

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.: **82V**

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:	82V
Expiry date:	2016-December-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. 82V.

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 (09S)**

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 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. 09S).

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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
1	-	Added	3'-primer added for the A*11:01:51 allele.
5	-	Added	3'-primer added for the A*11:126 allele.
16	Added	-	5'-primer added for the A*11:117 allele.
18	Added	-	5'-primer added for the A*11:170Q allele.
19	-	Added	3'-primer added for the A*11:134 allele.
25	Added	-	5'-primer added for the A*11:135 allele.
28	Added	Added	Primer pair added for the A*11:170Q allele.
30	-	Added	3'-primer added for the A*11:156 allele.
34	-	Added	3'-primer added for the A*11:156 allele.
38	-	Added	3'-primer added for the A*11:105 allele.
42	-	Added	3'-primer added for the A*11:134 allele.
44	-	Modified	Modified 3'-primer for improved HLA-specific amplification.
45	Added	Added	Primer pair added from well 64, 5'-primer added for the A*11:163 allele.
46	Added	Added	Primer pair added for the A*11:173 allele.
48	Added	-	5'-primer added for the A*11:135 allele.
50	Added	-	5'-primer added for the A*11:142 allele.
53	-	Added	3'-primers added for the A*11:154 and A*11:172 alleles.
55	-	Added	3'-primers added for the A*11:172 and A*11:128 alleles.
56	Added	Added	Primer pair added for the A*11:112 allele.
57	Added	Added	Primer pair added for the A*11:173 allele.
58	-	Added	3'-primer added for the A*11:105 allele.
59	Added	-	5'-primers added for the A*11:163 and A*11:174 alleles.
60	-	Added	3'-primer added for the A*11:128 allele.
62	Added	-	5'-primer added for the A*11:117 allele.
63	-	Added	3'-primers added for the A*11:154 and A*11:171 alleles.
64	Moved	Moved	Primer pair moved to well 45, Negative Control.

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Change in revision R01 compared to R00:

1. Primer mix 3 may faintly amplify the A*03:66 and 11:08 alleles. A footnote has been added in the Specificity Table.

Change in revision R02 compared to R01:

1. In primer mix 24 the amplicon size is 470 bp for the A*11:21N and the A*01:04N, 03:21N, 23:07N and 24:11N alleles. This has been corrected in the Specificity and Interpretation Tables.

Change in revision R03 compared to R02:

1. Primer mix 5 does not amplify the A*03:26 and the A*11:77 and 11:126 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*11:01:01-11:01:20, 11:01:22-11:01:43, 11:01:45-11:01:56, 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, 11:131-11:133, 11:136, 11:138, 11:141, 11:144-11:146, 11:148-11:153:02, 11:155, 11:160, 11:162, 11:164-11:167 and 11:169 alleles and the A*11:126 allele, nor the A*11:02:01-11:02:06, 11:113, 11:140 and 11:176 alleles and the A*11:77 allele.

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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*11:176 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 ‘82V’.

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, 35, 36, 38, 40 to 43, 49, 50, 52, 53, 55, 56, 58 and 61 to 62. In addition, a few HLA-B and HLA-C alleles will be amplified by primer mixes 1, 10, 19, 20, 22, 26, 33, 36, 38, 43, 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*11:176**, recognized by the HLA Nomenclature Committee in January 2014^{1,2} will be amplified by the primers in the HLA-A*11 SSP kit.

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*11:13, 11:54	16	A*11:79, 11:129	45
A*11:36, 11:173	57	A*11:81, 11:108	52
A*11:58, 11:67	34	A*11:86, 11:142	50
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		

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 and 11:01:45-11:01:56 alleles, the A*11:01:21 and 11:01:44 alleles, the A*11:02:01-11:02:06 alleles or the A*11:33:01-11:33:02 alleles.

