

101.413-24/04 – including *Taq* polymerase, IFU-01
101.413-24u/04u – without *Taq* polymerase, IFU-02

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

Lot No.: **6D5**

Lot-specific Information

www.olerup-ssp.com

Olerup SSP® HLA-A*03

Product number:	101.413-24/04 – including <i>Taq</i> pol. 101.413-24u/04u – without <i>Taq</i> pol.
Lot number:	6D5
Expiry date:	2018-09-01
Number of tests:	24 tests – Product No. 101.413-24/24u 4 tests – Product No. 101.413-04/04u
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. 6D5.

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*03 LOT (14Y)

The HLA-A*03 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*03 specificity and interpretation tables have been updated for the HLA-A alleles described since the previous *Olerup SSP®* HLA-A*03 lot was made (**Lot No. 14Y**). The kit design is based on IMGT/HLA database 3.22.0.

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.

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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
6	-	Added	3'-primer added for the A*03:234Q allele.
19	Added	-	5'-primer added for the A*03:202 allele.
31	Added	-	5'-primer added for the A*03:202 allele.
40	Added	-	5'-primer added for the A*03:220 allele.
46	Added	-	5'-primer added for the A*03:213 allele.
50	Added	-	5'-primer added for the A*03:213 allele.
53	-	Added	3'-primer added for the A*03:234Q allele.
57	Added	-	5'-primer added for the A*03:220 allele.
60	Added	-	5'-primer added for the A*03:218 allele.
62	Added	-	5'-primer added for the A*03:204 allele.

Change in revision R01 compared to R00:

1. Primer mix 28 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*03 subtyping kit cannot distinguish the A*03:01:01:01, 03:01:01:03-03:01:01:05, 03:01:03-03:01:05, 03:01:07, 03:01:09-03:01:11, 03:01:13, 03:01:15-03:01:22, 03:01:24-03:01:29, 03:01:31-03:01:46, 03:01:49, 03:01:51, 03:01:53-03:01:56, 03:77, 03:80, 03:83, 03:85, 03:92, 03:94, 03:100-03:101, 03:110, 03:114-03:117, 03:119-03:121, 03:124-03:126, 03:131, 03:136-03:138, 03:141, 03:145-03:148, 03:151, 03:154-03:157:01, 03:158-03:159, 03:163-03:164, 03:166, 03:169-03:170, 03:174-03:175, 03:181, 03:183-03:185, 03:188-03:190, 03:193, 03:195, 03:201, 03:206-03:207, 03:209-03:210, 03:212, 03:214, 03:216-03:217, 03:222, 03:224, 03:226-03:228, 03:230, 03:232-03:233 alleles and the A*03:26 allele.

Change in revision R02 compared to R01:

1. Primer mix 11 does not amplify the A*80:03 allele. This has been corrected in the Specificity and Interpretation Tables.

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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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PRODUCT DESCRIPTION

HLA-A*03 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the A*03:01 to A*03:234Q alleles.

PLATE LAYOUT

Each test consists of 64 PCR reactions in a 64 well 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*03’ in silver/gray ink.

Well No. 1 is marked with the Lot No. ‘6D5’.

Wells 1 to 63 – HLA-A*03 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*03 alleles will be amplified by primer mixes 1 to 4, 6, 8 to 12, 15 to 18, 21 to 26, 28 to 31, 33, 35, 37 to 39, 45 to 49, 51 to 53, 56, 58 and 60 to 63. In addition, a few HLA-C alleles will be amplified by primer mixes 46, 48 and 62.

For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the HLA-A*03 alleles, i.e. **A*03:01 to A*03:234Q**, recognized by the HLA Nomenclature Committee in October 2015^{1,2} will be amplified by the primers in the HLA-A*03 subtyping kit^{3,4}.

The HLA-A*03 kit enables separation of the confirmed HLA-A*03 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*03 alleles is listed below.

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The HLA-A*03 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*03 subtyping kit cannot distinguish following silent mutations: the A*03:01:01:01, 03:01:01:03-03:01:01:05, 03:01:03-03:01:05, 03:01:07, 03:01:09-03:01:11, 03:01:13, 03:01:15-03:01:22, 03:01:24-03:01:29, 03:01:31-03:01:46, 03:01:49, 03:01:51 and 03:01:53-03:01:56 alleles, the A*03:01:02, 03:01:06, 03:01:14, 03:01:47 and 03:01:52 alleles, the A*03:01:12 and 03:01:23 alleles, the A*03:01:30, 03:01:48 and 03:01:50 alleles, the A*03:02:01-03:02:04 alleles, the A*03:04:01-03:04:03 alleles, the *03:17:01-03:17:02 alleles, the A*03:22:01-03:22:02 alleles, the A*03:23:01-03:23:02 alleles, the A*03:44:01-03:44:02 and the A*03:123:01-03:123:02 alleles.

The following HLA-A*03 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

Alleles	Primer mix	Alleles	Primer mix
A*03:16, 03:61	20	A*03:38, 03:68N	41
A*03:17:01-03:17:02, 03:74	21	A*03:44:01-03:44:02, 03:53	46
A*03:20, 03:47	43	A*03:78, 03:161N	49
A*03:22:01-03:22:02, 03:103	23	A*03:118, 03:134	57
A*03:25, 03:71	27	A*03:128, 03:144	59
A*03:27, 03:49	30	A*03:132, 03:162N	62
A*03:33, 03:70	36		

¹HLA-A alleles listed on the IMGT/HLA web page 2015-October-10, release 3.22.0, 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>.

³The HLA-A*03 primer set cannot separate the A*03:05:02 and A*30:55 alleles. These alleles can be distinguished by the HLA-A low resolution kit and/or the HLA-A*30 high resolution kit.

The HLA-A*03 primer set cannot separate the A*03:95, 03:204 and A*74:13 alleles. These alleles can be distinguished by the HLA-A low resolution kit and/or the HLA-A*74 high resolution kit.

⁴This lot of the HLA-A*03 subtyping kit cannot distinguish the A*03:01:01:01, 03:01:01:03-03:01:01:05, 03:01:03-03:01:05, 03:01:07, 03:01:09-03:01:11, 03:01:13, 03:01:15-03:01:22, 03:01:24-03:01:29, 03:01:31-03:01:46, 03:01:49, 03:01:51, 03:01:53-03:01:56, 03:77, 03:80, 03:83, 03:85, 03:92, 03:94, 03:100-03:101, 03:110, 03:114-03:117, 03:119-03:121, 03:124-03:126, 03:131, 03:136-03:138, 03:141, 03:145-03:148, 03:151, 03:154-03:157:01, 03:158-03:159, 03:163-03:164, 03:166, 03:169-03:170, 03:174-03:175, 03:181, 03:183-03:185, 03:188-03:190, 03:193, 03:195, 03:201, 03:206-03:207, 03:209-03:210, 03:212, 03:214, 03:216-03:217, 03:222, 03:224, 03:226-03:228, 03:230, 03:232-03:233 alleles and the A*03:26 allele.

