

101.561-24/03 – including *Taq* pol., IFU-01
101.561-24u/03u – without *Taq* pol., IFU-02

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

Lot No.: **62X**

Lot-specific information

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Olerup SSP® HLA-B*51

Product number:	101.561-24/03 – including <i>Taq</i> pol. 101.561-24u/03u – without <i>Taq</i> pol.
Lot number:	62X
Expiry date:	2017-May-01
Number of tests:	24 tests – Product No. 101.561-24/24u 3 tests – Product No. 101.561-03/03u
Number of wells per test:	76+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. 62X.

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*51 LOT (07V).

The HLA-B*51 kit is updated for new alleles to enable separation of:

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

The format of the Product Insert and Worksheet have been changed.

Three wells have been added to HLA-B*51, wells **75 to 77**.

¹As described in section Uniquely Identified Alleles.

The HLA-B*51 primer set, specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup SSP®* HLA-B*51 lot was made (**Lot No. 07V**). The kit design is based on IMGT/HLA database 3.17.0.

As of lot series V, the Specificity Table is included in the lot-specific Product Insert, and the Interpretation Table is included in the Worksheet.

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

Well	5'-primer	3'-primer	rationale
7	Added	-	5'-primer added for the B*51:156 allele.
27	Added	-	5'-primer added for the B*51:126 allele.
30	Moved	Moved, modified	Primer pair moved to well 75 for decreased tendency of primer oligomer formation, 3'-primer modified for improved HLA-specific amplification.
36	Added	Added	Primer pair added for the B*51:165 allele.
38	Added	-	5'-primer added for the B*51:173Q allele.
41	Added	-	5'-primers added for the B*51:166 and B*51:169 alleles.
44	Added	-	5'-primer added for the B*51:166 allele.
45	-	Added	3'-primer added for the B*51:178N allele.
52	Added	-	5'-primer added for the B*51:107 allele.
54	Added	-	5'-primer added for the B*51:156 allele.
57	Added	Added	5'-primer added for the B*51:78:02 allele, 3'-primer added for the B*51:178N allele.
58	Added	-	5'-primer added for the B*51:107 allele.
60	-	Added	3'-primer added for the B*51:130 allele.
61	-	Added	3'-primer added for the B*51:115 allele.
63	Added	-	5'-primer added for the B*51:146 allele.
68	Added	-	5'-primer added for the B*51:134 allele.
69	-	Added	3'-primer added for the B*51:147 allele.
70	Added	-	5'-primer added for the B*51:134 allele.
71	-	Added	3'-primer added for the B*51:130 allele.
72	Added	Added	Primer pair added for the B*51:164 allele, 5'-primer added for the B*169 allele.
73	-	Added	3'-primer added for the B*51:127 allele.
74	Added	Added	Updated negative control moved to well 77, primer pair added for the B*51:157 allele.
75	Added	Added	Primer pair added from well 30, 5'-primer added for the B*51:158:01 allele.
76	New	New	New primer pairs for the B*51:152 and B*51:173Q alleles.
77	-	-	Updated negative control added from well 74.

Change in revision R01 compared to R00:

1. Primer mix 16 amplifies the C*15:15 allele. This has been corrected in the Specificity and Interpretation Tables.

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Well **77** contains Negative Control primer pairs, that will amplify more than 95% of the *Olerup SSP®* HLA Class I, DRB, DQB1, DPB1 and DQA1 amplicons as well as all the amplicons generated by the control primer pairs matching the human growth hormone gene.

HLA-specific PCR product sizes range from 75 to 200 base pairs.
The PCR product generated by the positive control primer pair is 430 base pairs.

Length of PCR product	105	200	105	80	75	80	85
5'-primer¹	164	340	440	45	45	43	36
	5'-CAC ^{3'}	5'-Agg ^{3'}	5'-TTA ^{3'}	5'-Tgg ^{3'}	5'-Tgg ^{3'}	5'-Tgg ^{3'}	5'-TAC ^{3'}
							36
							5'-TAT ^{3'}
3'-primer²	231	2nd I	507	59	58	57	47
	5'-TgC ^{3'}	5'-AAA ^{3'}	5'-TTg ^{3'}	5'-CTC ^{3'}	5'-ggC ^{3'}	5'-CTC ^{3'}	5'-ACA ^{3'}
							48
							5'-gCA ^{3'}
							48
							5'-gCC ^{3'}
							52
							5'-TgT ^{3'}
A*	+	+	+				
B*	+	+	+				
C*	+	+	+				
DRB1				+	+		
DRB3				+	+		
DRB5				+			
DQB1					+		
DPB1						+	
DQA1							+

¹The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2nd or 3rd exon, matching the specificity-determining 3'-end of the primer is given. Nucleotide and codon numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

²The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2nd or 3rd exon or the 2nd intron, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide and codon numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

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PRODUCT DESCRIPTION

HLA-B*51 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*51:01 to B*51:179 alleles.

PLATE LAYOUT

Each test consists of 77 PCR reactions in a 96 well PCR plate. Wells 78 to 96 are empty

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	42	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72
73	74	75	76	NC	empty	empty	empty
empty	empty	empty	empty	empty	empty	empty	empty
empty	empty	empty	empty	empty	empty	empty	empty

The 96 well cut PCR plate is marked with 'HLA-B*51' in silver/gray ink.

