

**101.613-12 – including *Taq* polymerase**  
**101.613-12u – without *Taq* polymerase**

Visit [www.caredx.com](http://www.caredx.com) for  
**“Instructions for Use” (IFU)**

**Lot No.: 9N9**

**Lot-specific information**

**Olerup SSP<sup>®</sup> HLA-C\*05**

<b>Product number:</b>	<b>101.613-12 – including <i>Taq</i> polymerase</b> <b>101.613-12u – without <i>Taq</i> polymerase</b>
<b>Lot number:</b>	<b>9N9</b>
<b>Expiry date:</b>	<b>2027-01-01</b>
<b>Number of tests:</b>	<b>12</b>
<b>Number of wells per test:</b>	<b>40+1</b>
<b>Storage - pre-aliquoted primers:</b>	<b>dark, between -15°C and -25°C</b>
- PCR Master Mix:	<b>between -15°C and -25°C</b>
- Adhesive PCR seals	<b>RT</b>

**This Product Description is only valid for Lot No. 9N9.**

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

**CHANGES COMPARED TO THE PREVIOUS OLERUP SSP<sup>®</sup>  
 HLA-C\*05 LOT (0M4)**

- 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 HLA-C\*05 specificity and interpretation tables have been updated for the HLA-C alleles described since the previous *Olerup SSP<sup>®</sup> HLA-C\*05* lot was made (**Lot No. 0M4**).

The HLA-C\*05 primer set is unchanged compared to the previous lot (**Lot No. 0M4**).

<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 **41** 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>
							<b>36</b>
							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>
							<b>48</b>
							5'-gCA <sup>3'</sup>
							<b>48</b>
							5'-gCC <sup>3'</sup>
							<b>52</b>
							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

### HLA-C\*05 SSP subtyping

#### CONTENT

The primer set contains 5'- and 3'-primers for identifying the C\*05:01 to C\*05:277 alleles.

#### PLATE LAYOUT

Each test consists of 41 PCR reactions in a 48 well PCR plate. Wells 42 to 48 are empty.

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

The 48 well cut PCR plate is marked with ‘HLA-C\*05’ in silver/gray ink.

Well No. 1 is marked with the Lot No. ‘9N9’.

Wells 1 to 40 – HLA-C\*05 high resolution primers.

Well 41 – Negative Control (NC).

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

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

**Please note:** When removing each 48 well PCR plate, make sure that the remaining plates stay sealed. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

#### INTERPRETATION

Due to the sharing of sequence motifs between HLA-C alleles non-HLA-C\*05 alleles will be amplified by some primer mixes. For further details see Specificity Table.

#### UNIQUELY IDENTIFIED ALLELES

All the HLA-C\*05 alleles, i.e. **C\*05:01 to C\*05:277**, recognized by the HLA Nomenclature Committee in October 2022<sup>1</sup> will be amplified by the primers in the HLA-C\*05 subtyping kit<sup>2</sup>.

The HLA-C\*05 kit enables separation of the confirmed HLA-C\*05 alleles as listed in the IMGT/HLA database 3.24.0. 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 HLA-C\*05 alleles is listed below.



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The HLA-C\*05 kit also enables identification of many null and alternatively expressed alleles.

The following HLA-C\*05 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

Alleles	Primer mix	Alleles	Primer mix
C*05:03, 05:07N	4	C*05:25, 05:33	11
C*05:08, 05:30, 05:89	10	C*05:28, 05:39	26
C*05:14, 05:93	16	C*05:32, 05:53	30
C*05:15, 05:91N	14	C*05:35, 05:40	25
C*05:21, 05:26	20	C*05:37, 05:41	29
C*05:24, 05:36	23		

<sup>1</sup>HLA-C 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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### ALLELE CONFIRMATION STATUS

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

<sup>1</sup>Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2016-April-15, release 3.24.0, [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla).

### RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in HLA-C\*05 homo- and heterozygotes is available upon request.



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## SPECIFICITY TABLE

### HLA-C\*05 SSP subtyping

Specificities and sizes of the PCR products of the 40+1 primer mixes used for HLA-C\*05 SSP subtyping

