

101.115-24/03 – including *Taq* polymerase, IFU-01
101.115-24u/03u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for
“Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

Olerup SSP[®] DRB1*11

Product number:	101.115-24/03 – including <i>Taq</i> pol. 101.115-24u/03u – without <i>Taq</i> pol.
Lot number:	85S
Expiry date:	2016-April-01
Number of tests:	24 tests – Product No. 101.115-24/24u 3 tests – Product No. 101.115-03/03u
Number of wells per test:	43
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. 85S.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP[®]* DRB1*11 LOT (07R)

The DRB1*11 kit is updated to enable separation of:

- Confirmed DRB1*11 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

Three wells have been added to the DRB1*11 kit, wells **41 to 43**.

The Lot-specific information for DRB1*11 including and without *Taq* polymerase is now described in one common Product Insert.

¹As described in section Uniquely Identified Alleles.

The DRB1*11 specificity and interpretation tables have been updated for the DRB1 alleles described since the previous *Olerup SSP[®]* DRB1*11 lot was made (Lot No. 07R).

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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
3	-	Added	3'-primer added for the DRB1*11:01:18 allele.
10	Moved	Moved	Primer pair moved to well 41, for resolution of the DRB1*11:103 and DRB1*11:125 alleles.
15	Modified	-	5'-primer modified for increased yield of HLA-specific PCR product.
21	Moved	Moved	Primer pair moved to well 42, for resolution of the DRB1*11:72 and DRB1*11:142 alleles.
26	Added	-	5'-primer added for increased yield of HLA-specific PCR product.
30	Removed	Added	5'-primer removed to decrease oligomer formation, 3'-primer added for the DRB1*11:01:18 allele.
41	Added	Added, modified	Primer pair added from well 10, 3'-primer modified for increased yield of HLA-specific PCR product.
42	Added	Added	Primer pair added from well 21.
43	New	New	New primer pair for the DRB1*11:137 allele.

Change in revision R01 compared to R00:

1. Primer mix 5 amplifies the DRB1*11:73, 11:79, 11:93, 11:131 and 11:132 and the DRB1*04:145 alleles. This has been corrected in the Specificity and Interpretation tables.

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PRODUCT DESCRIPTION

DRB1*11 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the DRB1*11:01 to DRB1*11:147 alleles.

PLATE LAYOUT

Each test consists of 43 PCR reactions in a 48 well cut PCR plate. Wells 44 to 48 are empty

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

The 48 well cut PCR plate is marked with 'DRB1*11', in silver/gray ink.

Well No. 1 is marked with the Lot No. '85S'.

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

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

Please note: When removing each 32 well PCR plate, make sure that the remaining plates stay sealed. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

INTERPRETATION

The interpretation of DRB1*11 PCR-SSP subtypings will be influenced by seven DRB1*01 alleles, several DRB1*03, several DRB1*04, most DRB1*07, several DRB1*08, the DRB1*12, most DRB1*13, several DRB1*14, several DRB1*15 and seven DRB1*16 alleles, when present on the other haplotype. In addition, the DRB3*01:14 allele is amplified by primer mixes 14, 16 and 40, the DRB3*02:11, DRB5*01:07, DRB5*01:11 and DRB5*02:03 alleles are amplified by primer mix 29, the DRB3*02:18 allele is amplified by primer mixes 7, 12, 18, 25 and 41 and the DRB5*01:13 allele is amplified by primer mixes 3, 5 and 7.

UNIQUELY IDENTIFIED ALLELES

All the phenotypically different DRB1*11 alleles, i.e. **DRB1*11:01 to DRB1*11:147**, recognized by the HLA Nomenclature Committee in July 2013¹ will be amplified by the primers in the DRB1*11 subtyping kit.

The DRB1*11 kit enables separation of the confirmed DRB1*11 alleles as listed in the IMGT/HLA database. An HLA allele is listed as confirmed by IMGT/HLA if it

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has been sequenced by more than a single laboratory or from multiple sources.
Current allele confirmation status for DRB1*11 alleles is listed below.

The DRB1*11 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*11 subtyping kit cannot distinguish the silent mutations in the DRB1*11:01:01-11:01:11 and 11:01:13-11:01:18, 11:02:01-11:02:02, 11:04:01-11:04:03 and 11:04:05-11:04:11, 11:06:01-11:06:03, 11:08:01-11:08:02, 11:10:01-11:10:02, 11:11:01-11:11:02, 11:13:01-11:13:02, 11:14:01-11:14:02, 11:19:01-11:19:03, 11:23:01-11:23:02, 11:27:01-11:27:03, 11:28:01-11:28:02, 11:37:01-11:37:02, 11:49:01-11:49:02, 11:54:01-11:54:02, 11:58:01-11:58:02, 11:65:01-11:65:02, 11:74:01-11:74:02, 11:84:01-11:84:03 and 11:102:01-11:102:02 alleles.

The DRB1*11:24 and 11:91 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 16.

The DRB1*11:61 and 11:90 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 12.

¹DRB1 alleles listed on the IMGT/HLA web page 2013-July-25, release 3.13.1, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 199 alleles generate 131 amplification patterns that can be combined in 8646 homozygous and heterozygous combinations. 3432 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.

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ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
DRB1*11:01:01	Confirmed	DRB1*11:14:01	Confirmed	DRB1*11:54:01	Unconfirmed	DRB1*11:99	Confirmed
DRB1*11:01:02	Confirmed	DRB1*11:14:02	Confirmed	DRB1*11:54:02	Unconfirmed	DRB1*11:100	Unconfirmed
DRB1*11:01:03	Confirmed	DRB1*11:15	Confirmed	DRB1*11:55	Unconfirmed	DRB1*11:101	Confirmed
DRB1*11:01:04	Unconfirmed	DRB1*11:16	Confirmed	DRB1*11:56	Unconfirmed	DRB1*11:102:01	Unconfirmed
DRB1*11:01:05	Confirmed	DRB1*11:17	Confirmed	DRB1*11:57	Confirmed	DRB1*11:102:02	Confirmed
DRB1*11:01:06	Unconfirmed	DRB1*11:18	Confirmed	DRB1*11:58:01	Confirmed	DRB1*11:103	Confirmed
DRB1*11:01:07	Confirmed	DRB1*11:19:01	Confirmed	DRB1*11:58:02	Confirmed	DRB1*11:104	Unconfirmed
DRB1*11:01:08	Unconfirmed	DRB1*11:19:02	Unconfirmed	DRB1*11:59	Unconfirmed	DRB1*11:105	Confirmed
DRB1*11:01:09	Confirmed	DRB1*11:19:03	Unconfirmed	DRB1*11:60	Unconfirmed	DRB1*11:106	Confirmed
DRB1*11:01:10	Confirmed	DRB1*11:20	Confirmed	DRB1*11:61	Unconfirmed	DRB1*11:107	Unconfirmed
DRB1*11:01:11	Confirmed	DRB1*11:21	Confirmed	DRB1*11:62	Unconfirmed	DRB1*11:108	Confirmed
DRB1*11:01:12	Confirmed	DRB1*11:22	Unconfirmed	DRB1*11:63	Unconfirmed	DRB1*11:109	Unconfirmed
DRB1*11:01:13	Confirmed	DRB1*11:23:01	Confirmed	DRB1*11:64	Unconfirmed	DRB1*11:110	Unconfirmed
DRB1*11:01:14	Unconfirmed	DRB1*11:23:02	Unconfirmed	DRB1*11:65:01	Confirmed	DRB1*11:111	Unconfirmed
DRB1*11:01:15	Confirmed	DRB1*11:24	Confirmed	DRB1*11:65:02	Unconfirmed	DRB1*11:112	Unconfirmed
DRB1*11:01:16	Confirmed	DRB1*11:25	Confirmed	DRB1*11:66	Confirmed	DRB1*11:113	Confirmed
DRB1*11:01:17	Unconfirmed	DRB1*11:26	Unconfirmed	DRB1*11:67	Unconfirmed	DRB1*11:114	Unconfirmed
DRB1*11:01:18	Unconfirmed	DRB1*11:27:01	Confirmed	DRB1*11:68	Unconfirmed	DRB1*11:115	Unconfirmed
DRB1*11:01:19	Unconfirmed	DRB1*11:27:02	Confirmed	DRB1*11:69	Confirmed	DRB1*11:116	Confirmed
DRB1*11:01:20	Unconfirmed	DRB1*11:27:03	Confirmed	DRB1*11:70	Unconfirmed	DRB1*11:117	Unconfirmed
DRB1*11:02:01	Confirmed	DRB1*11:28:01	Confirmed	DRB1*11:72	Confirmed	DRB1*11:118	Unconfirmed
DRB1*11:02:02	Confirmed	DRB1*11:28:02	Confirmed	DRB1*11:73	Unconfirmed	DRB1*11:119	Unconfirmed
DRB1*11:03	Confirmed	DRB1*11:29	Confirmed	DRB1*11:74:01	Confirmed	DRB1*11:120	Confirmed
DRB1*11:04:01	Confirmed	DRB1*11:30	Unconfirmed	DRB1*11:74:02	Unconfirmed	DRB1*11:121	Unconfirmed
DRB1*11:04:02	Confirmed	DRB1*11:31	Unconfirmed	DRB1*11:75	Confirmed	DRB1*11:122	Unconfirmed
DRB1*11:04:03	Unconfirmed	DRB1*11:32	Confirmed	DRB1*11:76	Confirmed	DRB1*11:123	Unconfirmed
DRB1*11:04:04	Unconfirmed	DRB1*11:33	Confirmed	DRB1*11:77	Unconfirmed	DRB1*11:124	Unconfirmed
DRB1*11:04:05	Confirmed	DRB1*11:34	Confirmed	DRB1*11:78	Confirmed	DRB1*11:125	Confirmed
DRB1*11:04:06	Unconfirmed	DRB1*11:35	Confirmed	DRB1*11:79	Unconfirmed	DRB1*11:126	Unconfirmed
DRB1*11:04:07	Unconfirmed	DRB1*11:36	Confirmed	DRB1*11:80	Unconfirmed	DRB1*11:127	Unconfirmed
DRB1*11:04:08	Unconfirmed	DRB1*11:37:01	Confirmed	DRB1*11:81	Confirmed	DRB1*11:128	Unconfirmed
DRB1*11:04:09	Unconfirmed	DRB1*11:37:02	Confirmed	DRB1*11:82	Unconfirmed	DRB1*11:129	Unconfirmed
DRB1*11:04:10	Unconfirmed	DRB1*11:38	Unconfirmed	DRB1*11:83	Confirmed	DRB1*11:130	Unconfirmed
DRB1*11:04:11	Confirmed	DRB1*11:39	Confirmed	DRB1*11:84:01	Confirmed	DRB1*11:131	Unconfirmed
DRB1*11:05	Confirmed	DRB1*11:40	Unconfirmed	DRB1*11:84:02	Confirmed	DRB1*11:132	Unconfirmed
DRB1*11:06:01	Confirmed	DRB1*11:41	Confirmed	DRB1*11:84:03	Unconfirmed	DRB1*11:133	Unconfirmed
DRB1*11:06:02	Confirmed	DRB1*11:42	Unconfirmed	DRB1*11:85	Unconfirmed	DRB1*11:134	Unconfirmed
DRB1*11:06:03	Unconfirmed	DRB1*11:43	Confirmed	DRB1*11:86	Unconfirmed	DRB1*11:135	Unconfirmed
DRB1*11:07	Confirmed	DRB1*11:44	Unconfirmed	DRB1*11:87	Confirmed	DRB1*11:136	Unconfirmed
DRB1*11:08:01	Confirmed	DRB1*11:45	Confirmed	DRB1*11:88	Unconfirmed	DRB1*11:137	Confirmed
DRB1*11:08:02	Confirmed	DRB1*11:46:01	Confirmed	DRB1*11:89	Unconfirmed	DRB1*11:138	Unconfirmed
DRB1*11:09	Confirmed	DRB1*11:46:02	Unconfirmed	DRB1*11:90	Unconfirmed	DRB1*11:139	Unconfirmed
DRB1*11:10:01	Confirmed	DRB1*11:47	Confirmed	DRB1*11:91	Unconfirmed	DRB1*11:140	Unconfirmed
DRB1*11:10:02	Confirmed	DRB1*11:48	Unconfirmed	DRB1*11:92	Unconfirmed	DRB1*11:141	Unconfirmed
DRB1*11:11:01	Confirmed	DRB1*11:49:01	Confirmed	DRB1*11:93	Confirmed	DRB1*11:142	Confirmed
DRB1*11:11:02	Unconfirmed	DRB1*11:49:02	Unconfirmed	DRB1*11:94	Confirmed	DRB1*11:143	Unconfirmed
DRB1*11:12:01	Confirmed	DRB1*11:50	Unconfirmed	DRB1*11:95	Unconfirmed	DRB1*11:144	Unconfirmed
DRB1*11:12:02	Unconfirmed	DRB1*11:51	Confirmed	DRB1*11:96	Confirmed	DRB1*11:145	Unconfirmed
DRB1*11:13:01	Confirmed	DRB1*11:52	Confirmed	DRB1*11:97	Unconfirmed	DRB1*11:146	Unconfirmed
DRB1*11:13:02	Confirmed	DRB1*11:53	Unconfirmed	DRB1*11:98	Confirmed	DRB1*11:147	Unconfirmed

