

Olerup SSP® DRB1*15

Product number:	101.125-24u/06u – without <i>Taq</i> pol.
Lot number:	27M
Expiry date:	2013-November-01
Number of tests:	24 test – Product No. 101.125-24u 6 tests – Product No. 101.125-06u
Number of wells per test:	32
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. 27M.

**CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*®
DRB1*15 LOT**

The DRB1*15 specificity and interpretation tables have been updated for the DRB1 alleles described since the previous *Olerup SSP*® DRB1*15 lot was made (Lot No. 09K).

Two wells has been added to the DRB1*15 kit,
wells **31** to **32**.

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

Well	5'-primer	3'-primer	rationale
18	Exchanged	-	Exchanged 5'-primer and positive control primer pair, to decrease primer oligomer formation.
30	-	Added	Primer added for the DRB1*15:45 allele.
31	New	New	New primer pair for the DRB1*15:46 allele.
32	New	New	New primer pairs for the DRB1*15:47 and DRB1*15:49 alleles.

PRODUCT DESCRIPTION

DRB1*15 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the DRB1*15:01 to DRB1*15:49 alleles.

PLATE LAYOUT

Each test consists of 32 PCR reactions in a 32 well cut PCR plate.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32

The 32 well cut PCR plate is marked with 'DRB1*15' in silver/gray ink.

Well No. 1 is marked with the Lot No. '27M'.

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 32 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

Only the DRB1*15 and DRB1*16 alleles will be amplified by the DRB1*15 subtyping kit, except that the DRB1*04:73, 11:82, 13:09 and 14:37 alleles will be amplified by primer mix 3, and the DRB1*11:88 allele will be amplified by primer mix 12. Thus, the interpretation of DRB1*15 subtypings is only influenced by these alleles when present on the other haplotype, and not by other groups of DRB1 alleles or other DRB genes.

UNIQUELY IDENTIFIED ALLELES

All the DRB1*15 alleles, i.e. **DRB1*15:01 to DRB1*15:49**, recognized by the HLA Nomenclature Committee in July 2010¹ will give rise to unique amplification patterns by the primers in the DRB1*15 subtyping kit.

The DRB1*15 subtyping kit cannot distinguish the DRB1*15:01:01:01-15:01:12 alleles, the DRB1*15:02:01-15:02:07 alleles or the DRB1*15:03:01:01-15:03:01:02 alleles.

¹DRB1 alleles listed on the IMGT/HLA web page 2010-July-16, release 3.1.0, www.ebi.ac.uk/imgt/hla.

Lot No.: 27M

Lot-specific information

www.olerup-ssp.com

Resolution in homo- and heterozygotes

A total of 83 alleles generate 49 amplification patterns that can be combined in 1225 homozygous and heterozygous combinations. 460 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.

+++++++	-----	-----	-----	*15:05, *15:14 = *15:14, *15:36
++++++-	-----	-----	-----	*15:09, *15:14 = *15:14, *15:48
++++++-	-----	-----	-----	*15:13, *15:14 = *15:14, *15:17N
++++++-	-----	-----	-----	*15:02:01, *15:03:01:01 = *15:03:01:01, *15:14
+++++++	-----	-----	-----	*15:01:01:01, *15:34 = *15:07, *15:27 = *15:22, *15:34 = *15:34, *15:36
+++++++	-----	-----	-----	*15:05, *15:11 = *15:07, *15:31 = *15:11, *15:36
++++++-	-----	-----	-----	*15:06, *15:11 = *15:07, *15:19
++++++-	-----	-----	-----	*15:04, *15:11 = *15:07, *15:15
++++++-	-----	-----	-----	*15:11, *15:13 = *15:11, *15:17N
++++++-	-----	-----	-----	*15:07, *15:08 = *15:11, *15:16
++++++-	-----	-----	-----	*15:07, *15:30 = *15:11, *15:37
++++++-	-----	-----	-----	*15:07, *15:26 = *15:11, *15:43
++++++-	-----	-----	-----	*15:07, *15:39 = *15:11, *15:33
++++++-	-----	-----	-----	*15:07, *15:44 = *15:11, *15:45
++++++-	-----	-----	-----	*15:07, *15:47 = *15:11, *15:49
++++++-	-----	-----	-----	*15:01:01:01, *15:11 = *15:02:01, *15:07
++++++-	-----	-----	-----	*15:05, *15:19 = *15:06, *15:31 = *15:19, *15:36
++++++-	-----	-----	-----	*15:09, *15:27 = *15:27, *15:48
++++++-	-----	-----	-----	*15:09, *15:31 = *15:31, *15:48
++++++-	-----	-----	-----	*15:05, *15:08 = *15:08, *15:36 = *15:16, *15:31
++++++-	-----	-----	-----	*15:02:01, *15:25 = *15:25, *15:29 = *15:25, *15:30
++++++-	-----	-----	-----	*15:05, *15:30 = *15:30, *15:36 = *15:31, *15:37
++++++-	-----	-----	-----	*15:01:01:01, *15:27 = *15:22, *15:27 = *15:22, *15:31 = *15:27, *15:36
++++++-	-----	-----	-----	*15:05, *15:29 = *15:29, *15:36
++++++-	-----	-----	-----	*15:05, *15:26 = *15:26, *15:36 = *15:31, *15:43
++++++-	-----	-----	-----	*15:05, *15:39 = *15:31, *15:33 = *15:36, *15:39
++++++-	-----	-----	-----	*15:05, *15:38 = *15:36, *15:38
++++++-	-----	-----	-----	*15:05, *15:44 = *15:31, *15:45 = *15:36, *15:44
++++++-	-----	-----	-----	*15:05, *15:47 = *15:36, *15:47
++++++-	-----	-----	-----	*15:01:01:01, *15:31 = *15:02:01, *15:05 = *15:02:01, *15:36 = *15:31, *15:36
++++++-	-----	-----	-----	*15:04, *15:19 = *15:06, *15:15
++++++-	-----	-----	-----	*15:09, *15:19 = *15:19, *15:48
++++++-	-----	-----	-----	*15:13, *15:19 = *15:17N, *15:19
++++++-	-----	-----	-----	*15:06, *15:08 = *15:16, *15:19
++++++-	-----	-----	-----	*15:06, *15:30 = *15:19, *15:37
++++++-	-----	-----	-----	*15:06, *15:26 = *15:19, *15:43
++++++-	-----	-----	-----	*15:06, *15:39 = *15:19, *15:33
++++++-	-----	-----	-----	*15:06, *15:44 = *15:19, *15:45
++++++-	-----	-----	-----	*15:06, *15:47 = *15:19, *15:49
++++++-	-----	-----	-----	*15:01:01:01, *15:19 = *15:02:01, *15:06 = *15:06, *15:19
++++++-	-----	-----	-----	*15:09, *15:15 = *15:15, *15:48
++++++-	-----	-----	-----	*15:04, *15:08 = *15:15, *15:16
++++++-	-----	-----	-----	*15:04, *15:30 = *15:15, *15:37
++++++-	-----	-----	-----	*15:04, *15:26 = *15:15, *15:43
++++++-	-----	-----	-----	*15:04, *15:39 = *15:15, *15:33
++++++-	-----	-----	-----	*15:04, *15:44 = *15:15, *15:45
++++++-	-----	-----	-----	*15:01:01:01, *15:15 = *15:02:01, *15:04
++++++-	-----	-----	-----	*15:08, *15:09 = *15:08, *15:48

