-+- ----+--- -------   *03:34, *03:56 = *03:48, *03:56
+++----+ -------- +------+ ----+-+- ------+- -------   *03:36N, *03:56 = *03:45, *03:56
+++----+ -------- +------+ ----+-+- -------- ---+----  *03:40, *03:56 = *03:51, *03:56
+++----+ -------- +------+ ----+-+- -------- -------+  *03:46, *03:56 = *03:54, *03:56
+++----+ -------- +------+ ----+-+- -------- -------   *03:01:01:01, *03:56 = *03:01:08, *03:56 = *03:01:14, *03:56 =
                                                       *03:22, *03:28 = *03:22, *03:56 = *03:28, *03:56 = *03:28, *03:75 =
                                                       *03:56, *03:56 = *03:56, *03:75
+++----+ -------- +------+ ----+-+ -------- -------    *03:22, *03:29 = *03:22, *03:67 = *03:29, *03:75 = *03:67, *03:75
+++----+ -------- +------+ +------ +------- -------    *03:22, *03:30 = *03:22, *03:62 = *03:30, *03:75 = *03:62, *03:75
+++----+ -------- +------+ ----+--- -+------ -------   *03:22, *03:58 = *03:58, *03:75
+++----+ -------- +------+ ----+--- --+----- -------   *03:22, *03:55 = *03:55, *03:75
+++----+ -------- +------+ ----+--- ---+---- -------   *03:22, *03:33 = *03:33, *03:75
+++----+ -------- +------+ ----+--- ----+--- -------   *03:22, *03:34 = *03:22, *03:48 = *03:34, *03:75 = *03:48, *03:75
+++----+ -------- +------+ ----+--- -----+-- -------   *03:22, *03:35 = *03:35, *03:75
+++----+ -------- +------+ ----+--- ------+- -------   *03:22, *03:36N = *03:22, *03:45 = *03:36N, *03:75 = *03:45,
                                                       *03:75
+++----+ -------- +------+ ----+--- -------+ -------   *03:22, *03:37 = *03:37, *03:75
+++----+ -------- +------+ ----+--- -------- +------   *03:22, *03:38 = *03:38, *03:75
+++----+ -------- +------+ ----+--- -------- -+------  *03:22, *03:39 = *03:39, *03:75
+++----+ -------- +------+ ----+--- -------- --+-----  *03:20, *03:22 = *03:20, *03:75
+++----+ -------- +------+ ----+--- -------- ---+----  *03:22, *03:40 = *03:22, *03:51 = *03:51, *03:75
+++----+ -------- +------+ ----+--- -------- ----+---  *03:22, *03:43 = *03:43, *03:75
+++----+ -------- +------+ ----+--- -------- -----+-+  *03:22, *03:52 = *03:52, *03:75
+++----+ -------- +------+ ----+--- -------- -----+--  *03:22, *03:44 = *03:44, *03:75
+++----+ -------- +------+ ----+--- -------- ------+-  *03:22, *03:57 = *03:57, *03:75
+++----+ -------- +------+ ----+--- -------- -------+  *03:22, *03:46 = *03:22, *03:54 = *03:46, *03:75
+++----+ -------- +------+ ----+--- -------- -------   *03:01:01:01, *03:22 = *03:01:01:01, *03:75 = *03:01:08, *03:22 =
                                                       *03:01:08, *03:75 = *03:01:14, *03:22 = *03:22, *03:22 = *03:22,
                                                       *03:75
+++----+ -------- +------+ ---+++-- -------- -------   *03:21N, *03:26 = *03:21N, *03:63
+++----+ -------- +------+ ----+--+ -------- -------   *03:21N, *03:29 = *03:21N, *03:67
+++----+ -------- +------+ ----+--- +------- -------   *03:21N, *03:30 = *03:21N, *03:62
+++----+ -------- +------+ ----+--- ----+--- -------   *03:21N, *03:34 = *03:21N, *03:48
+++----+ -------- +------+ ----+--- ------+- -------   *03:21N, *03:36N = *03:21N, *03:45
+++----+ -------- +------+ ----+--- -------- ---+----  *03:21N, *03:40 = *03:21N, *03:51
+++----+ -------- +------+ ----+--- -------- -------+  *03:21N, *03:46 = *03:21N, *03:54
+++----+ -------- +------+ ----+--- -------- -------   *03:01:01:01, *03:21N = *03:01:08, *03:21N = *03:01:14, *03:21N
                                                       = *03:21N, *03:21N
+++----+ -------- +------+ +--++-- -------- -------    *03:23:01, *03:26 = *03:23:01, *03:63
+++----+ -------- +------+ +---+--+ -------- -------   *03:23:01, *03:29 = *03:23:01, *03:67
+++----+ -------- +------+ +---+--- +------- -------   *03:23:01, *03:30 = *03:23:01, *03:62
+++----+ -------- +------+ +---+--- ----+--- -------   *03:23:01, *03:34 = *03:23:01, *03:48
+++----+ -------- +------+ +---+--- ------+- -------   *03:23:01, *03:36N = *03:23:01, *03:45
+++----+ -------- +------+ +---+--- -------- ---+----  *03:23:01, *03:40 = *03:23:01, *03:51
+++----+ -------- +------+ +---+--- -------- -------+  *03:23:01, *03:46 = *03:23:01, *03:54
+++----+ -------- +------+ +---+--- -------- -------   *03:01:01:01, *03:23:01 = *03:01:08, *03:23:01 = *03:01:14,
                                                       *03:23:01 = *03:23:01, *03:23:01
+++----+ -------- +------+ -+-++-- -------- -------    *03:24, *03:26 = *03:24, *03:63
+++----+ -------- +------+ -+-+--+ -------- -------    *03:24, *03:29 = *03:24, *03:67
+++----+ -------- +------+ -+-+--- +------- -------    *03:24, *03:30 = *03:24, *03:62
+++----+ -------- +------+ -+-+--- ----+--- -------    *03:24, *03:34 = *03:24, *03:48
+++----+ -------- +------+ -+-+--- ------+- -------    *03:24, *03:36N = *03:24, *03:45
+++----+ -------- +------+ -+-+--- -------- ---+----   *03:24, *03:40 = *03:24, *03:51
+++----+ -------- +------+ -+-+--- -------- -------+   *03:24, *03:46 = *03:24, *03:54
+++----+ -------- +------+ -+-+--- -------- -------    *03:01:01:01, *03:24 = *03:01:08, *03:24 = *03:01:14, *03:24 =
                                                       *03:24, *03:24
+++----+ -------- +------+ --+++-- -------- -------    *03:25, *03:26 = *03:25, *03:63
+++----+ -------- +------+ --+-+--+ -------- -------   *03:25, *03:29 = *03:25, *03:67
+++----+ -------- +------+ --+-+--- +------- -------   *03:25, *03:30 = *03:25, *03:62
+++----+ -------- +------+ --+-+--- ----+--- -------   *03:25, *03:34 = *03:25, *03:48
+++----+ -------- +------+ --+-+--- ------+- -------   *03:25, *03:36N = *03:25, *03:45
+++----+ -------- +------+ --+-+--- -------- ---+----  *03:25, *03:40 = *03:25, *03:51
+++----+ -------- +------+ --+-+--- -------- -------+  *03:25, *03:46 = *03:25, *03:54
```

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For *In Vitro* Diagnostic Use.

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101.413-24u/04u – without *Taq* polymerase General **"Instructions for Use"**
IFU-02 Rev. No. 02 can be downloaded from

Lot No.: 38M **Lot-specific information** **www.olerup-ssp.com**

```
+++----+ -------- +------- --+-+--- ------- -------   *03:01:01:01, *03:25 = *03:01:08, *03:25 = *03:01:14, *03:25 =
                                                      *03:25, *03:25
+++----+ -------- +------- ---++-- ------- -------     *03:26, *03:27 = *03:27, *03:63
+++----+ -------- +------- --++-+- ------- -------     *03:26, *03:28 = *03:28, *03:63
+++----+ -------- +------- ---++--+ ------- -------    *03:26, *03:29 = *03:26, *03:67 = *03:63, *03:67
+++----+ -------- +------- ---++--- +------ -------    *03:26, *03:30 = *03:26, *03:62 = *03:30, *03:63
+++----+ -------- +------- ---++--- -+----- -------    *03:26, *03:58 = *03:58, *03:63
+++----+ -------- +------- ---++--- --+---- -------    *03:26, *03:55 = *03:55, *03:63
+++----+ -------- +------- ---++--- ---+--- -------    *03:26, *03:33 = *03:33, *03:63
+++----+ -------- +------- ---++--- ----+-- -------    *03:26, *03:34 = *03:26, *03:48 = *03:48, *03:63
+++----+ -------- +------- ---++--- -----+- -------    *03:26, *03:35 = *03:35, *03:63
+++----+ -------- +------- ---++--- ------+- -------   *03:26, *03:36N = *03:26, *03:45 = *03:45, *03:63
+++----+ -------- +------- ---++--- -------+ -------   *03:26, *03:37 = *03:37, *03:63
+++----+ -------- +------- ---++--- -------- +------   *03:26, *03:38 = *03:38, *03:63
+++----+ -------- +------- ---++--- -------- -+-----   *03:26, *03:39 = *03:39, *03:63
+++----+ -------- +------- ---++--- -------- --+----   *03:20, *03:26 = *03:20, *03:63
+++----+ -------- +------- ---++--- -------- ---+---   *03:26, *03:40 = *03:26, *03:51 = *03:40, *03:63 = *03:51, *03:63
+++----+ -------- +------- ---++--- -------- ----+--   *03:26, *03:43 = *03:43, *03:63
+++----+ -------- +------- ---++--- -------- -----+-+  *03:26, *03:52 = *03:52, *03:63
+++----+ -------- +------- ---++--- -------- -----+--  *03:26, *03:44 = *03:44, *03:63
+++----+ -------- +------- ---++--- -------- ------+-  *03:26, *03:57 = *03:57, *03:63
+++----+ -------- +------- ---++--- -------- -------+  *03:26, *03:46 = *03:26, *03:54 = *03:46, *03:63 = *03:54, *03:63
+++----+ -------- +------- ---++--- -------- -------   *03:01:01:01, *03:26 = *03:01:01:01, *03:63 = *03:01:08, *03:26 =
                                                      *03:01:08, *03:63 = *03:01:14, *03:26 = *03:01:14, *03:63 =
                                                      *03:26, *03:26 = *03:26, *03:63