¹ Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2013-July-25, release 3.13.1, www.ebi.ac.uk/imgt/hla.

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SPECIFICITY TABLE

DRB1*11 SSP subtyping

Specificities and sizes of the PCR products of the 43 primer mixes used for DRB1*11 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified DRB1*11 alleles ³	Other amplified DRB alleles ⁴
1	175 bp	515 bp	*11:01:01-11:04:11, 11:06:01-11:21, 11:23:01-11:29, 11:31- 11:66, 11:68-11:70, 11:72-11:103, 11:105- 11:147	*03:08, 03:65
2	175 bp	430 bp	*11:05, 11:67	*08:31, 08:41, 12:04, 14:11
3⁵	65 bp	430 bp	*11:01:01-11:01:18, 11:03-11:06:03, 11:09- 11:12:02, 11:15, 11:22- 11:25, 11:27:01-11:30, 11:32-11:33, 11:35, 11:37:01-11:41, 11:43- 11:44, 11:46:01-11:47, 11:49:01-11:51, 11:54:01-11:56, 11:58:01-11:63, 11:66- 11:67, 11:72, 11:74:01- 11:78, 11:80-11:81, 11:83-11:85, 11:87- 11:88, 11:90-11:97, 11:99-11:102:02, 11:104, 11:106, 11:108-11:109, 11:111-11:117, 11:120- 11:123, 11:126, 11:128- 11:129, 11:133-11:135, 11:137-11:142, 11:144- 11:147	*04:15, 08:31, 08:41, DRB5*01:13
4^{6,8}	200 bp	430 bp	*11:02:01-11:02:02, 11:14:01-11:14:02, 11:16, 11:18-11:21, 11:31, 11:45, 11:48, 11:65:01- 11:65:02, 11:70, 11:73, 11:86, 11:98, 11:118- 11:119, 11:124, 11:127, 11:132	*13:01:01-13:01:06, 13:01:08-13:04, 13:06, 13:08, 13:10, 13:12:01-13:13, 13:15- 13:16, 13:19, 13:22-13:23:02, 13:27-13:28, 13:30-13:41, 13:45, 13:48, 13:51-13:53, 13:57-13:59, 13:61:01- 13:61:02, 13:64-13:66:02,

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			13:68-13:70, 13:72-13:73, 13:76-13:77, 13:79-13:85, 13:87, 13:89-13:99, 13:101-13:102, 13:104-13:107, 13:109-13:110, 13:112-13:113N, 13:115, 13:117-13:118, 13:120-13:128, 13:130-13:131, 13:135, 13:137N-13:139, 13:141-13:143, 13:145-13:148, 13:151-13:157, 13:159, 13:161-13:163, 14:16, 14:63, 14:67, 14:78	
5 ⁵	85 bp	515 bp	*11:01:01-11:01:19, 11:04:01-11:06:03, 11:08:01-11:10:02, 11:12:01-11:13:02, 11:15, 11:17-11:19:03, 11:22-11:35, 11:37:01-11:39, 11:42-11:47, 11:49:01-11:50, 11:52, 11:54:01-11:58:02, 11:60-11:62, 11:64, 11:66-11:67, 11:72-11:75, 11:77-11:81, 11:83-11:84:03, 11:87-11:97, 11:99-11:102:02, 11:104, 11:106, 11:108-11:109, 11:111-11:117, 11:119-11:121, 11:123, 11:126, 11:128-11:135, 11:137, 11:140-11:147	*04:15, 04:61, 04:145, 04:154, 08:31, 08:41, 12:04, 14:11, 16:16, DRB5*01:13
6 ^{5,6,9}	80 bp	430 bp	*11:02:01-11:03, 11:11:01-11:11:02, 11:14:01-11:14:02, 11:16, 11:20-11:21, 11:36, 11:40-11:41, 11:48, 11:55, 11:59, 11:63, 11:65:01-11:65:02, 11:68, 11:70, 11:76, 11:85-11:86, 11:118, 11:122, 11:124, 11:127, 11:138-11:139	*04:138
7 ⁵	125 bp	430 bp	*11:01:01-11:01:19, 11:05, 11:08:01-11:12:02, 11:14:01-11:15, 11:19:01-11:20, 11:22-11:24,	*04:61, 04:145, 08:41, 16:16, DRB3*02:18, DRB5*01:13

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			11:26-11:33, 11:37:01- 11:37:02, 11:39, 11:45, 11:49:01-11:49:02, 11:51, 11:53, 11:61-11:62, 11:64, 11:66, 11:68- 11:69, 11:72-11:75, 11:79-11:82, 11:87, 11:90-11:91, 11:93- 11:97, 11:99-11:101, 11:103, 11:105-11:109, 11:111-11:112, 11:114, 11:117, 11:120-11:122, 11:125-11:126, 11:128, 11:133-11:134, 11:136, 11:140-11:145, 11:147	
8⁵	125 bp	430 bp	*11:02:01-11:04:11, 11:06:01-11:07, 11:13:01-11:13:02, 11:16-11:18, 11:21, 11:25, 11:34-11:36, 11:38, 11:40-11:44, 11:46:01-11:48, 11:50, 11:52, 11:54:01-11:60, 11:63, 11:65:01-11:65:02, 11:67, 11:70, 11:76- 11:78, 11:83-11:85, 11:88-11:89, 11:92, 11:98, 11:102:01- 11:102:02, 11:104, 11:113, 11:115-11:116, 11:118-11:119, 11:123- 11:124, 11:127, 11:129- 11:132, 11:135, 11:137- 11:139, 11:146	*03:08, 03:65, 04:15, 04:138, 04:154, 08:31, 12:04, 14:11
9^{5,8,12}	85 bp, 115 bp	430 bp	*11:07, 11:23:01- 11:23:02, 11:25, 11:32, 11:45, 11:55, 11:64, 11:67, 11:70, 11:77, 11:103, 11:105, 11:107, 11:119, 11:125	*03:08, 03:65
10^{5,7,13}	85 bp, 120 bp	430 bp	*11:07, 11:23:01- 11:23:02, 11:25, 11:45, 11:55, 11:64, 11:67, 11:74:01-11:74:02, 11:103, 11:105, 11:107, 11:119, 11:125	*03:08, 03:65

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11¹⁴	155 bp, 200 bp, 255 bp	515 bp	*11:06:01-11:06:03, 11:08:01-11:08:02, 11:21, 11:36, 11:42, 11:47, 11:57, 11:64, 11:68, 11:75, 11:129-11:130	*03:20, 13:20, 13:25, 13:29, 13:43, 13:56, 13:58, 13:60, 13:71, 13:78, 13:81, 13:88, 13:119, 13:134, 13:149, 13:163, 14:03:01-14:03:02, 14:12:01-14:12:02, 14:29, 14:40, 14:69, 14:74, 14:77, 14:84-14:85, 14:98-14:99, 14:102, 14:115-14:116, 14:135
12^{5,15}	95 bp, 145 bp, 185 bp	430 bp	*11:30, 11:61, 11:90	DRB3*02:18
13^{5,8,9,16}	70 bp, 105 bp	430 bp	*11:09, 11:16, 11:20, 11:28:01-11:28:02, 11:40, 11:58:01-11:60, 11:83, 11:87, 11:109, 11:113, 11:115, 11:122	*03:08, 03:65
14	145 bp	430 bp	*11:17, 11:37:01- 11:37:02, 11:41, 11:48, 11:50, 11:52, 11:56, 11:83, 11:107, 11:145	*03:02:01-03:03, 03:06, 03:17, 03:26-03:27, 03:31, 03:35, 03:38, 03:41, 03:60, 03:74-03:75, 03:80, 03:88, 03:90, 08:20, 13:03:01- 13:03:06, 13:07:01-13:08, 13:12:01-13:13, 13:19, 13:26:01-13:26:02, 13:32- 13:33:03, 13:36-13:38, 13:40, 13:47-13:49, 13:53, 13:55, 13:58, 13:60, 13:65, 13:70, 13:72, 13:76, 13:81, 13:84- 13:85, 13:88-13:90, 13:94:01- 13:95, 13:101, 13:108, 13:115, 13:118, 13:120, 13:122, 13:133-13:135, 13:149, 13:151-13:152, 13:159, 13:164, 14:01:01- 14:03:01, 14:05:01-14:09, 14:12:01-14:14, 14:16, 14:18- 14:20, 14:22-14:27, 14:29, 14:32:01-14:32:03, 14:34, 14:36-14:41, 14:43-14:45, 14:47-14:49, 14:51, 14:54:01- 14:56, 14:58-14:60, 14:62- 14:63, 14:67, 14:69-14:70, 14:74-14:75, 14:77-14:78, 14:80-14:92N, 14:94, 14:96- 14:106, 14:108-14:119,

