

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.: **53V**

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:	53V
Expiry date:	2016-September-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. 53V.

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 (88R)

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. 88R**).

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.

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

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

Well	5'-primer	3'-primer	rationale
12	Modified	-	5'-primer modified for improved HLA-specific amplification.
25	Modified	-	Modified 5'-primer for improved HLA-specific amplification.
28	Exchanged	Exchanged	Primer pair exchanged for the A*03:26 allele.
31	Modified	-	Modified 5'-primers for decreased primer oligomer formation.
37	-	Added	3'-primer added for the A*03:168N allele.
38	-	Added	3'-primer added from well 61.
39	-	Added	3'-primer added for the A*03:182 allele.
44	-	Added	3'-primer added from well 61.
46	Modified	-	Modified 5'-primer for decreased primer oligomer formation.
52	-	Added	3'-primer added for the A*03:168N allele.
54	-	Added	3'-primer added for the A*03:178N allele.
56	Added	Added	Primer pair added for the A*03:182 allele.
58	-	Modified	Modified 3'-primer for improved HLA-specific amplification.
59	-	Added	3'-primer added for the 03:178N allele.
61	Moved, added	Moved, added	Primer pair moved to well 38 and 44, primer pair added from well 64.
62	Added	-	5'-primer added for the A*03:162N allele.
64	Moved	Moved	Primer pair moved to well 61, Negative Control.

Change in revision R01 compared to R00:

1. Primer mixes 53 and 58 do not amplify the A*01:14, 36:01 and 36:05 alleles. This has been corrected in the Specificity and Interpretation Tables.

Change in revision R02 compared to R01:

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, 03:01:03-03:01:05, 03:01:07, 03:01:09-03:01:11, 03:01:13, 03:01:15-03:01:22, 03:01:24-03:01:29, 03:01:31-03:01:44, 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, 03:136-03:139, 03:141, 03:144-03:148, 03:151, 03:154-03:159, 03:163-03:164, 03:166, 03:169-03:170, 03:174-03:175, 03:181 alleles and the A*03:26 allele.

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

Well **64** contains Negative Control primer pairs, that will amplify more than 95% of the *Olerup SSP*® HLA Class I, DRB, DQB1 and DPB1 amplicons as well as amplicons generated by a control primer pair.

PCR product sizes range from 75 to 430 base pairs.
The PCR product generated by the control primer pair is 430 base pairs.

Length of PCR product	105	200	105	80	75	80
5'-primer¹	164	340	440	45	45	43
	5'-CAC ^{3'}	5'-Agg ^{3'}	5'-TTA ^{3'}	5'-Tgg ^{3'}	5'-Tgg ^{3'}	5'-Tgg ^{3'}
3'-primer²	231	2nd I	507	59	58	57
	5'-TgC ^{3'}	5'-AAA ^{3'}	5'-TTg ^{3'}	5'-CTC ^{3'}	5'-ggC ^{3'}	5'-CTC ^{3'}
A*	+	+	+			
B*	+	+	+			
C*	+	+	+			
DRB1				+	+	
DRB3				+	+	
DRB5				+		
DQB1					+	
DPB1						+

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.

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

PRODUCT DESCRIPTION

HLA-A*03 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the A*03:01 to A*03:182 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. ‘53V’.

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, 29, 31, 33, 35, 39, 46 to 49, 51, 53, 56, 58, 61 and 63. In addition, a few HLA-C alleles will be amplified by primer mixes 46 and 48.

For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the HLA-A*03 alleles, i.e. **A*03:01 to A*03:182**, recognized by the HLA Nomenclature Committee in January 2014^{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.

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

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, 03:01:03-03:01:05, 03:01:07, 03:01:09-03:01:11, 03:01:13, 03:01:15-03:01:22, 03:01:24-03:01:29 and 03:01:31-03:01:44 alleles, the A*03:01:02, 03:01:06 and 03:01:14 alleles, the A*03:01:12 and 03:01:23 alleles, the A*03:02:01-03:02:03 alleles, the *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 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*03:33, 03:70	36
A*03:17:01-03:17:02, 03:74	21	A*03:38, 03:68N	41
A*03:20, 03:47	43	A*03:44, 03:53	46
A*03:22:01-03:22:02, 03:103	23	A*03:78, 03:161N	49
A*03:25, 03:71	27	A*03:118, 03:134	57
A*03:27, 03:49	30	A*03:132, 03:162N	62

¹HLA-A alleles listed on the IMGT/HLA web page 2014-January-17, release 3.15.0, www.ebi.ac.uk/imgt/hla.

