

Olerup SSP[®] HLA-A*25

Product number:	101.423-06 – including <i>Taq</i> polymerase
Lot number:	20G
Expiry date:	2011-September-01
Number of tests:	6
Number of wells per test:	10
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. 20G.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*[®] HLA-A*25 LOT

The HLA-A*25 specificity and interpretation tables have been updated for the HLA-A alleles described since the previous *Olerup SSP*[®] HLA-A*25 lot was made (**Lot No. 23F**).

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

Well	5'-primer	3'-primer	rationale
9	New	New	New primer pair for the A*2508 allele.
10	New	New	New primer pair for the A*2507 allele.

PRODUCT DESCRIPTION

HLA-A*25 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the A*2501 to A*2508 alleles.

PLATE LAYOUT

Each test consists of 10 PCR reactions in a 16 well cut PCR plate. Wells 11 to 16 are empty.

1	2	3	4	5	6	7	8
9	10	empty	empty	empty	empty	empty	empty

The 16 well PCR plate is marked with ‘HLA-A*25’ in silver/gray ink.

Well No. 1 is marked with the Lot No. ‘20G’.

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 16 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*25 SSP subtypings will be influenced by most A*01, eleven A*02, two A*03, most A*11, the A*2313, four A*24, the A*26, two A*31, most A*32, the A*3313, the A*34, the A*36, the A*4301, most A*66, most A*68, the A*6901, the A*7410 and the A*8001 allele when present on the other haplotype.

UNIQUELY IDENTIFIED ALLELES

All the HLA-A*25 alleles, i.e. **A*2501 to A*2508**, recognized by the HLA Nomenclature Committee in July 2009¹ will give rise to unique amplification patterns by the primers in the HLA-A*25 subtyping kit.

The HLA-A*25 subtyping kit cannot distinguish the A*250101 and A*250102 alleles.

¹HLA-A alleles listed on the IMGT/HLA web page 2009-July-17, release 2.26.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

The 8 HLA-A*25 alleles can be combined in 36 homozygous and heterozygous combinations. Twenty-two of these genotypes do not give rise to unique amplification patterns. The different sizes of the specific PCR products generated by primer mix 7 were not considered in these calculations.

Lot No.: **20G**

Lot-specific information

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+++++--+ --	2502, 2504 = 2502, 2506
+++---+- --	2503, 2504 = 2503, 2506
+++---+- --	2501, 2503 = 2503, 2503
+++---++ --	2504, 2505 = 2505, 2506
+++---+- +-	2504, 2508 = 2506, 2508
+++---+- -+	2504, 2507 = 2506, 2507
+++---+- --	2501, 2504 = 2501, 2506 = 2504, 2504 = 2504, 2506
+++---+- --	2501, 2505 = 2505, 2505
+++----- +-	2501, 2508 = 2508, 2508
+++----- -+	2501, 2507 = 2507, 2507

2501 = 250101-250102

SPECIFICITY TABLE

HLA-A*25 SSP subtyping

Specificities and sizes of the PCR products of the 10 primer mixes used for HLA-A*25 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-A*25 alleles	Other amplified HLA-A alleles ³
1⁶	175 bp	800 bp	*250101-2505, 2507, 2508	*9235, 260101-2603, 2605-2608, 2610-2628, 2629 ^w , 2630-2633, 2635-2638, 2640, 4301, 6601, 6604-6609, 6610 ^w
2^{4,7}	75 bp	800 bp	*250101-2508	*320101-3202, 3204, 3206-3219N
3^{4,7}	100 bp	800 bp	*250101, 250102, 2503-2508	*01010101-0104N, 0106, 0108-0112, 0114-0116N, 0118N-0135, 0137, 0341, 1117, 1119, 1140, 2444 ^w , 260101-2612, 2614-2618, 2620-2628, 2629 ^w , 2631, 2632, 2634-2638, 2640, 3103, 3313, 3601-3604, 4301, 6605, 7410, 8001
4⁴	100 bp	800 bp	*2502	*0113, 0117, 110101-1111, 1113-1116, 1120-1127, 1129-1139, 1141-1144, 2613, 2619, 2633, 340101-3406, 3408, 6601, 6604, 6606-6610
5	425 bp	1070 bp	*2502	*0234-023503, 025601, 025602, 0262, 0278, 9203, 2313, 2407, 2419, 2424, 2613, 2619, 340101-3408, 6601, 6602, 6604, 6606-6610, 680101-680202, 6806-6814,

