

101.101-48/12 – including *Taq* pol., IFU-01
101.101-48u/12u – without *Taq* pol., IFU-02

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

Lot No.: **13R**

Lot-specific information

Olerup SSP[®] DR low resolution

Product number: 101.101-48/12 – including *Taq* pol.
101.101-48u/12u – without *Taq* pol.

Lot number: 13R

Expiry date: 2015-April-01

Number of tests: 48 tests – Product No. 101.101-48/48u
12 tests – Product No. 101.101-12/12u

Number of wells per test: 31 + 1

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

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

This Product Description is only valid for Lot No. 13R.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP[®]* DR LOW RESOLUTION LOT (01N)

The DR low resolution specificity and interpretation tables have been updated for the HLA-DRB1 alleles described since the previous *Olerup SSP[®]* DR low resolution lot was made (**Lot No. 01N**).

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

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

Well	5'-primer	3'-primer	rationale
9	Added	-	Increased yield of HLA-specific PCR product for the DRB1*07:22 allele.
12	Added	Exchanged	Improved allelic resolution.

Change in revision R01 compared to R00:

1. The DR serology has been corrected in the Specificity Table.

Change in revision R02 compared to R01:

1. Mistakes in foot note numbering have been corrected in the Specificity Table.

Change in revision R03 compared to R02:

1. Primer mix 4 may have tendency of unspecific amplification. A foot note has been added in the Specificity Table.

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **13R**

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 and DPB1 amplicons as well as the amplicons generated by control primer pairs.

PCR product sizes range from 75 to 430 base pairs.

The PCR product generated by the control primer pair is 430 base pairs.

Length of PCR product	105	200	105	80	75	80
5'-primer¹	164	340	440	45	45	43
	5'-CAC ^{3'}	5'-Agg ^{3'}	5'-TTA ^{3'}	5'-Tgg ^{3'}	5'-Tgg ^{3'}	5'-Tgg ^{3'}
3'-primer²	231	2nd I	507	59	58	57
	5'-TgC ^{3'}	5'-AAA ^{3'}	5'-TTg ^{3'}	5'-CTC ^{3'}	5'-ggC ^{3'}	5'-CTC ^{3'}
A*	+	+	+			
B*	+	+	+			
C*	+	+	+			
DRB1				+	+	
DRB3				+	+	
DRB5				+		
DQB1					+	
DPB1						+

¹The 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 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.

²The 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.

101.101-48/12 – including *Taq* pol., IFU-01
101.101-48u/12u – without *Taq* pol., IFU-02

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“Instructions for Use” (IFU)

Lot No.: **13R**

Lot-specific information

PRODUCT DESCRIPTION

DR low resolution

CONTENT

The primer set contains 5'- and 3'-primers for grouping the DRB1*01:01 to DRB1*10:04 alleles into the corresponding serological groups DR1 to DR18 as well as primer pairs for recognizing the DRB3, DRB4 and DRB5 groups of alleles.

PLATE LAYOUT

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

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

Wells 1 to 31 – DR low resolution primers.

Well 32 – Negative Control.

The 32 well cut PCR plate is marked with 'DR low' in silver/gray ink.

Well No. 1 is marked with the Lot No. '13R'.

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

The PCR plates are covered with a PCR-compatible foil.

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

INTERPRETATION

Only HLA-DRB alleles will be amplified by the 31 wells of the DR low resolution primer set, **wells 1 to 31**. Thus, the interpretation of DR low resolution typings is not influenced by other HLA class II genes.

UNIQUELY IDENTIFIED ALLELES

All the HLA-DRB1, -DRB3, -DRB4¹ and -DRB5 alleles, i.e. **DRB1*01:01 to 10:04, DRB3*01:01 to DRB3*03:03, DRB4*01:01 to DRB4*01:08, DRB5*01:01 to DRB5*02:06**, recognized by the HLA Nomenclature Committee in July 2012² will be amplified by the primers in the DR low resolution SSP kit. The HLA-DRB alleles will be grouped into their corresponding serological specificities.

¹The DRB4*02:01N and DRB4*03:01N null alleles will not be amplified by the DR low resolution primer set.

²DRB alleles listed on the IMGT/HLA web page 2012-July-12, release 3.9.0, www.ebi.ac.uk/imgt/hla.

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **13R**

Lot-specific information

SPECIFICITY TABLE

DR low resolution primer set

Specificities and sizes of the PCR products of the 31+1 primer mixes of the DR low resolution primer set

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	DR serology ³	Amplified HLA-DRB ⁴ alleles
1^{6,7}	205 bp, 255 bp	515 bp	1	*01:01:01-01:02:08, 01:04-01:38, 01:40N-01:49
2	200 bp	430 bp	1/103	*01:03, 01:39N, 01:42
3⁶	200 bp, 215 bp	430 bp	2, 15	*15:01:01:01-15:77
4¹³	210 bp	430 bp	16	*16:01:01-16:05:02, 16:07-16:19
5^{5-7,11}	120 bp, 220 bp	430 bp	3, 11, 17, 18	*03:01:01:01-03:75, 03:77-03:84, 11:07, 11:53, 11:103, 11:105, 11:107, 11:125, 15:25
6^{5,6,11}	80 bp, 210 bp	430 bp	3, 6, 11, 13, 14, 17	*03:01:01:01-03:01:20, 03:04:01-03:06, 03:08-03:16, 03:18-03:20, 03:22-03:23, 03:25-03:26, 03:28, 03:30-03:31, 03:33-03:34, 03:36-03:37, 03:43-03:48, 03:50-03:52, 03:54-03:68N, 03:70-03:73, 03:75-03:84, 08:40, 11:02:01-11:03, 11:11:01-11:11:02, 11:14:01-11:14:02, 11:16, 11:20-11:21, 11:36, 11:40-11:41, 11:48, 11:59, 11:63, 11:65:01-11:65:02, 11:68, 11:70, 11:73, 11:76, 11:79-11:80, 11:83, 11:85-11:87, 11:93, 11:118, 11:122, 11:124, 11:127, 13:01:01-13:04, 13:08, 13:10, 13:15-13:17, 13:19-13:20, 13:22-13:24, 13:27-13:29, 13:31-13:41, 13:43, 13:45, 13:48, 13:51-13:54, 13:57, 13:59, 13:61:01-13:61:02, 13:63-13:66:02, 13:68-13:76, 13:78-13:81, 13:83-13:85, 13:87-13:99, 13:101-13:102, 13:104-13:107, 13:109, 13:111-13:117, 13:120-13:131, 13:133, 13:135, 13:137N-13:142N, 14:16, 14:19, 14:21, 14:82, 14:95, 14:109
7^{5,6}	85 bp, 210 bp	430 bp	3, 6, 11, 13, 14, 1403, 18	*03:02:01-03:03, 03:27, 03:29, 03:38, 03:53, 03:74, 11:13:01 ^w -11:13:02 ^w , 11:26, 11:34, 13:15, 13:19, 13:26:01-13:26:02, 13:44, 13:53, 13:57, 13:85-13:86, 13:104, 14:02-14:03:02, 14:06:01-14:06:02, 14:09, 14:12:01-14:13, 14:17-14:21, 14:24, 14:27, 14:29-14:30, 14:32:01 ^w -14:32:02 ^w , 14:33, 14:40-14:41, 14:47-14:49, 14:51, 14:63, 14:65 ^w , 14:67, 14:77-14:78, 14:80-14:81, 14:83, 14:85, 14:89,

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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

