

101.571-06 – including *Taq* polymerase, IFU-01
101.571-06u – without *Taq* polymerase, IFU-02

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

Lot No.: **0F3**

Lot-specific information
Olerup SSP[®] HLA-B*56

Product number:	101.571-06 – including <i>Taq</i> polymerase 101.571-06u – without <i>Taq</i> polymerase
Lot number:	0F3
Expiry date:	2019-09-01
Number of tests:	6
Number of wells per test:	23+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. 0F3.

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*56 LOT (2D0)**

The HLA-B*56 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

¹As described in section Uniquely Identified Alleles.

The HLA-B*56 specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup SSP[®]* HLA-B*56 lot was made (**Lot No. 2D0**). The kit design is based on IMGT/HLA database 3.26.0.

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
3	Modified	-	5'-primer modified for improved HLA-specific amplification.
15	Modified	-	5'-primer modified for improved HLA-specific amplification.

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Well **24** 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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Lot-specific information

PRODUCT DESCRIPTION

HLA-B*56 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*56:01 to B*56:51 alleles.

PLATE LAYOUT

Each test consists of 24 PCR reactions in a 24 well PCR plate.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	NC

The 24 well PCR plate is marked with 'HLA-B*56' in silver/gray ink.

Well No. 1 is marked with the Lot No. '0F3'.

Wells 1 to 23 – HLA-B*56 high resolution primers.

Well 24 – 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 24 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*56 alleles will be amplified by all primer mixes. In addition, a few HLA-A and HLA-C alleles will be amplified by primer mixes 1, 3, 4, 6, 8, 10, 12 to 14, 17, 19, 22 and 23.

For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the HLA-B*56 alleles, i.e. **B*56:01 to B*56:51**, recognized by the HLA Nomenclature Committee in October 2016^{1,2} will be amplified by the primers in the HLA-B*56 subtyping kit³.

The HLA-B*56 kit enables separation of the confirmed HLA-B*56 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*56 alleles is listed below.

The HLA-B*56 kit also enables identification of polymorphisms in exons outside of the region encoding the peptide binding domain and of null and alternatively expressed alleles.

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Lot-specific information

The following HLA-B*56 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

Alleles	Primer mix
B*56:17, 56:26	21
B*56:18, B*07:65	22
B*56:19N, 56:29	19

The HLA-B*56 subtyping kit cannot distinguish the silent mutations in the B*56:01:01:01-56:01:08 alleles, the B*56:02:01-56:02:02 and the B*56:20:01-56:20:02 alleles.

¹HLA-B alleles listed on the IMGT/HLA web page 2016-October-14, release 3.26.0, www.ebi.ac.uk/imgt/hla.

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

³The HLA-B*56 primer set cannot separate the B*56:09 and the B*35:78 alleles. These alleles can be distinguished by the HLA-B low resolution and/or B*35 kits.

The HLA-B*56 primer set cannot separate the B*56:23 and the B*55:31 and B*55:78 alleles. These alleles can be distinguished by the HLA-B low resolution and/or B*55 kits.

The HLA-B*56 primer set cannot separate the B*56:50 and the B*55:13, 55:27-55:28, 55:32 and 55:58 alleles. These alleles can be distinguished by the HLA-B low resolution and/or B*55 kits.

ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
B*56:01:01:01	Confirmed	B*56:10	Confirmed	B*56:29	Unconfirmed	B*56:49	Unconfirmed
B*56:01:01:02	Confirmed	B*56:11	Unconfirmed	B*56:30	Unconfirmed	B*56:50	Unconfirmed
B*56:01:01:03	Unconfirmed	B*56:12	Unconfirmed	B*56:31	Unconfirmed	B*56:51	Unconfirmed
B*56:01:02	Confirmed	B*56:13	Unconfirmed	B*56:32	Unconfirmed		
B*56:01:03	Confirmed	B*56:14	Confirmed	B*56:33	Unconfirmed		
B*56:01:04	Confirmed	B*56:15	Confirmed	B*56:34	Unconfirmed		
B*56:01:05	Unconfirmed	B*56:16	Confirmed	B*56:35	Unconfirmed		
B*56:01:06	Unconfirmed	B*56:17	Unconfirmed	B*56:36	Confirmed		
B*56:01:07	Unconfirmed	B*56:18	Unconfirmed	B*56:37	Unconfirmed		
B*56:01:08	Unconfirmed	B*56:19N	Unconfirmed	B*56:38N	Unconfirmed		
B*56:02:01	Confirmed	B*56:20:01	Unconfirmed	B*56:39	Unconfirmed		
B*56:02:02	Confirmed	B*56:20:02	Unconfirmed	B*56:40	Unconfirmed		
B*56:03	Confirmed	B*56:21	Unconfirmed	B*56:41	Unconfirmed		
B*56:04	Confirmed	B*56:22	Unconfirmed	B*56:42	Unconfirmed		
B*56:05:01	Confirmed	B*56:23	Unconfirmed	B*56:43	Unconfirmed		
B*56:05:02	Confirmed	B*56:24	Unconfirmed	B*56:44	Unconfirmed		
B*56:06	Confirmed	B*56:25	Confirmed	B*56:45	Unconfirmed		
B*56:07	Confirmed	B*56:26	Confirmed	B*56:46	Unconfirmed		
B*56:08	Unconfirmed	B*56:27	Confirmed	B*56:47	Unconfirmed		
B*56:09	Unconfirmed	B*56:28N	Confirmed	B*56:48	Unconfirmed		

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2016-October-14, release 3.26.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in HLA-B*56 homo- and heterozygotes is available upon request.