Well No. 1 is marked with the Lot No. '62X'.

Wells 1 to 76 – HLA-B*51 high resolution primers.

Well 77 – 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-B alleles, non-HLA-B*51 alleles will be amplified by primer mixes 1 to 3, 5 to 11, 14 to 19, 21 to 32, 34 to 36, 38 to 41, 44, 46 to 50, 52, 54, 56, 57, 60 to 63, 65 and 71 to 75. In addition, a few HLA-A and HLA-C alleles will be amplified by primer mixes 2, 5, 7, 16, 24, 27, 30, 32, 34, 35, 38, 41, 44, 50, 56, 69, 74 and 75.

For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the HLA-B*51 alleles, i.e. **B*51:01 to B*51:179**, recognized by the HLA Nomenclature Committee in July 2014^{1,2} will be amplified by the primers in the HLA-B*51 subtyping kit.

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The HLA-B*51 kit enables separation of the confirmed HLA-B*51 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*51 alleles is listed below.

The HLA-B*51 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*51 alleles can be distinguished by the different sizes of the specific PCR product:

Alleles	Primer mix	Alleles	Primer mix
B*51:30, 51:142	25	B*51:74, 51:124	54
B*51:39, 51:126	27	B*51:75, 51:77	55
B*51:51, 51:76	44	B*51:83, 51:88	59
B*51:57, 51:123	46	B*51:84, 51:94	60
B*51:66, 51:67	64	B*51:86, 51:95	62
B*51:68, 51:72	51	B*51:127, 51:149N	73
B*51:70, 51:71	53		

The HLA-B*51 subtyping kit cannot distinguish following silent mutations: the B*51:01:01, 51:01:03-51:01:07, 51:01:10-51:01:14, 51:01:16-51:01:20, 51:01:22-51:01:24, 51:01:26-51:01:38, 51:01:41 and 51:01:44-51:01:50 alleles, the B*51:01:08, 51:01:15 and 51:01:43 alleles, the B*51:01:21 and 51:01:25 alleles, the B*51:02:01 and 51:02:03-51:02:05 alleles, the B*51:08:01-51:08:02 alleles, the B*51:13:01-51:13:02 alleles, the B*51:24:01 and 51:24:05, the B*51:24:02-51:24:04 alleles, the B*51:61:01-51:61:02 alleles or the B*51:158:01-51:158:02 alleles.

¹HLA-B alleles listed on the IMGT/HLA web page 2014-July-25, release 3.17.0, 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>.

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ALLELE CONFIRMATION STATUS

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

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Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
B*51:138	Unconfirmed	B*51:158:01	Confirmed	B*51:177	Unconfirmed
B*51:139	Unconfirmed	B*51:158:02	Unconfirmed	B*51:178N	Unconfirmed
B*51:140	Unconfirmed	B*51:159	Unconfirmed	B*51:179	Unconfirmed
B*51:141	Unconfirmed	B*51:160	Unconfirmed		
B*51:142	Unconfirmed	B*51:161	Unconfirmed		
B*51:143	Unconfirmed	B*51:162	Unconfirmed		
B*51:144	Unconfirmed	B*51:163	Unconfirmed		
B*51:145	Unconfirmed	B*51:164	Unconfirmed		
B*51:146	Confirmed	B*51:165	Unconfirmed		
B*51:147	Confirmed	B*51:166	Unconfirmed		
B*51:148	Unconfirmed	B*51:167	Unconfirmed		
B*51:149N	Unconfirmed	B*51:168	Unconfirmed		
B*51:150	Unconfirmed	B*51:169	Unconfirmed		
B*51:151	Unconfirmed	B*51:170	Unconfirmed		
B*51:152	Confirmed	B*51:171	Unconfirmed		
B*51:153	Unconfirmed	B*51:172	Unconfirmed		
B*51:154	Unconfirmed	B*51:173Q	Unconfirmed		
B*51:155	Unconfirmed	B*51:174	Unconfirmed		
B*51:156	Confirmed	B*51:175	Unconfirmed		
B*51:157	Unconfirmed	B*51:176	Unconfirmed		

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2014-July-25, release 3.17.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in HLA-B*51 homo- and heterozygotes is available upon request.