²Alleles that have been deleted from or renamed in the official WHO HLA Nomenclature up to and including the last IMGT/HLA database release can be retrieved from web page <http://hla.alleles.org/alleles/deleted.html>.

³This lot HLA-A*03 primer set cannot separate the A*03:79 and A*03:130 alleles.

⁴The 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 and 74:13 alleles. These alleles can be distinguished by the HLA-A low resolution kit and/or the HLA-A*74 high resolution kit.

⁵This lot of the HLA-A*03 subtyping kit cannot distinguish the A*03:01:01:01, 03:01:01:03, 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, 03:01:31-03:01:44, 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, 03:136-03:139, 03:141, 03:144-03:148, 03:151, 03:154-03:159, 03:163-03:164, 03:166, 03:169-03:170, 03:174-03:175, 03:181 alleles and the A*03:26 allele.

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
A*03:01:01:01	Confirmed	A*03:04:01	Unconfirmed	A*03:48	Confirmed	A*03:98	Unconfirmed
A*03:01:01:02N	Confirmed	A*03:04:02	Unconfirmed	A*03:49	Confirmed	A*03:99	Unconfirmed
A*03:01:01:03	Unconfirmed	A*03:04:03	Unconfirmed	A*03:50	Confirmed	A*03:100	Unconfirmed
A*03:01:02	Unconfirmed	A*03:05:01	Confirmed	A*03:51	Confirmed	A*03:101	Unconfirmed
A*03:01:03	Confirmed	A*03:05:02	Unconfirmed	A*03:52	Unconfirmed	A*03:102	Confirmed
A*03:01:04	Confirmed	A*03:06	Unconfirmed	A*03:53	Confirmed	A*03:103	Confirmed
A*03:01:05	Confirmed	A*03:07	Confirmed	A*03:54	Unconfirmed	A*03:104	Confirmed
A*03:01:06	Confirmed	A*03:08	Confirmed	A*03:55	Unconfirmed	A*03:105	Unconfirmed
A*03:01:07	Unconfirmed	A*03:09	Confirmed	A*03:56	Confirmed	A*03:106	Unconfirmed
A*03:01:08	Unconfirmed	A*03:10	Unconfirmed	A*03:57	Confirmed	A*03:107	Unconfirmed
A*03:01:09	Unconfirmed	A*03:11N	Unconfirmed	A*03:58	Unconfirmed	A*03:108	Confirmed
A*03:01:10	Unconfirmed	A*03:12	Unconfirmed	A*03:59	Unconfirmed	A*03:109	Unconfirmed
A*03:01:11	Confirmed	A*03:13	Unconfirmed	A*03:60	Unconfirmed	A*03:110	Unconfirmed
A*03:01:12	Confirmed	A*03:14	Unconfirmed	A*03:61	Unconfirmed	A*03:111	Confirmed
A*03:01:13	Unconfirmed	A*03:15	Unconfirmed	A*03:62	Confirmed	A*03:112	Unconfirmed
A*03:01:14	Confirmed	A*03:16	Confirmed	A*03:63	Confirmed	A*03:113	Confirmed
A*03:01:15	Confirmed	A*03:17:01	Unconfirmed	A*03:64	Unconfirmed	A*03:114	Unconfirmed
A*03:01:16	Confirmed	A*03:17:02	Unconfirmed	A*03:65	Confirmed	A*03:115	Unconfirmed
A*03:01:17	Confirmed	A*03:18	Unconfirmed	A*03:66	Confirmed	A*03:116	Unconfirmed
A*03:01:18	Confirmed	A*03:19	Unconfirmed	A*03:67	Unconfirmed	A*03:117	Unconfirmed