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ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
A*03:01:01:01	Confirmed	A*03:01:47	Unconfirmed	A*03:33	Confirmed	A*03:82	Unconfirmed
A*03:01:01:02N	Confirmed	A*03:01:48	Unconfirmed	A*03:34	Confirmed	A*03:83	Unconfirmed
A*03:01:01:03	Unconfirmed	A*03:01:49	Unconfirmed	A*03:35	Unconfirmed	A*03:84	Confirmed
A*03:01:01:04	Confirmed	A*03:01:50	Unconfirmed	A*03:36N	Unconfirmed	A*03:85	Unconfirmed
A*03:01:01:05	Confirmed	A*03:01:51	Unconfirmed	A*03:37	Unconfirmed	A*03:86	Confirmed
A*03:01:02	Unconfirmed	A*03:01:52	Confirmed	A*03:38	Confirmed	A*03:87	Confirmed
A*03:01:03	Confirmed	A*03:01:53	Unconfirmed	A*03:39	Unconfirmed	A*03:88	Confirmed
A*03:01:04	Confirmed	A*03:01:54	Unconfirmed	A*03:40	Unconfirmed	A*03:89:01	Unconfirmed
A*03:01:05	Confirmed	A*03:01:55	Confirmed	A*03:41	Unconfirmed	A*03:89:02	Unconfirmed
A*03:01:06	Confirmed	A*03:01:56	Unconfirmed	A*03:42	Unconfirmed	A*03:90	Unconfirmed
A*03:01:07	Unconfirmed	A*03:02:01	Confirmed	A*03:43	Unconfirmed	A*03:91N	Confirmed
A*03:01:08	Unconfirmed	A*03:02:02	Unconfirmed	A*03:44:01	Unconfirmed	A*03:92	Unconfirmed
A*03:01:09	Unconfirmed	A*03:02:03	Unconfirmed	A*03:44:02	Unconfirmed	A*03:93	Confirmed
A*03:01:10	Unconfirmed	A*03:02:04	Unconfirmed	A*03:45	Unconfirmed	A*03:94	Unconfirmed
A*03:01:11	Confirmed	A*03:03N	Unconfirmed	A*03:46	Unconfirmed	A*03:95	Unconfirmed
A*03:01:12	Confirmed	A*03:04:01	Unconfirmed	A*03:47	Confirmed	A*03:96	Confirmed
A*03:01:13	Unconfirmed	A*03:04:02	Unconfirmed	A*03:48	Confirmed	A*03:97	Confirmed
A*03:01:14	Confirmed	A*03:04:03	Unconfirmed	A*03:49	Confirmed	A*03:98	Unconfirmed
A*03:01:15	Confirmed	A*03:05:01	Confirmed	A*03:50	Confirmed	A*03:99	Unconfirmed
A*03:01:16	Confirmed	A*03:05:02	Unconfirmed	A*03:51	Confirmed	A*03:100	Unconfirmed
A*03:01:17	Confirmed	A*03:06	Unconfirmed	A*03:52	Unconfirmed	A*03:101	Unconfirmed
A*03:01:18	Confirmed	A*03:07	Confirmed	A*03:53	Confirmed	A*03:102	Confirmed
A*03:01:19	Confirmed	A*03:08	Confirmed	A*03:54	Unconfirmed	A*03:103	Confirmed
A*03:01:20	Confirmed	A*03:09	Confirmed	A*03:55	Unconfirmed	A*03:104	Confirmed
A*03:01:21	Confirmed	A*03:10	Unconfirmed	A*03:56	Confirmed	A*03:105	Unconfirmed
A*03:01:22	Unconfirmed	A*03:11N	Unconfirmed	A*03:57	Confirmed	A*03:106	Unconfirmed
A*03:01:23	Unconfirmed	A*03:12	Unconfirmed	A*03:58	Unconfirmed	A*03:107	Confirmed
A*03:01:24	Unconfirmed	A*03:13	Unconfirmed	A*03:59	Unconfirmed	A*03:108	Confirmed
A*03:01:25	Unconfirmed	A*03:14	Unconfirmed	A*03:60	Unconfirmed	A*03:109	Unconfirmed
A*03:01:26	Unconfirmed	A*03:15	Unconfirmed	A*03:61	Unconfirmed	A*03:110	Unconfirmed
A*03:01:27	Unconfirmed	A*03:16	Confirmed	A*03:62	Confirmed	A*03:111	Confirmed
A*03:01:28	Confirmed	A*03:17:01	Unconfirmed	A*03:63	Confirmed	A*03:112	Unconfirmed
A*03:01:29	Unconfirmed	A*03:17:02	Unconfirmed	A*03:64	Unconfirmed	A*03:113	Confirmed
A*03:01:30	Confirmed	A*03:18	Unconfirmed	A*03:65	Confirmed	A*03:114	Unconfirmed
A*03:01:31	Unconfirmed	A*03:19	Unconfirmed	A*03:66	Confirmed	A*03:115	Unconfirmed
A*03:01:32	Unconfirmed	A*03:20	Confirmed	A*03:67	Unconfirmed	A*03:116	Unconfirmed
A*03:01:33	Confirmed	A*03:21N	Unconfirmed	A*03:68N	Confirmed	A*03:117	Unconfirmed
A*03:01:34	Confirmed	A*03:22:01	Confirmed	A*03:69N	Confirmed	A*03:118	Unconfirmed
A*03:01:35	Unconfirmed	A*03:22:02	Confirmed	A*03:70	Unconfirmed	A*03:119	Unconfirmed
A*03:01:36	Unconfirmed	A*03:23:01	Unconfirmed	A*03:71	Unconfirmed	A*03:120	Unconfirmed
A*03:01:37	Unconfirmed	A*03:23:02	Confirmed	A*03:72	Unconfirmed	A*03:121	Unconfirmed
A*03:01:38	Confirmed	A*03:24	Unconfirmed	A*03:73	Unconfirmed	A*03:122	Unconfirmed
A*03:01:39	Unconfirmed	A*03:25	Unconfirmed	A*03:74	Confirmed	A*03:123:01	Confirmed
A*03:01:40	Unconfirmed	A*03:26	Confirmed	A*03:75	Unconfirmed	A*03:123:02	Unconfirmed
A*03:01:41	Unconfirmed	A*03:27	Confirmed	A*03:76	Confirmed	A*03:124	Unconfirmed
A*03:01:42	Unconfirmed	A*03:28	Confirmed	A*03:77	Unconfirmed	A*03:125	Unconfirmed
A*03:01:43	Confirmed	A*03:29	Unconfirmed	A*03:78	Unconfirmed	A*03:126	Unconfirmed
A*03:01:44	Unconfirmed	A*03:30	Unconfirmed	A*03:79	Confirmed	A*03:127	Confirmed
A*03:01:45	Unconfirmed	A*03:31	Unconfirmed	A*03:80	Unconfirmed	A*03:128	Confirmed
A*03:01:46	Unconfirmed	A*03:32	Unconfirmed	A*03:81	Confirmed	A*03:129N	Unconfirmed

