• LERUP SSP

HLA-B*67 Product Insert Page 1 of 11

101.550-06 – including *Taq* **pol.**, IFU-01 **101.550-06u – without** *Taq* **pol.**, IFU-02

Visit https://labproducts.caredx.com/ for "Instructions for Use" (IFU)

Lot No.: 3L1 Lot-specific information

Olerup SSP® HLA-B*67

Product number: 101.550-06 – including *Taq* polymerase

101.550-06u – without *Taq* polymerase

Lot number: 3L1

Expiry date: 2024-05-01

Number of tests: 6
Number of wells per test: 7+1

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

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

This Product Description is only valid for Lot No. 3L1.

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

Changes compared to the previous *OLERUP* SSP® HLA-B*67 Lot (9H4).

- The product documentation has been updated for new alleles of IMGT 3.39.0.
- The kit resolution focuses on common and well documented (CWD) alleles¹.

The HLA-B*67 specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup* SSP® HLA-B*67 lot was made (Lot No. 9H4).

The HLA-B*67 primer set is unchanged compared to the previous lot.

¹S. 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



¹As described in section Uniquely Identified Alleles.

HLA-B*67

ing *Taq* pol., IFU-01 Visit https://labproducts.caredx.com/ for out *Taq* pol., IFU-02 "Instructions for Use" (IFU)

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101.550-06 – including *Taq* **pol.**, IFU-01 **101.550-06u – without** *Taq* **pol.**, IFU-02

Lot No.: **3L1** Lot-specific information

Well **8** contains <u>Negative Control primer pairs</u>, 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	105	200	105	80	75	80	85
product							
5'-primer ¹	164	340	440	45	45	43	36
	5'-CAC3'	^{5'} -Agg ^{3'}	⁵ '-TTA3'	⁵ '-Tgg ³ '	^{5'} -Tgg ^{3'}	⁵ '-Tgg ³ '	^{5'} -TAC ^{3'}
							36
							^{5'} -TAT ^{3'}
3'-primer ²	231	2 nd I	507	59	58	57	47
•	⁵ '-TgC ³ '	^{5'} -AAA ^{3'}	^{5'} -TTg ^{3'}	5'-CTC3'	^{5'} -ggC ^{3'}	5'-CTC3'	5'-ACA3'
							48
							^{5'} -gCA ^{3'}
							48
							^{5'} -gCC ^{3'}
							52
							^{5'} -TgT ^{3'}
A *	+	+	+				
B*	+	+	+				
C*	+	+	+				
DRB1				+	+		
DRB3				+	+		
DRB5				+			
DQB1					+		
DPB1						+	
DQA1							+

¹The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2nd or 3rd exon, matching the specificity-determining 3'-end of the primer is given. Nucleotide and codon numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

²The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2nd or 3rd exon or the 2nd intron, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide and codon numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

■LERUP SSP®

HLA-B*67 Product Insert Page 3 of 11

101.550-06 – including *Taq* **pol.**, IFU-01 **101.550-06u – without** *Taq* **pol.**, IFU-02

Visit https://labproducts.caredx.com/ for "Instructions for Use" (IFU)

Lot No.: **3L1** Lot-specific information

PRODUCT DESCRIPTION

HLA-B*67 SSP typing

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*67:01 to B*67:07 alleles.

PLATE LAYOUT

Each HLA-B*67 test consists of 8 PCR reactions in an 8 well cut PCR plate.

1 2 3 4 5 6 7 NC

The 8 well PCR plate is marked with 'B67' in silver/gray ink.

Well No. 1 is marked with the Lot No. '3L1'.

Wells 1 to 7 – HLA-B*67 high resolution primers.

Well 8 – 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 8 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-B alleles, non-HLA-B*67 alleles will be amplified by some primer mixes. For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the HLA-B*67, i.e. **B*67:01 to B*67:07**, recognized by the HLA Nomenclature Committee in January 2020^{1,2} will be amplified by the primers in the HLA-B*67 SSP kit.

