101.521-24/04 – including *Taq* polymerase, IFU-01
101.521-24u/04u – without *Taq* polymerase, IFU-02
Visit www.olerup.com for **"Instructions for Use"(IFU)**

Lot No.: 5F4 **Lot-specific information**

Olerup SSP® HLA-B*27

Product number:	**101.521-24/04 – including *Taq* pol.** **101.521-24u/04u – without *Taq* pol.**
Lot number:	**5F4**
Expiry date:	**2020-04-01**
Number of tests:	**24 test – Product No. 101.521-24/24u** **4 tests – Product No. 101.521-04/04u**
Number of wells per test:	**46+1**
Storage - pre-aliquoted primers:	**dark at -20ºC**
- PCR Master Mix:	**-20ºC**
- Adhesive PCR seals	**RT**
- Product Insert	**RT**

This Product Description is only valid for Lot No. 5F4.

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-B*27 LOT (5D3)

The HLA-B*27 kit is updated for new alleles to enable separation of:

- Confirmed[1] 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

Two wells have been added to HLA-B*27, wells **46 and 47**.

The format of the Worksheet has been changed.

[1]As described in section Uniquely Identified Alleles.

The HLA-B*27 primer set, specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup* SSP® HLA-B*27 lot was made **(Lot No. 5D3)**. The kit design is based on IMGT/HLA database 3.28.0.

101.521-24/04 – including *Taq* polymerase, IFU-01
101.521-24u/04u – without *Taq* polymerase, IFU-02
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Lot No.: 5F4 **Lot-specific information**

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

Well	5'-primer	3'-primer	rationale
21	-	Added	3'-primer added for the B*27:137 allele.
30	-	Added	3'-primer added for the B*27:137 allele.
36	-	Added	3'-primer added for the B*27:146 allele.
37	-	Added	3'-primer added for the B*27:146 allele.
39	Modified	-	5'-primer modified for improved HLA-specific amplification.
41	Added	-	5'-primer added for improved allelic resolution of the B*27:67 allele.
43	Added	Added	Primer pair added for the B*27:05:02:04Q allele.
44	Added	Added	Primer pair added for the B*27:142 allele.
45	Added	Added	Negative control moved to well 47, primer pair added for the B*27:141 allele.
46	New	New	New primer pair added for improved allelic resolution of the B*27:142 allele.
47	-	-	Negative control added from well 45.

Change in revision R01 compared to R00:
1. Primer mix 43 amplifies the B*27:05:02:04Q allele. This has been corrected in the Specificity and Interpretation Tables.

101.521-24/04 – including *Taq* polymerase, IFU-01
101.521-24u/04u – without *Taq* polymerase, IFU-02
Visit www.olerup.com for **"Instructions for Use"(IFU)**

Lot No.: 5F4 **Lot-specific information**

Well **47** 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'-primer[1]	**164**	**340**	**440**	**45**	**45**	**43**	**36**
	5'-CAC3'	**5'-Agg3'**	**5'-TTA3'**	**5'-Tgg3'**	**5'-Tgg3'**	**5'-Tgg3'**	**5'-TAC3'**
							36
							5'-TAT3'
3'-primer[2]	**231**	**2nd I**	**507**	**59**	**58**	**57**	**47**
	5'-TgC3'	**5'-AAA3'**	**5'-TTg3'**	**5'-CTC3'**	**5'-ggC3'**	**5'-CTC3'**	**5'-ACA3'**
							48
							5'-gCA3'
							48
							5'-gCC3'
							52
							5'-TgT3'
A*	**+**	**+**	**+**				
B*	**+**	**+**	**+**				
C*	**+**	**+**	**+**				
DRB1				**+**	**+**		
DRB3				**+**	**+**		
DRB5				**+**			
DQB1					**+**		
DPB1						**+**	
DQA1							**+**

[1]The 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 codonnumbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

[2]The 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.

101.521-24/04 – including *Taq* polymerase, IFU-01
101.521-24u/04u – without *Taq* polymerase, IFU-02
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Lot No.: 5F4 **Lot-specific information**

PRODUCT DESCRIPTION

HLA-B*27 SSP subtyping

CONTENT
The primer set contains 5'- and 3'-primers for identifying the B*27:01 to B*27:161 alleles.

PLATE LAYOUT
Each test consists of 47 PCR reactions in a 48 well cut PCR plate. Well 48 is empty.

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

The 48 well cut PCR plate is marked with 'HLA-B*27' in silver/gray ink.
Well No. 1 is marked with the Lot No. '5F4'.
Wells 1 to 46 – HLA-B*27 high resolution primers.
Well 47 – 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.
Please note: When removing each 48 well PCR plate, make sure that the remaining plates stay covered. 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-B alleles non-HLA-B*27 alleles will be amplified by some primer mixes. For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES
All the HLA-B*27 alleles, i.e. **B*27:01 to B*27:161**, recognized by the HLA Nomenclature Committee in April 2017[1,2] will be amplified by the primers in the HLA-B*27 subtyping kit.

The HLA-B*27 kit enables separation of the confirmed HLA-B*27 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-B*27 alleles is listed below.

Lot No.: 5F4 **Lot-specific information**

The HLA- B*27 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-B*27 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

Alleles	Primer mix
B*27:37, 27:55, 27:101	22
B*27:83, 27:134	35

[1]HLA-B alleles listed on the IMGT/HLA web page 2017-April-13, release 3.28.0, www.ebi.ac.uk/imgt/hla.
[2]Alleles 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.

101.521-24/04 – including *Taq* polymerase, IFU-01
101.521-24u/04u – without *Taq* polymerase, IFU-02
Visit www.olerup.com for **"Instructions for Use"(IFU)**

