

101.331-24/06 – including *Taq* polymerase  
101.331-24u/06u – without *Taq* polymerase

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“Instructions for Use” (IFU)

Lot No.: **5R1**

Lot-specific information  
**Olerup SSP® DPA1**

<b>Product number:</b>	101.331-24/06 – including <i>Taq</i> pol. 101.331-24u/06u – without <i>Taq</i> pol.
<b>Lot number:</b>	5R1
<b>Expiry date:</b>	2026-12-01
<b>Number of tests:</b>	24 tests – Product No. 101.331-24/24u 6 tests – Product No. 101.331-06/06u
<b>Number of wells per test:</b>	22+1
<b>Storage - pre-aliquoted primers:</b>	dark, between -15°C and -25°C
- PCR Master Mix:	between -15°C and -25°C
- Adhesive PCR seals	RT

**This Product Description is only valid for Lot No. 5R1.**

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

**CHANGES COMPARED TO THE PREVIOUS OLERUP SSP® DPA1 LOT (7N5)**

- The product documentation has been updated for new alleles of IMGT 3.50.0.
- The kit resolution focuses on common and well documented (CWD) alleles<sup>1</sup>.

<sup>1</sup>As described in section Uniquely Identified Alleles.

The DPA1 specificity and interpretation tables have been updated for the DPA1 alleles described since the previous *Olerup SSP®* DPA1 lot was made (**Lot No. 7N5**).

The DPA1 primer set is unchanged compared to the previous *Olerup SSP®* DPA1 (**Lot No. 7N5**).

<sup>1</sup>S. J. Mack, P. Cano, J. A. Hollenbach et al.  
Common and well-documented HLA alleles: 2012 update to the CWD catalogue. *Tissue Antigens*, 2013, 81, 194–203



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Well **23** contains Negative Control primer pairs, that will amplify the majority 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 200 base pairs.

Length of PCR product	105	200	105	80	75	80	85
<b>5'-primer<sup>1</sup></b>	<b>164</b>	<b>340</b>	<b>440</b>	<b>45</b>	<b>45</b>	<b>43</b>	<b>36</b>
	5'-CAC <sup>3'</sup>	5'-Agg <sup>3'</sup>	5'-TTA <sup>3'</sup>	5'-Tgg <sup>3'</sup>	5'-Tgg <sup>3'</sup>	5'-Tgg <sup>3'</sup>	5'-TAC <sup>3'</sup>
							36
							5'-TAT <sup>3'</sup>
<b>3'-primer<sup>2</sup></b>	<b>231</b>	<b>2<sup>nd</sup> I</b>	<b>507</b>	<b>59</b>	<b>58</b>	<b>57</b>	<b>47</b>
	5'-TgC <sup>3'</sup>	5'-AAA <sup>3'</sup>	5'-TTg <sup>3'</sup>	5'-CTC <sup>3'</sup>	5'-ggC <sup>3'</sup>	5'-CTC <sup>3'</sup>	5'-ACA <sup>3'</sup>
							48
							5'-gCA <sup>3'</sup>
							48
							5'-gCC <sup>3'</sup>
							52
							5'-TgT <sup>3'</sup>
<b>A*</b>	<b>+</b>	<b>+</b>	<b>+</b>				
<b>B*</b>	<b>+</b>	<b>+</b>	<b>+</b>				
<b>C*</b>	<b>+</b>	<b>+</b>	<b>+</b>				
<b>DRB1</b>				<b>+</b>	<b>+</b>		
<b>DRB3</b>				<b>+</b>	<b>+</b>		
<b>DRB5</b>				<b>+</b>			
<b>DQB1</b>					<b>+</b>		
<b>DPB1</b>						<b>+</b>	
<b>DQA1</b>							<b>+</b>

<sup>1</sup>The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2<sup>nd</sup> or 3<sup>rd</sup> 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](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.

<sup>2</sup>The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2<sup>nd</sup> or 3<sup>rd</sup> exon or the 2<sup>nd</sup> 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](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.



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## PRODUCT DESCRIPTION

### DPA1 SSP subtyping

#### CONTENT

The primer set contains 5'- and 3'-primers for identifying the DPA1\*01:03 to DPA1\*04:03 alleles.

#### PLATE LAYOUT

Each test consists of 23 PCR reactions in a 24 well cut PCR plate. Wells 24 is empty.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>NC</b>	empty

The 24 well cut PCR plate is marked with ‘DPA1’ in silver/gray ink.

Well No. 1 is marked with the Lot No. ‘5R1’.

