

Olerup SSP® HLA-B*38

Product number:	101.565-12 – including <i>Taq</i> polymerase
Lot number:	22M
Expiry date:	2013-November-01
Number of tests:	12
Number of wells per test:	22
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. 22M.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*® HLA-B*38 LOT

The HLA-B*38 specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup SSP*® HLA-B*38 lot was made (Lot No. 42K).

Six wells have been added to the HLA-B*38 kit, wells **17 to 22**.
The amplification patterns for some rare HLA-B*38 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
1	Added	-	Increased yield of specific PCR product.
17	New	New	New primer pair for the B*38:23 allele.
18	New	New	New primer pair for the B*38:24 allele.
19	New	New	New primer pair for the B*38:27 allele.
20	New	New	New primer pair for the B*38:28 allele.
21	New	New	New primer pair for the B*38:30 allele.
22	New	New	New primer pair for the B*38:29 allele.

PRODUCT DESCRIPTION

HLA-B*38 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*38:01 to B*38:30 alleles.

PLATE LAYOUT

Each test consists of 22 PCR reactions in a 24 well cut PCR plate. Wells 23 and 24 are empty

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	empty	empty

The 24 well cut PCR plate is marked with 'HLA-B*38' in silver/gray ink.

Well No. 1 is marked with the Lot No. '22M'.

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 24 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-B*38 SSP subtypings will be influenced by most B*07, fourteen B*08, five B*13, the B*14, most B*15, most B*18, several B*27, several B*35, the B*37, most B*39, several B*40, the B*41:12, two B*42, most B*44, the B*45, most B*46, the B*48, the B*49, the B*50, most B*51, the B*52, most B*53, two B*54, several B*55, eight B*56, five B*57, most B*58, the B*67, the B*78, the B*82 and the B*83:01 alleles when present on the other haplotype. In addition, the C*02:02:07 and C*05:01:06 alleles are amplified by primer mix 8.

UNIQUELY IDENTIFIED ALLELES

All the HLA-B*38 alleles, i.e. **B*38:01 to B*38:30**, recognized by the HLA Nomenclature Committee in April 2011¹ will give rise to unique amplification patterns by the primers in the HLA-B*38 subtyping kit.

The HLA-B*38 subtyping kit cannot distinguish the B*38:01:01 and 38:01:03 to 38:01:05 and the B*38:02:01 and B*38:02:02 alleles.

The B*38:17 and B*39:37 alleles give rise to identical amplification patterns with the HLA-B*38 primer set. These two alleles can be distinguished by the HLA-B low resolution and/or HLA-B*39 kits.

The B*38:11 and 38:19 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 16.

¹HLA-B alleles listed on the IMGT/HLA web page 2011-April-08, release 3.4.0, www.ebi.ac.uk/imgt/hla.

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RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 36 alleles generate 31 amplification patterns that can be combined in 496 homozygous and heterozygous combinations. 338 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.

+++++++	-----	*38:03, *38:20 = *38:03, *38:22
+++++++	-----	*38:01:01, *38:03 = *38:01:02, *38:03 = *38:03, *38:09
+++++++	-----	*38:04, *38:20 = *38:04, *38:22
+++++++	-----	*38:08, *38:21 = *38:18, *38:21
+++++++	-----	*38:02:01, *38:21 = *38:02:03, *38:21 = *38:04, *38:21
+++++++	-----	*38:04, *38:12 = *38:04, *38:16
+++++++	-----	*38:04, *38:09 = *38:04, *38:14 = *38:04, *38:26
+++++++	-----	*38:01:01, *38:04 = *38:01:02, *38:04
+++++++	-----	*38:12, *38:15 = *38:15, *38:16
+++++++	-----	*38:05, *38:08 = *38:05, *38:18 = *38:08, *38:20 = *38:13, *38:15 = *38:18, *38:20 = *38:18, *38:22
+++++++	-----	*38:09, *38:15 = *38:14, *38:15 = *38:15, *38:26
+++++++	-----	*38:05, *38:23 = *38:20, *38:23 = *38:22, *38:23
+++++++	-----	*38:05, *38:29 = *38:20, *38:29
+++++++	-----	*38:01:01, *38:15 = *38:01:02, *38:15 = *38:02:01, *38:05 = *38:02:01, *38:20 = *38:02:01, *38:22 = *38:02:03, *38:20 = *38:02:03, *38:22 = *38:05, *38:15 = *38:15, *38:20 = *38:15, *38:22
+++++++	-----	*38:08, *38:12 = *38:08, *38:16 = *38:12, *38:18 = *38:16, *38:18
+++++++	-----	*38:12, *38:23 = *38:16, *38:23
+++++++	-----	*38:12, *38:29 = *38:16, *38:29
+++++++	-----	*38:02:01, *38:12 = *38:02:01, *38:16 = *38:02:03, *38:12 = *38:02:03, *38:16
+++++++	-----	*38:08, *38:09 = *38:08, *38:14 = *38:08, *38:26 = *38:09, *38:18 = *38:14, *38:18 = *38:18, *38:26
+++++++	-----	*38:08, *38:11 = *38:11, *38:18
+++++++	-----	*38:08, *38:24 = *38:18, *38:24
+++++++	-----	*38:08, *38:27 = *38:18, *38:27
+++++++	-----	*38:08, *38:28 = *38:18, *38:28
+++++++	-----	*38:01:01, *38:08 = *38:01:01, *38:18 = *38:01:02, *38:18 = *38:02:01, *38:13 = *38:02:03, *38:13 = *38:08, *38:13 = *38:13, *38:18
+++++++	-----	*38:09, *38:23 = *38:14, *38:23 = *38:23, *38:26
+++++++	-----	*38:09, *38:29 = *38:14, *38:29 = *38:26, *38:29
+++++++	-----	*38:02:01, *38:09 = *38:02:01, *38:14 = *38:02:01, *38:26 = *38:02:03, *38:09 = *38:02:03, *38:14 = *38:02:03, *38:26
+++++++	-----	*38:02:01, *38:10 = *38:02:03, *38:10
+++++++	-----	*38:02:01, *38:11 = *38:02:03, *38:11
+++++++	-----	*38:01:01, *38:23 = *38:01:02, *38:23
+++++++	-----	*38:02:01, *38:24 = *38:02:03, *38:24
+++++++	-----	*38:02:01, *38:27 = *38:02:03, *38:27
+++++++	-----	*38:02:01, *38:28 = *38:02:03, *38:28
+++++++	-----	*38:02:01, *38:30 = *38:02:03, *38:30
+++++++	-----	*38:01:01, *38:02:01 = *38:01:01, *38:02:03 = *38:01:02, *38:02:01 = *38:01:02, *38:02:03
+++++++	-----	*38:05, *38:21 = *38:20, *38:21 = *38:21, *38:22
+++++++	-----	*38:20, *38:25 = *38:22, *38:25
+++++++	-----	*38:07, *38:21 = *38:12, *38:21 = *38:16, *38:21
+++++++	-----	*38:09, *38:21 = *38:14, *38:21 = *38:21, *38:26
+++++++	-----	*38:11, *38:21 = *38:17, *38:21
+++++++	-----	*38:01:01, *38:21 = *38:01:02, *38:21 = *38:06, *38:21 = *38:21, *38:21 = *38:21, *38:25
+++++++	-----	*38:12, *38:25 = *38:16, *38:25
+++++++	-----	*38:09, *38:25 = *38:14, *38:25 = *38:25, *38:26
+++++++	-----	*38:01:01, *38:25 = *38:01:02, *38:25

