

101.429-12 – including *Taq* polymerase, IFU-01
 101.429-12u – without *Taq* polymerase, IFU-02

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

Lot No.: **1H7**

Lot-specific Information
Olerup SSP[®] HLA-A*30

Product number:	101.429-12 – including <i>Taq</i> polymerase 101.429-12u – without <i>Taq</i> polymerase
Lot number:	1H7
Expiry date:	2021-05-01
Number of tests:	12
Number of wells per test:	31+1
Storage - pre-aliquoted primers:	dark at -20°C
- PCR Master Mix:	-20°C
- Adhesive PCR seals	RT
- Product Insert	RT

This Product Description is only valid for Lot No. 1H7.

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-A*30 LOT (8E1)**

The HLA-A*30 kit is updated for new alleles to enable separation of:

- Null and Alternatively expressed alleles
- The product documentation has been updated for new alleles of IMGT 3.33.0

The format of the Worksheet has been changed.

The HLA-A*30 specificity and interpretation tables have been updated for the HLA-A alleles described since the previous *Olerup SSP[®]* HLA-A*30 lot was made (**Lot No. 8E1**).

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

Well	5'-primer	3'-primer	rationale
6	Added	Added	Primer pair added from well 28.
7	Modified	Exchanged	5'-primer modified, 3'-primer exchanged for improved HLA-specific amplification.
12	-	-	Positive control primer pair exchanged for decreased tendency of primer oligomer formation.
14	Added	Added	Primer pair added from well 28.
19	-	Moved	3'-primer moved to well 24 for improved HLA-specific amplification.
23	Added	-	5'-primer added for the A*30:123N allele.
24	-	Added	3'-primer added from well 19.
26	-	Added	3'-primer added for the A*30:121N allele.
27	Added	Added	Primer pair added for the A*30:132N allele.
28	Moved, Added	Moved, Added	Primer pair moved to well 6 and well 14, primer pair added for the A*30:130N allele.
29	-	Added	3'-primer added for the A*30:121N allele.
30	Added	-	5'-primer added for the A*30:123N allele.
31	Added	-	5'-primer added for the A*30:101Q allele.

Changes in revision R01 compared to R00:

1. Primer mix 27 amplifies the A*01:04:01:02N allele. This has been corrected in the Specificity and Interpretation Tables.

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Well **32** contains Negative Control primer pairs, that will amplify more than 95% 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 430 base pairs.

Length of PCR product	105	200	105	80	75	80	85
5'-primer¹	164	340	440	45	45	43	36
	5'-CAC ^{3'}	5'-Agg ^{3'}	5'-TTA ^{3'}	5'-Tgg ^{3'}	5'-Tgg ^{3'}	5'-Tgg ^{3'}	5'-TAC ^{3'}
							36
							5'-TAT ^{3'}
3'-primer²	231	2nd I	507	59	58	57	47
	5'-TgC ^{3'}	5'-AAA ^{3'}	5'-TTg ^{3'}	5'-CTC ^{3'}	5'-ggC ^{3'}	5'-CTC ^{3'}	5'-ACA ^{3'}
							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.

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Lot-specific Information
PRODUCT DESCRIPTION

HLA-A*30 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the A*30:01 to A*30:132N alleles.

PLATE LAYOUT

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

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

The 32 well cut PCR plate is marked with ‘HLA-A*30’ in silver/gray ink.

Well No. 1 is marked with ‘1H7’.

Wells 1 to 31 – HLA-A*30 high resolution primers.

Well 32 – 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 covered with a PCR-compatible foil.

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

INTERPRETATION

Due to the sharing of sequence motifs between HLA-A alleles non-HLA-A*30 alleles will be amplified by some primer mixes. For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the HLA-A*30 alleles, i.e. **A*30:01 to A*30:132N alleles**, recognized by the HLA Nomenclature Committee in July 2018^{1,2} will be amplified by the primers in the HLA-A*30 subtyping kit.