Primer Mix	Size of spec. PCR product <sup>1</sup>	Size of control band <sup>2</sup>	Amplified HLA-C*05 alleles <sup>3</sup>	Other amplified HLA Class I alleles
1	155 bp	800 bp	*05:01:01:01-05:01:44, 05:01:46-05:01:72, 05:03-05:08, 05:10-05:11, 05:13-05:16, 05:19-05:51Q, 05:53-05:86, 05:88-05:96, 05:98-05:102, 05:104-05:105, 05:108-05:113N, 05:116-05:127, 05:129-05:133, 05:135-05:142, 05:144-05:150, 05:152-05:200, 05:202Q-05:205, 05:207-05:227, 05:229-05:244N, 05:246-05:261, 05:263N-05:271N, 05:273-05:277	*03:607, 07:41, 08:02:01:01-08:02:38, 08:04:01:01-08:05, 08:07, 08:12:01:01-08:13, 08:17-08:19:02, 08:23, 08:25, 08:28-08:32, 08:34, 08:37, 08:43, 08:45, 08:47-08:49, 08:52N-08:53, 08:55N, 08:57, 08:62:01-08:63, 08:67-08:71, 08:73-08:77, 08:90, 08:92-08:94, 08:100, 08:103:01:01-08:104, 08:107-08:108, 08:110-08:116, 08:120, 08:123, 08:125-08:126, 08:132, 08:134, 08:139-08:140, 08:142, 08:146, 08:149-08:152, 08:156, 08:158-08:159, 08:161N, 08:166-08:172, 08:179-08:185, 08:188, 08:191, 08:195, 08:198, 08:200-08:202, 08:206-08:207, 08:211, 08:213-08:216, 08:218, 08:222-08:227, 08:229-08:231, 08:233, 08:237-08:240, 08:242, 08:245, 08:247-08:248, 08:256
2	165 bp	1070 bp	*05:01:01:01-05:01:72, 05:03-05:28, 05:30-05:47, 05:49-05:91N, 05:93-05:128N, 05:130-05:154N, 05:156-05:189, 05:191-05:194, 05:196, 05:198-05:244N, 05:246-05:277	*02:94, 04:129, 06:05, 06:67, 08:10, 12:21, 12:33, 15:107, 15:178, 17:05
3	150 bp	1070 bp	*05:09:01-05:09:03, 05:17, 05:44:01-05:44:02, 05:52, 05:79, 05:201, 05:206, 05:262	*01:13, 02:51, 03:87:01-03:87:02, 03:414, 04:223:01-04:223:02, 04:387, 07:130, 07:915, 08:15:01-08:15:02, 08:51, 08:243, 08:246, 12:144, 12:185, 16:27, <b>B*15:33</b> , <b>B*15:248</b>
4 <sup>4</sup>	120 bp 285 bp	800 bp	*05:03 *05:07N	*03:490, 03:548, 07:52 *08:180N



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<b>5</b>	225 bp	1070 bp	*05:04:01-05:04:02, 05:103:01-05:103:02, 05:135, 05:188, 05:207, 05:215	*06:129, 07:68, 07:260:01- 07:260:02, 07:302, 08:09, 08:11, 08:59, 08:113, 08:152, <b>B*15:337, B*15:627, B*18:83, B*58:76</b>
	285 bp		*05:31	
<b>6</b>	255 bp	1070 bp	*05:05:01-05:05:02, 05:99N, 05:135, 05:147- 05:148	*03:251, 03:314, 07:1012, 08:62:01-08:62:02, 08:82, 08:144:01-08:144:02, 08:209, <b>A*02:425, A*02:519, A*29:10:01-29:10:02, A*29:161, A*68:69, B*14:32, B*15:337, B*15:627, B*18:83, B*44:148, B*51:355</b>
	280 bp		*05:16, 05:85, 05:107, 05:241	*06:129, 07:364, 08:12:01:01- 08:12:01:02, <b>B*14:32</b>
<b>7</b>	265 bp	1070 bp	*05:01:01:01-05:01:72, 05:03-05:04:02, 05:06- 05:08, 05:10-05:16, 05:18:01-05:51Q, 05:53- 05:60, 05:62-05:81, 05:83-05:84, 05:86- 05:106:02, 05:108- 05:134, 05:136-05:142, 05:144-05:146, 05:149- 05:200, 05:202Q-05:205, 05:207-05:232, 05:234- 05:240, 05:242-05:244N, 05:246-05:261, 05:263N- 05:277	*03:607, 04:120, 06:129, 07:04:01:01-07:04:21, 07:04:23- 07:04:28, 07:11-07:12, 07:41, 07:63, 07:68, 07:101, 07:139, 07:142, 07:181, 07:199:01- 07:199:02, 07:260:01- 07:260:02, 07:272, 07:302, 07:323-07:324, 07:328-07:329N, 07:336, 07:338, 07:354-07:355, 07:357-07:358, 07:361, 07:365, 07:378, 07:394-07:395, 07:403, 07:406, 07:420, 07:426, 07:428, 07:447, 07:459, 07:466-07:467, 07:480, 07:487, 07:501, 07:523, 07:534-07:535, 07:552, 07:562- 07:563, 07:569, 07:585-07:586, 07:600:01N-07:600:02N, 07:622, 07:626, 07:648, 07:651, 07:655-07:656, 07:664, 07:672N, 07:674, 07:693, 07:698, 07:742, 07:751N, 07:780, 07:797N, 07:831, 07:838-07:839N, 07:852, 07:858, 07:868, 07:876, 07:881N, 07:892, 07:895- 07:897, 07:901, 07:917, 07:926, 07:941, 07:948, 07:951, 07:953, 07:974Q, 07:1010, 07:1033, 08:01:01:01-08:01:07, 08:01:09- 08:01:13, 08:01:15-08:02:25, 08:02:27-08:08:01, 08:09-08:14, 08:16:01-08:50, 08:52N-08:61, 08:63, 08:65-08:69, 08:71, 08:73-08:81, 08:83-08:140, 08:142-08:143, 08:145-08:150, 08:152-08:159, 08:161N- 08:208N, 08:210-08:240, 08:242, 08:244-08:245, 08:247- 08:256, 15:130, 15:229, <b>B*58:76</b>





