

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

Olerup SSP® DQB1 high resolution for frequent alleles

Product number:	101.221-12 – including <i>Taq</i> polymerase 101.221-12u – without <i>Taq</i> polymerase
Lot number:	17Y
Expiry date:	2018-January-01
Number of tests:	12 tests
Number of wells per test:	95+ 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. 17Y.

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 HIGH RESOLUTION LOT (74X)**

The DQB1*high 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.

The DQB1 high resolution specificity and interpretation tables have been updated with the DQB1 alleles described since the previous *Olerup SSP®* DQB1 high resolution lot was made (**Lot No. 74X**). The kit design is based on IMGT/HLA database 3.19.0.

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.

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

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

Well	5'-primer	3'-primer	rationale
3	-	Added	3'-primer added for the DQB1*05:02:11 allele.
5	Added	-	5'-primers added for the DQB1*05:06:02 and DQB1*03:96 alleles.
8	-	Added	3'-primer added for the DQB1*02:02:14 allele.
12	-	Added	3'-primer added for the DQB1*03:119 allele.
13	Added	-	5'-primer added for the DQB1*03:162 allele.
14	-	Added	3'-primer added for the DQB1*05:56 allele.
20	Modified	-	5'-primer modified for improved HLA-specific amplification.
23	Added	-	5'-primer added for the DQB1*05:01:16 allele.
27	-	Added	3'-primers added for the DQB1*06:01:13 and DQB1*06:02:13 alleles.
28	-	Added	3'-primer added for the DQB1*06:02:11 allele.
29	-	Added	3'-primer added for the DQB1*06:03:13 allele.
30	Added	-	5'-primers added for the DQB1*04:18 and DQB1*04:20 alleles.
31	-	Added	3'-primer added for the DQB1*06:03:15 allele.
34	Added	-	5'-primers added for the DQB1*05:75 and DQB1*06:09:04 alleles.
36	-	Added	3'-primer added for the DQB1*03:90N allele.
37	Added	-	5'-primer added for the DQB1*06:63 allele.
38	-	Added	3'-primer added for the DQB1*03:98 allele.
39	-	Added	3'-primer added for the DQB1*03:165 allele.
40	Added	-	5'-primer added for the DQB1*05:45 allele.
41	Added	-	5'-primer added for the DQB1*06:127 allele.
42	Added	-	3'-primer added for the DQB1*04:18 allele.
44	-	Added	3'-primers added for the DQB1*03:94, DQB1*03:164, DQB1*06:02:16 and 06:02:19 alleles.
47	-	Added	3'-primer added for the DQB1*04:02:05, DQB1*04:02:07, DQB1*06:19:02 and DQB1*03:38 alleles.
49	-	Added	3'-primer added for the DQB1*02:41, DQB1*05:45 and DQB1*05:87Q alleles.
50	Added	-	5'-primers added for the DQB1*02:14:02, DQB1*03:130, DQB1*03:139 and DQB1*03:162 alleles.
51	Added, modified	Added	5'-primer added for the DQB1*03:158 allele, 3'-primer added for the DQB1*06:117 allele, 5'-primer modified for improved HLA-specific amplification.
52	Added	-	5'-primer added for the DQB1*06:126 allele.
53	Added	Added	Primer pair added for the DQB1*02:07:02 allele, 3'-primer added for the DQB1*06:153 allele.
54	-	Added	3'-primers added for the DQB1*03:115 and DQB1*06:110 alleles.
55	Exchanged	-	5'-primer exchanged and strength of control band has been optimized for increased yield.
56	-	Added	3'-primer added for the DQB1*03:114 allele.
58	Added	Added	5'-primer added for the DQB1*05:52 allele, 3'-primer added for the DQB1*03:119 allele.
59	-	Added	3'-primer added for the DQB1*03:114 allele.
60	-	Added	3'-primers added for the DQB1*05:49 and DQB1*05:69 alleles.
61	-	Added	3'-primers added for the DQB1*05:69 and DQB1*05:73 alleles.

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

62	Added	-	5'-primer added for the DQB1*06:158N allele.
65	Added	Added	Primer pair added from well 71.
66	Added	-	5'-primer added for the DQB1*03:116 and DQB1*05:57 alleles.
71	Moved, added	Moved	Primer pair moved to well 71 for decreased tendency of primer oligomer formation, 5'-primers added for the DQB1*03:118N and DQB1*03:139 alleles.
72	Added	-	5'-primers added for the DQB1*03:99Q and DQB1*03:118N alleles.
73	Added	-	5'-primer added for the DQB1*02:53Q allele.
74	-	Added	3'-primer added for the DQB1*04:25N allele.
75	Added	Added	5'-primer added for the DQB1*05:75 allele, 3'-primer added for the DQB1*03:102 allele.
77	-	Added	3'-primer added for the DQB1*06:155 allele.
79	Added	Added	Primer pair added for the DQB1*06:116 allele.
80	-	Added	3'-primer added for the DQB1*06:163 allele.
81	Added	Added	5'-primers added for the DQB1*03:95N and DQB1*03:158 alleles, 3'-primer added for the DQB1*06:163 allele.
82	-	Added	3'-primer added for the DQB1*06:107 allele.
83	-	Added	3'-primer added for the DQB1*06:107 allele.
84	-	Added	3'-primer added for the DQB1*06:106 allele.
85	Added	Added	5'-primer added for the DQB1*06:112N allele, primer pair added for the DQB1*06:127 allele.
86	Added	-	5'-primer added for the DQB1*06:112N allele.
88	Added	-	5'-primers added for the DQB1*06:125 and DQB1*06:144N alleles.
89	Added	-	5'-primer added for the DQB1*06:125 allele.
90	-	Added	3'-primer added for the DQB1*03:117 allele.
91	-	Added	3'-primer added for the DQB1*06:51:02 allele.
92	-	Added	3'-primer added from well 95 for the DQB1*02:22 allele
93	Added	-	5'-primers added for the DQB1*02:41 and DQB1*03:91Q alleles.
94	Added	Added	5'-primer added for the DQB1*03:03:12 allele, 3'-primer added for the DQB1*03:02:14 allele.
95	Added	Added	Primer pair added for the DQB1*03:105, DQB1*03:106 and DQB1*03:109 alleles, 3'-primer moved to well 92.

Change in revision R01 compared to R00:

1. Primer mix 2 may have a tendency of unspecific amplifications. A footnote has been added in the Specificity Table.

Change in revision R02 compared to R01:

1. Primer mixes 12, 31 and 38 may have a tendency of unspecific amplifications. Footnotes have been added in the Specificity Table.

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

Well **96** 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.

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

PRODUCT DESCRIPTION

DQB1 SSP typing

CONTENT

The primer set contains 5'- and 3'-primers for identifying the DQB1*02:01:01 to DQB1*06:167 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 96 PCR reactions in a 96 well cut 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	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	62	63	64
65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88
89	90	91	92	93	94	95	NC

The 96 well cut PCR plate is marked with ‘DQB1 “HIGH”’ in silver/gray ink.

Well No. 1 is marked with the Lot No. ‘17Y’.

Wells 1 to 95 – DQB1 high resolution primers.

Well 96 – Negative Control.

A faint row of numbers is seen between wells 1 and 2 or wells 7 and 8 of the PCR trays. These stem from the manufacture of the trays, and should be disregarded.

The PCR plates are covered with a PCR-compatible foil.

INTERPRETATION

Only DQB1 alleles will be amplified by the DQB1 high resolution for frequent alleles typing kit. Thus, the interpretation of DQB1 high resolution for frequent alleles typings is not influenced by the DQB2 or DQB3 genes or other HLA class II genes.

Product Insert

101.221-12 – including *Taq pol.*, IFU-01

101.221-12u – without *Taq pol.*, IFU-02

Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

UNIQUELY IDENTIFIED ALLELES

All the phenotypically different DQB1 alleles, i.e. **DQB1*02:01:01 to 02:53Q**, **DQB1*03:01:01:01 to 03:167**, **DQB1*04:01:01 to 04:27**, **DQB1*05:01:01:01 to 05:89** and **DQB1*06:01:01 to 06:167**, recognized by the HLA Nomenclature Committee in January 2015^{1,2} will give rise to unique amplification patterns by the primers in the DQB1 high resolution for frequent alleles typing kit.

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

Alleles	Primer mix	Alleles	Primer mix
DQB1*02:15, 02:30	67	DQB1*05:17, 05:47	54
DQB1*02:16, 02:20N	64	DQB1*06:31, 06:145	35
DQB1*02:23, 02:28	68	DQB1*06:35, 06:45	35
DQB1*02:29, 02:31	69	DQB1*06:48, 06:97	62
DQB1*03:31, 03:87	35	DQB1*06:70, 06:76	80
DQB1*03:36, 03:51	51	DQB1*06:73, 06:77N	82
DQB1*03:59, 03:71	43	DQB1*06:74, 06:78	83
DQB1*04:03:01, 04:12	42	DQB1*06:75N, 06:80	84
DQB1*04:05, 04:15	30	DQB1*06:102N, 06:104	90
DQB1*05:13, 05:24	59		

The DQB1 typing kit cannot distinguish the following silent mutations: the DQB1*02:01:01-02:01:19 alleles, the DQB1*02:02:01-02:02:02 alleles, the DQB1*02:14:01-02:14:02 alleles, the DQB1*03:01:01:01-03:01:02, 03:01:05-03:01:07, 03:01:09-03:01:12, 03:01:14, 03:01:16-03:01:24 and 03:01:26-03:01:28 alleles, the DQB1*03:01:03, 03:01:13, 03:01:15 and 03:01:25 alleles, the DQB1*03:02:01-03:02:17 alleles, the DQB1*03:03:02:01-03:03:05 and 03:03:07-03:03:13 alleles, the DQB1*03:05:01-03:05:04 alleles, the DQB1*03:17:01-03:17:02 alleles, the DQB1*04:01:01-04:01:02 and 04:01:04 alleles, the DQB1*04:02:01-04:02:06 alleles, the DQB1*05:01:01:01-05:01:08 and 05:01:11-05:01:19 alleles, the DQB1*05:01:09-05:01:10 alleles, the DQB1*05:02:01 and 05:02:03-05:02:11 alleles, the DQB1*05:03:01:01-05:03:11, 05:03:13 and 05:03:15-05:03:16 alleles, the DQB1*05:05:01-05:05:02 alleles, the DQB1*05:06:01-05:06:02 alleles, the DQB1*05:11:01-05:11:02 alleles, the DQB1*06:01:01, 06:01:03-06:01:06, 06:01:08-06:01:09, 06:01:11 and 06:01:13-06:01:14 alleles, the DQB1*06:01:02 and 06:01:07 alleles, the DQB1*06:02:01, 06:02:03, 06:02:06, 06:02:08-06:02:15 and 06:02:17-06:02:23 alleles, the DQB1*06:02:04, 06:02:16 alleles, the DQB1*06:03:01, 06:03:03, 06:03:05-06:03:07 and 06:03:11-06:03:18 alleles, the DQB1*06:03:04 and 06:03:08-06:03:09 alleles, the DQB1*06:04:01 and 06:04:03-06:04:10 alleles, the DQB1*06:08:02-06:08:03 alleles, the DQB1*06:09:03, 06:09:06 alleles, the DQB1*06:11:02-06:11:03 alleles, the DQB1*06:14:01-06:14:02 alleles, the DQB1*06:15:01-06:15:02 alleles, the DQB1*06:19:01-06:19:02 alleles, the DQB1*06:27:01-06:27:02 alleles or the DQB1*06:79:01-06:79:02 alleles.

¹DQB1 alleles listed on the IMGT/HLA web page 2015-January-19, release 3.19.0, 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>.



Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

ALLELE CONFIRMATION STATUS

Allele	Status¹	Allele	Status¹	Allele	Status¹
DQB1*02:01:01	Confirmed	DQB1*02:11	Unconfirmed	DQB1*02:40	Unconfirmed
DQB1*02:01:02	Unconfirmed	DQB1*02:12	Confirmed	DQB1*02:41	Confirmed
DQB1*02:01:03	Unconfirmed	DQB1*02:13	Unconfirmed	DQB1*02:42	Unconfirmed
DQB1*02:01:04	Confirmed	DQB1*02:14:01	Confirmed	DQB1*02:43	Unconfirmed
DQB1*02:01:05	Confirmed	DQB1*02:14:02	Unconfirmed	DQB1*02:44	Unconfirmed
DQB1*02:01:06	Unconfirmed	DQB1*02:15	Unconfirmed	DQB1*02:45	Unconfirmed
DQB1*02:01:07	Confirmed	DQB1*02:16	Confirmed	DQB1*02:46	Unconfirmed
DQB1*02:01:08	Confirmed	DQB1*02:17	Confirmed	DQB1*02:47	Unconfirmed
DQB1*02:01:09	Unconfirmed	DQB1*02:18N	Confirmed	DQB1*02:48	Unconfirmed
DQB1*02:01:10	Confirmed	DQB1*02:19	Confirmed	DQB1*02:49	Unconfirmed
DQB1*02:01:11	Unconfirmed	DQB1*02:20N	Confirmed	DQB1*02:50	Unconfirmed
DQB1*02:01:12	Unconfirmed	DQB1*02:21	Unconfirmed	DQB1*02:51	Unconfirmed
DQB1*02:01:13	Unconfirmed	DQB1*02:22	Unconfirmed	DQB1*02:52	Unconfirmed
DQB1*02:01:14	Confirmed	DQB1*02:23	Confirmed	DQB1*02:53Q	Unconfirmed
DQB1*02:01:15	Unconfirmed	DQB1*02:24	Unconfirmed		
DQB1*02:01:16	Unconfirmed	DQB1*02:25	Unconfirmed		
DQB1*02:01:17	Unconfirmed	DQB1*02:26	Confirmed		
DQB1*02:01:18	Unconfirmed	DQB1*02:27	Confirmed		
DQB1*02:01:19	Unconfirmed	DQB1*02:28	Confirmed		
DQB1*02:02:01	Confirmed	DQB1*02:29	Confirmed		
DQB1*02:02:02	Unconfirmed	DQB1*02:30	Confirmed		
DQB1*02:03	Confirmed	DQB1*02:31	Unconfirmed		
DQB1*02:04	Unconfirmed	DQB1*02:32	Unconfirmed		
DQB1*02:05	Confirmed	DQB1*02:33	Confirmed		
DQB1*02:06	Unconfirmed	DQB1*02:34	Unconfirmed		
DQB1*02:07:01	Confirmed	DQB1*02:35	Unconfirmed		
DQB1*02:07:02	Unconfirmed	DQB1*02:36	Unconfirmed		
DQB1*02:08	Unconfirmed	DQB1*02:37	Unconfirmed		
DQB1*02:09	Unconfirmed	DQB1*02:38	Unconfirmed		
DQB1*02:10	Unconfirmed	DQB1*02:39	Unconfirmed		



Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
DQB1*03:01:01:01	Confirmed	DQB1*03:03:03	Unconfirmed	DQB1*03:36	Unconfirmed	DQB1*03:86	Unconfirmed
DQB1*03:01:01:02	Unconfirmed	DQB1*03:03:04	Confirmed	DQB1*03:37	Confirmed	DQB1*03:87	Unconfirmed
DQB1*03:01:01:03	Confirmed	DQB1*03:03:05	Confirmed	DQB1*03:38	Unconfirmed	DQB1*03:88	Unconfirmed
DQB1*03:01:02	Unconfirmed	DQB1*03:03:06	Unconfirmed	DQB1*03:39	Unconfirmed	DQB1*03:89	Unconfirmed
DQB1*03:01:03	Confirmed	DQB1*03:03:07	Confirmed	DQB1*03:40	Confirmed	DQB1*03:90N	Unconfirmed
DQB1*03:01:04	Confirmed	DQB1*03:03:08	Confirmed	DQB1*03:41	Unconfirmed	DQB1*03:91Q	Unconfirmed
DQB1*03:01:05	Unconfirmed	DQB1*03:03:09	Unconfirmed	DQB1*03:42	Unconfirmed	DQB1*03:92	Unconfirmed
DQB1*03:01:06	Unconfirmed	DQB1*03:03:10	Unconfirmed	DQB1*03:43	Unconfirmed	DQB1*03:93	Unconfirmed
DQB1*03:01:07	Unconfirmed	DQB1*03:03:11	Confirmed	DQB1*03:44	Confirmed	DQB1*03:94	Unconfirmed
DQB1*03:01:08	Confirmed	DQB1*03:03:12	Unconfirmed	DQB1*03:45	Confirmed	DQB1*03:95N	Unconfirmed
DQB1*03:01:09	Unconfirmed	DQB1*03:03:13	Unconfirmed	DQB1*03:46	Unconfirmed	DQB1*03:96	Unconfirmed
DQB1*03:01:10	Unconfirmed	DQB1*03:04:01	Confirmed	DQB1*03:47	Confirmed	DQB1*03:97	Unconfirmed
DQB1*03:01:11	Unconfirmed	DQB1*03:04:02	Unconfirmed	DQB1*03:48	Unconfirmed	DQB1*03:98	Unconfirmed
DQB1*03:01:12	Unconfirmed	DQB1*03:05:01	Confirmed	DQB1*03:49	Unconfirmed	DQB1*03:99Q	Unconfirmed
DQB1*03:01:13	Unconfirmed	DQB1*03:05:02	Unconfirmed	DQB1*03:50	Unconfirmed	DQB1*03:100	Unconfirmed
DQB1*03:01:14	Confirmed	DQB1*03:05:03	Confirmed	DQB1*03:51	Unconfirmed	DQB1*03:101	Unconfirmed
DQB1*03:01:15	Unconfirmed	DQB1*03:05:04	Unconfirmed	DQB1*03:52	Confirmed	DQB1*03:102	Confirmed
DQB1*03:01:16	Unconfirmed	DQB1*03:06	Unconfirmed	DQB1*03:53	Confirmed	DQB1*03:103	Unconfirmed
DQB1*03:01:17	Unconfirmed	DQB1*03:07	Unconfirmed	DQB1*03:54	Confirmed	DQB1*03:104	Unconfirmed
DQB1*03:01:18	Unconfirmed	DQB1*03:08	Unconfirmed	DQB1*03:55	Confirmed	DQB1*03:105	Confirmed
DQB1*03:01:19	Unconfirmed	DQB1*03:09	Confirmed	DQB1*03:56	Confirmed	DQB1*03:106	Confirmed
DQB1*03:01:20	Unconfirmed	DQB1*03:10:01	Unconfirmed	DQB1*03:57	Unconfirmed	DQB1*03:107	Unconfirmed
DQB1*03:01:21	Confirmed	DQB1*03:10:02	Confirmed	DQB1*03:58	Confirmed	DQB1*03:108	Unconfirmed
DQB1*03:01:22	Confirmed	DQB1*03:11	Confirmed	DQB1*03:59	Confirmed	DQB1*03:109	Confirmed
DQB1*03:01:23	Unconfirmed	DQB1*03:12	Unconfirmed	DQB1*03:60	Unconfirmed	DQB1*03:110	Unconfirmed
DQB1*03:01:24	Unconfirmed	DQB1*03:13	Confirmed	DQB1*03:61	Unconfirmed	DQB1*03:111	Unconfirmed
DQB1*03:01:25	Unconfirmed	DQB1*03:14:01	Unconfirmed	DQB1*03:62	Confirmed	DQB1*03:112	Unconfirmed
DQB1*03:01:26	Unconfirmed	DQB1*03:14:02	Confirmed	DQB1*03:63	Confirmed	DQB1*03:113	Confirmed
DQB1*03:01:27	Unconfirmed	DQB1*03:15	Unconfirmed	DQB1*03:64	Confirmed	DQB1*03:114	Confirmed
DQB1*03:01:28	Unconfirmed	DQB1*03:16	Confirmed	DQB1*03:65	Confirmed	DQB1*03:115	Unconfirmed
DQB1*03:02:01	Confirmed	DQB1*03:17:01	Confirmed	DQB1*03:66N	Unconfirmed	DQB1*03:116	Unconfirmed
DQB1*03:02:02	Unconfirmed	DQB1*03:17:02	Confirmed	DQB1*03:67	Confirmed	DQB1*03:117	Unconfirmed
DQB1*03:02:03	Unconfirmed	DQB1*03:18	Unconfirmed	DQB1*03:68	Confirmed	DQB1*03:118N	Confirmed
DQB1*03:02:04	Unconfirmed	DQB1*03:19	Confirmed	DQB1*03:69	Unconfirmed	DQB1*03:119	Confirmed
DQB1*03:02:05	Unconfirmed	DQB1*03:20	Unconfirmed	DQB1*03:70	Confirmed	DQB1*03:120	Unconfirmed
DQB1*03:02:06	Confirmed	DQB1*03:21	Unconfirmed	DQB1*03:71	Unconfirmed	DQB1*03:121	Unconfirmed
DQB1*03:02:07	Confirmed	DQB1*03:22	Unconfirmed	DQB1*03:72	Confirmed	DQB1*03:122	Unconfirmed
DQB1*03:02:08	Unconfirmed	DQB1*03:23	Unconfirmed	DQB1*03:73	Unconfirmed	DQB1*03:123	Unconfirmed
DQB1*03:02:09	Unconfirmed	DQB1*03:24	Unconfirmed	DQB1*03:74	Unconfirmed	DQB1*03:124	Unconfirmed
DQB1*03:02:10	Confirmed	DQB1*03:25	Unconfirmed	DQB1*03:75	Confirmed	DQB1*03:125	Unconfirmed
DQB1*03:02:11	Confirmed	DQB1*03:26	Unconfirmed	DQB1*03:76	Unconfirmed	DQB1*03:126	Unconfirmed
DQB1*03:02:12	Unconfirmed	DQB1*03:27	Confirmed	DQB1*03:77	Unconfirmed	DQB1*03:127	Unconfirmed
DQB1*03:02:13	Confirmed	DQB1*03:28	Unconfirmed	DQB1*03:78	Unconfirmed	DQB1*03:128	Unconfirmed
DQB1*03:02:14	Unconfirmed	DQB1*03:29	Unconfirmed	DQB1*03:79	Unconfirmed	DQB1*03:129	Unconfirmed
DQB1*03:02:15	Confirmed	DQB1*03:30	Unconfirmed	DQB1*03:80	Unconfirmed	DQB1*03:130	Confirmed
DQB1*03:02:16	Unconfirmed	DQB1*03:31	Unconfirmed	DQB1*03:81	Confirmed	DQB1*03:131	Unconfirmed
DQB1*03:02:17	Unconfirmed	DQB1*03:32	Unconfirmed	DQB1*03:82	Unconfirmed	DQB1*03:132	Unconfirmed
DQB1*03:03:02:01	Confirmed	DQB1*03:33	Unconfirmed	DQB1*03:83	Unconfirmed	DQB1*03:133	Unconfirmed
DQB1*03:03:02:02	Unconfirmed	DQB1*03:34	Unconfirmed	DQB1*03:84N	Unconfirmed	DQB1*03:134	Unconfirmed
DQB1*03:03:02:03	Unconfirmed	DQB1*03:35	Unconfirmed	DQB1*03:85	Unconfirmed	DQB1*03:135	Unconfirmed

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
DQB1*03:136	Unconfirmed	DQB1*03:146	Unconfirmed	DQB1*03:156	Unconfirmed	DQB1*03:166	Unconfirmed
DQB1*03:137	Unconfirmed	DQB1*03:147	Unconfirmed	DQB1*03:157	Unconfirmed	DQB1*03:167	Unconfirmed
DQB1*03:138	Unconfirmed	DQB1*03:148	Unconfirmed	DQB1*03:158	Confirmed		
DQB1*03:139	Confirmed	DQB1*03:149	Unconfirmed	DQB1*03:159	Unconfirmed		
DQB1*03:140	Unconfirmed	DQB1*03:150	Unconfirmed	DQB1*03:160	Unconfirmed		
DQB1*03:141	Unconfirmed	DQB1*03:151	Unconfirmed	DQB1*03:161	Unconfirmed		
DQB1*03:142	Unconfirmed	DQB1*03:152	Unconfirmed	DQB1*03:162	Confirmed		
DQB1*03:143	Unconfirmed	DQB1*03:153	Unconfirmed	DQB1*03:163	Unconfirmed		
DQB1*03:144	Unconfirmed	DQB1*03:154	Unconfirmed	DQB1*03:164	Unconfirmed		
DQB1*03:145	Unconfirmed	DQB1*03:155	Unconfirmed	DQB1*03:165	Unconfirmed		