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+++++---+ +---+---+ -----	*38:05, *38:07 = *38:07, *38:20 = *38:07, *38:22
+++++---+ +---+---+ -----	*38:06, *38:20 = *38:06, *38:22
+++++---+ -++-+---+ -----	*38:05, *38:12 = *38:05, *38:16 = *38:12, *38:20 = *38:12, *38:22 =
	*38:16, *38:20 = *38:16, *38:22
+++++---+ --+---+---+ -----	*38:13, *38:20 = *38:13, *38:22
+++++---+ ---+---+---+ -----	*38:05, *38:09 = *38:09, *38:20 = *38:09, *38:22 = *38:14, *38:20 =
	*38:14, *38:22 = *38:20, *38:26 = *38:22, *38:26
+++++---+ ---+---+---+ -----	*38:05, *38:14 = *38:05, *38:26
+++++---+ ---+---+---+ -----	*38:05, *38:10 = *38:10, *38:20
+++++---+ ---+---+---+ -----	*38:05, *38:11 = *38:05, *38:17 = *38:11, *38:20 = *38:11, *38:22 =
	*38:17, *38:20 = *38:17, *38:22
+++++---+ ---+---+---+ -+-----	*38:05, *38:24 = *38:20, *38:24 = *38:22, *38:24
+++++---+ ---+---+---+ -+-----	*38:05, *38:27 = *38:20, *38:27 = *38:22, *38:27
+++++---+ ---+---+---+ -+-----	*38:05, *38:28 = *38:20, *38:28 = *38:22, *38:28
+++++---+ ---+---+---+ -+-----	*38:05, *38:30 = *38:20, *38:30
+++++---+ ---+---+---+ -----	*38:01:01, *38:05 = *38:01:01, *38:20 = *38:01:01, *38:22 = *38:01:02,
	*38:05 = *38:01:02, *38:20 = *38:05, *38:20 = *38:05, *38:22 = *38:20,
	*38:20 = *38:20, *38:22
+++++---+ ---+---+---+ -----	*38:01:02, *38:22 = *38:22, *38:22
+++++---+ ++-+---+---+ -----	*38:07, *38:09 = *38:07, *38:14
+++++---+ ++-+---+---+ -----	*38:01:01, *38:07 = *38:01:02, *38:07 = *38:06, *38:12 = *38:07, *38:12
+++++---+ ++-+---+---+ -----	*38:06, *38:09 = *38:06, *38:14
+++++---+ ++-+---+---+ -----	*38:01:01, *38:06 = *38:01:02, *38:06
+++++---+ -+---+---+---+ -----	*38:09, *38:12 = *38:09, *38:16 = *38:12, *38:14 = *38:12, *38:26
+++++---+ -+---+---+---+ -----	*38:10, *38:12 = *38:10, *38:16
+++++---+ -+---+---+---+ -----	*38:11, *38:12 = *38:11, *38:16 = *38:12, *38:17 = *38:16, *38:17
+++++---+ -+---+---+---+ -+-----	*38:12, *38:24 = *38:16, *38:24
+++++---+ -+---+---+---+ -+-----	*38:12, *38:27 = *38:16, *38:27
+++++---+ -+---+---+---+ -+-----	*38:12, *38:30 = *38:16, *38:30
+++++---+ -+---+---+---+ -----	*38:01:01, *38:12 = *38:01:01, *38:16 = *38:01:02, *38:12 = *38:01:02,
	*38:16 = *38:12, *38:12 = *38:12, *38:16
+++++---+ --+---+---+---+ -----	*38:11, *38:13 = *38:13, *38:17
+++++---+ --+---+---+---+ -----	*38:01:01, *38:13 = *38:01:02, *38:13
+++++---+ ---+---+---+---+ -----	*38:09, *38:10 = *38:10, *38:14 = *38:10, *38:26
+++++---+ ---+---+---+---+ -----	*38:09, *38:11 = *38:09, *38:17 = *38:11, *38:14 = *38:11, *38:26 =
	*38:14, *38:17 = *38:17, *38:26
+++++---+ ---+---+---+---+ -+-----	*38:09, *38:24 = *38:14, *38:24 = *38:24, *38:26
+++++---+ ---+---+---+---+ -+-----	*38:09, *38:27 = *38:14, *38:27 = *38:26, *38:27
+++++---+ ---+---+---+---+ -+-----	*38:09, *38:30 = *38:14, *38:30 = *38:26, *38:30
+++++---+ ---+---+---+---+ -----	*38:01:01, *38:09 = *38:01:01, *38:14 = *38:01:01, *38:26 = *38:01:02,
	*38:09 = *38:01:02, *38:14 = *38:01:02, *38:26 = *38:09, *38:09 = *38:09,
	*38:14 = *38:09, *38:26
+++++---+ ---+---+---+---+ -----	*38:10, *38:11 = *38:10, *38:17
+++++---+ ---+---+---+---+ -+-----	*38:11, *38:24 = *38:17, *38:24
+++++---+ ---+---+---+---+ -+-----	*38:11, *38:27 = *38:17, *38:27
+++++---+ ---+---+---+---+ -+-----	*38:11, *38:28 = *38:17, *38:28
+++++---+ ---+---+---+---+ -+-----	*38:11, *38:30 = *38:17, *38:30
+++++---+ ---+---+---+---+ -----	*38:01:01, *38:11 = *38:01:01, *38:17 = *38:01:02, *38:11 = *38:01:02,
	*38:17 = *38:11, *38:11 = *38:11, *38:17
+++++---+ ---+---+---+---+ -+-----	*38:01:01, *38:24 = *38:01:02, *38:24 = *38:24, *38:24
+++++---+ ---+---+---+---+ -+-----	*38:01:01, *38:27 = *38:01:02, *38:27 = *38:27, *38:27
+++++---+ ---+---+---+---+ -+-----	*38:01:01, *38:28 = *38:01:02, *38:28
+++++---+ ---+---+---+---+ -----	*38:01:01, *38:01:01 = *38:01:01, *38:01:02
+++++---+ ---+---+---+---+ -----	*38:01:02, *38:10 = *38:10, *38:10
+++++---+ ---+---+---+---+ -+-----	*38:01:02, *38:30 = *38:30, *38:30
+++-+---+ ---+---+---+---+ -----	*38:03, *38:08 = *38:03, *38:18
+++-+---+ ---+---+---+---+ -----	*38:02:01, *38:03 = *38:02:03, *38:03 = *38:03, *38:04 = *38:03, *38:25
+++-+---+ ---+---+---+---+ -----	*38:04, *38:15 = *38:15, *38:25
+++-+---+ ---+---+---+---+ -----	*38:04, *38:08 = *38:04, *38:18 = *38:08, *38:25 = *38:18, *38:25
+++-+---+ ---+---+---+---+ -+-----	*38:04, *38:23 = *38:23, *38:25
+++-+---+ ---+---+---+---+ -----	*38:04, *38:29 = *38:25, *38:29

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+++--+--	-----+--	-----	*38:02:01, *38:04 = *38:02:01, *38:25
+++--+--	-----+--	-----	*38:08, *38:15 = *38:15, *38:18
+++--+--	-----+--	-----	*38:02:01, *38:15 = *38:02:03, *38:15 = *38:15, *38:15
+++--+--	+++--+--	-----	*38:07, *38:08 = *38:07, *38:18
+++--+--	+++--+--	-----	*38:02:01, *38:07 = *38:02:03, *38:07
+++--+--	+++--+--	-----	*38:06, *38:08 = *38:06, *38:18
+++--+--	+++--+--	-----	*38:08, *38:17 = *38:17, *38:18
+++--+--	+++--+--	+++--	*38:08, *38:23 = *38:18, *38:23
+++--+--	+++--+--	-----	*38:02:01, *38:08 = *38:02:01, *38:18 = *38:02:03, *38:08 = *38:02:03, *38:18 = *38:08, *38:18 = *38:18, *38:18
+++--+--	+++--+--	-----	*38:02:01, *38:17 = *38:02:03, *38:17
+++--+--	+++--+--	+++--	*38:02:01, *38:23 = *38:02:03, *38:23 = *38:23, *38:23
+++--+--	+++--+--	-----+	*38:02:01, *38:29 = *38:02:03, *38:29
+++--+--	+++--+--	-----	*38:02:01, *38:02:01 = *38:02:01, *38:02:03
+++--+--	+++--+--	-----	*38:06, *38:16 = *38:07, *38:16
+++--+--	+++--+--	-----	*38:06, *38:07 = *38:07, *38:07
+++--+--	+++--+--	-----	*38:13, *38:14 = *38:13, *38:26
+++--+--	+++--+--	-----	*38:14, *38:14 = *38:14, *38:26
+++--+--	+++--+--	-----	*38:02:03, *38:04 = *38:02:03, *38:25 = *38:04, *38:04 = *38:04, *38:25