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<b>8<sup>4</sup></b>	85 bp	<b>800 bp</b>	*05:06	
<b>9<sup>4</sup></b>	105 bp 175 bp 245 bp	1070 bp	*05:51Q *05:48N *05:113N	
<b>10<sup>4</sup></b>	95 bp  250 bp  320 bp	1070 bp	*05:08, 05:52, 05:89  *05:30  *05:92N	*02:51, 08:29, 08:31, 08:246, 12:144, 12:185, <b>B*15:33</b> , <b>B*15:248</b> *03:247, 03:610, 06:125, 08:249, 14:70, 16:85-16:86, 16:144, 16:147, <b>B*44:515</b> *08:55N
<b>11<sup>4</sup></b>	115 bp 205 bp	1070 bp	*05:33 *05:25, 05:42	*04:129, 06:05, 06:67, 07:101, 07:148, 07:161, 07:583, 08:28, 08:137, 08:168, <b>A*01:203</b> , <b>A*11:166</b> , <b>A*80:01:01:01<sup>w</sup></b> - <b>80:09N<sup>w</sup></b>
<b>12<sup>6</sup></b>	155 bp 225 bp 285 bp	<b>800 bp</b>	*05:97 *05:38 *05:10, 05:148	*08:97 *03:251, 03:314, 08:44, 08:61, 08:82, 08:126, 08:209, 15:130, 15:229, <b>B*15:627</b> , <b>B*44:148</b> , <b>B*58:76</b>
<b>13<sup>4</sup></b>	95 bp	1070 bp	*05:11, 05:17, 05:27, 05:68, 05:79, 05:184	*03:87:01-03:87:02, 03:414, 07:130, 07:915, 08:04:01:01- 08:04:03, 08:13, 08:57, 08:93, 08:104, 08:113, 08:139, 08:168, 08:182, 08:188, 08:213, 08:243
<b>14<sup>4</sup></b>	120 bp 200 bp	1070 bp	*05:12, 05:15 *05:80, 05:91N	*08:153
<b>15<sup>4</sup></b>	115 bp 185 bp 240 bp	1070 bp	*05:65 *05:34 *05:13	*04:96, 08:238 *02:93, 04:352, 06:13
<b>16</b>	195 bp 470 bp	1070 bp	*05:14 *05:93	*01:200, 02:170, 03:171, 03:211:01, 04:144, 06:73, 08:20, 08:40, 12:109, 15:221
<b>17</b>	155 bp	1070 bp	*05:12, 05:18:01, 05:18:05-05:18:06, 05:103:02, 05:272	*03:251, 03:314, 04:120, 06:129, 07:04:11, 07:892, 07:953, 08:01:01:01-08:01:07, 08:01:09-08:01:18, 08:01:20- 08:01:33, 08:03:01:01-08:03:05, 08:06, 08:08:01-08:11, 08:14, 08:16:01-08:16:02, 08:20- 08:22:02, 08:24, 08:26N-08:27, 08:33:02-08:33:04, 08:35- 08:36N, 08:38-08:42, 08:44, 08:46, 08:50, 08:54, 08:56, 08:58-08:61, 08:65-08:66, 08:78-08:89N, 08:91, 08:95- 08:99, 08:101-08:102, 08:105- 08:106, 08:109, 08:117-08:119, 08:121N-08:122, 08:124, 08:127N-08:131, 08:133,





101.613-12 – including *Taq* polymerase  
 101.613-12u – without *Taq* polymerase

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Lot No.: **9N9**

Lot-specific information

				08:135-08:138, 08:141Q, 08:143-08:145, 08:147-08:148, 08:153-08:155, 08:157, 08:162- 08:165, 08:173N-08:178, 08:186-08:187, 08:189-08:190, 08:192-08:194, 08:196-08:197, 08:199, 08:203-08:205, 08:208N-08:210, 08:212, 08:217, 08:219-08:221, 08:228, 08:232, 08:234-08:236N, 08:241, 08:244, 08:249-08:255, 15:130, 15:229, <b>B*15:337,</b> <b>B*15:627</b>
<b>18</b>	160 bp 245 bp	1070 bp	*05:87 *05:19, 05:99N	*08:145
<b>19</b>	175 bp	<b>800 bp</b>	*05:20	*01:43, 02:87, 03:280, 03:530, 07:101, 07:148, 07:161, 07:583, 08:01:01:01-08:01:07, 08:01:09- 08:09, 08:11-08:12:01:02, 08:14-08:15:02, 08:17, 08:19:01-08:24, 08:26N-08:54, 08:56-08:63, 08:65-08:93, 08:95-08:110, 08:112-08:119, 08:121N-08:145, 08:147-08:232, 08:234-08:256, 12:127, 12:203, 16:139
<b>20</b>	260 bp 390 bp	1070 bp	*05:26 *05:21	*04:238
<b>21</b>	230 bp	1070 bp	*05:04:01-05:04:02, 05:22:01-05:22:02, 05:38, 05:103:01-05:103:02, 05:107, 05:135, 05:147- 05:148, 05:207, 05:241, 05:252, 05:272	*03:251, 03:314, 06:129, 07:04:01:01-07:04:28, 07:11- 07:12, 07:63, 07:68, 07:101, 07:139, 07:142, 07:181, 07:199:01-07:199:02, 07:260:01-07:260:02, 07:272, 07:302, 07:323-07:324, 07:328- 07:329N, 07:336, 07:338, 07:354-07:355, 07:357-07:358, 07:361, 07:364-07:365, 07:378, 07:394-07:395, 07:403, 07:406, 07:420, 07:426, 07:428, 07:447, 07:459, 07:466-07:467, 07:480, 07:487, 07:501, 07:523, 07:534- 07:535, 07:552, 07:562-07:563, 07:569, 07:585-07:586, 07:600:01N-07:600:02N, 07:622, 07:651, 07:655-07:656, 07:664, 07:672N, 07:674, 07:693, 07:698, 07:742, 07:751N, 07:780, 07:797N, 07:831, 07:838-07:839N, 07:852, 07:858, 07:868, 07:876, 07:881N, 07:895-07:897, 07:901, 07:917, 07:926, 07:941, 07:948, 07:951, 07:953, 07:974Q, 07:1010, 07:1012, 07:1033, 08:09, 08:11, 08:83,



