

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

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

Lot No.: **5E8**

Lot-specific information
Olerup SSP[®] DQB1*06

Product number:	101.212-24/04 – including <i>Taq</i> pol. 101.212-24u/04u – without <i>Taq</i> pol.
Lot number:	5E8
Expiry date:	2019-06-01
Number of tests:	24 tests – Product No. 101.212-24/24u 4 tests – Product No. 101.212-04/04u
Number of wells per test:	63+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. 5E8.

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

**CHANGES COMPARED TO THE PREVIOUS OLERUP SSP[®]
DQB1*06 Lot (84Y)**

The DQB1*06 kit is updated to enable separation of:

- Confirmed DQB1*06 alleles as listed in the IMGT/HLA database¹
- Polymorphisms in exons outside of the region encoding the peptide binding domain
- Null and Alternatively expressed alleles

Two wells have been added to DQB1*06, wells **63 and 64**.

¹As described in section Uniquely Identified Alleles.

The DQB1*06 primer set, specificity and interpretation tables have been updated for the DQB1 alleles described since the previous *Olerup SSP[®] DQB1*06 lot (Lot No. 84Y)*. The kit design is based on IMGT/HLA database 3.25.0.

As of lot series V, the Specificity Table is included in the lot-specific Product Insert, and the Interpretation Table is included in the Worksheet.

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

Well	5'-primer	3'-primer	rationale
11	Added	-	5'-primer added for the DQB1*06:164 allele.
14	-	Added	3'-primer added for the DQB1*06:146:02 allele.
16	Moved	Moved	Primer pair moved to well 58 for improved HLA-specific amplification and decreased tendency of primer oligomer formation.
18	-	Added	3'-primers added for the DQB1*06:149 and DQB1*06:193N alleles.
19	-	Added	3'-primer added for the DQB1*06:193N allele.
24	Added	-	5'-primer added for increased yield.
35	Added	-	5'-primer added for the DQB1*06:172 allele.
40	-	Added	3'-primer added from well 61.
43	Added	Added	Primer pair added from well 51 for improved HLA-specific amplification.
44	Added	-	5'-primer added for the DQB1*06:191 allele.
45	-	Added	3'-primer added from well 61.
51	Moved, Added	Moved	Primer pair moved to well 43, 5'-primers added for the DQB1*06:189 and DQB1*06:205 alleles.
52	-	Added	3'-primers added for the DQB1*06:188 and DQB1*06:200 alleles.
53	-	Added	3'-primers added for the DQB1*06:188 and DQB1*06:200 alleles.
56	Added	-	5'-primer added for the DQB1*06:187 allele.
57	-	-	Exchange of positive control primer pair.
58	Added	-	5'-primer added for the DQB1*06:205 allele, 5'-primer added from well 16 for improved HLA-specific amplification and decreased tendency of primer oligomer formation.
60	Added	-	5'-primer added for the DQB1*06:191 allele.
61	Moved, Added	Moved, Added	Primer pair moved to wells 40 and 45, primer pair added for the DQB1*06:53:02 allele.
62	Added	Added	Negative Control moved to well 64, primer pair added for the DQB1*06:169 allele.
63	New	New	New primer pair added for the DQB1*06:164 allele.
64	New	New	Negative Control added from well 62.

Change in revision R01 compared to R00:

1. In primer mixes 13, 21, 25 and 35 nucleotide sequence information is not available for the primer matching sequence in the DQB1*06:05:02 allele. The amplification pattern has been changed to “?” in the Specificity and Interpretation Tables.

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Lot-specific information

Well **64** contains Negative Control primer pairs, that will amplify more than 95% of the *Olerup SSP*[®] HLA Class I, DRB, DQB1, DPB1 and DQA1 amplicons as well as all the amplicons generated by the control primer pairs matching the human growth hormone gene.

HLA-specific PCR product sizes range from 75 to 200 base pairs.

The PCR product generated by the positive control primer pair is 430 base pairs.

Length of PCR product	105	200	105	80	75	80	85
5'-primer¹	164	340	440	45	45	43	36
	5'-CAC ^{3'}	5'-Agg ^{3'}	5'-TTA ^{3'}	5'-Tgg ^{3'}	5'-Tgg ^{3'}	5'-Tgg ^{3'}	5'-TAC ^{3'}
							36
							5'-TAT ^{3'}
3'-primer²	231	2nd I	507	59	58	57	47
	5'-TgC ^{3'}	5'-AAA ^{3'}	5'-TTg ^{3'}	5'-CTC ^{3'}	5'-ggC ^{3'}	5'-CTC ^{3'}	5'-ACA ^{3'}
							48
							5'-gCA ^{3'}
							48
							5'-gCC ^{3'}
							52
							5'-TgT ^{3'}
A*	+	+	+				
B*	+	+	+				
C*	+	+	+				
DRB1				+	+		
DRB3				+	+		
DRB5				+			
DQB1					+		
DPB1						+	
DQA1							+

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

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

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Lot-specific information

PRODUCT DESCRIPTION

DQB1*06 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the DQB1*06:01 to DQB1*06:209 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 64 PCR reactions in a 64 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	NC

The 64 well cut PCR plate is marked with 'DQB1*06' in silver/gray ink.

Well No. 1 is marked with the Lot No. '5E8'.

Wells 1 to 61 – DQB1*06 high resolution primers.

Well 62 – Negative Control (NC).

A faint row of numbers is seen between wells 1 and 2 or wells 7 and 8 of the PCR trays. These stem from the manufacture of the trays, and should be disregarded. The PCR plates are covered with a PCR-compatible foil.

Please note: When removing each 64 well PCR plate, make sure that the remaining plates stay covered. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

INTERPRETATION

Due to the sharing of sequence motifs between DQB1 alleles non-DQB1*06 alleles will be amplified by primer mixes 3, 5, 10, 13, 15 to 19, 21, 24, 26, 33, 34, 37, 41, 43, 46 to 48, 51 to 54, 57, 58 and 62. Thus, the interpretation of DQB1*06 subtypings is only influenced by a few non-DQB1*06 alleles and not by other groups of DQB1 alleles or the DQB2 and DQB3 genes.

For further details see Specificity Table.

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Lot-specific information

UNIQUELY IDENTIFIED ALLELES

All the DQB1*06 alleles, i.e. **DQB1*06:01 to DQB1*06:209**, recognized by the HLA Nomenclature Committee in July 2016^{1,2} will be amplified by the primers in the DQB1*06 subtyping kit^{1,2}.

The DQB1*06 kit enables separation of the confirmed DQB1*06 alleles as listed in the IMGT/HLA database. An HLA allele is listed as confirmed by IMGT/HLA if it has been sequenced by more than a single laboratory or from multiple sources. Current allele confirmation status for DQB1*06 alleles is listed below.

The DQB1*06 kit also enables identification of polymorphisms in exons outside of the region encoding the peptide binding domain and of null and alternatively expressed alleles.

