101.113-24/04 – including *Taq* polymerase, IFU-01
101.113-24u/04u – without *Taq* polymerase, IFU-02

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

Lot No.: 8E7

Lot-specific information

Olerup SSP® DRB1*03

Product number:	**101.113-24/04 – including *Taq* pol.** **101.113-24u/04u – without *Taq* pol.**
Lot number:	**8E7**
Expiry date:	**2019-09-01**
Number of tests:	**24 tests – Product No. 101.113-24/24u** **4 tests – Product No. 101.113-04/04u**
Number of wells per test:	**31+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. 8E7.

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*03 LOT (40Y)

The DRB1*03 kit is updated to enable separation of:

- Confirmed DRB1*03 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

[1]As described in section Uniquely Identified Alleles.

The DRB1*03 specificity and interpretation tables have been updated for the DRB alleles described since the previous *Olerup* SSP® DRB1*03 lot was made **(Lot No. 40Y)**. The kit design is based on IMGT/HLA database 3.26.0.

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.: 8E7 **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
6	-	Added	3'-primer added for the DRB1*03:16 allele.
7	Added	Added	Primer pair added for the DRB1*03:124 and DRB1*03:132 alleles.
9	-	Added	3'-primer added for the DRB1*03:01:25 allele.
11	-	Added	3'-primers added for the DRB1*03:112 and DRB1*03:115 alleles.
13	-	Added	3'-primer added for the DRB1*03:115 allele.
15	-	Added	3'-primer added for the DRB1*03:112 allele.
16	Added	Added	3'-primer added for the DRB1*03:15:02, primer pair added for the DRB1*03:132 allele.
17	-	Added	3'-primer added for the DRB1*03:34 allele.
19	Added	Added	Primer pair added for the DRB1*03:124 allele.
26	-	Added	3'-primer added for the DRB1*03:71:02 allele.
27	-	Added	3'-primer added for the DRB1*03:71:02 allele.
30	-	Added	3'-primers added for the DRB1*03:01:06 and DRB1*03:01:09 alleles.

Changes in revision R01 compared to R00:

1. Primer mix 27 does not amplify the DRB1*03:51, 03:55 and 03:133 alleles. Thus, this lot of the DRB1*03 kit cannot distinguish the DRB1*03:55 and the DRB1*03:01:01:01-03:01:25, 03:56, 03:59, 03:61, 03:66, 03:70, 03:73, 03:78, 03:83, 03:86, 03:91, 03:94, 03:98-03:100:02, 03:104, 03:106-03:109, 03:114, 03:116, 03:121, 03:127-03:129, 03:133-03:134, 03:136 alleles. This has been corrected in the Specificity and Interpretation Tables.

Changes in revision R02 compared to R01:

1. Primer mix 5 does not amplify the DRB1*03:58 and 03:65 alleles. Thus, this lot of the DRB1*03 kit cannot distinguish the DRB1*03:58 and the DRB1*03:01:01:01-03:01:25, 03:55, 03:56, 03:59, 03:61, 03:66, 03:70, 03:73, 03:78, 03:83, 03:86, 03:91, 03:94, 03:98-03:100:02, 03:104, 03:106-03:109, 03:114, 03:116, 03:121, 03:127-03:129, 03:133-03:134 and 03:136 alleles, or the DRB1*03:08 and the DRB1*03:65 alleles. This has been corrected in the Specificity and Interpretation Tables.

Lot No.: 8E7 **Lot-specific information**

Well **32** 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.: 8E7 **Lot-specific information**

PRODUCT DESCRIPTION

DRB1*03 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the DRB1*03:01 to DRB1*03:136 alleles.

PLATE LAYOUT

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

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

The 32 well cut PCR plate is marked with 'DRB1*03' in silver/gray ink.
Well No. 1 is marked with the Lot No. '8E7'.
Wells 1 to 31 – DRB1*03 high resolution primers.
Well 32 – 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 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

Due to the sharing of sequence motifs within the DR52 group of DRB1 alleles, non-DRB1*03 alleles are amplified by primer mixes 1 to 4, 6 to 18, 20, 21, 24, 26, 27, 29 to 31. In addition, a few DRB3 and DRB5 alleles will be amplified by primer mixes 1, 3, 4, 6 to 11, 13, 15, 18, 21, 23 to 27 and 30.
For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the phenotypically different DRB1*03 alleles, i.e. **DRB1*03:01 to DRB1*03:136,** recognized by the HLA Nomenclature Committee in October 2016[1,2] will be amplified by the primers in the DRB1*03 subtyping kit[3].

The DRB1*03 kit enables separation of the confirmed DRB1*03 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*03 alleles is listed below.

The DRB1*03 kit also enables identification of polymorphisms in exons outside of the region encoding the peptide binding domain and of null and alternatively expressed alleles.

Lot No.: 8E7 **Lot-specific information**

The following DRB1*03 alleles can be distinguished by the different sizes of the specific PCR product:

Alleles	Primer mix
DRB1*03:18, 03:48	22
DRB1*03:20, 03:93	17

The DRB1*03 subtyping kit cannot distinguish the following silent mutations: the DRB1*03:01:01:01-03:01:25, the DRB1*03:02:01-03:02:03, the DRB1*03:04:01-03:04:02, the DRB1*03:05:01-03:05:03, the DRB1*03:13:01-03:13:02, the DRB1*03:41:01-03:41:02 or the DRB1*03:71:01-03:71:02 alleles.

