

101.416-12/04 – including *Taq* pol., IFU-01
101.416-12u/04u – without *Taq* polymerase, IFU-02

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

Lot No.: **62Y**

Lot-specific information
Olerup SSP® HLA-A*11

Product number:	101.416-12/04 – including <i>Taq</i> pol. 101.416-12u/04u – without <i>Taq</i> pol.
Lot number:	62Y
Expiry date:	2018-January-01
Number of tests:	12 tests – Product No. 101.416-12/12u 4 tests – Product No. 101.416-04/04u
Number of wells per test:	63+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. 62Y.

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*11 LOT (82V)**

The HLA-A*11 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

A well containing Negative Control primer pairs has been added.

The format of the Product Insert and Worksheet have been changed.

¹As described in section Uniquely Identified Alleles.

The HLA-A*11 primer set, specificity and interpretation tables have been updated for the HLA-A alleles described since the previous *Olerup SSP®* HLA-A*11 lot was made (**Lot No. 82V**). The kit design is based on IMGT/HLA database 3.20.0.

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Lot-specific information

As of lot series V, the Specificity Table is included in the lot-specific Product Insert, and the Interpretation Table is included in the Worksheet.

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

Well	5'-primer	3'-primer	rationale
7	-	Added	3'-primer added for the A*11:155 allele.
8	Added	-	5'-primer added for the A*11:196 allele.
19	-	Added	Positive control primer pairs exchanged for decreased tendency of primer oligomer formation, 3'-primer added for the A*11:215 allele.
20	-	Added	3'-primer added for the A*11:131 allele.
27	-	Added	3'-primers added for the A*11:155 and 11:208N alleles.
30	-	Added	3'-primers added for the A*11:131, 11:182Q and 11:215N alleles.
34	-	Added	3'-primers added for the A*11:208N alleles.
36	Added	Added	Primer pairs added for the A*11:210N alleles.
37	-	Added	3'-primer added from well 40.
38	-	Added	3'-primer added for the A*11:189 allele.
39	Added	-	5'-primer added for the A*11:166 allele.
40	Removed, added	Moved, added	5'-primer removed, 3'-primers moved to wells 37 and 41, primer pair added for the A*11:199 alleles.
41	-	Added	3'-primer added and modified for increased HLA-specific amplification from well 40, 3'-primer added for the A*11:01:57 allele.
42	-	Added	3'-primer added for the A*11:189 allele.
45	Added	-	5'-primer added for the A*11:210N allele.
46	-	Added	3'-primer added for the A*11:193 allele.
49	-	Added	3'-primer added for the A*11:182Q allele.
50	Added	-	5'-primer added for the A*11:210N allele.
54	Added	Added	5'-primer added for the A*11:166, 3'-primers added for the A*11:153:01-11:153:02 alleles.
55	-	Added	3'-primer added for the A*11:194 allele.
57	-	Added	3'-primer added for the A*11:193 allele.
58	-	Added	3'-primer added for the A*11:180N allele.
60	-	Added	3'-primer added for the A*11:153:01-11:153:02 alleles.
61	Added	-	5'-primer added for improved allelic resolution of the A*11:54 allele.
62	Exchanged	Exchanged	Primer pair exchanged for the A*11:20 allele and for increased HLA-specific amplification.
63	-	Added	3'-primer added for the A*11:194 allele.
64	-	-	Updated negative control.

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Lot-specific information

Change in revision R01 compared to R00:

1. Primer mix 5 does not amplify the A*11:77 and 11:126 and the A*03:26 alleles. This has been corrected in the Specificity and Interpretation Tables. Thus, this lot of the HLA-A*11 subtyping kit cannot distinguish the A*11:01:01:01-11:01:20, 11:01:22-11:01:43, 11:01:45-11:01:56, 11:01:58-11:01:61, 11:01:63-11:01:66, 11:82-11:85, 11:87-11:88, 11:91:01-11:93, 11:95, 11:97, 11:103-11:104, 11:107, 11:114, 11:116, 11:119:01-11:119:02, 11:122-11:123, 11:125, 11:132-11:133, 11:136, 11:138, 11:141, 11:144-11:146, 11:148-11:152, 11:160, 11:162, 11:164-11:165, 11:167, 11:169, 11:177, 11:179, 11:181, 11:184-11:188, 11:192, 11:195, 11:197-11:198, 11:200, 11:202-11:207, 11:212-11:214 alleles and the A*11:126 allele, nor the A*11:02:01-11:02:06, 11:113, 11:140, 11:176 alleles and the A*11:77 allele.

Change in revision R02 compared to R01:

1. Primer mix 46 does not amplify the A*11:100 and 11:175 and the A*01:109 and 03:182 alleles. This has been corrected in the Specificity and Interpretation Tables.

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Lot-specific information

Well **64** 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*11 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the HLA-A*11:01 to A*11:215N alleles.

PLATE LAYOUT

Each test consists of 64 PCR reactions in a 64 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	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	NC

The 64 well cut PCR plate is marked with ‘HLA-A*11’ in silver/gray ink.

Well No. 1 is marked with Lot No ‘62Y’.

Wells 1 to 63 – HLA-A*11 high resolution primers.

Well 64 – 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.

INTERPRETATION

Due to the sharing of sequence motifs between HLA-A alleles non-HLA-A*11 alleles will be amplified by primer mixes 1, 3 to 18, 20 to 32, 34 to 43, 46 to 50, 52 to 56, 58 and 60 to 62. In addition, a few HLA-B and HLA-C alleles will be amplified by primer mixes 1, 10, 19, 20, 22, 26, 30, 33, 36, 38, 39, 43, 46, 54, 56 and 61.

For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the HLA-A*11 alleles, i.e. **A*11:01 to A*11:215N**, recognized by the HLA Nomenclature Committee in April 2015^{1,2} will be amplified by the primers in the HLA-A*11 SSP kit³.

The HLA-A*11 kit enables separation of the confirmed HLA-A*11 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*11 alleles is listed below.

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The HLA-A*11 kit also enables identification of polymorphisms in exons outside of the region encoding the peptide binding domain and of null and alternatively expressed alleles.

The following HLA-A*11 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

Alleles	Primer mix	Alleles	Primer mix
A*11:09, 11:196	8	A*11:79, 11:129	45
A*11:13, 11:54	16	A*11:81, 11:108	52
A*11:58, 11:67	34	A*11:86, 11:142	50
A*11:59, 11:60	41	A*11:115N, 11:180N	58
A*11:62, 11:68	35	A*11:120, 11:171	63
A*11:63, 11:69N	42	A*11:124, 11:74	59
A*11:64, 11:65	36	A*11:127N, 11:137N	60
A*11:66, 11:72	37	A*11:173, 11:193	46, 57

The HLA-A*11 subtyping kit cannot distinguish the silent mutations in the A*11:01:01-11:01:20, 11:01:22-11:01:43, 11:01:45-11:01:56, 11:01:58-11:01:61 and 11:01:63-11:01:66 alleles, the A*11:01:21, 11:01:44, 11:01:62 alleles, the A*11:02:01-11:02:06 alleles, the A*11:33:01-11:33:02 alleles, the A*11:70:01-11:70:02 or the A*11:153:01-11:153:02 alleles.

¹HLA-A alleles listed on the IMGT/HLA web page 2015-April-17, release 3.20.0, 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>.