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Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
A*03:130	Confirmed	A*03:159	Unconfirmed	A*03:189	Unconfirmed	A*03:220	Confirmed
A*03:131	Unconfirmed	A*03:160	Unconfirmed	A*03:190	Unconfirmed	A*03:221	Unconfirmed
A*03:132	Unconfirmed	A*03:161N	Unconfirmed	A*03:191	Confirmed	A*03:222	Unconfirmed
A*03:133	Confirmed	A*03:162N	Confirmed	A*03:192N	Unconfirmed	A*03:223	Unconfirmed
A*03:134	Unconfirmed	A*03:163	Unconfirmed	A*03:193	Unconfirmed	A*03:224	Unconfirmed
A*03:135	Unconfirmed	A*03:164	Unconfirmed	A*03:195	Unconfirmed	A*03:225	Unconfirmed
A*03:136	Unconfirmed	A*03:165	Unconfirmed	A*03:196	Unconfirmed	A*03:226	Unconfirmed
A*03:137	Unconfirmed	A*03:166	Unconfirmed	A*03:197N	Confirmed	A*03:227	Unconfirmed
A*03:138	Unconfirmed	A*03:167	Confirmed	A*03:198	Unconfirmed	A*03:228	Unconfirmed
A*03:139	Confirmed	A*03:168N	Unconfirmed	A*03:199	Unconfirmed	A*03:229	Unconfirmed
A*03:140	Unconfirmed	A*03:169	Unconfirmed	A*03:200Q	Unconfirmed	A*03:230	Unconfirmed
A*03:141	Unconfirmed	A*03:170	Unconfirmed	A*03:201	Unconfirmed	A*03:231	Unconfirmed
A*03:142	Unconfirmed	A*03:171	Unconfirmed	A*03:202	Confirmed	A*03:232	Unconfirmed
A*03:143	Confirmed	A*03:172	Unconfirmed	A*03:203	Unconfirmed	A*03:233	Unconfirmed
A*03:144	Confirmed	A*03:173	Unconfirmed	A*03:204	Confirmed	A*03:234Q	Unconfirmed
A*03:145	Unconfirmed	A*03:174	Unconfirmed	A*03:205	Unconfirmed		
A*03:146	Unconfirmed	A*03:175	Unconfirmed	A*03:206	Unconfirmed		
A*03:147	Unconfirmed	A*03:176	Confirmed	A*03:207	Unconfirmed		
A*03:148	Unconfirmed	A*03:177	Unconfirmed	A*03:208	Unconfirmed		
A*03:149	Confirmed	A*03:178N	Unconfirmed	A*03:209	Unconfirmed		
A*03:150	Confirmed	A*03:179	Unconfirmed	A*03:210	Unconfirmed		
A*03:151	Unconfirmed	A*03:180	Unconfirmed	A*03:211	Unconfirmed		
A*03:152	Unconfirmed	A*03:181	Unconfirmed	A*03:212	Unconfirmed		
A*03:153	Unconfirmed	A*03:182	Unconfirmed	A*03:213	Confirmed		
A*03:154	Unconfirmed	A*03:183	Unconfirmed	A*03:214	Unconfirmed		
A*03:155	Unconfirmed	A*03:184	Unconfirmed	A*03:215	Unconfirmed		
A*03:156	Unconfirmed	A*03:185	Unconfirmed	A*03:216	Unconfirmed		
A*03:157:01	Unconfirmed	A*03:186	Unconfirmed	A*03:217	Unconfirmed		
A*03:157:02	Unconfirmed	A*03:187	Unconfirmed	A*03:218	Unconfirmed		
A*03:158	Unconfirmed	A*03:188	Unconfirmed	A*03:219	Unconfirmed		

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2015-October-10, release 3.22.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in HLA-A*03 homo- and heterozygotes is available upon request.

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SPECIFICITY TABLE

HLA-A*03 SSP subtyping

Specificities and sizes of the PCR products of the 63+1 primer mixes used for HLA-A*03 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-A*03 alleles ³	Other amplified HLA-A alleles ⁴
1	235 bp	800 bp	*03:01:01:01-03:01:29, 03:01:31-03:01:47, 03:01:49, 03:01:51-03:04:03, 03:06-03:09, 03:11N-03:17:02, 03:19-03:39, 03:41, 03:43-03:74, 03:76-03:94, 03:96-03:97, 03:99-03:104, 03:106-03:121, 03:123:01-03:134, 03:136-03:166, 03:168N-03:176, 03:178N-03:186, 03:188-03:193, 03:195-03:203, 03:205-03:207, 03:209-03:214, 03:216-03:224, 03:226-03:234Q	*11:130, 30:89, 32:04, 36:02
2 ⁶	225 bp	1070 bp	*03:01:01:01-03:01:11, 03:01:12 ^w , 03:01:13-03:01:22, 03:01:23 ^w , 03:01:24-03:07, 03:09-03:11N, 03:13-03:31, 03:33-03:35, 03:37-03:40, 03:42-03:56, 03:58, 03:60-03:71, 03:73-03:87, 03:90-03:106, 03:109-03:110, 03:112-03:141, 03:143-03:148, 03:150-03:151, 03:153-03:171, 03:174-03:175, 03:177, 03:181-03:193, 03:195, 03:197N, 03:200Q-03:202, 03:204, 03:206-03:210, 03:212-03:218, 03:220, 03:222-03:234Q	*01:13, 01:176, 01:194, 02:34 ^w -02:35:03 ^w , 02:56:01 ^w -02:56:02 ^w , 02:62 ^w , 02:103 ^w , 02:580 ^w , 11:199:01, 11:222, 30:55, 34:08, 68:71, 74:13
3 ⁶	205 bp	1070 bp	*03:01:01:01-03:01:01:05, 03:01:03-03:01:05, 03:01:07-03:01:13, 03:01:15-03:01:46, 03:01:48-03:01:51, 03:01:53-03:01:56, 03:03N-03:05:01, 03:06, 03:08-03:09, 03:11N-03:17:02, 03:19-03:30, 03:33-03:41, 03:43-03:49, 03:51-03:53, 03:55-03:63, 03:67-03:72, 03:74, 03:77-03:81, 03:83-03:89:02, 03:91N-03:94, 03:96-03:105, 03:107-03:112, 03:114-03:126, 03:128-03:132, 03:134, 03:136-03:139, 03:141-03:152, 03:154-03:159, 03:161N-03:164, 03:166, 03:168N-03:170, 03:172-03:176, 03:178N-03:186, 03:188-03:193, 03:195-03:197N, 03:199, 03:201-03:203, 03:205-03:214, 03:216-03:217, 03:219-03:222, 03:224, 03:226-03:228,	*11:25:01, 30:89, 32:04, 34:02:01, 34:02:03-34:04, 34:07-34:10N, 34:13

101.413-24/04 – including *Taq* polymerase, IFU-01
101.413-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: **6D5**