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

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

The DQB1*06 subtyping kit cannot distinguish the silent mutations in the DQB1*06:01:01, 06:01:03-06:01:06, 06:01:08-06:01:11 and 06:01:13-06:01:15 alleles, the DQB1*06:01:02, 06:01:07 and 06:01:12 alleles, the DQB1*06:02:01-06:02:04, 06:02:06 and 06:02:08-06:02:25 alleles, the DQB1*06:03:01-06:03:03, 06:03:05-06:03:06, 06:03:11-06:03:18 and 06:03:20-06:03:22 alleles, the DQB1*06:03:04 and 06:03:08-06:03:10 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 and 06:09:05-06:09:06 alleles, the DQB1*06:11:02-06:11:03 alleles, the DQB1*06:13:01-06:13:02 alleles, the DQB1*06:14:01 and 06:14:03 alleles, the DQB1*06:15:01-06:15:02 alleles, the 06:19:01-06:19:02 alleles, the DQB1*06:22:01 and 06:22:03 alleles, the DQB1*06:27:01-06:27:02 alleles, the DQB1*06:79:01-06:79:02 alleles or the DQB1*06:146:01-06:146:02 alleles.

¹HLA-DQB1 alleles listed on the IMGT/HLA web page 2016-July-14, release 3.25.0, www.ebi.ac.uk/imgt/hla.

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

RESOLUTION IN HOMO- AND HETEROZYGOTES

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

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ALLELE CONFIRMATION STATUS

Allele	Status¹	Allele	Status¹	Allele	Status¹	Allele	Status¹
DQB1*06:01:01	Confirmed	DQB1*06:03:11	Confirmed	DQB1*06:18:01	Unconfirmed	DQB1*06:60	Unconfirmed
DQB1*06:01:02	Confirmed	DQB1*06:03:12	Unconfirmed	DQB1*06:18:02	Unconfirmed	DQB1*06:61	Unconfirmed
DQB1*06:01:03	Unconfirmed	DQB1*06:03:13	Unconfirmed	DQB1*06:19:01	Unconfirmed	DQB1*06:62	Confirmed
DQB1*06:01:04	Unconfirmed	DQB1*06:03:14	Unconfirmed	DQB1*06:19:02	Unconfirmed	DQB1*06:63	Unconfirmed
DQB1*06:01:05	Unconfirmed	DQB1*06:03:15	Unconfirmed	DQB1*06:20	Unconfirmed	DQB1*06:64	Confirmed
DQB1*06:01:06	Unconfirmed	DQB1*06:03:16	Unconfirmed	DQB1*06:21	Confirmed	DQB1*06:65	Unconfirmed
DQB1*06:01:07	Unconfirmed	DQB1*06:03:17	Unconfirmed	DQB1*06:22:01	Unconfirmed	DQB1*06:66	Unconfirmed
DQB1*06:01:08	Confirmed	DQB1*06:03:18	Unconfirmed	DQB1*06:22:02	Confirmed	DQB1*06:67	Unconfirmed
DQB1*06:01:09	Unconfirmed	DQB1*06:03:19	Unconfirmed	DQB1*06:22:03	Confirmed	DQB1*06:68	Confirmed
DQB1*06:01:10	Confirmed	DQB1*06:03:20	Unconfirmed	DQB1*06:23	Unconfirmed	DQB1*06:69	Confirmed
DQB1*06:01:11	Unconfirmed	DQB1*06:03:21	Unconfirmed	DQB1*06:24	Unconfirmed	DQB1*06:70	Unconfirmed
DQB1*06:01:12	Unconfirmed	DQB1*06:03:22	Unconfirmed	DQB1*06:25	Confirmed	DQB1*06:71	Confirmed
DQB1*06:01:13	Confirmed	DQB1*06:04:01	Confirmed	DQB1*06:26N	Confirmed	DQB1*06:72	Unconfirmed
DQB1*06:01:14	Confirmed	DQB1*06:04:02	Unconfirmed	DQB1*06:27:01	Unconfirmed	DQB1*06:73	Unconfirmed
DQB1*06:01:15	Unconfirmed	DQB1*06:04:03	Unconfirmed	DQB1*06:27:02	Confirmed	DQB1*06:74	Confirmed
DQB1*06:02:01	Confirmed	DQB1*06:04:04	Unconfirmed	DQB1*06:28	Unconfirmed	DQB1*06:75N	Confirmed
DQB1*06:02:02	Unconfirmed	DQB1*06:04:05	Unconfirmed	DQB1*06:29	Unconfirmed	DQB1*06:76	Unconfirmed
DQB1*06:02:03	Unconfirmed	DQB1*06:04:06	Confirmed	DQB1*06:30	Unconfirmed	DQB1*06:77N	Confirmed
DQB1*06:02:04	Confirmed	DQB1*06:04:07	Unconfirmed	DQB1*06:31	Unconfirmed	DQB1*06:78	Confirmed
DQB1*06:02:05	Confirmed	DQB1*06:04:08	Unconfirmed	DQB1*06:32:01	Unconfirmed	DQB1*06:79:01	Confirmed
DQB1*06:02:06	Unconfirmed	DQB1*06:04:09	Unconfirmed	DQB1*06:32:02	Unconfirmed	DQB1*06:79:02	Unconfirmed
DQB1*06:02:07	Confirmed	DQB1*06:04:10	Unconfirmed	DQB1*06:33	Confirmed	DQB1*06:80	Unconfirmed
DQB1*06:02:08	Unconfirmed	DQB1*06:05:01	Confirmed	DQB1*06:34	Confirmed	DQB1*06:81	Confirmed
DQB1*06:02:09	Unconfirmed	DQB1*06:05:02	Unconfirmed	DQB1*06:35	Unconfirmed	DQB1*06:82	Unconfirmed
DQB1*06:02:10	Unconfirmed	DQB1*06:06	Unconfirmed	DQB1*06:36	Confirmed	DQB1*06:83	Unconfirmed
DQB1*06:02:11	Confirmed	DQB1*06:07:01	Confirmed	DQB1*06:37	Confirmed	DQB1*06:84	Confirmed
DQB1*06:02:12	Unconfirmed	DQB1*06:07:02	Confirmed	DQB1*06:38	Unconfirmed	DQB1*06:85	Unconfirmed
DQB1*06:02:13	Unconfirmed	DQB1*06:08:01	Confirmed	DQB1*06:39	Unconfirmed	DQB1*06:86	Unconfirmed
DQB1*06:02:14	Confirmed	DQB1*06:08:02	Unconfirmed	DQB1*06:40	Unconfirmed	DQB1*06:87	Unconfirmed
DQB1*06:02:15	Unconfirmed	DQB1*06:08:03	Unconfirmed	DQB1*06:41	Confirmed	DQB1*06:88	Confirmed
DQB1*06:02:16	Unconfirmed	DQB1*06:09:01	Confirmed	DQB1*06:42	Unconfirmed	DQB1*06:89	Unconfirmed
DQB1*06:02:17	Confirmed	DQB1*06:09:02	Confirmed	DQB1*06:43	Unconfirmed	DQB1*06:90	Confirmed
DQB1*06:02:18	Unconfirmed	DQB1*06:09:03	Unconfirmed	DQB1*06:44	Confirmed	DQB1*06:91	Unconfirmed
DQB1*06:02:19	Unconfirmed	DQB1*06:09:04	Unconfirmed	DQB1*06:45	Unconfirmed	DQB1*06:92	Confirmed
DQB1*06:02:20	Confirmed	DQB1*06:09:05	Unconfirmed	DQB1*06:46	Confirmed	DQB1*06:93	Confirmed
DQB1*06:02:21	Unconfirmed	DQB1*06:09:06	Confirmed	DQB1*06:47	Unconfirmed	DQB1*06:94	Confirmed
DQB1*06:02:22	Unconfirmed	DQB1*06:10	Confirmed	DQB1*06:48	Confirmed	DQB1*06:95	Unconfirmed
DQB1*06:02:23	Unconfirmed	DQB1*06:11:01	Confirmed	DQB1*06:49	Confirmed	DQB1*06:96	Unconfirmed
DQB1*06:02:24	Unconfirmed	DQB1*06:11:02	Confirmed	DQB1*06:50	Confirmed	DQB1*06:97	Unconfirmed
DQB1*06:02:25	Unconfirmed	DQB1*06:11:03	Unconfirmed	DQB1*06:51:01	Unconfirmed	DQB1*06:98	Unconfirmed
DQB1*06:03:01	Confirmed	DQB1*06:12	Unconfirmed	DQB1*06:51:02	Unconfirmed	DQB1*06:99:01	Unconfirmed
DQB1*06:03:02	Confirmed	DQB1*06:13:01	Unconfirmed	DQB1*06:52	Unconfirmed	DQB1*06:99:02	Unconfirmed
DQB1*06:03:03	Unconfirmed	DQB1*06:13:02	Confirmed	DQB1*06:53:01	Confirmed	DQB1*06:100	Unconfirmed
DQB1*06:03:04	Unconfirmed	DQB1*06:14:01	Confirmed	DQB1*06:53:02	Unconfirmed	DQB1*06:101	Unconfirmed
DQB1*06:03:05	Confirmed	DQB1*06:14:02	Unconfirmed	DQB1*06:54N	Unconfirmed	DQB1*06:102N	Unconfirmed
DQB1*06:03:06	Unconfirmed	DQB1*06:14:03	Confirmed	DQB1*06:55	Confirmed	DQB1*06:103	Confirmed
DQB1*06:03:07	Confirmed	DQB1*06:15:01	Unconfirmed	DQB1*06:56	Unconfirmed	DQB1*06:104	Unconfirmed
DQB1*06:03:08	Unconfirmed	DQB1*06:15:02	Confirmed	DQB1*06:57	Confirmed	DQB1*06:105	Unconfirmed
DQB1*06:03:09	Confirmed	DQB1*06:16	Unconfirmed	DQB1*06:58	Confirmed	DQB1*06:106	Confirmed
DQB1*06:03:10	Unconfirmed	DQB1*06:17	Unconfirmed	DQB1*06:59	Confirmed	DQB1*06:107	Confirmed