Lot No.: 5F4 **Lot-specific information**

ALLELE CONFIRMATION STATUS

Allele	Status[1]	Allele	Status[1]	Allele	Status[1]	Allele	Status[1]
B*27:01	**Confirmed**	**B*27:07:03**	**Confirmed**	**B*27:55**	**Confirmed**	**B*27:101**	**Confirmed**
B*27:02:01:01	**Confirmed**	**B*27:07:04**	**Confirmed**	B*27:56	Unconfirmed	B*27:102	Unconfirmed
B*27:02:01:02	Unconfirmed	B*27:07:05	Unconfirmed	B*27:57	Unconfirmed	B*27:103	Unconfirmed
B*27:02:01:03	**Confirmed**	**B*27:08**	**Confirmed**	B*27:58	Unconfirmed	**B*27:104**	**Confirmed**
B*27:02:02	Unconfirmed	**B*27:09**	**Confirmed**	**B*27:59N**	**Confirmed**	B*27:105	Unconfirmed
B*27:02:03	Unconfirmed	**B*27:10**	**Confirmed**	**B*27:60**	**Confirmed**	B*27:106	Unconfirmed
B*27:03	**Confirmed**	B*27:11	Unconfirmed	**B*27:61**	**Confirmed**	B*27:107	Unconfirmed
B*27:04:01	**Confirmed**	**B*27:12**	**Confirmed**	B*27:62	Unconfirmed	B*27:108	Unconfirmed
B*27:04:02	Unconfirmed	**B*27:13**	**Confirmed**	B*27:63	Unconfirmed	B*27:109	Unconfirmed
B*27:04:03	**Confirmed**	**B*27:14**	**Confirmed**	B*27:64N	Unconfirmed	B*27:110	Unconfirmed
B*27:04:04	**Confirmed**	**B*27:15**	**Confirmed**	B*27:65N	Unconfirmed	B*27:111	Unconfirmed
B*27:04:05	Unconfirmed	B*27:16	Unconfirmed	**B*27:66N**	**Confirmed**	B*27:112	Unconfirmed
B*27:04:06	Unconfirmed	**B*27:17**	**Confirmed**	B*27:67	Unconfirmed	B*27:113	Unconfirmed
B*27:05:02:01	**Confirmed**	B*27:18	Unconfirmed	B*27:68	Unconfirmed	B*27:114	Unconfirmed
B*27:05:02:02	Unconfirmed	B*27:19	Unconfirmed	B*27:69	Unconfirmed	B*27:115	Unconfirmed
B*27:05:02:03	**Confirmed**	**B*27:20**	**Confirmed**	**B*27:70**	**Confirmed**	B*27:116	Unconfirmed
B*27:05:02:04Q	Unconfirmed	B*27:21	Unconfirmed	B*27:71	Unconfirmed	B*27:117	Unconfirmed
B*27:05:03	**Confirmed**	**B*27:23**	**Confirmed**	B*27:72	Unconfirmed	**B*27:118**	**Confirmed**
B*27:05:04	Unconfirmed	**B*27:24**	**Confirmed**	**B*27:73**	**Confirmed**	B*27:119	Unconfirmed
B*27:05:05	**Confirmed**	**B*27:25**	**Confirmed**	B*27:74	Unconfirmed	B*27:120	Unconfirmed
B*27:05:06	Unconfirmed	B*27:26	Unconfirmed	B*27:75	Unconfirmed	B*27:121	Unconfirmed
B*27:05:07	**Confirmed**	**B*27:27**	**Confirmed**	B*27:76	Unconfirmed	B*27:122	Unconfirmed
B*27:05:08	Unconfirmed	B*27:28	Unconfirmed	B*27:77	Unconfirmed	**B*27:123**	**Confirmed**
B*27:05:09	**Confirmed**	B*27:29	Unconfirmed	**B*27:78**	**Confirmed**	B*27:124	Unconfirmed
B*27:05:10	**Confirmed**	**B*27:30**	**Confirmed**	B*27:79	Unconfirmed	B*27:125	Unconfirmed
B*27:05:11	Unconfirmed	B*27:31	Unconfirmed	**B*27:80**	**Confirmed**	B*27:126	Unconfirmed
B*27:05:12	Unconfirmed	B*27:32	Unconfirmed	B*27:81	Unconfirmed	B*27:127	Unconfirmed
B*27:05:13	Unconfirmed	B*27:33	Unconfirmed	**B*27:82**	**Confirmed**	B*27:128	Unconfirmed
B*27:05:14	Unconfirmed	B*27:34	Unconfirmed	**B*27:83**	**Confirmed**	B*27:129	Unconfirmed
B*27:05:15	**Confirmed**	B*27:35	Unconfirmed	B*27:84	Unconfirmed	B*27:130	Unconfirmed
B*27:05:16	Unconfirmed	**B*27:36**	**Confirmed**	**B*27:85**	**Confirmed**	B*27:131	Unconfirmed
B*27:05:17	Unconfirmed	B*27:37	Unconfirmed	B*27:86	Unconfirmed	B*27:132	Unconfirmed
B*27:05:18	**Confirmed**	B*27:38	Unconfirmed	B*27:87	Unconfirmed	B*27:133	Unconfirmed
B*27:05:19	Unconfirmed	B*27:39	Unconfirmed	B*27:88	Unconfirmed	**B*27:134**	**Confirmed**
B*27:05:20	Unconfirmed	B*27:40	Unconfirmed	B*27:89	Unconfirmed	B*27:135	Unconfirmed
B*27:05:21	**Confirmed**	B*27:41	Unconfirmed	B*27:90:01	Unconfirmed	B*27:136	Unconfirmed
B*27:05:22	Unconfirmed	**B*27:42**	**Confirmed**	B*27:90:02	Unconfirmed	**B*27:137**	**Confirmed**
B*27:05:23	**Confirmed**	B*27:43	Unconfirmed	B*27:90:03	Unconfirmed	B*27:138	Unconfirmed
B*27:05:24	Unconfirmed	B*27:44	Unconfirmed	B*27:90:04	Unconfirmed	B*27:139	Unconfirmed
B*27:05:25	Unconfirmed	B*27:45	Unconfirmed	**B*27:91**	**Confirmed**	B*27:140	Unconfirmed
B*27:05:26	Unconfirmed	**B*27:46**	**Confirmed**	B*27:92	Unconfirmed	**B*27:141**	**Confirmed**
B*27:05:27	**Confirmed**	**B*27:47**	**Confirmed**	B*27:93	Unconfirmed	**B*27:142**	**Confirmed**
B*27:05:28	Unconfirmed	**B*27:48**	**Confirmed**	B*27:94N	Unconfirmed	B*27:143	Unconfirmed
B*27:05:29	Unconfirmed	**B*27:49**	**Confirmed**	B*27:95	Unconfirmed	B*27:144	Unconfirmed
B*27:05:30	Unconfirmed	**B*27:50:01**	**Confirmed**	B*27:96:01	Unconfirmed	B*27:145	Unconfirmed
B*27:05:31	Unconfirmed	**B*27:50:02**	**Confirmed**	B*27:96:02	Unconfirmed	**B*27:146**	**Confirmed**
B*27:05:32	**Confirmed**	**B*27:51**	**Confirmed**	**B*27:97**	**Confirmed**	B*27:147	Unconfirmed
B*27:06	**Confirmed**	**B*27:52**	**Confirmed**	B*27:98	Unconfirmed	B*27:148	Unconfirmed
B*27:07:01	**Confirmed**	**B*27:53**	**Confirmed**	B*27:99	Unconfirmed	B*27:149	Unconfirmed
B*27:07:02	Unconfirmed	B*27:54	Unconfirmed	B*27:100	Unconfirmed	B*27:150	Unconfirmed