[1]DRB1 alleles listed on the IMGT/HLA web page 2016-October-14, release 3.26.0, 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.
[3]The DRB1*03 primer set cannot separate the DRB1*03:77, 03:84, 03:89, 03:95 and the DRB1*13:144 alleles. These alleles can be distinguished by the DR low resolution kit and/or the DRB1*13 high resolution kit.
The DRB1*03 primer set cannot separate the DRB1*03:97 and the 14:33 alleles. These alleles can be distinguished by the DR low resolution kit and/or the DRB1*14 high resolution kit.
The DRB1*03 primer set cannot separate the DRB1*03:126 and the 14:95 alleles. These alleles can be distinguished by the DR low resolution kit and/or the DRB1*14 high resolution kit.
This lot of the DRB1*03 kit cannot distinguish the DRB1*03:55 or DRB1*03:58 and the DRB1*03:01:01:01-03:01:25, 03:56, 03:59, 03:61, 03:66, 03:70, 03:73, 03:78, 03:83, 03:86, 03:91, 03:94, 03:98-03:100:02, 03:104, 03:106-03:109, 03:114, 03:116, 03:121, 03:127-03:129, 03:133-03:134 and 03:136 alleles, or the DRB1*03:08 and DRB1*03:65 alleles.

RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in DRB1*03 homo- and heterozygotes is available upon request.

101.113-24/04 – including *Taq* polymerase, IFU-01
101.113-24u/04u – without *Taq* polymerase, IFU-02