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Allele	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
DQB1*06:108	Unconfirmed	DQB1*06:137	Unconfirmed	DQB1*06:166	Unconfirmed	DQB1*06:196	Unconfirmed
DQB1*06:109	Unconfirmed	DQB1*06:138	Unconfirmed	DQB1*06:167	Unconfirmed	DQB1*06:197	Unconfirmed
DQB1*06:110	Unconfirmed	DQB1*06:139	Unconfirmed	DQB1*06:168	Unconfirmed	DQB1*06:198	Unconfirmed
DQB1*06:111	Unconfirmed	DQB1*06:140	Unconfirmed	DQB1*06:169	Confirmed	DQB1*06:199	Unconfirmed
DQB1*06:112N	Unconfirmed	DQB1*06:141	Unconfirmed	DQB1*06:170	Confirmed	DQB1*06:200	Unconfirmed
DQB1*06:113	Unconfirmed	DQB1*06:142	Unconfirmed	DQB1*06:171	Confirmed	DQB1*06:201	Unconfirmed
DQB1*06:114	Unconfirmed	DQB1*06:143	Unconfirmed	DQB1*06:172	Confirmed	DQB1*06:202	Unconfirmed
DQB1*06:115	Unconfirmed	DQB1*06:144N	Unconfirmed	DQB1*06:173	Unconfirmed	DQB1*06:203	Unconfirmed
DQB1*06:116	Unconfirmed	DQB1*06:145	Unconfirmed	DQB1*06:174	Unconfirmed	DQB1*06:204	Unconfirmed
DQB1*06:117	Unconfirmed	DQB1*06:146:01	Unconfirmed	DQB1*06:175	Unconfirmed	DQB1*06:205	Unconfirmed
DQB1*06:118:01	Unconfirmed	DQB1*06:146:02	Unconfirmed	DQB1*06:176	Unconfirmed	DQB1*06:206	Unconfirmed
DQB1*06:118:02	Confirmed	DQB1*06:147	Unconfirmed	DQB1*06:177	Unconfirmed	DQB1*06:207	Unconfirmed
DQB1*06:119	Unconfirmed	DQB1*06:148	Unconfirmed	DQB1*06:178	Unconfirmed	DQB1*06:208	Unconfirmed
DQB1*06:120	Confirmed	DQB1*06:149	Confirmed	DQB1*06:179N	Confirmed	DQB1*06:209	Unconfirmed
DQB1*06:121	Unconfirmed	DQB1*06:150	Unconfirmed	DQB1*06:180	Unconfirmed		
DQB1*06:122	Unconfirmed	DQB1*06:151	Unconfirmed	DQB1*06:181	Unconfirmed		
DQB1*06:123	Confirmed	DQB1*06:152	Unconfirmed	DQB1*06:182	Unconfirmed		
DQB1*06:124	Unconfirmed	DQB1*06:153	Confirmed	DQB1*06:183	Unconfirmed		
DQB1*06:125	Confirmed	DQB1*06:154	Unconfirmed	DQB1*06:184	Unconfirmed		
DQB1*06:126	Confirmed	DQB1*06:155	Confirmed	DQB1*06:185	Unconfirmed		
DQB1*06:127	Unconfirmed	DQB1*06:156	Unconfirmed	DQB1*06:186	Unconfirmed		
DQB1*06:128	Unconfirmed	DQB1*06:157	Unconfirmed	DQB1*06:187	Unconfirmed		
DQB1*06:129	Unconfirmed	DQB1*06:158N	Confirmed	DQB1*06:188	Unconfirmed		
DQB1*06:130	Unconfirmed	DQB1*06:159	Unconfirmed	DQB1*06:189	Unconfirmed		
DQB1*06:131	Unconfirmed	DQB1*06:160	Unconfirmed	DQB1*06:190	Unconfirmed		
DQB1*06:132	Unconfirmed	DQB1*06:161	Unconfirmed	DQB1*06:191	Confirmed		
DQB1*06:133	Unconfirmed	DQB1*06:162	Confirmed	DQB1*06:192	Unconfirmed		
DQB1*06:134	Unconfirmed	DQB1*06:163	Confirmed	DQB1*06:193N	Unconfirmed		
DQB1*06:135	Unconfirmed	DQB1*06:164	Confirmed	DQB1*06:194	Unconfirmed		
DQB1*06:136	Unconfirmed	DQB1*06:165	Unconfirmed	DQB1*06:195	Unconfirmed		

