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Lot No.: **04R** Lot-specific information

Olerup SSP® HLA-A*36

Product number: 101.419-06 – including *Taq* polymerase

101.419-06u – without *Taq* polymerase

Lot number: 04R

Expiry date: 2014-December-01

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

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

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

This Product Description is only valid for Lot No. 04R.

Changes compared to the previous *OLERUP* SSP® HLA-A*36 Lot (98K)

The HLA-A*36 specificity and interpretation tables have been updated for the HLA-A alleles described since the previous *Olerup* SSP® HLA-A*36 lot was made **(Lot No. 98K)**.

The HLA-A*36 kit is updated for new alleles to enable separation of:

- Confirmed¹ alleles as listed in the IMGT/HLA database
- Polymorphisms in exons outside of the region encoding the peptide binding domain
- Null and Alternatively expressed alleles

The Lot-specific information for HLA-A*36 including and without *Tag* polymerase is now described in one common Product Insert.

The HLA-A*36 primer set is unchanged compared to the previous lot.

¹As described in section Uniquely Identified Alleles.

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Lot No.: **04R**

Lot-specific information

PRODUCT DESCRIPTION

HLA-A*36 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the HLA-A*36:01 to HLA-A*36:05 alleles.

PLATE LAYOUT

Each test consists of 7 PCR reactions in an 8 well cut PCR plate. Well 8 is empty.

5 6 7 1 empty

The 8 well cut PCR plate is marked with 'A36' in silver/gray ink.

Well No. 1 is marked with '04R'.

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

The interpretation of HLA-A*36 SSP subtypings will be influenced by most A*01 alleles, most A*03 alleles, most A*11 alleles, two A*24 alleles, two A*31 alleles and the A*32:04 allele and allele when present on the other haplotype. In addition, the HLA-B*15:90 allele will be amplified by primer mix 4.

UNIQUELY IDENTIFIED ALLELES

All the HLA-A*36 alleles, i.e. A*36:01 to A*36:05, recognized by the HLA Nomenclature Committee in April 2012¹ will be amplified by the primers in the HLA-A*36 subtyping kit.

The HLA-A*36 kit enables separation of the confirmed HLA-A*36 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*36 alleles is listed below.

The HLA-A*36 kit also enables identification of polymorphisms in exons outside of the region encoding the peptide binding domain and of null and alternatively expressed alleles.

¹HLA-A alleles listed on the IMGT/HLA web page 2012-April-12, release 3.8.0, www.ebi.ac.uk/imgt/hla.

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Lot No.: **04R** Lot-specific information

ALLELE CONFIRMATION STATUS

Allele	Status ¹
A*36:01	Confirmed
A*36:02	Unconfirmed
A*36:03	Confirmed
A*36:04	Unconfirmed
A*36:05	Unconfirmed

¹Allele status "confirmed" or "unconfirmed" as listed on the IMGT/HLA web page 2012-April-12, release 3.8.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 5 alleles generate 5 amplification patterns that can be combined in 15 homozygous and heterozygous combinations. 2 of these genotypes do not give rise to unique amplification patterns. The different lengths of the specific PCR products were not considered in these calculations.