Lot No.: **27M**

Lot-specific information

www.olerup-ssp.com

+++++---	---+-----	--+-----	-----	*15:09, *15:30 = *15:30, *15:48
+++++---	---+-----	-----+--	-----	*15:09, *15:29 = *15:29, *15:48
+++++---	---+-----	-----+--	-----	*15:09, *15:26 = *15:26, *15:48
+++++---	---+-----	-----+--	-----	*15:09, *15:39 = *15:39, *15:48
+++++---	---+-----	-----+--	-----	*15:09, *15:38 = *15:38, *15:48
+++++---	---+-----	-----+--	-----	*15:09, *15:44 = *15:44, *15:48
+++++---	---+-----	-----+--	-----	*15:09, *15:47 = *15:47, *15:48
+++++---	---+-----	-----+--	-----	*15:02:01, *15:09 = *15:02:01, *15:48
+++++---	---+-----	-----+--	-----	*15:08, *15:13 = *15:08, *15:17N
+++++---	---+-----	-----+--	-----	*15:13, *15:30 = *15:17N, *15:30
+++++---	---+-----	-----+--	-----	*15:13, *15:29 = *15:17N, *15:29
+++++---	---+-----	-----+--	-----	*15:13, *15:26 = *15:17N, *15:26
+++++---	---+-----	-----+--	-----	*15:13, *15:39 = *15:17N, *15:39
+++++---	---+-----	-----+--	-----	*15:13, *15:38 = *15:17N, *15:38
+++++---	---+-----	-----+--	-----	*15:13, *15:44 = *15:17N, *15:44
+++++---	---+-----	-----+--	-----	*15:13, *15:47 = *15:17N, *15:47
+++++---	---+-----	-----+--	-----	*15:02:01, *15:13 = *15:02:01, *15:17N
+++++---	---+-----	-----+--	-----	*15:02:01, *15:21 = *15:21, *15:30
+++++---	---+-----	-----+--	-----	*15:08, *15:37 = *15:16, *15:30
+++++---	---+-----	-----+--	-----	*15:08, *15:43 = *15:16, *15:26
+++++---	---+-----	-----+--	-----	*15:08, *15:33 = *15:16, *15:39
+++++---	---+-----	-----+--	-----	*15:08, *15:45 = *15:16, *15:44
+++++---	---+-----	-----+--	-----	*15:08, *15:49 = *15:16, *15:47
+++++---	---+-----	-----+--	-----	*15:01:01:01, *15:08 = *15:02:01, *15:16 = *15:08, *15:16
+++++---	---+-----	-----+--	-----	*15:26, *15:37 = *15:30, *15:43
+++++---	---+-----	-----+--	-----	*15:30, *15:33 = *15:37, *15:39
+++++---	---+-----	-----+--	-----	*15:30, *15:45 = *15:37, *15:44
+++++---	---+-----	-----+--	-----	*15:30, *15:49 = *15:37, *15:47
+++++---	---+-----	-----+--	-----	*15:01:01:01, *15:30 = *15:02:01, *15:37 = *15:30, *15:37
+++++---	---+-----	-----+--	-----	*15:02:01, *15:40 = *15:24, *15:26 = *15:26, *15:40
+++++---	---+-----	-----+--	-----	*15:26, *15:33 = *15:39, *15:43
+++++---	---+-----	-----+--	-----	*15:26, *15:45 = *15:43, *15:44
+++++---	---+-----	-----+--	-----	*15:26, *15:49 = *15:43, *15:47
+++++---	---+-----	-----+--	-----	*15:01:01:01, *15:26 = *15:02:01, *15:43 = *15:26, *15:43
+++++---	---+-----	-----+--	-----	*15:33, *15:44 = *15:39, *15:45
+++++---	---+-----	-----+--	-----	*15:33, *15:47 = *15:39, *15:49
+++++---	---+-----	-----+--	-----	*15:01:01:01, *15:39 = *15:02:01, *15:33 = *15:33, *15:39
+++++---	---+-----	-----+--	-----	*15:44, *15:49 = *15:45, *15:47
+++++---	---+-----	-----+--	-----	*15:01:01:01, *15:44 = *15:02:01, *15:45 = *15:44, *15:45
+++++---	---+-----	-----+--	-----	*15:01:01:01, *15:47 = *15:02:01, *15:49 = *15:47, *15:49
+++++---	---+-----	-----+--	-----	*15:03:01:01, *15:09 = *15:03:01:01, *15:48
+++++---	---+-----	-----+--	-----	*15:03:01:01, *15:24 = *15:03:01:01, *15:28
+++++---	---+-----	-----+--	-----	*15:05, *15:07 = *15:07, *15:36
+++++---	---+-----	-----+--	-----	*15:07, *15:13 = *15:07, *15:17N
+++++---	---+-----	-----+--	-----	*15:05, *15:06 = *15:06, *15:36
+++++---	---+-----	-----+--	-----	*15:05, *15:12 = *15:12, *15:36
+++++---	---+-----	-----+--	-----	*15:09, *15:25 = *15:25, *15:48
+++++---	---+-----	-----+--	-----	*15:09, *15:23 = *15:23, *15:48
+++++---	---+-----	-----+--	-----	*15:05, *15:09 = *15:05, *15:48 = *15:09, *15:36 = *15:36, *15:48
+++++---	---+-----	-----+--	-----	*15:05, *15:32 = *15:32, *15:36
+++++---	---+-----	-----+--	-----	*15:05, *15:13 = *15:13, *15:36 = *15:17N, *15:36
+++++---	---+-----	-----+--	-----	*15:05, *15:16 = *15:16, *15:36
+++++---	---+-----	-----+--	-----	*15:05, *15:18 = *15:18, *15:36
+++++---	---+-----	-----+--	-----	*15:05, *15:20 = *15:20, *15:36
+++++---	---+-----	-----+--	-----	*15:01:01:01, *15:25 = *15:25, *15:36 = *15:25, *15:37
+++++---	---+-----	-----+--	-----	*15:05, *15:37 = *15:36, *15:37
+++++---	---+-----	-----+--	-----	*15:05, *15:22 = *15:22, *15:36