101.613-12 – including *Taq* polymerase  
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Lot No.: **9N9**

Lot-specific information

				08:97, 08:108, 08:152, 08:205, 08:209, <b>B*15:627, B*44:148</b>
<b>22<sup>4</sup></b>	100 bp	<b>800 bp</b>	*05:23, 05:62, 05:134, 05:143, 05:151	*07:01:48, 07:02:35, 07:1028, 08:07, 08:47, 08:104, 08:188, <b>B*48:04:02</b>
<b>23<sup>4</sup></b>	85 bp 135 bp	1070 bp	*05:24 *05:36	*07:148, 15:107, 15:178
<b>24</b>	185 bp 265 bp	1070 bp	*05:43 *05:29:01-05:29:02, 05:197	*08:37 *08:13, 08:16:01, 08:25, 08:94
<b>25<sup>4</sup></b>	105 bp 205 bp	1070 bp	*05:40 *05:35, 05:80	*08:245
<b>26<sup>4</sup></b>	115 bp  185 bp 245 bp	1070 bp	*05:27, 05:39, 05:184  *05:28 *05:113N	*03:87:01-03:87:02, 03:414, 08:115, 08:182, <b>B*15:33, B*15:248</b> *06:64
<b>27</b>	155 bp	1070 bp	*05:42, 05:46:01:01-05:46:01:02	*04:129, 06:67, 07:101, 07:148, 07:161, 07:583, 08:05, 08:21, 08:137, 12:127, 12:203, 17:05
<b>28<sup>4,5</sup></b>	115 bp 200 bp	<b>800 bp</b>	*05:65 *05:45	*04:96, 08:238
<b>29<sup>6</sup></b>	140 bp 185 bp 260 bp	1070 bp	*05:41 *05:34 *05:37, 05:228	*02:202, 04:78 *02:93, 04:352, 06:13 *08:232
<b>30<sup>4</sup></b>	70 bp 175 bp	1070 bp	*05:53 *05:32	
<b>31</b>	155 bp	1070 bp	*05:18:02-05:18:04, 05:103:01, 05:106:01, 05:107, 05:115, 05:134, 05:151	*07:04:01:01-07:04:10, 07:04:12-07:04:19, 07:04:21-07:04:28, 07:11-07:12, 07:63, 07:68, 07:101, 07:139, 07:142, 07:181, 07:199:01-07:199:02, 07:260:01-07:260:02, 07:272, 07:302, 07:323-07:324, 07:328-07:329N, 07:336, 07:338, 07:354-07:355, 07:357-07:358, 07:361, 07:364-07:365, 07:378, 07:394-07:395, 07:403, 07:406, 07:420, 07:426, 07:428, 07:459, 07:466-07:467, 07:480, 07:487, 07:501, 07:523, 07:534-07:535, 07:552, 07:562-07:563, 07:569, 07:585-07:586, 07:600:01N-07:600:02N, 07:622, 07:626, 07:651, 07:655-07:656, 07:664, 07:672N, 07:674, 07:693, 07:698, 07:742, 07:751N, 07:780, 07:797N, 07:831, 07:838-07:839N, 07:852, 07:858, 07:868, 07:876, 07:881N, 07:895-07:897, 07:901, 07:917, 07:926, 07:941, 07:948, 07:951, 07:974Q, 07:1010, 07:1012, 07:1033, 08:33:01, 08:33:05, <b>B*14:32, B*18:83, B*44:148, B*51:355, B*58:76</b>



