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

Visit www.olerup.com for **"Instructions for Use" (IFU)**

Lot No.: 7D1

Lot-specific information

Olerup SSP® DRB1*11

Product number:	**101.115-24/03 – including *Taq* pol.** **101.115-24u/03u – without *Taq* pol.**
Lot number:	**7D1**
Expiry date:	**2019-01-01**
Number of tests:	**24 tests – Product No. 101.115-24/24u** **3 tests – Product No. 101.115-03/03u**
Number of wells per test:	**47+1**
Storage - pre-aliquoted primers:	**dark at -20ºC**
- PCR Master Mix:	**-20ºC**
- Adhesive PCR seals	**RT**
- Product Insert	**RT**

This Product Description is only valid for Lot No. 7D1.

Complete product documentation consists of generic Instructions for Use (IFU), lot specific Product Insert, Worksheet and Certificate.

CHANGES COMPARED TO THE PREVIOUS *OLERUP* SSP® DRB1*11 LOT (38X)

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

- Confirmed DRB1*11 alleles as listed in the IMGT/HLA database[1]
- Polymorphisms in exons outside of the region encoding the peptide binding domain
- Null and Alternatively expressed alleles

One well has been added to the DRB1*11 kit, well **48**.

[1]As 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. 38X)**. The kit design is based on IMGT/HLA database 3.23.0.

As of lot series V, the Specificity Table is included in the lot-specific Product Insert, and the Interpretation Table is included in the Worksheet.

Lot No.: 7D1 **Lot-specific information**

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

Well	5'-primer	3'-primer	rationale
5	-	Added	3'-primer added for the DRB1*11:01:27 allele.
12	Modified	-	5'-primer modified for the DRB1*11:61 allele.
13	-	Modified	3'-primer modified for improved HLA-specific amplification.
15	Added	-	5'-primer added for increased yield of the DRB1*11:66 allele.
27	Added	-	5'-primer added for the DRB1*11:154 allele.
34	-	Added, Modified	3'-primer added for the DRB1*11:169N allele, 3'-primer modified for improved HLA-specific amplification.
36	Exchanged	-	5'-primer exchanged for improved HLA-specific amplification.
37	-	Added	3'-primer added for the DRB1*11:101:02 allele.
39	-	Added	3'-primer added for the DRB1*11:160 allele.
44	-	Exchanged, Added	3'-primer exchanged for increased yield and for improved HLA-specific amplification, 3'-primer added for the DRB1*11:187 allele.
46	-	Exchanged	3'-primer exchanged for decreased primer oligomer formation.
47	New	New	New primer pair for the DRB1*11:193 allele, updated negative control moved to well 47.
48	-	-	Updated negative control added from well 47.

Change in revision R01 compared to R00:

1. The DRB1*08:40, DRB1*11:73, 11:93, 11:184, DRB1*13:03:01-13:03:06, 13:33:01-13:33:03, 13:37, 13:66:01-13:66:02, 13:85, 13:88, 13:90, 13:95, 13:101, 13:115, 13:120, 13:122, 13:151-13:152, 13:167, 13:170, 13:172, 13:174, 13:180, 13:188, 13:194, 13:216, 13:219, 13:227 and 13:230 alleles are amplified by primer mix 27. The DRB1*11:132, DRB1*13:10, 13:81, 13:89, 13:94:01-13:94:02 and 13:176 alleles are amplified by primer mix 28. This has been corrected in the Specificity and Interpretation Tables.

Lot No.: 7D1 **Lot-specific information**

Well **48** contains Negative Control primer pairs, that will amplify more than 95% of the *Olerup* SSP® HLA Class I, DRB, DQB1, DPB1 and DQA1 amplicons as well as all the amplicons generated by the control primer pairs matching the human growth hormone gene.

HLA-specific PCR product sizes range from 75 to 200 base pairs.
The PCR product generated by the positive control primer pair is 430 base pairs.

Length of PCR product	**105**	**200**	**105**	**80**	**75**	**80**	**85**
5'-primer[1]	**164**	**340**	**440**	**45**	**45**	**43**	**36**
	5'-CAC3'	**5'-Agg3'**	**5'-TTA3'**	**5'-Tgg3'**	**5'-Tgg3'**	**5'-Tgg3'**	**5'-TAC3'**
							36
							5'-TAT3'
3'-primer[2]	**231**	**2nd I**	**507**	**59**	**58**	**57**	**47**
	5'-TgC3'	**5'-AAA3'**	**5'-TTg3'**	**5'-CTC3'**	**5'-ggC3'**	**5'-CTC3'**	**5'-ACA3'**
							48
							5'-gCA3'
							48
							5'-gCC3'
							52
							5'-TgT3'
A*	**+**	**+**	**+**				
B*	**+**	**+**	**+**				
C*	**+**	**+**	**+**				
DRB1				**+**	**+**		
DRB3				**+**	**+**		
DRB5				**+**			
DQB1					**+**		
DPB1						**+**	
DQA1							**+**

[1]The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2nd or 3rd exon, matching the specificity-determining 3'-end of the primer is given. Nucleotide and codonnumbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

[2]The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2nd or 3rd exon or the 2nd intron, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide and codon numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

Lot No.: 7D1 **Lot-specific information**

PRODUCT DESCRIPTION

DRB1*11 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the DRB1*11:01 to DRB1*11:197 alleles.