Lot No.: **27M**

Lot-specific information

www.olerup-ssp.com

+++++---+	-----	---+---	-----	*15:01:01:01, *15:23 = *15:23, *15:36
+++++---+	-----	---+---	-----	*15:05, *15:40 = *15:36, *15:40
+++++---+	-----	---+---	-----	*15:05, *15:24 = *15:24, *15:36 = *15:28, *15:36
+++++---+	-----	---+---	-----	*15:05, *15:43 = *15:36, *15:43
+++++---+	-----	---+---	+-----	*15:05, *15:33 = *15:33, *15:36
+++++---+	-----	---+---	---+---	*15:05, *15:42 = *15:36, *15:42
+++++---+	-----	---+---	---+---	*15:05, *15:35 = *15:35, *15:36
+++++---+	-----	---+---	---+---	*15:05, *15:41 = *15:36, *15:41
+++++---+	-----	---+---	---+---	*15:05, *15:45 = *15:36, *15:45
+++++---+	-----	---+---	---+---	*15:05, *15:46 = *15:36, *15:46
+++++---+	-----	---+---	-----	*15:01:01:01, *15:05 = *15:01:01:01, *15:36 = *15:05,
				*15:36 = *15:36, *15:36
+++++---+	+---+---	-----	-----	*15:06, *15:09 = *15:06, *15:48
+++++---+	+---+---	-----	-----	*15:06, *15:13 = *15:06, *15:17N
+++++---+	+---+---	-----	-----	*15:06, *15:24 = *15:06, *15:28
+++++---+	+---+---	-----	-----	*15:01:01:01, *15:06 = *15:06, *15:06
+++++---+	+---+---	-----	-----	*15:04, *15:09 = *15:04, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:12 = *15:12, *15:48
+++++---+	+---+---	-----	-----	*15:12, *15:13 = *15:12, *15:17N
+++++---+	+---+---	-----	-----	*15:12, *15:24 = *15:12, *15:28
+++++---+	+---+---	-----	-----	*15:01:01:01, *15:12 = *15:12, *15:12
+++++---+	+---+---	-----	-----	*15:09, *15:10 = *15:10, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:32 = *15:32, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:13 = *15:09, *15:17N = *15:13, *15:48 =
				*15:17N, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:21 = *15:21, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:16 = *15:16, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:18 = *15:18, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:20 = *15:20, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:37 = *15:37, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:22 = *15:22, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:40 = *15:40, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:24 = *15:09, *15:28 = *15:24, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:43 = *15:43, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:33 = *15:33, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:42 = *15:42, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:35 = *15:35, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:41 = *15:41, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:45 = *15:45, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:46 = *15:46, *15:48
+++++---+	+---+---	-----	-----	*15:09, *15:49 = *15:48, *15:49
+++++---+	+---+---	-----	-----	*15:01:01:01, *15:09 = *15:01:01:01, *15:48 = *15:09,
				*15:09 = *15:09, *15:48
+++++---+	+---+---	-----	-----	*15:13, *15:32 = *15:17N, *15:32
+++++---+	+---+---	-----	-----	*15:10, *15:37 = *15:21, *15:32
+++++---+	+---+---	-----	-----	*15:01:01:01, *15:10 = *15:10, *15:32
+++++---+	+---+---	-----	-----	*15:24, *15:32 = *15:28, *15:32
+++++---+	+---+---	-----	-----	*15:01:01:01, *15:32 = *15:32, *15:32
+++++---+	+---+---	-----	-----	*15:13, *15:16 = *15:16, *15:17N
+++++---+	+---+---	-----	-----	*15:13, *15:18 = *15:17N, *15:18
+++++---+	+---+---	-----	-----	*15:13, *15:20 = *15:17N, *15:20
+++++---+	+---+---	-----	-----	*15:13, *15:37 = *15:17N, *15:37
+++++---+	+---+---	-----	-----	*15:13, *15:22 = *15:17N, *15:22
+++++---+	+---+---	-----	-----	*15:13, *15:40 = *15:17N, *15:40
+++++---+	+---+---	-----	-----	*15:13, *15:24 = *15:13, *15:28 = *15:17N, *15:24
+++++---+	+---+---	-----	-----	*15:13, *15:43 = *15:17N, *15:43
+++++---+	+---+---	-----	-----	*15:13, *15:33 = *15:17N, *15:33
+++++---+	+---+---	-----	-----	*15:13, *15:42 = *15:17N, *15:42