*38:01:01 = *38:01:01 and 38:01:03-38:01:05

*38:02:01 = *38:02:01-38:02:02

*38:11 = *38:11 and 38:19

SPECIFICITY TABLE

HLA-B*38 SSP subtyping

Specificities and sizes of the PCR products of the 22 primer mixes used for HLA-B*38 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-B*38 alleles ^{3,4}	Other amplified HLA-B alleles ⁵
1	185 bp	800 bp	*38:01:01-38:02:02, 38:03, 38:07-38:24, 38:26-38:30	*14:01:01-14:01:02, 14:07N-14:08, 14:10, 14:12, 14:14, 14:19, 39:01:01:01-39:01:01:02L, 39:01:03-39:01:08, 39:01:10-39:02:01, 39:03, 39:05:01-39:09, 39:11, 39:14-39:15, 39:18, 39:19:02, 39:22, 39:24:01-39:30, 39:31 ^w , 39:32-39:44, 39:46-39:48, 39:50-39:62, 67:01:01, 67:03
2	190 bp	800 bp	*38:01:01-38:02:03, 38:04-38:12, 38:15, 38:17-38:25, 38:27, 38:29-38:30	*07:16, 07:27, 07:37-07:38, 07:50, 07:75, 07:91, 08:03, 08:23, 08:54, 14:14, 14:18, 15:03:01-15:03:03, 15:09-15:10:02, 15:18:01-15:18:04, 15:23, 15:29, 15:37, 15:47, 15:49, 15:51-15:52, 15:54, 15:62, 15:64, 15:68-15:69, 15:72, 15:74, 15:80, 15:90-15:91, 15:93, 15:98-15:99, 15:103, 15:108, 15:114-15:115, 15:119, 15:123-15:124, 15:127, 15:131-15:134, 15:151, 15:153, 15:156, 15:158, 15:161, 15:173, 15:176, 15:186, 15:197-15:198, 15:200, 15:210, 15:221, 18:01:01, 18:01:03-18:02, 18:05-18:15, 18:17N-18:28, 18:30-18:63, 35:25, 35:124-35:125, 35:142, 35:162, 37:01:01-37:21, 37:23-37:29, 39:05:01-39:05:02, 39:07-39:08, 39:11, 39:13:01-39:13:02, 39:20, 39:37, 39:49, 39:55-39:56, 40:12, 40:149, 42:11, 44:130, 48:01:01-48:02:01, 48:03:01-48:25, 52:16, 58:12
3	170 bp	800 bp	*38:01:01-38:02:03, 38:04-38:05, 38:08-38:15, 38:17-38:25, 38:27, 38:29-38:30	*07:69, 07:85, 08:65, 14:01:01-14:20, 14:22-14:24, 15:09-15:10:02, 15:18:01-15:18:04, 15:23, 15:37, 15:51-15:52, 15:72, 15:80, 15:90, 15:93, 15:99, 15:108, 15:114-15:115, 15:119, 15:124, 15:133-15:134, 15:153, 15:161, 15:176, 15:186, 15:197-15:198, 15:200, 15:221, 18:33, 39:01:01:01-39:01:01:02L,

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				39:01:03-39:01:12, 39:03-39:07, 39:09, 39:11-39:12, 39:14-39:15, 39:18-39:19:02, 39:22, 39:24:01-39:38Q, 39:40N-39:48, 39:50-39:51, 39:53, 39:55-39:57, 39:59-39:62
4⁶	105 bp	1070 bp	*38:01:01-38:01:05, 38:05, 38:09-38:14, 38:16, 38:19-38:22, 38:24, 38:26-38:28, 38:30	
5	210 bp	1070 bp	*38:02:01-38:04, 38:08, 38:15, 38:18, 38:23, 38:29	*08:02, 15:115, 18:09, 37:10, 44:130
6⁷	170 bp	800 bp	*38:03	*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, 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, 15:210, 18:01:01-18:03, 18:05-18:06, 18:08-18:15, 18:17N-18:28, 18:30-18:32, 18:34-18:63, 37:01:01-37:20, 37:23-37:25, 37:27-37:29, 39:02:01-39:02:02, 39:08, 39:13:01-39:13:02, 39:23, 39:39, 39:49, 40:12, 40:149, 42:11, 44:130, 48:01:01-48:02:01, 48:03:01-48:05, 48:07-48:25, 52:16
7^{7,9}	160 bp, 205 bp	800 bp	*38:03-38:04, 38:21, 38:25	*08:17, 08:38, 08:54, 15:03:01-15:03:03, 15:47, 15:49, 15:54, 15:61-15:62, 15:68-15:69, 15:74, 15:91, 15:98, 15:103, 15:123, 15:127, 15:131-15:132, 15:151, 15:156, 15:158, 15:173, 15:210, 18:12, 37:01:01-37:07, 37:09-37:21, 37:23-37:29, 39:02:01-39:02:02, 39:08, 39:13:01-39:13:02, 39:22-39:23, 39:49, 40:12, 40:149, 42:11, 44:130, 48:01:01-48:02:01, 48:03:01-48:05, 48:07-48:15, 48:17-48:25, 52:16
8¹⁰	185 bp, 230 bp	800 bp	*38:05, 38:15, 38:20, 38:22	*14:02:01-14:02:02, 14:02:04-14:02:05, 14:03, 14:04 ^w , 14:05-14:06:02, 14:09, 14:11, 14:13, 14:15-14:18, 14:20, 14:22-14:23, 15:189, 35:26, 35:35, 39:04, 39:42, C*02:02:07, C*05:01:06

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9¹¹	145 bp, 205 bp	1070 bp	*38:06-38:07, 38:21	*44:06, 49:03, 51:01:01-51:24:04, 51:26-51:46, 51:48-51:53, 51:55-51:77, 51:79-51:103, 51:105-51:111, 51:113, 52:01:01:01-52:01:09, 52:03-52:15, 52:17-52:19, 52:21-52:24, 53:01:01- 53:02, 53:04-53:08:02, 53:10, 53:14- 53:24, 58:01:01-58:02, 58:04-58:16, 58:18-58:34
10^{6,12}	85 bp, 145 bp	1070 bp	*38:07, 38:12, 38:16	*39:19:02
11^{6,13}	90 bp, 145 bp	1070 bp	*38:08, 38:13, 38:18	
12⁶	90 bp	800 bp	*38:03, 38:09, 38:14, 38:26	*14:01:01-14:02:02, 14:02:04-14:02:05, 14:03-14:13, 14:15-14:17, 14:19-14:20, 14:22-14:24, 15:189, 39:01:01:01- 39:01:01:02L, 39:01:03, 39:01:05- 39:01:08, 39:01:10-39:02:01, 39:03- 39:04, 39:06:01-39:06:02, 39:09, 39:12, 39:14-39:15, 39:18, 39:19:02, 39:22, 39:24:01-39:36, 39:38Q-39:48, 39:50- 39:54, 39:57-39:62, 67:01:01, 67:03
13	175 bp	800 bp	*38:01:01, 38:01:03- 38:07, 38:09, 38:11-38:21, 38:23-38:28	*08:55, 39:01:01:01-39:01:01:02L, 39:01:03-39:06:02, 39:08-39:14, 39:16, 39:18-39:20, 39:22-39:24:02, 39:26- 39:28, 39:31, 39:35, 39:37-39:42, 39:44-39:46, 39:48, 39:51-39:54, 39:56-39:63, 51:101, 58:20, 67:01:01- 67:03
14	170 bp	1070 bp	*38:10	*07:02:01-07:24, 07:26-07:47, 07:49N- 07:50, 07:52-07:130, 08:20, 08:53, 13:16, 13:20, 13:31, 14:01:01-14:24, 15:01:01:01-15:01:04, 15:01:06-15:04, 15:06-15:19, 15:21, 15:23-15:30, 15:32-15:40, 15:42-15:47, 15:49-15:50, 15:53-15:54, 15:56-15:58, 15:60-15:74, 15:76-15:82, 15:85, 15:87, 15:89- 15:90, 15:92-15:99, 15:101-15:104, 15:106, 15:108-15:110, 15:112-15:113, 15:115-15:122, 15:125-15:129, 15:131- 15:135, 15:137-15:144, 15:146-15:150, 15:152-15:154, 15:156-15:161, 15:163- 15:175, 15:177-15:178, 15:180-15:184, 15:187, 15:189-15:199, 15:201-15:217, 15:219, 15:221, 15:223, 18:15, 18:19, 18:21, 18:30, 18:57, 27:04:01-27:04:03, 27:06, 27:10, 27:15, 27:18,

