101.212-24/04 – including *Taq* pol., IFU-01
101.212-24u/04u – without *Taq* pol., IFU-02

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

Lot No.: 93X

Lot-specific information

Olerup SSP® DQB1*06

Product number:	**101.212-24/04 – including *Taq* pol.** **101.212-24u/04u – without *Taq* pol.**
Lot number:	**93X**
Expiry date:	**2017-September-01**
Number of tests:	**24 test – Product No. 101.212-24/24u** **4 tests – Product No. 101.212-04/04u**
Number of wells per test:	**61+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. 93X.

Complete product documentation consists of generic Instructions for Use (IFU), lot specific Product Insert, Worksheet and Certificate.

CHANGES COMPARED TO THE PREVIOUS *OLERUP* SSP®
DQB1*06 LOT (62V)

A well containing Negative Control primer pairs has been added.

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

Two wells have been added to DQB1*06, wells **61 to 62**.

The DQB1*06 primer set, specificity and interpretation tables have been updated for the DQB1 alleles described since the previous *Olerup* SSP® DQB1*06 lot **(Lot No. 62V)**. The kit design is based on IMGT/HLA database 3.16.0.

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.

101.212-24/04 – including *Taq* pol., IFU-01
101.212-24u/04u – without *Taq* pol., IFU-02

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

Lot No.: 93X **Lot-specific information**

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

Well	5'-primer	3'-primer	rationale
4	-	Added	3'-primer added for the DQB1*06:03:13 allele.
8	-	-	Exchanged positive control primer pair for decreased tendency of primer oligomer formation.
14	-	Added	3'-primer added for the DQB1*06:146 allele.
15	-	Modified	3'-primer modified for increased HLA-specific amplification.
21	-	Added	3'-primer added for the DQB1*06:02:16 allele.
25	Added	-	5'-primer added for improved yield of the DQB1*06:49 allele.
27	Added	-	3'-primer added for the DQB1*06:132 allele.
32	Modified	-	5'-primer modified and strength of control band has been optimized for improved yield.
34	-	Modified	3'-primer modified for improved HLA-specific amplification.
35	Added	-	5'-primer added for the DQB1*06:135 allele.
36	-	Added	3'-primer added for the DQB1*06:138 allele.
37	-	Added	3'-primer added for the DQB1*06:137 allele.
38	-	Added	3'-primer added for the DQB1*06:137 allele.
39	-	Added	3'-primer added for the DQB1*06:138 allele.
40	-	Modified	3'-primer modified for HLA-specific amplification.
41	Moved, added		5'-primer moved to wells 47 and 48 for the DQB1*06:148, 5'-primer added for the DQB1*06:130 allele.
42	-	Added	3'-primer added for the DQB1*06:142 allele.
43	Added	-	5'-primer added for the DQB1*06:131 allele.
44	Added		5'-primer added for the DQB1*06:143 allele.
47	Added	-	5'-primer added from well 41, 5'-primer added for the DQB1*06:143 allele.
48	Added	-	5'-primer added from well 48, 5'-primer added for the DQB1*06:145 allele.
49	Added	-	5'-primers added for the DQB1*06:132 and DQB1*06:140 alleles.
50	Added	-	5'-primers added for the DQB1*06:134, DQB1*06:140 and DQB1*06:144N alleles.
52	Added	Added	Primer pair added for the DQB1*06:133 allele.
53	Added	Added	Primer pair added for the DQB1*06:147 allele.
54	Added	-	5'-primer added for the DQB1*06:131 allele.
57	Added	-	5'-primer added for the DQB1*06:135 allele.
59	Added	Added	Primer pair added for the DQB1*06:147 allele.
60	Added	Added	Primer pair added for the DQB1*06:141 allele, updated negative control moved to well 62.
61	New	New	New primer pair for the DQB1*06:136 allele.
62	-	-	Updated negative control added from well 60.

Lot No.: 93X **Lot-specific information**

Well **62** contains Negative Control primer pairs, that will amplify more than 95% of the *Olerup* SSP® HLA Class I, DRB, DQB1, DPB1 and DQA1 amplicons as well as all the amplicons generated by the control primer pairs matching the human growth hormone gene.

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

Length of PCR product	**105**	**200**	**105**	**80**	**75**	**80**	**85**
5'-primer[1]	**164**	**340**	**440**	**45**	**45**	**43**	**36**
	5'-CAC3'	**5'-Agg3'**	**5'-TTA3'**	**5'-Tgg3'**	**5'-Tgg3'**	**5'-Tgg3'**	**5'-TAC3'**
							36
							5'-TAT3'
3'-primer[2]	**231**	**2nd I**	**507**	**59**	**58**	**57**	**47**
	5'-TgC3'	**5'-AAA3'**	**5'-TTg3'**	**5'-CTC3'**	**5'-ggC3'**	**5'-CTC3'**	**5'-ACA3'**
							48
							5'-gCA3'
							48
							5'-gCC3'
							52
							5'-TgT3'
A*	**+**	**+**	**+**				
B*	**+**	**+**	**+**				
C*	**+**	**+**	**+**				
DRB1				**+**	**+**		
DRB3				**+**	**+**		
DRB5				**+**			
DQB1					**+**		
DPB1						**+**	
DQA1							**+**

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

Lot No.: 93X **Lot-specific information**

PRODUCT DESCRIPTION

DQB1*06 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the DQB1*06:01 to DQB1*06:148 alleles.