The HLA-A*30 kit enables separation of the confirmed HLA-A*30 alleles as listed in the IMGT/HLA database 3.26.0. 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-A*30 alleles is listed below.

The HLA-A*30 kit also enables identification of null and alternatively expressed alleles.

The following HLA-A*30 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

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Lot-specific Information

Alleles	Primer mix
A*30:42, 30:81	26
A*30:56, 30:132N	27

¹HLA-A alleles listed on the IMGT/HLA web page 2018-July-11, release 3.33.0, www.ebi.ac.uk/imgt/hla.

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>.

RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in HLA-A*30 homo- and heterozygotes is available upon request.

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Lot-specific Information

ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
A*30:01:01	Confirmed	A*30:11:02	Unconfirmed	A*30:52	Unconfirmed	A*30:92	Unconfirmed
A*30:01:02	Unconfirmed	A*30:12	Unconfirmed	A*30:53	Unconfirmed	A*30:93	Unconfirmed
A*30:01:03	Unconfirmed	A*30:13	Unconfirmed	A*30:54	Unconfirmed	A*30:94	Unconfirmed
A*30:01:04	Confirmed	A*30:14L	Unconfirmed	A*30:55	Unconfirmed	A*30:95	Unconfirmed
A*30:01:05	Unconfirmed	A*30:15	Unconfirmed	A*30:56	Confirmed	A*30:96	Unconfirmed
A*30:01:06	Unconfirmed	A*30:16	Confirmed	A*30:57	Unconfirmed	A*30:97	Unconfirmed
A*30:01:07	Unconfirmed	A*30:17	Confirmed	A*30:58	Unconfirmed	A*30:98	Unconfirmed
A*30:01:08	Unconfirmed	A*30:18	Unconfirmed	A*30:59N	Confirmed	A*30:99	Unconfirmed
A*30:01:09	Unconfirmed	A*30:19	Unconfirmed	A*30:60	Unconfirmed	A*30:100	Confirmed
A*30:01:10	Unconfirmed	A*30:20	Confirmed	A*30:61	Confirmed	A*30:102	Unconfirmed
A*30:01:11	Unconfirmed	A*30:22	Unconfirmed	A*30:62	Unconfirmed	A*30:103	Unconfirmed
A*30:02:01:01	Confirmed	A*30:23	Unconfirmed	A*30:63	Unconfirmed	A*30:104	Unconfirmed
A*30:02:01:02	Unconfirmed	A*30:24	Unconfirmed	A*30:64	Unconfirmed	A*30:106	Unconfirmed
A*30:02:01:03	Confirmed	A*30:25	Unconfirmed	A*30:65	Unconfirmed	A*30:107	Unconfirmed
A*30:02:02	Unconfirmed	A*30:26	Unconfirmed	A*30:66	Unconfirmed		
A*30:02:03	Confirmed	A*30:27N	Unconfirmed	A*30:67	Unconfirmed		
A*30:02:04	Confirmed	A*30:28	Unconfirmed	A*30:68	Unconfirmed		
A*30:02:05	Confirmed	A*30:29	Confirmed	A*30:69	Unconfirmed		
A*30:02:06	Confirmed	A*30:30	Confirmed	A*30:70N	Unconfirmed		
A*30:02:07	Unconfirmed	A*30:31	Confirmed	A*30:71	Confirmed		
A*30:02:08	Unconfirmed	A*30:32	Confirmed	A*30:72	Unconfirmed		
A*30:02:09	Unconfirmed	A*30:33	Unconfirmed	A*30:73N	Unconfirmed		
A*30:02:10	Unconfirmed	A*30:34	Unconfirmed	A*30:74	Unconfirmed		
A*30:02:11	Unconfirmed	A*30:35	Unconfirmed	A*30:75	Unconfirmed		
A*30:02:13	Confirmed	A*30:36	Confirmed	A*30:76N	Unconfirmed		
A*30:02:14	Unconfirmed	A*30:37	Unconfirmed	A*30:77	Unconfirmed		
A*30:02:15	Unconfirmed	A*30:38	Unconfirmed	A*30:78N	Confirmed		
A*30:02:16	Unconfirmed	A*30:39	Unconfirmed	A*30:79	Unconfirmed		
A*30:02:17	Unconfirmed	A*30:40	Confirmed	A*30:80	Confirmed		
A*30:02:18	Unconfirmed	A*30:41	Unconfirmed	A*30:81	Confirmed		
A*30:02:19	Unconfirmed	A*30:42	Confirmed	A*30:82	Unconfirmed		
A*30:03	Confirmed	A*30:43	Unconfirmed	A*30:83	Unconfirmed		
A*30:04:01	Confirmed	A*30:44	Unconfirmed	A*30:84	Unconfirmed		
A*30:04:02	Confirmed	A*30:45	Confirmed	A*30:85	Unconfirmed		
A*30:06	Unconfirmed	A*30:46	Unconfirmed	A*30:86	Unconfirmed		
A*30:07	Confirmed	A*30:47	Unconfirmed	A*30:87	Unconfirmed		
A*30:08	Confirmed	A*30:48	Unconfirmed	A*30:88	Unconfirmed		
A*30:09	Confirmed	A*30:49	Unconfirmed	A*30:89	Unconfirmed		
A*30:10	Confirmed	A*30:50	Unconfirmed	A*30:90	Confirmed		
A*30:11:01	Confirmed	A*30:51	Confirmed	A*30:91	Unconfirmed		