				27:20-27:21, 27:24-27:25, 27:40, 27:54, 27:63, 27:66N, 27:68-27:69, 27:79, 35:11:01-35:11:02, 35:14:01-35:14:02, 35:21, 35:43:01-35:44, 35:58, 35:67, 35:79, 35:86, 35:96, 35:99, 35:102, 35:117-35:118, 35:135, 37:07, 37:13, 39:18, 39:35-39:36, 40:05, 40:15-40:16, 40:23, 40:26, 40:28, 40:32, 40:51, 40:95, 40:98, 40:148, 40:158, 40:161, 44:76, 44:79, 46:01:01-46:05, 46:07N-46:08, 46:10, 46:12, 46:14-46:17, 46:20, 46:22-46:24, 46:27, 48:05, 48:08, 48:15, 48:25, 49:01:01-49:10, 49:12-49:17, 50:01:01-50:02, 50:04-50:13, 51:01:01-51:04, 51:06:01-51:07:02, 51:11N-51:14, 51:16-51:18, 51:21-51:24:04, 51:26-51:30, 51:32-51:39, 51:41N, 51:43, 51:45-51:46, 51:48-51:52, 51:55-51:72, 51:74-51:80, 51:82-51:92, 51:94-51:96, 51:98N-51:107, 51:109-51:113, 52:01:01:01-52:02, 52:04-52:09, 52:11-52:18, 52:20-52:24, 53:06, 53:08:01-53:08:02, 54:06, 54:20, 55:01:01-55:01:07, 55:03, 55:05, 55:09, 55:11, 55:14-55:15, 55:17, 55:21, 55:24-55:25, 55:28-55:29, 55:31, 55:33, 55:36, 55:38, 55:40, 55:44-55:45, 56:03, 56:05:01-56:06, 56:21, 56:25, 56:32, 57:09, 57:13, 57:22, 58:06, 58:08, 58:19, 78:01-78:03, 78:05-78:07
15	230 bp	1070 bp	*38:01:01-38:02:03, 38:04, 38:06-38:12, 38:15-38:25, 38:27-38:30	*07:16, 07:27, 07:37-07:38, 07:50, 07:75, 07:91, 13:14, 14:14, 15:68, 15:71, 15:175, 18:01:01, 18:01:03-18:01:12, 18:02, 18:05-18:15, 18:17N-18:24, 18:26-18:63, 27:01, 27:18, 27:23, 27:29, 27:44, 35:50, 35:84, 35:162, 37:01:01-37:29, 39:05:01-39:05:02, 39:07-39:08, 39:11, 39:13:01-39:13:02, 39:20, 39:37, 39:49, 39:55-39:56, 40:02:01-40:06:03, 40:08-40:09, 40:11:01-40:11:02, 40:13, 40:18-40:20, 40:24, 40:26-40:29, 40:35, 40:37, 40:39-40:40, 40:44, 40:56, 40:64, 40:68, 40:70-40:71, 40:74-40:75, 40:78, 40:82-40:83, 40:85-40:86, 40:89-40:91, 40:93-40:99, 40:103-40:105, 40:107, 40:109, 40:111,

				40:115, 40:119-40:120, 40:122, 40:127, 40:131, 40:133Q, 40:142N-40:145, 40:148-40:149, 40:157, 40:159, 40:161-40:162, 42:11, 44:103, 44:130, 48:01:01-48:21, 48:23-48:25, 51:57, 51:103, 53:21, 57:10
16¹⁴	220 bp, 350 bp, 425 bp	1070 bp	*38:11, 38:17, 38:19	*07:13, 07:27, 07:110, 08:55, 39:03, 39:14, 39:24:01-39:24:02, 39:29, 39:37, 67:02
17	230 bp	1070 bp	*38:23	
18⁶	65 bp	1070 bp	*38:24	
19^{7,8}	140 bp	1070 bp	*38:27	
20	265 bp	1070 bp	*38:28	*07:56, 07:72, 08:26, 08:56, 39:63, 40:10:01 [?] -40:10:02 [?] , 40:21 [?] , 40:58 [?] , 40:137 [?] , 41:12, 49:03
21⁶	115 bp	1070 bp	*38:30	*08:49, 13:46, 15:51, 15:83, 15:179, 15:199, 15:218Q, 18:56, 27:47, 35:38, 35:115, 37:01:01-37:01:07, 37:03N-37:06, 37:08, 37:10-37:11, 37:13-37:29, 42:10, 44:02:01:01-44:02:18, 44:05:01-44:06, 44:08-44:09, 44:11-44:12, 44:14-44:25, 44:27:01-44:27:02, 44:33-44:34, 44:41:01-44:42, 44:44, 44:48-44:49, 44:51-44:52N, 44:55, 44:58N-44:59, 44:62-44:63, 44:66-44:68, 44:70-44:73, 44:75, 44:78, 44:80, 44:83-44:84, 44:86-44:91, 44:93, 44:95, 44:97, 44:99-44:102, 44:104, 44:106, 44:112-44:113, 44:116-44:119, 44:123, 44:126-44:127, 45:01-45:13, 51:08, 51:20, 51:36, 51:44N, 51:97, 52:19, 53:22, 56:13, 57:09, 57:24, 82:01-82:03, 83:01
22	175 bp	1070 bp	*38:29	*15:69, 15:186, 35:35, 39:07, 39:15, 39:29, 39:49, 39:55

¹Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-B*38 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.

²The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells. Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-B*38 subtyping. In addition, wells number 2, 3, 6 to 8, 12 and 13 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

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

³For some HLA-B alleles complete 2nd exon nucleotide sequences are not available. In these instances it is not known whether some of the primers of the SSP sets are completely matched with the target sequences or not. We assume that unknown sequences in the second exon are conserved within allelic groups.

⁴The B*38:17 and B*39:37 alleles give rise to identical amplification patterns with the HLA-B*38 primer set. These two alleles can be distinguished by the HLA-B low resolution and/or HLA-B*39 kits.

The B*38:11 and 38:19 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 16.

⁵Due to the sharing of sequence motifs between HLA-B alleles, non-HLA-B*38 alleles will be amplified by primer mixes 1 to 3, 5 to 10, 12 to 16 and 20 to 22. In addition, the C*02:02:07 and C*05:01:06 alleles are amplified by primer mix 8.

⁶Short specific PCR fragments are less intense and not as sharp as longer specific bands.

⁷Primer solutions 6, 7 and 19 may have tendencies of primer oligomer formation.

⁸Primer solution 19 may yield less specific PCR product than the other HLA-B*38 primer mixes.

⁹Primer mix 7: Specific PCR fragment of 160 bp in the B*38:03-38:04 and 38:25 and the B*08:17, 08:38, 08:54, 15:03:01-15:03:03, 15:47, 15:49, 15:54, 15:61-15:62, 15:68-15:69, 15:74, 15:91, 15:98, 15:103, 15:123, 15:127, 15:131-15:132, 15:151, 15:156, 15:158, 15:173, 15:210, 18:12, 37:01:01-37:07, 37:09-37:21, 37:23-37:29, 39:02:01-39:02:02, 39:08, 39:13:01-39:13:02, 39:22-39:23, 39:49, 40:12, 40:149, 42:11, 44:130, 48:01:01-48:02:01, 48:03:01-48:05, 48:07-48:15, 48:17-48:25 and 52:16 alleles. Specific PCR fragment of 205 bp in the B*38:21 allele.

¹⁰Primer mix 8: Specific PCR fragment of 185 bp in the B*38:05 and the B*14:02:01-14:02:02, 14:02:04-14:02:05, 14:03, 14:04w, 14:05-14:06:02, 14:09, 14:11, 14:13, 14:15-14:18, 14:20, 14:22-14:23, 15:189, 35:26 and 39:04 and in the C*02:02:07 and C*05:01:06 alleles. Specific PCR fragment of 230 bp in the B*38:15, 38:20 and 38:22 and in the B*35:35 and 39:42 alleles.

¹¹Primer mix 9: Specific PCR fragment of 145 bp in the B*38:06 and 38:07 and the B*44:06, 49:03, 51:01:01-51:24:04, 51:26-51:46, 51:48-51:53, 51:55-51:77, 51:79-51:103, 51:105-51:111, 51:113, 52:01:01:01-52:01:09, 52:03-52:15, 52:17-52:19, 52:21-52:24, 53:01:01-53:02, 53:04-53:08:02, 53:10, 53:14-53:24, 58:01:01-58:02, 58:04-58:16 and 58:18-58:34 alleles. Specific PCR fragment of 205 bp in the B*38:21 allele.

¹²Primer mix 10: Specific PCR fragment of 85 bp in the B*38:07 and 38:12 and in the B*39:19:02 alleles. Specific PCR fragment of 145 bp in the B*38:16 allele.