Product Insert

101.221-12 – including *Taq pol.*, IFU-01

101.221-12u – without *Taq pol.*, IFU-02

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

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

Allele	Status ¹	Allele	Status ¹
DQB1*04:01:01	Confirmed	DQB1*04:10	Unconfirmed
DQB1*04:01:02	Unconfirmed	DQB1*04:11	Confirmed
DQB1*04:01:03	Unconfirmed	DQB1*04:12	Confirmed
DQB1*04:01:04	Unconfirmed	DQB1*04:13	Unconfirmed
DQB1*04:02:01	Confirmed	DQB1*04:14	Unconfirmed
DQB1*04:02:02	Unconfirmed	DQB1*04:15	Unconfirmed
DQB1*04:02:03	Confirmed	DQB1*04:16	Unconfirmed
DQB1*04:02:04	Confirmed	DQB1*04:17	Unconfirmed
DQB1*04:02:05	Unconfirmed	DQB1*04:18	Confirmed
DQB1*04:02:06	Unconfirmed	DQB1*04:19	Unconfirmed
DQB1*04:02:07	Confirmed	DQB1*04:20	Unconfirmed
DQB1*04:02:08	Unconfirmed	DQB1*04:21	Unconfirmed
DQB1*04:03:01	Unconfirmed	DQB1*04:22	Unconfirmed
DQB1*04:03:02	Unconfirmed	DQB1*04:23	Unconfirmed
DQB1*04:04	Unconfirmed	DQB1*04:24	Unconfirmed
DQB1*04:05	Unconfirmed	DQB1*04:25N	Unconfirmed
DQB1*04:06	Unconfirmed	DQB1*04:26	Unconfirmed
DQB1*04:07	Unconfirmed	DQB1*04:27	Unconfirmed
DQB1*04:08	Unconfirmed		
DQB1*04:09	Unconfirmed		

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
DQB1*05:01:01:01	Confirmed	DQB1*05:03:08	Confirmed	DQB1*05:32	Unconfirmed	DQB1*05:72	Unconfirmed
DQB1*05:01:01:02	Unconfirmed	DQB1*05:03:09	Unconfirmed	DQB1*05:33	Unconfirmed	DQB1*05:73	Confirmed
DQB1*05:01:01:03	Unconfirmed	DQB1*05:03:10	Unconfirmed	DQB1*05:34	Confirmed	DQB1*05:74	Unconfirmed
DQB1*05:01:02	Unconfirmed	DQB1*05:03:11	Unconfirmed	DQB1*05:35	Unconfirmed	DQB1*05:75	Confirmed
DQB1*05:01:03	Unconfirmed	DQB1*05:03:12	Unconfirmed	DQB1*05:36	Unconfirmed	DQB1*05:76	Unconfirmed
DQB1*05:01:04	Confirmed	DQB1*05:03:13	Unconfirmed	DQB1*05:37	Unconfirmed	DQB1*05:77	Unconfirmed
DQB1*05:01:05	Confirmed	DQB1*05:03:14	Confirmed	DQB1*05:38	Unconfirmed	DQB1*05:78	Unconfirmed
DQB1*05:01:06	Unconfirmed	DQB1*05:03:15	Unconfirmed	DQB1*05:39	Unconfirmed	DQB1*05:79	Unconfirmed
DQB1*05:01:07	Unconfirmed	DQB1*05:03:16	Confirmed	DQB1*05:40	Unconfirmed	DQB1*05:80	Confirmed
DQB1*05:01:08	Confirmed	DQB1*05:04	Confirmed	DQB1*05:41N	Unconfirmed	DQB1*05:81	Unconfirmed
DQB1*05:01:09	Unconfirmed	DQB1*05:05:01	Unconfirmed	DQB1*05:42	Unconfirmed	DQB1*05:82	Unconfirmed
DQB1*05:01:10	Unconfirmed	DQB1*05:05:02	Unconfirmed	DQB1*05:43	Confirmed	DQB1*05:83	Unconfirmed
DQB1*05:01:11	Unconfirmed	DQB1*05:06:01	Unconfirmed	DQB1*05:44	Confirmed	DQB1*05:84	Unconfirmed
DQB1*05:01:12	Unconfirmed	DQB1*05:06:02	Confirmed	DQB1*05:45	Unconfirmed	DQB1*05:85	Unconfirmed
DQB1*05:01:13	Unconfirmed	DQB1*05:07	Unconfirmed	DQB1*05:46	Unconfirmed	DQB1*05:86	Unconfirmed
DQB1*05:01:14	Unconfirmed	DQB1*05:08	Unconfirmed	DQB1*05:47	Unconfirmed	DQB1*05:87Q	Unconfirmed
DQB1*05:01:15	Unconfirmed	DQB1*05:09	Unconfirmed	DQB1*05:48	Unconfirmed	DQB1*05:88	Unconfirmed
DQB1*05:01:16	Unconfirmed	DQB1*05:10	Confirmed	DQB1*05:49	Confirmed	DQB1*05:89	Unconfirmed
DQB1*05:01:17	Unconfirmed	DQB1*05:11:01	Unconfirmed	DQB1*05:50	Unconfirmed		
DQB1*05:01:18	Unconfirmed	DQB1*05:11:02	Confirmed	DQB1*05:51	Unconfirmed		
DQB1*05:01:19	Unconfirmed	DQB1*05:12	Unconfirmed	DQB1*05:52	Confirmed		
DQB1*05:02:01	Confirmed	DQB1*05:13	Unconfirmed	DQB1*05:53	Unconfirmed		
DQB1*05:02:02	Unconfirmed	DQB1*05:14	Unconfirmed	DQB1*05:54	Unconfirmed		
DQB1*05:02:03	Unconfirmed	DQB1*05:15	Unconfirmed	DQB1*05:55	Unconfirmed		
DQB1*05:02:04	Unconfirmed	DQB1*05:16	Unconfirmed	DQB1*05:56	Unconfirmed		
DQB1*05:02:05	Unconfirmed	DQB1*05:17	Unconfirmed	DQB1*05:57	Confirmed		
DQB1*05:02:06	Unconfirmed	DQB1*05:18	Unconfirmed	DQB1*05:58	Unconfirmed		
DQB1*05:02:07	Confirmed	DQB1*05:19	Confirmed	DQB1*05:59	Unconfirmed		
DQB1*05:02:08	Unconfirmed	DQB1*05:20	Confirmed	DQB1*05:60	Unconfirmed		
DQB1*05:02:09	Unconfirmed	DQB1*05:21	Unconfirmed	DQB1*05:61	Unconfirmed		
DQB1*05:02:10	Unconfirmed	DQB1*05:22	Unconfirmed	DQB1*05:62	Unconfirmed		
DQB1*05:02:11	Unconfirmed	DQB1*05:23	Confirmed	DQB1*05:63	Confirmed		
DQB1*05:03:01:01	Confirmed	DQB1*05:24	Unconfirmed	DQB1*05:64	Unconfirmed		
DQB1*05:03:01:02	Unconfirmed	DQB1*05:25	Unconfirmed	DQB1*05:65	Unconfirmed		
DQB1*05:03:02	Confirmed	DQB1*05:26	Confirmed	DQB1*05:66	Unconfirmed		
DQB1*05:03:03	Unconfirmed	DQB1*05:27	Confirmed	DQB1*05:67	Unconfirmed		
DQB1*05:03:04	Unconfirmed	DQB1*05:28	Confirmed	DQB1*05:68	Unconfirmed		
DQB1*05:03:05	Unconfirmed	DQB1*05:29	Unconfirmed	DQB1*05:69	Confirmed		
DQB1*05:03:06	Unconfirmed	DQB1*05:30	Unconfirmed	DQB1*05:70	Unconfirmed		
DQB1*05:03:07	Unconfirmed	DQB1*05:31	Unconfirmed	DQB1*05:71	Unconfirmed		



Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
DQB1*06:01:01	Confirmed	DQB1*06:03:14	Unconfirmed	DQB1*06:22:03	Confirmed	DQB1*06:70	Unconfirmed
DQB1*06:01:02	Confirmed	DQB1*06:03:15	Unconfirmed	DQB1*06:23	Unconfirmed	DQB1*06:71	Confirmed
DQB1*06:01:03	Unconfirmed	DQB1*06:03:16	Unconfirmed	DQB1*06:24	Unconfirmed	DQB1*06:72	Unconfirmed
DQB1*06:01:04	Unconfirmed	DQB1*06:03:17	Unconfirmed	DQB1*06:25	Confirmed	DQB1*06:73	Unconfirmed
DQB1*06:01:05	Unconfirmed	DQB1*06:03:18	Unconfirmed	DQB1*06:26N	Confirmed	DQB1*06:74	Confirmed
DQB1*06:01:06	Unconfirmed	DQB1*06:04:01	Confirmed	DQB1*06:27:01	Unconfirmed	DQB1*06:75N	Confirmed
DQB1*06:01:07	Unconfirmed	DQB1*06:04:02	Unconfirmed	DQB1*06:27:02	Confirmed	DQB1*06:76	Unconfirmed
DQB1*06:01:08	Confirmed	DQB1*06:04:03	Unconfirmed	DQB1*06:28	Unconfirmed	DQB1*06:77N	Confirmed
DQB1*06:01:09	Unconfirmed	DQB1*06:04:04	Unconfirmed	DQB1*06:29	Unconfirmed	DQB1*06:78	Confirmed
DQB1*06:01:10	Confirmed	DQB1*06:04:05	Unconfirmed	DQB1*06:30	Unconfirmed	DQB1*06:79:01	Confirmed
DQB1*06:01:11	Unconfirmed	DQB1*06:04:06	Confirmed	DQB1*06:31	Unconfirmed	DQB1*06:79:02	Unconfirmed
DQB1*06:01:12	Unconfirmed	DQB1*06:04:07	Unconfirmed	DQB1*06:32	Unconfirmed	DQB1*06:80	Unconfirmed
DQB1*06:01:13	Confirmed	DQB1*06:04:08	Unconfirmed	DQB1*06:33	Confirmed	DQB1*06:81	Confirmed
DQB1*06:01:14	Unconfirmed	DQB1*06:04:09	Unconfirmed	DQB1*06:34	Confirmed	DQB1*06:82	Unconfirmed
DQB1*06:02:01	Confirmed	DQB1*06:04:10	Unconfirmed	DQB1*06:35	Unconfirmed	DQB1*06:83	Unconfirmed
DQB1*06:02:02	Unconfirmed	DQB1*06:05:01	Confirmed	DQB1*06:36	Confirmed	DQB1*06:84	Confirmed
DQB1*06:02:03	Unconfirmed	DQB1*06:05:02	Unconfirmed	DQB1*06:37	Unconfirmed	DQB1*06:85	Unconfirmed
DQB1*06:02:04	Confirmed	DQB1*06:06	Unconfirmed	DQB1*06:38	Unconfirmed	DQB1*06:86	Unconfirmed
DQB1*06:02:05	Confirmed	DQB1*06:07:01	Confirmed	DQB1*06:39	Unconfirmed	DQB1*06:87	Unconfirmed
DQB1*06:02:06	Unconfirmed	DQB1*06:07:02	Confirmed	DQB1*06:40	Unconfirmed	DQB1*06:88	Confirmed
DQB1*06:02:07	Confirmed	DQB1*06:08:01	Confirmed	DQB1*06:41	Confirmed	DQB1*06:89	Unconfirmed
DQB1*06:02:08	Unconfirmed	DQB1*06:08:02	Unconfirmed	DQB1*06:42	Unconfirmed	DQB1*06:90	Confirmed
DQB1*06:02:09	Unconfirmed	DQB1*06:08:03	Unconfirmed	DQB1*06:43	Unconfirmed	DQB1*06:91	Unconfirmed
DQB1*06:02:10	Unconfirmed	DQB1*06:09:01	Confirmed	DQB1*06:44	Unconfirmed	DQB1*06:92	Confirmed
DQB1*06:02:11	Confirmed	DQB1*06:09:02	Confirmed	DQB1*06:45	Unconfirmed	DQB1*06:93	Confirmed
DQB1*06:02:12	Unconfirmed	DQB1*06:09:03	Unconfirmed	DQB1*06:46	Confirmed	DQB1*06:94	Confirmed
DQB1*06:02:13	Unconfirmed	DQB1*06:09:04	Unconfirmed	DQB1*06:47	Unconfirmed	DQB1*06:95	Unconfirmed
DQB1*06:02:14	Confirmed	DQB1*06:09:05	Unconfirmed	DQB1*06:48	Confirmed	DQB1*06:96	Unconfirmed
DQB1*06:02:15	Unconfirmed	DQB1*06:09:06	Confirmed	DQB1*06:49	Confirmed	DQB1*06:97	Unconfirmed
DQB1*06:02:16	Unconfirmed	DQB1*06:10	Confirmed	DQB1*06:50	Confirmed	DQB1*06:98	Unconfirmed
DQB1*06:02:17	Confirmed	DQB1*06:11:01	Confirmed	DQB1*06:51:01	Unconfirmed	DQB1*06:99:01	Unconfirmed
DQB1*06:02:18	Unconfirmed	DQB1*06:11:02	Confirmed	DQB1*06:51:02	Unconfirmed	DQB1*06:99:02	Unconfirmed
DQB1*06:02:19	Unconfirmed	DQB1*06:11:03	Unconfirmed	DQB1*06:52	Unconfirmed	DQB1*06:100	Unconfirmed
DQB1*06:02:20	Confirmed	DQB1*06:12	Unconfirmed	DQB1*06:53	Confirmed	DQB1*06:101	Unconfirmed
DQB1*06:02:21	Unconfirmed	DQB1*06:13:01	Unconfirmed	DQB1*06:54N	Unconfirmed	DQB1*06:102N	Unconfirmed
DQB1*06:02:22	Unconfirmed	DQB1*06:13:02	Confirmed	DQB1*06:55	Confirmed	DQB1*06:103	Confirmed
DQB1*06:02:23	Unconfirmed	DQB1*06:14:01	Unconfirmed	DQB1*06:56	Unconfirmed	DQB1*06:104	Unconfirmed
DQB1*06:03:01	Confirmed	DQB1*06:14:02	Unconfirmed	DQB1*06:57	Confirmed	DQB1*06:105	Unconfirmed
DQB1*06:03:02	Confirmed	DQB1*06:15:01	Unconfirmed	DQB1*06:58	Confirmed	DQB1*06:106	Confirmed
DQB1*06:03:03	Unconfirmed	DQB1*06:15:02	Confirmed	DQB1*06:59	Confirmed	DQB1*06:107	Confirmed
DQB1*06:03:04	Unconfirmed	DQB1*06:16	Unconfirmed	DQB1*06:60	Unconfirmed	DQB1*06:108	Unconfirmed
DQB1*06:03:05	Confirmed	DQB1*06:17	Unconfirmed	DQB1*06:61	Unconfirmed	DQB1*06:109	Unconfirmed
DQB1*06:03:06	Unconfirmed	DQB1*06:18:01	Unconfirmed	DQB1*06:62	Confirmed	DQB1*06:110	Unconfirmed
DQB1*06:03:07	Confirmed	DQB1*06:18:02	Unconfirmed	DQB1*06:63	Unconfirmed	DQB1*06:111	Unconfirmed
DQB1*06:03:08	Unconfirmed	DQB1*06:19:01	Unconfirmed	DQB1*06:64	Confirmed	DQB1*06:112N	Unconfirmed
DQB1*06:03:09	Confirmed	DQB1*06:19:02	Unconfirmed	DQB1*06:65	Unconfirmed	DQB1*06:113	Unconfirmed
DQB1*06:03:10	Unconfirmed	DQB1*06:20	Unconfirmed	DQB1*06:66	Unconfirmed	DQB1*06:114	Unconfirmed
DQB1*06:03:11	Confirmed	DQB1*06:21	Confirmed	DQB1*06:67	Unconfirmed	DQB1*06:115	Unconfirmed
DQB1*06:03:12	Unconfirmed	DQB1*06:22:01	Unconfirmed	DQB1*06:68	Confirmed	DQB1*06:116	Unconfirmed
DQB1*06:03:13	Unconfirmed	DQB1*06:22:02	Confirmed	DQB1*06:69	Confirmed	DQB1*06:117	Unconfirmed



Product Insert

101.221-12 – including *Taq pol.*, IFU-01

101.221-12u – without *Taq pol.*, IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
DQB1*06:118:01	Unconfirmed	DQB1*06:137	Unconfirmed	DQB1*06:157	Unconfirmed
DQB1*06:118:02	Unconfirmed	DQB1*06:138	Unconfirmed	DQB1*06:158N	Unconfirmed
DQB1*06:119	Unconfirmed	DQB1*06:139	Unconfirmed	DQB1*06:159	Unconfirmed
DQB1*06:120	Confirmed	DQB1*06:140	Unconfirmed	DQB1*06:160	Unconfirmed
DQB1*06:121	Unconfirmed	DQB1*06:141	Unconfirmed	DQB1*06:161	Unconfirmed
DQB1*06:122	Unconfirmed	DQB1*06:142	Unconfirmed	DQB1*06:162	Unconfirmed
DQB1*06:123	Confirmed	DQB1*06:143	Unconfirmed	DQB1*06:163	Confirmed
DQB1*06:124	Unconfirmed	DQB1*06:144N	Unconfirmed	DQB1*06:164	Unconfirmed
DQB1*06:125	Confirmed	DQB1*06:145	Unconfirmed	DQB1*06:165	Unconfirmed
DQB1*06:126	Confirmed	DQB1*06:146	Unconfirmed	DQB1*06:166	Unconfirmed
DQB1*06:127	Unconfirmed	DQB1*06:147	Unconfirmed	DQB1*06:167	Unconfirmed
DQB1*06:128	Unconfirmed	DQB1*06:148	Unconfirmed		
DQB1*06:129	Unconfirmed	DQB1*06:149	Confirmed		
DQB1*06:130	Unconfirmed	DQB1*06:150	Unconfirmed		
DQB1*06:131	Unconfirmed	DQB1*06:151	Unconfirmed		
DQB1*06:132	Unconfirmed	DQB1*06:152	Unconfirmed		
DQB1*06:133	Unconfirmed	DQB1*06:153	Confirmed		
DQB1*06:134	Unconfirmed	DQB1*06:154	Unconfirmed		
DQB1*06:135	Unconfirmed	DQB1*06:155	Confirmed		
DQB1*06:136	Unconfirmed	DQB1*06:156	Unconfirmed		

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2015-January-19, release 3.19.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

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



Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

SPECIFICITY TABLE

DQB1 high resolution for frequent alleles SSP typing

Specificities and sizes of the PCR products of the 95+1 primer mixes used for DQB1 high resolution for frequent alleles SSP typing

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified DQB1 alleles ³
1 ⁴	120 bp	515 bp	*02:01:01-02:02:02, 02:04-02:16, 02:18N-02:24, 02:26-02:39, 02:41-02:53Q
2 ^{4,7}	85 bp	430 bp	*02:03
3 ⁶	145 bp	515 bp	*02:01:01-02:01:19, 02:04-02:05, 02:07:01-02:09, 02:13-02:47, 02:49-02:53Q, 03:01:01:01-03:23, 03:25-03:78, 03:80-03:96, 03:98-03:163, 03:166-03:167, 04:01:01-04:27, 05:01:01:01-05:13, 05:15-05:83, 05:85-05:89, 06:01:01-06:37, 06:39-06:85, 06:87-06:101, 06:105-06:167
4	140 bp 185 bp	430 bp	*02:02:01-02:03, 02:06, 02:10-02:12 *03:28, 03:50
5	145 bp 170 bp	515 bp	*02:04 *03:96, 04:23, 05:06:01-05:07, 05:50
6 ^{5,6}	165 bp	515 bp	*03:01:01:01-03:01:07, 03:01:09-03:01:28, 03:04:01-03:04:02, 03:09, 03:13, 03:16, 03:19, 03:21-03:22, 03:24, 03:27-03:29, 03:35-03:36, 03:42, 03:44, 03:46-03:60, 03:69, 03:71, 03:73-03:78, 03:80, 03:82-03:84N, 03:92-03:94, 03:101-03:103, 03:108, 03:113-03:116, 03:118N-03:122, 03:127-03:131, 03:134-03:135, 03:139-03:140, 03:142-03:144, 03:147-03:148, 03:150-03:152, 03:157-03:160, 03:162-03:167, 04:09
7	220 bp	515 bp	*03:01:01:01-03:01:28, 03:04:01-03:04:02, 03:09-03:10:02, 03:13-03:14:02, 03:16, 03:19, 03:21-03:22, 03:24, 03:27-03:29, 03:35-03:36, 03:42, 03:44, 03:46-03:60, 03:69, 03:71, 03:73, 03:75-03:77, 03:80, 03:82-03:84N, 03:92-03:94, 03:101-03:103, 03:108, 03:114-03:116, 03:118N-03:122, 03:127-03:131, 03:133-03:135, 03:138-03:140, 03:142-03:144, 03:147-03:148, 03:150, 03:152, 03:157-03:160, 03:162-03:167
8 ⁶	135 bp	515 bp	*02:01:01-02:02:02, 02:04-02:16, 02:18N-02:36, 02:38-02:53Q, 03:02:01-03:02:17, 03:07-03:08, 03:11, 03:18, 03:32, 03:37, 03:45, 03:62-03:64, 03:66N-03:68, 03:70, 03:81, 03:85, 03:106-03:107, 03:125, 03:146, 03:153, 03:161, 06:29, 06:63, 06:123, 06:139
9	175 bp 220 bp	515 bp	*03:02:01-03:03:13, 03:04:02-03:05:04, 03:06 [?] -03:08 [?] , 03:10:02 [?] -03:15 [?] , 03:17:01 [?] -03:18 [?] , 03:19, 03:20 [?] , 03:23 [?] , 03:25, 03:26 [?] , 03:30-03:32, 03:33 [?] -03:34 [?] , 03:37 [?] , 03:38-03:39, 03:40 [?] , 03:41, 03:43, 03:45, 03:48 [?] , 03:52 [?] -03:72 [?] , 03:74 [?] -03:78 [?] , 03:79, 03:81 [?] -03:82 [?] , 03:85-03:91Q, 03:95N-03:100, 03:101 [?] -03:112 [?] , 03:117, 03:118N [?] -03:163 [?] , 03:165 [?] -03:167 [?] , 04:01:01-04:27 *02:01:01-02:36, 02:38-02:53Q, 03:02:01-03:03:13, 03:06-03:08, 03:11-03:12, 03:15, 03:18, 03:20, 03:23, 03:25-03:26, 03:30-03:34, 03:37-03:41, 03:43, 03:45, 03:62-03:68, 03:70, 03:74, 03:79, 03:81, 03:85-03:91Q, 03:95N-03:99Q, 03:106-03:107, 03:110-03:113, 03:117, 03:123-03:126, 03:136-03:137, 03:141, 03:145-03:146, 03:149, 03:153, 03:155-03:156, 03:161, 04:03:01-04:03:02