Lot-specific Information

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Lot No.: 6D5		Lot-specific Information		www.olerup-ssp.com
			03:230, 03:232-03:233	
4	215 bp 800 bp	*03:02:01-03:02:04, 03:10, 03:31-03:32, 03:65, 03:69N, 03:73, 03:76, 03:82, 03:90, 03:106, 03:113, 03:160, 03:167, 03:198, 03:218, 03:223	*01:12, 01:19, 01:25, 01:127, 01:136, 11:01:01:01-11:01:56, 11:01:58-11:07, 11:09-11:22, 11:27, 11:29-11:30, 11:32:01-11:34, 11:36-11:43, 11:45-11:49, 11:51-11:52Q, 11:54-11:93, 11:95-11:100, 11:102-11:117, 11:119:01-11:138, 11:140-11:142, 11:144-11:157, 11:159-11:182Q, 11:184-11:190, 11:192-11:210N, 11:212-11:225, 11:227-11:229, 24:51, 24:92	
5	185 bp 800 bp	*03:03N		
6	190 bp 1070 bp 275 bp	*03:234Q *03:04:01-03:04:03,	*01:86, 11:153:01-11:153:02, 30:34	
7	225 bp 1070 bp	*03:06, 03:69N		
8	240 bp 1070 bp	*03:01:01:01-03:01:07, 03:01:09-03:11N, 03:13-03:40, 03:42-03:56, 03:58-03:87, 03:89:01-03:106, 03:108, 03:110-03:151, 03:153-03:172, 03:174-03:193, 03:195-03:218, 03:220-03:234Q	*01:13, 01:28, 01:176, 01:194, 02:01:01:01-02:01:15, 02:01:17-02:01:19, 02:01:21-02:01:48, 02:01:50-02:01:81, 02:01:83-02:01:100, 02:01:102-02:01:105, 02:01:107, 02:01:109-02:01:119, 02:02:01:01-02:02:04, 02:07:01-02:07:08, 02:09, 02:11:01-02:13, 02:15N-02:20:02, 02:22:01-02:22:02, 02:24:01-02:27, 02:29-02:40:02, 02:42-02:43N, 02:45-02:50, 02:52-02:53N, 02:55-02:56:02, 02:58-02:60:02, 02:62-02:71, 02:73-02:77, 02:80, 02:82N-02:83N, 02:85-02:86, 02:88N-02:90, 02:92-02:97:02, 02:101:01-02:105, 02:107, 02:109-02:111, 02:113:01N-02:121, 02:123, 02:125N, 02:128, 02:130-02:135, 02:138-02:141, 02:145, 02:147-02:153:02, 02:155-02:168, 02:171:01-02:171:02, 02:173-02:177, 02:181-02:183, 02:185-02:228, 02:230-02:231, 02:233-02:243:02, 02:245-02:246, 02:249-02:258, 02:260-02:270, 02:272-02:277, 02:279-02:285, 02:287-02:289:02, 02:291-02:294, 02:296-02:299, 02:301N-02:309, 02:311-02:323, 02:325-02:327, 02:329, 02:332, 02:334-02:336, 02:338-02:343, 02:345-02:354, 02:356N-02:357, 02:360-02:372, 02:374-02:375, 02:377-02:381, 02:383-02:386, 02:388-02:397, 02:399-02:403, 02:406-02:408, 02:410-02:412, 02:414, 02:416-02:418, 02:422-02:427, 02:429-02:432, 02:434-02:437, 02:439N-02:442, 02:444-02:452, 02:455-02:464, 02:466-02:469, 02:477-02:483, 02:485-02:488, 02:490N-02:492, 02:494, 02:498-02:505, 02:508-02:526, 02:528-02:531, 02:533-02:545, 02:547-02:548, 02:551-02:557, 02:559-02:570, 02:573, 02:575-02:576, 02:578-02:590, 02:594-02:598, 11:43, 11:88, 11:199:01-11:199:02, 11:222, 24:19, 24:28, 24:44, 24:89, 24:290, 29:19, 29:39, 29:48, 30:01:01-30:01:10, 30:11:01-30:11:02, 30:13-30:20, 30:23-30:24, 30:26, 30:30-30:31, 30:35-30:44, 30:46, 30:48-30:49, 30:52-30:56, 30:58-30:60, 30:62-30:63, 30:65, 30:71-30:75, 30:78N-30:79, 30:81-30:83, 30:86-30:87, 30:89, 30:91-30:96, 31:01:02:01-31:01:05, 31:01:07-31:06, 31:09, 31:11-31:32, 31:34-31:73, 31:75-31:78, 31:80-31:103,	

101.413-24/04 – including *Taq* polymerase, IFU-01
101.413-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: **6D5**

Lot-specific Information

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				33:01:01-33:01:08, 33:03:01-33:03:05, 33:03:07-33:12, 33:14-33:16, 33:18:01-33:37, 33:39-33:47, 33:49-33:50, 33:52-33:64, 33:66-33:68, 33:70-33:104, 34:08, 68:29, 68:45, 68:71, 68:117, 74:01:01-74:09, 74:11-74:18, 74:20-74:26, 80:02
9⁹	230 bp	1070 bp	*03:05:01-03:05:02, 03:10, 03:42, 03:72, 03:187, 03:225	*02:156, 02:338, 11:04, 11:35, 11:88, 24:19, 24:290, 30:01:01-30:04:02, 30:06-30:20, 30:22-30:27N, 30:29-30:44, 30:46, 30:48-30:79, 30:81-30:96, 31:03-31:04, 33:49, 34:02:01-34:04, 34:07-34:10N, 34:13, 36:01, 36:05, 68:45, 68:103:01-68:103:02, 68:117, 74:23
10⁵	65 bp 205 bp	800 bp	*03:60 *03:02:01-03:02:04, 03:07, 03:10, 03:31-03:32, 03:42, 03:73, 03:76, 03:82, 03:90, 03:106, 03:113, 03:133, 03:160, 03:171, 03:198, 03:218, 03:223	*01:12, 01:19, 01:21, 01:126, 02:156, 02:338, 11:31, 11:35, 11:60, 11:158, 11:183, 11:209, 24:92, 30:04:01-30:04:02, 30:06, 30:09, 30:17, 30:29, 30:46, 30:77, 30:90, 31:03-31:04, 33:49, 68:103:01-68:103:02, 74:23
11	225 bp	800 bp	*03:08, 03:32, 03:41, 03:107, 03:176	*01:01:01:01-01:01:31, 01:01:33-01:01:46, 01:01:48-01:01:61, 01:01:63-01:01:73, 01:03-01:04N, 01:06, 01:08-01:12, 01:14-01:16N, 01:18N-01:19, 01:21-01:33, 01:35-01:42, 01:44-01:94, 01:96-01:103, 01:105-01:107, 01:109-01:133, 01:135-01:142, 01:144-01:161, 01:163-01:175, 01:177-01:187, 01:189, 01:191-01:193, 01:196, 02:48, 02:81, 02:90, 02:124, 02:146, 25:03, 25:30, 26:20, 32:01:01-32:01:14, 32:01:16-32:02, 32:03 ^w , 32:04-32:06, 32:08 ^w , 32:09-32:16, 32:18-32:26, 32:28-32:41, 32:43-32:63, 32:65-32:66, 32:68-32:79, 36:01-36:05, 74:01:01-74:04, 74:08-74:12N, 74:14N-74:18, 74:20, 74:22-74:26, 80:01:01:01 ^w -80:01:01:02 ^w , 80:02
12	190 bp	1070 bp	*03:09, 03:89:02, 03:108, 03:172, 03:198	*01:134, 02:01:09, 02:05:05, 02:06:07, 02:50, 02:76:02, 02:122, 02:243:02, 02:591, 11:06, 11:18, 24:28, 24:89, 26:03:01, 26:06, 26:21, 26:30, 26:78, 26:92, 26:111, 29:19, 29:48, 33:24, 68:05, 68:15, 68:20, 74:06, 74:21
13	145 bp	800 bp	*03:01:01:02N	
14⁵	105 bp 235 bp	1070 bp	*03:11N *03:59	
15	225 bp	1070 bp	*03:12, 03:88	*02:78, 11:01:01:01-11:01:50, 11:01:52-11:02:01, 11:02:02 ^w , 11:02:03-11:05, 11:06 ^w , 11:07-11:16, 11:20-11:27, 11:29-11:39, 11:41-11:42, 11:44, 11:46, 11:48-11:52Q, 11:54-11:77, 11:79-11:87, 11:89-11:91:02, 11:93-11:97, 11:99N-11:105, 11:107-11:110, 11:112-11:120, 11:122-11:160, 11:162-11:177, 11:179-11:189, 11:191-11:198, 11:200-11:220, 11:224-11:229, 30:08, 34:01:01-34:07, 34:09-34:13, 66:01:01-66:02, 66:04, 66:06-66:10, 66:12-66:14, 66:16-66:24, 68:01:01:01-68:01:28, 68:01:30-68:02:10, 68:06-68:14, 68:16-68:19, 68:21:01-68:28, 68:30, 68:32-68:35, 68:37-68:44, 68:47-68:56, 68:58-68:70, 68:72-68:83, 68:85-68:89,