¹³Primer mix 11: Specific PCR fragment of 90 bp in the B*38:13 allele. Specific PCR fragment of 145 bp in the B*38:08 and 38:18 alleles.

¹⁴Primer mix 16: Specific PCR fragment of 220 bp in the B*38:19 and the B*08:55, 39:03, 39:14, 39:24:01-39:24:02, 39:29 and 39:37 alleles. Specific PCR fragment of 350 bp in the B*38:11 and the B*07:13, 07:110 and 67:02 alleles. Specific PCR fragment of 425 bp in the B*38:17 and the B*07:27 alleles.

'w', might be weakly amplified.

INTERPRETATION TABLE												
HLA-B*38 SSP subtyping												
Amplification patterns of the B*38:01 to 38:30 alleles												
	Well ⁶											
	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec.	185	190	170	105	210	170	160	185	145	85	90	90
PCR product(s)							205	230	205	145	145	
Length of int. pos. control ¹	800	800	800	1070	1070	800	800	800	1070	1070	1070	800
5'-primer(s) ²	103	142	142	246	142	142	142	103	206	142	246	246
	5' -CCT 3'	5' -TCT 3'	5' -TCT 3'	5' -gAA 3'	5' -TCT 3'	5' -TCT 3'	5' -TCT 3'	5' -CCg 3'	5' -gAC 3'	5' -TCA 3'	5' -gAA 3'	5' -gAA 3'
							382	346	382	193	463	483
							5' -TgC 3'	5' -ggC 3'	5' -TgC 3'	5' -CCA 3'	5' -TgA 3'	5' -gAg 3'
								355		206	660	
								5' -TCA 3'		5' -gAC 3'	5' -gAA 3'	
								363				
								5' -AAT 3'				
3'-primer(s) ³	246	292	272	309	309	272	259	246	309	246	296	292
	5' -TAT 3'	5' -gTA 3'	5' -TgC 3'	5' -ATC 3'	5' -gTg 3'	5' -Tgg 3'	5' -CTC 3'	5' -TAT 3'	5' -ATC 3'	5' -TAT 3'	5' -CTA 3'	5' -gTC 3'
	246	292					544	544	544		559	292
	5' -TAT 3'	5' -gTA 3'					5' -ggT 3'	5' -ggT 3'	5' -ggT 3'		5' -CAT 3'	5' -gTC 3'
		292									774	544
		5' -gTA 3'									5' -ggT 3'	5' -ggT 3'
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
HLA-B allele												

Length of spec.	185	190	170	105	210	170	160	185	145	85	90	90
PCR product(s)							205	230	205	145	145	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*38:01:01, 38:01:03-38:01:05	1	2	3	4								
*38:01:02	1	2	3	4								
*38:02:01-38:02:02	1	2	3		5							
*38:02:03		2	3		5							
*38:03	1				5	6	7					12
*38:04		2	3		5		7					
*38:05		2	3	4				8				
*38:06		2							9			
*38:07	1	2							9	10		
*38:08	1	2	3		5						11	
*38:09	1	2	3	4								12
*38:10	1	2	3	4								
*38:11, 38:19 ⁴	1	2	3	4								
*38:12	1	2	3	4						10		
*38:13	1		3	4							11	
*38:14	1		3	4								12
*38:15	1	2	3		5			8				
*38:16	1			4						10		
*38:17, 39:37 ⁵	1	2	3									
*38:18	1	2	3		5						11	
*38:20	1	2	3	4				8				
*38:21	1	2	3	4			7		9			
*38:22	1	2	3	4				8				
*38:23	1	2	3		5							
*38:24	1	2	3	4								
*38:25		2	3				7					
*38:26	1			4								12
*38:27	1	2	3	4								
*38:28	1			4								
*38:29	1	2	3		5							
*38:30	1	2	3	4								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

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Lot-specific information

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175	170	230	220	230	65	140	265	115	175	Length of spec. PCR product(s)	
			350								
			425								
13	14	15	16	17	18	19	20	21	22	Well No.	
13		15								*38:01:01, 38:01:03-38:01:05	
		15								*38:01:02	
13		15								*38:02:01-38:02:02	
13		15								*38:02:03	
13										*38:03	
13		15								*38:04	
13										*38:05	
13		15								*38:06	
13		15								*38:07	
		15								*38:08	
13		15								*38:09	
	14	15								*38:10	
13		15	16							*38:11, 38:19 ⁴	
13		15								*38:12	
13										*38:13	
13										*38:14	
13		15								*38:15	
13		15								*38:16	
13		15	16							*38:17, 39:37 ⁵	
13		15								*38:18	
13		15								*38:20	
13		15								*38:21	
		15								*38:22	
13		15		17						*38:23	
13		15			18					*38:24	
13		15								*38:25	
13										*38:26	
13		15				19				*38:27	
13		15					20			*38:28	
		15							22	*38:29	
		15						21		*38:30	
13	14	15	16	17	18	19	20	21	22	Well No.	

Length of spec.	185	190	170	105	210	170	160	185	145	85	90	90
PCR product(s)							205	230	205	145	145	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*07:02:01-07:12, 07:14-07:15, 07:17-07:24, 07:26, 07:28-07:36, 07:39-07:47, 07:49N, 07:52-07:55, 07:57-07:68:02, 07:70-07:71, 07:73-07:74, 07:76-07:84, 07:86-07:90, 07:92-07:109, 07:111N-07:130, 08:20, 08:53, 13:16, 13:20, 13:31, 14:21, 15:01:01:01-15:01:04, 15:01:06-15:02:05, 15:04, 15:06-15:08, 15:11:01-15:17:02, 15:19, 15:21, 15:24-15:28, 15:30, 15:32-15:36, 15:38:01-15:40, 15:42-15:46, 15:50, 15:53, 15:56-15:58, 15:60, 15:63, 15:65-15:67, 15:70, 15:73, 15:76-15:79N, 15:81-15:82, 15:85, 15:87, 15:89, 15:92, 15:94N-15:97, 15:101-15:102, 15:104, 15:106, 15:109-15:110, 15:112-15:113, 15:116-15:118, 15:120-15:122, 15:125-15:126, 15:128-15:129, 15:135, 15:137-15:144, 15:146-15:150, 15:152, 15:154, 15:157, 15:159-15:160, 15:163-15:172, 15:174, 15:177-15:178, 15:180-15:184, 15:187, 15:190N-15:196, 15:201-15:209N, 15:211-15:217, 15:219, 15:223, 27:04:01-27:04:03, 27:06, 27:10, 27:15, 27:20-27:21, 27:24-27:25, 27:40, 27:54, 27:63, 27:66N, 27:68-27:69, 27:79, 35:11:01-35:11:02, 35:14:01-35:14:02, 35:21, 35:43:01-35:44, 35:58, 35:67, 35:79, 35:86, 35:96, 35:99, 35:102, 35:117-35:118, 35:135, 40:15-40:16, 40:23, 40:32, 40:51, 40:158, 44:76, 44:79, 46:01:01-46:05, 46:07N-46:08, 46:10, 46:12, 46:14-46:17, 46:20, 46:22-46:24, 46:27, 49:01:01-49:02, 49:04-49:10, 49:12-49:17, 50:01:01-50:02, 50:04-50:13, 51:78, 51:104, 51:112, 52:02, 52:20, 54:06, 54:20, 55:01:01-55:01:07, 55:03, 55:05, 55:09, 55:11, 55:14-55:15, 55:17, 55:21, 55:24-55:25, 55:28-55:29, 55:31, 55:33, 55:36, 55:38, 55:40, 55:44-55:45, 56:03, 56:05:01-56:06, 56:21, 56:25, 56:32, 57:13, 57:22, 78:01-78:03, 78:05-78:07												
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Lot No.: **22M**

