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Lot No.: 18N Lot-specific information

Olerup SSP® DRB1*08

Product number: 101.127-12/04 – including *Taq* pol.

101.127-12u/04u - without Tag pol.

Lot number: 18N

Expiry date: 2014-August-01

Number of tests: 12 tests – Product No. 101.127-12/12u

4 tests - Product No. 101.127-04/04u

Number of wells per test: 24

Storage - pre-aliquoted primers: dark at -20°C

PCR Master Mix: -20°C
 Adhesive PCR seals
 Product Insert
 RT

This Product Description is only valid for Lot No. 18N.

CHANGES COMPARED TO THE PREVIOUS OLERUP SSP® DRB1*08 LOT

The DRB1*08 kit is updated to enable separation of:

- Confirmed DRB1*08 alleles as listed in the IMGT/HLA database¹
- Polymorphisms in exons outside of the region encoding the peptide binding domain
- Null and Alternatively expressed alleles

The Lot-specific information for DRB1*08 including and without *Taq* polymerase is now described in one common Product Insert.

The DRB1*08 specificity and interpretation tables have been updated for the DRB1 alleles described since the previous *Olerup* SSP® DRB1*08 lot was made (Lot No. 66K).

¹As described in section Uniquely Identified Alleles.

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

Well	5'-primer	3'-primer	rationale
2	-	Modified,	Primer added for the DRB1*08:04:06 allele,
		added	increased yield of specific PCR product.
12	-	Added	Primer added for the DRB1*08:44 allele.
15	-	Added	Primer added for the DRB1*08:49 allele.
19	-	Added	Primer added for the DRB1*08:49 allele.

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Lot No.: 18N Lot-specific information

PRODUCT DESCRIPTION

DRB1*08 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the DRB1*08:01 to DRB1*08:49 alleles.

PLATE LAYOUT

Each test consists of 24 PCR reactions in a 24 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

The 24 well cut PCR plate is marked with 'DRB1*08' in silver/gray ink.

Well No. 1 is marked with the Lot No. '18N'.

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 DRB1*08 SSP subtypings will be influenced by the DRB1*03:12, eleven DRB1*04 alleles, the DRB1*07:12, seven DRB1*11, the DRB1*12, several DRB1*13, several DRB1*14 and two DRB1*15 allele when present on the other haplotype.

UNIQUELY IDENTIFIED ALLELES

All the phenotypically different DRB1*08 alleles, i.e. **DRB1*08:01 to DRB1*08:49**, recognized by the HLA Nomenclature Committee in January 2012¹ will be amplified by the primers in the DRB1*08 subtyping kit².

The DRB1*08 kit enables separation of the confirmed DRB1*08 alleles as listed in the IMGT/HLA database. An HLA allele is listed as confirmed by IMGT/HLA if it has been sequenced by more than a single laboratory or from multiple sources. Current allele confirmation status for DRB1*08 alleles is listed below.

The DRB1*08 kit also enables identification of polymorphisms in exons outside of the region encoding the peptide binding domain and of null and alternatively expressed alleles.

The DRB1*08 subtyping kit cannot distinguish the following silent mutations: DRB1*08:01:01-08:01:05, the DRB1*08:02:01-08:02:04, DRB1*08:03:02-08:03:03, the DRB1*08:04:01 and 08:04:04-08:04:07 alleles, the DRB1* 08:04:02-08:04:03 alleles or the DRB1*08:30:01-08:30:03 alleles.

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Lot No.: 18N Lot-specific information

ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
DRB1*08:01:01	Confirmed	DRB1*08:09	Confirmed	DRB1*08:30:02	Unconfirmed
DRB1*08:01:02	Unconfirmed	DRB1*08:10	Confirmed	DRB1*08:30:03	Unconfirmed
DRB1*08:01:03	Unconfirmed	DRB1*08:11	Confirmed	DRB1*08:31	Unconfirmed
DRB1*08:01:04	Confirmed	DRB1*08:12	Confirmed	DRB1*08:32	Confirmed
DRB1*08:01:05	Unconfirmed	DRB1*08:13	Confirmed	DRB1*08:33	Unconfirmed
DRB1*08:02:01	Confirmed	DRB1*08:14	Confirmed	DRB1*08:34	Unconfirmed
DRB1*08:02:02	Confirmed	DRB1*08:15	Confirmed	DRB1*08:35	Confirmed
DRB1*08:02:03	Unconfirmed	DRB1*08:16	Confirmed	DRB1*08:36	Unconfirmed
DRB1*08:02:04	Unconfirmed	DRB1*08:17	Confirmed	DRB1*08:37	Unconfirmed
DRB1*08:03:02	Confirmed	DRB1*08:18	Confirmed	DRB1*08:38	Unconfirmed
DRB1*08:03:03	Unconfirmed	DRB1*08:19	Confirmed	DRB1*08:39	Unconfirmed
DRB1*08:04:01	Confirmed	DRB1*08:20	Unconfirmed	DRB1*08:40	Unconfirmed
DRB1*08:04:02	Confirmed	DRB1*08:21	Unconfirmed	DRB1*08:41	Unconfirmed
DRB1*08:04:03	Unconfirmed	DRB1*08:22	Confirmed	DRB1*08:42	Unconfirmed
DRB1*08:04:04	Unconfirmed	DRB1*08:23	Unconfirmed	DRB1*08:43	Unconfirmed
DRB1*08:04:05	Confirmed	DRB1*08:24	Unconfirmed	DRB1*08:44	Confirmed
DRB1*08:04:06	Confirmed	DRB1*08:25	Unconfirmed	DRB1*08:45	Confirmed
DRB1*08:04:07	Unconfirmed	DRB1*08:26	Unconfirmed	DRB1*08:46	Unconfirmed
DRB1*08:05	Confirmed	DRB1*08:27	Unconfirmed	DRB1*08:47	Unconfirmed
DRB1*08:06	Confirmed	DRB1*08:28	Unconfirmed	DRB1*08:48	Unconfirmed
DRB1*08:07	Confirmed	DRB1*08:29	Unconfirmed	DRB1*08:49	Confirmed
DRB1*08:08	Confirmed	DRB1*08:30:01	Unconfirmed		

¹Allele status "confirmed" or "unconfirmed" as listed on the IMGT/HLA web page 2012-January-12, release 3.7.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 65 alleles generate 46 amplification patterns that can be combined in 1081 homozygous and heterozygous combinations. 518 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.

++++++	*08:18, *08:44 = *08:24, *08:27
+++++	*08:02:01, *08:18 = *08:03:02, *08:24
+++++-++ +++ ++	*08:09, *08:12 = *08:12, *08:21
+++++-++ ++ +++-	*08:09, *08:10 = *08:10, *08:21
+++++-++++ ++++-	*08:23, *08:28 = *08:28, *08:29

¹DRB1 alleles listed on the IMGT/HLA web page 2012-January-12, release 3.7.0, www.ebi.ac.uk/imgt/hla. ²The DRB1*08:20 and DRB1*14:12:01-14:12:02 give rise to identical amplification patterns with

²The DRB1*08:20 and DRB1*14:12:01-14:12:02 give rise to identical amplification patterns with the DRB1*08 subtyping kit. These two alleles can be distinguished by e.g. the DR low resolution kit and/or the DRB1*14 subtyping kit.

