

101.422-24/03 – including *Taq* polymerase, IFU-01
101.422-24u/03u – without *Taq* polymerase, IFU-02

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

Lot No.: **46R**

Lot-specific information

Olerup SSP® HLA-A*24

Product number:	101.422-24/03 – including <i>Taq</i> pol. 101.422-24u/03u – without <i>Taq</i> pol.
Lot number:	46R
Expiry date:	2015-July-01
Number of tests:	24 tests – Product No. 101.422-24/24u 3 tests – Product No. 101.422-03/03u
Number of wells per test:	93
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. 46R.

CHANGES COMPARED TO THE PREVIOUS OLERUP SSP® HLA-A*24 LOT (78M)

The HLA-A*24 kit is updated for new alleles to enable separation of:

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

The Lot-specific information for HLA-A*24 including and without *Taq* polymerase is now described in one common Product Insert.

¹As described in section Uniquely Identified Alleles.

The HLA-A*24 specificity and interpretation tables have been updated for the HLA-A alleles described since the previous *Olerup SSP®* HLA-A*24 lot was made (Lot No. 78M).

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

Well	5'-primer	3'-primer	Rationale
13	Added	-	5'-primer added for the A*24:02:42 allele.
24	-	Added	3'-primer added for the A*02:145 allele.
28	Added	Added	Primer pair added for the A*24:155N allele.
29	Added	Added	Primer pair added for the A*24:155N allele.
35	Added	-	Exchanged positive control primer pair, 5'-primer added for the A*24:142 allele.
39	Added	-	5'-primer added for the A*24:185N allele.
42	Added	Added	Primer pair added for the A*24:160 allele.
43	-	Added	3'-primer added for the A*24:159 allele.
46	Modified	-	Improved yield of HLA-specific PCR product.
49	-	Added	3'-primer added for the A*24:159 allele.
50	Added	-	Exchanged positive control primer pair, 5'-primer added for the A*24:163N allele.
53	-	Added	3'-primer added for the A*24:158N allele.
55	-	Added	3'-primer added for the A*24:173 allele.
56	Added	Added	Primer pair added for the A*24:163N allele.
60	Added	Added	Primer pair added for the A*24:183N allele.
66	Exchanged	-	Decreased tendencies of primer oligomer formation.
71	Added	Added	Primer pair added for the A*24:183N allele.
74	-	Added	3'-primer added for the A*24:180 allele.
75	-	Added	3'-primer added for the A*24:180 allele.
79	Added	-	5'-primer added for the A*24:182 allele.
80	Added	-	5'-primer added for the A*24:142 allele.
83	-	Added	3'-primer added for the A*24:173 allele.
86	Added	-	5'-primer added for the A*24:182 allele.
88	Added	-	5'-primer added for the A*24:185N allele.
90	-	Added	3'-primer added for the A*24:168 allele.

Change in revision R01 compared to R00:

1. The A*24:14, 24:93 and the A*02:19, 02:36-02:37, 02:54 and 02:255 alleles are weakly amplified in primer mix 70. This has been corrected in the Specificity and Interpretation Tables.

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PRODUCT DESCRIPTION

HLA-A*24 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the HLA-A*24:02 to A*24:209 alleles.

PLATE LAYOUT

Each test consists of 93 PCR reactions in a 96 well PCR plate. Wells 94 to 96 are empty.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	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	64
65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88
89	90	91	92	93	empty	empty	empty

The 96 well PCR plate is marked with 'HLA-A*24' in silver/gray ink.

Well No. 1 is marked with '46R'.

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 aluminium foil.

INTERPRETATION

The interpretation of HLA-A*24 SSP subtypings will be influenced by the A*01, several A*02, ten A*03, ten A*11, the A*23, the A*25:11, nine A*26, six A*29, most A*30, five A*31, six A*32, six A*33, the A*66:10, the A*68, the A*74:06 and the A*80 alleles when present on the other haplotype. In addition, the B*07:64, B*15:12 and B*15:19 alleles will be amplified by primer mixes 32^w, 45 and 91, the B*18:27 allele will be amplified by mixes 2, 6, 25, 30 and 48, the B*18:38 and B*40:197 alleles will be amplified by primer mix 63, the B*44:136, B*51:136 and C*07:204 alleles will be amplified by primer mix 46, the B*51:129 allele will be amplified by primer mixes 89 and 93 and the C*12:37 allele will be amplified by primer mixes 46 and 57.

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UNIQUELY IDENTIFIED ALLELES

All the HLA-A*24 alleles, i.e. **A*24:02 to A*24:209**, recognized by the HLA Nomenclature Committee in July 2012¹, will be amplified by the primers in the HLA-A*24 subtyping kit^{2,3}.

The HLA-A*24 kit enables separation of the confirmed HLA-A*24 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*24 alleles is listed below.

The HLA-A*24 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 HLA-A*24 subtyping kit cannot distinguish the silent mutations in the A*24:02:01:01, 24:02:01:03-24:02:04, 24:02:06-24:02:09, 24:02:11-24:02:12 and 24:02:14-24:02:59 alleles, the A*24:03:01-24:03:02 alleles or the A* 24:21:01-24:21:02 alleles.

The A*24:37 and 24:119 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 31.

The A*24:49 and 24:126 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 38.

The A*24:81 and 24:134 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 70.

The A*24:82 and 24:128 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 71.

The A*24:101 and 24:111 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 83.

The A*24:102 and 24:103 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 84.

The A*24:104 and 24:117 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 85.

The A*24:105 and 24:121 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 86.

The A*24:106 and 24:136 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 87.

¹HLA-A alleles listed on the IMGT/HLA web page 2012-July-12, release 3.9.0, www.ebi.ac.uk/imgt/hla.

²This lot of the HLA-A*24 subtyping kit cannot distinguish the A*24:169 allele and the A*24:02:01:01, 24:02:01:03-24:02:04, 24:02:06-24:02:09, 24:02:11-24:02:12 and 24:02:14-24:02:59 and the A*24:146-24:154, 24:161-24:162, 24:165-24:166, 24:170-24:172, 24:174-24:176, 24:178-24:179, 24:181, 24:186-24:187, 24:189, 24:192-24:193, 24:195-24:198, 24:200-24:203, 24:205-24:206 and 24:209 alleles.

³The A*24 primer set cannot separate the A*24:164 and A*33:19 alleles. These two alleles can be distinguished by the HLA-A low resolution and/or HLA-A*33 kits.