Wells 1 to 22 – DPA1 high resolution primers.

Well 23 – 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 24 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

Only DPA1 alleles will be amplified by the DPA1 typing kit. Thus, the interpretation of DPA1 typings is not influenced by the DPA2 gene.

For further details see Specificity Table.

#### UNIQUELY IDENTIFIED ALLELES

All the DPA1 alleles, i.e. **DPA1\*01:03 to DPA1\*01:135, DPA1\*02:01 to DPA1\*02:95, DPA1\*03:01 to DPA1\*03:12 and DPA1\*04:01 to DPA1\*04:03**, recognized by the HLA Nomenclature Committee in October 2022<sup>1,2</sup> will be amplified by the primers in the DPA1 typing kit.

The DPA1 kit enables separation of the phenotypically different DPA1 alleles listed in the IMGT/HLA database 3.34.0, October 2018.

<sup>1</sup>DPA1 alleles listed on the IMGT/HLA web page 2022-October-12, release 3.50.0, [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla).

<sup>2</sup>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>.



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### RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in DPA1 homo- and heterozygotes is available upon request.



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**SPECIFICITY TABLE**

**DPA1 SSP typing**

**Specificities and sizes of the PCR products of the 22+1 primer mixes used for DPA1 SSP typing**

Primer Mix	Size of spec. PCR product <sup>1</sup>	Size of control band <sup>2</sup>	Amplified DPA1 <sup>3</sup> alleles
1 <sup>4</sup>	85 bp	515 bp	*01:03:01:01-01:03:02, 01:03:04-01:03:31, 01:03:33-01:05, 01:07-01:11:02, 01:12:01, 01:13-01:26, 01:28-01:61, 01:63-01:110, 01:112-01:117, 01:119N-01:132, 01:134-01:135, 02:03:03-02:03:04, 04:01:01:01-04:03
2	255 bp	515 bp	*01:03:01:01-01:03:13, 01:03:15-01:04:03, 01:06:01-01:12:02, 01:14-01:38, 01:40-01:57, 01:59-01:61, 01:63-01:135, 02:21:01-02:21:03, 02:50
3	160 bp 205 bp	430 bp	*02:11 *01:03:01:01-01:03:44, 01:06:01-01:07, 01:09-01:57, 01:59-01:61, 01:63-01:135, 02:21:01-02:21:03, 02:27:01-02:27:03, 02:50, 03:01:01:01-03:02, 03:04-03:06:02, 03:09, 03:11N-03:12
4 <sup>4,5</sup>	115 bp	430 bp	*01:04:01-01:04:03, 01:08, 03:03
5 <sup>4,7</sup>	105 bp	430 bp	*01:03:27, 01:05, 01:58:01:01-01:58:01:02, 01:62, 02:01:01:01-02:01:01:04, 02:01:01:06-02:02:02:05, 02:02:02:07-02:19, 02:21:01, 02:22:01-02:27:01, 02:28:01-02:42, 02:44-02:49, 02:51-02:95, 03:07:02-03:08, 04:01:01:01-04:03
6	160 bp 195 bp	515 bp	*01:10, 02:04 *01:06:01-01:06:02, 02:21:01-02:21:03, 02:27:01-02:27:03, 02:50, 03:06:01-03:06:02
7 <sup>4</sup>	255 bp 100 bp	430 bp	*01:13 *01:06:01-01:06:02, 02:01:01:01-02:01:01:04, 02:01:01:06-02:01:23, 02:08-02:09:01:04, 02:11, 02:13N, 02:16, 02:18-02:19, 02:21:01-02:21:03, 02:24, 02:26:01:01-02:26:01:02, 02:29, 02:31-02:32N, 02:34:01:01-02:34:01:02, 02:36-02:37, 02:39-02:40, 02:43, 02:45:01-02:46, 02:49-02:50, 02:53, 02:55, 02:57, 02:59-02:61, 02:65-02:66:02N, 02:69:01-02:70, 02:74N-02:75, 02:77-02:80N, 02:82, 02:84, 02:86-02:87, 02:91, 02:93-02:94N
8 <sup>4</sup>	150 bp 100 bp	430 bp	*01:16 *02:02:02:01-02:02:02:05, 02:02:02:07-02:02:12, 02:04-02:07:02, 02:10, 02:12:01-02:12:02, 02:14-02:15, 02:17, 02:20, 02:25, 02:27:01-02:27:03, 02:30, 02:33, 02:35, 02:38Q, 02:41N-02:42, 02:44, 02:47-02:48,