³This lot of the HLA-A*11 subtyping kit cannot distinguish the A*11:01:01-11:01:20, 11:01:22-11:01:43, 11:01:45-11:01:56, 11:01:58-11:01:61, 11:01:63-11:01:66, 11:82-11:85, 11:87-11:88, 11:91:01-11:93, 11:95, 11:97, 11:103-11:104, 11:107, 11:114, 11:116, 11:119:01-11:119:02, 11:122-11:123, 11:125, 11:132-11:133, 11:136, 11:138, 11:141, 11:144-11:146, 11:148-11:152, 11:160, 11:162, 11:164-11:165, 11:167, 11:169, 11:177, 11:179, 11:181, 11:184-11:188, 11:192, 11:195, 11:197-11:198, 11:200, 11:202-11:207, 11:212-11:214 alleles and the A*11:126 allele, nor the A*11:02:01-11:02:06, 11:113, 11:140, 11:176 alleles and the A*11:77 allele.

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ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
A*11:01:01:01	Confirmed	A*11:01:50	Unconfirmed	A*11:29	Confirmed	A*11:78N	Confirmed
A*11:01:01:02	Unconfirmed	A*11:01:51	Unconfirmed	A*11:30	Confirmed	A*11:79	Unconfirmed
A*11:01:02	Unconfirmed	A*11:01:52	Unconfirmed	A*11:31	Unconfirmed	A*11:80	Unconfirmed
A*11:01:03	Unconfirmed	A*11:01:53	Unconfirmed	A*11:32	Confirmed	A*11:81	Confirmed
A*11:01:04	Confirmed	A*11:01:54	Unconfirmed	A*11:33:01	Unconfirmed	A*11:82	Unconfirmed
A*11:01:05	Unconfirmed	A*11:01:55	Unconfirmed	A*11:33:02	Confirmed	A*11:83	Unconfirmed
A*11:01:06	Unconfirmed	A*11:01:56	Unconfirmed	A*11:34	Unconfirmed	A*11:84	Unconfirmed
A*11:01:07	Unconfirmed	A*11:01:57	Unconfirmed	A*11:35	Unconfirmed	A*11:85	Unconfirmed
A*11:01:08	Unconfirmed	A*11:01:58	Unconfirmed	A*11:36	Unconfirmed	A*11:86	Confirmed
A*11:01:09	Unconfirmed	A*11:01:59	Unconfirmed	A*11:37	Confirmed	A*11:87	Unconfirmed
A*11:01:10	Unconfirmed	A*11:01:60	Unconfirmed	A*11:38	Unconfirmed	A*11:88	Unconfirmed
A*11:01:11	Confirmed	A*11:01:61	Unconfirmed	A*11:39	Unconfirmed	A*11:89	Confirmed
A*11:01:12	Unconfirmed	A*11:01:62	Unconfirmed	A*11:40	Unconfirmed	A*11:90	Confirmed
A*11:01:13	Unconfirmed	A*11:01:63	Unconfirmed	A*11:41	Unconfirmed	A*11:91:01	Unconfirmed
A*11:01:14	Unconfirmed	A*11:01:64	Confirmed	A*11:42	Unconfirmed	A*11:91:02	Unconfirmed
A*11:01:15	Confirmed	A*11:01:65	Unconfirmed	A*11:43	Unconfirmed	A*11:92	Unconfirmed
A*11:01:16	Unconfirmed	A*11:01:66	Unconfirmed	A*11:44	Confirmed	A*11:93	Unconfirmed
A*11:01:17	Confirmed	A*11:02:01	Confirmed	A*11:45	Confirmed	A*11:94	Unconfirmed
A*11:01:18	Confirmed	A*11:02:02	Unconfirmed	A*11:46	Confirmed	A*11:95	Unconfirmed
A*11:01:19	Confirmed	A*11:02:03	Unconfirmed	A*11:47	Confirmed	A*11:96	Unconfirmed
A*11:01:20	Unconfirmed	A*11:02:04	Confirmed	A*11:48	Confirmed	A*11:97	Unconfirmed
A*11:01:21	Unconfirmed	A*11:02:05	Unconfirmed	A*11:49	Unconfirmed	A*11:98	Unconfirmed
A*11:01:22	Unconfirmed	A*11:02:06	Unconfirmed	A*11:50Q	Unconfirmed	A*11:99N	Unconfirmed
A*11:01:23	Unconfirmed	A*11:03	Confirmed	A*11:51	Unconfirmed	A*11:100	Unconfirmed
A*11:01:24	Unconfirmed	A*11:04	Confirmed	A*11:52Q	Confirmed	A*11:101	Unconfirmed
A*11:01:25	Unconfirmed	A*11:05	Confirmed	A*11:54	Confirmed	A*11:102	Unconfirmed
A*11:01:26	Unconfirmed	A*11:06	Unconfirmed	A*11:55	Unconfirmed	A*11:103	Unconfirmed
A*11:01:27	Confirmed	A*11:07	Unconfirmed	A*11:56	Confirmed	A*11:104	Unconfirmed
A*11:01:28	Unconfirmed	A*11:08	Confirmed	A*11:57	Unconfirmed	A*11:105	Confirmed
A*11:01:29	Unconfirmed	A*11:09	Confirmed	A*11:58	Confirmed	A*11:106	Confirmed
A*11:01:30	Confirmed	A*11:10	Confirmed	A*11:59	Unconfirmed	A*11:107	Unconfirmed
A*11:01:31	Unconfirmed	A*11:11	Unconfirmed	A*11:60	Confirmed	A*11:108	Unconfirmed
A*11:01:32	Unconfirmed	A*11:12	Confirmed	A*11:61	Unconfirmed	A*11:109N	Unconfirmed
A*11:01:33	Confirmed	A*11:13	Confirmed	A*11:62	Unconfirmed	A*11:110	Unconfirmed
A*11:01:34	Confirmed	A*11:14	Unconfirmed	A*11:63	Confirmed	A*11:111	Unconfirmed
A*11:01:35	Unconfirmed	A*11:15:01	Confirmed	A*11:64	Unconfirmed	A*11:112	Confirmed
A*11:01:36	Confirmed	A*11:15:02	Unconfirmed	A*11:65	Unconfirmed	A*11:113	Unconfirmed
A*11:01:37	Confirmed	A*11:16	Unconfirmed	A*11:66	Unconfirmed	A*11:114	Unconfirmed
A*11:01:38	Unconfirmed	A*11:17	Unconfirmed	A*11:67	Confirmed	A*11:115N	Unconfirmed
A*11:01:39	Confirmed	A*11:18	Unconfirmed	A*11:68	Unconfirmed	A*11:116	Unconfirmed
A*11:01:40	Confirmed	A*11:19	Confirmed	A*11:69N	Confirmed	A*11:117	Confirmed
A*11:01:41	Unconfirmed	A*11:20	Confirmed	A*11:70:01	Confirmed	A*11:118	Unconfirmed
A*11:01:42	Unconfirmed	A*11:21N	Unconfirmed	A*11:70:02	Unconfirmed	A*11:119:01	Unconfirmed
A*11:01:43	Confirmed	A*11:22	Unconfirmed	A*11:71	Confirmed	A*11:119:02	Unconfirmed
A*11:01:44	Unconfirmed	A*11:23	Confirmed	A*11:72	Unconfirmed	A*11:120	Unconfirmed
A*11:01:45	Unconfirmed	A*11:24:01	Confirmed	A*11:73	Confirmed	A*11:121	Unconfirmed
A*11:01:46	Unconfirmed	A*11:24:02	Unconfirmed	A*11:74	Confirmed	A*11:122	Unconfirmed
A*11:01:47	Confirmed	A*11:25	Unconfirmed	A*11:75	Unconfirmed	A*11:123	Unconfirmed
A*11:01:48	Unconfirmed	A*11:26	Unconfirmed	A*11:76	Unconfirmed	A*11:124	Unconfirmed