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ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
A*24:02:01:01	Confirmed	A*24:02:59	Unconfirmed	A*24:61	Unconfirmed	A*24:122	Confirmed	A*24:182	Confirmed
A*24:02:01:02L	Confirmed	A*24:03:01	Confirmed	A*24:62	Confirmed	A*24:123	Confirmed	A*24:183N	Unconfirmed
A*24:02:01:03	Unconfirmed	A*24:03:02	Unconfirmed	A*24:63	Unconfirmed	A*24:124	Unconfirmed	A*24:184	Confirmed
A*24:02:02	Confirmed	A*24:04	Confirmed	A*24:64	Confirmed	A*24:125	Unconfirmed	A*24:185N	Unconfirmed
A*24:02:03Q	Unconfirmed	A*24:05	Confirmed	A*24:66	Unconfirmed	A*24:126	Unconfirmed	A*24:186	Unconfirmed
A*24:02:04	Confirmed	A*24:06	Unconfirmed	A*24:67	Unconfirmed	A*24:127	Unconfirmed	A*24:187	Unconfirmed
A*24:02:05	Unconfirmed	A*24:07	Confirmed	A*24:68	Unconfirmed	A*24:128	Confirmed	A*24:188	Confirmed
A*24:02:06	Confirmed	A*24:08	Confirmed	A*24:69	Unconfirmed	A*24:129	Confirmed	A*24:189	Unconfirmed
A*24:02:07	Unconfirmed	A*24:09N	Confirmed	A*24:70	Confirmed	A*24:130	Unconfirmed	A*24:190	Unconfirmed
A*24:02:08	Unconfirmed	A*24:10	Confirmed	A*24:71	Confirmed	A*24:131	Unconfirmed	A*24:191	Unconfirmed
A*24:02:09	Unconfirmed	A*24:11N	Confirmed	A*24:72	Confirmed	A*24:132N	Confirmed	A*24:192	Unconfirmed
A*24:02:10	Unconfirmed	A*24:13:01	Unconfirmed	A*24:73	Unconfirmed	A*24:133	Unconfirmed	A*24:193	Unconfirmed
A*24:02:11	Unconfirmed	A*24:13:02	Confirmed	A*24:74	Unconfirmed	A*24:134	Unconfirmed	A*24:194	Unconfirmed
A*24:02:12	Unconfirmed	A*24:14	Confirmed	A*24:75	Unconfirmed	A*24:135	Confirmed	A*24:195	Unconfirmed
A*24:02:13	Unconfirmed	A*24:15	Unconfirmed	A*24:76	Unconfirmed	A*24:136	Unconfirmed	A*24:196	Unconfirmed
A*24:02:14	Confirmed	A*24:17	Confirmed	A*24:77	Unconfirmed	A*24:137	Confirmed	A*24:197	Unconfirmed
A*24:02:15	Unconfirmed	A*24:18	Unconfirmed	A*24:78	Unconfirmed	A*24:138	Confirmed	A*24:198	Unconfirmed
A*24:02:16	Confirmed	A*24:19	Unconfirmed	A*24:79	Unconfirmed	A*24:139	Unconfirmed	A*24:199	Unconfirmed
A*24:02:17	Unconfirmed	A*24:20	Confirmed	A*24:80	Unconfirmed	A*24:140	Unconfirmed	A*24:200	Unconfirmed
A*24:02:18	Confirmed	A*24:21:01	Confirmed	A*24:81	Confirmed	A*24:141	Unconfirmed	A*24:201	Unconfirmed
A*24:02:19	Confirmed	A*24:21:02	Unconfirmed	A*24:82	Unconfirmed	A*24:142	Unconfirmed	A*24:202	Unconfirmed
A*24:02:20	Unconfirmed	A*24:22	Confirmed	A*24:83N	Unconfirmed	A*24:143	Unconfirmed	A*24:203	Unconfirmed
A*24:02:21	Unconfirmed	A*24:23	Confirmed	A*24:84N	Unconfirmed	A*24:144	Unconfirmed	A*24:204	Unconfirmed
A*24:02:22	Confirmed	A*24:24	Confirmed	A*24:85	Confirmed	A*24:145	Confirmed	A*24:205	Unconfirmed
A*24:02:23	Confirmed	A*24:25	Confirmed	A*24:86N	Unconfirmed	A*24:146	Unconfirmed	A*24:206	Unconfirmed
A*24:02:24	Confirmed	A*24:26	Confirmed	A*24:87	Confirmed	A*24:147	Unconfirmed	A*24:207	Confirmed
A*24:02:25	Confirmed	A*24:27	Unconfirmed	A*24:88	Unconfirmed	A*24:148	Unconfirmed	A*24:208	Unconfirmed
A*24:02:26	Confirmed	A*24:28	Confirmed	A*24:89	Unconfirmed	A*24:149	Unconfirmed	A*24:209	Unconfirmed
A*24:02:27	Confirmed	A*24:29	Confirmed	A*24:90N	Confirmed	A*24:150	Unconfirmed		
A*24:02:28	Unconfirmed	A*24:30	Confirmed	A*24:91	Unconfirmed	A*24:151	Unconfirmed		
A*24:02:29	Confirmed	A*24:31	Unconfirmed	A*24:92	Unconfirmed	A*24:152	Unconfirmed		
A*24:02:30	Confirmed	A*24:32	Confirmed	A*24:93	Confirmed	A*24:153	Unconfirmed		
A*24:02:31	Confirmed	A*24:33	Confirmed	A*24:94	Unconfirmed	A*24:154	Unconfirmed		
A*24:02:32	Unconfirmed	A*24:34	Unconfirmed	A*24:95	Confirmed	A*24:155N	Unconfirmed		
A*24:02:33	Unconfirmed	A*24:35	Unconfirmed	A*24:96	Unconfirmed	A*24:156	Unconfirmed		
A*24:02:34	Unconfirmed	A*24:36N	Confirmed	A*24:97	Confirmed	A*24:157	Unconfirmed		
A*24:02:35	Confirmed	A*24:37	Confirmed	A*24:98	Unconfirmed	A*24:158N	Unconfirmed		
A*24:02:36	Unconfirmed	A*24:38	Unconfirmed	A*24:99	Unconfirmed	A*24:159	Confirmed		
A*24:02:37	Confirmed	A*24:39	Confirmed	A*24:100	Unconfirmed	A*24:160	Confirmed		
A*24:02:38	Unconfirmed	A*24:40N	Unconfirmed	A*24:101	Unconfirmed	A*24:161	Unconfirmed		
A*24:02:39	Unconfirmed	A*24:41	Unconfirmed	A*24:102	Unconfirmed	A*24:162	Unconfirmed		
A*24:02:40	Unconfirmed	A*24:42	Unconfirmed	A*24:103	Confirmed	A*24:163N	Unconfirmed		
A*24:02:41	Unconfirmed	A*24:43	Confirmed	A*24:104	Unconfirmed	A*24:164	Unconfirmed		
A*24:02:42	Unconfirmed	A*24:44	Unconfirmed	A*24:105	Confirmed	A*24:165	Unconfirmed		
A*24:02:43	Unconfirmed	A*24:45N	Unconfirmed	A*24:106	Confirmed	A*24:166	Unconfirmed		
A*24:02:44	Unconfirmed	A*24:46	Unconfirmed	A*24:107	Confirmed	A*24:167	Confirmed		
A*24:02:45	Unconfirmed	A*24:47	Confirmed	A*24:108	Confirmed	A*24:168	Confirmed		
A*24:02:46	Unconfirmed	A*24:48N	Unconfirmed	A*24:109	Unconfirmed	A*24:169	Confirmed		
A*24:02:47	Unconfirmed	A*24:49	Unconfirmed	A*24:110	Confirmed	A*24:170	Unconfirmed		
A*24:02:48	Unconfirmed	A*24:50	Confirmed	A*24:111	Unconfirmed	A*24:171	Unconfirmed		
A*24:02:49	Unconfirmed	A*24:51	Unconfirmed	A*24:112	Unconfirmed	A*24:172	Unconfirmed		
A*24:02:50	Unconfirmed	A*24:52	Confirmed	A*24:113	Confirmed	A*24:173	Confirmed		
A*24:02:51	Unconfirmed	A*24:53	Confirmed	A*24:114	Unconfirmed	A*24:174	Unconfirmed		
A*24:02:52	Unconfirmed	A*24:54	Unconfirmed	A*24:115	Confirmed	A*24:175	Unconfirmed		
A*24:02:53	Unconfirmed	A*24:55	Unconfirmed	A*24:116	Unconfirmed	A*24:176	Unconfirmed		
A*24:02:54	Unconfirmed	A*24:56	Confirmed	A*24:117	Confirmed	A*24:177	Unconfirmed		
A*24:02:55	Unconfirmed	A*24:57	Confirmed	A*24:118	Confirmed	A*24:178	Unconfirmed		
A*24:02:56	Unconfirmed	A*24:58	Confirmed	A*24:119	Unconfirmed	A*24:179	Unconfirmed		
A*24:02:57	Unconfirmed	A*24:59	Confirmed	A*24:120	Unconfirmed	A*24:180	Confirmed		
A*24:02:58	Unconfirmed	A*24:60N	Unconfirmed	A*24:121	Confirmed	A*24:181	Unconfirmed		

¹ Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2012-July-12, release 3.9.0, www.ebi.ac.uk/imgt/hla.

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RESOLUTION IN HOMO- AND HETEROZYGOTES

A total of 285 alleles generate 155 amplification patterns that can be combined in 12090 homozygous and heterozygous combinations. 5756 of these genotypes do not give rise to unique amplification patterns. The different lengths of the specific PCR products were not considered in these calculations.

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SPECIFICITY TABLE

HLA-A*24 SSP subtyping

Specificities and sizes of the PCR products of the 93 primer mixes used for HLA-A*24 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-A*24 alleles ³	Other amplified HLA Class I alleles ⁴
1⁸	210 bp	800 bp	*24:02:01:01-24:02:12, 24:02:13 ^w , 24:02:14-24:11N, 24:13:01-24:15, 24:17-24:32, 24:34-24:64, 24:66-24:75, 24:77-24:183N, 24:185N-24:209	*23:01:01-23:54, 33:19, 80:01 ^w -80:02 ^w
2	245 bp	1070 bp	*24:03:01-24:03:02, 24:10, 24:18, 24:22, 24:33, 24:94, 24:125, 24:138, 24:167, 24:204, 24:207	*02:17:01-02:17:02, 02:108, 02:110, 02:268, 02:300, 02:303, 23:04, 29:07, 31:29, B*18:27
3	210 bp	800 bp	*24:02:01:01-24:05, 24:07-24:11N, 24:17, 24:19-24:21:02, 24:23, 24:25-24:50, 24:55-24:56, 24:58-24:63, 24:66-24:86N, 24:88-24:90N, 24:93, 24:95-24:106, 24:108-24:113, 24:115-24:132N, 24:134-24:137, 24:139-24:166, 24:168-24:187, 24:189-24:206, 24:208-24:209	*33:19
4⁶	220 bp	1070 bp	*24:06, 24:13:01, 24:18, 24:22, 24:24, 24:94, 24:138, 24:167, 24:188, 24:204, 24:207	*02:17:01-02:17:02, 02:108, 02:110, 02:268, 02:300, 02:303, 23:01:01-23:13, 23:14:02-23:33, 23:35-23:54, 29:07, 31:29
5	175 bp	1070 bp	*24:02:01:01-24:04, 24:06-24:11N, 24:13:01-24:13:02, 24:17-24:23, 24:25-24:50, 24:54-24:56, 24:58-24:63, 24:66-24:91, 24:93, 24:95-24:113, 24:115-24:129, 24:131-24:137, 24:139-24:167, 24:169-24:187, 24:189-24:193, 24:195-24:198, 24:200-24:209	*02:17:01 ^w -02:17:02 ^w , 23:14:01-23:14:02, 33:19
6⁶	175 bp	1070 bp	*24:05, 24:24, 24:199	*23:01:01-23:13, 23:15-23:54, 29:07, 31:29, B*18:27

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7	335 bp	1070 bp	*24:02:01:01-24:03:02, 24:05-24:11N, 24:13:01-24:13:02, 24:17-24:18, 24:20-24:27, 24:29-24:43, 24:45N-24:50, 24:52, 24:54-24:56, 24:58-24:64, 24:66-24:88, 24:90N-24:91, 24:93-24:108, 24:110-24:117, 24:119-24:128, 24:130-24:163N, 24:165-24:209	*23:01:01-23:26, 23:28-23:54
8⁵	75 bp	1070 bp	*24:04, 24:109	
9	225 bp	800 bp	*24:07, 24:19, 24:24, 24:112, 24:131	*03:72, 11:88, 23:13, 29:37, 30:01:01-30:01:07, 30:11:01-30:11:02, 30:14L-30:20, 30:23-30:26, 30:30-30:31, 30:35-30:43, 30:48-30:49, 30:52-30:54, 30:56, 30:58-30:60, 30:62-30:63, 30:65, 68:45
10	370 bp	1070 bp	*24:02:01:01-24:02:04, 24:02:06-24:06, 24:08-24:11N, 24:13:01-24:13:02, 24:17-24:18, 24:20-24:23, 24:25-24:50, 24:52, 24:54-24:56, 24:58-24:64, 24:66-24:91, 24:93-24:107, 24:109-24:111, 24:113-24:117, 24:119-24:130, 24:132N-24:209	*02:10, 02:17:01-02:17:02, 02:39, 02:108, 02:110, 02:148, 02:242, 02:244, 02:268, 02:300, 02:303, 23:01:01-23:12, 23:14:01-23:21, 23:23-23:54, 31:29, 33:19
11^{8,9}	200 bp, 245 bp	1070 bp	*24:08, 24:42, 24:61, 24:89	*02:76:01-02:76:02, 02:319, 23:38N, 30:22
12	235 bp	1070 bp	*24:25	*23:05
13	160 bp	1070 bp	*24:02:01:01-24:02:59, 24:04-24:09N, 24:11N, 24:13:01-24:15, 24:17, 24:19-24:20, 24:23-24:32, 24:34-24:64, 24:66-24:74, 24:76-24:93, 24:95-24:109, 24:111-24:124, 24:126-24:137, 24:139-24:157, 24:159-24:166, 24:168-24:203, 24:205-24:206, 24:209	*02:19, 02:36-02:37, 02:54, 02:255, 23:01:01-23:02, 23:05-23:42, 23:44-23:54, 33:19, 68:26, 68:65
14⁵	105 bp	1070 bp	*24:09N	
15^{5,10}	105 bp, 385 bp	800 bp	*24:14-24:15, 24:19, 24:44, 24:51, 24:53, 24:57, 24:92, 24:100, 24:109	*02:46, 02:48, 02:70, 02:129, 03:30, 30:07, 31:08, 32:05, 33:21, 33:53
16⁵	85 bp	1070 bp	*24:17, 24:41, 24:208	*23:53, 29:07