¹HLA-A alleles listed on the IMGT/HLA web page 2014-January-17, release 3.15.0, 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, 11:82-11:85, 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, 11:131-11:133, 11:136, 11:138, 11:141, 11:144-11:146, 11:148-11:153:02, 11:155, 11:160, 11:162, 11:164-11:167 and 11:169 alleles and the A*11:126 allele, nor the A*11:02:01-11:02:06, 11:113, 11:140 and 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	Confirmed	A*11:01:51	Unconfirmed	A*11:39	Unconfirmed	A*11:90	Confirmed
A*11:01:02	Unconfirmed	A*11:01:52	Unconfirmed	A*11:40	Unconfirmed	A*11:91:01	Unconfirmed
A*11:01:03	Unconfirmed	A*11:01:53	Unconfirmed	A*11:41	Unconfirmed	A*11:91:02	Unconfirmed
A*11:01:04	Confirmed	A*11:01:54	Unconfirmed	A*11:42	Unconfirmed	A*11:92	Unconfirmed
A*11:01:05	Unconfirmed	A*11:01:55	Unconfirmed	A*11:43	Unconfirmed	A*11:93	Unconfirmed
A*11:01:06	Unconfirmed	A*11:01:56	Unconfirmed	A*11:44	Confirmed	A*11:94	Unconfirmed
A*11:01:07	Unconfirmed	A*11:02:01	Confirmed	A*11:45	Confirmed	A*11:95	Unconfirmed
A*11:01:08	Unconfirmed	A*11:02:02	Unconfirmed	A*11:46	Confirmed	A*11:96	Unconfirmed
A*11:01:09	Unconfirmed	A*11:02:03	Unconfirmed	A*11:47	Confirmed	A*11:97	Unconfirmed
A*11:01:10	Unconfirmed	A*11:02:04	Unconfirmed	A*11:48	Confirmed	A*11:98	Unconfirmed
A*11:01:11	Confirmed	A*11:02:05	Unconfirmed	A*11:49	Unconfirmed	A*11:99N	Unconfirmed
A*11:01:12	Unconfirmed	A*11:02:06	Unconfirmed	A*11:50Q	Unconfirmed	A*11:100	Unconfirmed
A*11:01:13	Unconfirmed	A*11:03	Confirmed	A*11:51	Unconfirmed	A*11:101	Unconfirmed
A*11:01:14	Unconfirmed	A*11:04	Confirmed	A*11:52Q	Unconfirmed	A*11:102	Unconfirmed
A*11:01:15	Confirmed	A*11:05	Confirmed	A*11:54	Confirmed	A*11:103	Unconfirmed
A*11:01:16	Unconfirmed	A*11:06	Unconfirmed	A*11:55	Unconfirmed	A*11:104	Unconfirmed
A*11:01:17	Confirmed	A*11:07	Unconfirmed	A*11:56	Confirmed	A*11:105	Confirmed
A*11:01:18	Confirmed	A*11:08	Confirmed	A*11:57	Unconfirmed	A*11:106	Confirmed
A*11:01:19	Confirmed	A*11:09	Confirmed	A*11:58	Confirmed	A*11:107	Unconfirmed
A*11:01:20	Unconfirmed	A*11:10	Confirmed	A*11:59	Unconfirmed	A*11:108	Unconfirmed
A*11:01:21	Unconfirmed	A*11:11	Unconfirmed	A*11:60	Confirmed	A*11:109N	Unconfirmed
A*11:01:22	Unconfirmed	A*11:12	Confirmed	A*11:61	Unconfirmed	A*11:110	Unconfirmed
A*11:01:23	Unconfirmed	A*11:13	Confirmed	A*11:62	Unconfirmed	A*11:111	Unconfirmed
A*11:01:24	Unconfirmed	A*11:14	Unconfirmed	A*11:63	Confirmed	A*11:112	Confirmed
A*11:01:25	Unconfirmed	A*11:15:01	Confirmed	A*11:64	Unconfirmed	A*11:113	Unconfirmed
A*11:01:26	Unconfirmed	A*11:15:02	Unconfirmed	A*11:65	Unconfirmed	A*11:114	Unconfirmed
A*11:01:27	Confirmed	A*11:16	Unconfirmed	A*11:66	Unconfirmed	A*11:115N	Unconfirmed
A*11:01:28	Unconfirmed	A*11:17	Unconfirmed	A*11:67	Confirmed	A*11:116	Unconfirmed
A*11:01:29	Unconfirmed	A*11:18	Unconfirmed	A*11:68	Unconfirmed	A*11:117	Confirmed
A*11:01:30	Confirmed	A*11:19	Confirmed	A*11:69N	Confirmed	A*11:118	Unconfirmed
A*11:01:31	Unconfirmed	A*11:20	Confirmed	A*11:70	Confirmed	A*11:119:01	Unconfirmed
A*11:01:32	Unconfirmed	A*11:21N	Unconfirmed	A*11:71	Confirmed	A*11:119:02	Unconfirmed
A*11:01:33	Confirmed	A*11:22	Unconfirmed	A*11:72	Unconfirmed	A*11:120	Unconfirmed
A*11:01:34	Confirmed	A*11:23	Confirmed	A*11:73	Confirmed	A*11:121	Unconfirmed
A*11:01:35	Unconfirmed	A*11:24:01	Confirmed	A*11:74	Confirmed	A*11:122	Unconfirmed
A*11:01:36	Unconfirmed	A*11:24:02	Unconfirmed	A*11:75	Unconfirmed	A*11:123	Unconfirmed
A*11:01:37	Confirmed	A*11:25	Unconfirmed	A*11:76	Unconfirmed	A*11:124	Unconfirmed
A*11:01:38	Unconfirmed	A*11:26	Unconfirmed	A*11:77	Unconfirmed	A*11:125	Unconfirmed
A*11:01:39	Confirmed	A*11:27	Unconfirmed	A*11:78N	Confirmed	A*11:126	Confirmed
A*11:01:40	Confirmed	A*11:29	Confirmed	A*11:79	Unconfirmed	A*11:127N	Unconfirmed
A*11:01:41	Unconfirmed	A*11:30	Confirmed	A*11:80	Unconfirmed	A*11:128	Confirmed
A*11:01:42	Unconfirmed	A*11:31	Unconfirmed	A*11:81	Confirmed	A*11:129	Confirmed
A*11:01:43	Confirmed	A*11:32	Confirmed	A*11:82	Unconfirmed	A*11:130	Unconfirmed
A*11:01:44	Unconfirmed	A*11:33:01	Unconfirmed	A*11:83	Unconfirmed	A*11:131	Unconfirmed
A*11:01:45	Unconfirmed	A*11:33:02	Confirmed	A*11:84	Unconfirmed	A*11:132	Unconfirmed
A*11:01:46	Unconfirmed	A*11:34	Unconfirmed	A*11:85	Unconfirmed	A*11:133	Unconfirmed
A*11:01:47	Confirmed	A*11:35	Unconfirmed	A*11:86	Unconfirmed	A*11:134	Confirmed
A*11:01:48	Unconfirmed	A*11:36	Unconfirmed	A*11:87	Unconfirmed	A*11:135	Confirmed
A*11:01:49	Unconfirmed	A*11:37	Confirmed	A*11:88	Unconfirmed	A*11:136	Unconfirmed
A*11:01:50	Unconfirmed	A*11:38	Unconfirmed	A*11:89	Confirmed	A*11:137N	Unconfirmed

