

101.568-06 – including *Taq* polymerase, IFU-01
101.568-06u – without *Taq* polymerase, IFU-02

Visit <https://labproducts.caredx.com> for
“Instructions for Use” (IFU)

Lot No.: **7E4**

Lot-specific information

Olerup SSP[®] HLA-B*58

Product number:	101.568-06 – including <i>Taq</i> polymerase 101.568-06u – without <i>Taq</i> polymerase
Lot number:	7E4
Expiry date:	2019-07-01
Number of tests:	6
Number of wells per test:	30+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. 7E4.

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*58 Lot (90Y)

The HLA-B*58 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

Three wells have been added to HLA-B*58, wells **29 to 31**.

¹As described in section Uniquely Identified Alleles.

The HLA-B*58 primer set, specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup SSP[®]* HLA-B*58 lot was made (**Lot No. 90Y**). The kit design is based on IMGT/HLA databased 3.25.0.

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	Modified	Modified	5'- and 3'-primer modified for increased yield.
11	-	Added	3'-primer added for the B*58:02:02 allele.
17	Moved	Moved	Primer pair moved to well 28 for improved allelic resolution.
24	Added	Added	Primer pair added for improved allelic resolution.
28	Added	Added	Negative Control moved to well 31, primer pair added from well 17 for improved allelic resolution.
29	New	New	New primer pair added for the B*58:59:01-58:59:02 alleles.
30	New	New	Primer pair added for the B*58:62 allele.
31	-	-	Negative Control added from well 28.

Changes in R01 compared to R00:

1. Primer mix 30 does not amplify the B*58:62 allele. Thus, this lot cannot discriminate between the B*58:62 and the B*58:01:01:01-58:01:19, 58:32-58:35, 58:37, 58:41-58:42, 58:45:01-58:45:02, 58:47-58:50, 58:53-58:56, 58:63-58:64, 58:67-58:71, 58:73-58:75, 58:77 and 58:79-58:81 alleles. This has been corrected in the specificity and interpretation tables.

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Well **31** 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*58 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*58:01 to B*58:81 alleles.

PLATE LAYOUT

Each test consists of 31 PCR reactions in a 32 well PCR plate. Well 32 is empty.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	NC	empty

The 32 well cut PCR plate is marked with 'HLA-B*58' in silver/gray ink.

Well No. 1 is marked with the Lot No. '7E4'.

Wells 1 to 30 – HLA-B*58 high resolution primers.

Well 31 – 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 heat-sealed with a PCR-compatible foil.

Please note: When removing each 32 well PCR plate, make sure that the remaining plates stay sealed. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

INTERPRETATION

Due to the sharing of sequence motifs between HLA-B alleles, non-HLA-B*58 alleles will be amplified by primer mixes 2, 3, 5 to 7, 9 to 17, 19 to 21, 23, 25 and 27 to 29. In addition, a few HLA-A and HLA-C alleles will be amplified by primer mixes 2, 3, 5, 8 to 11, 15 to 17 and 19.

For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the HLA-B*58 alleles, i.e. **B*58:01 to B*58:81** recognized by the HLA Nomenclature Committee in July 2016 will be amplified by the primers in the HLA-B*58 subtyping kit^{1,2,3}.

The HLA-B*58 kit enables separation of the confirmed HLA-B*58 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*58 alleles is listed below.

The HLA-B*58 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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The following HLA-B*58 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

Alleles	Primer mix
B*58:10N, 58:13	12
B*58:21, 58:29	20
B*58:58, 58:66	26

The HLA-B*58 primer set cannot distinguish the following silent mutations: the B*58:01:01:01-58:01:19 alleles, the B*58:02:01-58:02:02, the B*58:16:01-58:16:02 alleles, the B*58:28:01-58:28:02 or the B*58:59:01-58:59:02 alleles.

¹HLA-B alleles listed on the IMGT/HLA web page 2016-July-14, release 3.25.0, www.ebi.ac.uk/imgt/hla.

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

³This lot of the B*58 kit cannot discriminate between the B*58:62 and the B*58:01:01:01-58:01:19, 58:32-58:35, 58:37, 58:41-58:42, 58:45:01-58:45:02, 58:47-58:50, 58:53-58:56, 58:63-58:64, 58:67-58:71, 58:73-58:75, 58:77 and 58:79-58:81 alleles.

ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
B*58:01:01:01	Confirmed	B*58:09	Unconfirmed	B*58:38	Unconfirmed	B*58:66	Unconfirmed
B*58:01:01:02	Unconfirmed	B*58:10N	Unconfirmed	B*58:39N	Unconfirmed	B*58:67	Unconfirmed
B*58:01:01:03	Unconfirmed	B*58:11	Confirmed	B*58:40	Confirmed	B*58:68	Unconfirmed
B*58:01:02	Unconfirmed	B*58:12	Confirmed	B*58:41	Unconfirmed	B*58:69	Unconfirmed
B*58:01:03	Unconfirmed	B*58:13	Unconfirmed	B*58:42	Unconfirmed	B*58:70	Unconfirmed
B*58:01:04	Unconfirmed	B*58:14	Unconfirmed	B*58:43	Unconfirmed	B*58:71	Unconfirmed
B*58:01:05	Unconfirmed	B*58:15	Unconfirmed	B*58:44	Unconfirmed	B*58:72N	Unconfirmed
B*58:01:06	Unconfirmed	B*58:16:01	Unconfirmed	B*58:45:01	Unconfirmed	B*58:73	Unconfirmed
B*58:01:07	Unconfirmed	B*58:16:02	Unconfirmed	B*58:45:02	Unconfirmed	B*58:74	Unconfirmed
B*58:01:08	Confirmed	B*58:17N	Unconfirmed	B*58:46	Unconfirmed	B*58:75	Unconfirmed
B*58:01:09	Unconfirmed	B*58:18	Confirmed	B*58:47	Unconfirmed	B*58:76	Unconfirmed
B*58:01:10	Unconfirmed	B*58:19	Unconfirmed	B*58:48	Unconfirmed	B*58:77	Unconfirmed
B*58:01:11	Unconfirmed	B*58:20	Unconfirmed	B*58:49	Unconfirmed	B*58:78	Unconfirmed
B*58:01:12	Unconfirmed	B*58:21	Confirmed	B*58:50	Unconfirmed	B*58:79	Unconfirmed
B*58:01:13	Unconfirmed	B*58:22	Unconfirmed	B*58:51	Unconfirmed	B*58:80	Unconfirmed
B*58:01:14	Unconfirmed	B*58:23	Confirmed	B*58:52	Unconfirmed	B*58:81	Unconfirmed
B*58:01:15	Unconfirmed	B*58:24	Confirmed	B*58:53	Unconfirmed		
B*58:01:16	Unconfirmed	B*58:25	Unconfirmed	B*58:54	Unconfirmed		
B*58:01:17	Unconfirmed	B*58:26	Confirmed	B*58:55	Unconfirmed		
B*58:01:18	Unconfirmed	B*58:27	Unconfirmed	B*58:56	Unconfirmed		
B*58:01:19	Unconfirmed	B*58:28:01	Unconfirmed	B*58:57	Unconfirmed		
B*58:01:20	Unconfirmed	B*58:28:02	Confirmed	B*58:58	Unconfirmed		
B*58:02:01	Confirmed	B*58:29	Unconfirmed	B*58:59:01	Confirmed		
B*58:02:02	Unconfirmed	B*58:31N	Unconfirmed	B*58:59:02	Unconfirmed		
B*58:04	Confirmed	B*58:32	Unconfirmed	B*58:60	Unconfirmed		
B*58:05	Unconfirmed	B*58:33	Unconfirmed	B*58:61	Unconfirmed		
B*58:06	Confirmed	B*58:34	Unconfirmed	B*58:62	Confirmed		
B*58:07	Confirmed	B*58:35	Unconfirmed	B*58:63	Unconfirmed		
B*58:08:01	Unconfirmed	B*58:36	Unconfirmed	B*58:64	Unconfirmed		
B*58:08:02	Confirmed	B*58:37	Unconfirmed	B*58:65	Unconfirmed		

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2016-July-14, release 3.25.0, www.ebi.ac.uk/imgt/hla.

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RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in HLA-B*58 homo- and heterozygotes is available upon request.

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SPECIFICITY TABLE

HLA-B*58 SSP subtyping

Specificities and sizes of the PCR products of the 30+1 primer mixes used for HLA-B*58 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-B*58 alleles ³	Other amplified HLA-B alleles ⁴
1⁵	90 bp	800 bp	*58:01:01:01-58:02:02, 58:05-58:29, 58:31N-58:35, 58:37-58:38, 58:40-58:43, 58:45:01-58:81	
2	150 bp	800 bp	*58:01:01:01-58:01:20, 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, 58:62-58:81	*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, 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, 18:22, 18:69, 18:105, 27:19, 27:30, 27:127, 27:150, 35:01:01:01-35:04:03, 35:06-35:08:08, 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, 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, 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, 37:52-37:59, 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, 44:247-44:249,