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SPECIFICITY TABLE

HLA-B*51 SSP subtyping

Specificities and sizes of the PCR products of the 76+1 primer mixes used for HLA-B*51 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-B*51 alleles ³	Other amplified HLA-B alleles ⁴
1⁵	105 bp	800 bp	*51:01:01-51:06:02, 51:08:01-51:21, 51:23-51:24:05, 51:26-51:46, 51:48-51:103, 51:105-51:111, 51:113-51:127, 51:129-51:146, 51:148-51:179	*08:32, 08:133, 18:07:01-18:07:02, 18:29, 18:79, 35:01:01:01-35:08:01, 35:08:03-35:08:04, 35:08:06-35:18, 35:21-35:24:02, 35:27, 35:29:01-35:45, 35:48, 35:50-35:62, 35:64:01-35:71, 35:74-35:75, 35:77, 35:79-35:81, 35:83-35:84, 35:86-35:94, 35:96-35:134N, 35:136-35:153, 35:155-35:185, 35:187-35:197, 35:199-35:206, 35:208-35:209, 35:211-35:216N, 35:218-35:225, 35:227-35:228, 35:230-35:253, 35:256-35:260, 37:21, 38:06-38:07, 44:06, 52:06:01-52:06:02, 53:01:01-53:08:02, 53:10-53:16, 53:18-53:27, 53:29, 53:31-53:37, 78:01:01-78:02:02, 78:04, 78:07
2⁵	95 bp	1070 bp	*51:01:01-51:01:50, 51:03-51:04, 51:06:01-51:07:02, 51:11N-51:14, 51:16-51:18, 51:21-51:22, 51:24:01-51:24:05, 51:26-51:30, 51:32-51:33, 51:35, 51:37-51:39, 51:41N, 51:43, 51:45-51:46, 51:48-51:52, 51:55-51:58, 51:60-51:72, 51:74-51:80, 51:82-51:92, 51:94-51:96, 51:98N-51:107, 51:109-51:114, 51:116-51:119, 51:121, 51:123-51:138, 51:140, 51:142, 51:145, 51:147, 51:149N-51:152, 51:154-51:156, 51:158:01-51:174, 51:176-51:179	*07:218, 13:62, 14:01:01-14:40, 15:37-15:38:02, 15:323, 18:15, 18:19, 18:30, 18:57, 35:21, 35:96, 35:188, 40:28, 40:51, 40:174, 49:09, 52:01:01:01-52:02:02, 52:04-52:09, 52:12-52:18, 52:20-52:27, 52:30-52:40, 53:06, 53:28, 56:05:01-56:06, 56:21, 58:08:01-58:08:02, 78:01:01-78:03, 78:05-78:07, C*01:30, C*08:51, C*12:87, C*15:39
3⁶	265 bp	1070 bp	*51:02:01-51:02:05, 51:05, 51:10, 51:15, 51:23, 51:34, 51:36, 51:40, 51:54, 51:93, 51:108, 51:143-51:144, 51:146, 51:157	*07:78, 07:84, 08:09, 08:84, 13:02:01-13:02:12, 13:02:14-13:04, 13:08-13:09, 13:14, 13:16, 13:18-13:19, 13:27, 13:30-13:35, 13:37-13:38, 13:40-13:42, 13:45-13:49N, 13:53-13:56:02N, 13:58-13:59, 13:65-13:70, 13:72, 13:74-13:75, 13:81, 15:04:01-15:04:02, 15:16:01-15:16:03, 15:42, 15:67, 15:83, 15:95, 15:137, 15:155, 15:222, 15:254, 15:293, 15:303, 15:310, 27:14, 27:81, 27:130, 35:37, 35:60, 35:235, 39:06:01-39:06:04, 39:33-39:34, 39:50,

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	250 bp		*51:173Q	
39^{7,8}	250 bp	1070 bp	*51:46, 51:64-51:65	*07:218, 07:220, 08:118, 14:05, 14:13, 18:14, 40:174
40	185 bp	1070 bp	*51:01:01-51:01:39, 51:01:41, 51:01:43-51:24:05, 51:26-51:46, 51:48-51:53, 51:55-51:59, 51:61:01-51:72, 51:74-51:77, 51:79-51:102, 51:104-51:124, 51:126-51:140, 51:142-51:179	*07:36, 07:38, 07:81, 07:180, 07:219, 15:13:01-15:13:02, 15:17:01:01-15:17:02, 15:24:01-15:24:02, 15:87, 15:157, 15:162, 15:168, 15:177, 15:196, 15:208, 15:216, 15:230, 15:268, 15:273, 27:75, 37:34, 44:06, 48:18, 49:03, 52:01:01:01-52:19, 52:21-52:40, 53:01:01-53:02, 53:04-53:08:02, 53:10, 53:14-53:29, 53:32-53:35, 53:37, 57:01:01-57:01:08, 57:01:10-57:11, 57:13-57:50, 57:52-57:68, 57:70-57:72, 58:01:01-58:02, 58:04-58:16:02, 58:18-58:29, 58:31N-58:43, 58:45:01-58:47, 58:49-58:61
41	225 bp	1070 bp	*51:05, 51:29, 51:54, 51:61:01-51:61:02, 51:82	*07:78, 07:84, 13:18, 13:31, 13:41, 15:04:01-15:04:02, 15:137, 15:303, 39:33, 40:161, 46:32, 52:21, 52:24, 54:10, 54:20, 54:33, 55:09, 55:21, 55:37, 55:52, 56:43
	305 bp		*51:48, 51:166	*15:140, C*02:83, C*08:24
	380 bp		*51:169	
42⁵	100 bp	800 bp	*51:60	
	135 bp		*51:49	
43⁵	115 bp	800 bp	*51:58	
	215 bp		*51:50	