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			02:51-02:52N, 02:54, 02:56Q, 02:58, 02:62-02:64Q, 02:67-02:68, 02:71-02:73, 02:76, 02:81, 02:83, 02:85, 02:88-02:90, 02:92, 02:95, 03:06:01-03:06:02
<b>9</b>	205 bp	430 bp	*02:02:02:01-02:02:02:05, 02:02:02:07-02:02:12, 02:04-02:07:02, 02:10, 02:12:01-02:12:02, 02:14-02:15, 02:17, 02:20, 02:22:01-02:22:02, 02:25, 02:27:01-02:27:03, 02:30, 02:33, 02:35, 02:38Q, 02:41N-02:42, 02:44, 02:47-02:48, 02:51-02:52N, 02:54, 02:56Q, 02:58, 02:62-02:64Q, 02:67-02:68, 02:71-02:73, 02:76, 02:81, 02:83, 02:85, 02:88-02:90, 02:92, 02:95, 03:02
<b>10<sup>4</sup></b>	85 bp	<b>515 bp</b>	*01:03:03, 01:11:03, 01:12:02, 02:03:01-02:03:02, 02:22:01-02:22:02, 03:01:01:01-03:01:03, 03:02-03:05:02Q, 03:07:01-03:12
<b>11<sup>4,6</sup></b>	90 bp	<b>515 bp</b>	*1:12:01-01:12:02, 03:01:01:01-03:01:04, 03:03-03:06:02, 03:09-03:12
<b>12</b>	135 bp 205 bp	430 bp	*01:07 *04:01:01:01-04:03
<b>13<sup>4,6</sup></b>	90 bp	430 bp	*01:09, 02:06, 02:15, 02:16 <sup>?</sup> , 02:30, 02:41N <sup>?</sup> , 02:67-02:68, 02:92
<b>14</b>	130 bp	<b>515 bp</b>	*01:07-01:08, 01:11:01-01:11:03, 02:05, 02:21:01-02:21:03, 02:27:01-02:27:03, 02:50, 02:65, 03:04
<b>15</b>	245 bp	430 bp	*01:03:03, 01:11:03, 01:12:02, 02:21:01, 02:21:03, 02:27:01-02:27:03, 02:50, 03:01:01:01-03:01:03, 03:02-03:06:02, 03:09-03:12
<b>16<sup>8</sup></b>	90 bp	430 bp	*02:07:01:01-02:07:02, 02:12:01, 02:27:02, 02:52N, 02:60, 02:73, 02:90, 03:06:02
<b>17<sup>4</sup></b>	85 bp	430 bp	*01:03:10, 01:04:02 <sup>?</sup> , 01:12:01-01:12:02, 01:33:01-01:33:02, 01:40 <sup>?</sup> , 01:46 <sup>?</sup> -01:47 <sup>?</sup> , 01:51 <sup>?</sup> -01:53 <sup>?</sup> , 01:58:01:01-01:58:01:02, 01:62, 01:66N <sup>?</sup> , 01:95, 01:111 <sup>?</sup> , 01:123N <sup>?</sup> , 02:01:01:01-02:01:01:04, 02:01:01:06-02:01:02:03, 02:01:03 <sup>?</sup> , 02:01:04, 02:01:05 <sup>?</sup> -02:01:06 <sup>?</sup> , 02:01:07-02:02:02:05, 02:02:02:07-02:02:02:14, 02:02:03 <sup>?</sup> -02:02:06 <sup>?</sup> , 02:02:07-02:02:12, 02:03:01 <sup>?</sup> , 02:03:02-02:03:04, 02:04 <sup>?</sup> -02:05 <sup>?</sup> , 02:06-02:10, 02:11 <sup>?</sup> , 02:12:01-02:15, 02:16 <sup>?</sup> , 02:17-02:21:01, 02:21:02 <sup>?</sup> , 02:21:03-02:24, 02:25 <sup>?</sup> , 02:26:01:01-02:27:01, 02:27:02 <sup>?</sup> , 02:27:03-02:32N, 02:34:01:01-02:40, 02:41N <sup>?</sup> , 02:42-02:46, 02:47 <sup>?</sup> , 02:48-02:49, 02:51-02:52N, 02:53 <sup>?</sup> , 02:54-02:58, 02:60-02:72, 02:73 <sup>?</sup> , 02:74N-02:84, 02:86-02:95, 03:01:01:01-03:01:01:15, 03:01:03-03:01:04, 03:02 <sup>?</sup> -03:03 <sup>?</sup> , 03:04-03:05:01:02Q, 03:06:02 <sup>?</sup> -03:07:01 <sup>?</sup> , 03:07:02-03:12, 04:02:01:01-04:03



