

## Olerup SSP<sup>®</sup> HLA-B\*48

Product number:	101.546-06u – without <i>Taq</i> polymerase
Lot number:	44K
Expiry date:	2012-September-01
Number of tests:	6
Number of wells per test:	16
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. 44K.**

### CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*<sup>®</sup> HLA-B\*48 LOT.

The HLA-B\*48 specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup SSP*<sup>®</sup> HLA-B\*48 lot was made (**Lot No. 16G**).

The amplification patterns for some rare HLA-B\*48 alleles only differ by the length of the specific PCR products.

The primers of the wells detailed below have been added, exchanged or modified.

Well	5'-primer	3'-primer	rationale
6	Added	Added	Primer pairs added for the B*48:20 and B*48:21 alleles.
10	-	-	Exchanged positive control primer pair.
11	Added	-	Primer added for the B*48:02:02 allele.
12	Moved, new	Moved, new	Primer pair moved to well 14, new primer pairs for the B*48:22 and B*48:23 alleles.
13	Added	-	Increased yield of specific PCR product.
14	Added	Added	Primer pair from well 12.

## PRODUCT DESCRIPTION

### HLA-B\*48 SSP typing

#### CONTENT

The primer set contains 5'- and 3'-primers for identifying the B\*48:01 to B\*48:23 alleles.

#### PLATE LAYOUT

Each HLA-B\*48 test consists of 16 PCR reactions in a 16 well cut PCR plate.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

The 16 well PCR plate is marked with 'HLA-B\*48' in silver/gray ink.

Well No. 1 is marked with the Lot No. '44K'.

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

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

**Please note:** When removing each 16 well PCR plate, make sure that the remaining plates stay sealed. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

#### INTERPRETATION

The interpretation of HLA-B\*48 SSP subtypings will be influenced by the B\*07, the B\*08, most B\*13, most B\*14, many B\*15, most B\*18, eleven B\*27, most B\*35, the B\*37, the B\*38, most B\*39, the B\*40, the B\*41, the B\*42, most B\*44, most B\*45, five B\*46, the B\*49, the B\*50, most B\*51, most B\*52, the B\*53, most B\*54, most B\*55, most B\*56, most B\*57, most B\*58, the B\*59, the B\*67, the B\*73, the B\*78, the B\*81, the B\*82 and the B\*83:01 alleles when present on the other haplotype. In addition, the C\*02:23 and C\*07:38 alleles will be amplified by primer mix 5, the C\*15:24 allele will be amplified by primer mix 10, the C\*07:123 allele will be amplified by primer mix 12, the C\*06:21 and C\*15:24 alleles will be amplified by primer mix 13 and the C\*02:23 allele will be amplified by primer mix 16.

#### UNIQUELY IDENTIFIED ALLELES

All the HLA-B\*48 alleles, i.e. **B\*48:01 to B\*48:23**, recognized by the HLA Nomenclature Committee in July 2010<sup>2</sup> will be amplified by the primers in the HLA-B\*48 SSP kit<sup>1</sup>.

<sup>1</sup>The B\*48:09 and B\*48.11 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 14.

The B\*48 primer set cannot separate the B\*48:06 and B\*81:02 alleles. These two alleles can be distinguished by the HLA-B low resolution and/or HLA-B\*81 kits.

The B\*48 primer set cannot separate the B\*48:10, B\*08:17, B\*08:54 and B\*42:11 alleles. These alleles can be distinguished by the HLA-B low resolution and/or HLA-B\*08 and HLA-B\*42 kits.

Lot No.: **44K**

Lot-specific information

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The B\*48 primer set cannot separate the B\*48:13 and the 38:03, 39:02:01-39:02:02, 39:08 and 39:13:01-39:13:02 alleles. The B\*48:13 allele can be distinguished from the B\*38:03 and B\*39:xx alleles by the HLA-B low resolution and/or HLA-B\*38/HLA-B\*39 kits. The B\*48 primer set cannot separate the B\* 48:01:01 to 48:01:03, the 48:02:01 and 48:02:02 or the B\*48:03:01 and B\*48:03:02 alleles.

<sup>2</sup>HLA-B alleles listed on the IMGT/HLA web page 2010-July-16, release 3.1.0, [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla).

## RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 27 alleles generate 22 amplification patterns that can be combined in 253 homozygous and heterozygous combinations. 104 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.

+++++----	----	*48:02:01, *48:07 = *48:02:01, *48:16
+++-+---	-----	*48:07, *48:23 = *48:16, *48:23 = *48:17, *48:22
+++-+---	-----	*48:01:01, *48:17 = *48:03:01, *48:07 = *48:03:01, *48:16 = *48:07, *48:17 = *48:16, *48:17
+++-+---	-----	*48:01:01, *48:23 = *48:03:01, *48:22 = *48:22, *48:23
+++-----	-----	*48:06, *48:20 = *48:06, *48:21
+++-----	-----	*48:05, *48:07 = *48:05, *48:16
+++-----	-----	*48:07, *48:20 = *48:07, *48:21 = *48:16, *48:20 = *48:16, *48:21
+++-----	-----	*48:01:01, *48:05 = *48:05, *48:15 = *48:05, *48:19 = *48:05, *48:20
+++-----	-----	*48:19, *48:20 = *48:19, *48:21
+++-----	-----	*48:04, *48:20 = *48:04, *48:21
+++-----	-----	*48:20, *48:22 = *48:21, *48:22
+++-----	-----	*48:09, *48:20 = *48:09, *48:21
+++-----	-----	*48:18, *48:20 = *48:18, *48:21
+++-----	-----	*48:15, *48:20 = *48:15, *48:21
+++-----	-----	*48:01:01, *48:20 = *48:01:01, *48:21 = *48:20, *48:20 = *48:20, *48:21
+++-----	-----	*48:07, *48:08 = *48:08, *48:16
+++-----	-----	*48:07, *48:19 = *48:16, *48:19
+++-----	-----	*48:07, *48:13 = *48:13, *48:16
+++-----	-----	*48:04, *48:07 = *48:04, *48:16
+++-----	-----	*48:07, *48:22 = *48:16, *48:22
+++-----	-----	*48:07, *48:14 = *48:14, *48:16
+++-----	-----	*48:07, *48:12 = *48:12, *48:16
+++-----	-----	*48:07, *48:10 = *48:10, *48:16
+++-----	-----	*48:07, *48:09 = *48:09, *48:16
+++-----	-----	*48:07, *48:18 = *48:16, *48:18
+++-----	-----	*48:07, *48:15 = *48:15, *48:16
+++-----	-----	*48:01:01, *48:07 = *48:01:01, *48:16 = *48:07, *48:07 = *48:07, *48:16
+++-----	-----	*48:01:01, *48:08 = *48:08, *48:15 = *48:08, *48:19 = *48:15, *48:19
+++-----	-----	*48:01:01, *48:19 = *48:19, *48:19
+++-----	-----	*48:01:01, *48:22 = *48:22, *48:22
+++-----	-----	*48:01:01, *48:14 = *48:09, *48:12 = *48:09, *48:14 = *48:14, *48:18
+++-----	-----	*48:01:01, *48:12 = *48:10, *48:18 = *48:12, *48:18
+++-----	-----	*48:01:01, *48:09 = *48:09, *48:09
+++-----	-----	*48:01:01, *48:18 = *48:18, *48:18
+++-----	-----	*48:01:01, *48:15 = *48:15, *48:15
+++-----	-----	*48:03:01, *48:17 = *48:17, *48:17
+++-----	-----	*48:03:01, *48:23 = *48:23, *48:23
+++-----	-----	*48:04, *48:10 = *48:04, *48:13
+++-----	-----	*48:05, *48:05 = *48:05, *48:08 = *48:05, *48:10
+++-----	-----	*48:10, *48:13 = *48:13, *48:13
+++-----	-----	*48:10, *48:14 = *48:12, *48:14 = *48:14, *48:14
+++-----	-----	*48:10, *48:12 = *48:12, *48:12

48:01 = 48:01:01-48:01:03  
48:02 = 48:02:01-48:02:02  
48:03 = 48:03:01-48:03:02

## SPECIFICITY TABLE

### HLA-B\*48 SSP subtyping

Specificities and sizes of the PCR products of the 16 primer mixes used for HLA-B\*48 SSP subtyping