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Allele	Status ¹	Allele	Status ¹
A*11:138	Unconfirmed	A*11:157	Unconfirmed
A*11:139	Unconfirmed	A*11:158	Unconfirmed
A*11:140	Unconfirmed	A*11:159	Unconfirmed
A*11:141	Unconfirmed	A*11:160	Unconfirmed
A*11:142	Unconfirmed	A*11:161	Unconfirmed
A*11:143	Unconfirmed	A*11:162	Unconfirmed
A*11:144	Unconfirmed	A*11:163	Confirmed
A*11:145	Unconfirmed	A*11:164	Unconfirmed
A*11:146	Unconfirmed	A*11:165	Unconfirmed
A*11:147	Unconfirmed	A*11:166	Unconfirmed
A*11:148	Unconfirmed	A*11:167	Unconfirmed
A*11:149	Unconfirmed	A*11:168	Unconfirmed
A*11:150	Unconfirmed	A*11:169	Unconfirmed
A*11:151	Unconfirmed	A*11:170Q	Unconfirmed
A*11:152	Unconfirmed	A*11:171	Unconfirmed
A*11:153:01	Unconfirmed	A*11:172	Unconfirmed
A*11:153:02	Unconfirmed	A*11:173	Unconfirmed
A*11:154	Unconfirmed	A*11:174	Unconfirmed
A*11:155	Unconfirmed	A*11:175	Unconfirmed
A*11:156	Confirmed	A*11:176	Unconfirmed