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<b>18<sup>4</sup></b>	185 bp	430 bp	*01:15, 01:62, 02:09:01:01-02:09:01:04, 02:47, 03:08
<b>19</b>	135 bp	430 bp	*01:14, 01:68, 02:08, 02:60
<b>20</b>	140 bp	430 bp	*01:17
<b>21</b>	135 bp	430 bp	*02:10
<b>22<sup>8</sup></b>	90 bp	430 bp	*02:12:01-02:12:02, 02:60
<b>23<sup>9</sup></b>	-	-	<b>Negative Control</b>

<sup>1</sup>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 DPA1 SSP typings.

When the primers in a primer mix can give rise to HLA-specific PCR products of more than one length this is indicated if the size difference is more than 20 base pairs. Size differences of 20 base pairs or less are not given. For high resolution SSP kits, the alleles listed are specified according to amplicon length.

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

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

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

Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an 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.

<sup>2</sup>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.

<sup>3</sup>For several DPA1 alleles 1<sup>st</sup> and/or 3<sup>rd</sup> 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.

<sup>4</sup>Specific PCR products shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR products.

<sup>5</sup>Primer mix 4 may faintly amplify the DPA1\*04:01 allele.

<sup>6</sup>Primer mixes 11 and 13 may have tendencies of unspecific amplifications.

<sup>7</sup>Primer mix 5 may have tendencies of giving rise to primer oligomer formations.

<sup>8</sup>Primer mixes 16 and 22 may give rise to a lower yield of HLA-specific PCR product than the other DPA1 primer mixes.

<sup>9</sup>Primer mix 23 contains a negative control, which will amplify the majority of the 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 200 base pairs.

#### Abbreviations

'?', nucleotide sequence of the primer matching sequence is not known.



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## PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec. PCR product	85	255	160	115	105	160	100	100	205	85	90	205
			205			195	150				135	
						255						
Length of int. pos. control <sup>1</sup>	515	515	430	430	430	515	430	430	430	515	515	430
5'-primer(s) <sup>2</sup>	15(138) 5'-ACg <sup>3'</sup>	11(125) 5'-CgC <sup>3'</sup>	28(177) 5'-gAA <sup>3'</sup>	4(103) 5'-Cgg <sup>3'</sup>	84(345) 5'-AAT <sup>3'</sup>	11(125) 5'-CgT <sup>3'</sup>	11(125) 5'-CgC <sup>3'</sup>	11(125) 5'-CAT <sup>3'</sup>	11(125) 5'-CAT <sup>3'</sup>	15(138) 5'-ACC <sup>3'</sup>	51(244) 5'-AAA <sup>3'</sup>	18(145) 5'-gAA <sup>3'</sup>
						31(185) 5'-gCA <sup>3'</sup>					66(290) 5'-ATC <sup>3'</sup>	
						43(222) 5'-TgT <sup>3'</sup>						
3'-primer(s) <sup>3</sup>	31(184) 5'-CAT <sup>3'</sup>	83(340) 5'-ggT <sup>3'</sup>	68(296) 5'-TgC <sup>3'</sup>	28(177) 5'-TCg <sup>3'</sup>	2 <sup>nd</sup> I 5'-ggC <sup>3'</sup>	69(298) 5'-gTC <sup>3'</sup>	31(184) 5'-CTg <sup>3'</sup>	31(184) 5'-CTg <sup>3'</sup>	66(290) 5'-TCA <sup>3'</sup>	31(184) 5'-CAT <sup>3'</sup>	83(340) 5'-ggT <sup>3'</sup>	73(310) 5'-AgC <sup>3'</sup>
			83(340) 5'-ggT <sup>3'</sup>			83(340) 5'-ggT <sup>3'</sup>	47(232) 5'-CTT <sup>3'</sup>					
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
Length of spec. PCR product	90	130	245	90	85	185	135	140	135	90
Length of int. pos. control <sup>1</sup>	430	515	430	430	430	430	430	430	430	430
5'-primer(s) <sup>2</sup>	4(103) 5'-Cgg <sup>3'</sup>	50(242) 5'-CCg <sup>3'</sup>	15(138) 5'-ACC <sup>3'</sup>	20(153) 5'-ggA <sup>3'</sup>	190(661) 5'-CAA <sup>3'</sup>	28(177) 5'-gAA <sup>3'</sup>	190(661) 5'-CAA <sup>3'</sup>	88(355) 5'-CTC <sup>3'</sup>	96(379) 5'-Agg <sup>3'</sup>	224(764) 5'-CCA <sup>3'</sup>
		190(662) 5'-AAT <sup>3'</sup>	51(244) 5'-AAA <sup>3'</sup>							
3'-primer(s) <sup>3</sup>	23(161) 5'-ACg <sup>3'</sup>	76(320) 5'-AAT <sup>3'</sup>	83(340) 5'-ggT <sup>3'</sup>	37(204) 5'-TTA <sup>3'</sup>	204(705) 5'-CCC <sup>3'</sup>	76(319) 5'-ACA <sup>3'</sup>	218(746) 5'-AAT <sup>3'</sup>	120(453) 5'-CAC <sup>3'</sup>	127(473) 5'-CCg <sup>3'</sup>	down <sup>4</sup> 5'-T <sup>3'</sup>
		204(705) 5'-CCC <sup>3'</sup>	83(340) 5'-ggT <sup>3'</sup>				224(764) 5'-CCT <sup>3'</sup>			
Well No.	13	14	15	16	17	18	19	20	21	22