Lot No.: **13R**

Lot-specific information

				14:94, 14:98, 14:102, 14:106, 14:108-14:109, 14:115, 14:119, 14:121
8^{5,6,7}	100 bp, 175 bp	430 bp	3, 4	*04:01:01-04:124
9	235 bp	430 bp	7	*07:01:01:01-07:01:04, 07:03-07:22
10⁶	170 bp, 215 bp, 250 bp	515 bp	8, 11, 12, 14	*08:01:01-08:19, 08:21-08:49, 11:67, 12:04, 12:16:01, 12:22, 14:11, 14:15, 14:68, 14:93
11^{5,6,7}	85 bp, 135 bp, 180 bp	430 bp	3, 9, 11	*03:08, 03:65, 09:01:02-09:19, 11:07, 11:53, 11:103, 11:105, 11:107, 11:125
12	180 bp	430 bp	10	*03:76, 10:01:01-10:04, 11:59, 11:80, 11:83, 11:87, 13:27, 13:41, 13:71, 13:129
13^{5,6,7}	100 bp, 170 bp	430 bp	3, 8, 11, 13, 14	*03:08, 03:65, 08:31, 08:41, 11:01:01-11:70, 11:72-11:129
14^{5,6}	85 bp, 105 bp	430 bp	12	*08:32, 12:01:01-12:36
15¹⁰	215 bp	430 bp	6, 8, 11, 13, 14, 1403	*03:76, 08:20-08:21, 11:01:01-11:04:10, 11:06:01-11:06:03, 11:08:01-11:12:02, 11:14:01-11:16, 11:18-11:21, 11:23-11:25, 11:27:01-11:33, 11:35-11:51, 11:54:01-11:54:02, 11:56-11:66, 11:68, 11:70, 11:72-11:81, 11:83-11:88, 11:90-11:97, 11:99-11:102:02, 11:106, 11:108-11:124, 11:126-11:129, 13:01:01-13:02:01, 13:02:03-13:08, 13:10-13:16, 13:18-13:43, 13:45-13:85, 13:87-13:115, 13:117-13:128, 13:130-13:142N, 14:03:01-14:03:02, 14:12:01-14:12:02, 14:16, 14:19, 14:21-14:22, 14:25, 14:27, 14:40, 14:53, 14:63, 14:67, 14:69, 14:74, 14:77-14:78, 14:84-14:85, 14:98, 14:102, 14:105, 14:109, 14:115-14:116, DRB3*02:27
16^{6,7}	195 bp, 215 bp	430 bp	6, 8, 11, 12, 13, 14	*08:01:01-08:02:04, 08:04:01-08:09, 08:11, 08:16-08:17, 08:20-08:22, 08:24, 08:26, 08:28, 08:31, 08:39, 08:41-08:44, 11:01:01-11:06:03, 11:09-11:12:02, 11:14:01-11:16, 11:20-11:21, 11:23-11:25, 11:27:01-11:30, 11:32-11:33, 11:35-11:41, 11:43-11:44, 11:46:01-11:51, 11:54:01-11:56, 11:58:01-11:63, 11:65:01-11:70, 11:72, 11:74:01-11:78, 11:80-11:88, 11:90-11:97, 11:99-11:102:02, 11:106, 11:108-11:118, 11:120-11:124, 11:126-11:129, 12:02:01-12:02:05, 12:13, 12:15-12:16:01, 12:18-12:21, 12:23, 12:26-12:27, 12:31N-12:33, 13:01:01-13:02:01, 13:02:03-13:02:07, 13:04-13:05:02, 13:07:01-13:09, 13:11:01-13:11:02,

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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

Lot No.: **13R**

Lot-specific information

				13:14:01-13:24, 13:26:01-13:29, 13:31-13:32, 13:34-13:36, 13:38-13:43, 13:45-13:55, 13:57, 13:59, 13:61:01-13:65, 13:67-13:76, 13:78-13:80, 13:83-13:84, 13:87, 13:91-13:93, 13:96:01-13:100, 13:102-13:109, 13:111-13:114, 13:116-13:117, 13:121, 13:123-13:132, 13:135-13:136, 13:138-13:142N, 14:15-14:16, 14:22, 14:24-14:25, 14:27, 14:37, 14:53, 14:73, 14:105
17¹¹	175 bp	430 bp	3, 6, 11, 13, 14, 1403, 17, 18	*03:01:01:01-03:07, 03:09, 03:11:01-03:41, 03:43-03:45, 03:47-03:63, 03:66-03:68N, 03:70-03:84, 08:20, 13:01:01-13:16, 13:18-13:42, 13:44, 13:46-13:66:02, 13:68-13:102, 13:104-13:115, 13:117-13:121, 13:123-13:142N, 14:02-14:03:02, 14:05:01-14:06:02, 14:09, 14:12:01-14:14, 14:17-14:21, 14:23:01, 14:23:03-14:24, 14:27, 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, 14:102-14:103, 14:106, 14:108-14:109, 14:115-14:116, 14:121, 14:123, 14:127
18^{5,7,9}	100 bp, 140 bp, 155 bp	430 bp	4, 6, 8, 13, 14, 1404	*04:62, 04:69, 04:73, 04:105:01-04:105:02, 04:122, 08:08, 11:69, 11:82, 13:45, 14:01:01-14:01:02, 14:04, 14:07:01-14:07:02, 14:10, 14:16, 14:22, 14:25-14:26, 14:28, 14:31-14:32:02, 14:35, 14:37-14:39, 14:49-14:50, 14:53-14:54:01, 14:55, 14:57-14:58, 14:60-14:62, 14:68-14:71, 14:73-14:76, 14:79, 14:82, 14:86-14:88, 14:90, 14:93, 14:99, 14:101, 14:104-14:105, 14:107, 14:110-14:114, 14:117-14:120, 14:122, 14:124-14:125, DRB4*01:03:01:02N
19^{5,6,8}	110 bp, 140 bp, 170 bp	430 bp	3, 4, 6, 9, 11, 13, 14, 1404	*03:10, 09:01:02-09:01:05, 09:01:07-09:02:02, 09:04-09:19, 11:13:01-11:13:02, 11:17, 11:52, 13:43, 14:01:01-14:02, 14:04-14:11, 14:13-14:14, 14:16-14:18, 14:19 ^w , 14:20, 14:21 ^w , 14:22-14:23:03, 14:26, 14:28-14:36, 14:38-14:39, 14:41, 14:43-14:52, 14:54:01-14:57, 14:59-14:62, 14:64-14:65, 14:68, 14:70-14:76, 14:79-14:83, 14:86-14:88, 14:90-14:97, 14:99-14:101, 14:103-14:108, 14:109 ^w , 14:110-14:114, 14:117-14:127, 15:27, 15:34, 15:66
20^{5,6}	110 bp, 175 bp, 225 bp	430 bp	2 ^w , 3, 4, 6, 8, 11, 13, 14, 1403,	*03:10, 08:09, 08:20-08:21, 08:32, 08:35, 11:13:01-11:13:02, 11:17, 11:23, 11:25, 11:31, 11:45, 11:52, 11:55, 11:64, 11:89, 11:96,

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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