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

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Lot-specific information
SPECIFICITY TABLE

DQB1*06 SSP subtyping

Specificities and sizes of the PCR products of the 63+1 primer mixes used for DQB1*06 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified DQB1*06 alleles ³	Amplified non-DQB1*06 alleles ⁴
1	220 bp	515 bp	*06:01:01-06:01:15, 06:35, 06:43, 06:45, 06:53:01-06:57, 06:82, 06:98-06:105, 06:108, 06:120, 06:132, 06:140, 06:153, 06:157, 06:177, 06:181, 06:194, 06:205, 06:209	
2	210 bp	430 bp	*06:01:01-06:02:25, 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, 06:53:01-06:57, 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, 06:173-06:179N, 06:181-06:183, 06:188, 06:192, 06:197-06:198, 06:200-06:201, 06:205, 06:208-06:209	
3	185 bp	430 bp	*06:02:01-06:02:25, 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, 06:146:01-06:147, 06:150-06:152, 06:156, 06:159, 06:161-06:163, 06:166, 06:173-06:175, 06:178-06:179N, 06:182-06:183, 06:188, 06:192, 06:197-06:198, 06:200-06:201, 06:208	*04:10
4	130 bp	430 bp	*06:02:07, 06:03:01-06:03:06, 06:03:08-06:03:22, 06:05:02, 06:07:01-06:07:02, 06:11:02-06:11:03, 06:14:01, 06:14:03, 06:25-06:26N, 06:28, 06:30-06:32:02, 06:40-06:41, 06:44, 06:59-06:67, 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, 06:168, 06:172, 06:184-06:185, 06:187, 06:190-06:191, 06:195-06:196, 06:199, 06:203	
5	160 bp	430 bp	*06:03:01-06:03:03, 06:03:05-06:03:07, 06:03:11-06:03:22, 06:04:02, 06:07:01, 06:08:01, 06:09:02, 06:11:01-06:11:03, 06:26N, 06:28, 06:30-06:32:01, 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, 06:165, 06:169-06:170, 06:184-06:185, 06:187, 06:191, 06:195-06:196, 06:199, 06:203	*03:23:01, 05:03:12

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

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Lot No.: **5E8**

Lot-specific information

6	170 bp	515 bp	*06:02:07, 06:03:01-06:03:06, 06:03:08-06:03:18, 06:03:20-06:03:22, 06:08:01-06:08:03, 06:11:02-06:12, 06:14:01, 06:14:03, 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, 06:170, 06:184-06:185, 06:187, 06:190-06:191, 06:195-06:196, 06:199, 06:203	
7	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, 06:172, 06:180, 06:193N, 06:202, 06:204	
8^{5,8}	90 bp 175 bp	515 bp	*06:65 *06:04:01-06:07:02, 06:09:01-06:09:03, 06:09:05-06:09:06, 06:18:01-06:18:02, 06:22:02, 06:25, 06:27:01-06:27:02, 06:32:01-06:32:02, 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, 06:149, 06:155, 06:158N, 06:160, 06:164, 06:168, 06:171-06:172, 06:180, 06:186, 06:189, 06:193N, 06:202, 06:204, 06:207	
9^{6,8}	130 bp	430 bp	*06:04:01-06:05:01, 06:06, 06:08:01-06:09:03, 06:09:05-06:09:06, 06:12, 06:17-06:18:02, 06:21, 06:22:02, 06:27:01-06:27:02, 06:34, 06:36, 06:38-06:39, 06:42, 06:52, 06:58, 06:69, 06:85-06:86, 06:88-06:89, 06:93, 06:121, 06:129, 06:135, 06:142, 06:149, 06:155, 06:158N, 06:160, 06:164, 06:171, 06:180, 06:186, 06:189, 06:193N, 06:202, 06:204, 06:207	
10^{8,10}	260 bp	515 bp	*06:05:01, 06:05:02 [?] -06:06 [?] , 06:20, 06:31, 06:45, 06:85, 06:156	*05:73, 05:80, 05:98, 05:116
11	155 bp 210 bp	430 bp	*06:164 *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, 06:189, 06:207	
12⁵	100 bp 135 bp 180 bp 215 bp	430 bp	*06:64 *06:94, 06:170 *06:06, 06:149 *06:06 [?] , 06:129	
13	185 bp 225 bp	430 bp	*06:10, 06:130 *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	*03:30, 03:72, 03:100, 03:215
14	130 bp 215 bp	430 bp	*06:09:04, 06:13:01-06:13:02, 06:22:01, 06:22:03, 06:55, 06:119, 06:206 *06:146:01-06:146:02	

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

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Lot No.: **5E8**

Lot-specific information

15^{5,8}	105 bp	430 bp	*06:14:01-06:14:03, 06:69, 06:156, 06:162, 06:206	*04:28, 05:38, 05:62, 05:119
16⁶	185 bp 195 bp 215 bp	515 bp	*06:29, 06:123, 06:139 *06:16 *06:51:01-06:51:02	*03:132, 03:215 *04:01:01 ^w - 04:03:02 ^w , 04:06 ^w - 04:36N ^w
17⁵	110 bp	430 bp	*06:23, 06:82, 06:99:01, 06:156, 06:162, 06:169	*05:03:12
18	145 bp 185 bp 225 bp	430 bp	*06:193N, 03:66N *06:17, 06:24, 06:30, 06:42, 06:149 *06:171	*03:228
19⁷	140 bp 225 bp	430 bp	*06:10, 06:25, 06:36, 06:130, 06:193N *06:171	*03:66N
20^{5,7,8}	110 bp 210 bp 260 bp	515 bp	*06:37, 06:125 *06:26N, 06:81 *06:83	
21	155 bp	430 bp	*06:02:01-06:02:04, 06:02:06-06:02:25, 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, 06:146:01-06:147, 06:150-06:151, 06:156, 06:159, 06:161-06:162, 06:166, 06:173-06:175, 06:178-06:179N, 06:182-06:183, 06:188, 06:192, 06:198, 06:200-06:201, 06:206, 06:208	*04:02:07, 04:09, 05:62
22	130 bp 195 bp	515 bp	*06:07:01-06:07:02, 06:15:01-06:15:02, 06:46, 06:66, 06:92, 06:118:01-06:118:02, 06:172 *06:38, 06:158N	
23	160 bp	515 bp	*06:03:01-06:03:18, 06:03:20-06:03:22, 06:08:01-06:08:03, 06:14:01-06:14:03, 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, 06:170, 06:184-06:185, 06:187, 06:190-06:191, 06:195-06:196, 06:199, 06:203, 06:206	
24⁶	155 bp	430 bp	*06:02:05, 06:19:01-06:19:02, 06:139	*03:30, 03:72, 03:100, 03:132, 03:215, 04:01:01-04:02:04, 04:02:06, 04:02:08-04:03:02, 04:06-04:08, 04:10, 04:12-04:14, 04:16-04:36N, 05:38, 05:119
25	210 bp	430 bp	*06:03:01-06:03:22, 06:08:01-06:08:03, 06:14:01-06:14:03, 06:27:01-06:28, 06:30-06:32:02, 06:40-06:41, 06:44, 06:59-06:65, 06:67, 06:87, 06:90-06:91, 06:98, 06:110, 06:128, 06:133-06:134, 06:141, 06:143-06:145, 06:148, 06:154, 06:168, 06:170, 06:184-06:185, 06:187, 06:190-06:191,	