101.521-24/04 – including *Taq* polymerase, IFU-01
101.521-24u/04u – without *Taq* polymerase, IFU-02
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Lot No.: 5F4 **Lot-specific information**

Allele	Status[1]	Allele	Status[1]
B*27:151	Unconfirmed	B*27:161	Unconfirmed
B*27:152	Unconfirmed		
B*27:153	Unconfirmed		
B*27:154	Unconfirmed		
B*27:155	Unconfirmed		
B*27:156	Unconfirmed		
B*27:157	Unconfirmed		
B*27:158	Unconfirmed		
B*27:159	Unconfirmed		
B*27:160	Unconfirmed		

[1]Allele status "confirmed" or "unconfirmed" as listed on the IMGT/HLA web page 2017-April-13, release 3.28.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in HLA-B*27 homo- and heterozygotes is available upon request.

101.521-24/04 – including *Taq* polymerase, IFU-01
101.521-24u/04u – without *Taq* polymerase, IFU-02
Use"(IFU)

Visit www.olerup.com for **"Instructions for**

Lot No.: 5F4

Lot-specific information

SPECIFICITY TABLE

HLA-B*27 SSP subtyping

Specificities and sizes of the PCR products of the 46+1 primer mixes used for HLA-B*27 SSP subtyping

Primer Mix	Size of spec. PCR product[1]	Size of control band[2]	Amplified HLA-B*27 alleles[3]	Other amplified HLA Class I alleles
1	390 bp	**800 bp**	*27:01, 27:18, 27:23, 27:29, 27:44, 27:92, 27:131	*18:01:01:01-18:01:01:07, 18:01:03-18:01:22, 18:01:24-18:02, 18:04:01-18:15, 18:17N-18:24, 18:26-18:32, 18:34-18:93, 18:95-18:106, 18:108-18:131, 18:133-18:135, 35:01:23, 35:42:01-35:42:02, 37:01:01-37:33N, 37:35-37:36, 37:38-37:59, 37:61-37:67, 40:02:01:01-40:06:15, 40:08, 40:09?, 40:11:01?-40:11:02?, 40:14:01?-40:15?, 40:18?, 40:20, 40:21?-40:22N?, 40:24?-40:31?, 40:33?-40:38?, 40:39, 40:42?, 40:43, 40:44?-40:49?, 40:50, 40:52?-40:58?, 40:61?-40:63?, 40:64, 40:65?, 40:67?-40:69?, 40:70:01-40:70:02, 40:71?, 40:72:02?, 40:74?-40:76?, 40:78?, 40:80?-40:88?, 40:89, 40:90?-40:93?, 40:94, 40:95?-40:96?, 40:97, 40:98?, 40:99, 40:100?-40:116?, 40:118N?-40:121?, 40:122, 40:123?, 40:124:02?-40:137?, 40:141?, 40:142N-40:144N, 40:145?, 40:148?-40:149?, 40:151?, 40:154?, 40:156?-40:165?, 40:167?-40:170?, 40:173?-40:185?, 40:186:02?-40:213?, 40:214, 40:216N?-40:228?, 40:229, 40:231?-40:236?, 40:238?-40:248?, 40:254-40:255, 40:257?, 40:266-40:271, 40:273?-40:276?, 40:279?-40:283?, 40:284, 40:287?-40:300?, 40:302-40:305, 40:306?-40:308?, 40:309, 40:310?-40:313?, 40:314, 40:315?, 40:317?-40:319?, 40:320, 40:322?, 40:324?-40:331?, 40:333?, 40:334, 40:335?-40:339?, 40:341?-40:344?, 40:345N, 40:347, 44:139?, 47:01:01:01-47:01:02, 47:02-47:10
2	405 bp	**800 bp**	*27:02:01:01-27:02:03, 27:30, 27:53, 27:57, 27:62, 27:65N, 27:75, 27:77, 27:83, 27:95, 27:102, 27:119, 27:126, 27:134, 27:157	*18:67, 18:136, 37:34, 40:13, 40:19?, 40:109?, 40:117?, 40:292?, 40:340?
3[4]	120 bp	1070 bp	*27:03, 27:111, 27:139, 27:151	
4	200 bp	1070 bp	*27:03, 27:05:02:01-27:05:32, 27:07:01-27:07:05, 27:09-27:10,	*40:188, 44:257, 47:01:01:01-47:01:03, 47:05-47:10

