

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

Visit <https://labproducts.caredx.com> for
“Instructions for Use” (IFU)

Lot No.: **8L7**

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:	8L7
Expiry date:	2025-02-01
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. 8L7.

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 (5K0)**

- The product documentation has been updated for new alleles of IMGT 3.42.0.
- The kit resolution focuses on common and well documented (CWD) alleles¹.

¹As described in section Uniquely Identified Alleles

The DQB1*06 specificity and interpretation tables have been updated for the DQB1 alleles described since the previous *Olerup SSP®* DQB1*06 lot was made (Lot No. 5K0).

¹S. J. Mack, P. Cano, J. A. Hollenbach et al.
Common and well-documented HLA alleles: 2012 update to the CWD catalogue. Tissue Antigens, 2013, 81, 194–203

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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
7	Added	-	3'-primer added for improved yield of the *06:14:02 allele.
11	Removed	-	5'-primer removed for improved allelic resolution.
23	Added	-	5'-primer added for improved yield of the *06:14:02 allele.
24	Modified	-	5'-primer modified for improved HLA-specific amplification.
25	Added	-	5'-primer added for improved yield of the *06:14:02 allele.
27	Removed	-	5'-primer removed for improved allelic resolution.
31	-	Added	3'-primer added for the 06:57:01-06:57:02 alleles.
34	Exchanged	-	5'-primer exchanged for improved HLA-specific amplification, exchanged positive control primer pair.
45	Added	-	3'-primer added for the *06:19 allele.
58	Added	-	3'-primer added for the 06:57:01-06:57:02 alleles.
62	Exchanged/Added	Exchanged	Exchanged primer pair for reducing tendency of primer oligomer formation. 5'-primer added for the *06:184 allele.

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Well **64** contains Negative Control primer pairs, that will amplify a majority 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 200 base pair.

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*06:382 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. '8L7'.

Wells 1 to 63 – DQB1*06 high resolution primers.

Well 64 – 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 some primer mixes. For further details see Specificity Table.

UNIQUELY IDENTIFIED ALLELES

All the DQB1*06 alleles, i.e. **DQB1*06:01 to DQB1*06:382**, recognized by the HLA Nomenclature Committee in October 2020^{1,2} will be amplified by the primers in the DQB1*06 subtyping kit.

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The DQB1*06 kit enables separation of the confirmed DQB1*06 alleles as listed in the IMGT/HLA database 3.25.0. 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 many 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*06:97, 06:124	45
DQB1*06:70, 06:75N	40	DQB1*06:134, 06:144N	50
DQB1*06:91, 06:128	48	DQB1*06:200, 06:225	53

¹HLA-DQB1 alleles listed on the IMGT/HLA web page 2020-October-15, release 3.42.0, 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	Status ¹	Allele	Status ¹	Allele	Status ¹	Allele	Status ¹
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
1	220 bp	515 bp	*06:01:01:01-06:01:27, 06:35, 06:43, 06:45, 06:53:01-06:57:02, 06:82, 06:98-06:105, 06:108, 06:120, 06:132, 06:140, 06:153:01-06:153:02, 06:157, 06:177, 06:181, 06:194, 06:205, 06:209, 06:214, 06:229, 06:233, 06:239, 06:243, 06:245-06:247, 06:251, 06:257-06:258, 06:263, 06:268, 06:274, 06:277, 06:285, 06:302, 06:305, 06:307, 06:309-06:310, 06:312, 06:321, 06:323, 06:330N, 06:340, 06:359, 06:382	
2	210 bp	430 bp	*06:01:01:01-06:02:47, 06:05:02 [?] -06:06 [?] , 06:10-06:11:04, 06:13:01-06:13:03, 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, 06:53:01-06:57:02, 06:68, 06:70-06:84:01:02, 06:95-06:109, 06:111-06:117, 06:120, 06:122-06:127, 06:130-06:132, 06:136-06:140, 06:147, 06:150-06:153:02, 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, 06:211, 06:213-06:216N, 06:219, 06:224-06:229, 06:232-06:233, 06:235-06:237, 06:240, 06:242-06:243, 06:245-06:247, 06:249, 06:251, 06:255-06:258, 06:260, 06:262-06:264, 06:268, 06:270:01-06:271, 06:273-06:274, 06:277, 06:284-06:286, 06:289-06:290, 06:293-06:298, 06:300, 06:302, 06:304N, 06:306N-06:312, 06:314-06:315, 06:317N, 06:319, 06:321-06:324, 06:326, 06:330N, 06:333, 06:335, 06:337-06:338, 06:340-06:341N, 06:344, 06:347, 06:354-06:357, 06:359, 06:363-06:364, 06:366, 06:370, 06:372, 06:374, 06:376-06:377, 06:379N-06:380, 06:382	
3	185 bp	430 bp	*06:02:01:01-06:02:42, 06:02:44-06:02:47, 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, 06:70-06:84:01:02, 06:95, 06:96:02-06:97, 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,	*04:10