Primer Mix	Size of spec. PCR product <sup>1</sup>	Size of control band <sup>2</sup>	Amplified HLA-B*48 alleles <sup>3</sup>	Other amplified HLA-B alleles <sup>4</sup>
<b>1</b>	385 bp	<b>800 bp</b>	*48:01:01-48:05, 48:07-48:15, 48:17-48:23	*08:17, 08:38, 08:54, 15:68, 38:03-38:04, 39:02:01-39:02:02, 39:08, 39:13:01-39:13:02, 39:22-39:23, 39:49, 40:01:01-40:01:12, 40:07, 40:09 <sup>?</sup> -40:11:02 <sup>?</sup> , 40:14:01 <sup>?</sup> -40:15 <sup>?</sup> , 40:16, 40:18 <sup>?</sup> -40:19 <sup>?</sup> , 40:21 <sup>?</sup> -40:22N <sup>?</sup> , 40:23, 40:24 <sup>?</sup> , 40:26 <sup>?</sup> -40:38 <sup>?</sup> , 40:42 <sup>?</sup> -40:50 <sup>?</sup> , 40:51, 40:52 <sup>?</sup> -40:58 <sup>?</sup> , 40:59-40:60, 40:61 <sup>?</sup> -40:65 <sup>?</sup> , 40:66, 40:67 <sup>?</sup> , 40:71 <sup>?</sup> , 40:72:01-40:73, 40:74 <sup>?</sup> -40:76 <sup>?</sup> , 40:77, 40:78 <sup>?</sup> , 40:79, 40:80 <sup>?</sup> -40:88 <sup>?</sup> , 40:90 <sup>?</sup> -40:93 <sup>?</sup> , 40:95 <sup>?</sup> -40:96 <sup>?</sup> , 40:98 <sup>?</sup> -40:105 <sup>?</sup> , 40:107 <sup>?</sup> -40:121 <sup>?</sup> , 40:123 <sup>?</sup> , 40:124:01, 40:124:02 <sup>?</sup> -40:137 <sup>?</sup> , 40:138-40:140, 40:141 <sup>?</sup> , 40:145 <sup>?</sup> , 40:146-40:147, 41:01-41:12, 42:11, 44:18, 45:01-45:05, 45:07-45:12, 49:01:01-49:10, 50:01:01-50:02, 50:04-50:09
<b>2<sup>5,6</sup></b>	145 bp	<b>800 bp</b>	*48:01:01-48:01:03, 48:03:01-48:03:02, 48:06-48:07, 48:09, 48:11, 48:15-48:23	*27:36, 40:01:01-40:01:12, 40:07, 40:10:01-40:10:02, 40:12, 40:21-40:23, 40:25, 40:30-40:31, 40:33-40:34, 40:36, 40:38, 40:42-40:43, 40:45-40:49, 40:52, 40:54-40:55, 40:59-40:61, 40:63, 40:66-40:67, 40:69, 40:73-40:74, 40:76, 40:79-40:81, 40:84, 40:87-40:88, 40:100-40:102, 40:106, 40:112-40:114, 40:116-40:118N, 40:123-40:126, 40:128, 40:132, 40:134-40:135, 40:137-40:141, 40:146-40:147, 44:31, 46:06, 81:01-81:05
<b>3</b>	175 bp	<b>800 bp</b>	*48:01:01-48:01:03, 48:04,	*27:24, 40:31, 40:45, 40:80, 81:01-81:05

Lot No.: **44K**

Lot-specific information

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			48:06-48:07, 48:09, 48:11, 48:15-48:16, 48:18-48:20, 48:22	
<b>4</b>	150 bp	<b>800 bp</b>	*48:02:01- 48:02:02	*08:49, 13:01:01-13:01:05, 13:06-13:07N, 13:12-13:13, 13:17, 13:20, 13:22:01-13:23, 13:25-13:26, 13:28-13:29, 13:36, 13:39, 14:10, 15:02:01-15:02:04, 15:13, 15:20-15:21, 15:25:01-15:25:02, 15:36, 15:44, 15:62, 15:77, 15:80, 15:85, 15:88-15:89, 15:106, 15:112, 15:121, 15:139, 15:144, 15:154, 15:165, 15:170, 15:194, 18:22, 27:19, 27:30, 35:01:01:01-35:04:03, 35:06-35:08:04, 35:10-35:17, 35:19-35:21, 35:23-35:30, 35:33-35:36, 35:38-35:42:02, 35:45-35:50, 35:52, 35:54-35:57, 35:59, 35:61-35:63, 35:65Q, 35:69-35:71, 35:74, 35:76-35:78, 35:80-35:85, 35:90-35:96, 35:98, 35:100-35:101:02, 35:103-35:113, 35:115-35:116, 35:120-35:126, 35:128-35:134N, 35:136-35:145N, 37:01:01-37:01:07, 37:03N-37:06, 37:08, 37:10-37:11, 37:13-37:23, 38:20, 39:42, 40:28, 44:02:01:01-44:14, 44:16-44:17, 44:19N, 44:21-44:30, 44:32-44:40, 44:42-44:46, 44:48-44:52N, 44:55-44:64:02, 44:66-44:98, 44:101-44:105, 44:107-44:110, 51:04, 51:42, 51:46, 51:56, 53:01:01-53:13, 53:15-53:23, 55:14, 56:09, 56:11-56:12, 57:01:01-57:01:04, 57:01:06-57:10, 57:12, 57:14-57:20, 57:22-57:30, 57:32, 58:01:01-58:01:02, 58:01:04-58:01:07, 58:04-58:05, 58:09-58:15, 58:17N, 58:19, 58:21-58:24, 58:28-58:30, 83:01
<b>5</b>	285 bp	1070 bp	*48:03:01- 48:03:02, 48:17, 48:23	*07:07, 07:12, 07:14, 07:18:01-07:18:02, 07:77, 15:138, 18:35, 40:01:01-40:01:12, 40:07, 40:10:01-40:10:02, 40:12, 40:14:01-40:14:03, 40:21-40:23,

Lot No.: **44K**

Lot-specific information

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				40:25, 40:33, 40:36, 40:38, 40:42-40:43, 40:46-40:49, 40:52, 40:54-40:55, 40:59-40:63, 40:65- 40:67, 40:69, 40:72:01-40:74, 40:76-40:77, 40:79, 40:81, 40:84, 40:87-40:88, 40:100-40:102, 40:106, 40:108, 40:112-40:114, 40:116-40:118N, 40:121, 40:123- 40:126, 40:128, 40:132, 40:134- 40:141, 40:146-40:147, 41:08, 44:31, 46:06, <b>C*02:23, C*07:38</b>
<b>6<sup>5,7</sup></b>	90 bp, 170 bp, 285 bp	1070 bp	*48:05, 48:20- 48:21	*27:36
<b>7</b>	385 bp	1070 bp	*48:06	*07:02:01-07:12, 07:14-07:53, 07:55-07:64, 07:66-07:115, 08:01:01-08:05, 08:07-08:09, 08:11-08:16, 08:18-08:37, 08:39- 08:53, 08:55-08:62, 14:01-14:03, 14:05-14:18, 38:01:01-38:02:02, 38:05-38:23, 39:01:01:01- 39:01:01:02L, 39:01:03-39:01:11, 39:03-39:07, 39:09-39:12, 39:14- 39:20, 39:24-39:48, 39:50-39:60, 40:106 <sup>?</sup> , 42:01:01-42:02, 42:04- 42:10, 42:12-42:14, 67:01:01- 67:01:02, 73:01-73:02, 81:02
<b>8<sup>5,6,8</sup></b>	85 bp, 225 bp	1070 bp	*48:07, 48:16- 48:17	*07:78, 07:115, 40:36, 40:48, 40:77
<b>9</b>	215 bp	1070 bp	*48:05, 48:08, 48:19	*07:02:01-07:03, 07:05:01-07:06, 07:08-07:11, 07:13, 07:15-07:17, 07:20-07:24, 07:27-07:33, 07:35- 07:42, 07:44, 07:46-07:47, 07:49N-07:51, 07:53-07:65, 07:67N-07:76, 07:79, 07:81- 07:83, 07:85-07:115, 08:20, 08:40, 15:07:01-15:07:02, 15:45, 15:68, 15:126, 35:66, 37:07, 40:15-40:16, 40:32, 40:98, 46:12
<b>10<sup>6</sup></b>	240 bp	1070 bp	*48:04, 48:13	*07:53, 13:01:01-13:01:02, 13:01:04-13:03, 13:06-13:09, 13:11-13:23, 13:25, 13:27-13:33, 13:36-13:39, 14:13, 15:09, 15:30, 15:42, 15:48, 15:58, 15:73, 15:83, 15:86, 15:150, 15:188, 18:26, 27:07, 27:11, 27:20, 27:24, 27:27, 27:33, 27:43,