			27:13-27:14, 27:16-27:17, 27:19, 27:27-27:29, 27:32, 27:34-27:35, 27:37-27:39, 27:41-27:43, 27:45-27:52, 27:54-27:56, 27:58-27:60, 27:64N, 27:67, 27:70-27:74, 27:76, 27:78, 27:80-27:82, 27:84-27:85, 27:87-27:88, 27:90:01-27:90:04, 27:92-27:94N, 27:96:01-27:99, 27:101, 27:104, 27:111, 27:116-27:118, 27:121-27:124, 27:127-27:130, 27:132-27:133, 27:135-27:137, 27:139-27:141, 27:143-27:146, 27:148, 27:150-27:152, 27:155, 27:158-27:161	
5	400 bp	1070 bp	*27:04:01-27:04:06, 27:06, 27:08, 27:11-27:12, 27:15, 27:18, 27:20-27:21, 27:23-27:26, 27:31, 27:33, 27:36, 27:40, 27:44, 27:61, 27:63, 27:66N, 27:68-27:69, 27:79, 27:86, 27:91, 27:100, 27:103, 27:105-27:109, 27:112-27:115, 27:120, 27:125, 27:131, 27:138, 27:147, 27:149, 27:153-27:154	*18:01:01:01-18:01:20, 18:01:22-18:08, 18:10-18:15, 18:17N-18:24, 18:26-18:32, 18:34-18:48, 18:50-18:53, 18:55-18:66, 18:68-18:78, 18:80-18:106, 18:109-18:131, 18:133-18:135, 35:01:23, 35:42:01-35:42:02, 37:11, 37:14, 37:29, 37:37, 37:67, 40:02:01:01-40:06:15, 40:08, 40:09?, 40:11:01?-40:11:02?, 40:14:01?-40:15?, 40:18?, 40:20, 40:21?-40:22N?, 40:24?-40:31?, 40:33?-40:36?, 40:38?, 40:39, 40:44?-40:46?, 40:48?-40:50?, 40:52?-40:58?, 40:61?-40:63?, 40:64, 40:65?, 40:67?-40:69?, 40:70:01-40:70:02, 40:71?, 40:72:02?, 40:74?-40:76?, 40:78?, 40:80?-40:88?, 40:89, 40:90?-40:93?, 40:94, 40:95?, 40:97, 40:98?, 40:99, 40:100?-40:108?, 40:111?-40:112?, 40:114:02?-40:116?, 40:118N?-40:121?, 40:122, 40:123?, 40:124:02?-40:130:01?, 40:131?-40:134?, 40:136?-40:137?, 40:141?, 40:142N-40:144N, 40:145?, 40:148?-40:149?, 40:151?, 40:154?, 40:156?, 40:158?-40:170?, 40:173?-40:185?, 40:186:02?-40:187?, 40:189?-40:200?, 40:202?-40:213?, 40:214, 40:215?-40:228?, 40:229, 40:230?-40:236?, 40:238?-40:248?, 40:254-40:255, 40:257?, 40:266-40:271, 40:274?-40:276?, 40:279?-40:283?, 40:284, 40:287?-40:291N?, 40:293?-40:300?, 40:302-40:305, 40:306?-40:308?, 40:309, 40:310?-40:313?, 40:314, 40:315?, 40:317?-40:319?, 40:320, 40:322?, 40:324?-40:331?, 40:333?, 40:334, 40:335?-40:339?, 40:341?-40:343?, 40:345N, 40:347, 47:02-47:03, 82:01-82:03
6	415 bp	**800 bp**	*27:01-27:05:03, 27:05:05-27:07:05, 27:09-27:11, 27:13-27:17, 27:19-	*18:09, 18:54, 18:67, 18:136, , 37:01:01-37:04:02, 37:06:01-37:10, 37:12-37:36, 37:38-37:57, 37:59-37:66, 40:13, 40:19?,

			27:21, 27:23-27:25, 27:27-27:32, 27:34-27:39, 27:41, 27:43, 27:45-27:88, 27:90:01-27:115, 27:117-27:152, 27:154-27:161	40:47?, 40:96?, 40:109?-40:110?, 40:117?, 40:157?, 40:188?, 40:201?, 40:292?, 40:340?, 44:139w, 47:01:01:01-47:01:02, 47:03-47:10
7	410 bp	1070 bp	*27:08, 27:12, 27:18, 27:26, 27:33, 27:40, 27:42, 27:44, 27:89, 27:153	*18:01:01:01-18:08, 18:10-18:15, 18:17N-18:24, 18:26-18:32, 18:34-18:53, 18:55-18:66, 18:68-18:106, 18:108-18:135, 35:01:23, 35:42:01-35:42:02, 37:05, 37:11, 37:37, 37:67, 40:02:01:01-40:06:15, 40:08, 40:09?, 40:11:01?-40:11:02?, 40:14:01?-40:15?, 40:18?, 40:20, 40:21?-40:22N?, 40:24?-40:31?, 40:33?-40:38?, 40:39, 40:42?, 40:44?-40:46?, 40:48?-40:50?, 40:52?-40:58?, 40:61?-40:63?, 40:64, 40:65?, 40:67?-40:69?, 40:70:01-40:70:02, 40:71?, 40:72:02?, 40:74?-40:75?, 40:78?, 40:80?-40:88?, 40:89, 40:90?-40:93?, 40:94, 40:95?, 40:97, 40:98?, 40:99, 40:100?-40:108?, 40:111?-40:112?, 40:114:02?-40:116?, 40:118N?-40:121?, 40:122, 40:123?, 40:124:02?-40:130:01?, 40:131?-40:137?, 40:141?, 40:142N-40:144N, 40:145?, 40:148?-40:149?, 40:151?, 40:154?, 40:156?, 40:158?-40:170?, 40:173?-40:185?, 40:186:02?-40:187?, 40:189?-40:200?, 40:202?-40:213?, 40:214, 40:216N?-40:228?, 40:229, 40:230?-40:236?, 40:238?-40:248?, 40:254-40:255, 40:256N?-40:257?, 40:266-40:271, 40:274?-40:276?, 40:279?-40:283?, 40:284, 40:287?-40:291N?, 40:293?-40:300?, 40:302-40:305, 40:306?-40:308?, 40:309, 40:310?-40:313?, 40:314, 40:315?, 40:317?-40:319?, 40:320, 40:322?, 40:324?-40:331?, 40:333?, 40:334, 40:335?-40:339?, 40:341?-40:344?, 40:345N, 40:347, 47:02, 82:01-82:03
8[4]	95 bp	1070 bp	*27:01-27:05:32, 27:08, 27:10, 27:12-27:13, 27:15-27:18, 27:23, 27:25-27:26, 27:28-27:29, 27:31, 27:36-27:40, 27:42, 27:44-27:45, 27:47-27:69, 27:71-27:75, 27:77, 27:79-27:80, 27:82-27:90:04, 27:92-27:101, 27:103-27:105, 27:108-27:124, 27:126, 27:128-27:129, 27:131-27:135, 27:137, 27:139-27:149, 27:151-27:152, 27:155-27:161	*07:197, 15:342, 37:02, 47:04-47:05, 48:26, **A*32:89**
9	205 bp	1070 bp	*27:04:01-27:04:06, 27:06, 27:10, 27:15, 27:18, 27:20, 27:25w, 27:40, 27:54, 27:63,	*07:197, 15:129w, 15:342w, 15:395