101.413-24/04 – including *Taq* polymerase, IFU-01
101.413-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: **6D5**

Lot-specific Information

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Lot No.: 6D5		Lot-specific Information		www.olerup-ssp.com
				68:91-68:108, 68:110-68:116, 68:118-68:135, 68:137, 69:01-69:03
16	275 bp	1070 bp	*03:14	*02:450
17^{6,7}	215 bp	800 bp	*03:01:01:01-03:01:56, 03:03N-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, 03:83-03:89:02, 03:91N-03:94, 03:96-03:105, 03:107-03:112, 03:114-03:134, 03:136-03:152, 03:154-03:159, 03:161N-03:166, 03:168N-03:176, 03:178N-03:186, 03:188-03:193, 03:195-03:197N, 03:199, 03:201-03:203, 03:205-03:207, 03:209-03:214, 03:216-03:217, 03:219-03:222, 03:224, 03:226-03:228, 03:230-03:234Q	*01:06, 02:156, 02:338, 11:24:01-11:25:02, 11:31, 11:35, 11:158, 30:01:01-30:03, 30:07-30:16, 30:18-30:20, 30:22-30:27N, 30:30-30:45, 30:48-30:51, 30:53-30:62, 30:64-30:71, 30:73N-30:76N, 30:78N-30:79, 30:81-30:89, 30:91-30:96, 31:03-31:04, 32:04, 33:49, 34:02:01-34:04, 34:07-34:10N, 34:13, 74:23, 80:01:01:01-80:03
18⁶	135 bp 215 bp	1070 bp	*03:13 *03:50, 03:64, 03:66, 03:200Q, 03:225	*01:98, 11:08, 11:44, 11:183, 11:191, 30:04:01-30:04:02, 30:06, 30:17, 30:29, 30:46, 30:77, 30:90, 36:02, 68:103:01-68:103:02
19⁷	125 bp 240 bp	1070 bp	*03:202 *03:15, 03:19, 03:84	
20⁵	60 bp 185 bp	1070 bp	*03:61 *03:16, 03:79	
21	140 bp	1070 bp	*03:17:01-03:17:02, 03:102, 03:171	*01:88, 02:156, 02:338, 11:119:01-11:119:02, 11:209, 24:51, 24:92, 30:61, 30:74, 68:103:01-68:103:02
22⁵	195 bp 90 bp 250 bp	1070 bp	*03:74 *03:191 *03:18, 03:97, 03:122, 03:135, 03:167	*11:59 *01:01:01:01-01:01:65, 01:01:67-01:02, 01:04N, 01:06-01:19, 01:21-01:33, 01:35-01:62, 01:64-01:65, 01:67:01-01:71, 01:74-01:101, 01:103-01:129, 01:131-01:166, 01:168-01:191, 01:193-01:194, 01:196, 11:27, 11:38-11:39, 11:94, 11:209, 24:51, 24:92, 30:75, 80:01:01:01-80:03
23⁵	95 bp 185 bp 210 bp	1070 bp	*03:22:01-03:22:02 *03:19, 03:103 *03:56, 03:88, 03:99, 03:177, 03:186 *03:75	*32:52 *02:237, 24:18, 24:204, 24:213, 32:52 *11:130, 32:52, 36:02
24	240 bp 470 bp	1070 bp	*03:21N	*24:18, 24:204, 24:213 *01:04N, 11:21N, 23:07N, 24:11N
25	155 bp	1070 bp	*03:23:01-03:23:02, 03:89:02, 03:198	*01:83:01-01:83:02, 02:01:09, 02:05:05, 02:06:07, 02:11:02, 02:35:03, 02:50, 02:76:02, 02:122, 02:243:02, 02:591, 11:70:02, 11:121, 24:08, 24:42, 24:89, 24:310:01-24:310:02, 26:07:01-26:07:02, 26:92, 29:48, 33:08, 74:04, 74:21
26	190 bp	1070 bp	*03:24, 03:93	*01:51, 25:03, 25:30, 32:15, 32:37, 34:08, 68:71
27⁵	95 bp 145 bp 240 bp	1070 bp	*03:71 *03:25 *03:149	

101.413-24/04 – including *Taq* polymerase, IFU-01
101.413-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: **6D5**