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Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
A*11:126	Confirmed	A*11:155	Confirmed	A*11:185	Unconfirmed	A*11:215N	Unconfirmed
A*11:127N	Unconfirmed	A*11:156	Confirmed	A*11:186	Unconfirmed		
A*11:128	Confirmed	A*11:157	Unconfirmed	A*11:187	Unconfirmed		
A*11:129	Confirmed	A*11:158	Unconfirmed	A*11:188	Unconfirmed		
A*11:130	Unconfirmed	A*11:159	Unconfirmed	A*11:189	Confirmed		
A*11:131	Confirmed	A*11:160	Unconfirmed	A*11:190	Unconfirmed		
A*11:132	Unconfirmed	A*11:161	Unconfirmed	A*11:191	Unconfirmed		
A*11:133	Unconfirmed	A*11:162	Unconfirmed	A*11:192	Unconfirmed		
A*11:134	Confirmed	A*11:163	Confirmed	A*11:193	Confirmed		
A*11:135	Confirmed	A*11:164	Unconfirmed	A*11:194	Unconfirmed		
A*11:136	Unconfirmed	A*11:165	Unconfirmed	A*11:195	Unconfirmed		
A*11:137N	Unconfirmed	A*11:166	Confirmed	A*11:196	Confirmed		
A*11:138	Unconfirmed	A*11:167	Unconfirmed	A*11:197	Unconfirmed		
A*11:139	Unconfirmed	A*11:168	Unconfirmed	A*11:198	Unconfirmed		
A*11:140	Unconfirmed	A*11:169	Unconfirmed	A*11:199	Confirmed		
A*11:141	Unconfirmed	A*11:170Q	Unconfirmed	A*11:200	Unconfirmed		
A*11:142	Unconfirmed	A*11:171	Unconfirmed	A*11:201	Unconfirmed		
A*11:143	Unconfirmed	A*11:172	Unconfirmed	A*11:202	Unconfirmed		
A*11:144	Unconfirmed	A*11:173	Unconfirmed	A*11:203	Unconfirmed		
A*11:145	Unconfirmed	A*11:174	Unconfirmed	A*11:204	Unconfirmed		
A*11:146	Unconfirmed	A*11:175	Unconfirmed	A*11:205	Unconfirmed		
A*11:147	Unconfirmed	A*11:176	Unconfirmed	A*11:206	Unconfirmed		
A*11:148	Unconfirmed	A*11:177	Unconfirmed	A*11:207	Unconfirmed		
A*11:149	Unconfirmed	A*11:178	Unconfirmed	A*11:208N	Confirmed		
A*11:150	Unconfirmed	A*11:179	Unconfirmed	A*11:209	Unconfirmed		
A*11:151	Unconfirmed	A*11:180N	Unconfirmed	A*11:210N	Unconfirmed		
A*11:152	Unconfirmed	A*11:181	Unconfirmed	A*11:211	Confirmed		
A*11:153:01	Unconfirmed	A*11:182Q	Unconfirmed	A*11:212	Unconfirmed		
A*11:153:02	Confirmed	A*11:183	Confirmed	A*11:213	Unconfirmed		
A*11:154	Unconfirmed	A*11:184	Unconfirmed	A*11:214	Unconfirmed		

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2015-April-17, release 3.20.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in HLA-A*11 homo- and heterozygotes is available upon request.

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Lot-specific information
SPECIFICITY TABLE

HLA-A*11 SSP subtyping

Specificities and sizes of the PCR products of the 63+1 primer mixes used for HLA-A*11 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-A*11 alleles ³	Other amplified HLA-A alleles ⁴
1	195 bp	800 bp	*11:01:01:01-11:01:66, 11:03-11:13, 11:15:01-11:15:02, 11:20-11:27, 11:29-11:37, 11:39, 11:41-11:44, 11:46-11:52Q, 11:54-11:56, 11:58-11:70:02, 11:72-11:76, 11:79-11:97, 11:99N-11:100, 11:102-11:105, 11:107-11:109N, 11:112, 11:114-11:120, 11:122-11:139, 11:141-11:146, 11:148-11:160, 11:162-11:167, 11:169-11:175, 11:177, 11:179-11:189, 11:191-11:200, 11:202-11:215N	*01:13, 02:34-02:35:03, 02:56:01-02:56:02, 02:62, 02:78, 02:103, 03:01:01:01-03:01:08, 03:01:10-03:01:22, 03:01:24-03:07, 03:09-03:31, 03:33-03:35, 03:37-03:40, 03:42-03:56, 03:58-03:88, 03:90-03:106, 03:109-03:110, 03:112-03:141, 03:143-03:151, 03:153-03:160, 03:162N-03:171, 03:174-03:175, 03:177, 03:179-03:197N, 03:200Q-03:202, 03:204-03:205, 03:207-03:210, 03:212-03:218, 03:221, 24:19, 24:290, 30:18, 30:55, 31:89, 34:01:01-34:12, 66:01:01-66:02, 66:04, 66:06-66:10, 66:12-66:14, 66:16-66:22, 68:01:01:01-68:01:28, 68:01:30-68:02:09, 68:06-68:14, 68:16-68:19, 68:21:01-68:30, 68:32-68:35, 68:37-68:45, 68:47-68:56, 68:58-68:83, 68:85-68:89, 68:91, 68:93-68:108, 68:110-68:132, 69:01-69:03, 74:13, C*03:82
2	270 bp	1070 bp	*11:02:01-11:02:06, 11:14, 11:16, 11:38, 11:57, 11:77, 11:101, 11:110, 11:113, 11:140, 11:147, 11:176, 11:201	
3	190 bp	1070 bp	*11:03, 11:33:01-11:33:02, 11:175, 11:191	*01:61, 03:22:01-03:22:02, 03:42, 03:135, 30:01:01-30:04:02, 30:06-30:20, 30:22-30:27N, 30:29-30:34, 30:36-30:46, 30:48-30:51, 30:53, 30:55-30:71, 30:73N-30:79, 30:81-30:85, 30:88, 30:90-30:94, 31:03-31:04, 33:49, 34:02:01 ^w -34:02:04 ^w , 34:03, 34:04 ^w , 34:07 ^w -34:10N ^w , 74:23
4	235 bp	1070 bp	*11:04, 11:27, 11:35, 11:130, 11:209	*01:12, 01:14, 01:19, 02:156, 02:338, 03:01:01:01-03:01:29, 03:01:31-03:01:48, 03:01:51-03:17:02, 03:19-03:39, 03:41-03:74, 03:76-03:94, 03:96-03:97, 03:99-03:104, 03:106-03:134, 03:136-03:176, 03:178N-03:203, 03:205-03:207, 03:209-03:214, 03:216-03:219, 03:221, 24:92, 30:01:01-30:04:02, 30:06-30:13, 30:15-30:20, 30:22-30:27N, 30:29-30:42, 30:44-30:46, 30:48-30:51, 30:53-30:71, 30:73N-30:79, 30:81-30:94, 31:03-31:04, 32:04, 33:49, 34:02:01-34:04, 34:07-34:10N, 36:01-36:02, 36:05,