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

10^{4,7}	120 bp 145 bp 175 bp	430 bp	*02:11, 02:25 *02:26, 03:04:01-03:04:02, 03:14:01-03:14:02, 03:80, 03:138 *03:58
11⁴	95 bp 130 bp	430 bp	*03:20 *03:05:01-03:05:04, 03:17:01-03:17:02, 03:53, 03:61-03:62, 03:72, 03:100, 03:132, 04:09
12^{4,7}	65 bp 125 bp 150 bp 195 bp	430 bp	*03:40 *03:03:06, 03:06, 03:08, 03:25, 03:137, 04:01:03, 06:02:02, 06:03:02 *03:119 *03:57
13⁴	110 bp 135 bp 150 bp 195 bp	430 bp	*03:15 *03:16 *03:07 *03:54, 03:162
14	135 bp 175 bp 260 bp	430 bp	*03:09, 05:56 *03:55 *03:11, 03:26
15	135 bp 250 bp	430 bp	*03:10:01-03:10:02, 03:12, 03:14:01-03:14:02, 03:70, 06:01:01- 06:01:14, 06:43, 06:54N-06:58, 06:98, 06:99:02-06:105, 06:108, 06:120, 06:132, 06:140, 06:153, 06:157, 06:167 *03:27
16	260 bp	515 bp	*03:01:01:01-03:01:07, 03:01:09-03:01:28, 03:04:01-03:04:02, 03:09- 03:10:02, 03:12-03:14:02, 03:16, 03:19, 03:21-03:22, 03:24, 03:27- 03:29, 03:35-03:36, 03:42, 03:44, 03:46-03:60, 03:70-03:71, 03:73- 03:78, 03:80, 03:82-03:84N, 03:92-03:94, 03:101-03:103, 03:108, 03:114-03:116, 03:118N-03:122, 03:127-03:131, 03:133-03:135, 03:139-03:140, 03:143-03:144, 03:147-03:148, 03:150-03:152, 03:157-03:160, 03:162-03:167
17^{4,6}	110 bp 165 bp 195 bp 215 bp 300 bp	430 bp	*05:03:12, 06:23, 06:82, 06:99:01, 06:156, 06:162 *02:10, 03:13, 03:49 *03:28 *03:47 *06:34
18^{6,7}	130 bp 190 bp 220 bp 265 bp	430 bp	*03:24, 03:79 *03:60, 03:73, 03:112, 05:73 05:80, 06:28, 06:56, 06:79:01-06:79:02, 06:89 *03:18 *02:36, 06:85
19	135 bp	515 bp	*03:01:01:01-03:01:07, 03:01:09-03:15, 03:17:01-03:22, 03:24, 03:26-03:103, 03:106-03:108, 03:110-03:152, 03:155-03:167, 04:09
20⁷	130 bp	430 bp	*02:03, 03:01:01:01-03:01:02, 03:01:04-03:01:07, 03:01:09-03:01:12, 03:01:14, 03:01:16-03:01:24, 03:01:26-03:01:28, 03:03:02:01- 03:03:13, 03:06, 03:09-03:10:02, 03:12-03:13, 03:15-03:17:02, 03:19- 03:24, 03:26-03:31, 03:33-03:36, 03:38-03:44, 03:46-03:60, 03:65, 03:69, 03:71-03:79, 03:82-03:84N, 03:86-03:103, 03:108, 03:111- 03:124, 03:126-03:129, 03:131, 03:133-03:137, 03:139-03:145, 03:147-03:152, 03:155-03:160, 03:162-03:167, 04:09-04:10
21^{4,7}	125 bp 205 bp	515 bp	*04:11 *04:01:01-04:01:04, 04:05-04:08, 04:14-04:17
22	140 bp 205 bp	430 bp	*04:14 *03:132, 04:02:01-04:02:07, 04:03:01, 04:04, 04:09-04:13, 04:18- 04:19, 04:21-04:27
23	135 bp	430 bp	*05:01:01:01-05:01:19, 05:07, 05:11:01-05:12, 05:18, 05:20, 05:22, 05:25, 05:27, 05:29-05:32, 05:44-05:45, 05:48-05:49, 05:51, 05:54- 05:55, 05:61-05:63, 05:68-05:76, 05:80-05:81, 05:84, 05:88-05:89

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

24⁴	120 bp	430 bp	*05:02:01-05:02:11, 05:05:01-05:05:02, 05:14, 05:17, 05:19, 05:26, 05:33-05:37, 05:46-05:47, 05:53, 05:57, 05:59, 05:65, 05:79, 05:83, 05:86-05:87Q
25⁴	100 bp	515 bp	*05:01:09-05:01:10, 05:02:02, 05:03:01:01-05:03:11, 05:03:13, 05:03:15-05:03:16, 05:06:01-05:06:02, 05:08-05:10, 05:13, 05:15-05:16, 05:24, 05:28, 05:38-05:42, 05:50, 05:56, 05:58, 05:60, 05:64, 05:66-05:67, 05:78, 05:85
26^{4,5}	120 bp	430 bp	*02:17, 02:32, 06:02:01-06:03:18, 06:05:01 [?] -06:07:01 [?] , 06:08:01 [?] -06:08:03 [?] , 06:09:02 [?] -06:09:03 [?] , 06:09:05 [?] -06:11:03 [?] , 06:13:01 [?] -06:18:01 [?] , 06:19:01 [?] -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, 06:118:02 [?] -06:126 [?] , 06:127, 06:128 [?] , 06:130, 06:131 [?] -06:147 [?] , 06:148, 06:149 [?] -06:167 [?]
27	170 bp 210 bp	430 bp	*03:67 *06:01:01-06:02:23, 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, 06:150-06:153, 06:157, 06:159, 06:161, 06:163, 06:166-06:167
28	190 bp	430 bp	*04:10, 06:02:01-06:02:23, 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, 06:150-06:152, 06:156, 06:159, 06:161-06:163, 06:166
29	130 bp	430 bp	*06:02:07, 06:03:01-06:03:09, 06:03:11-06:03:18, 06:07:01-06:07:02, 06:11:02-06:11:03, 06:14:01-06:14:02, 06:26N, 06:28, 06:30-06:32, 06:40-06:41, 06:44, 06:59-06:62, 06:64-06:65, 06:67, 06:87, 06:90-06:92, 06:110, 06:118:01-06:118:02, 06:128, 06:133-06:134, 06:141, 06:143-06:145, 06:148, 06:154, 06:165
30^{4,5}	105 bp 150 bp	430 bp	*04:15-04:16 *03:23, 05:03:12, 06:03:01-06:03:03, 06:03:05-06:03:07, 06:03:11-06:03:18, 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, 06:154, 06:161, 06:165
	210 bp 235 bp		*04:20 *03:06, 03:25, 04:04-04:05, 04:18
31⁷	165 bp	515 bp	*06:02:07, 06:03:01-06:03:18, 06:08:01-06:08:03, 06:11:02-06:12, 06:14:01-06:14:02, 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, 06:154, 06:165
32	210 bp	515 bp	*06:04:01-06:04:10, 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, 06:149, 06:155, 06:158N, 06:160, 06:164
33⁷	170 bp	430 bp	*06:04:01-06:05:02, 06:06 ^w , 06:07:01-06:07:02, 06:09:01-06:09:03, 06:09:06, 06:18:01-06:18:02, 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, 06:118:01-06:118:02, 06:121, 06:129, 06:135, 06:142, 06:155, 06:158N, 06:160, 06:164

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

34⁴	105 bp 130 bp	430 bp	*05:07, 05:75 *05:25, 06:04:01-06:05:01, 06:06, 06:08:01-06:09:06, 06:12-06:13:02, 06:17-06:18:02, 06:21-06:22:03, 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, 06:119, 06:121, 06:129, 06:135, 06:142, 06:149, 06:155, 06:158N, 06:160, 06:164
35^{6,7}	160 bp 250 bp	515 bp	*03:27, 03:48, 03:87, 06:35, 06:53, 06:145 *03:31, 05:73, 05:80, 06:05:01, 06:05:02 [?] -06:06 [?] , 06:20, 06:31, 06:45, 06:156
36^{4,7}	95 bp 180 bp 210 bp	430 bp	*03:90 *03:68 *06:05:01, 06:05:02 [?] -06:06 [?] , 06:09:01-06:09:06, 06:12, 06:15:01- 06:15:02, 06:22:01-06:22:03, 06:42, 06:46, 06:66, 06:88, 06:94, 06:118:01-06:119, 06:121, 06:142
37⁵	130 bp 165 bp 185 bp	430 bp	*05:63 *05:39 *05:21, 06:06, 06:149
38^{4,6,7}	100 bp 130 bp 180 bp	430 bp	*05:38, 05:62, 06:14:01-06:14:02, 06:69, 06:156, 06:162 *03:01:04, 05:04, 05:08, 05:18, 05:26, 05:52, 05:77, 06:01:10 *03:98, 06:10, 06:130
39^{4,7}	115 bp 140 bp 170 bp 195 bp	430 bp	*03:88 *03:165 *03:29-03:30, 03:52, 03:72, 03:100, 03:132, 04:09, 06:29, 06:96, 06:139 *04:13, 05:62, 06:13:01-06:13:02, 06:16, 06:22:01-06:22:03, 06:55, 06:69, 06:119
40⁴	100 bp 140 bp 195 bp	430 bp	*05:45, 06:40 *03:21, 05:27, 05:35 *05:41N
41⁶	175 bp 195 bp 265 bp 300 bp	430 bp	*03:45, 06:17, 06:24, 06:30, 06:42 *06:38 *06:127 *06:52
42^{4,6,7}	100 bp 130 bp 155 bp 195 bp 230 bp	515 bp	*03:41, 04:06, 04:12, 04:16 *06:10, 06:25, 06:130 *03:66N *02:08, 03:06, 03:25, 04:03:01-04:03:02 *04:18
43^{4,6,7}	85 bp 110 bp 155 bp 185 bp 215 bp 240 bp 270 bp	515 bp	*03:59, 06:37 *06:37 *02:05, 06:100 *06:26N, 06:100 *06:26N *03:71, 06:33, 06:143 *06:143
44⁴	120 bp 155 bp	430 bp	*03:42, 03:89, 03:164 *03:94, 04:02:07, 04:09, 05:62, 06:02:01-06:02:04, 06:02:06- 06:02:23, 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, 06:68-06:84, 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, 06:150-06:151, 06:156, 06:159, 06:161-06:162, 06:166
45	130 bp 260 bp	515 bp	*06:07:01-06:07:02, 06:15:01-06:15:02, 06:36, 06:46, 06:66, 06:92, 06:118:01-06:118:02 *06:85

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

46	160 bp	515 bp	*06:03:01-06:03:14, 06:03:16-06:03:18, 06:08:01-06:08:03, 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, 06:154
	210 bp		*06:03:01-06:03:10, 06:03:12-06:03:18, 06:08:01-06:08:03, 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, 06:110, 06:128, 06:133-06:134, 06:141, 06:143-06:145, 06:148, 06:154
47 ^{4,5}	110 bp	430 bp	*03:42
	155 bp		*03:30, 03:72, 03:84N, 03:98, 03:100, 03:132, 04:01:01-04:03:02, 04:06-04:10, 04:12-04:14, 04:16-04:27, 05:38, 06:02:05, 06:02:16, 06:05:02, 06:13:02, 06:19:01-06:19:02, 06:22:01-06:22:02, 06:69, 06:95, 06:119, 06:123 ^w , 06:139, 06:152
48	290 bp	430 bp	*06:02:04, 06:72
	170 bp		*03:32, 03:43, 04:07
	225 bp		*03:85
49 ⁴	105 bp	430 bp	*03:33, 05:32, 05:42, 05:45
	135 bp		*05:87Q
	160 bp		*02:33, 02:41, 03:35, 05:14, 05:84, 06:103
50 ⁴	125 bp	430 bp	*03:130
	155 bp		*03:80, 03:139
	200 bp		*03:37, 03:38, 03:46, 03:162
	240 bp		*02:14:01-02:14:02, 03:34, 03:143
51 ⁷	130 bp	430 bp	*03:36, 03:39, 03:53, 03:62, 03:149
	160 bp		*02:10, 03:49
	185 bp		*03:51, 03:158
	240 bp		*02:06, 02:48, 03:24, 03:79, 06:117
	270 bp		*02:09
52 ⁴	95 bp	430 bp	*03:06 [?] -03:08 [?] , 03:10:02 [?] -03:15 [?] , 03:17:01 [?] -03:18 [?] , 03:19, 03:20 [?] , 03:23 [?] , 03:26 [?] , 03:37 [?] , 03:40 [?] , 03:48 [?] , 03:52 [?] -03:71 [?] , 03:74 [?] -03:78 [?] , 03:81 [?] -03:82 [?] , 03:101 [?] -03:112 [?] , 03:118N [?] -03:163 [?] , 03:165 [?] -03:167 [?] , 04:08
	220 bp		*06:98, 06:126
53	140 bp	430 bp	*03:162, 06:153
	185 bp		*02:07:02, 05:09, 05:29
	205 bp		*05:30
54 ⁴	110 bp	430 bp	*05:17, 05:23
	150 bp		*03:115, 06:109-06:110
	190 bp		*05:10, 05:12, 05:47, 06:105
55 ^{4,5}	115 bp	430 bp	*06:04:01-06:05:01, 06:05:02 [?] -06:07:01 [?] , 06:07:02, 06:08:01 [?] -06:08:03 [?] , 06:09:01, 06:09:02 [?] -06:09:03 [?] , 06:09:04, 06:09:05 [?] -06:11:03 [?] , 06:12, 06:13:01 [?] -06:18:01 [?] , 06:18:02, 06:19:01 [?] -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, 06:118:02 [?] -06:126 [?] , 06:128 [?] , 06:129, 06:131 [?] -06:147 [?] , 06:149 [?] -06:167 [?]
56 ⁴	100 bp	430 bp	*06:44, 06:47
	195 bp		*03:114
	220 bp		*06:43
	265 bp		*03:83