**101.613-12 – including Taq polymerase**  
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**Lot No.: 9N9**

**Lot-specific information**

	285 bp		*05:104	*07:04:01:01-07:04:06, 07:04:08-07:04:28, 07:11-07:12, 07:63, 07:101, 07:139, 07:142, 07:181, 07:272, 07:302, 07:323-07:324, 07:328-07:329N, 07:336, 07:338, 07:354-07:355, 07:357-07:358, 07:361, 07:365, 07:378, 07:394-07:395, 07:403, 07:406, 07:420, 07:426, 07:428, 07:447, 07:459, 07:466-07:467, 07:480, 07:487, 07:501, 07:523, 07:534-07:535, 07:552, 07:562-07:563, 07:569, 07:585-07:586, 07:600:01N-07:600:02N, 07:622, 07:626, 07:651, 07:655-07:656, 07:664, 07:672N, 07:674, 07:693, 07:698, 07:742, 07:751N, 07:780, 07:797N, 07:831, 07:838, 07:852, 07:858, 07:868, 07:876, 07:881N, 07:892, 07:895-07:897, 07:901, 07:917, 07:926, 07:948, 07:951, 07:953, 07:974Q, 07:1010, 07:1012, 07:1033
<b>32</b>	220 bp	1070 bp	*05:01:01:01-05:01:22, 05:01:24-05:01:72, 05:03-05:57, 05:58:02-05:58:03, 05:59-05:78:01, 05:79-05:137, 05:139-05:244N, 05:246-05:277	*01:14, 01:59, 01:118, 02:02:01-02:02:03, 02:02:06-02:02:11, 02:02:13-02:02:25, 02:02:27-02:11, 02:13-02:20, 02:22-02:26:02, 02:28-02:40:02, 02:42-02:86, 02:88-02:100, 02:101 <sup>w</sup> , 02:102-02:114, 02:116-02:125, 02:127-02:128, 02:130, 02:132-02:190, 02:192N-02:217, 04:01:72, 04:03:01:01-04:03:11, 04:06:01-04:06:03, 04:42:02, 04:80, 04:103:02, 04:107, 04:140, 04:147, 04:160:01-04:160:02, 04:166:03, 04:171, 04:190, 04:220, 04:256, 04:286, 04:294, 04:299 <sup>w</sup> , 04:304:02:01-04:304:02:02, 04:335, 04:337, 04:351:02, 04:357, 04:363, 04:381, 04:383, 04:393, 04:400, 04:402, 04:489, 06:02:01:01-06:02:01:92, 06:02:03-06:02:09, 06:02:11, 06:02:13-06:02:31, 06:02:33-06:02:64, 06:02:66-06:02:73, 06:02:75-06:10, 06:12-06:25, 06:27-06:51, 06:53:01-06:121, 06:123, 06:126-06:131, 06:133-06:146, 06:148-06:168, 06:170-06:216, 06:218-06:247, 06:249-06:251, 06:253-06:279, 06:281N-06:360, 07:07, 07:09, 07:49, 07:76:01-07:76:02, 07:210, 07:238,



101.613-12 – including *Taq* polymerase  
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Lot No.: **9N9**

Lot-specific information

				07:247, 07:315, 07:328, 07:403, 07:406, 07:598, 08:10, 12:04:01-12:05:02, 12:09, 12:21, 12:33, 12:41, 12:54, 12:60, 12:146, 12:188, 12:353, 12:362, 15:02:01:01-15:02:14, 15:02:16, 15:02:18-15:05:07, 15:05:09-15:05:10, 15:05:13-15:06:03, 15:08:01-15:10:02, 15:11-15:13:02, 15:15-15:18, 15:22-15:24, 15:26-15:42, 15:44:01-15:49, 15:51-15:115N, 15:117-15:133, 15:135-15:143, 15:145N-15:190, 15:192-15:243Q, 15:244 <sup>w</sup> , 15:245-15:247N, 15:248 <sup>w</sup> , 15:249-15:254, 16:02:01:01-16:02:01:05, 16:02:03-16:02:14, 16:02:16-16:02:17, 16:02:19-16:02:20, 16:09, 16:12, 16:19, 16:25, 16:46-16:48, 16:57, 16:60, 16:63, 16:69-16:70, 16:74, 16:77N, 16:84, 16:88-16:91, 16:99, 16:101-16:104, 16:107-16:108, 16:115, 16:120-16:121, 16:123N, 16:132N-16:133, 16:136, 16:140, 16:143-16:145, 16:153, 16:155-16:156, 16:163, 16:166-16:167, 16:176, 16:179, 16:181, 16:184, 16:189, 16:194-16:195N, 16:202, 17:01:01:02-17:01:17, 17:02-17:21, 17:23-17:61, 17:63-17:66, 18:01:01:01-18:16
<b>33<sup>4</sup></b>	100 bp	1070 bp	*05:98, 05:197	*01:02:34, 01:21, 02:42, 02:107, 02:152, 04:140, 04:166:01, 04:166:03, 04:220, 06:02:72, 06:05, 07:01:74, 07:02:09, 07:125:02, 08:14, 08:80, 08:103:01:01-08:103:01:02, 12:16:01, 12:147, 12:227, 12:279, 15:63, 15:113, 16:80, <b>B*15:436, B*67:02:01:01-67:02:01:02</b>
<b>34</b>	165 bp 275 bp	1070 bp	*05:128N *05:111, 05:207	*07:68, 07:260:01-07:260:02, 07:302, 07:941, 08:38
<b>35</b>	505 bp	1070 bp	*05:79	*04:291, 08:10
<b>36</b>	225 bp	1070 bp	*05:154N	*12:105N
<b>37</b>	285 bp	1070 bp	*05:153N	
<b>38</b>	260 bp	1070 bp	*05:108	*01:183, 03:354, 03:533, 03:561, 06:111, 14:131



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Lot No.: **9N9**

Lot-specific information

<b>39</b>	225 bp	1070 bp	*05:47, 05:107, 05:147-05:148, 05:272	*03:251, 03:314, 07:953, 08:205, 08:209
	280 bp		*05:16, 05:85, 05:107, 05:241	*06:129, 07:364, 08:12:01:01-08:12:01:02, <b>B*14:32</b>
<b>40</b>	210 bp	1070 bp	*05:55	
<b>41<sup>7</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 C\*05 high resolution 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 1070 or 800 base pairs respectively, well distribution as outlined in the table. Well number 1 contains the shorter, 800 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 HLA Class I alleles 1<sup>st</sup> and/or 4<sup>th</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>HLA-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 28 may have a tendency to giving rise to primer oligomer formation.

