

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

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

Lot No.: **30V**

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:	30V
Expiry date:	2016-August-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. 30V.

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 (80R)**

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

A well containing Negative Control primer pairs has been added.

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

¹As described in section Uniquely Identified Alleles.

The HLA-B*58 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. 80R).

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
1	Added	-	5'-primer added for the B*58:01:14 allele.
9	Added, modified	-	5'-primer added for the B*58:44 allele, 5'-primer modified for improved HLA-specific amplification.
12	Added	-	5'-primer added from well 16.
16	Moved, added	Moved, added	Primer pair moved to well 12, primer pair added from well 24.
17	-	Added	3'-primer added for the B*58:16:02 allele.
24	Moved	Moved	Primer pair moved to well 16, Negative Control.

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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 and DPB1 amplicons as well as amplicons generated by a control primer pair.

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

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

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

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

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Lot-specific information

PRODUCT DESCRIPTION

HLA-B*58 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*58:01 to B*58:48 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 cut PCR plate is marked with 'HLA-B*58' in silver/gray ink.

Well No. 1 is marked with the Lot No. '30V'.

Wells 1 to 23 – HLA-B*58 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 heat-sealed with a PCR-compatible foil.

Please note: When removing each 24 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, 10 to 17 and 19 to 23. In addition, a few HLA-A and HLA-C alleles will be amplified by primer mixes 2, 3, 5, 9 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*58:48** recognized by the HLA Nomenclature Committee in October 2013 will be amplified by the primers in the HLA-B*58 subtyping kit^{1,2}.

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.

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Lot-specific information

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.

The HLA-B*58 primer set cannot distinguish the following silent mutations: the B*58:01:01-58:01:14 alleles and the B*58:16:01-58:16:02 alleles.

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

Alleles	Primer mix
B*58:09, 58:24	10
B*58:10N, 58:13	12
B*58:21, 58:29	20

¹HLA-B alleles listed on the IMGT/HLA web page 2013-October-11, release 3.14.0, 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>.

ALLELE CONFIRMATION STATUS

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
B*58:01:01	Confirmed	B*58:08:02	Confirmed	B*58:27	Unconfirmed
B*58:01:02	Unconfirmed	B*58:09	Unconfirmed	B*58:28	Unconfirmed
B*58:01:03	Unconfirmed	B*58:10N	Unconfirmed	B*58:29	Unconfirmed
B*58:01:04	Unconfirmed	B*58:11	Confirmed	B*58:31N	Unconfirmed
B*58:01:05	Unconfirmed	B*58:12	Confirmed	B*58:32	Unconfirmed
B*58:01:06	Unconfirmed	B*58:13	Unconfirmed	B*58:33	Unconfirmed
B*58:01:07	Unconfirmed	B*58:14	Unconfirmed	B*58:34	Unconfirmed
B*58:01:08	Confirmed	B*58:15	Unconfirmed	B*58:35	Unconfirmed
B*58:01:09	Unconfirmed	B*58:16:01	Unconfirmed	B*58:36	Unconfirmed
B*58:01:10	Unconfirmed	B*58:16:02	Unconfirmed	B*58:37	Unconfirmed
B*58:01:11	Unconfirmed	B*58:17N	Unconfirmed	B*58:38	Unconfirmed
B*58:01:12	Unconfirmed	B*58:18	Confirmed	B*58:39N	Unconfirmed
B*58:01:13	Unconfirmed	B*58:19	Unconfirmed	B*58:40	Unconfirmed
B*58:01:14	Unconfirmed	B*58:20	Unconfirmed	B*58:41	Unconfirmed
B*58:02	Confirmed	B*58:21	Confirmed	B*58:42	Unconfirmed
B*58:04	Confirmed	B*58:22	Unconfirmed	B*58:43	Unconfirmed
B*58:05	Unconfirmed	B*58:23	Confirmed	B*58:44	Unconfirmed
B*58:06	Confirmed	B*58:24	Confirmed	B*58:45	Unconfirmed
B*58:07	Confirmed	B*58:25	Unconfirmed	B*58:46	Unconfirmed
B*58:08:01	Unconfirmed	B*58:26	Confirmed	B*58:47	Unconfirmed
				B*58:48	Unconfirmed

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2013-October-11, release 3.14.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

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

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Lot-specific information
SPECIFICITY TABLE