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17	230 bp	1070 bp	*24:10, 24:46	*23:10
18	275 bp	1070 bp	*24:02:01:02L	
19⁸	195 bp	1070 bp	*24:02:01:01-24:02:09, 24:02:11-24:11N, 24:13:01- 24:15, 24:17-24:32, 24:34- 24:64, 24:66-24:209	*23:01:01-23:54, 33:19
20^{7,8}	470 bp	1070 bp	*24:11N	*01:04N, 03:21N, 11:21N, 23:07N
21	155 bp	800 bp	*24:31	
22⁵	125 bp	800 bp	*24:27	
23	190 bp	800 bp	*24:28, 24:30, 24:42, 24:89	*02:01:09, 02:05:05, 02:06:07, 02:50, 02:76:02, 02:122, 03:09, 03:108, 11:06, 11:18, 23:12, 25:11, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 29:19, 32:08, 33:24, 68:05, 68:15, 68:20, 74:06
24¹¹	215 bp, 240 bp	800 bp	*24:19, 24:24, 24:28, 24:44, 24:67, 24:89, 24:145, 24:156, 24:191	*02:76:01-02:76:02, 02:319, 03:72, 11:88, 23:51, 26:16, 29:37, 30:01:01-30:04:02, 30:06, 30:09-30:20, 30:23- 30:54, 30:56-30:66, 32:07, 68:45
25	220 bp	1070 bp	*24:13:01-24:13:02, 24:18, 24:24, 24:56, 24:94, 24:177, 24:188, 24:204, 24:207	*02:17:01-02:17:02, 02:108, 02:110, 02:268, 02:300, 02:303, 23:01:01-23:01:10, 23:03:01-23:54, 29:07, 31:29, B*18:27
26^{5,12}	90 bp, 220 bp	800 bp	*24:22, 24:96, 24:160	
27^{5,8,13}	80 bp, 370 bp	800 bp	*24:14, 24:32	*02:46, 02:48, 02:70, 02:129, 23:36, 32:05
28^{5,8,14}	75 bp, 155 bp	800 bp	*24:35, 24:155N	
29^{5,15}	75 bp, 210 bp	800 bp	*24:08, 24:29, 24:42, 24:89, 24:155N	*02:76:01-02:76:02, 02:319, 30:22
30^{5,7,16}	125 bp, 200 bp	800 bp	*24:21:01-24:21:02, 24:59, 24:190, 24:208	*23:03:01-23:03:02, 29:07, 31:29, B*18:27
31¹⁷	155 bp, 235 bp	800 bp	*24:04, 24:37, 24:109, 24:119, 24:129	*01:02, 01:20, 26:16, 29:37, 30:57
32	225 bp	1070 bp	*24:15, 24:41, 24:51, 24:92	*01:01:01:01-01:04N, 01:06-01:33, 01:35-01:37, 01:39-01:41, 01:43-01:71,

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				01:73-01:101, 01:103-01:113, 11:27, 11:38-11:39, 11:94, 23:31, 23:45, 26:29, 26:49, 32:13, 66:10, B*07:64^w, B*15:12^w, B*15:19^w
33⁵	100 bp	1070 bp	*24:39, 24:139	
34	195 bp	800 bp	*24:36N	
35	195 bp	1070 bp	*24:45N, 24:88, 24:142	
36^{5,8}	115 bp	1070 bp	*24:47, 24:124	*31:07, 31:10
37	210 bp	1070 bp	*24:48N, 24:54	
38¹⁸	145 bp, 170 bp, 230 bp	800 bp	*24:49, 24:126, 24:137	
39^{5,19}	75 bp, 210 bp	800 bp	*24:50, 24:185N	*02:129
40	225 bp	1070 bp	*24:08, 24:20, 24:88	
41^{7,20}	200 bp, 240 bp	1070 bp	*24:26, 24:62, 24:118, 24:132N	*01:39, 23:45, 26:29, 26:49, 31:05, 32:13, 33:10, 66:10
42²¹	170 bp, 200 bp	1070 bp	*24:22, 24:24, 24:67, 24:160	*02:262, 26:16, 68:45
43	160 bp	800 bp	*24:43, 24:159	
44	250 bp	800 bp	*24:51, 24:57, 24:92, 24:120	*01:01:01:01-01:04N, 01:06-01:19, 01:21-01:33, 01:35-01:65, 01:67-01:71, 01:74-01:101, 01:103-01:113, 03:18, 03:97, 03:122, 03:135, 11:27, 11:38-11:39, 11:94, 26:29, 26:49, 29:03, 29:33, 31:05, 32:13, 33:10, 66:10, 68:26, 68:65, 80:01-80:02
45²²	200 bp, 245 bp	1070 bp	*24:14, 24:52, 24:113, 24:132N	*01:20, 01:66, 01:73, 02:19, 02:36-02:37, 02:54, 02:255, 26:29, 26:49, 66:10, B*07:64, B*15:12, B*15:19
46⁵	110 bp	1070 bp	*24:15, 24:41, 24:51, 24:92	*02:50, 02:73, 02:93, 02:122, 02:156, 02:172, 02:279, 11:119, 23:31, 23:45, 26:10, 32:28, 68:02:01:01-68:02:05, 68:15, 68:18N, 68:25, 68:27-68:28, 68:31, 68:34, 68:40, 68:44, 68:48-68:49N,

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				68:51, 68:53-68:54, 68:60-68:62, 68:64, 68:67, 68:74, 68:77-68:78, 68:80-68:82, 68:86, 68:92, B*44:136, B*51:136, C*07:204, C*12:37
47²³	200 bp, 410 bp	800 bp	*24:18, 24:26, 24:56, 24:123, 24:177	*03:30, 30:07, 31:08, 32:05, 33:53
48⁶	195 bp	1070 bp	*24:24, 24:71	*23:01:01-23:23, 23:25-23:33, 23:35-23:54, 29:07, 31:29, B*18:27
49²⁴	165 bp, 215 bp, 245 bp	1070 bp	*24:23, 24:91, 24:159	
50²⁵	235 bp, 260 bp	1070 bp	*24:34, 24:163N	
51²⁶	165 bp, 215 bp	800 bp	*24:38, 24:140	
52⁸	240 bp	800 bp	*24:40N	
53^{5,27}	125 bp, 230 bp	1070 bp	*24:55, 24:158N	
54⁸	165 bp	1070 bp	*24:58	
55²⁸	240 bp, 275 bp	1070 bp	*24:60N, 24:173	
56	270 bp	1070 bp	*24:63, 24:163N	*68:92
57	135 bp	1070 bp	*24:64	C*12:37
58	195 bp	1070 bp	*24:66	*23:46
59²⁹	230 bp, 255 bp, 285 bp	1070 bp	*24:68, 24:127, 24:143	
60³⁰	205 bp, 275 bp	800 bp	*24:69, 24:183N	
61^{5,31}	105 bp, 280 bp	800 bp	*24:70, 24:127, 24:141	
62⁵	125 bp	800 bp	*24:72	*02:106, 02:145
63	135 bp	1070 bp	*24:73, 24:157	B*18:38, B*40:197
64^{5,8,32}	115 bp, 170 bp	1070 bp	*24:74, 24:124	*31:07, 31:10
65^{5,33}	80 bp, 235 bp	1070 bp	*24:75, 24:90N	*02:88N
66	155 bp	800 bp	*24:77	*11:106, 23:28, 32:05
67	230 bp	1070 bp	*24:79	

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68³⁴	230 bp, 280 bp	800 bp	*24:78, 24:141, 24:143	
69^{5,35}	105 bp, 265 bp	1070 bp	*24:80, 24:184	
70^{5,36}	110 bp, 250 bp	1070 bp	*24:14 ^w , 24:81, 24:93 ^w , 24:134	*02:19 ^w , 02:36-02:37 ^w , 02:54 ^w , 02:255 ^w
71³⁷	130 bp, 205 bp, 260 bp	800 bp	*24:82, 24:128, 24:183N	*23:29, 29:13, 31:07-31:08, 31:10, 32:42
72⁵	120 bp	1070 bp	*24:83N	
73^{5,38}	100 bp, 170 bp	1070 bp	*24:84N, 24:131, 24:138, 24:188	*02:17:01-02:17:02, 02:108, 02:110, 02:268, 02:300, 02:303
74³⁹	145 bp, 200 bp	1070 bp	*24:85, 24:180	
75^{7,40}	145 bp, 290 bp	1070 bp	*24:86N, 24:180	
76^{8,41}	170 bp, 260 bp	1070 bp	*24:76, 24:98	
77⁴²	145 bp, 210 bp	800 bp	*24:06, 24:87, 24:122, 24:138, 24:167	*23:02
78	140 bp	800 bp	*24:57, 24:92, 24:120	*02:50, 02:73, 02:122, 02:156, 02:245, 02:334, 02:338, 03:17:01, 11:119, 26:10, 30:61, 32:28, 33:32:01, 68:01:01:01- 68:43, 68:45-68:55, 68:57- 68:82, 68:84-68:90, 68:92- 68:94N
79⁴³	195 bp, 250bp	1070 bp	*24:14, 24:93, 24:114, 24:182	*01:20, 01:66, 02:19, 02:36- 02:37, 02:54, 02:255
80⁴⁴	170 bp, 220 bp	1070 bp	*24:95, 24:140, 24:142	
81^{5,45}	100 bp, 215 bp	1070 bp	*24:97, 24:133, 24:139	
82⁴⁶	185 bp, 225 bp	1070 bp	*24:99, 24:125, 24:130	
83⁴⁷	135 bp, 275 bp	800 bp	*24:101, 24:111, 24:173	
84^{5,48}	95 bp, 210 bp, 290 bp	1070 bp	*24:102-24:103, 24:107	
85⁴⁹	145 bp, 210 bp	1070 bp	*24:104, 24:117	*03:30, 32:05

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86 ⁵⁰	190 bp, 255 bp	1070 bp	*24:105, 24:121, 24:182	
87 ^{5,51}	90 bp, 120 bp, 195 bp	1070 bp	*24:17, 24:41, 24:62, 24:106, 24:110, 24:136, 24:208	*23:31, 23:45, 23:53, 29:07, 31:29
88 ^{5,52}	75 bp, 170 bp	1070 bp	*24:116, 24:137, 24:185N	
89 ^{5,53}	75 bp, 270 bp	1070 bp	*24:07, 24:108, 24:112, 24:131	*23:13, B*51:129
90 ^{5,54}	95 bp, 180 bp	800 bp	*24:115, 24:168	
91 ⁸	215 bp	1070 bp	*24:135	*23:31, 23:45, 23:52, 32:13, B*07:64, B*15:12, B*15:19
92	190 bp	1070 bp	*24:144	
93 ⁸	270 bp	1070 bp	*24:112	B*51:129

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*24 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 respective lengths of the HLA-specific PCR product(s) are given for the alleles amplified by these primer mixes.