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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				14:121-14:125, 14:127:01-14:127:02, 14:129-14:131, 14:133, 14:135-14:137N, 14:139-14:140, 14:142, DRB3*01:14
15^{5,17}	60 bp, 105 bp	430 bp	*11:10:01-11:10:02, 11:12:01-11:13:02, 11:17, 11:52, 11:66, 11:114	*14:11
16^{5,18}	110 bp, 255 bp	430 bp	*11:15, 11:24, 11:44, 11:49:01-11:50, 11:76, 11:85, 11:91, 11:114, 11:127	*03:26, 03:33, 03:43-03:44, 03:71, 13:34, 13:62, 13:64, 13:68, 13:106, 13:136, 13:151, 14:41, 14:77, 14:97, 14:110, DRB3*01:14
17^{5,10}	90 bp	430 bp	*11:17, 11:23:01- 11:23:02, 11:25, 11:45, 11:52-11:55, 11:64, 11:67, 11:89, 11:119	*04:154, 14:11
18⁵	95 bp	430 bp	*11:07, 11:27:01- 11:27:03, 11:84:01- 11:84:03, 11:103, 11:107, 11:124-11:125, 11:136, 11:138	*03:08, 03:65, DRB3*02:18
19^{6,9,19}	180 bp, 225 bp, 260 bp	430 bp	*11:23:01-11:23:02, 11:25, 11:31-11:32, 11:45, 11:52, 11:55, 11:64, 11:70, 11:86, 11:96, 11:119	*03:10, 08:20, 13:13, 13:16, 13:18, 13:43, 13:45, 13:47, 13:55, 13:119, 13:144, 13:146, 13:154, 13:156, 13:158-13:159, 13:164, 14:01:01-14:01:04, 14:03:01- 14:03:02, 14:07:01-14:08, 14:12:01-14:12:02, 14:16, 14:22, 14:25-14:27, 14:32:01- 14:32:03, 14:34-14:35, 14:38- 14:40, 14:49, 14:53-14:55, 14:58, 14:60, 14:62-14:63, 14:67, 14:69-14:70, 14:72, 14:74-14:75, 14:77-14:78, 14:82, 14:84-14:90, 14:92N, 14:97, 14:99, 14:102, 14:104- 14:105, 14:110-14:119, 14:122, 14:124-14:125, 14:128-14:133, 14:135- 14:137N, 14:139-14:140, 14:142
20^{5,11}	115 bp	515 bp	*11:10:01-11:10:02, 11:12:01-11:13:02, 11:17, 11:29, 11:44, 11:47,	*03:04:01-03:04:02, 03:21, 03:26, 03:30, 03:33, 03:35, 03:44, 13:08, 13:19, 13:57,

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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			11:49:01-11:50, 11:52, 11:63, 11:85, 11:127	13:60, 13:72, 13:76, 13:83- 13:84, 13:87, 13:106-13:107, 13:135, 13:152, 14:01:01- 14:01:04, 14:05:01-14:05:04, 14:07:01-14:08, 14:14, 14:16, 14:20, 14:22-14:23:04, 14:26, 14:32:01-14:32:03, 14:34- 14:40, 14:43-14:45, 14:49, 14:54:01-14:56, 14:60, 14:62, 14:65, 14:70, 14:72, 14:74- 14:75, 14:82, 14:84, 14:86- 14:88, 14:90-14:92N, 14:94, 14:96-14:97, 14:99-14:101, 14:103-14:105, 14:111- 14:114, 14:117-14:119, 14:122-14:125, 14:127:01- 14:127:02, 14:129-14:131, 14:136-14:137N, 14:139- 14:140, 14:142
21²⁰	135 bp, 175 bp	430 bp	*11:22, 11:59, 11:80, 11:83, 11:87, 11:135, 11:142	*03:08, 03:65, 04:15, 04:61, 04:138, 04:145, 04:154
22^{5,21}	115 bp, 180 bp, 215 bp, 245 bp	430 bp	*11:15, 11:33, 11:35, 11:65:01-11:65:02, 11:69, 11:81-11:82, 11:130	*13:09, 13:62, 13:129, 13:151, 14:24, 14:37
23⁵	120 bp	430 bp	*11:38	
24²²	155 bp, 250 bp	430 bp	*11:06:01-11:06:03, 11:21, 11:39, 11:43, 11:47, 11:50, 11:57, 11:81, 11:115, 11:129, 11:145	*03:17, 03:20, 03:37, 03:80, 13:58, 13:81, 13:118, 13:131, 13:135, 13:150, 13:163, 14:29, 14:59, 14:86, 14:96, 14:99
25^{5,8}	110 bp	515 bp	*11:01:12, 11:04:04, 11:09-11:10:02, 11:12:02-11:13:02, 11:16-11:17, 11:20, 11:22, 11:28:01-11:28:02, 11:40, 11:46:01, 11:52, 11:58:01-11:59, 11:83, 11:87, 11:113, 11:115, 11:118, 11:122	*03:08, 03:65, 12:04, 14:11, 16:16, DRB3*02:18
26^{5,23}	120 bp, 160 bp	430 bp	*11:09-11:10:02, 11:13:01-11:13:02, 11:16-11:17, 11:20, 11:40, 11:46:01-11:46:02, 11:52, 11:59, 11:62,	*03:08, 03:65, 14:11

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 101.115-24u/03u – without *Taq* polymerase, IFU-02

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			11:78, 11:80, 11:83, 11:87, 11:113, 11:118, 11:122	
27⁵	85 bp	430 bp	*11:11:01-11:11:02, 11:14:01-11:14:02, 11:20, 11:68, 11:73, 11:93, 11:122	*01:03, 01:39N, 04:14, 04:106, 04:132, 08:40, 13:02:01-13:02:03, 13:02:05- 13:03:06, 13:23:01-13:23:02, 13:29, 13:31, 13:33:01-13:34, 13:36-13:39, 13:41, 13:45, 13:63, 13:65-13:67, 13:73- 13:74, 13:85, 13:88, 13:90, 13:95-13:97:02, 13:99, 13:101, 13:103-13:104, 13:107, 13:115, 13:123- 13:124, 13:126, 13:128, 13:135, 13:139, 13:143, 13:145, 13:147, 13:155, 13:159
28⁵	85 bp	430 bp	*11:02:01-11:03, 11:16, 11:21, 11:36, 11:40- 11:41, 11:48, 11:55, 11:59, 11:63, 11:65:01- 11:65:02, 11:70, 11:76, 11:85, 11:118, 11:124, 11:127, 11:138-11:139	*01:42, 04:02:01-04:02:03, 04:37, 04:124, 04:133- 04:134, 04:138, 04:143, 04:161, 13:01:01-13:01:06, 13:01:08-13:01:13, 13:04, 13:08, 13:10, 13:15, 13:17, 13:19-13:20, 13:22, 13:24, 13:27-13:28, 13:32, 13:35, 13:40, 13:43, 13:48, 13:51- 13:54, 13:57, 13:59, 13:61:01-13:61:02, 13:64, 13:68-13:72, 13:75-13:76, 13:78-13:81, 13:83-13:84, 13:87, 13:89, 13:91-13:94:01, 13:98, 13:102, 13:105- 13:106, 13:110-13:114, 13:116-13:117, 13:121, 13:125, 13:127, 13:130- 13:131, 13:138, 13:141, 13:146, 13:148-13:149, 13:153, 13:160, 13:162, 14:16, 14:57, 15:10
29⁵	100 bp	515 bp	*11:14:01-11:14:02, 11:19:01-11:20, 11:31, 11:45, 11:73, 11:82	*01:03, 01:15, 01:24:01- 01:24:02, 01:39N, 04:14, 04:38, 04:82, 04:86, 04:105:01-04:107, 04:125, 07:01:01:01-07:01:07, 07:03- 07:04, 07:06-07:19, 07:21- 07:23, 07:25-07:26N,

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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				08:03:02-08:03:03, 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, 08:51, 08:53, 12:22, 12:39, 13:02:01-13:02:03, 13:02:05-13:03:06, 13:12:01-13:13, 13:23:01-13:23:02, 13:30-13:31, 13:33:01-13:34, 13:36-13:39, 13:41, 13:45, 13:65-13:67, 13:73-13:74, 13:82, 13:85, 13:90, 13:95-13:97:02, 13:99, 13:101, 13:103-13:104, 13:107, 13:115, 13:118, 13:120, 13:122-13:124, 13:126, 13:128, 13:133, 13:135, 13:139-13:140, 13:143, 13:145, 13:147, 13:151-13:152, 13:154-13:155, 13:157, 13:159, 13:161, 14:24, 14:63, 14:67, 15:02:01-15:02:10, 15:11, 15:14, 15:19, 15:26, 15:29-15:30, 15:38-15:39, 15:44, 15:47, 15:58, 15:60, 15:68, 15:78, 15:80N, 16:05:01-16:05:02, 16:07, DRB3*02:11, DRB5*01:07, DRB5*01:11, DRB5*02:03
30⁵	100 bp	515 bp	*11:01:01-11:01:18, 11:03-11:06:03, 11:09-11:12:02, 11:15, 11:22-11:25, 11:27:01-11:30, 11:32-11:33, 11:35, 11:38-11:40, 11:43-11:44, 11:46:01-11:47, 11:49:01-11:49:02, 11:51, 11:54:01-11:55, 11:58:01-11:63, 11:66-11:67, 11:72, 11:74:01-11:78, 11:80-11:81, 11:84:01-11:85, 11:87, 11:90-11:97, 11:99-11:102:02, 11:104, 11:106, 11:108-11:117, 11:120-11:123, 11:126,	*08:17, 08:28, 12:02:01-12:02:05, 12:13, 12:15-12:16:02, 12:18-12:20, 12:23, 12:26-12:27, 12:31N-12:33, 12:37, 13:05:01-13:05:02, 13:11:01-13:11:02, 13:14:01-13:14:03, 13:18, 13:21:01-13:21:02, 13:24, 13:42, 13:46, 13:50:01-13:50:02, 13:54, 13:62-13:63, 13:75, 13:100, 13:111, 13:132, 13:136, 13:144, 13:150, 13:158, 14:53, 14:128, 16:09