<sup>1</sup>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.

<sup>2</sup>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](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.

<sup>3</sup>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](http://www.ebi.ac.uk/imgt/hla) web site. The sequence of the 3 terminal nucleotides of the primer is given.

<sup>4</sup>Primer located in the 3'untranslated region.





101.331-24/06 – including *Taq* polymerase  
101.331-24u/06u – without *Taq* polymerase

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Lot No.: **5R1**

Lot-specific information

CELL LINE VALIDATION SHEET																			
DPA1 SSP kit <sup>2</sup>																			
			Prod No.:	Well															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				202246401	202246402	202246403	202246404	202246405	202246406	202246407	202246408	202246409	202246410	202246411	202246412	202246413	202246414	202246415	202246416
	IHWC cell line <sup>1</sup>	DPA1																	
1	9001 SA	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373	*02:01	*04:01	+	-	-	-	+	-	-	+	-	-	-	+	-	-	-	-
5	9009 KAS011	*01:03	*02:01	+	+	+	-	+	-	+	-	-	-	-	-	-	-	-	-
6	9353 SM	*02:02		-	-	-	-	+	-	-	+	+	-	-	-	-	-	-	-
7	9020 QBL	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025 DEU	*01		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3	*02:02		-	-	-	-	+	-	-	+	+	-	-	-	-	-	-	-
11	9051 PITOUT	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540	*01:03	*02:01	+	+	+	-	+	-	+	-	-	-	-	-	-	-	-	-
18	9257 32367	*01:03	*03:01	+	+	+	-	-	-	-	-	-	+	+	-	-	-	+	-
19	9038 BM16	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*01:03	*02:01	+	+	+	-	+	-	+	-	-	-	-	-	-	-	-	-
23	9124 IHL	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9	*02:01		-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-
26	9285 WT49	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*01:03	*04:01	+	+	+	-	+	-	-	-	-	-	-	+	-	-	-	-
28	9320 BEL5GB	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH	*02:02	*03:01	-	-	+	-	+	-	-	+	+	+	+	-	-	-	+	-
31	9019 DUCAF	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17	*02:02		-	-	-	-	+	-	-	+	+	-	-	-	-	-	-	-
37	9065 HHKB	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML	*01:03	*02:01	+	+	+	-	+	-	+	-	-	-	-	-	-	-	-	-
40	9134 WHONP199	*02:02		-	-	-	-	+	-	-	+	+	-	-	-	-	-	-	-
41	9055 H0301	*02:01		-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-
42	9066 TAB089	*02:02		-	-	-	-	+	-	-	+	+	-	-	-	-	-	-	-
43	9076 T7526	*04:01		+	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-
44	9057 TEM	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO	*01:03	*03:01	+	+	+	-	-	-	-	-	-	+	+	-	-	-	+	-
46	9013 SCHU	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303 TER-ND	*01:03		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-



101.331-24/06 – including *Taq* polymerase  
101.331-24u/06u – without *Taq* polymerase