A*03:01:19	Confirmed	A*03:20	Confirmed	A*03:68N	Confirmed	A*03:118	Unconfirmed
A*03:01:20	Confirmed	A*03:21N	Unconfirmed	A*03:69N	Confirmed	A*03:119	Unconfirmed
A*03:01:21	Confirmed	A*03:22:01	Confirmed	A*03:70	Unconfirmed	A*03:120	Unconfirmed
A*03:01:22	Unconfirmed	A*03:22:02	Confirmed	A*03:71	Unconfirmed	A*03:121	Unconfirmed
A*03:01:23	Unconfirmed	A*03:23:01	Unconfirmed	A*03:72	Unconfirmed	A*03:122	Unconfirmed
A*03:01:24	Unconfirmed	A*03:23:02	Unconfirmed	A*03:73	Unconfirmed	A*03:123:01	Confirmed
A*03:01:25	Unconfirmed	A*03:24	Unconfirmed	A*03:74	Confirmed	A*03:123:02	Unconfirmed
A*03:01:26	Unconfirmed	A*03:25	Unconfirmed	A*03:75	Unconfirmed	A*03:124	Unconfirmed
A*03:01:27	Unconfirmed	A*03:26	Unconfirmed	A*03:76	Confirmed	A*03:125	Unconfirmed
A*03:01:28	Confirmed	A*03:27	Confirmed	A*03:77	Unconfirmed	A*03:126	Unconfirmed
A*03:01:29	Unconfirmed	A*03:28	Confirmed	A*03:78	Unconfirmed	A*03:127	Confirmed
A*03:01:30	Unconfirmed	A*03:29	Unconfirmed	A*03:79	Confirmed	A*03:128	Confirmed
A*03:01:31	Unconfirmed	A*03:30	Unconfirmed	A*03:80	Unconfirmed	A*03:129N	Unconfirmed
A*03:01:32	Unconfirmed	A*03:31	Unconfirmed	A*03:81	Confirmed	A*03:130	Confirmed
A*03:01:33	Confirmed	A*03:32	Unconfirmed	A*03:82	Unconfirmed	A*03:131	Unconfirmed
A*03:01:34	Unconfirmed	A*03:33	Confirmed	A*03:83	Unconfirmed	A*03:132	Unconfirmed
A*03:01:35	Unconfirmed	A*03:34	Confirmed	A*03:84	Unconfirmed	A*03:133	Confirmed
A*03:01:36	Unconfirmed	A*03:35	Unconfirmed	A*03:85	Unconfirmed	A*03:134	Unconfirmed
A*03:01:37	Unconfirmed	A*03:36N	Unconfirmed	A*03:86	Confirmed	A*03:135	Unconfirmed
A*03:01:38	Unconfirmed	A*03:37	Unconfirmed	A*03:87	Confirmed	A*03:136	Unconfirmed
A*03:01:39	Unconfirmed	A*03:38	Confirmed	A*03:88	Confirmed	A*03:137	Unconfirmed
A*03:01:40	Unconfirmed	A*03:39	Unconfirmed	A*03:89	Unconfirmed	A*03:138	Unconfirmed
A*03:01:41	Unconfirmed	A*03:40	Unconfirmed	A*03:90	Unconfirmed	A*03:139	Unconfirmed
A*03:01:42	Unconfirmed	A*03:41	Unconfirmed	A*03:91N	Confirmed	A*03:140	Unconfirmed
A*03:01:43	Unconfirmed	A*03:42	Unconfirmed	A*03:92	Unconfirmed	A*03:141	Unconfirmed
A*03:01:44	Unconfirmed	A*03:43	Unconfirmed	A*03:93	Confirmed	A*03:142	Unconfirmed
A*03:02:01	Confirmed	A*03:44	Unconfirmed	A*03:94	Unconfirmed	A*03:143	Confirmed
A*03:02:02	Unconfirmed	A*03:45	Unconfirmed	A*03:95	Unconfirmed	A*03:144	Unconfirmed
A*03:02:03	Unconfirmed	A*03:46	Unconfirmed	A*03:96	Confirmed	A*03:145	Unconfirmed
A*03:03N	Unconfirmed	A*03:47	Confirmed	A*03:97	Confirmed	A*03:146	Unconfirmed

