101.428-12 – including *Taq* polymerase, IFU-01
101.428-12u – without *Taq* polymerase, IFU-02

Visit www.olerup.com for
"Instructions for Use" (IFU)

Lot No.: 9F9

Lot-specific Information

Olerup SSP® HLA-A*29

Product number:	**101.428-12 – including *Taq* polymerase** **101.428-12u – without *Taq* polymerase**
Lot number:	**9F9**
Expiry date:	**2020-06-01**
Number of tests:	**12**
Number of wells per test:	**27+1**
Storage - pre-aliquoted primers:	**dark at -20ºC**
- PCR Master Mix:	**-20ºC**
- Adhesive PCR seals	**RT**
- Product Insert	**RT**

This Product Description is only valid for Lot No. 9F9.

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*29 LOT (7D7)

The HLA-A*29 kit is updated for new alleles to enable separation of:

- Confirmed[1] alleles as listed in the IMGT/HLA database
- Null and Alternatively expressed alleles

Four wells have been added to HLA-A*29, wells **25 to 28**.

The format of the Worksheet has been changed.

[1]As described in section Uniquely Identified Alleles.

The HLA-A*29 primer set, specificity and interpretation tables have been updated for the HLA-A alleles described since the previous *Olerup* SSP® HLA-A*29 lot was made **(Lot No. 7D7)**. The kit design is based on IMGT/HLA database 3.29.0.

101.428-12 – including *Taq* polymerase, IFU-01
101.428-12u – without *Taq* polymerase, IFU-02

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Lot No.: 9F9 **Lot-specific Information**

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	-	-	Exchange of positive control primer pair for decreased tendency of primer oligomer formation.
7	-	Added	3'-primers added for the A*29:82 and A*29:06 alleles.
23	Added	-	5'-primer added for the A*29:81 allele.
24	Added	Added	Negative control moved to well 28, primer pair added for the A*29:71 allele.
25	New	New	New primer pair added for the A*29:90 allele.
26	New	New	New primer pair added for the A*29:103 allele.
27	New	New	New primer pair added for the A*29:81 allele.
28	-	-	Negative control added from well 24.

101.428-12 – including *Taq* polymerase, IFU-01
101.428-12u – without *Taq* polymerase, IFU-02

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Lot No.: 9F9 **Lot-specific Information**

Well **28** 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'-primer[1]	**164**	**340**	**440**	**45**	**45**	**43**	**36**
	5'-CAC3'	**5'-Agg3'**	**5'-TTA3'**	**5'-Tgg3'**	**5'-Tgg3'**	**5'-Tgg3'**	**5'-TAC3'**
							36
							5'-TAT3'
3'-primer[2]	**231**	**2nd I**	**507**	**59**	**58**	**57**	**47**
	5'-TgC3'	**5'-AAA3'**	**5'-TTg3'**	**5'-CTC3'**	**5'-ggC3'**	**5'-CTC3'**	**5'-ACA3'**
							48
							5'-gCA3'
							48
							5'-gCC3'
							52
							5'-TgT3'
A*	+	+	+				
B*	+	+	+				
C*	+	+	+				
DRB1				+	+		
DRB3				+	+		
DRB5				+			
DQB1					+		
DPB1						+	
DQA1							+

[1]The 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 codonnumbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

[2]The 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.

Lot No.: 9F9

Lot-specific Information

PRODUCT DESCRIPTION

HLA-A*29 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the A*29:01 to A*29:103 alleles.

PLATE LAYOUT

Each test consists of 28 PCR reactions in a 32 well cut PCR plate. Wells 29 to 32 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**	**NC**	**empty**	**empty**	**empty**	**empty**

The 32 well cut PCR plate is marked with 'HLA-A*29' in silver/gray ink.
Well No. 1 is marked with the Lot No. '9F9'.
Wells 1 to 27 – HLA-A*29 high resolution primers.
Well 28 – 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*29 alleles will be amplified by some primer mixes. For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the HLA-A*29 alleles, i.e. **A*29:01 to A*29:103 alleles**, recognized by the HLA Nomenclature Committee in August 2017[1,2] will be amplified by the primers in the HLA-A*29 subtyping kit.

The HLA-A*29 kit enables separation of the confirmed HLA-A*29 alleles as listed in the IMGT/HLA database. 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*29 alleles is listed below.