Lot-specific information

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175	170	230	220	230	65	140	265	115	175	Length of spec.	
			350							PCR product(s)	
			425								
13	14	15	16	17	18	19	20	21	22	Well No.	
14										*07:02:01-07:12, 07:14-07:15, 07:17-07:24, 07:26, 07:28-07:36, 07:39-07:47, 07:49N, 07:52- 07:55, 07:57-07:68:02, 07:70-07:71, 07:73-07:74, 07:76-07:84, 07:86-07:90, 07:92-07:109, 07:111N- 07:130, 08:20, 08:53, 13:16, 13:20, 13:31, 14:21, 15:01:01:01-15:01:04, 15:01:06-15:02:05, 15:04, 15:06-15:08, 15:11:01-15:17:02, 15:19, 15:21, 15:24-15:28, 15:30, 15:32-15:36, 15:38:01-15:40, 15:42-15:46, 15:50, 15:53, 15:56-15:58, 15:60, 15:63, 15:65-15:67, 15:70, 15:73, 15:76-15:79N, 15:81-15:82, 15:85, 15:87, 15:89, 15:92, 15:94N- 15:97, 15:101-15:102, 15:104, 15:106, 15:109- 15:110, 15:112-15:113, 15:116-15:118, 15:120- 15:122, 15:125-15:126, 15:128-15:129, 15:135, 15:137-15:144, 15:146-15:150, 15:152, 15:154, 15:157, 15:159-15:160, 15:163-15:172, 15:174, 15:177-15:178, 15:180-15:184, 15:187, 15:190N- 15:196, 15:201-15:209N, 15:211-15:217, 15:219, 15:223, 27:04:01-27:04:03, 27:06, 27:10, 27:15, 27:20-27:21, 27:24-27:25, 27:40, 27:54, 27:63, 27:66N, 27:68-27:69, 27:79, 35:11:01-35:11:02, 35:14:01-35:14:02, 35:21, 35:43:01-35:44, 35:58, 35:67, 35:79, 35:86, 35:96, 35:99, 35:102, 35:117- 35:118, 35:135, 40:15-40:16, 40:23, 40:32, 40:51, 40:158, 44:76, 44:79, 46:01:01-46:05, 46:07N- 46:08, 46:10, 46:12, 46:14-46:17, 46:20, 46:22- 46:24, 46:27, 49:01:01-49:02, 49:04-49:10, 49:12- 49:17, 50:01:01-50:02, 50:04-50:13, 51:78, 51:104, 51:112, 52:02, 52:20, 54:06, 54:20, 55:01:01-55:01:07, 55:03, 55:05, 55:09, 55:11, 55:14-55:15, 55:17, 55:21, 55:24-55:25, 55:28- 55:29, 55:31, 55:33, 55:36, 55:38, 55:40, 55:44- 55:45, 56:03, 56:05:01-56:06, 56:21, 56:25, 56:32, 57:13, 57:22, 78:01-78:03, 78:05-78:07	
13	14	15	16	17	18	19	20	21	22	Well No.	

Lot No.: **22M**

Lot-specific information

www.olerup-ssp.com

Length of spec.	185	190	170	105	210	170	160	185	145	85	90	90
PCR product(s)							205	230	205	145	145	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*07:13, 07:110												
*07:16, 07:37-07:38, 07:75, 07:91		2										
*07:27		2				6						
*07:50, 18:15, 18:19, 18:21, 18:30, 18:57		2				6						
*07:56, 07:72												
*07:69, 07:85, 14:02:03, 14:02:06			3									
*08:02					5							
*08:03, 08:23, 35:25, 35:124-35:125, 35:142		2										
*08:04, 18:01:02, 18:03						6						
*08:17						6	7					
*08:26, 08:56, 41:12												
*08:38							7					
*08:49, 13:46, 15:83, 15:179, 15:218Q, 27:47, 35:38, 35:115, 42:10, 44:02:01-44:02:18, 44:05:01-44:05:02, 44:08-44:09, 44:11-44:12, 44:14-44:25, 44:27:01-44:27:02, 44:33-44:34, 44:41:01-44:42, 44:44, 44:48-44:49, 44:51-44:52N, 44:55, 44:58N-44:59, 44:62-44:63, 44:66-44:68, 44:70-44:73, 44:75, 44:78, 44:80, 44:83-44:84, 44:86-44:91, 44:93, 44:95, 44:97, 44:99-44:102, 44:104, 44:106, 44:112-44:113, 44:116-44:119, 44:123, 44:126-44:127, 45:01-45:13, 56:13, 57:24, 82:01-82:03, 83:01												
*08:54, 15:91, 15:123, 15:151, 40:12, 48:22		2				6	7					
*08:55, 67:02												
*08:65			3									
*13:14, 18:29, 27:01, 27:23, 27:29, 27:44, 35:50, 35:84, 40:02:01-40:04, 40:06:01:01-40:06:03, 40:08-40:09, 40:11:01-40:11:02, 40:13, 40:18-40:20, 40:24, 40:27:01-40:27:02, 40:29, 40:35, 40:37, 40:39-40:40, 40:44, 40:56, 40:64, 40:68, 40:70-40:71, 40:74-40:75, 40:78, 40:82-40:83, 40:85-40:86, 40:89-40:91, 40:93-40:94, 40:96-40:97, 40:99, 40:103-40:105, 40:107, 40:109, 40:111, 40:115, 40:119-40:120, 40:122, 40:127, 40:131, 40:133Q, 40:142N-40:145, 40:157, 40:159, 40:162, 44:103, 48:02:02, 57:10												
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Lot No.: **22M**

Lot-specific information

www.olerup-ssp.com

175	170	230	220	230	65	140	265	115	175	Length of spec.	
			350							PCR product(s)	
			425								
13	14	15	16	17	18	19	20	21	22	Well No.	
	14		16							*07:13, 07:110	
	14	15								*07:16, 07:37-07:38, 07:75, 07:91	
	14	15	16							*07:27	
	14	15								*07:50, 18:15, 18:19, 18:21, 18:30, 18:57	
	14						20			*07:56, 07:72	
	14									*07:69, 07:85, 14:02:03, 14:02:06	
										*08:02	
										*08:03, 08:23, 35:25, 35:124-35:125, 35:142	
										*08:04, 18:01:02, 18:03	
										*08:17	
							20			*08:26, 08:56, 41:12	
										*08:38	
								21		*08:49, 13:46, 15:83, 15:179, 15:218Q, 27:47, 35:38, 35:115, 42:10, 44:02:01-44:02:18, 44:05:01-44:05:02, 44:08-44:09, 44:11-44:12, 44:14-44:25, 44:27:01-44:27:02, 44:33-44:34, 44:41:01-44:42, 44:44, 44:48-44:49, 44:51-44:52N, 44:55, 44:58N-44:59, 44:62-44:63, 44:66-44:68, 44:70-44:73, 44:75, 44:78, 44:80, 44:83-44:84, 44:86-44:91, 44:93, 44:95, 44:97, 44:99-44:102, 44:104, 44:106, 44:112-44:113, 44:116-44:119, 44:123, 44:126-44:127, 45:01-45:13, 56:13, 57:24, 82:01-82:03, 83:01	
										*08:54, 15:91, 15:123, 15:151, 40:12, 48:22	
13			16							*08:55, 67:02	
										*08:65	
		15								*13:14, 18:29, 27:01, 27:23, 27:29, 27:44, 35:50, 35:84, 40:02:01-40:04, 40:06:01:01-40:06:03, 40:08-40:09, 40:11:01-40:11:02, 40:13, 40:18-40:20, 40:24, 40:27:01-40:27:02, 40:29, 40:35, 40:37, 40:39-40:40, 40:44, 40:56, 40:64, 40:68, 40:70-40:71, 40:74-40:75, 40:78, 40:82-40:83, 40:85-40:86, 40:89-40:91, 40:93-40:94, 40:96-40:97, 40:99, 40:103-40:105, 40:107, 40:109, 40:111, 40:115, 40:119-40:120, 40:122, 40:127, 40:131, 40:133Q, 40:142N-40:145, 40:157, 40:159, 40:162, 44:103, 48:02:02, 57:10	
13	14	15	16	17	18	19	20	21	22	Well No.	