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Lot No.: 18N		Lot-specific information
+++++-+++-+	+++	*08:14, *08:28 = *08:28, *08:36
+++++-+++-+		*08:03:02, *08:28 = *08:04:01, *08:37 = *08:28, *08:37
+++++-+++	+++-	*08:04:01, *08:23 = *08:04:01, *08:29
+++++-+++		*08:04:01, *08:14 = *08:04:01, *08:36
+++++-+- +++		*08:09, *08:27 = *08:21, *08:27
+++++-+- ++-+		*08:09, *08:33 = *08:21, *08:33
+++++-+- ++-+		*08:09, *08:37 = *08:21, *08:37
+++++-+- +++		*08:09, *08:49 = *08:21, *08:49
+++++-+- ++		*08:09, *08:32 = *08:21, *08:32
+++++-+- ++		*08:09, *08:38 = *08:21, *08:38
+++++-+- ++		*08:09, *08:23 = *08:09, *08:29 = *08:21, *08:23
+++++-+- ++		*08:02:01, *08:35 = *08:09, *08:35 = *08:09, *08:36 = *08:21, *08:35 =
		*08:21, *08:36
+++++-+-		*08:03:02, *08:09 = *08:03:02, *08:21
+++++-+-		*08:23, *08:44 = *08:29, *08:44
+++++-++		*08:02:01, *08:27 = *08:03:02, *08:44 = *08:27, *08:44
+++++-+-		*08:01:01, *08:45 = *08:17, *08:30:01 = *08:17, *08:45 = *08:43,
		*08:45
+++++-+-		*08:02:01, *08:23 = *08:02:01, *08:29
+++++-+-		*08:01:01, *08:30:01 = *08:30:01, *08:43
+++-+++		
+++-++		*08:05, *08:13 = *08:05, *08:44 = *08:24, *08:48 *08:01:01, *08:24 = *08:02:01, *08:05
+++-+-++ ++		·
+++-+-++ +		*08:09, *08:22 = *08:21, *08:22 *08:06, *08:09 = *08:06, *08:21
+++-+-++ -+-+		•
+++-+-+++		*08:13, *08:22 = *08:22, *08:44 *08:06, *08:13 = *08:06, *08:44
+++-+-+++		*08:01:01, *08:28 = *08:04:01, *08:17 = *08:17, *08:28 = *08:28,
		*08:43
+++-+-+	++-	*08:01:01, *08:04:01 = *08:04:01, *08:43
+++-+-+- ++		*08:09, *08:48 = *08:21, *08:48
+++-+-+- ++		*08:09, *08:39 = *08:21, *08:39
+++-+-+- ++		*08:09, *08:17 = *08:17, *08:21
+++-+-+- +		*08:09, *08:16 = *08:16, *08:21
+++-+-+- +		*08:09, *08:26 = *08:21, *08:26
+++-+-+- +		*08:01:01, *08:09 = *08:01:01, *08:21 = *08:09, *08:43
+++-+		*08:13, *08:39 = *08:39, *08:44
+++-+-+-		*08:13, *08:17 = *08:17, *08:44
+++-+	+	*08:13, *08:16 = *08:16, *08:44
+++-+		*08:13, *08:26 = *08:26, *08:44
+++-+-++		*08:01:01, *08:13 = *08:01:01, *08:44 = *08:02:01, *08:48 = *08:13,
		*08:43 = *08:43, *08:44 = *08:44, *08:48
+++-+		*08:01:01, *08:02:01 = *08:02:01, *08:43
+++++		*08:05, *08:24 = *08:24, *08:43
++-++-+	+	*08:13, *08:37 = *08:27, *08:45
++-++-+-	+	*08:13, *08:23 = *08:13, *08:29
++-++-+-		*08:03:02, *08:13 = *08:13, *08:27 = *08:27, *08:30:01
++-++-+-	+	*08:23, *08:45 = *08:29, *08:45
++-++-+-	+	*08:03:02, *08:45 = *08:30:01, *08:37 = *08:37, *08:45
++-++-+-	+	*08:23, *08:30:01 = *08:29, *08:30:01
+-+++++	++	*08:05, *08:12 = *08:18, *08:22 = *08:22, *08:40
+-+++++	+++-	*08:05, *08:10 = *08:06, *08:18
+-++++++		*08:11, *08:40 = *08:39, *08:40
+-++++++	+	*08:07, *08:40 = *08:16, *08:40
+-++++++		*08:03:02, *08:41 = *08:08, *08:18
+-+++++		*08:05, *08:33 = *08:11, *08:18 = *08:18, *08:39
+-+++++		*08:05, *08:37 = *08:17, *08:18
+-+++++-		*08:01:01, *08:25 = *08:05, *08:34
+-+++++	+	*08:05, *08:38 = *08:07, *08:18 = *08:16, *08:18
+-+++++	+	*08:05, *08:36 = *08:18, *08:26
+-+++++		*08:01:01, *08:18 = *08:03:02, *08:05
+-++-++ -++	++	*08:11, *08:12 = *08:12, *08:39 = *08:22, *08:33
+-++-++ -+++	+++	*08:12, *08:17 = *08:22, *08:37
+-++-++ -++	+-++	*08:07, *08:12 = *08:12, *08:16 = *08:22, *08:38

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Lot No.: 18N		Lot-specific information
+-+++-++ -++ +-	+-+	*08:22, *08:23 = *08:22, *08:29
+-+++-++ -++ +-	++	*08:12, *08:26 = *08:14, *08:22 = *08:22, *08:36
+-+++-++ -++ +-	+	*08:01:01, *08:12 = *08:03:02, *08:22 = *08:12, *08:43
+-+++-+++ +-		*08:06, *08:33 = *08:10, *08:11 = *08:10, *08:39
+-+++-+++++ +-		*08:06, *08:37 = *08:10, *08:17
+-+++-+++ +-		*08:06, *08:38 = *08:07, *08:10 = *08:10, *08:16
+-+++-+++ +-		*08:06, *08:23 = *08:06, *08:29
+-+++-+++ +-		*08:06, *08:14 = *08:06, *08:36 = *08:10, *08:26
+-+++-+++ +-		*08:01:01, *08:10 = *08:03:02, *08:06 = *08:10, *08:43
+-+++-+- ++		
+-+++-+- ++		*08:11, *08:35 = *08:35, *08:39 *09:07 *09:25 = *09:46 *09:25
+-+++-+- ++		*08:07, *08:35 = *08:16, *08:35 *08:04:04 *08:35
+-+++-+++		*08:01:01, *08:35 = *08:26, *08:35 = *08:35, *08:43
		*08:08, *08:23 = *08:08, *08:29
+-+++-++		*08:01:01, *08:15 = *08:15, *08:43
+-++		*08:11, *08:27 = *08:27, *08:39
+-++		*08:07, *08:27 = *08:16, *08:27
+-++		*08:01:01, *08:27 = *08:27, *08:43
+-++-+-		*08:11, *08:37 = *08:17, *08:33 = *08:37, *08:39
+-+++-+-		*08:11, *08:49 = *08:39, *08:49
+-++-++ +-		*08:11, *08:14 = *08:14, *08:39
+-++-+-		*08:11, *08:32 = *08:32, *08:39
+-++-+-		*08:07, *08:33 = *08:11, *08:38 = *08:16, *08:33 = *08:38, *08:39
+-++-+-		*08:11, *08:23 = *08:11, *08:29 = *08:23, *08:39 = *08:29, *08:39
+-++-+-		*08:11, *08:36 = *08:26, *08:33 = *08:36, *08:39
+-+++-+-		*08:01:01, *08:33 = *08:03:02, *08:11 = *08:03:02, *08:39 = *08:11,
		*08:33 = *08:33, *08:39 = *08:33, *08:43
+-++	-+-+	*08:07, *08:37 = *08:16, *08:37 = *08:17, *08:38
+-++-+-	++	*08:17, *08:23 = *08:17, *08:29
+-++-+-	+	*08:17, *08:36 = *08:26, *08:37
+-++-+-	+	*08:01:01, *08:37 = *08:03:02, *08:17 = *08:17, *08:37 = *08:37,
		*08:43
+-++-+++	-+	*08:01:01, *08:49 = *08:07, *08:49 = *08:16, *08:49 = *08:43, *08:49
+-+++-+-	+	*08:01:01, *08:19 = *08:19, *08:43
+-+++-++		*08:01:01, *08:34 = *08:34, *08:43
+-+++-++ +-	-++	*08:07, *08:14 = *08:14, *08:16
+-+++-++ +-	+	*08:01:01, *08:14 = *08:14, *08:26
+-+++-+-		*08:07, *08:32 = *08:16, *08:32
+-++-+-		*08:01:01, *08:32 = *08:32, *08:43
+-++-+-		*08:07, *08:23 = *08:07, *08:29 = *08:16, *08:23 = *08:16, *08:29
+-+++-+-		*08:07, *08:36 = *08:16, *08:36 = *08:26, *08:38
+-+++-++		*08:01:01, *08:38 = *08:03:02, *08:07 = *08:03:02, *08:16 = *08:07,
		*08:38 = *08:16, *08:38 = *08:38, *08:43
+-+++-++		
+-+++-++		*08:23, *08:26 = *08:26, *08:29 *09:04:04 *09:23 = *09:04:04 *09:20 = *09:23 *09:43
+-+++-++		*08:01:01, *08:23 = *08:01:01, *08:29 = *08:23, *08:43
	+	*08:01:01, *08:36 = *08:03:02, *08:26 = *08:26, *08:36 = *08:36,
		*08:43
+-+++-+-		*08:01:01, *08:03:02 = *08:03:02, *08:43
+-++++ -++ +-		*08:06, *08:12 = *08:10, *08:22
+-++-+++		*08:05, *08:40 = *08:40, *08:43
+-++-+		*08:05, *08:25 = *08:25, *08:43
+-++-++		*08:05, *08:18 = *08:18, *08:43
+-+-+++		*08:01:01, *08:41 = *08:05, *08:08
+-+-+++		*08:05, *08:11 = *08:05, *08:39
+-+-++	-+	*08:05, *08:07 = *08:05, *08:16
+-+-++ -++ +-	+	*08:11, *08:22 = *08:22, *08:39
+-+-++ -+ +-	-++	*08:07, *08:22 = *08:16, *08:22
+-+-++ -+ +-	+	*08:01:01, *08:22 = *08:22, *08:43
+-+-+++ +-		*08:06, *08:11 = *08:06, *08:39
+-+-++ +-	-++-	*08:06, *08:07 = *08:06, *08:16
+-+-++ +-	+	*08:01:01, *08:06 = *08:06, *08:43
+-+-+		*08:01:01, *08:08 = *08:08, *08:43
+-+-+		*08:11, *08:48 = *08:39, *08:48
+-+-+		*08:07, *08:48 = *08:16, *08:48
•		33.3., 33.10 - 30.10, 30.10