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Lot-specific information
SPECIFICITY TABLE

HLA-B*56 SSP subtyping

Specificities and sizes of the PCR products of the 23+1 primer mixes used for HLA-B*56 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-B*56 alleles ³	Other amplified HLA Class I alleles ⁴
1^{5,8}	125 bp	800 bp	*56:01:01:01-56:02:02, 56:07-56:11, 56:13-56:17, 56:19N, 56:22-56:26, 56:28N-56:30, 56:33-56:47, 56:50-56:51	*07:235, 13:01:01-13:04, 13:06-13:09, 13:11-13:20, 13:22:01-13:23, 13:25-13:34, 13:36-13:61, 13:63N-13:64, 13:66-13:70, 13:72-13:78, 13:80-13:96, 14:22, 14:37, 14:55, 15:16:01:01-15:16:03, 15:20, 15:34, 15:42, 15:62, 15:67, 15:85-15:86, 15:95, 15:137, 15:194, 15:222, 15:242:02, 15:254, 15:303, 15:362, 15:393, 18:22, 18:52, 18:105, 27:14, 35:01:01:01-35:01:42, 35:01:44-35:05:02, 35:06-35:08:09, 35:10-35:11:03, 35:13-35:15:02, 35:19-35:21, 35:23-35:30, 35:33-35:38, 35:40N-35:42:02, 35:45-35:50, 35:52, 35:54-35:58, 35:60, 35:62-35:63, 35:65Q-35:66, 35:68:01-35:72, 35:74-35:78, 35:80-35:85, 35:89-35:98, 35:100-35:101:02, 35:103-35:112, 35:115-35:116, 35:119-35:124, 35:126-35:134N, 35:136-35:148, 35:150:01-35:163, 35:166-35:173N, 35:175-35:178, 35:180-35:184, 35:186-35:195, 35:197-35:198, 35:200, 35:202-35:204, 35:206-35:207, 35:209-35:214, 35:216N-35:229, 35:231-35:232, 35:235-35:241, 35:243-35:250, 35:252-35:259, 35:261-35:264, 35:267-35:275, 35:277-35:316, 35:318-35:320, 35:322-35:329, 40:28, 44:10, 44:15, 44:18, 44:48, 44:256, 45:01:01-45:19, 46:11, 46:18, 46:33, 46:53, 46:67, 48:02:01-48:02:03, 48:25, 49:01:01-49:14, 49:16-49:39, 49:41-49:46, 50:01:01, 50:01:03-50:02, 50:05-50:19, 50:31-50:49, 51:15, 51:56:01-51:56:03, 51:157, 51:158:02, 53:01:01-53:06, 53:08:01-53:43, 53:45, 54:01:01-54:01:05, 54:01:07-54:05N, 54:07-54:08N, 54:10, 54:12-54:36, 55:01:01-55:01:05, 55:01:07-55:02:03, 55:02:05-55:03, 55:05, 55:07, 55:09-55:13, 55:15-55:16, 55:18-55:19, 55:21-55:37, 55:39-55:48, 55:50, 55:52-55:71, 55:73-55:78, 55:80, 57:05, 58:01:01:01-58:01:02, 58:01:04-58:02:02, 58:04-58:07, 58:09, 58:11-58:19, 58:21-58:26, 58:28:01-58:29, 58:31N-58:45:02, 58:47-58:58, 58:60, 58:62-58:83, 59:01:01:01-59:01:01:02, 59:03-59:09, 82:01-82:03, C*02:56, C*04:180:01-04:180:02, C*06:20, C*07:81, C*07:168, C*07:450, C*08:123, C*08:139, C*15:126, C*16:98
2	400 bp	1070 bp	*56:01:01:01-56:13, 56:15-56:32, 56:34-56:41, 56:43, 56:45-56:51	*07:65, 13:54, 27:77, 27:129, 35:76, 35:78, 40:166 [?] , 44:90, 54:01:01-54:06, 54:08N-54:23, 54:25-54:37, 55:01:01-55:05, 55:07-55:17, 55:19-55:33, 55:35-55:46, 55:48-55:63, 55:65-55:78, 55:80, 81:01, 81:03 [?] -81:04N [?] , 81:06 [?] -81:08 [?] , 82:01-82:03, 83:01