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				68:103:01-68:103:02, 74:23, 80:03
5⁵	85 bp 180 bp 210 bp	800 bp	*11:05 *11:110	*02:294, 32:54, 66:08
6	190 bp 550 bp	1070 bp	*11:07, 11:22 *11:06, 11:18	*01:79 ^w *01:104 ^w , 01:134 ^w , 02:38, 02:101:01, 02:135, 02:154, 02:447, 02:543, 25:11, 26:03:01, 26:06, 26:21, 26:30, 26:36, 26:92, 26:111
7⁷	210 bp	1070 bp	*11:08, 11:44, 11:50Q, 11:94, 11:155, 11:183, 11:191, 11:211	*01:01:01:01-01:01:01:57, 01:01:59-01:02, 01:04N, 01:07-01:11N, 01:13-01:18N, 01:21- 01:33, 01:35-01:40, 01:42-01:62, 01:64-01:65, 01:67:01-01:72, 01:74-01:88, 01:90-01:129, 01:131-01:135, 01:137-01:175, 01:178N- 01:179N, 03:18, 03:50, 03:66, 03:135, 03:153, 03:187, 30:04:01-30:04:02, 30:06, 30:17, 30:29, 30:46, 30:77, 30:90, 36:01-36:02, 36:04-36:05, 68:103:01-68:103:02
8^{5,8}	100 bp 175 bp	800 bp	*11:09, 11:34 *11:196, 11:201	*26:75 *01:129, 02:221, 23:41, 24:286, 29:15, 31:78
9^{5,6,8}	85 bp	800 bp	*11:27, 11:38-11:39, 11:94	*01:26, 01:136, 24:59, 24:285
10⁵	120 bp	1070 bp	*11:10	*01:51, 25:01:01-25:12N, 25:14-25:31, 26:01:01-26:06, 26:08-26:18, 26:20-26:29, 26:32-26:43:02, 26:45-26:64, 26:66-26:71N, 26:73-26:75, 26:77-26:91, 26:93-26:111, 33:13, 34:01:01-34:08, 34:10N-34:12, 66:01:01-66:01:03, 66:04-66:11, 66:13-66:15, 66:17-66:20, 66:22, 69:02, B*07:102, B*08:18, B*35:178, B*35:282, B*73:01-73:02, C*06:147
11	280 bp 215 bp	800 bp	*11:43 *11:01:01:01-11:01:56, 11:01:58-11:07, 11:09- 11:22, 11:27, 11:29- 11:30, 11:32-11:34, 11:36-11:43, 11:45- 11:47, 11:49, 11:51- 11:52Q, 11:54-11:93, 11:95-11:100, 11:102- 11:111, 11:112 ^w , 11:113-11:117, 11:119:01-11:138, 11:140-11:142, 11:144-11:157, 11:159-11:182Q, 11:184-11:190, 11:192-11:210N, 11:212-11:215N	*01:143, 26:35, 29:66, 31:03, 33:13 *01:12, 01:19, 01:25 ^w , 01:127, 01:136, 03:02:01-03:02:04, 03:10, 03:31-03:32, 03:65, 03:69N, 03:73, 03:76, 03:82, 03:90, 03:106, 03:113, 03:160, 03:167, 03:198, 03:218, 24:92
12	235 bp	1070 bp	*11:01:01:01-11:01:20, 11:01:22-11:01:43, 11:01:45-11:01:61, 11:01:63-11:03, 11:05- 11:25, 11:29-11:34, 11:36-11:47, 11:49, 11:51-11:52Q, 11:54-	*01:01:01:01-01:01:01:22, 01:01:24-01:01:47, 01:01:49-01:01:57, 01:01:59-01:02, 01:04N, 01:06-01:07, 01:09-01:11N, 01:13, 01:16N- 01:18N, 01:21-01:33, 01:35-01:40, 01:42- 01:62, 01:64-01:65, 01:67:01-01:72, 01:74- 01:88, 01:90-01:129, 01:131-01:146, 01:148, 01:150-01:158, 01:160N-01:175, 01:179N,

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13⁸	195 bp	800 bp	*11:11	*43:01, 68:130
14^{5,7}	100 bp	1070 bp	*11:01:01:01-11:11, 11:13-11:16, 11:20-11:27, 11:29-11:39, 11:41-11:52Q, 11:54-11:60, 11:61 ^w , 11:62-11:95, 11:97, 11:99N-11:105, 11:107-11:120, 11:122-11:155, 11:156 ^w , 11:157-11:158, 11:160-11:177, 11:179-11:215N	*01:13, 01:17, 03:63, 03:88, 25:02, 26:13, 26:19, 26:33, 29:66, 34:01:01 ^w -34:01:02 ^w , 34:02:01-34:04, 34:05 ^w , 34:06, 34:08, 34:10N, 34:11 ^w -34:12 ^w , 66:01:01-66:01:03, 66:04, 66:06-66:11, 66:13-66:14, 66:17-66:20, 66:22, 69:02
15^{5,6}	100 bp	800 bp	*11:12	*02:34 ^w -02:35:03 ^w , 02:56:01-02:56:02, 02:62, 02:78, 02:103, 03:01:01:01-03:01:09, 03:01:11-03:07, 03:09-03:22:02, 03:23:01 ^w -03:23:02 ^w , 03:24-03:28, 03:31, 03:33, 03:35, 03:37-03:40, 03:42-03:61, 03:64-03:87, 03:90-03:106, 03:109-03:112, 03:113 ^w , 03:114-03:151, 03:153-03:156, 03:157:01 ^w -03:157:02 ^w , 03:158-03:171, 03:173-03:175, 03:177-03:197N, 03:199-03:219, 03:221, 24:24, 24:290, 29:01:01:01-29:03, 29:04 ^w , 29:05-29:18, 29:21-29:29, 29:31-29:33, 29:35-29:47, 29:49-29:65, 29:67-29:73, 29:75-29:78N, 30:01:01-30:01:10, 30:08, 30:11:01-30:11:02, 30:14L-30:20, 30:23-30:26, 30:30, 30:35-30:43, 30:48-30:49, 30:52-30:56, 30:58-30:59N, 30:60 ^w , 30:62-30:63, 30:65, 30:71-30:75, 30:78N-30:79, 30:81-30:83, 30:86-30:89, 30:91-30:94, 31:89, 32:17, 34:09, 66:02, 66:12, 66:16, 66:21, 68:01:01:01-68:01:17, 68:01:19-68:02:09, 68:06-68:14, 68:16-68:19, 68:21:01-68:23, 68:25-68:30, 68:32-68:39, 68:41-68:71, 68:73-68:84, 68:86-68:89, 68:91-68:92, 68:94N-68:96, 68:98-68:108, 68:110-68:122, 68:124-68:126, 68:127 ^w , 68:128-68:132, 69:01, 69:03, 74:13
	215 bp		*11:24:02-11:25, 11:31, 11:35, 11:158	*01:06, 02:156, 02:338, 03:01:01:01-03:01:01:03, 03:01:03-03:01:05, 03:01:07-03:01:48, 03:01:50-03:01:54, 03:03N-03:05:01, 03:07-03:09, 03:11N-03:17:02, 03:19-03:30, 03:33-03:49, 03:51-03:64, 03:67-03:68N, 03:70-03:72, 03:74, 03:77-03:81, 03:83-03:89, 03:91N-03:94, 03:96-03:105,