101.127-12/04 – including *Taq* **polymerase**, IFU-01 Rev. No. 03 Visit <u>www.olerup-ssp.com</u> for **101.127-12u/04u – without** *Taq* **polymerase**, IFU-02 Rev. No. 03 "Instructions for Use" (IFU)

Lot No.: 18N		Lot-specific information
+-+-+-		*08:01:01, *08:48 = *08:43, *08:48
+-+-+-		*08:11, *08:17 = *08:17, *08:39
+-+-+-	+	*08:07, *08:39 = *08:11, *08:16 = *08:16, *08:39
+-+-+-	+	*08:11, *08:26 = *08:26, *08:39
+-+-+-		*08:01:01, *08:11 = *08:01:01, *08:39 = *08:11, *08:39 = *08:11,
		*08:43 = *08:39, *08:39 = *08:39, *08:43
+-+-+-	+-+	*08:07, *08:17 = *08:16, *08:17
+-+-+-		*08:01:01, *08:17 = *08:17, *08:17 = *08:17, *08:43
+-+-+-	++	*08:01:01, *08:20 = *08:20, *08:43
+-+-+-		*08:07, *08:26 = *08:16, *08:26
+-+-+-	+	*08:01:01, *08:07 = *08:01:01, *08:16 = *08:07, *08:16 = *08:07,
		*08:43 = *08:16, *08:16 = *08:16, *08:43
+-+-+-	+	*08:01:01, *08:26 = *08:26, *08:26 = *08:26, *08:43
+-+-+-		*08:01:01, *08:01:01 = *08:01:01, *08:43
+-++++	+-	*08:05, *08:31 = *08:31, *08:43
+-++++		*08:05, *08:41 = *08:41, *08:43
+-++-		*08:05, *08:05 = *08:05, *08:43
+++++	++	*08:12, *08:18 = *08:12, *08:40
+++++-++		*08:27, *08:40 = *08:40, *08:48
+++++		*08:18, *08:27 = *08:18, *08:48
++++++	+	*08:18, *08:49 = *08:25, *08:38 = *08:25, *08:49
++++++	+	*08:18, *08:19 = *08:23, *08:25
++++++		*08:03:02, *08:25 = *08:18, *08:34
+++-++ -++	++	*08:12, *08:27 = *08:12, *08:48
+++-++ -++		*08:12, *08:23 = *08:12, *08:29
+++-++ -++		*08:12, *08:14 = *08:12, *08:36
+++-+++		*08:10, *08:27 = *08:10, *08:48
+++-+	++-	*08:10, *08:23 = *08:10, *08:29
+++-+	++-	*08:10, *08:14 = *08:10, *08:36
+++-+-		*08:27, *08:35 = *08:35, *08:48
+++-+-		*08:23, *08:35 = *08:29, *08:35
+++-+- ++		*08:03:02, *08:35 = *08:35, *08:35 = *08:35, *08:36
+++-+-		*08:15, *08:23 = *08:15, *08:29
+++-+-		*08:27, *08:33 = *08:33, *08:48
++		*08:27, *08:37 = *08:37, *08:48
+++-+-		*08:27, *08:49 = *08:48, *08:49
+++-+-		*08:19, *08:27 = *08:19, *08:48
++		*08:14, *08:27 = *08:14, *08:48
+++-+++		*08:27, *08:32 = *08:32, *08:48
+++-+++		*08:27, *08:38 = *08:38, *08:48
+++-+++		*08:23, *08:27 = *08:23, *08:48 = *08:27, *08:29 = *08:29, *08:48
+++-+++		*08:27, *08:36 = *08:36, *08:48
	_	*08:03:02, *08:27 = *08:03:02, *08:48 = *08:27, *08:27 = *08:27, *08:48
+++-+-		*08:23, *08:33 = *08:29, *08:33
+++-+-		*08:03:02, *08:33 = *08:33, *08:33
+++-+		*08:23, *08:37 = *08:29, *08:37
+++-+-		*08:03:02, *08:37 = *08:37, *08:37
+++-+-		*08:19, *08:38 = *08:19, *08:49 = *08:23, *08:49 = *08:29, *08:49
+++-+-	+	*08:03:02, *08:49 = *08:34, *08:38 = *08:34, *08:49 = *08:38, *08:49 =
		*08:49, *08:49
+++-+-	+	*08:03:02, *08:19 = *08:19, *08:23 = *08:19, *08:29 = *08:23, *08:34 =
		*08:29, *08:34
+++-+-	+++	*08:20, *08:23 = *08:20, *08:29
+++-+-	+++	*08:14, *08:20 = *08:14, *08:32 = *08:20, *08:36
+++-+-	++	*08:03:02, *08:20 = *08:20, *08:32
+++-+-	++	*08:03:02, *08:14 = *08:14, *08:36
+++-+-	-+	*08:23, *08:32 = *08:29, *08:32
+++-+-	-+	*08:03:02, *08:32 = *08:32, *08:32
+++-+-		*08:23, *08:38 = *08:29, *08:38
+++-+-		*08:03:02, *08:38 = *08:38, *08:38
+++-+-		*08:23, *08:36 = *08:29, *08:36
+++-+-	+	*08:03:02, *08:23 = *08:03:02, *08:29 = *08:23, *08:23 = *08:23,

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```
Lot No.: 18N
                               Lot-specific information
                              *08:29
 +--++-+-
                              *08:03:02, *08:36 = *08:36, *08:36
 +--+-++- -+----+ ------
                              *08:18, *08:40 = *08:40, *08:40
 -+++++- --+----
                              *08:15, *08:24 = *08:30:01, *08:41
                              *08:02:01, *08:25 = *08:24, *08:34
 -+++++- ------
 -+++-++ ----+-- +---+-
                              *08:04:01, *08:45 = *08:28, *08:30:01 = *08:28, *08:45
                              *08:09, *08:15 = *08:15, *08:21
 -+++-+- +-+----
                              *08:09, *08:45 = *08:21, *08:45
*08:09, *08:19 = *08:19, *08:21
*08:09, *08:34 = *08:21, *08:34
 -+++-+-
 -+++-+- +----++ ----+--
 -+++-+-
 -+++-+- +-----
                              *08:09. *08:30:01 = *08:21. *08:30:01
 -+++---
                              *08:02:01, *08:15 = *08:08, *08:30:01
 -++-+++ --++---
                              *08:13, *08:31 = *08:31, *08:44
 -++-++- --++---
                              *08:13, *08:41 = *08:41, *08:44
 -++-++- --+----
                              *08:02:01, *08:41 = *08:08, *08:24
 -++-++- ---+---
                              *08:13, *08:24 = *08:24, *08:44
 -++-+-+ +----+-- +---+--
                              *08:09, *08:28 = *08:21, *08:28
 -++-+-+ +----- +----+-
                              *08:04:01, *08:09 = *08:04:01, *08:21
 -++-+-+
                              *08:13, *08:28 = *08:28, *08:44
 -++-+-++ ---+---
                              *08:04:01, *08:13 = *08:04:01, *08:44
                              *08:08, *08:09 = *08:08, *08:21