Lot No.: **13R**

Lot-specific information

			1404, 16 ^w	11:119, 13:13, 13:18, 13:43, 13:45, 13:47, 13:55, 13:119, 14:01:01-14:01:03, 14:03:01-14:05:03, 14:07:01-14:08, 14:10-14:12:02, 14:14-14:16, 14:18, 14:22-14:23:03, 14:25-14:28, 14:31-14:32:02, 14:34-14:36, 14:38-14:40, 14:42-14:45, 14:49-14:50, 14:53-14:65, 14:67-14:79, 14:81-14:82, 14:84-14:93, 14:95-14:97, 14:99-14:105, 14:107, 14:110-14:120, 14:122-14:127, 15:21 ^w , 16:04 ^w , 16:18 ^w
21	165 bp	430 bp	8, 12, 13, 14	*08:01:01-08:04:05, 08:04:07-08:06, 08:09-08:10, 08:12-08:14, 08:16-08:18, 08:21-08:24, 08:26-08:30:03, 08:32-08:33, 08:35-08:40, 08:42-08:49, 12:09, 13:17, 13:116, 14:15, 14:52, 14:126
22^{5,7}	75 bp, 175 bp	430 bp	2, 4, 8, 11, 13, 14	*04:12, 04:18, 04:25, 04:58, 08:04:01, 08:04:02 ^w -08:04:03 ^w , 08:04:04-08:04:07, 08:06, 08:10, 08:12, 08:14, 08:20, 08:22, 08:28, 11:25, 11:67, 11:119, 13:18, 14:12:01-14:12:02, 14:15, 14:78, 14:84, 15:21
23	135 bp	430 bp	8, 12, 13	*08:17, 08:28, 08:37, 08:45, 11:67, 12:01:01-12:20, 12:22-12:36, 13:17
24	170 bp	430 bp	3, 6, 11, 13, 14	*03:12, 13:03:01-13:04, 13:12:01-13:13, 13:21:01-13:21:02, 13:30, 13:32-13:33:03, 13:38, 13:48-13:49, 13:55, 13:58, 13:65-13:66:02, 13:75, 13:81, 13:88-13:90, 13:93-13:95, 13:101, 13:108, 13:115, 13:118, 13:120, 13:122, 13:133-13:134, 13:139, 14:13, 14:63, 14:65, 14:78, 14:85
25	150 bp	430 bp	2, 4, 6, 11, 13	*11:16, 11:20, 11:40, 11:59, 11:118, 11:122, 13:01:01-13:02:01, 13:02:03-13:02:07, 13:08, 13:15-13:16, 13:19-13:20, 13:27-13:29, 13:31-13:32, 13:34-13:36, 13:39-13:41, 13:43, 13:51-13:53, 13:57, 13:59, 13:61:01-13:61:02, 13:63-13:65, 13:67-13:69, 13:71-13:74, 13:76, 13:78-13:80, 13:83-13:84, 13:87, 13:91-13:93, 13:96:01-13:97:01, 13:98-13:99, 13:102-13:107, 13:109, 13:111-13:114, 13:117, 13:121, 13:123-13:128, 13:130-13:131, 13:135, 13:138-13:142N, 14:16, 14:57, 15:10
26	145 bp	430 bp	3, 6, 11, 13, 14, 17	*03:01:01:01-03:01:20, 03:04:01-03:05:03, 03:07-03:16, 03:18-03:25, 03:28-03:30, 03:32-03:34, 03:36-03:37, 03:39-03:40, 03:43-03:52, 03:54-03:59, 03:61-03:68N, 03:70-03:73, 03:76-03:79, 03:81, 03:83-03:84, 11:01:01-11:01:06, 11:01:08-11:04:10, 11:06:01-11:16,

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“Instructions for Use” (IFU)

Lot-specific information

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 DR low resolution 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 respective lengths of the HLA-specific PCR product(s) are given for the alleles amplified by these primer mixes. Nonspecific amplifications, i.e. a ladder or a smear of bands, may sometimes be seen. GC-rich primers have a higher tendency of giving rise to nonspecific amplifications than other primers, e.g. the primers in wells 3, 18, 19 and 20.

101.101-48/12 – including *Taq* pol., IFU-01
101.101-48u/12u – without *Taq* pol., IFU-02

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

Lot No.: 13R**Lot-specific information**

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

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

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

²The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 430 base pairs, for most wells, or a band of 515 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the longer, 515 bp, internal positive control band in order to help in the correct orientation of the DR low resolution typing.

In addition, well number 10 contains the primer pair giving rise to the longer, 515 bp, internal positive control band in order to allow kit identification.

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

³The serological reactivity of all DRB alleles is not known. In this table we use the information in the HLA Dictionary 2004 on the www.ebi.ac.uk/imgt/hla web site and the expert-assigned serological grouping in Tissue Antigens (2009) 73:95-170.

⁴For several DRB alleles 1st and/or 3th exon(s) and above, as well as intron nucleotide sequences, are not available. In these instances it is not known whether some of the primers of the SSP sets are completely matched with the target sequences or not. We assume that unknown sequences in the first hyperpolymorphic region of the second exon of DRB alleles are conserved within allelic groups and that unknown sequences of codons 87 to 92 are identical with the DRB1*0101 consensus sequence.

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

⁶Individual alleles can give rise to two differently sized specific PCR fragments in primer mix 1, 3, 5 to 8, 10, 11, 13, 14, 16, 19, 20 and 29.

⁷Primer mixes 1, 5, 8, 11, 13, 16, 18, 22, 27 and 30 have a tendency to giving rise to primer oligomer formation.

⁸Primer mix 19 has a tendency of primer oligomer formation and also has an intense primer cloud due to the high number of primers present in the primer mix.

⁹The DRB4*01:03:01:02N allele is amplified by the primer pairs in wells 18 and 30, whereas the DRB4*02:01N and DRB4*03:01N null alleles are not amplified by these primer pairs.

¹⁰Due to sharing of sequence motifs, DRB3*02:27 is amplified by the primer pairs in well 15 in addition to primer mix 29.

¹¹Due to sharing of sequence motifs in codon 38, DRB3*01:14 will also be amplified in primer mixes 5, 6 and 17 in addition to primer mix 29.

¹²Primer mix 32 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by control primer pairs. PCR product sizes range from 75 to 200 base pairs. The PCR product generated by the control primer pair is 430 base pairs.

¹³Primer mix 4 may have a tendency of unspecific amplification.

‘w’, might be weakly amplified.

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **13R**

Lot-specific information

INTERPRETATION TABLE																	
DR low resolution SSP typing																	
Amplification patterns of the DRB1*01:01 to DRB1*10:04 alleles																	
		Well ⁴															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Length of spec.		205	200	200	210	120	80	85	100	235	170	85	180	100	85	215	195
PCR product(s)		255		215		220	210	210	175		215	135		170	105		215
											250	180					
Length of int. pos. control ¹		515	430	430	430	430	430	430	430	430	515	430	430	430	430	430	430
Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DRB1 allele ²	ser ³																
*01:01:01-01:02:08, 01:04-01:38, 01:40N-01:41, 01:43-01:49	DR1, Null, -	1															
*01:03, 01:39N	DR103, Null		2														
*01:42	-	1	2														
*03:01:01-01:03:01:20, 03:04:01-03:05:03, 03:09, 03:11:01, 03:13:01-03:16, 03:18-03:20, 03:22-03:23, 03:25, 03:28, 03:30, 03:33-03:34, 03:36-03:37, 03:43-03:45, 03:47-03:48, 03:50-03:52, 03:54-03:59, 03:61-03:63, 03:66-03:68N, 03:70-03:73, 03:77-03:79, 03:81, 03:83-03:84	DR17(3), DR3, Null, -					5	6										
*03:02:01-03:03, 03:27, 03:38, 03:53, 03:74	DR18(3), -					5		7									
*03:06, 03:26, 03:31, 03:60, 03:75, 03:80, 03:82	DR3, -					5	6										
*03:07, 03:21, 03:24, 03:32, 03:39-03:40, 03:49	DR3, -					5											
*03:08, 03:65	-					5	6					11		13			
*03:10	DR17(3)					5	6										
*03:12	DR3					5	6										
*03:17, 03:35, 03:41	-					5											
*03:29	-					5		7									
Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

INTERPRETATION TABLE																																
DR low resolution SSP typing																																
Amplification patterns of the DRB1*01:01 to DRB1*10:04 alleles																																
Well ⁴																																
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32																	
175	100	110	110	165	75	135	170	150	145	145	140	160	215	175	Neg. Control		Length of spec.															
	140	140	175		175					215		240	215	175			PCR product(s)															
	155	170	225																													
430	430	430	430	430	430	430	430	430	430	430	430	430	430	430			Length of int. pos. control ¹															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR ser ³	Well No. DRB1 allele ²															
																DR1, Null, -	*01:01:01-01:02:08, 01:04-01:38, 01:40N-01:41, 01:43-01:49															
																DR103, Null	*01:03, 01:39N															
																-	*01:42															
17									26							Neg. Control	DR17(3), DR3, Null, -	*03:01:01-01:03:01:20, 03:04:01-03:05:03, 03:09, 03:11:01, 03:13:01-03:16, 03:18-03:20, 03:22-03:23, 03:25, 03:28, 03:30, 03:33-03:34, 03:36-03:37, 03:43-03:45, 03:47-03:48, 03:50-03:52, 03:54-03:59, 03:61-03:63, 03:66-03:68N, 03:70-03:73, 03:77-03:79, 03:81, 03:83-03:84														
17																	DR18(3), -	*03:02:01-03:03, 03:27, 03:38, 03:53, 03:74														
17																	DR3, -	*03:06, 03:26, 03:31, 03:60, 03:75, 03:80, 03:82														
17									26								DR3, -	*03:07, 03:21, 03:24, 03:32, 03:39-03:40, 03:49														
									26								-	*03:08, 03:65														
		19	20						26								DR17(3)	*03:10														
17							24		26								DR3	*03:12														
17																	-	*03:17, 03:35, 03:41														
17									26								-	*03:29														
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.															