The HLA-B*67 kit enables separation of the confirmed HLA-B*67 alleles as listed in the IMGT/HLA database 3.35.0. 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-B*67 alleles is listed below.

The HLA-B*67 kit also enables identification of null and alternatively expressed alleles.

The following HLA-B*67 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

Alleles	Primer mix
B*67:04, 67:05	7

¹HLA-B alleles listed on the IMGT/HLA web page 2020-January-20, release 3.39.0, www.ebi.ac.uk/imgt/hla.

HLA-B*67 Product Insert Page 4 of 11

101.550-06 – including *Taq* **pol.**, IFU-01 **101.550-06u – without** *Taq* **pol.**, IFU-02

Visit https://labproducts.caredx.com/ for "Instructions for Use" (IFU)

Lot No.: **3L1** Lot-specific information

²Alleles 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.

ALLELE CONFIRMATION STATUS

Allele	Status ¹
B*67:01:01	Confirmed
B*67:01:02	Confirmed
B*67:01:03	Unconfirmed
B*67:02	Confirmed
B*67:03	Unconfirmed
B*67:04	Unconfirmed
B*67:05	Unconfirmed
B*67:06	Unconfirmed
B*67:07	Unconfirmed

¹Allele status "confirmed" or "unconfirmed" as listed on the IMGT/HLA web page 2019-January-23, release 3.35.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in HLA-B*67 homo- and heterozygotes is available upon request.

HLA-B*67 Product Insert Page 5 of 11

101.550-06 – including *Taq* **pol.**, IFU-01 **101.550-06u – without** *Taq* **pol.**, IFU-02

Visit https://labproducts.caredx.com/ for "Instructions for Use" (IFU)

Lot No.: 3L1

Lot-specific information

SPECIFICITY TABLE

HLA-B*67 SSP subtyping

Specificities and sizes of the PCR products of the 7+1 primer mixes used for HLA-B*67 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-B*67 alleles ³	Other amplified HLA-B alleles
1 ⁵	210 bp	800 bp	*67:01:01- 67:01:03, 67:03-67:07	*07:02:01:01-07:02:27, 07:02:29-07:02:80, 07:04:01-07:07:03, 07:09:01-07:09:02, 07:11-07:12, 07:14-07:15, 07:17-07:26, 07:28, 07:30-07:31, 07:33:01-07:36, 07:39-07:49N, 07:51-07:64, 07:66-07:68:03, 07:73-07:82, 07:84, 07:87-07:124, 07:126-07:179, 07:181N-07:182N, 07:185, 07:186 ^w , 07:187-07:203, 07:205-07:206, 07:208-07:209, 07:211-07:218, 07:220-07:227, 07:229:01-07:258, 07:260-07:291, 07:293-07:305, 07:307-07:312, 07:313 ^w , 07:314-07:351N, 07:353-07:367, 07:369-07:382, 07:384-07:399, 27:157, 38:26, 42:01:01:01-42:02:02, 42:04-42:06, 42:08-42:10, 42:12-42:25, 42:27-42:28, 54:02, 55:10, 55:82, 56:35, 81:01:01:01-81:04N, 81:06-81:09
2	325 bp	1070 bp	*67:02:01:01- 67:02:01:02	C*16:112
3 ^{4,6,7}	120 bp	1070 bp	*67:01:01- 67:02:01:02, 67:04-67:07	*15:69, 15:186, 15:265, 15:449, 15:494, 18:168, 35:35, 35:276, 35:468, 37:40, 38:01:01:01-38:07, 38:09, 38:11-38:29, 38:31-38:35, 38:38-38:44, 38:46-38:49, 38:51, 38:53-38:62, 38:64, 38:66-38:86, 38:156-38:158, 38:160-38:165N, 39:01:01:01-39:01:01:12, 39:01:03:01-39:20, 39:22-39:29, 39:31:01:01-39:31:01:02, 39:35, 39:37-39:42, 39:44-39:46, 39:48-39:49, 39:51-39:67, 39:69-39:73, 39:75-39:81, 39:83-39:101, 39:103-39:106, 39:108-39:111, 39:113-39:127, 39:129-39:135, 39:137-39:154, 39:157N-39:162, 40:184, 50:49, 51:101, 52:71, 52:84, 58:20, 58:84
4	160 bp	1070 bp		*07:02:01:01-07:02:02, 07:02:04-07:02:80, 07:04:01-07:05:03, 07:05:05-07:07:03, 07:09:01-07:15, 07:17-07:26, 07:28-07:31, 07:33:01-07:36, 07:39-07:46, 07:48-07:49N, 07:51-07:55, 07:56:02-07:68:03, 07:70-07:72, 07:74-07:84, 07:86-07:108, 07:110-07:179, 07:181N-07:206, 07:208-07:218, 07:220-07:227, 07:229:01-07:231N, 07:233-07:279, 07:281-07:305, 07:307-07:327, 07:329-07:333, 07:335, 07:337-07:355, 07:357-07:399, 15:76, 15:101, 27:75, 35:76, 35:186, 35:229, 35:368, 37:60, 42:01:01:01-42:02:02, 42:04-42:06, 42:08-42:10, 42:12-42:23, 42:25, 42:27-42:28, 46:01:01:01-46:40:02, 46:42-46:48, 46:50-46:76, 46:78-46:81, 54:01:02, 55:35, 56:03, 56:06, 73:01:01:01-73:02-, 81:01:01:01-81:09, 83:01,