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4	130 bp	430 bp	*06:02:07, 06:03:01:01-06:03:06, 06:03:08-06:03:38, 06:03:40, 06:05:02, 06:07:01-06:07:02, 06:11:02-06:11:04, 06:14:01, 06:14:03, 06:25-06:26N, 06:28, 06:30-06:32:02, 06:40-06:41:01:03, 06:44, 06:59-06:67, 06:87, 06:90-06:92:02, 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, 06:190:01-06:191, 06:195-06:196, 06:199, 06:203, 06:210, 06:218, 06:221-06:223, 06:230, 06:234, 06:238, 06:244, 06:248, 06:250, 06:253, 06:259, 06:269, 06:272, 06:275-06:276, 06:278-06:279, 06:316, 06:320, 06:327-06:329, 06:331, 06:334, 06:336, 06:345N-06:346, 06:350, 06:352, 06:360, 06:362, 06:365, 06:367, 06:371, 06:373, 06:378
5	160 bp	430 bp	*06:03:01:01-06:03:03, 06:03:05-06:03:07, 06:03:11-06:03:25, 06:03:27-06:03:33, 06:03:35-06:03:40, 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, 06:40-06:41:01:03, 06:44, 06:59-06:62, 06:64-06:65, 06:67, 06:90-06:92:02, 06:94, 06:110, 06:118:01, 06:118:03, 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, 06:210, 06:218, 06:221-06:223, 06:230, 06:234, 06:238, 06:248, 06:250, 06:253, 06:259, 06:272, 06:276, 06:279, 06:316, 06:327-06:329, 06:331, 06:334, 06:336, 06:345N-06:346, 06:350, 06:352, 06:360, 06:362, 06:365, 06:367, 06:371
			*03:23:01, 05:03:12, 05:43:02
6	170 bp	515 bp	*06:02:07, 06:03:01:01-06:03:06, 06:03:08-06:03:18, 06:03:20-06:03:40, 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, 06:40-06:41:01:03, 06:44, 06:59, 06:61, 06:63-06:65, 06:67, 06:87, 06:90-06:92:02, 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, 06:190:01-06:191, 06:195-06:196, 06:199, 06:203, 06:210, 06:218,

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7	210 bp	515 bp	*06:04:01:01-06:04:17, 06:07:01-06:07:02, 06:17, 06:21, 06:25, 06:34, 06:36, 06:38-06:39, 06:52, 06:58, 06:69:01-06:69:02, 06:85-06:86, 06:89, 06:92:01-06:93, 06:135, 06:149, 06:155, 06:158N, 06:160, 06:164, 06:172, 06:180, 06:193N, 06:202, 06:204, 06:217, 06:231, 06:252N, 06:254, 06:261, 06:265-06:267, 06:280, 06:283, 06:288, 06:291-06:292, 06:301, 06:303N, 06:313, 06:318, 06:320, 06:332, 06:343, 06:349, 06:351, 06:361, 06:369, 06:375, 06:381	
8^{4,7}	90 bp 175 bp	515 bp	*06:65 *06:04:01:01-06:07:02, 06:09:01:01-06:09:03, 06:09:05-06:09:12, 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, 06:69:01, 06:85-06:86, 06:88:01:01-06:89, 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, 06:217, 06:241, 06:252N, 06:254, 06:261, 06:265-06:267, 06:276, 06:280-06:283, 06:287-06:288, 06:291-06:292, 06:299, 06:303N, 06:313, 06:318, 06:320, 06:339, 06:343, 06:348-06:349, 06:351, 06:353, 06:358, 06:361, 06:368-06:369, 06:375, 06:381	
9^{5,7}	130 bp	430 bp	*06:04:01:01-06:05:01, 06:06, 06:08:01-06:09:03, 06:09:05-06:09:12, 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, 06:69:01, 06:85-06:86, 06:88:01:01-06:89, 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, 06:217, 06:231, 06:241, 06:252N, 06:254, 06:261, 06:265-06:267, 06:280-06:283, 06:287-06:288, 06:291-06:292, 06:299, 06:301, 06:313, 06:318-06:319, 06:339, 06:343, 06:348-06:349, 06:351, 06:353, 06:358, 06:361, 06:368-06:369, 06:375, 06:381	
10^{7,9}	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	210 bp	430 bp	*06:05:01, 06:05:02 [?] -06:06 [?] , 06:09:01:01-06:09:12, 06:12, 06:15:01-06:15:02,	