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

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Lot No.: **5E8**

Lot-specific information

			06:195-06:196, 06:206	
	260 bp		*06:05:02 [?] , 06:06 [?] , 06:49	
26	165 bp	430 bp	*06:35, 06:53:01-06:53:02, 06:145, 06:208	
	190 bp		*06:28, 06:56, 06:79:01-06:79:02	*05:73, 05:98, 05:116
27	155 bp	430 bp	*06:114	
	195 bp		*06:40, 06:81, 06:132	
	220 bp		*06:57	
	265 bp		*06:33	
28	130 bp	515 bp	*06:102N	
	180 bp		*06:50	
	300 bp		*06:34	
29⁵	90 bp	430 bp	*06:04:01-06:05:01, 06:05:02 [?] -06:06 [?] , 06:07:01-06:07:02, 06:09:01-06:09:06, 06:15:01-06:15:02, 06:22:01-06:22:03, 06:25, 06:34, 06:36, 06:38-06:39, 06:52, 06:58, 06:66, 06:69, 06:85-06:86, 06:88-06:89, 06:93- 06:94, 06:118:01-06:118:02, 06:121, 06:135, 06:155, 06:158N, 06:160, 06:164, 06:172, 06:180, 06:189, 06:193N, 06:202, 06:204, 06:207	
30⁵	115 bp	430 bp	*06:02:01-06:03:22, 06:05:02 [?] -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 [?] -06:32:02 [?] , 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 [?] , 06:53:01 [?] -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 [?] -06:184 [?] , 06:185, 06:187- 06:188, 06:190 [?] -06:199 [?] , 06:200, 06:201 [?] - 06:204 [?] , 06:206 [?] -06:208 [?]	
31^{5,8}	100 bp	430 bp	*06:44, 06:47	
	220 bp		*06:43	
32^{5,6,7,9}	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- 06:09:06, 06:10 [?] -06:11:03 [?] , 06:12, 06:13:01 [?] - 06:18:01 [?] , 06:18:02, 06:19:01 [?] -06:20 [?] , 06:21, 06:22:01 [?] -06:32:02 [?] , 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, 06:53:01 [?] -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 [?] - 06:184 [?] , 06:186, 06:189, 06:190 [?] -06:199 [?] , 06:201 [?] -06:204 [?] , 06:206 [?] -06:208 [?]	
33	190 bp	430 bp	*06:28, 06:56, 06:79:01-06:79:02	*05:04 [?] , 05:73, 05:98, 05:116
34⁸	145 bp	430 bp	*06:01:01, 06:01:03-06:01:06, 06:01:08- 06:01:11, 06:01:13-06:01:15, 06:43, 06:53:01, 06:54N-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, 06:167-06:168, 06:181, 06:194, 06:205	*03:04:02, 03:10:01, 03:12, 03:14:02, 03:70, 03:179, 03:195
35	135 bp	430 bp	*06:66, 06:172	

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

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Lot No.: **5E8**

Lot-specific information

	185 bp		*06:54N, 06:135	
	260 bp		*06:05:02 [?] , 06:06 [?] , 06:58	
36	165 bp	430 bp	*06:71, 06:77N-06:78, 06:95, 06:138	
37⁵	120 bp	430 bp	*06:80	
	175 bp		*06:29, 06:76-06:77N, 06:96, 06:139	*03:30, 03:72, 03:100, 03:132, 03:215, 04:09
	245 bp		*06:05:02 [?] , 06:137	
38⁸	170 bp	430 bp	*06:78, 06:123	
	245 bp		*06:137	
	285 bp		*06:72-06:73	
39⁵	120 bp	430 bp	*06:80	
	155 bp		*06:138	
	270 bp		*06:73-06:74	
40^{5,7}	105 bp	430 bp	*06:70	
	190 bp		*06:75N, 06:106, 06:136	
41⁸	215 bp	430 bp	*06:122, 06:130, 06:148	
42	130 bp	430 bp	*06:93-06:94, 06:170	
	165 bp		*06:121, 06:142, 06:168	
	190 bp		*06:60-06:61	
43	150 bp	430 bp	*06:103	*05:14, 05:84
	180 bp		*06:07:01 [?] , 06:20 [?] , 06:68, 06:131	*05:03:02 [?]
44	130 bp	430 bp	*06:113	
	180 bp		*06:67, 06:174, 06:191	
	220 bp		*06:143	
45	150 bp	430 bp	*06:97	
	195 bp		*06:136	
	235 bp		*06:124	
46	170 bp	430 bp	*06:163	
	240 bp		*06:86, 06:104, 06:107	*03:97
47⁵	95 bp	430 bp	*06:29, 06:59, 06:63, 06:87, 06:96, 06:150	*03:08, 03:137, 03:194
	180 bp		*06:90	
	220 bp		*06:143	
48⁵	110 bp	430 bp	*06:59, 06:91, 06:145, 06:150, 06:208	*03:194
	205 bp		*06:128	
49	190 bp	430 bp	*06:100, 06:132, 06:140	
	230 bp		*06:126	
50⁵	75 bp	515 bp	*06:134	
	150 bp		*06:101	
	190 bp		*06:140, 06:144N	
	275 bp		*06:120	
51^{5,7,8}	120 bp	430 bp	*06:111, 06:189	*04:17, 05:31, 05:46, 05:108
	240 bp		*06:205	
52⁵	95 bp	430 bp	*06:155	
	130 bp		*06:133	
	165 bp		*06:188, 06:200	
	195 bp			
53	150 bp	430 bp	*06:109-06:110, 06:200	*03:115
	195 bp		*06:105, 06:185, 05:47	
	220 bp		*06:147	
54	190 bp	430 bp	*06:07:01 [?] , 06:20 [?] , 06:112N, 06:131	*05:03:02 [?]

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

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Lot No.: **5E8**

Lot-specific information

55	145 bp	430 bp	*06:115	
56	130 bp 200 bp	515 bp	*06:99:01-06:99:02 *06:116, 06:187	
57^{5,8}	125 bp 185 bp 200 bp	515 bp	*06:07:01-06:07:02, 06:15:01-06:15:02, 06:46, 06:92, 06:118:01-06:118:02 *06:89, 06:135 *06:158N	*05:80
58	215 bp 275 bp 300 bp	430 bp	*06:153 *06:127, 06:205 *06:52	*03:52, 03:179
59	170 bp 230 bp	430 bp	*06:163 *06:117, 06:147	
60	140 bp 180 bp	430 bp	*06:141, 06:179N *06:191	
61⁵	65 bp	430 bp	*06:53:01-06:53:02	
62⁸	220 bp	430 bp	*06:23, 06:156, 06:162, 06:169	*05:73, 05:98, 05:116
63	155 bp	515 bp	*06:164	
64¹¹	-	-	Negative Control	

¹ Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of DQB1*06 SSP typings.