HLA-B*58 SSP subtyping

Specificities and sizes of the PCR products of the 23+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
1 ⁵	90 bp	800 bp	*58:01:01-58:02, 58:05-58:29, 58:31N-58:35, 58:37-58:38, 58:40-58:43, 58:45-58:48	
2	150 bp	800 bp	*58:01:01-58:01:14, 58:04-58:05, 58:09-58:15, 58:17N, 58:19, 58:21-58:24, 58:28-58:29, 58:31N-58:37, 58:39N-58:42, 58:44-58:45, 58:47-58:48	*08:49, 13:01:01-13:01:06, 13:06-13:07N, 13:12:01-13:13, 13:17, 13:20, 13:22:01-13:23, 13:25-13:26, 13:28-13:29, 13:36, 13:39, 13:43, 13:50-13:52, 13:57, 13:60-13:61, 13:63N, 14:10, 15:02:01-15:02:06, 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, 18:22, 18:69, 27:19, 27:30, 35:01:01:01-35:04:03, 35:06-35:08:06, 35:10-35:17, 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, 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, 35:152-35:173N, 35:175-35:184, 35:186-35:198, 35:200-35:204, 35:206-35:229, 35:231, 35:233, 35:236-35:240, 37:01:01-37:01:07, 37:01:09, 37:03N-37:06, 37:08, 37:10-37:11, 37:13-37:42N, 38:20, 39:42, 40:28, 44:02:01:01-44:14, 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, 46:33, 48:02:01-48:02:03, 48:25, 50:17, 51:04, 51:42, 51:46, 51:56:01-51:56:02, 51:139, 53:01:01-53:13, 53:15-53:31, 55:14, 56:09, 56:11-56:12, 57:01:01-57:01:04, 57:01:06-57:10, 57:12, 57:14-57:20, 57:22-57:30, 57:32-57:46, 57:48-57:68, 83:01, C*03:102
3	240 bp	800 bp	*58:02, 58:06-58:07, 58:25, 58:38, 58:43, 58:46	*14:19, 14:27, 57:11, C*01:35, C*03:17, C*03:71, C*06:96, C*14:20
4	190 bp 230 bp	1070 bp	*58:04 *58:15	

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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, 46:43, 48:14, 48:26, 48:29, 57:59, C*07:81, C*07:168
6	170 bp	1070 bp	*58:06, 58:08:01-58:08:02, 58:19, 58:46	*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, 07:203-07:204, 08:20, 08:53:01-08:53:02, 08:79, 13:16, 13:20, 13:31, 13:48, 13:62, 14:01:01-14:37, 15:01:01:01-15:01:04, 15:01:06-15:04, 15:06-15:19, 15:21, 15:23-15:30, 15:32-15:40, 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, 15:284-15:291, 18:15, 18:19, 18:21, 18:30, 18:57, 27:04:01-27:04:03, 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, 27:105-27:107, 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, 37:07, 37:13, 38:10, 38:32, 39:18, 39:35-39:36, 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, 42:19, 44:76, 44:79, 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, 46:26-46:32, 46:34-46:42, 48:05, 48:08, 48:15, 48:25, 49:01:01-49:10, 49:12-49:26, 50:01:01-50:02, 50:04-50:20, 50:31-50:34, 51:01:01-51:04, 51:06:01-51:07:02, 51:11N-51:14, 51:16-51:18, 51:21-51:24:05, 51:26-51:30, 51:32-51:39, 51:41N, 51:43, 51:45-51:46, 51:48-51:52, 51:55-51:72, 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, 51:142-51:147, 51:149N-51:152, 51:154, 52:01:01:01-52:02:02, 52:04-52:09, 52:11-52:18, 52:20-52:27, 52:30-52:32, 53:06, 53:08:01-53:08:02, 53:28, 54:06, 54:20, 55:01:01-55:01:11, 55:03, 55:05, 55:09, 55:11, 55:14-55:15, 55:17, 55:21, 55:24-55:25, 55:28-55:29, 55:31, 55:33, 55:36, 55:38, 55:40, 55:44-55:45, 55:52-55:53, 55:55N-55:56, 55:58-55:60, 56:03, 56:05:01-56:06, 56:21, 56:25, 56:32, 56:37, 57:09, 57:13, 57:22, 57:57, 57:63, 78:01:01-78:03, 78:05-78:07
7^{5,8}	80 bp	800 bp	*58:06, 58:08:01-58:08:02, 58:19, 58:46	*07:02:35 ^w , 07:68:02 ^w , 13:16, 13:20, 13:48, 13:62, 14:01:01-14:02:06, 14:02:08-14:02:09, 14:03 ^w , 14:04-14:11, 14:12 ^w , 14:13-14:37, 15:03:02, 15:03:04, 15:13:02, 15:39:02, 15:42, 18:15, 35:11:01, 35:11:03 ^w , 35:21, 35:58, 35:96, 35:167,