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2016-October-14, release 3.26.0, www.ebi.ac.uk/imgt/hla.

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Lot-specific Information
SPECIFICITY TABLE

HLA-A*30 SSP subtyping

Specificities and sizes of the PCR products of the 31+1 primer mixes used for HLA-A*30 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-A*30 alleles ³	Other amplified HLA-A alleles
1	165 bp	800 bp	*30:01:01:01-30:02:04, 30:02:06-30:03, 30:07-30:16, 30:18-30:20, 30:22-30:25, 30:27N-30:28, 30:31-30:45, 30:47-30:76N, 30:78N-30:89, 30:91-30:92, 30:94-30:98, 30:100-30:102, 30:104, 30:106- 30:116, 30:118-30:122, 30:124- 30:132N	*02:52, 03:43, 03:186, 23:46
2	205 bp	800 bp	*30:01:01:01-30:01:11, 30:08, 30:11:01-30:11:02, 30:14L- 30:16, 30:18-30:20, 30:23- 30:24, 30:26, 30:30-30:31, 30:35-30:44, 30:48-30:49, 30:53-30:56, 30:58-30:60, 30:62-30:63, 30:65, 30:71- 30:75, 30:78N-30:79, 30:81- 30:83, 30:86-30:87, 30:91- 30:98, 30:102, 30:104, 30:106, 30:109-30:116, 30:118, 30:120, 30:122-30:123N, 30:126, 30:128-30:130N, 30:132N	
3⁶	210 bp	800 bp	*30:02:01:01-30:03, 30:07, 30:10, 30:12:01-30:13, 30:22, 30:25, 30:27N, 30:32-30:34, 30:45, 30:50-30:51, 30:57, 30:61, 30:64, 30:66-30:70N, 30:76N, 30:84-30:85, 30:88, 30:100-30:101Q, 30:107-30:108, 30:119, 30:121N, 30:124- 30:125, 30:127	*03:05:02, 03:231:01 ^w , 03:231:02, 11:24:01, 11:25:02, 34:02:02, 80:01:01:01-80:03
4⁵	155 bp	1070 bp	*30:03, 30:11:01-30:11:02, 30:71	*01:02, 01:20, 01:190, 33:108
5	150 bp	1070 bp	*30:04:01-30:04:02, 30:06, 30:17, 30:29, 30:46, 30:77, 30:90, 30:99, 30:103, 30:105, 30:117	*02:52, 03:82, 24:66, 24:308, 24:333, 68:06
6⁴	245 bp 80 bp 185 bp 270 bp	1070 bp	*30:19 *30:06 *30:07 *30:51, 30:106	*02:121, 02:425, 02:517, 03:154:01, 23:47, 24:234, 24:339, 24:347:02, 29:06, 31:51, 68:14, 68:158, C*03:125^w , C*03:176^w