When the primers in a primer mix can give rise to HLA-specific PCR products of more than one length this is indicated if the size difference is more than 20 base pairs. Size differences of 20 base pairs or less are not given. For high resolution SSP kits, the alleles listed are specified according to amplicon length.

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

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

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

Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an 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.

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

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

⁴ Due to the sharing of sequence motifs between DQB1 alleles non-DQB1*06 alleles will be amplified by primer mixes 3, 5, 10, 13, 15 to 19, 21, 24, 26, 33, 34, 37, 41, 43, 46 to 48, 51 to 54, 57, 58 and 62. Thus, the interpretation of DQB1*06 subtypings is only influenced by a few non-DQB1*06 alleles and not by other groups of DQB1 alleles or the DQB2 and DQB3 genes.

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

⁶ Primer mixes 9, 16, 24 and 32 may give rise to a lower yield of HLA-specific PCR product than the other DQB1*06 primer mixes.

⁷ Primer mixes 19, 20, 32, 40 and 51 have a tendency to giving rise to primer oligomer formation.

⁸ Primer mixes 8, 9, 10, 15, 20, 31, 34, 38, 41, 51, 57 and 62 may have tendencies of unspecific amplifications.

⁹ In primer mix 32 the positive control band may be weaker than for other DQB1*06 primer mixes.

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

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Lot No.: 5E8

Lot-specific information

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

¹¹Primer mix 64 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by the control primer pairs matching the human growth hormone gene. HLA-specific PCR product sizes range from 75 to 200 base pairs and the PCR product generated by the HGH positive control primer pair is 430 base pairs.

“?”, nucleotide sequence information is not available for the primer matching sequence.

‘w’, might be weakly amplified.

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

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Lot No.: **5E8**

Lot-specific information

PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec. PCR product	220	210	185	130	160	170	210	90	130	260	155	100
								175			210	135
												180
												215
Length of int. pos. control ¹	515	430	430	430	430	515	515	515	430	515	430	430
5'-primer(s) ²	26(173) 5'-TTA ^{3'}	29(184) 5'-gAT ^{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(134) 5'-ggA ^{3'} 13(136) 5'-gCC ^{3'}	29(184) 5'-gAT ^{3'} 48(239) 5'-CCA ^{3'}	27(177) 5'-gTA ^{3'}
3'-primer(s) ³	86(353) 5'-ACg ^{3'}	86(353) 5'-ACg ^{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'}	43(224) 5'-Cgg ^{3'}	57(266) 5'-CAA ^{3'}	86(353) 5'-ACC ^{3'}	86(353) 5'-ACC ^{3'}	47(238) 5'-gCA ^{3'}
	86(354) 5'-AAT ^{3'}	86(354) 5'-AAA ^{3'}	58(270) 5'-TCC ^{3'}	57(267) 5'-gCg ^{3'}		69(304) 5'-CCC ^{3'}	86(354) 5'-TAT ^{3'}	69(304) 5'-CCT ^{3'}		87(356) 5'-ggA ^{3'}		58(271) 5'-CTT ^{3'}
		86(354) 5'-AAT ^{3'}		58(270) 5'-TCA ^{3'}				74(317) 5'-CCg ^{3'}				74(317) 5'-CCg ^{3'}
												86(353) 5'-ACg ^{3'}
Well No.	1	2	3	4	5	6	7	8	9	10	11	12

Well No.	13	14	15	16	17	18	19	20	21	22	23	24
Length of spec. PCR product	185	130	105	195	110	145	140	110	155	130	160	155
	225	215	185	215		185	225	210		195		
						225		260				
Length of int. pos. control ¹	430	430	430	515	430	430	430	515	430	515	515	430
5'-primer(s) ²	9(122) 5'-gTT ^{3'}	27(177) 5'-gTg ^{3'}	9(122) 5'-gTT ^{3'}	9(122) 5'-gTT ^{3'}	26(173) 5'-ggg ^{3'} 26(173) 5'-TTA ^{3'}	26(173) 5'-TCT ^{3'}	26(173) 5'-TCT ^{3'} 154(558) 5'-ACT ^{3'}	13(136) 5'-gCg ^{3'} 28(181) 5'-CCT ^{3'} 30(187) 5'-ACT ^{3'} 62(282) 5'-AAg ^{3'} 63(285) 5'-Agg ^{3'}	9(122) 5'-gTT ^{3'}	33(196) 5'-ACT ^{3'}	29(184) 5'-gAC ^{3'}	9(122) 5'-gTT ^{3'}
3'-primer(s) ³	56(265) 5'-gCT ^{3'}	57(266) 5'-CAA ^{3'}	29(184) 5'-gTg ^{3'}	59(274) 5'-gTT ^{3'}	48(240) 5'-gCg ^{3'}	61(278) 5'-TCT ^{3'}	56(265) 5'-gCT ^{3'}	86(353) 5'-ACg ^{3'}	47(236) 5'-ggT ^{3'}	86(353) 5'-ACC ^{3'}	69(304) 5'-CCC ^{3'}	47(237) 5'-CgA ^{3'}
	69(304) 5'-CCT ^{3'}	86(353) 5'-ACg ^{3'}	57(266) 5'-Cgg ^{3'}	66(294) 5'-ATg ^{3'}		70(307) 5'-ggC ^{3'}	61(278) 5'-TCT ^{3'}		48(240) 5'-gCg ^{3'}	185(650) 5'-Cgg ^{3'}	69(304) 5'-CCC ^{3'}	48(240) 5'-gCg ^{3'}
		86(353) 5'-ACg ^{3'}				77(327) 5'-ACT ^{3'}	86(355) 5'-gTg ^{3'}		48(241) 5'-TgC ^{3'}			
						86(355) 5'-gTg ^{3'}	186(653) 5'-CCg ^{3'}					
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

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

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

Lot No.: **5E8**

Lot-specific information

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec. PCR product	210	165	155	130	90	115	100	115	190	145	135	165
			220	300			220				185	
			265								260	
Length of int. pos. control ¹	430	430	430	515	430	430	430	430	430	430	430	430
5'-primer(s) ²	13(134) 5'-ggT 3'	38(209) 5'-CgT 3'	11(129) 5'-TTA 3'	29(184) 5'-gAT 3'	67(297) 5'-gTA 3'	130(485) 5'-CCg 3'	13(134) 5'-ggC 3'	130(485) 5'-CCA 3'	38(209) 5'-CgT 3'	13(134) 5'-ggC 3'	13(134) 5'-ggC 3'	9(122) 5'-gTT 3'
	29(184) 5'-gAC 3'	45(230) 5'-ggA 3'	26(174) 5'-TAC 3'	101(400) 5'-TCT 3'	69(304) 5'-AgA 3'		154(558) 5'-ACT 3'				38(211) 5'-CgT 3'	
	30(185) 5'-ATg 3'		30(187) 5'-ACg 3'								55(260) 5'-gCC 3'	
			30(187) 5'-ACT 3'									
			38(209) 5'-CAT 3'									
			48(239) 5'-CCA 3'									
3'-primer(s) ³	86(353) 5'-ACg 3'	87(356) 5'-ggA 3'	86(353) 5'-ACg 3'	75(322) 5'-gTg 3'	86(353) 5'-ACC 3'	154(558) 5'-AAA 3'	73(314) 5'-CCA 3'	154(558) 5'-AAA 3'	87(356) 5'-ggA 3'	47(237) 5'-CgA 3'	61(279) 5'-TTT 3'	47(238) 5'-gCA 3'
	86(354) 5'-AAg 3'			131(488) 5'-ACT 3'	86(354) 5'-TAT 3'		174(618) 5'-ACT 3'				86(353) 5'-ACC 3'	49(244) 5'-CAT 3'
				188(661) 5'-CCA 3'								50(247) 5'-CgA 3'
												52(253) 5'-CTT 3'
												52(253) 5'-CTA 3'
Well No.	25	26	27	28	29	30	31	32	33	34	35	36