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3	240 bp	800 bp	*58:02:01-58:02:02, 58:06-58:07, 58:25, 58:38, 58:43, 58:46, 58:60	*14:19, 14:27, 57:11, C*01:35, C*01:107, C*03:17, C*03:71, C*03:249, C*03:271, C*03:302, C*06:96, C*12:122, C*14:20
4	190 bp 230 bp	1070 bp	*58:04 *58:15	
5⁵	90 bp	1070 bp	*58:05	*15:124, 18:88, 38:43, 40:77, 40:87:01-40:87:02, 40:222, 40:237, 44:247, 46:43, 48:14, 48:26, 48:29, 49:29, 51:181, 57:59, C*07:81, C*07:168, C*07:450
6	170 bp	1070 bp	*58:06, 58:08:01-58:08:02, 58:19, 58:46, 58:78	*07:02:01-07:24, 07:26-07:47, 07:49N-07:50, 07:52-07:154, 07:156-07:163, 07:165-07:201N, 07:203-07:208, 07:210-07:219, 07:221-07:222, 07:224-07:225, 07:227-07:234, 07:236-07:260, 07:262-07:270, 07:272N-07:275, 08:20, 08:53:01-08:53:02, 08:79, 08:156, 13:16, 13:20, 13:31, 13:48, 13:62, 14:01:01-14:40, 14:42, 14:44-14:54, 15:01:01:01-15:01:04, 15:01:06-15:04:04, 15:06-15:17:04, 15:18:01:01-15:19, 15:21, 15:23-15:30, 15:32:01-15:40:02, 15:42-15:47:02, 15:49-15:50, 15:53-15:54, 15:56-15:58, 15:60-15:74, 15:76-15:82, 15:85, 15:87, 15:89-15:90, 15:92-15:99, 15:101-15:104, 15:106, 15:108-15:110, 15:112-15:113, 15:115-15:122, 15:125-15:129, 15:131-15:135, 15:137-15:144, 15:146-15:150, 15:152-15:154, 15:156-15:161, 15:163-15:175, 15:177-15:178, 15:180-15:184, 15:187, 15:189-15:199, 15:201-15:217, 15:219-15:221, 15:223, 15:225-15:234, 15:236, 15:238-15:249, 15:251-15:274, 15:276-15:282, 15:284-15:311, 15:313-15:331, 15:333-15:347, 15:349-15:382, 15:384-15:392, 15:394-15:395, 15:397-15:398, 18:15, 18:19, 18:21, 18:30, 18:57, 18:101, 27:04:01-27:04:05, 27:06, 27:10, 27:15, 27:18, 27:20-27:21, 27:24-27:25, 27:40, 27:54, 27:63, 27:66N, 27:68-27:69, 27:79, 27:86, 27:91-27:92, 27:100, 27:103, 27:105-27:109, 27:112-27:115, 27:120, 27:138, 27:149, 27:153, 35:11:01-35:11:03, 35:14:01-35:14:02, 35:21, 35:43:01-35:44, 35:58, 35:67, 35:79, 35:86, 35:96, 35:99, 35:102, 35:117-35:118, 35:135, 35:167, 35:185, 35:188, 35:213, 35:232, 35:265, 35:277, 37:07, 37:13, 38:10, 38:32, 39:18, 39:35-39:36, 39:107, 40:05, 40:15-40:16, 40:23, 40:26, 40:28, 40:32, 40:51, 40:95, 40:98, 40:148, 40:158, 40:161, 40:174, 40:183, 40:198, 40:309, 42:19, 44:76, 44:79:01-44:79:02, 44:146, 44:150, 46:01:01-46:05, 46:07N-46:08, 46:10, 46:12, 46:14-46:17, 46:20, 46:22-46:24,