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44	285 bp	800 bp	*51:76, 51:166	*08:39, 15:140, 35:101:02, 35:195, 35:211, 44:185
	385 bp		*51:51	C*01:83^w
45	145 bp	1070 bp	*51:178N	
	190 bp		*51:52	
46⁵	80 bp	1070 bp	*51:57	*07:206
	170 bp		*51:123	*55:59
47⁵	125 bp	800 bp	*51:20	*07:65, 07:134, 08:32, 18:03, 35:29:01-35:29:02, 35:69, 35:76, 35:136, 35:186 ^w , 35:229, 37:37, 39:19:01-39:19:02, 46:40 ^w , 53:23, 56:06, 78:01:01-78:01:02, 78:03, 78:07
48⁵	95 bp	1070 bp	*51:37, 51:90, 51:92	*07:84, 13:04, 13:35, 13:72, 15:04:01-15:04:02, 15:16:01-15:16:03, 15:67, 15:95, 15:155, 15:222, 15:254, 15:293, 15:310, 35:37, 35:235, 40:44, 40:159, 41:21, 44:20, 44:47, 44:100, 44:197, 45:09, 46:32, 49:04-49:05, 50:33, 50:39, 52:12, 52:26, 54:14-54:15, 54:16, 55:23, 55:27, 55:46, 55:68
	220 bp		*51:61:01-51:61:02	*13:31, 13:41, 15:04:01-15:04:02, 15:137, 15:303, 46:32, 52:21, 54:33, 55:21, 56:43
49	160 bp	1070 bp	*51:01:02, 51:01:09, 51:02:02, 51:05, 51:07:02, 51:09:02, 51:15, 51:54, 51:78:02, 51:93, 51:132, 51:144, 51:148	*07:56:01-07:56:02, 07:72, 08:26:01-08:26:02, 08:56:01-08:56:02, 15:02:01-15:02:09, 15:08:01-15:08:02, 15:11:01-15:11:06, 15:13:01-15:13:02, 15:15, 15:21, 15:31, 15:44, 15:55, 15:76, 15:88-15:89, 15:112, 15:121, 15:139, 15:143-15:144, 15:148, 15:170, 15:189, 15:191, 15:194, 15:209N, 15:213-15:215, 15:223, 15:265, 15:283-15:284, 15:291, 15:297, 15:301-15:303, 15:305, 15:308, 15:319, 15:325, 15:328, 18:29, 18:98, 35:01:01:01-35:02:05, 35:03:01-35:08:04, 35:08:06-35:09:03, 35:11:01-35:12:03, 35:14:01-35:15, 35:17:01-35:24:02, 35:26-35:27, 35:29:01-35:42:01, 35:43:01-35:62, 35:64:01-35:68:02, 35:70-35:72, 35:74-35:79, 35:81-35:83, 35:85-35:89, 35:91-35:123, 35:126-35:141, 35:143-35:149, 35:151-35:161, 35:163-35:183, 35:187-35:190, 35:192-35:200, 35:202-35:206, 35:208-35:216N, 35:218-35:225, 35:227-35:260, 38:28, 53:01:01-53:05, 53:07-53:16, 53:18-53:27, 53:29-53:37, 54:01:01-54:20, 54:22-54:24, 54:25 ^w , 54:26-54:33, 55:01:01-55:05, 55:07-55:09, 55:11-55:17, 55:19-55:33, 55:35, 55:37-55:39, 55:41-55:46, 55:47 ^w , 55:48-55:68, 56:01:01-56:04, 56:05:02, 56:07, 56:09-56:13, 56:15, 56:17-56:35, 56:37-56:44, 59:01:01:01-59:08, 78:02:01, 78:04

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50	155 bp	1070 bp	*51:81	*07:02:01-07:02:13, 07:02:15-07:02:19, 07:02:21-07:02:34, 07:02:36-07:02:38, 07:02:40-07:06, 07:08-07:11, 07:13, 07:15-07:17, 07:19-07:21, 07:23-07:67N, 07:68:03-07:76, 07:79-07:83, 07:85-07:99, 07:101-07:136, 07:138-07:161N, 07:164-07:192, 07:194-07:195, 07:199-07:213, 07:215-07:224, 07:226, 08:01:02, 08:01:13, 08:20, 08:53:02, 08:79, 13:71, 27:07:01-27:07:04, 27:11, 27:24, 27:32-27:34, 27:43, 35:31, 35:114, 37:07, 37:09, 40:02:01-40:02:19, 40:02:21-40:03, 40:05, 40:08-40:09, 40:13, 40:15-40:16, 40:18-40:19, 40:24, 40:27:01-40:27:02, 40:29, 40:31-40:32, 40:35:01, 40:37, 40:39-40:40, 40:45, 40:50, 40:56-40:58, 40:80, 40:82, 40:85, 40:89-40:91, 40:94, 40:97-40:98, 40:104-40:105, 40:107, 40:111, 40:115, 40:119, 40:122, 40:133Q, 40:142N-40:145, 40:157, 40:164, 40:169, 40:173-40:174, 40:176, 40:180-40:181, 40:189, 40:200-40:203, 40:205-40:206, 40:209, 40:211, 40:214, 40:219-40:220, 40:224, 40:226, 40:229, 40:232, 40:246, 40:248, 40:254-40:255, 40:266-40:267, 40:271, 40:274, 40:276, 40:283-40:284, 40:287, 40:289-40:293, 48:01:01-48:01:06, 48:04-48:11, 48:13, 48:15-48:16, 48:18-48:20, 48:22, 48:24, 48:27-48:36, 55:04, 55:49, 58:27, 81:01-81:07, C*02:60, C*03:05, C*03:25, C*03:27, C*03:167, C*07:294, C*08:08:01-08:08:02
51⁵	85 bp 135 bp 215 bp	800 bp	*51:68 *51:136 *51:72	
52	160 bp	1070 bp	*51:69, 51:107	*18:65, 52:30
53	135 bp 165 bp 260 bp	1070 bp	*51:136 *51:71 *51:70	
54⁵	120 bp	1070 bp	*51:74	*35:46-35:47, 35:154, 35:207, 35:217, 35:257, 40:07-40:08, 40:13, 40:68, 40:106, 40:162, 40:220, 40:232, 53:30
55⁵	250 bp 75 bp 200 bp	1070 bp	*51:124, 51:156 *51:77 *51:75	
56	380 bp	1070 bp	*51:01:01-51:01:07, 51:01:09-51:01:14, 51:01:16-51:01:39, 51:01:41-51:01:42, 51:01:44-51:12, 51:16- 51:24:05, 51:26-51:36, 51:38-51:41N, 51:43- 51:44N, 51:46, 51:48- 51:49, 51:51-51:53, 51:55-51:61:02, 51:64- 51:77, 51:79-51:84, 51:86-51:89, 51:91,	*08:03, 08:52, 08:78, 27:102, 40:13, 40:19, 40:109, 40:117, 40:292, 48:18, 49:18, 52:01:01:01-52:11, 52:13, 52:15-52:19, 52:21-52:24, 52:27-52:38, 52:40, 53:19, 56:21, 57:02:01-57:03:02, 57:05, 57:07, 57:09, 57:17, 57:39, 57:42, 57:46, 57:57, 57:63, 57:66, 57:70, 58:08:01-58:08:02, 58:27-58:28, 59:02, A*24:146