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

Allele	Status ¹	Allele	Status ¹
A*03:147	Unconfirmed	A*03:167	Confirmed
A*03:148	Unconfirmed	A*03:168N	Unconfirmed
A*03:149	Confirmed	A*03:169	Unconfirmed
A*03:150	Confirmed	A*03:170	Unconfirmed
A*03:151	Unconfirmed	A*03:171	Unconfirmed
A*03:152	Unconfirmed	A*03:172	Unconfirmed
A*03:153	Unconfirmed	A*03:173	Unconfirmed
A*03:154	Unconfirmed	A*03:174	Unconfirmed
A*03:155	Unconfirmed	A*03:175	Unconfirmed
A*03:156	Unconfirmed	A*03:176	Unconfirmed
A*03:157	Unconfirmed	A*03:177	Unconfirmed
A*03:158	Unconfirmed	A*03:178N	Unconfirmed
A*03:159	Unconfirmed	A*03:179	Unconfirmed
A*03:160	Unconfirmed	A*03:180	Unconfirmed
A*03:161N	Unconfirmed	A*03:181	Unconfirmed
A*03:162N	Confirmed	A*03:182	Unconfirmed
A*03:163	Unconfirmed		
A*03:164	Unconfirmed		
A*03:165	Unconfirmed		
A*03:166	Unconfirmed		

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2014-January-17, release 3.15.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

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

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

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, 03:01:31-03:04:03, 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- 03:182	*11:130, 32:04, 36:02
2⁶	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, 03:181-03:182	*01:13, 02:34 ^w -02:35:03 ^w , 02:56:01 ^w - 02:56:02 ^w , 02:62 ^w , 02:103 ^w , 30:55, 34:08, 68:71, 74:13
3⁶	205 bp	1070 bp	*03:01:01:01-03:01:01:03, 03:01:03-03:01:05, 03:01:07- 03:01:13, 03:01:15-03:01:44, 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, 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-03:182	*11:25, 32:04, 34:02:01, 34:02:03-34:04, 34:07-34:10N
4	215 bp	800 bp	*03:02:01-03:02:03, 03:10, 03:31-03:32, 03:65, 03:69N, 03:73, 03:76, 03:82, 03:90, 03:106, 03:113, 03:160, 03:167	*01:12, 01:19, 01:25, 01:127, 01:136, 11:01:01-11:07, 11:09-11:22, 11:27, 11:29- 11:30, 11:32-11:34, 11:36-11:43, 11:45-11:49, 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, 11:159-11:176, 24:51, 24:92
5	185 bp	800 bp	*03:03N	

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

6	275 bp	1070 bp	*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, 03:89-03:106, 03:108, 03:110- 03:151, 03:153-03:172, 03:174- 03:182	*01:13, 01:28, 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- 02:04, 02:07:01-02:07:05, 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, 02:113N-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, 02:291-02:294, 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, 02:477-02:478, 11:43, 11:88, 24:19, 24:28, 24:44, 24:89, 29:19, 29:39, 29:48, 30:01:01- 30:01:09, 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, 31:01:02-31:01:05, 31:01:07-31:06, 31:09, 31:11-31:32, 31:34-31:73, 31:75-31:78, 31:80-31:82, 33:01:01-33:01:07, 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, 33:70-33:85, 34:08, 68:29, 68:45, 68:71, 74:01-74:09, 74:11-74:18, 74:20, 80:02
9⁹	230 bp	1070 bp	*03:05:01-03:05:02, 03:10, 03:42, 03:72	*02:156, 02:338, 11:04, 11:35, 11:88, 24:19, 30:01:01-30:04:02, 30:06-30:20, 30:22-30:27N, 30:29-30:44, 30:46, 30:48-30:79, 31:03-31:04, 33:49, 34:02:01-34:04, 34:07-34:10N, 36:01, 36:05, 68:45, 68:103
10⁵	65 bp 205 bp	800 bp	*03:60 *03:02:01-03:02:03, 03:07, 03:10, 03:31-03:32, 03:42, 03:73, 03:76, 03:82, 03:90, 03:106, 03:113, 03:133, 03:160, 03:171	*01:12, 01:19, 01:21, 01:126, 02:156, 02:338, 11:31, 11:35, 11:60, 11:158, 24:92, 30:04:01- 30:04:02, 30:06, 30:09, 30:17, 30:29, 30:46, 30:77, 31:03-31:04, 33:49, 68:103