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2014-January-17, release 3.15.0, 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	*11:01:01-11:01:56, 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, 11:58-11:70:01, 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	*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, 03:179-03:182, 24:19, 30:18, 30:55, 34:01:01- 34:11, 66:01:01-66:02, 66:04, 66:06-66:10, 66:12-66:14, 66:16-66:19, 68:01:01-01- 68:02:05, 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- 68:107, 69:01-69:02, 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	
3¹¹	180 bp	1070 bp	*11:33:01-11:33:02	*01:61, 03:22:01-03:22:02, 03:42, 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, 31:03-31:04, 33:49, 34:02:01 ^w -34:02:03 ^w , 34:03, 34:04 ^w , 34:07 ^w - 34:10N ^w *03:135
4	200 bp 235 bp	1070 bp	*11:03, 11:175 *11:04, 11:27, 11:35, 11:130	*01:12, 01:14, 01:19, 02:156, 02:338, 03:01:01-01-03:01:29, 03:01:31-03:17:02, 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-03:182, 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, 31:03- 31:04, 32:04, 33:49, 34:02:01-34:04, 34:07- 34:10N, 36:01-36:02, 36:05, 68:103, 80:03
5⁵	85 bp 180 bp 210 bp	800 bp	*11:05 *11:110	*02:294, 32:54, 66:08

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6	195 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, 25:11, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 26:36, 26:92
7^r	215 bp	1070 bp	*11:08, 11:44, 11:50Q, 11:94	*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- 01:24, 01:26-01:33, 01:35-01:40, 01:42-01:62, 01:64, 01:67:01-01:72, 01:74-01:88, 01:90- 01:126, 01:128-01:129, 01:131-01:132, 01:134-01:135, 01:137-01:146, 03:18, 03:50, 03:66, 03:135, 03:153, 30:04:01-30:04:02, 30:06, 30:17, 30:29, 30:46, 30:77, 36:01- 36:02, 36:04-36:05, 68:103
8^{5,8}	100 bp	800 bp	*11:09, 11:34	*26:75
9^{5,6,8}	85 bp	800 bp	*11:27, 11:38-11:39, 11:94	*01:26, 01:136, 24:59
10⁵	120 bp	1070 bp	*11:10	*01:51, 25:01:01-25:12N, 25:14-25:24, 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, 26:93-26:98, 33:13, 34:01:01-34:08, 34:10N-34:11, 66:01:01- 66:01:02, 66:04-66:11, 66:13-66:15, 66:17- 66:19, 69:02, B*07:102, B*08:18, B*35:178, B*73:01-73:02
11	280 bp 215 bp	800 bp	*11:43 *11:01:01-11:07, 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, 11:159-11:176	*01:143, 26:35, 31:03, 33:13 *01:12, 01:19, 01:25 ^w , 01:127, 01:136, 03:02:01-03:02:03, 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, 24:92
12	235 bp	1070 bp	*11:01:01-11:01:20, 11:01:22-11:01:43, 11:01:45-11:03, 11:05- 11:25, 11:29-11:34, 11:36-11:47, 11:49, 11:51-11:52Q, 11:54- 11:89, 11:91:01- 11:100, 11:102- 11:117, 11:119:01- 11:129, 11:131- 11:138, 11:140- 11:142, 11:144- 11:156, 11:157 ^w , 11:158-11:169, 11:171-11:176	*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, 03:18, 03:135, 36:04
13⁸	195 bp	800 bp	*11:11	*43:01
14^{5,7}	100 bp	1070 bp	*11:01:01-11:11,	*01:13, 01:17, 03:63, 03:88, 25:02, 26:13,

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			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, 11:160-11:176	26:19, 26:33, 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 , 66:01:01-66:01:02, 66:04, 66:06-66:11, 66:13-66:14, 66:17-66:19, 69:02
15⁵	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 ^w , 03:158-03:171, 03:173-03:175, 03:177-03:182, 24:24, 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, 29:49-29:58, 30:01:01-30:01:09, 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, 32:17, 34:09, 66:02, 66:12, 66:16, 68:01:01:01-68:01:17, 68:01:19-68:02:05, 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, 68:98-68:107, 69:01, 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, 03:01:07-03:01:44, 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, 03:107-03:112, 03:114-03:134, 03:136-03:149, 03:151-03:152, 03:154-03:159, 03:161N-03:166, 03:168N-03:176, 03:178N-03:182, 30:01:01-30:02:04, 30:02:06-30:03, 30:07-30:16, 30:18-30:20, 30:22-30:27N, 30:30-30:45, 30:48-30:51, 30:53-30:71, 30:73N-30:76N, 30:78N-30:79, 31:03-31:04, 32:04, 33:49, 34:02:01, 34:02:03-34:04, 34:07-34:10N
16^{5,6,8}	95 bp 205 bp	1070 bp	*11:13 *11:07, 11:26, 11:54, 11:117	*02:38, 02:101:01, 02:154, 02:447, 03:18 ^w , 03:135 ^w , 23:10 ^w , 24:10:01-24:10:02, 24:46 ^w , 24:210, 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, 80:01:01:01-80:03