+++----+ -------- +------- ----++-+ -------- -------   *03:27, *03:29 = *03:27, *03:67
+++----+ -------- +------- ----++-- +------- -------   *03:27, *03:30 = *03:27, *03:62
+++----+ -------- +------- ----++-- ----+--- -------   *03:27, *03:34 = *03:27, *03:48
+++----+ -------- +------- ----++-- ------+- -------   *03:27, *03:36N = *03:27, *03:45
+++----+ -------- +------- ----++-- -------- ---+---   *03:27, *03:40 = *03:27, *03:51
+++----+ -------- +------- ----++-- -------- -------+  *03:27, *03:46 = *03:27, *03:54
+++----+ -------- +------- ----++-- -------- -------   *03:01:01:01, *03:27 = *03:01:08, *03:27 = *03:01:14, *03:27 =
                                                      *03:27, *03:27
+++----+ -------- +------- ----+-++ -------- -------   *03:28, *03:29 = *03:28, *03:67
+++----+ -------- +------- ----+-+- +------- -------   *03:28, *03:30 = *03:28, *03:62
+++----+ -------- +------- ----+-+- ----+--- -------   *03:28, *03:34 = *03:28, *03:48
+++----+ -------- +------- ----+-+- ------+- -------   *03:28, *03:36N = *03:28, *03:45
+++----+ -------- +------- ----+-+- -------- ---+---   *03:28, *03:40 = *03:28, *03:51
+++----+ -------- +------- ----+-+- -------- -------+  *03:28, *03:46 = *03:28, *03:54
+++----+ -------- +------- ----+-+- -------- -------   *03:01:01:01, *03:28 = *03:01:08, *03:28 = *03:01:14, *03:28 =
                                                      *03:28, *03:28
+++----+ -------- +------- ----+-+- +------- -------   *03:29, *03:30 = *03:30, *03:67 = *03:62, *03:67
+++----+ -------- +------- ----+-+ -+------ -------    *03:29, *03:58 = *03:58, *03:67
+++----+ -------- +------- ----+-+ --+----- -------    *03:29, *03:55 = *03:55, *03:67
+++----+ -------- +------- ----+-+ ---+---- -------    *03:29, *03:33 = *03:33, *03:67
+++----+ -------- +------- ----+-+ ----+--- -------    *03:29, *03:48 = *03:34, *03:67 = *03:48, *03:67
+++----+ -------- +------- ----+-+ -----+-- -------    *03:29, *03:35 = *03:35, *03:67
+++----+ -------- +------- ----+-+ ------+- -------    *03:29, *03:45 = *03:36N, *03:67 = *03:45, *03:67
+++----+ -------- +------- ----+-+ -------+ -------    *03:29, *03:37 = *03:37, *03:67
+++----+ -------- +------- ----+-+ -------- +------    *03:29, *03:38 = *03:38, *03:67
+++----+ -------- +------- ----+-+ -------- -+-----    *03:29, *03:39 = *03:39, *03:67
+++----+ -------- +------- ----+-+ -------- --+----    *03:20, *03:29 = *03:20, *03:67
+++----+ -------- +------- ----+-+ -------- ---+---    *03:29, *03:40 = *03:29, *03:51 = *03:40, *03:67 = *03:51, *03:67
+++----+ -------- +------- ----+-+ -------- ----+---   *03:29, *03:43 = *03:43, *03:67
+++----+ -------- +------- ----+-+ -------- -----+-+   *03:29, *03:52 = *03:52, *03:67
+++----+ -------- +------- ----+-+ -------- -----+--   *03:29, *03:44 = *03:44, *03:67
+++----+ -------- +------- ----+-+ -------- ------+-   *03:29, *03:57 = *03:57, *03:67
+++----+ -------- +------- ----+-+ -------- -------+   *03:29, *03:46 = *03:29, *03:54 = *03:46, *03:67 = *03:54, *03:67
+++----+ -------- +------- ----+-+ -------- -------    *03:01:01:01, *03:29 = *03:01:01:01, *03:67 = *03:01:08, *03:29 =
                                                      *03:01:08, *03:67 = *03:01:14, *03:29 = *03:01:14, *03:67 =
                                                      *03:29, *03:67 = *03:67, *03:67
+++----+ -------- +------- ----+--- ++----- -------    *03:30, *03:58 = *03:58, *03:62
+++----+ -------- +------- ----+--- +-+---- -------    *03:30, *03:55 = *03:55, *03:62
+++----+ -------- +------- ----+--- +--+--- -------    *03:30, *03:33 = *03:33, *03:62
+++----+ -------- +------- ----+--- +---+-- -------    *03:30, *03:34 = *03:30, *03:48 = *03:48, *03:62
+++----+ -------- +------- ----+--- +----+- -------    *03:30, *03:35 = *03:35, *03:62
+++----+ -------- +------- ----+--- +-----+ -------    *03:30, *03:36N = *03:30, *03:45 = *03:45, *03:62
+++----+ -------- +------- ----+--- +------+ -------   *03:30, *03:37 = *03:37, *03:62
+++----+ -------- +------- ----+--- +------- +------   *03:30, *03:38 = *03:38, *03:62
+++----+ -------- +------- ----+--- +------- -+-----   *03:30, *03:39 = *03:39, *03:62
+++----+ -------- +------- ----+--- +------- --+----   *03:20, *03:30 = *03:20, *03:62
+++----+ -------- +------- ----+--- +------- ---+---   *03:30, *03:40 = *03:30, *03:51 = *03:40, *03:62 = *03:51, *03:62
+++----+ -------- +------- ----+--- +------- ----+---  *03:30, *03:43 = *03:43, *03:62
```

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```
+++----+ -------- +------- ----+--- +------- -----+-+   *03:30, *03:52 = *03:52, *03:62
+++----+ -------- +------- ----+--- +------- -----+--   *03:30, *03:44 = *03:44, *03:62
+++----+ -------- +------- ----+--- +------- ------+-   *03:30, *03:57 = *03:57, *03:62
+++----+ -------- +------- ----+--- +------- -------+   *03:30, *03:46 = *03:30, *03:54 = *03:46, *03:62 = *03:54, *03:62
+++----+ -------- +------- ----+--- +------- --------   *03:01:01:01, *03:30 = *03:01:01:01, *03:62 = *03:01:08, *03:30 =
                                                        *03:01:08, *03:62 = *03:01:14, *03:30 = *03:01:14, *03:62 =
                                                        *03:30, *03:30 = *03:30, *03:62
+++----+ -------- +------- ----+--- -+--+--- -------    *03:34, *03:58 = *03:48, *03:58
+++----+ -------- +------- ----+--- -+----+- -------    *03:36N, *03:58 = *03:45, *03:58
+++----+ -------- +------- ----+--- -+------ ---+----   *03:40, *03:58 = *03:51, *03:58
+++----+ -------- +------- ----+--- -+------ -------+   *03:46, *03:58 = *03:54, *03:58
+++----+ -------- +------- ----+--- -+------ -------    *03:01:01:01, *03:58 = *03:01:08, *03:58 = *03:01:14, *03:58 =
                                                        *03:58, *03:58
+++----+ -------- +------- ----+--- --+-+--- -------    *03:34, *03:55 = *03:48, *03:55
+++----+ -------- +------- ----+--- --+---+- -------    *03:36N, *03:55 = *03:45, *03:55
+++----+ -------- +------- ----+--- --+----- ---+----   *03:40, *03:55 = *03:51, *03:55
+++----+ -------- +------- ----+--- --+----- -------+   *03:46, *03:55 = *03:54, *03:55
+++----+ -------- +------- ----+--- --+----- -------    *03:01:01:01, *03:55 = *03:01:08, *03:55 = *03:01:14, *03:55 =
                                                        *03:55, *03:55
+++----+ -------- +------- ----+--- ---++--- -------    *03:33, *03:34 = *03:33, *03:48
+++----+ -------- +------- ----+--- ---+--+- -------    *03:33, *03:36N = *03:33, *03:45
+++----+ -------- +------- ----+--- ---+---- ---+----   *03:33, *03:40 = *03:33, *03:51
+++----+ -------- +------- ----+--- ---+---- -------+   *03:33, *03:46 = *03:33, *03:54
+++----+ -------- +------- ----+--- ---+---- -------    *03:01:01:01, *03:33 = *03:01:08, *03:33 = *03:01:14, *03:33 =
                                                        *03:33, *03:33
+++----+ -------- +------- ----+--- ----++-- -------    *03:34, *03:35 = *03:35, *03:48
+++----+ -------- +------- ----+--- ----+-+- -------    *03:34, *03:45 = *03:36N, *03:48 = *03:45, *03:48
+++----+ -------- +------- ----+--- ----+--+ -------    *03:34, *03:37 = *03:37, *03:48
+++----+ -------- +------- ----+--- ----+--- +------    *03:34, *03:38 = *03:38, *03:48
+++----+ -------- +------- ----+--- ----+--- -+-----    *03:34, *03:39 = *03:39, *03:48
+++----+ -------- +------- ----+--- ----+--- --+----   *03:20, *03:34 = *03:20, *03:48
+++----+ -------- +------- ----+--- ----+--- ---+----   *03:34, *03:40 = *03:34, *03:51 = *03:40, *03:48 = *03:48, *03:51
+++----+ -------- +------- ----+--- ----+--- ----+---   *03:34, *03:43 = *03:43, *03:48
+++----+ -------- +------- ----+--- ----+--- -----+-+   *03:34, *03:52 = *03:48, *03:52
+++----+ -------- +------- ----+--- ----+--- -----+--   *03:34, *03:44 = *03:44, *03:48
+++----+ -------- +------- ----+--- ----+--- ------+-   *03:34, *03:57 = *03:48, *03:57
+++----+ -------- +------- ----+--- ----+--- -------+   *03:34, *03:46 = *03:34, *03:54 = *03:46, *03:48 = *03:48, *03:54
+++----+ -------- +------- ----+--- ----+--- -------    *03:01:01:01, *03:34 = *03:01:01:01, *03:48 = *03:01:08, *03:34 =
                                                        *03:01:08, *03:48 = *03:01:14, *03:34 = *03:01:14, *03:48 =
                                                        *03:34, *03:48 = *03:48, *03:48
+++----+ -------- +------- ----+--- -----++- -------    *03:35, *03:36N = *03:35, *03:45
+++----+ -------- +------- ----+--- -----+-- ---+----   *03:35, *03:40 = *03:35, *03:51