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			51:93-51:96, 51:98N- 51:105, 51:107-51:134, 51:136-51:156, 51:158:01-51:171, 51:173Q-51:179	
57	145 bp 210 bp	1070 bp	*51:79, 51:178N *51:54, 51:78:01- 51:78:02	*13:17, 13:33, 15:36, 15:89, 15:256, 44:02:10, 44:34:01-44:34:02, 44:83, 52:20, 53:09, 53:11-53:13, 53:31, 53:36, 56:07, 59:08
58⁸	170 bp	1070 bp	*51:80, 51:107	
59⁵	120 bp 240 bp	1070 bp	*51:83 *51:88	
60^{5,8}	85 bp 190 bp	800 bp	*51:94 *51:84, 51:130	*49:12
61⁵	100 bp	1070 bp	*51:85	*27:14, 27:81, 44:20, 44:47, 44:100, 44:197, 50:20, 52:26
62	210 bp 180 bp 250 bp	1070 bp	*51:87, 51:115 *51:86, 51:132 *51:95	*39:57
63⁵	70 bp 200 bp	1070 bp	*51:91 *51:146	*35:02:01-35:02:06, 35:81, 35:83, 35:95, 35:129N, 35:146, 35:154, 35:162, 35:172, 35:182-35:184, 35:211, 35:220, 35:258, 45:12, 50:36, 53:19, 53:36
64⁵	115 bp 170 bp	1070 bp	*51:67 *51:66, 51:89	
65	185 bp 215 bp	1070 bp	*51:98N *51:103, 51:116, 51:151	*08:62, 18:07:01-18:07:02, 18:29, 18:79, 27:23, 35:50, 35:84, 35:162, 35:217, 35:231, 37:21, 40:07-40:08, 40:13, 40:68, 40:106, 40:162, 40:220, 40:232
66	175 bp 210 bp	1070 bp	*51:109, 51:132 *51:120	
67⁵	110 bp 230 bp	1070 bp	*51:93, 51:122 *51:100	
68	160 bp 190 bp	1070 bp	*51:134 *51:105	
69⁵	105 bp 225 bp	1070 bp	*51:147 *51:110N	A*02:01:33^w, A*23:01:14^w
70	160 bp	1070 bp	*51:111, 51:134	
71	185 bp	1070 bp	*51:117, 51:130	*49:12
72⁵	90 bp 145 bp 170 bp	1070 bp	*51:118N *51:169 *51:164	*39:46 ^w , 44:118 ^w
73	170 bp 295 bp	1070 bp	*51:127 *51:149N	*55:43
74	180 bp	1070 bp	*51:157	*13:06, 13:53, 15:42, 15:86, 15:224, 35:60, 46:18, 54:01:01-54:02, 54:05N, 54:07- 54:08N, 54:10, 54:12-54:13, 54:17-54:25, 54:27-54:32, 55:01:01-55:03, 55:05, 55:07, 55:10-55:12, 55:15-55:16, 55:18-55:19,

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				55:21, 55:25-55:26, 55:29-55:31, 55:33-55:40, 55:42-55:45, 55:47-55:48, 55:50, 55:52-55:57, 55:59-55:67, 56:10, 56:23, 59:01:01:01-59:01:01:02, 59:05-59:08, C*01:90
75⁵	95 bp	1070 bp	*51:56:01-51:56:02, 51:158:01-51:158:02	*35:01:10, 35:04:02, 40:28, 49:18, 50:14, 53:28, 55:01:04, C*02:02:23, C*12:03:31
76	255 bp	1070 bp	*51:152, 51:173Q	
77⁹	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-B*51 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, e.g. the primers in wells number 4, 5, 6, 7, 8, 9, 15, 17, 18 and 19 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-B alleles, non-HLA-B*51 alleles will be amplified by primer mixes 1 to 3, 5 to 11, 14 to 19, 21 to 32, 34 to 36, 38 to 41, 44, 46 to 50, 52, 54, 56, 57, 60 to 63, 65 and 71 to 75. In addition, a few HLA-A and HLA-C alleles will be amplified by primer mixes 2, 5, 7, 16, 24, 27, 30, 32, 34, 35, 38, 41, 44, 50, 56, 69, 74 and 75.