Length of spec. PCR product(s)	185	190	170	105	210	170	160	185	145	85	90	90
							205	230	205	145	145	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*14:01:01-14:01:02, 14:07N-14:08, 14:10, 14:12, 14:19, 39:36	1		3									12
*14:02:01-14:02:02, 14:02:04-14:02:05, 14:03, 14:05-14:06:02, 14:09, 14:11, 14:13, 14:15-14:17, 14:20, 14:22-14:23			3					8				12
*14:04			3					w				12
*14:14	1	2	3									
*14:18		2	3					8				
*14:24			3									12
*15:03:01-15:03:03, 15:47, 15:54, 15:62, 15:98, 15:103, 15:127, 15:131-15:132, 15:156, 15:158, 15:173, 15:210, 52:16		2				6	7					
*15:09-15:10:02, 15:18:01-15:18:04, 15:23, 15:37, 15:72, 15:80, 15:90, 15:93, 15:99, 15:108, 15:119, 15:133-15:134, 15:153, 15:161, 15:197-15:198, 15:221		2	3									
*15:29		2										
*15:49, 15:74		2					7					
*15:51		2	3									
*15:52, 15:114, 15:124, 15:176, 15:200		2	3									
*15:61						6	7					
*15:64		2				6						
*15:68, 37:07, 48:05, 48:08, 48:15, 48:25		2				6	7					
*15:69		2				6	7					
*15:71, 15:175, 27:18, 40:05, 40:26, 40:28, 40:95, 40:98, 40:148, 40:161												
*15:115		2	3		5							
*15:186		2	3									
*15:189								8				12
*15:199, 57:09												
*18:01:01, 18:01:03-18:01:12, 18:02, 18:05-18:06, 18:08, 18:10-18:11, 18:13-18:14, 18:17N-18:18, 18:20, 18:22-18:24, 18:26-18:28, 18:31-18:32, 18:34-18:55, 18:58-18:63, 48:16		2				6						
*18:01:13, 18:25		2				6						
*18:07:01-18:07:02, 35:162, 48:06		2										
*18:09		2			5	6						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Lot No.: **22M**

Lot-specific information

www.olerup-ssp.com

175	170	230	220	230	65	140	265	115	175	Length of spec. PCR product(s)	
			350								
			425								
13	14	15	16	17	18	19	20	21	22	Well No.	
	14									*14:01:01-14:01:02, 14:07N-14:08, 14:10, 14:12, 14:19, 39:36	
	14									*14:02:01-14:02:02, 14:02:04-14:02:05, 14:03, 14:05-14:06:02, 14:09, 14:11, 14:13, 14:15- 14:17, 14:20, 14:22-14:23	
	14									*14:04	
	14	15								*14:14	
	14									*14:18	
	14									*14:24	
	14									*15:03:01-15:03:03, 15:47, 15:54, 15:62, 15:98, 15:103, 15:127, 15:131-15:132, 15:156, 15:158, 15:173, 15:210, 52:16	
	14									*15:09-15:10:02, 15:18:01-15:18:04, 15:23, 15:37, 15:72, 15:80, 15:90, 15:93, 15:99, 15:108, 15:119, 15:133-15:134, 15:153, 15:161, 15:197- 15:198, 15:221	
	14									*15:29	
	14									*15:49, 15:74	
								21		*15:51	
										*15:52, 15:114, 15:124, 15:176, 15:200	
	14									*15:61	
	14									*15:64	
	14	15								*15:68, 37:07, 48:05, 48:08, 48:15, 48:25	
	14								22	*15:69	
	14	15								*15:71, 15:175, 27:18, 40:05, 40:26, 40:28, 40:95, 40:98, 40:148, 40:161	
	14									*15:115	
									22	*15:186	
	14									*15:189	
	14							21		*15:199, 57:09	
		15								*18:01:01, 18:01:03-18:01:12, 18:02, 18:05- 18:06, 18:08, 18:10-18:11, 18:13-18:14, 18:17N- 18:18, 18:20, 18:22-18:24, 18:26-18:28, 18:31- 18:32, 18:34-18:55, 18:58-18:63, 48:16	
										*18:01:13, 18:25	
		15								*18:07:01-18:07:02, 35:162, 48:06	
		15								*18:09	
13	14	15	16	17	18	19	20	21	22	Well No.	

Length of spec. PCR product(s)	185	190	170	105	210	170	160	185	145	85	90	90
							205	230	205	145	145	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*18:12, 37:02, 37:09, 37:12, 40:149, 42:11, 48:01:01-48:02:01, 48:03:01-48:04, 48:07, 48:09- 48:14, 48:17-48:21, 48:23-48:24		2				6	7					
*18:33		2	3									
*18:56, 37:08		2				6						
*35:26, C*02:02:07, C*05:01:06								8				
*35:35								8				
*37:01:01-37:01:07, 37:03N-37:06, 37:11, 37:14- 37:20, 37:23-37:25, 37:27-37:29		2				6	7					
*37:10		2			5	6	7					
*37:13		2				6	7					
*37:21, 37:26		2					7					
*37:22												
*39:01:01:01-39:01:01:02L, 39:01:03, 39:01:05- 39:01:08, 39:01:10-39:01:12, 39:06:01-39:06:02, 39:09, 39:26-39:28, 39:38Q, 39:40N-39:41, 39:44, 39:46, 39:48, 39:51, 39:53, 39:57, 39:59- 39:62	1		3									12
*39:01:04	1		3									
*39:01:09, 39:19:01			3									
*39:02:01	1					6	7					12
*39:02:02, 39:23						6	7					
*39:03, 39:14, 39:24:01-39:24:02	1		3									12
*39:04			3					8				12
*39:05:01-39:05:02, 39:11, 39:56	1	2	3									
*39:07, 39:55	1	2	3									
*39:08	1	2				6	7					
*39:10, 39:16, 67:01:02												
*39:12, 39:45			3									12
*39:13:01-39:13:02		2				6	7					
*39:15	1		3									12
*39:18, 39:35	1		3									12
*39:19:02	1		3							10		12
*39:20		2										
*39:22	1		3				7					12
*39:25N, 39:30, 39:32-39:34, 39:43, 39:47, 39:50	1		3									12
*39:29	1		3									12
*39:31	w		3									12
*39:39	1					6						12
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Lot No.: **22M**

Lot-specific information

www.olerup-ssp.com

175	170	230	220	230	65	140	265	115	175	Length of spec. PCR product(s)	
			350								
			425								
13	14	15	16	17	18	19	20	21	22	Well No.	
		15								*18:12, 37:02, 37:09, 37:12, 40:149, 42:11, 48:01:01-48:02:01, 48:03:01-48:04, 48:07, 48:09- 48:14, 48:17-48:21, 48:23-48:24	
		15								*18:33	
		15						21		*18:56, 37:08	
										*35:26, C*02:02:07, C*05:01:06	
									22	*35:35	
		15						21		*37:01:01-37:01:07, 37:03N-37:06, 37:11, 37:14- 37:20, 37:23-37:25, 37:27-37:29	
		15						21		*37:10	
	14	15						21		*37:13	
		15						21		*37:21, 37:26	
		15						21		*37:22	
13										*39:01:01:01-39:01:01:02L, 39:01:03, 39:01:05- 39:01:08, 39:01:10-39:01:12, 39:06:01-39:06:02, 39:09, 39:26-39:28, 39:38Q, 39:40N-39:41, 39:44, 39:46, 39:48, 39:51, 39:53, 39:57, 39:59- 39:62	
13										*39:01:04	
13										*39:01:09, 39:19:01	
13										*39:02:01	
13										*39:02:02, 39:23	
13			16							*39:03, 39:14, 39:24:01-39:24:02	
13										*39:04	
13		15								*39:05:01-39:05:02, 39:11, 39:56	
		15						22		*39:07, 39:55	
13		15								*39:08	
13										*39:10, 39:16, 67:01:02	
13										*39:12, 39:45	
13		15								*39:13:01-39:13:02	
								22		*39:15	
13	14									*39:18, 39:35	
13										*39:19:02	
13		15								*39:20	
13										*39:22	
			16						22	*39:25N, 39:30, 39:32-39:34, 39:43, 39:47, 39:50	
										*39:29	
13										*39:31	
13										*39:39	
13	14	15	16	17	18	19	20	21	22	Well No.	