			27:66N, 27:68-27:69, 27:79, 27:86, 27:91-27:92, 27:100, 27:103, 27:105-27:109, 27:112-27:114, 27:115[w], 27:120, 27:147, 27:149	
10^4	90 bp 185 bp	**800 bp**	*27:06, 27:35, 27:41, 27:78, 27:91, 27:106-27:107, 27:154 *27:60	*15:129, 15:395, 18:02, 38:22, **C*07:05, C*07:538**
11	190 bp	1070 bp	*27:07:01-27:07:05, 27:11, 27:20, 27:24, 27:27, 27:33, 27:43, 27:125, 27:130	*07:05:01:01-07:06:02, 07:32, 07:40, 07:53, 07:69, 07:78, 07:80, 07:90, 07:97, 07:105, 07:112, 07:123, 07:137-07:138, 07:140, 07:176, 07:182N, 07:201N, 07:206-07:207, 07:209-07:210, 07:213-07:214, 07:222, 07:249, 07:258, 07:262, 07:264, 07:270, 07:278, 07:283, 07:287, 07:293, 08:40, 08:79, 08:165, 08:171, 13:01:01-13:01:02, 13:01:04-13:02:16, 13:02:18-13:02:19, 13:07N-13:09, 13:11, 13:13:01-13:23, 13:25, 13:27-13:33, 13:36-13:45, 13:47, 13:49N-13:50, 13:52, 13:54-13:61, 13:63N-13:71, 13:73-13:78, 13:80-13:85, 13:87-13:102, 35:31, 35:88, 35:230, 38:63, 39:47, 39:50, 40:01:01-40:01:25, 40:01:27, 40:01:28[w], 40:01:29-40:01:31, 40:01:33-40:02:09, 40:02:11-40:02:17, 40:02:19-40:02:25, 40:04, 40:06:01:01-40:06:09, 40:06:11-40:08, 40:10:01:01-40:16, 40:19, 40:21-40:23, 40:25, 40:27:01-40:27:02, 40:29-40:30, 40:34-40:38, 40:40, 40:43, 40:45-40:50, 40:53-40:58, 40:61-40:62, 40:64-40:70:02, 40:72:01-40:88, 40:90-40:91, 40:93-40:97, 40:99-40:119, 40:121-40:123, 40:125-40:130:02, 40:132, 40:134-40:158, 40:160:01-40:162, 40:164-40:171, 40:173, 40:175-40:179, 40:181-40:183, 40:185-40:186:02, 40:188-40:198, 40:200-40:266, 40:268-40:279, 40:281-40:283, 40:285-40:304, 40:305[w], 40:306, 40:308-40:323, 40:325-40:329, 40:331-40:340, 40:342, 40:344-40:351, 40:353-40:355, 41:19, 44:31, 48:01:01-48:01:06, 48:03:01-48:07, 48:09-48:16, 48:18-48:22, 48:24, 48:27-48:36, 48:38-48:41, 51:10, 51:16, 51:31, 51:34, 51:81-51:82, 51:93, 52:08, 52:67, 54:26, 55:09, 55:22, 55:24, 58:27, 59:09, 78:08, 81:01-81:08, **C*02:68**
12	210 bp 310 bp 425 bp	1070 bp	*27:74 *27:13	*08:100, 15:292, 15:401, 27:43, 35:113, 39:62, 40:202, 44:98, 46:27, 52:31:01-52:31:02

Lot No.: 5F4 **Lot-specific information**

13	215 bp	**800 bp**	*27:47	
	370 bp		*27:12, 27:16, 27:92, 27:119, 27:153	*37:57, 40:75[?], 40:322[?]
	400 bp		*27:53	
14[4]	120 bp	**800 bp**	*27:34	*35:01:30, 40:02:07, 40:06:02, 51:01:52, 57:01:16, 57:03:02, **C*02:06:02, C*02:23, C*02:36, C*02:68**
	345 bp		*27:17	
15[4]	105 bp	1070 bp	*27:18, 27:29	*07:27, 07:50, 08:04:01-08:04:02, 08:17, 08:54:01-08:54:02, 08:110, 13:97, 15:03:01:01-15:03:06, 15:47:01-15:47:02, 15:54, 15:61-15:62, 15:64:01-15:64:02, 15:68-15:69, 15:91, 15:98, 15:103, 15:123, 15:127, 15:131-15:132, 15:151, 15:156, 15:158, 15:173, 15:210, 15:220, 15:235, 15:242:01-15:242:02, 15:253, 15:259, 15:266, 15:274, 15:281-15:282, 15:369, 15:379, 15:389, 15:397, 18:37, 18:125, 37:28, 38:03, 39:02:01-39:02:02:03, 39:08, 39:13:01-39:13:02, 39:23, 39:39:01-39:39:02, 39:49, 39:88, 39:101, 39:105, 39:110, 40:12, 40:46, 40:93, 42:11, 44:40, 44:44, 44:130, 44:156, 44:210, 48:01:01-48:05, 48:07-48:30, 48:32-48:40, 52:16, 55:18, 56:44
16[4]	100 bp	1070 bp	*27:19, 27:30, 27:150	*57:32
17[4]	100 bp	**800 bp**	*27:14, 27:81	*44:20, 44:47, 44:100, 44:197, 50:20, 51:85, 51:192, 51:214, 52:26
	310 bp		*27:51	
18	175 bp	**800 bp**	*27:24	*07:174, 07:202, 07:222, 07:279, 40:31, 40:45, 40:80, 48:01:01-48:01:06, 48:04:01-48:04:02, 48:06-48:07, 48:09, 48:11, 48:15-48:16, 48:18-48:20, 48:22, 48:24, 48:27-48:39, 48:41, 81:01-81:08
	415 bp		*27:49	
19[4]	95 bp	**800 bp**	*27:35	*38:22
	240 bp		*27:25, 27:38, 27:47, 27:50:01-27:50:02, 27:63, 27:76, 27:139	*15:129, 15:342, 15:395
20[4]	95 bp	**800 bp**	*27:09	
	175 bp		*27:36	*48:21, 48:26
	215 bp		*27:25, 27:45, 27:108, 27:115, 27:161	*07:197, 15:129, 15:342
	345 bp		*27:69	*15:227, 37:23, 40:213, 51:32, 58:52
21[4]	110 bp	1070 bp	*27:04:01-27:04:06, 27:06, 27:24-27:25, 27:66N, 27:68-27:69, 27:100, 27:103, 27:105, 27:109, 27:112-27:115, 27:138, 27:147, 27:149	*37:47
	160 bp		*27:39, 27:137	