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

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Lot No.: **5E8**

Lot-specific information

Well No.	37	38	39	40	41	42	43	44	45	46	47	48
Length of spec.	120	170	120	105	215	130	150	130	150	170	95	110
PCR product	175	245	155	190		165	180	180	195	240	180	205
	245	285	270			190		220	235		220	
Length of int.	430	430	430	430	430	430	430	430	430	430	430	430
pos. control ¹												
5'-primer(s) ²	9(122) 5'-gTT 3'	9(122) 5'-gTT 3'	9(122) 5'-gTT 3'	9(122) 5'-gTT 3'	10(125) 5'-CCT 3'	27(177) 5'-gTA 3'	8(119) 5'-CgC 3'	10(126) 5'-CAT 3'	9(122) 5'-gTT 3'	9(122) 5'-gTT 3'	10(126) 5'-CAT 3'	14(138) 5'-ATC 3'
					13(134) 5'-ggC 3'		14(137) 5'-CAC 3'	24(167) 5'-CgA 3'		101(400) 5'-TCT 3'	23(166) 5'-gCA 3'	45(230) 5'-ggC 3'
							133(494) 5'-TCA 3'	24(169) 5'-TgT 3'			47(238) 5'-ACA 3'	45(230) 5'-ggA 3'
								40(217) 5'-TCC 3'			55(260) 5'-gCC 3'	47(238) 5'-ACA 3'
3'-primer(s) ³	36(203) 5'-ACC 3'	50(247) 5'-CgA 3'	36(203) 5'-ACC 3'	31(188) 5'-Agg 3'	69(304) 5'-CCC 3'	55(260) 5'-gCA 3'	57(266) 5'-CAT 3'	69(304) 5'-CCC 3'	45(232) 5'-CAA 3'	52(251) 5'-gCA 3'	69(304) 5'-CCC 3'	69(304) 5'-CCC 3'
	52(253) 5'-CTA 3'	55(260) 5'-gCA 3'	47(238) 5'-gCA 3'	58(271) 5'-CTT 3'		58(271) 5'-CTT 3'	169(604) 5'-gAC 3'		59(274) 5'-gTg 3'	74(317) 5'-ACC 3'		
	55(260) 5'-gCg 3'	77(328) 5'-CAT 3'	82(341) 5'-AgC 3'	59(274) 5'-gTg 3'		66(294) 5'-ATg 3'			73(316) 5'-CTC 3'	172(611) 5'-AgA 3'		
	55(262) 5'-AgA 3'	88(359) 5'-CgA 3'	88(359) 5'-CgA 3'	60(276) 5'-CAC 3'		72(311) 5'-CCg 3'						
	77(328) 5'-CAT 3'	91(369) 5'-TTT 3'				75(322) 5'-gTg 3'						
						77(326) 5'-CCA 3'						
Well No.	37	38	39	40	41	42	43	44	45	46	47	48

Well No.	49	50	51	52	53	54	55	56	57	58	59	60
Length of spec.	190	75	120	95	150	190	145	130	125	215	170	140
PCR product	230	150	240	130	195			200	185	275	230	180
		190		165	220				200	300		
		275		195								
Length of int.	430	515	430	430	430	430	430	515	515	430	430	430
pos. control ¹												
5'-primer(s) ²	22(163) 5'-AgT 3'	8(121) 5'-TgA 3'	103(406) 5'-CAA 3'	27(177) 5'-gTA 3'	9(122) 5'-gTT 3'	8(119) 5'-CgC 3'	57(266) 5'-TgA 3'	8(121) 5'-TgC 3'	33(196) 5'-ACT 3'	8(121) 5'-TgC 3'	9(122) 5'-gTT 3'	24(167) 5'-CgA 3'
	37(206) 5'-gTC 3'	37(206) 5'-gTC 3'	140(517) 5'-CCA 3'	135(500) 5'-TgA 3'	135(500) 5'-TgA 3'	9(124) 5'-TCT 3'		99(394) 5'-TgT 3'	38(209) 5'-CgT 3'	98(389) 5'-CAT 3'	101(400) 5'-TCT 3'	33(196) 5'-ACT 3'
	38(209) 5'-CAT 3'	37(207) 5'-TAA 3'	146(533) 5'-CCT 3'					105(411) 5'-AgC 3'	38(211) 5'-CgT 3'	103(406) 5'-CAA 3'		38(211) 5'-Cgg 3'
	38(211) 5'-TgA 3'	49(242) 5'-ggA 3'							57(267) 5'-gAT 3'	110(426) 5'-AAA 3'		
		74(319) 5'-Agg 3'										
3'-primer(s) ³	86(353) 5'-ACg 3'	86(353) 5'-ACg 3'	169(604) 5'-gAC 3'	46(233) 5'-ACC 3'	69(302) 5'-CCC 3'	57(266) 5'-CAT 3'	92(372) 5'-CTA 3'	38(209) 5'-gCg 3'	86(353) 5'-ACC 3'	66(294) 5'-ACT 3'	52(251) 5'-gCA 3'	69(304) 5'-CCC 3'
				56(265) 5'-ATT 3'	168(599) 5'-CTT 3'			154(558) 5'-AAA 3'		185(650) 5'-Cgg 3'	69(302) 5'-CCC 3'	
				176(624) 5'-TgA 3'	174(619) 5'-CAT 3'						167(596) 5'-CAA 3'	
				179(633) 5'-AgT 3'	176(624) 5'-TgA 3'							
				185(652) 5'-CAT 3'	185(652) 5'-CAT 3'							
Well No.	49	50	51	52	53	54	55	56	57	58	59	60

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

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Lot No.: **5E8**

Lot-specific information

Well No.	61	52	63
Length of spec. PCR product	65	220	155
Length of int. pos. control ¹	430	430	515
5'-primer(s) ²	45(230) 5'-ggA 3'	26(173) 5'-ggg 3'	48(239) 5'-CCA 3'
3'-primer(s) ³	53(254) 5'-CCT 3'	86(353) 5'-ACg 3'	86(353) 5'-ACC 3'
Well No.	61	62	63

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.