Lot No.: **44K**

Lot-specific information

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				35:02:01 <sup>W</sup> -35:02:04 <sup>W</sup> , 35:04:01-35:04:03, 35:06, 35:09:01-35:09:02, 35:12:01-35:12:02, 35:18, 35:22, 35:31, 35:44, 35:59-35:60, 35:81 <sup>W</sup> , 35:83 <sup>W</sup> , 35:88, 35:95 <sup>W</sup> , 35:129N <sup>W</sup> , 37:12, 38:01:01, 38:01:03-38:21, 38:23, 39:01:01:01-39:01:01:02L, 39:01:03-39:06:02, 39:08-39:14, 39:16, 39:18-39:20, 39:22-39:24, 39:26-39:28, 39:30-39:42, 39:44-39:48, 39:50-39:54, 39:56-39:60, 40:02:01-40:02:09, 40:02:11, 40:04-40:06:03, 40:08, 40:11:01-40:11:02, 40:13, 40:19, 40:26-40:29, 40:35, 40:37, 40:39-40:40, 40:50-40:51, 40:53, 40:56-40:58, 40:64, 40:68, 40:70-40:71, 40:75, 40:78, 40:82-40:83, 40:85-40:86, 40:90-40:97, 40:99, 40:103-40:105, 40:107, 40:109-40:111, 40:115, 40:119, 40:122, 40:127, 40:129-40:130, 40:133Q, 40:142N-40:145, 41:06, 41:09, 42:08, 42:14, 44:10, 44:14, 44:62, 44:77, 44:82, 46:11, 46:18, 51:01:01-51:02:02, 51:02:04-51:16, 51:19-51:24:03, 51:26-51:36, 51:38-51:41N, 51:43-51:44N, 51:46, 51:48-51:84, 51:86-51:89, 51:91, 51:93, 51:95, 52:01:01-52:11, 52:13-52:21, 53:19 <sup>W</sup> , 54:01-54:05N, 54:07-54:08N, 54:10-54:13, 54:17-54:23, 55:01:01-55:05, 55:07-55:13, 55:15-55:19, 55:21-55:22, 55:24-55:26, 55:28-55:40, 55:42-55:43, 56:01:01-56:02, 56:04-56:08, 56:10, 56:12-56:17, 56:19N-56:29, 57:02:01-57:03:02, 57:07, 57:09, 57:12, 57:17, 57:28N, 58:08, 58:20, 58:27-58:28, 59:01-59:05, 67:01:01-67:02, 78:01-78:07, 82:01-82:03, <b>C*15:24</b>
<b>11</b>	170 bp	<b>800 bp</b>	*48:01:01-48:05, 48:07-48:23	*07:27, 07:50, 08:04, 08:17, 08:54, 15:03:01-15:03:03, 15:47, 15:54, 15:61-15:62, 15:64,

Lot No.: **44K**

Lot-specific information

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				15:68-15:69, 15:91, 15:98, 15:103, 15:123, 15:127, 15:131- 15:132, 15:151, 15:156, 15:158, 15:173, 18:01:01-18:03, 18:05- 18:06, 18:08-18:15, 18:17N- 18:28, 18:30-18:32, 18:34-18:50, 37:01:01-37:20, 37:23, 38:03, 39:02:01-39:02:02, 39:08, 39:13:01-39:13:02, 39:23, 39:39, 39:49, 40:12, 42:11, 52:16
<b>12<sup>5</sup></b>	120 bp	1070 bp	*48:22-48:23	*13:23, 15:71, 15:116, 15:124, 15:175, 18:01:01-18:03, 18:05- 18:15, 18:17N-18:24, 18:26- 18:42, 18:44-18:50, 35:50, 35:84, 37:01:01-37:01:06, 37:02-37:23, 40:52, 40:59, 40:83, 42:02, 42:09, 46:06, 46:14, 49:03, 58:05, 73:01-73:02, <b>C*07:123</b>
<b>13<sup>5,6,9</sup></b>	135 bp	1070 bp	*48:05, 48:10, 48:12-48:13, 48:14 <sup>w</sup>	*07:05:01-07:06, 07:32, 07:34, 07:40, 07:53, 07:69, 07:78, 07:80, 07:97, 07:105, 07:112, 08:01:01- 08:01:11, 08:02-08:05, 08:08N- 08:12:01, 08:12:03-08:13, 08:15- 08:27, 08:29-08:36, 08:38-08:48, 08:50-08:62, 13:03, 13:22:01- 13:22:02, 14:13, 15:09, 15:30, 15:42, 15:48, 15:58, 15:73, 15:83, 15:86, 15:150, 15:188, 18:26, 27:07, 27:11, 27:20, 27:27, 27:33, 27:43, 35:02:01-35:02:04, 35:04:01-35:04:03, 35:06, 35:09:01-35:09:02, 35:12:01- 35:12:02, 35:18, 35:22, 35:31, 35:44, 35:59-35:60, 35:81, 35:83, 35:87-35:88, 35:95, 35:129N, 37:12, 38:01:01, 38:01:03-38:21, 38:23, 39:01:01:01-39:01:01:02L, 39:01:03-39:06:02, 39:08-39:14, 39:16, 39:18-39:20, 39:22, 39:24, 39:26-39:28, 39:30-39:42, 39:45- 39:48, 39:50-39:54, 39:56 <sup>w</sup> , 39:57-39:60, 40:02:01-40:02:09, 40:02:11, 40:04-40:06:03, 40:08, 40:11:01-40:11:02, 40:13-40:16, 40:19, 40:26-40:29, 40:35, 40:37, 40:39-40:40, 40:50, 40:53, 40:56- 40:58, 40:64, 40:68, 40:70-40:71, 40:72:01 <sup>w</sup> -40:72:02 <sup>w</sup> , 40:75,



				40:77 <sup>w</sup> , 40:78, 40:82-40:83, 40:86, 40:90, 40:93-40:97, 40:99, 40:103-40:105, 40:107, 40:109-40:111, 40:115, 40:119, 40:121-40:122, 40:127, 40:129, 40:133Q, 40:136, 40:142N-40:145, 41:01-41:03:02, 41:05-41:09, 41:11-41:12, 42:01:01-42:02, 42:04-42:08, 42:10-42:14, 44:10, 44:14, 44:62, 44:77, 44:82, 45:12, 46:11, 46:18, 51:01:01-51:02:02, 51:02:04-51:16, 51:19-51:24:03, 51:26, 51:28-51:36, 51:38-51:41N, 51:43-51:44N, 51:46, 51:48-51:74, 51:75 <sup>w</sup> , 51:76-51:83, 51:86-51:89, 51:91, 51:95-51:96, 52:01:01-52:11, 52:13-52:21, 53:19, 54:01-54:05N, 54:07-54:08N, 54:10, 54:12-54:13, 54:17-54:21, 54:23, 55:01:01-55:05, 55:07-55:13, 55:15-55:22, 55:24-55:26, 55:28-55:40, 55:42-55:43, 56:01:01-56:02, 56:04-56:08, 56:10, 56:12-56:17, 56:19N-56:29, 57:02:01-57:03:02, 57:07, 57:09, 57:12, 57:17, 57:28N, 58:08, 58:20, 58:27-58:28, 59:01-59:05, 67:01:01-67:02, 78:01-78:07, 82:01-82:03, <b>C*06:21, C*15:24</b>
<b>14<sup>5,10</sup></b>	100 bp, 250 bp	1070 bp	*48:09, 48:11, 48:14	*07:09, 07:11, 07:17, 08:28, 08:35, 08:37, 15:07:01-15:07:02, 15:55, 15:68, 15:126, 18:14, 35:05:01-35:05:02, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 35:114, 40:03, 40:105, 42:09, 46:12, 53:14, 58:18
<b>15<sup>5,6,11</sup></b>	140 bp, 435 bp	<b>800 bp</b>	*48:12, 48:14, 48:18	*07:36, 07:38, 07:68:01-07:68:02, 07:81, 07:100, 08:03, 08:52, 14:05, 14:13, 15:07:01-15:07:02, 15:45, 15:55, 15:68, 15:126, 18:14, 27:32, 35:05:01-35:05:02, 35:22, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 38:01:01-38:01:04, 38:05-38:07, 38:09-38:14, 38:16, 38:19-38:22, 39:03, 39:14, 39:24, 39:29, 39:37, 40:35, 40:71, 40:109 <sup>?</sup> , 40:117 <sup>?</sup> , 42:10, 44:18,

				44:54, 44:106, 46:12, 49:01:01-49:01:02, 49:03-49:10, 51:64, 53:14, 58:18
<b>16<sup>5,6</sup></b>	120 bp	1070 bp	*48:05, 48:08, 48:15	*07:02:01-07:18:02, 07:20-07:24, 07:26-07:32, 07:34-07:39, 07:41-07:47, 07:49N-07:50, 07:52, 07:54-07:59, 07:61-07:99, 07:101-07:115, 15:138, 37:07, 40:15-40:16, 40:23, 40:32, 40:98, <b>C*02:23</b>

<sup>1</sup>Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-B\*48 SSP typings.