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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			11:128-11:129, 11:133-11:135, 11:137-11:142, 11:144, 11:146-11:147	
31⁵	85 bp	515 bp	*11:04:01-11:04:11, 11:06:01-11:06:03, 11:18, 11:25, 11:35, 11:38, 11:42-11:44, 11:46:01-11:47, 11:50, 11:54:01-11:54:02, 11:56-11:58:02, 11:60, 11:67, 11:77-11:78, 11:83-11:84:03, 11:88, 11:92, 11:102:01-11:102:02, 11:104, 11:113, 11:115-11:116, 11:119, 11:123, 11:129-11:130, 11:135, 11:137, 11:146	*01:23, 04:12, 04:15, 04:18, 04:25, 04:36, 04:53, 04:58, 04:99, 04:136, 08:04:01, 08:04:04-08:04:07, 08:06, 08:10, 08:12, 08:20, 08:22, 08:28, 08:31, 08:54, 12:01:01-12:15, 12:17-12:21, 12:23-12:38, 12:40, 13:06, 13:11:01-13:11:02, 13:18, 13:42, 13:58, 13:77, 13:108, 13:144, 13:150, 13:156, 13:163-13:164, 14:12:01-14:12:02, 14:15, 14:73-14:74, 14:78, 14:84, 14:105, 14:128, 15:21, 16:15, 16:23
32^{5,11}	75 bp	430 bp	*11:13:01-11:13:02, 11:17, 11:51-11:52, 11:89	*14:11
33⁸	155 bp	430 bp	*11:88, 11:94	
34^{5,24}	80 bp, 290 bp	515 bp	*11:31, 11:96-11:97	*03:10, 13:43, 13:45, 14:35, 14:53, 14:72, 14:128, 14:132, 14:138
35⁵	85 bp	430 bp	*11:98	
36^{5,25}	110 bp, 170 bp	430 bp	*11:99, 11:102:01-11:102:02, 11:110	*03:49
37	150 bp	430 bp	*11:101	
38	155 bp	430 bp	*11:78, 11:106	
39⁵	110 bp	430 bp	*11:108	
40	180 bp	430 bp	*11:116, 11:120	*03:13:01-03:13:02, 03:38, 03:79, 03:88, 13:39, 13:54, 13:77-13:79, 13:100, 13:162-13:163, 14:48, 14:64, 14:109, 14:115, DRB3*01:14
41⁵	65 bp	430 bp	*11:07, 11:13:01-11:13:02, 11:17, 11:26, 11:34, 11:52, 11:79, 11:103, 11:105, 11:107, 11:131, 11:136	*03:08, 04:61, 04:145, 04:154, 14:11, DRB3*02:18
42	135 bp	430 bp	*11:72, 11:92	
43	265 bp	430 bp	*11:112, 11:137	*03:78

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*11 SSP typings.

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Lot No.: 85S**Lot-specific information**

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

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

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

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

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

²The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 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*11 subtyping.

In addition, wells number 5, 11, 20, 25, 29 to 31 and 34 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 DRB1 alleles 1st and/or 3rd exon(s) and beyond, as well as intron nucleotide sequences, are not available. In these instances it is not known whether some of the primers of the SSP sets are completely matched with the target sequences or not. We assume that unknown sequences in these regions are conserved within allelic groups.

⁴Due to the sharing of sequence motifs within the DR52 group of DRB1 alleles, other DRB1 alleles are amplified by primer mixes 1 to 11, 13 to 22, 24 to 32, 34, 36, 40, 41 and 43. In addition, the DRB3*01:14 allele is amplified by primer mixes 14, 16 and 40, the DRB3*02:11, DRB5*01:07, DRB5*01:11 and DRB5*02:03 alleles are amplified by primer mix 29, the DRB3*02:18 allele is amplified by primer mixes 7, 12, 18, 25 and 41 and the DRB5*01:13 allele is amplified by primer mixes 3, 5 and 7

⁵HLA-specific PCR products shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR products.

In order to have as little co-amplification as possible of non-DRB1*11 alleles by the primer pairs of the DRB1*11 subtyping kit, the DRB1*11 characteristic sequence motif in codon 58, 'Ag', has been used in either the 5'-primer or the 3'-primer in many of the DRB1*11 primer mixes and consequently many of the specific PCR products are shorter than 100 base pairs.

⁶Primer mix 4 may faintly amplify the DRB1*13:29 allele.

⁷Primer mix 10 may faintly amplify the DRB1*11:53 allele.

⁸Primer mixes 4, 9, 13, 25 and 33 have a tendency to giving rise to primer oligomer formation.

⁹Primer mixes 6, 13 and 19 may have tendencies of unspecific amplifications.

¹⁰Primer mix 17 may give rise to a lower yield of HLA-specific PCR product than the other DRB1*11 primer mixes.

¹¹Primer mixes 20 and 32 might generate a long unspecific PCR product. This band should be disregarded when interpreting the DRB1*11 typings.

¹²Primer mix 9: Specific PCR fragment of 85 bp in the DRB1*11:07, *11:23:01-11:23:02, 11:25, 11:32, 11:45, 11:55, 11:64, 11:67, 11:70, 11:103, 11:105, 11:107, 11:119 and 11:125 and the DRB1*03:08 and 03:65 alleles. Specific PCR fragment of 115 bp in the DRB1*11:77 allele.

¹³Primer mix 10: Specific PCR fragment of 85 bp in the DRB1*11:07, 11:23:01-11:23:02, 11:25, 11:45, 11:55, 11:64, 11:67, 11:103, 11:105, 11:107, 11:119 and 11:125 and the DRB1*03:08, 03:65 alleles. Specific PCR fragment of 120 bp in the DRB1*11:74:01-11:74:02 alleles.

¹⁴Primer mix 11: Specific PCR fragment of 155 bp in the DRB1*11:75 allele. Specific PCR fragment of 200 bp in the DRB1*11:08:01-11:08:02, 11:36, 11:42, 11:64, 11:68 and 11:130 and the DRB1*13:20, 13:25, 13:29, 13:43, 13:56, 13:60, 13:71, 13:78, 13:88, 13:119, 13:134, 13:149, 14:03:01-14:03:02, 14:12:01-14:12:02, 14:40, 14:69, 14:74, 14:77, 14:84-14:85, 14:98, 14:102,

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Lot No.: 85S**Lot-specific information**

14:115-14:116 and 14:135 alleles. Specific PCR fragment of 255 bp in the DRB1*11:06:01-11:06:03, 11:21, 11:47 and 11:129 and the DRB1*03:20, 13:58, 13:81, 13:163 and 14:29, 14:99 alleles. Specific PCR fragment of 200 and 255 bp in the 11:57 allele.

¹⁵Primer mix 12: Specific PCR fragment of 95 bp in the DRB1*11:61 allele. Specific PCR fragment of 145 bp in the DRB1*11:90 allele. Specific PCR fragment of 185 bp in the DRB1*11:30 and in the DRB3*02:18 alleles.

¹⁶Primer mix 13: Specific PCR fragment of 70 bp in the DRB1*11:60 and 11:109 alleles. Specific PCR fragment of 105 bp in the DRB1*11:09, 11:16, 11:20, 11:28:01-11:28:02, 11:40, 11:58:01-11:58:02, 11:59, 11:83, 11:87, 11:113, 11:115, 11:122 and the DRB1*03:08 and 03:65 alleles.

¹⁷Primer mix 15: Specific PCR fragment of 60 bp in the DRB1*11:66 allele. Specific PCR fragment of 105 bp in the DRB1*11:10:01-11:10:02, 11:12:01-11:13:02, 11:17, 11:52 and 11:114 and the DRB1*14:11 alleles.

¹⁸Primer mix 16: Specific PCR fragment of 110 bp in the DRB1*11:15, 11:24, 11:44, 11:49:01-11:50, 11:76, 11:85, 11:114 and 11:127 and the DRB1*03:26, 03:33, 03:43-03:44, 03:71, 13:34, 13:62, 13:64, 13:68, 13:106, 13:136, 14:41, 14:77, 14:97 and 14:110 and in the DRB3*01:14 alleles. Specific PCR fragment of 255 bp in the DRB1*11:91 allele.

¹⁹Primer mix 19: Specific PCR fragment of 180 bp in the DRB1*11:31, 11:52 and 11:96 and the DRB1*03:10, 13:43, 13:45, 13:159, 14:01:01-14:01:04, 14:07:01-14:08, 14:16, 14:22, 14:25-14:26, 14:32:01-14:32:03, 14:34-14:35, 14:38-14:39, 14:49, 14:53-14:54:02, 14:58, 14:60, 14:62, 14:69-14:70, 14:72, 14:74-14:75, 14:82, 14:86-14:88, 14:90, 14:92N, 14:97, 14:99, 14:104-14:105, 14:110-14:114, 14:117-14:119, 14:122, 14:124-14:125, 14:128-14:133, 14:137N, 14:139-14:140 and 14:142 alleles. Specific PCR fragment of 225 bp in the DRB1*11:23:01-11:23:02, 11:25, 11:32, 11:45, 11:55, 11:64, 11:70 and 11:119 and the DRB1*08:20, 13:13, 13:18, 13:47, 13:55, 13:119, 13:144, 13:146, 13:154, 13:156, 13:158, 13:164, 14:03:01-14:03:02, 14:12:01-14:12:02, 14:27, 14:40, 14:63, 14:67, 14:77-14:78, 14:84-14:85, 14:89, 14:102, 14:115-14:116 and 14:135-14:136 alleles. Specific PCR fragment of 260 bp in the DRB1*11:86 and the DRB1*13:16 alleles. Specific PCR fragment of 180 and 225 bp in the 14:55 allele.

²⁰Primer mix 21: Specific PCR fragment of 135 bp in the DRB1*11:59, 11:80, 11:83, 11:87, 11:135 and 11:142 and the DRB1*03:08 and 03:65 alleles. Specific PCR fragment of 175 bp in the DRB1*11:22 and the DRB1*04:15, 04:61, 04:138, 04:145 and 04:154 alleles.

²¹Primer mix 22: Specific PCR fragment of 115 bp in the DRB1*11:15 and the DRB1*13:62 and 13:151 alleles. Specific PCR fragment of 180 bp in the DRB1*11:33, 11:35, 11:65:01-11:65:02, and 11:130 alleles. Specific PCR fragment of 215 bp in DRB1*11:69, 11:82 and DRB1*13:09, 13:129, 14:24 and 14:37 alleles. Specific PCR fragment of 245 bp in DRB1*11:81 allele.

²²Primer mix 24: Specific PCR fragment of 155 bp in the DRB1*11:39, 11:43, 11:50, 11:115 and 11:145 and the DRB1*03:17, 03:37, 03:80, 13:118, 13:131, 13:135, 13:150, 14:59, 14:86 and 14:96 alleles. Specific PCR fragment of 250 bp in the DRB1*11:06:01-11:06:03, 11:21, 11:47, 11:57, 11:81 and 11:129 and the DRB1*03:20, 13:58, 13:81, 13:163, 14:29 and 14:99 alleles.

²³Primer mix 26: Specific PCR fragment of 120 bp in the DRB1*11:09-11:10:02, 11:13:01-11:13:02, 11:16-11:17, 11:20, 11:40, 11:46:01-11:46:02, 11:52, 11:59, 11:62, 11:80, 11:83, 11:87, 11:113, 11:118 and 11:122 and the DRB1*03:08, 03:65 and 14:11 alleles. Specific PCR fragment of 160 bp in the DRB1*11:78 allele.

²⁴Primer mix 34: Specific PCR fragment of 80 bp in the DRB1*11:31 and 11:96 and in the DRB1*03:10, 13:43, 13:45, 14:35, 14:53, 14:72, 14:128, 14:132 and 14:138 alleles. Specific PCR fragment of 290 bp in the DRB1*11:97 allele.

²⁵Primer mix 36: Specific PCR fragment of 115 bp in the DRB1*11:99 and 11:102:01-11:102:02 and the DRB1*03:49 alleles. Specific PCR fragment of 170 bp in the DRB1*11:110 allele.