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DRB1 allele ²	ser ³																
*03:42, 03:69	-					5											
*03:46, 03:64	-					5	6										
*03:76	-					6						12				15	
*04:01:01-04:11:02, 04:13-04:17:02, 04:19-04:24, 04:26-04:57, 04:59-04:61, 04:63-04:68, 04:70-04:72:02, 04:74-04:104, 04:106-04:121, 04:123-04:124	DR4, Null, -								8								
*04:12, 04:18, 04:25, 04:58	DR4, -								8								
*04:62, 04:69, 04:73, 04:105:01-04:105:02, 04:122	-								8								
*07:01:01-07:01:04, 07:03-07:22	DR7, Null, -									9							
*08:01:01-08:02:04, 08:05, 08:16, 08:24, 08:26, 08:39, 08:42-08:44	DR8, -										10						16
*08:03:02-08:03:03, 08:13, 08:18, 08:23, 08:27, 08:29-08:30:03, 08:33, 08:36:01, 08:38, 08:46-08:49	DR8, -										10						
*08:04:01, 08:04:04-08:04:05, 08:04:07, 08:06, 08:22	DR8, -										10						16
*08:04:02-08:04:03	DR8										10						16
*08:04:06	-										10						16
*08:07, 08:11	DR8										10						16
*08:08	-										10						16
*08:09	DR8										10						16
*08:10, 08:12, 08:14	DR8										10						
*08:15, 08:19, 08:25, 08:34	-										10						
*08:17	DR8										10						16
*08:20	-															15	16
*08:21	-										10					15	16
*08:28	-										10						16
*08:31, 08:41	DR11(5), -										10			13			16
*08:32	-										10				14		
*08:35	-										10						
*08:37, 08:45	-										10						
*08:40	-						6				10						
Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.
																ser ³	DRB1 allele ²
																-	*03:42, 03:69
									26							-	*03:46, 03:64
17									26	28						-	*03:76
																DR4, Null, -	*04:01:01-04:11:02, 04:13- 04:17:02, 04:19-04:24, 04:26- 04:57, 04:59-04:61, 04:63- 04:68, 04:70-04:72:02, 04:74- 04:104, 04:106-04:121, 04:123- 04:124
				22												DR4, -	*04:12, 04:18, 04:25, 04:58
18																-	*04:62, 04:69, 04:73, 04:105:01- 04:105:02, 04:122
																DR7, Null, -	*07:01:01-07:01:04, 07:03- 07:22
				21												DR8, -	*08:01:01-08:02:04, 08:05, 08:16, 08:24, 08:26, 08:39, 08:42-08:44
				21												DR8, -	*08:03:02-08:03:03, 08:13, 08:18, 08:23, 08:27, 08:29- 08:30:03, 08:33, 08:36:01, 08:38, 08:46-08:49
				21	22											DR8, -	*08:04:01, 08:04:04-08:04:05, 08:04:07, 08:06, 08:22
				21	w											DR8	*08:04:02-08:04:03
				22												-	*08:04:06
																DR8	*08:07, 08:11
18																-	*08:08
			20	21						27						DR8	*08:09
				21	22											DR8	*08:10, 08:12, 08:14
																-	*08:15, 08:19, 08:25, 08:34
				21		23										DR8	*08:17
17			20	22						27						-	*08:20
			20	21						27						-	*08:21
				21	22	23										-	*08:28
																DR11(5), -	*08:31, 08:41
			20	21												-	*08:32
			20	21						27						-	*08:35
				21		23										-	*08:37, 08:45
				21												-	*08:40
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.