Lot No.: **27M**

Lot-specific information

www.olerup-ssp.com

++++-----	-----+--	-----	---+-----	*15:13, *15:35 = *15:17N, *15:35
++++-----	-----+--	-----	---+-----	*15:13, *15:41 = *15:17N, *15:41
++++-----	-----+--	-----	---+-----	*15:13, *15:45 = *15:17N, *15:45
++++-----	-----+--	-----	---+-----	*15:13, *15:46 = *15:17N, *15:46
++++-----	-----+--	-----	-----	*15:01:01:01, *15:13 = *15:01:01:01, *15:17N = *15:13, *15:13 = *15:13, *15:17N
++++-----	-----+--	--+-----	-----	*15:01:01:01, *15:21 = *15:21, *15:37
++++-----	-----+--	-----	-----	*15:16, *15:24 = *15:16, *15:28
++++-----	-----+--	-----	-----	*15:01:01:01, *15:16 = *15:16, *15:16
++++-----	-----+--	+-----+--	-----	*15:18, *15:24 = *15:18, *15:28
++++-----	-----+--	+-----	-----	*15:01:01:01, *15:18 = *15:18, *15:18
++++-----	-----+--	--+-----	-----	*15:20, *15:24 = *15:20, *15:28
++++-----	-----+--	-+-----	-----	*15:01:01:01, *15:20 = *15:20, *15:20
++++-----	-----+--	-----	-----	*15:24, *15:37 = *15:28, *15:37
++++-----	-----+--	-----	-----	*15:01:01:01, *15:37 = *15:37, *15:37
++++-----	-----+--	-----	-----	*15:22, *15:24 = *15:22, *15:28
++++-----	-----+--	-----	-----	*15:01:01:01, *15:22 = *15:22, *15:22
++++-----	-----+--	-----+--	-----	*15:01:01:01, *15:40 = *15:24, *15:40 = *15:24, *15:43 = *15:28, *15:40 = *15:28, *15:43 = *15:40, *15:40 = *15:40, *15:43
++++-----	-----+--	-----+--	+-----	*15:24, *15:33 = *15:28, *15:33
++++-----	-----+--	-----+--	--+-----	*15:24, *15:42 = *15:28, *15:42
++++-----	-----+--	-----+--	---+-----	*15:24, *15:35 = *15:28, *15:35
++++-----	-----+--	-----+--	---+-----	*15:24, *15:41 = *15:28, *15:41
++++-----	-----+--	-----+--	---+-----	*15:24, *15:45 = *15:28, *15:45
++++-----	-----+--	-----+--	---+-----	*15:24, *15:46 = *15:28, *15:46
++++-----	-----+--	-----+--	-----	*15:01:01:01, *15:24 = *15:01:01:01, *15:28 = *15:24, *15:24 = *15:24, *15:28
++++-----	-----+--	-----+--	-----	*15:01:01:01, *15:43 = *15:43, *15:43
++++-----	-----+--	-----+--	+-----	*15:01:01:01, *15:33 = *15:33, *15:33
++++-----	-----+--	-----+--	--+-----	*15:01:01:01, *15:42 = *15:42, *15:42
++++-----	-----+--	-----+--	---+-----	*15:01:01:01, *15:35 = *15:35, *15:35
++++-----	-----+--	-----+--	---+-----	*15:01:01:01, *15:41 = *15:41, *15:41
++++-----	-----+--	-----+--	---+-----	*15:01:01:01, *15:45 = *15:45, *15:45
++++-----	-----+--	-----+--	---+-----	*15:01:01:01, *15:46 = *15:46, *15:46
+++++-----	-----+--	-----+--	-----	*15:02:01, *15:14 = *15:14, *15:14
+++++-----	-----+--	-----+--	-----	*15:02:01, *15:34 = *15:11, *15:27
+++++-----	+-----+--	-----+--	-----	*15:02:01, *15:19 = *15:19, *15:19
+++++-----	-----+--	-----+--	-----	*15:02:01, *15:08 = *15:08, *15:08
+++++-----	-----+--	--+-----	-----	*15:02:01, *15:30 = *15:30, *15:30
+++++-----	-----+--	-----+--	-----	*15:02:01, *15:29 = *15:29, *15:29
+++++-----	-----+--	-----+--	-----	*15:02:01, *15:26 = *15:26, *15:26
+++++-----	-----+--	-----+--	+-----	*15:02:01, *15:39 = *15:39, *15:39
+++++-----	-----+--	-----+--	--+-----	*15:02:01, *15:38 = *15:38, *15:38
+++++-----	-----+--	-----+--	-----+--	*15:02:01, *15:44 = *15:44, *15:44
+++++-----	-----+--	-----+--	-----+--	*15:02:01, *15:47 = *15:47, *15:47
+++++-----	-----+--	-----+--	-----	*15:03:01:01, *15:05 = *15:03:01:01, *15:23
+---+-----	+-----+--	-----+--	-----	*15:04, *15:31 = *15:05, *15:15
+---+-----	-----+--	--+-----	-----	*15:05, *15:25 = *15:25, *15:25
+---+-----	-----+--	-----+--	-----	*15:05, *15:23 = *15:23, *15:23
+---+-----	-----+--	-----+--	-----	*15:27, *15:34 = *15:31, *15:34
+---+-----	-----+--	-----+--	-----	*15:27, *15:27 = *15:27, *15:31