Nonspecific amplifications, i.e. a ladder or a smear of bands, may sometimes be seen. GC-rich primers have a higher tendency of giving rise to nonspecific amplifications than other primers.

PCR fragments longer than the control bands may sometimes be observed. Such bands should be disregarded and do not influence the interpretation of the SSP typings.

PCR fragments migrating faster than the control bands, but slower than a 400 bp fragment may be seen in some gel read-outs. Such bands can be disregarded and do not influence the interpretation of the SSP typings.

Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an inherent feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated.

²The internal positive control primer pairs amplify segments of the human growth hormone gene.

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-A*24 subtyping.

In addition, wells number 3, 9, 15, 21 to 24, 26 to 31, 34, 38, 39, 43, 44, 47, 51, 52, 60 to 62, 66, 68, 71, 77, 78, 83 and 90 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

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

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. We assume that unknown sequences in these regions are conserved within allelic groups.

⁴Due to the sharing of sequence motifs between HLA-A alleles some non-HLA-A*24 alleles will be amplified by primer mixes 1 to 7, 9 to 13, 15 to 17, 19, 20, 23 to 25, 27, 29 to 32, 36, 39, 41, 42, 44 to 48, 56, 58, 62, 64 to 66, 71, 73, 77 to 79, 85, 87, 89 and 91. In addition, the B*07:64, B*15:12 and B*15:19 alleles will be amplified by primer mixes 32^w, 45 and 91, the B*18:27 allele will be amplified by mixes 2, 6, 25, 30 and 48, the B*18:38 and B*40:197 alleles will be amplified

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by primer mix 63, the B*44:136, B*51:136 and C*07:204 alleles will be amplified by primer mix 46, the B*51:129 allele will be amplified by primer mixes 89 and 93 and the C*12:37 allele will be amplified by primer mixes 46 and 57.

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

⁶Primer mixes 4, 6 and 48 may give rise to a lower yield of HLA-specific PCR product than the other A*24 primer mixes.

⁷Primer mixes 20, 30, 41 and 75 have a tendency to giving rise to primer oligomer formation.

⁸Primer mixes 1, 11, 19, 20, 27, 28, 36, 52, 54, 64, 76, 91 and 93 may have tendencies of unspecific amplifications, most pronounced in primer mix 91.

⁹Primer mix 11: Specific PCR fragment of 200 bp in the A*24:08, 24:42 and 24:89 and the A*02:76:01-02:76:02, 02:319 and 30:22 alleles. Specific PCR fragment of 245 bp in the A*24:61 and the 23:38N alleles.

¹⁰Primer mix 15: Specific PCR fragment of 105 bp in the A*24:19, 24:44, 24:100 and 24:109 alleles. Specific PCR fragment of 385 bp in the A*24:14-24:15, 24:51, 24:53, 24:57 and 24:92 and the A*02:46, 02:48, 02:70, 02:129, 03:30, 30:07, 31:08, 32:05, 33:21 and 33:53 alleles.

¹¹Primer mix 24: Specific PCR fragment of 215 bp in the A*24:24, 24:67, 24:145, 24:156 and 24:191 and the A*03:72, 23:51, 26:16, 29:37, 30:02:01-30:04:02, 30:06, 30:09-30:10, 30:12, 30:25, 30:27-30:29, 30:32-30:34, 30:45, 30:47, 30:50-30:51, 30:57, 30:61, 30:64, 30:66 and 32:07 alleles.

Specific PCR fragment of 240 bp in the A*24:19, 24:28, 24:44 and 24:89 and the A*02:76:01-02:76:02, 02:319, 03:72, 30:31 and 30:60 alleles. Specific PCR fragment of 215 and 245 bp in the A*11:88, 30:01:01-30:01:07, 30:11:01-30:11:02, 30:13-30:20, 30:23-30:24, 30:26, 30:30, 30:35-30:44, 30:46, 30:48-30:49, 30:52-30:54, 30:56, 30:58-30:59N, 30:62-30:63, 30:65 and 68:45 alleles.

¹²Primer mix 26: Specific PCR fragment of 90 bp in the A*24:96 allele. Specific PCR fragment of 220 bp in the A*24:22 and 24:160 alleles.

¹³Primer mix 27: Specific PCR fragment of 80 bp in the A*24:32 and the A*23:36 and 32:05 alleles. Specific PCR fragment of 370 bp in the A*24:14 and in the A*24:14 and the A*02:46, 02:48, 02:70 and 02:129 alleles.

¹⁴Primer mix 28: Specific PCR fragment of 75 bp in the A*24:155N allele. Specific PCR fragment of 155 bp in the A*24:35 allele.

¹⁵Primer mix 29: Specific PCR fragment of 75 bp in the A*24:155N allele. Specific PCR fragment of 210 bp in the A*24:08, 24:29, 24:42 and 24:89 and the A*02:76:01-02:76:02, 02:319 and 30:22 alleles.

¹⁶Primer mix 30: Specific PCR fragment of 125 bp in the A*24:21:01-24:21:02 and 24:208 and in the A*23:03:01-23:03:02, 29:07 and 31:29 and the B*18:27 alleles. Specific PCR fragment of 200 bp in the A*24:59 and 24:190 alleles.

¹⁷Primer mix 31: Specific PCR fragment of 155 bp in the A*24:37 allele. Specific PCR fragment of 235 bp in the A*24:04, 24:109, 24:119 and 24:129 and the A*01:02, 01:20, 26:16, 29:37 and 30:57 alleles.

¹⁸Primer mix 38: Specific PCR fragment of 145 bp in the A*24:49 allele. Specific PCR fragment of 170 bp in the A*24:137 allele. Specific PCR fragment of 230 bp in the A*24:126 allele.

¹⁹Primer mix 39: Specific PCR fragment of 75 bp in the A*24:185N allele. Specific PCR fragment of 210 bp in the A*24:50 and the A*02:129 alleles.

²⁰Primer mix 41: Specific PCR fragment of 200 bp in the A*24:26 and 24:62 and the A*01:39, 23:45, 26:29, 26:49, 31:05, 32:13, 33:10 and 66:10 alleles. Specific PCR fragment of 240 bp in the A*24:118 and 24:132N alleles.

²¹Primer mix 42: Specific PCR fragment of 170 bp in the A*24:22 and 24:160 and the A*02:262 alleles. Specific PCR fragment of 200 bp in the A*24:24 and 24:67 and the A*26:16 and 68:45 alleles.

²²Primer mix 45: Specific PCR fragment of 200 bp in the A*24:113 allele. Specific PCR fragment of 245 bp in the A*24:14, 24:52 and 24:132N and in the A*01:20, 01:66, 01:73, 02:19, 02:36-02:37, 02:54, 02:255, 26:29, 26:49 and 66:10 and the B*07:64, B*15:12 and B*15:19 alleles.

²³Primer mix 47: Specific PCR fragment of 200 bp in the A*24:18, 24:56, 24:123 and 24:177 alleles. Specific PCR fragment of 410 bp in the A*24:26 and the A*03:30, 30:07, 31:08, 32:05 and 33:53 alleles.