PLATE LAYOUT

Each test consists of 48 PCR reactions in a 48 well cut PCR plate.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
9	**10**	**11**	**12**	**13**	**14**	**15**	**16**
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**
25	**26**	**27**	**28**	**29**	**30**	**31**	**32**
33	**34**	**35**	**36**	**37**	**38**	**39**	**40**
41	**42**	**43**	**44**	**45**	**46**	**47**	**NC**

The 48 well cut PCR plate is marked with 'DRB1*11', in silver/gray ink.
Well No. 1 is marked with the Lot No. '7D1'.
Wells 1 to 47 – DRB1*11 high resolution primers.
Well 48 – Negative Control (NC).
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 48 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

Due to the sharing of sequence motifs between DRB1 alleles, non-DRB1*11 alleles will be amplified by primer mixes 1 to 11, 13 to 22, 24 to 34, 36, 40, 41, 43, 45 and 47. In addition, a few DRB3 and DRB5 alleles will be amplified by primer mixes 3, 5, 7, 12, 14, 16, 18, 25, 29, 40 and 41.
For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the phenotypically different DRB1*11 alleles, i.e. **DRB1*11:01 to DRB1*11:197**, recognized by the HLA Nomenclature Committee in January 2016[1,2] 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 has been sequenced by more than a single laboratory or from multiple sources. Current allele confirmation status for DRB1*11 alleles is listed below.

Lot No.: 7D1 **Lot-specific information**

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 following DRB1*11 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

Alleles	Primer mix
DRB1*11:24, 11:91	16
DRB1*11:61, 11:90	12
DRB1*11:93, 11:154	27
DRB1*11:97, 11:169N	34
DRB1*11:99, 11:128, 11:175	36

The DRB1*11 subtyping kit cannot distinguish the silent mutations in the DRB1*11:01:01-11:01:11 and 11:01:13-11:01:27, the DRB1*11:02:01-11:02:04, the DRB1*11:03:01-11:03:02, the DRB1*11:04:01-11:04:03 and 11:04:05-11:04:12, the DRB1*11:06:01-11:06:03, the DRB1*11:08:01-11:08:03, the DRB1*11:10:01-11:10:02, the DRB1*11:11:01 and 11:11:03, the DRB1*11:12:01 and 11:12:03, the DRB1*11:13:01-11:13:02, the DRB1*11:14:01-11:14:02, the DRB1*11:19:01-11:19:03, the DRB1*11:23:01-11:23:02, the DRB1*11:27:01-11:27:03, the DRB1*11:28:01-11:28:02, the DRB1*11:37:01-11:37:02, the DRB1*11:49:01-11:49:02, the DRB1*11:54:01-11:54:02, the DRB1*11:58:01-11:58:02, the DRB1*11:65:01-11:65:02, the DRB1*11:74:01-11:74:02, the DRB1*11:84:01-11:84:03, the DRB1*11:101:01-11:101:02, the DRB1*11:102:01-11:102:02 or the DRB1*11:103:01-11:103:02 alleles.

[1]DRB1 alleles listed on the IMGT/HLA web page 2016-January-19, release 3.23.0, www.ebi.ac.uk/imgt/hla.
[2]Alleles that have been deleted from or renamed in the official WHO HLA Nomenclature up to and including the last IMGT/HLA database release can be retrieved from web page http://hla.alleles.org/alleles/deleted.html.

RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in DRB1*11 homo- and heterozygotes is available upon request.

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

Visit www.olerup.com for
"Instructions for Use" (IFU)

Lot No.: 7D1 **Lot-specific information**

ALLELE CONFIRMATION STATUS

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

Lot No.: 7D1 **Lot-specific information**

Allele	Status[1]	Allele	Status[1]	Allele	Status[1]	Allele	Status[1]
DRB1*11:128	**Confirmed**	DRB1*11:147:02	Unconfirmed	DRB1*11:167	Unconfirmed	**DRB1*11:187**	**Confirmed**
DRB1*11:129	Unconfirmed	DRB1*11:148	Unconfirmed	DRB1*11:168	Unconfirmed	DRB1*11:188	Unconfirmed
DRB1*11:130	Unconfirmed	DRB1*11:149	Unconfirmed	DRB1*11:169N	Unconfirmed	DRB1*11:189	Unconfirmed
DRB1*11:131	Unconfirmed	DRB1*11:150	Unconfirmed	DRB1*11:170	Unconfirmed	DRB1*11:190	Unconfirmed
DRB1*11:132	Unconfirmed	DRB1*11:151	Unconfirmed	DRB1*11:171	Unconfirmed	DRB1*11:191	Unconfirmed
DRB1*11:133	Unconfirmed	DRB1*11:152	Unconfirmed	DRB1*11:172	Unconfirmed	**DRB1*11:193**	**Confirmed**
DRB1*11:134	Unconfirmed	DRB1*11:153	Unconfirmed	DRB1*11:173	Unconfirmed	DRB1*11:194	Unconfirmed
DRB1*11:135	Unconfirmed	**DRB1*11:154**	**Confirmed**	DRB1*11:174	Unconfirmed	DRB1*11:195	Unconfirmed
DRB1*11:136	Unconfirmed	DRB1*11:155	Unconfirmed	DRB1*11:175	Unconfirmed	DRB1*11:197	Unconfirmed
DRB1*11:137	**Confirmed**	DRB1*11:156	Unconfirmed	DRB1*11:176	Unconfirmed		
DRB1*11:138	Unconfirmed	DRB1*11:157	Unconfirmed	DRB1*11:177	Unconfirmed		
DRB1*11:139	Unconfirmed	DRB1*11:158	Unconfirmed	DRB1*11:178	Unconfirmed		
DRB1*11:140	Unconfirmed	DRB1*11:159	Unconfirmed	DRB1*11:179	Unconfirmed		
DRB1*11:141	Unconfirmed	**DRB1*11:160**	**Confirmed**	DRB1*11:180	Unconfirmed		
DRB1*11:142	**Confirmed**	DRB1*11:161	Unconfirmed	DRB1*11:181	Unconfirmed		
DRB1*11:143	Unconfirmed	DRB1*11:162	Unconfirmed	DRB1*11:182	Unconfirmed		
DRB1*11:144	Unconfirmed	DRB1*11:163	Unconfirmed	DRB1*11:183	Unconfirmed		
DRB1*11:145	Unconfirmed	DRB1*11:164	Unconfirmed	DRB1*11:184	Unconfirmed		
DRB1*11:146	Unconfirmed	**DRB1*11:165**	**Confirmed**	DRB1*11:185	Unconfirmed		
DRB1*11:147:01	Unconfirmed	DRB1*11:166	Unconfirmed	DRB1*11:186	Unconfirmed		