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16^{5,6,8}	95 bp 210 bp	1070 bp	*11:13 *11:07, 11:26, 11:54, 11:117	*02:38, 02:101:01, 02:154, 02:447, 02:543, 03:18 ^w , 03:135 ^w , 23:10 ^w , 24:10:01-24:10:02, 24:46 ^w , 24:210, 24:300, 25:10, 31:24, 33:61
17	205 bp	1070 bp	*11:14, 11:50Q	*01:10, 30:01:01-30:01:06, 30:01:08-30:03, 30:07-30:08, 30:10-30:16, 30:18-30:20, 30:22, 30:24-30:26, 30:30-30:45, 30:48-30:51, 30:53-30:71, 30:73N-30:76N, 30:78N-30:79, 30:81-30:88, 30:91-30:94, 80:01:01:01-80:03
18	225 bp 240 bp	1070 bp	*11:47 *11:15:01, 11:170Q	*30:39
19^{5,8}	100 bp 175 bp 265 bp	800 bp	*11:134 *11:42 *11:46, 11:215N	B*39:75, B*40:268 B*07:111N
20	180 bp 235 bp	800 bp	*11:42, 11:131 *11:17, 11:40	B*39:75, B*40:268 *01:43, 26:01:01-26:01:29, 26:01:31-26:02:02, 26:04, 26:07:01-26:15, 26:17-26:19, 26:22-26:29, 26:31-26:34, 26:36-26:43:02, 26:45-26:56, 26:58-26:77, 26:79-26:91, 26:93-26:110, 43:01
21^{5,7}	100 bp	1070 bp	*11:17, 11:19, 11:40, 11:98, 11:121	*01:01:01:01-01:01:27, 01:01:29-01:01:56, 01:01:58-01:01:61, 01:01:63-01:04N, 01:06, 01:08-01:12, 01:14-01:16N, 01:18N-01:33, 01:35-01:70, 01:72-01:99, 01:101-01:104, 01:106-01:143, 01:145-01:175, 01:178N-01:179N, 02:346, 02:427, 03:41, 24:44 ^w , 24:109 ^w , 24:260 ^w , 25:01:01-25:01:09, 25:03-25:12N, 25:14, 25:16, 25:18-25:31, 26:01:01-26:01:21, 26:01:23-26:01:27, 26:01:29-26:12, 26:14-26:18, 26:20-26:29, 26:31-26:32, 26:34-26:43:02, 26:45-26:63, 26:66-26:82, 26:84-26:111, 31:03, 32:62, 33:13, 36:01-36:05, 43:01, 66:05, 66:15, 74:10, 80:01:01:01-80:03
22	150 bp 230 bp	1070 bp	*11:37 *11:06, 11:18	B*27:87 *02:05:01-02:06:04, 02:06:06-02:06:18, 02:08, 02:10, 02:14, 02:21, 02:28, 02:41, 02:44, 02:51, 02:54, 02:57, 02:61, 02:72, 02:79:01-02:79:02, 02:84, 02:91, 02:99, 02:106, 02:108, 02:122, 02:126-02:127, 02:137, 02:142-02:144, 02:154, 02:169-02:170, 02:172, 02:178-02:180, 02:229, 02:232, 02:244, 02:248, 02:259, 02:271, 02:278, 02:286,

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23^{5,6}	80 bp	800 bp	*11:08, 11:25	*02:03:01 ^w -02:03:08 ^w , 02:26, 02:99, 02:117 ^w , 02:148 ^w , 02:171:02, 02:253 ^w , 02:258 ^w , 02:264 ^w , 02:281 ^w , 02:315 ^w , 02:345 ^w , 02:355 ^w , 02:370 ^w , 02:393, 02:412 ^w , 02:431 ^w , 02:447 ^w , 02:463 ^w , 02:466 ^w , 02:480 ^w , 02:489 ^w , 02:505 ^w , 02:529 ^w , 02:541 ^w , 03:01:38, 03:123:02, 68:42 ^w , 68:54 ^w , 68:61 ^w , 68:63
24	295 bp 465 bp	1070 bp	*11:48 *11:21N	*01:41 *01:04N, 03:21N, 23:07N, 24:11N
25⁷	190 bp 220 bp	1070 bp	*11:135 *11:24:01, 11:47	*03:210 *03:01:02, 03:05:02, 30:02:05, 34:02:02, 80:01:01:01-80:03
26	305 bp	1070 bp	*11:26, 11:118	*01:03, 26:32, 26:70, 29:66, 32:62, 33:13, 36:03, 74:10, C*06:72
27⁸	370 bp 160 bp 205 bp 260 bp	1070 bp	*11:41 *11:208N *11:17, 11:155 *11:27, 11:38-11:39, 11:55, 11:94, 11:209	*34:12, C*06:90, C*07:277, C*07:394 *26:71N, 68:94N *01:01:01:01-01:01:11, 01:01:13-01:01:15, 01:01:17-01:01:54, 01:01:56-01:01:57, 01:01:59-01:02, 01:04N, 01:07-01:09, 01:11N, 01:13-01:18N, 01:22N-01:25, 01:27N-01:33, 01:35-01:40, 01:42-01:62, 01:64-01:65, 01:67:01-01:72, 01:74-01:88, 01:90-01:118, 01:120-01:125, 01:127-01:129, 01:131-01:135, 01:137-01:159, 01:161-01:175, 01:178N-01:179N, 03:18, 03:187, 26:62, 26:72, 36:01-36:02, 36:04-36:05 *01:01:01:01-01:01:57, 01:01:59-01:01:65, 01:01:67-01:02, 01:04N, 01:06-01:19, 01:21-01:33, 01:35-01:40, 01:42-01:62, 01:64-01:65, 01:67:01-01:71, 01:74-01:88, 01:90-01:101, 01:103-01:129, 01:131-01:166, 01:168-01:175, 01:178N-01:179N, 03:18, 03:97, 03:122, 03:135, 03:167, 24:92, 30:75, 80:01:01:01-80:03
28	240 bp 280 bp	800 bp	*11:15:02, 11:49, 11:170Q	*26:35
29⁵	80 bp	1070 bp	*11:10	*02:55, 03:24, 24:290, 26:03:01, 26:06, 26:21, 26:30, 26:78, 26:111, 33:01:01-33:01:07, 33:03:01-33:07, 33:10-33:12, 33:14-33:16, 33:18:01-33:20, 33:22-33:37, 33:39-33:47, 33:49-33:52, 33:54-33:65, 33:67-33:97, 34:01:01-34:12, 66:01:01-66:10, 66:12-66:22,