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Lot No.: 5R1

Lot-specific information

CELL LINE VALIDATION SHEET											
DPA1 SSP kit <sup>2</sup>											
					Well						
					17	18	19	20	21	22	
					Prod. No.:	202246417	202246418	202246419	202246420	202246421	202246422
IHWC cell line <sup>1</sup>		DPA1									
1	9001 SA	*01:03			-	-	-	-	-	-	
2	9280 LK707	*01:03			-	-	-	-	-	-	
3	9011 E4181324	*01:03			-	-	-	-	-	-	
4	9275 GU373	*02:01	*04:01		+	-	-	-	-	-	
5	9009 KAS011	*01:03	*02:01		+	-	-	-	-	-	
6	9353 SM	*02:02			+	-	-	-	-	-	
7	9020 QBL	*01:03			-	-	-	-	-	-	
8	9025 DEU	*01			-	-	-	-	-	-	
9	9026 YAR	*01:03			-	-	-	-	-	-	
10	9107 LKT3	*02:02			+	-	-	-	-	-	
11	9051 PTOUT	*01:03			-	-	-	-	-	-	
12	9052 DBB	*01:03			-	-	-	-	-	-	
13	9004 JESTHOM	*01:03			-	-	-	-	-	-	
14	9071 OLGA	*01:03			-	-	-	-	-	-	
15	9075 DKB	*01:03			-	-	-	-	-	-	
16	9037 SWEIG007	*01:03			-	-	-	-	-	-	
17	9282 CTM8953540	*01:03	*02:01		+	-	-	-	-	-	
18	9257 32367	*01:03	*03:01		+	-	-	-	-	-	
19	9038 BM16	*01:03			-	-	-	-	-	-	
20	9059 SLE005	*01:03			-	-	-	-	-	-	
21	9064 AMALA	*01:03			-	-	-	-	-	-	
22	9056 KOSE	*01:03	*02:01		+	-	-	-	-	-	
23	9124 IHL	*01:03			-	-	-	-	-	-	
24	9035 JBUSH	*01:03			-	-	-	-	-	-	
25	9049 IBW9	*02:01			+	-	-	-	-	-	
26	9285 WT49	*01:03			-	-	-	-	-	-	
27	9191 CH1007	*01:03	*04:01		-	-	-	-	-	-	
28	9320 BEL5GB	*01:03			-	-	-	-	-	-	
29	9050 MOU	*01:03			-	-	-	-	-	-	
30	9021 RSH	*02:02	*03:01		+	-	-	-	-	-	
31	9019 DUCAF	*01:03			-	-	-	-	-	-	
32	9297 HAG	*01:03			-	-	-	-	-	-	
33	9098 MT14B	*01:03			-	-	-	-	-	-	
34	9104 DHIF	*01:03			-	-	-	-	-	-	
35	9302 SSTO	*01:03			-	-	-	-	-	-	
36	9024 KT17	*02:02			+	-	-	-	-	-	
37	9065 HHKB	*01:03			-	-	-	-	-	-	
38	9099 LZL	*01:03			-	-	-	-	-	-	
39	9315 CML	*01:03	*02:01		+	-	-	-	-	-	
40	9134 WHONP199	*02:02			+	-	-	-	-	-	
41	9055 H0301	*02:01			+	-	-	-	-	-	
42	9066 TAB089	*02:02			+	-	-	-	-	-	
43	9076 T7526	*04:01			-	-	-	-	-	-	
44	9057 TEM	*01:03			-	-	-	-	-	-	
45	9239 SHJO	*01:03	*03:01		+	-	-	-	-	-	
46	9013 SCHU	*01:03			-	-	-	-	-	-	
47	9045 TUBO	*01:03			-	-	-	-	-	-	
48	9303 TER-ND	*01:03			-	-	-	-	-	-	



101.331-24/06 – including *Taq* polymerase  
101.331-24u/06u – without *Taq* polymerase

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Lot No.: **5R1**

**Lot-specific information**

<sup>1</sup>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.

<sup>2</sup>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 allele to be amplified by primer solutions 6, 13, 14 and 18 to 22 were available. The specificities of the primers in primer solutions 6, 13, 14 and 21 were tested by separately adding one additional 5'-primer and one additional 3'-primer, respectively. In primer solutions 18, 19 and 22 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solution 20 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 6, 11, 13 and 14 one or two 5'-primers were not possible to test, and in primer solutions 3, 6, 7, 13 and 14 one or two 3'-primers were not possible to test.



101.331-24/06 – including *Taq* polymerase  
 101.331-24u/06u – without *Taq* polymerase

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Lot No.: **5R1**

Lot-specific information

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**Fax:** +46-8-717 88 18

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**Fax:** 610-344-7989

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For information on CareDx distributors worldwide, contact **CareDx AB**.