+++----+ -------- +------- ----+--- -----+-- -------+   *03:35, *03:46 = *03:35, *03:54
+++----+ -------- +------- ----+--- -----+-- -------    *03:01:01:01, *03:35 = *03:01:08, *03:35 = *03:01:14, *03:35 =
                                                        *03:35, *03:35
+++----+ -------- +------- ----+--- ------++ -------    *03:36N, *03:37 = *03:37, *03:45
+++----+ -------- +------- ----+--- ------+- +------    *03:36N, *03:38 = *03:38, *03:45
+++----+ -------- +------- ----+--- ------+- -+-----    *03:36N, *03:39 = *03:39, *03:45
+++----+ -------- +------- ----+--- ------+- --+----   *03:20, *03:36N = *03:20, *03:45
+++----+ -------- +------- ----+--- ------+- ---+----   *03:36N, *03:40 = *03:36N, *03:51 = *03:40, *03:45 = *03:45,
                                                        *03:51
+++----+ -------- +------- ----+--- ------+- ----+---   *03:36N, *03:43 = *03:43, *03:45
+++----+ -------- +------- ----+--- ------+- -----+-+   *03:36N, *03:52 = *03:45, *03:52
+++----+ -------- +------- ----+--- ------+- -----+--   *03:36N, *03:44 = *03:44, *03:45
+++----+ -------- +------- ----+--- ------+- -------+   *03:36N, *03:46 = *03:36N, *03:54 = *03:45, *03:46 = *03:45,
                                                        *03:54
+++----+ -------- +------- ----+--- ------+- -------    *03:01:01:01, *03:36N = *03:01:01:01, *03:45 = *03:01:08,
                                                        *03:36N = *03:01:08, *03:45 = *03:01:14, *03:36N = *03:01:14,
                                                        *03:45 = *03:36N, *03:45 = *03:45, *03:45
+++----+ -------- +------- ----+--- -------+ ---+----   *03:37, *03:40 = *03:37, *03:51
+++----+ -------- +------- ----+--- -------+ -------+   *03:37, *03:46 = *03:37, *03:54
+++----+ -------- +------- ----+--- -------+ -------    *03:01:01:01, *03:37 = *03:01:08, *03:37 = *03:01:14, *03:37 =
                                                        *03:37, *03:37
+++----+ -------- +------- ----+--- -------- +--+----   *03:38, *03:40 = *03:38, *03:51
+++----+ -------- +------- ----+--- -------- +------+   *03:38, *03:46 = *03:38, *03:54
+++----+ -------- +------- ----+--- -------- +------    *03:01:01:01, *03:38 = *03:01:08, *03:38 = *03:01:14, *03:38 =
                                                        *03:38, *03:38
+++----+ -------- +------- ----+--- -------- -++----   *03:39, *03:40 = *03:39, *03:51
+++----+ -------- +------- ----+--- -------- -+----+   *03:39, *03:46 = *03:39, *03:54
+++----+ -------- +------- ----+--- -------- -+----   *03:01:01:01, *03:39 = *03:01:08, *03:39 = *03:01:14, *03:39 =
                                                        *03:39, *03:39
+++----+ -------- +------- ----+--- -------- --++----   *03:20, *03:40 = *03:20, *03:51
+++----+ -------- +------- ----+--- -------- --+----+   *03:20, *03:46 = *03:20, *03:54
```

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```
+++----+ -------- +------- ----+--- ------- --+-----   *03:01:01:01, *03:20 = *03:01:08, *03:20 = *03:01:14, *03:20 =
                                                        *03:20, *03:20
+++----+ -------- +------- ----+--- ------- ---++--     *03:40, *03:43 = *03:43, *03:51
+++----+ -------- +------- ----+--- ------- ---+-+-+    *03:40, *03:52 = *03:51, *03:52
+++----+ -------- +------- ----+--- ------- ---+-+--    *03:40, *03:44 = *03:44, *03:51
+++----+ -------- +------- ----+--- ------- ---+--+-    *03:40, *03:57 = *03:51, *03:57
+++----+ -------- +------- ----+--- ------- ---+--++    *03:40, *03:46 = *03:40, *03:54 = *03:46, *03:51 = *03:51, *03:54
+++----+ -------- +------- ----+--- ------- ---+----    *03:01:01:01, *03:40 = *03:01:01:01, *03:51 = *03:01:08, *03:40 =
                                                        *03:01:08, *03:51 = *03:01:14, *03:40 = *03:01:14, *03:51 =
                                                        *03:40, *03:51 = *03:51, *03:51
+++----+ -------- +------- ----+--- ------- ----+-+     *03:43, *03:46 = *03:43, *03:54
+++----+ -------- +------- ----+--- ------- ----+--     *03:01:01:01, *03:43 = *03:01:08, *03:43 = *03:01:14, *03:43 =
                                                        *03:43, *03:43
+++----+ -------- +------- ----+--- ------- -----+-+    *03:01:01:01, *03:52 = *03:01:08, *03:52 = *03:01:14, *03:52 =
                                                        *03:44, *03:46 = *03:44, *03:52 = *03:44, *03:54 = *03:46, *03:52 =
                                                        *03:52, *03:52 = *03:52, *03:54
+++----+ -------- +------- ----+--- ------- -----+--    *03:01:01:01, *03:44 = *03:01:08, *03:44 = *03:01:14, *03:44 =
                                                        *03:44, *03:44
+++----+ -------- +------- ----+--- ------- ------++    *03:46, *03:57 = *03:54, *03:57
+++----+ -------- +------- ----+--- ------- ------+-    *03:01:01:01, *03:57 = *03:01:14, *03:57
+++----+ -------- +------- ----+--- ------- -------+    *03:01:01:01, *03:46 = *03:01:01:01, *03:54 = *03:01:08, *03:46 =
                                                        *03:01:08, *03:54 = *03:01:14, *03:46 = *03:46, *03:46 = *03:46,
                                                        *03:54
+++----+ -------- +------- ----+--- ------- -------     *03:01:01:01, *03:01:01:01 = *03:01:01:01, *03:01:08 =
                                                        *03:01:01:01, *03:01:14 = *03:01:08, *03:01:14
+++----+ -------- -+------ ----+--- ------- -------     *03:50, *03:50 = *03:50, *03:66
++-+---+ ++------ +------- ----+--- ------- -------     *03:01:14, *03:10 = *03:02, *03:42 = *03:07, *03:10 = *03:42,
                                                        *03:65
++-+---+ ++------ -------- ----+--- ------- -------     *03:02, *03:10 = *03:10, *03:65
++-+---+ -++----- +------- ----+--- --+----- -------    *03:01:14, *03:32 = *03:07, *03:32
++-+---+ -++----- -------- ----+--- --+----- -------    *03:02, *03:32 = *03:32, *03:65
++-+---+ -+------ +------- ----+--- -+----- -------     *03:01:14, *03:31 = *03:07, *03:31
++-+---+ -+------ +------- ----+--- -----+-- -------    *03:01:14, *03:73 = *03:07, *03:73
++-+---+ -+------ +------- ----+--- ------- --+-----    *03:01:14, *03:76 = *03:07, *03:76
++-+---+ -+------ +------- ----+--- ------- -------     *03:01:14, *03:02 = *03:02, *03:07 = *03:07, *03:65
++-+---+ -+------ -------- ----+--- -----+-- -------    *03:02, *03:31 = *03:31, *03:31 = *03:31, *03:65
++-+---+ -+------ -------- ----+--- -----+-- -------    *03:02, *03:73 = *03:65, *03:73 = *03:73, *03:73
++-+---+ -+------ -------- ----+--- ------- --+-----    *03:02, *03:76 = *03:65, *03:76 = *03:76, *03:76
++-+---+ -+------ -------- ----+--- ------- -------     *03:02, *03:02 = *03:02, *03:65
++-+---+ ++------ ++------ ----+--- ------- -------     *03:42, *03:64 = *03:42, *03:66
++-----+ ++------ +------- ----+--- ------- -------     *03:01:14, *03:42 = *03:07, *03:42
++-----+ -+------ ++------ ----+--- ------- -------     *03:07, *03:64 = *03:07, *03:66
++-----+ -+------ +------- ----+--- ------- -------     *03:01:14, *03:07 = *03:07, *03:07
++-----+ -------- ++------ ----+--- ------- ------+     *03:54, *03:64 = *03:54, *03:66
++-----+ -------- +------- ----+--- ------- -------     *03:01:14, *03:64 = *03:01:14, *03:66 = *03:64, *03:64 = *03:64,
                                                        *03:66
++-----+ -------- +------- ----+--- ------- -------+    *03:01:14, *03:54 = *03:54, *03:54
```

*03:01:01:01 = *03:01:01:01, 03:01:01:03-03:01:07, 03:01:09-03:01:13 and 03:01:15-03:01:17
*03:16 = *03:16 and 03:61
*03:17 = *03:17 and 03:74
*03:20 = *03:20 and 03:47
*03:25 = *03:25 and 03:71
*03:27 = *03:27 and 03:49
*03:33 = *03:33 and 03:70
*03:38 = *03:38 and 03:68N
*03:44 = *03:44 and 03:53

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SPECIFICITY TABLE

HLA-A*03 SSP subtyping

Specificities and sizes of the PCR products of the 48 primer mixes used for HLA-A*03 SSP subtyping

Primer Mix	Size of spec. PCR product[1]	Size of control band[2]	Amplified HLA-A*03 alleles[3]	Other amplified HLA-A alleles[4]
1	235 bp	**800 bp**	*03:01:01:01-03:04:01, 03:06-03:09, 03:11N-03:17, 03:19-03:39, 03:41, 03:43-03:74, 03:76	*32:04, 36:02
2[6]	225 bp	1070 bp	*03:01:01:01-03:01:11, 03:01:12[w], 03:01:13-03:07, 03:09-03:11N, 03:13-03:31, 03:33-03:35, 03:37-03:40, 03:42-03:56, 03:58, 03:60-03:71, 03:73-03:76	*01:13, 02:34[w]-02:35:03[w], 02:56:01[w]-02:56:02[w], 02:62[w], 02:103[w], 34:08, 74:13