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

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, 01:01:48-01:01:59, 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, 01:144-01:146, 02:48, 02:81, 02:90, 02:124, 02:146, 25:03, 26:20, 32:01:01- 32:01:14, 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- 32:61, 36:01-36:05, 74:01-74:04, 74:08- 74:12N, 74:14N-74:18, 74:20, 80:01:01:01 ^w - 80:01:01:02 ^w , 80:02-80:03
12	190 bp	1070 bp	*03:09, 03:108, 03:172	*01:134, 02:01:09, 02:05:05, 02:06:07, 02:50, 02:76:02, 02:122, 02:243:02, 11:06, 11:18, 24:28, 24:89, 26:03:01-26:03:02, 26:06, 26:21, 26:30, 26:78, 26:92, 29:19, 29:48, 33:24, 68:05, 68:15, 68:20, 74:06
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, 11:01:01-11:01:50, 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, 11:162-11:176, 30:08, 34:01:01-34:07, 34:09-34:11, 66:01:01-66:02, 66:04, 66:06-66:10, 66:12-66:14, 66:16-66:19, 68:01:01:01-68:02:05, 68:06-68:14, 68:16- 68:19, 68:21:01-68:28, 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, 68:91-68:107, 69:01-69:02
16	275 bp	1070 bp	*03:14	*02:450
17^{6,7}	215 bp	800 bp	*03:01:01:01-03:01:44, 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, 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-03:182	*01:06, 02:156, 02:338, 11:24:01-11:25, 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, 31:03-31:04, 32:04, 33:49, 34:02:01-34:04, 34:07-34:10N, 80:01:01:01-80:03
18⁶	135 bp 210 bp	1070 bp	*03:13 *03:50, 03:64, 03:66	*01:98, 11:08, 11:44, 30:04:01-30:04:02, 30:06, 30:17, 30:29, 30:46, 30:77, 36:02, 68:103
19⁷	230 bp	1070 bp	*03:15, 03:19	
20⁵	60 bp 175 bp	1070 bp	*03:61 *03:16	
21	145 bp 195 bp	1070 bp	*03:17:01-03:17:02, 03:102, 03:171 *03:74	*01:88, 02:156, 02:338, 11:119:01-11:119:02, 24:51, 24:92, 30:61, 30:74, 68:103

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

22	250 bp	1070 bp	*03:18, 03:97, 03:122, 03:135, 03:167	*01:01:01:01-01:02, 01:04N, 01:06-01:19, 01:21-01:33, 01:35-01:62, 01:64-01:65, 01:67-01:71, 01:74-01:101, 01:103-01:129, 01:131-01:146, 11:27, 11:38-11:39, 11:94, 24:51, 24:92, 30:75, 80:01:01:01-80:03
23⁵	95 bp 185 bp 210 bp 240 bp	1070 bp	*03:22:01-03:22:02 *03:19, 03:103 *03:56, 03:88, 03:99, 03:177 *03:75	*32:52 *02:237, 24:18, 24:204, 24:213, 32:52 *11:130, 32:52, 36:02 *24:18, 24:204, 24:213
24	470 bp	1070 bp	*03:21N	*01:04N, 11:21N, 23:07N, 24:11N
25	155 bp	1070 bp	*03:23:01-03:23:02	*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, 11:121, 24:08, 24:42, 24:89, 26:07:01-26:07:02, 26:92, 29:48, 33:08, 74:04
26	190 bp	1070 bp	*03:24, 03:93	*01:51, 25:03, 32:15, 32:37, 34:08, 68:71
27⁵	95 bp 145 bp 240 bp	1070 bp	*03:71 *03:25 *03:149	
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, 03:177-03:182	*02:34-02:35:03, 02:56:01-02:56:02, 02:62, 02:78, 02:103, 11:12, 23:13, 24:07, 24:24, 24:108, 24:112, 24:131, 29:01:01:01-29:18, 29:21-29:29, 29:31-29:33, 29:35-29:47, 29:49-29:58, 30:01:01-30:01:09, 30:08, 30:11:01-30:11:02, 30:14L-30:20, 30:23-30:26, 30:30, 30:35-30:43, 30:48-30:49, 30:52-30:56, 30:58-30:60, 30:62-30:63, 30:65, 30:71-30:75, 30:78N-30:79, 32:17, 34:09, 66:02, 66:12, 66:16, 68:01:01:01-68:01:17, 68:01:19-68:02:05, 68:06-68:14, 68:16-68:19, 68:21:01-68:30, 68:32-68:39, 68:41-68:71, 68:73-68:84, 68:86-68:89, 68:91-68:92, 68:94N-68:96, 68:98-68:107, 69:01, 74:13
30	130 bp 155 bp 210 bp	1070 bp	*03:27 *03:102 *03:49	
31⁷	190 bp 220 bp	800 bp	*03:143 *03:28, 03:56, 03:88, 03:99, 03:177	*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 *24:104, 32:05 *01:144
34⁵	125 bp 160 bp	1070 bp	*03:58 *03:31	
35⁷	235 bp 275 bp	1070 bp	*03:32 *03:55	*31:21, 74:07
36⁵	120 bp 160 bp	1070 bp	*03:81 *03:33	