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3	180 bp	1070 bp	*56:01:01:01-56:02:02, 56:04, 56:07-56:08, 56:13-56:14, 56:16-56:17, 56:19N-56:20:02, 56:24-56:30, 56:33-56:49, 56:51	*13:03, 13:48, 15:73, 15:303, 40:71, 44:10, 44:15, 44:18, 44:140, 45:01:01-45:01:02, 45:04-45:07, 45:11-45:19, 46:11, 49:01:01-49:01:07, 49:02-49:03, 49:06, 49:08-49:14, 49:16-49:17, 49:19N-49:46, 50:01:01-50:02, 50:04-50:08, 50:10-50:13, 50:15-50:19, 50:32, 50:34-50:38, 50:40-50:44, 50:46-50:48, 51:15, 51:62, 51:106, 52:25:01-52:25:02, 54:03, 54:33, 58:73, 59:04, 82:01-82:03, C*03:19^w, C*03:102^w
4⁵	105 bp	800 bp	*56:02:01-56:02:02, 56:04, 56:10, 56:51	*07:182N, 13:11, 15:18:03, 15:73, 15:86, 15:224, 39:17, 40:48, 40:71, 51:62, 82:01-82:03, C*01:90, C*02:06:01-02:06:02, C*02:47, C*05:132, C*06:168, C*07:289, C*07:536, C*12:15, C*15:37, C*15:58, C*15:72
5	175 bp 285 bp	1070 bp	*56:40 *56:03	*40:10:02, 54:01:02, 55:35
6^{5,9}	105 bp 150 bp	800 bp	*56:05:01 *56:32	*07:206, 08:26:03, 18:125, 27:05:18, 39:63 *07:09 ^w , 07:11 ^w , 07:162 ^w , 07:237 ^w , 07:255 ^w , 15:03:01:01-15:03:06, 15:16:01:01-15:16:03, 15:18:01:01-15:18:06, 15:23, 15:29, 15:39:01-15:40:02, 15:47:01 ^w -15:47:02 ^w , 15:49 ^w , 15:61-15:62, 15:64:01-15:64:02, 15:65 ^w , 15:67, 15:69, 15:72, 15:74, 15:80, 15:93, 15:95, 15:98, 15:103, 15:108, 15:115, 15:119, 15:127, 15:131-15:132, 15:134, 15:138, 15:153, 15:158, 15:161, 15:173, 15:176, 15:194-15:195, 15:197:01-15:198, 15:210, 15:220, 15:221 ^w , 15:223, 15:226N, 15:238, 15:242:01-15:242:02, 15:254-15:255, 15:263, 15:266, 15:268, 15:274, 15:281-15:282, 15:288, 15:290, 15:292-15:294N, 15:306-15:307, 15:310-15:311, 15:314, 15:335, 15:337, 15:351, 15:354, 15:362, 15:364, 15:369, 15:376, 15:379 ^w , 15:380N, 15:382, 15:388-15:389, 15:397, 15:402, 18:15, 18:21 ^w , 18:30 ^w , 18:57, 18:101, 35:11:01-35:11:02, 35:11:03 ^w , 35:21, 35:58, 35:99 ^w , 35:188, 35:232 ^w , 35:277, 46:03 ^w , 46:08, 46:62 ^w , 48:25, 49:04:01-49:04:02, 51:37, 51:45, 53:06, 53:08:01-53:08:02, 53:28, 55:14, 55:68, 57:13 ^w , 57:22, 58:06, 58:19, 58:46, C*01:102^w, C*03:175, C*03:199, C*03:245, C*08:113, C*15:09, C*15:19, C*15:27, C*15:61, C*15:107, C*15:126
7⁵	120 bp	800 bp	*56:05:01-56:06, 56:21	*13:62, 27:153, 40:95, 49:18:01, 50:14, 51:01:01:01-51:01:03, 51:01:05-51:01:12, 51:01:14-51:02:03, 51:02:05-51:03, 51:05, 51:07:01-51:09:03, 51:11N-51:12, 51:13:02-51:14, 51:16-51:23, 51:24:03-51:24:05, 51:26-51:37, 51:39-51:41N, 51:43-51:44N, 51:48-51:55, 51:57-51:58, 51:60-51:61:02, 51:63:01, 51:65-51:80, 51:82-51:91, 51:92:02-51:134, 51:136-51:138, 51:140-51:147, 51:149N-51:156, 51:158:01-51:193, 51:195-51:196, 51:198, 51:200-51:212, 52:01:01:01-52:01:04, 52:01:06-52:01:14, 52:01:16-52:13, 52:15-52:24, 52:25:02-52:63, 55:01:04, 58:08:01-58:08:02, 78:01:01-78:09
	170 bp		*56:33	*14:54, 15:21, 15:44, 15:66, 15:189, 15:394,