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

Lot No.: 8E7 **Lot-specific information**

ALLELE CONFIRMATION STATUS

Allele	Status[1]	Allele	Status[1]	Allele	Status[1]	Allele	Status[1]
DRB1*03:01:01:01	**Confirmed**	**DRB1*03:19**	**Confirmed**	DRB1*03:68N	Unconfirmed	DRB1*03:116	Unconfirmed
DRB1*03:01:01:02	Unconfirmed	DRB1*03:20	Unconfirmed	DRB1*03:69	Unconfirmed	DRB1*03:117	Unconfirmed
DRB1*03:01:02	**Confirmed**	**DRB1*03:21**	**Confirmed**	DRB1*03:70	Unconfirmed	DRB1*03:118	Unconfirmed
DRB1*03:01:03	Unconfirmed	**DRB1*03:22**	**Confirmed**	**DRB1*03:71:01**	**Confirmed**	DRB1*03:119	Unconfirmed
DRB1*03:01:04	Unconfirmed	**DRB1*03:23**	**Confirmed**	DRB1*03:71:02	Unconfirmed	DRB1*03:120	Unconfirmed
DRB1*03:01:05	Unconfirmed	DRB1*03:24	Unconfirmed	**DRB1*03:72**	**Confirmed**	DRB1*03:121	Unconfirmed
DRB1*03:01:06	Unconfirmed	DRB1*03:25	Unconfirmed	DRB1*03:73	Unconfirmed	DRB1*03:122	Unconfirmed
DRB1*03:01:07	**Confirmed**	DRB1*03:26	Unconfirmed	DRB1*03:74	Unconfirmed	DRB1*03:123	Unconfirmed
DRB1*03:01:08	Unconfirmed	**DRB1*03:27**	**Confirmed**	DRB1*03:75	Unconfirmed	**DRB1*03:124**	**Confirmed**
DRB1*03:01:09	Unconfirmed	DRB1*03:28	Unconfirmed	**DRB1*03:76**	**Confirmed**	DRB1*03:125	Unconfirmed
DRB1*03:01:10	Unconfirmed	**DRB1*03:29**	**Confirmed**	DRB1*03:77	Unconfirmed	DRB1*03:126	Unconfirmed
DRB1*03:01:11	**Confirmed**	DRB1*03:30	Unconfirmed	DRB1*03:78	Unconfirmed	DRB1*03:127	Unconfirmed
DRB1*03:01:12	**Confirmed**	DRB1*03:31	Unconfirmed	DRB1*03:79	Unconfirmed	DRB1*03:128	Unconfirmed
DRB1*03:01:13	Unconfirmed	DRB1*03:32	Unconfirmed	DRB1*03:80	Unconfirmed	DRB1*03:129	Unconfirmed
DRB1*03:01:14	**Confirmed**	**DRB1*03:33**	**Confirmed**	DRB1*03:81	Unconfirmed	DRB1*03:130	Unconfirmed
DRB1*03:01:15	**Confirmed**	**DRB1*03:34**	**Confirmed**	DRB1*03:82	Unconfirmed	DRB1*03:131	Unconfirmed
DRB1*03:01:16	**Confirmed**	DRB1*03:35	Unconfirmed	DRB1*03:83	Unconfirmed	DRB1*03:132	Unconfirmed
DRB1*03:01:17	**Confirmed**	DRB1*03:36	Unconfirmed	DRB1*03:84	Unconfirmed	DRB1*03:133	Unconfirmed
DRB1*03:01:18	Unconfirmed	**DRB1*03:37**	**Confirmed**	DRB1*03:85	Unconfirmed	DRB1*03:134	Unconfirmed
DRB1*03:01:19	Unconfirmed	DRB1*03:38	Unconfirmed	DRB1*03:86	Unconfirmed	DRB1*03:135	Unconfirmed
DRB1*03:01:20	**Confirmed**	DRB1*03:39	Unconfirmed	DRB1*03:87	Unconfirmed	DRB1*03:136	Unconfirmed
DRB1*03:01:21	Unconfirmed	DRB1*03:40	Unconfirmed	**DRB1*03:88**	**Confirmed**		
DRB1*03:01:22	Unconfirmed	DRB1*03:41:01	Unconfirmed	DRB1*03:89	Unconfirmed		
DRB1*03:01:23	Unconfirmed	DRB1*03:41:02	Unconfirmed	**DRB1*03:90**	**Confirmed**		
DRB1*03:01:24	Unconfirmed	**DRB1*03:42**	**Confirmed**	DRB1*03:91	Unconfirmed		
DRB1*03:01:25	Unconfirmed	**DRB1*03:43**	**Confirmed**	DRB1*03:92	Unconfirmed		
DRB1*03:02:01	**Confirmed**	**DRB1*03:44**	**Confirmed**	**DRB1*03:93**	**Confirmed**		
DRB1*03:02:02	**Confirmed**	DRB1*03:45	Unconfirmed	DRB1*03:94	Unconfirmed		
DRB1*03:02:03	Unconfirmed	DRB1*03:46	Unconfirmed	DRB1*03:95	Unconfirmed		
DRB1*03:03	**Confirmed**	**DRB1*03:47**	**Confirmed**	DRB1*03:96	Unconfirmed		
DRB1*03:04:01	**Confirmed**	**DRB1*03:48**	**Confirmed**	DRB1*03:97	Unconfirmed		
DRB1*03:04:02	Unconfirmed	DRB1*03:49	Unconfirmed	DRB1*03:98	Unconfirmed		
DRB1*03:05:01	**Confirmed**	**DRB1*03:50**	**Confirmed**	DRB1*03:99	Unconfirmed		
DRB1*03:05:02	Unconfirmed	DRB1*03:51	Unconfirmed	DRB1*03:100:01	Unconfirmed		
DRB1*03:05:03	**Confirmed**	DRB1*03:52	Unconfirmed	DRB1*03:100:02	Unconfirmed		
DRB1*03:06	**Confirmed**	**DRB1*03:53**	**Confirmed**	DRB1*03:101	Unconfirmed		
DRB1*03:07	**Confirmed**	DRB1*03:54	Unconfirmed	DRB1*03:102	Unconfirmed		
DRB1*03:08	**Confirmed**	**DRB1*03:55**	**Confirmed**	DRB1*03:103	Unconfirmed		
DRB1*03:09	Unconfirmed	DRB1*03:56	Unconfirmed	DRB1*03:104	Unconfirmed		
DRB1*03:10	Unconfirmed	DRB1*03:57	Unconfirmed	DRB1*03:105	Unconfirmed		
DRB1*03:11:01	Unconfirmed	**DRB1*03:58**	**Confirmed**	DRB1*03:106	Unconfirmed		
DRB1*03:12	Unconfirmed	DRB1*03:59	Unconfirmed	DRB1*03:107	Unconfirmed		
DRB1*03:13:01	**Confirmed**	DRB1*03:60	Unconfirmed	DRB1*03:108	Unconfirmed		
DRB1*03:13:02	**Confirmed**	DRB1*03:61	Unconfirmed	DRB1*03:109	Unconfirmed		
DRB1*03:14	**Confirmed**	**DRB1*03:62**	**Confirmed**	**DRB1*03:110**	**Confirmed**		
DRB1*03:15:01	**Confirmed**	DRB1*03:63	Unconfirmed	DRB1*03:111	Unconfirmed		
DRB1*03:15:02	Unconfirmed	DRB1*03:64	Unconfirmed	**DRB1*03:112**	**Confirmed**		
DRB1*03:16	**Confirmed**	**DRB1*03:65**	**Confirmed**	DRB1*03:113	Unconfirmed		
DRB1*03:17	Unconfirmed	DRB1*03:66	Unconfirmed	DRB1*03:114	Unconfirmed		
DRB1*03:18	Unconfirmed	DRB1*03:67N	Unconfirmed	**DRB1*03:115**	**Confirmed**		

[1]Allele status "confirmed" or "unconfirmed" as listed on the IMGT/HLA web page 2016-October-14, release 3.26.0, www.ebi.ac.uk/imgt/hla.