<sup>6</sup>Primer mixes 12 and 29 may have tendencies of unspecific amplifications.

<sup>7</sup>Primer mix 41 contains a negative control, which will amplify the majority 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 200 base pairs.

#### Abbreviations

w: might be weakly amplified.



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Lot No.: **9N9**

Lot-specific information

**PRIMER SPECIFICATION**

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec.	155	165	150	120	225	255	265	85	105	95	115	155
PCR product				285	285	280			175	250	205	225
									245	320		285
Length of int.	<b>800</b>	1070	1070	<b>800</b>	1070	1070	1070	<b>800</b>	1070	1070	1070	<b>800</b>
pos. control <sup>1</sup>												
5'-primer(s) <sup>2</sup>	485 5'-CAA 3'	176 5'-gCA 3'	485 5'-CAA 3'	355 5'-CC 3'	355 5'-TCC 3'	361 5'-AgT 3'	379 5'-ACC 3'	176 5'-gCA 3'	96 5'-TC 3'	28 5'-TCA 3'	176 5'-gCA 3'	355 5'-TCA 3'
		176 5'-gCA 3'		3 <sup>rd</sup> I 5'-Cgg 3'	419 5'-gTC 3'	379 5'-ACg 3'			166 5'-CgT 3'	485 5'-CAA 3'		416 5'-CCg 3'
						385 5'-gC 3'			485 5'-CAA 3'			485 5'-CAg 3'
3'-primer(s) <sup>3</sup>	601 5'-CTT 3'	302 5'-ggT 3'	595 5'-CCT 3'	601 5'-CTT 3'	601 5'-CTT 3'	601 5'-CTT 3'	601 5'-CTT 3'	221 5'-ACC 3'	302 5'-ggT 3'	106 5'-CAT 3'	248 5'-AAC 3'	601 5'-CTT 3'
	601 5'-CTg 3'		595 5'-CCg 3'	668 5'-TgA 3'			601 5'-CTg 3'		550 5'-CAg 3'	175 5'-CTA 3'	341 5'-CgT 3'	
			601 5'-CTC 3'							538 5'-CCA 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.	95	120	115	195	155	160	175	260	230	100	85	185
PCR product		200	185	470		245		390			135	265
			240									
Length of int.	1070	1070	1070	1070	1070	1070	<b>800</b>	1070	1070	<b>800</b>	1070	1070
pos. control <sup>1</sup>												
5'-primer(s) <sup>2</sup>	485 5'-CAA 3'	176 5'-gCA 3'	115 5'-ggA 3'	446 5'-CgT 3'	486 5'-ACg 3'	385 5'-gC 3'	176 5'-gCA 3'	28 5'-TCA 3'	412 5'-ATg 3'	453 5'-AAT 3'	176 5'-gCA 3'	1 <sup>st</sup> I 5'-CgA 3'
		453 5'-AAT 3'	2 <sup>nd</sup> I 5'-CCA 3'	652 5'-CCA 3'		406 5'-gCC 3'		322 5'-gCC 3'	416 5'-CCg 3'			
						483 5'-gAg 3'						
3'-primer(s) <sup>3</sup>	538 5'-CAg 3'	256 5'-CCA 3'	312 5'-AgT 3'	601 5'-CTT 3'	601 5'-CTT 3'	601 5'-CTT 3'	311 5'-ggT 3'	118 5'-gCT 3'	601 5'-CTT 3'	512 5'-CCA 3'	218 5'-gCC 3'	97 5'-gTC 3'
		337 5'-CTA 3'	403 5'-gCA 3'	956 5'-CAg 3'				419 5'-CgA 3'			270 5'-TAg 3'	175 5'-CCg 3'
		337 5'-CTT 3'	475 5'-ggT 3'									
		527 5'-CCA 3'										
Well No.	13	14	15	16	17	18	19	20	21	22	23	24



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Lot No.: **9N9**

Lot-specific information

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec.	105	115	155	115	140	70	155	220	100	165	505	225
PCR product	205	185		200	185	175	285			275		
		245			260							
Length of int.	1070	1070	1070	800	1070	1070	1070	1070	1070	1070	1070	1070
pos. control <sup>1</sup>												
5'-primer(s) <sup>2</sup>	176	96	176	2 <sup>nd</sup> I	2 <sup>nd</sup> I	176	355	118	142	368	312	2 <sup>nd</sup> I
	5'-gCA 3'	5'-TC 3'	5'-gCA 3'	5'-CCA 3'	5'-CCA 3'	5'-gCA 3'	5'-CCT 3'	5'-CCA 3'	5'-TCT 3'	5'-gTC 3'	5'-AAA 3'	5'-CCA 3'
		158			629	3 <sup>rd</sup> I	486	126		477		
		5'-ggg 3'			5'-AAg 3'	5'-Cgg 3'	5'-ACC 3'	5'-ggA 3'		5'-gCC 3'		
		485					486					
		5'-CAA 3'					5'-ACA 3'					
3'-primer(s) <sup>3</sup>	241	302	289	403	430	311	601	302	201	601	526	514
	5'-CgA 3'	5'-ggT 3'	5'-AgC 3'	5'-gCA 3'	5'-gCA 3'	5'-gTC 3'	5'-CTT 3'	5'-ggT 3'	5'-CTT 3'	5'-CTT 3'	5'-CgT 3'	5'-CTA 3'
	337	559	289	488	475	621		307				
	5'-CTT 3'	5'-CAg 3'	5'-AgC 3'	5'-CCT 3'	5'-ggT 3'	5'-Tgg 3'		5'-CCA 3'				
	341				846							
	5'-CgA 3'				5'-CAC 3'							
Well No.	25	26	27	28	29	30	31	32	33	34	35	36