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				15:404, 35:26, 35:82, 35:85, 35:135, 35:294, 38:28, 59:08
8⁷	380 bp	1070 bp	*56:21	*08:03, 08:52, 08:78, 15:361, 27:102, 40:13, 40:19, 40:109, 40:117, 40:292, 40:340, 41:46, 48:18, 49:18:01-49:18:02, 51:01:01:01-51:01:07, 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, 51:93-51:96, 51:98N-51:105, 51:107-51:134, 51:136-51:156, 51:158:01-51:171, 51:173Q-51:181, 51:183-51:191, 51:193-51:196, 51:198-51:213, 52:01:01:01-52:11, 52:13, 52:15-52:19, 52:21-52:24, 52:27-52:38, 52:40-52:61, 53:19, 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, 57:80, 57:82, 57:84, 58:08:01-58:08:02, 58:27-58:28:02, 58:65, 59:02, A*24:146
9⁸	145 bp	800 bp	*56:07	*07:149, 08:02, 08:117, 15:115, 27:01, 27:142, 38:02:01-38:02:06, 38:03-38:04, 38:08, 38:15, 38:18, 38:23, 38:29, 38:35, 38:43-38:50, 38:62, 38:64, 44:40, 44:44, 44:130, 44:156, 44:210, 59:08
	205 bp		*56:31	*15:38:01-15:38:02, 15:185, 15:335, 15:364, 15:368, 18:01:01:01-18:01:13, 18:01:15-18:09, 18:12:01-18:15, 18:17N-18:19, 18:22-18:25, 18:27-18:34, 18:36-18:40, 18:42-18:55, 18:57, 18:59-18:60, 18:62-18:96, 18:98-18:100, 18:102-18:109, 18:111-18:121, 18:123, 18:125-18:130, 35:21, 35:24:01-35:24:02, 35:188, 35:190, 35:287, 39:43, 51:37, 51:45, 53:02, 53:06, 53:28, 57:14:01-57:14:02, 58:09, 58:76
10⁷	150 bp	800 bp	*56:09, 56:11-56:12	*07:235, 08:49, 13:01:01-13:01:12, 13:06-13:07N, 13:12:01-13:13:02, 13:17, 13:20, 13:22:01-13:23, 13:25-13:26:02, 13:28-13:29, 13:36, 13:39, 13:43, 13:50-13:52, 13:57, 13:60-13:61, 13:63N, 13:73, 13:76N-13:80, 13:83, 13:86-13:87, 13:90, 13:92, 13:95, 14:10, 15:02:01-15:02:11, 15:13:01-15:13:02, 15:20-15:21, 15:25:01-15:25:03, 15:36, 15:44, 15:62, 15:77, 15:80, 15:85, 15:88-15:89, 15:106, 15:112, 15:121, 15:139, 15:144, 15:154, 15:165, 15:170, 15:194, 15:204, 15:213-15:214, 15:223, 15:240, 15:250, 15:265, 15:271, 15:283, 15:289, 15:291, 15:297, 15:301-15:302N, 15:308, 15:319, 15:325, 15:328, 15:330, 15:341, 15:345, 15:357-15:358, 15:366, 15:374, 15:378, 15:393-15:394, 15:399, 15:402, 15:404, 18:22, 18:69, 18:105, 27:19, 27:30, 27:127, 27:150, 35:01:01:01-35:04:03, 35:06-35:08:09, 35:10-35:17:02, 35:19-35:21, 35:23-35:30, 35:33-35:36, 35:38-35:42:02, 35:45-35:50, 35:52, 35:54-35:57, 35:59:01-35:59:02, 35:61:01-35:63, 35:65Q, 35:69-35:71, 35:74, 35:76-35:78, 35:80-35:85, 35:90-35:96, 35:98, 35:100-35:101:02, 35:103-35:113, 35:115-35:116, 35:120-35:126, 35:128-35:134N,