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- ²⁴Primer mix 49: Specific PCR fragment of 165 bp in the A*24:159 allele. Specific PCR fragment of 215 bp in the A*24:91 allele. Specific PCR fragment of 245 bp in the A*24:23 allele.
- ²⁵Primer mix 50: Specific PCR fragment of 235 bp in the A*24:34 allele. Specific PCR fragment of 260 bp in the A*24:163N allele.
- ²⁶Primer mix 51: Specific PCR fragment of 165 bp in the A*24:140 allele. Specific PCR fragment of 215 bp in the A*24:38 allele.
- ²⁷Primer mix 53: Specific PCR fragment of 125 bp in the A*24:158N allele. Specific PCR fragment of 230 bp in the A*24:55 allele.
- ²⁸Primer mix 55: Specific PCR fragment of 240 bp in the A*24:60N allele. Specific PCR fragment of 275 bp in the A*24:173 allele.
- ²⁹Primer mix 59: Specific PCR fragment of 230 bp in the A*24:143 allele. Specific PCR fragment of 255 bp in the A*24:68 allele. Specific PCR fragment of 285 bp in the A*24:127 allele.
- ³⁰Primer mix 60: Specific PCR fragment of 205 bp in the A*24:183N allele. Specific PCR fragment of 275 bp in the A*24:69 allele.
- ³¹Primer mix 61: Specific PCR fragment of 105 bp in the A*24:70 allele. Specific PCR fragment of 280 bp in the A*24:127 and 24:141 alleles.
- ³²Primer mix 64: Specific PCR fragment of 115 bp in the A*24:124 and in the A*31:07 and 31:10 alleles. Specific PCR fragment of 170 bp in the A*24:74 allele.
- ³³Primer mix 65: Specific PCR fragment of 80 bp in the A*24:75 allele. Specific PCR fragment of 235 bp in the A*24:90N and the A*02:88N alleles.
- ³⁴Primer mix 68: Specific PCR fragment of 230 bp in the A*24:143 allele. Specific PCR fragment of 285 bp in the A*24:78 and 24:141 alleles.
- ³⁵Primer mix 69: Specific PCR fragment of 105 bp in the A*24:80 allele. Specific PCR fragment of 265 bp in the A*24:184 allele.
- ³⁶Primer mix 70: Specific PCR fragment of 110 bp in the A*24:134 allele. Specific PCR fragment of 250 bp in the A*24:14^w, 24:81 and 24:93^w and the A*02:19^w, 02:36-02:37^w, 02:54^w and 02:255^w alleles.
- ³⁷Primer mix 71: Specific PCR fragment of 130 bp in the A*24:128 and the A*23:29 alleles. Specific PCR fragment of 205 bp in the A*24:183N allele. Specific PCR fragment of 260 bp in the A*24:82 and the A*29:13, 31:07-31:08, 31:10, 32:42 alleles.
- ³⁸Primer mix 73: Specific PCR fragment of 100 bp in the A*24:84N allele. Specific PCR fragment of 170 bp in the A*24:131, 24:138 and 24:188 and the A*02:17:01-02:17:02, 02:108, 02:110, 02:268, 02:300 and 02:303 alleles.
- ³⁹Primer mix 74: Specific PCR fragment of 145 bp in the A*24:180 allele. Specific PCR fragment of 200 bp in the A*24:85 allele.
- ⁴⁰Primer mix 75: Specific PCR fragment of 145 bp in the A*24:180 allele. Specific PCR fragment of 290 bp in the A*24:86N allele.
- ⁴¹Primer mix 76: Specific PCR fragment of 170 bp in the A*24:76 allele. Specific PCR fragment of 260 bp in the A*24:98 allele.
- ⁴²Primer mix 77: Specific PCR fragment of 145 bp in the A*24:122 allele. Specific PCR fragment of 210 bp in the A*24:06, 24:87, 24:138, 24:167 and the A*23:02 alleles.
- ⁴³Primer mix 79: Specific PCR fragment of 195 bp in the A*24:182 allele. Specific PCR fragment of 250 bp in the A*24:14, 24:93 and 24:114 and the A*01:20, 01:66, 02:19, 02:36-02:37, 02:54 and 02:255 alleles.
- ⁴⁴Primer mix 80: Specific PCR fragment of 170 bp in the A*24:140 and 24:142 alleles. Specific PCR fragment of 220 bp in the A*24:95 allele.
- ⁴⁵Primer mix 81: Specific PCR fragment of 100 bp in the A*24:139 allele. Specific PCR fragment of 215 bp in the A*24:97 and 24:133 alleles.
- ⁴⁶Primer mix 82: Specific PCR fragment of 185 bp in the A*24:99 and 24:130 alleles. Specific PCR fragment of 225 bp in the A*24:125 allele.
- ⁴⁷Primer mix 83: Specific PCR fragment of 135 bp in the A*24:111 allele. Specific PCR fragment of 275 bp in the A*24:101 and 24:173 alleles.
- ⁴⁸Primer mix 84: Specific PCR fragment of 95 bp in the A*24:103 allele. Specific PCR fragment of 210 bp in the A*24:107 allele. Specific PCR fragment of 290 bp in the A*24:102 allele.
- ⁴⁹Primer mix 85: Specific PCR fragment of 145 bp in the A*24:117 allele. Specific PCR fragment of 210 bp in the A*24:104 and in the A*03:30 and 32:05 alleles.

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⁵⁰Primer mix 86: Specific PCR fragment of 190 bp in the A*24:121 and 24:182 alleles. Specific PCR fragment of 255 bp in the A*24:105 allele.

⁵¹Primer mix 87: Specific PCR fragment of 90 bp in the A*24:17, 24:41, 24:62, 24:106 and 24:208 and the A*23:31, 23:45, 23:53, 29:07, 31:29 alleles. Specific PCR fragment of 120 bp in the A*24:110 allele. Specific PCR fragment of 195 bp in the A*24:136 alleles.

⁵²Primer mix 88: Specific PCR fragment of 75 bp in the A**24:185N allele. Specific PCR fragment of 170 bp in the A*24:116 and 24:137 alleles.

⁵³Primer mix 89: Specific PCR fragment of 75 bp in the A*24:07, 24:108, 24:112, 24:131 and the A*23:13 alleles. Specific PCR fragment of 270 bp in the A*24:112 and the B*51:129 alleles.

⁵⁴Primer mix 90: Specific PCR fragment of 95 bp in the A*24:115 allele. Specific PCR fragment of 180 bp in the A*24:168 allele.

‘w’, might be weakly amplified.

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Lot-specific information

[illegible]

101.422-24/03 – including *Taq* polymerase, IFU-01
101.422-24u/03u – without *Taq* polymerase, IFU-02

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Lot No.: 46R

Lot-specific information

[illegible]

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For *In Vitro* Diagnostic Use.

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Lot-specific information

[illegible]

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Lot-specific information

[illegible]

101.422-24/03 – including *Taq* polymerase, IFU-01
 101.422-24u/03u – without *Taq* polymerase, IFU-02

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Lot-specific information

4	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	8	8	8	8	8	8	8	9	9	9	9	Well No.	
9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	HLA-A allele ^{2,3}
																		+									+							*24:185N	
																																		*24:188	
																																		*24:194	
																																		*24:204	
																																		*24:207	
																											+							*24:208	
																																		*01:01:01:01:01:47, 01:03, 01:06-01:19, 01:21- 01:33, 01:35-01:37, 01:40- 01:41, 01:43-01:65, 01:67- 01:71, 01:74-01:101, 01:103- 01:113, 11:27, 11:38-11:39, 11:94	
																																		*01:02	
																																		*01:04N	
																																		*01:20	
																																		*01:38, 01:42, 03:18, 03:97, 03:122, 03:135, 29:03, 29:33	
																																		*01:39	
																																		*01:66	
																																		*01:73	
																																		*02:01:09, 02:05:05, 02:06:07, 03:09, 03:108, 11:06, 11:18, 25:11, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 29:19, 32:08, 33:24, 74:06	
																																		*02:10, 02:39, 02:148, 02:242, 02:244	
																																		*02:17:01-02:17:02	
																																		*02:19, 02:36-02:37, 02:54, 02:255	
																																		*02:46, 02:48, 02:70	
																																		*02:50, 02:122, 68:15	
																																		*02:73, 02:156, 11:119, 26:10, 32:28, 68:02:01:01- 68:02:05, 68:18N, 68:25, 68:27-68:28, 68:31, 68:34, 68:40, 68:48-68:49N, 68:51, 68:53-68:54, 68:60-68:62, 68:64, 68:67, 68:74, 68:77- 68:78, 68:80-68:82, 68:86	
																																		*02:76:01, 02:319	
																																		*02:76:02	
																																		*02:88N	
																																		*02:93, 02:172, 02:279, 68:44, B*44:136, B*51:136, C*07:204	
																																		*02:106, 02:145	
																																		*02:108, 02:110, 02:268, 02:300, 02:303	
																																		*02:129	
4	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	8	8	8	8	8	8	8	9	9	9	9	Well No.	
9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	HLA-A allele ^{2,3}

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Lot-specific information

June 2014
Rev. No.: 01

CE
0088

For *In Vitro* Diagnostic Use.

101.422-24/03 – including *Taq* polymerase, IFU-01
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Lot No.: 46R

Lot-specific information

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Lot-specific information

For *In Vitro* Diagnostic Use.

101.422-24/03 – including *Taq* polymerase, IFU-01
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Lot No.: **46R**

Lot-specific information

4	5	5	5	5	5	5	5	6	6	6	6	6	6	6	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	9	9	9	9	9	Well No.
9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	HLA-A allele ^{2,3}
																																		*29:13, 32:42	
																																		*29:37	
																																		*30:02:01-30:04:02, 30:06, 30:09-30:10, 30:12-30:13, 30:27N-30:29, 30:32-30:34, 30:44-30:47, 30:50-30:51, 30:64, 30:66, 32:07	
																																		*30:07, 33:53	
																																		*30:22	
																																		*30:57	
																																		*30:61	
																																		*31:05, 33:10	
																																		*31:07, 31:10	
																																		*31:08	
																																		*31:29	
																																		*32:05	
																																		*32:13	
																																		*33:21	
																																		*68:05, 68:20	
																																		*68:26, 68:65	
																																		*68:45	
																																		*68:92	
																																		*80:01-80:02	
																																		B*07:64, B*15:12, B*15:19	
																																		B*18:27	
																																		B*18:38, B*40:197	
																																		B*51:129	
																																		C*12:37	
4	5	5	5	5	5	5	5	6	6	6	6	6	6	6	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	9	9	9	9	Well No.
9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	

⁶The A*24:37 and 24:119 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 31.

⁷The A*24:49 and 24:126 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 38.

⁸The A*24:81 and 24:134 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 70.

⁹The A*24:82 and 24:128 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 71.

¹⁰The A*24:101 and 24:111 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 83.

¹¹The A*24:102 and 24:103 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 84.

¹²The A*24:104 and 24:117 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 85.

¹³The A*24:105 and 24:121 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 86.

¹⁴The A*24:106 and 24:136 alleles can be distinguished by the different sizes of the specific PCR products generated by primer mix 87.

¹⁵Primer mix 11: Specific PCR fragment of 200 bp in the A*24:08, 24:42 and 24:89 and the A*02:76:01-02:76:02, 02:319 and 30:22 alleles. Specific PCR fragment of 245 bp in the A*24:61 and the 23:38N alleles.

Primer mix 15: Specific PCR fragment of 105 bp in the A*24:19, 24:44, 24:100 and 24:109 alleles. Specific PCR fragment of 385 bp in the A*24:14-24:15, 24:51, 24:53, 24:57 and 24:92 and the A*02:46, 02:48, 02:70, 02:129, 03:30, 30:07, 31:08, 32:05, 33:21 and 33:53 alleles.

101.422-24/03 – including *Taq* polymerase, IFU-01
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Lot No.: 46R**Lot-specific information**

Primer mix 24: Specific PCR fragment of 215 bp in the A*24:24, 24:67, 24:145, 24:156 and 24:191 and the A*03:72, 23:51, 26:16, 29:37, 30:02:01-30:04:02, 30:06, 30:09-30:10, 30:12, 30:25, 30:27-30:29, 30:32-30:34, 30:45, 30:47, 30:50-30:51, 30:57, 30:61, 30:64, 30:66 and 32:07 alleles.