				6816-6819, 6821-6830, 6832-6848, 6901
6	200 bp	1070 bp	*2503	*0255, 0324, 2620, 3215, 3408
7⁵	155 bp, 175 bp	800 bp	*2504, 2506	*2608, 2609, 3103, 3104, 340101-3408
8⁴	125 bp	1070 bp	*2505	
9	135 bp	1070 bp	*2508	
10	170 bp	1070 bp	*2507	

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*25 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 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 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*25 subtyping.

In addition, wells number 2, 3, 4 and 7 contain 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*25 alleles will be amplified by the A*25 primer mixes 1 to 7.

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

⁵Primer mix 7: Specific PCR fragment of 155 bp in the A*2504 and A*2608 alleles. Specific PCR fragment of 175 in the A*2506 and A*2609, 3103, 3104 and 340101 to 3408 alleles.

⁶Primer mix 1 may give rise to a PCR fragment approx. 500 bp in size. This band should be disregarded in the interpretation of HLA-A*25 subtypings.

⁷Primer mixes 2 and 3 have a tendency of giving rise to non-specific amplifications.

‘w’, may be weakly amplified.

INTERPRETATION TABLE								
HLA-A*25 SSP subtyping								
Amplification patterns of the A*2501 to A*2508 alleles								
	Well ⁴							
	1	2	3	4	5	6	7	8
Length of spec.	175	75	100	100	425	200	155	125
PCR product							175	
Length of int.	800	800	800	800	1070	1070	800	1070
pos. control ¹								
5'-primer(s) ²	418	266	282	282	28	102	423	423
	5' -AgA 3' ^{5'} -ACg 3' ^{5'} -CAC 3' ^{5'} -CAg 3' ^{5'} -TCg 3' ^{5'} -ACA 3' ^{5'} -gCT 3' ^{5'} -gCT 3'							
	423	266						
	5' -gCT 3' ^{5'} -ACg 3'							
3'-primer(s) ³	559	302	341	341	282	259	538	506
	5' -CCg 3' ^{5'} -ggC 3' ^{5'} -CgT 3' ^{5'} -CgT 3' ^{5'} -gAC 3' ^{5'} -gTT 3' ^{5'} -CTg 3' ^{5'} -TgT 3'							
					282		559	
					5' -gAC 3'		5' -CgT 3'	
Well No.	1	2	3	4	5	6	7	8
HLA-A allele								
*250101, 250102	1	2	3					
*2502	1	2		4	5			
*2503	1	2	3			6		
*2504	1	2	3				7	
*2505	1	2	3					8
*2506		2	3				7	
*2507	1	2	3					
*2508	1	2	3					
*01010101-0104N, 0106, 0108-0112, 0114-0116N, 0118N-0135, 0137, 0341, 1117, 1119, 1140, 2604, 2634, 3313, 3601-3604, 7410, 8001			3					
*0113, 0117, 110101-1111, 1113-1116, 1120-1127, 1129-1139, 1141-1144				4				
*0234-023503, 025601, 025602, 0262, 0278, 9203, 2313, 2407, 2419, 2424, 6602, 680101-680202, 6806-6814, 6816-6819, 6821-6830, 6832-6848, 6901					5			
*0255, 0324						6		
Well No.	1	2	3	4	5	6	7	8