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

⁶Primer mixes 3, 6, 9 and 30 may give rise to a lower yield of HLA-specific PCR product than the other HLA-B*51 primer mixes.

⁷Primer mixes 25, 30 and 39 may have tendencies of unspecific amplifications.

⁸Primer mixes 4, 27, 39, 58 and 60 have a tendency to giving rise to primer oligomer formation, most pronounced in primer mix 4.

⁹Primer mix 77 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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PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec. PCR product	105	95	265	255	270	210	240	105	85	160	245	495
							270		205	245		
Length of int. pos. control ¹	800	1070	1070	1070	1070	800	1070	800	1070	1070	1070	1070
5'-primer(s) ²	206	527	357	357	355	357	355	206	408	357	357	3 rd I
	5'-gAC 3'	5'-TgA 3'	5'-Tgg 3'	5'-Tgg 3'	5'-TCA 3'	5'-Tgg 3'	5'-CCC 3'	5'-gAC 3'	5'-ggT 3'	5'-Tgg 3'	5'-Tgg 3'	5'-CTT 3'
							385		431			
							5'-ggA 3'		5'-CgA 3'			
									540			
									5'-gAC 3'			
3'-primer(s) ³	272	583	583	571	583	527	583	272	583	477	559	621
	5'-TgA 3'	5'-gTg 3'	5'-gTA 3'	5'-CCC 3'	5'-gTg 3'	5'-CCA 3'	5'-gTg 3'	5'-Tgg 3'	5'-gTg 3'	5'-gCg 3'	5'-CTC 3'	5'-ggg 3'
						527				559		
						5'-CCA 3'				5'-CgT 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	200	105	100	170	105	140	145	110	130	160	210	210
			230	195		220			185			
Length of int. pos. control ¹	1070	1070	800	1070	800	800	800	1070	1070	1070	1070	1070
5'-primer(s) ²	165	357	357	404	206	141	357	141	357	141	141	141
	5'-ACC 3'	5'-Tgg 3'	5'-Tgg 3'	5'-CCC 3'	5'-gAC 3'	5'-ATT 3'	5'-Tgg 3'	5'-ATT 3'	5'-Tgg 3'	5'-ATT 3'	5'-ATT 3'	5'-ATT 3'
				420		357						
				5'-TTA 3'		5'-Tgg 3'						
				431								
				5'-CgA 3'								
3'-primer(s) ³	322	419	414	559	272	242	463	211	445	259	311	309
	5'-gTC 3'	5'-CgA 3'	5'-TgT 3'	5'-CAg 3'	5'-TgC 3'	5'-CCC 3'	5'-gCg 3'	5'-ggT 3'	5'-ggA 3'	5'-gTT 3'	5'-ggT 3'	5'-ATC 3'
			544			538			502			
			5'-ggT 3'			5'-gTC 3'			5'-CTA 3'			
			544									
			5'-ggT 3'									
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

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Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec.	120	105	140	205	245	105	105	165	195	260	225	110
PCR product	175	155	205	255			225					215
	205		270									
			345									
Length of int. pos. control ¹	800	1070	800	1070	1070	800	1070	1070	1070	1070	1070	1070
5'-primer(s) ²	357	357	49	49	357	369	357	435	141	355	355	133
	5'-Tgg 3'	5'-Tgg 3'	5'-CAg 3'	5'-CAg 3'	5'-Tgg 3'	5'-TAC 3'	5'-Tgg 3'	5'-AAA 3'	5'-ATT 3'	5'-TCA 3'	5'-TCA 3'	5'-CCg 3'
	652	756	355	357		369						704
	5'-CCg 3'	5'-ACT 3'	5'-TCA 3'	5'-Tgg 3'		5'-TAC 3'						5'-TgT 3'
			485									
			5'-CAA 3'									
3'-primer(s) ³	445	419	83	83	559	435	419	559	295	572	538	309
	5'-ggA 3'	5'-Cgg 3'	5'-TgA 3'	5'-TgA 3'	5'-CAg 3'	5'-TCT 3'	5'-Cgg 3'	5'-CTC 3'	5'-TCA 3'	5'-gCg 3'	5'-gTC 3'	5'-ATC 3'
	523	419	226	572	559		419					774
	5'-ACA 3'	5'-CgA 3'	5'-CAC 3'	5'-gCg 3'	5'-CAg 3'		5'-CgA 3'					5'-ggT 3'
	727	872	583				539					
	5'-CCA 3'	5'-TCA 3'	5'-gTg 3'				5'-TCC 3'					
	787											
	5'-TCC 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.	165	205	250	185	225	100	115	285	145	80	125	95
PCR product	225	250			305	135	215	385	190	170		220
					380							
Length of int. pos. control ¹	1070	1070	1070	1070	1070	800	800	800	1070	800	800	1070
5'-primer(s) ²	141	374	362	165	357	106	141	106	141	103	209	357
	5'-ATT 3'	5'-CTA 3'	5'-gAC 3'	5'-ACC 3'	5'-Tgg 3'	5'-CCA 3'	5'-ATT 3'	5'-CCA 3'	5'-ATT 3'	5'-CCT 3'	5'-ggA 3'	5'-Tgg 3'
	357	419	363		670	488		667		357		
	5'-Tgg 3'	5'-gTC 3'	5'-AgC 3'		5'-CCT 3'	5'-Cgg 3'		5'-AgA 3'		5'-Tgg 3'		
			383		736			754				
			5'-ggA 3'		5'-gCA 3'			5'-ACg 3'				
					754							
					5'-ACg 3'							
3'-primer(s) ³	265	583	583	309	539	163	214	343	244	141	292	412
	5'-CTA 3'	5'-gTg 3'	5'-gTg 3'	5'-ATC 3'	5'-TCC 3'	5'-ggC 3'	5'-CCA 3'	5'-T 3'	5'-CTA 3'	5'-gCA 3'	5'-gTC 3'	5'-gTC 3'
	539				916	583	314	916	292	487	292	412
	5'-TCT 3'				5'-gAT 3'	5'-gTg 3'	5'-gCC 3'	5'-gAT 3'	5'-gTg 3'	5'-Cgg 3'	5'-gTC 3'	5'-gTC 3'
												538
												5'-CCA 3'
Well No.	37	38	39	40	41	42	43	44	45	46	47	48

