

101.613-12 – including *Taq* polymerase, IFU-01  
101.613-12u – without *Taq* polymerase, IFU-02

Visit <https://labproducts.caredx.com> for  
“Instructions for Use” (IFU)

Lot No.: **3K0**

Lot-specific information

**Olerup SSP<sup>®</sup> HLA-C\*05**

<b>Product number:</b>	101.613-12 – including <i>Taq</i> polymerase 101.613-12u – without <i>Taq</i> polymerase
<b>Lot number:</b>	3K0
<b>Expiry date:</b>	2023-10-01
<b>Number of tests:</b>	12
<b>Number of wells per test:</b>	37+1
<b>Storage - pre-aliquoted primers:</b>	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. 3K0.**

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 (1H3)**

- The product documentation has been updated for new alleles of IMGT 3.36.0
- 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. 1H3**).

The HLA-C\*05 primer set is unchanged compared to the previous *Olerup SSP<sup>®</sup>* HLA-C\*05 (**Lot No. 1H3**).

<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 **38** contains Negative Control primer pairs, that will amplify a 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

### HLA-C\*05 SSP subtyping

#### CONTENT

The primer set contains 5'- and 3'-primers for identifying the C\*05:01 to C\*05:215 alleles.

#### PLATE LAYOUT

Each test consists of 38 PCR reactions in a 48 well PCR plate. Wells 39 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	NC	empty	empty
empty	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. ‘3K0’.

Wells 1 to 37 – HLA-C\*05 high resolution primers.

Well 38 – 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\*05:215**, recognized by the HLA Nomenclature Committee in April 2019<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*05:24, 05:36	23
C*05:06, 05:55	8	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

<sup>1</sup>HLA-C alleles listed on the IMGT/HLA web page 2019-April-17, release 3.36.0, [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 37+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, 05:03-05:08, 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, 05:207-05:215	*07:41, 08:02:01:01-08:02:26, 08:04:01-08:05, 08:07, 08:12-08:13, 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, 08:103-08:104, 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
2	165 bp	1070 bp	*05:01:01:01-05:01:45, 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, 05:198-05:215	*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	*01:13, 02:51, 03:87:01-03:87:02, 03:414, 04:223:01-04:223:02, 07:130, 08:15:01-08:15:02, 08:51, 12:144, 12:185, 16:27, <b>B*15:33, B*15:248</b>
4 <sup>4</sup>	120 bp 285 bp	800 bp	*05:03 *05:07N	*07:52 *08:180N
5	225 bp  285 bp	1070 bp	*05:04:01-05:04:02, 05:103:01-05:103:02, 05:135, 05:188, 05:207, 05:215 *05:31	*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*18:83, B*58:76</b>
6	255 bp  280 bp	1070 bp	*05:05:01-05:05:02, 05:99N, 05:135, 05:147-05:148  *05:16, 05:85, 05:107	*03:251, 03:314, 08:62:01-08:62:02, 08:82, 08:144:01-08:144:02, <b>A*02:425, A*02:519, A*29:10:01-29:10:02, A*68:69, B*14:32, B*15:337, B*18:83, B*44:148</b> *06:129, 07:364, 08:12, <b>B*14:32</b>

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7	155 bp	1070 bp	*05:01:01:01-05:01:15, 05:01:17, 05:01:19- 05:01:44, 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- 05:132, 05:135-05:142, 05:144-05:150, 05:152- 05:200, 05:202Q-05:205, 05:207-05:215	*07:41, 08:02:01:01-08:02:26, 08:04:01-08:05, 08:07, 08:12- 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- 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
	265 bp		*05:01:01:01-05:01:45, 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, 05:207-05:215	*04:120, 06:129, 07:04:01:01- 07:04:18, 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, 07:651, 07:655- 07:656, 07:664, 07:672N, 07:674, 07:693, 07:698, 07:742, 07:751N, 08:01:01:01-08:01:13, 08:01:15-08:02:25, 08:03:01- 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-08:188, 15:130, <b>B*58:76</b>
8 <sup>4</sup>	85 bp	800 bp	*05:06	
	210 bp		*05:55	
9 <sup>4</sup>	105 bp	1070 bp	*05:51Q	
	175 bp		*05:48N	
	245 bp		*05:113N	
10 <sup>4</sup>	95 bp	1070 bp	*05:08, 05:52, 05:89	*02:51, 08:29, 08:31, 12:144, 12:185, <b>B*15:33, B*15:248</b>
	250 bp		*05:30	*03:247, 06:125, 14:70, 16:85- 16:86, 16:144, 16:147
	320 bp		*05:92N	*08:55N