[1]Allele status "confirmed" or "unconfirmed" as listed on the IMGT/HLA web page 2016-January-19, release 3.23.0, www.ebi.ac.uk/imgt/hla.

Lot No.: 7D1

Lot-specific information

SPECIFICITY TABLE

DRB1*11 SSP subtyping

Specificities and sizes of the PCR products of the 47+1 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**	*11:01:01-11:04:12, 11:06:01-11:11:01, 11:11:03-11:21, 11:23:01-11:29:02, 11:31-11:66, 11:68-11:70, 11:72-11:103:02, 11:105-11:191, 11:194-11:195, 11:197	*03:08, 03:65
2	175 bp	430 bp	*11:05, 11:67, 11:193	*08:31, 08:41, 08:63, 08:75, 12:04, 12:49, 14:11, 14:148
3[5]	70 bp	430 bp	*11:01:01-11:01:27, 11:03:01-11:04:12, 11:05-11:06:03, 11:09-11:11:01, 11:11:03-11:12:03, 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, 11:58:01-11:63:02, 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, 11:144-11:152, 11:154-11:155, 11:157-11:158, 11:160-11:166, 11:168-11:170, 11:172, 11:174-11:183, 11:186-11:190, 11:193-11:195, 11:197	*04:15, 08:31, 08:41, 08:75, 12:49, 16:27, **DRB5*01:13**
4[6,8]	200 bp	430 bp	*11:02:01-11:02:05, 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, 11:171, 11:184, 11:191	*03:125, 13:01:01-13:01:06, 13:01:08-13:02:09, 13:02:11-13:04, 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, 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,

Lot No.: 7D1 **Lot-specific information**

				13:137N-13:139, 13:141-13:143, 13:145-13:148, 13:151-13:157, 13:159, 13:161-13:163, 13:165-13:168, 13:170-13:174, 13:176-13:177, 13:179, 13:181-13:182, 13:185N-13:188, 13:190-13:191, 13:194, 13:198, 13:200N-13:202, 13:204-13:205, 13:207-13:213, 14:16, 14:63, 14:67, 14:78
5[5]	85 bp	**515 bp**	*11:01:01-11:01:27, 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, 11:60-11:62:02, 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, 11:140-11:150, 11:152-11:155, 11:157-11:160, 11:162-11:163, 11:165-11:166, 11:169N-11:170, 11:172, 11:174-11:175, 11:177-11:183, 11:186-11:191, 11:193-11:195, 11:197	*04:15, 04:61, 04:145, 04:154, 04:170, 08:31, 08:41, 08:63, 08:75, 12:04, 12:49, 14:11, 16:16, 16:27, **DRB5*01:13**
6[5,9]	80 bp	430 bp	*11:02:01-11:03:02, 11:11:01, 11:11:03, 11:14:01-11:14:02, 11:16, 11:20-11:21, 11:36, 11:40-11:41, 11:48, 11:55, 11:59, 11:63:01-11:63:02, 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, 11:151, 11:161, 11:168, 11:171, 11:176	*04:138
7[5]	125 bp	430 bp	*11:01:01-11:01:27, 11:05, 11:08:01-11:11:01, 11:11:03-11:12:03, 11:14:01-11:15, 11:19:01-11:20, 11:22-11:24, 11:26-11:33, 11:37:01-11:37:02, 11:39, 11:45, 11:49:01-11:49:02, 11:51, 11:53, 11:61-11:62:02, 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, 11:99-11:101:02, 11:103:01-11:103:02, 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,	*04:61, 04:145, 04:170, 08:41, 08:63, 15:99, 16:16, 16:27, **DRB3*02:18, DRB5*01:13**