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Lot No.: **62X**

Lot-specific information

www.olerup-ssp.com

Well No.	49	50	51	52	53	54	55	56	57	58	59	60
Length of spec. PCR product	160	155	85 135 215	160	135 165 260	120 250	75 200	380	145 210	170	120 240	85 190
Length of int. pos. control ¹	1070	1070	800	1070	1070	1070	1070	1070	1070	1070	1070	800
5'-primer(s) ²	142 5'-TCg 3'	363 5'-AgC 3'	97 5'-TCg 3' 357 5'-Tgg 3'	454 5'-ACC 3' 475 5'-CCA 3'	357 5'-Tgg 3'	193 5'-CCA 3' 368 5'-gTg 3'	141 5'-ATT 3' 357 5'-Tgg 3'	317 5'-gCT 3'	141 5'-ATT 3' 142 5'-TCg 3'	454 5'-ACC 3' 457 5'-AgC 3'	141 5'-ATT 3' 357 5'-Tgg 3'	357 5'-Tgg 3'
3'-primer(s) ³	259 5'-gTT 3'	477 5'-gCg 3'	141 5'-gCA 3'	583 5'-gTg 3'	453 5'-TCT 3'	272 5'-TgA 3'	177 5'-AAA 3'	412 5'-gTT 3'	244 5'-CTA 3'	583 5'-gTg 3'	218 5'-gCC 3'	403 5'-gCA 3'
	259 5'-gTT 3'		453 5'-TCT 3'		481 5'-gTg 3'	583 5'-gTg 3'	514 5'-CTg 3'		246 5'-TAA 3'		555 5'-CCg 3'	505 5'-gCC 3'
			530 5'-CCT 3'		578 5'-TgA 3'				309 5'-gTg 3'			505 5'-gCT 3'
Well No.	49	50	51	52	53	54	55	56	57	58	59	60

Well No.	61	62	63	64	65	66	67	68	69	70	71	72
Length of spec. PCR product	100 210	180 250	70 200	115 170	185 215	175 210	110 230	160 190	105 225	160	185	90 145 170
Length of int. pos. control ¹	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070
5'-primer(s) ²	357 5'-Tgg 3'	357 5'-Tgg 3'	397 5'-gCT 3' 411 5'-CAA 3'	138 5'-TTg 3' 145 5'-CAA 3'	97 5'-TCC 3' 127 5'-ggT 3'	357 5'-Tgg 3'	141 5'-ATT 3' 435 5'-AAA 3'	121 5'-gCT 3' 154 5'-ACA 3'	141 5'-ATT 3'	154 5'-ACA 3' 155 5'-CgC 3'	357 5'-Tgg 3'	267 5'-Ag 3' 646 5'-ACg 3' 670 5'-CCT 3'
3'-primer(s) ³	418 5'-gTC 3'	493 5'-CCT 3'	559 5'-CAg 3'	272 5'-TgA 3'	272 5'-TgA 3'	488 5'-CCA 3'	331 5'-CTC 3'	272 5'-TgA 3'	206 5'-CCA 3'	272 5'-TgA 3'	494 5'-TCg 3'	317 5'-ggA 3'
	527 5'-CCg 3'	496 5'-gAC 3'				496 5'-gAC 3'	506 5'-TgA 3'		327 5'-TTC 3'		505 5'-gCT 3'	774 5'-ggT 3'
	528 5'-gCA 3'	565 5'-CAT 3'				526 5'-CTT 3'						
Well No.	61	62	63	64	65	66	67	68	69	70	71	72

101.561-24/03 – including *Taq* pol., IFU-01
101.561-24u/03u – without *Taq* pol., IFU-02

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Lot No.: **62X**

Lot-specific information

www.olerup-ssp.com

Well No.	73	74	75	76
Length of spec.	170	180	95	255
PCR product	295			
Length of int.	1070	1070	1070	1070
pos. control ¹				
5'-primer(s) ²	357	420	379	362
	5' -Tgg 3'	5' -TTA 3'	5' -ACC 3'	5' -gAA 3'
			379	374
			5' -ACT 3'	5' -CTA 3'
3'-primer(s) ³	487	559	435	583
	5' -CgT 3'	5' -CgT 3'	5' -TCT 3'	5' -gTg 3'
	610			
	5' -C.g 3'			
Well No.	73	74	75	76

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.

