

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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

Lot No.: **4D9**

Lot-specific information
Olerup SSP® DQB1*03

Product number:	101.214-24/06 – including <i>Taq</i> pol. 101.214-24u/06u – without <i>Taq</i> pol.
Lot number:	4D9
Expiry date:	2018-08-01
Number of tests:	24 test – Product No. 101.214-24/24u 6 tests – Product No. 101.214-06/06u
Number of wells per test:	59+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. 4D9.

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*03 LOT (69Y)**

The DQB1*03 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.

One well has been added to DQB1*03, well **60**.

The DQB1*03 primer set, specificity and interpretation tables have been updated for the HLA-DQB1 alleles described since the previous *Olerup SSP®* DQB1*03 lot was made (**Lot No. 69Y**). The kit design is based on IMGT/HLA database 3.22.0.

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
8	Modified	Modified	Modified 3'-and 5'-primers for increased yield of the DQB1*03:16 allele.
15	Modified	-	Modified 5'-primer for improved HLA-specific amplification.
25	-	Added	3'-primer added for the DQB1*03:206 allele.
34	-	Added	3'-primer added for the DQB1*03:198 allele.
35	-	Added	3'-primer added for the DQB1*03:190 allele.
42	Added	-	5'-primer added for the DQB1*03:188 allele.
43	-	Added	3'-primer added for the DQB1*03:198 allele.
44	Added	-	5'-primer added for the DQB1*03:211 allele.
45	Added	-	5'-primer added for the DQB1*03:204 allele.
46	-	Added	3'-primer added for the DQB1*03:191 allele.
49	-	Added	3'-primers added for the DQB1*03:182 and DQB1*03:191 alleles.
50	-	Added	3'-primers added for the DQB1*03:182 and DQB1*03:206 alleles.
51	-	Added	3'-primer added for the DQB1*03:213N allele.
52	Added	-	5'-primer added for the DQB1*03:188 allele.
53	Added	-	5'-primer added for the DQB1*03:204 allele.
54	Added	-	5'-primers added for the DQB1*03:170 and DQB1*03:181 alleles.
56	Added	-	5'-primer added for the DQB1*03:170 allele.
57	Added	-	5'-primer added for the DQB1*03:196 allele.
58	-	Added	3'-primer added for the DQB1*03:197Q allele.
59	Added	Added	Negative control moved to well 60, primer pair added for the DQB1*03:138 allele.
60	-	-	Negative control added from well 59.

Change in revision R01 compared to R00:

1. Primer mix 49 amplifies the DQB1*03:164 allele. This has been corrected in the Specificity and Interpretation Tables.

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Well **60** 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*03 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the DQB1*03:01 to DQB1*03:215 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 60 PCR reactions in a 64 well PCR plate. Wells 61 to 64 are empty.

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

The 64 well cut PCR plate is marked with 'DQB1*03' in silver/gray ink.

Well No. 1 is marked with the Lot No. '4D9'.

Wells 1 to 59 – DQB1*03 high resolution primers.

Well 60 – 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.

INTERPRETATION

Due to the sharing of sequence motifs, non-DQB1*03 alleles will be amplified by primer mixes 1, 3, 4, 6, 7, 9, 11, 15, 16, 18, 20 to 22, 25, 26, 33, 35, 39, 43, 51, 57 and 59.

The interpretation of DQB1*03 subtypings is not influenced by the DQB2 and DQB3 genes.

For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the DQB1*03 alleles, i.e. **DQB1*03:01 to DQB1*03:215**, recognized by the HLA Nomenclature Committee in October 2015^{1,2} will give rise to unique amplification patterns by the primers in the DQB1*03 subtyping kit.

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The DQB1*03 kit enables separation of the confirmed DQB1*03 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*03 alleles is listed below.

The DQB1*03 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*03 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

Alleles	Primer mix
DQB1*03:40, 03:137	9
DQB1*03:169, 03:196	57

The DQB1*03 subtyping kit cannot distinguish the following silent mutations: the DQB1*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, 03:01:26-03:01:31, the DQB1*03:01:13, 03:01:15 and 03:01:25, the DQB1*03:02:01-03:02:19, the DQB1*03:03:02:01-03:03:05 and DQB1*03:03:07-03:03:13, the DQB1*03:04:01-03:04:02, the DQB1*03:05:01-03:05:04, the DQB1*03:14:01-03:14:02 and the DQB1*03:17:01-03:17:02 alleles.

¹HLA-DQB1 alleles listed on the IMGT/HLA web page 2015-October-10, release 3.22.0, 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*03 homo- and heterozygotes is available upon request.