Lot No.: 7D1 **Lot-specific information**

			11:147:01-11:147:02, 11:149-11:150, 11:152, 11:154-11:155, 11:157-11:158, 11:162, 11:164, 11:166, 11:168-11:170, 11:172, 11:175, 11:177-11:178, 11:183-11:184, 11:186, 11:188, 11:191, 11:193, 11:195, 11:197	
8[5]	125 bp	430 bp	*11:02:01-11:04:12, 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, 11:63:01-11:63:02, 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, 11:148, 11:151, 11:153, 11:159-11:161, 11:163, 11:165, 11:171, 11:173-11:174, 11:176, 11:179-11:182, 11:187, 11:189-11:190, 11:194	*03:08, 03:65, 04:15, 04:138, 04:154, 08:31, 08:75, 12:04, 12:49, 14:11, 15:109
9[5]	85 bp 115 bp	430 bp	*11:07, 11:103:01-11:103:02, 11:105, 11:107, 11:125, 11:173 *11:77, 11:186	*03:08, 03:65
10[5,7]	85 bp 120 bp	430 bp	*11:07, 11:23:01-11:23:02, 11:25, 11:45, 11:55, 11:64, 11:67, 11:103:01-11:103:02, 11:105, 11:107, 11:119, 11:125, 11:173 *11:74:01-11:74:02	*03:08, 03:65, 08:63, 08:75
11	155 bp 200 bp 255 bp	**515 bp**	*11:75 *11:08:01-11:08:03, 11:36, 11:42, 11:57, 11:64, 11:68, 11:130 *11:06:01-11:06:03, 11:21, 11:47, 11:57, 11:129, 11:174	 *13:20, 13:25, 13:29, 13:43, 13:56, 13:60, 13:71, 13:78, 13:88, 13:119, 13:134, 13:149, 13:180, 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, 14:135, 14:144, 14:156 *03:20, 13:58, 13:81, 13:163, 14:29, 14:99
12[5,11]	95 bp 145 bp 185 bp	430 bp	*11:61 *11:90 *11:30	 **DRB3*02:18**
13[5,9]	105 bp	430 bp	*11:09, 11:16, 11:20, 11:28:01-11:28:02, 11:40, 11:58:01-11:59, 11:83, 11:87, 11:113, 11:115, 11:122, 11:182	*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,	*03:02:01-03:03, 03:06, 03:17, 03:26-03:27, 03:31, 03:35, 03:38,

Lot No.: 7D1 **Lot-specific information**

			11:56, 11:83, 11:107, 11:145, 11:149, 11:170-11:171, 11:183-11:184, 11:189	03:41:01-03:41:02, 03:60, 03:74-03:75, 03:80, 03:85, 03:88, 03:90, 03:102-03:103, 03:115, 03:122, 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, 13:167, 13:174, 13:180, 13:182, 13:188-13:189, 13:191, 13:194, 13:198, 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, 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, 14:144, 14:146-14:147, 14:149, 14:151, 14:153-14:171, **DRB3*01:14**
15[5]	60 bp 105 bp	430 bp	*11:66 *11:12:01, 11:12:02[w], 11:12:03, 11:114, 11:170, 11:179, 11:191	*14:11, 14:148
16[5]	110 bp	430 bp	*11:15, 11:24, 11:44, 11:49:01-11:50, 11:76, 11:85, 11:114, 11:127, 11:183	*03:26, 03:33, 03:43-03:44, 03:71:01-03:71:02, 13:34, 13:62, 13:64, 13:68, 13:106, 13:136, 13:151, 13:174, 13:204, 14:41, 14:77, 14:97, 14:110, **DRB3*01:14**
	255 bp		*11:91	
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, 11:150, 11:159	*04:154, 04:170, 08:63, 08:75, 14:11
18[5]	95 bp	430 bp	*11:07, 11:27:01-11:27:03, 11:84:01-11:84:03, 11:103:01-11:103:02, 11:107, 11:124-11:125, 11:136, 11:138, 11:173	*03:08, 03:65, **DRB3*02:18**
19[6,9]	180 bp	430 bp	*11:31, 11:52, 11:96, 11:148	*03:10, 13:43, 13:45, 13:159, 13:179, 13:191, 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, 14:38:01-14:39, 14:49, 14:53-14:55, 14:58, 14:60,

Lot No.: 7D1 **Lot-specific information**

				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, 14:142, 14:146-14:147, 14:149-14:151, 14:153, 14:157-14:158, 14:162-14:164, 14:166N, 14:168, 14:171
	225 bp		*11:23:01-11:23:02, 11:25, 11:32, 11:45, 11:55, 11:64, 11:70, 11:119	*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, 14:55, 14:63, 14:67, 14:77-14:78, 14:84-14:85, 14:89, 14:102, 14:115-14:116, 14:135-14:136, 14:144, 14:156, 14:164
	260 bp		*11:86	*13:16
20[5]	115 bp	**515 bp**	*11:10:01-11:10:02, 11:12:01-11:13:02, 11:17, 11:29:01-11:29:02, 11:44, 11:47, 11:49:01-11:50, 11:52, 11:63:01-11:63:02, 11:85, 11:127, 11:149, 11:165, 11:170, 11:179, 11:189-11:191	*03:04:01-03:04:02, 03:21, 03:26, 03:30, 03:33, 03:35, 03:44, 13:08, 13:19, 13:57, 13:60, 13:72, 13:76, 13:83-13:84, 13:87, 13:106-13:107, 13:135, 13:152, 13:182, 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, 14:146-14:147, 14:149-14:151, 14:153, 14:155, 14:157-14:158, 14:162-14:164, 14:166N, 14:168-14:169, 14:171
21	135 bp	430 bp	*11:59, 11:80, 11:83, 11:87, 11:135, 11:142, 11:182	*03:08, 03:65
	175 bp		*11:22	*04:15, 04:61, 04:138, 04:145, 04:154, 04:170
22[5]	115 bp	430 bp	*11:15	*03:71:02, 13:62, 13:151
	180 bp		*11:33, 11:35, 11:65:01-11:65:02, 11:130	
	215 bp		*11:69, 11:82	*13:09, 13:129, 13:192, 14:24, 14:37
	245 bp		*11:81	
23[5]	120 bp	430 bp	*11:38	
24	155 bp	430 bp	*11:39, 11:43, 11:50, 11:115, 11:145, 11:151, 11:168, 11:171, 11:174	*03:17, 03:37, 03:80, 13:118, 13:131, 13:135, 13:150, 14:59, 14:86, 14:96, 14:153-14:154