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

57⁵	185 bp	430 bp	*02:07:01, 03:01:01:01-03:01:28, 03:04:01-03:04:02, 03:06 ² -03:08 ² , 03:09-03:10:01, 03:10:02 ² -03:15 ² , 03:16, 03:17:01 ² -03:18 ² , 03:20 ² , 03:21-03:22, 03:23 ² , 03:24, 03:26 ² , 03:27-03:29, 03:33 ² -03:34 ² , 03:35-03:36, 03:37 ² , 03:40 ² , 03:42, 03:44, 03:46-03:47, 03:48 ² , 03:49-03:51, 03:52 ² -03:71 ² , 03:73, 03:74 ² -03:78 ² , 03:80, 03:81 ² -03:82 ² , 03:83-03:84N, 03:92-03:94, 03:101 ² -03:112 ² , 03:113-03:116, 03:118N ² -03:163 ² , 03:164, 03:165 ² -03:167 ²
58	150 bp 165 bp 195 bp 235 bp	430 bp	*03:119 *03:56 *05:05:01-05:05:02, 05:11:01-05:11:02, 05:28, 05:30, 05:66, 06:129, 06:146 *05:52
59^{4,5}	100 bp 190 bp 230 bp	430 bp	*03:44, 05:13 *03:114, 06:54N *05:24
60	145 bp 170 bp 190 bp	430 bp	*05:40 *05:33, 05:49, 05:69 *05:15
61	155 bp 210 bp	430 bp	*05:40, 05:69 *05:16, 05:34, 05:44, 05:73, 06:156, 06:162
62	135 bp 155 bp 225 bp	430 bp	*03:75 *06:95, 06:97, 06:158N *03:30, 03:72, 03:100, 06:05:02, 06:15:01-06:15:02, 06:22:01-06:22:03, 06:37, 06:48, 06:51:01-06:51:02, 06:69, 06:139
63	180 bp 220 bp	430 bp	*06:50 *03:86
64^{4,6}	100 bp 160 bp 230 bp	430 bp	*02:16, 02:21 *04:17 *02:20N
65⁴	115 bp	430 bp	*02:21, 05:36
66⁴	110 bp 135 bp 165 bp	430 bp	*03:116, 05:57 *02:18N, 05:31, 05:46, 06:111 *02:19
67⁴	90 bp 160 bp	430 bp	*02:15, 02:27 *02:30
68⁴	100 bp 175 bp	430 bp	*02:23, 02:24, 02:27 *02:28
69⁴	100 bp 185 bp	430 bp	*02:24, 02:31 *02:29
70⁴	75 bp	430 bp	*03:61
71⁶	160 bp 185 bp	430 bp	*03:63, 03:76, 03:139 *03:118N
72	135 bp 165 bp 190 bp	430 bp	*05:37 *03:64, 03:77 *03:99Q, 03:118N
73⁴	95 bp 225 bp	430 bp	*02:53Q, 03:65 *03:78, 03:81, 03:159
74⁴	110 bp 135 bp	430 bp	*05:19 *04:25N, 05:22
75^{4,7}	110 bp 165 bp	430 bp	*05:75 *03:102, 05:20, 06:06 ² , 06:55, 06:58

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

76	145 bp	430 bp	*03:04:02, 03:10:01, 03:12, 03:14:02, 03:70, 06:01:01, 06:01:03-06:01:06, 06:01:08-06:01:11, 06:01:13-06:01:14, 06:43, 06:53-06:57, 06:98, 06:99:02-06:100, 06:102N-06:105, 06:108, 06:120, 06:132, 06:140, 06:153, 06:157, 06:167
	185 bp		*06:54N
77^{4,7}	95 bp	430 bp	*06:155
	185 bp		*06:60-06:61
78⁴	100 bp	430 bp	*06:64
	170 bp		*06:62
79⁴	90 bp	430 bp	*06:65
	125 bp		*06:93
	190 bp		*06:116
80^{4,7}	105 bp	430 bp	*06:70
	175 bp		*06:76, 06:163
81⁴	115 bp	430 bp	*03:95N
	175 bp		*03:30, 03:72, 03:100, 03:132, 03:158, 04:09, 06:29, 06:71, 06:96, 06:139, 06:163
82	170 bp	430 bp	*06:77N
	235 bp		*06:107
	280 bp		*06:73
83	165 bp	430 bp	*06:78
	235 bp		*06:107
	260 bp		*06:74
84⁴	120 bp	430 bp	*06:80
	190 bp		*06:75N, 06:106
85	175 bp	430 bp	*06:67
	215 bp		*06:68, 06:112N
	265 bp		*06:127
86⁴	105 bp	430 bp	*06:59, 06:150
	180 bp		*06:90
	220 bp		*06:112N
87⁴	105 bp	430 bp	*03:08, 03:137, 06:29, 06:59, 06:63, 06:87, 06:91, 06:96, 06:150
88⁴	110 bp	430 bp	*06:125
	185 bp		*06:144N
	215 bp		*06:57, 06:81
89⁴	110 bp	430 bp	*06:125
	150 bp		*06:101
	260 bp		*06:83
90	130 bp	430 bp	*06:102N
	240 bp		*03:97, 03:117, 06:86, 06:104
91⁴	70 bp	430 bp	*03:10:02, 04:02:07 ^w , 05:03:14, 05:43, 06:01:12, 06:51:01, 06:66, 06:96, 06:99:01
	100 bp		*06:01:12, 06:51:01-06:51:02, 06:99:01, 06:142
92⁴	105 bp	430 bp	*02:22
	165 bp		*02:19
	230 bp		*02:12
93⁴	95 bp	430 bp	*03:91Q
	170 bp		*02:13, 02:41
	225 bp		*03:85

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

94 ^{5,7}	175 bp	430 bp	*03:02:01-03:03:13, 03:05:01-03:08, 03:11, 03:15, 03:17:01-03:18, 03:20, 03:26, 03:30 ^w , 03:31-03:34, 03:37-03:41, 03:43, 03:45, 03:61-03:69, 03:72 ^w , 03:79, 03:81, 03:85-03:91Q, 03:95N-03:99Q, 03:100 ^w , 03:104-03:107, 03:110-03:113, 03:117, 03:123-03:126, 03:132 ^w , 03:136-03:138, 03:141, 03:145, 03:149, 03:153, 03:155-03:156, 03:161, 04:09 ^w , 06:29 ^w , 06:63, 06:66, 06:87, 06:96 ^w , 06:139 ^w
95 ⁴	95 bp	430 bp	*03:105-03:106, 03:109, 03:120
96 ⁸	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 DQB1 high resolution 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 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.

³For 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.

⁴HLA-specific PCR products shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR products.

⁵Primer mixes 6, 26, 30, 37, 47, 55, 57, 59 and 94 may give rise to a lower yield of HLA-specific PCR product than the other DQB1 primer mixes, most pronounced are primer mixes 26, 55 and 94.

⁶Primer mixes 3, 8, 17, 18, 35, 38, 41, 42, 43, 64 and 71 have a tendency to giving rise to primer oligomer formation.

⁷Primer mixes 2, 10, 12, 18, 20, 21, 31, 33, 35, 36, 38, 39, 42, 43, 51, 75, 77, 80 and 94 may have tendencies of unspecific amplifications.

⁸Primer mix 96 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.

Product Insert

101.221-12 – including *Taq* pol., IFU-01

Visit www.olerup-ssp.com for

101.221-12u – without *Taq* pol., IFU-02

“Instructions for Use” (IFU)

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec. PCR product	120	85	145	140	145	165	220	135	175	120	95	65
				185	170				220	145	130	125
										175		150
												195
Length of int. pos. control ¹	515	430	515	430	515	515	515	515	515	430	430	430
5'-primer(s) ²	30(185) 5'-AAG ^{3'}	57(266) 5'-TgA ^{3'}	135(500) 5'-TgA ^{3'}	26(173) 5'-TTA ^{3'}	39(212) 5'-gCA ^{3'}	45(230) 5'-ggA ^{3'}	26(173) 5'-TTA ^{3'}	26(173) 5'-TCT ^{3'}	26(173) 5'-TCT ^{3'}	22(163) 5'-AgT ^{3'}	23(164) 5'-gCA ^{3'}	38(210) 5'-gCA ^{3'}
				101(400) 5'-TCT ^{3'}	39(214) 5'-gCC ^{3'}				139(514) 5'-CAA ^{3'}	26(173) 5'-TTA ^{3'}	26(173) 5'-ggg ^{3'}	
				40(216) 5'-TTg ^{3'}						29(184) 5'-gAg ^{3'}	37(208) 5'-ACA ^{3'}	
				130(485) 5'-CCA ^{3'}						32(193) 5'-ATg ^{3'}		
				135(502) 5'-ACg ^{3'}								
3'-primer(s) ³	57(266) 5'-Cgg ^{3'}	71(309) 5'-CgT ^{3'}	169(604) 5'-gAC ^{3'}	76(325) 5'-CgC ^{3'}	86(353) 5'-ACg ^{3'}	86(353) 5'-gCT ^{3'}	86(353) 5'-gCT ^{3'}	57(266) 5'-Cgg ^{3'}	86(353) 5'-gCT ^{3'}	57(266) 5'-Cgg ^{3'}	55(260) 5'-gCg ^{3'}	45(232) 5'-CAA ^{3'}
	57(266) 5'-CAg ^{3'}		169(604) 5'-gAC ^{3'}	135(500) 5'-ggC ^{3'}	169(604) 5'-gAC ^{3'}		86(353) 5'-gTT ^{3'}	57(266) 5'-CAg ^{3'}	185(650) 5'-CgA ^{3'}	71(308) 5'-ggC ^{3'}		62(282) 5'-CTA ^{3'}
			145(532) 5'-ggT ^{3'}					57(266) 5'-Cgg ^{3'}				69(304) 5'-CCC ^{3'}
												75(320) 5'-CCC ^{3'}
												89(362) 5'-TCA ^{3'}
Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Well No.	13	14	15	16	17	18	19	20	21	22	23	24
Length of spec. PCR product	110	135	135	260	110	130	135	130	125	140	135	120
	135	175	250		165	190			205	205		
	150	260			195	220						
	195				215	265						
					300							
Length of int. pos. control ¹	430	430	430	515	430	430	515	430	515	430	430	430
5'-primer(s) ²	34(197) 5'-CCA ^{3'}	13(136) 5'-gCC ^{3'}	12(132) 5'-AAA ^{3'}	13(134) 5'-ggC ^{3'}	26(173) 5'-ggg ^{3'}	13(134) 5'-ggA ^{3'}	55(260) 5'-gCC ^{3'}	57(266) 5'-TgA ^{3'}	23(164) 5'-gCT ^{3'}	23(164) 5'-gCg ^{3'}	26(173) 5'-ggg ^{3'}	29(184) 5'-gAC ^{3'}
	36(205) 5'-Agg ^{3'}	40(217) 5'-TCC ^{3'}	13(134) 5'-ggC ^{3'}		26(173) 5'-TTA ^{3'}	26(175) 5'-TTC ^{3'}			48(241) 5'-ggA ^{3'}	23(164) 5'-gCg ^{3'}	26(173) 5'-ggg ^{3'}	
	49(242) 5'-ggT ^{3'}	135(500) 5'-TgA ^{3'}			101(400) 5'-TCT ^{3'}	38(209) 5'-CgT ^{3'}				43(226) 5'-ACA ^{3'}		
	55(260) 5'-gCA ^{3'}					38(211) 5'-CAT ^{3'}						
	63(285) 5'-Agg ^{3'}					139(514) 5'-CAA ^{3'}						
3'-primer(s) ³	86(353) 5'-gCT ^{3'}	86(353) 5'-gCT ^{3'}	45(230) 5'-CCC ^{3'}	86(353) 5'-gCT ^{3'}	48(240) 5'-gCg ^{3'}	86(353) 5'-gCT ^{3'}	86(353) 5'-gCT ^{3'}	86(353) 5'-gCT ^{3'}	77(327) 5'-ACg ^{3'}	77(327) 5'-ACg ^{3'}	57(266) 5'-CAA ^{3'}	56(265) 5'-gCT ^{3'}
		166(594) 5'-CgA ^{3'}	82(343) 5'-gTg ^{3'}		67(296) 5'-ggT ^{3'}	86(353) 5'-ACC ^{3'}						
		167(596) 5'-CAT ^{3'}			76(325) 5'-CgC ^{3'}	87(356) 5'-ggA ^{3'}						
					84(349) 5'-CAT ^{3'}	169(604) 5'-gAT ^{3'}						
					141(520) 5'-AAT ^{3'}							
					188(661) 5'-CCA ^{3'}							
Well No.	13	14	15	16	17	18	19	20	21	22	23	24



Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec. PCR product	100	120	170	190	130	105	165	210	170	105	160	95
			210			150				130	250	180
						210						210
						235						
Length of int. pos. control ¹	515	430	430	430	430	430	515	515	430	430	515	430
5'-primer(s) ²	29(184) 5'-gAC 3'	30(185) 5'-AAg 3'	29(184) 5'-gAT 3'	9(122) 5'-gTT 3'	27(177) 5'-gTA 3'	9(122) 5'-gTA 3'	27(177) 5'-gTA 3'	29(184) 5'-gAC 3'	27(177) 5'-gTA 3'	27(177) 5'-gTA 3'	13(136) 5'-gCC 3'	29(184) 5'-gAT 3'
		130(485) 5'-CCg 3'	29(184) 5'-gAT 3'		29(184) 5'-gAC 3'	15(140) 5'-gTA 3'	29(184) 5'-gAC 3'			28(179) 5'-gAC 3'	45(230) 5'-ggA 3'	
						21(160) 5'-CCA 3'				30(185) 5'-ACC 3'	115(442) 5'-TgA 3'	
						52(251) 5'-gCT 3'				31(190) 5'-TCC 3'	146(533) 5'-CCA 3'	
						59(272) 5'-CgT 3'				39(212) 5'-gCA 3'		
3'-primer(s) ³	47(237) 5'-CgA 3'	56(265) 5'-ggT 3'	73(314) 5'-CCT 3'	57(266) 5'-CAT 3'	57(266) 5'-CAT 3'	48(240) 5'-gCg 3'	69(304) 5'-CCC 3'	86(353) 5'-ACC 3'	69(304) 5'-CCT 3'	57(266) 5'-CAA 3'	81(338) 5'-TgC 3'	47(238) 5'-Cg 3'
	47(237) 5'-CgA 3'	57(268) 5'-ggT 3'	86(353) 5'-ACg 3'	58(270) 5'-TCC 3'	58(270) 5'-TCA 3'	77(327) 5'-ACg 3'	69(304) 5'-CCC 3'	86(354) 5'-TAT 3'			82(343) 5'-gTg 3'	76(324) 5'-gTT 3'
	50(246) 5'-gTg 3'	154(558) 5'-AAA 3'	86(354) 5'-AAT 3'								86(353) 5'-ACC 3'	86(353) 5'-ACC 3'
			86(354) 5'-AAA 3'								87(356) 5'-ggA 3'	
											185(650) 5'-CgA 3'	
Well No.	25	26	27	28	29	30	31	32	33	34	35	36



Product Insert

101.221-12 – including *Taq* pol., IFU-01

Visit www.olerup-ssp.com for

101.221-12u – without *Taq* pol., IFU-02

“Instructions for Use” (IFU)

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

Well No.	37	38	39	40	41	42	43	44	45	46	47	48
Length of spec.	130	100	115	100	175	100	85	120	130	160	110	170
PCR product	165	130	140	140	195	130	110	155	260	210	155	225
	185	180	170	195	265	155	155				290	
			195		300	195	185					
						230	215					
							240					
							270					
Length of int. pos. control ¹	430	430	430	430	430	515	515	430	515	515	430	430
5'-primer(s) ²	25(170) 5'-gCA ³	9(122) 5'-gTT ³	8(121) 5'-TgC ³	30(187) 5'-ACg ³	26(173) 5'-TCT ³	15(140) 5'-gTA ³	10(126) 5'-CAT ³	9(122) 5'-gTT ³	13(134) 5'-ggA ³	29(184) 5'-gAC ³	9(122) 5'-gTT ³	123(464) 5'-CTT ³
	27(177) 5'-gTA ³	23(166) 5'-gCT ³	9(122) 5'-gTT ³	118(449) 5'-CTA ³	98(389) 5'-CAT ³	26(173) 5'-TCT ³	11(129) 5'-TTA ³	139(514) 5'-CAA ³	57(266) 5'-TgA ³		139(514) 5'-CAA ³	140(517) 5'-CTA ³
	33(195) 5'-AAg ³	29(184) 5'-gAT ³	139(514) 5'-CAA ³	132(493) 5'-TTT ³	110(426) 5'-AAA ³	54(259) 5'-ggT ³	28(181) 5'-CCT ³		154(558) 5'-ACT ³			141(520) 5'-gCC ³
	45(230) 5'-ggA ³	135(500) 5'-TgA ³		139(512) 5'-gAT ³	130(485) 5'-CCA ³	59(272) 5'-CgT ³	38(210) 5'-gTg ³					144(529) 5'-CCg ³
				150(547) 5'-ACA ³	133(494) 5'-TCA ³		38(211) 5'-TgA ³					
							62(282) 5'-AAg ³					
3'-primer(s) ³	74(317) 5'-CCg ³	27(177) 5'-gTT ³	55(260) 5'-gCg ³	48(240) 5'-gCg ³	70(307) 5'-ggC ³	44(229) 5'-CCA ³	77(326) 5'-CCg ³	47(236) 5'-ggT ³	86(353) 5'-ACC ³	69(304) 5'-CCC ³	47(237) 5'-CgA ³	185(650) 5'-CgA ³
		29(184) 5'-gTg ³	55(260) 5'-gCg ³	169(604) 5'-gAC ³	74(318) 5'-AAg ³	56(265) 5'-gCT ³	86(353) 5'-ACg ³	48(240) 5'-gCg ³	186(653) 5'-CCg ³	86(353) 5'-ACg ³	47(237) 5'-CTA ³	
		56(265) 5'-gCT ³	57(266) 5'-CAA ³		185(650) 5'-Cgg ³	61(278) 5'-TCT ³		48(241) 5'-TgC ³			47(237) 5'-Cgg ³	
		167(596) 5'-CAT ³	59(274) 5'-gTT ³			77(326) 5'-CCT ³		162(583) 5'-CAC ³			48(240) 5'-gCg ³	
		179(632) 5'-ggT ³	164(589) 5'-ggT ³			77(327) 5'-ACg ³		166(595) 5'-ACA ³			49(244) 5'-CAT ³	
			172(611) 5'-AgC ³					169(604) 5'-gAA ³			91(369) 5'-TTT ³	
			182(641) 5'-ggC ³					174(617) 5'-CgC ³			162(583) 5'-CAC ³	
			187(656) 5'-ACA ³								175(622) 5'-CTA ³	
											179(632) 5'-ggT ³	
Well No.	37	38	39	40	41	42	43	44	45	46	47	48



Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

Visit www.olerup-ssp.com for

“Instructions for Use” (IFU)

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

Well No.	49	50	51	52	53	54	55	56	57	58	59	60
Length of spec.	105	125	130	95	140	110	115	100	185	150	100	145
PCR product	135	155	160	220	185	150		195		165	190	170
	160	200	185		205	190		220		195	230	190
		240	240					265		235		
			270									
Length of int. pos. control ¹	430	430	430	430	430	430	430	430	430	430	430	430
5'-primer(s) ²	14(138)	19(154)	8(119)	13(134)	30(185)	26(173)	130(485)	13(134)	30(185)	19(154)	13(134)	29(184)
	5'-ATA 3'	5'-ACA 3'	5'-CgC 3'	5'-ggT 3'	5'-AAG 3'	5'-ggg 3'	5'-CCA 3'	5'-ggC 3'	5'-AAG 3'	5'-ACA 3'	5'-ggC 3'	5'-gAC 3'
	19(154)	19(154)	23(164)	22(163)	30(187)	135(500)		154(558)	139(514)	30(187)	13(136)	
	5'-ACT 3'	5'-ACC 3'	5'-gCA 3'	5'-AgT 3'	5'-ACC 3'	5'-TgA 3'		5'-ACT 3'	5'-CAA 3'	5'-ACC 3'	5'-gCC 3'	
	128(481)	29(184)	23(166)	30(185)	36(205)					37(208)		
	5'-AAA 3'	5'-gAC 3'	5'-gCA 3'	5'-ATg 3'	5'-Agg 3'					5'-ACA 3'		
	133(494)	30(187)	101(400)	167(596)						38(210)		
	5'-TCA 3'	5'-ACg 3'	5'-TCT 3'	5'-gCA 3'						5'-gCA 3'		
	138(511)	36(204)								38(210)		
	5'-A 3'	5'-gAC 3'								5'-gCg 3'		
	146(533)	36(205)										
	5'-CCg 3'	5'-Agg 3'										
	146(535)	48(239)										
5'-CCT 3'	5'-CCA 3'											
150(547)	48(239)											
5'-ACA 3'	5'-CCC 3'											
	57(268)											
	5'-ACT 3'											
3'-primer(s) ³	57(266)	86(353)	55(260)	86(353)	66(294)	51(248)	154(558)	64(287)	81(338)	75(320)	32(191)	65(290)
	5'-Cgg 3'	5'-gCT 3'	5'-gCg 3'	5'-ACg 3'	5'-ACT 3'	5'-gCT 3'	5'-AAA 3'	5'-TCC 3'	5'-Tgg 3'	5'-CCC 3'	5'-TAC 3'	5'-CCC 3'
	169(604)		55(260)	185(650)	81(338)	77(328)		73(314)	185(650)	82(343)	61(279)	69(304)
	5'-gAC 3'		5'-gCg 3'	5'-CgA 3'	5'-TCg 3'	5'-CAA 3'		5'-CCA 3'	5'-Cgg 3'	5'-gTC 3'	5'-TTT 3'	5'-CCT 3'
			127(477)		86(353)	157(566)		88(359)		86(353)	64(287)	72(311)
			5'-TTC 3'		5'-ACg 3'	5'-ggg 3'		5'-TgA 3'		5'-ACg 3'	5'-TCC 3'	5'-CCT 3'
			141(520)			168(599)		174(618)			76(323)	74(317)
			5'-AAT 3'			5'-CTT 3'		5'-ACT 3'			5'-TgC 3'	5'-CCA 3'
			149(544)			174(619)						80(335)
			5'-gTC 3'			5'-CAT 3'						5'-gTT 3'
			167(596)			182(642)						
			5'-CAA 3'			5'-ggT 3'						
			169(604)			185(652)						
		5'-gAT 3'			5'-CAT 3'							
		178(631)										
		5'-gCg 3'										
Well No.	49	50	51	52	53	54	55	56	57	58	59	60