HLA-B*67 Product Insert Page 6 of 11

101.550-06 – including *Taq* **pol.**, IFU-01 **101.550-06u – without** *Taq* **pol.**, IFU-02

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Lot No.: **3L1** Lot-specific information

			Lot specific	
				C*01:73, C*03:02:23, C*05:01:28, C*07:02:30,
_				C*08:16:02, C*14:02:27
5 ⁵	240 bp	1070 bp	*67:01:01-	*07:02:01:01-07:02:66, 07:02:68-07:02:77,
	240 bp		67:07	07:02:79-07:10, 07:12-07:26, 07:28, 07:30-07:35,
				07:37:01-07:37:02, 07:39-07:56:02, 07:58-07:64,
				07:66-07:69, 07:73-07:74, 07:76-07:80, 07:82-
				07:85:02, 07:87-07:148, 07:150-07:178, 07:181N-
				07:183, 07:185, 07:186 ^w , 07:187-07:191, 07:193-
				07:194, 07:196-07:203, 07:205-07:209, 07:211-
				07:218, 07:220-07:235, 07:237-07:239, 07:241-
				07:252, 07:254-07:256, 07:258-07:272N, 07:274-
				07:312, 07:313 ^w , 07:314-07:339, 07:341-07:351N,
				07:353-07:382, 07:384-07:399, 08:94, 08:190 ^w ,
				08:226, 14:01:01-14:01:04, 14:01:07-14:01:09,
				14:07N-14:08:02, 14:10, 14:12, 14:14, 14:19, 14:26,
				14:32, 14:40, 14:46-14:47, 14:49, 14:53-14:55,
				14:65, 14:71, 14:78N, 14:80-14:83, 14:86, 15:68,
				15:71, 15:175, 15:381, 15:556, 18:01:01-
				18:01:12, 18:01:14-18:01:20, 18:01:22-18:03:02,
				18:05:01:01-18:08, 18:10-18:15, 18:17N-18:24,
				18:26-18:48, 18:50-18:53, 18:55-18:66, 18:69,
				18:71-18:78, 18:80-18:106Q, 18:109-18:124,
				18:126-18:131:01:02, 18:133-18:135:01:02, 18:137-
				18:141, 18:143-18:146, 18:148-18:189, 27:08,
				27:12:01:01-27:12:01:03, 27:18, 27:26, 27:33,
				27:40, 27:44, 27:153, 27:204, 35:50, 35:84, 35:162,
				35:197, 35:231, 35:267, 35:269, 35:411, 35:423,
				37:11, 37:37, 37:67, 38:156-38:159, 39:01:01:01-
				39:01:01:12, 39:01:03:01-39:03:01:03, 39:05:01:01-
				39:06:04, 39:06:06-39:11, 39:13:01-39:19:02,
				39:22-39:24:01, 39:25N-39:62, 39:64-39:71, 39:73-
				39:75, 39:77-39:98, 39:99 ^w , 39:100-39:103, 39:105-
				39:123, 39:125-39:128, 39:130-39:162,
				40:02:01:01-40:06:14, 40:06:16-40:06:22, 40:08-
				40:09, 40:11:01:01-40:11:02, 40:18, 40:20:01:01-
				40:20:01:02, 40:24, 40:26-40:29, 40:35:01-
				40:35:02, 40:39-40:40, 40:44, 40:50:01:01-
				40:50:01:02, 40:56, 40:64:01:01-40:64:02, 40:68,
				40:70:01-40:71, 40:74-40:75, 40:78, 40:82-40:83,
				40:85-40:86, 40:89-40:91, 40:93-40:95, 40:97-
				40:99, 40:103-40:105, 40:107, 40:111, 40:115,
				40:119-40:120, 40:122, 40:127, 40:131, 40:133Q,
				40:142N-40:145, 40:148-40:149, 40:159, 40:161-
				40:162, 40:165, 40:167, 40:169, 40:173-40:174,
				40:176-40:177, 40:180-40:181, 40:184, 40:189-
				40:190, 40:200, 40:202-40:203, 40:205-40:206,
				40:209-40:211, 40:214, 40:220, 40:224-40:226,
				40:229-40:230, 40:232, 40:243-40:244, 40:246,
				40:248, 40:254-40:255, 40:266-40:271, 40:274-
				40:276, 40:283-40:284, 40:287, 40:289-40:291N,
				40:293-40:297, 40:302-40:305, 40:307, 40:309,
				40:311, 40:313-40:314, 40:317, 40:320, 40:322,
				40.311, 40.313-40.314, 40.317, 40.320, 40.322, 40:330-40:331, 40:334, 40:337N, 40:341, 40:343,
				40:345N, 40:347-40:351, 40:354, 40:356, 40:359, 40:361N, 40:364, 40:366, 40:360, 40:371, 40:373
				40:361N-40:364, 40:366, 40:369, 40:371, 40:373-
				40:376, 40:378, 40:384, 40:387-40:390, 40:399N,