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7 ⁵	80 bp	800 bp	*58:06, 58:08:01-58:08:02, 58:19, 58:46	*07:02:35 ^w , 07:68:02 ^w , 07:151:02 ^w , 07:262 ^w , 13:16, 13:20, 13:48, 13:62, 14:01:01-14:02:06, 14:02:08-14:11, 14:12 ^w , 14:13-14:42, 14:44-14:46, 14:47 ^w , 14:48-14:54, 15:02:09, 15:03:02, 15:03:04, 15:13:02, 15:39:02, 15:42, 18:15, 27:153, 35:11:01, 35:11:03 ^w , 35:21, 35:58, 35:96, 35:167, 35:188, 35:277, 38:10, 38:32, 39:35, 39:107, 40:28, 40:95, 42:19, 44:76 ^w , 44:79:01, 48:25, 49:01:01, 49:01:03-49:10, 49:12-49:14, 49:16-49:21, 49:23-49:40, 49:41 ^w , 49:42-49:43, 50:01:01-50:02, 50:04-50:20, 50:31, 50:32 ^w , 50:33-50:46, 51:01:01:01-51:01:24, 51:01:26-51:01:36, 51:01:38-51:01:46, 51:01:47 ^w , 51:01:48-51:01:51, 51:01:53-51:02:04, 51:03-51:04, 51:06:01-51:07:02, 51:11N-51:14, 51:16-51:18, 51:21-51:24:01, 51:24:04-51:24:05, 51:26-51:28, 51:29 ^w , 51:30, 51:32-51:35, 51:37-51:39, 51:41N, 51:43, 51:45-51:46, 51:48-51:53, 51:55 ^w , 51:56:01-51:60, 51:62-51:70, 51:74-51:80, 51:82 ^w , 51:83-51:86, 51:88-51:90, 51:92:01-51:92:02, 51:94-51:96, 51:98N-51:107, 51:109-51:114, 51:116-51:121, 51:123-51:125, 51:127-51:138, 51:140, 51:142-51:147, 51:149N-51:152, 51:154-51:156, 51:158:01-51:173Q, 51:175-51:180, 51:182-51:193, 51:195-51:196, 51:197 ^w , 51:198-51:208, 52:01:01:01-52:01:06, 52:01:08-52:01:14, 52:01:16-52:01:25, 52:01:26 ^w , 52:01:27-52:02:02, 52:04-52:09, 52:11-52:18, 52:20, 52:22-52:23, 52:24 ^w , 52:25:01-52:43, 52:44 ^w , 52:45-52:53, 52:55-52:60, 52:61 ^w , 53:06, 53:08:01, 53:28, 54:20 ^w , 55:01:01-55:01:16, 55:03, 55:05, 55:09 ^w , 55:11, 55:14-55:15, 55:17, 55:24-55:25, 55:28-55:29, 55:31, 55:33, 55:36, 55:38, 55:40, 55:44-55:45, 55:52 ^w , 55:53-55:55N, 55:58-55:60,

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				55:64, 55:66, 55:68, 55:73-55:76, 55:78, 56:05:01-56:06, 56:21, 56:25, 56:32, 56:37, 78:01:01-78:03, 78:05-78:07, 78:09
8	250 bp	1070 bp	*58:07	C*06:165, C*14:61
9^{5,6}	90 bp 160 bp 190 bp	800 bp	*58:44 *58:08:01, 58:23 *58:72N	*07:219 *57:01:20, A*02:01:33
10⁵	115 bp 270 bp	800 bp	*58:24 *58:09, 58:76	C*03:141, C*03:233, C*15:18 *14:10, 18:22, 18:69, 18:105, 35:21, 35:24:01- 35:24:02, 35:81, 35:96, 35:109, 35:157, 35:188, 35:190, 35:233, 35:287, 37:04:01-37:04:02, 40:28, 44:190, 44:203, 51:04, 51:46, 51:56:01-51:56:03, 51:139, 53:02, 53:06, 53:28, 57:14:01-57:14:02, C*15:39
11⁸	210 bp	1070 bp	*58:02:01- 58:02:02, 58:07, 58:25, 58:38, 58:43, 58:60	*14:43, 18:44:01-18:44:02, 40:243, 57:11, A*24:64^w, C*01:06^w, C*06:79N, C*06:153, C*12:175, C*14:53, C*14:71^w, C*16:43^w
12	145 bp 235 bp	1070 bp	*58:13 *58:10N	*49:06
13	165 bp	1070 bp	*58:01:01:01- 58:02:02, 58:04- 58:10N, 58:12- 58:19, 58:21- 58:29, 58:31N- 58:81	*15:20, 15:228, 15:305, 35:01:01:01-35:01:27, 35:01:29-35:30, 35:32:01-35:34, 35:36-35:42:02, 35:44-35:45, 35:47-35:56, 35:58-35:59:02, 35:61:01-35:72, 35:74-35:78, 35:80-35:86, 35:88- 35:184, 35:186-35:278, 35:280-35:322, 48:02:01- 48:02:03, 51:01:01:01-51:24:05, 51:26-51:41N, 51:43-51:46, 51:48-51:156, 51:158:01-51:163, 51:165-51:208, 52:01:01:01-52:06:03, 52:08- 52:61, 53:01:01-53:43, 56:05:01-56:05:02, 56:21, 56:36, 67:05, 78:01:01-78:09, 81:03, 83:01 [?]
14^{6,7}	165 bp	1070 bp	*58:11, 58:20	*07:02:01-07:57, 07:59-07:270, 07:272N-07:275, 08:01:01:01-08:05, 08:07-08:165, 13:01:01- 13:01:11, 13:02:01-13:04, 13:06-13:23, 13:25- 13:60, 13:62-13:93, 14:01:01-14:54, 15:01:01:01- 15:01:04, 15:01:06-15:19, 15:21, 15:23-15:40:02, 15:42-15:58, 15:60-15:99, 15:101, 15:103-15:129, 15:131-15:227, 15:229-15:283, 15:285-15:304N, 15:306-15:398, 18:01:01:01-18:15, 18:17N- 18:123, 18:125-18:127, 27:01-27:05:30, 27:05:32- 27:21, 27:23-27:154, 35:31, 35:35, 35:43:01, 35:46, 35:57, 35:60, 35:79, 35:87, 35:185, 35:279, 37:01:01-37:59, 38:01:01-38:63, 39:01:01:01- 39:01:01:04, 39:01:03-39:20, 39:22-39:45, 39:47- 39:117, 40:01:01-40:06:07, 40:06:09-40:16, 40:18-40:40, 40:42-40:235, 40:237-40:271, 40:273-40:338N, 41:01:01-41:46, 42:01:01- 42:02:01:02, 42:04-42:23, 44:02:01:01-44:65, 44:67-44:117, 44:119-44:245, 44:247-44:249, 45:01:01-45:19, 46:01:01-46:68, 47:01:01:01- 47:10, 48:01:01-48:01:06, 48:02:02-48:40, 49:01:01-49:14, 49:16-49:43, 50:01:01-50:02, 50:04-50:20, 50:31-50:47, 51:42, 51:157, 52:07, 54:01:01-54:35, 55:01:01-55:05, 55:07-55:78, 56:01:01:01-56:04, 56:06-56:20:02, 56:22-56:51, 57:01:01-57:01:10, 57:01:12-57:83, 59:01:01:01-