Please note that DQB1 amplifications usually are somewhat less pronounced than e.g. DRB and DQA1 amplifications even when using the same DNA preparation and exactly the same experimental procedures.

PLATE LAYOUT

Each test consists of 62 PCR reactions in a 64 well cut PCR plate. Wells 63 to 64 are empty

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	NC	empty	empty

The 64 well cut PCR plate is marked with 'DQB1*06' in silver/gray ink.
Well No. 1 is marked with the Lot No. '93X'.
Wells 1 to 61 – DQB1*06 high resolution primers.
Well 62 – 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 64 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 DQB1 alleles non-DQB1*06 alleles will be amplified by primer mixes 3, 5, 13, 15 to 17, 21, 24, 33, 34, 37, 43, 46, 47 and 51 to 54. Thus, the interpretation of DQB1*06 subtypings is only influenced by a few non-DQB1*06 alleles and not by other groups of DQB1 alleles or the DQB2 and DQB3 genes.
For further details see Specificity Table.

Lot No.: 93X **Lot-specific information**

UNIQUELY IDENTIFIED ALLELES

All the DQB1*06 alleles, i.e. **DQB1*06:01 to DQB1*06:148**, recognized by the HLA Nomenclature Committee in April 2014[1,2] will give rise to unique amplification patterns by the primers in the DQB1*06 subtyping kit.

The following DQB1*06 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

Alleles	Primer mix	Alleles	Primer mix
DQB1*06:33, 06:114	27	DQB1*06:91, 06:128	48
DQB1*06:70, 06:75	40	DQB1*06:97, 06:124	45
DQB1*06:83, 06:125	20	DQB1*06:134, 06:144N	50

The DQB1*06 subtyping kit cannot distinguish the silent mutations in the DQB1*06:01:01, 06:01:03-06:01:06 and 06:01:08-06:01:11 alleles, the DQB1*06:01:02, 06:01:07 and 06:01:12 alleles, the DQB1*06:02:01-06:02:04, 06:02:06 and 06:02:08-06:02:17 alleles, the DQB1*06:03:01-06:03:03, 06:03:05-06:03:06 and 06:03:11-06:03:14 alleles, the DQB1*06:03:04 and 06:03:08-06:03:10, the DQB1*06:04:01 and 06:04:03-06:04:08 alleles, the DQB1*06:09:03 and 06:09:05 alleles, the DQB1*06:11:02-06:11:03 alleles, the DQB1*06:13:01-06:13:02 alleles, the DQB1*06:15:01-06:15:02 alleles or the DQB1*06:27:01-06:27:02 alleles.

[1]HLA-DQB1 alleles listed on the IMGT/HLA web page 2014-April-14, release 3.16.0, www.ebi.ac.uk/imgt/hla.
[2]Alleles that have been deleted from or renamed in the official WHO HLA Nomenclature up to and including the last IMGT/HLA database release can be retrieved from web page http://hla.alleles.org/alleles/deleted.html.

RESOLUTION IN HOMO- AND HETEROZYGOTES

Results file with resolution in DQB1*06 homo- and heterozygotes is available upon request.

101.212-24/04 – including *Taq* pol., IFU-01
101.212-24u/04u – without *Taq* pol., IFU-02

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

Lot No.: 93X **Lot-specific information**

SPECIFICITY TABLE

DQB1*06 SSP subtyping

Specificities and sizes of the PCR products of the 61+1 primer mixes used for DQB1*06 SSP subtyping

Primer Mix	Size of spec. PCR product[1]	Size of control band[2]	Amplified DQB1*06 alleles[3]	Amplified non-DQB1*06 alleles[4]
1	220 bp	**515 bp**	*06:01:01-06:01:12, 06:35, 06:43, 06:45, 06:53-06:57, 06:82, 06:98-06:105, 06:108, 06:120, 06:132, 06:140	
2	210 bp	430 bp	*06:01:01-06:02:17, 06:05:02?-06:06?, 06:10-06:11:03, 06:13:01-06:13:02, 06:16, 06:18:01-06:20, 06:24, 06:29, 06:33, 06:35, 06:37, 06:43, 06:45, 06:47-06:51:02, 06:53-06:57, 06:68, 06:70-06:84, 06:95-06:109, 06:111-06:117, 06:120, 06:122-06:127, 06:130-06:132, 06:136-06:140, 06:147	
3	185 bp	430 bp	*06:02:01-06:02:17, 06:14:01-06:16, 06:19:01-06:20, 06:23-06:24, 06:33, 06:37, 06:46-06:50, 06:51:02, 06:68, 06:70-06:84, 06:95, 06:97, 06:107, 06:109, 06:111-06:117, 06:122, 06:124-06:127, 06:136-06:138, 06:146-06:147	*04:10
4	130 bp	430 bp	*06:02:07, 06:03:01-06:03:06, 06:03:08-06:03:15, 06:05:02, 06:07:01-06:07:02, 06:11:02-06:11:03, 06:14:01, 06:25-06:26N, 06:28, 06:30-06:32, 06:40-06:41, 06:44, 06:59-06:67, 06:87, 06:90-06:92, 06:110, 06:118:01, 06:128, 06:133-06:134, 06:141, 06:143-06:145, 06:148	
5	160 bp	430 bp	*06:03:01-06:03:03, 06:03:05-06:03:07, 06:03:11-06:03:15, 06:04:02, 06:07:01, 06:08:01, 06:09:02, 06:11:01-06:11:03, 06:26N, 06:28, 06:30-06:32, 06:40-06:41, 06:44, 06:59-06:62, 06:64-06:65, 06:67, 06:90-06:92, 06:94, 06:110, 06:118:01, 06:128, 06:133-06:134, 06:141, 06:143-06:145, 06:148	*03:23, 05:03:12
6	170 bp	**515 bp**	*06:02:07, 06:03:01-06:03:06, 06:03:08-06:03:14, 06:08:01-06:08:02, 06:11:02-06:12, 06:14:01, 06:21, 06:26N, 06:28, 06:31, 06:40-06:41, 06:44, 06:59, 06:61, 06:63-06:65, 06:67, 06:87, 06:90-06:92, 06:110, 06:128, 06:133-06:134, 06:141, 06:143-06:145, 06:148	
7	210 bp	**515 bp**	*06:04:01-06:04:08, 06:07:01-06:07:02, 06:17, 06:21, 06:25, 06:34, 06:36, 06:38-06:39, 06:52, 06:58, 06:69, 06:85-06:86, 06:89, 06:92-06:93, 06:135	
8[5,8]	90 bp 175 bp	**515 bp**	*06:65 *06:04:01-06:07:02, 06:09:01-06:09:03, 06:09:05, 06:18:01, 06:22:02, 06:25,	