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101.550-06 – including *Taq* **pol.**, IFU-01 **101.550-06u – without** *Taq* **pol.**, IFU-02

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Lot No.: 3L1 Lot-specific information

				inc information
				40:405, 40:408-40:415, 40:425, 40:427, 40:429, 40:432, 40:434-40:435, 40:437-40:438N, 40:440-40:442, 40:444-40:445, 40:451, 42:01:01:01-42:02:02, 42:04-42:14, 42:16-42:21, 42:23-42:28, 44:131, 48:01:01:01-48:17, 48:19-48:21, 48:23-48:50, 50:43, 54:02, 55:10, 55:82, 56:35, 73:01:01:01-73:02, 81:01:01-81:09, C*03:137, C*03:182, C*03:459, C*03:504, C*07:102*, C*07:351, C*12:82, C*16:116
64	110 bp	1070 bp	*67:03	*40:424, C*04:188, C*05:70, C*06:40, C*07:137:01-07:137:02, C*14:63, C*15:51
74	85 bp 165 bp	1070 bp	*67:04 *67:05	*07:94, 08:106, 40:115, 55:99, C*01:166, C*03:124, C*07:262, C*07:417, C*07:475, C*08:153, C*12:95 *15:20, 15:228, 15:305, 15:435, 27:197, 35:01:01-01-35:01:27, 35:01:29-35:01:46, 35:01:48-35:30:01:02, 35:32:01-35:32:02, 35:33-35:34, 35:36-35:42:02, 35:45, 35:47-35:56, 35:58-35:59:02, 35:61:01-35:72, 35:74-35:78, 35:80-35:86, 35:88-35:134N, 35:136-35:184, 35:186-35:208:01, 35:209-35:278, 35:280-35:358, 35:360-35:466, 35:468-35:470, 37:80, 48:02:01-48:02:03, 49:66, 51:01:01:01-51:01:55, 51:01:57-51:24:05, 51:26-51:41N, 51:43-51:46, 51:48-51:156, 51:158:01-51:163, 51:165-51:219, 51:221-51:236, 51:238-51:294, 51:296-51:299, 51:301-51:306N, 51:308-51:310, 52:01:01:01-52:06:03, 52:08-52:95, 53:01:01:01-53:58, 56:05:01-56:05:02, 56:21, 56:36, 58:01:01:01-58:01:21, 58:01:23-58:02:02, 58:04-58:10N, 58:12-58:19, 58:21-58:29, 58:31N-58:104, 58:107-58:121, 78:01:01:01-78:10, 81:03
8 8	-	-		Negative Control