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12⁴	100 bp 135 bp 180 bp 215 bp	430 bp	*06:64 *06:94, 06:170 *06:06, 06:149, 06:276 *06:06 [?] , 06:129, 06:241	
13	185 bp 225 bp	430 bp	*06:10, 06:130 *06:15:01-06:15:02, 06:22:01-06:22:03, 06:37, 06:48:01-06:48:02, 06:51:01-06:51:02, 06:69:01-06:69:02, 06:139, 06:368	*03:30, 03:72, 03:100, 03:215
14	130 bp	430 bp	*06:09:04, 06:13:01-06:13:03, 06:22:01, 06:22:03, 06:55, 06:69:02, 06:119, 06:206:01- 06:206:02, 06:247 *06:146:01-06:146:02	*03:259
15^{4,7}	215 bp 105 bp 185 bp	430 bp	*06:14:01-06:14:03, 06:69:01-06:69:02, 06:156, 06:162, 06:206:01-06:206:02, 06:368 *06:29, 06:123, 06:139, 06:337	*04:28, 05:38, 05:62, 05:119 *03:132, 03:215, 04:75
16⁵	195 bp 215 bp	515 bp	*06:16 *06:51:01-06:51:02	*04:01:01:01 ^w - 04:02:01:01 ^w , 04:02:01:04 ^w -04:84 ^w
17⁴	110 bp	430 bp	*06:23, 06:82, 06:99:01, 06:156, 06:162, 06:169, 06:233, 06:340	*05:03:12, 05:43:02
18	145 bp 185 bp 225 bp	430 bp	*06:193N *06:03:25, 06:17, 06:24, 06:30, 06:42, 06:149 *06:171	*03:66N *03:02:23, 03:228
19⁶	140 bp 225 bp	430 bp	*06:10, 06:25, 06:36, 06:130, 06:193N, 06:216N *06:171	*03:66N
20^{4,6,7}	110 bp 210 bp 260 bp	515 bp	*06:37, 06:125, 06:374 *06:26N, 06:81 *06:83	
21⁷	155 bp	430 bp	*06:02:01:01-06:02:04, 06:02:06-06:02:47, 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, 06:68-06:84:01:02, 06:96:01-06:97, 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, 06:206:01-06:206:02, 06:208, 06:211, 06:213, 06:215-06:216N, 06:219, 06:224-06:228, 06:232, 06:235-06:237, 06:240, 06:242, 06:249, 06:255-06:256, 06:262, 06:264, 06:270:02-06:271, 06:273, 06:284, 06:286, 06:289-06:290, 06:293- 06:298, 06:300, 06:304N, 06:306N, 06:308N, 06:311, 06:314-06:315, 06:317N, 06:324, 06:326, 06:333, 06:335, 06:338, 06:341N,	*04:02:07, 04:09, 05:62

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22⁷	130 bp	515 bp	06:344, 06:347, 06:355-06:357, 06:363-06:364, 06:366, 06:368, 06:370, 06:374, 06:376, 06:379N-06:380 *06:07:01-06:07:02, 06:15:01-06:15:02, 06:46, 06:66, 06:92:01-06:92:02, 06:118:01-06:118:03, 06:172, 06:275 *06:38, 06:158N
23	195 bp 160 bp	515 bp	*06:03:01:01-06:03:18, 06:03:20-06:03:40, 06:08:01-06:08:03, 06:14:01-06:14:03, 06:21, 06:28, 06:31, 06:40-06:41:01:03, 06:44, 06:59, 06:61, 06:63-06:65, 06:67, 06:87, 06:90-06:92:02, 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, 06:190:01-06:191, 06:195-06:196, 06:199, 06:203, 06:206:01-06:206:02, 06:210, 06:218, 06:221-06:223, 06:230, 06:234, 06:238, 06:244, 06:248, 06:250, 06:253, 06:259, 06:269, 06:272, 06:278-06:279, 06:316, 06:327-06:329, 06:331, 06:334, 06:336, 06:345N-06:346, 06:350, 06:352, 06:360, 06:362, 06:365, 06:367, 06:371, 06:373, 06:378
24⁵	155 bp	430 bp	*06:02:05, 06:19:01-06:19:02, 06:139, 06:322, 06:337 *03:30, 03:72, 03:100, 03:132, 03:215, 04:01:01:01-04:02:01:01, 04:02:01:04-04:02:04, 04:02:06, 04:02:08-04:03:03, 04:06-04:08, 04:10, 04:12-04:14, 04:16-04:36N, 04:38-04:72, 04:74-04:84, 05:38, 05:119
25⁷	210 bp	430 bp	*06:03:01:01-06:03:40, 06:08:01-06:08:03, 06:14:01-06:14:03, 06:27:01-06:28, 06:30-06:32:02, 06:40-06:41:01:03, 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, 06:190:01-06:191, 06:195-06:196, 06:206:01-06:206:02, 06:210, 06:218, 06:221-06:223, 06:230, 06:234, 06:238, 06:244, 06:248, 06:250, 06:253, 06:259, 06:269, 06:272, 06:276, 06:278-06:279, 06:316, 06:327-06:329, 06:331, 06:334, 06:336, 06:345N-06:346, 06:350, 06:352, 06:360, 06:362, 06:365, 06:367-06:368, 06:371, 06:373, 06:378 *06:06 [?] , 06:49
26	260 bp 165 bp 190 bp	430 bp	*06:35, 06:53:01-06:53:02, 06:145, 06:208 *06:28, 06:56, 06:79:01-06:79:02
27⁷	155 bp 195 bp 265 bp	430 bp	*06:114 *06:40, 06:81, 06:132 *06:33 *05:73, 05:98, 05:116