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ALLELE CONFIRMATION STATUS

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

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Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
DQB1*03:129	Unconfirmed	DQB1*03:159	Unconfirmed	DQB1*03:189	Unconfirmed
DQB1*03:130	Confirmed	DQB1*03:160	Unconfirmed	DQB1*03:190	Unconfirmed
DQB1*03:131	Unconfirmed	DQB1*03:161	Unconfirmed	DQB1*03:191	Unconfirmed
DQB1*03:132	Unconfirmed	DQB1*03:162	Confirmed	DQB1*03:192	Unconfirmed
DQB1*03:133	Unconfirmed	DQB1*03:163	Unconfirmed	DQB1*03:193	Unconfirmed
DQB1*03:134	Unconfirmed	DQB1*03:164	Unconfirmed	DQB1*03:194	Unconfirmed
DQB1*03:135	Unconfirmed	DQB1*03:165	Unconfirmed	DQB1*03:195	Unconfirmed
DQB1*03:136	Unconfirmed	DQB1*03:166	Unconfirmed	DQB1*03:196	Unconfirmed
DQB1*03:137	Unconfirmed	DQB1*03:167	Unconfirmed	DQB1*03:197Q	Unconfirmed
DQB1*03:138	Confirmed	DQB1*03:168	Unconfirmed	DQB1*03:198	Unconfirmed
DQB1*03:139	Confirmed	DQB1*03:169	Unconfirmed	DQB1*03:199	Unconfirmed
DQB1*03:140	Unconfirmed	DQB1*03:170	Confirmed	DQB1*03:200	Unconfirmed
DQB1*03:141	Unconfirmed	DQB1*03:171	Unconfirmed	DQB1*03:201	Unconfirmed
DQB1*03:142	Unconfirmed	DQB1*03:172	Unconfirmed	DQB1*03:202	Unconfirmed
DQB1*03:143	Unconfirmed	DQB1*03:173	Unconfirmed	DQB1*03:203	Unconfirmed
DQB1*03:144	Unconfirmed	DQB1*03:174	Unconfirmed	DQB1*03:204	Confirmed
DQB1*03:145	Unconfirmed	DQB1*03:175	Unconfirmed	DQB1*03:205	Unconfirmed
DQB1*03:146	Unconfirmed	DQB1*03:176	Unconfirmed	DQB1*03:206	Unconfirmed
DQB1*03:147	Unconfirmed	DQB1*03:177	Confirmed	DQB1*03:207	Unconfirmed
DQB1*03:148	Unconfirmed	DQB1*03:178	Unconfirmed	DQB1*03:208	Unconfirmed
DQB1*03:149	Unconfirmed	DQB1*03:179	Unconfirmed	DQB1*03:209	Unconfirmed
DQB1*03:150	Unconfirmed	DQB1*03:180	Unconfirmed	DQB1*03:210	Unconfirmed
DQB1*03:151	Unconfirmed	DQB1*03:181	Unconfirmed	DQB1*03:211	Confirmed
DQB1*03:152	Unconfirmed	DQB1*03:182	Unconfirmed	DQB1*03:212	Unconfirmed
DQB1*03:153	Unconfirmed	DQB1*03:183	Unconfirmed	DQB1*03:213N	Unconfirmed
DQB1*03:154	Unconfirmed	DQB1*03:184	Unconfirmed	DQB1*03:214	Unconfirmed
DQB1*03:155	Unconfirmed	DQB1*03:185	Unconfirmed	DQB1*03:215	Unconfirmed
DQB1*03:156	Unconfirmed	DQB1*03:186	Unconfirmed		
DQB1*03:157	Unconfirmed	DQB1*03:187	Unconfirmed		
DQB1*03:158	Confirmed	DQB1*03:188	Confirmed		

¹Allele status “confirmed” or “unconfirmed” as listed on the IMGT/HLA web page 2015-October-10, release 3.22.0, www.ebi.ac.uk/imgt/hla.

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Lot-specific information
SPECIFICITY TABLE