¹Alleles 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 HLA-B*67 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 inherit feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated.

²The 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.

³For several HLA Class I alleles 1st and/or 4th 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

HLA-B*67 Product Insert Page 8 of 11

101.550-06 – including *Taq* **pol.**, IFU-01 **101.550-06u – without** *Taq* **pol.**, IFU-02

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Lot No.: **3L1** Lot-specific information

with the target sequences or not. Assumption is made that unknown sequences in these regions are conserved within allelic groups.

⁴HLA-specific PCR products shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR products.

⁵Primer mixes 1 and 5 may give rise to a lower yield of HLA-specific PCR product than the other B*67 primer mixes.

⁶Primer mixes 3 and 8 have a tendency to giving rise to primer oligomer formation, most pronounced in primer mix 3.

⁷In primer mix 3 the positive control band may be weaker than for other HLA-B*67 primer mixes.

⁸Primer mix 7 may have tendency of unspecific amplification.

⁹Primer mix 8 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.

"w", may be weakly amplified.

PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7
Length of spec.	210	325	120	160	240	110	85
PCR product							165
-							
Length of int.	800	1070	1070	1070	1070	1070	1070
pos. control ¹							
5'-primer(s) ²	103	44	463	165	103	477	256
	5' -CCT 3'	^{5'} -ggC ^{3'}	^{5'} -TgA ^{3'}	5' -ACC 3'	5' -CCT 3'	^{5'} -gCC ^{3'}	5' -ACT 3'
	103				103		652
	5' -CCT 3'				5' -CCT 3'		^{5'} -CCg ^{3'}
3'-primer(s) ³	272	201	544	282	302	544	302
	^{5'} -TgT ^{3'}	^{5'} -CTT ^{3'}	^{5'} -ggT ^{3'}	^{5'} -gCC ^{3'}	^{5'} -ggC ^{3'}	^{5'} -ggT ^{3'}	^{5'} -ggC ^{3'}
							774
							^{5'} -ggT ^{3'}
Well No.	1	2	3	4	5	6	7

¹The 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.

²The nucleotide position matching the specificity-determining 3'-end of the primer is given. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

³The nucleotide position matching the specificity-determining 3'-end of the primer is given in the antisense direction. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

101.550-06 – including *Taq* **pol.**, IFU-01 **101.550-06u – without** *Taq* **pol.**, IFU-02

Visit https://labproducts.caredx.com/ for "Instructions for Use" (IFU)