The HLA-A*29 kit also enables identification of null and alternatively expressed alleles.

Lot No.: 9F9 **Lot-specific Information**

The following HLA-A*29 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

Alleles	Primer mix
A*29:06, 29:34	7
A*29:07, 29:46	8
A*29:11, 29:92	13
A*29:20, 29:82	7

[1]HLA-A alleles listed on the IMGT/HLA web page 2017-August-10, release 3.29.0, www.ebi.ac.uk/imgt/hla.
[2]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.

101.428-12 – including *Taq* polymerase, IFU-01
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Lot No.: 9F9 **Lot-specific Information**

ALLELE CONFIRMATION STATUS

Allele	Status[1]	Allele	Status[1]	Allele	Status[1]	Allele	Status[1]
A*29:01:01:01	**Confirmed**	A*29:08N	Unconfirmed	A*29:47	Unconfirmed	**A*29:87**	**Confirmed**
A*29:01:01:02N	Unconfirmed	**A*29:09**	**Confirmed**	A*29:48	Unconfirmed	A*29:88	Unconfirmed
A*29:01:02	Unconfirmed	**A*29:10:01**	**Confirmed**	A*29:49	Unconfirmed	A*29:89	Unconfirmed
A*29:01:03	Unconfirmed	**A*29:10:02**	**Confirmed**	A*29:50	Unconfirmed	**A*29:90**	**Confirmed**
A*29:01:04	Unconfirmed	**A*29:11**	**Confirmed**	**A*29:51**	**Confirmed**	A*29:91	Unconfirmed
A*29:01:05	Unconfirmed	**A*29:12**	**Confirmed**	A*29:52	Unconfirmed	A*29:92	Unconfirmed
A*29:01:06	Unconfirmed	A*29:13	Unconfirmed	**A*29:53**	**Confirmed**	A*29:93	Unconfirmed
A*29:01:07	Unconfirmed	A*29:14	Unconfirmed	**A*29:54**	**Confirmed**	A*29:94	Unconfirmed
A*29:01:08	Unconfirmed	A*29:15	Unconfirmed	**A*29:55**	**Confirmed**	A*29:95	Unconfirmed
A*29:01:09	Unconfirmed	A*29:16	Unconfirmed	A*29:56	Unconfirmed	A*29:96	Unconfirmed
A*29:02:01:01	**Confirmed**	A*29:17	Unconfirmed	A*29:57	Unconfirmed	A*29:97	Unconfirmed
A*29:02:01:02	**Confirmed**	A*29:18	Unconfirmed	A*29:58	Unconfirmed	A*29:98	Unconfirmed
A*29:02:01:03	**Confirmed**	A*29:19	Unconfirmed	A*29:59	Unconfirmed	A*29:99	Unconfirmed
A*29:02:01:04	**Confirmed**	**A*29:20**	**Confirmed**	A*29:60	Unconfirmed	A*29:100	Unconfirmed
A*29:02:02	**Confirmed**	**A*29:21**	**Confirmed**	A*29:61	Unconfirmed	A*29:101	Unconfirmed
A*29:02:03	**Confirmed**	**A*29:22**	**Confirmed**	A*29:62	Unconfirmed	A*29:102	Unconfirmed
A*29:02:04	**Confirmed**	A*29:23	Unconfirmed	A*29:63	Unconfirmed	**A*29:103**	**Confirmed**
A*29:02:05	Unconfirmed	A*29:24	Unconfirmed	A*29:64	Unconfirmed		
A*29:02:06	**Confirmed**	A*29:25	Unconfirmed	A*29:65	Unconfirmed		
A*29:02:07	Unconfirmed	**A*29:26**	**Confirmed**	A*29:66	Unconfirmed		
A*29:02:08	Unconfirmed	A*29:27	Unconfirmed	A*29:67	Unconfirmed		
A*29:02:09	**Confirmed**	A*29:28	Unconfirmed	A*29:68	Unconfirmed		
A*29:02:10	Unconfirmed	A*29:29	Unconfirmed	**A*29:69**	**Confirmed**		
A*29:02:11	Unconfirmed	A*29:30	Unconfirmed	A*29:70	Unconfirmed		
A*29:02:12	Unconfirmed	A*29:31	Unconfirmed	**A*29:71**	**Confirmed**		
A*29:02:13	Unconfirmed	**A*29:32**	**Confirmed**	A*29:72	Unconfirmed		
A*29:02:14	**Confirmed**	A*29:33	Unconfirmed	A*29:73	Unconfirmed		
A*29:02:15	Unconfirmed	**A*29:34**	**Confirmed**	A*29:74	Unconfirmed		
A*29:02:16	**Confirmed**	**A*29:35**	**Confirmed**	A*29:75	Unconfirmed		
A*29:02:17:01	Unconfirmed	**A*29:36**	**Confirmed**	A*29:76	Unconfirmed		
A*29:02:17:02	Unconfirmed	A*29:37	Unconfirmed	**A*29:77**	**Confirmed**		
A*29:02:18	Unconfirmed	A*29:38	Unconfirmed	A*29:78N	Unconfirmed		
A*29:02:19	Unconfirmed	A*29:39	Unconfirmed	A*29:79	Unconfirmed		
A*29:02:20	**Confirmed**	**A*29:40**	**Confirmed**	A*29:80	Unconfirmed		
A*29:02:21	Unconfirmed	A*29:41	Unconfirmed	**A*29:81**	**Confirmed**		
A*29:03	**Confirmed**	A*29:42	Unconfirmed	**A*29:82**	**Confirmed**		
A*29:04	Unconfirmed	**A*29:43**	**Confirmed**	A*29:83	Unconfirmed		
A*29:05	Unconfirmed	**A*29:44**	**Confirmed**	A*29:84	Unconfirmed		
A*29:06	Unconfirmed	A*29:45	Unconfirmed	A*29:85	Unconfirmed		
A*29:07	Unconfirmed	A*29:46	Unconfirmed	A*29:86	Unconfirmed		