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Lot No.: **04R**

Lot-specific information

SPECIFICITY TABLE

HLA-A*36 SSP subtyping

Specificities and sizes of the PCR products of the 7 primer mixes used for HLA-A*36 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-A*36 alleles	Other amplified HLA-A alleles ³
14	75 bp	800 bp	*36:01-36:03, 36:05	*01:14 ^w , 31:62
2	225 bp	1070 bp	*36:01, 36:04- 36:05	*01:01:01:01-01:02, 01:04N, 01:07-01:11N, 01:13-01:14, 01:16N-01:18N, 01:21-01:33, 01:35-01:52N, 01:54-01:62, 01:64, 01:67-01:72, 01:74-01:97, 01:99-01:109, 03:18, 03:135, 11:94, 11:112
3	235 bp	800 bp	*36:02	*03:01:01:01-03:01:29, 03:01:31-03:04:02, 03:07-03:09, 03:11N-03:17, 03:19-03:39, 03:41, 03:43-03:74, 03:76- 03:94, 03:96-03:97, 03:99- 03:104, 03:106-03:121, 03:123- 03:134, 03:136-03:143, 32:04
4	230 bp	1070 bp	*36:03	*01:73, 01:89, 24:22, 24:160, B*15:90
5	235 bp	1070 bp	*36:04	*01:72, 11:01:01-11:01:20, 11:01:22-11:03, 11:05-11:14, 11:16-11:25, 11:29-11:33:02, 11:36-11:37, 11:40-11:49, 11:51-11:52Q, 11:54-11:89, 11:91-11:93, 11:95-11:100, 11:102-11:117, 11:119-11:122
64	85 bp	1070 bp	*36:01-36:05	*11:01:01 ^w -11:01:15 ^w , 11:01:17 ^w -11:02:03 ^w , 11:04 ^w - 11:07 ^w , 11:09 ^w -11:13 ^w , 11:15:01 ^w -11:19 ^w , 11:21N ^w - 11:24:02 ^w , 11:26 ^w , 11:29 ^w - 11:30 ^w , 11:32 ^w -11:34 ^w , 11:36 ^w - 11:37 ^w , 11:40 ^w -11:49 ^w , 11:51 ^w - 11:52Q ^w , 11:54 ^w -11:59 ^w , 11:61 ^w -11:93 ^w , 11:95 ^w -11:122 ^w , 31:24 ^w , 31:62
7 ⁴	110 bp	1070 bp	*36:05	

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Lot No.: 04R Lot-specific information

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*36 SSP typings.

When the primers in a primer mix can give rise to specific PCR products of more than one length this is indicated if the size difference is 20 base pairs or more. Size differences shorter than 20 base pairs are not given. For high resolution SSP kits the respective lengths of the specific PCR product(s) of the alleles amplified by these primer mixes are given.

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 two different control primer pairs give rise to either an internal positive control band of 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-A*36 subtyping.

In addition, well number 3 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

In the presence of a specific amplification the intensity of the control band often decreases.

³Due to the sharing of sequence motifs between HLA-A alleles non-HLA-A*36 alleles will be amplified by primer mixes 1 to 6. In addition, the HLA-B*15:90 allele will be amplified by primer mix 4.

⁴Specific PCR fragments shorter than 125 base pairs have a lower intensity than longer PCR bands.

'w', might be weakly amplified.

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Lot No.: 04R Lot-specific information

Lot No.: 04R Lot-specific information							
INTERPRET							
HLA-A*36 SSP subtyping							
Amplification patterns of the A*36:01 to A*36:05 alleles							
	Well						
	1	2	3	4	5	6	7
Length of spec.	75	225	235	230	235	85	110
PCR product							
Length of int.	800	1070	800	1070	1070	1070	1070
pos. control ¹							
5'-primer ²	527	363	363	355	363	527	363
o primor	5' -TgC 3'	^{5'} -ATA ^{3'}	^{5'} -ATA ³	5' -CCC 3'	^{5'} -ATA ^{3'}	^{5'} -TgC ^{3'}	^{5'} -ATA ^{3'}
3'-primer ³	559	545	555	545	559	570	430
	^{5'} -CgT ^{3'}	^{5'} -AgA ^{3'}	^{5'} -CCA ³	^{5'} -AgA ^{3'}	^{5'} -CCg ^{3'}	^{5'} -CAC ^{3'}	^{5'} -gCA ^{3'}
		545		545			
		^{5'} -AgA ^{3'}		^{5'} -AgA ^{3'}			
Well No.	1	2	3	4	5	6	7
HLA-A allele ⁴							
*36:01	1	2				6	
*36:02	1		3			6	
*36:03	1			4		6	
*36:04		2			5	6	
*36:05	1	2				6	7
*01:01:01:01-01:02, 01:04N, 01:07-							
01:11N, 01:13, 01:16N-01:18N, 01:21-							
01:33, 01:35-01:52N, 01:54-01:62, 01:64,		2					
01:67-01:71, 01:74-01:88, 01:90-01:97,							
01:99-01:109, 03:18, 03:135, 11:94							
*01:14	W	2					
*01:72		2			5		
*01:73, 24:22, 24:160, <i>B*15:90</i>				4			
*01:89		2		4			
*03:01:01:01-03:01:29, 03:01:31-03:04:02,							
03:07-03:09, 03:11N-03:17, 03:19-03:39,							
03:41, 03:43-03:74, 03:76-03:94, 03:96-			3				
03:97, 03:99-03:104, 03:106-03:121,							
03:123-03:134, 03:136-03:143, 32:04							
Well No.	1	2	3	4	5	6	7