			06:27:01-06:27:02, 06:32, 06:34, 06:36, 06:38-06:39, 06:52, 06:58, 06:66, 06:69, 06:85-06:86, 06:88-06:89, 06:93-06:94, 06:118:01, 06:121, 06:129, 06:135, 06:142	
9[6,8]	130 bp	430 bp	*06:04:01-06:05:01, 06:06, 06:08:01-06:09:03, 06:09:05, 06:12, 06:17-06:18:01, 06:21, 06:22:02, 06:27:01-06:27:02, 06:34, 06:36, 06:38-06:39, 06:42, 06:52, 06:58, 06:69, 06:85-06:86, 06:88-06:89, 06:93, 06:121, 06:129, 06:135, 06:142	
10[8,9]	260 bp	**515 bp**	*06:05:01, 06:05:02[?]-06:06[?], 06:20, 06:31, 06:45, 06:85	
11[8]	210 bp	430 bp	*06:05:01, 06:05:02[?]-06:06[?], 06:09:01-06:09:05, 06:12, 06:15:01-06:15:02, 06:22:01-06:22:02, 06:42, 06:46, 06:66, 06:88, 06:94, 06:118:01-06:119, 06:121, 06:142	
12[5]	100 bp	430 bp	*06:64	
	180 bp		*06:06	
	215 bp		*06:06[?], 06:129	
13	185 bp	430 bp	*06:10, 06:130	
	225 bp		*06:05:02, 06:15:01-06:15:02, 06:22:01-06:22:02, 06:37, 06:48, 06:51:01-06:51:02, 06:69, 06:139	*03:30, 03:72, 03:100
14	130 bp	430 bp	*06:09:04, 06:13:01-06:13:02, 06:22:01, 06:55, 06:119	
	215 bp		*06:146	
15[5,8]	105 bp	430 bp	*06:14:01-06:14:02, 06:69	*05:38, 05:62
	185 bp		*06:29, 06:123, 06:139	*03:132
16[7,8]	205 bp	**515 bp**	*06:16, 06:51:01-06:51:02	*04:01:01[W]-04:03:02[W], 04:06[W]-04:22[W]
	300 bp		*06:52	
17[5]	110 bp	430 bp	*06:23, 06:82, 06:99:01	*05:03:12
18[7]	175 bp	430 bp	*06:17, 06:24, 06:30, 06:42	
19[7]	135 bp	430 bp	*06:10, 06:25, 06:36, 06:130	
20[5,7,8]	110 bp	**515 bp**	*06:37, 06:125	
	210 bp		*06:26N, 06:81	
	260 bp		*06:83	
21	155 bp	430 bp	*06:02:01-06:02:04, 06:02:06-06:02:17, 06:05:02, 06:10, 06:13:01-06:16, 06:20, 06:22:01-06:24, 06:29, 06:33, 06:37, 06:46-06:51:02, 06:68-06:79:01, 06:80-06:84, 06:96-06:97, 06:106-06:107, 06:109, 06:111-06:117, 06:119, 06:122, 06:124-06:127, 06:130, 06:136-06:138, 06:146-06:147	*04:09
22	130 bp	**515 bp**	*06:07:01-06:07:02, 06:15:01-06:15:02, 06:46, 06:66, 06:92, 06:118:01	
	195 bp		*06:38	