[1]Allele status "confirmed" or "unconfirmed" as listed on the IMGT/HLA web page 2017-August-10, release 3.29.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in HLA-A*29 homo- and heterozygotes is available upon request.

101.428-12 – including *Taq* polymerase, IFU-01
101.428-12u – without *Taq* polymerase, IFU-02

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Lot No.: 9F9

Lot-specific Information

SPECIFICITY TABLE

HLA-A*29 SSP subtyping

Specificities and sizes of the PCR products of the 27+1 primer mixes used for HLA-A*29 SSP subtyping

Primer Mix	Size of spec. PCR product[1]	Size of control band[2]	Amplified HLA-A*29 alleles[3]	Other amplified HLA-A alleles
1	480 bp	**800 bp**	*29:01:01:01-29:01:06, 29:01:08-29:01:09, 29:12, 29:15-29:17, 29:20, 29:24, 29:28, 29:33, 29:48-29:49, 29:55-29:58, 29:60-29:62, 29:67, 29:71, 29:76-29:77, 29:79, 29:81-29:83, 29:98-29:99, 29:101	
2	130 bp	1070 bp	*29:01:01:02N	
3	440 bp	**800 bp**	*29:02:01:01-29:02:03, 29:02:05-29:11, 29:13-29:14, 29:19, 29:21-29:23, 29:26-29:27, 29:29-29:32, 29:34-29:47, 29:50-29:54, 29:59, 29:63, 29:65-29:66, 29:68-29:70, 29:72-29:75, 29:78N, 29:80, 29:84-29:97, 29:100, 29:102-29:103	*11:01:42, 30:01:11, 68:130:02
4[4]	110 bp 165 bp	**800 bp**	*29:35, 29:51, 29:69, 29:73 *29:03, 29:33	*02:24:02, 02:507 *23:03:01, 24:21:03, 24:208, 31:05, 32:13, 33:10
5	130 bp 185 bp	1070 bp	*29:04 *29:23	
6[4]	105 bp 130 bp	**800 bp**	*29:19 *29:05, 29:33, 29:40, 29:77, 29:87	 *11:01:28, 11:01:77, 24:21:03, 24:208, 31:24, 32:02, 32:22, 33:59, 33:102
7[4]	105 bp 210 bp 475 bp	1070 bp	*29:19-29:20, 29:34 *29:06 *29:82	 *31:51, 32:12, 74:26, **B*08:01:07[w], B*15:02:07[w], B*15:17:03, B*27:07:05, B*41:01:05[w], B*55:02:10, C*02:02:15[w], C*03:03:20[w], C*04:175[w], C*08:01:15[w]**
8[4]	85 bp 160 bp	**800 bp**	*29:07, 29:49 *29:46	*11:139, 23:53, 23:70, 24:17, 24:41, 24:208
9[4,5]	80 bp 170 bp	1070 bp	*29:16 *29:08N	*01:157, 03:27, 11:233
10[4,6]	90 bp	**800 bp**	*29:09, 29:33, 29:51, 29:73	*02:24:02, 02:507, 03:01:18, 11:01:28, 11:01:77, 24:21:03, 24:208, 31:24, 32:33:01, 33:34