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18	235 bp	1070 bp	*11:15:01, 11:47, 11:170Q	*30:39
19^{5,8}	100 bp 175 bp 265 bp	1070 bp	*11:134 *11:42 *11:46	B*39:75, B*40:268
20	175 bp 235 bp	800 bp	*11:42 *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, 26:93-26:98, 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, 01:01:58-01:04N, 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- 01:146, 02:346, 02:427, 03:41, 24:44 ^w , 24:109 ^w , 24:260 ^w , 25:01:01-25:01:07, 25:03- 25:12N, 25:14, 25:16, 25:18-25:24, 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- 26:98, 31:03, 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, 02:06:06-02:06:16, 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, 02:290, 02:295, 02:300, 02:310, 02:324, 02:328, 02:330, 02:333, 02:337, 02:344, 02:355, 02:358-02:359, 02:373N, 02:376, 02:382, 02:387, 02:398, 02:404-02:405, 02:409, 02:413, 02:415, 02:419-02:421, 02:428, 02:433, 02:438, 02:453-02:454, 02:465, 02:470-02:476N, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 26:78, 26:92, 68:15
23^{5,6}	80 bp	800 bp	*11:08, 11:25	*02:03:01 ^w -02:03:07 ^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 , 03:01:38, 03:123:02, 68:42 ^w , 68:54 ^w , 68:61 ^w , 68:63
24	295 bp 470 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, 11:135	*03:01:02, 03:05:02, 30:02:05, 34:02:02, 80:01:01:01-80:03
26	305 bp 370 bp	1070 bp	*11:26, 11:118 *11:41	*01:03, 26:32, 26:70, 33:13, 36:03, 74:10, C*06:72 C*06:90, C*07:277

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27	210 bp 260 bp	1070 bp	*11:17 *11:27, 11:38-11:39, 11:55, 11:94	*01:43, 26:62, 26:72 *01:01:01:01:01:01:57, 01:01:59-01:02, 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, 01:131-01:146, 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, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 26:78, 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, 33:67-33:85, 34:01:01-34:11, 66:01:01-66:10, 66:12-66:19, 68:01:01:01-68:09, 68:11N-68:12, 68:15- 68:29, 68:31-68:35, 68:37-68:45, 68:47-68:65, 68:67-68:74, 68:76-68:83, 68:85-68:107, 69:01-69:02
30	200 bp 235 bp 270 bp	1070 bp	*11:156 *11:45 *11:29, 11:55	*66:11
31⁹	230 bp 285 bp	1070 bp	*11:49 *11:30, 11:43	*01:101, 01:143, 03:87, 31:03, 33:13
32	205 bp 295 bp	1070 bp	*11:31, 11:35, 11:158 *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, 31:03- 31:04, 33:49, 68:103 *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 190 bp 265 bp	1070 bp	*11:58 *11:67, 11:156 *11:46	
35⁵	105 bp 290 bp	1070 bp	*11:62 *11:68	*01:125
36^{5,6}	65 bp 380 bp	1070 bp	*11:65 *11:64	*03:174, B*44:36 *31:65
37⁵	105 bp 290 bp	1070 bp	*11:66 *11:72	
38⁵	110 bp 225 bp	1070 bp	*11:75, 11:105 *11:78N	*66:13, B*07:117
39	280 bp	1070 bp	*11:52Q, 11:74	
40⁵	90 bp 185 bp	1070 bp	*11:59 *11:57, 11:158	*02:156, 02:338, 03:171, 68:103
41	205 bp	1070 bp	*11:31, 11:35, 11:60, 11:158	*01:12, 01:19, 01:21, 01:126, 02:156, 02:338, 03:02:01-03:02:03, 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, 24:92, 30:04:01 ^w -30:04:02 ^w , 30:06 ^w , 30:09, 30:17 ^w ,