DQB1*03 SSP subtyping

Specificities and sizes of the PCR products of the 59+1 primer mixes used for DQB1*03 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified DQB1*03 alleles ³	Other amplified DQB1 alleles ⁴
1 ⁸	165 bp	515 bp	*03:01:01:01-03:01:31, 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, 03:169-03:173, 03:182, 03:184, 03:188, 03:191-03:194, 03:196-03:198, 03:201-03:202, 03:206-03:208	*04:09
2 ⁸	220 bp	515 bp	*03:01:01:01-03:01:07, 03:01:09-03:01:31, 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, 03:169-03:173, 03:180, 03:182-03:183, 03:186-03:188, 03:191-03:198, 03:201-03:202, 03:206-03:208	
3 ⁶	135 bp	515 bp	*03:02:01-03:02:19, 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, 03:174-03:175, 03:178-03:179, 03:184-03:185, 03:189-03:190, 03:199, 03:203-03:205, 03:210-03:211, 03:213N-03:215	*02:01:01-02:01:20, 02:01:22-02:02:02, 02:04-02:16, 02:18N-02:36, 02:38-02:64, 06:29, 06:63, 06:123, 06:139
4	220 bp	515 bp	*03:02:01-03:03:13, 03:06-03:08, 03:11-03:12, 03:15, 03:18, 03:20, 03:23:01-03:23:02, 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, 03:168, 03:174-03:179, 03:184-03:185, 03:190, 03:199-03:200, 03:203-03:205,	*02:01:01-02:36, 02:38-02:64, 04:03:01-04:03:02

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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Lot No.: **4D9**

Lot-specific information

			03:209-03:215	
5 ⁶	135 bp	430 bp	*03:04:01-03:04:02, 03:14:01-03:14:02, 03:80, 03:138	
6 ^{5,7}	95 bp 130 bp	430 bp	*03:20 *03:05:01-03:05:04, 03:17:01-03:17:02, 03:61, 03:72, 03:100, 03:132, 03:181	*04:09
7 ⁵	115 bp 150 bp	430 bp	*03:03:06, 03:06, 03:25, 03:42, 03:88 *03:84N	*04:01:03
8 ⁵	110 bp 145 bp	430 bp	*03:15 *03:07, 03:16	
9 ⁵	65 bp 145 bp	430 bp	*03:40 *03:08, 03:119, 03:137, 03:194	*06:02:02, 06:03:02
10	135 bp 260 bp	430 bp	*03:09 *03:11, 03:26	
11 ⁷	135 bp	430 bp	*03:10:01-03:10:02, 03:12, 03:14:01-03:14:02, 03:70, 03:179, 03:183, 03:195	*06:01:01-06:01:06, 06:01:08-06:01:15, 06:06 ⁷ , 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, 06:167-06:168, 06:177, 06:181, 06:194
	255 bp		*03:47	
12	260 bp	515 bp	*03:01:01:01-03:01:07, 03:01:09-03:01:31, 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, 03:169-03:173, 03:179, 03:182-03:183, 03:186-03:188, 03:191-03:198, 03:201-03:202, 03:206, 03:208	
13	165 bp 205 bp	430 bp	*03:13 *03:48	
14 ⁷	130 bp	430 bp	*03:01:01:01-03:01:12, 03:01:14, 03:01:16-03:01:24, 03:01:26-03:01:31, 03:04:01-03:04:02, 03:09-03:10:02, 03:13-03:14:02, 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, 03:108-03:109, 03:114-03:116, 03:118N-03:122, 03:127-03:129, 03:131, 03:133-03:135, 03:138-03:140, 03:142-03:144, 03:147-03:148, 03:150, 03:152, 03:154, 03:157-03:160, 03:162-03:167, 03:169-03:171, 03:173, 03:180, 03:182-03:183, 03:186-03:188, 03:191-03:196, 03:198, 03:201, 03:206-03:208	

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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Lot No.: **4D9**