Specific PCR fragment of 240 bp in the A*24:19, 24:28, 24:44 and 24:89 and the A*02:76:01-02:76:02, 02:319, 03:72, 30:31 and 30:60 alleles. Specific PCR fragment of 215 and 245 bp in the A*11:88, 30:01:01-30:01:07, 30:11:01-30:11:02, 30:13-30:20, 30:23-30:24, 30:26, 30:30, 30:35-30:44, 30:46, 30:48-30:49, 30:52-30:54, 30:56, 30:58-30:59N, 30:62-30:63, 30:65 and 68:45 alleles.

Primer mix 26: Specific PCR fragment of 90 bp in the A*24:96 allele. Specific PCR fragment of 220 bp in the A*24:22 and 24:160 alleles.

Primer mix 27: Specific PCR fragment of 80 bp in the A*24:32 and the A*23:36 and 32:05 alleles. Specific PCR fragment of 370 bp in the A*24:14 and in the A*24:14 and the A*02:46, 02:48, 02:70 and 02:129 alleles.

Primer mix 28: Specific PCR fragment of 75 bp in the A*24:155N allele. Specific PCR fragment of 155 bp in the A*24:35 allele.

Primer mix 29: Specific PCR fragment of 75 bp in the A*24:155N allele. Specific PCR fragment of 210 bp in the A*24:08, 24:29, 24:42 and 24:89 and the A*02:76:01-02:76:02, 02:319 and 30:22 alleles.

Primer mix 30: Specific PCR fragment of 125 bp in the A*24:21:01-24:21:02 and 24:208 and in the A*23:03:01-23:03:02, 29:07 and 31:29 and the B*18:27 alleles. Specific PCR fragment of 200 bp in the A*24:59 and 24:190 alleles.

Primer mix 31: Specific PCR fragment of 155 bp in the A*24:37 allele. Specific PCR fragment of 235 bp in the A*24:04, 24:109, 24:119 and 24:129 and the A*01:02, 01:20, 26:16, 29:37 and 30:57 alleles.

Primer mix 38: Specific PCR fragment of 145 bp in the A*24:49 allele. Specific PCR fragment of 170 bp in the A*24:137 allele. Specific PCR fragment of 230 bp in the A*24:126 allele.

Primer mix 39: Specific PCR fragment of 75 bp in the A*24:185N allele. Specific PCR fragment of 210 bp in the A*24:50 and the A*02:129 alleles.

Primer mix 41: Specific PCR fragment of 200 bp in the A*24:26 and 24:62 and the A*01:39, 23:45, 26:29, 26:49, 31:05, 32:13, 33:10 and 66:10 alleles. Specific PCR fragment of 240 bp in the A*24:118 and 24:132N alleles.

Primer mix 42: Specific PCR fragment of 170 bp in the A*24:22 and 24:160 and the A*02:262 alleles. Specific PCR fragment of 200 bp in the A*24:24 and 24:67 and the A*26:16 and 68:45 alleles.

Primer mix 45: Specific PCR fragment of 200 bp in the A*24:113 allele. Specific PCR fragment of 245 bp in the A*24:14, 24:52 and 24:132N and in the A*01:20, 01:66, 01:73, 02:19, 02:36-02:37, 02:54, 02:255, 26:29, 26:49 and 66:10 and the B*07:64, B*15:12 and B*15:19 alleles.

Primer mix 47: Specific PCR fragment of 200 bp in the A*24:18, 24:56, 24:123 and 24:177 alleles. Specific PCR fragment of 410 bp in the A*24:26 and the A*03:30, 30:07, 31:08, 32:05 and 33:53 alleles.

Primer mix 49: Specific PCR fragment of 165 bp in the A*24:159 allele. Specific PCR fragment of 215 bp in the A*24:91 allele. Specific PCR fragment of 245 bp in the A*24:23 allele.

Primer mix 50: Specific PCR fragment of 235 bp in the A*24:34 allele. Specific PCR fragment of 260 bp in the A*24:163N allele.

Primer mix 51: Specific PCR fragment of 165 bp in the A*24:140 allele. Specific PCR fragment of 215 bp in the A*24:38 allele.

Primer mix 53: Specific PCR fragment of 125 bp in the A*24:158N allele. Specific PCR fragment of 230 bp in the A*24:55 allele.

Primer mix 55: Specific PCR fragment of 240 bp in the A*24:60N allele. Specific PCR fragment of 275 bp in the A*24:173 allele.

Primer mix 59: Specific PCR fragment of 230 bp in the A*24:143 allele. Specific PCR fragment of 255 bp in the A*24:68 allele. Specific PCR fragment of 285 bp in the A*24:127 allele.

Primer mix 60: Specific PCR fragment of 205 bp in the A*24:183N allele. Specific PCR fragment of 275 bp in the A*24:69 allele.

Primer mix 61: Specific PCR fragment of 105 bp in the A*24:70 allele. Specific PCR fragment of 280 bp in the A*24:127 and 24:141 alleles.

101.422-24/03 – including *Taq* polymerase, IFU-01
101.422-24u/03u – without *Taq* polymerase, IFU-02

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Lot No.: 46R**Lot-specific information**

Primer mix 64: Specific PCR fragment of 115 bp in the A*24:124 and in the A*31:07 and 31:10 alleles. Specific PCR fragment of 170 bp in the A*24:74 allele.

Primer mix 65: Specific PCR fragment of 80 bp in the A*24:75 allele. Specific PCR fragment of 235 bp in the A*24:90N and the A*02:88N alleles.

Primer mix 68: Specific PCR fragment of 230 bp in the A*24:143 allele. Specific PCR fragment of 285 bp in the A*24:78 and 24:141 alleles.

Primer mix 69: Specific PCR fragment of 105 bp in the A*24:80 allele. Specific PCR fragment of 265 bp in the A*24:184 allele.

Primer mix 70: Specific PCR fragment of 110 bp in the A*24:134 allele. Specific PCR fragment of 250 bp in the A*24:14^w, 24:81 and 24:93^w and the A*02:19^w, 02:36-02:37^w, 02:54^w and 02:255^w alleles.

Primer mix 71: Specific PCR fragment of 130 bp in the A*24:128 and the A*23:29 alleles. Specific PCR fragment of 205 bp in the A*24:183N allele. Specific PCR fragment of 260 bp in the A*24:82 and the A*29:13, 31:07-31:08, 31:10, 32:42 alleles.

Primer mix 73: Specific PCR fragment of 100 bp in the A*24:84N allele. Specific PCR fragment of 170 bp in the A*24:131, 24:138 and 24:188 and the A*02:17:01-02:17:02, 02:108, 02:110, 02:268, 02:300 and 02:303 alleles.

Primer mix 74: Specific PCR fragment of 145 bp in the A*24:180 allele. Specific PCR fragment of 200 bp in the A*24:85 allele.

Primer mix 75: Specific PCR fragment of 145 bp in the A*24:180 allele. Specific PCR fragment of 290 bp in the A*24:86N allele.

Primer mix 76: Specific PCR fragment of 170 bp in the A*24:76 allele. Specific PCR fragment of 260 bp in the A*24:98 allele.

Primer mix 77: Specific PCR fragment of 145 bp in the A*24:122 allele. Specific PCR fragment of 210 bp in the A*24:06, 24:87, 24:138, 24:167 and the A*23:02 alleles.

Primer mix 79: Specific PCR fragment of 195 bp in the A*24:182 allele. Specific PCR fragment of 250 bp in the A*24:14, 24:93 and 24:114 and the A*01:20, 01:66, 02:19, 02:36-02:37, 02:54 and 02:255 alleles.

Primer mix 80: Specific PCR fragment of 170 bp in the A*24:140 and 24:142 alleles. Specific PCR fragment of 220 bp in the A*24:95 allele.

Primer mix 81: Specific PCR fragment of 100 bp in the A*24:139 allele. Specific PCR fragment of 215 bp in the A*24:97 and 24:133 alleles.

Primer mix 82: Specific PCR fragment of 185 bp in the A*24:99 and 24:130 alleles. Specific PCR fragment of 225 bp in the A*24:125 allele.

Primer mix 83: Specific PCR fragment of 135 bp in the A*24:111 allele. Specific PCR fragment of 275 bp in the A*24:101 and 24:173 alleles.

Primer mix 84: Specific PCR fragment of 95 bp in the A*24:103 allele. Specific PCR fragment of 210 bp in the A*24:107 allele. Specific PCR fragment of 290 bp in the A*24:102 allele.

Primer mix 85: Specific PCR fragment of 145 bp in the A*24:117 allele. Specific PCR fragment of 210 bp in the A*24:104 and in the A*03:30 and 32:05 alleles.

Primer mix 86: Specific PCR fragment of 190 bp in the A*24:121 and 24:182 alleles. Specific PCR fragment of 255 bp in the A*24:105 allele.

Primer mix 87: Specific PCR fragment of 90 bp in the A*24:17, 24:41, 24:62, 24:106 and 24:208 and the A*23:31, 23:45, 23:53, 29:07, 31:29 alleles. Specific PCR fragment of 120 bp in the A*24:110 allele. Specific PCR fragment of 195 bp in the A*24:136 alleles.

Primer mix 88: Specific PCR fragment of 75 bp in the A**24:185N allele. Specific PCR fragment of 170 bp in the A*24:116 and 24:137 alleles.

Primer mix 89: Specific PCR fragment of 75 bp in the A*24:07, 24:108, 24:112, 24:131 and the A*23:13 alleles. Specific PCR fragment of 270 bp in the A*24:112 and the B*51:129 alleles.

Primer mix 90: Specific PCR fragment of 95 bp in the A*24:115 allele. Specific PCR fragment of 180 bp in the A*24:168 allele.

‘w’, might be weakly amplified.