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

	210 bp		*03:70	
37⁵	95 bp	1070 bp	*03:48, 03:168N	
	120 bp		*03:81	
	225 bp		*03:34	
38	165 bp	800 bp	*03:35, 03:130	
	195 bp		*03:79	
	250 bp		*03:73	
39	200 bp	1070 bp	*03:36N, 03:182	*01:109, 11:100, 11:175
	235 bp		*03:45	*30:77
40	240 bp	1070 bp	*03:37	
41	185 bp	1070 bp	*03:38	
	275 bp		*03:68N	
42⁷	190 bp	800 bp	*03:143	
	220 bp		*03:39	
43	150 bp	1070 bp	*03:20	
	260 bp		*03:47, 03:76	
44	165 bp	1070 bp	*03:51, 03:130	
	195 bp		*03:79	
	240 bp		*03:40	
45	150 bp	1070 bp	*03:43	
	270 bp		*03:91N	
46^{5,8}	110 bp	1070 bp	*03:44, 03:52	*02:164, 02:380, 31:19
	190 bp		*03:53	*30:30, 31:69, C*07:35, C*08:48
47	240 bp	1070 bp	*03:41, 03:57, 03:107	*01:01:01:01-01:01:01:03, 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, 01:01:51-01:01:59, 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, 01:144-01:146, 36:01-36:05, 74:10, 80:01:01:01-80:01:01:02, 80:03
48⁵	70 bp	1070 bp	*03:54	
	110 bp		*03:52	*02:380, 31:19
	145 bp		*03:46	*C*07:86
49	195 bp	1070 bp	*03:161N	
	545 bp		*03:78	*01:45, 02:453, 11:108, 66:17
50	130 bp	1070 bp	*03:86	
51^{6,7}	215 bp	1070 bp	*03:50	*30:04:01-30:04:02, 30:06, 30:17, 30:29, 30:46, 30:77, 68:103
	285 bp		*03:87	*01:101, 11:30
52⁵	90 bp	1070 bp	*03:96, 03:168N	
53	225 bp	800 bp	*03:150, 03:153	
	260 bp		*03:104	*33:49
54	240 bp	1070 bp	*03:111, 03:178N	
55	175 bp	800 bp	*03:112	
56	205 bp	1070 bp	*03:113, 03:182	*01:109, 11:100, 11:175
57⁸	180 bp	1070 bp	*03:134	
	275 bp		*03:118	
58^{6,7}	215 bp	1070 bp	*03:127, 03:150, 03:153	*01:06, 11:24:02
59	240 bp	1070 bp	*03:128, 03:178N	

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

60 ⁷	390 bp	1070 bp	*03:129N	
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, 23:56-23:60, 24:02:01:01-24:02:04, 24:02:06-24:02:28, 24:02:30-24:02:69, 24:02:71-24:02:83, 24:04- 24:09N, 24:11N, 24:13:01-24:14, 24:17, 24:19- 24:21:02, 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, 24:262-24:270, 29:03, 30:75, 31:05, 33:10, 33:19, 68:26, 68:65, 80:01:01:01-80:03
62	190 bp 375 bp	1070 bp	*03:132 *03:162N	
63	175 bp 200 bp	800 bp	*03:123:01-03:123:02, 03:171 *03:42, 03:133	*02:156, 02:338, 11:16, 11:35, 11:57, 11:73, 11:158, 68:103 *30:09, 31:03-31:04, 33:49
64 ¹⁰	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, 16, 17, 18, 21 to 26, 28, 29, 31, 33, 35, 39, 46 to 49, 51, 53, 56, 58, 61 and 63. In addition, a few HLA-C alleles will be amplified by primer mixes 46 and 48.

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

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, 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, 35, 42, 51, 58 and 60 may have tendencies of unspecific amplifications.

⁸Primer mixes 28, 46 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 control primer pairs. PCR product sizes range from 75 to 200 base pairs. The PCR product generated by the control primer pair is 430 base pairs.

'w', may be weakly amplified.