*15:01:01:01= *15:01:01:01-15:01:12

*15:02:01 = *15:02:01-15:02:07

*15:03:01:01= *15:03:01:01-15:03:01:02

SPECIFICITY TABLE

DRB1*15 SSP subtyping

Specificities and sizes of the PCR products of the 32 primer mixes used for DRB1*15 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified DRB1*15 alleles ³	Other amplified DRB1 alleles ⁴
1	140 bp	515 bp	*15:01:01:01-15:06, 15:08-15:10, 15:12-15:27, 15:29-15:33, 15:35-15:47, 15:49	*16:09-16:10
2	200 bp	515 bp	*15:01:01:01-15:03:01:02, 15:06-15:09, 15:11-15:14, 15:16, 15:18 ^w , 15:19-15:20, 15:22, 15:24, 15:26, 15:29-15:30, 15:32-15:33, 15:35-15:48	
3	150 bp	430 bp	*15:01:01:01-15:02:07, 15:06-15:09, 15:11-15:14, 15:16, 15:18 ^w , 15:19-15:20, 15:22, 15:24, 15:26, 15:28-15:30, 15:32-15:33, 15:35-15:48	*04:73, 11:82, 13:09, 14:37
4	260 bp	430 bp	*15:01:01:01-15:01:12, 15:03:01:01-15:07, 15:09-15:10, 15:12-15:13, 15:16-15:18, 15:20-15:25, 15:32-15:33, 15:35-15:37, 15:40-15:43, 15:45-15:46, 15:48-15:49	*16:15
5	260 bp	430 bp	*15:02:01-15:02:07, 15:08, 15:11, 15:14-15:15, 15:19, 15:26-15:27, 15:29-15:31, 15:34, 15:38-15:39, 15:44, 15:47	*16:01:01-16:05:02, 16:07-16:11, 16:13N-16:14, 16:16
6 ^{7,8}	150 bp, 180 bp	430 bp	*15:03:01:01-15:03:01:02, 15:14	
7	140 bp	430 bp	*15:07, 15:11, 15:34	*16:01:01-16:05:02, 16:07-16:08, 16:11, 16:13N-16:16
8 ⁹	200 bp, 245 bp	430 bp	*15:05, 15:23, 15:25, 15:27, 15:31, 15:34, 15:36	
9 ^{5,10}	90 bp, 225 bp	430 bp	*15:06, 15:19	
10	200 bp	430 bp	*15:04, 15:15	
11	170 bp	430 bp	*15:12	
12 ⁵	95 bp	430 bp	*15:09, 15:48	*11:88

13 ^{5,11}	110 bp, 215 bp	430 bp	*15:10, 15:32	
14	200 bp	430 bp	*15:13, 15:17N	
15	200 bp	515 bp	*15:10, 15:21	*16:05:01- 16:05:02, 16:07
16 ¹²	135 bp, 200 bp	430 bp	*15:08, 15:16	
17	160 bp	430 bp	*15:18	
18	205 bp	515 bp	*15:20	
19 ¹³	175 bp, 225 bp	430 bp	*15:21, 15:25, 15:30, 15:37	*16:04
20 ¹⁴	165 bp, 200 bp	430 bp	*15:22, 15:27, 15:34	
21	165 bp	430 bp	*15:03:01:01-15:03:01:02, 15:23	
22 ^{6,15}	165 bp, 200 bp	430 bp	*15:24, 15:28, 15:40	
23 ¹⁶	170 bp, 220 bp	430 bp	*15:25, 15:29	
24	200 bp	430 bp	*15:26, 15:40, 15:43	
25 ^{5,17}	70 bp, 195 bp	430 bp	*15:33, 15:39	
26 ⁷	180 bp	430 bp	*15:38	
27	170 bp	430 bp	*15:42	
28	255 bp	430 bp	*15:35	
29	190 bp	430 bp	*15:41	
30 ¹⁸	165 bp, 220 bp	430 bp	*15:44, 15:45	
31	215 bp	430 bp	*15:46	
32 ¹⁹	155 bp, 200 bp	430 bp	*15:47, 15:49	

¹ Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of DRB*15 SSP subtypings.

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.

Lot No.: **27M**

Lot-specific information

www.olerup-ssp.com

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 430 base pairs, for most wells, or a band of 515 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the longer, 515 bp, internal positive control band in order to help in the correct orientation of the DRB1*15 subtyping.

In addition, wells number 2, 15 and 18 contain the primer pair giving rise to the longer, 515 bp, internal positive control band in order to allow kit identification.

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

³For several DRB alleles only partial second exon nucleotide sequences are 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 first hyperpolymorphic region of the second exon of DRB alleles are conserved within allelic groups and that unknown sequences of codons 87 to 92 are identical with the DRB1*0101 consensus sequence.

⁴Due to the sharing of sequence motifs between DRB1 alleles, the DRB1* 04:73, 11:82, 13:09 and 14:37 alleles will be amplified by primer mix 3, the DRB1*11:88 allele will be amplified by primer mix 12, and DRB1*16 alleles will be amplified by primer mixes 1, 4, 5, 7, 15 and 19.

⁵Specific PCR fragments shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR bands.

⁶Primer mix 22 has a tendency of giving rise to nonspecific amplifications.

⁷Primer mix 6 and 26 may give rise to primer oligomer formation.

⁸Primer mix 6: Specific PCR fragment of 150 bp in the DRB1*15:03:01:01-15:03:01:02 alleles. Specific PCR fragment of 180 bp in the DRB1*15:14 allele.

⁹Primer mix 8: Specific PCR fragment of 200 bp in the DRB1*15:05, 15:23, 15:25, 15:27, 15:31 and 15:34 alleles. Specific PCR fragment of 245 bp in the DRB1*15:36 allele.