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

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

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

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

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

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-B\*48 SSP subtyping.

In addition, wells number 2, 3, 4, 11 and 15 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band.

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

<sup>3</sup>The B\*48:09 and B\*48:11 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 14.

The B\*48 primer set cannot separate the B\*48:06 and B\*81:02 alleles. These two alleles can be distinguished by the HLA-B low resolution and/or HLA-B\*81 kits.

The B\*48 primer set cannot separate the B\*48:10, B\*08:17, B\*08:54 and B\*42:11 alleles. These alleles can be distinguished by the HLA-B low resolution and/or HLA-B\*08 and HLA-B\*42 kits.

The B\*48 primer set cannot separate the B\*48:13 and the 38:03, 39:02:01-39:02:02, 39:08 and 39:13:01-39:13:02 alleles. The B\*48:13 allele can be distinguished from the B\*38:03 and B\*39:xx alleles by the HLA-B low resolution and/or HLA-B\*38/HLA-B\*39 kits.

<sup>4</sup>Due to the sharing of sequence motifs between HLA-B alleles non-HLA-B\*48 alleles will be amplified by all HLA-B\*48 primer mixes. In addition, the C\*02:23 and C\*07:38 alleles will be amplified by primer mix 5, the C\*15:24 allele will be amplified by primer mix 10, the C\*07:123 allele will be amplified by primer mix 12, the C\*06:21 and C\*15:24 alleles will be amplified by primer mix 13 and the C\*02:23 allele will be amplified by primer mix 16.

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

<sup>6</sup>Primer mixes 2, 8, 10, 13, 15 and 16 have a tendency of giving rise to nonspecific amplifications.

<sup>7</sup>Primer mix 6: Specific PCR fragment of 90 bp in the B\*48:20 allele. Specific PCR fragment of 170 bp in the B\*48:05 allele. Specific PCR fragment of 285 bp in the B\*48:21 and in the B\*27:36 alleles.

Lot No.: **44K**

Lot-specific information

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<sup>8</sup>Primer mix 8: Specific PCR fragment of 85 bp in the B\*48:16 allele. Specific PCR fragment of 225 bp in the B\*48:07 and 48:17 and in the B\*07:78, 07:115, 40:36, 40:48 and 40:77 alleles.

<sup>9</sup>Primer mix 13 might faintly amplify the B\*13:xx alleles.

<sup>10</sup>Primer mix 14: Specific PCR fragment of 100 bp in the B\*48:09 and 48:14 and in the B\*07:09, 07:11, 07:17, 08:28, 08:35, 08:37, 15:07:01-15:07:02, 15:55, 15:68, 15:126, 18:14, 35:05:01-35:05:02, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 35:114, 40:03, 40:105, 42:09, 46:12, 53:14 and 58:18 alleles. Specific PCR fragment of 250 bp in the B\*48:11 allele.

<sup>11</sup>Primer mix 15: Specific PCR fragment of 140 bp in the B\*48:12 and 48:14 and in the B\*07:68:01-07:68:02, 07:100, 14:05, 14:13, 15:07:01-15:07:02, 15:45, 15:55, 15:68, 15:126, 18:14, 27:32, 35:05:01-35:05:02, 35:22, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 39:03, 39:14, 39:24, 39:29, 39:37, 40:35, 40:71, 42:10, 44:54, 44:106, 46:12, 51:64, 53:14 and 58:18 alleles. Specific PCR fragment of 435 bp in the B\*48:18 and in the 07:36, 07:38, 07:81, 08:03, 08:52, 38:01:01-38:01:04, 38:05-38:07, 38:09-38:14, 38:16, 38:20-38:22, 40:109<sup>?</sup>, 40:117<sup>?</sup>, 44:18, 49:01:01-49:01:02 and 49:03-49:10 alleles. Specific PCR fragment of 140 and 435 bp in the B\*38:19 allele.

'w', might be weakly amplified.

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

<b>INTERPRETATION TABLE</b>								
<b>HLA-B*48 SSP subtyping</b>								
<b>Amplification patterns of the B*48:01 to 48:23 alleles</b>								
	<b>Well<sup>8</sup></b>							
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>Length of spec.</b>	<b>385</b>	<b>145</b>	<b>175</b>	<b>150</b>	<b>285</b>	<b>90</b>	<b>385</b>	<b>85</b>
<b>PCR product(s)</b>						<b>170</b>		<b>225</b>
						<b>285</b>		
<b>Length of int.</b>	<b>800</b>	<b>800</b>	<b>800</b>	<b>800</b>	<b>1070</b>	<b>1070</b>	<b>1070</b>	<b>1070</b>
<b>pos. control<sup>1</sup></b>								
<b>5'-primer(s)<sup>2</sup></b>	<b>44</b>	<b>499</b>	<b>363</b>	<b>355</b>	<b>363</b>	<b>144</b>	<b>44</b>	<b>260</b>
	5' -ggC <sup>3'</sup>	5' -TCT <sup>3'</sup>	5' -AgC <sup>3'</sup>	5' -TCA <sup>3'</sup>	5' -Agg <sup>3'</sup>	5' -TCC <sup>3'</sup>	5' -ggC <sup>3'</sup>	5' -ggT <sup>3'</sup>
					<b>363</b>	<b>225</b>		<b>419</b>
					5' -Agg <sup>3'</sup>	5' -Tgc <sup>3'</sup>		5' -gTT <sup>3'</sup>
						<b>363</b>		<b>419</b>
						5' -AAT <sup>3'</sup>		5' -gTT <sup>3'</sup>
<b>3'-primer(s)<sup>3</sup></b>	<b>259</b>	<b>605</b>	<b>499</b>	<b>463</b>	<b>605</b>	<b>272</b>	<b>259</b>	<b>302</b>
	5' -CTC <sup>3'</sup>	5' -gCT <sup>3'</sup>	5' -ggA <sup>3'</sup>	5' -gCT <sup>3'</sup>	5' -gCT <sup>3'</sup>	5' -Tgg <sup>3'</sup>	5' -gTT <sup>3'</sup>	5' -ggC <sup>3'</sup>
						<b>605</b>	<b>259</b>	<b>605</b>
						5' -gCT <sup>3'</sup>	5' -gTT <sup>3'</sup>	5' -gCT <sup>3'</sup>
<b>Well No.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>HLA-B allele</b>								
<b>*48:01:01-48:01:03</b>	<b>1</b>	<b>2</b>	<b>3</b>					
<b>*48:02:01-48:02:02</b>	<b>1</b>			<b>4</b>				
<b>*48:03:01-48:03:02</b>	<b>1</b>	<b>2</b>			<b>5</b>			
<b>*48:04</b>	<b>1</b>		<b>3</b>					
<b>*48:05</b>	<b>1</b>					<b>6</b>		
<b>*48:06, 81:02<sup>4</sup></b>		<b>2</b>	<b>3</b>				<b>7</b>	
<b>*48:07</b>	<b>1</b>	<b>2</b>	<b>3</b>					<b>8</b>
<b>*48:08</b>	<b>1</b>							
<b>Well No.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>

## INTERPRETATION TABLE

### HLA-B\*48 SSP subtyping

Amplification patterns of the B\*48:01 to 48:23 alleles

Well <sup>8</sup>								
9	10	11	12	13	14	15	16	
215	240	170	120	135	100	140	120	Length of spec. PCR product(s)
					250	435		
1070	1070	800	1070	1070	1070	800	1070	Length of int. pos. control <sup>1</sup>
363	412	142	97	397	363	44	527	5'-primer(s) <sup>2</sup>
5' -AgC 3'	5' -ATA 3'	5' -TCT 3'	5' -TCC 3'	5' -gCT 3'	5' -AgC 3'	5' -ggC 3'	5' -TgA 3'	
		142	419	412	693	363		
		5' -TCT 3'	5' -gTC 3'	5' -ATA 3'	5' -ggT 3'	5' -AgC 3'		
539	610	272	165	499	419	309	605	3'-primer(s) <sup>3</sup>
5' -TCC 3'	5' -CTg 3'	5' -Tgg 3'	5' -Tgg 3'	5' -ggT 3'	5' -Cgg 3'	5' -ATC 3'	5' -gCT 3'	
			512		572	463		
			5' -CCA 3'		5' -gCA 3'	5' -gCT 3'		
					755			
					5' -CAA 3'			
9	10	11	12	13	14	15	16	Well No.
								HLA-B allele
		11						*48:01:01-48:01:03
		11						*48:02:01-48:02:02
		11						*48:03:01-48:03:02
	10	11						*48:04
9		11		13			16	*48:05
								*48:06, 81:02 <sup>4</sup>
		11						*48:07
9		11					16	*48:08
9	10	11	12	13	14	15	16	Well No.