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<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, A*80:01:01:01<sup>w</sup>-</b> <b>80:05<sup>w</sup></b>
<b>12</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, 15:130, <b>B*44:148, 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, 08:04:01-08:04:03, 08:13, 08:57, 08:93, 08:104, 08:113, 08:139, 08:168, 08:182, 08:188
<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 *02:93, 04:352, 06:13
<b>16</b>	195 bp 470 bp	1070 bp	*05:14 *05:93	*03:171, 03:211:01, 04:144, 06:73, 08:20, 08:40, 12:109
<b>17</b>	155 bp	1070 bp	*05:12, 05:18:01, 05:18:05, 05:103:02	*03:251, 03:314, 04:120, 06:129, 07:04:11, 08:01:01:01- 08:01:18, 08:01:20-08:01:28, 08:03:01-08:03:04, 08:06, 08:08:01-08:11, 08:14, 08:16:01-08:16:02, 08:20-08:22, 08:24, 08:26N-08:27, 08:33:02- 08:33:03, 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, 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, 15:130, <b>B*15:337</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, 07:101, 07:148, 07:161, 07:583, 08:01:01:01-08:09, 08:11-08:12, 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,



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Lot-specific information

				08:121N-08:145, 08:147-08:188, 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	*03:251, 03:314, 06:129, 07:04:01:01-07:04:18, 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, 08:09, 08:11, 08:83, 08:97, 08:108, 08:152, <b>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, 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	
<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> , <b>B*15:248</b> *06:64
<b>27</b>	155 bp	1070 bp	*05:42, 05:46	*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
<b>29<sup>6</sup></b>	140 bp 185 bp 260 bp	1070 bp	*05:41 *05:34 *05:37	*04:78 *02:93, 04:352, 06:13
<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,	*07:04:01:01-07:04:10, 07:04:12- 07:04:18, 07:11-07:12, 07:63, 07:68, 07:101, 07:139, 07:142,

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 101.613-12u – without *Taq* polymerase, IFU-02

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			05:107, 05:115, 05:134, 05:151	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, 08:33:01, <b>B*14:32, B*18:83, B*44:148, B*58:76</b>
	285 bp		*05:104	*07:04:01:01-07:04:06, 07:04:08- 07:04:18, 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
<b>32</b>	215 bp	1070 bp	*05:01:01:01-05:01:22, 05:01:24-05:01:45, 05:03- 05:57, 05:58:02-05:58:03, 05:59-05:78:01, 05:79- 05:137, 05:139-05:215	*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, 02:28-02:29, 02:31- 02:40:02, 02:42-02:86, 02:88- 02:100, 02:102-02:114, 02:116- 02:125, 02:127-02:128, 02:130, 02:132-02:169N, 04:01:72, 04:03:01:01-04:03:05, 04:06:01, 04:42:02, 04:80, 04:107, 04:140, 04:147, 04:160, 04:171, 04:220, 04:256, 04:286, 04:294, 04:299 <sup>w</sup> , 04:335, 04:337, 04:351:02, 04:357, 04:363, 06:02:01:01-06:02:01:17, 06:02:03-06:02:09, 06:02:11, 06:02:13-06:02:31, 06:02:33- 06:02:64, 06:02:66-06:10, 06:12-06:25, 06:27-06:51, 06:53:01-06:121, 06:123, 06:126-06:131, 06:133-06:146,