22	165 bp 195 bp 235 bp 375 bp	**800 bp**	*27:55, 27:149 *27:37 *27:15, 27:28, 27:62, 27:71 *27:26, 27:31, 27:101, 27:157	 *18:43, 40:210?, 40:229 *18:02, **A*32:89, C*07:05, C*07:538** *40:166?, 82:01-82:03
23	235 bp	**800 bp**	*27:01-27:05:19, 27:05:21-27:06, 27:08-27:10, 27:12-27:13, 27:16-27:18, 27:20, 27:23, 27:26-27:27, 27:29, 27:31, 27:35-27:37, 27:39-27:42, 27:44-27:46, 27:48-27:61, 27:64N-27:69, 27:72-27:75, 27:77-27:80, 27:82-27:124, 27:126, 27:128-27:129, 27:131-27:137, 27:140-27:149, 27:151-27:152, 27:154-27:161	*07:197, 37:02, 47:04-47:05, 48:21, 48:26
24[7]	375 bp	1070 bp	*27:18, 27:29	*15:129, 15:342, 15:395, 37:02, 47:04-47:05, 48:21, 48:26
25[4]	85 bp	1070 bp	*27:46, 27:78	**A*23:23**
26[4]	105 bp 145 bp 235 bp	1070 bp	*27:52 *27:64N *27:72	*37:60 *40:291N
27	215 bp 320 bp	1070 bp	*27:104 *27:57	 *37:27
28[5]	145 bp 325 bp	1070 bp	*27:64N *27:48	*40:118N, 40:291N
29[4]	70 bp 105 bp 210 bp	1070 bp	*27:54, 27:123 *27:67 *27:74	
30[5,8]	160 bp 240 bp	**800 bp**	*27:59N, 27:137 *27:72-27:73	
31[4,5]	125 bp 160 bp 265 bp	1070 bp	*27:65N *27:56 *27:118	**A*24:185N**
32[4,5]	90 bp 370 bp	1070 bp	*27:32, 27:70 *27:85	*07:28, 07:118, 08:14, 08:87, 15:17:01:01-15:17:06, 15:162, 15:168, 15:177, 15:196, 15:208, 15:216, 15:230, 15:233, 15:269, 15:273, 15:339, 15:356, 15:396, 15:403, 15:411, 15:423-15:424, 35:234, 40:124:02, 40:180, 40:240, 44:02:33, 44:41:01, 44:54, 44:65, 44:106, 44:135, **C*02:07, C*02:97**
33	250 bp	1070 bp	*27:73, 27:80	*40:88
34	160 bp 265 bp	1070 bp	*27:82 *27:118	
35[4]	120 bp 280 bp	1070 bp	*27:134 *27:83	
36	190 bp 350 bp	1070 bp	*27:146 *27:94N	 *37:33N
37	185 bp	1070 bp	*27:97, 27:146	

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38	260 bp	1070 bp	*27:28, 27:62	*18:02
39[5]	345 bp	1070 bp	*27:19, 27:70, 27:127	*15:43, 18:54, 18:108, 18:132, 37:12, 37:19:01, 37:44, 37:56, 38:17, 40:188, 44:257
40[4]	95 bp	1070 bp	*27:32	*07:28, 07:118, 08:14, 08:87, 40:180, 44:54, 44:106, 44:135
41[4]	105 bp 155 bp	1070 bp	*27:67 *27:91	
42	140 bp	1070 bp	*27:125	*08:120, 35:230, 38:43, 38:63, 40:01:01-40:01:20, 40:01:22-40:01:25, 40:01:27, 40:01:29-40:01:31, 40:01:33-40:01:49, 40:07, 40:10:01:01-40:10:02, 40:12, 40:21-40:22N, 40:25, 40:30, 40:34, 40:36, 40:38, 40:43, 40:46-40:49, 40:54-40:55, 40:61-40:63, 40:65-40:67, 40:69, 40:72:01-40:74, 40:76-40:77, 40:79-40:81, 40:84, 40:87:01-40:88, 40:92, 40:100-40:102, 40:106, 40:108, 40:112-40:113, 40:116-40:118N, 40:123, 40:125-40:126, 40:128, 40:130:01-40:130:02, 40:132, 40:134-40:135, 40:137-40:141, 40:146-40:147, 40:149-40:156, 40:160:01-40:160:02, 40:163, 40:166, 40:168, 40:170-40:171, 40:175, 40:178-40:179, 40:182-40:183, 40:185-40:186:02, 40:188, 40:191-40:199, 40:204, 40:207-40:208, 40:210, 40:212-40:213, 40:215-40:218, 40:221-40:223, 40:227-40:228, 40:233-40:242, 40:245, 40:247, 40:249-40:253, 40:257-40:260, 40:262-40:265N, 40:272-40:273, 40:277-40:279, 40:281-40:282, 40:285-40:288, 40:298-40:301, 40:308, 40:310, 40:312, 40:315-40:316, 40:319, 40:321, 40:323-40:329, 40:332-40:333, 40:336, 40:338N-40:339, 40:344, 40:346, 40:353, 41:38, 44:31, 48:01:01-48:01:06, 48:03:01-48:04:02, 48:06-48:07, 48:09, 48:11, 48:14-48:16, 48:18-48:22, 48:24, 48:28-48:41, 51:181, 81:01-81:08
43[6]	155 bp 290 bp	1070 bp	*27:68 *27:05:02:04Q	*15:201
44	225 bp 255 bp 290 bp	1070 bp	*27:66N 27:01, 27:142 *27:58	 *13:23, 13:55, 18:09, 37:10, 40:47, 40:96, 40:157, 40:201, 44:15, 44:55, 44:103, 44:188, 44:212, 49:02
45	230 bp	1070 bp	*27:141	
46	165 bp	1070 bp	*27:02:01:01-27:02:03, 27:30, 27:57, 27:62, 27:65N, 27:77, 27:83, 27:89, 27:95, 27:102, 27:110, 27:126, 27:134, 27:142, 27:157	*44:97, 44:206
47[9]	-	-	**Negative Control**	

101.521-24/04 – including *Taq* polymerase, IFU-01 Visit www.olerup.com for
101.521-24u/04u – without *Taq* polymerase, IFU-02 **"Instructions for Use"(IFU)**

Lot No.: 5F4 **Lot-specific information**

[1]Alleles 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-B*27 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 inherit 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.

[2]The 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.

[3]For 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.

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

[5]Primer mixes 28, 30, 31, 32 and 39 may have tendencies of unspecific amplifications.

[6]Primer mix 43 has a tendency to giving rise to primer oligomer formation.

[7]Primer mix 24 may give rise to a lower yield of HLA-specific PCR product than the other B*27 primer mixes.

[8]Primer mix 30 may give rise to a long unspecific amplification product. This band should be disregarded when interpreting the typing results.

[9]Primer mix 47 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.

'?', nucleotide sequence information not available for the primer matching sequence.