3[6]	205 bp	1070 bp	*03:01:01:01-03:01:01:03, 03:01:03-03:01:13, 03:01:15-03:01:17, 03:03N-03:06, 03:08-03:09, 03:11N-03:17, 03:19-03:30, 03:33-03:41, 03:43-03:53, 03:55-03:63, 03:67-03:72, 03:74	*11:25, 32:04, 34:02:01, 34:02:03-34:04, 34:07-34:08
4	215 bp	**800 bp**	*03:02, 03:10, 03:31-03:32, 03:65, 03:69N, 03:73, 03:76	*01:12, 01:19, 01:25, 11:01:01-11:07, 11:09-11:22, 11:27, 11:29-11:30, 11:32-11:34, 11:36-11:43, 11:45-11:49, 11:51-11:59, 24:51, 24:92
5	185 bp	**800 bp**	*03:03N	
6	275 bp	1070 bp	*03:04:01	
7	225 bp	1070 bp	*03:06, 03:69N	
8	240 bp	1070 bp	*03:01:01:01-03:01:07, 03:01:09-03:11N, 03:13-03:40, 03:42-03:56,	*01:13, 01:28, 02:01:01:01-02:01:15, 02:01:17-02:01:19, 02:01:21-02:04, 02:07, 02:09, 02:11:01-02:13, 02:15N-02:20:02,

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			03:58-03:76	02:22:01-02:22:02, 02:24:01-02:27, 02:29-02:40, 02:42-02:43N, 02:45-02:50, 02:52-02:53N, 02:55-02:56:02, 02:58-02:60:01, 02:62-02:71, 02:73-02:77, 02:80, 02:82N-02:83N, 02:85-02:86, 02:88N-02:90, 02:92-02:97:02, 02:101:01-02:105, 02:107, 02:109-02:111, 02:113N-02:121, 02:123, 02:125N, 02:128, 02:130-02:135, 02:138-02:141, 02:145, 02:147-02:153, 02:155-02:168, 02:171:01-02:171:02, 02:173-02:177, 02:181-02:183, 02:185-02:199, 11:43, 24:19, 24:28, 24:44, 24:89, 29:19, 30:01:01-30:01:03, 30:11:01-30:11:02, 30:13-30:20, 30:23-30:24, 30:26, 30:30-30:31, 30:35-30:37, 31:01:02-31:01:05, 31:01:07-31:06, 31:09, 31:11-31:31, 33:01:01-33:01:03, 33:03:01-33:12, 33:14-33:16, 33:18-33:29, 34:08, 68:29, 68:45, 74:01-74:09, 74:11-74:14N, 80:02
9	230 bp	1070 bp	*03:05, 03:10, 03:42, 03:72	*02:156, 11:04, 11:35, 24:19, 30:01:01-30:04:01, 30:06-30:20, 30:22-30:27N, 30:29-30:37, 31:03-31:04, 34:02:01-34:04, 34:07-34:08, 36:01, 36:05, 68:45
10[5,8]	65 bp, 205 bp	**800 bp**	*03:02, 03:07, 03:10, 03:31-03:32, 03:42, 03:60, 03:73, 03:76	*01:12, 01:19, 01:21, 02:156, 11:31, 11:35, 24:92, 30:04:01, 30:06, 30:09, 30:17, 30:29, 31:03-31:04
11	225 bp	**800 bp**	*03:08, 03:32, 03:41	*01:01:01:01-01:01:14, 01:03-01:04N, 01:06, 01:08-01:12, 01:14-01:16N, 01:18N-01:19, 01:21-01:33, 01:01:38L, 01:35-01:42, 01:44-01:55, 02:48, 02:81, 02:90, 02:124, 02:146, 25:03, 26:20, 32:01:01-32:02, 32:03[w], 32:04-32:06, 32:08[w], 32:09-32:16, 32:18-32:22, 36:01-36:05, 74:01-74:04, 74:08-74:12N, 74:14N, 80:01[w], 80:02

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12	190 bp	1070 bp	*03:09	*02:01:09, 02:06:07, 02:50, 02:122, 11:06, 11:18, 24:28, 24:89, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 29:19, 33:24, 68:05, 68:15, 68:20, 74:06
13	145 bp	**800 bp**	*03:01:01:02N	
14[5,9]	105 bp, 235 bp	1070 bp	*03:11N, 03:59	
15	225 bp	1070 bp	*03:12	*02:78, 11:01:01-11:02:01, 11:02:02[w], 11:02:03-11:05, 11:06[w], 11:07-11:16, 11:20-11:27, 11:29-11:39, 11:41-11:42, 11:44, 11:46, 11:48-11:59, 30:08, 34:01:01-34:07, 66:01-66:02, 66:04, 66:06-66:10, 66:12-66:13, 68:01:01:01-68:02:04, 68:06-68:14, 68:16-68:19, 68:21:01-68:28, 68:30, 68:32-68:35, 68:37-68:44, 68:47-68:49N, 69:01
16	275 bp	1070 bp	*03:14	
17[6,7]	215 bp	**800 bp**	*03:01:01:01-03:01:17, 03:03N-03:09, 03:11N-03:17, 03:19-03:30, 03:33-03:49, 03:51-03:64, 03:67-03:68N, 03:70-03:72, 03:74	*01:06, 02:156, 11:24:01-11:25, 11:31, 11:35, 30:01:01-30:03, 30:07-30:16, 30:18-30:20, 30:22-30:27N, 30:30-30:37, 31:03-31:04, 32:04, 34:02:01-34:04, 34:07-34:08, 80:01-80:02
18[5,10]	135 bp, 210 bp	1070 bp	*03:13, 03:50, 03:64, 03:66	*11:08, 11:44, 30:04:01, 30:06, 30:17, 30:29, 36:02
19	230 bp	1070 bp	*03:15, 03:19	
20[5,11]	60 bp, 175 bp	1070 bp	*03:16, 03:61	
21[5,12]	130 bp, 195 bp	1070 bp	*03:17, 03:74	*02:156, 24:51, 24:92
22	250 bp	1070 bp	*03:18	*01:01:01:01-01:02, 01:04N, 01:06-01:19, 01:21-01:33, 01:01:38L, 01:35-01:55, 11:27, 11:38-11:39, 24:51, 24:92, 80:01-80:02
23[5,13]	95 bp, 185 bp, 210 bp, 240 bp	1070 bp	*03:19, 03:22, 03:56, 03:75	*24:18, 36:02
24	470 bp	1070 bp	*03:21N	*01:04N, 11:21N, 23:07N, 24:11N

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25	155 bp	1070 bp	*03:23:01	*02:01:09, 02:06:07, 02:35:03, 02:50, 02:122, 24:08, 24:42, 24:89, 26:07:01-26:07:02, 33:08, 74:04
26	200 bp	1070 bp	*03:24	*01:51, 02:55, 25:03, 26:20, 32:15, 34:08
27[5,14]	95 bp, 145 bp	1070 bp	*03:25, 03:71	
28	495 bp	1070 bp	*03:41, 03:63	*36:02
29[5]	100 bp	1070 bp	*03:01:01:01-03:07, 03:09-03:28, 03:30-03:31, 03:33, 03:35, 03:37-03:40, 03:42-03:61, 03:64-03:76	*02:34-02:35:03, 02:56:01-02:56:02, 02:62, 02:78, 02:103, 11:12, 23:13, 24:07, 24:24, 29:01:01:01-29:18, 29:21-29:22, 30:01:01-30:01:03, 30:08, 30:11:01-30:11:02, 30:14L-30:20, 30:23-30:26, 30:30, 30:35-30:37, 32:17, 66:02, 66:12, 68:01:01:01-68:02:04, 68:06-68:14, 68:16-68:19, 68:21:01-68:30, 68:32-68:39, 68:41-68:49N, 69:01, 74:13
30[5,15]	130 bp, 210 bp	1070 bp	*03:27, 03:49	
31	220 bp	**800 bp**	*03:28, 03:56	*36:02
32[16]	150 bp, 220 bp	1070 bp	*03:29, 03:67	
33[17]	210 bp, 285 bp	1070 bp	*03:30, 03:62	*32:05
34[5,18]	125 bp, 160 bp	1070 bp	*03:31, 03:58	
35[19]	235 bp, 275 bp	1070 bp	*03:32, 03:55	*31:21, 74:07
36[20]	160 bp, 210 bp	1070 bp	*03:33, 03:70	
37[5,21]	95 bp, 225 bp	1070 bp	*03:34, 03:48	
38[22]	165 bp, 250 bp	**800 bp**	*03:35, 03:73	
39[23]	200 bp, 235 bp	1070 bp	*03:36N, 03:45	
40	240 bp	1070 bp	*03:37	
41[24]	185 bp, 275 bp	1070 bp	*03:38, 03:68N	
42	220 bp	**800 bp**	*03:39	

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43[25]	150 bp, 260 bp	1070 bp	*03:20, 03:47, 03:76	
44[26]	165 bp, 240 bp	1070 bp	*03:40, 03:51	
45	150 bp	1070 bp	*03:43	
46[5,27]	115 bp, 190 bp	1070 bp	*03:44, 03:52-03:53	*02:164, 30:30, 31:19, **C*07:35**
47	240 bp	1070 bp	*03:41, 03:57	*01:01:01:01-01:01:03, 01:01:05-01:01:12, 01:01:14, 01:03-01:04N, 01:06, 01:08-01:12, 01:14-01:19, 01:21-01:23, 01:25-01:27N, 01:29-01:33, 01:01:38L, 01:35-01:42, 01:44-01:55, 36:01-36:05, 74:10, 80:01
48[5,28]	70 bp, 110 bp, 145 bp	1070 bp	*03:46, 03:52, 03:54	*31:19, **C*07:86**

[1]Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-A*03 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 inherit feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated.

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-A*03 subtyping.

In addition, wells number 4, 5, 10, 11, 13, 17, 31, 38 and 42 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

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

[3]The A*03:16 and A*03:61 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 20.

The A*03:17 and A*03:74 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 21.

The A*03:20, and A*03:47 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 43.

The A*03:25 and A*03:71 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 27.

The A*03:27 and A*03:49 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 30.

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The A*03:33 and A*03:70 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 36.

The A*03:38 and A*03:68N alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 41.

The A*03:44 and A*03:53 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 46.

[4]Due to the sharing of sequence motifs between HLA-A alleles non-HLA-A*03 alleles will be amplified by primer mixes 1 to 4, 8 to 12, 15, 17, 18, 21 to 26, 28, 29, 31, 33, 35 and 46 to 48. In addition, the C*07:35 allele is amplified by primer mix 46 and the C*07:86 allele is amplified by primer mix 48.

[5]Short specific PCR fragments are less intense and not as sharp as longer specific bands.

[6]Primer mix 2, 3 and 17 may give a lower yield of specific PCR product than the other A*03 primer mixes.

[7]Primer mix 17 may give rise to nonspecific amplifications.

[8]Primer mix 10: Specific PCR fragment of 65 bp in A*03:60 allele. Specific PCR fragment of 205 bp in the A*03:02, 03:07, 03:10, 03:31-03:32, 03:42, 03:73 and A*03:76 and in the A*01:12, 01:19, 01:21, 02:156, 11:31, 11:35, 24:92, 30:04, 30:06, 30:09, 30:17, 30:29 and 31:03-31:04 alleles.

[9]Primer mix 14: Specific PCR fragment of 105 bp in the A*03:11N allele. Specific PCR fragment of 235 bp in the A*03:59 allele.

[10]Primer mix 18: Specific PCR fragment of 135 bp in the A*03:13 allele. Specific PCR fragment of 210 bp in the A* 03:50, 03:64 and 03:66 and the A*11:08, 11:44, 30:04, 30:06, 30:17, 30:29 and 36:02 alleles.

[11]Primer mix 20: Specific PCR fragment of 60 bp in the A*03:61 allele. Specific PCR fragment of 175 bp in the A*03:16 allele.

[12]Primer mix 21: Specific PCR fragment of 130 bp in the A*03:17 and the A*02:156, 24:51 and 24:92 alleles. Specific PCR fragment of 195 bp in the A*03:74 allele.