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

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	275	225	240	230	65	225	190
Length of int. pos. control ¹	800	1070	1070	800	800	1070	1070	1070	1070	800	800	1070
5'-primer(s) ²	363 5'-ATA 3'	98 5'-CTT 3'	363 5'-ATA 3'	363 5'-ATA 3'	382 5'-Tgg 3'	363 5'-ATA 3'	363 5'-ATA 3'	102 5'-ACA 3'	98 5'-CTC 3'	363 5'-ATA 3'	98 5'-CTT 3'	144 5'-gCC 3'
3'-primer(s) ³	555 5'-CCA 3'	282 5'-gAC 3'	527 5'-CCT 3'	539 5'-TCT 3'	527 5'-CCT 3'	595 5'-CCg 3'	538 5'-CTA 3'	299 5'-CCA 3'	282 5'-gAC 3'	388 5'-gAT 3'	282 5'-gAg 3'	292 5'-gTg 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	230	60	145	250	95	470
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 5'-ggA 3'	28 5'-TCC 3'	98 5'-CTA 3'	98 5'-CTT 3'	363 5'-ATA 3'	363 5'-ATA 3'	368 5'-gTT 3'	363 5'-ATA 3'	363 5'-ATA 3'	363 5'-ATA 3'	355 5'-CCC 3'	3 rd I 5'-ATA 3'
3'-primer(s) ³	899 5'-ACA 3'	92 5'-AAC 3'	282 5'-gAC 3'	333 5'-CTg 3'	539 5'-TCA 3'	455 5'-CCA 3'	555 5'-CCA 3'	382 5'-CCT 3'	453 5'-TCT 3'	570 5'-CCg 3'	555 5'-CCA 3'	621 5'-ggg 3'
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec. PCR product	155	190	95	85	100	130	190	150	180	125	235	120
			145	495		155	220	220	210	160	275	160
			240			210		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'					
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'
						533		327	343			265
						5'-gCC 3'		5'-TTT 3'	5'-T 3'			5'-CCA 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	165	200	240	185	190	150	165	150	110	240	70
	120	195	235		275	220	260	195	270	190		110
	225	250						240				145
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	801	98	376	98	363	98	410	98	457
	5'-CTT 3'	5'-ATA 3'	5'-CTT 3'	5'-AAC 3'	5'-CTT 3'	5'-gCT 3'	5'-CTT 3'	5'-ATA 3'	5'-CTT 3'	5'-gTg 3'	5'-CTT 3'	5'-AgC 3'
			650		363	406	890		418	484		488
			5'-CCC 3'		5'-ATA 3'	5'-gCC 3'	5'-gAA 3'		5'-AgC 3'	5'-ACT 3'		5'-ggT 3'
										488		530
										5'-ggT 3'		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	518	845					518				
	5'-CCC 3'	5'-CCA 3'	5'-AgT 3'					5'-CCA 3'				
	281	574						561				
	5'-ACg 3'	5'-gAA 3'						5'-CAg 3'				
Well No.	37	38	39	40	41	42	43	44	45	46	47	48

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

Well No.	49	50	51	52	53	54	55	56	57	58	59	60
Length of spec.	195	130	215	90	225	240	175	205	180	215	240	390
PCR product	545		285		260				275			
Length of int. pos. control ¹	1070	1070	1070	1070	800	1070	800	1070	1070	1070	1070	1070
5'-primer(s) ²	127	466	363	98	363	98	643	98	766	363	98	652
	5'-ggT 3'	5'-gCC 3'	5'-ATA 3'	5'-CTT 3'	5'-ATA 3'	5'-CTT 3'	5'-CCg 3'	5'-CTT 3'	5'-TgA 3'	5'-ATA 3'	5'-CTT 3'	5'-C.A 3'
	3 rd I							650	864			
	5'-ATA 3'							5'-CCC 3'	5'-gAT 3'			
3'-primer(s) ³	282	555	538	143	545	295	777	270	899	527	295	899
	5'-gAC 3'	5'-CCA 3'	5'-CCA 3'	5'-CgT 3'	5'-AgA 3'	5'-TCA 3'	5'-gCA 3'	5'-ACC 3'	5'-ACA 3'	5'-CCg 3'	5'-TCA 3'	5'-ACA 3'
	704		605	153	583	296		806		545	298	
	5'-CCA 3'		5'-gCA 3'	5'-ACT 3'	5'-gTg 3'	5'-CTA 3'		5'-CCA 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		375	200
Length of int. pos. control ¹	1070	1070	800
5'-primer(s) ²	385	665	363
	5'-ggT 3'	5'-TgA 3'	5'-ATA 3'
		853	
		5'-ATA 3'	
3'-primer(s) ³	570	899	497
	5'-CCg 3'	5'-ACA 3'	5'-Tgg 3'
			524
			5'-CAC 3'
Well No.	61	62	63