¹⁰Primer mix 9: Specific PCR fragment of 90 bp in the DRB1*15:06 allele. Specific PCR fragment of 225 bp in the DRB1*15:19 allele.

¹¹Primer mix 13: Specific PCR fragment of 110 bp in the DRB1*15:32 allele. Specific PCR fragment of 215 bp in the DRB1*15:10 allele.

¹²Primer mix 16: Specific PCR fragment of 135 bp in the DRB1*15:16 allele. Specific PCR fragment of 200 bp in the DRB1*15:08 allele.

¹³Primer mix 19: Specific PCR fragment of 175 bp in the DRB1*15:30 allele. Specific PCR fragment of 225 bp in the DRB1*15:21, 15:25 and 15:37 and the DRB1*16:04 alleles.

¹⁴Primer mix 20: Specific PCR fragment of 165 bp in the DRB1*15:22 allele. Specific PCR fragment of 200 bp in the DRB1*15:27 and 15:34 alleles.

¹⁵Primer mix 22: Specific PCR fragment of 165 bp in the DRB1*15:24 allele. Specific PCR fragment of 200 bp in the DRB1*15:28 and 15:40 alleles.

¹⁶Primer mix 23: Specific PCR fragment of 170 bp in the DRB1*15:29 allele. Specific PCR fragment of 220 bp in the DRB1*15:25 allele.

¹⁷Primer mix 25: Specific PCR fragment of 70 bp in the DRB1*15:39 allele. Specific PCR fragment of 195 bp in the DRB1*15:33 allele.

¹⁸Primer mix 30: Specific PCR fragment of 165 bp in the DRB1*15:45 allele. Specific PCR fragment of 220 bp in the DRB1*15:44 allele.

¹⁹Primer mix 32: Specific PCR fragment of 155 bp in the DRB1*15:47 allele. Specific PCR fragment of 200 bp in the DRB1*15:49 allele.

‘w’, may be weakly amplified.

INTERPRETATION TABLE**DRB1*15 SSP subtyping**

Amplification patterns of the DRB1*15:01 to 15:49 alleles

	Well ⁴															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Length of spec.	140	200	150	260	260	150	140	200	90	200	170	95	110	200	200	135
PCR product(s)						180		245	225				215			200
Length of int.	515	515	430	430	430	430	430	430	430	430	430	430	430	430	515	430
pos. control ¹																
5'primer(s) ²	13(126)	13(126)	30(175)	13(126)	13(126)	20(146)	13(126)	13(126)	6(103)	13(126)	13(126)	30(175)	13(126)	13(126)	13(126)	13(126)
	5' -Agg 3'	5' -Agg 3'	5' -gAT 3'	5' -Agg 3'	5' -Agg 3'	5' -TgC 3'	5' -Agg 3'	5' -Agg 3'	5' -Cag 3'	5' -Agg 3'	5' -Agg 3'	5' -gAT 3'	5' -Agg 3'	5' -Agg 3'	5' -Agg 3'	5' -Agg 3'
						30(175)			50(236)							
						5' -gAC 3'			5' -ggC 3'							
3'primer(s) ³	47(227)	67(286)	67(286)	86(344)	86(344)	67(286)	47(227)	67(286)	67(286)	67(286)	57(256)	48(230)	37(196)	64(277)	67(286)	45(220)
	5' -ggA 3'	5' -gAT 3'	5' -gAT 3'	5' -CCA 3'	5' -CAC 3'	5' -gAT 3'	5' -ggT 3'	5' -gAg 3'	5' -gAT 3'	5' -gAA 3'	5' -gCT 3'	5' -CCT 3'	5' -ggT 3'	5' -Tg 3'	5' -gAT 3'	5' -CCT 3'
								67(286)					71(299)	69(294)	67(286)	66(283)
								5' -gAg 3'					5' -gCT 3'	5' -TgT 3'	5' -gAT 3'	5' -gTT 3'
								5' -TgC 3'								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DRB1 allele																

INTERPRETATION TABLE															
DRB1*15 SSP subtyping															
Amplification patterns of the DRB1*15:01 to 15:49 alleles															
Well ⁴															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
160	205	175	165	165	165	170	200	70	180	170	255	190	165	215	155
		225	200		200	220		195					220		200
430	515	430	430	430	430	430	430	430	430	430	430	430	430	430	430
30(175)	30(175)	13(126)	13(126)	30(175)	13(126)	13(126)	15(131)	15(130)	13(126)	23(155)	13(126)	13(126)	13(126)	13(126)	13(126)
5' -gAT 3'	5' -gAT 3'	5' -Agg 3'	5' -Agg 3'	5' -gAC 3'	5' -AAG 3'	5' -Agg 3'	5' -gTA 3'	5' -AgA 3'	5' -Agg 3'	5' -gCA 3'	5' -Agg 3'	5' -Agg 3'	5' -Agg 3'	5' -Agg 3'	5' -Agg 3'
					15(131)		19(143)	58(259)							
					5' -gTA 3'		5' -CAG 3'	5' -ACA 3'							
					25(161)		21(148)								
					5' -gCA 3'		5' -ggT 3'								
70(295)	84(337)	57(258)	55(251)	71(298)	67(286)	57(257)	71(298)	67(286)	60(266)	67(286)	85(341)	62(273)	55(250)	72(301)	51(239)
5' -CTC 3'	5' -CCT 3'	5' -GCC 3'	5' -gCA 3'	5' -CgC 3'	5' -gAT 3'	5' -CgA 3'	5' -CgC 3'	5' -gAT 3'	5' -Agg 3'	5' -gAT 3'	5' -CAG 3'	5' -CTC 3'	5' -CCA 3'	5' -CCC 3'	5' -CCC 3'
		74(307)	67(286)			73(305)							73(305)		67(287)
		5' -CAG 3'	5' -gAg 3'			5' -ggC 3'							5' -CgA 3'		5' -ggg 3'
		77(317)													
		5' -AgT 3'													
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Well No.
DRB1 allele