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30	180 bp 200 bp 235 bp 270 bp	1070 bp	*11:131 *11:156 *11:45, 11:50Q, 11:182Q *11:29, 11:55, 11:215N	*66:11 B*07:111N
31⁹	230 bp 285 bp	1070 bp	*11:49 *11:30, 11:43	*01:101, 01:143, 03:87, 29:66, 30:92, 31:03, 33:13
32	205 bp 295 bp	1070 bp	*11:31, 11:35, 11:158, 11:183 *11:32, 11:50Q, 11:147	*01:21, 01:126, 02:156, 02:338, 03:07, 03:42, 03:133, 03:171, 30:04:01-30:04:02, 30:06, 30:09, 30:17, 30:29, 30:46, 30:77, 30:90, 31:03-31:04, 33:49, 68:103:01-68:103:02, 74:23 *01:115, 03:154, 30:51
33⁵	110 bp 280 bp 305 bp	1070 bp	*11:61 *11:74 *11:56	C*07:221
34⁵	85 bp 170 bp 200 bp 265 bp	1070 bp	*11:58 *11:67, 11:208N *11:156 *11:46	*26:71N, 68:94N
35⁵	105 bp 290 bp	1070 bp	*11:62 *11:68	*01:125
36^{5,6}	65 bp 230 bp 380 bp	1070 bp	*11:65 *11:210N *11:64	*03:174, B*44:36 *31:65
37⁵	105 bp 185 bp 290 bp	1070 bp	*11:66 *11:57, 11:158 *11:72	*02:156, 02:338, 03:171, 68:103:01-68:103:02
38⁵	95 bp 120 bp 225 bp	1070 bp	*11:105, 11:189 *11:75 *11:78N	*02:484, 26:77, 66:13 B*07:117
39	205 bp 280 bp	1070 bp	*11:166 *11:52Q, 11:74	*80:01:01:01-80:03, C*04:129, C*05:25, C*05:42, C*06:05, C*06:67, C*07:101, C*07:148, C*07:161, C*08:28
40	225 bp	1070 bp	*11:199	*01:13, 03:01:01:01-03:01:07, 03:01:09- 03:01:11, 03:01:13-03:01:22, 03:01:24-03:07, 03:10-03:11N, 03:13-03:31, 03:33-03:35, 03:37-03:40, 03:42-03:56, 03:58, 03:60-03:71, 03:73-03:87, 03:90-03:106, 03:110, 03:112- 03:141, 03:143-03:148, 03:150-03:151, 03:153-03:171, 03:174-03:175, 03:177, 03:181-03:195, 03:197N, 03:200Q-03:202, 03:204, 03:206-03:210, 03:212-03:215, 03:217-03:218, 30:55, 34:08, 68:71, 74:13

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Lot-specific information

41⁵	90 bp 215 bp	1070 bp	*11:59 *11:01:57, 11:31, 11:35, 11:60, 11:158, 11:183, 11:209	*03:191 *01:12, 01:19, 01:21, 01:126, 02:156, 02:338, 03:02:01-03:02:04, 03:07, 03:10, 03:31-03:32, 03:42, 03:73, 03:76, 03:82, 03:90, 03:106, 03:113, 03:133, 03:160, 03:171, 03:198, 03:218, 24:92, 30:04:01 ^w -30:04:02 ^w , 30:06 ^w , 30:09, 30:17 ^w , 30:29 ^w , 30:46 ^w , 30:77 ^w , 30:90 ^w , 31:03-31:04, 33:49, 68:103:01 ^w -68:103:02 ^w , 74:23
42⁵	95 bp 175 bp 560 bp	1070 bp	*11:134, 11:189 *11:63 *11:69N	*02:484, 26:77 *01:56N
43⁸	445 bp	1070 bp	*11:70:01-11:70:02, 11:121	*01:83:01-01:83:02, 02:65, 02:80, 02:114, 02:117, 02:152, 02:246, 02:279, 02:298, 02:304, 02:406, 02:527, 03:23:01-03:23:02, 03:89, 03:198, 29:48, 33:08-33:09, 68:30, 68:75:01-68:75:02, 74:04, 74:21, B*57:04, B*57:32
44	145 bp 215 bp	800 bp	*11:76 *11:106	
45	210 bp 340 bp 400 bp	1070 bp	*11:79 *11:129, 11:163 *11:210N	
46^{5,6}	75 bp 120 bp 175 bp	1070 bp	*11:193 *11:80 *11:173	C*16:79
47⁵	55 bp	1070 bp	*11:44	*24:285
48	195 bp	1070 bp	*11:71, 11:135	*03:210
49	180 bp 230 bp	800 bp	*11:16, 11:35, 11:57, 11:73, 11:109N 11:158 *11:23, 11:50Q, 11:182Q	*02:156, 02:338, 03:123:01-03:123:02, 03:171, 68:103:01-68:103:02
50^{5,8}	90 bp 210 bp 310 bp 400 bp	800 bp	*11:34 *11:142 *11:86 *11:210N	*26:75 *03:218
51	265 bp	1070 bp	*11:51	
52	230 bp 545 bp	1070 bp	*11:81 *11:108	*01:45, 02:453, 02:557, 03:78, 24:271, 66:17
53^{6,8}	150 bp 195 bp	1070 bp	*11:154, 11:172 *11:100, 11:175	*01:37 *01:109, 03:182
54	200 bp 270 bp	1070 bp	*11:109N, 11:166 *11:89, 11:153:01- 11:153:02	*80:01:01:01-80:03, C*04:129, C*05:25, C*05:42, C*06:05, C*06:67, C*07:101, C*07:148, C*07:161, C*08:28 *01:86, 03:04:01-03:04:03, 30:34
55^{5,7,8}	115 bp 145 bp 170 bp 235 bp	1070 bp	*11:102, 11:128 *11:172 *11:194 *11:90	*01:148, 24:249 *01:37 *03:208, 80:01:01:01-80:02
56⁵	65 bp 230 bp	1070 bp	*11:94, 11:112, 11:211 *11:99N	*01:10, 01:21, 01:26, 03:135, B*15:90^w, B*45:05^w

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Lot-specific information

57⁶	75 bp	800 bp	*11:193	
	175 bp		*11:173	
	245 bp		*11:36	
58⁵	95 bp	1070 bp	*11:105, 11:115N	*66:13
	245 bp		*11:180N	
59	165 bp	1070 bp	*11:174	
	340 bp		*11:163	
	370 bp		*11:124	
60^{5,8}	105 bp	1070 bp	*11:128, 11:137N	*01:148
	270 bp		*11:127N, 11:153:01-11:153:02	*01:86, 03:04:01-03:04:03, 30:34
61	130 bp	1070 bp	*11:03, 11:175	*02:393, 02:489, 02:541, 03:135, 24:177, 24:289, 26:28, 26:52, B*15:173, B*50:11, C*12:74
	265 bp		*11:54	*33:70
62^{5,6}	205 bp	1070 bp	*11:03, 11:20, 11:25, 11:175, 11:191	*03:01:01:01-03:01:05, 03:01:07-03:01:13, 03:01:15-03:01:46, 03:01:48, 03:01:50-03:01:51, 03:01:53-03:01:54, 03:03N-03:06, 03:08-03:09, 03:11N-03:17:02, 03:19-03:30, 03:33-03:41, 03:43-03:53, 03:55-03:63, 03:65, 03:67-03:72, 03:74, 03:77-03:81, 03:83-03:89, 03:91N-03:94, 03:96-03:105, 03:107-03:112, 03:114-03:126, 03:128-03:132, 03:134, 03:136-03:139, 03:141-03:152, 03:154-03:159, 03:161N-03:170, 03:172-03:176, 03:178N-03:186, 03:188-03:197N, 03:199, 03:201-03:203, 03:205-03:214, 03:216-03:217, 03:219, 03:221, 30:89, 32:04, 34:02:01-34:04, 34:07-34:10N
	275 bp			
63⁶	145 bp	1070 bp	*11:171	
	170 bp		*11:154, 11:194	
	275 bp		*11:120	
64¹⁰			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*11 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

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Lot-specific information

decreases.

³For several HLA Class I alleles 1st and/or 4th exon(s) and beyond, as well as intron nucleotide sequences, are not available. In these instances it is not known whether some of the primers of the SSP sets are completely matched with the target sequences or not. Assumption is made that unknown sequences in these regions are conserved within allelic groups.

