

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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

Lot No.: **1F8**

Lot-specific information

Olerup SSP® HLA-C*12

Product number:	101.624-12 – including <i>Taq</i> polymerase 101.624-12u – without <i>Taq</i> polymerase
Lot number:	1F8
Expiry date:	2020-01-01
Number of tests:	12
Number of wells per test:	47+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. 1F8.

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-C*12 LOT (3D5)**

The HLA-C*12 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 format of the Worksheet has been changed.

Three wells have been added to HLA-C*12, **wells 46 to 48**

¹As described in section Uniquely Identified Alleles.

The HLA-C*12 primer set, specificity and interpretation tables have been updated for the HLA-C alleles described since the previous *Olerup SSP®* HLA-C*12 lot was made (**Lot No. 3D5**). The kit design is based on IMGT/HLA database 3.27.0.

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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
7	Exchanged	-	5'-primer exchanged for the C*12:33 allele, exchange of positive control primer pairs.
11	-	Added	3'-primer added for the C*12:158 allele.
17	Added	-	5'-primer added for the C*12:99:02 allele.
18	Added	Added	Primer pair added for the C*12:201 allele.
20	-	Added	3'-primer added for the C*12:158 allele.
22	Added	-	5'-primer added for the C*12:99:02 allele.
23	Added	Added	Primer pairs added for the C*12:172 and C12:201 alleles, 3'-primer added for the C*12:205 allele.
25	Added	-	5'-primers added for the C*12:149 and C*12:167 alleles.
26	-	Added	3'-primer added for increased yield.
27	-	Added	3'-primer added for the C*12:153 allele.
29	Added	Added	Primer pair added for the C*12:172 allele.
30	Added	-	5'-primers added for the C*12:144 and C*12:162 alleles.
31	-	Added	3'-primer added for the C*12:164 allele.
33	-	Added	3'-primer added for the C*12:100 allele.
34	Added	-	5'-primer added for the C*12:171 allele.
36	Added	-	5'-primer added for the C*12:149 allele.
37	-	Added	3'-primer added for the C*12:163 allele.
38	Added	-	5'-primer added for the C*12:156 allele.
39	Added	-	5'-primer added for the C*12:136 allele.
41	-	Added	3'-primer added for the C*12:164 allele.
45	Added	Added	Negative Control moved to well 48, primer pair added for the C*12:181 allele.
46	New	New	New primer pair added for the C*12:165 allele.
47	New	New	New primer pair added for the C*12:02:14 allele.
48	-	-	Negative Control added from well 45.

Change in revision R01 compared to R00:

1. Primer mixes 3 and 30 do not amplify the C*12:34 allele. Thus, this lot of the C*12 subtyping kit cannot distinguish the C*12:34 and C*16:15:02 alleles. This has been corrected in the Specificity and Interpretation Tables.

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Well **48** 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-C*12 SSP typing

CONTENT

The primer set contains 5'- and 3'-primers for identifying the C*12:02 to C*12:206 alleles.

PLATE LAYOUT

Each HLA-C*12 test consists of 45 PCR reactions in a 48 well cut PCR plate.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	NC

The 48 well PCR plate is marked with ‘HLA-C*12’ in silver/gray ink.

Well No. 1 is marked with the Lot No. ‘1F8’.

Wells 1 to 47 – HLA-C*12 high resolution primers.

Well 48 – 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.

The PCR plates are heat-sealed with a PCR-compatible foil.

Please note: When removing each 48 well PCR plate, make sure that the remaining plates stay sealed. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

INTERPRETATION

Due to the sharing of sequence motifs between HLA-C alleles non-HLA-C*12 alleles will be amplified by some primer mixes. For further details see Specificity Table.

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UNIQUELY IDENTIFIED ALLELES

All the HLA-C*12 alleles, i.e. **C*12:02 to C*12:206**, recognized by the HLA Nomenclature Committee in January 2017^{1,2} will be amplified by the primers in the HLA-C*12 SSP kit³.

The HLA-C*12 kit enables separation of the confirmed HLA-C*12 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-C*12 alleles is listed below.

The HLA-C*12 kit also enables identification of polymorphisms in exons outside of the region encoding the peptide binding domain and of null and alternatively expressed alleles.

The following HLA-C*12 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

Alleles	Primer mix	Alleles	Primer mix
C*12:03:09, 12:159	17	C*12:39N, 12:167	25
C*12:06, 12:48, 12:81	6	C*12:45, 12:50	28
C*12:23, 12:203	22	C*12:46N, 12:139	20
C*12:29, 12:38	29	C*12:86, 12:104N	29
C*12:30, 12:36	27	C*12:109, 12:171	34

¹HLA-C alleles listed on the IMGT/HLA web page 2017-January-20, release 3.27.0, 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-C*12 primer set cannot separate the C*12:09, C*05:16, C*05:85, C*05:107 and C*16:88 alleles, the C*12:16 and C*01:21 or the C*12:34 and the C*16:15:02 alleles. These alleles can be distinguished by the HLA-C low resolution kit and the HLA-C*01, HLA-C*05, or HLA-C*16 kit, respectively.