*08:09, *08:13 = *08:09, *08:44 = *08:13, *08:21 = *08:21, *08:44

*08:09, *08:11 = *08:11, *08:21
 -++-+-- +-+----
 -++-+--
 -++-+--
 -++-+-- +----- ++-----
                              *08:09, *08:20 = *08:20, *08:21
 -++-+-+- +-----
                              *08:07, *08:09 = *08:07, *08:21
 -++-+--
                              *08:02:01, *08:09 = *08:02:01, *08:21 = *08:09, *08:09 = *08:09,
                              *08:21
 -++-+--
                              *08:08, *08:13 = *08:08, *08:44
 -++-+--
                              *08:11, *08:13 = *08:11, *08:44
 -++-+--
                              *08:07, *08:13 = *08:07, *08:44
 -++-+--
                              *08:02:01, *08:13 = *08:02:01, *08:44 = *08:13, *08:44 = *08:44,
                              *08:44
 -++-+--+ ----+-- +---+-
                              *08:04:01, *08:28 = *08:28, *08:28
 -+-++-+-
                              *08:30:01, *08:45 = *08:45, *08:45
 --++++- --+-----
                              *08:08, *08:25 = *08:34, *08:41
 ---++-+-
                              *08:19, *08:19 = *08:19, *08:34
 *08:01:01 = *08:01:01-08:01:05
 *08:02:01 = *08:02:01-08:02:04 and 08:42
 *08:03:02 = *08:03:02-08:03:03 and 08:46
 *08:04:01 = *08:04:01-08:04:07
 *08:30:01 = *08:30:01-08:30:03
 *08:18 = *08:18 and 08:47
```

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Lot-specific information

SPECIFICITY TABLE

DRB1*08 SSP subtyping

Specificities and sizes of the PCR products of the 24 primer mixes used for DRB1*08 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified DRB1*08 alleles ³	Other amplified DRB1 alleles ⁴
1	165 bp	515 bp	*08:01:01-08:01:05, 08:03:02-08:03:03, 08:05-08:06, 08:10, 08:12, 08:14, 08:16- 08:18, 08:22-08:23, 08:26-08:27, 08:29, 08:32-08:33, 08:35- 08:40, 08:43, 08:46- 08:49	
2 ⁶	165 bp	430 bp	*08:02:01-08:02:04, 08:04:01-08:04:07, 08:09, 08:13, 08:21, 08:24, 08:28, 08:30:01- 08:30:03, 08:42, 08:44- 08:45	*12:09, 13:17, 13:116, 14:15, 14:52
3	195 bp	430 bp	*08:01:01-08:02:04, 08:04:01-08:09, 08:11, 08:16-08:17, 08:21- 08:22, 08:24, 08:26, 08:28, 08:31, 08:39, 08:41-08:44	*11:67, 12:02:01-12:02:05, 12:13, 12:15-12:16, 12:18-12:21, 12:23, 12:26-12:27, 12:31N-12:33, 14:15, 14:73
4	195 bp	430 bp	*08:03:02-08:03:03, 08:10, 08:12, 08:14- 08:15, 08:18-08:19, 08:23, 08:25, 08:27, 08:29-08:30:03, 08:32- 08:38, 08:40, 08:45- 08:47, 08:49	*12:01:01-12:01:04, 12:03:02-12:06, 12:08- 12:11, 12:14, 12:17, 12:22, 12:24N-12:25, 12:28-12:30, 12:34-12:35, 13:17, 13:116
5 ⁶	225 bp	515 bp	*08:01:01-08:04:07, 08:06-08:13, 08:15- 08:17, 08:19-08:20, 08:22-08:23, 08:26- 08:28, 08:30:01- 08:30:03, 08:32-08:39, 08:42, 08:44-08:46, 08:48-08:49	*11:23, 11:25, 11:45, 11:55, 11:64, 11:67, 11:119, 13:13, 13:18, 13:47, 13:55, 13:119, 14:03:01-14:03:02, 14:12:01-14:12:02, 14:15, 14:27, 14:40, 14:55, 14:63, 14:67, 14:77-14:78, 14:84-14:85, 14:89, 14:102, 14:115-14:116

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Lot No.	: 18N		Lot-specific information	
6	215 bp	430 bp	*08:05, 08:18, 08:24- 08:25, 08:31, 08:40- 08:41, 08:47	*12:01:01-12:21, 12:23- 12:35, 13:17, 13:116, 14:31, 14:52
7	250 bp	430 bp	*08:01:01-08:03:03, 08:05, 08:07-08:09, 08:11, 08:13-08:19, 08:21, 08:23-08:27, 08:29-08:30:03, 08:32- 08:49	*12:16, 12:22, 14:68, 14:93
8	250 bp	430 bp	*08:04:01-08:04:07, 08:06, 08:10, 08:12, 08:22, 08:28, 08:31	*11:67, 12:01:01-12:15, 12:17-12:21, 12:23-12:35, 13:17, 13:116, 14:04, 14:11, 14:15, 14:28, 14:31, 14:50, 14:52, 14:71, 14:73, 14:76, 14:79, 14:107, 14:120
9	150 bp	430 bp	*08:09, 08:21, 08:35	*14:15, 14:40, 14:55, 14:77, 14:84
10 ⁷	205 bp, 250 bp	515 bp	*08:12, 08:22, 08:40	*12:01:01-12:02:05, 12:04- 12:15, 12:17-12:18, 12:20- 12:21, 12:23-12:35, 13:17, 13:116, 14:28
11	170 bp	515 bp	*08:08, 08:15, 08:31, 08:41	*11:67, 12:04, 14:04, 14:11, 14:28, 14:31, 14:50, 14:68, 14:71, 14:73, 14:76, 14:79, 14:93, 14:107, 14:120
12 ^{5,8}	95 bp, 145 bp, 195 bp	430 bp	*08:13, 08:27, 08:44, 08:48	*12:12
13 ⁹	135 bp, 165 bp, 260 bp	430 bp	*08:11, 08:33, 08:39	
14	135 bp	430 bp	*08:17, 08:28, 08:37, 08:45	*11:67, 12:01:01-12:20, 12:22-12:35, 13:17
15	175 bp	430 bp	*08:19, 08:25, 08:34, 08:49	*12:01:01-12:03:02, 12:05- 12:08, 12:10-12:17, 12:19- 12:32, 12:34-12:35
16 ⁵	70 bp	430 bp	*08:03:02-08:03:03, 08:10, 08:12, 08:14, 08:18-08:19, 08:23, 08:27, 08:29, 08:32- 08:33, 08:35-08:38, 08:40, 08:46-08:47, 08:49	*04:12, 04:86, 04:106, 07:12, 13:03:01-13:04, 13:12:01-13:13, 13:30, 13:32-13:33:03, 13:38, 13:48, 13:58, 13:66:02, 13:81, 13:89, 13:93-13:95, 13:101, 13:115, 13:118, 13:120, 13:122, 14:63, 14:78

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Lot No.	: 18N		Lot-specific information	
17 ^{5,10}	75 bp, 175 bp	430 bp	*08:04:01, 08:04:02 ^w - 08:04:03 ^w , 08:04:04- 08:04:07, 08:06, 08:10, 08:12, 08:14, 08:20, 08:22, 08:28	*04:12, 04:18, 04:25, 04:58, 11:25, 11:67, 11:119, 13:18, 14:12:01-14:12:02, 14:15, 14:78, 14:84, 15:21
18 ¹¹	150 bp, 225 bp	430 bp	*08:20, 08:32	*11:23, 11:25, 11:45, 11:55, 11:64, 11:119, 13:13, 13:18, 13:47, 13:55, 13:119, 14:03:01-14:03:02, 14:12:01-14:12:02, 14:27, 14:40, 14:55, 14:63, 14:67, 14:77-14:78, 14:84-14:85, 14:89, 14:102, 14:115-14:116
19 ^{5,12}	100 bp, 165 bp, 180 bp	515 bp	*08:07, 08:16, 08:38, 08:49	
20 ⁵	125 bp	515 bp	*08:06, 08:10, 08:12, 08:22	*03:12, 04:10:01-04:12, 04:67, 04:91, 13:04, 13:32, 13:48, 13:58, 13:75, 13:81, 13:89, 13:93-13:94, 13:108, 14:65, 14:78, 15:12
21 ⁵	120 bp	515 bp	*08:17, 08:28, 08:37, 08:45	*11:23, 11:25, 11:45, 11:55, 11:64, 11:67, 11:119, 13:18, 13:119, 15:21
22 ¹³	130 bp, 165 bp, 215 bp	430 bp	*08:19, 08:23, 08:29	*14:04, 14:11, 14:28, 14:68, 14:71, 14:73, 14:93, 14:120
23	250 bp	430 bp	*08:04:01, 08:04:02 ^w -08:04:03 ^w , 08:04:04-08:04:07, 08:06, 08:10, 08:28, 08:31	*11:67, 12:03:02, 12:19, 13:17, 13:116, 14:04, 14:11, 14:15, 14:31, 14:50, 14:52, 14:73, 14:76, 14:79, 14:107, 14:120
24 ^{5,14}	125 bp, 175 bp	430 bp	*08:14, 08:26, 08:35- 08:36	*03:12, 13:32, 13:65, 13:93, 13:120, 14:13, 14:63, 14:65, 14:78, 14:85

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 DRB1*08SSP 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.