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Lot No.: 5F4

Lot-specific information

PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec.	390	405	120	200	400	415	410	95	205	90	190	210
PCR product										185		310
												425
Length of int.	800	800	1070	1070	1070	800	1070	1070	1070	800	1070	1070
pos. control[1]												
5'-primer(s)[2]	72	72	167	141	72	72	72	363	363	363	412	14
	5' -gCT 3'	5' -gCT 3'	5' -gCT 3'	5' -ATT 3'	5' -gCT 3'	5' -gCT 3'	5' -gCT 3'	5' -AAT 3'	5' -AAT 3'	5' -AAT 3'	5' -ATA 3'	5' -ggA 3'
				142								104
				5' -TCA 3'								5' -CTT 3'
												385
												5' -ggT 3'
3'-primer(s)[3]	292	309	247	301	301	317	311	418	527	409	559	272
	5' -gTA 3'	5' -ATC 3'	5' -ATg 3'	5' -gTC 3'	5' -gCT 3'	5' -ggA 3'	5' -ggT 3'	5' -gTC 3'	5' -CCT 3'	5' -ATA 3'	5' -CTC 3'	5' -TgC 3'
	292				302					419		3rd I
	5' -gTA 3'				5' -ggC 3'					5' -Cgg 3'		5' -TAT 3'
										419		
										5' -CgA 3'		
										505		
										5' -gCC 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.	215	120	105	100	100	175	95	95	110	165	235	375
PCR product	370	345			310	415	240	175	160	195		
	400							215		235		
								345		375		
Length of int.	800	800	1070	1070	800	800	800	800	1070	800	800	1070
pos. control[1]												
5'-primer(s)[2]	72	72	206	355	72	72	363	363	167	72	363	272
	5' -gCT 3'	5' -gCT 3'	5' -AgA 3'	5' -TCA 3'	5' -gCT 3'	5' -gCT 3'	5' -AAT 3'	5' -AAT 3'	5' -gCT 3'	5' -gCT 3'	5' -AAT 3'	5' -CTC 3'
	363	409			357	363		3rd I	704	363		
	5' -AAT 3'	5' -ggC 3'			5' -Tgg 3'	5' -AgC 3'		5' -Agg 3'	5' -Tgg 3'	5' -AAT 3'		
3'-primer(s)[3]	272	248	272	412	212	316	419	418	287	97	559	362
	5' -TgC 3'	5' -AAA 3'	5' -Tgg 3'	5' -gTg 3'	5' -gCT 3'	5' -gAA 3'	5' -CgA 3'	5' -gTg 3'	5' -TCA 3'	5' -gTA 3'	5' -CTC 3'	5' -TAT 3'
	301	486			418	499	559	499	288	280		
	5' -gTC 3'	5' -gCT 3'			5' -gTC 3'	5' -ggA 3'	5' -CAg 3'	5' -ggA 3'	5' -gTA 3'	5' -CTg 3'		
	538						572	539	774	488		
	5' -gTC 3'						5' -gCg 3'	5' -TCC 3'	5' -ggT 3'	5' -CCA 3'		
								872		559		
								5' -TCA 3'		5' -CgT 3'		
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

CE 0088

For *In Vitro* Diagnostic Use.

101.521-24/04 – including *Taq* polymerase, IFU-01
101.521-24u/04u – without *Taq* polymerase, IFU-02
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Lot No.: 5F4 **Lot-specific information**

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec.	85	105	215	145	70	160	125	90	250	160	120	190
PCR product		145	320	325	105	240	160	370		265	280	350
		235			210		265					
Length of int.	1070	1070	1070	1070	1070	800	1070	1070	1070	1070	1070	1070
pos. control[1]												
5'-primer(s)[2]	418	206	72	72	104	167	232	72	350	363	363	72
	5' -AgT 3'	5' -gAC 3'	5' -gCT 3'	5' -gCT 3'	5' -CTT 3'	5' -gCT 3'	5' -AgT 3'	5' -gCT 3'	5' -TCg 3'	5' -AAT 3'	5' -AAT 3'	5' -gCT 3'
		367	383	454	209	351	363	369	351			
		5' -TgA 3'	5' -ggC 3'	5' -ACT 3'	5' -ggC 3'	5' -CAA 3'	5' -AAT 3'	5' -TAC 3'	5' -CAA 3'			
		454			363	367						
		5' -ACT 3'			5' -AAT 3'	5' -TgA 3'						
3'-primer(s)[3]	463	272	221	227	272	286	317	274	559	482	442	91
	5' -gCT 3'	5' -TgC 3'	5' -ACC 3'	5' -CTC 3'	5' -TgC 3'	5' -CTA 3'	5' -ggA 3'	5' -CTg 3'	5' -CTC 3'	5' -TgA 3'	5' -gAA 3'	5' -ATT 3'
		559	559	559	391	288	482	418		589	603	251
		5' -CTC 3'	5' -CTC 3'	5' -CTC 3'	5' -CCg 3'	5' -gTA 3'	5' -TgC 3'	5' -gTC 3'		5' -CTT 3'	5' -gTg 3'	5' -CCT 3'
						559	589					
						5' -CTC 3'	5' -CTT 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
Length of spec.	185	260	345	95	105	140	155	225	230	165
PCR product					155		290	255		
								290		
Length of int.	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070
pos. control[1]										
5'-primer(s)[2]	72	363	302	363	160	412	341	97	368	167
	5' -gCT 3'	5' -AAT 3'	5' -ggA 3'	5' -AgC 3'	5' -ACT 3'	5' -ATA 3'	5' -ggC 3'	5' -TCC 3'	5' -gTC 3'	5' -gCT 3'
					209		662	363		
					5' -ggC 3'		5' -CCT 3'	5' -AAT 3'		
3'-primer(s)[3]	83	583	362	418	272	512	2nd I	309	559	292
	5' -TgC 3'	5' -gTg 3'	5' -TCC 3'	5' -gTC 3'	5' -TgC 3'	5' -CCA 3'	5' -CCT 3'	5' -gTg 3'	5' -CTC 3'	5' -gTC 3'
	91						774	547		
	5' -ATT 3'						5' -ggT 3'	5' -gTg 3'		
								613		
								5' -gCA 3'		
Well No.	37	38	39	40	41	42	43	44	45	46

[1]The 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.

[2]The 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.

[3]The 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.