Lot No.: 7D1 **Lot-specific information**

	250 bp		*11:06:01-11:06:03, 11:21, 11:47, 11:57, 11:81, 11:129, 11:174	*03:20, 13:58, 13:81, 13:163, 14:29, 14:99
25[5]	110 bp	430 bp	*11:01:12, 11:02:05[w], 11:04:04, 11:09-11:10:02, 11:12:02, 11:13:01-11:13:02, 11:16-11:17, 11:20, 11:22, 11:28:01-11:28:02, 11:29:02[w], 11:40, 11:46:01, 11:52, 11:58:01-11:59, 11:62:02, 11:63:02, 11:83, 11:87, 11:113, 11:115, 11:118, 11:122, 11:149, 11:182, 11:189-11:190	*03:08, 03:65, 12:04, 12:49, 14:11, 14:148, 15:99, 15:109, 16:16, 16:27[w], **DRB3*02:18**
26[5]	120 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, 11:62:01-11:62:02, 11:80, 11:83, 11:87, 11:113, 11:118, 11:122, 11:149, 11:182, 11:189-11:190	*03:08, 03:65, 14:11, 14:148
	160 bp		*11:78, 11:152	
27[5]	85 bp	430 bp	*11:11:01, 11:11:03, 11:14:01-11:14:02, 11:20, 11:68, 11:73, 11:93, 11:122, 11:168, 11:184	*01:03, 01:39N, 04:14, 04:106, 04:132, 08:40, 13:02:01-13:02:03, 13:02:05-13:02:09, 13:02:11-13:02:12, 13:03:01-13:03:06, 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, 13:120, 13:122-13:124, 13:126, 13:128, 13:135, 13:139, 13:143, 13:145, 13:147, 13:151-13:152, 13:155, 13:159, 13:165, 13:167-13:168, 13:170-13:172, 13:174, 13:179-13:180, 13:182, 13:188, 13:194-13:195, 13:198, 13:202, 13:207-13:212, 13:216, 13:219, 13:227, 13:230
	215 bp		*11:154	
28[5]	85 bp	430 bp	*11:02:01-11:03:02, 11:16, 11:21, 11:36, 11:40-11:41, 11:48, 11:55, 11:59, 11:63:01-11:63:02, 11:65:01-11:65:02, 11:70, 11:76, 11:85, 11:118, 11:124, 11:127, 11:132, 11:138-11:139, 11:151, 11:161, 11:171, 11:176	*01:42, 01:61, 03:125, 04:02:01-04:02:05, 04:37, 04:124, 04:133-04:134, 04:138, 04:143, 04:161, 04:204, 13:01:01-13:01:06, 13:01:08-13:01:16, 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,

Lot No.: 7D1 **Lot-specific information**

				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, 13:166, 13:173, 13:175-13:177, 13:183, 13:185N-13:187, 13:190-13:191, 13:200N-13:201, 13:204-13:205, 13:213, 14:16, 14:57, 15:10
29[5]	100 bp	**515 bp**	*11:14:01-11:14:02, 11:19:01-11:20, 11:31, 11:45, 11:73, 11:82, 11:184, 11:191	*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, 04:185, 04:205, 07:01:01:01-07:01:18, 07:03-07:04, 07:06-07:19, 07:21-07:23, 07:25-07:30, 07:32-07:42, 07:44-07:54, 07:56-07:64, 07:66-07:67, 08:03:02-08:03:06, 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, 08:56, 08:58, 08:60N-08:63, 08:66, 08:68-08:69, 08:71, 08:74, 10:10, 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, 13:165, 13:167-13:168, 13:170-13:172, 13:174, 13:179, 13:182, 13:188, 13:194-13:196, 13:198, 13:202, 13:207-13:212, 14:24, 14:63, 14:67, 15:02:01-15:02:17, 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, 15:99, 15:101, 15:103-15:105, 15:115N, 15:118-15:119, 15:122, 15:126, 15:131, 16:05:01-16:05:02, 16:07, **DRB3*02:11, DRB5*01:07, DRB5*01:11, DRB5*02:03**
30[5]	100 bp	**515 bp**	*11:01:01-11:01:27, 11:03:01-11:06:03, 11:09-11:11:01, 11:11:03-11:12:03, 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,	*08:17, 08:28, 12:02:01-12:02:06, 12:13, 12:15-12:16:03, 12:18-12:20, 12:23, 12:26-12:27, 12:31N-12:33, 12:37, 12:42-12:45, 12:49-12:52, 12:55-12:56, 13:05:01-13:05:03, 13:11:01-13:11:02, 13:14:01-13:14:03, 13:18,