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Lot No.: 04R Lot-specific information

Length of spec.	75	225	235	230	235	85	110
PCR product							
Well No.	1	2	3	4	5	6	7
*11:01:01-11:01:15, 11:01:17-11:01:20, 11:01:22-11:02:03, 11:05-11:07, 11:09-11:13, 11:16-11:19, 11:21N-11:24:02, 11:29-11:30, 11:32-11:33:02, 11:36-11:37, 11:40-11:49, 11:51-11:52Q, 11:54-11:59, 11:61-11:89, 11:91-11:93, 11:95-11:100, 11:102-11:111, 11:113-11:117, 11:119-11:122					5	w	
*11:01:16, 11:03, 11:08, 11:14, 11:20, 11:25, 11:31, 11:60					5		
*11:01:21, 11:04, 11:15:01-11:15:02, 11:26, 11:34, 11:90, 11:101, 11:118, 31:24						W	
*11:112		2			5	W	
*31:62	1					6	
Well No.	1	2	3	4	5	6	7

¹The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-A*36 subtyping. In addition, well number 3 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

²The nucleotide position, in the 3rd exon, 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, in 3rd exon, 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.

⁴HLA-A*36 alleles in bold lettering are listed as confirmed alleles on the on the IMGT/HLA web page www.ebi.ac.uk/imgt/hla, release 3.8.0, April 2012.

'w', might be weakly amplified.

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Lot No.: **04R** Lot-specific information

	CELL LINE VALIDATION SHEET										
HLA-A*36 SSP subtyping kit											
					Well						
					1	2	3	4	5	6	7
				٠:	1	2		4	2	9	7
				Prod. No.:	200963501	200963502	200963503	200963504	200963505	200963506	201181707
				-	963	963	963	963	963	963	81
				ĕ	30C	300	300	õ	lõ	õ	11
					2	2(2(2	7	2	2
		VC cell line		*							
1	9001		*24:02		•	-	-	-	-	-	-
3		LK707	*02:01		•	-	•	-	<u> </u>	-	-
4		E4181324 GU373	*01:01		•	+	-	-	-	-	-
5		KAS011	*30:01		-	-	-	-	-	-	-
6	9353		*01:01 *02:01	*26:03	÷	+	÷	H	H	=	-
7	9020		*26:01	20.03	-	Ė	Ė	Ė	H	Ε-	H
8	9020		*31:01		-	Ė	Ė	Ė	-	-	H
9	9025		*26:01		Ė	-	-	<u> </u>	Ė	<u> </u>	
10		LKT3	*24:02		-	-	-	-	-	-	-
11		PITOUT	*29:02		-	-	-	-	-	-	-
12	9052		*02:01		-	-	-	-	-	-	-
13		JESTHOM	*02:01		-	-	-	-	-	-	-
14		OLGA	*31:01		-	-	-	-	-	-	-
15	9075		*24:02		-	-	-	-	-	-	-
16	9037	SWEIG007	*29:02		•	•	•	-	-	-	-
17		CTM3953540	*03:01	*80:01	•	-	+	-	-	-	-
18	9257	32367	*33:03	*74:01	•	-	-	-	-	-	-
19	9038	BM16	*02:01		١	١	١	•	-	•	-
20	9059	SLE005	*02:01		١	•	•	•	-	•	-
21		AMALA	*02:17		١	•	•	•	-	•	
22		KOSE	*02:01		١	٠	٠	•	•	•	-
23	9124	IHL	*02:01	*34:01	٠	•	•	-	-	-	-
24		JBUSH	*32:01		-	-	-	-	-	-	-
25		IBW9	*33:01		•	•	•	-	-	-	-
26		WT49	*02:05		•	•	•	-	-	-	-
27		CH1007	*24:10	*29:01	•	-	-	-	-	-	-
28		BEL5GB	*02:01	*29:02	-	_	_	<u>-</u>	-	-	<u>-</u>
29	9050		*29:02		-	_	_	-	-	-	-
30	9021		*30:01	*68:02	-	-	-	-	-	-	-
31		DUCAF	*30:02		-	-	-	-	-	-	-
32	9297		*02:01		-	-	-	-	<u> </u>	-	-
33 34	9104	MT14B	*31:01		Ė	Ė	Ė	Ė	Ė	Ė	븝
35		SSTO	*31:01 *32:01		•	-	-	-	-	-	H
36		KT17	*02:06	*11:01	-	-	-	-	+	w	H
37		HHKB	*03:01	1 1.01	-		+	-	-	-	
38	9099		*02:17		-		-	-	-	-	\vdash
39	9315		*01:01	*03:01	-	+	+	-	-	-	-
40		WHONP199	*02:07	*30:01	-	÷	÷	-	-	-	-
41		H0301	*03:01		-	-	+	-	-	-	-
42		TAB089	*02:07		-	-	-	-	-	-	-
43		T7526	*02:06	*02:07	-	-	-	-	-	-	-
44	9057		*66:01		-	-	-	-	-	-	-
45		SHJO	*23:01	*24:02	•	-	-	-	-	-	-
46		SCHU	*03:01		-	-	+				
47		TUBO	*02:16	*03:01	•	•	+	-	-	-	-
48	9303	TER-ND	*02:01	*11:01	•	-	-	-	+	W	-