Lot No.: 8E7 **Lot-specific information**

SPECIFICITY TABLE

DRB1*03 SSP subtyping

Specificities and sizes of the PCR products of the 31+1 primer mixes used for DRB1*03 SSP subtyping

Primer Mix	Size of spec. PCR product[1]	Size of control band[2]	Amplified DRB1*03 alleles[3]	Other amplified DRB alleles[4]
1	220 bp	**515 bp**	*03:01:01:01-03:01:25, 03:04:01-03:04:02, 03:06, 03:08, 03:10-03:13:02, 03:15:01-03:16, 03:18-03:20, 03:22-03:23, 03:25-03:26, 03:28, 03:30-03:34, 03:36-03:37, 03:39, 03:42-03:48, 03:50-03:52, 03:55-03:56, 03:58-03:62, 03:64-03:73, 03:75-03:80, 03:82-03:87, 03:89, 03:91-03:96, 03:98-03:100:02, 03:104, 03:106-03:112, 03:114, 03:116-03:118, 03:121, 03:124-03:129, 03:132-03:136	*09:06, 11:59, 11:83, 11:135, 11:182, 13:27, 13:71, 13:129, 13:144, 13:176, 14:82, 14:95, 14:132, **DRB3*01:34**
2[5,8]	85 bp	430 bp	*03:02:01-03:03, 03:27, 03:29, 03:38, 03:53, 03:74, 03:88, 03:90, 03:102-03:103, 03:115, 03:119, 03:131	*13:15, 13:19, 13:26:01-13:26:02, 13:53, 13:57, 13:85-13:86, 13:104, 13:198, 14:02:01-14:03:02, 14:06:01-14:06:03, 14:12:01-14:13, 14:18-14:20, 14:24, 14:27:01-14:27:02, 14:29, 14:40-14:41, 14:47-14:49, 14:51, 14:63, 14:67, 14:77-14:78, 14:81, 14:83, 14:85, 14:89, 14:94, 14:98, 14:102, 14:106, 14:108-14:109, 14:115, 14:135, 14:154, 14:156, 14:159-14:160, 14:165, 14:170, 14:174, 14:176-14:177, 14:181
3	155 bp	**515 bp**	*03:97, 03:126	*14:18, 14:33, 14:51, 14:59, 14:64, 14:95, 14:106, 14:132-14:134, 14:154
	190 bp		*03:02:01-03:02:03, 03:05:01-03:05:03, 03:09, 03:14, 03:27, 03:29, 03:38, 03:53, 03:74, 03:81, 03:88, 03:90, 03:102-03:103, 03:115, 03:122, 03:130-03:131	*11:09, 11:20, 11:28:02, 11:87, 11:122, 13:02:01-13:02:03, 13:02:05-13:02:12, 13:05:01-13:05:03, 13:26:01-13:26:02, 13:29, 13:31, 13:34, 13:36, 13:39, 13:41, 13:50:02-13:50:03, 13:56, 13:63, 13:65, 13:67, 13:73-13:74, 13:85, 13:96:01-13:96:02, 13:99, 13:103-13:104, 13:119-13:120, 13:123-13:124, 13:126, 13:128, 13:136, 13:139-13:140, 13:142N-13:143, 13:145, 13:147, 13:155, 13:157-13:159, 13:165, 13:168, 13:170-13:171:02, 13:179, 13:189, 13:196, 13:198-13:199,

Lot No.: 8E7 **Lot-specific information**

				13:202-13:203, 13:207-13:212, 13:220, 13:225, 14:02:01-14:03:02, 14:09, 14:13, 14:19, 14:24, 14:27:01-14:27:02, 14:30, 14:46-14:48, 14:51, 14:63, 14:67, 14:85, 14:89, 14:98, 14:109, 14:115, 14:134-14:135, 14:144, 14:174, 14:179, 16:08, **DRB3*01:08, DRB3*02:06, DRB3*02:20**
4	190 bp	430 bp	*03:01:01:01-03:01:25, 03:03, 03:06-03:08, 03:10-03:13:02, 03:15:01-03:16, 03:18-03:20, 03:22-03:24, 03:26, 03:28, 03:32-03:34, 03:36-03:37, 03:39, 03:42, 03:45-03:48, 03:50-03:51, 03:54-03:56, 03:58-03:62, 03:64-03:73, 03:76-03:80, 03:82-03:87, 03:89, 03:91-03:101, 03:104, 03:106-03:114, 03:116-03:117, 03:119-03:121, 03:124-03:129, 03:132-03:136	*04:211, 11:16, 11:40, 11:58:01, 11:59, 11:83, 11:113, 11:115, 11:182, 12:58, 13:01:01:01-13:01:16, 13:06, 13:09-13:10, 13:15, 13:18, 13:20, 13:27-13:28, 13:32, 13:35, 13:40, 13:42-13:43, 13:51, 13:53, 13:59, 13:61:01-13:61:02, 13:69, 13:71, 13:77-13:80, 13:87, 13:91-13:93, 13:98, 13:102, 13:105, 13:110-13:114, 13:117, 13:121, 13:125, 13:127, 13:129-13:131, 13:137N-13:138, 13:141, 13:144, 13:146, 13:148, 13:153, 13:156, 13:160, 13:163, 13:166, 13:173, 13:176-13:178, 13:181, 13:183-13:187, 13:190-13:193, 13:200N-13:201, 13:205, 13:213-13:215, 13:217-13:218, 13:221-13:223, 13:226, 14:06:01-14:06:03, 14:12:01-14:12:02, 14:17-14:18, 14:21, 14:29, 14:33, 14:52, 14:59, 14:64, 14:78, 14:80-14:81, 14:83, 14:95, 14:106, 14:108, 14:121, 14:132-14:133, 14:154, 14:165, 14:170, 14:176-14:177, 15:32, **DRB3*03:10**
5[5]	75 bp 165 bp	430 bp	*03:04:01-03:04:02	
6[5,6]	105 bp	430 bp	*03:01:01:01-03:01:25, 03:04:01-03:05:03, 03:08-03:16, 03:18-03:20, 03:22-03:23, 03:25, 03:28, 03:30, 03:32-03:34, 03:36-03:37, 03:39, 03:42-03:48, 03:50-03:52, 03:55-03:59, 03:61-03:73, 03:76-03:79, 03:81, 03:83-03:84, 03:86-03:87, 03:89, 03:91-03:96, 03:98-03:100:02, 03:104, 03:106-03:112, 03:114, 03:116-03:118, 03:121, 03:123-03:130, 03:132-03:136	*11:59, 11:80, 11:87, 11:135, 11:142, 11:182, 13:27, 13:41, 13:71, 13:129, 13:144, 13:176, 14:95, 14:132, 14:179, **DRB3*01:23**
7[5]	125 bp 150 bp 215 bp	430 bp	*03:08, 03:65, 03:72 *03:124 *03:132	*11:59, 11:80, 11:83, 11:87, 11:135, 11:142, 11:182 **DRB5*01:04**[?]
8	185 bp	430 bp	*03:02:01-03:03, 03:07, 03:21, 03:29, 03:38, 03:40-03:41:02, 03:49, 03:53, 03:74, 03:88,	*01:16, 01:55, 04:22, 11:07:01-11:07:02, 11:103:01-11:103:02, 11:107, 11:125, 11:173, 14:76, 14:79, 14:171, 15:25, **DRB3*01:09, DRB3*01:36, DRB3*02:04,**