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Lot No.: 18N

Lot-specific information

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

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

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*08 subtyping.

In addition, wells number 5, 10, 11 and 19 to 21 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 and fourth 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 within the DR52 group of DRB1 alleles, non-DRB1*08 alleles are amplified by primer mixes 2 to 12, 14 to 18 and 20 to 24.

The DRB1*08:20 and DRB1*14:12:01-14:12:02 give rise to identical amplification patterns with the DRB1*08 subtyping kit. These alleles can be distinguished by e.g. the DR low resolution kit and/or the DRB1*14 subtyping kit.

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

⁶Primer mixes 2 and 5 may give rise to nonspecific amplifications.

⁷Primer mix 10: Specific PCR fragment of 205 bp in the DRB1*08:40 and in the DRB1*13:17 and 13:116 alleles. Specific PCR fragment of 250 bp in the DRB1*08:12 and 08:22 and in the DRB1*12:01:01-12:02:05, 12:04-12:15, 12:17-12:18, 12:20-12:21, 12:23-12:35 and 14:28 alleles.

⁸Primer mix 12: Specific PCR fragment of 95 bp in the DRB1*08:27 allele. Specific PCR fragment of 145 bp in the DRB1 *08:44 allele. Specific PCR fragment of 195 bp in the DRB1 08:13 and 08:48 and in the DRB1*12:12 alleles.

⁹Primer mix 13: Specific PCR fragment of 135 bp in the DRB1*08:33 allele. Specific PCR fragment of 165 bp in the DRB1*08:11 allele. Specific PCR fragment of 260 bp in the DRB1*08:39 allele.

¹⁰Primer mix 17: Specific PCR fragment of 75 bp in the DRB1*08:04:01, 08:04:02w-08:04:03w, 08:04:04-08:04:07, 08:06, 08:10, 08:12, 08:20, 08:22 and 08:28 and in the DRB1*04:12, 04:18, 04:25, 04:58, 11:25, 11:67, 11:119, 13:18, 14:12:01-14:12:02, 14:15, 14:78, 14:84 and 15:21 alleles. Specific PCR fragment of 175 bp in the DRB1*08:14 allele.

¹¹Primer mix 18: Specific PCR fragment of 150 bp in the DRB1*08:32 allele. Specific PCR fragment of 225 bp in the DRB1*08:20 and in the DRB1*11:23, 11:25, 11:45, 11:55, 11:64, 11:119, 13:13, 13:18, 13:47, 13:55, 13:119, 14:03:01-14:03:02, 14:12:01-14:12:02, 14:27, 14:40, 14:55, 14:63, 14:67, 14:77-14:78, 14:84-14:85, 14:89, 14:102 and 14:115-14:116 alleles.

¹²Primer mix 19: Specific PCR fragment of 100 bp in the DRB1*08:16 and 08:38 alleles. Specific PCR fragment of 165 bp in the DRB1*08:07 allele. Specific PCR fragment of 180 bp in the DRB1*08:49 allele.

¹³Primer mix 22: Specific PCR fragment of 130 bp in the DRB1*08:23 allele. Specific PCR fragment of 165 bp in the DRB1*08:19 allele. Specific PCR fragment of 215 bp in the DRB1*08:29 and in the DRB1*14:04, 14:11, 14:28, 14:68, 14:71, 14:73, 14:93 and 14:120 alleles.

¹⁴Primer mix 24: Specific PCR fragment of 125 bp in the DRB1*08:26, 08:35 and 08:36 and in the DRB1*03:12, 13:32, 13:65, 13:93, 13:120, 14:13, 14:63, 14:65, 14:78 and 14:85 alleles. Specific PCR fragment of 175 bp in the DRB1*08:14 allele.

'w', may be weakly amplified.

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	ot-spe											
INTER												
DRB							4.5					
Amplification patter	ns of	the	DRB	1*08	:01 t			llele	S			
Well ⁷												
Lawrite of an ac	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec.	165	165	195	195	225	215	250	250	150	205 250	170	95 145
PCR product(s)										230		195
Length of int.	515	430	430	430	515	430	430	430	430	515	515	430
pos. control ¹												
	16(133)	16(133)	16(133)	16(133)	12(122)	16(133)	16(133)	16(133)	37(197)	16(133)	16(133)	133)
5'-primer(s) ²		_			12(16(16(16(16(`	16(
	-gTT ³	-gTT ³'	-gTT ³'	-gTT ³'	-TAC 3'	-gTT ³⁻	-gTT ³'	-gTT ³'	-gTT ³'	-gTT ³'	-gTT ³'	^{5'} -gTT ^{3'} 16(133)
	.s.		- G	G	'L' .s	G	G		G	ري اح	- G	9
3'-primer(s) ³	57(256)	57(257)	67(286)	67(286)	74(307)	74(307)	86(344)	86(344)	74(307)	71(299)	58(261)	34(188)
3 -primer(s)					74(74	98	98	74(7	. 28(8
	-gCT ³	CAT 3'	-gAA ³	-gAT ³'	-CAg 3'	.cgc ³	.cAC 3.	·ccA ³	-CAg ³	-gCT ³	-TCC 3"	·cTC ³
	5Q	້ທີ	ر رو رو	ດ້	٠.	i _o	۲	io.	٠, -	īo.	ດັ	
		57(257)		67(286)				86(344)		85(341)	58(261)	51(239) 5'
				. 67(98		85(. 28(51(
		58(261) ^{5'} -CAT ^{3'}		-gAT ³'				-CAA 3.		-CAg ³'	-TCC 3.	67(286) ^{5'} -CCA ^{3'}
)- -2.		 D				۶		۶.	5T	٥
		(261)										(286)
		3. 58										. 67
		-TCA 3										-gAg ³
		s										ر. اح
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

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	Lot No.: 18N Lot-specific information INTERPRETATION TABLE											
	DRB1*08 SSP subtyping											
				۱mnl	ificat							8:01 to 08:49 alleles
				шрп		ell ⁷	Jane	1113	,, (110		J 1 0	
13	14	15	16	17	18	19	20	21	22	23	24	
135		175	70	75	150	100	125	120	130	250	125	Length of spec.
165				175	225	165			165		175	PCR product(s)
260						180			215			
430	430	430	430	430	430	515	515	515	430	430	430	Length of int.
												pos. control ¹
16(133)	16(133)	16(133)	57(258)	12(122)	13(125)	16(133)	57(258)	47(227)	16(133)	16(133)	12(122)	5'-primer(s) ²
^{5.} -gтт ^{3.}	^{5'} -gTT ^{3'}	^{5′} -gTT ³′	5' -AgC 3'	^{5'} -TAg ^{3'}	^{5'} -gTC ^{3'}	5' -gTT 3'	^{5'} -AgC ^{3'}	^{5′} -gTT ³′	^{5'} -gTT ^{3'}	^{5′} -gTT ³′	25(161) ^{5'} -TAg ^{3'}	
				74(308)	37(196)							
				5 -сст 3	5 -AgC 3'						32(181) ^{5'} -gCT ^{3'}	
											32(181)	
											^{5.} -тсс ^{3.}	
48(229)	47(227)	57(257)	67(286)	57(256)	74(307)	33(184)	86(344)	74(307)	45(220)	85(341)	57(256)	3'-primer(s) ³
' -CCA ^{3'} 48(229)	^{5'} -ggA ^{3'}	5' -CgA 3'	5' -gAT 3'	^{5'} -gСТ ^{3'}	5' -CAg 3'	5' -gTg 3'	5' -CCA 3'	^{5'} -CAg ^{3'}	5' -ССТ 3'	^{5'} -CAA ^{3'}	^{5'} -gСТ ^{3'}	
57(257) ^{5'}		61(270)	67(286)	86(344)		37(196)			57(256)	.,		
88(350) ^{5'} -CAg ^{3'}		^{5′} -TTg ^{3′}	5' -gAT 3'	5' -CCA 3'		57(257) ^{5'} -gTC ^{3'}			5' -gAT 3'			
88(350)									74(308)			
^{5'} -АgТ ^{3'}						61(270) ^{5'} -CAA ^{3'}			5' -ССТ ³'			
						61(270) [†]						
						5' -TTg 3'						
13	14	15	16	17	18	19	20	21	22	23	24	Well No.

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	165		195	105		215	250	250	150	205	170	95
Length of spec.	103	103	193	193	223	213	230	230	130	250	170	145