Lot-specific information

15	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, 03:155-03:171, 03:173-03:188, 03:190-03:204, 03:206-03:213N, 03:215	*04:09
16⁷	130 bp	430 bp	*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, 03:01:26-03:01:31, 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, 03:162-03:171, 03:173, 03:176-03:177, 03:180, 03:182-03:183, 03:186-03:188, 03:191-03:198, 03:200-03:201, 03:206-03:209, 03:212	*02:03, 04:09-04:10
17	165 bp 225 bp	430 bp	*03:43, 03:87 *03:18, 03:85	
18⁸	175 bp	515 bp	*03:02:01-03:03:13, 03:05:01-03:05:04, 03:06 [?] -03:08 [?] , 03:10:02 [?] -03:15 [?] , 03:17:01 [?] -03:18 [?] , 03:19, 03:20 [?] , 03:23:01 [?] -03:23:02 [?] , 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 [?] -03:71 [?] , 03:72, 03:74 [?] -03:78 [?] , 03:79, 03:81 [?] -03:82 [?] , 03:85-03:91Q, 03:95N-03:100, 03:101 [?] -03:104 [?] , 03:105, 03:106 [?] -03:112 [?] , 03:117, 03:118N [?] -03:163 [?] , 03:165 [?] -03:167 [?] , 03:168, 03:170 [?] -03:179 [?] , 03:180-03:181, 03:183 [?] -03:185 [?] , 03:187 [?] -03:189 [?] , 03:190, 03:192 [?] -03:194 [?] , 03:195, 03:199-03:200, 03:201 [?] -03:205 [?] , 03:207 [?] -03:215 [?]	*04:01:01-04:32
19⁸	175 bp	430 bp	*03:01:01:01-03:01:31, 03:04:01-03:04:02, 03:06 [?] -03:08 [?] , 03:09-03:10:01, 03:10:02 [?] -03:15 [?] , 03:16, 03:17:01 [?] -03:18 [?] , 03:20 [?] , 03:21-03:22, 03:23:01 [?] -03:23:02 [?] , 03:24, 03:26 [?] , 03:27-03:29, 03:33 [?] -03:34 [?] , 03:35-03:36, 03:37 [?] , 03:40 [?] , 03:42, 03:44, 03:46-03:47, 03:48 [?] , 03:49-03:51, 03:52 [?] -03:71 [?] , 03:73, 03:74 [?] -03:78 [?] , 03:80, 03:81 [?] -03:82 [?] , 03:83-03:84N, 03:92-03:94, 03:101 [?] -03:112 [?] , 03:113-03:116, 03:118N [?] , 03:119, 03:120 [?] -03:138 [?] , 03:139, 03:140 [?] -03:163 [?] , 03:164, 03:165 [?] -03:167 [?] , 03:169, 03:170 [?] -03:179 [?] , 03:182, 03:183 [?] -03:185 [?] , 03:186, 03:187 [?] -03:189 [?] , 03:191, 03:192 [?] -03:194 [?] , 03:196-03:198, 03:201 [?] -03:205 [?] , 03:206, 03:207 [?] -03:215 [?]	

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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Lot No.: **4D9**

Lot-specific information

20	150 bp	430 bp	*03:21	*02:64, 05:35
21	160 bp	515 bp	*03:22, 03:96	*04:23, 06:04:01 ^w - 06:05:02 ^w , 06:06 [?] , 06:07:01 ^w -06:07:02 ^w , 06:08:01 [?] -06:08:03 [?] , 06:09:01 ^w -06:09:06 ^w , 06:10 [?] -06:11:03 [?] , 06:12 ^w , 06:13:01 [?] - 06:18:01 [?] , 06:18:02 ^w , 06:19:01 [?] -06:20 [?] , 06:21 ^w , 06:22:01 [?] - 06:32:02 [?] , 06:34 ^w , 06:35 [?] , 06:36 ^w , 06:37 [?] , 06:38 ^w , 06:40 [?] , 06:41 ^w - 06:42 ^w , 06:45 [?] -06:46 [?] , 06:48 [?] -06:50 [?] , 06:51:02 [?] , 06:52 ^w , 06:53 [?] -06:83 [?] , 06:84 ^w , 06:85 [?] , 06:89 [?] , 06:91 [?] - 06:97 [?] , 06:118:01 ^w , 06:118:02 [?] -06:126 [?] , 06:128 [?] , 06:129 ^w , 06:131 [?] -06:147 [?] , 06:149 [?] -06:184 [?] , 06:186 ^w , 06:189 ^w , 06:190 [?] -06:197 [?]
22	160 bp	515 bp	*03:23:01	*05:03:12, 06:03:01- 06:03:03, 06:03:05- 06:03:07, 06:03:11- 06:03:21, 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
23^{5,6}	95 bp 125 bp 150 bp 185 bp	430 bp	*03:41 *03:24, 03:79, 03:89 *03:84N *03:45	
24^{5,7}	120 bp 210 bp	430 bp	*03:39 *03:27, 03:48, 03:56	
25^{5,6}	105 bp 130 bp 160 bp 240 bp	430 bp	*03:206 *03:24, 03:79 *03:29, 03:80 *03:34	*02:14:01

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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Lot No.: **4D9**