Lot No.: **44K**

Lot-specific information

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Length of spec.	385	145	175	150	285	90	385	85
PCR product(s)						170		225
						285		
Well No.	1	2	3	4	5	6	7	8
*48:09, 48:11 <sup>5</sup>	1	2	3					
*48:10, 08:17, 08:54, 42:11 <sup>6</sup>	1							
*48:12	1							
*48:13, 38:03, 39:02:01-39:02:02, 39:08, 39:13:01-39:13:02 <sup>7</sup>	1							
*48:14	1							
*48:15	1	2	3					
*48:16		2	3					8
*48:17	1	2			5			8
*48:18	1	2	3					
*48:19	1	2	3					
*48:20	1	2	3			6		
*48:21	1	2				6		
*48:22	1	2	3					
*48:23	1	2			5			
*07:02:01-07:03, 07:08, 07:10, 07:15-07:16, 07:20-07:24, 07:28-07:31, 07:35, 07:37, 07:39, 07:41-07:42, 07:44, 07:46-07:47, 07:49N, 07:55-07:59, 07:61-07:64, 07:67N, 07:70-07:76, 07:79, 07:82-07:83, 07:85-07:96, 07:98-07:99, 07:101-07:104, 07:106-07:111N, 07:113-07:114							7	
*07:04, 07:26, 07:43, 07:45, 07:52, 07:66, 07:84							7	
*07:05:01-07:06, 07:32, 07:69, 07:97, 07:105, 07:112							7	
*07:07, 07:12, 07:14, 07:18:01-07:18:02, 07:77					5		7	
*07:09, 07:11, 07:17							7	
*07:13, 07:54, 07:65								
*07:19, 07:25, 07:48, 08:01:12, 08:07, 08:12:02, 08:14, 14:01-14:03, 14:06:01-14:09, 14:11-14:12, 14:14-14:18, 39:07, 39:15, 39:17, 39:25N, 39:43, 39:55							7	
*07:27, 07:50							7	
*07:33, 07:51, 07:60							7	
*07:34, 07:80							7	
*07:36, 07:38, 07:68:01-07:68:02, 07:81							7	
*07:40, 08:20, 08:40							7	
*07:53							7	
*07:78							7	8
*07:100							7	
*07:115							7	8
Well No.	1	2	3	4	5	6	7	8

Lot No.: **44K**

Lot-specific information

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215	240	170	120	135	100	140	120	Length of spec. PCR product(s)
					250	435		
<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>Well No.</b>
		11			14			*48:09, 48:11 <sup>5</sup>
		11		13				*48:10, 08:17, 08:54, 42:11 <sup>6</sup>
		11		13		15		*48:12
	10	11		13				*48:13, 38:03, 39:02:01-39:02:02, 39:08, 39:13:01-39:13:02 <sup>7</sup>
		11		w	14	15		*48:14
		11					16	*48:15
		11						*48:16
		11						*48:17
		11				15		*48:18
9		11						*48:19
		11						*48:20
		11						*48:21
		11	12					*48:22
		11	12					*48:23
9							16	*07:02:01-07:03, 07:08, 07:10, 07:15-07:16, 07:20-07:24, 07:28-07:31, 07:35, 07:37, 07:39, 07:41-07:42, 07:44, 07:46-07:47, 07:49N, 07:55-07:59, 07:61-07:64, 07:67N, 07:70-07:76, 07:79, 07:82-07:83, 07:85-07:96, 07:98-07:99, 07:101-07:104, 07:106-07:111N, 07:113-07:114
							16	*07:04, 07:26, 07:43, 07:45, 07:52, 07:66, 07:84
9				13			16	*07:05:01-07:06, 07:32, 07:69, 07:97, 07:105, 07:112
							16	*07:07, 07:12, 07:14, 07:18:01-07:18:02, 07:77
9					14		16	*07:09, 07:11, 07:17
9							16	*07:13, 07:54, 07:65
								*07:19, 07:25, 07:48, 08:01:12, 08:07, 08:12:02, 08:14, 14:01-14:03, 14:06:01-14:09, 14:11-14:12, 14:14-14:18, 39:07, 39:15, 39:17, 39:25N, 39:43, 39:55
9		11					16	*07:27, 07:50
9								*07:33, 07:51, 07:60
				13			16	*07:34, 07:80
9						15	16	*07:36, 07:38, 07:68:01-07:68:02, 07:81
9				13				*07:40, 08:20, 08:40
9	10			13				*07:53
				13			16	*07:78
9						15		*07:100
9							16	*07:115
9	10	11	12	13	14	15	16	<b>Well No.</b>

Lot No.: **44K**

Lot-specific information

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Length of spec.	385	145	175	150	285	90	385	85
PCR product(s)						170		225
						285		
Well No.	1	2	3	4	5	6	7	8
*08:01:01-08:01:11, 08:02, 08:05, 08:08N-08:09, 08:11-08:12:01, 08:12:03-08:13, 08:15-08:16, 08:18-08:19N, 08:21-08:27, 08:29-08:34, 08:36, 08:39, 08:41-08:48, 08:50-08:51, 08:53, 08:55-08:62, 42:01:01-42:01:02, 42:04-42:07, 42:12-42:13							7	
*08:03, 08:52, 42:10							7	
*08:04							7	
*08:10, 35:87, 51:96, 55:20, C*06:21								
*08:28, 08:37							7	
*08:35							7	
*08:38, 41:01-41:03:02, 41:05, 41:07, 41:11-41:12, 45:12	1							
*08:49, 14:10				4			7	
*13:01:01-13:01:02, 13:01:04-13:01:05, 13:06-13:07N, 13:12-13:13, 13:17, 13:20, 13:25, 13:28-13:29, 13:36, 13:39				4				
*13:01:03, 13:26, 15:02:01-15:02:04, 15:13, 15:20-15:21, 15:25:01-15:25:02, 15:36, 15:44, 15:77, 15:80, 15:85, 15:88-15:89, 15:106, 15:112, 15:121, 15:139, 15:144, 15:154, 15:165, 15:170, 15:194, 27:19, 27:30, 35:01:01-35:01:21, 35:03:01-35:03:04, 35:07-35:08:04, 35:10-35:11:02, 35:13-35:17, 35:19-35:21, 35:23-35:30, 35:33-35:36, 35:38-35:42:02, 35:45-35:49, 35:52, 35:54-35:57, 35:61-35:63, 35:65Q, 35:69-35:71, 35:74, 35:76-35:78, 35:80, 35:82, 35:85, 35:90-35:94, 35:96, 35:98, 35:100-35:101:02, 35:103-35:113, 35:115-35:116, 35:120-35:126, 35:128, 35:130N-35:134N, 35:136-35:145N, 44:02:01-44:09, 44:11-44:13, 44:16-44:17, 44:19N, 44:21-44:30, 44:32-44:40, 44:42-44:46, 44:48-44:52N, 44:55-44:61N, 44:63-44:64:02, 44:66-44:76, 44:78-44:81, 44:83-44:98, 44:101-44:105, 44:107-44:110, 51:42, 53:01:01-53:13, 53:15-53:18, 53:20-53:23, 55:14, 56:09, 56:11, 57:01:01-57:01:04, 57:01:06-57:01:08, 57:04-57:06, 57:08, 57:10, 57:14-57:16, 57:18-57:20, 57:22-57:27, 57:29-57:30, 57:32, 58:01:01-58:01:02, 58:01:04-58:01:07, 58:04, 58:09-58:15, 58:17N, 58:19, 58:21-58:24, 58:29-58:30, 83:01				4				
Well No.	1	2	3	4	5	6	7	8