‘w’, might be weakly amplified.

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Lot-specific information

CE
0088

101.115-24/03 – including *Taq* polymerase, IFU-01
101.115-24u/03u – without *Taq* polymerase, IFU-02

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Lot No.: 85S

Lot-specific information

INTERPRETATION TABLE																								
DRB1*11 SSP subtyping																								
Amplification patterns of the DRB1*11:01 to DRB1*11:147 alleles																								
Well ⁸																								
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43		
135	115	120	155	110	120	85	85	100	100	85	75	155	80	85	110	150	155	110	180	65	135	235	Length of spec. PCR product(s)	
175	180		250		160								290		170									
	215																							
	245																							
430	430	430	430	515	430	430	430	515	515	515	430	430	515	430	430	430	430	430	430	430	430	430	Length of int. pos. control ¹	
																							5'-primer(s) ²	
																							3'-primer(s) ³	
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.	

101.115-24/03 – including *Taq* polymerase, IFU-01
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Lot No.: **85S**

Lot-specific information

Length of spec.	175	175	65	200	85	80	125	125	85	85	155	95	70	145	60	110	90	95	180	115
PCR product(s)									115	120	200	145	105		105	255			225	
											255	185							260	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
DRB1 allele ^{4,5}																				
*11:01:01-11:01:11, 11:01:13-11:01:18, 11:95, 11:100, 11:111, 11:117, 11:121, 11:126, 11:128, 11:133-11:134, 11:140-11:141, 11:144, 11:147	1		3		5		7													
*11:01:12	1		3		5		7													
*11:01:19, 11:143	1				5		7													
*11:02:01-11:02:02	1			4		6		8												
*11:03, 11:139	1		3			6		8												
*11:04:01-11:04:03, 11:04:05-11:04:11, 11:123, 11:146	1		3		5			8												
*11:04:04	1		3		5			8												
*11:05		2	3		5		7													
*11:06:01-11:06:03, 11:129	1		3		5			8			11									
*11:07	1							8	9	10								18		
*11:08:01-11:08:02	1				5		7				11									
*11:09	1		3		5		7						13							
*11:10:01-11:10:02	1		3		5		7								15					20
*11:11:01-11:11:02	1		3			6	7													
*11:12:01	1		3		5		7								15					20
*11:12:02	1		3		5		7								15					20
*11:13:01-11:13:02	1				5			8							15					20
*11:14:01-11:14:02	1			4		6	7													
*11:15	1		3		5		7									16				
*11:16	1			4		6		8					13							
*11:17	1				5			8						14	15		17			20
*11:18	1			4	5			8												
*11:19:01-11:19:03	1			4	5		7													
*11:20	1			4		6	7						13							
*11:21	1			4		6		8			11									
*11:22			3		5		7													
*11:23:01-11:23:02	1		3		5		7		9	10							17		19	
*11:24, 11:91 ⁶	1		3		5		7								16					
*11:25	1		3		5			8	9	10							17		19	
*11:26, 11:79	1				5		7													
*11:27:01-11:27:03	1		3		5		7											18		
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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Lot No.: **85S**

Lot-specific information

135	115	120	155	110	120	85	85	100	100	85	75	155	80	85	110	150	155	110	180	65	135	235	Length of spec. PCR product(s)
175	180		250		160								290		170								
	215																						
	245																						
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.
																							DRB1 allele ^{4,5}
									30														*11:01:01-11:01:11, 11:01:13-11:01:18, 11:01:19, 11:01:20, 11:01:21, 11:01:22, 11:01:23, 11:01:24, 11:01:25, 11:01:26, 11:01:27, 11:01:28, 11:01:29-11:01:30, 11:01:31-11:01:32, 11:01:33, 11:01:34-11:01:35, 11:01:36, 11:01:37-11:01:38, 11:01:39, 11:01:40-11:01:41, 11:01:42, 11:01:43
				25					30														*11:01:12
																							*11:01:19, 11:01:20
							28																*11:02:01-11:02:02
							28		30														*11:03, 11:03:01-11:03:02
									30	31													*11:04:01-11:04:03, 11:04:05-11:04:11, 11:04:12, 11:04:13
				25					30	31													*11:04:04
									30														*11:05
			24						30	31													*11:06:01-11:06:03, 11:06:04-11:06:05, 11:06:06, 11:06:07-11:06:08, 11:06:09, 11:06:10-11:06:11, 11:06:12, 11:06:13-11:06:14, 11:06:15, 11:06:16-11:06:17, 11:06:18, 11:06:19-11:06:20, 11:06:21, 11:06:22-11:06:23, 11:06:24, 11:06:25-11:06:26, 11:06:27, 11:06:28-11:06:29, 11:06:30, 11:06:31-11:06:32, 11:06:33, 11:06:34-11:06:35, 11:06:36, 11:06:37-11:06:38, 11:06:39, 11:06:40-11:06:41, 11:06:42, 11:06:43-11:06:44, 11:06:45, 11:06:46-11:06:47, 11:06:48, 11:06:49-11:06:50, 11:06:51, 11:06:52-11:06:53, 11:06:54, 11:06:55-11:06:56, 11:06:57, 11:06:58-11:06:59, 11:07:00
																			41				*11:07
																							*11:08:01-11:08:02
				25	26				30														*11:09
				25	26				30														*11:10:01-11:10:02
						27			30														*11:11:01-11:11:02
									30														*11:12:01
				25					30														*11:12:02
				25	26						32									41			*11:13:01-11:13:02
						27		29															*11:14:01-11:14:02
	22								30														*11:15
				25	26		28																*11:16
				25	26						32									41			*11:17
										31													*11:18
								29															*11:19:01-11:19:03
				25	26	27		29															*11:20
			24				28																*11:21
21				25					30														*11:22
									30														*11:23:01-11:23:02
									30														*11:24, 11:91 ⁶
									30	31													*11:25
																				41			*11:26, 11:79
									30														*11:27:01-11:27:03
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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Lot No.: **85S**

Lot-specific information

Length of spec.	175	175	65	200	85	80	125	125	85	85	155	95	70	145	60	110	90	95	180	115
PCR product(s)									115	120	200	145	105		105	255			225	
											255	185							260	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
*11:28:01-11:28:02	1		3		5		7						13							
*11:29	1		3		5		7													20
*11:30			3		5		7					12								
*11:31	1			4	5		7												19	
*11:32	1		3		5		7		9										19	
*11:33	1		3		5		7													
*11:34, 11:131	1				5			8												
*11:35	1		3		5			8												
*11:36	1					6		8				11								
*11:37:01-11:37:02	1		3		5		7							14						
*11:38	1		3		5			8												
*11:39	1		3		5		7													
*11:40	1		3			6		8					13							
*11:41	1		3			6		8						14						
*11:42	1				5			8				11								
*11:43	1		3		5			8												
*11:44	1		3		5			8								16				20
*11:45	1			4	5		7		9	10							17		19	
*11:46:01	1		3		5			8												
*11:46:02	1		3		5			8												
*11:47	1		3		5			8				11								20
*11:48	1			4		6		8						14						
*11:49:01-11:49:02	1		3		5		7									16				20
*11:50	1		3		5			8						14		16				20
*11:51	1		3				7													
*11:52	1				5			8						14	15		17		19	20
*11:53	1						7										17			
*11:54:01-11:54:02	1		3		5			8									17			
*11:55	1		3		5	6		8	9	10							17		19	
*11:56	1		3		5			8						14						
*11:57	1				5			8				11								
*11:58:01-11:58:02	1		3		5			8					13							
*11:59	1		3			6		8					13							
*11:60	1		3		5			8					13							
*11:61, 11:90 ⁷	1		3		5		7					12								
*11:62	1		3		5		7													
*11:63	1		3			6		8												20
*11:64	1				5		7		9	10	11						17		19	
*11:65:01-11:65:02	1			4		6		8												
*11:66	1		3		5		7								15					
*11:67		2	3		5			8	9	10							17			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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Lot No.: **85S**

Lot-specific information

135	115	120	155	110	120	85	85	100	100	85	75	155	80	85	110	150	155	110	180	65	135	235	Length of spec. PCR product(s)
175	180		250		160								290		170								
	215																						
	245																						
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.
				25					30														
									30														*11:28:01-11:28:02
									30														*11:29
									30														*11:30
								29				34											*11:31
									30														*11:32
	22								30														*11:33
																				41			*11:34, 11:131
	22								30	31													*11:35
							28																*11:36
																							*11:37:01-11:37:02
	23								30	31													*11:38
		24							30														*11:39
				25	26		28		30														*11:40
							28																*11:41
										31													*11:42
		24							30	31													*11:43
									30	31													*11:44
								29															*11:45
				25	26				30	31													*11:46:01
				26					30	31													*11:46:02
		24							30	31													*11:47
							28																*11:48
									30														*11:49:01-11:49:02
		24								31													*11:50
									30		32												*11:51
				25	26						32								41				*11:52
																							*11:53
									30	31													*11:54:01-11:54:02
							28		30														*11:55
										31													*11:56
		24								31													*11:57
				25					30	31													*11:58:01-11:58:02
21				25	26		28		30														*11:59
									30	31													*11:60
									30														*11:61, 11:90 ⁷
				26					30														*11:62
							28		30														*11:63
																							*11:64
	22						28																*11:65:01-11:65:02
									30														*11:66
									30	31													*11:67
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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Lot No.: **85S**

Lot-specific information

Length of spec.	175	175	65	200	85	80	125	125	85	85	155	95	70	145	60	110	90	95	180	115
PCR product(s)									115	120	200	145	105		105	255			225	
											255	185							260	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
*11:68	1					6	7				11									
*11:69	1						7													
*11:70	1			4		6		8	9										19	
*11:72	1		3		5		7													
*11:73	1			4	5		7													
*11:74:01-11:74:02	1		3		5		7			10										
*11:75	1		3		5		7				11									
*11:76	1		3			6		8								16				
*11:77	1		3		5			8	9											
*11:78	1		3		5			8												
*11:80	1		3		5		7													
*11:81	1		3		5		7													
*11:82	1						7													
*11:83	1		3		5			8					13	14						
*11:84:01-11:84:03	1		3		5			8										18		
*11:85	1		3			6		8								16				20
*11:86	1			4		6													19	
*11:87	1		3		5		7						13							
*11:88	1		3		5			8												
*11:89	1				5			8									17			
*11:92	1		3		5			8												
*11:93	1		3		5		7													
*11:94	1		3		5		7													
*11:96	1		3		5		7												19	
*11:97	1		3		5		7													
*11:98	1			4				8												
*11:99	1		3		5		7													
*11:101	1		3		5		7													
*11:102:01-11:102:02	1		3		5			8												
*11:103	1						7		9	10								18		
*11:104			3		5			8												
*11:105	1						7		9	10										
*11:106	1		3		5		7													
*11:107	1						7		9	10				14				18		
*11:108	1		3		5		7													
*11:109	1		3		5		7						13							
*11:110	1																			
*11:112	1		3		5		7													
*11:113	1		3		5			8					13							
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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Lot No.: **85S**