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23	160 bp	**515 bp**	*06:03:01-06:03:14, 06:08:01-06:08:02, 06:14:01-06:14:02, 06:21, 06:28, 06:31, 06:40-06:41, 06:44, 06:59, 06:61, 06:63-06:65, 06:67, 06:87, 06:90-06:92, 06:110, 06:128, 06:133-06:134, 06:141, 06:143-06:145, 06:148	
24[6]	155 bp	430 bp	*06:02:05, 06:19:01, 06:139	*03:30, 03:72, 03:100, 03:132, 04:01:01-04:02:04, 04:02:06-04:03:02, 04:06-04:08, 04:10, 04:12-04:14, 04:16-04:22, 05:38
25	210 bp	430 bp	*06:03:01-06:03:15, 06:08:01-06:08:02, 06:14:01-06:14:02, 06:27:01-06:28, 06:30-06:32, 06:40-06:41, 06:44, 06:59-06:65, 06:67, 06:87, 06:90-06:91, 06:98, 06:110, 06:128, 06:133-06:134, 06:141, 06:143-06:145, 06:148	
	260 bp		*06:49	
26	165 bp	430 bp	*06:35, 06:53, 06:145	
	190 bp		*06:28, 06:56, 06:79:01-06:79:02	
27	155 bp	430 bp	*06:114	
	195 bp		*06:40, 06:81, 06:132	
	220 bp		*06:57	
	265 bp		*06:33	
28[8]	130 bp	**515 bp**	*06:102N	
	180 bp		*06:50	
	300 bp		*06:34	
29[5]	90 bp	430 bp	*06:04:01-06:05:01, 06:05:02?-06:06?, 06:07:01-06:07:02, 06:09:01-06:09:05, 06:15:01-06:15:02, 06:22:01-06:22:02, 06:25, 06:34, 06:36, 06:38-06:39, 06:52, 06:58, 06:66, 06:69, 06:85-06:86, 06:88-06:89, 06:93-06:94, 06:118:01, 06:121, 06:135	
30[5,8]	115 bp	430 bp	*06:02:01-06:03:15, 06:05:01?-06:07:01?, 06:08:01?-06:08:02?, 06:09:02?-06:09:03?, 06:09:05?-06:11:03?, 06:13:01?-06:20?, 06:22:01?-06:32?, 06:33, 06:35?, 06:37?, 06:39, 06:40?, 06:44, 06:45?-06:46?, 06:47, 06:48?-06:50?, 06:51:02?, 06:53?-06:83?, 06:85?, 06:87-06:88, 06:89?-06:97?, 06:106-06:117, 06:119?-06:126?, 06:127, 06:128?, 06:130, 06:131?-06:147?, 06:148	
31[5,7,8]	100 bp	430 bp	*06:44, 06:47	
	220 bp		*06:43	
32[5,6,7]	115 bp	430 bp	*06:04:01-06:04:08, 06:05:01?-06:07:01?, 06:07:02, 06:08:01?-06:08:02?, 06:09:01-06:09:05, 06:10?-06:11:03?, 06:12, 06:13:01?-06:20?, 06:21, 06:22:01?-06:32?, 06:34, 06:35?, 06:36, 06:37?, 06:38, 06:40?, 06:41-06:42, 06:45?-06:46?, 06:48?-06:50?, 06:51:02?, 06:52, 06:53?-06:83?, 06:84,	

			06:85[?], 06:86, 06:89[?]-06:97[?], 06:118:01, 06:119[?]-06:126[?], 06:128[?], 06:129, 06:131[?]-06:147[?]	
33	190 bp	430 bp	*06:28, 06:56, 06:79:01-06:79:02	*05:04[?]
34[8]	145 bp	430 bp	*06:01:01, 06:01:03-06:01:06, 06:01:08-06:01:11, 06:43, 06:53-06:57, 06:98, 06:100, 06:102N-06:105, 06:108, 06:120, 06:132, 06:140	*03:04:02, 03:10:01, 03:12, 03:14:02, 03:70
35	185 bp	430 bp	*06:54N, 06:135	
	260 bp		*06:06[?], 06:58	
36	165 bp	430 bp	*06:71, 06:77N-06:78, 06:95, 06:138	
37[5]	120 bp	430 bp	*06:80	
	175 bp		*06:29, 06:76-06:77N 06:96, 06:139	*03:30, 03:72, 03:100, 03:132, 04:09
	245 bp		*06:05:02, 06:137	
38[8]	170 bp	430 bp	*06:78, 06:123	
	245 bp		*06:137	
	285 bp		*06:72-06:73	
39[5]	120 bp	430 bp	*06:80	
	155 bp		*06:138	
	270 bp		*06:73-06:74	
40[5,7,8]	105 bp	430 bp	*06:70	
	190 bp		*06:75N, 06:106	
41[5,8]	215 bp	430 bp	*06:122, 06:130, 06:148	
42[5]	125 bp	430 bp	*06:93	
	165 bp		*06:121, 06:142	
	190 bp		*06:60-06:61	
43	180 bp	430 bp	*06:07:01[?], 06:20[?], 06:68, 06:131	*05:03:02[?]
44	130 bp	430 bp	*06:113	
	175 bp		*06:67	
	220 bp		*06:143	
45	150 bp	430 bp	*06:97	
	235 bp		*06:124	
46[7]	240 bp	430 bp	*06:86, 06:104, 06:107	*03:97
47[5]	95 bp	430 bp	*06:29, 06:59, 06:63, 06:87, 06:96	*03:08, 03:137
	180 bp		*06:90	
	220 bp		*06:143	
48[5]	110 bp	430 bp	*06:59, 06:91, 06:145	
	205 bp		*06:128	
49	190 bp	430 bp	*06:100, 06:132, 06:140	
	230 bp		*06:126	
50[5,7]	75 bp	430 bp	*06:134	
	150 bp		*06:101	
	190 bp		*06:140, 06:144N	
	275 bp		*06:120	