Neg. Control

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DRB1 allele ²	ser ³																
*09:01:02-09:01:05, 09:01:07-09:02:02, 09:04-09:19	DR9, -											11					
*09:01:06, 09:03	DR9, -											11					
*10:01:01-10:04	DR10, -												12				
*11:01:01-11:01:06, 11:01:08-11:01:16, 11:04:01-11:04:10, 11:06:01-11:06:03, 11:09-11:10:02, 11:12:01-11:12:02, 11:15, 11:24, 11:27:01-11:29, 11:32-11:33, 11:35, 11:38-11:39, 11:43-11:44, 11:46:01-11:47, 11:49:01-11:49:02, 11:51, 11:54:01-11:54:02, 11:58:01-11:58:02, 11:60-11:62, 11:66, 11:72, 11:74:01-11:75, 11:77-11:78, 11:81, 11:84:01-11:84:02, 11:90-11:92, 11:94-11:95, 11:97, 11:99-11:102:02, 11:106, 11:108-11:117, 11:120-11:121, 11:123, 11:126, 11:128-11:129	DR11(5), -													13		15	16
*11:01:07, 11:30, 11:37:01-11:37:02, 11:50, 11:56, 11:88	DR11(5), -													13		15	16
*11:02:01-11:03, 11:11:01-11:11:02, 11:14:01-11:14:02, 11:21, 11:36, 11:63, 11:65:01-11:65:02, 11:68, 11:70, 11:76, 11:85-11:86, 11:93, 11:124, 11:127	DR11(5), -						6							13		15	16
*11:05	DR11(5)													13			16
*11:07, 11:53, 11:103, 11:105, 11:125	DR11(5), -					5						11		13			
*11:08:01-11:08:02, 11:18-11:19:03, 11:42, 11:57	DR11(5), -													13		15	
*11:13:01-11:13:02	DR11(5)							w						13			
*11:16, 11:20, 11:40, 11:118, 11:122	DR11(5), DR13(6), -						6							13		15	16
Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.
																ser ³	DRB1 allele ²
		19														DR9, -	*09:01:02-09:01:05, 09:01:07-09:02:02, 09:04-09:19
																DR9, -	*09:01:06, 09:03
																DR10, -	*10:01:01-10:04
									26							DR11(5), -	*11:01:01-11:01:06, 11:01:08-11:01:16, 11:04:01-11:04:10, 11:06:01-11:06:03, 11:09-11:10:02, 11:12:01-11:12:02, 11:15, 11:24, 11:27:01-11:29, 11:32-11:33, 11:35, 11:38-11:39, 11:43-11:44, 11:46:01-11:47, 11:49:01-11:49:02, 11:51, 11:54:01-11:54:02, 11:58:01-11:58:02, 11:60-11:62, 11:66, 11:72, 11:74:01-11:75, 11:77-11:78, 11:81, 11:84:01-11:84:02, 11:90-11:92, 11:94-11:95, 11:97, 11:99-11:102:02, 11:106, 11:108-11:117, 11:120-11:121, 11:123, 11:126, 11:128-11:129
																DR11(5), -	*11:01:07, 11:30, 11:37:01-11:37:02, 11:50, 11:56, 11:88
									26							DR11(5), -	*11:02:01-11:03, 11:11:01-11:11:02, 11:14:01-11:14:02, 11:21, 11:36, 11:63, 11:65:01-11:65:02, 11:68, 11:70, 11:76, 11:85-11:86, 11:93, 11:124, 11:127
																DR11(5)	*11:05
									26							DR11(5), -	*11:07, 11:53, 11:103, 11:105, 11:125
									26							DR11(5), -	*11:08:01-11:08:02, 11:18-11:19:03, 11:42, 11:57
		19	20						26	27						DR11(5)	*11:13:01-11:13:02
								25	26							DR11(5), DR13 (6), -	*11:16, 11:20, 11:40, 11:118, 11:122
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DRB1 allele ²	ser ³																
*11:17, 11:52	DR11(5), -													13			
*11:22, 11:104	-													13			
*11:23	DR11(5)													13		15	16
*11:25	DR11(5)													13		15	16
*11:26, 11:34	DR11(5), -							7						13			
*11:31	-													13		15	
*11:41, 11:48	-						6							13		15	16
*11:45, 11:64	-													13		15	
*11:55	-													13			16
*11:59	-						6					12		13		15	16
*11:67	-									10				13			16
*11:69, 11:82	-													13			16
*11:73, 11:79	-						6							13		15	
*11:80, 11:87	-						6					12		13		15	16
*11:83	-						6					12		13		15	16
*11:89	-													13			
*11:96	-													13		15	16
*11:98	-													13			
*11:107	-					5						11		13			
*11:119	-													13		15	
*12:01:01-12:01:04, 12:03:02-12:03:03, 12:05-12:08, 12:10-12:12, 12:14, 12:17, 12:24N-12:25, 12:28-12:30, 12:34-12:36	DR12(5), Null, -														14		
*12:02:01-12:02:05, 12:13, 12:15, 12:18-12:20, 12:23, 12:26-12:27, 12:31N-12:33	DR12(5), Null, -														14		16
*12:04, 12:22	-									10				14			
*12:09	-													14			
*12:16:01	-									10				14		16	
*12:21	-													14		16	
Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.
																ser ³	DRB1 allele ²
		19	20							27						DR11(5),	*11:17, 11:52
																-	*11:22, 11:104
			20						26	27						DR11(5)	*11:23
			20		22				26	27						DR11(5)	*11:25
									26							DR11(5),	*11:26, 11:34
																-	*11:31
			20						26							-	*11:41, 11:48
			20						26	27						-	*11:45, 11:64
			20						26	27						-	*11:55
								25	26							-	*11:59
					22	23										-	*11:67
	18								26							-	*11:69, 11:82
									26							-	*11:73, 11:79
									26							-	*11:80, 11:87
																-	*11:83
			20						26	27						-	*11:89
			20						26							-	*11:96
									26							-	*11:98
																-	*11:107
			20		22				26	27						-	*11:119
						23										DR12(5), Null, -	*12:01:01-12:01:04, 12:03:02- 12:03:03, 12:05-12:08, 12:10- 12:12, 12:14, 12:17, 12:24N- 12:25, 12:28-12:30, 12:34-12:36
						23										DR12(5), Null, -	*12:02:01-12:02:05, 12:13, 12:15, 12:18-12:20, 12:23, 12:26-12:27, 12:31N-12:33
						23										-	*12:04, 12:22
				21		23										-	*12:09
						23										-	*12:16:01
																-	*12:21
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DRB1 allele ²	ser ³																
*13:01:01-13:01:08, 13:01:10-13:02:01, 13:02:03-13:02:07, 13:16, 13:20, 13:28-13:29, 13:31, 13:34, 13:39, 13:51-13:52, 13:59, 13:61:01-13:61:02, 13:63-13:64, 13:68-13:69, 13:73-13:74, 13:78-13:80, 13:83, 13:87, 13:91-13:92, 13:96:01-13:97:01, 13:98-13:99, 13:102, 13:105-13:107, 13:109, 13:111-13:114, 13:117, 13:121, 13:123-13:128, 13:130-13:131, 13:138, 13:140-13:142N	DR13(6), Null, -						6									15	16
*13:01:09, 13:08, 13:35-13:36, 13:40, 13:72, 13:76, 13:84, 13:135	DR13(6), -						6									15	16
*13:02:02	DR13(6)						6										
*13:03:01-13:03:06, 13:33:01-13:33:03, 13:81, 13:88-13:90, 13:94-13:95, 13:101, 13:115, 13:133	DR13(6), -						6									15	
*13:04, 13:75	DR13(6), -						6									15	16
*13:05:01-13:05:02, 13:11:01-13:11:02, 13:14:01-13:14:03, 13:42, 13:46, 13:50:01-13:50:02, 13:62, 13:100, 13:132, 13:136	DR13(6), -															15	16
*13:06, 13:25, 13:56, 13:77, 13:82, 13:110	DR13(6), -															15	
*13:07:01-13:07:02	DR13(6)															15	16
*13:09	-																16
*13:10	DR13(6)						6									15	
*13:12:01-13:12:02, 13:58, 13:118, 13:134	DR13(6), -															15	
*13:13	DR13(6)															15	
*13:15, 13:57, 13:104	DR13(6), -						6	7								15	16
Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.
																ser ³	DRB1 allele ²
17								25	26							DR13(6), Null, -	*13:01:01-13:01:08, 13:01:10-13:02:01, 13:02:03-13:02:07, 13:16, 13:20, 13:28-13:29, 13:31, 13:34, 13:39, 13:51-13:52, 13:59, 13:61:01-13:61:02, 13:63-13:64, 13:68-13:69, 13:73-13:74, 13:78-13:80, 13:83, 13:87, 13:91-13:92, 13:96:01-13:97:01, 13:98-13:99, 13:102, 13:105-13:107, 13:109, 13:111-13:114, 13:117, 13:121, 13:123-13:128, 13:130-13:131, 13:138, 13:140-13:142N
17								25								DR13(6), -	*13:01:09, 13:08, 13:35-13:36, 13:40, 13:72, 13:76, 13:84, 13:135
17								26								DR13(6)	*13:02:02
17							24									DR13(6), -	*13:03:01-13:03:06, 13:33:01-13:33:03, 13:81, 13:88-13:90, 13:94-13:95, 13:101, 13:115, 13:133
17							24	26								DR13(6), -	*13:04, 13:75
17								26								DR13(6), -	*13:05:01-13:05:02, 13:11:01-13:11:02, 13:14:01-13:14:03, 13:42, 13:46, 13:50:01-13:50:02, 13:62, 13:100, 13:132, 13:136
17								26								DR13(6), -	*13:06, 13:25, 13:56, 13:77, 13:82, 13:110
17																DR13(6)	*13:07:01-13:07:02
17								26								-	*13:09
17								26		28						DR13(6)	*13:10
17							24									DR13(6), -	*13:12:01-13:12:02, 13:58, 13:118, 13:134
17			20				24			27						DR13(6)	*13:13
17								25	26							DR13(6), -	*13:15, 13:57, 13:104
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.

Neg. Control

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **13R**

Lot-specific information

Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DRB1 allele ²	ser ³																
*13:17	DR13(6)						6										16
*13:18	DR13(6)															15	16
*13:19, 13:53	DR13(6), -						6	7								15	16
*13:21:01-13:21:02	-															15	16
*13:22-13:24, 13:54, 13:97:02	DR13(6), DR14(6), -						6									15	16
*13:26:01-13:26:02	-							7								15	16
*13:27, 13:41, 13:71	DR13(6), -						6					12				15	16
*13:30	-															15	
*13:32, 13:65	-						6									15	16
*13:37	-						6									15	
*13:38, 13:48	-						6									15	16
*13:43	-						6									15	16
*13:44, 13:86	-							7									
*13:45	-						6									15	16
*13:47	-															15	16
*13:49, 13:108	-															15	16
*13:55	-															15	16
*13:60	-															15	
*13:66:01-13:66:02	DR13(6), -						6									15	
*13:67, 13:103	-															15	16
*13:70	-						6									15	16
*13:85	-						6	7								15	
*13:93, 13:139	-						6									15	16
*13:116	-						6										16
*13:119	-															15	
*13:120	-						6									15	
*13:122	-						6									15	
*13:129	-						6					12					16
*13:137N	Null						6									15	
Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.
																ser ³	DRB1 allele ²
				21		23										DR13(6)	*13:17
17			20		22				26	27						DR13(6)	*13:18
17								25								DR13(6), -	*13:19, 13:53
17							24		26							-	*13:21:01-13:21:02
17									26							DR13(6), DR14(6), -	*13:22-13:24, 13:54, 13:97:02
17																-	*13:26:01-13:26:02
17								25	26							DR13(6), -	*13:27, 13:41, 13:71
17							24		26							-	*13:30
17							24	25								-	*13:32, 13:65
17																-	*13:37
17							24									-	*13:38, 13:48
		19	20					25	26							-	*13:43
17									26							-	*13:44, 13:86
	18		20						26							-	*13:45
17			20							27						-	*13:47
17							24									-	*13:49, 13:108
17			20				24			27						-	*13:55
17																-	*13:60
17							24		26							DR13(6), -	*13:66:01-13:66:02
								25								-	*13:67, 13:103
17																-	*13:70
17											28					-	*13:85
17							24	25	26							-	*13:93, 13:139
				21												-	*13:116
17			20						26	27						-	*13:119
17							24				28					-	*13:120
							24									-	*13:122
17									26							-	*13:129
17									26							Null	*13:137N
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.