Lot No.: 7D1 **Lot-specific information**

			11:51, 11:54:01-11:55, 11:58:01-11:63:02, 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, 11:128-11:129, 11:133-11:135, 11:137-11:142, 11:144, 11:146-11:148, 11:150-11:152, 11:154-11:158, 11:160-11:169N, 11:172, 11:174-11:182, 11:185-11:188, 11:190, 11:193-11:195, 11:197	13:21:01-13:21:02, 13:24, 13:42, 13:46, 13:50:01-13:50:03, 13:54, 13:62-13:63, 13:75, 13:100, 13:111, 13:132, 13:136, 13:144, 13:150, 13:158, 13:169, 13:197, 13:199, 13:203, 14:53, 14:128, 16:09:01-16:09:02, 16:33
31[5]	85 bp	**515 bp**	*11:04:01-11:04:13, 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, 11:148, 11:156, 11:160, 11:163, 11:165, 11:174, 11:179-11:182, 11:187, 11:189-11:190, 11:194	*01:23, 04:12, 04:15, 04:18, 04:25, 04:36, 04:53:01-04:53:02, 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, 08:59, 08:67, 08:70, 08:75, 12:01:01-12:15, 12:17-12:21, 12:23-12:38, 12:40-12:59, 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, 13:169, 13:181, 14:12:01-14:12:02, 14:15, 14:73-14:74, 14:78, 14:84, 14:105, 14:128, 14:156, 15:21, 16:15, 16:23, 16:33-16:34, 16:36
32[5,9]	75 bp	430 bp	*11:13:01-11:13:02, 11:17, 11:51-11:52, 11:89, 11:159	*14:11
33	155 bp	430 bp	*11:88, 11:94	*13:177
34[5]	80 bp	**515 bp**	*11:31, 11:96, 11:148	*03:10, 13:43, 13:45, 13:179, 14:35, 14:53, 14:72, 14:128, 14:132, 14:138
	135 bp		*11:169N	
	290 bp		*11:97	
35[5]	85 bp	430 bp	*11:98	
36[5]	90 bp	430 bp	*11:102:01-11:102:02, 11:175	*03:49, 14:161
	115 bp		*11:99	
	165 bp		*11:110	
	250 bp		*11:128	
37	150 bp	430 bp	*11:101:01-11:101:02	
38	150 bp	430 bp	*11:78, 11:106, 11:152	
39[5]	110 bp	430 bp	*11:108, 11:160-11:161	
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, 13:181, 14:48, 14:64, 14:109, 14:115, **DRB3*01:14**
41[5]	65 bp	430 bp	*11:07, 11:13:01-11:13:02, 11:17, 11:26, 11:34, 11:52,	*03:08, 04:61, 04:145, 04:154, 04:170, 14:11, **DRB3*02:18**

Lot No.: 7D1 **Lot-specific information**

			11:79, 11:103:01-11:103:02, 11:105, 11:107, 11:131, 11:136, 11:159	
42	135 bp 180 bp	430 bp	*11:72, 11:92, 11:180 *11:104	
43	235 bp	430 bp	*11:112, 11:137	*03:78
44[9]	200 bp 270 bp	430 bp	*11:111 *11:187	
45[5]	90 bp	430 bp	*11:23:01-11:23:02, 11:25, 11:32, 11:45, 11:55, 11:64, 11:67, 11:70, 11:119	*08:63, 08:75
46[5]	70 bp	430 bp	*11:60, 11:109	
47	210 bp	430 bp	*11:193	*08:05, 08:18, 08:24, 08:29, 08:31, 08:40-08:41, 12:01:02, 12:02:04, 12:16:01, 12:49, 13:17, 13:116, 13:175, 14:04:01-14:04:03, 14:11, 14:28, 14:31, 14:52, 14:68:01-14:68:02, 14:71, 14:73, 14:120, 14:126:01-14:126:02, 14:138, 14:145, 14:148, 14:152N
48[12]	-	-	**Negative Control**	

[1]Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of DRB1*11 SSP typings.
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 alleles listed are specified according to amplicon length.
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 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.

[2]The internal positive control primer pairs amplify segments of the human growth hormone gene. The internal positive control bands are 430 or 515 base pairs respectively, well distribution as outlined in the table. Well number 1 contains the longer, 515 bp, internal positive control band. The well distribution of the internal controls can help in orientation of the kit on gel photo, as well as allow for kit identification. In the presence of a specific amplification the intensity of the control band often decreases.

[3]For 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. Assumption is made that unknown sequences in these regions are conserved within allelic groups.

[4]Due to the sharing of sequence motifs between DRB1 alleles, non-DRB1*11 alleles will be amplified by primer mixes 1 to 11, 13 to 22, 24 to 34, 36, 40, 41, 43, 45 and 47. In addition, a few DRB3 and DRB5 alleles will be amplified by primer mixes 3, 5, 7, 12, 14, 16, 18, 25, 29, 40 and 41.

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

Lot No.: 7D1 **Lot-specific information**

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.

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

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

[8]Primer mix 4 has a tendency to giving rise to primer oligomer formation.

[9]Primer mixes 6, 13, 19, 32 and 44 may have tendencies of unspecific amplifications.