PCR product(s)										250		195
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
DRB1 allele ^{4,5}	i i	_					•				••	
* 08:01:01 -08:01:05	1		3		5		7					
* 08:02:01 -08:02:04, 08:42	•	2	3		5		7					
* 08:03:02 -08:03:03, 08:46	1		3	4	5		7					
* 08:04:01 , 08:04:04-08:04:07	•	2	3	7	5		•	8				
* 08:04:02 -08:04:03		2	3		5			8				
*08:05	1		3		<u> </u>	6	7					
*08:06	1		3		5		-	8				
*08:07	•		3		5		7					
*08:08			3		5		7				11	
*08:09		2	3		5		7		9		•••	
*08:10	1	_		4	5		-	8				
*08:11	·		3	-	5		7					
*08:12	1			4	5		-	8		10		
*08:13	-	2		-	5		7					12
*08:14	1			4			7					
*08:15	-			4	5		7				11	
*08:16	1		3	-	5		7					
*08:17	1		3		5		7					
*08:18 , 08:47	1			4		6	7					
*08:19				4	5		7					
*08:20, 14:12:01-14:12:02 ⁶					5							
*08:21		2	3				7		9			
*08:22	1		3		5			8		10		
*08:23	1			4	5		7					
*08:24		2	3			6	7					
*08:25				4		6	7					
*08:26	1		3		5		7					
*08:27	1			4	5		7					12
*08:28		2	3		5			8				
*08:29	1			4			7					
*08:30:01-08:30:03		2		4	5		7					
*08:31			3			6		8			11	
*08:32	1			4	5		7					
*08:33	1			4	5		7					
*08:34				4	5		7					
*08:35	1			4	5		7		9			
*08:36	1			4	5		7					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

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Lot No.: 18N Lot-specific information

135	135	175	70	75	150	100	125	120	130			Length of spec.
165	100	.,,		175		165	120	120	165	200	175	PCR product(s)
260				173	ZZJ	180			215		173	i ch product(s)
13	14	15	16	17	18	19	20	21	22	23	24	Well No.
13	17	13	10	17	10	13	20	4 1		23	47	DRB1 allele ^{4,5}
												* 08:01:01 -08:01:05
												* 08:02:01- 08:02:04, 08:42
			16									* 08:03:02- 08:03:03, 08:46
			10	17						23		* 08:04:01 , 08:04:04-08:04:07
												* 08:04:02- 08:04:03
				W						W		*08:05
				17			20			23		*08:06
				17		40	20			23		
						19						*08:07
												*08:08
			46	47			20			22		*08:09
13			16	17			20			23		*08:10
13			46	17			20					*08:11
			16	17			20					*08:12
			40	47							0.4	*08:13
			16	17							24	*08:14
						40						*08:15
	4.4					19		24				*08:16
	14		40					21				*08:17
		4 -	16						00			* 08:18 , 08:47
		15	16	47	40				22			*08:19
				17	18							*08:20, 14:12:01-14:12:02 ⁶
				4-			00					*08:21
				17			20					*08:22
			16						22			*08:23
												*08:24
		15										*08:25
											24	*08:26
			16	4-								*08:27
	14			17				21		23		*08:28
			16						22			*08:29
												*08:30:01-08:30:03
										23		*08:31
			16		18							*08:32
13			16									*08:33
		15										*08:34
			16								24	*08:35
		. =	16								24	*08:36
13	14	15	16	17	18	19	20	21	22	23	24	Well No.

February 2012 Rev. No.: 00

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Length of spec.	165	165	195	195	225	215	250	250	150	205	170	95
PCR product(s)										250		145
												195
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*08:37	1			4	5		7					
*08:38	1			4	5		7					
*08:39	1		3		5		7					
*08:40	1			4		6	7			10		
*08:41			3			6	7				11	
*08:43	1		3				7					
*08:44		2	3		5		7					12
*08:45		2		4	5		7					
*08:48	1				5		7					12
*08:49	1			4	5		7					
*03:12, 14:65												
*04:10:01-04:11, 04:67, 04:91, 13:75,												
13:108, 15:12												
*04:12												
*04:18, 04:25, 04:58												
*04:86, 04:106, 07:12, 13:03:01-												
13:03:06, 13:12:01-13:12:02, 13:30,												
13:33:01-13:33:03, 13:38, 13:66:01-												
13:66:02, 13:95, 13:101, 13:115,												
13:118, 13:122												
*11:23, 11:45, 11:55, 11:64, 13:119					5							
*11:25, 11:119, 13:18					5							
*11:67			3		5			8			11	
*12:01:01-12:01:04, 12:05-12:06,												
12:08, 12:10-12:11, 12:14, 12:17,				4		6		8		10		
12:24N-12:25, 12:28-12:30, 12:34-				7		J		J		10		
12:35												
*12:02:01-12:02:05, 12:13, 12:15,												
12:20, 12:23, 12:26-12:27, 12:31N-			3			6		8		10		
12:32				_		_		_				
*12:03:02				4		6		8				
*12:04				4		6		8		10	11	
*12:07						6		8		10		
*12:09		2		4		6		8		10		
*12:12						6		8		10		12
*12:16			3			6	7					
*12:18, 12:33			3			6		8		10		
*12:19			3			6		8				
*12:21			3			6		8		10		
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

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135	135	175	70	75	150	100	125	120	130			Length of spec.
165				175		165			165		175	PCR product(s)
260				170		180			215			1 On product(s)
13	14	15	16	17	18	19	20	21	22	23	24	Well No.
10	14	10	16	1,	10	10		21				*08:37
			16			19						*08:38
13			10			13						*08:39
13			16									*08:40
			-10									*08:41
												*08:43
												*08:44
	14							21				*08:45
	17											*08:48
		15	16			19						*08:49
		13	10			13	20				24	*03:12, 14:65
											4	*04:10:01-04:11, 04:67, 04:91, 13:75,
							20					13:108, 15:12
			16	17			20					*04:12
			. •	17								*04:18, 04:25, 04:58
												*04:86, 04:106, 07:12, 13:03:01-
												13:03:06, 13:12:01-13:12:02, 13:30,
			16									13:33:01-13:33:03, 13:38, 13:66:01-
												13:66:02, 13:95, 13:101, 13:115,
												13:118, 13:122
					18			21				*11:23, 11:45, 11:55, 11:64, 13:119
				17	18			21				*11:25, 11:119, 13:18
	14			17				21		23		*11:67
												*12:01:01-12:01:04, 12:05-12:06,
	14	15										12:08, 12:10-12:11, 12:14, 12:17,
		15										12:24N-12:25, 12:28-12:30, 12:34-
												12:35
												*12:02:01-12:02:05, 12:13, 12:15,
	14	15										12:20, 12:23, 12:26-12:27, 12:31N-
	4.4	4 -								00		12:32
	14	15								23		*12:03:02
	14	4 -										*12:04
	14	15										*12:07
	14	4-										*12:09
	14	15										*12:12
	14	15										*12:16
	14	4=										*12:18, 12:33
	14	15								23		*12:19
4.5	4 .	15		4-	4.5	4.5		64			0.1	*12:21
13	14	15	16	17	18	19	20	21	22	23	24	Well No.

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Length of spec.	165	165	195	195	225	215	250	250	150	205	170	95
PCR product(s)										250		145
												195
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
*12:22				4			7					
*13:04, 13:48, 13:58, 13:81, 13:89,												
13:94												
*13:13					5							
*13:17		2		4		6		8		10		
*13:32, 13:93												
*13:47, 13:55, 14:03:01-14:03:02,												