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				35:136-35:150:02, 35:152-35:173N, 35:175-35:184, 35:186-35:198, 35:200-35:204, 35:206-35:229, 35:231, 35:233, 35:236-35:250, 35:252-35:259, 35:261-35:264, 35:266-35:272, 35:274-35:275, 35:277-35:291, 35:293-35:320, 35:322-35:329, 37:01:01-37:01:07, 37:01:09, 37:01:11, 37:03N-37:06:02, 37:08, 37:10-37:11, 37:13-37:43, 37:45-37:50, 37:52-37:61, 38:20, 39:42, 40:28, 44:02:01:01-44:02:33, 44:02:35-44:14, 44:16-44:17, 44:19N, 44:21-44:30, 44:32-44:40, 44:42-44:46, 44:48-44:52N, 44:55-44:64:02, 44:66-44:98, 44:101-44:105, 44:107-44:134, 44:136-44:137, 44:139-44:157, 44:159-44:165, 44:167-44:181, 44:183, 44:185-44:191, 44:194-44:196, 44:198N-44:212, 44:214-44:229, 44:231-44:235, 44:237N-44:245, 44:247-44:254, 44:256-44:259, 46:33, 46:67, 48:02:01-48:02:03, 48:25, 50:17, 51:04, 51:42, 51:46, 51:56:01-51:56:03, 51:139, 53:01:01-53:13, 53:15-53:40, 53:42-53:43, 53:45, 55:14, 57:01:01-57:01:04, 57:01:06-57:10, 57:12, 57:14:01-57:20, 57:22-57:30, 57:32-57:46, 57:48-57:73, 57:75-57:81, 57:84-57:85, 58:01:01:01-58:01:02, 58:01:04-58:01:15, 58:01:17-58:01:20, 58:04-58:05, 58:09-58:15, 58:17N, 58:19, 58:21-58:24, 58:28:01-58:29, 58:31N-58:37, 58:39N-58:42, 58:44-58:45:02, 58:47-58:59:02, 58:62-58:83, 83:01, C*03:102, C*03:263:01-03:263:02, C*15:126
11 ⁵	105 bp	800 bp	*56:01:01:01-56:01:08, 56:07-56:08, 56:13-56:14, 56:16-56:17, 56:19N-56:20:02, 56:23-56:30, 56:33-56:49	*07:78, 13:02:01-13:02:14, 13:02:16-13:03, 13:08-13:09, 13:14-13:16, 13:18-13:19, 13:27, 13:30-13:34, 13:37-13:38, 13:40-13:42, 13:44-13:45, 13:48-13:49N, 13:53-13:56:02N, 13:58, 13:65-13:70, 13:74-13:75, 13:81-13:82, 13:84-13:85, 13:88-13:89, 13:91, 13:93-13:94, 13:96, 14:37, 15:42, 15:303, 35:60, 44:15, 44:18, 45:01:01-45:01:02, 45:03-45:08, 45:10-45:19, 46:11, 46:18, 49:01:01-49:03, 49:06-49:14, 49:16-49:17, 49:19N-49:46, 50:01:01-50:02, 50:04-50:08, 50:10-50:11, 50:13, 50:15, 50:18-50:19, 50:31-50:32, 50:34-50:40, 50:43-50:49, 51:15, 51:157, 52:25:01, 54:01:01-54:03, 54:05N, 54:07-54:08N, 54:10, 54:12-54:13, 54:16-54:30, 54:32-54:37, 55:01:01-55:01:03, 55:01:05-55:01:06, 55:01:08-55:03, 55:05, 55:07, 55:09-55:12, 55:15-55:16, 55:18-55:19, 55:21-55:22, 55:24-55:26, 55:29-55:31, 55:33-55:38, 55:40-55:41, 55:43, 55:45-55:48, 55:50, 55:52, 55:54-55:57, 55:59-55:60, 55:62-55:67, 55:69-55:78, 55:80, 59:01:01:01-59:01:01:02, 59:04-59:09
12	150 bp	800 bp	*56:25, 56:37	*07:78, 13:16, 13:20, 13:31 ^w , 13:48, 15:42, 15:73 ^w , 15:303 ^w , 51:62, 51:106, 52:25:01-52:25:02, 54:20, 54:33 ^w , 55:01:01-55:01:16, 55:03, 55:05, 55:09, 55:11, 55:15, 55:21 ^w , 55:24-55:25, 55:29, 55:31, 55:33, 55:36, 55:38, 55:40, 55:44-55:45, 55:52-55:55N, 55:59-55:60, 55:64, 55:66, 55:73-55:76, 55:78, C*01:90, C*15:128

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180 bp		*56:10, 56:23		*13:06, 13:53, 15:42, 15:86, 15:224, 35:60, 46:18, 51:157, 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, 54:34-54:37, 55:01:01-55:03, 55:05, 55:07, 55:10-55:12, 55:15-55:16, 55:18-55:19, 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, 55:69-55:78, 55:80, 59:01:01:01-59:01:01:02, 59:05-59:08, C*01:90, C*15:128
13^{5,7,8}	70 bp	1070 bp	*56:30	*44:174
	180 bp		*56:11, 56:22	*15:58, 15:133, 15:229, 15:253, 35:03:01:01-35:03:05, 35:03:07-35:03:21, 35:06, 35:13, 35:36, 35:38, 35:55-35:56, 35:59:01-35:59:02, 35:70, 35:74-35:75, 35:84-35:85, 35:98, 35:106, 35:109, 35:127-35:128, 35:136, 35:150:01-35:153, 35:155-35:156, 35:160, 35:163, 35:167, 35:169, 35:179, 35:181, 35:193, 35:195, 35:198, 35:204-35:205, 35:221, 35:223, 35:231, 35:235-35:237, 35:242-35:243, 35:246, 35:256-35:257, 35:261, 35:267, 35:274, 35:278-35:279, 35:281-35:282, 35:290, 35:296, 35:298, 35:312, 35:320, 35:326, 35:329, 37:48, 38:30, 38:65, 39:32-39:33, 39:74, 44:251, 46:61, 51:13:01-51:13:02, 51:92:01-51:92:02, 51:172, 52:14, 53:04, 53:31, 53:33, 57:76, 58:34, C*08:138
14^{5,8}	80 bp	800 bp	*56:04, 56:27	*07:182N, 15:18:03, 15:73, 15:224, 39:17, 40:48, 40:71, 44:140, 44:226, 50:04, 51:62, 55:38, A*02:339^w, A*02:510, C*03:19^w, C*03:102^w, C*03:307, C*03:318N, C*15:26^w
15	160 bp	1070 bp	*56:13	*44:15, 44:18, 44:140, 45:01:01-45:01:02, 45:04-45:08, 45:10-45:19, 55:56, 82:01-82:03
	385 bp		*56:08, 56:14, 56:28N	*35:186
16	165 bp	800 bp	*56:36	*07:177, 08:87, 27:127, 40:166, 44:02:01:01-44:02:40, 44:06, 44:08-44:09, 44:11-44:12, 44:16, 44:19N-44:24, 44:27:01-44:27:02, 44:33-44:34:02, 44:41:01-44:41:02, 44:44, 44:48-44:49, 44:52N-44:53:02, 44:55, 44:59:01-44:59:02, 44:63, 44:66-44:68, 44:71-44:74, 44:80, 44:83-44:84:02, 44:86-44:87, 44:89-44:91, 44:93, 44:95, 44:97, 44:99-44:102, 44:104, 44:106, 44:112-44:113, 44:116, 44:118-44:119, 44:121, 44:126:01-44:127, 44:131-44:132, 44:137-44:138Q, 44:142, 44:145, 44:148-44:149N, 44:151-44:152, 44:162, 44:168-44:173, 44:176-44:177, 44:179, 44:185, 44:187, 44:190-44:191, 44:195N-44:196, 44:200-44:201, 44:206, 44:208, 44:211-44:212, 44:214, 44:216, 44:218-44:221, 44:225, 44:229, 44:235, 44:238, 44:240-44:244, 44:249, 44:253-44:254, 44:257, 45:06, 83:01
17^{5,7}	80 bp	1070 bp	*56:38N	*07:20, 07:24, 07:60, 07:100, 07:131, 07:220,
	180 bp		*56:05:01-56:06, 56:15, 56:21	07:223, 08:21, 08:25, 13:62, 13:86, 15:09-15:10:04, 15:30, 15:37, 15:45, 15:48, 15:63, 15:90, 15:99, 15:150, 15:243, 15:248, 15:287, 15:312-15:313,