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				06:148-06:168, 06:170-06:216, 06:218-06:247, 06:249-06:251, 06:253-06:263N, 07:07, 07:09, 07:49, 07:76:01-07:76:02, 07:210, 07:238, 07:247, 07:315, 07:328, 07:403, 07:406, 07:598, 08:10, 12:04:01-12:05, 12:09, 12:21, 12:33, 12:41, 12:54, 12:60, 12:146, 12:188, 15:02:01:01-15:02:14, 15:02:16, 15:02:18-15:05:10, 15:05:13-15:06:03, 15:08:01-15:10:02, 15:11-15:13:01:02, 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, 15:192-15:194, 16:02:01, 16:02:03-16:02:14, 16:02:16-16:02:17, 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, 17:01:01:02-17:21, 17:23-17:46, 18:01:01-18:12
<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, 04:220, 06:05, 07:01:74, 07:02:09, 08:14, 08:80, 08:103, 12:16:01, 12:147, 12:227, 12:279, 15:63, 15:113, 16:80, <b>B*15:436, B*67:02</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, 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<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.

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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 mix 29 may have tendencies of unspecific amplifications.

<sup>7</sup>Primer mix 38 contains a negative control, which will amplify a 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-specific information

### PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec. PCR product	155	165	150	120	225	255	155	85	105	95	115	155
				285	285	280	265	210	175	250	205	225
									245	320		285
Length of int. pos. control <sup>1</sup>	800	1070	1070	800	1070	1070	1070	800	1070	1070	1070	800
5'-primer(s) <sup>2</sup>	485	176	485	355	355	361	379	176	96	28	176	355
	5'-CAA 3'	5'-gCA 3'	5'-CAA 3'	5'-CC 3'	5'-TCC 3'	5'-AgT 3'	5'-ACC 3'	5'-gCA 3'	5'-TC 3'	5'-TCA 3'	5'-gCA 3'	5'-TCA 3'
		176		3 <sup>rd</sup> I	419	379	485		166	485		416
		5'-gCA 3'		5'-Cgg 3'	5'-gTC 3'	5'-ACg 3'	5'-CAA 3'		5'-CgT 3'	5'-CAA 3'		5'-CCg 3'
						385			485			485
						5'-g.C 3'			5'-CAA 3'			5'-CAg 3'
3'-primer(s) <sup>3</sup>	601	302	595	601	601	601	601	221	302	106	248	601
	5'-CTT 3'	5'-ggT 3'	5'-CCT 3'	5'-CTT 3'	5'-CTT 3'	5'-CTT 3'	5'-CTT 3'	5'-ACC 3'	5'-ggT 3'	5'-CAT 3'	5'-AAC 3'	5'-CTT 3'
	601		595	668			601	343	550	175	341	
	5'-CTg 3'		5'-CCg 3'	5'-TgA 3'			5'-CTg 3'	5'-T 3'	5'-CAg 3'	5'-CTA 3'	5'-CgT 3'	
			601	862						538		
			5'-CTC 3'	5'-CTT 3'						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. PCR product	95	120	115	195	155	160	175	260	230	100	85	185
		200	185	470				390			135	265
			240									
Length of int. pos. control <sup>1</sup>	1070	1070	1070	1070	1070	1070	800	1070	1070	800	1070	1070
5'-primer(s) <sup>2</sup>	485	176	115	446	486	385	176	28	412	453	176	1 <sup>st</sup> I
	5'-CAA 3'	5'-gCA 3'	5'-ggA 3'	5'-CgT 3'	5'-ACg 3'	5'-g.C 3'	5'-gCA 3'	5'-TCA 3'	5'-ATg 3'	5'-AAT 3'	5'-gCA 3'	5'-CgA 3'
		453	2 <sup>nd</sup> I	652		406		322	416			
		5'-AAT 3'	5'-CCA 3'	5'-CCA 3'		5'-gCC 3'		5'-gCC 3'	5'-CCg 3'			
						483						
						5'-gAg 3'						
3'-primer(s) <sup>3</sup>	538	256	312	601	601	601	311	118	601	512	218	97
	5'-CAg 3'	5'-CCA 3'	5'-AgT 3'	5'-CTT 3'	5'-CTT 3'	5'-CTT 3'	5'-ggT 3'	5'-gCT 3'	5'-CTT 3'	5'-CCA 3'	5'-gCC 3'	5'-gTC 3'
		337	403	956				419			270	175
		5'-CTA 3'	5'-gCA 3'	5'-CAg 3'				5'-CgA 3'			5'-TAg 3'	5'-CCg 3'
		337	475									
		5'-CTT 3'	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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Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec.	105	115	155	115	140	70	155	215	100	165	505	225
PCR product	205	185 245		200	185 260	175	285			275		
Length of int. pos. control <sup>1</sup>	1070	1070	1070	800	1070	1070	1070	1070	1070	1070	1070	1070
5'-primer(s) <sup>2</sup>	176 5'-gCA 3'	96 5'-TC 3' 158 5'-ggg 3' 485 5'-CAA 3'	176 5'-gCA 3'	2 <sup>nd</sup> I 5'-CCA 3'	2 <sup>nd</sup> I 5'-CCA 3'	176 5'-gCA 3' 629 3 <sup>rd</sup> I 5'-AAG 3'	355 5'-CCT 3' 486 5'-ACC 3' 486 5'-ACA 3'	126 5'-ggA 3'	142 5'-TCT 3'	368 5'-gTC 3' 477 5'-gCC 3'	312 5'-AAA 3'	2 <sup>nd</sup> I 5'-CCA 3'
3'-primer(s) <sup>3</sup>	241 5'-CgA 3' 337 5'-CTT 3' 341 5'-CgA 3'	302 5'-ggT 3' 559 5'-CAg 3'	289 5'-AgC 3' 289 5'-AgC 3'	403 5'-gCA 3' 488 5'-CCT 3'	430 5'-gCA 3' 475 5'-ggT 3' 846 5'-CAC 3'	311 5'-gTC 3' 621 5'-Tgg 3' 862 5'-CTT 3'	601 5'-CTT 3'	302 5'-ggT 3' 307 5'-CCA 3'	201 5'-CTT 3'	601 5'-CTT 3'	526 5'-CgT 3'	514 5'-CTA 3'
Well No.	25	26	27	28	29	30	31	32	33	34	35	36