Lot No.: 8E7 **Lot-specific information**

			03:101-03:103, 03:105, 03:115, 03:119-03:120, 03:131	**DRB3*02:19, DRB3*02:22:01-02:22:02, DRB3*02:56, DRB3*03:03-03:04**
9	135 bp	430 bp	*03:01:01:01-03:01:25, 03:04:01-03:06, 03:09, 03:11:01, 03:13:01[w]-03:13:02[w], 03:14-03:16, 03:18-03:20, 03:22-03:23, 03:25-03:26, 03:28, 03:30-03:34, 03:36-03:37, 03:39, 03:42-03:45, 03:47-03:48, 03:50-03:52, 03:55-03:63, 03:66, 03:67N[w], 03:68N-03:73, 03:75-03:78, 03:80-03:84, 03:86-03:87, 03:89, 03:91-03:95, 03:98-03:100:02, 03:104, 03:106-03:109, 03:111-03:112, 03:114, 03:116, 03:117[w], 03:118, 03:121-03:129, 03:132-03:136	*09:01:08, 09:02:01-09:02:02, 13:27, 13:41, 13:71, 13:129, 13:144, 13:176, 14:95, 14:179, **DRB3*01:07, DRB3*01:15, DRB3*01:41**
10	145 bp	430 bp	*03:02:01-03:03, 03:06, 03:17, 03:26-03:27, 03:31, 03:35, 03:38, 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, 03:131	*08:20, 11:17, 11:37:01-11:37:02, 11:41, 11:48, 11:50, 11:52, 11:56, 11:83, 11:107, 11:145, 11:149, 11:170-11:171, 11:183-11:184, 11:189, 11:200, 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, 13:216, 13:219, 14:01:01-14:03:01, 14:05:01-14:09, 14:12:01-14:14, 14:16, 14:18-14:20, 14:22-14:27:02, 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, 14:153-14:174, 14:176-14:178, 14:181, **DRB3*01:14**
11[5]	100 bp 125 bp 180 bp	**515 bp**	*03:09, 03:23, 03:112 *03:115 *03:13:01-03:13:02, 03:38, 03:79, 03:88	 *14:151 *11:116, 11:120, 13:39, 13:54, 13:77-13:79, 13:100, 13:162-13:163, 13:181, 14:48,