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				15:324, 15:329, 15:338, 15:361, 27:76, 27:153, 35:02:01-35:02:08, 35:04:01-35:04:03, 35:09:01-35:09:03, 35:12:01-35:12:03, 35:18, 35:22, 35:34, 35:39, 35:44, 35:81, 35:83, 35:95, 35:129N, 35:149, 35:154, 35:162, 35:172, 35:182-35:184, 35:199, 35:201, 35:211, 35:220, 35:233, 35:251, 35:258, 35:266, 35:270, 35:273, 35:285, 35:292, 35:309, 35:311, 35:316, 35:321, 35:323, 40:05, 40:26, 40:28, 40:63, 40:92, 40:174, 40:324, 40:343, 41:17, 44:62, 44:77, 44:82, 44:107, 44:123, 44:184, 44:213, 49:18:01-49:18:02, 50:14, 51:01:01:01-51:01:14, 51:01:16-51:01:31, 51:01:33-51:01:38, 51:01:40-51:09:03, 51:11N-51:12, 51:18-51:20, 51:22-51:24:05, 51:26-51:30, 51:32-51:33, 51:35, 51:38-51:41N, 51:43-51:44N, 51:46, 51:48-51:61:02, 51:64-51:80, 51:83-51:84, 51:86-51:91, 51:94-51:96, 51:98N-51:100, 51:102-51:105, 51:107-51:142, 51:145-51:152, 51:154-51:156, 51:158:01-51:171, 51:173Q-51:181, 51:183-51:191, 51:193-51:196, 51:198-51:213, 52:01:01:01-52:01:20, 52:01:22-52:07, 52:09-52:13, 52:15-52:24, 52:27-52:36, 52:38, 52:40-52:61, 53:19, 53:36, 53:42, 55:08, 55:51, 57:02:01-57:03:02, 57:05, 57:07, 57:09, 57:12, 57:17, 57:28N, 57:39, 57:42, 57:46, 57:57, 57:63, 57:66, 57:70, 57:80, 57:82, 57:84, 58:08:01-58:08:02, 58:28:01-58:28:02, 58:65, 78:01:01-78:06, 78:09, C*03:81, C*03:152, C*03:317
18⁶	295 bp	800 bp	*56:16	*40:149, 41:22, 49:25, 54:21, 55:10, 57:58, 57:80, 67:06 [?] -67:07 [?] , 82:01-82:03
	405 bp		*56:28N	
19⁵	75 bp	800 bp	*56:29	*07:176
	105 bp		*56:08, 56:14	C*03:342, C*07:46, C*07:356
	185 bp		*56:19N	*39:40:01N-39:40:02N
20⁷	215 bp	1070 bp		*07:02:19, 15:01:04, 18:01:20, 18:72:02, 37:01:04, 40:94, 51:01:18, 54:01:01, 54:01:03-54:37, 55:02:07, 58:01:08
21^{5,7}	115 bp	800 bp	*56:17, 56:23, 56:42, 56:44	*07:16, 07:37, 07:50, 07:75, 07:91, 07:207, 07:228, 08:23, 08:54:01-08:54:02, 08:110, 14:14, 14:18, 15:03:01:01-15:03:06, 15:09-15:10:04, 15:18:01:01-15:18:06, 15:29, 15:37, 15:47:01-15:47:02, 15:49, 15:51-15:52, 15:54, 15:62, 15:64:01-15:64:02, 15:68-15:69, 15:72, 15:74, 15:80, 15:90-15:91, 15:93, 15:98-15:99, 15:103, 15:108, 15:114, 15:123-15:124, 15:127, 15:131-15:134, 15:151, 15:153, 15:156, 15:158, 15:161, 15:173, 15:176, 15:186, 15:197:01-15:198, 15:200, 15:210, 15:220-15:221, 15:226N, 15:229, 15:235, 15:238, 15:242:01-15:243, 15:252-15:253, 15:259, 15:263, 15:266, 15:274-15:275:02, 15:281-15:282, 15:290, 15:292-15:293, 15:306-15:307, 15:311-15:314, 15:323, 15:329, 15:335, 15:337-15:338, 15:351, 15:354, 15:369, 15:379-15:380N, 15:382, 15:388-15:389, 18:37, 18:125, 27:18, 27:23, 27:44, 27:77, 27:129, 27:131, 35:25-35:26, 35:49, 39:05:01-39:05:02, 39:07-39:08, 39:11, 39:13:01-39:13:02,