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

Well No.	61	62	63	64	65	66	67	68	69	70	71	72
Length of spec.	155	135	180	100	115	110	90	100	100	75	160	135
PCR product	210	155	220	160		135	160	175	185		185	165
		225		230		165						190
Length of int. pos. control ¹	430	430	430	430	430	430	430	430	430	430	430	430
5'-primer(s) ²	29(184) 5'-gAC 3'	9(122) 5'-gTT 3'	29(184) 5'-gAT 3'	30(185) 5'-AAg 3'	30(185) 5'-AAg 3'	30(185) 5'-AAg 3'	17(147) 5'-TTA 3'	13(134) 5'-ggT 3'	9(122) 5'-gTg 3'	55(260) 5'-gCC 3'	37(207) 5'-TAA 3'	32(192) 5'-..T 3'
		33(196) 5'-ACT 3'		146(533) 5'-CCT 3'	135(501) 5'-gAT 3'	140(517) 5'-CCA 3'	40(217) 5'-TCC 3'	36(204) 5'-gAT 3'	36(204) 5'-gAT 3'		44(227) 5'-CgC 3'	37(207) 5'-TAA 3'
		38(209) 5'-CgA 3'				145(530) 5'-CAA 3'	40(217) 5'-TCT 3'	39(212) 5'-gCT 3'	38(209) 5'-CgC 3'		46(235) 5'-TgA 3'	41(219) 5'-gAg 3'
						146(535) 5'-CCg 3'		40(217) 5'-TCT 3'			48(239) 5'-CCC 3'	48(239) 5'-TCC 3'
												135(501) 5'-gAT 3'
3'-primer(s) ³	65(290) 5'-CCC 3'	45(232) 5'-CAA 3'	75(322) 5'-gTg 3'	48(241) 5'-CgT 3'	51(248) 5'-gCC 3'	61(279) 5'-TTT 3'	57(266) 5'-Cgg 3'	57(266) 5'-Cgg 3'	57(266) 5'-Cgg 3'	66(294) 5'-ATg 3'	86(353) 5'-gCT 3'	86(353) 5'-gCT 3'
	69(304) 5'-CCT 3'	49(244) 5'-CAT 3'	90(365) 5'-AgT 3'	51(248) 5'-gCC 3'	163(585) 5'-gTT 3'	72(311) 5'-CCg 3'						166(595) 5'-ACA 3'
	82(341) 5'-AgC 3'	69(304) 5'-CCT 3'		93(376) 5'-TCA 3'		169(604) 5'-gAC 3'						
	87(356) 5'-ggA 3'			185(650) 5'-CgA 3'								
	88(361) 5'-CCT 3'											
Well No.	61	62	63	64	65	66	67	68	69	70	71	72

Well No.	73	74	75	76	77	78	79	80	81	82	83	84
Length of spec.	95	110	110	145	95	100	90	105	115	170	165	120
PCR product	225	135	165	185	185	170	125	175	175	235	235	190
							190			280	260	
Length of int. pos. control ¹	430	430	430	430	430	430	430	430	430	430	430	430
5'-primer(s) ²	22(163) 5'-AgA 3'	26(173) 5'-ggg 3'	13(134) 5'-ggC 3'	13(134) 5'-ggC 3'	27(177) 5'-gTA 3'	27(177) 5'-gTA 3'	27(177) 5'-gTA 3'	9(122) 5'-gTT 3'	8(119) 5'-CgC 3'	9(122) 5'-gTT 3'	9(122) 5'-gTT 3'	9(122) 5'-gTT 3'
	26(173) 5'-TTT 3'		19(154) 5'-ACC 3'				105(411) 5'-AgC 3'		9(122) 5'-gTT 3'			
	65(292) 5'-..g 3'		31(190) 5'-TCC 3'						29(182) 5'-CAA 3'			
	70(306) 5'-AgC 3'											
3'-primer(s) ³	86(353) 5'-gCT 3'	49(242) 5'-CCT 3'	51(250) 5'-CgC 3'	47(237) 5'-CgA 3'	46(233) 5'-ACC 3'	47(238) 5'-gCA 3'	43(224) 5'-Cgg 3'	31(188) 5'-Agg 3'	52(251) 5'-gCA 3'	52(253) 5'-CTA 3'	50(247) 5'-CgA 3'	36(203) 5'-ACC 3'
		54(257) 5'-gCT 3'	57(266) 5'-CAA 3'	61(279) 5'-TTT 3'	75(322) 5'-gTg 3'	71(308) 5'-ggA 3'	55(260) 5'-gCA 3'	52(251) 5'-gCA 3'	52(253) 5'-CTT 3'	74(317) 5'-ACC 3'	74(317) 5'-ACC 3'	58(271) 5'-CTT 3'
		58(271) 5'-CTA 3'			77(326) 5'-CCA 3'		154(558) 5'-AAA 3'	55(262) 5'-AgA 3'	55(260) 5'-gCg 3'	88(359) 5'-CgA 3'	82(341) 5'-AgC 3'	60(276) 5'-CAC 3'
Well No.	73	74	75	76	77	78	79	80	81	82	83	84



Product Insert

101.221-12 – including *Taq* pol., IFU-01

Visit www.olerup-ssp.com for

101.221-12u – without *Taq* pol., IFU-02

“Instructions for Use” (IFU)

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

Well No.	85	86	87	88	89	90	91	92	93	94	95
Length of spec.	175	105	105	110	110	130	70	105	95	175	95
PCR product	215	180		185	150	240	100	165	170		
	265	220		215	260			230	225		
Length of int. pos. control ¹	430	430	430	430	430	430	430	430	430	430	430
5'-primer(s) ²	9(124) 5'-TCT 3'	9(124) 5'-TCT 3'	45(230) 5'-ggC 3'	26(174) 5'-TAC 3'	13(136) 5'-gCg 3'	101(400) 5'-TCT 3'	47(237) 5'-TAC 3'	30(185) 5'-AAG 3'	14(138) 5'-ATA 3'	10(126) 5'-CAA 3'	71(309) 5'-ACC 3'
	14(137) 5'-CAC 3'	23(166) 5'-gCA 3'	47(238) 5'-ACA 3'	30(187) 5'-ACT 3'	49(242) 5'-ggA 3'				15(142) 5'-gCA 3'	13(134) 5'-ggg 3'	
	24(169) 5'-TgT 3'	47(238) 5'-ACA 3'	55(260) 5'-gCC 3'	37(207) 5'-TAA 3'	63(285) 5'-Agg 3'				123(464) 5'-CTT 3'		
	110(426) 5'-AAA 3'			63(285) 5'-Agg 3'					166(595) 5'-AgA 3'		
3'-primer(s) ³	69(304) 5'-CCC 3'	69(304) 5'-CCC 3'	69(304) 5'-CCC 3'	86(353) 5'-ACg 3'	86(353) 5'-ACg 3'	131(488) 5'-ACT 3'	56(265) 5'-gTC 3'	51(248) 5'-gCA 3'	57(266) 5'-Cgg 3'	55(260) 5'-gCg 3'	86(355) 5'-gAC 3'
	185(650) 5'-Cgg 3'					167(596) 5'-CAA 3'	66(294) 5'-ATg 3'	72(311) 5'-CCg 3'	185(650) 5'-CgA 3'	57(266) 5'-Cgg 3'	87(358) 5'-gCC 3'
						172(611) 5'-AgA 3'		92(372) 5'-CgA 3'			93(374) 5'-gCA 3'
Well No.	85	86	87	88	89	90	91	92	93	94	95

¹The 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.

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.

Product Insert

101.221-12 – including *Taq* pol., IFU-01

Visit www.olerup-ssp.com for

101.221-12u – without *Taq* pol., IFU-02

“Instructions for Use” (IFU)

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

CELL LINE VALIDATION SHEET																			
DQB1 high resolution primer set ²																			
				Well															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				201550001	201550002	201550003	201550004	201550005	201550006	201550007	201550008	201550009	201550010	201550011	201550012	201550013	201550014	201550015	201550016
			Production No.																
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		-	-	+	-	-	-	-	-	-	-	-	-	-	-	-



Product Insert

101.221-12 – including *Taq* pol., IFU-01

Visit www.olerup-ssp.com for

101.221-12u – without *Taq* pol., IFU-02

“Instructions for Use” (IFU)

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

CELL LINE VALIDATION SHEET																			
DQB1 high resolution primer set ²																			
				Well															
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
				201550017	201550018	201550019	201550020	201550021	201550022	201550023	201550024	201550025	201550026	201550027	201550028	201550029	201550030	201550031	201550032
	IHWC cell line ¹		DQB1	Production No.															
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		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-



Product Insert

101.221-12 – including *Taq* pol., IFU-01

Visit www.olerup-ssp.com for

101.221-12u – without *Taq* pol., IFU-02

“Instructions for Use” (IFU)

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

CELL LINE VALIDATION SHEET																					
DQB1 high resolution primer set ²																					
				Production No.	Well																
					33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
	IHWC cell line ¹		DQB1		201550033	201550034	201550035	201550036	201550037	201550038	201550039	201550040	201550041	201550042	201550043	201550044	201550045	201550046	201550047	201550048	
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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Product Insert

101.221-12 – including *Taq* pol., IFU-01

Visit www.olerup-ssp.com for

101.221-12u – without *Taq* pol., IFU-02

“Instructions for Use” (IFU)

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

CELL LINE VALIDATION SHEET																			
DQB1 high resolution primer set ²																			
			Production No.	Well															
				49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
				201550049	201550050	201550051	201550052	201550053	201550054	201550055	201550056	201550057	201550058	201550059	201550060	201550061	201550062	201550063	201550064
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 OLG A	*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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Product Insert

101.221-12 – including *Taq* pol., IFU-01

Visit www.olerup-ssp.com for

101.221-12u – without *Taq* pol., IFU-02

“Instructions for Use” (IFU)

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

CELL LINE VALIDATION SHEET																			
DQB1 high resolution primer set ²																			
			Production No.	Well															
				65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
	IHWC cell line ¹	DQB1		201550065	201550066	201550067	201550068	201550069	201550070	201550071	201550072	201550073	201550074	201550075	201550076	201550077	201550078	201550079	201550080
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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Product Insert

101.221-12 – including *Taq* pol., IFU-01

Visit www.olerup-ssp.com for

101.221-12u – without *Taq* pol., IFU-02

“Instructions for Use” (IFU)

Lot No.: 17Y

Lot-specific information

www.olerup-ssp.com

CELL LINE VALIDATION SHEET																		
DQB1 high resolution primer set ²																		
				Well														
				81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
				201550081	201550082	201550083	201550084	201550085	201550086	201550087	201550088	201550089	201550090	201550091	201550092	201550093	201550094	201550095
			Production No.															
IHC 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		-	-	-	-	-	-	-	-	-	-	-	-	-	

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.



Product Insert

101.221-12 – including *Taq* pol., IFU-01101.221-12u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for
“Instructions for Use” (IFU)Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

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 2, 5, 12 to 14, 17, 18, 37 to 43, 45, 48 to 51, 53, 54, 56, 58 to 75, 77 to 93 and 95 were available.

The specificities of the primers in primer solutions 2, 12 to 14, 17, 18, 37 to 39, 41, 42, 45, 50, 51, 53, 58, 61, 62, 64, 66, 70, 72, 75, 79, 81, 87 and 91, were tested by separately adding additional 5'-primers, respectively additional 3'-primers.

In primer solution 5, 40, 43, 48, 49, 67 to 69, 71, 73, 85, 86, 88, 89 and 93 it was only possible to test the 3'-primers, the 5'-primers were not possible to test.

In primer solution 54, 56, 59, 60, 63, 65, 74, 77, 78, 80, 82 to 84, 90, 92 and 95 it was only possible to test the 5'-primers, the 3'-primers were not possible to test.

In primer solutions 10, 11, 13 to 15, 18, 21 to 23, 30, 34, 35, 37, 38, 39, 41, 42, 45, 50 to 53, 58, 62, 64, 66, 72, 75, 79, 81, 87 and 94 one to four 5'-primers were not possible to test.

In primer solutions 1, 3, 4, 7, 8, 10, 12, 14, 15, 17, 18, 25 to 29, 31, 32, 35, 36, 38, 39, 41, 42, 44, 45, 47, 51, 53, 57, 58, 61, 62, 64, 66, 72, 75, 76, 79, 81 and 94 one to eight 3'-primers were not possible to test.

Additional primers in primer solutions 4, 26, 29 to 31, 34, 35, 44, 46, 47, 52 and 57 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer.

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

Product Insert

101.221-12 – including *Taq* pol., IFU-01

101.221-12u – without *Taq* pol., IFU-02

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

Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com

Product Insert

101.221-12 – including *Taq* pol., IFU-01101.221-12u – without *Taq* pol., IFU-02Visit www.olerup-ssp.com for
“Instructions for Use” (IFU)Lot No.: **17Y**

Lot-specific information

www.olerup-ssp.com**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>****For information on Olerup SSP distributors worldwide, contact [Olerup GmbH](http://www.olerup.com).**