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8	250 bp	1070 bp	*58:07	
9^{5,6}	90 bp 160 bp	800 bp	*58:44 *58:08:01, 58:23	A*02:01:33
10⁵	115 bp 270 bp	800 bp	*58:24 *58:09	C*03:141, C*15:18 *14:10, 18:22, 18:69, 35:21, 35:24:01-35:24:02, 35:81, 35:96, 35:109, 35:157, 35:188, 35:190, 35:233, 37:04:01-37:04:02, 40:28, 51:04, 51:46, 51:56:01-51:56:02, 51:139, 53:02, 53:06, 53:28, 57:14, C*15:39
11⁸	205 bp	1070 bp	*58:02, 58:07, 58:25, 58:38, 58:43	*18:44:01-18:44:02, 40:243, 57:11, A*24:64^w, C*01:06^w, C*14:53, C*16:43^w
12	145 bp 235 bp	1070 bp	*58:13 *58:10N	*49:06
13	165 bp	1070 bp	*58:01:01-58:02, 58:04-58:10N, 58:12-58:19, 58:21-58:29, 58:31N-58:48	*15:20, 15:228, 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, 35:61:01-35:72, 35:74-35:78, 35:80-35:86, 35:88-35:184, 35:186-35:240, 48:02:01-48:02:03, 51:01:01-51:24:05, 51:26-51:41N, 51:43-51:46, 51:48-51:154, 52:01:01:01-52:06:02, 52:08-52:32, 53:01:01-53:31, 56:05:01-56:05:02, 56:21, 56:36, 78:01:01-78:07, 81:03, 83:01 [?]
14^{6,7}	165 bp	1070 bp	*58:11, 58:20	*07:02:01-07:57, 07:59-07:204, 08:01:01-08:05, 08:07-08:113, 13:01:01-13:04, 13:06-13:23, 13:25-13:60, 13:62-13:71, 14:01:01-14:37, 15:01:01:01-15:01:04, 15:01:06-15:19, 15:21, 15:23-15:40, 15:42-15:58, 15:60-15:99, 15:101, 15:103-15:129, 15:131-15:227, 15:229-15:283, 15:285-15:291,

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				18:01:01:01-18:15, 18:17N-18:94N, 27:01-27:21, 27:23-27:107, 35:31, 35:35, 35:43:01, 35:46, 35:57, 35:60, 35:79, 35:87, 35:185, 37:01:01-37:42N, 38:01:01-38:45, 39:01:01:01-39:01:01:03, 39:01:03-39:20, 39:22-39:45, 39:47-39:83, 40:01:01-40:16, 40:18-40:40, 40:42-40:235, 40:237-40:249, 41:01-41:29, 42:01:01-42:02, 42:04-42:20, 44:02:01:01-44:65, 44:67-44:117, 44:119-44:183, 45:01-45:14, 46:01:01-46:43, 47:01:01:01-47:08, 48:01:01-48:01:04, 48:02:02-48:32, 49:01:01-49:26, 50:01:01-50:02, 50:04-50:20, 50:31-50:34, 51:42, 52:07, 54:01:01-54:30, 55:01:01-55:05, 55:07-55:60, 56:01:01-56:04, 56:06-56:20:02, 56:22-56:43, 57:01:01-57:01:10, 57:01:12-57:68, 59:01:01:01-59:06, 67:01:01-67:03, 81:01-81:02, 81:04N-81:06, 82:01-82:03, 83:01?
15⁵	90 bp	1070 bp	*58:36	*57:01:01-57:15, 57:17-57:19, 57:21-57:35, 57:37-57:44, 57:46-57:50, 57:52-57:61, 57:63-57:68
	155 bp		*58:12	*57:58, A*02:42, A*02:310
16^{5,6}	95 bp	1070 bp	*58:27-58:28	*07:05:01-07:06, 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, 08:01:01-08:05, 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, 08:112-08:113, 13:13, 13:21, 13:71, 14:13, 27:07:01-27:07:04, 27:11, 27:24, 27:33, 27:43, 35:02:01-35:02:06, 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, 37:12, 39:14, 40:02:01-40:02:15, 40:02:17, 40:04-40:05, 40:08, 40:13, 40:15-40:16, 40:19, 40:28-40:30, 40:34-40:35, 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, 41:02:01-41:02:05, 41:10-41:11, 41:13, 41:15, 41:19, 41:23, 41:27, 42:01:01-42:02, 42:05:01-42:05:02, 42:07-42:08, 42:10-42:15, 42:17-42:19, 44:62, 44:77, 44:82, 44:166, 48:01:01-48:01:04, 48:04-48:06, 48:09-48:13, 48:15-48:16, 48:18-48:20, 48:22, 48:24, 48:27-48:32, 51:04, 51:46, 51:56:01-51:56:02, 51:64, 51:81, 51:139, 51:148, 53:19, 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, 81:01-81:06, C*15:24