Lot No.: **44K**

Lot-specific information

www.olerup-ssp.com

215	240	170	120	135	100	140	120	Length of spec. PCR product(s)
					250	435		
9	10	11	12	13	14	15	16	Well No.
				13				*08:01:01-08:01:11, 08:02, 08:05, 08:08N-08:09, 08:11-08:12:01, 08:12:03-08:13, 08:15-08:16, 08:18-08:19N, 08:21-08:27, 08:29-08:34, 08:36, 08:39, 08:41-08:48, 08:50-08:51, 08:53, 08:55-08:62, 42:01:01-42:01:02, 42:04-42:07, 42:12-42:13
				13		15		*08:03, 08:52, 42:10
		11		13				*08:04
				13				*08:10, 35:87, 51:96, 55:20, C*06:21
					14			*08:28, 08:37
				13	14			*08:35
				13				*08:38, 41:01-41:03:02, 41:05, 41:07, 41:11-41:12, 45:12
								*08:49, 14:10
	10							*13:01:01-13:01:02, 13:01:04-13:01:05, 13:06-13:07N, 13:12-13:13, 13:17, 13:20, 13:25, 13:28-13:29, 13:36, 13:39
								*13:01:03, 13:26, 15:02:01-15:02:04, 15:13, 15:20-15:21, 15:25:01-15:25:02, 15:36, 15:44, 15:77, 15:80, 15:85, 15:88-15:89, 15:106, 15:112, 15:121, 15:139, 15:144, 15:154, 15:165, 15:170, 15:194, 27:19, 27:30, 35:01:01:01-35:01:21, 35:03:01-35:03:04, 35:07-35:08:04, 35:10-35:11:02, 35:13-35:17, 35:19-35:21, 35:23-35:30, 35:33-35:36, 35:38-35:42:02, 35:45-35:49, 35:52, 35:54-35:57, 35:61-35:63, 35:65Q, 35:69-35:71, 35:74, 35:76-35:78, 35:80, 35:82, 35:85, 35:90-35:94, 35:96, 35:98, 35:100-35:101:02, 35:103-35:113, 35:115-35:116, 35:120-35:126, 35:128, 35:130N-35:134N, 35:136-35:145N, 44:02:01:01-44:09, 44:11-44:13, 44:16-44:17, 44:19N, 44:21-44:30, 44:32-44:40, 44:42-44:46, 44:48-44:52N, 44:55-44:61N, 44:63-44:64:02, 44:66-44:76, 44:78-44:81, 44:83-44:98, 44:101-44:105, 44:107-44:110, 51:42, 53:01:01-53:13, 53:15-53:18, 53:20-53:23, 55:14, 56:09, 56:11, 57:01:01-57:01:04, 57:01:06-57:01:08, 57:04-57:06, 57:08, 57:10, 57:14-57:16, 57:18-57:20, 57:22-57:27, 57:29-57:30, 57:32, 58:01:01-58:01:02, 58:01:04-58:01:07, 58:04, 58:09-58:15, 58:17N, 58:19, 58:21-58:24, 58:29-58:30, 83:01
9	10	11	12	13	14	15	16	Well No.

Length of spec.	385	145	175	150	285	90	385	85
PCR product(s)						170		225
						285		
Well No.	1	2	3	4	5	6	7	8
*13:02:01-13:02:09, 13:08Q-13:09, 13:11, 13:14-13:16, 13:18-13:19, 13:21, 13:27, 13:30-13:33, 13:37-13:38, 51:27N, 51:84, 51:93, 54:11, 54:22								
*13:03, 15:09, 15:30, 15:42, 15:48, 15:58, 15:73, 15:83, 15:86, 15:150, 15:188, 27:07, 27:11, 27:20, 27:27, 27:33, 27:43, 35:09:01-35:09:02, 35:18, 35:31, 35:44, 35:60, 35:88, 40:02:01-40:02:09, 40:02:11, 40:04-40:06:03, 40:08, 40:13, 40:39-40:40, 40:68, 40:70, 40:94, 40:97, 40:122, 40:142N-40:144N, 46:11, 46:18, 51:01:01-51:02:02, 51:02:04-51:03, 51:05-51:16, 51:19-51:24:03, 51:26, 51:28-51:36, 51:38-51:41N, 51:43-51:44N, 51:48-51:55, 51:57-51:63, 51:65-51:74, 51:76-51:83, 51:86-51:89, 51:91, 51:95, 52:01:01-52:11, 52:13-52:15, 52:17-52:21, 54:01-54:05N, 54:07-54:08N, 54:10, 54:12-54:13, 54:17-54:21, 54:23, 55:01:01-55:05, 55:07-55:13, 55:15-55:19, 55:21-55:22, 55:24-55:26, 55:28-55:40, 55:42-55:43, 56:01:01-56:02, 56:04-56:08, 56:10, 56:13-56:17, 56:19N-56:29, 58:08, 58:20, 58:27, 59:01-59:05, 67:02, 78:01-78:07, 82:01-82:03, C*15:24								
*13:22:01-13:22:02, 35:04:01-35:04:03, 35:06, 35:12:01-35:12:02, 35:59, 44:10, 44:14, 44:62, 44:77, 44:82, 51:04, 51:46, 51:56, 56:12, 57:02:01-57:03:02, 57:07, 57:09, 57:12, 57:17, 57:28N, 58:28				4				
*13:23				4				
*14:05, 38:01:02, 38:22, 39:29							7	
*14:13, 38:01:01, 38:01:03-38:01:04, 38:05-38:07, 38:09-38:14, 38:16, 38:19, 38:21, 39:03, 39:14, 39:24, 39:37							7	
*15:03:01-15:03:03, 15:47, 15:54, 15:61, 15:64, 15:69, 15:91, 15:98, 15:103, 15:123, 15:127, 15:131-15:132, 15:151, 15:156, 15:158, 15:173, 18:25, 18:43								
*15:07:01-15:07:02, 15:126, 35:66, 46:12								
*15:45								
*15:55, 35:05:01-35:05:02, 35:51, 35:58, 35:72, 35:89, 35:97, 53:14, 58:18								
*15:62, 37:01:07				4				
*15:68	1							
Well No.	1	2	3	4	5	6	7	8

Lot No.: **44K**

Lot-specific information

www.olerup-ssp.com

215	240	170	120	135	100	140	120	Length of spec. PCR product(s)
					250	435		
9	10	11	12	13	14	15	16	Well No.
	10							*13:02:01-13:02:09, 13:08Q-13:09, 13:11, 13:14-13:16, 13:18-13:19, 13:21, 13:27, 13:30-13:33, 13:37-13:38, 51:27N, 51:84, 51:93, 54:11, 54:22
	10			13				*13:03, 15:09, 15:30, 15:42, 15:48, 15:58, 15:73, 15:83, 15:86, 15:150, 15:188, 27:07, 27:11, 27:20, 27:27, 27:33, 27:43, 35:09:01-35:09:02, 35:18, 35:31, 35:44, 35:60, 35:88, 40:02:01-40:02:09, 40:02:11, 40:04-40:06:03, 40:08, 40:13, 40:39-40:40, 40:68, 40:70, 40:94, 40:97, 40:122, 40:142N-40:144N, 46:11, 46:18, 51:01:01-51:02:02, 51:02:04-51:03, 51:05-51:16, 51:19-51:24:03, 51:26, 51:28-51:36, 51:38-51:41N, 51:43-51:44N, 51:48-51:55, 51:57-51:63, 51:65-51:74, 51:76-51:83, 51:86-51:89, 51:91, 51:95, 52:01:01-52:11, 52:13-52:15, 52:17-52:21, 54:01-54:05N, 54:07-54:08N, 54:10, 54:12-54:13, 54:17-54:21, 54:23, 55:01:01-55:05, 55:07-55:13, 55:15-55:19, 55:21-55:22, 55:24-55:26, 55:28-55:40, 55:42-55:43, 56:01:01-56:02, 56:04-56:08, 56:10, 56:13-56:17, 56:19N-56:29, 58:08, 58:20, 58:27, 59:01-59:05, 67:02, 78:01-78:07, 82:01-82:03, C*15:24
	10			13				*13:22:01-13:22:02, 35:04:01-35:04:03, 35:06, 35:12:01-35:12:02, 35:59, 44:10, 44:14, 44:62, 44:77, 44:82, 51:04, 51:46, 51:56, 56:12, 57:02:01-57:03:02, 57:07, 57:09, 57:12, 57:17, 57:28N, 58:28
	10		12					*13:23
						15		*14:05, 38:01:02, 38:22, 39:29
	10			13		15		*14:13, 38:01:01, 38:01:03-38:01:04, 38:05-38:07, 38:09-38:14, 38:16, 38:19, 38:21, 39:03, 39:14, 39:24, 39:37
		11						*15:03:01-15:03:03, 15:47, 15:54, 15:61, 15:64, 15:69, 15:91, 15:98, 15:103, 15:123, 15:127, 15:131-15:132, 15:151, 15:156, 15:158, 15:173, 18:25, 18:43
9					14	15		*15:07:01-15:07:02, 15:126, 35:66, 46:12
9						15		*15:45
					14	15		*15:55, 35:05:01-35:05:02, 35:51, 35:58, 35:72, 35:89, 35:97, 53:14, 58:18
		11						*15:62, 37:01:07
9		11			14	15		*15:68
9	10	11	12	13	14	15	16	Well No.