Lot-specific Information

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28^{5,8}	85 bp 495 bp	1070 bp	*03:41, 03:63, 03:88	*11:130, 36:02
29⁵	100 bp	1070 bp	*03:01:01:01-03:07, 03:09-03:28, 03:30-03:31, 03:33, 03:35, 03:37- 03:40, 03:42-03:61, 03:64-03:87, 03:90-03:106, 03:109-03:151, 03:153-03:171, 03:173-03:175, 03:177-03:193, 03:195-03:197N, 03:199-03:234Q	*01:194, 02:34-02:35:03, 02:56:01-02:56:02, 02:62, 02:78, 02:103, 02:580, 11:12, 23:13, 24:07:01-24:07:02, 24:24, 24:108, 24:112, 24:131, 24:288, 24:290, 24:294Q, 29:01:01:01- 29:18, 29:21-29:29, 29:31-29:33, 29:35-29:47, 29:49-29:65, 29:67-29:73, 29:75-29:82, 30:01:01-30:01:10, 30:08, 30:11:01-30:11:02, 30:14L-30:20, 30:23-30:26, 30:30, 30:35-30:43, 30:48-30:49, 30:52-30:56, 30:58-30:60, 30:62- 30:63, 30:65, 30:71-30:75, 30:78N-30:79, 30:81- 30:83, 30:86-30:89, 30:91-30:96, 31:89, 32:17, 34:09, 66:02, 66:12, 66:16, 66:21, 68:01:01:01- 68:01:17, 68:01:19-68:02:10, 68:06-68:14, 68:16-68:19, 68:21:01-68:30, 68:32-68:39, 68:41-68:71, 68:73-68:84, 68:86-68:89, 68:91- 68:92, 68:94N-68:96, 68:98-68:108, 68:110- 68:137, 69:01, 69:03, 74:13
30	140 bp 210 bp	1070 bp	*03:27, 03:102 *03:49, 03:139	*01:157
31⁷	125 bp 190 bp 220 bp	800 bp	*03:202 *03:143 *03:28, 03:56, 03:88, 03:99, 03:177, 03:186	*11:130, 32:52, 36:02
32	150 bp 220 bp 270 bp	1070 bp	*03:67 *03:29 *03:91N	
33	180 bp 210 bp 285 bp	1070 bp	*03:93 *03:30, 03:152 *03:62	*32:37, 80:01:01:01 ^w -80:03 ^w *23:64, 24:104, 32:05, 32:79 *01:144
34⁵	125 bp 160 bp	1070 bp	*03:58 *03:31	
35	235 bp 275 bp	1070 bp	*03:32 *03:55	*31:21, 74:07
36⁵	120 bp 160 bp 210 bp	1070 bp	*03:81 *03:33 *03:70	
37⁵	95 bp 120 bp 225 bp	1070 bp	*03:48, 03:168N *03:81 *03:34	*02:525N
38	170 bp 195 bp 250 bp	800 bp	*03:35, 03:130 *03:79, 03:192N *03:73	*01:167
39	200 bp 235 bp	1070 bp	*03:36N, 03:182 *03:45	*01:109, 11:100, 11:175 *30:77
40	240 bp 280 bp	1070 bp	*03:37 *03:220	
41	185 bp 275 bp	1070 bp	*03:38, 03:192N, 03:223 *03:68N	
42⁷	190 bp 220 bp 245 bp	800 bp	*03:143 *03:39 *03:84	

101.413-24/04 – including *Taq* polymerase, IFU-01
101.413-24u/04u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **6D5**

Lot-specific Information

www.olerup-ssp.com

43	150 bp 260 bp	1070 bp	*03:20 *03:47, 03:76	
44	170 bp 240 bp	1070 bp	*03:51, 03:130 *03:40	
45	150 bp 270 bp	1070 bp	*03:43, 03:186 *03:91N	*30:89
46^{5,8}	115 bp 170 bp 190 bp	1070 bp	*03:44:01-03:44:02, 03:52 *03:213 *03:53	*02:164, 02:380, 30:69, 31:19 *02:575, 30:30, 31:69, C*05:123, C*07:35, C*07:352, C*08:48
47⁶	240 bp	1070 bp	*03:41, 03:57, 03:107	*01:01:01:01-01:01:03, 01:01:05-01:01:12, 01:01:14-01:01:28, 01:01:30-01:01:31, 01:01:33- 01:01:34, 01:01:36-01:01:49, 01:01:51-01:01:73, 01:03-01:04N, 01:06, 01:08-01:12, 01:14-01:19, 01:21-01:23, 01:25-01:27N, 01:29-01:33, 01:35- 01:42, 01:44-01:94, 01:96-01:112, 01:114- 01:133, 01:135-01:142, 01:144-01:157, 01:159- 01:175, 01:177-01:182, 01:184-01:187, 01:189, 01:191-01:193, 01:196, 36:01-36:05, 74:10, 80:01:01:01-80:01:01:02, 80:03
48^{5,8}	70 bp 110 bp 145 bp 190 bp	1070 bp	*03:54 *03:52 *03:46 *03:197N	*02:380, 31:19 C*07:86 *02:314N, 32:48N, C*07:55N
49	195 bp 545 bp	1070 bp	*03:161N *03:78	*01:45, 02:453, 02:557, 11:108, 24:271, 66:17
50	130 bp 165 bp	1070 bp	*03:86 *03:213	
51^{6,7}	215 bp	1070 bp	*03:50	*11:183, 11:191, 30:04:01-30:04:02, 30:06, 30:17, 30:29, 30:46, 30:77, 30:90, 68:103:01- 68:103:02
	285 bp		*03:87	*01:101, 11:30, 30:92
52⁵	90 bp 215 bp	1070 bp	*03:96, 03:168N *03:89:02, 03:152, 03:172, 03:176, 03:198	*01:83:01-01:83:02, 01:191, 02:01:02, 02:50, 23:64, 24:104, 32:05, 32:31, 32:79, 74:04, 74:21
53	190 bp 225 bp 260 bp	800 bp	*03:234Q *03:150, 03:153 *03:104	*33:49
54	240 bp	1070 bp	*03:111, 03:178N	
55	175 bp	800 bp	*03:112	
56	195 bp 215 bp	1070 bp	*03:182 *03:113, 03:157:02	*01:109, 11:100, 11:175
57⁸	180 bp 280 bp	1070 bp	*03:134 *03:118, 03:220	
58⁶	215 bp	1070 bp	*03:127, 03:150, 03:153, 03:200Q	*01:06, 11:24:02
59⁵	105 bp 240 bp	1070 bp	*03:144 *03:128, 03:178N	
60⁷	310 bp 390 bp	1070 bp	*03:218 *03:129N	*11:86
61	225 bp	1070 bp	*03:18, 03:97, 03:122, 03:135, 03:167	*02:19, 02:36-02:37, 02:54, 02:255, 02:417, 23:01:01-23:03:02, 23:05-23:15, 23:17-23:30, 23:32-23:41, 23:44, 23:46-23:54, 23:56-23:69, 24:02:01:01-24:02:04, 24:02:06-24:02:28,

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101.413-24u/04u – without *Taq* polymerase, IFU-02

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				24:02:30-24:02:69, 24:02:71-24:02:95, 24:04-24:09N, 24:11N, 24:13:01-24:14, 24:17, 24:19-24:21:03, 24:24-24:32, 24:34-24:40N, 24:42-24:50, 24:52-24:64, 24:66-24:74:02, 24:76-24:91, 24:93, 24:95-24:117, 24:119-24:124, 24:126-24:131, 24:133-24:137, 24:139-24:166, 24:168-24:203, 24:205-24:206, 24:208-24:209, 24:212-24:218, 24:220-24:234, 24:236-24:260, 24:262-24:288, 24:290-24:291, 24:293-24:296, 24:298, 24:301-24:304, 24:306-24:314, 24:317-24:323N, 29:03, 30:75, 31:05, 33:10, 33:19, 68:26, 68:65, 68:115, 68:131, 80:01:01:01-80:03
62	190 bp 245 bp 375 bp	1070 bp	*03:132, 03:197N *03:204 *03:162N	*02:314N, 32:48N, C*07:55N
63	175 bp 205 bp	800 bp	*03:123:01-03:123:02, 03:171 *03:42, 03:133, 03:139	*02:156, 02:338, 11:16, 11:35, 11:57, 11:73, 11:158, 68:103:01-68:103:02 *30:09, 31:03-31:04, 33:49, 74:23
64¹⁰			Negative Control	

¹Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-A*03 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*03 alleles will be amplified by primer mixes 1 to 4, 6, 8 to 12, 15 to 18, 21 to 26, 28 to 31, 33, 35, 37 to 39, 45 to 49, 51 to 53, 56, 58 and 60 to 63. In addition, a few HLA-C alleles will be amplified by primer mixes 46, 48 and 62.