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51[8]	140 bp	430 bp	*06:103, 06:111	*05:14, 05:31, 05:46
52	130 bp	430 bp	*06:133	
	195 bp		*06:105	*05:47
53	150 bp	430 bp	*06:109-06:110	*03:115
	220 bp		*06:147	
54	190 bp	430 bp	*06:07:01[?], 06:20[?], 06:112N, 06:131	*05:03:02[?]
55	145 bp	430 bp	*06:115	
56	190 bp	**515 bp**	*06:116	
57[8]	185 bp	430 bp	*06:89, 06:135	
58	265 bp	430 bp	*06:127	
59	230 bp	430 bp	*06:117, 06:147	
60	135 bp	430 bp	*06:141	
61	195 bp	430 bp	*06:136	
62[10]			**Negative Control**	

[1]Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of DQB1*06 SSP typings.
When the primers in a primer mix can give rise to HLA-specific PCR products of more than one length this is indicated if the size difference is more than 20 base pairs. Size differences of 20 base pairs or less are not given. For high resolution SSP kits, the alleles listed are specified according to amplicon length.
Nonspecific amplifications, i.e. a ladder or a smear of bands, may sometimes be seen. GC-rich primers have a higher tendency of giving rise to nonspecific amplifications than other primers.
PCR fragments longer than the control bands may sometimes be observed. Such bands should be disregarded and do not influence the interpretation of the SSP typings.
PCR fragments migrating faster than the control bands, but slower than a 400 bp fragment may be seen in some gel read-outs. Such bands can be disregarded and do not influence the interpretation of the SSP typings.
Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an inherit feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated

[2]The internal positive control primer pairs amplify segments of the human growth hormone gene. The internal positive control bands are 430 or 515 base pairs respectively, well distribution as outlined in the table. Well number 1 contains the longer, 515 bp, internal positive control band. The well distribution of the internal controls can help in orientation of the kit on gel photo, as well as allow for kit identification. In the presence of a specific amplification the intensity of the control band often decreases.

[3]For several DQB1 alleles 1st and/or 3rd exon(s) and beyond, as well as intron nucleotide sequences, are not available. In these instances it is not known whether some of the primers of the SSP sets are completely matched with the target sequences or not. Assumption is made that unknown sequences in these regions are conserved within allelic groups.

[4]Due to the sharing of sequence motifs between DQB1 alleles non-DQB1*06 alleles will be amplified by primer mixes 3, 5, 13, 15 to 17, 21, 24, 33, 34, 37, 43, 46, 47 and 51 to 54. Thus, the interpretation of DQB1*06 subtypings is only influenced by a few non-DQB1*06 alleles and not by other groups of DQB1 alleles or the DQB2 and DQB3 genes.

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

[6]Primer mixes 9, 24 and 32 may give rise to a lower yield of HLA-specific PCR product than the other DQB1*06 primer mixes.

[7]Primer mixes 16, 18, 19, 20, 31, 32, 40, 46 and 50 have a tendency to giving rise to primer oligomer formation.

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[8]Primer mixes 8, 9, 10, 11, 15, 16, 20, 28, 30, 31, 34, 38, 40, 41, 51 and 57 may have tendencies of unspecific amplifications, most pronounced in primer mix 15.

[9]The nucleotide sequence of codon 14 of the DQB1*06:05:02 allele is not yet known. If codon 14 is CTg, then the DQB1*06:05:02 allele will retain its name and will be amplified by the primer pair in well No. 10. If the sequence of codon 14 is ATg, then DQB1*06:05:02 will be renamed to DQB1*06:09:02 (Steven Marsh personal communication), and will not be amplified by the primer pair in well No. 10.

[10]Primer mix 62 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 is not available for the primer matching sequence.

'w', might be weakly amplified.