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ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
C*12:02:01	Unconfirmed	C*12:03:29	Confirmed	C*12:35	Confirmed	C*12:84N	Unconfirmed
C*12:02:02:01	Confirmed	C*12:03:30	Unconfirmed	C*12:36	Unconfirmed	C*12:85	Unconfirmed
C*12:02:02:02	Unconfirmed	C*12:03:31	Unconfirmed	C*12:37	Confirmed	C*12:86	Confirmed
C*12:02:03	Unconfirmed	C*12:03:32	Unconfirmed	C*12:38	Confirmed	C*12:87	Unconfirmed
C*12:02:04	Confirmed	C*12:03:33	Unconfirmed	C*12:39N	Confirmed	C*12:88	Unconfirmed
C*12:02:05	Unconfirmed	C*12:03:34:01	Unconfirmed	C*12:40	Unconfirmed	C*12:89	Unconfirmed
C*12:02:06	Unconfirmed	C*12:03:34:02	Unconfirmed	C*12:41	Confirmed	C*12:90	Confirmed
C*12:02:07	Unconfirmed	C*12:03:35	Confirmed	C*12:42Q	Confirmed	C*12:91	Unconfirmed
C*12:02:08	Unconfirmed	C*12:03:36	Unconfirmed	C*12:43	Confirmed	C*12:92	Unconfirmed
C*12:02:09	Unconfirmed	C*12:03:37	Confirmed	C*12:44	Confirmed	C*12:93	Unconfirmed
C*12:02:10	Unconfirmed	C*12:03:38	Unconfirmed	C*12:45	Confirmed	C*12:94	Confirmed
C*12:02:11	Unconfirmed	C*12:03:39	Unconfirmed	C*12:46N	Unconfirmed	C*12:95	Unconfirmed
C*12:02:12	Confirmed	C*12:03:40	Unconfirmed	C*12:47	Confirmed	C*12:96	Unconfirmed
C*12:02:13	Confirmed	C*12:03:41	Confirmed	C*12:48	Unconfirmed	C*12:97	Unconfirmed
C*12:02:14	Unconfirmed	C*12:03:42	Unconfirmed	C*12:49	Unconfirmed	C*12:98	Unconfirmed
C*12:02:15	Unconfirmed	C*12:04:01	Unconfirmed	C*12:50	Confirmed	C*12:99:01	Confirmed
C*12:03:01:01	Confirmed	C*12:04:02	Confirmed	C*12:51	Unconfirmed	C*12:99:02	Unconfirmed
C*12:03:01:02	Unconfirmed	C*12:05	Confirmed	C*12:52	Unconfirmed	C*12:100	Confirmed
C*12:03:01:03	Unconfirmed	C*12:06	Unconfirmed	C*12:53	Unconfirmed	C*12:101	Confirmed
C*12:03:01:04	Confirmed	C*12:07	Confirmed	C*12:54	Confirmed	C*12:102	Confirmed
C*12:03:01:05	Unconfirmed	C*12:08	Unconfirmed	C*12:55	Unconfirmed	C*12:103	Unconfirmed
C*12:03:01:06	Unconfirmed	C*12:09	Confirmed	C*12:56	Unconfirmed	C*12:104N	Unconfirmed
C*12:03:01:07	Unconfirmed	C*12:10:01	Unconfirmed	C*12:57:01	Unconfirmed	C*12:105N	Unconfirmed
C*12:03:02	Unconfirmed	C*12:10:02	Unconfirmed	C*12:57:02	Unconfirmed	C*12:106	Unconfirmed
C*12:03:03	Unconfirmed	C*12:11	Unconfirmed	C*12:58	Confirmed	C*12:107	Unconfirmed
C*12:03:04	Confirmed	C*12:12	Confirmed	C*12:59	Confirmed	C*12:108	Unconfirmed
C*12:03:05	Confirmed	C*12:13	Confirmed	C*12:60	Confirmed	C*12:109	Confirmed
C*12:03:06	Confirmed	C*12:14:01	Unconfirmed	C*12:61	Unconfirmed	C*12:110	Unconfirmed
C*12:03:07	Unconfirmed	C*12:14:02	Unconfirmed	C*12:62	Confirmed	C*12:111	Unconfirmed
C*12:03:08	Confirmed	C*12:15	Unconfirmed	C*12:63	Confirmed	C*12:112	Unconfirmed
C*12:03:09	Confirmed	C*12:16	Confirmed	C*12:64	Unconfirmed	C*12:113	Confirmed
C*12:03:10	Confirmed	C*12:17	Unconfirmed	C*12:65	Unconfirmed	C*12:114	Unconfirmed
C*12:03:11	Confirmed	C*12:18:01	Confirmed	C*12:66	Unconfirmed	C*12:115	Unconfirmed
C*12:03:12	Confirmed	C*12:18:02	Unconfirmed	C*12:67	Unconfirmed	C*12:116	Unconfirmed
C*12:03:13	Confirmed	C*12:19	Confirmed	C*12:68	Unconfirmed	C*12:117	Unconfirmed
C*12:03:14	Confirmed	C*12:20	Unconfirmed	C*12:69	Unconfirmed	C*12:118	Unconfirmed
C*12:03:15	Confirmed	C*12:21	Confirmed	C*12:70	Unconfirmed	C*12:119	Unconfirmed
C*12:03:16	Unconfirmed	C*12:22	Unconfirmed	C*12:71	Unconfirmed	C*12:120	Unconfirmed
C*12:03:17	Confirmed	C*12:23	Confirmed	C*12:72	Confirmed	C*12:121	Unconfirmed
C*12:03:18	Confirmed	C*12:24	Confirmed	C*12:73	Confirmed	C*12:122	Confirmed
C*12:03:19	Confirmed	C*12:25	Confirmed	C*12:74	Unconfirmed	C*12:123	Confirmed
C*12:03:20	Unconfirmed	C*12:26	Unconfirmed	C*12:75	Unconfirmed	C*12:124	Unconfirmed
C*12:03:21	Unconfirmed	C*12:27	Confirmed	C*12:76	Unconfirmed	C*12:125	Unconfirmed
C*12:03:22	Confirmed	C*12:28	Confirmed	C*12:77	Unconfirmed	C*12:126	Unconfirmed
C*12:03:23	Confirmed	C*12:29	Unconfirmed	C*12:78	Unconfirmed	C*12:127	Unconfirmed
C*12:03:24	Unconfirmed	C*12:30	Confirmed	C*12:79	Unconfirmed	C*12:128	Unconfirmed
C*12:03:25	Unconfirmed	C*12:31	Unconfirmed	C*12:80N	Unconfirmed	C*12:129	Unconfirmed
C*12:03:26	Unconfirmed	C*12:32	Unconfirmed	C*12:81	Unconfirmed	C*12:130	Unconfirmed
C*12:03:27	Confirmed	C*12:33	Unconfirmed	C*12:82	Confirmed	C*12:131	Unconfirmed
C*12:03:28	Unconfirmed	C*12:34	Confirmed	C*12:83	Unconfirmed	C*12:132	Confirmed

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C*12:133	Unconfirmed	C*12:153	Confirmed	C*12:173	Unconfirmed	C*12:193	Unconfirmed
C*12:134	Unconfirmed	C*12:154	Unconfirmed	C*12:174	Unconfirmed	C*12:194	Unconfirmed
C*12:135	Unconfirmed	C*12:155Q	Unconfirmed	C*12:175	Unconfirmed	C*12:195	Unconfirmed
C*12:136	Confirmed	C*12:156	Confirmed	C*12:176	Unconfirmed	C*12:196	Unconfirmed
C*12:137	Unconfirmed	C*12:157	Unconfirmed	C*12:177	Unconfirmed	C*12:197	Unconfirmed
C*12:138	Unconfirmed	C*12:158	Confirmed	C*12:178	Unconfirmed	C*12:198	Unconfirmed
C*12:139	Confirmed	C*12:159	Confirmed	C*12:179	Unconfirmed	C*12:199	Unconfirmed
C*12:140	Unconfirmed	C*12:160	Unconfirmed	C*12:180	Unconfirmed	C*12:200	Unconfirmed
C*12:141	Unconfirmed	C*12:161	Unconfirmed	C*12:181	Unconfirmed	C*12:201	Unconfirmed
C*12:142	Unconfirmed	C*12:162	Confirmed	C*12:182	Unconfirmed	C*12:202	Unconfirmed
C*12:143	Confirmed	C*12:163	Confirmed	C*12:183	Unconfirmed	C*12:203	Unconfirmed
C*12:144	Confirmed	C*12:164	Confirmed	C*12:184	Unconfirmed	C*12:204	Unconfirmed
C*12:145	Unconfirmed	C*12:165	Confirmed	C*12:185	Unconfirmed	C*12:205	Confirmed
C*12:146	Unconfirmed	C*12:166	Unconfirmed	C*12:186	Unconfirmed	C*12:206	Unconfirmed
C*12:147	Unconfirmed	C*12:167	Unconfirmed	C*12:187	Unconfirmed		
C*12:148N	Unconfirmed	C*12:168	Unconfirmed	C*12:188	Confirmed		
C*12:149	Confirmed	C*12:169	Unconfirmed	C*12:189	Unconfirmed		
C*12:150	Unconfirmed	C*12:170	Unconfirmed	C*12:190	Unconfirmed		
C*12:151	Unconfirmed	C*12:171	Unconfirmed	C*12:191	Unconfirmed		
C*12:152	Unconfirmed	C*12:172	Unconfirmed	C*12:192	Unconfirmed		

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2017-January-20, release 3.27.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in HLA-C*12 homo- and heterozygotes is available upon request.