Neg. Control

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **13R**

Lot-specific information

Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DRB1 allele ²	ser ³																
*14:01:01-14:01:02, 14:04, 14:07:01-14:07:02, 14:10, 14:26, 14:28, 14:31, 14:38- 14:39, 14:50, 14:54:01, 14:55, 14:60-14:62, 14:70-14:71, 14:75, 14:86-14:88, 14:90, 14:99, 14:101, 14:110, 14:112- 14:114, 14:117-14:118, 14:120, 14:122, 14:124-14:125	DR14(6), DR1404, -																
*14:01:03, 14:08, 14:23:02, 14:34, 14:54:02, 14:92N, 14:97	DR14(6), Null, -																
*14:02, 14:06:01-14:06:02, 14:09, 14:29, 14:47-14:48, 14:51, 14:80, 14:83, 14:106, 14:108, 14:121	DR14(6), -							7									
*14:03:01-14:03:02, 14:40, 14:67, 14:77, 14:102, 14:115	DR1403, -							7								15	
*14:05:01-14:05:03, 14:14, 14:23:01, 14:23:03, 14:36, 14:43-14:45, 14:56, 14:59, 14:91, 14:96, 14:100, 14:103, 14:123, 14:127	DR14(6), -																
*14:11	DR14(6)									10							
*14:12:01-14:12:02	DR14(6), -							7								15	
*14:13	DR14(6)							7									
*14:15	DR8									10							16
*14:16	DR6						6									15	16
*14:17, 14:30, 14:33	DR6, -							7									
*14:18, 14:81	DR6, -							7									
*14:19, 14:109	DR14(6), -						6	7								15	
*14:20, 14:41, 14:94	DR14(6), -							7									
*14:21	DR14(6)						6	7								15	
*14:22, 14:105	DR14(6), -															15	16
*14:24	-							7									16
*14:25	-															15	16
*14:27	DR14(6)							7								15	16
Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **13R**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.
																ser ³	DRB1 allele ²
	18	19	20							27						DR14(6), DR1404, -	*14:01:01-14:01:02, 14:04, 14:07:01-14:07:02, 14:10, 14:26, 14:28, 14:31, 14:38- 14:39, 14:50, 14:54:01, 14:55, 14:60-14:62, 14:70-14:71, 14:75, 14:86-14:88, 14:90, 14:99, 14:101, 14:110, 14:112- 14:114, 14:117-14:118, 14:120, 14:122, 14:124-14:125
		19	20							27						DR14(6), Null, -	*14:01:03, 14:08, 14:23:02, 14:34, 14:54:02, 14:92N, 14:97
17		19									28					DR14(6), -	*14:02, 14:06:01-14:06:02, 14:09, 14:29, 14:47-14:48, 14:51, 14:80, 14:83, 14:106, 14:108, 14:121
17			20							27						DR1403, -	*14:03:01-14:03:02, 14:40, 14:67, 14:77, 14:102, 14:115
17		19	20							27						DR14(6), -	*14:05:01-14:05:03, 14:14, 14:23:01, 14:23:03, 14:36, 14:43-14:45, 14:56, 14:59, 14:91, 14:96, 14:100, 14:103, 14:123, 14:127
		19	20							27						DR14(6)	*14:11
17			20		22					27						DR14(6), -	*14:12:01-14:12:02
17		19					24				28					DR14(6)	*14:13
			20	21	22					27						DR8	*14:15
	18	19	20					25								DR6	*14:16
17		19							26		28					DR6, -	*14:17, 14:30, 14:33
17		19	20							27						DR6, -	*14:18, 14:81
17		w									28					DR14(6), -	*14:19, 14:109
17		19														DR14(6), -	*14:20, 14:41, 14:94
17		w							26		28					DR14(6)	*14:21
	18	19	20													DR14(6), -	*14:22, 14:105
17																-	*14:24
	18		20													-	*14:25
17			20							27						DR14(6)	*14:27
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.

Neg. Control

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **13R**

Lot-specific information

Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DRB1 allele ²	ser ³																
*14:32:01-14:32:02	-							w									
*14:35	-																
*14:37	-																16
*14:42	-																
*14:46	-																
*14:49, 14:119	DR14(6), -							7									
*14:52	-																
*14:53	DR13(6)															15	16
*14:57	-																
*14:58	-																
*14:63, 14:85	-							7								15	
*14:64	-																
*14:65	-							w									
*14:68, 14:93	-									10							
*14:69	-															15	
*14:72	-																
*14:73	-																16
*14:74	-															15	
*14:76, 14:79, 14:104, 14:107, 14:111	-																
*14:78	-							7								15	
*14:82	-						6										
*14:84	-															15	
*14:89	-							7									
*14:95	-						6										
*14:98	-							7								15	
*14:116	-															15	
*14:126	-																
*15:01:01-15:09, 15:11- 15:20, 15:22-15:24, 15:26, 15:28-15:33, 15:35-15:65, 15:67- 15:77	DR15(2), DR2, Null, -			3													
*15:10	-			3													
*15:21	-			3													
*15:25	-			3		5											
*15:27, 15:34, 15:66	-			3													
*16:01:01-16:03, 16:05:01- 16:05:02, 16:07-16:17, 16:19	DR16(2), DR2, Null, -				4												
*16:04, 16:18	DR16(2), -				4												
Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **13R**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.
																ser ³	DRB1 allele ²
	18	19	20							27						-	*14:32:01-14:32:02
	18	19	20						26	27						-	*14:35
17	18															-	*14:37
17			20						26	27						-	*14:42
		19									28					-	*14:46
	18	19	20													DR14(6),	*14:49, 14:119
		19		21							28					-	*14:52
	18		20						26							DR13(6)	*14:53
	18	19	20					25								-	*14:57
	18		20							27						-	*14:58
17			20				24			27						-	*14:63, 14:85
17		19	20						26	27						-	*14:64
17		19	20				24		26	27						-	*14:65
	18	19	20							27						-	*14:68, 14:93
	18		20													-	*14:69
		19	20						26	27						-	*14:72
	18	19	20													-	*14:73
	18	19	20													-	*14:74
	18	19	20													-	*14:76, 14:79, 14:104, 14:107, 14:111
17			20		22		24			27						-	*14:78
	18	19	20							27						-	*14:82
17			20		22					27						-	*14:84
17			20							27						-	*14:89
17		19	20						26	27						-	*14:95
17																-	*14:98
17			20							27						-	*14:116
		19	20	21						27						-	*14:126
																DR15(2), DR2, Null, -	*15:01:01:01-15:09, 15:11-15:20, 15:22-15:24, 15:26, 15:28-15:33, 15:35-15:65, 15:67-15:77
								25								-	*15:10
			w		22											-	*15:21
																-	*15:25
		19														-	*15:27, 15:34, 15:66
																DR16(2), DR2, Null, - DR16(2),	*16:01:01-16:03, 16:05:01-16:05:02, 16:07-16:17, 16:19
			w													-	*16:04, 16:18
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.