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	170 bp		*56:26	
22⁵	105 bp	800 bp	*56:06, 56:45	*07:65, 07:134, 35:76
	175 bp		*56:18, 56:31-56:32, 56:36	*07:177, 08:37, 08:89, 08:107, 15:50, 15:69, 15:93, 15:186, 15:199, 15:348, 15:368, 18:01:01:01-18:01:13, 18:01:15-18:01:17, 18:01:19-18:09, 18:11-18:15, 18:17N-18:19, 18:22-18:25, 18:27-18:34, 18:37-18:40, 18:42-18:49, 18:51-18:55, 18:59-18:60, 18:62-18:85, 18:87-18:96, 18:98-18:100, 18:102-18:105, 18:107-18:121, 18:123, 18:125-18:130, 35:35, 35:93, 35:188, 35:190, 35:262, 35:277, 37:35, 37:56, 38:52, 39:07, 39:43, 39:91, 40:166, 42:09, 44:90, 45:06 46:03, 46:21:01-46:21:02, 46:29, 54:09, 54:14, 55:14, 55:23, 55:68, 57:26, 58:05, 58:35, 58:76, C*01:102, C*06:89, C*07:123, C*07:173, C*07:294, C*08:113, C*12:113, C*15:09, C*15:19, C*15:27, C*15:61, C*15:107, C*15:126, C*16:20
23⁵	85 bp	1070 bp	*56:20:01-56:20:02	*07:78, 40:48, 49:40, C*01:90, C*07:536, C*15:91, C*15:128
	350 bp		*56:24	
24¹⁰			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*56 high resolution SSP typings. When the primers in a primer mix can give rise to HLA-specific PCR products of more than one length this is indicated if the size difference is more than 20 base pairs. Size differences of 20 base pairs or less are not given. For high resolution SSP kits, the alleles listed are specified according to amplicon length.

Nonspecific amplifications, i.e. a ladder or a smear of bands, may sometimes be seen. GC-rich primers have a higher tendency of giving rise to nonspecific amplifications than other primers.

PCR fragments longer than the control bands may sometimes be observed. Such bands should be disregarded and do not influence the interpretation of the SSP typings.

PCR fragments migrating faster than the control bands, but slower than a 400 bp fragment may be seen in some gel read-outs. Such bands can be disregarded and do not influence the interpretation of the SSP typings.

Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an inherent feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated.

²The internal positive control primer pairs amplify segments of the human growth hormone gene. The internal positive control bands are 1070 or 800 base pairs respectively, well distribution as outlined in the table. Well number 1 contains the shorter, 800 bp, internal positive control band. The well distribution of the internal controls can help in orientation of the kit on gel photo, as well as allow for kit identification. In the presence of a specific amplification the intensity of the control band often decreases.

³For several HLA Class I alleles 1st and/or 4th exon(s) and beyond, as well as intron nucleotide sequences, are not available. In these instances it is not known whether some of the primers of the SSP sets are completely matched with the target sequences or not. Assumption is made that unknown sequences in these regions are conserved within allelic groups.

⁴Due to the sharing of sequence motifs between HLA-B alleles non-HLA-B*56 alleles will be amplified by all primer mixes. In addition, a few HLA-A and HLA-C alleles will be amplified by primer mixes 1, 3, 4, 6, 8, 10, 12 to 14, 17, 19, 22 and 23.

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

⁶Primer mix 7 and 18 may give rise to a lower yield of HLA-specific PCR product than the other B*56 primer mixes.

⁷Primer mixes 8, 10, 13, 17, 20 and 21 may have tendencies of unspecific amplifications.

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⁸Primer mixes 1, 9, 13 and 14 have a tendency to giving rise to primer oligomer formation.

⁹Primer mix 6 may give rise to an unspecific amplification product of approx. 670 bp in some HLA-B alleles. This band should be disregarded in the interpretation of HLA-B*56 typings.

¹⁰Primer mix 24 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by the control primer pairs matching the human growth hormone gene. HLA-specific PCR product sizes range from 75 to 200 base pairs and the PCR product generated by the HGH positive control primer pair is 430 base pairs.