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SPECIFICITY TABLE

HLA-C*12 SSP subtyping

Specificities and sizes of the PCR products of the 47+1 primer mixes used for HLA-C*12 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-C*12 alleles ³	Other amplified HLA Class I alleles
1⁵	235 bp	800 bp	*12:02:01-12:03:12, 12:03:13 ^w , 12:03:14-12:04:02, 12:06-12:08, 12:10:01-12:15, 12:17-12:20, 12:22-12:32, 12:34-12:48, 12:50-12:54, 12:56-12:97, 12:99:01-12:146, 12:148N-12:187, 12:189-12:194, 12:196-12:206	*02:12, 02:49, 02:55:01-02:55:02, 02:115, 03:15, 03:27, 03:38:01-03:38:02, 03:53, 03:69, 03:130, 03:136, 03:163, 03:246, 03:274, 03:297, 04:03:01, 04:03:03, 04:06, 04:16, 04:80, 04:103, 04:107, 04:147, 04:160, 04:171, 04:190, 04:256, 05:42, 05:46, 06:03:01-06:03:02, 06:76:01-06:76:02, 06:132:01-06:132:02, 07:26:01-07:26:02, 07:92, 07:96:01-07:96:02, 07:314:01-07:314:03, 07:317, 07:351, 07:578, 08:05, 08:21, 08:25, 08:137, 15:03, 15:16, 15:25, 16:15:01-16:15:02, 16:25, 16:64, 17:01:01:02-17:19, 17:21-17:26, 17:27N ^w , 17:28-17:35, 18:09, B*07:13, B*07:15, B*07:160, B*67:02
2⁴	100 bp	1070 bp	*12:02:01-12:02:05, 12:02:07, 12:02:09-12:02:11, 12:02:13, 12:03:19, 12:03:32, 12:08, 12:10:01-12:10:02, 12:14:02, 12:16-12:18:01, 12:22, 12:27, 12:30, 12:36, 12:40-12:41, 12:44, 12:49, 12:56, 12:64, 12:67-12:69, 12:72-12:74, 12:80N, 12:83-12:86, 12:96, 12:103-12:106, 12:112, 12:114, 12:117, 12:123-12:124, 12:126-12:128, 12:130, 12:132, 12:134, 12:136-12:137, 12:142, 12:145-12:146, 12:148N, 12:151, 12:155Q, 12:161-12:162, 12:164, 12:166, 12:168-12:169, 12:177, 12:179, 12:183, 12:188, 12:193, 12:196, 12:198, 12:200, 12:204	*01:04, 01:21, 16:02:13
3	220 bp	800 bp	*12:03:01:01-12:07, 12:11-12:13, 12:15, 12:23, 12:25-12:26, 12:28-12:29, 12:31-12:33,	*01:04, 01:09, 02:05:01-02:05:03, 02:17, 06:02:01:01-06:02:01:03, 06:02:03-06:02:15, 06:02:17-06:02:42, 06:02:44-06:03:02, 06:07-06:13,

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			12:35, 12:37-12:39N, 12:42Q-12:43, 12:45- 12:48, 12:50-12:55, 12:57:01-12:63, 12:65- 12:66, 12:70-12:71, 12:75-12:79, 12:81-12:82, 12:87-12:95, 12:97- 12:102, 12:107-12:111, 12:113, 12:115-12:116, 12:119-12:122, 12:125, 12:129, 12:131, 12:133, 12:135, 12:138-12:141, 12:143-12:144, 12:147, 12:149-12:150, 12:152, 12:154, 12:156-12:160, 12:163, 12:165, 12:167, 12:170-12:174, 12:176, 12:178, 12:180, 12:182, 12:184-12:187, 12:189- 12:192, 12:194-12:195, 12:197, 12:199, 12:201- 12:203, 12:205-12:206	06:15-06:34:02, 06:36-06:39, 06:41- 06:71, 06:73-06:78, 06:80, 06:82- 06:100, 06:102:01-06:117, 06:119- 06:122, 06:124-06:126, 06:128N- 06:135, 06:137-06:142, 06:145- 06:152N, 06:154-06:196, 06:198- 06:199, 14:16, 16:04:01, 16:04:03- 16:04:04, 16:29, 16:33, 16:42, 16:55, 16:61, 16:66, 16:78, 16:82, 16:91
4	340 bp	1070 bp	*12:04:01-12:05, 12:09, 12:21, 12:33, 12:41, 12:54, 12:60, 12:146, 12:188	*01:14, 01:59, 01:118, 02:02:01- 02:02:03, 02:02:05-02:02:11, 02:02:13-02:11, 02:13-02:26:03, 02:28-02:40:02, 02:42-02:86, 02:88- 02:114, 02:116-02:125, 02:127- 02:128, 03:07, 03:15, 03:45, 03:130, 03:140, 03:163, 03:243, 03:268, 03:297, 04:01:01:01-04:01:28, 04:01:30-04:01:76, 04:01:78-04:01:81, 04:03:01-04:10, 04:12-04:20, 04:23- 04:28, 04:30-04:35, 04:37-04:54, 04:56-04:171, 04:173N-04:213, 04:215N-04:248, 04:250-04:263, 05:01:01:01-05:01:34, 05:03-05:128N, 05:130-05:148, 06:02:01:01- 06:02:01:03, 06:02:03-06:02:11, 06:02:13-06:10, 06:12-06:51, 06:53:01-06:121, 06:123, 06:125- 06:146, 06:148-06:199, 07:07, 07:09, 07:49, 07:76:01-07:76:02, 07:210, 07:238, 07:247, 07:315, 07:328, 07:403, 07:406, 08:10, 14:04, 14:12, 14:49, 14:64, 14:77, 15:02:01:01- 15:05:10, 15:06:01-15:06:03, 15:08- 15:13, 15:15-15:19, 15:22-15:24, 15:26-15:42, 15:44:01-15:70, 15:72- 15:115N, 15:117-15:137, 16:02:01- 16:02:13, 16:09, 16:12, 16:19, 16:25, 16:46-16:48, 16:57, 16:60, 16:63, 16:69-16:70, 16:74, 16:77N, 16:84, 16:88-16:91, 16:99, 16:101-16:104, 17:01:01:02-17:21, 17:23-17:35, 18:01-18:10

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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Lot-specific information