Lot-specific information

135	115	120	155	110	120	85	85	100	100	85	75	155	80	85	110	150	155	110	180	65	135	235	Length of spec. PCR product(s)
175	180		250		160								290		170								
	215																						
	245																						
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.
						27																	*11:68
	22																						*11:69
							28																*11:70
									30												42		*11:72
						27		29															*11:73
									30														*11:74:01-11:74:02
									30														*11:75
							28		30														*11:76
									30	31													*11:77
					26				30	31							38						*11:78
21					26				30														*11:80
	22		24						30														*11:81
	22							29															*11:82
21				25	26					31													*11:83
									30	31													*11:84:01-11:84:03
							28		30														*11:85
																							*11:86
21				25	26				30														*11:87
										31		33											*11:88
											32												*11:89
									30	31											42		*11:92
						27			30														*11:93
									30			33											*11:94
									30				34										*11:96
									30				34										*11:97
														35									*11:98
									30						36								*11:99
									30							37							*11:101
									30	31					36								*11:102:01-11:102:02
																				41			*11:103
									30	31													*11:104
																				41			*11:105
									30								38						*11:106
																				41			*11:107
									30									39					*11:108
									30														*11:109
									30						36								*11:110
									30												43		*11:112
				25	26				30	31													*11:113
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for
 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

Length of spec.	175	175	65	200	85	80	125	125	85	85	155	95	70	145	60	110	90	95	180	115
PCR product(s)									115	120	200	145	105		105	255			225	
											255	185							260	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
*11:114	1		3		5		7								15	16				
*11:115	1		3		5			8					13							
*11:116	1		3		5			8												
*11:118	1			4		6		8												
*11:119	1			4	5			8	9	10							17		19	
*11:120	1		3		5		7													
*11:122	1		3			6	7						13							
*11:124	1			4		6		8										18		
*11:125	1						7		9	10								18		
*11:127	1			4		6		8								16				20
*11:130	1				5			8			11									
*11:132	1			4	5			8												
*11:135	1		3		5			8												
*11:136	1						7											18		
*11:137	1		3		5			8												
*11:138	1		3			6		8										18		
*11:142	1		3		5		7													
*11:145	1		3		5		7							14						
*01:03, 01:39N, 04:14, 04:106, 08:40, 13:67, 13:74, 13:103																				
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for
 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

135	115	120	155	110	120	85	85	100	100	85	75	155	80	85	110	150	155	110	180	65	135	235	Length of spec. PCR product(s)
175	180		250		160								290		170								
	215																						
	245																						
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.
									30														
			24	25					30	31													*11:114
									30	31													*11:115
									30	31								40					*11:116
				25	26		28																*11:118
										31													*11:119
									30									40					*11:120
				25	26	27			30														*11:122
							28																*11:124
																							*11:125
							28																*11:127
	22									31													*11:130
																							*11:132
21									30	31													*11:135
																			41				*11:136
									30	31											43		*11:137
							28		30														*11:138
21									30														*11:142
			24																				*11:145
						27		29															*01:03, 01:39N, 04:14, 04:106, 08:40, 13:67, 13:74, 13:103
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for
 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

Length of spec.	175	175	65	200	85	80	125	125	85	85	155	95	70	145	60	110	90	95	180	115
PCR product(s)									115	120	200	145	105		105	255			225	
											255	185							260	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
*01:15, 01:24:01- 01:24:02, 04:38, 04:82, 04:86, 04:105:01- 04:105:02, 04:107, 04:125, 07:01:01:01- 07:01:07, 07:03-07:04, 07:06-07:19, 07:21- 07:23, 07:25-07:26N, 08:03:02-08:03:03, 08:14-08:15, 08:18- 08:19, 08:23, 08:25, 08:27, 08:29-08:30:03, 08:32-08:38, 08:45- 08:47, 08:49, 08:51, 08:53, 12:22, 12:39, 13:140, 15:02:01- 15:02:10, 15:11, 15:14, 15:19, 15:26, 15:29- 15:30, 15:38-15:39, 15:44, 15:47, 15:58, 15:60, 15:68, 15:78, 15:80N, 16:05:01- 16:05:02, 16:07, <i>DRB3*02:11</i> , <i>DRB5*01:07</i> , <i>DRB5*01:11</i> , <i>DRB5*02:03</i>																				
*01:23, 04:12, 04:18, 04:25, 04:36, 04:53, 04:58, 04:99, 04:136, 08:04:01, 08:04:04- 08:04:07, 08:06, 08:10, 08:12, 08:22, 08:54, 12:01:01-12:01:05, 12:03:02-12:03:03, 12:05-12:12, 12:14, 12:17, 12:21, 12:24N- 12:25, 12:28-12:30, 12:34-12:36, 12:38, 12:40, 14:15, 14:73, 15:21, 16:15, 16:23																				
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for
 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

135	115	120	155	110	120	85	85	100	100	85	75	155	80	85	110	150	155	110	180	65	135	235	Length of spec. PCR product(s)
175	180		250		160								290		170								
	215																						
	245																						
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.
								29															*01:15, 01:24:01- 01:24:02, 04:38, 04:82, 04:86, 04:105:01- 04:105:02, 04:107, 04:125, 07:01:01:01- 07:01:07, 07:03-07:04, 07:06-07:19, 07:21- 07:23, 07:25-07:26N, 08:03:02-08:03:03, 08:14-08:15, 08:18- 08:19, 08:23, 08:25, 08:27, 08:29-08:30:03, 08:32-08:38, 08:45- 08:47, 08:49, 08:51, 08:53, 12:22, 12:39, 13:140, 15:02:01- 15:02:10, 15:11, 15:14, 15:19, 15:26, 15:29- 15:30, 15:38-15:39, 15:44, 15:47, 15:58, 15:60, 15:68, 15:78, 15:80N, 16:05:01- 16:05:02, 16:07, DRB3*02:11, DRB5*01:07, DRB5*01:11, DRB5*02:03
										31													*01:23, 04:12, 04:18, 04:25, 04:36, 04:53, 04:58, 04:99, 04:136, 08:04:01, 08:04:04- 08:04:07, 08:06, 08:10, 08:12, 08:22, 08:54, 12:01:01-12:01:05, 12:03:02-12:03:03, 12:05-12:12, 12:14, 12:17, 12:21, 12:24N- 12:25, 12:28-12:30, 12:34-12:36, 12:38, 12:40, 14:15, 14:73, 15:21, 16:15, 16:23
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for
 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

Length of spec.	175	175	65	200	85	80	125	125	85	85	155	95	70	145	60	110	90	95	180	115
PCR product(s)									115	120	200	145	105		105	255			225	
											255	185							260	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
*01:42, 04:02:01- 04:02:03, 04:37, 04:124, 04:133-04:134, 04:143, 04:161, 13:17, 13:114, 13:116, 13:160, 14:57, 15:10																				
*03:02:01-03:03, 03:06, 03:27, 03:31, 03:41, 03:60, 03:74-03:75, 03:90, 13:07:01- 13:07:02, 13:26:01- 13:26:02, 13:49, 14:02, 14:06:01-14:06:02, 14:09, 14:13, 14:18- 14:19, 14:47, 14:51, 14:80-14:81, 14:83, 14:106, 14:108, 14:121														14						
*03:04:01-03:04:02, 03:21, 03:30, 14:65																				20
*03:08	1							8	9	10			13					18		
*03:10, 14:132																			19	
*03:13:01-03:13:02, 03:79, 14:64																				
*03:17, 03:80, 14:59														14						
*03:20											11									
*03:26														14		16				20
*03:33, 03:44																16				20
*03:35, 14:05:01- 14:05:04, 14:14, 14:20, 14:23:01-14:23:04, 14:36, 14:43-14:45, 14:56, 14:91, 14:94, 14:100-14:101, 14:103, 14:123, 14:127:01- 14:127:02														14						20
*03:37																				
*03:38, 03:88, 14:48, 14:109														14						
*03:43, 03:71																16				
*03:49																				
*03:65	1							8	9	10			13					18		
*03:78																				
*04:15			3		5			8												
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for
 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

135	115	120	155	110	120	85	85	100	100	85	75	155	80	85	110	150	155	110	180	65	135	235	Length of spec.
175	180		250		160								290		170								PCR product(s)
	215																						
	245																						
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.
							28																*01:42, 04:02:01-04:02:03, 04:37, 04:124, 04:133-04:134, 04:143, 04:161, 13:17, 13:114, 13:116, 13:160, 14:57, 15:10
																							*03:02:01-03:03, 03:06, 03:27, 03:31, 03:41, 03:60, 03:74-03:75, 03:90, 13:07:01-13:07:02, 13:26:01-13:26:02, 13:49, 14:02, 14:06:01-14:06:02, 14:09, 14:13, 14:18-14:19, 14:47, 14:51, 14:80-14:81, 14:83, 14:106, 14:108, 14:121
																							*03:04:01-03:04:02, 03:21, 03:30, 14:65
21				25	26															41			*03:08
												34											*03:10, 14:132
																			40				*03:13:01-03:13:02, 03:79, 14:64
			24																				*03:17, 03:80, 14:59
			24																				*03:20
																							*03:26
																							*03:33, 03:44
																							*03:35, 14:05:01-14:05:04, 14:14, 14:20, 14:23:01-14:23:04, 14:36, 14:43-14:45, 14:56, 14:91, 14:94, 14:100-14:101, 14:103, 14:123, 14:127:01-14:127:02
			24																				*03:37
																			40				*03:38, 03:88, 14:48, 14:109
																							*03:43, 03:71
															36								*03:49
21				25	26																		*03:65
																					43		*03:78
21										31													*04:15
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for
 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

Length of spec.	175	175	65	200	85	80	125	125	85	85	155	95	70	145	60	110	90	95	180	115
PCR product(s)									115	120	200	145	105		105	255			225	
											255	185							260	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
*04:61, 04:145					5		7													
*04:132																				
*04:138						6		8												
*04:154					5			8									17			
*08:17, 12:16:01- 12:16:02, 13:05:01- 13:05:02, 13:14:01- 13:14:03, 13:21:01- 13:21:02, 13:46, 13:50:01-13:50:02, 13:132, 16:09																				
*08:20, 13:164														14				19		
*08:28, 12:02:01- 12:02:05, 12:13, 12:15, 12:18-12:20, 12:23, 12:26-12:27, 12:31N- 12:33, 12:37, 13:11:01- 13:11:02, 13:42																				
*08:31		2	3		5			8												
*08:41		2	3		5		7													
*12:04		2			5			8												
*13:01:01-13:01:06, 13:01:08-13:01:13, 13:04, 13:10, 13:15, 13:22, 13:27-13:28, 13:35, 13:51-13:52, 13:59, 13:61:01- 13:61:02, 13:69, 13:80, 13:91-13:93, 13:98, 13:102, 13:105, 13:110, 13:112-13:113N, 13:117, 13:121, 13:125, 13:127, 13:130, 13:138, 13:141, 13:148, 13:153				4																
*13:02:01-13:02:03, 13:02:05-13:02:08, 13:23:01-13:23:02, 13:31, 13:41, 13:66:01- 13:66:02, 13:73, 13:96:01-13:97:02, 13:99, 13:104, 13:123- 13:124, 13:126, 13:128, 13:139, 13:143, 13:145, 13:147, 13:155				4																
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