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7^{4,7}	90 bp 200 bp	1070 bp	*30:28, 30:131 *30:02:14, 30:08	*02:185 ^w , 02:601 ^w
8⁴	85 bp	800 bp	*30:10, 30:88	
9	180 bp	1070 bp	*30:01:01:01-30:02:21, 30:04:01-30:04:02, 30:06-30:07, 30:09-30:10, 30:12:01-30:20, 30:23-30:54, 30:56-30:70N, 30:72-30:78N, 30:80-30:84, 30:86-30:132N	*24:124
10	150 bp	1070 bp	*30:12:01-30:12:02, 30:18, 30:55	*01:07, 02:185, 02:601, 24:124, 26:19, 29:14, 31:01:02:01- 31:01:06, 31:01:08-31:07, 31:09-31:43, 31:45-31:86, 31:88, 31:90-31:136
11	215 bp	800 bp	*30:01:01:01-30:04:02, 30:06, 30:09-30:20, 30:23-30:30, 30:32-30:54, 30:56-30:59N, 30:61-30:78N, 30:80-30:132N	*01:02 ^w , 01:20 ^w , 03:72, 11:88, 23:09 ^w , 23:51, 24:24, 24:67, 24:129 ^w , 24:145, 24:156, 24:191, 24:290, 24:392, 26:16, 29:37, 29:56, 32:07, 33:119, 68:45, 68:117
12⁵	190 bp	800 bp	*30:09, 30:35	*01:244, 01:257, 03:42, 03:131, 03:133, 11:165, 31:03-31:04, 33:49, 33:144, 74:23
13	160 bp	1070 bp	*30:01:01:01-30:02:21, 30:04:01-30:04:02, 30:06-30:10, 30:13-30:17, 30:19-30:20, 30:23-30:40, 30:42-30:54, 30:56-30:70N, 30:72-30:84, 30:86-30:102, 30:104-30:132N	
14⁵	210 bp 270 bp	1070 bp	*30:13, 30:16, 30:44, 30:46 *30:51, 30:106	*02:121, 02:425, 02:517, 03:154:01, 23:47, 24:234, 24:339, 24:347:02, 29:06, 31:51, 68:14, 68:158, C*03:125^w, C*03:176^w
15	245 bp	800 bp	*30:14L, 30:29, 30:122	
16⁵	235 bp 265 bp	1070 bp	*30:95 *30:15, 30:33	*36:02, 36:04 *11:268
17	225 bp	1070 bp	*30:01:01:01-30:01:11, 30:11:01-30:11:02, 30:14L- 30:20, 30:23-30:26, 30:30- 30:31, 30:35-30:43, 30:48- 30:49, 30:52-30:54, 30:56, 30:58-30:60, 30:62-30:63, 30:65, 30:72-30:75, 30:78N, 30:81-30:83, 30:86-30:89, 30:91-30:98, 30:102, 30:104, 30:106, 30:109-30:116, 30:118, 30:120, 30:122-30:123N, 30:125-30:126, 30:128-30:132N	*03:72, 11:88, 23:13, 24:07:01- 24:07:02, 24:19, 24:24, 24:131, 24:288, 24:290, 24:294Q, 24:339, 24:347:01-24:347:02, 24:387, 29:37, 29:56, 68:45, 68:117
18	130 bp 210 bp	800 bp	*30:32 *30:20, 30:71	
19⁴	125 bp	1070 bp	*30:70N	