Lot No.: **27M**

Lot-specific information

www.olerup-ssp.com

Length of spec.	140	200	150	260	260	150	140	200	90	200	170	95	110	200	200	135
PCR product(s)						180		245	225				215			200
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DRB1 allele																
*15:01:01-15:01:12	1	2	3	4												
*15:02:01-15:02:07	1	2	3		5											
*15:03:01-15:03:01:02	1	2		4		6										
*15:04	1			4						10						
*15:05	1			4				8								
*15:06	1	2	3	4					9							
*15:07		2	3	4			7									
*15:08	1	2	3		5											16
*15:09	1	2	3	4								12				
*15:10	1			4									13		15	
*15:11		2	3		5		7									
*15:12	1	2	3	4							11					
*15:13	1	2	3	4										14		
*15:14	1	2	3		5	6										
*15:15	1				5					10						
*15:16	1	2	3	4												16
*15:17N	1			4										14		
*15:18	1	w	w	4												
*15:19	1	2	3		5				9							
*15:20	1	2	3	4												
*15:21	1			4											15	
*15:22	1	2	3	4												
*15:23	1			4				8								
*15:24	1	2	3	4												
*15:25	1			4				8								
*15:26	1	2	3		5											
*15:27	1				5			8								
*15:28			3													
*15:29	1	2	3		5											
*15:30	1	2	3		5											
*15:31	1				5			8								
*15:32	1	2	3	4									13			
*15:33	1	2	3	4												
*15:34					5		7	8								
*15:35	1	2	3	4												
*15:36	1	2	3	4				8								
*15:37	1	2	3	4												
*15:38	1	2	3		5											
*15:39	1	2	3		5											
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Lot No.: **27M**

Lot-specific information

www.olerup-ssp.com

160	205	175	165	165	165	170	200	70	180	170	255	190	165	215	155	Length of spec. PCR product(s)
		225	200		200	220		195					220		200	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No. DRB1 allele
																*15:01:01:01-15:01:12
																*15:02:01-15:02:07
				21												*15:03:01:01-15:03:01:02
																*15:04
																*15:05
																*15:06
																*15:07
																*15:08
																*15:09
																*15:10
																*15:11
																*15:12
																*15:13
																*15:14
																*15:15
																*15:16
17																*15:17N
																*15:18
																*15:19
	18															*15:20
		19														*15:21
			20													*15:22
				21												*15:23
					22											*15:24
		19				23										*15:25
							24									*15:26
			20													*15:27
				22												*15:28
					23											*15:29
	19															*15:30
																*15:31
																*15:32
			20					25								*15:33
																*15:34
										28						*15:35
																*15:36
	19															*15:37
									26							*15:38
								25								*15:39
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Lot No.: **27M**

Lot-specific information

www.olerup-ssp.com

Length of spec.	140	200	150	260	260	150	140	200	90	200	170	95	110	200	200	135
PCR product(s)						180		245	225				215			200
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*15:40	1	2	3	4												
*15:41	1	2	3	4												
*15:42	1	2	3	4												
*15:43	1	2	3	4												
*15:44	1	2	3		5											
*15:45	1	2	3	4												
*15:46	1	2	3	4												
*15:47	1	2	3		5											
*15:48		2	3	4								12				
*15:49	1			4												
*04:73, 11:82, 13:09, 14:37			3													
*11:88												12				
*16:01:01-16:03, 16:08, 16:11, 16:13N-16:14, 16:16					5		7									
*16:04					5		7									
*16:05:01-16:05:02, 16:07					5		7								15	
*16:09-16:10	1				5											
*16:15				4			7									
DRB1 allele																
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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 430 base pairs, for most wells, or a band of 515 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the longer, 515 bp, internal positive control band in order to help in the correct orientation of the DRB1*15 subtyping.

In addition, wells number 2, 15 and 18 contain the primer pair giving rise to the longer, 515 bp, internal positive control band in order to allow kit identification.

²The codon, and in parenthesis the nucleotide, in the 2nd exon, matching the specificity-determining 3'-end of the primer is given. Codon and 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 codon, and in parenthesis the nucleotide, in the 2nd exon, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Codon and 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.

⁴Primer mix 6: Specific PCR fragment of 150 bp in the DRB1*15:03:01:01-15:03:01:02 alleles. Specific PCR fragment of 180 bp in the DRB1*15:14 allele.

Primer mix 8: Specific PCR fragment of 200 bp in the DRB1*15:05, 15:23, 15:25, 15:27, 15:31 and 15:34 alleles. Specific PCR fragment of 245 bp in the DRB1*15:36 allele.

Primer mix 9: Specific PCR fragment of 90 bp in the DRB1*15:06 allele. Specific PCR fragment of 225 bp in the DRB1*15:19 allele.

Lot No.: **27M**

Lot-specific information

www.olerup-ssp.com

160	205	175	165	165	165	170	200	70	180	170	255	190	165	215	155	Length of spec. PCR product(s)	
		225	200		200	220		195					220		200		
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.	
					22		24									*15:40	
												29				*15:41	
										27						*15:42	
							24									*15:43	
													30			*15:44	
													30			*15:45	
														31		*15:46	
															32	*15:47	
																*15:48	
															32	*15:49	
																*04:73, 11:82, 13:09, 14:37	
																*11:88	
																*16:01:01-16:03, 16:08, 16:11, 16:13N-16:14, 16:16	
		19														*16:04	
																*16:05:01-16:05:02, 16:07	
																*16:09-16:10	
																*16:15	
																DRB1 allele	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.	