Lot-specific information

26	180 bp	430 bp	*03:30, 03:52, 03:72, 03:100, 03:132, 03:179, 03:215	*04:09, 06:29, 06:96, 06:139
27 ⁸	170 bp 225 bp 250 bp	430 bp	*03:32, 03:87 *03:85 *03:31	
28	200 bp	430 bp	*03:37-03:38, 03:46	
29 ⁵	110 bp 165 bp	515 bp	*03:33 *03:35	
30	135 bp	430 bp	*03:36, 03:149	
31	200 bp 225 bp	430 bp	*03:28, 03:56 *03:83	
32 ⁵	100 bp	430 bp	*03:44	
33 ⁵	85 bp	430 bp	*03:59	*06:37
34 ⁶	180bp	430 bp	*03:50, 03:58, 03:82, 03:198	
35 ⁵	125 bp 190 bp 235 bp	430 bp	*03:190 *03:51, 03:54 *03:117	*05:102
36	180 bp	430 bp	*03:55, 03:60	
37	180 bp 230 bp	430 bp	*03:60, 03:77 *03:53, 03:62	
38	175 bp 230 bp	430 bp	*03:58 *03:57, 03:83	
39	145 bp 190 bp 235 bp	430 bp	*03:66N *03:68 *03:86	*06:193N
40	185 bp	430 bp	*03:67-03:68	
41	175 bp	430 bp	*03:63, 03:75, 03:168	
42 ⁵	80 bp 165 bp	430 bp	*03:188 *03:64, 03:76-03:77	
43 ⁶	160 bp 185 bp 250 bp	430 bp	*03:49 *03:198 *03:97	*02:10 *06:86, 06:104
44	160 bp 220 bp 270 bp	430 bp	*03:211 *03:78 *03:71	
45 ⁵	90 bp 190 bp 230 bp	430 bp	*03:65 *03:204 *03:81, 03:159	
46 ^{5,6}	115 bp 175 bp	430 bp	*03:88-03:89 *03:191	
47	175 bp	430 bp	*03:06 [?] -03:08 [?] , 03:10:02 [?] -03:15 [?] , 03:17:01 [?] -03:18 [?] , 03:19, 03:20 [?] , 03:23:01 [?] -03:23:02 [?] , 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 [?] , 03:170 [?] -03:179 [?] , 03:183 [?] -03:185 [?] , 03:187 [?] -03:189 [?] , 03:192 [?] -03:194 [?] , 03:201 [?] -03:205 [?] , 03:207 [?] -03:215 [?]	
48 ⁵	95 bp	430 bp	*03:105-03:106, 03:109, 03:120	
49	150 bp	430 bp	*03:94, 03:164, 03:182	

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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Lot No.: **4D9**

Lot-specific information

	175 bp		*03:191	
50^{5,7}	105 bp	430 bp	*03:206	
	150 bp		*03:98, 03:165, 03:182	
51⁵	105 bp	430 bp	*03:90N	
	160 bp		*03:115, 03:213N	*06:109
52⁵	80 bp	430 bp	*03:188	
	190 bp		*03:99Q, 03:118N, 03:162, 03:183	
53⁵	125 bp	430 bp	*03:130	
	155 bp		*03:139	
	190 bp		*03:162, 03:183, 03:204	
54⁵	95 bp	430 bp	*03:91Q	
	170 bp		*03:158, 03:170	
	220 bp		*03:181	
55⁹	155 bp	430 bp	*03:102	
	195 bp		*03:114	
56⁵	120 bp	430 bp	*03:95N, 03:116, 03:210	
	160 bp		*03:170	
57⁵	100 bp	515 bp	*03:196	*05:45
	215 bp		*03:169	
58⁹	155 bp	430 bp	*03:102	
	180 bp		*03:197Q	
59⁵	100 bp	430 bp	*03:10:01-03:10:02, 03:14:01-03:14:02, 03:138, 03:180, 03:183, 03:195	*06:01:01-06:01:15, 06:43, 06:45, 06:54N- 06:57, 06:98, 06:99:02- 06:105, 06:108, 06:120, 06:132, 06:140, 06:153, 06:157, 06:177, 06:181, 06:194
60¹⁰	-	-	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*03 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.

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.

⁴Due to the sharing of sequence motifs, non-DQB1*03 alleles will be amplified by primer mixes 1, 3, 4, 6, 7, 9, 11, 15, 16, 18, 20 to 22, 25, 26, 33, 35, 39, 43, 51, 57 and 59.

The interpretation of DQB1*03 subtypings is not influenced by the DQB2 and DQB3 genes.

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

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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Lot No.: 4D9

Lot-specific information

⁶Primer mixes 3, 5, 23, 25, 34, 43 and 46 may have a tendency to giving rise to primer oligomer formation.

⁷Primer mixes 6, 11, 14, 16, 24 and 50 may have tendencies of unspecific amplifications.

⁸Primer mixes 1, 2, 18, 19 and 27 may give rise to a lower yield of HLA-specific PCR product than the other DQB1*03 primer mixes.

⁹Primer mixes 55 and 58 may give rise to a long unspecific amplification product. This should be disregarded when interpreting the DQB1*03 typings.

¹⁰Primer mix 60 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.

‘w’, might be weakly amplified.