[13]Primer mix 23: Specific PCR fragment of 95 bp in the A*03:22 allele. Specific PCR fragment of 185 bp in the A*03:19 and in the A*24:18 alleles. Specific PCR fragment of 210 bp in the A* 03:56 and in the A*36:02 alleles. Specific PCR fragment of 240 bp in the A*03:75 and in the A*24:18 alleles.

[14]Primer mix 27: Specific PCR fragment of 95 bp in the A*03:71 allele. Specific PCR fragment of 145 bp in the A*03:25 allele.

[15]Primer mix 30: Specific PCR fragment of 130 bp in the A*03:27 allele. Specific PCR fragment of 210 bp in the A*03:49 allele.

[16]Primer mix 32: Specific PCR fragment of 150 bp in the A*03:67 allele. Specific PCR fragment of 220 bp in the A*03:29 allele.

[17]Primer mix 33: Specific PCR fragment of 210 bp in the A*03:30 and the A*32:05 alleles. Specific PCR fragment of 285 bp in the A*03:62 allele.

[18]Primer mix 34: Specific PCR fragment of 125 bp in the A*03:58 allele. Specific PCR fragment of 160 bp in the A*03:31 allele.

[19]Primer mix 35: Specific PCR fragment of 235 bp in the A*03:32 and the A*31:21 and 74:07 alleles. Specific PCR fragment of 275 bp in the A*03:55 allele.

[20]Primer mix 36: Specific PCR fragment of 160 bp in the A*03:33 allele. Specific PCR fragment of 210 bp in the A* 03:70 allele.

[21]Primer mix 37: Specific PCR fragment of 95 bp in the A*03:48 allele. Specific PCR fragment of 225 bp in the A* 03:34 allele.

[22]Primer mix 38: Specific PCR fragment of 165 bp in the A*03:35 allele. Specific PCR fragment of 250 bp in the A*03:73 allele.

[23]Primer mix 39: Specific PCR fragment of 200 bp in the A* 03:36N allele. Specific PCR fragment of 235 bp in the A*03:45 allele.

[24]Primer mix 41: Specific PCR fragment of 185 bp in the A* 03:38 allele. Specific PCR fragment of 275 bp in the A*03:68N allele.

[25]Primer mix 43: Specific PCR fragment of 150 bp in the A*03:20 allele. Specific PCR fragment of 260 bp in the A*03:47 and 03:76 alleles.

[26]Primer mix 44: Specific PCR fragment of 165 bp in the A*03:51 allele. Specific PCR fragment of 240 bp in the A*03:40 allele.

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[27]Primer mix 46: Specific PCR fragment of 115 bp in A*03:44 and 03:52 and the A*02:164 and 31:19 alleles. Specific PCR fragment of 190 bp in A*03:53 and the A*30:30 and in the C*07:35 alleles.

[28]Primer mix 48: Specific PCR fragment of 70 bp in the A*03:54 allele. Specific PCR fragment of 110 bp in the A*03:52 and the A*31:19 alleles. Specific PCR fragment of 145 bp in the A*03:46 and in the C*07:86 alleles.

'w', may be weakly amplified.

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INTERPRETATION TABLE
HLA-A*03 SSP subtyping
Amplification patterns of the A*03:01 to A*03:76 alleles

	Well[12] 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.	235	225	205	215	185	275	225	240	230	65	225	190	145	105	225	275	215	135	230	60	130	250	95	470
PCR product(s)										205			235					210		175	195		185	
																							240 / 210	
Length of int. pos. control[1]	800	1070	1070	800	800	1070	1070	1070	1070	800	800	1070	800	1070	1070	1070	800	1070	1070	1070	1070	1070	1070	1070
5'-primer(s)[2]	363 5'-ATA 3'	98 5'-CTT 3'	363 5'-ATA 3'	363 5'-ATA 3'	382 5'-Tgg 3'	363 5'-ATA 3'	363 5'-ATA 3'	102 5'-ACA 3'	98 5'-CTC 3'	363 5'-ATA 3'	98 5'-CTT 3'	144 5'-gCC 3'	4th| 5'-ggA 3'	28 5'-TCC 3'	98 5'-CTA 3'	98 5'-CTT 3'	363 5'-ATA 3'	363 5'-ATA 3'	368 5'-gTT 3'	363 5'-ATA 3'	363 5'-ATA 3'	363 5'-ATA 3'	355 5'-CCC 3'	3rd| 5'-ATA 3'
								102 5'-ACA 3'	363 5'-ATA 3'				363 5'-ATA 3'										385 5'-ggC 3'	
																							413 5'-CCA 3'	
																							502 5'-CCC 3'	
3'-primer(s)[3]	555 5'-CCA 3'	282 5'-gAC 3'	527 5'-CCT 3'	539 5'-TCT 3'	527 5'-CCT 3'	595 5'-CCg 3'	538 5'-CTA 3'	299 5'-CCA 3'	282 5'-gAC 3'	388 5'-gAT 3'	282 5'-gAg 3'	292 5'-gTg 3'	899 5'-ACA 3'	92 5'-AAC 3'	282 5'-gAC 3'	333 5'-CTg 3'	539 5'-TCA 3'	455 5'-CCA 3'	555 5'-CCA 3'	382 5'-CCT 3'	453 5'-TCT 3'	570 5'-CCg 3'	555 5'-CCA 3'	621 5'-ggg 3'
	557 5'-Tgg 3'	282 5'-gAC 3'					557 5'-Tgg 3'	299 5'-CCA 3'	555 5'-CCC 3'	527 5'-CCA 3'	282 5'-gAg 3'			426 5'-TCT 3'			539 5'-TCC 3'	528 5'-gCg 3'		496 5'-gAA 3'	518 5'-CCT 3'			
										527 5'-CCA 3'	282 5'-gAg 3'													
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
HLA-A allele																								

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INTERPRETATION TABLE
HLA-A*03 SSP subtyping
Amplification patterns of the A*03:01 to A*03:76 alleles

Well[12]

25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
155	200	95	495	100	130	220	150	210	125	235	160	95	165	200	240	185	220	150	165	150	115	240	70	**Length of spec.**
		145		210			220	285	160	275	210	225	250	235				260	240		190		110	**PCR product(s)**
																							145	
1070	1070	1070	1070	1070	1070	**800**	1070	1070	1070	1070	1070	1070	**800**	1070	1070	1070	**800**	1070	1070	1070	1070	1070	1070	**Length of int.** **pos. control[1]**
144	98	179	341	282	363	365	98	98	98	98	98	98	363	98	801	98	376	98	363	418	410	98	457	**5'-primer(s)[2]**
5'-gCC 3'	5'-CTT 3'	5'-gTg 3'	5'-ggA 3'	5'-CAg 3'	5'-ATA 3'	5'-AAC 3'	5'-CTT 3'	5'-CTT 3'	5'-CTT 3'	5'-CTT 3'	5'-CTT 3'	5'-CTT 3'	5'-ATA 3'	5'-CTT 3'	5'-AAC 3'	5'-CTT 3'	5'-gCT 3'	5'-CTT 3'	5'-ATA 3'	5'-AgC 3'	5'-gTg 3'	5'-CTT 3'	5'-AgC 3'	
		228	874	282		385			418				650			363	890				484		488	
		5'-ATg 3'	5'-CCg 3'	5'-CAg 3'		5'-ggC 3'			5'-AgT 3'				5'-CCC 3'			5'-ATA 3'	5'-gAA 3'				5'-ACT 3'		5'-ggT 3'	
																					488		530	
																					5'-ggT 3'		5'-ggT 3'	
256	259	282	555	341	454	555	206	265	181	290	217	152	487	259	899	331	555	316	486	527	559	299	559	**3'-primer(s)[3]**
5'-CCC 3'	5'-gTT 3'	5'-gAC 3'	5'-CCA 3'	5'-Cgg 3'	5'-CTg 3'	5'-CCA 3'	5'-CCg 3'	5'-CCC 3'	5'-gTT 3'	5'-CAA 3'	5'-CgA 3'	5'-Cgg 3'	5'-Cgg 3'	5'-CTC 3'	5'-ACA 3'	5'-CTA 3'	5'-CCA 3'	5'-gCT 3'	5'-gCg 3'	5'-CCT 3'	5'-CgT 3'	5'-TCg 3'	5'-CgT 3'	
			899	533		278		343	539	330	265	281	574	845		506	899	561						
			5'-ACA 3'	5'-gCC 3'		5'-ggA 3'		5'-T 3'	5'-TCT 3'	5'-TgT 3'	5'-CCA 3'	5'-ACg 3'	5'-gAA 3'	5'-AgT 3'		5'-Tgg 3'	5'-ACA 3'	5'-CAg 3'						
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	**Well No.**
																								HLA-A allele

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	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.	235	225	205	215	185	275	225	240	230	65	225	190	145	105	225	275	215	135	230	60	130	250	95	470
PCR product(s)										205					235			210		175	195		185	
																							210	
																							240	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
HLA-A allele																								
*03:01:01:01, 03:01:01:03-03:01:01:03, 03:01:03-03:01:07, 03:01:09-03:01:11, 03:01:13, 03:01:15-03:01:17, 03:26[13]	1	2	3					8									17							
*03:01:01:02N	1	2	3					8					13				17							
*03:01:08	1	2	3					8									17							
*03:01:12	1	w	3					8									17							
*03:01:02, 03:01:14	1	2						8									17							
*03:02	1	2		4				8		10														
*03:03N	1	2	3		5			8									17							
*03:04:01	1	2	3			6		8									17							
*03:05		2	3					8	9								17							
*03:06	1	2	3				7	8									17							
*03:07	1	2						8		10							17							
*03:08	1		3					8			11						17							
*03:09	1	2	3					8				12					17							
*03:10		2		4				8	9	10														
*03:11N	1	2	3					8						14			17							
*03:12	1		3												15		17							
*03:13	1	2	3					8									17	18						
*03:14	1	2	3					8								16	17							
*03:15	1	2	3					8									17		19					
*03:16, 03:61[4]	1	2	3					8									17			20				
*03:17, 03:74[5]	1	2	3					8									17				21			
*03:18		2						8														22		
*03:19	1	2	3					8									17		19				23	
*03:20, 03:47[6]	1	2	3					8									17							
*03:21N	1	2	3					8									17							24
*03:22	1	2	3					8									17						23	
*03:23:01	1	2	3					8									17							
*03:24	1	2	3					8									17							
*03:25, 03:71[7]	1	2	3					8									17							
*03:27, 03:49[8]	1	2	3					8									17							
*03:28	1	2	3					8									17							
*03:29	1	2	3					8									17							
*03:30	1	2	3					8									17							
*03:31	1	2		4				8		10														
*03:32	1			4				8		10	11													
*03:33, 03:70[9]	1	2	3					8									17							
*03:34	1	2	3					8									17							
*03:35	1	2	3					8									17							
*03:36N	1		3					8									17							
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

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155	200	95	495	100	130	220	150	210	125	235	160	95	165	200	240	185	220	150	165	150	115	240	70	**Length of spec.**
	145			210			220	285	160	275	210	225	250	235		275		260	240		190		110	**PCR product(s)**
																							145	
25	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**Well No.**
																								HLA-A allele
				29																				***03:01:01:01, 03:01:01:03-03:01:01:03, 03:01:03-03:01:07, 03:01:09-03:01:11, 03:01:13, 03:01:15-03:01:17, 03:26[13]**
				29																				***03:01:01:02N**
				29																				***03:01:08**
				29																				***03:01:12**
				29																				***03:01:02, 03:01:14**
				29																				***03:02**
				29																				***03:03N**
				29																				***03:04:01**
				29																				***03:05**
				29																				***03:06**
				29																				***03:07**
																								*03:08