'w', may be weakly amplified.

'?', 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	125	400	180	105	175	105	120	380	145	150	105	150
Length of int. pos. control ¹	800	1070	1070	800	1070	800	800	1070	800	800	800	800
5'-primer(s) ²	379 5'-ACC 3'	41 5'-CTg 3'	420 5'-TTA 3'	355 5'-CCC 3'	48 5'-gCC 3'	141 5'-ATT 3'	142 5'-TCg 3'	317 5'-gCT 3'	206 5'-AgA 3'	355 5'-TCA 3'	357 5'-Tgg 3'	420 5'-TTA 3'
			420 5'-CTA 3'		874 5'-CgC 3'	419 5'-gTC 3'	357 5'-Tgg 3'		419 5'-gTC 3'			
3'-primer(s) ³	463 5'-gCT 3'	272 5'-TgT 3'	559 5'-CAg 3'	420 5'-gCT 3'	165 5'-Tgg 3'	204 5'-TCT 3'	272 5'-TgC 3'	412 5'-gTT 3'	309 5'-gTg 3'	463 5'-gCT 3'	420 5'-gCT 3'	527 5'-CCT 3'
	463 5'-gCT 3'	277 5'-ggC 3'	564 5'-ACT 3'		916 5'-gAT 3'	527 5'-CCT 3'	435 5'-TCT 3'		583 5'-gTg 3'			559 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
Length of spec. PCR product	70	80	160	165	80	295	75	215	115	105	85
	180		385		180	405	105		170	175	350
							185				
Length of int. pos. control ¹	1070	800	1070	800	1070	800	800	1070	800	800	1070
5'-primer(s) ²	420 5'-TTC 3'	379 5'-ACg 3'	41 5'-CTg 3'	144 5'-ACC 3'	166 5'-CgT 3'	15 5'-gCA 3'	206 5'-AgA 3'	1 st I 5'-CAg 3'	206 5'-AgA 3'	144 5'-ACC 3'	420 5'-TTA 3'
	420 5'-TTC 3'		420 5'-TTA 3'	418 5'-Agg 3'	419 5'-gTA 3'		419 5'-gTT 3'			206 5'-gAC 3'	701 5'-CCT 3'
	530 5'-ggT 3'									419 5'-gTC 3'	
3'-primer(s) ³	559 5'-CAg 3'	420 5'-gCT 3'	252 5'-TCT 3'	272 5'-TgT 3'	204 5'-TCT 3'	142 5'-TgA 3'	239 5'-gCT 3'	175 5'-CCg 3'	277 5'-ggC 3'	272 5'-TgT 3'	463 5'-gCg 3'
			269 5'-ACT 3'	538 5'-gTC 3'	559 5'-CAg 3'	252 5'-TCT 3'	269 5'-ACT 3'		292 5'-gTA 3'	559 5'-CgT 3'	916 5'-gAT 3'
			538 5'-gTC 3'				564 5'-ACT 3'		335 5'-CgT 3'		
Well No.	13	14	15	16	17	18	19	20	21	22	23

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

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

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

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CELL LINE VALIDATION SHEET																			
HLA-B*56 SSP subtyping kit ²																			
			Well																
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
			Prod. No.:	201560401	201560402	201778303	201560404	201560405	201778306	201560407	201560408	201560409	201560410	201560411	201778312	201778313	201560414	201778315	201560416
IHC 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	W	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-
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	+	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-

101.571-06 – including *Taq* polymerase, IFU-01
101.571-06u – without *Taq* polymerase, IFU-02

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Lot No.: **0F3**

Lot-specific information

CELL LINE VALIDATION SHEET													
HLA-B*56 SSP subtyping kit²													
				Well									
				17	18	19	20	21	22	23			
				Prod. No.:	201560417	201560418	201560419	201560420	201560421	201560422	201560423		
	IHCW cell line¹	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	-	-	-	-	-	-	-	-	-	-

101.571-06 – including *Taq* polymerase, IFU-01

101.571-06u – without *Taq* polymerase, IFU-02

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Lot No.: 0F3

Lot-specific information

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

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

No DNAs carrying the alleles to be amplified by primer solutions 19 and 23 were available. The specificities of the primers in primer solutions 19 and 23 were tested by separately adding additional 5'-primers, respectively additional 3'-primers. In primer solutions 1 to 3, 15, 18, 19 and 21 one or two 3'-primers were not possible to test, and in primer solutions 3, 5, 13, 17 and 23 one 5'-primer was not possible to test. Additional 5'-primers and 3'-primers in primer solutions 5, 6, 15 to 17 and 22 were tested by separately adding one 5'-primer and/or one or two 3'-primers.

101.571-06 – including *Taq* polymerase, IFU-01

101.571-06u – without *Taq* polymerase, IFU-02

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Lot No.: 0F3

Lot-specific information

101.571-06 – including *Taq* polymerase, IFU-01

101.571-06u – without *Taq* polymerase, IFU-02

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Lot No.: 0F3

Lot-specific information

101.571-06 – including *Taq* polymerase, IFU-01
101.571-06u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **0F3**

Lot-specific information

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