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

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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Lot No.: **4D9**

Lot-specific information

PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec. PCR product	165	220	135	220	135	95	115	110	65	135	135	260
Length of int. pos. control ¹	515	515	515	515	430	430	430	430	430	430	430	515
5'-primer(s) ²	45(230) 5'-ggA 3'	26(173) 5'-TTA 3'	26(173) 5'-TCT 3'	26(173) 5'-TCT 3'	26(173) 5'-TTA 3'	26(173) 5'-ggg 3'	38(210) 5'-gCA 3'	49(242) 5'-ggT 3'	38(210) 5'-gCA 3'	13(136) 5'-gCC 3'	13(134) 5'-ggC 3'	13(134) 5'-ggC 3'
						37(208) 5'-ACA 3'	139(514) 5'-CAA 3'	55(260) 5'-gCA 3'		135(500) 5'-TgA 3'		
								63(285) 5'-Agg 3'				
3'-primer(s) ³	86(353) 5'-gTT 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'	62(282) 5'-CTA 3'	86(353) 5'-gCT 3'	45(232) 5'-CAA 3'	86(353) 5'-gCT 3'	45(230) 5'-CCC 3'	86(353) 5'-gCT 3'
	86(353) 5'-gCT 3'		57(266) 5'-CAg 3'				162(583) 5'-CAC 3'		69(304) 5'-CCC 3'	167(596) 5'-CAT 3'	84(349) 5'-CAT 3'	
			57(266) 5'-Cgg 3'				164(589) 5'-ggT 3'		75(320) 5'-CCC 3'			
							175(622) 5'-CTA 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	165	130	135	130	165	175	175	150	160	160	95	120
	205				225						125	210
											150	
											185	
Length of int. pos. control ¹	430	430	515	430	430	515	430	430	515	515	430	430
5'-primer(s) ²	26(173) 5'-TTA 3'	26(173) 5'-TTA 3'	55(260) 5'-gCC 3'	57(266) 5'-TgA 3'	26(175) 5'-TTC 3'	139(514) 5'-CAA 3'	139(514) 5'-CAA 3'	132(493) 5'-TTT 3'	130(485) 5'-CCA 3'	9(122) 5'-gTA 3'	26(173) 5'-TCT 3'	26(173) 5'-TTA 3'
					123(464) 5'-CTT 3'						139(514) 5'-CAA 3'	101(400) 5'-TCT 3'
					141(520) 5'-gCC 3'							
					146(533) 5'-CCA 3'							
3'-primer(s) ³	67(296) 5'-ggT 3'	55(260) 5'-gCg 3'	86(353) 5'-gCT 3'	86(353) 5'-gCT 3'	86(353) 5'-gCT 3'	185(650) 5'-CgA 3'	185(650) 5'-Cgg 3'	169(604) 5'-gAC 3'	169(604) 5'-gAC 3'	48(240) 5'-gCg 3'	44(229) 5'-CCA 3'	81(338) 5'-TgC 3'
	81(338) 5'-TgC 3'	55(260) 5'-gCg 3'			185(650) 5'-CgA 3'						74(318) 5'-AAg 3'	82(343) 5'-gTC 3'
		55(260) 5'-ggg 3'									166(595) 5'-ACA 3'	82(343) 5'-gTg 3'
											169(604) 5'-gAT 3'	127(477) 5'-TTC 3'
											175(622) 5'-CTA 3'	
Well No.	13	14	15	16	17	18	19	20	21	22	23	24

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **4D9**

Lot-specific information

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec.	105	180	170	200	110	135	200	100	85	180	125	180
PCR product	130		225		165		225				190	
	160		250								235	
	240											
Length of int. pos. control ¹	430	430	430	430	515	430	430	430	430	430	430	430
5'-primer(s) ²	19(154) 5'-ACA 3'	8(121) 5'-TgC 3'	115(442) 5'-TgA 3'	29(184) 5'-gAC 3'	128(481) 5'-AAA 3'	23(166) 5'-gCA 3'	26(173) 5'-TTA 3'	13(134) 5'-ggC 3'	62(282) 5'-Aag 3'	26(173) 5'-TTA 3'	34(197) 5'-CCA 3'	38(211) 5'-CAT 3'
	48(239) 5'-CCA 3'	9(122) 5'-gTT 3'	123(464) 5'-CTT 3'	30(187) 5'-ACg 3'	146(535) 5'-CCT 3'					101(400) 5'-TCT 3'	101(400) 5'-TCT 3'	40(217) 5'-TCC 3'
	139(514) 5'-CAA 3'		140(517) 5'-CTA 3'	36(204) 5'-gAC 3'								
			146(533) 5'-CCA 3'									
3'-primer(s) ³	86(353) 5'-gCT 3'	55(260) 5'-gCg 3'	185(650) 5'-CgA 3'	86(353) 5'-gCT 3'	169(604) 5'-gAC 3'	55(260) 5'-gCg 3'	76(325) 5'-CgC 3'	32(191) 5'-TAC 3'	77(326) 5'-CCg 3'	71(308) 5'-ggC 3'	86(353) 5'-gCT 3'	86(353) 5'-gCT 3'
	160(577) 5'-CAT 3'	55(260) 5'-gCg 3'				55(260) 5'-gCg 3'	82(343) 5'-gTC 3'			79(332) 5'-TgT 3'	129(484) 5'-CCA 3'	
	169(604) 5'-gAT 3'						88(359) 5'-TgA 3'			145(532) 5'-ggT 3'	149(544) 5'-gTC 3'	
	182(641) 5'-ggC 3'									150(546) 5'-CCC 3'	167(596) 5'-CAA 3'	
Well No.	25	26	27	28	29	30	31	32	33	34	35	36