Lot No.: **22M**

Lot-specific information

www.olerup-ssp.com

Length of spec.	185	190	170	105	210	170	160	185	145	85	90	90
PCR product(s)							205	230	205	145	145	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*39:42	1		3					8				12
*39:49		2				6	7					
*39:52, 39:54, 39:58, 67:01:01, 67:03	1											12
*39:63												
*40:10:01-40:10:02, 40:21, 40:58, 40:137												
*44:06, 51:08, 51:20, 51:44N, 51:97, 52:19, 53:22									9			
*44:130		2			5	6	7					
*49:03									9			
*51:01:01-51:04, 51:06:01-51:07:02, 51:11N-51:14, 51:16-51:18, 51:21-51:24:04, 51:26-51:30, 51:32-51:35, 51:37-51:39, 51:41N, 51:43, 51:45-51:46, 51:48-51:52, 51:55-51:56:02, 51:58-51:72, 51:74-51:77, 51:79-51:80, 51:82-51:92, 51:94-51:96, 51:98N-51:100, 51:102, 51:105-51:107, 51:109-51:111, 51:113, 52:01:01-52:01:09, 52:04-52:09, 52:11-52:15, 52:17-52:18, 52:21-52:24, 53:06, 53:08:01-53:08:02, 58:06, 58:08, 58:19									9			
*51:05, 51:09:01-51:10, 51:15, 51:19, 51:31, 51:40, 51:42, 51:53, 51:73, 51:81, 51:93, 51:108, 52:03, 52:10, 53:01:01-53:02, 53:04-53:05, 53:07, 53:10, 53:14-53:20, 53:23-53:24, 58:01:01-58:02, 58:04-58:05, 58:07, 58:09-58:11, 58:13-58:16, 58:18, 58:21-58:34									9			
*51:36									9			
*51:57, 51:103									9			
*51:101									9			
*53:21									9			
*58:12		2							9			
*58:20									9			
HLA-B allele												
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Lot No.: **22M**

Lot-specific information

www.olerup-ssp.com

175	170	230	220	230	65	140	265	115	175	Length of spec. PCR product(s)	
			350								
			425								
13	14	15	16	17	18	19	20	21	22	Well No.	
13										*39:42	
		15							22	*39:49	
13										*39:52, 39:54, 39:58, 67:01:01, 67:03	
13							20			*39:63	
							?			*40:10:01-40:10:02, 40:21, 40:58, 40:137	
								21		*44:06, 51:08, 51:20, 51:44N, 51:97, 52:19, 53:22	
		15								*44:130	
	14						20			*49:03	
	14									*51:01:01-51:04, 51:06:01-51:07:02, 51:11N- 51:14, 51:16-51:18, 51:21-51:24:04, 51:26-51:30, 51:32-51:35, 51:37-51:39, 51:41N, 51:43, 51:45- 51:46, 51:48-51:52, 51:55-51:56:02, 51:58-51:72, 51:74-51:77, 51:79-51:80, 51:82-51:92, 51:94- 51:96, 51:98N-51:100, 51:102, 51:105-51:107, 51:109-51:111, 51:113, 52:01:01:01-52:01:09, 52:04-52:09, 52:11-52:15, 52:17-52:18, 52:21- 52:24, 53:06, 53:08:01-53:08:02, 58:06, 58:08, 58:19	
										*51:05, 51:09:01-51:10, 51:15, 51:19, 51:31, 51:40, 51:42, 51:53, 51:73, 51:81, 51:93, 51:108, 52:03, 52:10, 53:01:01-53:02, 53:04-53:05, 53:07, 53:10, 53:14-53:20, 53:23-53:24, 58:01:01- 58:02, 58:04-58:05, 58:07, 58:09-58:11, 58:13- 58:16, 58:18, 58:21-58:34	
	14							21		*51:36	
	14	15								*51:57, 51:103	
13	14									*51:101	
		15								*53:21	
										*58:12	
13										*58:20	
										HLA-B allele	
13	14	15	16	17	18	19	20	21	22	Well No.	

Lot No.: **22M**

Lot-specific information

www.olerup-ssp.com

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-B*38 subtyping.

In addition, wells number 2, 3, 6 to 8, 12 and 13 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

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

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

⁴The B*38:11 and 38:19 alleles may be distinguished by the different sizes of the specific PCR products generated by primer mix 16.

⁵The B*38:17 and B*39:37 alleles give rise to identical amplification patterns with the HLA-B*38 primer set. These two alleles can be distinguished by the HLA-B low resolution and/or HLA-B*39 kits.

⁶Primer mix 7: Specific PCR fragment of 160 bp in the B*38:03-38:04 and 38:25 and the B*08:17, 08:38, 08:54, 15:03:01-15:03:03, 15:47, 15:49, 15:54, 15:61-15:62, 15:68-15:69, 15:74, 15:91, 15:98, 15:103, 15:123, 15:127, 15:131-15:132, 15:151, 15:156, 15:158, 15:173, 15:210, 18:12, 37:01:01-37:07, 37:09-37:21, 37:23-37:29, 39:02:01-39:02:02, 39:08, 39:13:01-39:13:02, 39:22-39:23, 39:49, 40:12, 40:149, 42:11, 44:130, 48:01:01-48:02:01, 48:03:01-48:05, 48:07-48:15, 48:17-48:25 and 52:16 alleles. Specific PCR fragment of 205 bp in the B*38:21 allele.

Primer mix 8: Specific PCR fragment of 185 bp in the B*38:05 and the B*14:02:01-14:02:02, 14:02:04-14:02:05, 14:03, 14:04w, 14:05-14:06:02, 14:09, 14:11, 14:13, 14:15-14:18, 14:20, 14:22-14:23, 15:189, 35:26 and 39:04 and in the C*02:02:07 and C*05:01:06 alleles. Specific PCR fragment of 230 bp in the B*38:15, 38:20 and 38:22 and in the B*35:35 and 39:42 alleles.

Primer mix 9: Specific PCR fragment of 145 bp in the B*38:06 and 38:07 and the B*44:06, 49:03, 51:01:01-51:24:04, 51:26-51:46, 51:48-51:53, 51:55-51:77, 51:79-51:103, 51:105-51:111, 51:113, 52:01:01-52:01:09, 52:03-52:15, 52:17-52:19, 52:21-52:24, 53:01:01-53:02, 53:04-53:08:02, 53:10, 53:14-53:24, 58:01:01-58:02, 58:04-58:16 and 58:18-58:34 alleles. Specific PCR fragment of 205 bp in the B*38:21 allele.

Primer mix 10: Specific PCR fragment of 85 bp in the B*38:07 and 38:12 and in the B*39:19:02 alleles. Specific PCR fragment of 145 bp in the B*38:16 allele.

Primer mix 11: Specific PCR fragment of 90 bp in the B*38:13 allele. Specific PCR fragment of 145 bp in the B*38:08 and 38:18 alleles.

Primer mix 16: Specific PCR fragment of 220 bp in the B*38:19 and the B*08:55, 39:03, 39:14, 39:24:01-39:24:02, 39:29 and 39:37 alleles. Specific PCR fragment of 350 bp in the B*38:11 and the B*07:13, 07:110 and 67:02 alleles. Specific PCR fragment of 425 bp in the B*38:17 and the B*07:27 alleles.

'w', might be weakly amplified.

CELL LINE VALIDATION SHEET																				
HLA-B*38 SSP subtyping kit																				
					Well															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Prod. No.:	201186401	201075902	201075903	201075904	201186405	201075906	201075907	201075908	201075909	201075910	201075911	201075912	201075913	201075914	201075915	201075916
	IHWC cell line		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	9004 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 S8TO	*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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CELL LINE VALIDATION SHEET												
HLA-B*38 SSP subtyping kit												
					Prod. No.:	Well						
						17	18	19	20	21	22	
						201186417	201186418	201186419	201186420	201186421	201186422	
	IHWC cell line		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	9004	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*38 SSP

Product number: 101.565-12 – including *Taq* polymerase
Lot number: 22M
Expiry date: 2013-November-01
Number of tests: 12
Number of wells per test: 22

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2011-864-01	9	2010-759-09	17	2011-864-17
2	2010-759-02	10	2010-759-10	18	2011-864-18
3	2010-759-03	11	2010-759-11	19	2011-864-19
4	2010-759-04	12	2010-759-12	20	2011-864-20
5	2011-864-05	13	2010-759-13	21	2011-864-21
6	2010-759-06	14	2010-759-14	22	2011-864-22
7	2010-759-07	15	2010-759-15		
8	2010-759-08	16	2010-759-16		

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 10, 11 and 16 to 20 were available. The specificities of the primers in primer solutions 10, 11, 16, 17, 19 and 20 were tested by separately adding one or more additional 5'-primers, respectively one or more additional 3'-primers. In primer solution 18 it was only possible to test the 3'-primer, the 5'-primer was not possible to test. In primer solutions 7, 8, 9 and 11, one of the 5'-primers was not possible to test, and in primer solution 11 two of the 3'-primers were not possible to test. Additional primers in primer solutions 8 and 9 were tested by separately adding one or two 5'-primers or 3'-primers.

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

Date of approval: 2011-July-08

Approved by:

Quality Control, Supervisor

Declaration of Conformity

Product name: *Olerup* SSP® HLA-B*38
Product number: 101.565-12
Lot number: 22M

Intended use: HLA-B*38 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
2011-July-08

Olle Olerup
Managing Director

Lot No.: **22M**

Lot-specific information

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