Lot No.: 8E7 **Lot-specific information**

				14:64, 14:109, 14:115, 14:177, **DRB3*01:14, DRB3*01:25**[?]
12	135 bp 190 bp	430 bp	*03:10, 03:110 *03:51, 03:76, 03:125	*14:82, 14:132 *11:59[w], 11:80[w], 11:83[w], 11:87[w], 11:135[w], 11:142[w], 11:182[w], 13:27[w], 13:41[w], 13:71[w], 13:129[w], 13:176[w], 14:179[w]
13[5]	125 bp 160 bp 225 bp	430 bp	*03:115 *03:47, 03:62 *03:11:01, 03:17, 03:24, 03:27, 03:35, 03:81	*14:151 *11:136, 14:38:01-14:38:02, 14:127:01-14:127:02, **DRB3*02:54**[?]
14[5,6]	105 bp 135 bp 245 bp	**515 bp**	*03:16 *03:12, 03:110 *03:68N	 *09:08
15[5]	95 bp 155 bp	430 bp	*03:112 *03:17, 03:37, 03:62, 03:80	 *11:39, 11:43, 11:50, 11:115, 11:145, 11:151, 11:168, 11:171, 11:174, 13:118, 13:131, 13:135, 13:150, 14:59, 14:86, 14:96, 14:153-14:154, **DRB3*02:54**[?]
16[5]	50 bp 215 bp	430 bp	*03:14-03:15:02, 03:90 *03:132	*04:98:01-04:98:02, 11:105, 14:107, 14:111
17[5]	100 bp 230 bp 255 bp	430 bp	*03:93 *03:34 *03:20	*13:125 *11:06:01-11:06:03, 11:21, 11:47, 11:57, 11:129, 11:174, 13:58, 13:81, 13:163, 14:29, 14:99
18[5]	120 bp	430 bp	*03:01:01:01-03:01:25, 03:04:01-03:05:03, 03:07-03:10, 03:12-03:15:01, 03:16, 03:18-03:23, 03:25, 03:28-03:30, 03:32-03:34, 03:36-03:37, 03:39-03:40, 03:42-03:52, 03:54-03:59, 03:61-03:73, 03:78-03:79, 03:82-03:83, 03:86-03:87, 03:91-03:94, 03:96, 03:98-03:101, 03:104-03:114, 03:116-03:121, 03:123-03:124, 03:127-03:130, 03:132-03:136	*11:07:01-11:07:02, 11:103:01-11:103:02, 11:105, 11:125, 11:173, 15:25, **DRB3*01:23**
19	150 bp 175 bp	**515 bp**	*03:124 *03:22	
20[5]	75 bp 120 bp 245 bp	430 bp	*03:25, 03:31, 03:75, 03:118 *03:28 *03:68N	*11:80, 11:135, 11:142
21[5]	70 bp 150 bp	430 bp	*03:21, 03:30, 03:43 *03:42, 03:87	*11:10:01-11:10:02, 11:12:01-11:13:02, 11:114, 11:179, 11:190, 11:191, 11:196, 11:202, 12:05, 12:14-12:15, 12:56, 13:57, 13:64, 13:83, 13:107, 13:175, 13:195, 13:204, 14:35, 14:65, 14:72, 14:138, 14:175, **DRB3*01:23** *11:30, 13:67, 13:195, **DRB3*01:23,**

Lot No.: 8E7 **Lot-specific information**

				DRB3*02:32
22[5,6]	95 bp 215 bp	430 bp	*03:18 *03:48	
23[5,6]	65 bp 165 bp	430 bp	*03:09, 03:23 *03:19	**DRB3*01:31**
24[5,8]	65 bp	430 bp	*03:02:01-03:03, 03:27, 03:29, 03:38, 03:53, 03:74, 03:88, 03:90, 03:101-03:103, 03:115, 03:119, 03:120[w], 03:131	*12:58[w], 13:15, 13:26:01-13:26:02, 13:53, 13:85, 13:104, 13:198, 14:02:01-14:03:02, 14:06:01-14:06:03, 14:12:01-14:13, 14:18-14:19, 14:24, 14:27:01-14:27:02, 14:29, 14:46-14:48, 14:51-14:52, 14:63, 14:67, 14:78, 14:81, 14:85, 14:89, 14:98, 14:106, 14:108-14:109, 14:115, 14:121, 14:135, 14:154, 14:165, 14:170, 14:174, 14:176-14:177, **DRB3*02:20, DRB3*03:10**
25[5]	80 bp 180 bp 230 bp	430 bp	*03:13:01-03:13:02, 03:67N, 03:88 *03:32 *03:69	**DRB3*01:01:03, DRB3*02:19**
26[5,7]	115 bp	**515 bp**	*03:26, 03:33, 03:43-03:44, 03:71:01-03:71:02	*11:15, 11:44, 11:49:01-11:50, 11:76, 11:85, 11:114, 11:127, 11:183, 11:196, 13:34, 13:62, 13:64, 13:106, 13:136, 13:151, 13:174, 13:204, 13:216, 13:221, 14:41, 14:77, 14:97, 14:110, **DRB3*01:14, DRB3*01:25[?], DRB3*02:54[?]**
27[5,7]	115 bp 150 bp 175 bp 225 bp	**515 bp**	*03:43, 03:71:01-03:71:02 *03:53 *03:46, 03:130 *03:11:01, 03:17, 03:24, 03:27, 03:34-03:35, 03:81	*11:15, 11:76, 11:114, 11:183, 11:196, 13:34, 13:62, 13:64, 13:136, 13:151, 13:174, 13:204, 13:221, 14:41, 14:77, 14:110, **DRB3*01:14, DRB3*01:25[?]** *14:150 *11:53, 11:136, **DRB3*02:54[?]**
28[5]	75 bp 160 bp 195 bp	430 bp	*03:67N *03:36 *03:45	
29	155 bp 180 bp 215 bp	430 bp	*03:40-03:41:02, 03:52, 03:75, 03:105, 03:118 *03:39 *03:92	*11:07:01-11:07:02, 11:103:01-11:103:02, 11:105, 11:107, 11:125, 11:173 *14:76, 14:79
30	175 bp	430 bp	*03:01:01:01-03:07, 03:09, 03:11:01-03:41:02, 03:43-03:45, 03:47-03:63, 03:66-03:68N, 03:70-03:86, 03:88-03:91, 03:93-03:110, 03:112-03:129, 03:131-03:134, 03:136	*08:20, 13:01:01:01-13:16, 13:18-13:42, 13:44, 13:46-13:66:02, 13:68-13:102, 13:104-13:115, 13:117-13:121, 13:123-13:158, 13:161-13:164, 13:166-13:174, 13:176-13:178, 13:180-13:182, 13:184-13:190, 13:192-13:194, 13:196-13:213, 13:215-13:216, 13:218-13:226, 14:02:01-14:03:02, 14:05:01-14:06:03, 14:09, 14:12:01-14:14, 14:17-14:21, 14:23:01-14:24, 14:27:01-14:27:02, 14:29-14:30, 14:33, 14:36-14:37, 14:40-14:45, 14:47-14:48, 14:51, 14:56, 14:59, 14:63-14:65, 14:67, 14:77-14:78, 14:80-14:81, 14:83-14:85, 14:89, 14:91, 14:94-14:96, 14:98, 14:100-14:103, 14:106, 14:108-14:109,