5 ⁵	130 bp	1070 bp	*12:05, 12:09, 12:21, 12:33, 12:49, 12:98, 12:188	*01:02:34, 02:02:01-02:02:03, 02:02:05-02:02:07, 02:02:09-02:02:12, 02:02:14-02:02:28, 02:02:30-02:11, 02:13-02:40:02, 02:42-02:48, 02:50- 02:54, 02:56-02:62, 02:64-02:89, 02:91-02:114, 02:116-02:128, 03:04:25, 04:10-04:11, 04:36, 04:55, 04:153, 04:169, 04:210, 04:214- 04:215N, 05:01:01:01-05:01:11, 05:01:13-05:01:23, 05:01:24 ^w , 05:01:25-05:01:32, 05:01:33 ^w , 05:01:34, 05:03-05:29:01, 05:30- 05:41, 05:43-05:45, 05:47-05:108, 05:110-05:128N, 05:129 ^w , 05:130- 05:136, 05:138-05:148, 06:05, 08:01:01-08:02:02, 08:02:04-08:02:10, 08:02:12-08:04:03, 08:06-08:20, 08:22-08:24, 08:26N-08:63, 08:65- 08:72:02, 08:74-08:94, 08:95 ^w , 08:96- 08:136, 08:138-08:146, 14:02:03, 14:03, 14:08, 14:10, 14:22, 14:35N, 14:38, 14:41, 14:53-14:54, 14:61, 14:70, 14:79, 15:02:01:01-15:02:09, 15:02:11-15:02:16, 15:02:18-15:02:28, 15:04:01-15:05:11, 15:06:01-15:13, 15:15, 15:17-15:19, 15:21-15:24, 15:26-15:42, 15:44:01-15:44:02, 15:45 ^w , 15:46-15:66, 15:67 ^w , 15:68- 15:82, 15:84Q-15:98, 15:100-15:137, 16:01:01:01-16:01:01:02, 16:01:03- 16:01:15, 16:01:17-16:02:13, 16:04:01, 16:04:03-16:04:04, 16:06-16:14, 16:16Q-16:24, 16:26-16:63, 16:65- 16:68, 16:70, 16:71 ^w , 16:72-16:84, 16:86-16:105
6 ⁴	75 bp 150 bp 415 bp	1070 bp	*12:48, 12:102 *12:06 *12:08, 12:81, 12:188	*01:118, 01:128, 03:08, 03:29, 03:31, 03:246, 04:112, 04:169, 05:36, 06:44, 14:73, 16:64, 16:70, 16:87
7	225 bp	1070 bp	*12:04:01-12:05, 12:09, 12:21, 12:33, 12:41, 12:54, 12:60, 12:146, 12:188	*02:26:01, 02:107, 04:42:01-04:42:02, 04:103, 04:220, 05:01:01:01-05:01:25, 05:01:27-05:01:28, 05:01:30-05:01:34, 05:03-05:12, 05:14-05:25, 05:27- 05:29:02, 05:31-05:57, 05:58:02, 05:59-05:77, 05:79-05:128N, 05:130- 05:148, 06:02:01:01-06:02:01:03, 06:02:03-06:02:08, 06:02:10-06:02:11, 06:02:13-06:02:20, 06:02:22-06:02:47, 06:03:02-06:10, 06:12-06:17, 06:19- 06:32, 06:34:01-06:51, 06:53:01- 06:70:01, 06:71-06:103, 06:105- 06:118, 06:121, 06:123, 06:126- 06:131, 06:133-06:146, 06:148- 06:187, 06:189-06:199, 07:07, 07:09, 07:49, 07:76:01-07:76:02, 07:210, 07:238, 07:247, 07:315, 07:328,

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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8^{4,6}	95 bp 155 bp 195 bp 245 bp	1070 bp	*12:15 *12:40 *12:80N *12:07	*15:02:14 *16:14 B*35:310
9⁴	95 bp	1070 bp	*12:02:01-12:04:02, 12:06-12:08, 12:10:01-12:20, 12:22-12:27, 12:29-12:32, 12:34-12:48, 12:50-12:57:02, 12:59-12:62, 12:64-12:97, 12:99:01-12:107, 12:109-12:131, 12:133-12:134, 12:136-12:145, 12:147-12:187, 12:189-12:206	*01:17, 01:21, 01:128, 02:12, 02:55:01-02:55:02, 03:27, 03:38:01-03:38:02, 03:130, 03:163, 03:246, 04:33, 04:107, 04:172, 04:231, 05:46, 06:30, 07:07, 07:16, 07:51, 07:181, 07:367, 08:05, 08:21, 08:25, 14:04, 14:73, 14:77, 15:03, 15:16, 16:15:01-16:15:02, 16:25, 17:01:01:02-17:10, 17:12-17:14, 17:16-17:25, 17:27N-17:35, B*07:13, B*67:02
10	155 bp	1070 bp	*12:03:01:01-12:03:01:07, 12:03:03-12:03:07, 12:03:09-12:03:15, 12:03:17-12:03:18, 12:03:21-12:03:29, 12:03:31, 12:03:33, 12:03:35-12:03:42, 12:04:02-12:07, 12:11-12:13, 12:15, 12:20, 12:23-12:25, 12:28-12:29, 12:31-12:32, 12:34-12:35, 12:37-12:39N, 12:42Q-12:43, 12:45-12:48, 12:50-12:55, 12:57:01-12:58, 12:60-12:63, 12:65-12:66, 12:70-12:71, 12:75-12:79, 12:81-12:82, 12:87-12:95, 12:97-12:102, 12:107-12:111, 12:113, 12:115-12:116, 12:119-12:122, 12:125, 12:129, 12:131, 12:133, 12:135, 12:138-12:141, 12:143, 12:147, 12:149-12:150, 12:152-12:154, 12:156-12:160, 12:163, 12:165, 12:167, 12:170-12:176, 12:178, 12:180, 12:182, 12:184, 12:186-12:187, 12:189-12:192, 12:194-12:195, 12:197, 12:199, 12:201-12:203, 12:205-12:206	*01:02:18, 06:02:38, 06:76:02, 14:02:08, 16:01:17, 16:15:02

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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Lot No.: **1F8**

Lot-specific information

Lot No.	Fragment Size	Reference Size	Allele	Sequence
11	230 bp	1070 bp	*12:09, 12:24, 12:158	*01:02:01-01:03, 01:06-01:07:01, 01:08, 01:10-01:20, 01:23-01:34, 01:37N-01:48, 01:51-01:54, 01:56N-01:78, 01:80-01:119, 01:121Q-01:130, 01:132-01:136, 03:58, 03:86, 03:94, 03:99, 04:37, 04:230, 04:263, 05:16, 05:85, 05:107, 06:05-06:06, 08:12, 14:02:01:01-14:05, 14:07N, 14:10-14:14, 14:17-14:27, 14:29-14:52, 14:55-14:62, 14:64-14:76, 14:78-14:85, 15:102, 16:53, 16:68, 16:88, B*07:239, B*14:03
12 ⁵	135 bp	1070 bp	*12:02:01-12:03:03, 12:03:05-12:03:23, 12:03:24 ^w , 12:03:25-12:03:33, 12:03:35-12:03:42, 12:06-12:08, 12:10:01-12:20, 12:22-12:26, 12:28-12:32, 12:34-12:40, 12:42Q-12:53, 12:55-12:59, 12:61-12:71, 12:72 ^w , 12:73-12:122, 12:124-12:134, 12:135 ^w , 12:136-12:145, 12:147-12:153, 12:154 ^w , 12:155Q-12:187, 12:189-12:194, 12:196-12:206	*01:02:34, 01:21, 02:12 ^w , 02:27:01-02:27:02, 02:87, 02:115, 02:126 ^w , 03:04:25, 04:11, 04:29, 04:36, 04:55, 04:172, 04:214 ^w , 06:11, 06:122 ^w , 06:124 ^w , 06:147, 07:01:13, 07:02:09, 07:04:01:01-07:04:11, 07:11-07:12, 07:45, 07:63, 07:68, 07:101, 07:139, 07:142, 07:181, 07:199:01-07:199:02, 07:272, 07:302, 07:323-07:324, 07:329N, 07:338, 07:354-07:355, 07:358, 07:364-07:365, 07:378, 07:394-07:395, 07:420, 07:426, 07:428, 07:447, 07:459, 07:466-07:467, 07:480, 07:487, 07:501, 07:523, 07:534-07:535, 07:552, 07:562-07:563, 07:569, 08:01:01-08:02:10, 08:02:12-08:09, 08:11-08:63, 08:65-08:94, 08:95 ^w , 08:96-08:146, 14:02:03, 14:03, 14:08, 14:10, 14:22, 14:35N, 14:38, 14:41, 14:53-14:54, 14:61, 14:70, 14:79, 15:07, 15:21 ^w , 15:25, 15:116 ^w , 16:01:01:01-16:01:01:02, 16:01:03-16:01:22, 16:04:01, 16:04:03-16:04:04, 16:06-16:08, 16:10-16:11, 16:13-16:18, 16:20-16:24, 16:26-16:36, 16:37 ^w , 16:38-16:45, 16:49-16:56, 16:58-16:59, 16:61-16:62, 16:64-16:68, 16:71 ^w , 16:72-16:73, 16:75-16:76, 16:78-16:83, 16:86-16:87, 16:92-16:93, 16:95-16:98, 16:100, 16:105, B*08:01:36, B*35:08:02, B*35:08:05, B*67:02
13 ⁴	105 bp	1070 bp	*12:31	*04:01:05, 04:01:75, 05:106:02, 08:01:19
	150 bp		*12:10:01-12:10:02, 12:155Q, 12:156	*04:01:05, 04:01:75, 14:02:08
14 ⁴	100 bp	1070 bp	*12:16, 12:147	*01:02:34, 01:21, 02:42, 02:107, 04:140, 04:166, 04:220, 05:98, 06:05 ^w , 07:02:09, 08:14, 08:80, 08:103, 15:63, 15:113, 16:80, B*67:02
	150 bp		*12:11, 12:60 12:118	
15	140 bp	1070 bp	*12:12	*08:73, B*08:01:36, B*35:08:02, B*35:08:05
16	185 bp	1070 bp	*12:13	