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

⁶Primer mix 2, 3, 17, 18, 47, 51 and 58 may give rise to a lower yield of HLA-specific PCR product than the other A*03 primer mixes.

⁷Primer mixes 17, 19, 31, 42, 51 and 60 may have tendencies of unspecific amplifications.

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Lot No.: **6D5**

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⁸Primer mixes 28, 46, 48 and 57 have a tendency to giving rise to primer oligomer formation.

⁹Primer mix 9 may give rise to a long unspecific amplification product of approximately 750 bp. This should be disregarded when interpreting the A*03 typings.

¹⁰Primer mix 64 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by the control primer pairs matching the human growth hormone gene. HLA-specific PCR product sizes range from 75 to 200 base pairs and the PCR product generated by the HGH positive control primer pair is 430 base pairs.

'w', may be weakly amplified.

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Lot-specific Information

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PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec. PCR product	235	225	205	215	185	190	225	240	230	65	225	190
						275				205		
Length of int. pos. control ¹	800	1070	1070	800	800	1070	1070	1070	1070	800	800	1070
5'-primer(s) ²	363	98	363	363	382	363	363	102	98	363	98	144
	5'-ATA 3'	5'-CTT 3'	5'-ATA 3'	5'-ATA 3'	5'-Tgg 3'	5'-ATA 3'	5'-ATA 3'	5'-ACA 3'	5'-CTC 3'	5'-ATA 3'	5'-CTT 3'	5'-gCC 3'
	363		363					102	363			
	5'-ATA 3'		5'-ATA 3'					5'-ACA 3'	5'-ATA 3'			
3'-primer(s) ³	555	282	527	539	527	513	538	299	282	388	282	292
	5'-CCA 3'	5'-gAC 3'	5'-CCT 3'	5'-TCT 3'	5'-CCT 3'	5'-TCC 3'	5'-CTA 3'	5'-CCA 3'	5'-gAC 3'	5'-gAT 3'	5'-gAg 3'	5'-gTg 3'
	555	282				595	557	299	555	527	282	
	5'-CCA 3'	5'-gAC 3'				5'-CCg 3'	5'-Tgg 3'	5'-CCA 3'	5'-CCC 3'	5'-CCA 3'	5'-gAg 3'	
	557					595				527	282	
	5'-Tgg 3'					5'-CCT 3'				5'-CCA 3'	5'-gAg 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	145	105	225	275	215	135	125	60	140	90	95	470
		235				215	240	185	195	250	185	
											210	
											240	
Length of int. pos. control ¹	800	1070	1070	1070	800	1070	1070	1070	1070	1070	1070	1070
5'-primer(s) ²	4 th I	28	98	98	363	363	350	363	363	363	355	3 rd I
	5'-ggA 3'	5'-TCC 3'	5'-CTA 3'	5'-CTT 3'	5'-ATA 3'	5'-ATA 3'	5'-TCg 3'	5'-ATA 3'	5'-ATA 3'	5'-ATA 3'	5'-ATA 3'	5'-CCC 3'
		363			363		368				385	
		5'-ATA 3'			5'-ATA 3'		5'-gTT 3'				5'-ggC 3'	
							470				413	
							5'-TTC 3'				5'-CCA 3'	
											502	
											5'-CCC 3'	
3'-primer(s) ³	899	92	282	333	539	455	555	382	453	412	555	621
	5'-ACA 3'	5'-AAC 3'	5'-gAC 3'	5'-CTg 3'	5'-TCA 3'	5'-CCA 3'	5'-CCA 3'	5'-CCT 3'	5'-TCT 3'	5'-CCC 3'	5'-CCA 3'	5'-ggg 3'
		426				528		496	453	570		
		5'-TCT 3'				5'-gCg 3'		5'-gAA 3'	5'-TCC 3'	5'-CCg 3'		
						539		518	479			
						5'-TCC 3'		5'-CCA 3'	5'-CCC 3'			
						540			518			
						5'-..C 3'			5'-CCT 3'			
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

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Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec. PCR product	155	190	95	85	100	140	125	150	180	125	235	120
			145	495		210	190	220	210	160	275	160
			240				220	270	285			210
Length of int. pos. control ¹	1070	1070	1070	1070	1070	1070	800	1070	1070	1070	1070	1070
5'-primer(s) ²	144	98	83	341	282	363	365	98	98	98	98	98
	5'-gCC ^{3'}	5'-CTT ^{3'}	5'-CTg ^{3'}	5'-ggA ^{3'}	5'-CAg ^{3'}	5'-ATA ^{3'}	5'-AAC ^{3'}	5'-CTT ^{3'}	5'-CTT ^{3'}	5'-CTT ^{3'}	5'-CTT ^{3'}	5'-CTT ^{3'}
			179	831	282		385			418		
			5'-gTg ^{3'}	5'-gAg ^{3'}	5'-CAg ^{3'}		5'-ggC ^{3'}			5'-AgT ^{3'}		
			228				406					
			5'-ATg ^{3'}				5'-gCC ^{3'}					
							470					
							5'-TTC ^{3'}					
3'-primer(s) ³	256	239	282	555	341	454	555	206	239	181	290	175
	5'-CCC ^{3'}	5'-gCT ^{3'}	5'-gAC ^{3'}	5'-CCA ^{3'}	5'-Cgg ^{3'}	5'-CTg ^{3'}	5'-CCA ^{3'}	5'-CCg ^{3'}	5'-gCT ^{3'}	5'-gTT ^{3'}	5'-CAA ^{3'}	5'-CCC ^{3'}
		259		873		479		278	265	539	330	217
		5'-gTT ^{3'}		5'-TCg ^{3'}		5'-CCC ^{3'}		5'-ggA ^{3'}	5'-CCC ^{3'}	5'-TCT ^{3'}	5'-TgT ^{3'}	5'-CgA ^{3'}
						526		327	343			265
						5'-CTT ^{3'}		5'-TTT ^{3'}	5'-T ^{3'}			5'-CCA ^{3'}
						533						
						5'-gCC ^{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	95	170	200	240	185	190	150	170	150	115	240	70
	120	195	235	280	275	220	260	240	270	170		110
		225	250			245				190		145
												190
Length of int. pos. control ¹	1070	800	1070	1070	1070	800	1070	1070	1070	1070	1070	1070
5'-primer(s) ²	98	363	98	764	98	350	98	363	98	410	98	411
	5'-CTT ^{3'}	5'-ATA ^{3'}	5'-CTT ^{3'}	5'-CgC ^{3'}	5'-CTT ^{3'}	5'-TCg ^{3'}	5'-CTT ^{3'}	5'-ATA ^{3'}	5'-CTT ^{3'}	5'-gTg ^{3'}	5'-CTT ^{3'}	5'-TAG ^{3'}
			650	801	363	376	890		418	429		457
			5'-CCC ^{3'}	5'-AAC ^{3'}	5'-ATA ^{3'}	5'-gCT ^{3'}	5'-gAA ^{3'}		5'-AgC ^{3'}	5'-gAA ^{3'}		5'-AgC ^{3'}
						406				484		488
						5'-gCC ^{3'}				5'-ACC ^{3'}		5'-ggT ^{3'}
										484		530
										5'-ACT ^{3'}		5'-ggT ^{3'}
										488		
										5'-ggT ^{3'}		
3'-primer(s) ³	152	487	259	899	331	555	316	486	327	559	299	559
	5'-Cgg ^{3'}	5'-Cgg ^{3'}	5'-CTC ^{3'}	5'-ACA ^{3'}	5'-CTA ^{3'}	5'-CCA ^{3'}	5'-gCT ^{3'}	5'-gCg ^{3'}	5'-TTT ^{3'}	5'-CgT ^{3'}	5'-TCg ^{3'}	5'-CgT ^{3'}
	153	490	806		506		899	490	527			
	5'-ACT ^{3'}	5'-AgT ^{3'}	5'-CCA ^{3'}		5'-Tgg ^{3'}		5'-ACA ^{3'}	5'-AgT ^{3'}	5'-CCT ^{3'}			
	175	513	845		513			561				
	5'-CCC ^{3'}	5'-TCT ^{3'}	5'-AgT ^{3'}		5'-TCT ^{3'}			5'-CAg ^{3'}				
	281	518										
	5'-ACg ^{3'}	5'-CCA ^{3'}										
		574										
		5'-gAA ^{3'}										
Well No.	37	38	39	40	41	42	43	44	45	46	47	48