Well No.	37	38	39	40
Length of spec.	285	260	225	210
PCR product			280	
Length of int.	1070	1070	1070	1070
pos. control <sup>1</sup>				
5'-primer(s) <sup>2</sup>	61	862	361	176
	5'-CCT 3'	5'-ACA 3'	5'-AgT 3'	5'-gCA 3'
			419	
			5'-gTA 3'	
3'-primer(s) <sup>3</sup>	176	956	601	343
	5'-ACT 3'	5'-CAg 3'	5'-CTT 3'	5'-T 3'
Well No.	37	38	39	40

<sup>1</sup>The internal positive control primer pairs amplify segments of the human growth hormone gene. The internal positive control bands are 1070 or 800 base pairs respectively, well distribution as outlined in the table. Well number 1 contains the shorter, 800 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.





**101.613-12 – including Taq polymerase**  
**101.613-12u – without Taq polymerase**

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**“Instructions for Use” (IFU)**

**Lot No.: 9N9**

**Lot-specific information**

<b>CELL LINE VALIDATION SHEET</b>																				
<b>HLA-C*05 SSP subtyping kit</b>																				
				<b>Well<sup>2</sup></b>																
				<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>Prod. No.:</b>	202129501	202129502	202129503	202129504	202129505	202129506	202129507	202129508	202129509	202129510	202129511	202129512	202129513	202129514	202129515	202129516
				<b>IHWC cell line<sup>1</sup></b>																
				<b>C*</b>																
<b>1</b>	9001	SA	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>2</b>	9280	LK707	*07:01	*15:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3</b>	9011	E4181324	*12:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>4</b>	9275	GU373	*03:04	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>5</b>	9009	KAS011	*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>6</b>	9353	SM	*03:04	*07:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>7</b>	9020	QBL	*05:01		+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<b>8</b>	9025	DEU	*04:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>9</b>	9026	YAR	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>10</b>	9107	LKT3	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>11</b>	9051	PITOUT	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>12</b>	9052	DBB	*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>13</b>	9004	JESTHOM	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>14</b>	9071	OLGA	*01:02	*03:04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>15</b>	9075	DKB	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>16</b>	9037	SWEIG007	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>17</b>	9282	CTM3953540	*03:03	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>18</b>	9257	32367	*01:02	*07:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>19</b>	9038	BM16	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>20</b>	9059	SLE005	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>21</b>	9064	AMALA	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>22</b>	9056	KOSE	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>23</b>	9124	IHL	*01:02	*15:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>24</b>	9035	JBUSH	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>25</b>	9049	IBW9	*08:02		+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<b>26</b>	9285	WT49	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>27</b>	9191	CH1007	*07:04	*15:27	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<b>28</b>	9320	BEL5GB	*05:01	*16:01	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<b>29</b>	9050	MOU	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>30</b>	9021	RSH	*17:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>31</b>	9019	DUCAF	*05:01		+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<b>32</b>	9297	HAG	*17:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>33</b>	9098	MT14B	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>34</b>	9104	DHIF	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>35</b>	9302	SSTO	*05:01		+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<b>36</b>	9024	KT17	*03:03	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>37</b>	9065	HHKB	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>38</b>	9099	LZL	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>39</b>	9315	CML	*02:02	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>40</b>	9134	WHONP199	*01:02	*06:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>41</b>	9055	H0301	*08:02		+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<b>42</b>	9066	TAB089	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>43</b>	9076	T7526	*01:02	*08:01	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<b>44</b>	9057	TEM	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>45</b>	9239	SHJO	*06:02	*17:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>46</b>	9013	SCHU	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>47</b>	9045	TUBO	*07:04	*15:02	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<b>48</b>	9303	TER-ND	*04:01	*16:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



101.613-12 – including *Taq* polymerase  
 101.613-12u – without *Taq* polymerase

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Lot No.: **9N9**

Lot-specific information

<b>CELL LINE VALIDATION SHEET</b>																			
<b>HLA-C*05 SSP subtyping kit</b>																			
				Well <sup>2</sup>															
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
			Prod. No.:	202129517	202237718	202129519	202129520	202129521	202129522	202129523	202129524	202129525	202129526	202129527	202129528	202129529	202129530	202129531	202129532
	IHCW cell line <sup>1</sup>	C*																	
1	9001 SA	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*07:01	*15:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
3	9011 E4181324	*12:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373	*03:04	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011	*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
6	9353 SM	*03:04	*07:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
8	9025 DEU	*04:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB	*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
13	9004 JESTHOM	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA	*01:02	*03:04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
17	9282 CTM3953540	*03:03	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257 32367	*01:02	*07:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL	*01:02	*15:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
24	9035 JBUSH	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9	*08:02		-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*07:04	*15:27	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	+
28	9320 BEL5GB	*05:01	*16:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
29	9050 MOU	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH	*17:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
31	9019 DUCAF	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
32	9297 HAG	*17:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
33	9098 MT14B	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
36	9024 KT17	*03:03	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML	*02:02	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
40	9134 WHONP199	*01:02	*06:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
41	9055 H0301	*08:02		-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526	*01:02	*08:01	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO	*06:02	*17:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
46	9013 SCHU	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*07:04	*15:02	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	+
48	9303 TER-ND	*04:01	*16:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