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				30:29 ^w , 30:46 ^w , 30:77 ^w , 31:03-31:04, 33:49, 68:103
42^{5,10}	100 bp 175 bp 560 bp	1070 bp	*11:134 *11:63 *11:69N	*01:56N
43⁸	445 bp	1070 bp	*11:70:01, 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, 03:23:01-03:23:02, 03:89, 29:48, 33:08-33:09, 68:30, 68:75:01-68:75:02, 74:04, B*57:04, B*57:32
44	145 bp 215 bp	800 bp	*11:76 *11:106	
45	210 bp 340 bp	1070 bp	*11:79 *11:129, 11:163	
46^{5,6}	120 bp	1070 bp	*11:80	
47⁵	55 bp	1070 bp	*11:44	
48	195 bp	1070 bp	*11:71, 11:135	
49	185 bp 220 bp	800 bp	*11:16, 11:35, 11:57, 11:73, 11:109N 11:158 *11:23	*02:156, 02:338, 03:123:01-03:123:02, 03:171, 68:103
50^{5,8}	90 bp 210 bp 310 bp	800 bp	*11:34 *11:142 *11:86	*26:75
51	265 bp	1070 bp	*11:51	
52	230 bp 545 bp	1070 bp	*11:81 *11:108	*01:45, 02:453, 03:78, 66:17
53^{6,8}	155 bp 195 bp	1070 bp	*11:154, 11:172 *11:100, 11:175	*01:37 *01:109, 03:182
54	190 bp 265 bp	1070 bp	*11:109N *11:89	
55^{5,7}	115 bp 145 bp 235 bp	1070 bp	*11:102, 11:128 *11:172 *11:90	*24:249 *01:37 *80:01:01:01-80:02
56⁵	65 bp 230 bp	1070 bp	*11:94, 11:112 *11:99N	*01:10, 01:21, 01:26, 03:135, B*15:90^w, B*45:05^w
57⁶	175 bp 245 bp	800 bp	*11:173 *11:36	
58⁵	95 bp	1070 bp	*11:105, 11:115N	*66:13
59	165 bp 340 bp 370 bp	1070 bp	*11:174 *11:163 *11:124	
60^{5,8}	105 bp 265 bp	1070 bp	*11:128, 11:137N *11:127N	
61	130 bp	1070 bp	*11:03, 11:175	*02:393, 03:135, 24:177, 26:28, 26:52, B*15:173, B*50:11, C*12:74
62^{5,6}	75 bp	1070 bp	*11:08, 11:20, 11:25	02:38, 02:135, 02:447, 25:01:01-25:05, 25:07, 25:09-25:17, 25:19-25:21, 25:23-25:24, 26:01:01-26:01:14, 26:01:16-26:01:20, 26:01:22-26:01:25, 26:01:27-26:02:01, 26:03:01-26:03:02, 26:05-26:08, 26:10, 26:13-26:17, 26:19-26:27, 26:30-26:33, 26:35-26:43:02, 26:45-26:46, 26:48, 26:50-26:51,

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	215 bp		*11:26, 11:117	26:53-26:72, 26:74, 26:76-26:77, 26:79-26:85, 26:87-26:90, 26:92-26:98, 43:01, 66:01:01, 66:04-66:05, 66:08-66:09, 66:11-66:15, 66:17, 66:19, 68:61
				*02:38, 02:101:01, 02:154, 02:447, 24:10:01- 24:10:02, 24:210, 25:10, 31:24, 33:61
63⁶	155 bp	1070 bp	*11:154, 11:171	
	275 bp		*11:120	
64¹²			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 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, 35, 36, 38, 40 to 43, 49, 50, 52, 53, 55, 56, 58 and 61 to 62. In addition, a few HLA-B and HLA-C alleles will be amplified by primer mixes 1, 10, 19, 20, 22, 26, 33, 36, 38, 43, 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, 16, 23, 36, 46, 53, 57, 62 and 63 may have tendencies of unspecific amplifications, most pronounced in primer mix 62.

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, 43, 50, 53 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.

¹⁰In primer mix 42 the positive control band may be weaker than for other HLA-A*11 primer mixes.

¹¹Primer mix 3 may faintly amplify the A*03:66 and 11:08 alleles.

¹²Primer mix 64 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by control primer pairs. PCR product sizes range from 75 to 200 base pairs. The PCR product generated by the control primer pair is 430 base pairs.

'w', may be weakly amplified.