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Lot No.: **04R** Lot-specific information

CERTIFICATE OF ANALYSIS

Olerup SSP® HLA-A*36 SSP

Product number: 101.419-06 – including *Taq* polymerase

101.419-06u - without *Taq* polymerase

Lot number: 04R

Expiry date: 2014-December-01

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

Well specifications:

Well No.	Production No.
1	2009-635-01
2	2009-635-02
3	2009-635-03
4	2009-635-04
5	2009-635-05
6	2009-635-06
7	2011-817-07

The specificity of each primer solution of the kit has been tested against 48 well characterized cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solution 7 was available. The specificities of the 5'-primer in primer solutions 7 was tested by separately adding one additional 3'-primer, the 3'-primer was not possible to test.

Results: No false positive or false negative amplifications were obtained.

Date of approval: 2012-June-29

Approved by:

Production Quality Control

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Lot No.: 04R Lot-specific information

Declaration of Conformity

Product name: Olerup SSP® HLA-A*36

Product number: 101.419-06/06u

Lot number: 04R

Intended use: HLA-A*36 high resolution histocompatibility testing

Manufacturer: Olerup SSP AB

Franzengatan 5

SE-112 51 Stockholm, Sweden

Phone: +46-8-717 88 27 **Fax:** +46-8-717 88 18

We, *Olerup* SSP AB, hereby declare that this product, to which this Declaration of Conformity relates is in conformity with the following Standard(s) and other normative document(s) ISO 9001:2008 and ISO 13485:2003, following the provisions of the 98/79/EC Directive on *in vitro* diagnostic medical devices, Annex II List B, conformity assessed using Annex IV, as transposed into the national laws of the Member States of the European Union.

The Technical Documentation File is maintained at *Olerup* SSP AB, Franzengatan 5, SE-112 51 Stockholm, Sweden.

Notified Body: Lloyd's Register Quality Assurance Limited, Hiramford, Middlemarch Office Village, Siskin Drive, Coventry CV3 4FJ, United Kingdom. (Notified Body number: 0088.)

Stockholm, Sweden 2012-June-29

Ann-Cathrin Jareman Head of QA and Regulatory Affairs

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Lot No.: **04R** Lot-specific information

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Lot No.: **04R** Lot-specific information

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