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

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Lot No.: **30V**

Lot-specific information

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, 35:08:01-35:08:06, 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, 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, 57:04-57:05, 57:12-57:13, 57:19, 57:28N, 57:30, 57:42, 57:63, A*01:41, C*01:49-01:50, C*03:28, C*03:49, C*03:117, C*04:80, C*04:100, C*04:110, C*05:10, C*14:54, C*15:08
	370 bp		*58:16:01-58:16:02, 58:18	
18⁵	70 bp	1070 bp	*58:25	
	140 bp		*58:17N	
19⁵	95 bp	800 bp	*58:18	*07:09, 07:11, 07:17, 08:28, 08:35, 08:37, 15:07:01-15:07:02, 15:55, 15:68, 15:126, 15:207, 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, 41:24, 42:09, 46:12, 48:14, 53:14, C*02:60, C*07:294
20⁵	85 bp	1070 bp	*58:29	
	145 bp		*58:39N	
	175 bp		*58:21, 58:29	*18:51
	275 bp		*58:21	
21	440 bp	1070 bp	*58:14	*35:208
22	180 bp	1070 bp		*35:70
23	150 bp	1070 bp	*58:26	*35:75, 44:138Q
	260 bp		*58:31N	
24⁹	-	-	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*38 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.

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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, 10 to 17 and 19 to 23. In addition, a few HLA-A and HLA-C alleles will be amplified by primer mixes 2, 3, 5, 9 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 7 and 11 may give a lower yield of HLA-specific PCR product than the other HLA-B*58 primer mixes.

⁹Primer mix 24 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by control primer pairs. PCR product sizes range from 75 to 200 base pairs. The PCR product generated by the control primer pair is 430 base pairs.

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

'w', might be weakly amplified.

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Lot-specific information
PRIMER SPECIFICATION

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	205	145
Length of int. pos. control ¹	800	800	800	1070	1070	1070	800	1070	800	800	1070	1070
5'-primer(s) ²	207	355	361	106	463	527	486	361	141	355	361	367
	5'-ACC 3'	5'-TCA 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								206			454
	5'-ggA 3'								5'-AgA 3'			5'-ACA 3'
									355			
									5'-TCA 3'			
3'-primer(s) ³	256	463	559	256	512	3rd 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		
				5'-CTg 3'					5'-CCA 3'	5'-gTg 3'		
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Well No.	13	14	15	16	17	18	19	20	21	22	23
Length of spec. PCR product	165	165	90	95	225	70	95	85	440	180	150
Length of int. pos. control ¹	1070	1070	1070	1070	1070	1070	800	1070	1070	1070	1070
5'-primer(s) ²	652	652	142	355	281	209	363	106	206	635	355
	5'-CCg 3'	5'-CCA 3'	5'-TCT 3'	5'-TCA 3'	5'-CTC 3'	5'-ggA 3'	5'-AgC 3'	5'-CCA 3'	5'-gAC 3'	5'-ACg 3'	5'-TCC 3'
			209	363	355			209			652
			5'-ggC 3'	5'-AgC 3'	5'-TCA 3'			5'-ggA 3'			5'-CCg 3'
3'-primer(s) ³	774	774	256	412	353	239	419	208	362	774	463
	5'-ggT 3'	5'-ggT 3'	5'-CCC 3'	5'-gTT 3'	5'-ggg 3'	5'-gCg 3'	5'-Cgg 3'	5'-CTA 3'	5'-TCA 3'	5'-ggT 3'	5'-gCT 3'
					369	309		252			870
					5'-CCg 3'	5'-A.C 3'		5'-TCg 3'			5'-gA 3'
					538			340			
					5'-CCg 3'			5'-ggT 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.

101.568-06 – including *Taq* polymerase, IFU-01
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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	201298702	201298703	201298704	201312705	201298706	201312707	201298708	201330009	201298710	201298711	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
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Lot-specific information

CELL LINE VALIDATION SHEET						
HLA-B*58 SSP subtyping kit²						
			Well			
				17	18	19
			Prod. No.:			
			201330017			
			201298718			
			201298719			
			201312720			
			201298721			
			201298722			
			201312723			
	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 OLG A	*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.

101.568-06 – including *Taq* polymerase, IFU-01
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Lot No.: 30V

Lot-specific information

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 and 20 to 23 were available. The specificities of the primers in primer solutions 5, 8 to 10 and 23 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solution 4, 18, 20 and 21 it was only possible to test the 5'-primer, the 3'-primer was 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, 10 and 23, one 3'-primer was not possible to test. In primer solution 1, one 5'-primer was not possible to test. Additional primers in primer solutions 15 and 17 were tested by separately adding one additional 5'-primers and respectively one additional 3'-primer.

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

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

Lot No.: **30V**

Lot-specific information

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