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PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec.	195	270	180	235	85	195	215	100	85	120	215	235
PCR product			200		180	550				280		
					210							
Length of int.	800	1070	1070	1070	800	1070	1070	800	800	1070	800	1070
pos. control ¹												
5'-primer(s) ²	127	28	363	363	363	292	363	553	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'-TgC ^{3'}	5'-TgC ^{3'}	5'-TCA ^{3'}	5'-ATA ^{3'}	5'-ATA ^{3'}
					831	399		565		103		
					5'-gAg ^{3'}	5'-TTA ^{3'}		5'-gCA ^{3'}		5'-CCA ^{3'}		
						413				261		
						5'-CCC ^{3'}				5'-AAC ^{3'}		
3'-primer(s) ³	282	127	502	559	502	559	539	616	570	341	539	559
	5'-gAC ^{3'}	5'-CTT ^{3'}	5'-CTg ^{3'}	5'-CgT ^{3'}	5'-CTC ^{3'}	5'-CCg ^{3'}	5'-TCC ^{3'}	5'-CgT ^{3'}	5'-CCg ^{3'}	5'-CgT ^{3'}	5'-TCT ^{3'}	5'-CCg ^{3'}
	282		524	559	873							559
	5'-gAC ^{3'}		5'-CAC ^{3'}	5'-CgT ^{3'}	5'-TCg ^{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.	195	100	100	95	205	235	100	175	100	150	80	295
PCR product			215	205			175	235		230		470
							265					
Length of int.	800	1070	800	1070	1070	1070	1070	800	1070	1070	800	1070
pos. control ¹												
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'-ATA ^{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	299		292	527	621
			5'-CAA ^{3'}		5'-CCA ^{3'}	5'-ACC ^{3'}	5'-CCA ^{3'}	5'-TCg ^{3'}		5'-gTg ^{3'}	5'-CCT ^{3'}	5'-ggg ^{3'}
						565	329					
						5'-CAg ^{3'}	5'-ggC ^{3'}					
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

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.: **82V**

Lot-specific information

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec. PCR product	190	305	210	240	80	200	230	205	110	85	105	65
						270			305	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			
	5'-ATA 3'			5'-ATA 3'			5'-ATA 3'		5'-TgC 3'			
3'-primer(s) ³	282	362	271	341	299	261	341	527	341	146	427	418
	5'-gAC 3'	5'-TCA 3'	5'-CAT 3'	5'-CgT 3'	5'-CCA 3'	5'-gTA 3'	5'-CgT 3'	5'-CCA 3'	5'-CgT 3'	5'-CCg 3'	5'-gTg 3'	5'-gTC 3'
	538	430	330	564		299	605	616		242	614	
	5'-CAg 3'	5'-gCg 3'	5'-TgC 3'	5'-ACC 3'		5'-CCg 3'	5'-gCA 3'	5'-CgC 3'		5'-CCC 3'	5'-TgT 3'	
			570	565		330				261		
			5'-CCg 3'	5'-CAA 3'		5'-TgC 3'				5'-gTA 3'		
						587				329		
						5'-CCT 3'				5'-ggC 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. PCR product	105	110	280	90	205	100	445	145	210	120	55	195
				185		175		215	340			
						560						
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	363	363	103	257	98	112	460	527	125
	5'-ATA 3'	5'-CCT 3'	5'-CAT 3'	5'-ATA 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	701			134
			5'-gT 3'			5'-ATA 3'		5'-AgA 3'	5'-CCT 3'			5'-CCA 3'
									703			
									5'-CTA 3'			
3'-primer(s) ³	427	164	341	412	527	164	418	270	282	539	539	282
	5'-gTA 3'	5'-gCA 3'	5'-CgT 3'	5'-CCC 3'	5'-CCA 3'	5'-gCT 3'	5'-gTC 3'	5'-ACT 3'	5'-gAC 3'	5'-TCT 3'	5'-TCC 3'	5'-gAC 3'
	613	181		506		235		616	899			
	5'-gCA 3'	5'-gTT 3'		5'-TgT 3'		5'-CTg 3'		5'-CgT 3'	5'-ACA 3'			
		285				723						
		5'-T.. 3'				5'-TgT 3'						
Well No.	37	38	39	40	41	42	43	44	45	46	47	48