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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	225 bp		*12:14:01-12:14:02, 12:176, 12:181	*01:60, 04:58, 04:160, 05:23, 05:62, 05:134, 05:143, 06:118, 08:07, 08:47, 08:104, 14:17, 15:65, 17:01:01:02- 17:31, 17:33-17:34
17	130 bp 565 bp	1070 bp	*12:99:02, 12:159 *12:03:04, 12:03:09, 12:195	B*40:02:21 01:02:18, 06:02:38, 07:447, 14:02:08, B*27:05:27
18	145 bp 175 bp 245 bp 270 bp	1070 bp	*12:17, 12:27 *12:35, 12:201 *12:17, 12:27 *12:35	*04:12 *03:53 B*38:60
19⁴	100 bp	1070 bp	*12:14:02, 12:18:01, 12:25, 12:83, 12:169	*03:104, 07:01:20, 07:01:27, 07:02:38, 08:122, B*08:144, B*18:77, B*40:29
20⁴	105 bp 175 bp	1070 bp	*12:46N *12:22, 12:58, 12:94	*01:129, 04:52, 04:55, 05:55, 14:10, 14:48, 15:12 *01:31, 14:38
21	235 bp 250 bp	1070 bp	*12:19, 12:139, 12:158 *12:14:01-12:14:02, 12:18:01-12:18:02, 12:20, 12:83, 12:169, 12:175, 12:181	*01:22, 01:35, 01:131, 05:11, 05:17, 05:27, 05:68, 05:79, 05:115, 05:134, 06:04:01-06:04:02, 06:118, 06:153, 06:197, 08:01:01-08:01:19, 08:03:01- 08:04:03, 08:06, 08:08:01-08:11, 08:13-08:14, 08:16:01-08:16:02, 08:20-08:22, 08:24, 08:26N, 08:36N, 08:38-08:42, 08:44, 08:46, 08:50, 08:54, 08:56-08:61, 08:65-08:66, 08:72:01-08:72:02, 08:78-08:89N, 08:91, 08:93, 08:95-08:99, 08:101- 08:102, 08:104-08:106, 08:109, 08:113, 08:117, 08:119, 08:121N- 08:122, 08:124, 08:127N-08:131, 08:133, 08:135-08:139, 08:141Q, 08:143-08:145, 14:06, 14:15, 14:53, 14:77, 15:02:01:01-15:07, 15:09- 15:13, 15:15-15:19, 15:21-15:24, 15:26-15:50, 15:52-15:73, 15:76- 15:83, 15:85-15:101, 15:103-15:137, 16:35, 16:40, 16:48, 17:01:01:02- 17:16, 17:18-17:35
22⁴	100 bp 135 bp 590 bp	1070 bp	*12:15, 12:23 *12:99:01-12:99:02 *12:21, 12:203	*15:02:14 B*40:02:21 *05:106:02, 08:01:19
23⁴	105 bp	1070 bp	*12:205	*06:56, A*02:362, A*26:85, B*13:80, B*18:116, B*35:326, B*44:38 *07:470, 16:36
24	140 bp 185 bp 135 bp 185 bp 425 bp	1070 bp	*12:26, 12:63 *12:172, 12:201 *12:99:01 *12:43 *12:28, 12:135	*04:01:05, 06:02:38, 06:76:02, 07:447

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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25⁴	80 bp 155 bp 430 bp	1070 bp	*12:39N *12:02:06, 12:02:08, 12:02:12, 12:21, 12:118, 12:149 *12:167	*04:01:05, 05:106:02, 07:413, 07:422, 08:01:19, 08:02:02, B*27:05:27 , B*40:02:21 *02:12, 02:49, 02:55:01-02:55:02, 02:115, 04:226, 15:03, 15:16, 15:25
26⁵	355 bp	800 bp	*12:44	*03:38:01-03:38:02, 03:69, 03:130, 03:136, 03:163, 03:246, 03:274, 03:297, 04:80, 04:100, 04:178, 06:14, 06:143, 07:10, 07:43:01, 07:196, 07:367, 07:568, 15:03, 15:16, 15:25
27⁴	100 bp 150 bp 175 bp 215 bp 295 bp	1070 bp	*12:30 *12:03:19, 12:03:32, 12:155Q *12:94 *12:36, *12:153 *12:101	*07:214, 07:429 *01:04, 16:02:13 *01:129, 14:48, A*02:605Q *16:103 *14:84, 16:81
28⁶	275 bp 350 bp	1070 bp	*12:50 *12:45, 12:166	*01:32:01-01:32:02, 02:56, 03:102, 03:263:01-03:263:02, 04:180:01, 06:20, 07:81, 07:168, 07:450, 08:123, 08:139, 14:82, 15:126, 16:98, 16:102 *05:81, 06:87, 07:24, 07:218, 14:65, 16:13, 16:61
29⁴	125 bp 185 bp 210 bp	1070 bp	*12:38, 12:104N *12:42Q, 12:172 *12:29, 12:86	B*15:181N, B*57:50 *07:513Q, B*46:51Q
30^{4,7}	90 bp 200 bp	1070 bp	*12:32, 12:102, 12:144, 12:185 *12:143, 12:162	*02:51, 05:08, 05:52, 05:89, 06:41, 08:29, 08:31, B*15:33, B*15:248 *02:64
31	135 bp 180 bp 240 bp	1070 bp	*12:47, 12:84N, 12:123 *12:42Q, 12:80N *12:164	A*11:197, A*26:67, A*68:95 *07:513Q, B*46:51Q *15:67
32⁴	50 bp 115 bp 180 bp	1070 bp	*12:54, 12:188 *12:37 *12:62	*01:59, 01:118, 02:65, 03:130, 03:140, 03:243, 04:114, 05:20, 06:82, 07:49, 07:210, 07:238, 07:247, 07:403, 14:04, 14:64, 14:77, 15:85, 16:57, A*03:267 , A*68:46, B*07:253 *07:204:01, 07:482, A*02:211:01 , A*02:594, A*24:261, A*68:76:01- 68:76:02 A*02:335
33	135 bp 210 bp	1070 bp	*12:105N *12:100	
34⁴	85 bp 235 bp 260 bp	1070 bp	*12:171 *12:109 *12:125	*03:171, 03:211:01, 04:144, 05:93, 06:73, 08:20, 08:40
35	195 bp 260 bp	1070 bp	*12:110, 12:143 *12:125	
36	180 bp	1070 bp	*12:62, 12:111, 12:149	*03:282, 07:413, 07:422, 08:18, A*02:335, B*40:346
37⁴	90 bp 225 bp 285 bp	1070 bp	*12:163 *12:108 *12:73	B*14:51, B*53:34, B*58:21
38⁴	105 bp	1070 bp	*12:15, 12:113	*15:02:14, B*40:02:21