Length of spec.	385	145	175	150	285	90	385	85
PCR product(s)						170		225
						285		
Well No.	1	2	3	4	5	6	7	8
*15:71, 15:116, 15:124, 15:175, 18:07:01-18:07:02, 18:29, 18:33, 46:14, C*07:123								
*15:138, C*02:23					5			
*18:01:01-18:03, 18:05-18:06, 18:08-18:13, 18:15, 18:17N-18:21, 18:23N-18:24, 18:27-18:28, 18:30- 18:32, 18:34, 18:36-18:42, 18:44-18:50, 37:02, 37:09								
*18:14								
*18:22, 37:01:01-37:01:06, 37:03N-37:06, 37:08, 37:10- 37:11, 37:13-37:20, 37:23				4				
*18:26, 37:12								
*18:35					5			
*27:24			3					
*27:32, 44:54, 44:106								
*27:36		2				6		
*35:02:01-35:02:04, 35:81, 35:83, 35:95, 35:129N, 53:19				4				
*35:22, 51:64								
*35:50, 35:84, 37:21-37:22, 58:05				4				
*35:114, 40:03								
*37:07								
*38:02:01-38:02:02, 38:08, 38:15, 38:17-38:18, 38:23, 39:01:01:01-39:01:01:02L, 39:01:03-39:01:11, 39:04- 39:06:02, 39:09-39:12, 39:16, 39:18-39:20, 39:26- 39:28, 39:30-39:36, 39:38Q, 39:40N-39:41, 39:45- 39:48, 39:50-39:54, 39:57-39:60, 42:08, 42:14, 67:01:01-67:01:02							7	
*38:04, 39:22, 41:06, 41:09	1							
*38:20				4			7	
*39:23	1							
*39:39							7	
*39:42				4			7	
*39:44							7	
*39:49	1							
*39:56							7	
*40:01:01-40:01:12, 40:07, 40:60, 40:66, 40:73, 40:79, 40:124:01, 40:138-40:140, 40:146-40:147	1	2			5			
*40:09, 40:18, 40:24, 40:44, 40:120, 40:131	?							
Well No.	1	2	3	4	5	6	7	8

Lot No.: **44K**

Lot-specific information

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215	240	170	120	135	100	140	120	Length of spec. PCR product(s)
					250	435		
9	10	11	12	13	14	15	16	Well No.
			12					*15:71, 15:116, 15:124, 15:175, 18:07:01-18:07:02, 18:29, 18:33, 46:14, C*07:123
							16	*15:138, C*02:23
		11	12					*18:01:01-18:03, 18:05-18:06, 18:08-18:13, 18:15, 18:17N-18:21, 18:23N-18:24, 18:27-18:28, 18:30- 18:32, 18:34, 18:36-18:42, 18:44-18:50, 37:02, 37:09
		11	12		14	15		*18:14
		11	12					*18:22, 37:01:01-37:01:06, 37:03N-37:06, 37:08, 37:10- 37:11, 37:13-37:20, 37:23
	10	11	12	13				*18:26, 37:12
		11	12					*18:35
	10							*27:24
						15		*27:32, 44:54, 44:106
								*27:36
	w			13				*35:02:01-35:02:04, 35:81, 35:83, 35:95, 35:129N, 53:19
	10			13		15		*35:22, 51:64
			12					*35:50, 35:84, 37:21-37:22, 58:05
					14			*35:114, 40:03
9		11	12				16	*37:07
	10			13				*38:02:01-38:02:02, 38:08, 38:15, 38:17-38:18, 38:23, 39:01:01:01-39:01:01:02L, 39:01:03-39:01:11, 39:04- 39:06:02, 39:09-39:12, 39:16, 39:18-39:20, 39:26- 39:28, 39:30-39:36, 39:38Q, 39:40N-39:41, 39:45- 39:48, 39:50-39:54, 39:57-39:60, 42:08, 42:14, 67:01:01-67:01:02
	10			13				*38:04, 39:22, 41:06, 41:09
	10			13		15		*38:20
	10	11						*39:23
	10	11		13				*39:39
	10			13				*39:42
	10							*39:44
		11						*39:49
	10			w				*39:56
								*40:01:01-40:01:12, 40:07, 40:60, 40:66, 40:73, 40:79, 40:124:01, 40:138-40:140, 40:146-40:147
								*40:09, 40:18, 40:24, 40:44, 40:120, 40:131
9	10	11	12	13	14	15	16	Well No.

Length of spec.	385	145	175	150	285	90	385	85
PCR product(s)						170		225
						285		
Well No.	1	2	3	4	5	6	7	8
*40:10:01-40:10:02, 40:21-40:22N, 40:33, 40:38, 40:42-40:43, 40:46-40:47, 40:49, 40:54-40:55, 40:61, 40:63, 40:67, 40:74, 40:76, 40:81, 40:84, 40:87-40:88, 40:100-40:102, 40:112-40:114, 40:116, 40:118N, 40:123, 40:124:02-40:126, 40:128, 40:132, 40:134-40:135, 40:137, 40:141	?	2			5			
*40:11:01-40:11:02, 40:19, 40:26-40:27, 40:29, 40:37, 40:50, 40:53, 40:56-40:58, 40:64, 40:75, 40:78, 40:82, 40:86, 40:90, 40:93, 40:95-40:96, 40:99, 40:103-40:104, 40:107, 40:110-40:111, 40:115, 40:119, 40:127, 40:129, 40:133Q, 40:145	?							
*40:12		2			5			
*40:14:01-40:14:03, 40:121, 40:136	?				5			
*40:15	?							
*40:16	1							
*40:23	1	2			5			
*40:25, 40:69, 44:31		2			5			
*40:28	?			4				
*40:30, 40:34	?	2						
*40:31, 40:45, 40:80	?	2	3					
*40:32, 40:98	?							
*40:35, 40:71	?							
*40:36, 40:48	?	2			5			8
*40:51	1							
*40:52	?	2			5			
*40:59	1	2			5			
*40:62, 40:65, 40:108	?				5			
*40:72:01-40:72:02	1				5			
*40:77	1				5			8
*40:83	?							
*40:85, 40:91-40:92, 40:130	?							
*40:105	?							
*40:106		2			5		?	
*40:109	?							
*40:117	?	2			5			
*41:04, 41:10, 45:01-45:05, 45:07-45:11, 49:02, 50:01:01-50:02, 50:04-50:09	1							
*41:08	1				5			
*42:02							7	
Well No.	1	2	3	4	5	6	7	8

Lot No.: **44K**

Lot-specific information

www.olerup-ssp.com

215	240	170	120	135	100	140	120	Length of spec. PCR product(s)
					250	435		
9	10	11	12	13	14	15	16	Well No.
								*40:10:01-40:10:02, 40:21-40:22N, 40:33, 40:38, 40:42-40:43, 40:46-40:47, 40:49, 40:54-40:55, 40:61, 40:63, 40:67, 40:74, 40:76, 40:81, 40:84, 40:87-40:88, 40:100-40:102, 40:112-40:114, 40:116, 40:118N, 40:123, 40:124:02-40:126, 40:128, 40:132, 40:134-40:135, 40:137, 40:141
	10			13				*40:11:01-40:11:02, 40:19, 40:26-40:27, 40:29, 40:37, 40:50, 40:53, 40:56-40:58, 40:64, 40:75, 40:78, 40:82, 40:86, 40:90, 40:93, 40:95-40:96, 40:99, 40:103-40:104, 40:107, 40:110-40:111, 40:115, 40:119, 40:127, 40:129, 40:133Q, 40:145
		11						*40:12
				13				*40:14:01-40:14:03, 40:121, 40:136
9				13			16	*40:15
9				13			16	*40:16
							16	*40:23
								*40:25, 40:69, 44:31
	10			13				*40:28
								*40:30, 40:34
								*40:31, 40:45, 40:80
9							16	*40:32, 40:98
	10			13		15		*40:35, 40:71
								*40:36, 40:48
	10							*40:51
			12					*40:52
			12					*40:59
								*40:62, 40:65, 40:108
				w				*40:72:01-40:72:02
				w				*40:77
	10		12	13				*40:83
	10							*40:85, 40:91-40:92, 40:130
	10			13	14			*40:105
								*40:106
	10			13		?		*40:109
						?		*40:117
								*41:04, 41:10, 45:01-45:05, 45:07-45:11, 49:02, 50:01:01-50:02, 50:04-50:09
				13				*41:08
			12	13				*42:02
9	10	11	12	13	14	15	16	Well No.

Length of spec.	385	145	175	150	285	90	385	85
PCR product(s)						170		225
						285		
Well No.	1	2	3	4	5	6	7	8
*42:09							7	
*44:18, 49:01:01-49:01:02, 49:04-49:10	1							
*46:06		2			5			
*49:03	1							
*51:75								
*52:16								
*73:01-73:02							7	
*81:01, 81:03-81:05		2	3					
Cw*0738					5			
HLA-B allele								
Well No.	1	2	3	4	5	6	7	8

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-B\*48 SSP subtyping.

In addition, wells number 2 to 4, 11 and 15 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band.