⁴Due to the sharing of sequence motifs between HLA-A alleles non-HLA-A*11 alleles will be amplified by primer mixes 1, 3 to 18, 20 to 32, 34 to 43, 46 to 50, 52 to 56, 58 and 60 to 62. In addition, a few HLA-B and HLA-C alleles will be amplified by primer mixes 1, 10, 19, 20, 22, 26, 30, 33, 36, 38, 39, 43, 46, 54, 56 and 61.

⁵HLA-specific PCR products shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR products.

⁶Primer mixes 9, 15, 16, 23, 36, 46, 53, 57, 62 and 63 may have tendencies of unspecific amplifications.

⁷Primer mixes 7, 14, 21, 25 and 55 may give rise to a lower yield of HLA-specific PCR product than the other A*11 primer mixes.

⁸Primer mixes 8, 9, 13, 16, 19, 27, 43, 50, 53, 55 and 60 may have a tendency of giving rise to primer oligomer formation.

⁹Primer mix 31 may give rise to a long unspecific amplification product of about 800 bp. This band should be disregarded when interpreting the A*11 SSP typings.

¹⁰Primer mix 64 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’, may 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	195	270	190	235	85	190	210	100	85	120	215	235
					180	550		175		280		
					210							
Length of int. pos. control ¹	800	1070	1070	1070	800	1070	1070	800	800	1070	800	1070
5'-primer(s) ²	127	28	363	363	363	292	363	484	527	97	363	363
	5'-ggg 3'	5'-TCC 3'	5'-ATA 3'	5'-ATA 3'	5'-ATA 3'	5'-CTC 3'	5'-ATA 3'	5'-ACg 3'	5'-TgC 3'	5'-TCA 3'	5'-ATA 3'	5'-ATA 3'
					831	399		553		103		
					5'-gAg 3'	5'-TTA 3'		5'-TgC 3'		5'-CCA 3'		
						413		565		261		
						5'-CCC 3'		5'-gCA 3'		5'-AAC 3'		
3'-primer(s) ³	282	127	502	559	502	559	521	616	570	341	539	559
	5'-gAC 3'	5'-CTT 3'	5'-CTg 3'	5'-CgT 3'	5'-CTC 3'	5'-CCg 3'	5'-ggA 3'	5'-CgT 3'	5'-CCg 3'	5'-CgT 3'	5'-TCT 3'	5'-CCg 3'
	282		524	559	873		539					559
	5'-gAC 3'		5'-CAC 3'	5'-CgT 3'	5'-TCg 3'		5'-TCC 3'					5'-CCg 3'
	282				899							
	5'-gAC 3'				5'-ACg 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	195	100	100	95	205	225	100	180	100	150	80	295
			215	210		240	175	235		230		465
							265					
Length of int. pos. control ¹	800	1070	800	1070	1070	1070	800	800	1070	1070	800	1070
5'-primer(s) ²	102	282	282	385	363	97	103	103	282	103	489	341
	5'-ACC 3'	5'-CAg 3'	5'-CAg 3'	5'-ggT 3'	5'-ATA 3'	5'-TCC 3'	5'-CCT 3'	5'-CCT 3'	5'-CAC 3'	5'-CCT 3'	5'-gCA 3'	5'-ggA 3'
			363	391		363						3 rd I
			5'-ATA 3'	5'-ACA 3'		5'-ATA 3'						5'-A 3'
				399								
				5'-TTA 3'								
				503								
				5'-CAg 3'								
3'-primer(s) ³	257	341	341	559	526	282	164	236	341	214	527	353
	5'-gCA 3'	5'-CgT 3'	5'-Cgg 3'	5'-CCg 3'	5'-CCg 3'	5'-gAC 3'	5'-gCT 3'	5'-CCA 3'	5'-CgT 3'	5'-CCA 3'	5'-CCT 3'	5'-TgA 3'
			538		526	564	236	244		292	527	621
			5'-CAA 3'		5'-CCA 3'	5'-ACC 3'	5'-CCA 3'	5'-CTT 3'		5'-gTg 3'	5'-CCT 3'	5'-ggg 3'
						565	327	299				
						5'-CAg 3'	5'-TTT 3'	5'-TCg 3'				
							329					
							5'-ggC 3'					
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

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Lot-specific information

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec.	190	305	160	240	80	180	230	205	110	85	105	65
PCR product	220	370	205	280		200	285	295	280	170	290	230
			260			235			305	200		380
						270				265		
Length of int. pos. control ¹	1070	1070	1070	800	1070	1070	1070	1070	1070	1070	1070	1070
5'-primer(s) ²	97	341	103	103	261	103	97	363	77	103	363	322
	5'-TCC 3'	5'-ggA 3'	5'-CCT 3'	5'-CCA 3'	5'-AAC 3'	5'-CCT 3'	5'-TCA 3'	5'-ATA 3'	5'-CTA 3'	5'-CCT 3'	5'-ATA 3'	5'-gCC 3'
	134		363	151		363	151		101			395
	5'-CCA 3'		5'-ATA 3'	5'-gCC 3'		5'-ATA 3'	5'-gCC 3'		5'-CAT 3'			5'-gCT 3'
	363			363			363		272			644
	5'-ATA 3'			5'-ATA 3'			5'-ATA 3'		5'-TgC 3'			5'-CA 3'
3'-primer(s) ³	282	362	224	341	299	244	341	527	341	146	427	418
	5'-gAC 3'	5'-TCA 3'	5'-TCT 3'	5'-CgT 3'	5'-CCA 3'	5'-CTT 3'	5'-CgT 3'	5'-CCA 3'	5'-CgT 3'	5'-CCg 3'	5'-gTg 3'	5'-gTC 3'
	538	430	271	564		261	605	616		224	614	831
	5'-CAg 3'	5'-gCg 3'	5'-CAT 3'	5'-ACC 3'		5'-gTA 3'	5'-gCA 3'	5'-CgC 3'		5'-TCT 3'	5'-TgT 3'	5'-TCC 3'
			330	565		299				242		
			5'-TgC 3'	5'-CAA 3'		5'-CCg 3'				5'-CCC 3'		
			521			327				261		
			5'-ggA 3'			5'-TTT 3'				5'-gTA 3'		
			570			330				329		
			5'-CCg 3'			5'-TgC 3'				5'-ggC 3'		
						559						
						5'-CTC 3'						
						587						
						5'-CCT 3'						
Well No.	25	26	27	28	29	30	31	32	33	34	35	36