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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	145 bp		*12:156	*04:01:05, 14:02:08
39	200 bp 225 bp	1070 bp	*12:136 *12:59, 12:82	*07:102, 07:351, B*07:13, B*07:15, B*07:160, B*42:18, B*67:02
40^{4,7}	65 bp	1070 bp	*12:04:01-12:04:02, 12:41, 12:60, 12:72, 12:135, 12:146, 12:154	*02:12, 02:49, 02:55:01-02:55:02, 03:15, 03:163, 03:297, 04:01:01:01- 04:01:47, 04:01:49-04:01:81, 04:03:01-04:09N, 04:12-04:20, 04:23- 04:28, 04:30-04:35, 04:37-04:44, 04:46-04:54, 04:56-04:96, 04:98:01- 04:113, 04:115N-04:147, 04:149- 04:152, 04:154-04:168, 04:170N- 04:171, 04:173N-04:209, 04:211- 04:213, 04:216-04:249, 04:251- 04:263, 05:42, 05:46, 06:02:01:01- 06:02:01:03, 06:02:03-06:02:23, 06:02:25-06:04:02, 06:06-06:10, 06:12-06:43:02, 06:45-06:64, 06:66- 06:81, 06:83-06:123, 06:125-06:137, 06:139-06:146, 06:148-06:197, 06:199, 07:07, 07:09, 07:76:01- 07:76:02, 07:315, 07:406, 07:559, 14:49, 15:03, 15:16, 16:25, 17:01:01:02-17:14, 17:16-17:21, 17:23-17:35, 18:01-18:10
41	215 bp 240 bp	1070 bp	*12:90, 12:148N *12:164	B*56:08 *15:67
42⁴	125 bp	1070 bp	*12:122	B*35:12:03, B*44:03:24, B*53:01:06
43	180 bp	1070 bp	*12:28, 12:132, 12:135, 12:146	*02:49, 02:75, 02:115, 04:01:01:01- 04:01:09, 04:01:11-04:01:22, 04:01:24-04:01:73, 04:01:74 ^w , 04:01:75-04:01:81, 04:03:01-04:10, 04:12-04:20, 04:23-04:26, 04:28- 04:32, 04:34-04:51, 04:53-04:54, 04:56-04:106, 04:108-04:115N, 04:117-04:129, 04:131-04:168, 04:170N-04:171, 04:173N-04:230, 04:232-04:263, 05:25, 05:42, 06:05, 06:76:02, 07:02:09, 08:28, 08:137, 15:25, 15:62, 16:26, 16:46, 16:55, 16:64
44	290 bp	1070 bp	*12:160	
45	245 bp	1070 bp	*12:181	*07:01:01:01-07:02:20, 07:02:22- 07:33N, 07:35-07:40, 07:42-07:165, 07:167-07:294, 07:296-07:347N, 07:349-07:580
46	175 bp	1070 bp	*12:165	
47	370 bp	1070 bp	*12:02:01-12:02:02:02, 12:02:04-12:02:07, 12:02:09-12:02:11, 12:02:13-12:02:15, 12:03:29, 12:03:32, 12:08, 12:14:01-12:14:02, 12:16- 12:18:02, 12:22, 12:27, 12:30, 12:36, 12:40-	*01:21, 02:12, 02:49, 02:55:01- 02:55:02, 02:115, 04:01:55, 04:15:01, 04:15:03, 06:02:37, 06:127:02, 07:01:07, 07:04:03, 07:14, 07:27:02, 07:31:02, 07:43:02, 07:199:02, 07:526, 17:01:10

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **1F8**

Lot-specific information

	12:41, 12:56, 12:64, 12:67-12:69, 12:72-12:74, 12:80N, 12:83-12:86, 12:103-12:106, 12:112, 12:114, 12:117, 12:123- 12:124, 12:126-12:128, 12:130, 12:132, 12:134, 12:136-12:137, 12:142, 12:145-12:146, 12:148N, 12:151, 12:161, 12:164, 12:166, 12:168-12:169, 12:177, 12:179, 12:183, 12:193, 12:196, 12:198, 12:200, 12:204
48⁸	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-C*12 high resolution 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.

⁴HLA-specific PCR products shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR products.

⁵Primer mixes 1, 5, 12 and 26 may give rise to a lower yield of HLA-specific PCR product than the other C*12 primer mixes.

⁶Primer mixes 8 and 28 have a tendency to giving rise to primer oligomer formation.

⁷Primer mixes 30 and 40 may have tendencies of unspecific amplifications.

⁸Primer mix 48 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', might be weakly amplified.

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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Lot No.: **1F8**