101.428-12 – including *Taq* polymerase, IFU-01
101.428-12u – without *Taq* polymerase, IFU-02

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Lot No.: 9F9 **Lot-specific Information**

	165 bp 215 bp		*29:17, 29:43 *29:54	
11[4]	110 bp 190 bp	**800 bp**	*29:14, 29:35 *29:10:01-29:10:02, 29:23	**C*08:01:15**
12[4,5]	80 bp 145 bp	**800 bp**	*29:02:04, 29:18, 29:48 *29:78N	*03:01:39, 32:01:01:01-32:01:07, 32:01:09-32:01:17, 32:01:19-32:03, 32:05-32:55:02, 32:57-32:69, 32:71, 32:73-32:103, 68:01:28, 74:01:01-74:13, 74:15-74:28
13[4,5,7]	90 bp 165 bp 260 bp	1070 bp	*29:11, 29:51, 29:73 *29:12, 29:92 *29:55	*02:24:02, 02:507 *31:16, 33:58
14	200 bp	1070 bp	*29:01:01:01-29:13, 29:15-29:17, 29:19-29:36, 29:38-29:47, 29:49-29:55, 29:57-29:103	
15	240 bp	1070 bp	*29:01:01:01-29:12, 29:14-29:18, 29:20-29:36, 29:38, 29:40-29:47, 29:49-29:55, 29:57-29:97, 29:99-29:103	*01:143, 31:79, 33:13, 33:48
16[4,5]	95 bp 160 bp 190 bp	1070 bp	*29:15 *29:21, 29:43 *29:53	*02:221, 23:41, 31:78
17[4]	100 bp 130 bp 190 bp 215 bp	1070 bp	*29:51, 29:69, 29:73 *29:24, 29:40 *29:27, 29:53 *29:54	*02:24:02, 02:507
18	225 bp 260 bp	1070 bp	*29:37, 29:56 *29:36	*32:07, 33:119
19[6]	160 bp 260 bp 505 bp	1070 bp	*29:25 *29:55 *29:26	
20[4,5]	105 bp	1070 bp	*29:44, 29:64	*02:65, 11:01:28, 11:01:77, 31:123, 32:01:01:01-32:01:06, 32:01:08-32:01:11, 32:01:13-32:03, 32:05-32:27N, 32:29-32:30:01, 32:31-32:33:01, 32:34-32:65, 32:67-32:93, 32:95-32:100, 32:102-32:103, 74:01:01-74:28, **B*15:17:03, B*27:07:05, B*41:01:05, B*55:02:10**
21	185 bp	1070 bp	*29:22	*01:20, 01:66, 01:130, 02:19, 02:44, 02:149, 02:309, 02:408, 02:436, 02:619, 03:95, 24:14:01:01-24:14:01:02, 24:93, 24:324, 26:22, 30:47, 31:99, 33:22, 66:09, **C*02:74**
22[4]	115 bp	**800 bp**	*29:29	*01:148, 11:128, 26:85, 68:58:01-68:58:02

Lot No.: 9F9 **Lot-specific Information**

	260 bp		*29:13	*24:82, 31:07-31:08, 31:10, 32:42
23[4]	75 bp	1070 bp	*29:32	*02:24:02, 02:65, 02:152, 02:507, 23:03:01, 23:83, 24:21:03, 31:01:02:01-31:02, 31:05, 31:07-31:61, 31:63-31:66, 31:70-31:119, 31:121-31:127, 32:01:01:01-32:01:06, 32:01:08-32:01:11, 32:01:13-32:03, 32:05-32:27N, 32:29, 32:31, 32:33:01, 32:34-32:47, 32:49-32:65, 32:67-32:93, 32:95-32:100, 32:102-32:103, 33:01:01:01-33:01:04, 33:01:06-33:01:10, 33:03:01-33:03:18, 33:03:20-33:03:23, 33:03:25-33:03:26, 33:03:28-33:17, 33:20-33:31, 33:33-33:37, 33:39-33:130, 74:01:01-74:28, **B*15:17:03**
	510 bp		*29:81	
24[4]	125 bp	1070 bp	*29:71	*31:77
25[4]	110 bp	1070 bp	*29:90	*31:108, 33:110
26	185 bp	1070 bp	*29:103	
27	510 bp	1070 bp	*29:81	
28[8]	-	-	**Negative Control**	

[1]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 HLA-A*29 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.
[2]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.