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PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec.	220	210	185	130	160	170	210	90	130	260	210	100
PCR product								175				180
												215
Length of int. pos. control[1]	515	430	430	430	430	515	515	515	430	515	430	430
5'-primer(s)[2]	26(173)	29(184)	9(122)	27(177)	9(122)	27(177)	29(184)	27(177)	27(177)	13(134)	29(184)	27(177)
	5' -TTA 3'	5' -gAT 3'	5' -gTT 3'	5' -gTA 3'	5' -gTA 3'	5' -gTA 3'	5' -gAC 3'	5' -gTA 3'	5' -gTA 3'	5' -ggA 3'	5' -gAT 3'	5' -gTA 3'
		29(184)								13(136)		
		5' -gAT 3'								5' -gCC 3'		
3'-primer(s)[3]	86(353)	86(353)	57(266)	57(266)	48(240)	69(304)	86(353)	43(224)	57(266)	86(353)	86(353)	47(238)
	5' -ACg 3'	5' -ACg 3'	5' -CAT 3'	5' -CAT 3'	5' -gCg 3'	5' -CCC 3'	5' -ACC 3'	5' -Cgg 3'	5' -CAA 3'	5' -ACC 3'	5' -ACC 3'	5' -gCA 3'
		86(354)	58(270)	57(267)			86(354)	69(304)		87(356)		74(317)
		5' -AAA 3'	5' -TCC 3'	5' -gCg 3'			5' -TAT 3'	5' -CCT 3'		5' -ggA 3'		5' -CCg 3'
				58(270)				74(317)				86(353)
				5' -TCA 3'				5' -CCg 3'				5' -ACg 3'
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Well No.	13	14	15	16	17	18	19	20	21	22	23	24
Length of spec.	185	130	105	205	110	175	135	110	155	130	160	155
PCR product	225	215	185	300				210		195		
								260				
Length of int. pos. control[1]	430	430	430	515	430	430	430	515	430	515	515	430
5'-primer(s)[2]	9(122)	27(177)	9(122)	9(122)	26(173)	26(173)	26(173)	13(136)	9(122)	57(266)	29(184)	9(122)
	5' -gTT 3'	5' -gTg 3'	5' -gTT 3'	5' -gTT 3'	5' -ggg 3'	5' -TCT 3'	5' -TCT 3'	5' -gCg 3'	5' -gTT 3'	5' -TgA 3'	5' -gAC 3'	5' -gTT 3'
				98(389)	26(173)		154(558)	28(181)		133(494)		
				5' -CAT 3'	5' -TTA 3'		5' -ACT 3'	5' -CCT 3'		5' -TCA 3'		
								30(187)				
								5' -ACT 3'				
								62(282)				
								5' -AAg 3'				
								63(285)				
								5' -Agg 3'				
3'-primer(s)[3]	56(265)	57(266)	29(184)	59(274)	48(240)	70(307)	56(265)	86(353)	47(236)	86(353)	69(304)	47(237)
	5' -gCT 3'	5' -CAA 3'	5' -gTg 3'	5' -gTT 3'	5' -gCg 3'	5' -ggC 3'	5' -gCT 3'	5' -ACg 3'	5' -ggT 3'	5' -ACC 3'	5' -CCC 3'	5' -CgA 3'
	69(304)	86(353)	57(266)	66(294)			186(653)		48(240)	185(650)		
	5' -CCT 3'	5' -ACg 3'	5' -Cgg 3'	5' -ATg 3'			5' -CCg 3'		5' -gCg 3'	5' -Cgg 3'		
				185(650)								
				5' -Cgg 3'								
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

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Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec.	210	165	155	130	90	115	100	115	190	145	185	165
PCR product	260	190	195	180			220				260	
			220	300								
			265									
Length of int.	430	430	430	515	430	430	430	430	430	430	430	430
pos. control[1]												
5'-primer(s)[2]	13(134)	38(209)	11(129)	29(184)	69(304)	130(485)	13(134)	130(485)	38(209)	13(134)	13(134)	9(122)
	5' -ggT 3'	5' -CgT 3'	5' -TTA 3'	5' -gAT 3'	5' -AgA 3'	5' -CCg 3'	5' -ggC 3'	5' -CCA 3'	5' -CgT 3'	5' -ggC 3'	5' -ggC 3'	5' -gTT 3'
	29(184)	45(230)	26(174)	101(400)			154(558)				38(211)	
	5' -gAC 3'	5' -ggA 3'	5' -TAC 3'	5' -TCT 3'			5' -ACT 3'				5' -CgT 3'	
	30(185)		30(187)									
	5' -ATg 3'		5' -ACg 3'									
			30(187)									
			5' -ACT 3'									
			38(209)									
			5' -CAT 3'									
			48(239)									
			5' -CCA 3'									
3'-primer(s)[3]	86(353)	87(356)	86(353)	75(322)	86(353)	154(558)	73(314)	154(558)	87(356)	47(237)	61(279)	47(238)
	5' -ACg 3'	5' -ggA 3'	5' -ACg 3'	5' -gTg 3'	5' -ACC 3'	5' -AAA 3'	5' -CCA 3'	5' -AAA 3'	5' -ggA 3'	5' -CgA 3'	5' -TTT 3'	5' -gCA 3'
	86(354)			131(488)	86(354)		174(618)				86(353)	49(244)
	5' -AAg 3'			5' -ACT 3'	5' -TAT 3'		5' -ACT 3'				5' -ACC 3'	5' -CAT 3'
				188(661)								50(247)
				5' -CCA 3'								5' -CgA 3'
												52(253)
												5' -CTT 3'
												52(253)
												5' -CTA 3'
Well No.	25	26	27	28	29	30	31	32	33	34	35	36