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Well No.	49	50	51	52	53	54	55	56	57	58	59	60
Length of spec.	195	130	215	90	190	240	175	195	180	215	105	310
PCR product	545	165	285	215	225			215	280		240	390
					260							
Length of int. pos. control ¹	1070	1070	1070	1070	800	1070	800	1070	1070	1070	1070	1070
5'-primer(s) ²	127	429	363	98	363	98	643	98	764	363	98	652
	5'-ggT 3'	5'-gAA 3'	5'-ATA 3'	5'-CTT 3'	5'-ATA 3'	5'-CTT 3'	5'-CCg 3'	5'-CTT 3'	5'-CgC 3'	5'-ATA 3'	5'-CTT 3'	5'-C.A 3'
	3 ^d I	466						650	766			733
	5'-ATA 3'	5'-gCC 3'						5'-CCC 3'	5'-TgA 3'			5'-ATA 3'
								864				
								5'-gAT 3'				
3'-primer(s) ³	282	555	538	143	513	295	777	270	899	527	160	899
	5'-gAC 3'	5'-CCA 3'	5'-CCA 3'	5'-CgT 3'	5'-TCC 3'	5'-TCA 3'	5'-gCA 3'	5'-ACC 3'	5'-ACA 3'	5'-CCg 3'	5'-gTg 3'	5'-ACA 3'
	704		605	153	545	296		806		540	295	
	5'-CCA 3'		5'-gCA 3'	5'-ACT 3'	5'-AgA 3'	5'-CTA 3'		5'-CCA 3'		5'-C 3'	5'-TCA 3'	
				270	583					545	298	
				5'-ACT 3'	5'-gTg 3'					5'-AgA 3'	5'-CAg 3'	
Well No.	49	50	51	52	53	54	55	56	57	58	59	60

Well No.	61	62	63
Length of spec.	225	190	175
PCR product		245	205
		375	
Length of int. pos. control ¹	1070	1070	800
5'-primer(s) ²	385	357	363
	5'-ggT 3'	5'-ATg 3'	5'-ATA 3'
		411	
		5'-TAg 3'	
		665	
		5'-TgA 3'	
		853	
		5'-ATA 3'	
3'-primer(s) ³	570	559	497
	5'-CCg 3'	5'-CgT 3'	5'-Tgg 3'
		899	524
		5'-ACA 3'	5'-CAC 3'
			526
			5'-CTT 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.

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CELL LINE VALIDATION SHEET																			
HLA-A*03 SSP subtyping kit²																			
				Well															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
			Prod. No.:	201549601	201549602	201549603	201549604	201549605	201665006	201549607	201549608	201549609	201549610	201549611	201549612	201549613	201549614	201549615	201549616
	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	+	+	+	-	-	-	-	-	+	-	-	W	-	-	-	-
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	-	-	-	+	-	-	-	-	+	-	-	-	-	-	+	-

101.413-24/04 – including *Taq* polymerase, IFU-01
101.413-24u/04u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **6D5**

Lot-specific Information

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CELL LINE VALIDATION SHEET																						
HLA-A*03 SSP subtyping kit²																						
				Prod. No.:	Well																	
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32		
					201549617	201549618	201665019	201549620	201549621	201549622	201549623	201549624	201549625	201549626	201549627	201549628	201549629	201549630	201665031	201549632		
	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.413-24/04 – including *Taq* polymerase, IFU-01
101.413-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: **6D5**

Lot-specific Information

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CELL LINE VALIDATION SHEET																				
HLA-A*03 SSP subtyping kit ²																				
				Well																
				33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
				Prod. No.:	201549633	201549634	201549635	201549636	201549637	201549638	201549639	201665040	201549641	201549642	201549643	201549644	201549645	201665046	201549647	201549648
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	w	-	-	-	-	-	-	-	-	-	-	-	-	+	-	
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

101.413-24/04 – including *Taq* polymerase, IFU-01
101.413-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: **6D5**

Lot-specific Information

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CELL LINE VALIDATION SHEET																			
HLA-A*03 SSP subtyping kit ²																			
				Well															
				49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	
				Prod. No.:	201549649	201665050	201549651	201549652	201665053	201549654	201549655	201665056	201665057	201549658	201549659	201665060	201549661	201665062	201549663
	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.

101.413-24/04 – including *Taq* polymerase, IFU-01
101.413-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: **6D5**

Lot-specific Information

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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 to 7, 13, 16, 19 to 21, 23 to 28, 30 to 32, 34 to 46, 48 to 50, 52 to 60 and 62 and 63 were available.

The specificities of the primers in primer solutions 21, 23 to 26, 28, 31, 32, 34, 35, 39, 43 to 45, 49, 52, 53, 56 and 63 were tested by separately adding additional 5'-primers, respectively additional 3'-primers. In primer solutions 6, 7, 16, 20, 30, 36 to 38, 41, 54, 58 and 59 it was only possible to test the 5'-primers, the 3'-primers were not possible to test.

In primer solutions 5, 13, 19, 27, 40, 42, 46, 48, 50, 55, 57, 60 and 62 it was only possible to test the 3'-primers, the 5'-primers were not possible to test.

In primer mixes 1, 3, 17, 31, 34, 43 and 49 one or three 5'-primers were not possible to test, and in primer mixes 1, 10, 14, 18, 21, 22, 26, 32, 34, 35, 39, 43 to 45, 49, 51 to 53, 56 and 63 one to three 3'-primers were not possible to test.

Additional primers in primer mixes 14 and 33 were tested by separately adding one 3'-primer and/or 5'-primer.

101.413-24/04 – including *Taq* polymerase, IFU-01
101.413-24u/04u – without *Taq* polymerase, IFU-02

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