				14:115-14:116, 14:121, 14:123, 14:127:01-14:127:02, 14:134-14:136, 14:144, 14:154-14:156, 14:159-14:161, 14:165, 14:167, 14:169-14:170, 14:174, 14:176-14:179, 14:181, **DRB3*01:14**
31	205 bp 245 bp	**515 bp**	*03:45, 03:92 *03:50	*14:76, 14:79
32[9]			**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*03 SSP subtypings.
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 within the DR52 group of DRB1 alleles, non-DRB1*03 alleles are amplified by primer mixes 1 to 4, 6 to 18, 20, 21, 24, 26, 27, 29 to 31. In addition, a few DRB3 alleles will be amplified by primer mixes 1, 3, 8 to 11 and 24 to 27.
[5]HLA-specific PCR products shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR products.
[6]Primer mixes 6, 14, 22 and 23 may have a tendency of giving rise to primer oligomer formation.
[7]Primer mixes 26 and 27 may have a tendency of unspecific amplification.
[8]Primer mixes 2 and 24 may give rise to a lower yield of specific PCR product than the other DRB1*03 primer mixes.
[9]Primer mix 32 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.
'?', nucleotide sequence information not available for the primer matching sequence.
"w", may be weakly amplified.

101.113-24/04 – including *Taq* polymerase, IFU-01
101.113-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: 8E7

Lot-specific information

PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec.	220	85	155	190	75	105	125	185	135	145	100	135
PCR product			190		165		150				125	190
							215				180	
Length of int. pos. control[1]	515	430	515	430	430	430	430	430	430	430	515	430
5'-primer(s)[2]	26(164)	13(125)	36(196)	36(196)	26(164)	26(164)	26(164)	26(164)	26(164)	13(125)	13(125)	26(164)
	5' -gTA 3'	5' -gTC 3'	5' -AgA 3'	5' -AgA 3'	5' -gTA 3'	5' -gTA 3'	5' -gTA 3'	5' -gTT 3'	5' -gTA 3'	5' -gTC 3'	5' -gTC 3'	5' -gTA 3'
							112(423)					
							5' -CAT 3'					
3'-primer(s)[3]	86(344)	28(171)	74(308)	86(344)	37(197)	47(227)	53(247)	74(308)	57(257)	47(227)	31(179)	57(257)
	5' -CCA 3'	5' -CTC 3'	5' -CCT 3'	5' -CCA 3'	5' -Cgg 3'	5' -ggA 3'	5' -CCg 3'	5' -CCC 3'	5' -CAT 3'	5' -ggT 3'	5' -ggC 3'	5' -CAg 3'
			86(344)		66(286)	47(229)	58(260)		57(257)		34(188)	57(257)
			5' -CAC 3'		5' -gAA 3'	5' -CCT 3'	5' -CCT 3'		5' -CAT 3'		5' -CCC 3'	5' -CAg 3'
						47(229)	149(534)		57(258)		40(207)	74(308)
						5' -CCA 3'	5' -TTC 3'		5' -gCg 3'		5' -TCT 3'	5' -CCg 3'
							169(595)				60(266)	79(324)
							5' -AAg 3'				5' -Agg 3'	5' -CTC 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.	125	105	95	50	100	120	150	75	70	95	65	65
PCR product	160	135	155	215	230		175	120	150	215	165	
	225	245			255			245				
Length of int. pos. control[1]	430	515	430	430	430	430	515	430	430	430	430	430
5'-primer(s)[2]	13(125)	26(164)	13(125)	74(308)	13(125)	47(227)	31(181)	26(164)	10(116)	26(164)	26(164)	28(171)
	5' -gTC 3'	5' -gTA 3'	5' -gTC 3'	5' -CCg 3'	5' -gTC 3'	5' -gTT 3'	5' -TCg 3'	5' -gTA 3'	5' -gCT 3'	5' -gTA 3'	5' -gTA 3'	5' -gAg 3'
				112(423)		47(227)	112(423)		37(197)			
				5' -CAT 3'		5' -ATT 3'	5' -CAT 3'		5' -gTT 3'			
									37(197)			
									5' -gTT 3'			
3'-primer(s)[3]	40(207)	47(229)	31(179)	77(317)	32(182)	73(305)	77(317)	36(196)	47(227)	44(220)	34(188)	36(196)
	5' -TCT 3'	5' -CCA 3'	5' -ggC 3'	5' -Agg 3'	5' -TAC 3'	5' -ggC 3'	5' -AgT 3'	5' -gTA 3'	5' -ggA 3'	5' -CCg 3'	5' -CCC 3'	5' -gTT 3'
	51(241)	56(256)	51(239)	77(317)	75(313)		149(534)	51(241)		84(340)	66(286)	
	5' -CTg 3'	5' -gCT 3'	5' -CCC 3'	5' -Agg 3'	5' -gTT 3'		5' -TTC 3'	5' -CTT 3'		5' -AAT 3'	5' -gAT 3'	
	56(254)	57(257)	51(241)	169(595)	85(341)			93(367)				
	5' -CAC 3'	5' -CAg 3'	5' -CTg 3'	5' -AAg 3'	5' -CAg 3'			5' -TCA 3'				
	74(308)	93(367)										
	5' -CCT 3'	5' -TCA 3'										
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