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

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

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

101.413-24/04 – 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.: **53V**

Lot-specific Information

www.olerup-ssp.com

CELL LINE VALIDATION SHEET																				
HLA-A*03 SSP subtyping kit ²																				
				Well																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				Prod. No.:	201313701	201072002	201187903	201072004	201072005	201203706	201072007	201072008	201072009	201313710	201072011	201432712	201072013	201072014	201072015	201072016
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

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

Lot No.: **53V**

Lot-specific Information

www.olerup-ssp.com

CELL LINE VALIDATION SHEET																				
HLA-A*03 SSP subtyping kit ²																				
				Well																
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
				Prod. No.:	201203717	201072018	201072019	201072020	201313721	201072022	201313723	201313724	201432725	201313726	201313727	201432728	201072029	201203730	201432731	201203732
	IHWC cell line ¹		A*																	
1	9001 SA		*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707		*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324		*01:01		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
4	9275 GU373		*30:01		+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
5	9009 KAS011		*01:01		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
6	9353 SM		*02:01	*26:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL		*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025 DEU		*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR		*26:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3		*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT		*29:02		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
12	9052 DBB		*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM		*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA		*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB		*24:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007		*29:02		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
17	9282 CTM3953540		*03:01	*80:01	+	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-
18	9257 32367		*33:03	*74:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16		*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005		*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA		*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE		*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL		*02:01	*34:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH		*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9		*33:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49		*02:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007		*24:10	*29:01	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
28	9320 BEL5GB		*02:01	*29:02	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
29	9050 MOU		*29:02		-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
30	9021 RSH		*30:01	*68:02	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
31	9019 DUCAF		*30:02		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG		*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B		*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF		*31:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO		*32:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17		*02:06	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB		*03:01		+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
38	9099 LZL		*02:17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML		*01:01	*03:01	+	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-
40	9134 WHONP199		*02:07	*30:01	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
41	9055 H0301		*03:01		+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
42	9066 TAB089		*02:07		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526		*02:06	*02:07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM		*66:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO		*23:01	*24:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU		*03:01		+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
47	9045 TUBO		*02:16	*03:01	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
48	9303 TER-ND		*02:01	*11:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.413-24/04 – 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.: **53V**

Lot-specific Information

www.olerup-ssp.com

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.:	201203733	201072034	201072035	201203736	201432737	201432738	201432739	201072040	201072041	201313742	201072043	201432744	201203745	201432746	201072047	201072048
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

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

Lot No.: **53V**

Lot-specific Information

www.olerup-ssp.com

CELL LINE VALIDATION SHEET																				
HLA-A*03 SSP subtyping kit²																				
				Prod. No.:	Well															
					49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	
					201313749	201313750	201432751	201432752	201313753	201432754	201203755	201432756	201203757	201432758	201432759	201313760	201203764	201432762	201203763	
	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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Lot No.: **53V**

Lot-specific Information

www.olerup-ssp.com

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, 53, 56, 58 and 63 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solutions 6, 7, 16, 20, 30, 36 to 38, 41, 52, 54 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 31, 34, 43 and 49 one or two 5'-primers were not possible to test, and in primer mixes 1, 10, 14, 18, 21, 26, 32, 34, 35, 39, 43 to 45, 49, 51, 53, 56 and 58 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

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

Lot No.: **53V**

Lot-specific Information

www.olerup-ssp.com

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.: **53V**

Lot-specific Information

www.olerup-ssp.com

ADDRESSES:

Manufacturer:

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

Tel: +46-8-717 88 27

Fax: +46-8-717 88 18

E-mail: info-ssp@olerup.com

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

Distributed by:

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

Tel: +43-1-710 15 00

Fax: +43-1-710 15 00 10

E-mail: support-at@olerup.com

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

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

Tel: 1-877-OLERUP1

Fax: 610-344-7989

E-mail: info.us@olerup.com

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

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