Lot-specific information

PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec. PCR product	235	100	220	340	130	75	225	95	95	155	230	135
						150		155				
						415		195				
								245				
Length of int. pos. control ¹	800	1070	800	1070	1070	1070	1070	1070	1070	1070	1070	1070
5'-primer(s) ²	98 5'-CTA 3'	419 5'-gTC 3'	361 5'-AgT 3'	1 st I 5'-CgA 3'	201 5'-CCA 3'	28 5'-TCA 3'	118 5'-CCg 3'	98 5'-CTA 3'	289 5'-Agg 3'	361 5'-AgT 3'	361 5'-AgT 3'	201 5'-CCA 3'
						431 5'-CgT 3'		420 5'-TTA 3'				213 5'-CCc 3'
						499 5'-TCg 3'						
						504 5'-CAT 3'						
3'-primer(s) ³	289 5'-AgC 3'	477 5'-gCA 3'	538 5'-CCA 3'	302 5'-ggT 3'	289 5'-AgT 3'	270 5'-TAg 3'	302 5'-ggT 3'	214 5'-CCA 3'	341 5'-Cgg 3'	474 5'-gCA 3'	538 5'-CCg 3'	302 5'-ggC 3'
	289 5'-AgC 3'				289 5'-AgT 3'	538 5'-CCA 3'		251 5'-CCT 3'			559 5'-CAT 3'	
	295 5'-TCC 3'							301 5'-gCC 3'				
								474 5'-gCA 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	105	100	140	185	130	145	100	105	250	100	105	135
	150	150		225	565	175		175		135	140	185
						245		230		590	185	425
						270						
Length of int. pos. control ¹	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070
5'-primer(s) ²	368 5'-gTT 3'	142 5'-TCT 3'	201 5'-CCA 3'	2 nd I 5'-CCA 3'	201 5'-CCg 3'	98 5'-CTA 3'	257 5'-CCC 3'	201 5'-CCA 3'	2 nd I 5'-CCA 3'	176 5'-gCA 3'	201 5'-CCA 3'	98 5'-CTA 3'
	375 5'-Tgg 3'	364 5'-ggT 3'			379 5'-ACg 3'	201 5'-CCA 3'	477 5'-gCT 3'	361 5'-AgT 3'		379 5'-ACg 3'	368 5'-gTA 3'	341 5'-ggA 3'
	412 5'-ATA 3'	368 5'-gTC 3'			386 5'-gCT 3'	3 rd I 5'-Cgg 3'				379 5'-ACg 3'	3 rd I 5'-Cgg 3'	379 5'-ACg 3'
										420 5'-TTA 3'		
										3 rd I 5'-Cgg 3'		
3'-primer(s) ³	474 5'-gCA 3'	201 5'-CTT 3'	299 5'-TCT 3'	473 5'-CAA 3'	474 5'-gCA 3'	295 5'-TCC 3'	311 5'-ggT 3'	332 5'-TCC 3'	539 5'-TCA 3'	474 5'-gCA 3'	288 5'-gCg 3'	241 5'-CgT 3'
	477 5'-gCA 3'	474 5'-gCA 3'		512 5'-CCA 3'		308 5'-TCg 3'	538 5'-CAg 3'	343 5'-T 3'		658 5'-gTg 3'	430 5'-gCT 3'	474 5'-gCA 3'
						326 5'-TgC 3'		426 5'-TCC 3'			476 5'-CgA 3'	
						728 5'-CCg 3'		506 5'-TgT 3'			728 5'-CCg 3'	
								538 5'-gCA 3'			739 5'-gTT 3'	
								559 5'-CAT 3'				
								562 5'-gCg 3'				
Well No.	13	14	15	16	17	18	19	20	21	22	23	24



101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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Lot No.: **1F8**

Lot-specific information

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec.	80	355	100	275	125	90	135	50	135	85	195	180
PCR product	155		150	350	185	200	180	115	210	235	260	
	430		175		210	230	240	180		260		
			215									
			295									
Length of int.	1070	800	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070
pos. control ¹												
5'-primer(s) ²	28	289	127	385	419	347	98	173	419	625	625	173
	5'-TCC 3'	5'-Agg 3'	5'-gAC 3'	5'-ggT 3'	5'-gTC 3'	5'-gTg 3'	5'-CTA 3'	5'-CgA 3'	5'-gTC 3'	5'-ACg 3'	5'-ACg 3'	5'-CgA 3'
	173		228	463	3 ^d I	370	419	302		652	694	173
	5'-CgC 3'		5'-ATg 3'	5'-TgA 3'	5'-Cgg 3'	5'-ACT 3'	5'-gTC 3'	5'-gAA 3'		5'-CCA 3'	5'-gCA 3'	5'-CgC 3'
	252		361			485		379		802	1046	710
	5'-TgA 3'		5'-AgT 3'			5'-CAA 3'		5'-ACC 3'		5'-AgC 3'	5'-TgT 3'	5'-gAA 3'
	361		375			490						
	5'-AgC 3'		5'-Tgg 3'			5'-CgT 3'						
	361					499						
	5'-AgA 3'					5'-TCg 3'						
						1046						
						5'-TgT 3'						
3'-primer(s) ³	289	353	289	3 ^d I	502	538	175	312	514	846	846	312
	5'-AgC 3'	5'-TgA 3'	5'-AgC 3'	5'-CTC 3'	5'-CTA 3'	5'-CCA 3'	5'-CCA 3'	5'-Agg 3'	5'-CTA 3'	5'-CAC 3'	5'-CAC 3'	5'-Agg 3'
	474		477		505	1087	197	453	589		1087	846
	5'-gCA 3'		5'-gCA 3'		5'-gCC 3'	5'-AgC 3'	5'-gAT 3'	5'-TCT 3'	5'-CTg 3'		5'-AgC 3'	5'-CAC 3'
			506		564		201					
			5'-TgT 3'		5'-ACC 3'		5'-CTT 3'					
			545		587		251					
			5'-AgA 3'		5'-CCC 3'		5'-CCT 3'					
			613		739		296					
			5'-gCA 3'		5'-gTT 3'		5'-CTg 3'					
							564					
							5'-ACC 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
Length of spec.	90	105	200	65	215	125	180	290	245	175	370
PCR product	225	145	225		240						
	285										
Length of int.	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070
pos. control ¹											
5'-primer(s) ²	98	368	103	289	98	474	201	832	648	404	289
	5'-CTA 3'	5'-gTT 3'	5'-CCT 3'	5'-Agg 3'	5'-CTA 3'	5'-ACT 3'	5'-CCA 3'	5'-AAC 3'	5'-CAC 3'	5'-CCA 3'	5'-Agg 3'
		409	112								
		5'-ggC 3'	5'-CCg 3'								
			130								
			5'-AgA 3'								
3'-primer(s) ³	146	474	289	312	265	559	341	956	853	538	369
	5'-CCC 3'	5'-gCA 3'	5'-AgC 3'	5'-AgT 3'	5'-CTA 3'	5'-CAg 3'	5'-CgT 3'	5'-CAg 3'	5'-CAT 3'	5'-CCA 3'	5'-CCg 3'
	284				277						
	5'-gTT 3'				5'-gCC 3'						
	340				296						
	5'-ggT 3'				5'-CTg 3'						
Well No.	37	38	39	40	41	42	43	44	45	46	47

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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Lot-specific information

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

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

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

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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Lot No.: **1F8**

Lot-specific information

CELL LINE VALIDATION SHEET																				
HLA-C*12 SSP primer set²																				
				Well																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				Prod. No.:	201432001	201432002	201432003	201432004	201446205	201432006	201779607	201432008	201432009	201432010	201779611	201432012	201561013	201432014	201432015	201432016
IHWC cell line ¹		C*																		
1	9001 SA	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*07:01	*15:05	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324	*12:02		+	+	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-
4	9275 GU373	*03:04	*04:01	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011	*06:02		-	-	+	+	-	-	+	-	-	-	-	-	-	-	-	-	-
6	9353 SM	*03:04	*07:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL	*05:01		-	-	-	+	+	-	+	-	-	-	-	-	-	-	-	-	-
8	9025 DEU	*04:01		-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR	*12:03		+	-	+	-	-	-	-	-	-	+	+	-	+	-	-	-	-
10	9107 LKT3	*01:02		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
11	9051 PITOUT	*16:01		-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-
12	9052 DBB	*06:02		-	-	+	+	-	-	+	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM	*01:02		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
14	9071 OLGA	*01:02	*03:04	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
15	9075 DKB	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*02:02		-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540	*03:03	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257 32367	*01:02	*07:05	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
19	9038 BM16	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*12:03		+	-	+	-	-	-	-	-	-	+	+	-	+	-	-	-	-
23	9124 IHL	*01:02	*15:02	-	-	-	+	+	-	-	-	-	-	-	+	-	-	-	-	-
24	9035 JBUSH	*12:03		+	-	+	-	-	-	-	-	-	+	+	-	+	-	-	-	-
25	9049 IBW9	*08:02		-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-
26	9285 WT49	*07:18		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*07:04	*15:29	-	-	-	+	+	-	-	-	-	-	-	-	+	-	-	-	-
28	9320 BEL5GB	*05:01	*16:01	-	-	-	+	+	-	+	-	-	-	-	-	+	-	-	-	-
29	9050 MOU	*16:01		-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-
30	9021 RSH	*17:01		+	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	+
31	9019 DUCAF	*05:01		-	-	-	+	+	-	+	-	-	-	-	-	-	-	-	-	-
32	9297 HAG	*17:03		+	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	+
33	9098 MT14B	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF	*12:03		+	-	+	-	-	-	-	-	-	+	+	-	+	-	-	-	-
35	9302 SSTO	*05:01		-	-	-	+	+	-	+	-	-	-	-	-	-	-	-	-	-
36	9024 KT17	*03:03	*04:01	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML	*02:02	*07:01	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-
40	9134 WHONP199	*01:02	*06:02	-	-	+	+	-	-	+	-	-	-	-	+	-	-	-	-	-
41	9055 H0301	*08:02		-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-
42	9066 TAB089	*01:02		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
43	9076 T7526	*01:02	*08:01	-	-	-	-	+	-	-	-	-	-	-	+	+	-	-	-	-
44	9057 TEM	*12:03		+	-	+	-	-	-	-	-	-	+	+	-	+	-	-	-	-
45	9239 SHJO	*06:02	*17:01	+	-	+	+	-	-	+	-	-	+	-	-	-	-	-	-	+
46	9013 SCHU	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*07:04	*15:02	-	-	-	+	+	-	-	-	-	-	-	-	+	-	-	-	-
48	9303 TER-ND	*04:01	*16:01	-	-	-	+	+	-	-	-	-	-	-	-	+	-	-	-	-