				29																				***03:09**
				29																				***03:10**
				29																				***03:11N**
				29																				***03:12**
				29																				***03:13**
				29																				***03:14**
				29																				***03:15**
				29																				***03:16, 03:61[4]**
				29																				***03:17, 03:74[5]**
				29																				***03:18**
				29																				***03:19**
				29													43						***03:20, 03:47[6]**
				29																				***03:21N**
				29																				***03:22**
25				29																				***03:23:01**
	26			29																				***03:24**
		27		29																				***03:25, 03:71[7]**
				29	30																			***03:27, 03:49[8]**
				29		31																		***03:28**
							32																	***03:29**
				29				33																***03:30**
				29					34															***03:31**
										35														***03:32**
				29							36													***03:33, 03:70[9]**
												37												***03:34**
				29									38											***03:35**
														39										***03:36N**
25	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**Well No.**

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Length of spec.	235	225	205	215	185	275	225	240	230	65	225	190	145	105	225	275	215	135	230	60	130	250	95	470
PCR product(s)										205				235				210		175	195		185	
																							210	
																							240	
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
*03:37	1	2	3					8									17							
*03:38, 03:68N[10]	1	2	3					8									17							
*03:39	1	2	3					8									17							
*03:40		2	3					8									17							
*03:41	1		3								11						17							
*03:42		2						8	9	10							17							
*03:43	1	2	3					8									17							
*03:44, 03:53[11]	1	2	3					8									17							
*03:45	1	2	3					8									17							
*03:46	1	2	3					8									17							
*03:48	1	2	3					8									17							
*03:50	1	2	3					8										18						
*03:51	1	2	3					8									17							
*03:52	1	2	3					8									17							
*03:54	1	2						8									17							
*03:55	1	2	3					8									17							
*03:56	1	2	3					8									17						23	
*03:57	1		3														17							
*03:58	1	2	3					8									17							
*03:59	1		3					8						14			17							
*03:60	1	2	3					8		10							17							
*03:62	1	2	3					8									17							
*03:63	1	2	3					8									17							
*03:64	1	2						8									17	18						
*03:65	1	2		4				8																
*03:66	1	2						8										18						
*03:67	1	2	3					8									17							
*03:69N	1	2	3	4			7	8																
*03:72	1		3					8	9								17							
*03:73	1	2		4				8		10														
*03:75		2						8															23	
*03:76	1	2		4				8		10														
*01:01:01:01-01:01:03, 01:01:05-01:01:12, 01:01:14, 01:08-01:11N, 01:14-01:16N, 01:18N, 01:22N-01:23, 01:26-01:27N, 01:29-01:33, 01:01:38L, 01:35-01:42, 01:44-01:50, 01:52N-01:55											11											22		
*01:01:04, 01:01:13, 01:24											11											22		
*01:02, 01:07, 01:43																						22		
*01:03, 36:03-36:04, 74:10											11													
*01:04N											11											22		24
*01:06											11						17					22		
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**

101.413-24u/04u – without *Taq* polymerase   General **"Instructions for Use"**
IFU-02 Rev. No. 02 can be downloaded from

Lot No.: 38M   **Lot-specific information**   **www.olerup-ssp.com**

25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Length of spec. PCR product(s)
155	200	95	495	100	130	220	150	210	125	235	160	95	165	200	240	185	220	150	165	150	115	240	70	
	145				210		220	285	160	275	210	225	250	235		275		260	240		190		110	
																							145	
25	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**Well No.**
				29											40									***03:37**
				29												41								***03:38, 03:68N**[10]
				29													42							***03:39**
				29															44					***03:40**
			28																			47		***03:41**
				29																				***03:42**
				29																45				***03:43**
				29																	46			***03:44, 03:53**[11]
				29										39										***03:45**
				29																			48	***03:46**
				29								37												***03:48**
				29																				***03:50**
				29															44					***03:51**
				29																	46		48	***03:52**
				29																			48	***03:54**
				29					35															***03:55**
				29		31																		***03:56**
				29																		47		***03:57**
				29				34																***03:58**
				29																				***03:59**
				29																				***03:60**
							33																	***03:62**
			28																					***03:63**
				29																				***03:64**
				29																				***03:65**
				29																				***03:66**
				29			32																	***03:67**
				29																				***03:69N**
				29																				***03:72**
				29									38											***03:73**
				29																				***03:75**
				29														43						***03:76**
																						47		***01:01:01:01-01:01:03, 01:01:05-01:01:12, 01:01:14, 01:08-01:11N, 01:14-01:16N, 01:18N, 01:22N-01:23, 01:26-01:27N, 01:29-01:33, 01:01:38L, 01:35-01:42, 01:44-01:50, 01:52N-01:55**
																								*01:01:04, 01:01:13, 01:24
																								*01:02, 01:07, 01:43
																						47		***01:03, 36:03-36:04, 74:10**
																						47		***01:04N**
																						47		***01:06**
25	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**Well No.**

101.413-24u/04u – without *Taq* polymerase General **"Instructions for Use"**
IFU-02 Rev. No. 02 can be downloaded from

Lot No.: 38M **Lot-specific information** **www.olerup-ssp.com**

Length of spec.	235	225	205	215	185	275	225	240	230	65	225	190	145	105	225	275	215	135	230	60	130	250	95	470
PCR product(s)										205				235			210			175	195		185	
																							210	
																							240	
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**
*01:12, 01:19				4						10	11											22		
*01:13		2						8														22		
*01:17																						22		
*01:21										10	11											22		
*01:25				4							11											22		
*01:28								8			11											22		
*01:51											11											22		
*02:01:01:01-02:01:08, 02:01:10-02:01:15, 02:01:17-02:01:19, 02:01:21-02:04, 02:07, 02:09, 02:11:01-02:13, 02:15N-02:20:02, 02:22:01-02:22:02, 02:24:01-02:27, 02:29-02:33, 02:36-02:40, 02:42-02:43N, 02:45-02:47, 02:49, 02:52-02:53N, 02:58-02:60:01, 02:63-02:71, 02:73-02:77, 02:80, 02:82N-02:83N, 02:85-02:86, 02:88N-02:89, 02:92-02:97:02, 02:101:01-02:102, 02:104-02:105, 02:107, 02:109-02:111, 02:113N-02:121, 02:123, 02:125N, 02:128, 02:130-02:135, 02:138-02:141, 02:145, 02:147-02:153, 02:155, 02:157-02:163, 02:165-02:168, 02:171:01-02:171:02, 02:173-02:177, 02:181-02:183, 02:185-02:199, 24:44, 31:01:02-31:01:05, 31:01:07-31:02, 31:05-31:06, 31:09, 31:11-31:18, 31:20, 31:22-31:31, 33:01:01-33:01:03, 33:03:01-33:07, 33:09-33:12, 33:14-33:16, 33:18-33:23, 33:25-33:29, 74:05								8																
*02:01:09, 02:50, 24:89								8				12												
*02:06:07, 02:122												12												
*02:34-02:35:02, 02:56:01-02:56:02, 02:62, 02:103		w						8																
*02:35:03		w						8																
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**

101.413-24u/04u – without *Taq* polymerase   General **"Instructions for Use"**
IFU-02 Rev. No. 02 can be downloaded from

Lot No.: 38M   **Lot-specific information**   **www.olerup-ssp.com**

25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Length of spec. PCR product(s)
155	200	95	495	100	130	220	150	210	125	235	160	95	165	200	240	185	220	150	165	150	115	240	70	
	145				210		220	285	160	275	210		225	250	235	275		260	240			190	110	
																							145	
25	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**Well No.**
																						47		***01:12, 01:19**
																								*01:13
																						47		***01:17**
																						47		***01:21**
																						47		***01:25**
																								*01:28
	26																					47		***01:51**
																								*02:01:01:01-02:01:08, 02:01:10-02:01:15, 02:01:17-02:01:19, 02:01:21-02:04, 02:07, 02:09, 02:11:01-02:13, 02:15N-02:20:02, 02:22:01-02:22:02, 02:24:01-02:27, 02:29-02:33, 02:36-02:40, 02:42-02:43N, 02:45-02:47, 02:49, 02:52-02:53N, 02:58-02:60:01, 02:63-02:71, 02:73-02:77, 02:80, 02:82N-02:83N, 02:85-02:86, 02:88N-02:89, 02:92-02:97:02, 02:101:01-02:102, 02:104-02:105, 02:107, 02:109-02:111, 02:113N-02:121, 02:123, 02:125N, 02:128, 02:130-02:135, 02:138-02:141, 02:145, 02:147-02:153, 02:155, 02:157-02:163, 02:165-02:168, 02:171:01-02:171:02, 02:173-02:177, 02:181-02:183, 02:185-02:199, 24:44, 31:01:02-31:01:05, 31:01:07-31:02, 31:05-31:06, 31:09, 31:11-31:18, 31:20, 31:22-31:31, 33:01:01-33:01:03, 33:03:01-33:07, 33:09-33:12, 33:14-33:16, 33:18-33:23, 33:25-33:29, 74:05
25																								***02:01:09, 02:50, 24:89**
25																								***02:06:07, 02:122**
				29																				***02:34-02:35:02, 02:56:01-02:56:02, 02:62, 02:103**
25				29																				***02:35:03**
25	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**Well No.**

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For *In Vitro* Diagnostic Use.