Well No.	37	38	39	40	41	42	43	44	45	46	47	48
Length of spec.	120	170	120	105	215	125	180	130	150	240	95	110
PCR product	175	245	155	190		165		175	235		180	205
	245	285	270			190		220			220	
Length of int.	430	430	430	430	430	430	430	430	430	430	430	430
pos. control[1]												
5'-primer(s)[2]	9(122)	9(122)	9(122)	9(122)	10(125)	27(177)	8(119)	10(126)	9(122)	9(122)	10(126)	14(138)
	5' -gTT 3'	5' -gTT 3'	5' -gTT 3'	5' -gTT 3'	5' -CCT 3'	5' -gTA 3'	5' -CgC 3'	5' -CAT 3'	5' -gTT 3'	5' -gTT 3'	5' -CAT 3'	5' -ATC 3'
					13(134)		14(137)	24(169)		101(400)	23(166)	45(230)
					5' -ggC 3'		5' -CAC 3'	5' -TgT 3'		5' -TCT 3'	5' -gCA 3'	5' -ggC 3'
								40(217)			47(238)	45(230)
								5' -TCC 3'			5' -ACA 3'	5' -ggA 3'
											55(260)	47(238)
											5' -gCC 3'	5' -ACA 3'
3'-primer(s)[3]	36(203)	50(247)	36(203)	31(188)	69(304)	55(260)	57(266)	69(304)	45(232)	74(317)	69(304)	69(304)
	5' -ACC 3'	5' -CgA 3'	5' -ACC 3'	5' -Agg 3'	5' -CCC 3'	5' -gCA 3'	5' -CAT 3'	5' -CCC 3'	5' -CAA 3'	5' -ACC 3'	5' -CCC 3'	5' -CCC 3'
	52(253)	55(260)	47(238)	58(271)		66(294)			73(316)	172(611)		
	5' -CTA 3'	5' -gCA 3'	5' -gCA 3'	5' -CTT 3'		5' -ATg 3'			5' -CTC 3'	5' -AgA 3'		
	55(260)	77(328)	82(341)	60(276)		72(311)						
	5' -gCg 3'	5' -CAT 3'	5' -AgC 3'	5' -CAC 3'		5' -CCg 3'						
	55(262)	88(359)	88(359)			75(322)						
	5' -AgA 3'	5' -CgA 3'	5' -CgA 3'			5' -gTg 3'						
	77(328)	91(369)				77(326)						
	5' -CAT 3'	5' -TTT 3'				5' -CCA 3'						
Well No.	37	38	39	40	41	42	43	44	45	46	47	48

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Well No.	49	50	51	52	53	54	55	56	57	58	59	60	61
Length of spec.	190	75	140	130	150	190	145	190	185	265	230	135	195
PCR product	230	150		195	220								
		190											
		275											
Length of int. pos. control[1]	430	430	430	430	430	430	430	515	430	430	430	430	430
5'-primer(s)[2]	22(163)	8(121)	133(494)	27(177)	9(122)	8(119)	57(266)	105(411)	38(209)	110(426)	9(122)	38(211)	9(122)
	5' -AgT 3'	5' -TgA 3'	5' -TCA 3'	5' -gTA 3'	5' -gTT 3'	5' -CgC 3'	5' -TgA 3'	5' -AgC 3'	5' -CgT 3'	5' -AAA 3'	5' -gTT 3'	5' -Cgg 3'	5' -gTT 3'
	37(206)	37(206)	140(517)	135(500)	135(500)	9(124)			38(211)		101(400)		
	5' -gTC 3'	5' -gTC 3'	5' -CCA 3'	5' -TgA 3'	5' -TgA 3'	5' -TCT 3'			5' -CgT 3'		5' -TCT 3'		
	38(209)	37(207)											
	5' -CAT 3'	5' -TAA 3'											
	38(211)	49(242)											
	5' -TgA 3'	5' -ggA 3'											
		74(319)											
		5' -Agg 3'											
3'-primer(s)[3]	86(353)	86(353)	169(604)	56(265)	69(302)	57(266)	92(372)	154(558)	86(353)	185(650)	69(302)	69(304)	59(274)
	5' -ACg 3'	5' -ACg 3'	5' -gAC 3'	5' -ATT 3'	5' -CCC 3'	5' -CAT 3'	5' -CTA 3'	5' -AAA 3'	5' -ACC 3'	5' -Cgg 3'	5' -CCC 3'	5' -CCC 3'	5' -gTg 3'
				185(652)	168(599)						167(596)		
				5' -CAT 3'	5' -CTT 3'						5' -CAA 3'		
					174(619)								
					5' -CAT 3'								
Well No.	49	50	51	52	53	54	55	56	57	58	59	60	61

[1]The internal positive control primer pairs amplify segments of the human growth hormone gene. The internal positive control bands are 430 or 515 base pairs respectively, well distribution as outlined in the table. Well number 1 contains the longer, 515 bp, internal positive control band. The well distribution of the internal controls can help in orientation of the kit on gel photo, as well as allow for kit identification. In the presence of a specific amplification the intensity of the control band often decreases.

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

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

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CELL LINE VALIDATION SHEET

DQB1*06 SSP subtyping kit[2]

					Well															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Prod. No.	201075701	201433502	201433503	201547804	201075705	201075706	201433507	201547808	201075709	201547810	201075711	201433512	201206713	201547814	201547815	201433516
	IHWC cell line[1]		DQB1																	
1	9001	SA	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*06:01	*02:02	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*06:01		+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*05:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*03:02	*06:01	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*04:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*04:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*02:01	*06:03	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*06:02	*02:02	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*06:04		-	-	-		-	-	+	+	+	-	-		-	-	-	
21	9064	AMALA	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*05:03	*06:04	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-
23	9124	IHL	*05:03	*06:01	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*04:01	*05:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*02:02	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*04:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019	DUCAF	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*03:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*06:03		-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*02:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*02:02	*03:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*06:09		-	-	-	-	-	-	-	+	+	-	+	-	-	-	-	-
42	9066	TAB089	*06:01		+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*05:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*06:02		-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.212-24/04 – including *Taq* pol., IFU-01
101.212-24u/04u – without *Taq* pol., IFU-02

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

Lot No.: 93X **Lot-specific information**

CELL LINE VALIDATION SHEET

DQB1*06 SSP subtyping kit[2]