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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Lot No.: **1F8**

Lot-specific information

CELL LINE VALIDATION SHEET																				
HLA-C*12 SSP primer set²																				
			Prod. No.:	Well																
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
				201779617	201779618	201432019	201779620	201432021	201779622	201779623	201561024	201779625	201779626	201779627	201432028	201779629	201779630	201779631	201561032	
	IHWC cell line¹	C*																		
1	9001 SA	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*07:01	*15:05	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324	*12:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373	*03:04	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011	*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353 SM	*03:04	*07:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025 DEU	*04:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB	*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA	*01:02	*03:04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540	*03:03	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257 32367	*01:02	*07:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16	*07:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL	*01:02	*15:02	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9	*08:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49	*07:18		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*07:04	*15:29	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB	*05:01	*16:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU	*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH	*17:01		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG	*17:03		-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B	*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17	*03:03	*04:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML	*02:02	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134 WHONP199	*01:02	*06:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301	*08:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089	*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526	*01:02	*08:01	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM	*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO	*06:02	*17:01	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*07:04	*15:02	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
48	9303 TER-ND	*04:01	*16:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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Lot No.: **1F8**

Lot-specific information

CELL LINE VALIDATION SHEET																			
HLA-C*12 SSP primer set²																			
			Prod. No.:	Well															
				33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	
				201779633	201779634	201561035	201779636	201779637	201779638	201779639	201561040	201779641	201561042	201561043	201561044	201779645	201779646	201779647	
	IHWC cell line ¹		C*																
1	9001 SA		*07:02	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	
2	9280 LK707		*07:01	*15:05	-	-	-	-	-	-	-	-	-	-	-	+	-	-	
3	9011 E4181324		*12:02		-	-	-	-	-	-	-	-	-	-	-	-	-	+	
4	9275 GU373		*03:04	*04:01	-	-	-	-	-	-	+	-	-	+	-	-	-	-	
5	9009 KAS011		*06:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-	
6	9353 SM		*03:04	*07:02	-	-	-	-	-	-	-	-	-	-	-	+	-	-	
7	9020 QBL		*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	9025 DEJ		*04:01		-	-	-	-	-	-	+	-	-	+	-	-	-	-	
9	9026 YAR		*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10	9107 LKT3		*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11	9051 PITOUT		*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	9052 DBB		*06:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-	
13	9004 JESTHOM		*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14	9071 OLGA		*01:02	*03:04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	9075 DKB		*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	9037 SWEIG007		*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	9282 CTM3953540		*03:03	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	+	-	
18	9257 32367		*01:02	*07:05	-	-	-	-	-	-	-	-	-	-	-	-	+	-	
19	9038 BM16		*07:01		-	-	-	-	-	-	-	-	-	-	-	+	-	-	
20	9059 SLE005		*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
21	9064 AMALA		*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
22	9056 KOSE		*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
23	9124 IHL		*01:02	*15:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
24	9035 JBUSH		*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	9049 IBW9		*08:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
26	9285 WT49		*07:18		-	-	-	-	-	-	-	-	-	-	-	+	-	-	
27	9191 CH1007		*07:04	*15:29	-	-	-	-	-	-	-	-	-	-	-	+	-	-	
28	9320 BEL5GB		*05:01	*16:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	9050 MOU		*16:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30	9021 RSH		*17:01		-	-	-	-	-	-	+	-	-	-	-	-	-	-	
31	9019 DUCAF		*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
32	9297 HAG		*17:03		-	-	-	-	-	-	+	-	-	-	-	-	-	-	
33	9098 MT14B		*03:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
34	9104 DHIF		*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	9302 SSTO		*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
36	9024 KT17		*03:03	*04:01	-	-	-	-	-	-	+	-	-	+	-	-	-	-	
37	9065 HHKB		*07:02		-	-	-	-	-	-	-	-	-	-	-	+	-	-	
38	9099 LZL		*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
39	9315 CML		*02:02	*07:01	-	-	-	-	-	-	-	-	-	-	-	-	+	-	
40	9134 WHONP199		*01:02	*06:02	-	-	-	-	-	-	+	-	-	-	-	-	-	-	
41	9055 H0301		*08:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
42	9066 TAB089		*01:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
43	9076 T7526		*01:02	*08:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
44	9057 TEM		*12:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
45	9239 SHJO		*06:02	*17:01	-	-	-	-	-	-	+	-	-	-	-	-	-	-	
46	9013 SCHU		*07:02		-	-	-	-	-	-	-	-	-	-	-	+	-	-	
47	9045 TUBO		*07:04	*15:02	-	-	-	-	-	-	-	-	-	-	-	-	+	-	
48	9303 TER-ND		*04:01	*16:01	-	-	-	-	-	-	+	-	-	+	-	-	-	-	



101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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Lot No.: 1F8**Lot-specific information**

¹The provided cell line HLA specificities are retrieved from the <http://www.ihwg.org/hla> web site. The specificity of an individual cell line may thus be subject to change.

²The specificity of each primer solution in the kit has been tested against 48 well characterized cell line DNAs and where applicable, additional cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 6, 8, 13 to 15, 17 to 20, 22 to 39, 41, 42, 44 and 46 were available. The specificities of the primers in primer solutions 6, 8, 13 to 15, 17, 19, 20, 22, 24 to 28, 30, 32, 38, 39 and 42 were tested by separately adding additional 5'-primers, respectively additional 3'-primers. In primer solutions 18, 23, 29, 31, 33, 37 and 41 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solutions 34 to 36, 44 and 46 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 6, 13, 14, 17, 19, 25, 27, 28, 30, 32 and 39 one or more 5'-primers were not possible to test, and in primer solutions 1, 8, 11, 16, 20, 22, 24 and 27 one or more 3'-primers were not possible to test.

101.624-12 – including *Taq* polymerase, IFU-01
101.624-12u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **1F8**

Lot-specific information

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