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101.413-24u/04u – without *Taq* polymerase General **"Instructions for Use"**
IFU-02 Rev. No. 02 can be downloaded from

Lot No.: 38M Lot-specific information **www.olerup-ssp.com**

	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.	235	225	205	215	185	275	225	240	230	65	225	190	145	105	225	275	215	135	230	60	130	250	95	470
PCR product(s)										205				235				210		175	195		185	
																							210	
																							240	
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
*02:48, 02:90, 74:01-74:03, 74:08-74:09, 74:11-74:12N, 74:14N								8			11													
*02:55								8																
*02:78, 66:02, 66:12, 68:01:01:01-68:02:04, 68:06-68:14, 68:16-68:19, 68:21:01-68:28, 68:30, 68:32-68:35, 68:37-68:39, 68:41-68:44, 68:47-68:49N, 69:01															15									
*02:81, 02:124, 02:146, 32:01:01-32:02, 32:06, 32:09-32:14, 32:16, 32:18-32:22											11													
*02:156								8	9	10							17				21			
*02:164								8																
*11:01:01-11:02:01, 11:02:03-11:03, 11:05, 11:07, 11:09-11:11, 11:13-11:16, 11:20, 11:22, 11:29-11:30, 11:32-11:34, 11:36-11:37, 11:41-11:42, 11:46, 11:48-11:49, 11:51-11:59				4											15									
*11:02:02				4											w									
*11:04				4					9						15									
*11:06				4								12			w									
*11:08, 11:44															15			18						
*11:12				4											15									
*11:17, 11:19, 11:40, 11:45, 11:47				4																				
*11:18				4								12												
*11:21N				4											15									24
*11:23, 11:26, 11:50Q, 34:01:01-34:01:02, 34:05-34:06, 66:01, 66:04, 66:06-66:10, 66:13, 68:40															15									
*11:24:01-11:24:02															15		17							
*11:25			3												15		17							
*11:27, 11:38-11:39				4											15							22		
*11:31										10					15		17							
*11:35									9	10					15		17							
*11:43				4				8																
*23:07N, 24:11N																								24
*23:13, 24:07, 24:24, 29:01:01:01-29:18, 29:21-29:22, 32:17, 68:36, 68:46																								
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**

HLA-A*03 **Product Insert** **Page 29 of 40**
101.413-24u/04u – without *Taq* polymerase General **"Instructions for Use"**
IFU-02 Rev. No. 02 can be downloaded from

Lot No.: 38M Lot-specific information **www.olerup-ssp.com**

25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Length of spec. PCR product(s)
155	200	95	495	100	130	220	150	210	125	235	160	95	165	200	240	185	220	150	165	150	115	240	70	**Length of spec.**
	145			210			220	285	160	275	210	225	250	235		275		260	240		190		110	**PCR product(s)**
																							145	
25	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**Well No.**
																								*02:48, 02:90, 74:01-74:03, 74:08-74:09, 74:11-74:12N, 74:14N
	26																							***02:55**
				29																				***02:78, 66:02, 66:12, 68:01:01:01-68:02:04, 68:06-68:14, 68:16-68:19, 68:21:01-68:28, 68:30, 68:32-68:35, 68:37-68:39, 68:41-68:44, 68:47-68:49N, 69:01**
																								*02:81, 02:124, 02:146, 32:01:01-32:02, 32:06, 32:09-32:14, 32:16, 32:18-32:22
																								*02:156
																						46			***02:164**
																								*11:01:01-11:02:01, 11:02:03-11:03, 11:05, 11:07, 11:09-11:11, 11:13-11:16, 11:20, 11:22, 11:29-11:30, 11:32-11:34, 11:36-11:37, 11:41-11:42, 11:46, 11:48-11:49, 11:51-11:59
																									*11:02:02
																									*11:04
																									*11:06
																									*11:08, 11:44
				29																				***11:12**
																									*11:17, 11:19, 11:40, 11:45, 11:47
																									*11:18
																									*11:21N
																									*11:23, 11:26, 11:50Q, 34:01:01-34:01:02, 34:05-34:06, 66:01, 66:04, 66:06-66:10, 66:13, 68:40
																									*11:24:01-11:24:02
																									*11:25
																									*11:27, 11:38-11:39
																									*11:31
																									*11:35
																									*11:43
																									*23:07N, 24:11N
				29																				***23:13, 24:07, 24:24, 29:01:01:01-29:18, 29:21-29:22, 32:17, 68:36, 68:46**
25	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**Well No.**

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101.413-24u/04u – without *Taq* polymerase   General **"Instructions for Use"**
IFU-02 Rev. No. 02 can be downloaded from

Lot No.: 38M   **Lot-specific information**   **www.olerup-ssp.com**

	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.	235	225	205	215	185	275	225	240	230	65	225	190	145	105	225	275	215	135	230	60	130	250	95	470
PCR product(s)										205				235				210		175	195		185	
																							210	
																							240	
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**
*24:08, 24:42, 26:07:01-26:07:02																								
*24:18																							23	
*24:19								8	9															
*24:28, 29:19, 33:24, 74:06								8				12												
*24:51				4																	21	22		
*24:92				4						10											21	22		
*25:03, 26:20, 32:15											11													
*26:03:01-26:03:02, 26:06, 26:21, 26:30, 68:05, 68:15, 68:20												12												
*30:01:01-30:01:03, 30:11:01-30:11:02, 30:14L-30:16, 30:18-30:20, 30:23-30:24, 30:26, 30:35-30:37								8	9								17							
*30:02:01-30:03, 30:07, 30:10, 30:12, 30:22, 30:27N, 30:32-30:34									9								17							
*30:04:01, 30:06, 30:29									9	10								18						
*30:08									9						15		17							
*30:09									9	10							17							
*30:13, 30:31								8	9								17							
*30:17								8	9	10								18						
*30:25									9								17							
*30:30								8	9								17							
*31:03-31:04								8	9	10							17							
*31:19								8																
*31:21, 74:07								8																
*32:03, 32:08										w														
*32:04	1		3								11						17							
*32:05											11													
*33:08								8																
*34:02:01, 34:02:03-34:04, 34:07			3						9						15		17							
*34:02:02									9						15		17							
*34:08		2	3					8	9								17							
*36:01, 36:05									9		11													
*36:02	1										11							18					23	
*68:29								8																
*68:45								8	9															
*74:04								8			11													
*74:13		2						8																
*80:01										w							17					22		
*80:02								8			11						17					22		
*C*07:35*																								
*C*07:86*																								
HLA-A allele																								
Well No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**

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101.413-24u/04u – without *Taq* polymerase   General **"Instructions for Use"**
IFU-02 Rev. No. 02 can be downloaded from

Lot No.: 38M   Lot-specific information   **www.olerup-ssp.com**

25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
155	200	95	495	100	130	220	150	210	125	235	160	95	165	200	240	185	220	150	165	150	115	240	70	**Length of spec.**
	145				210		220	285	160	275	210	225	250	235		275		260	240		190		110	**PCR product(s)**
																							145	
25	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**Well No.**
25																								***24:08, 24:42, 26:07:01-26:07:02**
																								*24:18
																								*24:19
																								*24:28, 29:19, 33:24, 74:06
																								*24:51
																								*24:92
	26																							***25:03, 26:20, 32:15**
																								*26:03:01-26:03:02, 26:06, 26:21, 26:30, 68:05, 68:15, 68:20
				29																				***30:01:01-30:01:03, 30:11:01-30:11:02, 30:14L-30:16, 30:18-30:20, 30:23-30:24, 30:26, 30:35-30:37**
																								*30:02:01-30:03, 30:07, 30:10, 30:12, 30:22, 30:27N, 30:32-30:34
																								*30:04:01, 30:06, 30:29
				29																				***30:08**
																								*30:09
																								*30:13, 30:31
				29																				***30:17**
				29																				***30:25**
				29																	46			***30:30**
																								*31:03-31:04
																					46		48	***31:19**
										35														***31:21, 74:07**
																								*32:03, 32:08
																								*32:04
								33																***32:05**
25																								***33:08**
																								*34:02:01, 34:02:03-34:04, 34:07
																								*34:02:02
	26																							***34:08**
																						47		***36:01, 36:05**
			28			31																47		***36:02**
				29																				***68:29**
				29																				***68:45**
25																								***74:04**
				29																				***74:13**
																						47		***80:01**
																								*80:02
																					46			*C*07:35*
																							48	*C*07:86*
																								HLA-A allele
25	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**Well No.**

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                              IFU-02 Rev. No. 02 can be downloaded from

Lot No.: 38M   **Lot-specific information**   **www.olerup-ssp.com**

[1]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-A*03 subtyping.

In addition, wells number 4, 5, 10, 11, 13, 17, 31, 38 and 42 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

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

[3]The nucleotide position, in 2nd, 3rd, 4th or 5th exon, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

[4]The A*03:16 and A*03:61 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 20.

[5]The A*03:17 and A*03:74 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 21.

[6]The A*03:20, and A*03:47 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 43.

[7]The A*03:25 and A*03:71 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 27.

[8]The A*03:27 and A*03:49 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 30.

[9]The A*03:33 and A*03:70 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 36.

[10]The A*03:38 and A*03:68N alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 41.

[11]The A*03:44 and A*03:53 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 46.

[12]Primer mix 10: Specific PCR fragment of 65 bp in A*03:60 allele. Specific PCR fragment of 205 bp in the A*03:02, 03:07, 03:10, 03:31-03:32, 03:42, 03:73 and A*03:76 and in the A*01:12, 01:19, 01:21, 02:156, 11:31, 11:35, 24:92, 30:04, 30:06, 30:09, 30:17, 30:29 and 31:03-31:04 alleles.

Primer mix 14: Specific PCR fragment of 105 bp in the A*03:11N allele. Specific PCR fragment of 235 bp in the A*03:59 allele.

Primer mix 18: Specific PCR fragment of 135 bp in the A*03:13 allele. Specific PCR fragment of 210 bp in the A* 03:50, 03:64 and 03:66 and the A*11:08, 11:44, 30:04, 30:06, 30:17, 30:29 and 36:02 alleles.

Primer mix 20: Specific PCR fragment of 60 bp in the A*03:61 allele. Specific PCR fragment of 175 bp in the A*03:16 allele.

Primer mix 21: Specific PCR fragment of 130 bp in the A*03:17 and the A*02:156, 24:51 and 24:92 alleles. Specific PCR fragment of 195 bp in the A*03:74 allele.

Primer mix 23: Specific PCR fragment of 95 bp in the A*03:22 allele. Specific PCR fragment of 185 bp in the A*03:19 and in the A*24:18 alleles. Specific PCR fragment of 210 bp in the A* 03:56 and in the A*36:02 alleles. Specific PCR fragment of 240 bp in the A*03:75 and in the A*24:18 alleles.

Primer mix 27: Specific PCR fragment of 95 bp in the A*03:71 allele. Specific PCR fragment of 145 bp in the A*03:25 allele.

Primer mix 30: Specific PCR fragment of 130 bp in the A*03:27 allele. Specific PCR fragment of 210 bp in the A*03:49 allele.

Primer mix 32: Specific PCR fragment of 150 bp in the A*03:67 allele. Specific PCR fragment of 220 bp in the A*03:29 allele.