[3]For 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.

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

[5]Primer mixes 9, 12, 13, 16 and 20 may have tendencies of unspecific amplifications.

[6]Primer mixes 10 and 19 have a tendency giving rise to primer oligomer formation.

[7]Primer mix 13 may give rise to a lower yield of HLA-specific PCR product than the other A*29 primer mixes.

[8]Primer mix 28 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.

101.428-12 – including *Taq* polymerase, IFU-01
101.428-12u – without *Taq* polymerase, IFU-02

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Lot No.: 9F9

Lot-specific Information

PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec.	480	130	440	110	130	105	105	85	80	90	110	80
PCR product				165	185	130	210	160	170	165	190	145
							475			215		
Length of int.	800	1070	800	800	1070	1070	1070	800	1070	800	800	800
pos. control[1]												
5'-primer(s)[2]	180	808	219	448	180	219	219	368	97	82	180	180
	5' -TTT 3'	5' -CgT 3'	5' -gCA 3'	5' -CCT 3'	5' -TTT 3'	5' -gCA 3'	5' -gCA 3'	5' -gTT 3'	5' -TCA 3'	5' -ACC 3'	5' -TTT 3'	5' -TTT 3'
						448	448	652	413	130	448	
						5' -CCT 3'	5' -CCT 3'	5' -CTg 3'	5' -CCg 3'	5' -AgA 3'	5' -CCT 3'	
										140		
										5' -CAA 3'		
										448		
										5' -CCT 3'		
3'-primer(s)[3]	376	895	376	506	268	282	282	413	224	257	238	218
	5' -gTg 3'	5' -CTC 3'	5' -gTC 3'	5' -TgT 3'	5' -ATg 3'	5' -gAg 3'	5' -gAg 3'	5' -gCC 3'	5' -TCT 3'	5' -gCA 3'	5' -CCT 3'	5' -gCg 3'
				526	326	533	282	773	454	497	326	286
				5' -CAT 3'	5' -TgA 3'	5' -gCC 3'	5' -gAg 3'	5' -gCT 3'	5' -CTg 3'	5' -Tgg 3'	5' -TgA 3'	5' -CTA 3'
				570		539	412			502	526	
				5' -CCg 3'		5' -TCT 3'	5' -CCC 3'			5' -CTT 3'	5' -CAT 3'	
							616				601	
							5' -CgC 3'				5' -CTT 3'	
							616					
							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.	90	200	240	95	100	225	160	105	185	115	75	125
PCR product	165			160	130	260	260			260	510	
	260			190	190		505					
					215							
Length of int.	1070	1070	1070	1070	1070	1070	1070	1070	1070	800	1070	1070
pos. control[1]												
5'-primer(s)[2]	97	98	98	107	82	41	98	385	355	98	221	448
	5' -TCA 3'	5' -CAC 3'	5' -CAC 3'	5' -CgC 3'	5' -ACC 3'	5' -CTT 3'	5' -CAC 3'	5' -ggC 3'	5' -CCg 3'	5' -CAC 3'	5' -ACA 3'	5' -CCT 3'
	448			134	107		3rd I			355	413	
	5' -CCT 3'			5' -CCT 3'	5' -CgC 3'		5' -ATA 3'			5' -CCA 3'	5' -CCA 3'	
				140	448							
				5' -CAA 3'	5' -CCT 3'							
				484								
				5' -ACg 3'								
3'-primer(s)[3]	221	257	299	257	257	97	217	448	497	317	448	530
	5' -ACA 3'	5' -gCA 3'	5' -TCg 3'	5' -gCA 3'	5' -gCA 3'	5' -ggA 3'	5' -TgA 3'	5' -CAA 3'	5' -TgA 3'	5' -ggA 3'	5' -CAA 3'	5' -CCA 3'
	316			538	506	131	316			430		
	5' -gCT 3'			5' -CAA 3'	5' -TgT 3'	5' -ggA 3'	5' -gCT 3'			5' -gCT 3'		
	494				533		667					
	5' -TCg 3'				5' -gCC 3'		5' -ggT 3'					
	497				545							
	5' -Tgg 3'				5' -AgC 3'							
					595							
					5' -CCA 3'							
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

CE 0088

For *In Vitro* Diagnostic Use.