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28	130 bp 180 bp 300 bp	515 bp	*06:102N *06:50 *06:34	*02:154, 04:66, 05:250
29⁴	90 bp	430 bp	*06:04:01:01-06:05:01, 06:05:02 [?] -06:06 [?] , 06:07:01-06:07:02, 06:09:01:01-06:09:12, 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, 06:69:01-06:69:02, 06:85-06:86, 06:88:01:01-06:89, 06:93-06:94, 06:118:01- 06:118:03, 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, 06:212, 06:217, 06:231, 06:252N, 06:254, 06:261, 06:265-06:267, 06:280-06:283, 06:287-06:288, 06:291-06:292, 06:299, 06:301, 06:303N, 06:313, 06:318, 06:320, 06:325, 06:332, 06:339, 06:343, 06:348-06:349, 06:351, 06:353, 06:358, 06:361, 06:369, 06:375, 06:381	
30^{4,5,7}	115 bp	430 bp	*06:02:01:01-06:02:01:04, 06:02:02-06:02:27, 06:02:29-06:02:41, 06:03:01:01-06:03:01:03, 06:03:02-06:03:37, 06:06 [?] , 06:08:01, 06:08:02 [?] -06:08:03 [?] , 06:09:03 [?] , 06:09:05 [?] - 06:09:06 [?] , 06:10-06:11:01, 06:11:02 [?] - 06:11:03 [?] , 06:11:04, 06:13:01, 06:13:02 [?] , 06:14:01-06:14:02, 06:14:03 [?] -06:15:02 [?] , 06:16, 06:17 [?] -06:18:01 [?] , 06:19:01 [?] , 06:19:02-06:20, 06:22:01 [?] -06:25 [?] , 06:26N, 06:27:01 [?] - 06:32:02 [?] , 06:33, 06:35 [?] , 06:37, 06:39, 06:40 [?] , 06:44, 06:45 [?] , 06:46-06:49, 06:50 [?] , 06:51:02 [?] , 06:53:01 [?] -06:54N [?] , 06:56 [?] -06:57:01 [?] , 06:59 [?] - 06:61 [?] , 06:62, 06:63 [?] -06:67 [?] , 06:68, 06:69:01 [?] , 06:70 [?] -06:76 [?] , 06:77N-06:79:01, 06:79:02 [?] - 06:83 [?] , 06:85 [?] , 06:87-06:88:01:01, 06:89 [?] , 06:90, 06:91 [?] -06:92:01 [?] , 06:92:02, 06:93 [?] - 06:96:01 [?] , 06:97 [?] , 06:106-06:117, 06:118:02 [?] - 06:124 [?] , 06:125, 06:126 [?] , 06:127, 06:128 [?] , 06:130, 06:131 [?] -06:141 [?] , 06:143 [?] -06:147 [?] , 06:148, 06:149 [?] -06:153:01 [?] , 06:154 [?] -06:184 [?] , 06:185, 06:187-06:188, 06:190:01 [?] -06:199 [?] , 06:200, 06:201 [?] -06:204 [?] , 06:206:01 [?] , 06:207 [?] - 06:208 [?] , 06:210 [?] -06:215 [?] , 06:216N, 06:218- 06:219, 06:221-06:222, 06:224-06:228, 06:229 [?] -06:236 [?] , 06:237, 06:238 [?] , 06:240, 06:241 [?] , 06:242, 06:244 [?] , 06:246 [?] -06:247 [?] , 06:248, 06:249 [?] , 06:250, 06:252N [?] , 06:253, 06:255-06:256, 06:259, 06:260 [?] , 06:262, 06:263 [?] , 06:264, 06:268 [?] , 06:269-06:273, 06:276, 06:277 [?] , 06:278-06:279, 06:284, 06:286, 06:289-06:290, 06:293-06:298, 06:300, 06:304N, 06:306N, 06:308N, 06:311, 06:314-06:315, 06:317N, 06:320 [?] , 06:322, 06:324, 06:326-06:329, 06:331, 06:333- 06:338, 06:341N, 06:344-06:347, 06:350, 06:352	