14:27, 14:67, 14:89, 14:102, 14:115-					5							
14:116												
*13:65, 13:120												
*13:116		2		4		6		8		10		
*14:04, 14:11, 14:120								8			11	
*14:13												
*14:15		2	3		5			8	9			
*14:28								8		10	11	
*14:31						6		8			11	
*14:40, 14:55, 14:77					5				9			
*14:50, 14:76, 14:79, 14:107								8			11	
*14:52		2				6		8				
*14:63					5							
*14:68, 14:93							7				11	
*14:71								8			11	
*14:73			3					8			11	
*14:78					5							
*14:84					5				9			
*14:85					5							
*15:21												
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

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*08 subtyping.

In addition, wells number 5, 10, 11 and 19 to 21 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.

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		-										1
135	135	175	70	75	150		125	120	130	250		Length of spec.
165				175	225				165		175	PCR product(s)
260						180			215			
13	14	15	16	17	18	19	20	21	22	23	24	Well No.
	14	15										*12:22
			16				20					*13:04, 13:48, 13:58, 13:81, 13:89,
			10				20					13:94
			16		18							*13:13
	14									23		*13:17
			16				20				24	*13:32, 13:93
												*13:47, 13:55, 14:03:01-14:03:02,
					18							14:27, 14:67, 14:89, 14:102, 14:115-
												14:116
			16								24	*13:65, 13:120
										23		*13:116
									22	23		*14:04, 14:11, 14:120
											24	*14:13
				17						23		*14:15
									22			*14:28
										23		*14:31
					18							*14:40, 14:55, 14:77
										23		*14:50, 14:76, 14:79, 14:107
										23		*14:52
			16		18						24	*14:63
									22			*14:68, 14:93
									22			*14:71
									22	23		*14:73
			16	17	18		20				24	*14:78
				17	18							*14:84
					18						24	*14:85
				17				21				*15:21
13	14	15	16	17	18	19	20	21	22	23	24	Well No.

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.

⁴The sequence of the DRB1*080301 allele has been shown to be identical to DRB1*08:03:02.

⁵DRB1*08 alleles in bold lettering are listed as confirmed alleles on the on the IMGT/HLA web page www.ebi.ac.uk/imgt/hla, release 3.7.0, January 2012.
⁶The DRB1*08:20 and DRB1*14:12:01-14:12:02 give rise to identical amplification patterns with

⁶The DRB1*08:20 and DRB1*14:12:01-14:12:02 give rise to identical amplification patterns with the DRB1*08 subtyping kit. These two alleles can be distinguished by the DR low resolution kit and/or the DRB1*14 subtyping kit.

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Lot No.: 18N

Lot-specific information

⁷Primer mix 10: Specific PCR fragment of 205 bp in the DRB1*08:40 and in the DRB1*13:17 and 13:116 alleles. Specific PCR fragment of 250 bp in the DRB1*08:12 and 08:22 and in the DRB1*12:01:01-12:02:05, 12:04-12:15, 12:17-12:18, 12:20-12:21, 12:23-12:35 and 14:28 alleles. Primer mix 12: Specific PCR fragment of 95 bp in the DRB1*08:27 allele. Specific PCR fragment of 145 bp in the DRB1 *08:44 allele. Specific PCR fragment of 195 bp in the DRB1 08:13 and 08:48 and in the DRB1*12:12 alleles.

Primer mix 13: Specific PCR fragment of 135 bp in the DRB1*08:33 allele. Specific PCR fragment of 165 bp in the DRB1*08:11 allele. Specific PCR fragment of 260 bp in the DRB1*08:39 allele. Primer mix 17: Specific PCR fragment of 75 bp in the DRB1*08:04:01, 08:04:02w-08:04:03w, 08:04:04-08:04:07, 08:06, 08:10, 08:12, 08:20, 08:22 and 08:28 and in the DRB1*04:12, 04:18, 04:25, 04:58, 11:25, 11:67, 11:119, 13:18, 14:12:01-14:12:02, 14:15, 14:78, 14:84 and 15:21 alleles. Specific PCR fragment of 175 bp in the DRB1*08:14 allele.

Primer mix 18: Specific PCR fragment of 150 bp in the DRB1*08:32 allele. Specific PCR fragment of 225 bp in the DRB1*08:20 and in the DRB1*11:23, 11:25, 11:45, 11:55, 11:64, 11:119, 13:13, 13:18, 13:47, 13:55, 13:119, 14:03:01-14:03:02, 14:12:01-14:12:02, 14:27, 14:40, 14:55, 14:63, 14:67, 14:77-14:78, 14:84-14:85, 14:89, 14:102 and 14:115-14:116 alleles.

Primer mix 19: Specific PCR fragment of 100 bp in the DRB1*08:16 and 08:38 alleles. Specific PCR fragment of 165 bp in the DRB1*08:07 allele. Specific PCR fragment of 180 bp in the DRB1*08:49 allele.

Primer mix 22: Specific PCR fragment of 130 bp in the DRB1*08:23 allele. Specific PCR fragment of 165 bp in the DRB1*08:19 allele. Specific PCR fragment of 215 bp in the DRB1*08:29 and in the DRB1*14:04, 14:11, 14:28, 14:68, 14:71, 14:73, 14:93 and 14:120 alleles.

Primer mix 24: Specific PCR fragment of 125 bp in the DRB1*08:26, 08:35 and 08:36 and in the DRB1*03:12, 13:32, 13:65, 13:93, 13:120, 14:13, 14:63, 14:65, 14:78 and 14:85 alleles. Specific PCR fragment of 175 bp in the DRB1*08:14 allele.

'w', may be weakly amplified.

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CELL LINE VALIDATION SHEET																				
			DRE	31*08 S	S	S	ub	typ	oin	g l	kit									
												W	ell							
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
					_	ر د	8	4	10	0	_	3	6	0	_	~	3	4	2	9
				 0	201079101	201295602	201079103	201079104	201079105	201079106	107	201079108	201079109	201079110	201079111	201295612	201079113	201079114	991	201079116
				7	075	295	075	075	075	970	075	075	320	075	3/0	295	075	970	295	075
				Prod. No.	201	2	20	201	201	20	2010791	201	201	201	201	201	201	201	20129561	201
	IΗW	/C cell line	DE	RB1	- (1	.,	.,	.4	. 4	.,	.,	.,		.,	.4	.,	.4	.4	.,	.,
1	9001		*01:01	(D)	-	-	-	_	_	_	-	-	-	-	-	-	-	_	-	-
2		LK707	*15:02	*04:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3		E4181324	*15:02	000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*04:07	*08:03	+	-	-	+	+	-	+	-	-	-	-	-	-	-	-	+
7	9020		*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025		*04:01		-	-	-	-	-	-	-	-	<u> </u>	-	-	-	-	-	-	-
9		YAR	*04:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3 *04:05																			
11 12																				
13		JESTHOM	*07:01 *01:01		-	-	-	-	-	-	÷		-	-	-	-	-	-	-	-
14		OLGA	*08:02			+	+	-	+	-	+		-	-	-	-	-	-		-
15	9075		*09:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16		SWEIG007	*11:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17		CTM3953540	*03:01	*13:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		32367	*09:01	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*12:01		-	-	-	+	-	+	-	+	-	+	-	-	-	+	+	-