Neg. Control

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

Well No.	DR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DRB1 allele ²	ser ³																
<i>DRB3*01:01:02:01-01:15,</i> <i>DRB3*02:01-02:26, 02:28-</i> <i>02:29N, DRB3*03:01:01-03:03</i>	DR52, Null, -																
<i>DRB3*02:27</i>	-															15	
<i>DRB4*01:01:01:01-01:03:01:01,</i> <i>01:03:01:03-01:08</i>	DR53, -																
<i>DRB4*01:03:01:02N</i>	Null																
<i>DRB5*01:01:01-01:14,</i> <i>DRB5*02:02-02:06</i>	DR51, Null, -																
Well No.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

101.101-48/12 – including *Taq* pol., IFU-01
101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	DR	Well No.
																ser ³	DRB1 allele ²
												29				DR52, Null, -	<i>DRB3*01:01:02:01-01:15,</i> <i>DRB3*02:01-02:26, 02:28-</i> <i>02:29N, DRB3*03:01:01-03:03</i>
												29				-	<i>DRB3*02:27</i>
													30			DR53, -	<i>DRB4*01:01:01:01-01:03:01:01,</i> <i>01:03:01:03-01:08</i>
	18												30			Null	<i>DRB4*01:03:01:02N</i>
														31		DR51, Null, -	<i>DRB5*01:01:01-01:14,</i> <i>DRB5*02:02-02:06</i>
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32		Well No.

¹The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 430 base pairs, for most wells, or a band of 515 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the longer, 515 bp, internal positive control band in order to help in the correct orientation of the DR low resolution typing.

In addition, well number 10 contains the primer pair giving rise to the longer, 515 bp, internal positive control band in order to allow kit identification.

²The DRB1*03:11:02 allele has been renamed DRB1*03:81.

The sequence of the DRB1*04:05:12 allele has been shown to be identical to DRB1*04:05:14.

The sequence of the DRB1*0702 allele has been shown to be identical to DRB1*07:01:01:01.

The sequence of the DRB1*08031 allele has been shown to be identical to DRB1*08:03:02.

The sequence of the DRB1*09011 allele has been shown to be identical to DRB1*09:01:02.

The sequence of the DRB1*1171 allele has been shown to be identical to DRB1*11:02:01.

The sequence of the DRB1*12031 allele has been shown to be identical to DRB1*12:01:01.

The DRB1*1466 allele has been renamed DRB1*14:32:02.

The sequence of the DRB1*1606 allele has been shown to be identical to DRB1*16:05:01.

The sequence of the DRB3*010101 allele has been shown to be identical to DRB3*01:01:02:01.

The DRB4*0101102N allele has been shown to be identical to DRB4*01:03:10:02N.

The sequence of the DRB5*0201 allele has been shown to be identical to DRB5*02:02.

Due to sharing of sequence motifs in codon 38, DRB3*01:14 will also be amplified in primer mixes 5, 6 and 17 in addition to primer mix 29.

³The serological reactivity of all DRB alleles is not known. In this table we use the information in the HLA Dictionary 2004 on the www.ebi.ac.uk/imgt/hla web site and the expert-assigned serological grouping in Tissue Antigens (2009) 73:95-170.

⁴Primer mix 32 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by control primer pairs. PCR product sizes range from 75 to 200 base pairs. The PCR product generated by the control primer pair is 430 base pairs.

'ser', serological HLA specificity.

'w', may be weakly amplified.

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

Primers

Well No.	1	2	3	4	5	6	7	8
Length of spec.	205	200	200	210	120	80	85	100
PCR product(s)	255		215		220	210	210	175
Length of int.	515	430	430	430	430	430	430	430
pos. control ¹								
5'-primer(s) ²	12(124) 5' -A.T 3'	14(129) 5' -gAA 3'	13(126) 5' -Agg 3'	13(126) 5' -Agg 3'	13(125) 5' -gTC 3'	13(125) 5' -gTC 3'	13(125) 5' -gTC 3'	13(125) 5' -ACA 3'
	14(129) 5' -gAA 3'		13(126) 5' -AAg 3'	13(126) 5' -AAg 3'	47(227) 5' -gTT 3'	15(133) 5' -gTT 3'		13(125) 5' -ACC 3'
								13(125) 5' -ATA 3'
								13(125) 5' -gTC 3'
3'-primer(s) ³	66(286) 5' -gAg 3'	66(286) 5' -gAT 3'	66(286) 5' -gAT 3'	66(286) 5' -gAA 3'	73(305) 5' -ggC 3'	26(164) 5' -ggT 3'	28(171) 5' -CTC 3'	32(184) 5' -gTg 3'
	66(286) 5' -gAg 3'		69(295) 5' -CTg 3'	66(286) 5' -gAg 3'	73(305) 5' -ggC 3'	71(299) 5' -gCT 3'	69(295) 5' -CTg 3'	58(260) 5' -Cgg 3'
	66(286) 5' -gAT 3'		69(295) 5' -Tg 3'	70(297) 5' -CTg 3'	74(308) 5' -CCC 3'			
	71(299) 5' -gCg 3'		70(298) 5' -CgC 3'	71(301) 5' -ggC 3'				
	86(344) 5' -CCA 3'		71(299) 5' -gCT 3'					
			73(305) 5' -ggC 3'					
Well No.	1	2	3	4	5	6	7	8

Well No.	9	10	11	12	13	14	15	16
Length of spec.	235	170	85	180	100	85	215	195
PCR product(s)		215	135		170	105		215
		250	180					
Length of int.	430	515	430	430	430	430	430	430
pos. control ¹								
5'-primer(s) ²	13(127) 5' -ATA 3'	15(133) 5' -gTT 3'	26(165) 5' -TAT 3'	26(164) 5' -gTA 3'	13(125) 5' -gTC 3'	15(133) 5' -gTT 3'	10(116) 5' -gCT 3'	10(116) 5' -gCT 3'
	13(127) 5' -ATA 3'	15(133) 5' -gTT 3'	58(261) 5' -gAg 3'	30(178) 5' -gCg 3'	15(133) 5' -gTC 3'		12(122) 5' -TAT 3'	12(122) 5' -TAT 3'
	13(127) 5' -gTA 3'				38(200) 5' -CgT 3'		13(125) 5' -gTC 3'	13(125) 5' -gTC 3'
							15(133) 5' -gTT 3'	
							15(133) 5' -gTC 3'	
3'-primer(s) ³	77(319) 5' -CAC 3'	58(260) 5' -CCT 3'	57(257) 5' -CgA 3'	73(307) 5' -CgC 3'	58(260) 5' -CCT 3'	29(175) 5' -gTg 3'	69(295) 5' -gTC 3'	66(286) 5' -gAA 3'
	77(319) 5' -gTA 3'	73(307) 5' -CAg 3'	73(305) 5' -ggC 3'		58(260) 5' -CCT 3'	37(199) 5' -CAg 3'	71(299) 5' -gCT 3'	70(298) 5' -CgC 3'
		86(344) 5' -CAC 3'	77(319) 5' -CAC 3'		58(260) 5' -CCT 3'		71(299) 5' -ACT 3'	70(298) 5' -CTC 3'
Well No.	9	10	11	12	13	14	15	16

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

Well No.	17	18	19	20	21	22	23	24
Length of spec.	175	100	110	110	165	75	135	170
PCR product(s)		140	140	175		175		
		155	170	225				
Length of int.	430	430	430	430	430	430	430	430
pos. control ¹								
5'-primer(s) ²	13(125) 5'-gTC 3'	1 st I 5'-CAA 3'	26(164) 5'-gTA 3'	13(125) 5'-gTC 3'	15(133) 5'-gTT 3'	12(122) 5'-TAg 3'	15(133) 5'-gTT 3'	13(125) 5'-gTC 3'
		37(197) 5'-gTT 3'	34(189) 5'-CAg 3'	34(189) 5'-CAg 3'		74(308) 5'-CCT 3'		
		37(197) 5'-gTA 3'						
3'-primer(s) ³	58(260) 5'-Cgg 3'	42(213) 5'-TCA 3'	57(257) 5'-CAg 3'	57(257) 5'-CAg 3'	56(256) 5'-gCT 3'	56(256) 5'-gCT 3'	47(227) 5'-ggA 3'	56(256) 5'-gCT 3'
	58(260) 5'-CAg 3'	57(257) 5'-CAg 3'	69(295) 5'-CTg 3'	59(265) 5'-gTg 3'	57(257) 5'-CAT 3'	86(344) 5'-CCA 3'		
		70(298) 5'-CgC 3'	70(296) 5'-TCC 3'	70(296) 5'-TCC 3'	57(257) 5'-CAT 3'			
				73(307) 5'-CAg 3'				
Well No.	17	18	19	20	21	22	23	24