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

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Lot No.: **82V**

Lot-specific information

Well No.	49	50	51	52	53	54	55	56	57	58	59	60
Length of spec.	185	90	265	230	155	190	115	65	175	95	165	105
PCR product	220	210		545	195	265	145	230	245		340	265
		310					235				370	
Length of int.	800	800	1070	1070	1070	1070	1070	1070	800	1070	1070	1070
pos. control ¹												
5'-primer(s) ²	363 5'-ATA 3'	565 5'-gCA 3'	28 5'-TCC 3'	428 5'-CgC 3'	650 5'-CCC 3'	116 5'-gCT 3'	363 5'-ATA 3'	154 5'-A.g 3'	368 5'-gTg 3'	103 5'-CCT 3'	670 5'-CCg 3'	363 5'-ATA 3'
		733 5'-ATA 3'		3 rd I 5'-ATA 3'		363 5'-ATA 3'	650 5'-CCC 3'	521 5'-ggC 3'	627 5'-CCC 3'		703 5'-CTA 3'	
		832 5'-AgA 3'									877 5'-Agg 3'	
3'-primer(s) ³	497 5'-Tgg 3'	616 5'-CgT 3'	122 5'-Cgg 3'	616 5'-CgT 3'	755 5'-CCA 3'	341 5'-CgT 3'	430 5'-gCT 3'	341 5'-CgT 3'	570 5'-CAC 3'	153 5'-ACT 3'	899 5'-ACA 3'	426 5'-TCC 3'
	513 5'-TCT 3'	899 5'-ACA 3'		704 5'-CCA 3'	770 5'-TgA 3'	513 5'-TCT 3'	559 5'-CTC 3'	545 5'-AgA 3'	763 5'-CAT 3'	164 5'-gCA 3'		430 5'-gCT 3'
	542 5'-CTg 3'				806 5'-CCA 3'		727 5'-CCA 3'					585 5'-AgT 3'
							755 5'-CCA 3'					
Well No.	49	50	51	52	53	54	55	56	57	58	59	60

Well No.	61	62	63
Length of spec.	130	75	155
PCR product		215	275
Length of int.	1070	1070	1070
pos. control ¹			
5'-primer(s) ²	527 5'-TgA 3'	385 5'-ggT 3'	650 5'-CCC 3'
		527 5'-TgA 3'	
3'-primer(s) ³	616 5'-CgT 3'	559 5'-CCg 3'	755 5'-CCC 3'
			770 5'-TgA 3'
			884 5'-ggC 3'
Well No.	61	62	63

¹The internal positive control primer pairs amplify segments of the human growth hormone gene. The internal positive control bands are 1070 or 800 base pairs respectively, well distribution as outlined in the table. Well number 1 contains the shorter, 800 bp, internal positive control band. The well distribution of the internal controls can help in orientation of the kit on gel photo, as well as allow for kit identification. In the presence of a specific amplification the intensity of the control band often decreases.

²The nucleotide position matching the specificity-determining 3'-end of the primer is given. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

³The nucleotide position matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

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

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Lot No.: **82V**

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	201436207	201436208	201436209	201436210	201436211	201436212	201436213	201436214	201436215	201436216
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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Lot No.: **82V**

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	201436219	201436220	201436221	201436222	201436223	201436224	201436225	201436226	201436227	201436228	201436229	201436230	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 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.: **82V**

Lot-specific information

				CELL LINE VALIDATION SHEET																
				HLA-A*11 SSP subtyping kit²																
				Well																
				33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
				Prod. No.:	201436233	201436234	201436235	201436236	201436237	201436238	201436239	201436240	201436241	201436242	201436243	201436244	201436264	201436246	201436247	201436248
	IHWC cell line¹		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.: **82V**

Lot-specific information

CELL LINE VALIDATION SHEET				Well														
HLA-A*11 SSP subtyping kit ²				49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
			Prod. No.:	201436249	201436250	201436251	201436252	201436253	201436254	201436255	201436256	201436257	201436258	201436259	201436260	201436261	201436262	201436263
	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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.

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

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Lot No.: 82V

Lot-specific information

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 40, 42 to 54, 56 to 61 and 63 were available. The specificities of the primers in primer solutions 5, 9, 13, 23, 28, 31, 40, 43 to 48, 52 to 54, 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, 37, 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, 39 and 50 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 6, 10, 28, 31, 44 to 46, 48, 52, 54, 56, 57 and 59 one or two of the 5'-primers were not possible to test. In primer solutions 1, 5, 18, 20, 22, 24, 26 to 28, 31, 32, 40, 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 and 55 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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“Instructions for Use” (IFU)

Lot No.: **82V**

Lot-specific information

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Web page: <http://www.olerup.com>

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