20	9059	SLE005	*13:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*14:02		•	-	-	-	-	-	-	-	٠	-	-	-	-	-	-	
22		KOSE	*13:02	*14:54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124		*08:03	*14:14	+	-	-	+	+	-	+	-	-	-	-	-	-	-	-	+
24		JBUSH	*11:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25		IBW9	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 27		WT49	*03:01	*10:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28		CH1007 BEL5GB	*04:05 *04:16	*07:01	-	-		-	-	-	÷		-		-	-	-	-	÷	-
29		MOU	*07:01	07.01	_	-		-	-	-			-	-	-	-	-	-		-
30	9021		*03:02		-	-	-	-	_	-	-	-	-	-	-	-	-	-	-	-
31		DUCAF	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32		HAG	*13:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
33		MT14B	*04:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*11:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35		SSTO	*04:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36		KT17	*04:03	*04:06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37		HHKB	*13:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099		*14:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315		*03:01	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40		WHONP199	*07:01	*09:01	-	-	-	-	-	-	-	-	<u> </u>	-	-	-	-	-	-	-
41 42		H0301	*13:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_
42		TAB089 T7526	*08:03 *09:01		+	-	-	+	+	-	+	-		-	-	-	-	-	÷	+
44	9057		*14:01		-	-		-	-	-			-	-	-	-	-	-		-
45		SHJO	*07:01		-	-	-	-	-	-		-	-	-	-	-	-	-	-	-
46		SCHU	*15:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47		TUBO	*11:04	*12:01	-	-	-	+	-	+	-	+	-	+	-	-	-	+	+	-
48		TER-ND	*01:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Lot No.: 18N Lot-specific information

	CELL LINE VALIDATION SHEET											
		DRB1*0	8 SSP	subty	pin	g I	kit					
								W	ell			
					17	18	19	20	21	22	23	24
										۵.		_
				.:	201079117	201079118	201295619	201079120	201079121	201079122	201079123	201079124
				Prod. No.	62	62	32	62	139	62	79	62
				9	150	5	7	5	5	5	5	5
					2	8	×	×	×	7	8	×
		C cell line	DF	RB1								
1	9001		*01:01		-	-	-	-	-	-	-	-
2		LK707	*15:02	*04:05	-	-	-	-	-	-	-	-
3		E4181324	*15:02		-	-	-	-	-	-	-	-
4		GU373	*03:01		-	-	-	-	-	-	-	-
5		KAS011	*16:01		-	-	-	-	-	-	-	-
6	9353		*04:07	*08:03	-	-	-	-	-	-	-	-
7	9020		*03:01		-	-	-	-	-	-	-	-
8	9025		*04:01		-	-	-	-	-	-	-	-
9		YAR	*04:02		-	-	-	-	-	-	-	-
10		LKT3	*04:05		-	-	-	-	-	-	-	-
11		PITOUT	*07:01		-	-	-	-	-	-	-	-
12	9052		*07:01		-	-	-	-	-	-	_	-
13		JESTHOM	*01:01		-	-	-	-	-	-	-	-
14		OLGA	*08:02		-	-	-	-	-	-	-	-
15	9075		*09:01		-	-	-	-	-	-	-	-
16		SWEIG007	*11:01		-	-	-	-	-	-	-	-
17		CTM3953540	*03:01	*13:01	-	-	-	-	-	-	-	-
18		32367	*09:01	*11:01	-	-	-	-	-	-	-	-
19		BM16	*12:01		-	-	-	-	-	-	-	-
20		SLE005	*13:02		-	-	-	-	-	-	-	-
21		AMALA	*14:02	***	-	-	-	-	-	-	-	-
22		KOSE	*13:02	*14:54	-	-	-	-	-	-	-	-
23	9124		*08:03	*14:14	-	-	-	-	-	-	-	-
24		JBUSH	*11:01		-	-	-	-	-	-	-	-
25		IBW9	*07:01		-	-	-	-	-	-	-	-
26		WT49 CH1007	*03:01	*40.04	-	-	-	-	-	-	-	-
27			*04:05	*10:01	-	-	-	-	-	-	-	-
28		BEL5GB	*04:16	*07:01	-	-	-	-	-	-	-	-
29	9050	MOU	*07:01		-	-	-	-	-	-	-	-
30		-	*03:02		-	-	-	-	-	-	-	-
31		DUCAF	*03:01		-	-	-	-	-	-	<u> </u>	-
32		HAG MT14B	*13:03		-	-	-	-	-	-	<u> </u>	-
33	9098		*04:04		-	-	-	-	-	-	Ė	-
34 35		SSTO	*11:01		-	-	-	-	-	-	-	-
36		KT17	*04:03	*04:06	-	-	-	-	-	-	Ė	-
37		HHKB	*13:01	04.00	-				-		÷	
38	9099		*14:02		-	-			-		÷	-
39	9099		*03:01	*04:01	-						÷	
40		WHONP199	*07:01	*09:01	-		Ë	-	-		Ë	
41		H0301	*13:02	03.01	-	-	-	-	-	-	÷	-
42		TAB089	*08:03		-	-	-	-	-	-	E	-
42		T7526	*09:01		-						÷	
43	9076		*14:01		-						÷	
45		SHJO	*07:01		-				-		÷	
46		SCHU	*15:01		-						÷	
46		TUBO	*11:04	*12:01	-						Ė	
48				12.01							Ē	
46	9 3 03	TER-ND	*01:03		-	-	_	-	-	-	_	-

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Lot No.: 18N Lot-specific information

CERTIFICATE OF ANALYSIS

Olerup SSP® DRB1*08 SSP

Product number: 101.127-12/04 – including *Taq* pol.

101.127-12u/04u - without *Tag* pol.

Lot number: 18N

Expiry date: 2014-August-01

Number of tests: 12 tests – Product No. 101.127-12/12u

4 tests - Product No. 101.127-04/04u

Number of wells per test: 24

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2010-791-01	9	2010-791-09	17	2010-791-17
2	2012-956-02	10	2010-791-10	18	2010-791-18
3	2010-791-03	11	2010-791-11	19	2012-956-19
4	2010-791-04	12	2012-956-12	20	2010-791-20
5	2010-791-05	13	2010-791-13	21	2010-791-21
6	2010-791-06	14	2010-791-14	22	2010-791-22
7	2010-791-07	15	2012-956-15	23	2010-791-23
8	2010-791-08	16	2010-791-16	24	2010-791-24

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 No. 9, 12, 21 and 24 were available. The specificities of the primers in primer solutions 9, 21 and 24 were tested by separately adding one additional 5'-primer, respectively, one additional 3'-primer. In primer solution 12 it was only possible to test the 5'-primer, the 3'-primers were not possible to test. In primer solutions 2, 8, 13, 15, 19 and 22 one or two 3'-primers were not possible to test, and in primer solution 17 and 24 one or two 5'-primers were not possible to test. Additional primers in primer solutions 2, 10, 11 and 17 to 19 were tested by separately adding one additional 5'-primer or 3'-primer.

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

Date of approval: 2012-February-10

Approved by:

Production Quality Control



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Lot No.: 18N Lot-specific information

Declaration of Conformity

Product name: Olerup SSP® DRB1*08 **Product number:** 101.127-12/04, -12u/04u

Lot number: 18N

Intended use: DRB1*08 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.

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 2012-February-10

Ann-Cathrin Jareman Head of QA and Regulatory Affairs

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Lot No.: 18N Lot-specif

Lot-specific information



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Lot No.: 18N Lot-specific information

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