101.428-12 – including *Taq* polymerase, IFU-01
101.428-12u – without *Taq* polymerase, IFU-02

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"Instructions for Use" (IFU)

Lot No.: 9F9 **Lot-specific Information**

Well No.	25	26	27
Length of spec.	110	185	510
PCR product			
Length of int.	1070	1070	1070
pos. control[1]			
5'-primer(s)[2]	448	98	221
	5' -CCT 3'	5' -CAC 3'	5' -ACA 3'
3'-primer(s)[3]	518	242	448
	5' -CCA 3'	5' -CCA 3'	5' -CAA 3'
Well No.	25	26	27

[1]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.

[2]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 web site. The sequence of the 3 terminal nucleotides of the primer is given.

[3]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 web site. The sequence of the 3 terminal nucleotides of the primer is given.

101.428-12 – including *Taq* polymerase, IFU-01
101.428-12u – without *Taq* polymerase, IFU-02

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Lot No.: 9F9 **Lot-specific Information**

CELL LINE VALIDATION SHEET

HLA-A*29 SSP subtyping kit[2]

					Well															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Lot No.:	201323601	201323602	201323603	201666104	201444905	201786806	201786807	201323608	201444909	201444910	201444911	201666112	201444913	201323614	201323615	201444916
	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	9007	DEM	*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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.428-12 – including *Taq* polymerase, IFU-01
101.428-12u – without *Taq* polymerase, IFU-02

Visit www.olerup.com for **"Instructions for Use" (IFU)**

Lot No.: 9F9 **Lot-specific Information**

CELL LINE VALIDATION SHEET

HLA-A*29 SSP subtyping kit[2]

					Well										
					17	18	19	20	21	22	23	24	25	26	27
				Lot No.:	201666117	201444924	201444919	201786820	201323621	201444922	201786823	201786824	201786825	201786826	201786827
	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	9007	DEM	*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	-	-	-	-	-	-	-	-	-	-	-

101.428-12 – including *Taq* polymerase, IFU-01
101.428-12u – without *Taq* polymerase, IFU-02

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Lot No.: 9F9 **Lot-specific Information**

[1]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.

[2]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 2, 4 to 7, 9 to 11, 13, 17 to 19, 21, 22 and 24 to 27 were available.
The specificities of the primers in primer solutions 4, 6, 7, 10, 11, 13, 17, 18, 21 and 22 were tested by separately adding one, two or three additional 5'-primers, respectively one or two additional 3'-primers.
In primer solutions 2, 5, 9, 19 and 24 to 26 it was only possible to test the 5'-primers, the 3'-primers were not possible to test.
In primer solution 27 it was only possible to test the 3'-primer, the 5'-primer was not possible to test.
In primer solution 4, 6, 7, 8, 11 to 13, 17, 18 and 22 one or more of the 3'-primers were not possible to test, and in primer solutions 10, 16, 17 and 23 one, two or three of the 5'-primers were not possible to test. Additional primers in primer solutions 8 and 16 were tested by separately adding one 3'-primer respectively one 5'-primer.

Lot No.: 9F9 **Lot-specific Information**

ADDRESSES:

Manufacturer:
***Olerup* SSP AB**, Franzengatan 5, SE-112 51 Stockholm, Sweden.
Tel: +46-8-717 88 27
Fax: +46-8-717 88 18
E-mail: olerup-se@caredx.com
Web page: http://www.olerup.com

Distributed by:
Olerup GmbH, Löwengasse 47 / 6, AT-1030 Vienna, Austria.
Tel: +43-1-710 15 00
Fax: +43-1-710 15 00 10
E-mail: olerup-at@caredx.com
Web page: http://www.olerup.com

Olerup Inc., 901 S. Bolmar St., Suite R, West Chester, PA 19382
Tel: 1-877-OLERUP1
Fax: 610-344-7989
E-mail: olerup-us@caredx.com
Web page: http://www.olerup.com

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