101.561-24/03 – including *Taq* pol., IFU-01
101.561-24u/03u – without *Taq* pol., IFU-02

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Lot No.: **62X**

Lot-specific information

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CELL LINE VALIDATION SHEET															
HLA-B*51 SSP subtyping kit															
				Well ²											
				1	2	3	4	5	6	7	8	9	10	11	12
				13	14	15	16	17	18	19	20	21	22	23	24
Prod. No.:				201444501	201444502	201444503	201444504	201444505	201444506	201444507	201444508	201444509	201444510	201444511	201444512
				201444513	201444514	201444515	201444516	201444517	201444518	201444519	201444520	201444521	201444522	201444523	201444524
IHCW 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	+	-	-	-	-	-	-	-	-	-	-

101.561-24/03 – including *Taq* pol., IFU-01
101.561-24u/03u – without *Taq* pol., IFU-02

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Lot No.: **62X**

Lot-specific information

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CELL LINE VALIDATION SHEET																					
HLA-B*51 SSP subtyping kit																					
						Well ²															
						17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
					Prod. No.:	201444517	201444518	201444519	201444520	201444521	201444522	201444523	201444524	201444525	201444526	201444527	201444528	201444529	201444530	201444531	201444532
	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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.561-24/03 – including *Taq* pol., IFU-01
101.561-24u/03u – without *Taq* pol., IFU-02

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CELL LINE VALIDATION SHEET																							
HLA-B*51 SSP subtyping kit																							
					Prod. No.:	Well ²																	
						33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48		
						201444533	201444534	201444535	201444536	201444537	201444538	201444539	201444540	201444541	201444542	201444543	201444544	201444545	201444546	201444547	201444548		
	IHCW 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	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

101.561-24/03 – including *Taq* pol., IFU-01
101.561-24u/03u – without *Taq* pol., IFU-02

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Lot No.: **62X**

Lot-specific information

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CELL LINE VALIDATION SHEET															
HLA-B*51 SSP subtyping kit															
				Well ²											
				49	50	51	52	53	54	55	56	57	58	59	60
				201444549	201444550	201444551	201444552	201444553	201444554	201444555	201444556	201444557	201444558	201444559	201444560
Prod. No.:				201444561	201444562	201444563	201444564	201444565	201444566	201444567	201444568	201444569	201444570	201444571	201444572
IHCW 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	+	-	-	-	-	-	+	-	-	-	-

101.561-24/03 – including *Taq* pol., IFU-01
101.561-24u/03u – without *Taq* pol., IFU-02

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Lot No.: **62X**

Lot-specific information

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CELL LINE VALIDATION SHEET																	
HLA-B*51 SSP subtyping kit																	
					Prod. No.:	Well ²											
						65	66	67	68	69	70	71	72	73	74	75	76
						201444565	201444566	201444567	201444568	201444569	201444570	201444571	201444572	201444573	201444574	201444575	201444576
	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		-	-	-	-	-	-	-	-	-	-	-	-

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.

101.561-24/03 – including *Taq* pol., IFU-01
101.561-24u/03u – without *Taq* pol., IFU-02

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Lot No.: 62X

Lot-specific information

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

No DNAs carrying the alleles to be amplified by primer solutions 5, 13, 17, 20, 21, 25, 27, 32, 33, 36, 39, 42 to 46, 51 to 53, 55, 57 to 62, 64, 66 to 73, 75 and 76 were available. The specificities of the primers in primer solutions 5, 17, 27, 32, 39, 42, 44, 46, 51, 57, 61, 67 and 75 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer.

In primer solutions 13, 20, 21, 25, 33, 43, 45, 53, 55, 59, 60, 62, 66, 69, 71 and 73 it was only possible to test the 5'-primer, the 3'-primer was not possible to test. In primer solutions 36, 52, 58, 64, 68, 70, 72 and 76 it was only possible to test the 3'-primer, the 5'-primer was not possible to test. In primer solutions 7, 9, 16, 38, 39, 41, 42, 44, 54, 63, 65 and 75 one or two of the 5'-primers were not possible to test. In primer solution 15, 18, 26 to 28, 42, 46, 51, 57, 61 and 67 one or two of the 3'-primers were not possible to test.

Additional primers in primer solutions 18, 26, 28 to 29, 31, 37, 41, 47, 48 and 54 were tested by separately adding one 5'-primer or one 3'-primer.

101.561-24/03 – including *Taq* pol., IFU-01
101.561-24u/03u – without *Taq* pol., IFU-02

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101.561-24/03 – including *Taq* pol., IFU-01
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Lot No.: **62X**

Lot-specific information

www.olerup-ssp.com

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