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

[11]Primer mix 12 may amplify the DRB1*11:60 and 11:109 and the DRB1*15:68 alleles.

[12]Primer mix 48 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by the control primer pairs matching the human growth hormone gene. HLA-specific PCR product sizes range from 75 to 200 base pairs and the PCR product generated by the HGH positive control primer pair is 430 base pairs.

'w', may be weakly amplified.

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

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Lot No.: 7D1

Lot-specific information

PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec.	175	175	70	200	85	80	125	125	85	85	155	95
PCR product									115	120	200	145
											255	185
Length of int.	515	430	430	430	515	430	430	430	430	430	515	430
pos. control[1]												
5'-primer(s)[2]	13(125)	13(125)	58(261)	13(125)	58(260)	58(261)	58(261)	58(261)	58(261)	58(261)	13(125)	10(116)
	5' -gTC 3'	5' -ggg 3'	5' -gAg 3'	5' -gTC 3'	5' -TgA 3'	5' -gAg 3'	5' -gAg 3'	5' -gAg 3'	5' -gAg 3'	5' -gAg 3'	5' -gTC 3'	5' -gCT 3'
												23(157)
												5' -ggA 3'
												40(208)
												5' -TCA 3'
3'-primer(s)[3]	58(260)	58(260)	66(286)	66(286)	70(298)	70(298)	86(344)	86(344)	73(305)	73(305)	50(238)	58(260)
	5' -CCT 3'	5' -CCT 3'	5' -gAA 3'	5' -gAT 3'	5' -CCT 3'	5' -CTC 3'	5' -CAC 3'	5' -CCA 3'	5' -ggC 3'	5' -ggC 3'	5' -CgC 3'	5' -CCT 3'
	58(260)		66(286)	66(286)	72(303)				73(305)	73(305)	66(286)	
	5' -CCT 3'		5' -gAA 3'	5' -gAT 3'	5' -gCg 3'				5' -ggC 3'	5' -ggC 3'	5' -gAg 3'	
	58(260)		66(286)		72(303)				82(334)	73(307)	85(341)	
	5' -CCT 3'		5' -gAA 3'		5' -gCA 3'				5' -gTg 3'	5' -CAg 3'	5' -CAg 3'	
			67(288)		73(307)					84(338)		
			5' -AgA 3'		5' -CAg 3'					5' -CCT 3'		
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Well No.	13	14	15	16	17	18	19	20	21	22	23	24
Length of spec.	105	145	60	110	90	95	180	115	135	115	120	155
PCR product			105	255			225		175	180		250
							260			215		
										245		
Length of int.	430	430	430	430	430	430	430	515	430	430	430	430
pos. control[1]												
5'-primer(s)[2]	36(196)	13(125)	37(197)	13(125)	58(260)	58(261)	13(125)	13(125)	13(125)	13(125)	59(263)	13(125)
	5' -AgA 3'	5' -gTC 3'	5' -gTT 3'	5' -gTC 3'	5' -TgA 3'	5' -gAg 3'	5' -gTC 3'	5' -gTC 3'	5' -ACA 3'	5' -gTC 3'	5' -ggg 3'	5' -gTC 3'
	36(196)		37(197)						26(164)			
	5' -AgA 3'		5' -gTT 3'						5' -gTA 3'			
			51(239)									
			5' -gAT 3'									
3'-primer(s)[3]	58(260)	47(227)	58(260)	36(196)	73(307)	77(317)	59(265)	37(197)	58(260)	37(199)	86(344)	51(239)
	5' -CCT 3'	5' -ggT 3'	5' -CCT 3'	5' -gTC 3'	5' -CAg 3'	5' -AAT 3'	5' -gTg 3'	5' -Cgg 3'	5' -CCT 3'	5' -CAA 3'	5' -CCA 3'	5' -CCC 3'
				37(199)	74(308)	77(317)	74(308)	37(197)		59(264)		81(330)
				5' -CAg 3'	5' -CCT 3'	5' -AgT 3'	5' -CCA 3'	5' -CgA 3'		5' -TAg 3'		5' -TTT 3'
				37(199)			86(344)	38(200)		71(299)		85(341)
				5' -CAA 3'			5' -CAT 3'	5' -gCg 3'		5' -gCg 3'		5' -CAg 3'
				38(200)						81(330)		
				5' -gCg 3'						5' -TTT 3'		
				84(340)								
				5' -AAT 3'								
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

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

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Lot No.: 7D1 **Lot-specific information**