Primer mix 33: Specific PCR fragment of 210 bp in the A*03:30 and the A*32:05 alleles. Specific PCR fragment of 285 bp in the A*03:62 allele.

Primer mix 34: Specific PCR fragment of 125 bp in the A*03:58 allele. Specific PCR fragment of 160 bp in the A*03:31 allele.

Primer mix 35: Specific PCR fragment of 235 bp in the A*03:32 and the A*31:21 and 74:07 alleles. Specific PCR fragment of 275 bp in the A*03:55 allele.

Primer mix 36: Specific PCR fragment of 160 bp in the A*03:33 allele. Specific PCR fragment of 210 bp in the A* 03:70 allele.

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Primer mix 37: Specific PCR fragment of 95 bp in the A*03:48 allele. Specific PCR fragment of 225 bp in the A* 03:34 allele.

Primer mix 38: Specific PCR fragment of 165 bp in the A*03:35 allele. Specific PCR fragment of 250 bp in the A*03:73 allele.

Primer mix 39: Specific PCR fragment of 200 bp in the A* 03:36N allele. Specific PCR fragment of 235 bp in the A*03:45 allele.

Primer mix 41: Specific PCR fragment of 185 bp in the A* 03:38 allele. Specific PCR fragment of 275 bp in the A*03:68N allele.

Primer mix 43: Specific PCR fragment of 150 bp in the A*03:20 allele. Specific PCR fragment of 260 bp in the A*03:47 and 03:76 alleles.

Primer mix 44: Specific PCR fragment of 165 bp in the A*03:51 allele. Specific PCR fragment of 240 bp in the A*03:40 allele.

Primer mix 46: Specific PCR fragment of 115 bp in A*03:44 and 03:52 and the A*02:164 and 31:19 alleles. Specific PCR fragment of 190 bp in A*03:53 and the A*30:30 and in the C*07:35 alleles.

Primer mix 48: Specific PCR fragment of 70 bp in the A*03:54 allele. Specific PCR fragment of 110 bp in the A*03:52 and the A*31:19 alleles. Specific PCR fragment of 145 bp in the A*03:46 and in the C*07:86 alleles.

[13]This lot of the HLA-A*03 subtyping kit cannot distinguish the A*03:26 and the A*03:01:01:01, 03:01:01:03-03:01:01:03, 03:01:03-03:01:07, 03:01:09-03:01:11, 03:01:13, 03:01:15-03:01:17 alleles.

 'w', may be weakly amplified.

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CELL LINE VALIDATION SHEET
HLA-A*03 SSP subtyping kit

#	IHWC cell line		A*	A*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		Prod. No.:			201072001	201072002	201187903	201072004	201072005	201072006	201072007	201072008	201072009	201072010	201072011	201072012	201072013	201072014	201072015	201072016
1	9001	SA	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*02:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
3	9011	E4181324	*01:01		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
4	9275	GU373	*30:01		-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-
5	9009	KAS011	*01:01		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
6	9353	SM	*02:01	*26:03	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-
7	9020	QBL	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*31:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
9	9026	YAR	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*02:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*02:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
14	9071	OLGA	*31:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
15	9075	DKB	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*03:01	*80:01	+	+	+	-	-	-	-	+	-	-	w	-	-	-	-	-
18	9257	32367	*33:03	*74:01	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-
19	9038	BM16	*02:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
20	9059	SLE005	*02:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
21	9064	AMALA	*02:17		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
22	9056	KOSE	*02:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
23	9124	IHL	*02:01	*34:01	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-
24	9035	JBUSH	*32:01		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
25	9049	IBW9	*33:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
26	9285	WT49	*02:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*24:10	*29:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*02:01	*29:02	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
29	9050	MOU	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*30:01	*68:02	-	-	-	-	-	-	-	+	+	-	-	-	-	-	+	-
31	9019	DUCAF	*30:02		-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
32	9297	HAG	*02:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
33	9098	MT14B	*31:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
34	9104	DHIF	*31:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
35	9302	SSTO	*32:01		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
36	9024	KT17	*02:06	*11:01	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	-
37	9065	HHKB	*03:01		+	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-
38	9099	LZL	*02:17		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
39	9315	CML	*01:01	*03:01	+	+	+	-	-	-	-	+	-	-	+	-	-	-	-	-
40	9134	WHONP199	*02:07	*30:01	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-
41	9055	H0301	*03:01		+	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-
42	9066	TAB089	*02:07		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
43	9076	T7526	*02:06	*02:07	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
44	9057	TEM	*66:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
45	9239	SHJO	*23:01	*24:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*03:01		+	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-
47	9045	TUBO	*02:16	*03:01	+	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-
48	9303	TER-ND	*02:01	*11:01	-	-	-	+	-	-	-	+	-	-	-	-	-	-	+	-

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IFU-02 Rev. No. 02 can be downloaded from

Lot No.: 38M   **Lot-specific information**   **www.olerup-ssp.com**

CELL LINE VALIDATION SHEET
HLA-A*03 SSP subtyping kit

	IHWC cell line		A*		Prod. No.:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
					Prod No. →	201072017	201072018	201072019	201072020	201072021	201072022	201072023	201072024	201072025	201072026	201072027	201072028	201072029	201072030	201072031	201072032
1	9001	SA	*24:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*01:01			-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*30:01			+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
5	9009	KAS011	*01:01			-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*02:01	*26:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*26:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*31:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*26:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*24:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*29:02			-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
12	9052	DBB	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*31:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*24:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*29:02			-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
17	9282	CTM3953540	*03:01	*80:01		+	-	-	-	-	+	-	-	-	-	-	-	+	-	-	-
18	9257	32367	*33:03	*74:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*02:17			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*02:01	*34:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*32:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*33:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*02:05			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*24:10	*29:01		-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
28	9320	BEL5GB	*02:01	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
29	9050	MOU	*29:02			-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
30	9021	RSH	*30:01	*68:02		+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
31	9019	DUCAF	*30:02			+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*31:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*31:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*32:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*02:06	*11:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*03:01			+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
38	9099	LZL	*02:17			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*01:01	*03:01		+	-	-	-	-	+	-	-	-	-	-	-	+	-	-	-
40	9134	WHONP199	*02:07	*30:01		+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
41	9055	H0301	*03:01			+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
42	9066	TAB089	*02:07			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*02:06	*02:07		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*66:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*23:01	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*03:01			+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
47	9045	TUBO	*02:16	*03:01		+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
48	9303	TER-ND	*02:01	*11:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

June 2013
Rev. No.: 02u

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0088

For *In Vitro* Diagnostic Use.

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CELL LINE VALIDATION SHEET
HLA-A*03 SSP subtyping kit

#	IHWC cell line	A*		Prod. No.:	33 / 201072033	34 / 201072034	35 / 201072035	36 / 201072036	37 / 201072037	38 / 201072038	39 / 201072039	40 / 201072040	41 / 201072041	42 / 201072042	43 / 201072043	44 / 201072044	45 / 201072045	46 / 201072046	47 / 201072047	48 / 201072048
1	9001 SA	*24:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324	*01:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
4	9275 GU373	*30:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011	*01:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
6	9353 SM	*02:01	*26:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL	*26:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025 DEU	*31:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR	*26:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3	*24:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT	*29:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA	*31:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB	*24:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*29:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540	*03:01	*80:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
18	9257 32367	*33:03	*74:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA	*02:17			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL	*02:01	*34:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH	*32:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9	*33:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49	*02:05			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*24:10	*29:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB	*02:01	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU	*29:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH	*30:01	*68:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF	*30:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B	*31:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF	*31:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO	*32:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17	*02:06	*11:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB	*03:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL	*02:17			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML	*01:01	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
40	9134 WHONP199	*02:07	*30:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301	*03:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089	*02:07			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526	*02:06	*02:07		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM	*66:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO	*23:01	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU	*03:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*02:16	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303 TER-ND	*02:01	*11:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Lot No.: 38M   **Lot-specific information**   **www.olerup-ssp.com**

CERTIFICATE OF ANALYSIS

Olerup SSP® HLA-A*03 SSP

Product number:	**101.413-24u/04u – without *Taq* pol.**
Lot number:	**38M**
Expiry date:	**2013-December-01**
Number of tests:	**24 tests – Product No. 101.413-24u**
	4 tests – Product No. 101.413-04u
Number of wells per test:	**48**

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2010-720-01	17	2010-720-17	33	2010-720-33
2	2010-720-02	18	2010-720-18	34	2010-720-34
3	2011-879-03	19	2010-720-19	35	2010-720-35
4	2010-720-04	20	2010-720-20	36	2010-720-36
5	2010-720-05	21	2010-720-21	37	2010-720-37
6	2010-720-06	22	2010-720-22	38	2010-720-38
7	2010-720-07	23	2010-720-23	39	2010-720-39
8	2010-720-08	24	2010-720-24	40	2010-720-40
9	2010-720-09	25	2010-720-25	41	2010-720-41
10	2010-720-10	26	2010-720-26	42	2010-720-42
11	2010-720-11	27	2010-720-27	43	2010-720-43
12	2010-720-12	28	2010-720-28	44	2010-720-44
13	2010-720-13	29	2010-720-29	45	2010-720-45
14	2010-720-14	30	2010-720-30	46	2010-720-46
15	2010-720-15	31	2010-720-31	47	2010-720-47
16	2010-720-16	32	2010-720-32	48	2010-720-48

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

No DNAs carrying the alleles to be amplified by primer solutions 5 to 7, 13, 16, 19 to 21, 23, 25 to 28, 30 to 46 and 48 were available. The specificities of the primers in primer solutions 21, 23, 25, 26, 28, 31 to 35 and 43 to 45 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solutions 6, 7, 16, 20, 30, 36 to 39 and 41 it was only possible to test the 5'-primers, the 3'-primers were not possible to test.
In primer solutions 5, 13, 19, 27, 40, 42, 46 and 48 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer mixes 28, 31, 34 and 43 one 5'-primer was not possible to test, and in primer mixes 10, 14, 21, 32, 34, 35, 43 and 44 one or more 3'-primers were not possible to test. One additional 5'-primer in primer mix 14 was tested by separately adding one 3'-primer.

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

Date of approval: 2013-February-20

Approved by:

Production Quality Control

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Declaration of Conformity

Product name: *Olerup* SSP® HLA-A*03
Product number: 101.413-24u/04u
Lot number: 38M

Intended use: HLA-A*03 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 II List B, conformity assessed using Annex IV, as transposed into the national laws of the Member States of the European Union.

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

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

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

Stockholm, Sweden
2013-February-20

Ann-Cathrin Jareman
Head of QA and Regulatory Affairs

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