INTERPRETATION TABLE		
HLA-A*25 SSP subtyping		
Amplification patterns of the A*25 alleles		
Well ⁴		
9	10	
135	170	Length of spec. PCR product
1070	1070	Length of int. pos. control ¹
423	650	5'-primer(s) ²
5' -gCT 3' 5' -Cgg 3'		
518	777	3'-primer(s) ³
5' -CCA 3' 5' -gCA 3'		
9	10	Well No.
		HLA-A allele
		*250101, 250102
		*2502
		*2503
		*2504
		*2505
		*2506
	10	*2507
9		*2508
		*01010101-0104N, 0106, 0108- 0112, 0114-0116N, 0118N- 0135, 0137, 0341, 1117, 1119, 1140, 2604, 2634, 3313, 3601- 3604, 7410, 8001
		*0113, 0117, 110101-1111, 1113-1116, 1120-1127, 1129- 1139, 1141-1144
		*0234-023503, 025601, 025602, 0262, 0278, 9203, 2313, 2407, 2419, 2424, 6602, 680101-680202, 6806-6814, 6816-6819, 6821-6830, 6832- 6848, 6901
		*0255, 0324
9	10	Well No.

Length of spec.	175	75	100	100	425	200	155	125
PCR product							175	
Well No.	1	2	3	4	5	6	7	8
*2444			w					
*260101-2603, 2605-260702, 2610-2612, 2614-2618, 2621- 2628, 2631, 2632, 2635-2638, 2640, 4301, 6605	1		3					
*2608	1		3				7	
*2609, 3103			3				7	
*2613, 2619, 6601, 6604, 6606- 6609	1			4	5			
*2620	1		3			6		
*2629	w		3					
*2630, 9235	1							
*2633	1			4				
*3104							7	
*320101-3202, 3204, 3206- 3214, 3216-3219N		2						
*3215		2				6		
*340101-3406				4	5		7	
*3407					5		7	
*3408				4	5	6	7	
*6610	w			4	5			
HLA-A allele								
Well No.	1	2	3	4	5	6	7	8

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*25 subtyping. .

In addition, wells number 2, 3, 4 and 7 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

135	170	Length of spec. PCR product
9	10	Well No.
		*2444
		*260101-2603, 2605-260702, 2610-2612, 2614-2618, 2621- 2628, 2631, 2632, 2635-2638, 2640, 4301, 6605
		*2608
		*2609, 3103
		*2613, 2619, 6601, 6604, 6606- 6609
		*2620
		*2629
		*2630, 9235
		*2633
		*3104
		*320101-3202, 3204, 3206- 3214, 3216-3219N
		*3215
		*340101-3406
		*3407
		*3408
		*6610
9	10	HLA-A allele Well No.

²The nucleotide position, in the 1st, 2nd or 3rd exons, 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 the 2nd or 3rd exons, 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.

⁴Primer mix 7: Specific PCR fragment of 155 bp in the A*2504 and A*2608 alleles. Specific PCR fragment of 175 in the A*2506 and A*2609, 3103, 3104 and 3401 to 3408 alleles.

'w', may be weakly amplified.