Well No.	25	26	27	28	29	30	31
Length of spec.	150	145	145	140	160	215	175
PCR product(s)			215		240		
Length of int.	430	430	430	430	430	430	430
pos. control ¹							
5'-primer(s) ¹	34(189) 5'-CAg 3'	13(125) 5'-gTC 3'	13(125) 5'-gTC 3'	36(196) 5'-AgA 3'	10(116) 5'-gCT 3'	28(170) 5'-gAT 3'	13(125) 5'-gTA 3'
	34(189) 5'-CAg 3'		37(197) 5'-gTT 3'		10(116) 5'-gCT 3'		
					37(199) 5'-TCC 3'		
3'-primer(s) ²	70(298) 5'-CTC 3'	47(227) 5'-ggA 3'	70(296) 5'-TCC 3'	69(295) 5'-CTg 3'	51(239) 5'-CCC 3'	86(346) 5'-CTC 3'	57(258) 5'-gCg 3'
		47(229) 5'-CCA 3'	73(307) 5'-CAg 3'	70(298) 5'-CTT 3'	77(317) 5'-AAT 3'	86(346) 5'-CTT 3'	58(260) 5'-CCT 3'
Well No.	25	26	27	28	29	30	31

¹The codon, and in parenthesis the nucleotide, in the 2nd exon or the 1st intron, matching the specificity-determining 3'-end of the primer is given. Codon and nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

²The codon, and in parenthesis the nucleotide, in the 2nd exon, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Codon and nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

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Lot-specific information

CELL LINE VALIDATION SHEET																					
DR low resolution primer set																					
					Prod. No.:	Well															
						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
						201297201	201297202	201297203	201297204	201297205	201297206	201297207	201297208	201205509	201297210	201297211	201297212	201297213	201297214	201205515	201297216
	IHCW cell line		DRB1																		
1	9001	SA	*01:01			+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*15:02	*04:05		-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-
3	9011	E4181324	*15:02			-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*03:01			-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*16:01			-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*04:07	*08:03		-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-
7	9020	QBL	*03:01			-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*04:01			-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
9	9026	YAR	*04:02			-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
10	9107	LKT3	*04:05			-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
11	9051	PITOUT	*07:01			-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
12	9052	DBB	*07:01			-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
13	9004	JESTHOM	*01:01			+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*08:02			-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	+
15	9075	DKB	*09:01			-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
16	9037	SWEIG007	*11:01			-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+
17	9282	CTM3953540	*03:01	*13:01		-	-	-	-	+	+	-	-	-	-	-	-	-	-	+	+
18	9257	32367	*09:01	*11:01		-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	+
19	9038	BM16	*12:01			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
20	9059	SLE005	*13:02			-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	+
21	9064	AMALA	*14:02			-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*13:02	*14:54		-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	+
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			-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

CELL LINE VALIDATION SHEET																																			
DR low resolution primer set																																			
					Prod. No.:	Well ¹																													
						17	18	19	20	21	22	23	24	25	26	27	28	29	30	31															
						201297217	201200618	201200619	201297220	201205521	201205522	201205523	201205524	201205525	201205526	201205527	201205528	201297229	201297230	201297231															
	IHCW cell line		DRB1																																
1	9001	SA	*01:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2	9280	LK707	*15:02	*04:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-		
3	9011	E4181324	*15:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-		
4	9275	GU373	*03:01			+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-		
5	9009	KAS011	*16:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-		
6	9353	SM	*04:07	*08:03		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-		
7	9020	QBL	*03:01			+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-		
8	9025	DEU	*04:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
9	9026	YAR	*04:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-		
10	9107	LKT3	*04:05			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-		
11	9051	PITOUT	*07:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-		
12	9052	DBB	*07:01			-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-		
13	9004	JESTHOM	*01:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
14	9071	OLGA	*08:02			-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
15	9075	DKB	*09:01			-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-		
16	9037	SWEIG007	*11:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-		
17	9282	CTM3953540	*03:01	*13:01		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-		
18	9257	32367	*09:01	*11:01		-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-		
19	9038	BM16	*12:01			-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-		
20	9059	SLE005	*13:02			+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	+	-	-	
21	9064	AMALA	*14:02			+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-		
22	9056	KOSE	*13:02	*14:54		+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	-	-	
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			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

¹The DRB4*01:03:01:02N allele is amplified by primer mix 18 in the 9052 (DBB) cell line.

101.101-48/12 – including *Taq* pol., IFU-01
 101.101-48u/12u – without *Taq* pol., IFU-02

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

Lot No.: **13R**

Lot-specific information

CERTIFICATE OF ANALYSIS

Olerup SSP® DR low resolution

Product number: 101.101-48/12 – including *Taq* pol.
 101.101-48u/12u – without *Taq* pol.
Lot number: 13R
Expiry date: 2015-April-01
Number of tests: 48 tests – Product No. 101.101-48/48u
 12 tests – Product No. 101.101-12/12u
Number of wells per test: 31 + 1

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2012-972-01	13	2012-972-13	25	2012-055-25
2	2012-972-02	14	2012-972-14	26	2012-055-26
3	2012-972-03	15	2012-055-15	27	2012-055-27
4	2012-972-04	16	2012-972-16	28	2012-055-28
5	2012-972-05	17	2012-972-17	29	2012-972-29
6	2012-972-06	18	2012-006-18	30	2012-972-30
7	2012-972-07	19	2012-006-19	31	2012-972-31
8	2012-972-08	20	2012-972-20		
9	2012-055-09	21	2012-055-21		
10	2012-972-10	22	2012-055-22		
11	2012-972-11	23	2012-055-23		
12	2012-972-12	24	2012-055-24		

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

The reactivities of additional 3'-primers in primer solutions 1, 3, 4, 9 to 11, 18, 20, 22 and 27 were tested by separately adding one or more additional 5'-primers. Additional 5'-primers in primer solutions 6, 11, 12, 15, 16, 18 and 27 were tested by separately adding another 3'-primer.

One or more of the 5'-primers in primer solutions 1, 3, 4, 8 to 10, 13, 15, 16 and 22 and one or two of the 3'-primers in primer solutions 1, 3, 4, 13, 15, 21, 26 and 30 were not possible to test.

The negative control primer pairs, **Production No. 2012-002-01**, can detect contamination with PCR products diluted 10^{-7} .

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

Date of approval: 2012-October-26

Approved by:

Production Quality Control

101.101-48/12 – including *Taq* pol., IFU-01
101.101-48u/12u – without *Taq* pol., IFU-02

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Lot No.: **13R**

Lot-specific information

Declaration of Conformity

Product name: Olerup SSP® DR low resolution
Product number: 101.101-48/48u, -12/12u
Lot number: 13R

Intended use: DRB1 low resolution histocompatibility testing

Manufacturer: Olerup SSP AB
Franzengatan 5
SE-112 51 Stockholm, Sweden
Phone: +46-8-717 88 27
Fax: +46-8-717 88 18

We, Olerup SSP AB, hereby declare that this product, to which this Declaration of Conformity relates is in conformity with the following Standard(s) and other normative document(s) ISO 9001:2008 and ISO 13485:2003, following the provisions of the 98/79/EC Directive on *in vitro* diagnostic medical devices, Annex II List B, conformity assessed using Annex IV, as transposed into the national laws of the Member States of the European Union.

The Technical Documentation File is maintained at Olerup SSP AB, Franzengatan 5, SE-112 51 Stockholm, Sweden.

Notified Body: Lloyd's Register Quality Assurance Limited, Hiramford, Middlemarch Office Village, Siskin Drive, Coventry CV3 4FJ, United Kingdom. (Notified Body number: 0088.)

Stockholm, Sweden
2012-October-26

Ann-Cathrin Jareman
Head of QA and Regulatory Affairs

101.101-48/12 – including *Taq* pol., IFU-01
101.101-48u/12u – without *Taq* pol., IFU-02

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101.101-48/12 – including *Taq* pol., IFU-01
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101.101-48/12 – including *Taq* pol., IFU-01
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Lot No.: **13R**

Lot-specific information

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