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	200 bp		*30:31	
	235 bp		*30:77	*03:45
20	210 bp	800 bp	*30:23	
	275 bp		*30:34	*03:04:02-03:04:03, 11:153:01
21	150 bp	1070 bp	*30:02:12, 30:30, 30:100	
	185 bp		*30:24	
22	180 bp	800 bp	*30:36, 30:73N	
	215 bp		*30:27N	
23	150 bp	1070 bp	*30:26, 30:76N, 30:123N	
24^{4,7}	105 bp	800 bp	*30:78N	
	160 bp		*30:22	
	210 bp		*30:25, 30:57, 30:88, 30:90	*01:02, 01:20, 01:190
25	160 bp	1070 bp	*30:40, 30:76N	
	235 bp		*30:95	*36:02, 36:04
26⁴	80 bp	1070 bp	*30:42	
	190 bp		*30:121N	
	300 bp		*30:81	
27	145 bp	1070 bp	*30:56	*11:166
	195 bp		*30:45	
	465 bp		*30:132N	*01:04:01:01N-01:04:01:02N, 03:21N, 11:21N, 23:07N, 24:11N
28	465 bp	1070 bp	*30:130N	
29	130 bp	1070 bp	*30:59N, 30:61, 30:74	*01:57N, 01:88:02-01:88:03, 01:236, 02:156, 02:338, 03:17:01, 03:171, 11:119:01- 11:119:02, 11:209, 24:92, 68:103:01-68:103:02
30⁴	190 bp		*30:73N, 30:121N	
	80 bp	1070 bp	*30:37	
	155 bp		*30:123N	
31	200 bp	1070 bp	*30:80, 30:101Q	B*07:164, B*15:75
32⁸	-	-	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-A*30 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.

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.

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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 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 4, 12, 14 and 16 may give rise to unspecific amplifications.

⁶Primer mix 3 may give rise to a lower yield of HLA-specific PCR product than the other A*30 primer mixes.

⁷Primer mixes 7 and 24 may have a tendency of giving rise to primer oligomer formation.

⁸Primer mix 32 contains a negative control, which will amplify more than 95% 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 430 base pairs.

'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	165	205	210	155	150	80	90	85	180	150	215	190
					245	185	200					
						270						
Length of int. pos. control ¹	800	800	800	1070	1070	1070	1070	800	1070	1070	800	800
5'-primer(s) ²	414	363	363	123	123	123	78	367	98	127	98	363
	5'-gAA 3'	5'-ATA 3'	5'-ATA 3'	5'-AgT 3'	5'-AgT 3'	5'-AgT 3'	5'-TCT 3'	5'-TgC 3'	5'-CTC 3'	5'-ggg 3'	5'-CTC 3'	5'-ATA 3'
					414	385	362					
					5'-gAA 3'	5'-ggT 3'	5'-ggT 3'					
3'-primer(s) ³	538	526	526	238	325	163	238	411	238	238	270	505
	5'-CAA 3'	5'-CCA 3'	5'-CCg 3'	5'-CCC 3'	5'-gTg 3'	5'-CgC 3'	5'-CCT 3'	5'-TCA 3'	5'-CCT 3'	5'-CCT 3'	5'-ACA 3'	5'-gCT 3'
			535		524	265	411					524
			5'-CTA 3'		5'-CAT 3'	5'-CCC 3'	5'-TCA 3'					5'-CAC 3'
			538			616						
			5'-CAg 3'			5'-CgC 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	160	210	245	235	225	130	125	210	150	180	150	105
		270		265		210	200	275	185	215		160
							235					210
Length of int. pos. control ¹	1070	1070	800	1070	1070	800	1070	800	1070	800	1070	800
5'-primer(s) ²	117	123	363	363	98	123	123	363	410	363	127	123
	5'-CCT 3'	5'-AgT 3'	5'-ATA 3'	5'-ATA 3'	5'-CTC 3'	5'-AgT 3'	5'-AgT 3'	5'-ATA 3'	5'-gTg 3'	5'-ATA 3'	5'-gAT 3'	5'-AgT 3'
	123	385		784			650		634		412	
	5'-AgT 3'	5'-ggT 3'		5'-ggA 3'			5'-CCC 3'		5'-CAg 3'		5'-ATT 3'	
				808					680		413	
				5'-CgT 3'					5'-gTT 3'		5'-CCg 3'	
3'-primer(s) ³	238	292	563	586	282	212	206	530	526	494	238	187
	5'-CCT 3'	5'-gTg 3'	5'-Cgg 3'	5'-CAC 3'	5'-gAC 3'	5'-gCC 3'	5'-CA 3'	5'-CCT 3'	5'-CCA 3'	5'-TCC 3'	5'-CCT 3'	5'-gC 3'
		616	572	899		289	281	595	777	513	526	240
		5'-CgC 3'	5'-gCg 3'	5'-ACA 3'		5'-AgC 3'	5'-ACC 3'	5'-CCT 3'	5'-gCA 3'	5'-TCC 3'	5'-CCA 3'	5'-ggA 3'
						294	845			535		282
						5'-CgT 3'	5'-AgT 3'			5'-CTA 3'		5'-gAC 3'
												299
												5'-TCg 3'
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