101.521-24/04 – including *Taq* polymerase, IFU-01
101.521-24u/04u – without *Taq* polymerase, IFU-02
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Lot No.: 5F4 **Lot-specific information**

CELL LINE VALIDATION SHEET

HLA-B*27 SSP subtyping kit[2]

					Well[3]															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Prod. No.:	201783501	201783502	201783503	201783504	201783505	201783506	201783507	201783508	201783509	201783510	201783511	201783512	201783513	201783514	201783515	201783516
	IHWC cell line[1]		B*																	
1	9001	SA	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*52:01	*73:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*52:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*15:10	*53:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*37:01		+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*39:01	*51:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*18:01		+	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-
8	9025	DEU	*35:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*54:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*44:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*57:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9025	JESTHOM	*27:05		-	-	-	+	-	+	-	+	-	-	-	-	-	-	-	-
14	9071	OLGA	*15:01	*15:20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*40:01		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
16	9037	SWEIG007	*40:02		+	-	-	-	+	-	+	-	-	-	+	-	-	-	-	-
17	9282	CTM3953540	*08:01	*55:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*14:01	*56:01	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
19	9038	BM16	*18:01		+	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*40:01		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
21	9064	AMALA	*15:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*35:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*40:02	*56:02	+	-	-	-	+	-	+	-	-	-	+	-	-	-	-	-
24	9035	JBUSH	*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*14:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*58:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*07:05	*51:01	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
28	9320	BEL5GB	*44:02	*44:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*44:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*42:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019	DUCAF	*18:01		+	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-
32	9297	HAG	*41:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*40:01		-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
34	9104	DHIF	*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*44:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*15:01	*35:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*15:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*08:01	*27:05	-	-	-	+	-	+	-	+	-	-	-	-	-	-	-	-
40	9134	WHONP199	*13:02	*46:01	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
41	9055	H0301	*14:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*46:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*46:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*42:01	*50:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*51:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*35:01	*44:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.521-24/04 – including *Taq* polymerase, IFU-01
101.521-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: 5F4 **Lot-specific information**

CELL LINE VALIDATION SHEET

HLA-B*27 SSP subtyping kit[2]

					Well[3]															
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
				Prod. No.:	201783517	201783518	201783519	201783520	201783521	201783522	201783523	201783524	201783525	201783526	201783527	201783528	201783529	201783530	201783531	201783532
	IHWC cell line[1]		B*																	
1	9001	SA	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*52:01	*73:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*52:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*15:10	*53:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*37:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*39:01	*51:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*18:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*35:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*54:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*44:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*57:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9025	JESTHOM	*27:05		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*15:01	*15:20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*40:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*40:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*08:01	*55:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*14:01	*56:01	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*18:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*40:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*15:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*35:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*40:02	*56:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*14:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*58:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*07:05	*51:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*44:02	*44:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*44:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*42:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019	DUCAF	*18:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*41:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*40:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*44:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*15:01	*35:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*15:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*08:01	*27:05	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*13:02	*46:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*14:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*46:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*46:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*42:01	*50:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*51:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*35:01	*44:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.521-24/04 – including *Taq* polymerase, IFU-01
101.521-24u/04u – without *Taq* polymerase, IFU-02
"Instructions for Use"(IFU)

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Lot No.: 5F4 **Lot-specific information**

CELL LINE VALIDATION SHEET

HLA-B*27 SSP subtyping kit[2]

					Well[3]													
					33	34	35	36	37	38	39	40	41	42	43	44	45	46
				Prod. No.:	201783533	201783534	201783535	201783536	201783537	201783538	201783539	201783540	201783541	201783542	201783543	201783544	201783545	201783546
	IHWC cell line[1]		B*															
1	9001	SA	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*52:01	*73:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*52:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*15:10	*53:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*37:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*39:01	*51:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*18:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*35:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*54:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*44:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*57:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*27:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*15:01	*15:20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*40:01		-	-	-	-	-	-	-	-	-	+	-	-	-	-
16	9037	SWEIG007	*40:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*08:01	*55:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*14:01	*56:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*18:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*40:01		-	-	-	-	-	-	-	-	-	+	-	-	-	-
21	9064	AMALA	*15:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*35:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*40:02	*56:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*14:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*58:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*07:05	*51:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*44:02	*44:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*44:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*42:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019	DUCAF	*18:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*41:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*40:01		-	-	-	-	-	-	-	-	-	+	-	-	-	-
34	9104	DHIF	*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*44:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*15:01	*35:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*15:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*08:01	*27:05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*13:02	*46:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*14:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*46:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*46:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*38:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*42:01	*50:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*07:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*51:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*35:01	*44:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.521-24/04 – including *Taq* polymerase, IFU-01
101.521-24u/04u – without *Taq* polymerase, IFU-02

Visit www.olerup.com for **"Instructions for Use"(IFU)**

Lot No.: 5F4 **Lot-specific information**

[1]The 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.

[2]The 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.

[3]The C*07:05 allele is amplified by primer mixes 10 and 22 in the 9257/32367 cell line.

No DNAs carrying the alleles to be amplified by primer solutions 12, 16, 19, 25 to 31, 33 to 37, 39 to 41 and 43 to 45 were available. The specificities of the primers in primer solutions 12, 16, 19, 25 to 31, 35, 39 to 41, 43 and 44 were tested by separately adding additional 5'-primers, respectively additional 3'-primers.

In primer solution 34, 36 and 37 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solutions 33 and 45 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 10, 13, 17, 18, 20 to 22, 27 to 32, 35, 43 and 44 one or two of the 3'-primers were not possible to test. In primer solutions 12, 26 to 31, 41 and 43 one or two of the 5'-primers were not possible to test. Additional primers in primer solutions 4, 10, 13 to 14, 17 to 18, 20 to 22 and 32 were tested by separately adding one or two additional 5'-primers and /or one additional 3'-primer.

101.521-24/04 – including *Taq* polymerase, IFU-01
101.521-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: 5F4 **Lot-specific information**

101.521-24/04 – including *Taq* polymerase, IFU-01
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101.521-24u/04u – without *Taq* polymerase, IFU-02

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Lot No.: 5F4 **Lot-specific information**

ADDRESSES:

Manufacturer:
***Olerup* SSP AB**, Franzengatan 5, SE-112 51 Stockholm, Sweden.
Tel: +46-8-717 88 27
Fax: +46-8-717 88 18
E-mail: olerup-se@caredx.com
Web page: http://www.olerup.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: olerup-at@caredx.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: olerup-us@caredx.com
Web page: http://www.olerup.com

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