Lot No.: 3L1 Lot-specific information

	CELL LINE VALIDATION SHEET											
	HLA-B*67 SSP primer set ²											
	Well											
					1	2	3	4	5	6	7	
				Prod. No.:	201559801	201559802	201559803	201676204	201559805	201559806	201559807	
	IHW	/C cell line ¹		B*								
1	9001		*07:02		+	-	-	+	+	-	-	
2	9280	LK707	*52:01	*73:01	-	-	-	w	+	-	-	
3	9011	E4181324	*52:01		-	-	-	-	-	-	-	
4	9275	GU373	*15:10	*53:01	-	-	-	-	-	-	-	
5	9009	KAS011	*37:01		-	-	-	-	-	-	-	
6	9353	SM	*39:01	*51:01	-	-	+	-	+	-	-	
7	9020	QBL	*18:01		-	-	-	-	+	-	-	
8	9025	DEU	*35:01		-	-	-	-	-	-	-	
9	9026	YAR	*38:01		-	-	+	-	-	-	-	
10	9107	LKT3	*54:01		-	-	-	-	-	-	-	
11	9051	PITOUT	*44:03		-	-	-	-	-	-	-	
12	9052	DBB	*57:01		-	-	-	-	-	-	-	
13	9004	JESTHOM	*27:05		-	-	-	-	-	-	-	
14	9071	OLGA	*15:01	*15:20	-	-	-	-	-	-	-	
15	9075	DKB	*40:01		-	-	-	-	-	-	-	
16	9037	SWEIG007	*40:02		-	-	-	-	+	-	-	
17	9282	CTM3953540	*08:01	*55:01	-	-	-	-	-	-	-	
18	9257	32367	*14:01	*56:01	-	-	-	-	+	-	-	
19	9038	BM16	*18:01		-	-	-	-	+	-	-	
20	9059	SLE005	*40:01		-	-	-	-	-	-	-	
21	9064	AMALA	*15:01		-	-	-	-	-	-	-	
22	9056	KOSE	*35:03		-	-	-	-	-	-	-	
23	9124	IHL	*40:02	*56:02	-	-	-	-	+	-	-	
24	9035	JBUSH	*38:01		-	-	+	-	-	-	-	
25		IBW9	*14:02		-	-	-	-	-	-	-	
26	9285	WT49	*58:01		-	-	-	-	-	-	-	
27	9191	CH1007	*07:05	*51:01	+	-	-	+	+	-	-	
28	9320	BEL5GB	*44:02	*44:03	-	-	-	-	-	-	-	
29	9050		*44:03		-	-	-	-	-	-	-	
30	9021		*42:01		+	-	-	+	+	-	-	
31		DUCAF	*18:01		 	-	-	<u> </u>	+	-	-	
32	9297		*41:02		-	-	-	-	-	-	-	
33		MT14B	*40:01		-	-	-	-	-	-	-	
34	9104		*38:01		-	-	+	-	-	-	-	
35		SSTO	*44:02		-	-	-	-	-	-	-	
36		KT17	*15:01	*35:01	-	-	-	-	-	-	-	
37		HHKB	*07:02	20.01	+	-	-	+	+	-	-	
38	9099		*15:01		Ė	-	-	÷	÷	-	-	
39	9315		*08:01	*27:05	-	-	-	-	-	-	-	
40		WHONP199	*13:02	*46:01	-	-	-	+	-	-	-	
41		H0301	*14:02	.5.51	-	-	-	Ė	-	-	-	
42		TAB089	*46:01		-	-	-	+	-	-	-	
43		T7526	*46:01		-	-	-	+	-	-	-	
44	9057		*38:01		-	-	+	-		-	Ē	
45		SHJO	*42:01	*50:01	+	-	-	+	+	-	-	
46		SCHU	*07:02	50.01	+	-	-	+	+	-	-	
47		TUBO	*51:01		-	-	_	-	Ξ.	-	H	
48		TER-ND	*35:01	*44:03	-	-	Ë	Ë	H	-	-	

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101.550-06 – including *Taq* **pol.**, IFU-01 **101.550-06u – without** *Taq* **pol.**, IFU-02

Visit https://labproducts.caredx.com/ for "Instructions for Use" (IFU)

Lot No.: 3L1 Lot-specific information

¹The 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.

²The 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 2 and 6 were available. The specificities of the primers in primer solutions 2 and 6 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer.

In primer solution 7 one 5'-primer was not possible to test.

In addition, one primer in solution 7 was tested by separately adding one 5'-primer.

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101.550-06 – including *Taq* **pol.**, IFU-01 **101.550-06u – without** *Taq* **pol.**, IFU-02

Visit https://labproducts.caredx.com/ for "Instructions for Use" (IFU)

Lot No.: 3L1 Lot-specific information

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