Well No.	37	38	39	40	41	42	43	44	45	46	47	48
Length of spec.	105	95	205	225	90	95	445	145	210	75	55	195
PCR product	185	120	280		215	175		215	340	120		
	290	225				560			400	175		
									220			
Length of int. pos. control ¹	1070	1070	1070	1070	1070	1070	1070	800	1070	1070	1070	1070
5'-primer(s) ²	363	103	101	98	363	103	257	98	112	460	527	125
	5'-ATA 3'	5'-CCT 3'	5'-CAT 3'	5'-CTT 3'	5'-ATA 3'	5'-CCT 3'	5'-Cgg 3'	5'-CTA 3'	5'-CCT 3'	5'-ACg 3'	5'-TgC 3'	5'-CgC 3'
			107			3 rd I		511	644	627		134
			5'-gT 3'			5'-ATA 3'		5'-AgA 3'	5'-CA 3'	5'-CCC 3'		5'-CCA 3'
			176						701			
			5'-gCA 3'						5'-CCT 3'			
									703			
									5'-CTA 3'			
3'-primer(s) ³	427	154	341	282	412	154	418	270	282	539	539	282
	5'-gTA 3'	5'-CAT 3'	5'-CgT 3'	5'-gAC 3'	5'-CCC 3'	5'-CAT 3'	5'-gTC 3'	5'-ACT 3'	5'-gAC 3'	5'-TCT 3'	5'-TCC 3'	5'-gAC 3'
	506	164			527	164		616	899	662		
	5'-TgT 3'	5'-gCA 3'			5'-CCA 3'	5'-gCT 3'		5'-CgT 3'	5'-ACA 3'	5'-CAC 3'		
	613	181			546	235				763		
	5'-gCA 3'	5'-gTT 3'			5'-TAA 3'	5'-CTg 3'				5'-CAT 3'		
		285				723						
		5'-T.. 3'				5'-TgT 3'						
Well No.	37	38	39	40	41	42	43	44	45	46	47	48

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Lot-specific information

Well No.	49	50	51	52	53	54	55	56	57	58	59	60
Length of spec.	180	90	265	230	150	200	115	65	75	95	165	105
PCR product	230	210		545	195	270	145	230	175	245	340	270
		310					170		245		370	
		400					235					
Length of int.	800	800	1070	1070	1070	1070	1070	1070	800	1070	1070	1070
pos. control ¹												
5'-primer(s) ²	363	565	28	428	650	116	363	154	368	103	670	363
	5'-ATA 3'	5'-gCA 3'	5'-TCC 3'	5'-CgC 3'	5'-CCC 3'	5'-gCT 3'	5'-ATA 3'	5'-A.g 3'	5'-gTg 3'	5'-CCT 3'	5'-CCg 3'	5'-ATA 3'
		644		3 rd I		176	650	521	627		703	
		5'-CA 3'		5'-ATA 3'		5'-gCA 3'	5'-CCC 3'	5'-ggC 3'	5'-CCC 3'		5'-CTA 3'	
		733				363					877	
		5'-ATA 3'				5'-ATA 3'					5'-Agg 3'	
		832										
		5'-AgA 3'										
3'-primer(s) ³	497	616	122	616	755	341	430	341	570	153	899	426
	5'-Tgg 3'	5'-CgT 3'	5'-Cgg 3'	5'-CgT 3'	5'-CCA 3'	5'-CgT 3'	5'-gCT 3'	5'-CgT 3'	5'-CAC 3'	5'-ACT 3'	5'-ACA 3'	5'-TCC 3'
	513	899		704	770	513	559	545	662	164		430
	5'-TCT 3'	5'-ACA 3'		5'-CCA 3'	5'-TgA 3'	5'-TCT 3'	5'-CTC 3'	5'-AgA 3'	5'-CAC 3'	5'-gCA 3'		5'-gCT 3'
	542				806	595	727		763	305		585
	5'-CTg 3'				5'-CCA 3'	5'-CCg 3'	5'-CCA 3'		5'-CAT 3'	5'-CA 3'		5'-AgT 3'
	559					595	755					595
	5'-CTC 3'					5'-CCT 3'	5'-CCA 3'					5'-CCT 3'
							779					595
							5'-CTC 3'					5'-CCg 3'
Well No.	49	50	51	52	53	54	55	56	57	58	59	60

Well No.	61	62	63
Length of spec.	130	205	145
PCR product	265		170
			275
Length of int.	1070	1070	1070
pos. control ¹			
5'-primer(s) ²	391	363	650
	5'-ACA 3'	5'-ATA 3'	5'-CCC 3'
	527		
	5'-TgA 3'		
3'-primer(s) ³	616	527	755
	5'-CgT 3'	5'-CCT 3'	5'-CCC 3'
			770
			5'-TgA 3'
			779
			5'-CTC 3'
			884
			5'-ggC 3'
Well No.	61	62	63

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Lot-specific information

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.

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Lot-specific information

CELL LINE VALIDATION SHEET																				
HLA-A*11 SSP subtyping kit ²																				
				Well																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				Prod. No.:	201436201	201436202	201436203	201436204	201436205	201436206	201554407	201554408	201436209	201436210	201436211	201436212	201436213	201436214	201436215	201436216
	IHWC cell line ¹		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	+	-	-	-	-	-	-	-	-	-	+	+	-	+	-	-

101.416-12/04 – including *Taq* pol., IFU-01
101.416-12u/04u – without *Taq* polymerase, IFU-02

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

Lot No.: **62Y**

Lot-specific information

CELL LINE VALIDATION SHEET																			
HLA-A*11 SSP subtyping kit ²																			
			Prod. No.:	Well															
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	IHWC cell line ¹	A*		201436217	201436218	201554419	201554420	201436221	201436222	201436223	201554424	201436225	201436226	201554427	201436228	201436229	201554430	201436231	201436232
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 PTOU	*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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.416-12/04 – including *Taq* pol., IFU-01
101.416-12u/04u – without *Taq* polymerase, IFU-02

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Lot No.: **62Y**

Lot-specific information

CELL LINE VALIDATION SHEET																				
HLA-A*11 SSP subtyping kit ²																				
				Well																
				33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
				Prod. No.:	201436233	201554434	201436235	201554436	201554437	201554438	201554439	201554440	201554441	201554442	201554443	201436244	201554445	201554446	201436247	201436248
	IHWC cell line ¹	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.416-12/04 – including *Taq* pol., IFU-01
101.416-12u/04u – without *Taq* polymerase, IFU-02

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Lot No.: **62Y**

Lot-specific information

CELL LINE VALIDATION SHEET																		
HLA-A*11 SSP subtyping kit²																		
				Well														
				49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
				Prod. No.:														
				201554449	201554450	201436251	201436252	201436253	201554454	201554455	201436256	201554457	201554458	201436259	201554460	201554461	201554462	201554463
IHCW cell line ¹		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	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.416-12/04 – including *Taq* pol., IFU-01
101.416-12u/04u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **62Y**

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 5, 8, 9, 13, 19, 23, 28, 30, 31, 33 to 38, 42 to 53, 56 to 61 and 63 were available.

The specificities of the primers in primer solutions 5, 9, 13, 23, 28, 31, 37, 43 to 48, 52, 53, 56, 57, 59 and 61 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer.

In primer solutions 19, 30, 34, 35, 38, 42, 49, 51, 58, 60 and 63 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solutions 8, 33, 36 and 50 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 6, 10, 16, 28, 31, 39, 44 to 46, 48, 52, 54, 56, 57, 59 and 61 one, two or three of the 5'-primers were not possible to test. In primer solutions 1, 5, 18, 20, 22, 24, 26 to 28, 31, 32, 37, 41, 44, 46, 52 to 55 and 57 one, two or three of the 3'-primers were not possible to test.

Additional primers in primer solutions 3, 10, 18, 24, 25, 27, 54, 55 and 62 were tested by separately adding one additional 5'-primer and/or one additional 3'-primer.

101.416-12/04 – including *Taq* pol., IFU-01
101.416-12u/04u – without *Taq* polymerase, IFU-02

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101.416-12/04 – including *Taq* pol., IFU-01
101.416-12u/04u – without *Taq* polymerase, IFU-02

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Lot No.: **62Y**

Lot-specific information

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