101.613-12 – including *Taq* polymerase  
 101.613-12u – without *Taq* polymerase

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Lot No.: **9N9**

Lot-specific information

CELL LINE VALIDATION SHEET												
HLA-C*05 SSP subtyping kit												
				Well <sup>2</sup>								
				33	34	35	36	37	38	39	40	
				Prod. No.:	202129533	202129534	202129535	202129536	202129537	202129538	202129539	202129540
IHC cell line <sup>1</sup>			C*									
1	9001	SA	*07:02	-	-	-	-	-	-	-	-	-
2	9280	LK707	*07:01	*15:05	-	-	-	-	-	-	-	-
3	9011	E4181324	*12:02	-	-	-	-	-	-	-	-	-
4	9275	GU373	*03:04	*04:01	-	-	-	-	-	-	-	-
5	9009	KAS011	*06:02	-	-	-	-	-	-	-	-	-
6	9353	SM	*03:04	*07:02	-	-	-	-	-	-	-	-
7	9020	QBL	*05:01	-	-	-	-	-	-	-	-	-
8	9025	DEU	*04:01	-	-	-	-	-	-	-	-	-
9	9026	YAR	*12:03	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*01:02	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*16:01	-	-	-	-	-	-	-	-	-
12	9052	DBB	*06:02	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*01:02	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*01:02	*03:04	-	-	-	-	-	-	-	-
15	9075	DKB	*03:04	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*02:02	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*03:03	*07:01	-	-	-	-	-	-	-	-
18	9257	32367	*01:02	*07:05	-	-	-	-	-	-	-	-
19	9038	BM16	*07:01	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*03:04	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*03:03	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*12:03	-	-	-	-	-	-	-	-	-
23	9124	IHL	*01:02	*15:02	-	-	-	-	-	-	-	-
24	9035	JBUSH	*12:03	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*08:02	-	-	-	-	-	-	-	-	-
26	9285	WT49	*07:01	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*07:04	*15:29	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*05:01	*16:01	-	-	-	-	-	-	-	-
29	9050	MOU	*16:01	-	-	-	-	-	-	-	-	-
30	9021	RSH	*17:01	-	-	-	-	-	-	-	-	-
31	9019	DUCAF	*05:01	-	-	-	-	-	-	-	-	-
32	9297	HAG	*17:03	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*03:04	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*12:03	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*05:01	-	-	-	-	-	-	-	-	-
36	9024	KT17	*03:03	*04:01	-	-	-	-	-	-	-	-
37	9065	HHKB	*07:02	-	-	-	-	-	-	-	-	-
38	9099	LZL	*03:03	-	-	-	-	-	-	-	-	-
39	9315	CML	*02:02	*07:01	-	-	-	-	-	-	-	-
40	9134	WHONP199	*01:02	*06:02	-	-	-	-	-	-	-	-
41	9055	H0301	*08:02	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*01:02	-	-	-	-	-	-	-	-	-
43	9076	T7526	*01:02	*08:01	-	-	-	-	-	-	-	-
44	9057	TEM	*12:03	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*06:02	*17:01	-	-	-	-	-	-	-	-
46	9013	SCHU	*07:02	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*07:04	*15:02	-	-	-	-	-	-	-	-
48	9303	TER-ND	*04:01	*16:01	-	-	-	-	-	-	-	-



101.613-12 – including *Taq* polymerase  
101.613-12u – without *Taq* polymerase

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Lot No.: **9N9**

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 alleles to be amplified by primer solutions 4 to 6, 8 to 12, 14 to 16, 18, 20, 22 to 30 and 33 to 40 were available. The specificities of the primers in primer solutions 4 to 6, 9 to 12, 14, 15, 18, 20, 22 to 24, 26, 27, 29, 33 to 35, 39 and 40 were tested by separately adding additional 5'-primers and 3'-primers accordingly.

In primer solutions 8, 25, 28, 30 and 36 it was only possible to test the 5'-primers, the 3'-primers were not possible to be tested. In primer solutions 16, 37 and 38 it was only possible to test the 3'-primers, the 5'-primers were not possible to be tested. In primer solutions 1, 3, 4, 7, 9 to 11, 14, 15, 20, 23, 29 and 32 one or more 3'-primers were not possible to be tested. In primer solutions 2, 4, 6, 9, 12, 15, 18, 20, 21, 26, 29 and 34 one or two 5'-primers were not possible to be tested. In addition, one 3'-primer in primer solution 3 was tested by separately adding one 5'-primer, and one 5'-primer in primer solution 31 was tested by separately adding one 3'-primer.



101.613-12 – including *Taq* polymerase  
101.613-12u – without *Taq* polymerase

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“Instructions for Use” (IFU)

Lot No.: **9N9**

Lot-specific information

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