CELL LINE VALIDATION SHEET													
HLA-A*25 SSP subtyping kit													
				Well									
				1	2	3	4	5	6	7	8	9	10
				200962801	200962802	200962803	200962804	200962805	200962806	200962807	200962808	200962809	200962810
	IHWC cell line	A*	A*	Lot No.:									
1	9001 SA	*2402		-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*0201		-	-	-	-	-	-	-	-	-	-
3	9011 E4181324	*0101		-	-	+	-	-	-	-	-	-	-
4	9275 GU373	*3001		-	-	-	-	-	-	-	-	-	-
5	9009 KAS011	*0101		-	-	+	-	-	-	-	-	-	-
6	9353 SM	*0201	*2603	+	-	+	-	-	-	-	-	-	-
7	9020 QBL	*2601		+	-	+	-	-	-	-	-	-	-
8	9025 DEU	*3101		-	-	-	-	-	-	-	-	-	-
9	9026 YAR	*2601		+	-	+	-	-	-	-	-	-	-
10	9107 LKT3	*2402		-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT	*2902		-	-	-	-	-	-	-	-	-	-
12	9052 DBB	*0201		-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM	*0201		-	-	-	-	-	-	-	-	-	-
14	9071 OLGA	*3101		-	-	-	-	-	-	-	-	-	-
15	9075 DKB	*2402		-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*2902		-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540	*0301	*8001	-	-	+	-	-	-	-	-	-	-
18	9257 32367	*3303	*7401	-	-	-	-	-	-	-	-	-	-
19	9038 BM16	*0201		-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*0201		-	-	-	-	-	-	-	-	-	-
21	9064 AMALA	*0217		-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*0201		-	-	-	-	-	-	-	-	-	-
23	9124 IHL	*0201	*3401	-	-	-	+	+	-	+	-	-	-
24	9035 JBUSH	*3201		-	+	-	-	-	-	-	-	-	-
25	9049 IBW9	*3301		-	-	-	-	-	-	-	-	-	-
26	9285 WT49	*0205		-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*2410	*2901	-	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB	*0201	*2902	-	-	-	-	-	-	-	-	-	-
29	9050 MOU	*2902		-	-	-	-	-	-	-	-	-	-
30	9021 RSH	*3001	*6802	-	-	-	-	+	-	-	-	-	-
31	9019 DUCAF	*3002		-	-	-	-	-	-	-	-	-	-
32	9297 HAG	*0201		-	-	-	-	-	-	-	-	-	-
33	9098 MT14B	*3101		-	-	-	-	-	-	-	-	-	-
34	9104 DHIF	*3101		-	-	-	-	-	-	-	-	-	-
35	9302 SSTO	*3201		-	+	-	-	-	-	-	-	-	-
36	9024 KT17	*0206	*1101	-	-	-	+	-	-	-	-	-	-
37	9065 HHKB	*0301		-	-	-	-	-	-	-	-	-	-
38	9099 LZL	*0217		-	-	-	-	-	-	-	-	-	-
39	9315 CML	*0101	*0301	-	-	+	-	-	-	-	-	-	-
40	9134 WHONP199	*0207	*3001	-	-	-	-	-	-	-	-	-	-
41	9055 H0301	*0301		-	-	-	-	-	-	-	-	-	-
42	9066 TAB089	*0207		-	-	-	-	-	-	-	-	-	-
43	9076 T7526	*0207		-	-	-	-	-	-	-	-	-	-
44	9057 TEM	*6601		+	-	-	+	+	-	-	-	-	-
45	9239 SHJO	*2301	*2402	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU	*0301		-	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*0216	*0301	-	-	-	-	-	-	-	-	-	-
48	9303 TER-ND	*0201	*1101	-	-	-	+	-	-	-	-	-	-

CERTIFICATE OF ANALYSIS

Olerup SSP[®] HLA-A*25 SSP

Product number: 101.423-06 – including *Taq* polymerase
Lot number: 20G
Expiry date: 2011-September-01
Number of tests: 6
Number of Wells per test: 10

Well specifications:

Well No.	Production No.	Well No.	Production No.
1	2009-628-01	9	2009-628-09
2	2009-628-02	10	2009-628-10
3	2009-628-03		
4	2009-628-04		
5	2009-628-05		
6	2009-628-06		
7	2009-628-07		
8	2009-628-08		

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

No DNAs carrying the alleles to be amplified by primer solutions 6 and 8 to 10 were available. The specificities of the primers in primer solutions 6 and 8 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solution 9 it was only possible to test the 5'-primer, the 3'-primer was not possible to test. In primer solution 10 it was only possible to test the 3'-primer, the 5'-primer was not possible to test. An additional 3'-primer in primer solution 7 was tested by separately adding one additional 3'-primer.

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

Date of approval: 2009-October-01

Approved by:

Quality Control, Supervisor

Lot No.: **20G**

Lot-specific information

www.olerup.com

Declaration of Conformity

Product name: *Olerup* SSP® HLA-A*25
Product number: 101.423-06
Lot number: 20G

Intended use: HLA-A*25 high resolution histocompatibility testing

Manufacturer: *Olerup* SSP AB
Hasselstigen 1
SE-133 33 Saltsjöbaden, 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, as transposed into the national laws of the Member States of the European Union.

The Technical Documentation File is maintained at *Olerup* SSP AB, Hasselstigen 1, SE-133 33 Saltsjöbaden, Sweden.

The Authorized Representative located within the Community is: *Olerup* SSP AB.

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

Saltsjöbaden, Sweden
2009-October-01

Olle Olerup
Managing Director

Lot No.: **20G**

Lot-specific information

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