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

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Lot No.: 5E8

Lot-specific information

CELL LINE VALIDATION SHEET																				
DQB1*06 SSP subtyping kit²																				
				Well																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				Prod. No.	201556901	201556902	201556903	201556904	201556905	201556906	201556907	201556908	201556909	201556910	201674311	201556912	201556913	201674314	201556915	201674316
1	IHWC cell line¹	DQB1																		
1	9001 SA	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*06:01	*02:02	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011 E4181324	*06:01		+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011	*05:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353 SM	*03:02	*06:01	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	9020 QBL	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9025 DEU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3	*04:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004 JESTHOM	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA	*04:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282 CTM3953540	*02:01	*06:03	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-
18	9257 32367	*06:02	*02:02	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038 BM16	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*06:04		-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-
21	9064 AMALA	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*05:03	*06:04	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-
23	9124 IHL	*05:03	*06:01	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*04:01	*05:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB	*02:02	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH	*04:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO	*03:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB	*06:03		-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML	*02:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134 WHONP199	*02:02	*03:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301	*06:09		-	-	-	-	-	-	-	+	+	-	+	-	-	-	-	-	-
42	9066 TAB089	*06:01		+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM	*05:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU	*06:02		-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303 TER-ND	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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

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Lot No.: **5E8**

Lot-specific information

CELL LINE VALIDATION SHEET																				
DQB1*06 SSP subtyping kit ²																				
				Well																
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
				Prod. No.	201556917	201674318	201674319	201556920	201556921	201556922	201556923	201674324	201556925	201556926	201556927	201674328	201556929	201556930	201556931	201556932
	IHWC cell line ¹	DQB1																		
1	9001 SA	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2	9280 LK707	*06:01	*02:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	9011 E4181324	*06:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4	9275 GU373	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	9009 KAS011	*05:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	9353 SM	*03:02	*06:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	9020 QBL	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	9025 DEU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	9026 YAR	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10	9107 LKT3	*04:01		-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	
11	9051 PITOUT	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	9052 DBB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13	9004 JESTHOM	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14	9071 OLGA	*04:02		-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	
15	9075 DKB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	9037 SWEIG007	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	9282 CTM3953540	*02:01	*06:03	-	-	-	-	-	-	-	+	-	+	-	-	-	-	+	-	
18	9257 32367	*06:02	*02:02	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	-	
19	9038 BM16	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
20	9059 SLE005	*06:04		-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	
21	9064 AMALA	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
22	9056 KOSE	*05:03	*06:04	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	
23	9124 IHL	*05:03	*06:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
24	9035 JBUSH	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	9049 IBW9	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
26	9285 WT49	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
27	9191 CH1007	*04:01	*05:01	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	
28	9320 BEL5GB	*02:02	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	9050 MOU	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30	9021 RSH	*04:02		-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	
31	9019 DUCAF	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
32	9297 HAG	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
33	9098 MT14B	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
34	9104 DHIF	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	9302 SSTO	*03:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
36	9024 KT17	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
37	9065 HHKB	*06:03		-	-	-	-	-	-	-	+	-	+	-	-	-	-	+	-	
38	9099 LZL	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
39	9315 CML	*02:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
40	9134 WHONP199	*02:02	*03:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
41	9055 H0301	*06:09		-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	
42	9066 TAB089	*06:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
43	9076 T7526	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
44	9057 TEM	*05:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
45	9239 SHJO	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
46	9013 SCHU	*06:02		-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	-	
47	9045 TUBO	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
48	9303 TER-ND	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



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

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“Instructions for Use” (IFU)

Lot No.: **5E8**

Lot-specific information

CELL LINE VALIDATION SHEET																				
DQB1*06 SSP subtyping kit ²																				
				Well																
				33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
				Prod. No.	201556933	201556934	201674335	201556936	201556937	201556938	201556939	201674340	201556941	201556942	201674343	201674344	201674345	201556946	201556947	201556948
	IHWC cell line ¹	DQB1																		
1	9001 SA	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2	9280 LK707	*06:01	*02:02	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	9011 E4181324	*06:01		-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4	9275 GU373	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	9009 KAS011	*05:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	9353 SM	*03:02	*06:01	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	9020 QBL	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	9025 DEU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	9026 YAR	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10	9107 LKT3	*04:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11	9051 PITOUT	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	9052 DBB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13	9004 JESTHOM	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14	9071 OLGA	*04:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	9075 DKB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	9037 SWEIG007	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	9282 CTM3953540	*02:01	*06:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	9257 32367	*06:02	*02:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
19	9038 BM16	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
20	9059 SLE005	*06:04		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
21	9064 AMALA	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
22	9056 KOSE	*05:03	*06:04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
23	9124 IHL	*05:03	*06:01	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
24	9035 JBUSH	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	9049 IBW9	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
26	9285 WT49	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
27	9191 CH1007	*04:01	*05:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28	9320 BEL5GB	*02:02	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	9050 MOU	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30	9021 RSH	*04:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	9019 DUCAF	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
32	9297 HAG	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
33	9098 MT14B	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
34	9104 DHIF	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	9302 SSTO	*03:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
36	9024 KT17	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
37	9065 HHKB	*06:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
38	9099 LZL	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
39	9315 CML	*02:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
40	9134 WHONP199	*02:02	*03:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
41	9055 H0301	*06:09		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
42	9066 TAB089	*06:01		-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
43	9076 T7526	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
44	9057 TEM	*05:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
45	9239 SHJO	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
46	9013 SCHU	*06:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
47	9045 TUBO	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
48	9303 TER-ND	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

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

Lot No.: **5E8**

Lot-specific information

CELL LINE VALIDATION SHEET																			
DQB1*06 SSP subtyping kit ²																			
				Well															
				49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	
				Prod. No.	201556949	201674350	201674351	201674352	201674353	201556954	201556955	201674356	201674357	201674358	201556959	201674360	201674361	201674362	201674363
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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

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Lot No.: 5E8

Lot-specific information

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

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

No DNAs carrying the alleles to be amplified by primer solutions 12 to 20, 22, 26 to 28, 31, 33 and 35 to 63 were available.

The specificities of the primers in primer solutions 10, 12 to 19, 22, 26, 33, 35, 37, 38, 41, 42, 47, 48, 56 to 58, 61 and 62 were tested by separately adding additional 5'-primers, respectively additional 3'-primers.

In primer solutions 28, 31, 36, 39, 40, 45, 46, 52, 53, 55 and 59 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solutions 20, 27, 43, 44, 49 to 51, 54, 60 and 63 it was only possible to test the 3'-primers, the 5'-primers were not possible to test.

In primer solution 1 to 4, 6 to 8, 12, 14, 16, 18, 19, 23 to 25, 29, 35, 37, 38 and 42 one to five 3'-primers were not possible to test, and in primer solutions 10, 11, 22, 25, 29, 35, 41, 47, 48 and 56 to 58 one, two or three 5'-primers were not possible to test. Additional primer in primer solutions 4 and 21 were tested by separately adding one or two 5'-primers or one 3'-primer.

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

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

Lot No.: **5E8**

Lot-specific information

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Fax: +46-8-717 88 18

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Fax: +43-1-710 15 00 10

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Fax: 610-344-7989

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