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				59:09, 67:01:01-67:04, 67:06-67:07, 78:08, 81:01-81:02, 81:04N-81:08, 82:01-82:02:01, 82:03, 83:01?
15⁵	90 bp	1070 bp	*58:36	*57:01:01-57:04:01, 57:05-57:15, 57:17-57:19, 57:21-57:35, 57:37-57:44, 57:46-57:50, 57:52-57:61, 57:63-57:68, 57:70-57:83
	155 bp		*58:12	*07:219, 57:58, 57:80, A*02:42, A*02:310
16^{5,6}	95 bp	1070 bp	*58:27-58:28:02, 58:65	*07:05:01:01-07:06:02, 07:32, 07:34, 07:40, 07:53, 07:69, 07:80, 07:90, 07:97, 07:105, 07:112, 07:123, 07:137-07:138, 07:140, 07:176, 07:182N, 07:201N, 07:206-07:207, 07:209-07:210, 07:213, 07:222, 07:249, 07:258, 07:262, 07:264, 07:269-07:270, 08:01:01:01-08:05, 08:08N, 08:10-08:11, 08:13, 08:15, 08:17-08:27, 08:29, 08:31-08:34, 08:36, 08:38-08:48, 08:50-08:68, 08:70-08:83, 08:85-08:86N, 08:88, 08:90-08:106, 08:108-08:110, 08:112-08:155, 08:157-08:165, 13:13:01-13:13:02, 13:21, 13:71, 13:86, 14:13, 14:53, 15:324, 15:329, 27:07:01-27:07:05, 27:11, 27:24, 27:33, 27:43, 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, 35:31, 35:81, 35:83, 35:87-35:88, 35:95, 35:129N, 35:149, 35:154, 35:157, 35:162, 35:172, 35:182-35:184, 35:201, 35:211, 35:220, 35:230, 35:233, 35:258, 35:266, 35:270, 35:285, 35:309, 35:311, 35:316, 35:321, 37:12, 39:14, 40:02:01-40:02:15, 40:02:17-40:02:25, 40:04-40:05, 40:08, 40:13, 40:15-40:16, 40:19, 40:28-40:30, 40:34-40:35:02, 40:37, 40:39-40:40, 40:45, 40:50, 40:56-40:58, 40:64, 40:68, 40:78, 40:80, 40:82, 40:85, 40:89-40:91, 40:94, 40:97, 40:99, 40:104, 40:107, 40:111, 40:115, 40:119, 40:122, 40:129, 40:133Q, 40:137, 40:142N-40:145, 40:157, 40:160:01-40:160:02, 40:164, 40:169, 40:173-40:174, 40:176, 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, 40:271, 40:274, 40:276, 40:283, 40:287, 40:289-40:293, 40:296-40:297, 40:302-40:305, 40:309, 40:320, 40:322, 40:331, 40:334-40:335, 40:337N, 41:02:01-41:02:06, 41:10-41:11, 41:13, 41:15, 41:19, 41:23, 41:27, 41:31, 41:36, 41:38-41:43, 41:45N-41:46, 42:01:01-42:02:01:02, 42:05:01-42:05:02, 42:07-42:08, 42:10-42:15, 42:17-42:19, 42:21-42:23, 44:62, 44:77, 44:82, 44:166, 44:184, 44:213, 48:01:01-48:01:06, 48:04:01-48:06, 48:09-48:13, 48:15-48:16, 48:18-48:20, 48:22, 48:24, 48:27-48:39, 51:04, 51:46, 51:56:01-51:56:03, 51:64, 51:81, 51:139, 51:148, 53:19, 53:36, 55:04, 55:49, 55:51, 56:12, 57:02:01-57:03:02, 57:05, 57:07, 57:09, 57:12, 57:17, 57:39, 57:42, 57:46, 57:57, 57:63, 57:66, 57:70, 57:80, 81:01-81:08, C*03:317, C*15:24