					Well															
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
				Prod. No.	201433517	201075718	201075719	201433520	201547821	201075722	201075723	201320524	201547825	201547826	201547827	201547828	201433529	201320530	201547831	201547832
	IHWC cell line[1]		DQB1																	
1	9001	SA	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*06:01	*02:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*06:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*05:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*03:02	*06:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*04:01		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
11	9051	PITOUT	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*04:02		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
15	9075	DKB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*02:01	*06:03	-	-	-	-	-	-	+	-	+	-	-	-	-	+	-	-
18	9257	32367	*06:02	*02:02	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	-
19	9038	BM16	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*06:04		-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+
21	9064	AMALA	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*05:03	*06:04	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+
23	9124	IHL	*05:03	*06:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*04:01	*05:01	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*02:02	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*04:02		-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
31	9019	DUCAF	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*03:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*06:03		-	-	-	-	-	-	+	-	+	-	-	-	-	+	-	-
38	9099	LZL	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*02:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*02:02	*03:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*06:09		-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+
42	9066	TAB089	*06:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*05:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*06:02		-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	-
47	9045	TUBO	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*05:01		-	-	-	-	-	-	-	-	-	-	-		-	-	-	-

101.212-24/04 – including *Taq* pol., IFU-01
101.212-24u/04u – without *Taq* pol., IFU-02

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Lot No.: 93X **Lot-specific information**

CELL LINE VALIDATION SHEET

DQB1*06 SSP subtyping kit[2]

					Well															
					33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
				Prod. No.	201320533	201547834	201547835	201547836	201547837	201547838	201547839	201547840	201547841	201547842	201547843	201547844	201433545	201433546	201547847	201547848
	IHWC cell line[1]		DQB1																	
1	9001	SA	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*06:01	*02:02	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*06:01		-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*05:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*03:02	*06:01	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*04:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*04:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*02:01	*06:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*06:02	*02:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*06:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*05:03	*06:04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*05:03	*06:01	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*04:01	*05:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*02:02	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*04:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019	DUCAF	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*03:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*06:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*02:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*02:02	*03:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*06:09		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*06:01		-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*05:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.212-24/04 – including *Taq* pol., IFU-01
101.212-24u/04u – without *Taq* pol., IFU-02

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Lot No.: 93X **Lot-specific information**

CELL LINE VALIDATION SHEET

DQB1*06 SSP subtyping kit[2]

					Well												
					49	50	51	52	53	54	55	56	57	58	59	60	61
				Prod. No.	201547849	201547850	201433551	201547852	201547853	201547854	201547855	201433556	201547857	201433558	201547859	201547860	201547861
	IHWC cell line[1]		DQB1														
1	9001	SA	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*06:01	*02:02	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*06:01		-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*05:02		-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*03:02	*06:01	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025	DEU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*04:01		-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*04:02		-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*02:01	*06:03	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*06:02	*02:02	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*06:04		-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*05:03	*06:04	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*05:03	*06:01	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*04:01	*05:01	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320	BEL5GB	*02:02	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*04:02		-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019	DUCAF	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*03:05		-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*06:03		-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*02:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*02:02	*03:03	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*06:09		-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*06:01		-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*05:03		-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-

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

101.212-24/04 – including *Taq* pol., IFU-01 Visit www.olerup-ssp.com for
101.212-24u/04u – without *Taq* pol., IFU-02 **"Instructions for Use" (IFU)**

Lot No.: 93X **Lot-specific information**

[2]The specificity of each primer solution in the kit has been tested against 48 well characterized cell line DNAs and where applicable, additional cell line DNAs.
No DNAs carrying the alleles to be amplified by primer solutions 12 to 20, 22, 26 to 28, 31, 33 and 35 to 61 were available. The specificities of the primers in primer solutions 12 to 17, 19, 22, 26, 33, 35, 37, 38, 41, 42, 47, 48 and 57 were tested by separately adding additional 5'-primers, respectively additional 3'-primers. In primer solutions 18, 28, 31, 36, 39, 40, 45, 46, 52, 53, 55, 59 and 61 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solutions 20, 27, 43, 44, 49 to 51, 54, 56, 58 and 60 it was only possible to test the 3'-primer, the 5'-primer was not possible to test.
In primer solution 2, 3, 4, 7, 8, 12, 16, 19, 25, 29, 35, 37, 38 and 42 one to four 3'-primers were not possible to test, and in primer solutions 10, 16, 22, 25, 35, 41, 47, 48 and 57 one or two 5'-primer was not possible to test. Additional primer in primer solutions 4, 10 and 21 were tested by separately adding one or two 5'-primers, or one 3'-primer.

101.212-24/04 – including *Taq* pol., IFU-01
101.212-24u/04u – without *Taq* pol., IFU-02

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Lot No.: 93X **Lot-specific information**

ADDRESSES:

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

Distributed by:
Olerup GmbH, Löwengasse 47 / 6, AT-1030 Vienna, Austria.
Tel: +43-1-710 15 00
Fax: +43-1-710 15 00 10
E-mail: support-at@olerup.com
Web page: http://www.olerup.com

Olerup Inc., 901 S. Bolmar St., Suite R, West Chester, PA 19382
Tel: 1-877-OLERUP1
Fax: 610-344-7989
E-mail: info.us@olerup.com
Web page: http://www.olerup.com

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