Primer mix 13: Specific PCR fragment of 110 bp in the DRB1*15:32 allele. Specific PCR fragment of 215 bp in the DRB1*15:10 allele.

Primer mix 16: Specific PCR fragment of 135 bp in the DRB1*15:16 allele. Specific PCR fragment of 200 bp in the DRB1*15:08 allele.

Primer mix 19: Specific PCR fragment of 175 bp in the DRB1*15:30 allele. Specific PCR fragment of 225 bp in the DRB1*15:21, 15:25 and 15:37 and the DRB1*16:04 alleles.

Primer mix 20: Specific PCR fragment of 165 bp in the DRB1*15:22 allele. Specific PCR fragment of 200 bp in the DRB1*15:27 and 15:34 alleles.

Primer mix 22: Specific PCR fragment of 165 bp in the DRB1*15:24 allele. Specific PCR fragment of 200 bp in the DRB1*15:28 and 15:40 alleles.

Primer mix 23: Specific PCR fragment of 170 bp in the DRB1*15:29 allele. Specific PCR fragment of 220 bp in the DRB1*15:25 allele.

Primer mix 25: Specific PCR fragment of 70 bp in the DRB1*15:39 allele. Specific PCR fragment of 195 bp in the DRB1*15:33 allele.

Primer mix 30: Specific PCR fragment of 165 bp in the DRB1*15:45 allele. Specific PCR fragment of 220 bp in the DRB1*15:44 allele.

Primer mix 32: Specific PCR fragment of 155 bp in the DRB1*15:47 allele. Specific PCR fragment of 200 bp in the DRB1*15:49 allele.

‘w’, may be weakly amplified.

CELL LINE VALIDATION SHEET																				
DRB1*15 SSP subtyping kit																				
					Well															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Prod. No.:	201186801	201186802	201186803	201186804	201186805	201186806	201186807	201186808	201186809	201186810	201186811	201186812	201186813	201186814	201186815	201186816
	IHWC cell line		DRB1																	
1	9001 SA	*01:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*15:02	*04:05		+	+	+	-	+	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324	*15:02			+	+	+	-	+	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373	*03:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011	*16:01			-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-
6	9353 SM	*04:07	*08:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL	*03:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025 DEU	*04:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR	*04:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3	*04:05			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT	*07:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB	*07:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM	*01:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA	*08:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB	*09:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*11:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540	*03:01	*13:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257 32367	*09:01	*11:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16	*12:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*13:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA	*14:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*13:02	*14:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL	*08:03	*14:14		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH	*11:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9	*07:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49	*03:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*04:05	*10:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB	*04:16	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU	*07:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH	*03:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF	*03:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG	*13:03			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B	*04:04			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF	*11:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO	*04:03			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17	*04:03	*04:06		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB	*13:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL	*14:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML	*03:01	*04:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134 WHONP199	*07:01	*09:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301	*13:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089	*08:03			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526	*09:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM	*14:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO	*07:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU	*15:01			+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*11:04	*12:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303 TER-ND	*01:03			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CERTIFICATE OF ANALYSIS**Olerup SSP® DRB1*15 SSP**

Product number: 101.125-24u/06u – without *Taq* pol.
Lot number: 27M
Expiry date: 2013-November-01
Number of tests: 24 test – Product No. 101.125-24u
 6 tests – Product No. 101.125-06u
Number of wells per test: 32

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2011-868-01	13	2011-868-13	25	2011-868-25
2	2011-868-02	14	2011-868-14	26	2011-868-26
3	2011-868-03	15	2011-868-15	27	2011-868-27
4	2011-868-04	16	2011-868-16	28	2011-868-28
5	2011-868-05	17	2011-868-17	29	2011-868-29
6	2011-868-06	18	2011-868-18	30	2011-868-30
7	2011-868-07	19	2011-868-19	31	2011-868-31
8	2011-868-08	20	2011-868-20	32	2011-868-32
9	2011-868-09	21	2011-868-21		
10	2011-868-10	22	2011-868-22		
11	2011-868-11	23	2011-868-23		
12	2011-868-12	24	2011-868-24		

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 8, 9, 11 to 20 and 22 to 32 were available. The specificities of the primers in primer solutions 8, 11 to 13, 15, 19, 20, 22, 23, 26, 28 and 32 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solutions 14, 16 to 18 and 29 to 31 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solutions 9, 24, 25 and 27 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 6 and 22 one respective two of the 5'-primers were not possible to test, and in primer solutions 2, 3, 8, 13, 19, 20, 23 and 32 one or two of the 3'-primers were not possible to test.

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

Date of approval: 2011-May-26

Approved by:

Quality Control, Supervisor

Declaration of Conformity

Product name: *Olerup SSP*® DRB1*15

Product number: 101.125-24u/06u

Lot number: 27M

Intended use: DRB1*15 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-May-26

Olle Olerup
Managing Director

Lot No.: **27M**

Lot-specific information

www.olerup-ssp.com**ADDRESSES:****Manufacturer:****Olerup SSP AB**, Franzengatan 5, SE-112 51 Stockholm, Sweden.**Tel:** +46-8-717 88 27**Fax:** +46-8-717 88 18**E-mail:** info-ssp@olerup.com**Web page:** <http://www.olerup-ssp.com>**Distributed by:****Olerup GmbH**, Löwengasse 47 / 6, AT-1030 Vienna, Austria.**Tel:** +43-1-710 15 00**Fax:** +43-1-710 15 00 10**E-mail:** support-at@olerup.com**Web page:** <http://www.olerup.com>**Olerup Inc.**, 901 S. Bolmar St., Suite R, West Chester, PA 19382**Tel:** 1-877-OLERUP1**Fax:** 610-344-7989**E-mail:** info.us@olerup.com**Web page:** <http://www.olerup.com>For information on *Olerup* SSP distributors worldwide, contact **Olerup GmbH**.