135	115	120	155	110	120	85	85	100	100	85	75	155	80	85	110	150	155	110	180	65	135	235	Length of spec. PCR product(s)
175	180		250		160								290		170								
	215																						
	245																						
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.
21																				41			*04:61, 04:145
						27																	*04:132
21							28																*04:138
21																				41			*04:154
										30													*08:17, 12:16:01- 12:16:02, 13:05:01- 13:05:02, 13:14:01- 13:14:03, 13:21:01- 13:21:02, 13:46, 13:50:01-13:50:02, 13:132, 16:09
										31													*08:20, 13:164
										30	31												*08:28, 12:02:01- 12:02:05, 12:13, 12:15, 12:18-12:20, 12:23, 12:26-12:27, 12:31N- 12:33, 12:37, 13:11:01- 13:11:02, 13:42
										31													*08:31
																							*08:41
				25						31													*12:04
							28																*13:01:01-13:01:06, 13:01:08-13:01:13, 13:04, 13:10, 13:15, 13:22, 13:27-13:28, 13:35, 13:51-13:52, 13:59, 13:61:01- 13:61:02, 13:69, 13:80, 13:91-13:93, 13:98, 13:102, 13:105, 13:110, 13:112-13:113N, 13:117, 13:121, 13:125, 13:127, 13:130, 13:138, 13:141, 13:148, 13:153
						27		29															*13:02:01-13:02:03, 13:02:05-13:02:08, 13:23:01-13:23:02, 13:31, 13:41, 13:66:01- 13:66:02, 13:73, 13:96:01-13:97:02, 13:99, 13:104, 13:123- 13:124, 13:126, 13:128, 13:139, 13:143, 13:145, 13:147, 13:155
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

Length of spec. PCR product(s)	175	175	65	200	85	80	125	125	85	85	155	95	70	145	60	110	90	95	180	115
									115	120	200	145	105		105	255			225	
											255	185							260	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
*13:02:04, 13:109, 13:137N, 13:142N				4																
*13:03:01-13:03:06, 13:33:01-13:33:03, 13:36-13:38, 13:65, 13:85, 13:90, 13:95, 13:101, 13:115				4										14						
*13:06				4																
*13:08, 13:19, 13:72, 13:76, 13:84				4										14						20
*13:09, 13:129																				
*13:12:01-13:12:03, 13:120, 13:122				4										14						
*13:13, 14:63, 14:67				4										14					19	
*13:16				4															19	
*13:18, 13:144																			19	
*13:20, 13:71											11									
*13:24, 13:75, 13:111																				
*13:25, 13:56											11									
*13:29											11									
*13:30, 13:82, 13:157, 13:161				4																
*13:32, 13:40, 13:48, 13:53, 13:70, 13:89, 13:94:01				4										14						
*13:34				4												16				
*13:39				4																
*13:43											11								19	
*13:45				4															19	
*13:47, 13:55, 14:25, 14:27, 14:58, 14:89, 14:133														14					19	
*13:54																				
*13:57, 13:83, 13:87				4																20
*13:58				4							11			14						
*13:60											11			14						20
*13:62																16				
*13:63																				
*13:64, 13:68				4												16				
*13:77				4																
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for
 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

135	115	120	155	110	120	85	85	100	100	85	75	155	80	85	110	150	155	110	180	65	135	235	Length of spec.
175	180		250		160								290		170								PCR product(s)
	215																						
	245																						
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.
																							*13:02:04, 13:109, 13:137N, 13:142N
						27		29															*13:03:01-13:03:06, 13:33:01-13:33:03, 13:36-13:38, 13:65, 13:85, 13:90, 13:95, 13:101, 13:115
										31													*13:06
							28																*13:08, 13:19, 13:72, 13:76, 13:84
22																							*13:09, 13:129
								29															*13:12:01-13:12:03, 13:120, 13:122
								29															*13:13, 14:63, 14:67
																							*13:16
									30	31													*13:18, 13:144
							28																*13:20, 13:71
							28		30														*13:24, 13:75, 13:111
																							*13:25, 13:56
						27																	*13:29
								29															*13:30, 13:82, 13:157, 13:161
							28																*13:32, 13:40, 13:48, 13:53, 13:70, 13:89, 13:94:01
						27		29															*13:34
						27		29										40					*13:39
							28						34										*13:43
						27		29					34										*13:45
																							*13:47, 13:55, 14:25, 14:27, 14:58, 14:89, 14:133
							28		30									40					*13:54
							28																*13:57, 13:83, 13:87
			24							31													*13:58
																							*13:60
22									30														*13:62
						27			30														*13:63
							28																*13:64, 13:68
										31								40					*13:77
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

Length of spec. PCR product(s)	175	175	65	200	85	80	125	125	85	85	155	95	70	145	60	110	90	95	180	115
									115	120	200	145	105		105	255			225	
											255	185							260	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
*13:78											11									
*13:79, 13:162				4																
*13:81				4							11			14						
*13:88											11			14						
*13:94:02				4										14						
*13:100																				
*13:106				4												16				20
*13:107				4																20
*13:108														14						
*13:118				4										14						
*13:119, 14:03:02											11								19	
*13:131				4																
*13:133														14						
*13:134, 14:98											11			14						
*13:135				4										14						20
*13:136																16				
*13:146				4															19	
*13:149											11			14						
*13:150																				
*13:151				4										14		16				
*13:152				4										14						20
*13:154				4															19	
*13:156				4															19	
*13:158																			19	
*13:159				4										14					19	
*13:163				4							11									
*14:01:01-14:01:04, 14:07:01-14:08, 14:22, 14:26, 14:32:01- 14:32:03, 14:34, 14:38- 14:39, 14:49, 14:54:01- 14:55, 14:60, 14:62, 14:70, 14:75, 14:82, 14:87-14:88, 14:90, 14:92N, 14:104, 14:111- 14:114, 14:117-14:119, 14:122, 14:124-14:125, 14:129-14:131, 14:136- 14:137N, 14:139- 14:140, 14:142																				
*14:03:01, 14:69, 14:85, 14:102, 14:116, 14:135											11			14					19	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

135	115	120	155	110	120	85	85	100	100	85	75	155	80	85	110	150	155	110	180	65	135	235	Length of spec. PCR product(s)
175	180		250		160								290		170								
	215																						
	245																						
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.
							28												40				*13:78
							28												40				*13:79, 13:162
			24				28																*13:81
						27																	*13:88
																							*13:94:02
									30										40				*13:100
							28																*13:106
						27		29															*13:107
										31													*13:108
			24					29															*13:118
																							*13:119, 14:03:02
			24				28																*13:131
								29															*13:133
																							*13:134, 14:98
			24			27		29															*13:135
									30														*13:136
							28																*13:146
							28																*13:149
			24						30	31													*13:150
	22							29															*13:151
								29															*13:152
								29															*13:154
										31													*13:156
									30														*13:158
						27		29															*13:159
			24							31									40				*13:163
																							*14:01:01-14:01:04, 14:07:01-14:08, 14:22, 14:26, 14:32:01- 14:32:03, 14:34, 14:38- 14:39, 14:49, 14:54:01- 14:55, 14:60, 14:62, 14:70, 14:75, 14:82, 14:87-14:88, 14:90, 14:92N, 14:104, 14:111- 14:114, 14:117-14:119, 14:122, 14:124-14:125, 14:129-14:131, 14:136- 14:137N, 14:139- 14:140, 14:142
																							*14:03:01, 14:69, 14:85, 14:102, 14:116, 14:135
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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Lot No.: **85S**

Lot-specific information

Length of spec. PCR product(s)	175	175	65	200	85	80	125	125	85	85	155	95	70	145	60	110	90	95	180	115
									115	120	200	145	105		105	255			225	
											255	185							260	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
*14:11		2			5			8							15		17			
*14:12:01-14:12:02											11			14					19	
*14:16				4										14					19	20
*14:24														14						
*14:29											11			14						
*14:35, 14:72																			19	20
*14:37														14						20
*14:40											11			14					19	20
*14:41														14		16				
*14:53																			19	
*14:74, 14:84											11			14					19	20
*14:77											11			14		16			19	
*14:78				4										14					19	
*14:86														14					19	20
*14:96														14						20
*14:97														14		16			19	20
*14:99											11			14					19	20
*14:105														14					19	20
*14:110														14		16			19	
*14:115											11			14					19	
*14:128																			19	
*14:138																				
*16:16					5		7													
DRB3*01:14														14		16				
DRB3*02:18							7				12							18		
DRB5*01:13			3		5		7													
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
DRB1 allele ^{4,5}																				

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*11 subtyping.

In addition, wells number 5, 11, 20, 25, 29 to 31 and 34 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, position, in the 2nd or 3rd exons, 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, position, in the 2nd or 3rd exons, 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.

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

135	115	120	155	110	120	85	85	100	100	85	75	155	80	85	110	150	155	110	180	65	135	235	Length of spec. PCR product(s)
175	180		250		160								290		170								
	215																						
	245																						
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.
				25	26						32									41			*14:11
										31													*14:12:01-14:12:02
							28																*14:16
	22							29															*14:24
			24																				*14:29
												34											*14:35, 14:72
	22																						*14:37
																							*14:40
																							*14:41
									30			34											*14:53
										31													*14:74, 14:84
																							*14:77
										31													*14:78
			24																				*14:86
			24																				*14:96
																							*14:97
			24																				*14:99
										31													*14:105
																							*14:110
																			40				*14:115
									30	31		34											*14:128
												34											*14:138
				25																			*16:16
																			40				<i>DRB3*01:14</i>
				25																41			<i>DRB3*02:18</i>
																							<i>DRB5*01:13</i>
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Well No.
																							DRB1 allele ^{4,5}

⁴The DRB1*1171 has been shown to be identical to corrected DRB1*11:02:01.

⁵DRB1*11 alleles in bold lettering are listed as confirmed alleles on the on the IMGT/HLA web page www.ebi.ac.uk/imgt/hla, release 3.13.1, July 2013.

⁶The DRB1*11:24 and 11:91 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 16.

⁷The DRB1*11:61 and 11:90 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 12.

⁸Primer mix 9: Specific PCR fragment of 85 bp in the DRB1*11:07, *11:23:01-11:23:02, 11:25, 11:32, 11:45, 11:55, 11:64, 11:67, 11:70, 11:103, 11:105, 11:107, 11:119 and 11:125 and the DRB1*03:08 and 03:65 alleles. Specific PCR fragment of 115 bp in the DRB1*11:77 allele.

Primer mix 10: Specific PCR fragment of 85 bp in the DRB1*11:07, 11:23:01-11:23:02, 11:25, 11:45, 11:55, 11:64, 11:67, 11:103, 11:105, 11:107, 11:119 and 11:125 and the DRB1*03:08, 03:65 alleles. Specific PCR fragment of 120 bp in the DRB1*11:74:01-11:74:02 alleles.