101.422-24/03 – including *Taq* polymerase, IFU-01
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Lot No.: **46R**

Lot-specific information

Primers

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec. PCR product	210	245	210	220	175	175	335	75	225	370	200	235
											245	
Length of int. pos. control ¹	800	1070	800	1070	1070	1070	1070	1070	800	1070	1070	1070
5'-primer(s) ²	650 5'-CCC 3'	368 5'-gTT 3'	368 5'-gTT 3'	368 5'-gTT 3'	368 5'-gTT 3'	368 5'-gTT 3'	317 5'-gCT 3'	265 5'-CAG 3'	98 5'-CTC 3'	282 5'-CAC 3'	98 5'-CTC 3'	28 5'-TCg 3'
										282 5'-CAT 3'		
3'-primer(s) ³	819 5'-ggT 3'	570 5'-CAC 3'	539 5'-TCT 3'	538 5'-CAA 3'	502 5'-CTT 3'	502 5'-CTg 3'	368 5'-CAA 3'	299 5'-TCg 3'	282 5'-gAC 3'	368 5'-CAA 3'	256 5'-CCC 3'	92 5'-AAC 3'
				538 5'-CCA 3'					282 5'-gAC 3'		303 5'-AgT 3'	
				555 5'-CCA 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	160	105	105	85	230	275	195	470	155	125	190	215
			385									240
Length of int. pos. control ¹	1070	1070	800	1070	1070	1070	1070	1070	800	800	800	800
5'-primer(s) ²	453 5'-AAA 3'	678 5'-AgA 3'	265 5'-CAG 3'	368 5'-gTT 3'	368 5'-gTT 3'	2nd I 5'-CgA 3'	678 5'-AgA 3'	3rd I 5'-ATA 3'	144 5'-gCC 3'	485 5'-CAG 3'	144 5'-gCC 3'	98 5'-CTC 3'
	453 5'-AAA 3'											
3'-primer(s) ³	570 5'-CCg 3'	742 5'-CTA 3'	320 5'-AgA 3'	413 5'-gCC 3'	559 5'-CCg 3'	570 5'-CCg 3'	831 5'-TCC 3'	621 5'-ggg 3'	259 5'-CTg 3'	570 5'-CCg 3'	292 5'-gTg 3'	270 5'-ACA 3'
	570 5'-CAG 3'		341 5'-CgT 3'		559 5'-CCg 3'						292 5'-gTg 3'	299 5'-CCA 3'
			368 5'-CAT 3'									
Well No.	13	14	15	16	17	18	19	20	21	22	23	24
Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec. PCR product	220	90	80	75	75	125	155	225	100	195	195	115
		220	370	155	210	200	235					
								255				
Length of int. pos. control ¹	1070	800	800	800	800	800	800	1070	1070	800	1070	1070
5'-primer(s) ²	368 5'-gTT 3'	368 5'-gTT 3'	265 5'-CAG 3'	98 5'-CTC 3'	98 5'-CTC 3'	368 5'-gTT 3'	98 5'-CTC 3'	385 5'-ggC 3'	368 5'-gTT 3'	98 5'-CTC 3'	98 5'-CTT 3'	242 5'-gCT 3'
				741 5'-g.C 3'	741 5'-g.C 3'						105 5'-Tgg 3'	243 5'-CCT 3'
											124 5'-gCC 3'	
3'-primer(s) ³	527 5'-CCT 3'	419 5'-CgA 3'	302 5'-ggC 3'	214 5'-CCA 3'	265 5'-CCg 3'	453 5'-TCg 3'	212 5'-gCA 3'	570 5'-CCg 3'	427 5'-gTA 3'	250 5'-CA 3'	265 5'-CCC 3'	317 5'-ggA 3'
	539 5'-TCA 3'	545 5'-AgA 3'	355 5'-gAC 3'	777 5'-gCA 3'	777 5'-gCA 3'	453 5'-TCA 3'	289 5'-AgC 3'		427 5'-gTT 3'			
	555 5'-CCA 3'					527 5'-CCg 3'	299 5'-TCg 3'					
Well No.	25	26	27	28	29	30	31	32	33	34	35	36

101.422-24/03 – including *Taq* polymerase, IFU-01
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Lot No.: **46R**

Lot-specific information

Well No.	37	38	39	40	41	42	43	44	45	46	47	48
Length of spec.	210	145	75	225	200	170	160	250	200	110	200	195
PCR product		170	210		240	200			245		410	
		230										
Length of int.	1070	800	800	1070	1070	1070	800	800	1070	1070	800	1070
pos. control ¹												
5'-primer(s) ²	368	77	98	28	370	98	368	355	362	385	28	368
	5'-gTT 3'	5'-CTT 3'	5'-CTA 3'	5'-TCg 3'	5'-TTA 3'	5'-CTC 3'	5'-gTT 3'	5'-CCA 3'	5'-gAg 3'	5'-ggC 3'	5'-TCC 3'	5'-gTT 3'
		134	232		375	418		363	362		115	
		5'-CCA 3'	5'-AgT 3'		5'-TgA 3'	5'-AgT 3'		5'-ATA 3'	5'-gAg 3'		5'-ggT 3'	
		160			404				375		368	
		5'-ACT 3'			5'-CCA 3'				5'-TgA 3'		5'-gTT 3'	
					414				410			
					5'-CAg 3'				5'-gTg 3'			
3'-primer(s) ³	532	265	265	81	570	259	488	570	570	453	265	524
	5'-CTA 3'	5'-CCC 3'	5'-CCC 3'	5'-gAT 3'	5'-CCg 3'	5'-gTT 3'	5'-CCT 3'	5'-CCg 3'	5'-CCg 3'	5'-TCT 3'	5'-CCC 3'	5'-CAC 3'
	544					545	490				527	524
	5'-ggg 3'					5'-AgA 3'	5'-AgT 3'				5'-CCT 3'	5'-CAC 3'
Well No.	37	38	39	40	41	42	43	44	45	46	47	48

Well No.	49	50	51	52	53	54	55	56	57	58	59	60
Length of spec.	165	235	165	240	125	165	240	270	135	195	230	205
PCR product	215	260	215		230		275				255	275
	245										285	
Length of int.	1070	1070	800	800	1070	1070	1070	1070	1070	1070	1070	800
pos. control ¹												
5'-primer(s) ²	368	98	90	630	368	98	98	28	361	414	368	28
	5'-gTT 3'	5'-CTC 3'	5'-AgC 3'	5'-AAg 3'	5'-gTT 3'	5'-CTC 3'	5'-CTC 3'	5'-TCg 3'	5'-AgT 3'	5'-gAA 3'	5'-gTT 3'	5'-TCg 3'
		678	142					678				678
		5'-AgA 3'	5'-TCA 3'					5'-AgA 3'				5'-AgA 3'
3'-primer(s) ³	490	290	265	831	452	221	295	127	453	570	559	131
	5'-AgT 3'	5'-CAA 3'	5'-CCC 3'	5'-TCC 3'	5'-..T 3'	5'-ACA 3'	5'-TCA 3'	5'-CTT 3'	5'-TCT 3'	5'-CCg 3'	5'-CAg 3'	5'-ggA 3'
	542	895			559		330	895			582	843
	5'-CTT 3'	5'-A 3'			5'-CTC 3'		5'-TgT 3'	5'-A 3'			5'-TAG 3'	5'-gTT 3'
	570										614	
	5'-CAg 3'										5'-TgA 3'	
Well No.	49	50	51	52	53	54	55	56	57	58	59	60

Well No.	61	62	63	64	65	66	67	68	69	70	71	72
Length of spec.	105	125	135	115	235	155	230	230	105	110	130	120
PCR product	280			170	80			285	265	250	205	
											260	
Length of int.	800	800	1070	1070	1070	800	1070	800	1070	1070	800	1070
pos. control ¹												
5'-primer(s) ²	368	530	409	186	420	144	678	368	98	359	98	699
	5'-gTT 3'	5'-ggT 3'	5'-ggC 3'	5'-AgA 3'	5'-TAg 3'	5'-gCC 3'	5'-AgA 3'	5'-gTT 3'	5'-CTC 3'	5'-CCT 3'	5'-CAC 3'	5'-TAA 3'
				243	575					499	228	
				5'-CCT 3'	5'-gCg 3'					5'-TCC 3'	5'-ATg 3'	
											678	
											5'-AgA 3'	
3'-primer(s) ³	434	616	502	317	616	256	866	559	163	570	317	777
	5'-CCC 3'	5'-CgT 3'	5'-CTT 3'	5'-ggA 3'	5'-CgT 3'	5'-CTg 3'	5'-gAT 3'	5'-CAg 3'	5'-Cgg 3'	5'-CCg 3'	5'-ggA 3'	5'-gCA 3'
	605							605	323		843	
	5'-gCC 3'							5'-gCC 3'	5'-AgC 3'		5'-gTT 3'	
	614							614				
	5'-TgA 3'							5'-TgT 3'				
Well No.	61	62	63	64	65	66	67	68	69	70	71	72

101.422-24/03 – including *Taq* polymerase, IFU-01
 101.422-24u/03u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **46R**

Lot-specific information

Well No.	73	74	75	76	77	78	79	80	81	82	83	84
Length of spec.	100	145	145	170	145	140	195	170	100	185	135	95
PCR product	170	200	290	260	210		250	220	215	225	275	210
												290
Length of int.	1070	1070	1070	1070	800	800	1070	1070	1070	1070	800	1070
pos. control ¹												
5'-primer(s) ²	368	368	368	368	368	355	355	88	368	368	98	368
	5'-gTT 3'	5'-gTT 3'	5'-gTT 3'	5'-gTT 3'	5'-gTT 3'	5'-CCA 3'	5'-CCg 3'	5'-Tgg 3'	5'-gTT 3'	5'-gTT 3'	5'-CTC 3'	5'-gTT 3'
				650			365	124				
				5'-CCT 3'			5'-gAC 3'	5'-gCC 3'				
							416	142				
							5'-CCg 3'	5'-TCA 3'				
3'-primer(s) ³	426	473	473	587	473	453	570	265	427	505	190	422
	5'-TCT 3'	5'-CgA 3'	5'-CgA 3'	5'-CCC 3'	5'-CgC 3'	5'-TCT 3'	5'-CCg 3'	5'-CCC 3'	5'-gTT 3'	5'-gCT 3'	5'-ggT 3'	5'-AgC 3'
	497	525	616	777	539				536	517	330	538
	5'-Tgg 3'	5'-ACT 3'	5'-CgT 3'	5'-gCA 3'	5'-TCC 3'				5'-gCC 3'	5'-CgT 3'	5'-TgT 3'	5'-gTg 3'
									542	553	333	617
									5'-CTg 3'	5'-CTT 3'	5'-CTg 3'	5'-CCA 3'
Well No.	73	74	75	76	77	78	79	80	81	82	83	84
Well No.	85	86	87	88	89	90	91	92	93			
Length of spec.	145	190	90	75	75	95	215	190	270			
PCR product	210	255	120	170	270	180						
			195									
Length of int.	1070	1070	1070	1070	1070	800	1070	1070	1070			
pos. control ¹												
5'-primer(s) ²	98	358	368	134	89	368	397	626	89			
	5'-CTT 3'	5'-TCg 3'	5'-gTT 3'	5'-CCA 3'	5'-gAA 3'	5'-gTT 3'	5'-gCC 3'	5'-CCA 3'	5'-gAA 3'			
	159	416		141	282							
	5'-gAA 3'	5'-CCg 3'		5'-ATg 3'	5'-CAg 3'							
		419		232								
		5'-gTC 3'		5'-AgT 3'								
3'-primer(s) ³	265	570	418	265	317	421	570	777	317			
	5'-CCC 3'	5'-CCg 3'	5'-gTC 3'	5'-CCC 3'	5'-ggA 3'	5'-ggT 3'	5'-CCg 3'	5'-gCA 3'	5'-ggA 3'			
			448			506						
			5'-CAC 3'			5'-TgA 3'						
			521									
			5'-ggA 3'									
Well No.	85	86	87	88	89	90	91	92	93			

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

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-A*24 subtyping.