Well No.	37	38	39	40	41	42	43	44	45	46	47	48
Length of spec.	180	175	145	185	175	80	160	160	90	115	175	95
PCR product	230	230	190				165	185	220	190	175	
			235					250	270	230		
Length of int. pos. control ¹	430	430	430	430	430	430	430	430	430	430	430	430
5'-primer(s) ²	23(164) 5'-gCA 3'	26(173) 5'-TTA 3'	26(173) 5'-TCT 3'	26(173) 5'-TCT 3'	38(209) 5'-CgA 3'	41(219) 5'-gAg 3'	101(400) 5'-TCT 3'	10(126) 5'-CAT 3'	22(163) 5'-AgA 3'	139(514) 5'-CAA 3'	140(516) 5'-ACC 3'	71(309) 5'-ACC 3'
	38(211) 5'-CAT 3'				44(227) 5'-CgC 3'	46(235) 5'-TgA 3'		26(173) 5'-TTT 3'	36(205) 5'-AgA 3'			
	41(219) 5'-gAg 3'					48(239) 5'-TCC 3'		46(235) 5'-TgC 3'	70(306) 5'-AgC 3'			
						73(316) 5'-CgA 3'						
3'-primer(s) ³	86(353) 5'-gCT 3'	71(308) 5'-ggC 3'	61(278) 5'-TCT 3'	73(314) 5'-CCT 3'	86(353) 5'-gCT 3'	86(353) 5'-gCT 3'	141(520) 5'-AAT 3'	86(353) 5'-gCT 3'	86(353) 5'-gCT 3'	164(589) 5'-ggT 3'	185(650) 5'-CgA 3'	86(355) 5'-gAC 3'
		88(359) 5'-TgA 3'	76(324) 5'-gTT 3'	76(324) 5'-gTT 3'			150(546) 5'-CCC 3'			166(595) 5'-ACA 3'		87(358) 5'-gCC 3'
		89(362) 5'-TCA 3'	90(365) 5'-AgT 3'				172(611) 5'-AgA 3'			184(647) 5'-Tgg 3'		93(374) 5'-gCA 3'
Well No.	37	38	39	40	41	42	43	44	45	46	47	48

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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Lot No.: **4D9**

Lot-specific information

Well No.	49	50	51	52	53	54	55	56	57	58	59
Length of spec.	150	105	105	80	125	95	155	120	100	155	100
PCR product	175	150	160	190	155	170	195	160	215	180	
					190	220					
Length of int. pos. control ¹	430	430	430	430	430	430	430	430	515	430	430
5'-primer(s) ²	118(449) 5' -CTA 3'	139(514) 5' -CAA 3'	26(173) 5' -TCT 3'	32(192) 5' -..T 3'	36(205) 5' -AgA 3'	8(119) 5' -CgC 3'	13(134) 5' -ggC 3'	15(142) 5' -gCC 3'	111(430) 5' -ACT 3'	13(134) 5' -ggC 3'	26(173) 5' -TTA 3'
	139(514) 5' -CAA 3'		135(500) 5' -TgA 3'	36(205) 5' -Agg 3'	36(205) 5' -Agg 3'	15(142) 5' -gCC 3'		29(182) 5' -CAA 3'	150(547) 5' -ACA 3'		
				37(207) 5' -TAA 3'	48(239) 5' -CCC 3'	125(470) 5' -Agg 3'		145(530) 5' -CAA 3'			
3'-primer(s) ³				73(316) 5' -CgA 3'	57(268) 5' -ACT 3'	166(595) 5' -AgA 3'					
	174(617) 5' -CgC 3'	160(577) 5' -CAT 3'	47(238) 5' -Cg 3'	86(353) 5' -gCT 3'	86(353) 5' -gCT 3'	55(260) 5' -gCg 3'	51(250) 5' -CgC 3'	55(260) 5' -gCg 3'	169(604) 5' -gAC 3'	51(250) 5' -CgC 3'	45(230) 5' -CCC 3'
	176(625) 5' -gTT 3'	172(611) 5' -AgC 3'	63(286) 5' -CTA 3'			185(650) 5' -CgA 3'	64(287) 5' -TCC 3'	169(604) 5' -gAC 3'		59(274) 5' -gTA 3'	
	184(647) 5' -Tgg 3'	176(625) 5' -gTT 3'	174(619) 5' -CAT 3'								
		179(632) 5' -ggT 3'									
Well No.	49	50	51	52	53	54	55	56	57	58	59