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17^{6,7}	225 bp	1070 bp	*58:22	*07:12, 07:14, 07:18:01-07:18:02, 07:137, 07:162-07:163, 07:199, 07:225, 07:227, 07:248, 13:73, 35:08:01-35:08:08, 35:18, 35:45, 35:61:01-35:61:02, 35:80, 35:100, 35:105, 35:142, 35:156, 35:158, 35:164, 35:172, 35:174, 35:176, 35:187, 35:192, 35:206, 35:225, 35:229, 35:262, 35:300-35:301, 37:39, 44:04, 44:28:01-44:28:02, 44:56N, 44:76, 44:150, 53:11, 53:16, 53:24, 57:02:01-57:02:02, 57:04:01-57:05, 57:12-57:13, 57:19, 57:28N, 57:30, 57:42, 57:63, A*01:41, C*01:49:01-01:50, C*03:28, C*03:49, C*03:117, C*03:251, C*03:293, C*04:80, C*04:100, C*04:110, C*05:10, C*08:126, C*14:54, C*15:08
18⁵	70 bp 140 bp	1070 bp	*58:25 *58:17N	
19⁵	95 bp	800 bp	*58:18	*07:09, 07:11, 07:17, 07:237, 08:28, 08:35, 08:37, 15:07:01-15:07:03, 15:55, 15:68, 15:126, 15:197:02, 15:207, 15:331, 15:360, 15:383, 18:14, 35:05:01-35:05:03, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 35:114, 35:232, 40:03, 40:105, 40:267, 40:284, 41:24, 42:09, 46:12, 48:14, 53:14, C*02:60, C*07:294, 07:526, 07:530
20⁵	85 bp 145 bp 175 bp 275 bp	1070 bp	*58:29 *58:39N *58:21, 58:29 *58:21	*18:51, 53:34 *53:34
21	440 bp	1070 bp	*58:14	*35:208
22	160 bp	1070 bp	*58:51	
23	150 bp 260 bp	1070 bp	*58:26 *58:31N, 58:52	*35:75, 39:106, 44:138Q *51:32
24	145 bp 190 bp 280 bp	1070 bp	*58:39N *58:72N *58:40	
25	130 bp 260 bp	1070 bp	*58:57 *58:52	*51:32
26⁵	75 bp 170 bp	1070 bp	*58:66 *58:58	
27	590 bp	1070 bp	*58:08:01-58:09, 58:76	*57:14:01-57:14:02
28	365 bp	1070 bp	*58:01:20, 58:16:01-58:16:02, 58:18	*57:82
29	385 bp	1070 bp	*58:08:01-58:08:02, 58:20, 58:27, 58:59:01-58:59:02	*07:219, 15:17:01:01-15:17:05, 15:162, 15:168, 15:177, 15:196, 15:208, 15:216, 15:230, 15:268, 15:273, 15:356, 15:361, 15:396, 57:01:01-57:01:09, 57:01:11-57:04:02, 57:06-57:66, 57:68-57:83
30	170 bp	1070 bp		
31⁹	-	-	-	Negative Control

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Lot-specific information

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*58 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*58 alleles will be amplified by primer mixes 2, 3, 5 to 7, 9 to 17, 19 to 21, 23, 25 and 27 to 29. In addition, a few HLA-A and HLA-C alleles will be amplified by primer mixes 2, 3, 5, 8 to 11, 15 to 17 and 19.

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

⁶Primer mixes 9, 14, 16 and 17 may have tendencies of primer oligomer formation.

⁷Primer mixes 14 and 17 may have tendencies of unspecific amplifications.

⁸Primer mix 11 may give a lower yield of HLA-specific PCR product than the other HLA-B*58 primer mixes.

⁹Primer mix 31 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.

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

‘w’, might be weakly amplified.