101.429-12 – including *Taq* polymerase, IFU-01
 101.429-12u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **1H7**

Lot-specific Information

Well No.	25	26	27	28	29	30	31
Length of spec.	160	80	145	465	130	80	200
PCR product	235	190	195		190	155	
		300	465				
Length of int.	1070	1070	1070	1070	1070	1070	1070
pos. control ¹							
5'-primer(s) ²	127	363	176	3 rd I	363	412	355
	5'-gAT 3'	5'-ATA 3'	5'-gCA 3'	5'-A 3'	5'-ATA 3'	5'-ATT 3'	5'-CCC 3'
	397	627	414			485	373
	5'-gCC 3'	5'-CCC 3'	5'-gAA 3'			5'-CAC 3'	5'-gCC 3'
	808		3 rd I				
	5'-CgT 3'		5'-A 3'				
3'-primer(s) ³	238	403	282	620	453	526	526
	5'-CCT 3'	5'-gCT 3'	5'-gAC 3'	5'-ggT 3'	5'-TCT 3'	5'-CCA 3'	5'-CCg 3'
	526	514	570		454		
	5'-CCA 3'	5'-CTA 3'	5'-CAg 3'		5'-CTA 3'		
	899	886	621		513		
	5'-ACA 3'	5'-CAT 3'	5'-ggg 3'		5'-TCC 3'		
					514		
					5'-CTA 3'		
Well No.	25	26	27	28	29	30	31

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 anti-sense 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.

101.429-12 – including *Taq* polymerase, IFU-01
 101.429-12u – without *Taq* polymerase, IFU-02

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Lot No.: **1H7**

Lot-specific Information

CELL LINE VALIDATION SHEET																				
HLA-A*30 SSP subtyping kit ²																				
				Well																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				Prod. No.:	201899801	201899802	201899803	201899804	201899805	201899806	201899807	201899808	201899809	201899810	201899811	201899812	201899813	201899814	201899815	201899816
	IHWC cell line ¹	A*	A*																	
1	9001 SA	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373	*30:01		+	+	-	-	-	-	-	-	+	-	+	-	+	-	-	-	-
5	9009 KAS011	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353 SM	*02:01	*26:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025 DEU	*31:01		-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
9	9026 YAR	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLG A	*31:01		-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
15	9075 DKB	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540	*03:01	*80:01	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257 32367	*33:03	*74:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA	*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL	*02:01	*34:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9	*33:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49	*02:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*24:10	*29:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB	*02:01	*29:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH	*30:01	*68:02	+	+	-	-	-	-	-	-	+	-	+	-	+	-	-	-	-
31	9019 DUCAF	*30:02		+	-	+	-	-	-	-	-	+	-	+	-	+	-	-	-	-
32	9297 HAG	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B	*31:01		-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
34	9104 DHIF	*31:01		-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
35	9302 SSTO	*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17	*02:06	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL	*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML	*01:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134 WHONP199	*02:07	*30:01	+	+	-	-	-	-	-	-	+	-	+	-	+	-	-	-	-
41	9055 H0301	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089	*02:07		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526	*02:06	*02:07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM	*66:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO	*23:01	*24:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*02:16	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303 TER-ND	*02:01	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.429-12 – including *Taq* polymerase, IFU-01
 101.429-12u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **1H7**