In addition, wells number 3, 9, 15, 21 to 24, 26 to 31, 34, 38, 39, 43, 44, 47, 51, 52, 60 to 62, 66, 68, 71, 77, 78, 83 and 90 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

²The nucleotide position, in the 1st, 2nd, 3rd or 4th exons or the 2nd or 3rd intron, matching the specificity-determining 3'-end of the primer is given. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

³The nucleotide position, in the 2nd, 3rd or 4th exons, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

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Lot-specific information

[illegible]

101.422-24/03 – including *Taq* polymerase, IFU-01
 101.422-24u/03u – without *Taq* polymerase, IFU-02

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Lot No.: **46R**

Lot-specific information

CELL LINE VALIDATION SHEET																				
HLA-A*24 SSP subtyping kit																				
					Well															
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
				Lot No.:	200846517	200846518	200846519	200846520	200846521	201191522	200846523	201209324	200846525	200962126	200846527	201209328	201209329	201191530	201078531	200846532
	IHCW cell line		A*	A*																
1	9001	SA	*24:02		-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
4	9275	GU373	*30:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
5	9009	KAS011	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
6	9353	SM	*02:01	*26:03	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
7	9020	QBL	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.422-24/03 – including *Taq* polymerase, IFU-01
 101.422-24u/03u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **46R**

Lot-specific information

CELL LINE VALIDATION SHEET																						
HLA-A*24 SSP subtyping kit																						
					Well																	
				Lot No.:	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48		
					201078533	200846534	201209335	201078536	200846537	201209338	201209339	200846540	201078541	201209342	201209343	200846544	201078545	201209346	201078547	201191548		
	IHWC cell line		A*	A*																		
1	9001	SA	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2	9280	LK707	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	9011	E4181324	*01:01		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	
4	9275	GU373	*30:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	9009	KAS011	*01:01		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	
6	9353	SM	*02:01	*26:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	9020	QBL	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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Lot-specific information

[illegible]

101.422-24/03 – including *Taq* polymerase, IFU-01
 101.422-24u/03u – without *Taq* polymerase, IFU-02

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 “Instructions for Use” (IFU)

Lot No.: **46R**

Lot-specific information

CELL LINE VALIDATION SHEET																				
HLA-A*24 SSP subtyping kit																				
					Well															
					65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
				Lot No.:	200962165	201209366	200846567	201078568	201209369	201078570	201209371	200846572	201078573	201209374	201209375	200962176	201078577	200962178	201209379	201209380
	IHCW cell line		A*	A*																
1	9001	SA	*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*30:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*01:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*02:01	*26:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.422-24/03 – including *Taq* polymerase, IFU-01
 101.422-24u/03u – without *Taq* polymerase, IFU-02

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

Lot No.: **46R**

Lot-specific information

CELL LINE VALIDATION SHEET																	
HLA-A*24 SSP subtyping kit																	
					Well												
					81	82	83	84	85	86	87	88	89	90	91	92	93
				Lot No.:	201191581	201078582	201209383	201078584	201078585	201209386	201209387	201209388	201078589	201209390	201078591	201209392	201078593
	IHWC cell line	A*	A*														
1	9001 SA	*24:02			-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*02:01			-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324	*01:01			-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373	*30:01			-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011	*01:01			-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353 SM	*02:01	*26:03		-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL	*26:01			-	-	-	-	-	-	-	-	-	-	-	-	-
8	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		-	-	-	-	-	-	-	-	-	-	-	-	-

101.422-24/03 – including *Taq* polymerase, IFU-01
 101.422-24u/03u – without *Taq* polymerase, IFU-02

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

Lot No.: **46R**

Lot-specific information

CERTIFICATE OF ANALYSIS

Olerup SSP® HLA-A*24 SSP

Product number:

101.422-24/03 – including *Taq* pol.
 101.422-24u/03u – without *Taq* pol.

Lot number:

46R

Expiry date:

2015-July-01

Number of tests:

24 tests – Product No. 101.422-24/24u

3 tests – Product No. 101.422-03/03u

Number of wells per test:

93

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2008-465-01	33	2010-785-33	65	2009-621-65
2	2008-465-02	34	2008-465-34	66	2012-093-66
3	2008-465-03	35	2012-093-35	67	2008-465-67
4	2008-465-04	36	2010-785-36	68	2010-785-68
5	2008-465-05	37	2008-465-37	69	2012-093-69
6	2008-465-06	38	2012-093-38	70	2010-785-70
7	2008-465-07	39	2012-093-39	71	2012-093-71
8	2010-785-08	40	2008-465-40	72	2008-465-72
9	2011-915-09	41	2010-785-41	73	2010-785-73
10	2010-785-10	42	2012-093-42	74	2012-093-74
11	2012-093-11	43	2012-093-43	75	2012-093-75
12	2008-465-12	44	2008-465-44	76	2009-621-76
13	2012-093-13	45	2010-785-45	77	2010-785-77
14	2008-465-14	46	2012-093-46	78	2009-621-78
15	2010-785-15	47	2010-785-47	79	2012-093-79
16	2008-465-16	48	2011-915-48	80	2012-093-80
17	2008-465-17	49	2012-093-49	81	2011-915-81
18	2008-465-18	50	2012-093-50	82	2010-785-82
19	2008-465-19	51	2010-785-51	83	2012-093-83
20	2008-465-20	52	2009-621-52	84	2010-785-84
21	2008-465-21	53	2012-093-53	85	2010-785-85
22	2011-915-22	54	2010-785-54	86	2012-093-86
23	2008-465-23	55	2012-093-55	87	2012-093-87
24	2012-093-24	56	2012-093-56	88	2012-093-88
25	2008-465-25	57	2008-465-57	89	2010-785-89
26	2009-621-26	58	2009-621-58	90	2012-093-90
27	2008-465-27	59	2010-785-59	91	2010-785-91
28	2012-093-28	60	2012-093-60	92	2012-093-92
29	2012-093-29	61	2010-785-61	93	2010-785-93
30	2011-915-30	62	2008-465-62		
31	2010-785-31	63	2008-465-63		
32	2008-465-32	64	2010-785-64		

101.422-24/03 – including *Taq* polymerase, IFU-01
101.422-24u/03u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **46R**

Lot-specific information

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

No DNAs carrying the alleles to be amplified by primer solutions 8, 11, 14, 21, 22, 26 to 29, 33, 35, 36, 38 to 43, 45, 47, 50 to 72, 74 to 77, 79 to 86, 88, 90, 92 and 93 were available. The specificities of the primers in primer solutions 8, 11, 26 to 29, 36, 38, 39, 41, 42, 45, 47, 51, 53, 54, 56 to 59, 63, 64, 68, 71, 76, 77, 79, 80, 82, 84, 85, 88, 90 and 93 were tested by separately adding one or two additional 5'-primers, respectively one or two additional 3'-primers.

In primer solutions 14, 21, 33, 40, 43, 50, 55, 60, 61, 66, 67, 69, 74, 75, 81 and 83 it was only possible to test the 5'-primer, the 3'-primers were not possible to test.

In primer solutions 22, 35, 52, 62, 65, 70, 72, 86 and 92 it was only possible to test the 3'-primers, the 5'-primers were not possible to test.

In primer solution 10, 28, 29, 36, 38, 39, 41, 45, 47, 51, 64, 71, 76, 79, 80, 85 and 88 one or more 5'-primers were not possible to test, and in primer solutions 4, 11, 13, 15, 23, 28, 31, 37, 49, 53, 56, 59, 68, 71, 73, 76, 77, 82, 84, 87 and 90 one or two 3'-primers were not possible to test.

Additional primers in primer solutions 4, 15, 25, 30 and 89 were tested by separately adding additional 5'-primers or 3'-primers.

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

Date of approval: 2013-January-18

Approved by:

Production Quality Control

101.422-24/03 – including *Taq* polymerase, IFU-01
101.422-24u/03u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **46R**

Lot-specific information

Declaration of Conformity

Product name: Olerup SSP® HLA-A*24
Product number: 101.422-24/24u, -03/03u
Lot number: 46R

Intended use: HLA-A*24 high resolution histocompatibility testing

Manufacturer: Olerup SSP AB
Franzengatan 5
SE-112 51 Stockholm, Sweden
Phone: +46-8-717 88 27
Fax: +46-8-717 88 18

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

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

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

Stockholm, Sweden
2013-January-18

Ann-Cathrin Jareman
Head of QA and Regulatory Affairs

101.422-24/03 – including *Taq* polymerase, IFU-01
101.422-24u/03u – without *Taq* polymerase, IFU-02

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

Lot No.: **46R**

Lot-specific information

ADDRESSES:

Manufacturer:

Olerup SSP AB, Franzengatan 5, SE-112 51 Stockholm, Sweden.

Tel: +46-8-717 88 27

Fax: +46-8-717 88 18

E-mail: info-ssp@olerup.com

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

Distributed by:

Olerup GmbH, Löwengasse 47 / 6, AT-1030 Vienna, Austria.

Tel: +43-1-710 15 00

Fax: +43-1-710 15 00 10

E-mail: support-at@olerup.com

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

Olerup Inc., 901 S. Bolmar St., Suite R, West Chester, PA 19382

Tel: 1-877-OLERUP1

Fax: 610-344-7989

E-mail: info.us@olerup.com

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

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