<sup>2</sup>The nucleotide position, in the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> or 4<sup>th</sup> exon, matching the specificity-determining 3'-end of the primer is given. Nucleotide numbering as on the [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.

<sup>3</sup>The nucleotide position, in the 2<sup>nd</sup>, 3<sup>rd</sup> or 4<sup>th</sup> 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](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.

<sup>4</sup>The B\*48 primer set cannot separate the B\*48:06 and B\*81:02 alleles. These two alleles can be distinguished by the HLA-B low resolution and/or HLA-B\*81 kits.

<sup>5</sup>The B\*48:09 and B\*48:11 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 14.

<sup>6</sup>The B\*48 primer set cannot separate the B\*48:10, B\*08:17, B\*08:54 and B\*42:11 alleles. These alleles can be distinguished by the HLA-B low resolution and/or HLA-B\*08 and HLA-B\*42 kits.

<sup>7</sup>The B\*48 primer set cannot separate the B\*48:13 and the 38:03, 39:02:01-39:02:02, 39:08 and 39:13:01-39:13:02 alleles. The B\*48:13 allele can be distinguished from the B\*38:03 and B\*39:xx alleles by the HLA-B low resolution and/or HLA-B\*38/HLA-B\*39 kits.



Lot No.: **44K**

Lot-specific information

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215	240	170	120	135	100	140	120	Length of spec. PCR product(s)
					250	435		
9	10	11	12	13	14	15	16	Well No.
			12		14			*42:09
						15		*44:18, 49:01:01-49:01:02, 49:04-49:10
			12					*46:06
			12			15		*49:03
	10			w				*51:75
	10	11		13				*52:16
			12					*73:01-73:02
								*81:01, 81:03-81:05
								Cw*0738
9	10	11	12	13	14	15	16	HLA-B allele Well No.

<sup>8</sup>Primer mix 6: Specific PCR fragment of 90 bp in the B\*48:20 allele. Specific PCR fragment of 170 bp in the B\*48:05 allele. Specific PCR fragment of 285 bp in the B\*48:21 and in the B\*27:36 alleles.

Primer mix 8: Specific PCR fragment of 85 bp in the B\*48:16 allele. Specific PCR fragment of 225 bp in the B\*48:07 and 48:17 and in the B\*07:78, 07:115, 40:36, 40:48 and 40:77 alleles.

Primer mix 14: Specific PCR fragment of 100 bp in the B\*48:09 and 48:14 and in the B\*07:09, 07:11, 07:17, 08:28, 08:35, 08:37, 15:07:01-15:07:02, 15:55, 15:68, 15:126, 18:14, 35:05:01-35:05:02, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 35:114, 40:03, 40:105, 42:09, 46:12, 53:14 and 58:18 alleles. Specific PCR fragment of 250 bp in the B\*48:11 allele.

Primer mix 15: Specific PCR fragment of 140 bp in the B\*48:12 and 48:14 and in the B\*07:68:01-07:68:02, 07:100, 14:05, 14:13, 15:07:01-15:07:02, 15:45, 15:55, 15:68, 15:126, 18:14, 27:32, 35:05:01-35:05:02, 35:22, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 39:03, 39:14, 39:24, 39:29, 39:37, 40:35, 40:71, 42:10, 44:54, 44:106, 46:12, 51:64, 53:14 and 58:18 alleles. Specific PCR fragment of 435 bp in the B\*48:18 and in the 07:36, 07:38, 07:81, 08:03, 08:52, 38:01:01-38:01:04, 38:05-38:07, 38:09-38:14, 38:16, 38:20-38:22, 40:109<sup>?</sup>, 40:117<sup>?</sup>, 44:18, 49:01:01-49:01:02 and 49:03-49:10 alleles. Specific PCR fragment of 140 and 435 bp in the B\*38:19 allele.

'w', might be weakly amplified.

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

<b>CELL LINE VALIDATION SHEET</b>																				
<b>HLA-B*48 SSP primer set</b>																				
				<b>Well</b>																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	15	
				Prod. No.:	200962501	200620602	200733603	200962504	200962505	201076106	200962507	200962508	201076109	201076110	201076111	201076112	201076113	201076114	200962515	200962516
	<b>IHC cell line</b>		<b>B*</b>																	
1	9001 SA		*07:02		-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	+
2	9280 LK707		*52:01	*73:01	-	-	-	-	-	-	+	-	-	+	-	+	+	-	-	-
3	9011 E4181324		*52:01		-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-
4	9275 GU373		*15:10	*53:01	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011		*37:01		-	-	-	+	-	-	-	-	-	-	+	+	-	-	-	-
6	9353 SM		*39:01	*51:01	-	-	-	-	-	-	+	-	-	+	-	-	+	-	-	-
7	9020 QBL		*18:01		-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
8	9025 DEU		*35:01		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR		*38:01		-	-	-	-	-	-	+	-	-	+	-	-	+	-	+	-
10	9107 LKT3		*54:01		-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-
11	9051 PITOUT		*44:03		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB		*57:01		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
13	9025 JESTHOM		*27:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA		*15:01	*15:20	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB		*40:01		+	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007		*40:02		-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-
17	9282 CTM3953540		*08:01	*55:01	-	-	-	-	-	-	+	-	-	+	-	-	+	-	-	-
18	9257 32367		*14:01	*56:01	-	-	-	-	-	-	+	-	-	+	-	-	+	-	-	-
19	9038 BM16		*18:01		-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
20	9059 SLE005		*40:01		+	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA		*15:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE		*35:03		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL		*40:02	*56:02	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-
24	9035 JBUSH		*38:01		-	-	-	-	-	-	+	-	-	+	-	-	+	-	+	-
25	9049 IBW9		*14:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
26	9285 WT49		*58:01		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007		*07:05	*51:01	-	-	-	-	-	-	+	-	+	+	-	-	+	-	-	-
28	9320 BEL5GB		*44:02	*44:03	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU		*44:03		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH		*42:01		-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-
31	9019 DUCAF		*18:01		-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
32	9297 HAG		*41:02		+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
33	9098 MT14B		*40:01		+	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF		*38:01		-	-	-	-	-	-	+	-	-	+	-	-	+	-	+	-
35	9302 SSTO		*44:02		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17		*15:01	*35:01	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB		*07:02		-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	+
38	9099 LZL		*15:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML		*08:01	*27:05	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-
40	9134 WHONP199		*13:02	*46:01	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
41	9055 H0301		*14:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
42	9066 TAB089		*46:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526		*46:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM		*38:01		-	-	-	-	-	-	+	-	-	+	-	-	+	-	+	-
45	9239 SHJO		*42:01	*50:01	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-
46	9013 SCHU		*07:02		-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	+
47	9045 TUBO		*51:01		-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-
48	9303 TER-ND		*35:01	*44:03	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-

## CERTIFICATE OF ANALYSIS

### Olerup SSP® HLA-B\*48 SSP

Product number: 101.546-06u – without Taq polymerase  
Lot number: 44K  
Expiry date: 2012-September-01  
Number of tests: 6  
Number of wells per test: 16

#### Well specifications:

Well No.	Production No.	Well No.	Production No.
1	2009-625-01	9	2010-761-09
2	2006-206-02	10	2010-761-10
3	2007-336-03	11	2010-761-11
4	2009-625-04	12	2010-761-12
5	2009-625-05	13	2010-761-13
6	2010-761-06	14	2010-761-14
7	2009-625-07	15	2009-625-15
8	2009-625-08	16	2009-625-16

The specificity of each primer solution of the HLA-B\*48 primer set has been tested against 48 well characterized IHWC cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 6 and 8 were available. The specificities of the primers in these primer solutions were tested by separately adding one additional 3'-primer, respectively one additional 5'-primer. In primer solutions 6, 8 and 11, one or two 5'-primers were not possible to test, and in primer solution 14 two 3'-primers were not possible to test. Additional 5'-primers in primer solutions 5, 12 and 14 were tested by separately adding an additional 3'-primer, and one additional 3'-primer in primer solution 12 was tested by separately adding an additional 5'-primer.

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

**Date of approval:** 2010-October-01

**Approved by:**

Quality Control, Supervisor

## Declaration of Conformity

**Product name:** Olerup SSP® HLA-B\*48  
**Product number:** 101.546-06u  
**Lot number:** 44K

**Intended use:** HLA-B\*48 high resolution histocompatibility testing

**Manufacturer:** Olerup SSP AB  
Hasselstigen 1  
SE-133 33 Saltsjöbaden, 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, Hasselstigen 1, SE-133 33 Saltsjöbaden, 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.)

Saltsjöbaden, Sweden  
2010-October-01

Olle Olerup  
Managing Director







Lot No.: **44K**

Lot-specific information

[www.olerup-ssp.com](http://www.olerup-ssp.com)

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