Primer mix 11: Specific PCR fragment of 155 bp in the DRB1*11:75 allele. Specific PCR fragment of 200 bp in the DRB1*11:08:01-11:08:02, 11:36, 11:42, 11:64, 11:68 and 11:130 and the DRB1*13:20, 13:25, 13:29,

101.115-24/03 – including *Taq* polymerase, IFU-01
101.115-24u/03u – without *Taq* polymerase, IFU-02

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Lot No.: 85S**Lot-specific information**

13:43, 13:56, 13:60, 13:71, 13:78, 13:88, 13:119, 13:134, 13:149, 14:03:01-14:03:02, 14:12:01-14:12:02, 14:40, 14:69, 14:74, 14:77, 14:84-14:85, 14:98, 14:102, 14:115-14:116 and 14:135 alleles. Specific PCR fragment of 255 bp in the DRB1*11:06:01-11:06:03, 11:21, 11:47 and 11:129 and the DRB1*03:20, 13:58, 13:81, 13:163 and 14:29, 14:99 alleles. Specific PCR fragment of 200 and 255 bp in the 11:57 allele.

Primer mix 12: Specific PCR fragment of 95 bp in the DRB1*11:61 allele. Specific PCR fragment of 145 bp in the DRB1*11:90 allele. Specific PCR fragment of 185 bp in the DRB1*11:30 and in the DRB3*02:18 alleles.

Primer mix 13: Specific PCR fragment of 70 bp in the DRB1*11:60 and 11:109 alleles. Specific PCR fragment of 105 bp in the DRB1*11:09, 11:16, 11:20, 11:28:01-11:28:02, 11:40, 11:58:01-11:58:02, 11:59, 11:83, 11:87, 11:113, 11:115, 11:122 and the DRB1*03:08 and 03:65 alleles.

Primer mix 15: Specific PCR fragment of 60 bp in the DRB1*11:66 allele. Specific PCR fragment of 105 bp in the DRB1*11:10:01-11:10:02, 11:12:01-11:13:02, 11:17, 11:52 and 11:114 and the DRB1*14:11 alleles.

Primer mix 16: Specific PCR fragment of 110 bp in the DRB1*11:15, 11:24, 11:44, 11:49:01-11:50, 11:76, 11:85, 11:114 and 11:127 and the DRB1*03:26, 03:33, 03:43-03:44, 03:71, 13:34, 13:62, 13:64, 13:68, 13:106, 13:136, 14:41, 14:77, 14:97 and 14:110 and in the DRB3*01:14 alleles. Specific PCR fragment of 255 bp in the DRB1*11:91 allele.

Primer mix 19: Specific PCR fragment of 180 bp in the DRB1*11:31, 11:52 and 11:96 and the DRB1*03:10, 13:43, 13:45, 13:159, 14:01:01-14:01:04, 14:07:01-14:08, 14:16, 14:22, 14:25-14:26, 14:32:01-14:32:03, 14:34-14:35, 14:38-14:39, 14:49, 14:53-14:54:02, 14:58, 14:60, 14:62, 14:69-14:70, 14:72, 14:74-14:75, 14:82, 14:86-14:88, 14:90, 14:92N, 14:97, 14:99, 14:104-14:105, 14:110-14:114, 14:117-14:119, 14:122, 14:124-14:125, 14:128-14:133, 14:137N, 14:139-14:140 and 14:142 alleles. Specific PCR fragment of 225 bp in the DRB1*11:23:01-11:23:02, 11:25, 11:32, 11:45, 11:55, 11:64, 11:70 and 11:119 and the DRB1*08:20, 13:13, 13:18, 13:47, 13:55, 13:119, 13:144, 13:146, 13:154, 13:156, 13:158, 13:164, 14:03:01-14:03:02, 14:12:01-14:12:02, 14:27, 14:40, 14:63, 14:67, 14:77-14:78, 14:84-14:85, 14:89, 14:102, 14:115-14:116 and 14:135-14:136 alleles. Specific PCR fragment of 260 bp in the DRB1*11:86 and the DRB1*13:16 alleles. Specific PCR fragment of 180 and 225 bp in the 14:55 allele.

Primer mix 21: Specific PCR fragment of 135 bp in the DRB1*11:59, 11:80, 11:83, 11:87, 11:135 and 11:142 and the DRB1*03:08 and 03:65 alleles. Specific PCR fragment of 175 bp in the DRB1*11:22 and the DRB1*04:15, 04:61, 04:138, 04:145 and 04:154 alleles.

Primer mix 22: Specific PCR fragment of 115 bp in the DRB1*11:15 and the DRB1*13:62 and 13:151 alleles. Specific PCR fragment of 180 bp in the DRB1*11:33, 11:35, 11:65:01-11:65:02, and 11:130 alleles. Specific PCR fragment of 215 bp in DRB1*11:69, 11:82 and DRB1*13:09, 13:129, 14:24 and 14:37 alleles. Specific PCR fragment of 245 bp in DRB1*11:81 allele.

Primer mix 24: Specific PCR fragment of 155 bp in the DRB1*11:39, 11:43, 11:50, 11:115 and 11:145 and the DRB1*03:17, 03:37, 03:80, 13:118, 13:131, 13:135, 13:150, 14:59, 14:86 and 14:96 alleles. Specific PCR fragment of 250 bp in the DRB1*11:06:01-11:06:03, 11:21, 11:47, 11:57, 11:81 and 11:129 and the DRB1*03:20, 13:58, 13:81, 13:163, 14:29 and 14:99 alleles.

Primer mix 26: Specific PCR fragment of 120 bp in the DRB1*11:09-11:10:02, 11:13:01-11:13:02, 11:16-11:17, 11:20, 11:40, 11:46:01-11:46:02, 11:52, 11:59, 11:62, 11:80, 11:83, 11:87, 11:113, 11:118 and 11:122 and the DRB1*03:08, 03:65 and 14:11 alleles. Specific PCR fragment of 160 bp in the DRB1*11:78 allele.

Primer mix 34: Specific PCR fragment of 80 bp in the DRB1*11:31 and 11:96 and in the DRB1*03:10, 13:43, 13:45, 14:35, 14:53, 14:72, 14:128, 14:132 and 14:138 alleles. Specific PCR fragment of 290 bp in the DRB1*11:97 allele.

Primer mix 36: Specific PCR fragment of 115 bp in the DRB1*11:99 and 11:102:01-11:102:02 and the DRB1*03:49 alleles. Specific PCR fragment of 170 bp in the DRB1*11:110 allele.

‘w’, might be weakly amplified.

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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Lot No.: **85S**

Lot-specific information

CELL LINE VALIDATION SHEET																				
DRB1*11 SSP subtyping kit																				
					Well															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Prod. No.:	201075101	201075102	201324603	201075104	201075105	201188306	201075107	201075108	201075109	201324610	201204811	201075112	201188313	201075114	201324615	201188316
	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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

Visit www.olerup-ssp.com for
 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

CELL LINE VALIDATION SHEET																				
DRB1*11 SSP subtyping kit																				
					Well															
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
				Prod. No.:	201075117	201204818	201075119	201204820	201324621	201204822	201075123	201075124	201075125	201324626	201188327	201075128	201075129	201324630	201188331	201075132
	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		-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

CELL LINE VALIDATION SHEET																
DRB1*11 SSP subtyping kit																
						Well										
						33	34	35	36	37	38	39	40	41	42	43
					Prod. No.:	201204833	201204834	201204835	201204836	201204837	201204838	201204839	201204840	201324641	201324642	201324643
	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			-	-	-	-	-	-	-	-	-	-	-

101.115-24/03 – including *Taq* polymerase, IFU-01
 101.115-24u/03u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

CERTIFICATE OF ANALYSIS

Olerup SSP® DRB1*11 SSP

Product number: 101.115-24/03 – including *Taq* pol.
 101.115-24u/03u – without *Taq* pol.
Lot number: 85S
Expiry date: 2016-April-01
Number of tests: 24 tests – Product No. 101.115-24/24u
 3 tests – Product No. 101.115-03/03u
Number of wells per test: 43

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2010-751-01	17	2010-751-17	33	2012-048-33
2	2010-751-02	18	2012-048-18	34	2012-048-34
3	2013-246-03	19	2010-751-19	35	2012-048-35
4	2010-751-04	20	2012-048-20	36	2012-048-36
5	2010-751-05	21	2013-246-21	37	2012-048-37
6	2011-883-06	22	2012-048-22	38	2012-048-38
7	2010-751-07	23	2010-751-23	39	2012-048-39
8	2010-751-08	24	2010-751-24	40	2012-048-40
9	2010-751-09	25	2010-751-25	41	2013-246-41
10	2013-246-10	26	2013-246-26	42	2013-246-42
11	2012-048-11	27	2011-883-27	43	2013-246-43
12	2010-751-12	28	2010-751-28		
13	2011-883-13	29	2010-751-29		
14	2010-751-14	30	2013-246-30		
15	2013-246-15	31	2011-883-31		
16	2011-883-16	32	2010-751-32		

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

No DNAs carrying the alleles to be amplified by primer solutions 12, 16, 21 to 23, 33 to 40, 42 and 43 were available. The specificities of the primers in primer solutions 12, 16, 21, 22, 33, 34, 36, 40 and 42 were tested by separately adding one or more additional 5'-primers, respectively one or more additional 3'-primers.

In primer solution 23, 35 and 38 the 3'-primer was tested by separately adding one 5'-primer, the 5'-primer was not possible test.

In primer solution 37, 39 and 43 the 5'-primer was tested by separately adding one 3'-primer, the 3'-primer was not possible test.

In primer solutions 3, 9 to 11, 16, 19, 22, 24, 30, 32, 33 and 36 one, two or three of the 3'-primers were not possible to test, and in primer solutions 12, 13, 15, 26 and 34 one or two of the 5'-primers were not possible to test.

Additional 3'-primers in primer solutions 5, 9, 10, 17 to 20 and 24 were tested by separately adding one or two 5'-primers.

101.115-24/03 – including *Taq* polymerase, IFU-01
101.115-24u/03u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

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

Date of approval: 2013-October-24

Approved by:

Production Quality Control

101.115-24/03 – including *Taq* polymerase, IFU-01
101.115-24u/03u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

Declaration of Conformity

Product name: *Olerup* SSP® DRB1*11
Product number: 101.115-24/24u, -03/03u
Lot number: 85S

Intended use: DRB1*11 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 13485:2012, 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
2015-February-04

Daniel Malica
Head of QA and Regulatory Affairs

101.115-24/03 – including *Taq* polymerase, IFU-01
101.115-24u/03u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **85S**

Lot-specific information

101.115-24/03 – including *Taq* polymerase, IFU-01
101.115-24u/03u – without *Taq* polymerase, IFU-02

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Lot No.: **85S**

Lot-specific information

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Web page: <http://www.olerup-ssp.com>

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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

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For information on Olerup SSP distributors worldwide, contact Olerup GmbH.