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec.	110	120	85	85	100	100	85	75	155	80	85	90
PCR product		160	215							135		115
										290		165
												250
Length of int.	430	430	430	430	515	515	515	430	430	515	430	430
pos. control[1]												
5'-primer(s)[2]	34(189)	19(143)	28(172)	71(299)	66(286)	47(227)	71(299)	58(261)	13(125)	47(227)	71(299)	15(133)
	5' -CAg 3'	5' -CAg 3'	5' -ACg 3'	5' -CgA 3'	5' -ACA 3'	5' -gTT 3'	5' -CAg 3'	5' -gAg 3'	5' -gTC 3'	5' -gTT 3'	5' -Cgg 3'	5' -gTC 3'
	36(196)	31(181)	71(299)							98(381)		
	5' -AgA 3'	5' -TCC 3'	5' -CgA 3'							5' -AAT 3'		
3'-primer(s)[3]	58(260)	58(260)	86(344)	86(344)	86(344)	66(286)	86(344)	70(296)	48(230)	59(265)	86(344)	32(184)
	5' -CCT 3'	5' -CCT 3'	5' -CAC 3'	5' -CCA 3'	5' -CAC 3'	5' -gAA 3'	5' -CCA 3'	5' -TCC 3'	5' -CCT 3'	5' -gTg 3'	5' -CCA 3'	5' -gTg 3'
						66(286)		72(302)	55(251)	79(323)		40(206)
						5' -gAA 3'		5' -CCT 3'	5' -gCT 3'	5' -TgC 3'		5' -Cgg 3'
						66(286)				181(630)		56(256)
						5' -gAA 3'				5' -CTT 3'		5' -ATT 3'
						67(288)						84(340)
						5' -AgA 3'						5' -AAg 3'
Well No.	25	26	27	28	29	30	31	32	33	34	35	36

Well No.	37	38	39	40	41	42	43	44	45	46	47
Length of spec.	150	150	110	180	65	135	235	200	90	70	210
PCR product						180		270			
Length of int.	430	430	430	430	430	430	430	430	430	430	430
pos. control[1]											
5'-primer(s)[2]	47(227)	19(143)	58(261)	13(125)	58(261)	11(119)	13(125)	13(125)	58(261)	49(233)	15(133)
	5' -gTT 3'	5' -CAg 3'	5' -gAg 3'	5' -gTC 3'	5' -gAg 3'	5' -CTT 3'	5' -gTC 3'	5' -gTC 3'	5' -gAg 3'	5' -ggA 3'	5' -gTT 3'
		23(155)				26(165)					
		5' -gCA 3'				5' -TTg 3'					
3'-primer(s)[3]	83(337)	58(260)	80(328)	60(266)	66(286)	58(260)	77(317)	65(283)	74(308)	58(260)	72(303)
	5' -CCg 3'	5' -CCT 3'	5' -gTA 3'	5' -Agg 3'	5' -gAg 3'	5' -CCT 3'	5' -AgC 3'	5' -gTT 3'	5' -CCA 3'	5' -CCT 3'	5' -gCC 3'
	83(337)		82(332)					90(356)			
	5' -CCT 3'		5' -AgC 3'					5' -CTC 3'			
Well No.	37	38	39	40	41	42	43	44	45	46	47

[1]The internal positive control primer pairs amplify segments of the human growth hormone gene. The internal positive control bands are 430 or 515 base pairs respectively, well distribution as outlined in the table. Well number 1 contains the longer, 515 bp, internal positive control band. The well distribution of the internal controls can help in orientation of the kit on gel photo, as well as allow for kit identification. In the presence of a specific amplification the intensity of the control band often decreases.

[2]The nucleotide position matching the specificity-determining 3'-end of the primer is given. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

[3]The nucleotide position matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

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

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Lot No.: 7D1 **Lot-specific information**

CELL LINE VALIDATION SHEET

DRB1*11 SSP subtyping kit[2]

					Well															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Prod. No.:	201442201	201442202	201665603	201442204	201665605	201442206	201442207	201442208	201665609	201442210	201442211	201665612	201665613	201442214	201665615	201442216
	IHWC cell line[1]		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.com for
"Instructions for Use" (IFU)

Lot No.: 7D1 **Lot-specific information**

CELL LINE VALIDATION SHEET

DRB1*11 SSP subtyping kit[2]

					Well															
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
				Prod. No.:	201442217	201442218	201442219	201442220	201442221	201442222	201442223	201442224	201665625	201442226	201665627	201442228	201442229	201665630	201665631	201442232
	IHWC cell line[1]		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.com for **"Instructions for Use" (IFU)**

Lot No.: 7D1 **Lot-specific information**

CELL LINE VALIDATION SHEET

DRB1*11 SSP subtyping kit[2]

					Well													
					33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
				Prod. No.:	201665633	201665634	201442235	201665636	201665637	201665638	201665639	201442240	201442241	201665642	201442243	201665644	201442245	201665646	201665647
	IHWC cell line[1]		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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Lot No.: 7D1 **Lot-specific information**

[1]The provided cell line HLA specificities are retrieved from the http://www.ihwg.org/hla web site. The specificity of an individual cell line may thus be subject to change.

[2]The specificity of each primer solution in the kit has been tested against 48 well characterized cell line DNAs and where applicable, additional cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 12, 16, 21 to 23, 33 to 40 and 42 to 46 were available. The specificities of the primers in primer solutions 12, 16, 21, 22, 33, 34, 40, 42 and 45 were tested by separately adding one or more additional 5'-primers, respectively one or more additional 3'-primers.

In primer solution 23, 35, 36, 38 and 46 the 3'-primers were tested by separately adding one 5'-primer, the 5'-primers were not possible test.

In primer solution 37, 39, 43 and 44 the 5'-primers were tested by separately adding one 3'-primer, the 3'-primers were not possible test.

In primer solutions 3, 9 to 11, 16, 19, 22, 24, 30, 32, 33, 34 and 36 one, two or three of the 3'-primers were not possible to test, and in primer solutions 12, 15, 26, 27, 34 and 42 one, two or three of the 5'-primers were not possible to test.

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

Lot No.: 7D1 **Lot-specific information**

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