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.

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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Lot No.: **4D9**

Lot-specific information

CELL LINE VALIDATION SHEET																			
DQB1*03 SSP subtyping kit ²																			
				Well															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				201555401	201555402	201555403	201321504	201321505	201321506	201327207	201662508	201555409	201321510	201321511	201321512	201321513	201321514	201662515	201321516
			Production No.																
IHCW 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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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Lot No.: **4D9**

Lot-specific information

CELL LINE VALIDATION SHEET																			
DQB1*03 SSP subtyping kit ²																			
				Well															
				17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
				201327217	201321518	201327219	201321520	201555421	201321522	201555423	201321524	201662525	201321526	201327227	201321528	201321529	201321530	201327231	201321532
	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 OPGA	*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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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Lot No.: **4D9**

Lot-specific information

CELL LINE VALIDATION SHEET																			
DQB1*03 SSP subtyping kit²																			
			Production No.	Well															
				33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	IHWC cell line¹	DQB1		201321533	201662534	201662535	201327236	201327237	201327238	201327239	201555440	201555441	201662542	201662543	201662544	201662545	201662546	201327247	201555448
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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **4D9**

Lot-specific information

CELL LINE VALIDATION SHEET														
DQB1*03 SSP subtyping kit ²														
				Well										
				49	50	51	52	53	54	55	56	57	58	59
				201662549	201662550	201662551	201662552	201662553	201662554	201555455	201662556	201662557	201662558	201662559
	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		-	-	-	-	-	-	-	-	-	-	-

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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Lot No.: 4D9

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 of the kit has been tested against 48 well characterized IHWC cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 7 to 10, 13, 17, 20, 23 to 46, 48 to 58 were available.

The specificities of the primers in primer solutions 7, 9, 10, 25, 27, 28, 35, 52, 53 and 54 were tested by separately adding additional 5'-primers respectively 3'-primers.

In primer solutions 8, 17, 20, 29, 30, 33, 36, 37, 41, 42, 44, 45, 56 and 57 it was only possible to test the 3'-primer, the 5'-primers were not possible to test. In primer solutions 13, 23, 24, 31, 32, 34, 38 to 40, 43, 46, 48 to 51, 55 and 58 it was only possible to test the 5'-primers, the 3'-primers were not possible to test.

In primer solutions 1, 3, 7, 9 to 11, 14, 25 and 35 one or more of the 3'-primers were not possible to test, and in primer solution 6, 25 to 28, 35, 52, 53 and 54 one, two or three of the 5'-primers were not possible to test.

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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Lot No.: **4D9**

Lot-specific information

101.214-24/06 – including *Taq* polymerase, IFU-01
101.214-24u/06u – without *Taq* polymerase, IFU-02

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“Instructions for Use” (IFU)

Lot No.: **4D9**

Lot-specific information

ADDRESSES:

Manufacturer:

Olerup SSP AB, Franzengatan 5, SE-112 51 Stockholm, Sweden.

Tel: +46-8-717 88 27

Fax: +46-8-717 88 18

E-mail: info-ssp@olerup.com

Web page: <http://www.olerup-ssp.com>

Distributed by:

Olerup GmbH, Löwengasse 47 / 6, AT-1030 Vienna, Austria.

Tel: +43-1-710 15 00

Fax: +43-1-710 15 00 10

E-mail: support-at@olerup.com

Web page: <http://www.olerup.com>

Olerup Inc., 901 S. Bolmar St., Suite R, West Chester, PA 19382

Tel: 1-877-OLERUP1

Fax: 610-344-7989

E-mail: info.us@olerup.com

Web page: <http://www.olerup.com>

For information on *Olerup* SSP distributors worldwide, contact **Olerup GmbH**.