Well No.	37
Length of spec.	285
PCR product	
Length of int. pos. control <sup>1</sup>	1070
5'-primer(s) <sup>2</sup>	61 5'-CCT 3'
3'-primer(s) <sup>3</sup>	176 5'-ACT 3'
Well No.	37

<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.

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Lot-specific information

CELL LINE VALIDATION SHEET																				
HLA-C*05 SSP subtyping kit																				
				Well <sup>2</sup>																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				Prod. No.:	201890401	201448502	201448503	201448504	201448505	201448506	201890407	201448508	201448509	201448510	201448511	201448512	201448513	201448514	201448515	201448516
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, IFU-01  
101.613-12u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **3K0**

Lot-specific information

CELL LINE VALIDATION SHEET				HLA-C*05 SSP subtyping kit																
				Well <sup>2</sup>																
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
				Prod. No.:	201448517	201448518	201448519	201448520	201448521	201448522	201448523	201448524	201448525	201448526	201448527	201448528	201448529	201668530	201890431	201668532
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	*15:27	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	+	
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, IFU-01  
101.613-12u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **3K0**

Lot-specific information

<b>CELL LINE VALIDATION SHEET</b>										
<b>HLA-C*05 SSP subtyping kit</b>										
					Well <sup>2</sup>					
					33	34	35	36	37	
					Prod. No.:	201668533	201668534	201668535	201890436	201890437
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	*15:29	-	-	-	-	-	
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, IFU-01  
101.613-12u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **3K0**

**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 37 were available. The specificities of the primers in primer solutions 4 to 6, 8 to 12, 14, 15, 18, 20, 22 to 24, 26, 27, 29 and 33 to 35 were tested by separately adding additional 5'-primers respectively 3'-primers.

In primer solutions 25, 28, 30 and 36 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solutions 16 and 37 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 1, 3, 4, 7 to 11, 14, 15, 20, 23, 29 and 32 one or more 3'-primers were not possible to test. 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 test. One additional 3'-primer in primer solution 3 was tested by separately adding one 5'-primer, and one additional 5'-primer in primer solutions 7 and 31 was tested by separately adding one 3'-primer.

101.613-12 – including *Taq* polymerase, IFU-01  
101.613-12u – without *Taq* polymerase, IFU-02

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Lot-specific information

101.613-12 – including *Taq* polymerase, IFU-01  
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 “Instructions for Use” (IFU)

Lot No.: **3K0**

Lot-specific information

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