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PRIMER SPECIFICATION

Well No.	13	14	15	16	17	18	19	20	21	22	23	24
Length of spec. PCR product	165	165	90	95	225	70	95	85	440	160	150	145
			155			140		145			260	190
								175				280
								275				
Length of int. pos. control ¹	1070	1070	1070	1070	1070	1070	800	1070	1070	1070	1070	1070
5'-primer(s) ²	652	652	142	355	355	209	363	106	206	653	355	106
	5'-CCg 3'	5'-CCA 3'	5'-TCT 3'	5'-TCA 3'	5'-TCA 3'	5'-ggA 3'	5'-AgC 3'	5'-CCA 3'	5'-gAC 3'	5'-CgC 3'	5'-TCC 3'	5'-CCA 3'
			209	363				209			652	355
			5'-ggC 3'	5'-AgC 3'				5'-ggA 3'			5'-CCg 3'	5'-TCA 3'
3'-primer(s) ³	774	774	256	412	538	239	419	208	362	774	463	208
	5'-ggT 3'	5'-ggT 3'	5'-CCC 3'	5'-gTT 3'	5'-CCg 3'	5'-gCg 3'	5'-Cgg 3'	5'-CTA 3'	5'-TCA 3'	5'-ggT 3'	5'-gCT 3'	5'-CTA 3'
						309		252			870	506
						5'-A.C 3'		5'-TCg 3'			5'-gA 3'	5'-TgC 3'
								340			872	596
								5'-ggT 3'			5'-TCA 3'	5'-TCT 3'
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec. PCR product	90	150	240	190	90	170	80	250	90	115	210	145
				230					160	270		235
									190			
Length of int. pos. control ¹	800	800	800	1070	1070	1070	800	1070	800	800	1070	1070
5'-primer(s) ²	207	354	361	106	463	527	486	361	141	355	361	367
	5'-ACC 3'	5'-ATA 3'	5'-AgT 3'	5'-CCA 3'	5'-TgA 3'	5'-TgA 3'	5'-ACC 3'	5'-AgT 3'	5'-ATT 3'	5'-TCA 3'	5'-AgT 3'	5'-T.T 3'
	209	355							206			454
	5'-ggA 3'	5'-TCA 3'							5'-AgA 3'			5'-ACA 3'
									355			
									5'-TCA 3'			
3'-primer(s) ³	256	463	559	256	512	3 rd I	527	572	256	430	527	559
	5'-CCC 3'	5'-gCT 3'	5'-CAg 3'	5'-CTC 3'	5'-CCA 3'	5'-TAT 3'	5'-CCT 3'	5'-gCg 3'	5'-CCC 3'	5'-gCg 3'	5'-CCA 3'	5'-CAg 3'
				296					479	583	540	
				5'-CTg 3'					5'-CCA 3'	5'-gTg 3'	5'-CTT 3'	
									506			
									5'-TgC 3'			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Well No.	25	26	27	28	29	30
Length of spec. PCR product	130	75	590	365	385	170
	260	170				
Length of int. pos. control ¹	1070	1070	1070	1070	1070	1070
5'-primer(s) ²	652	652	281	281	281	209
	5'-CCg 3'	5'-CCg 3'	5'-CTC 3'	5'-CTC 3'	5'-CTC 3'	5'-ggA 3'
3'-primer(s) ³	739	685	583	353	379	339
	5'-gTA 3'	5'-ggA 3'	5'-gTg 3'	5'-ggg 3'	5'-CAC 3'	5'-gCg 3'
	872	782		369	379	
	5'-TCA 3'	5'-CTT 3'		5'-CCg 3'	5'-CAC 3'	
Well No.	25	26	27	28	29	30

101.568-06 – including *Taq* polymerase, IFU-01
101.568-06u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **7E4**

Lot-specific information

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

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

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

101.568-06 – including *Taq* polymerase, IFU-01
101.568-06u – without *Taq* polymerase, IFU-02