101.113-24/04 – including *Taq* polymerase, IFU-01
101.113-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: 8E7 **Lot-specific information**

Well No.	25	26	27	28	29	30	31
Length of spec.	80	115	115	75	155	175	205
PCR product	180		150	160	180		245
	230		175	195	215		
			225				
Length of int.	430	515	515	430	430	430	515
pos. control[1]							
5'-primer(s)[2]	10(118)	13(125)	13(125)	21(149)	15(133)	13(125)	5(103)
	5' -ACg 3'	5' -gTC 3'	5' -gTC 3'	5' -gAT 3'	5' -gTT 3'	5' -gTC 3'	5' -CAg 3'
	26(166)			33(186)	27(167)		15(133)
	5' -ACg 3'			5' -AAA 3'	5' -CCg 3'		5' -gTT 3'
	60(266)			61(269)	34(189)		21(149)
	5' -gTC 3'			5' -CTA 3'	5' -CAA 3'		5' -gAT 3'
	61(269)						
	5' -CTA 3'						
3'-primer(s)[3]	73(305)	37(199)	37(199)	73(305)	73(305)	58(260)	73(305)
	5' -ggC 3'	5' -CAg 3'	5' -CAg 3'	5' -ggC 3'	5' -ggC 3'	5' -CAg 3'	5' -ggC 3'
		37(199)	37(199)			58(260)	
		5' -CAA 3'	5' -CAA 3'			5' -Cgg 3'	
		38(200)	48(232)			58(260)	
		5' -gCg 3'	5' -Cgg 3'			5' -CCg 3'	
			58(260)			59(264)	
			5' -CgC 3'			5' -TAT 3'	
			73(305)				
			5' -ggC 3'				
			75(313)				
			5' -gTT 3'				
Well No.	25	26	27	28	29	30	31

[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.

101.113-24/04 – including *Taq* polymerase, IFU-01
101.113-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: 8E7 **Lot-specific information**

CELL LINE VALIDATION SHEET

DRB1*03 SSP subtyping[2]

					Well															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Prod. No.:	201432601	201432602	201552103	201432604	201432605	201777006	201777007	201432608	201777009	201432610	201777011	201552112	201777013	201552114	201777015	201777016
	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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.113-24/04 – including *Taq* polymerase, IFU-01
101.113-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: 8E7 **Lot-specific information**

CELL LINE VALIDATION SHEET

DRB1*03 SSP subtyping[2]

					Well													
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
				Prod. No.:	201777017	201432618	201777019	201432620	201432621	201432622	201432623	201432624	201432625	201777026	201777027	201432628	201432629	201777030	201432631
	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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.113-24/04 – including *Taq* polymerase, IFU-01
101.113-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: 8E7 **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 7, 11 to 17, 19 to 23, 25 to 29 and 31 were available. The specificities of the primers in primer solutions 7, 11 to 17, 19, 21, 26, 27, 29 and 31 were tested by separately adding one, two or three additional 5'-primers, respectively one or two additional 3'-primers. In primer solutions 25 and 28 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 20, 22 and 23 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solutions 5 to 7, 11 to 17, 27 and 30 one or more of the 3'-primers were not possible to test. In primer solutions 18, 19, 21, 29 and 31 one of the 5'-primers was not possible to test. In primer solutions 3 and 9 one or two additional 3'-primer was tested by adding one or two additional 5'-primers.

101.113-24/04 – including *Taq* polymerase, IFU-01
101.113-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: 8E7 **Lot-specific information**

101.113-24/04 – including *Taq* polymerase, IFU-01
101.113-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: 8E7 **Lot-specific information**

Lot No.: 8E7 **Lot-specific information**

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