Lot-specific Information

CELL LINE VALIDATION SHEET																				
HLA-A*30 SSP subtyping kit ²																				
					Well															
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
					Prod. No.:	201899817	201899818	201899819	201899820	201899821	201899822	201899823	201899824	201899825	201899826	201899827	201899828	201899829	201899830	201899831
	IHWC cell line ¹	A*	A*																	
1	9001 SA	*24:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2	9280 LK707	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	9011 E4181324	*01:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4	9275 GU373	*30:01			+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	9009 KAS011	*01:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	9353 SM	*02:01	*26:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	9020 QBL	*26:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	9025 DEU	*31:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	9026 YAR	*26:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10	9107 LKT3	*24:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11	9051 PITOUT	*29:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	9052 DBB	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13	9004 JESTHOM	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14	9071 OLGA	*31:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	9075 DKB	*24:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	9037 SWEIG007	*29:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	9282 CTM3953540	*03:01	*80:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	9257 32367	*33:03	*74:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
19	9038 BM16	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
20	9059 SLE005	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
21	9064 AMALA	*02:17			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
22	9056 KOSE	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
23	9124 IHL	*02:01	*34:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
24	9035 JBUSH	*32:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	9049 IBW9	*33:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
26	9285 WT49	*02:05			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
27	9191 CH1007	*24:10	*29:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28	9320 BEL5GB	*02:01	*29:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	9050 MOU	*29:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30	9021 RSH	*30:01	*68:02		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	9019 DUCAF	*30:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
32	9297 HAG	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
33	9098 MT14B	*31:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
34	9104 DHIF	*31:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	9302 SSTO	*32:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
36	9024 KT17	*02:06	*11:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
37	9065 HHKB	*03:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
38	9099 LZL	*02:17			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
39	9315 CML	*01:01	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
40	9134 WHONP199	*02:07	*30:01		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
41	9055 H0301	*03:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
42	9066 TAB089	*02:07			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
43	9076 T7526	*02:06	*02:07		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
44	9057 TEM	*66:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
45	9239 SHJO	*23:01	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
46	9013 SCHU	*03:01			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
47	9045 TUBO	*02:16	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
48	9303 TER-ND	*02:01	*11:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

101.429-12 – including *Taq* polymerase, IFU-01
101.429-12u – without *Taq* polymerase, IFU-02

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Lot No.: 1H7

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 6, 7, 14 to 16 and 18 to 31 were available. The specificities of the primers in primer 6, 7, 14 to 16, 23 to 25, 27 and 29 to 31 were tested by separately adding one, two or three additional 5'-primers, respectively one or two additional 3'-primers. In primer solutions 18 to 20, 22, 26 and 28 it was only possible to test the 5'-primer, the 3'-primers were not possible to test. In primer solution 21 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 7, 16, 23, 25, 30 and 31 one or two 5'-primers were not possible to test, and in primer solutions 2, 3, 5, 6, 12, 14 to 16, 24, 27 and 29 one, two or three 3'-primers were not possible to test. Additional primers in primer solutions 5, 13 and 27 were tested by separately adding 5'- and/or 3'-primers.

101.429-12 – including *Taq* polymerase, IFU-01
101.429-12u – without *Taq* polymerase, IFU-02

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Lot No.: **1H7**

Lot-specific Information

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