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Lot No.: **7E4**

Lot-specific information

CELL LINE VALIDATION SHEET																					
HLA-B*58 SSP subtyping kit ²																					
					Well																
						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Prod. No.:		201330001	201557302	201298703	201298704	201312705	201298706	201675707	201298708	201557309	201298710	201675711	201330012	201298713	201298714	201312715	201298724
	IHWC cell line ¹		B*																		
1	9001	SA	*07:02			-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-
2	9280	LK707	*52:01	*73:01		-	-	-	-	-	+	+	-	-	-	-	-	+	-	-	-
3	9011	E4181324	*52:01			-	-	-	-	-	+	+	-	-	-	-	-	+	-	-	-
4	9275	GU373	*15:10	*53:01		-	+	-	-	-	+	-	-	-	-	-	-	+	+	-	-
5	9009	KAS011	*37:01			-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-
6	9353	SM	*39:01	*51:01		-	-	-	-	-	+	+	-	-	-	-	-	+	+	-	-
7	9020	QBL	*18:01			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
8	9025	DEU	*35:01			-	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-
9	9026	YAR	*38:01			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
10	9107	LKT3	*54:01			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
11	9051	PITOUT	*44:03			-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-
12	9052	DBB	*57:01			-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-
13	9025	JESTHOM	*27:05			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
14	9071	OLGA	*15:01	*15:20		-	+	-	-	-	+	-	-	-	-	-	-	+	+	-	-
15	9075	DKB	*40:01			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
16	9037	SWEIG007	*40:02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
17	9282	CTM3953540	*08:01	*55:01		-	-	-	-	-	+	+	-	-	-	-	-	-	+	-	+
18	9257	32367	*14:01	*56:01		-	-	-	-	-	+	+	-	-	-	-	-	-	+	-	-
19	9038	BM16	*18:01			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
20	9059	SLE005	*40:01			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
21	9064	AMALA	*15:01			-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-
22	9056	KOSE	*35:03			-	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-
23	9124	IHL	*40:02	*56:02		-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+
24	9035	JBUSH	*38:01			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
25	9049	IBW9	*14:02			-	-	-	-	-	+	+	-	-	-	-	-	-	+	-	-
26	9285	WT49	*58:01			+	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-
27	9191	CH1007	*07:05	*51:01		-	-	-	-	-	+	+	-	-	-	-	-	+	+	-	+
28	9320	BEL5GB	*44:02	*44:03		-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-
29	9050	MOU	*44:03			-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-
30	9021	RSH	*42:01			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+
31	9019	DUCAF	*18:01			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
32	9297	HAG	*41:02			-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	+
33	9098	MT14B	*40:01			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
34	9104	DHIF	*38:01			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
35	9302	SSTO	*44:02			-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-
36	9024	KT17	*15:01	*35:01		-	+	-	-	-	+	-	-	-	-	-	-	+	+	-	-
37	9065	HHKB	*07:02			-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-
38	9099	LZL	*15:01			-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-
39	9315	CML	*08:01	*27:05		-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+
40	9134	WHONP199	*13:02	*46:01		-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-
41	9055	H0301	*14:02			-	-	-	-	-	+	+	-	-	-	-	-	-	+	-	-
42	9066	TAB089	*46:01			-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-
43	9076	T7526	*46:01			-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-
44	9057	TEM	*38:01			-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
45	9239	SHJO	*42:01	*50:01		-	-	-	-	-	+	+	-	-	-	-	-	-	+	-	+
46	9013	SCHU	*07:02			-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-
47	9045	TUBO	*51:01			-	-	-	-	-	+	+	-	-	+	-	-	+	-	-	-
48	9303	TER-ND	*35:01	*44:03		-	+	-	-	-	-	-	-	-	-	-	-	+	+	-	-

101.568-06 – including *Taq* polymerase, IFU-01
101.568-06u – without *Taq* polymerase, IFU-02

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Lot No.: 7E4

Lot-specific information

CELL LINE VALIDATION SHEET																			
HLA-B*58 SSP subtyping kit ²																			
					Prod. No.:	Well													
						17	18	19	20	21	22	23	24	25	26	27	28	29	30
						201675717	201298718	201298719	201312720	201298721	201557322	201557323	201675724	201557325	201557326	201557327	201657528	201675729	201675730
	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	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		-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.568-06 – including *Taq* polymerase, IFU-01
101.568-06u – without *Taq* polymerase, IFU-02

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Lot No.: **7E4**

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 4, 5, 8 to 10, 12, 18, 20 to 28 and 30 were available. The specificities of the primers in primer solutions 5, 8 to 10, 23, 27 and 28 were tested by separately adding one or two additional 5'-primers, respectively one, two or three additional 3'-primers.

In primer solution 4, 18, 20, 21, 24 to 26 and 30 it was only possible to test the 5'-primers, the 3'-primer were not possible to test. In primer solutions 12 and 22 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 9 to 11 and 23 one or two 3'-primers were not possible to test. In primer solution 1 and 2 one 5'-primer was not possible to test. Additional primers in primer solutions 15 and 29 were tested by separately adding one additional 5'-primer or one additional 3'-primer.

101.568-06 – including *Taq* polymerase, IFU-01
101.568-06u – without *Taq* polymerase, IFU-02

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Lot No.: **7E4**

Lot-specific information

101.568-06 – including *Taq* polymerase, IFU-01
101.568-06u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **7E4**

Lot-specific information

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