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32 ^{4,5,6}	115 bp	430 bp	*06:04:01:01-06:05:02, 06:06 [?] , 06:07:01-06:07:02, 06:08:02 [?] -06:08:03 [?] , 06:09:01:01-06:09:12, 06:11:02 [?] -06:11:03 [?] , 06:12, 06:13:02 [?] -06:13:03 [?] , 06:14:03 [?] -06:15:02 [?] , 06:17 [?] -06:18:01 [?] , 06:18:02, 06:19:01 [?] , 06:21, 06:22:01 [?] -06:25 [?] , 06:27:01 [?] -06:32:02 [?] , 06:34, 06:35 [?] , 06:36, 06:38, 06:40 [?] , 06:41:01:01-06:42, 06:45 [?] , 06:50 [?] , 06:51:02 [?] , 06:52, 06:53:01 [?] -06:54N [?] , 06:56 [?] -06:57:01 [?] , 06:58, 06:59 [?] -06:61 [?] , 06:63 [?] -06:67 [?] , 06:69:01 [?] -06:76 [?] , 06:79:02 [?] -06:83 [?] , 06:84:01:01-06:84:01:02, 06:85 [?] , 06:86, 06:89 [?] , 06:91 [?] -06:92:01 [?] , 06:93 [?] -06:97 [?] , 06:118:01, 06:118:02 [?] -06:124 [?] , 06:126 [?] , 06:128 [?] , 06:129, 06:131 [?] -06:141 [?] , 06:142, 06:143 [?] -06:147 [?] , 06:149 [?] -06:153:01 [?] , 06:154 [?] -06:184 [?] , 06:186, 06:189, 06:190:01 [?] -06:199 [?] , 06:201 [?] -06:204 [?] , 06:206:01 [?] , 06:206:02, 06:207 [?] -06:208 [?] , 06:210 [?] -06:215 [?] , 06:217, 06:229 [?] -06:236 [?] , 06:238 [?] , 06:241 [?] , 06:244 [?] , 06:246 [?] -06:247 [?] , 06:249 [?] , 06:252N [?] , 06:254, 06:260 [?] , 06:261, 06:263 [?] , 06:265-06:267, 06:268 [?] , 06:275, 06:277 [?] , 06:280-06:283, 06:287-06:288, 06:291-06:292, 06:299, 06:301, 06:303N, 06:313, 06:318-06:319, 06:320 [?] , 06:325, 06:332, 06:339, 06:343, 06:348-06:349, 06:351, 06:353, 06:358, 06:361, 06:368 [?] , 06:369, 06:371 [?] , 06:374 [?] , 06:375, 06:377 [?] -06:379N [?] , 06:381	
33	190 bp	430 bp	*06:28, 06:56, 06:79:01-06:79:02	*05:73, 05:98, 05:116
34 ⁷	155 bp	515 bp	*06:01:01:01-06:01:01:02, 06:01:03-06:01:11, 06:01:13-06:01:27, 06:43, 06:53:01, 06:54N-06:57:02, 06:98, 06:99:02-06:100, 06:102N-06:105, 06:108, 06:132, 06:140, 06:153:01-06:153:02, 06:157, 06:167-06:168, 06:181, 06:194, 06:205, 06:209, 06:214, 06:229, 06:239, 06:243, 06:245-06:247, 06:251, 06:257-06:258, 06:260, 06:263, 06:268, 06:274, 06:277, 06:285, 06:302, 06:305, 06:307, 06:309-06:310, 06:312, 06:321, 06:323, 06:330N, 06:342, 06:359, 06:377, 06:382	
35	135 bp 185 bp 260 bp	430 bp	*06:66, 06:172, 06:320 *06:54N, 06:135 *06:06 [?] , 06:58	
36	165 bp	430 bp	*06:71, 06:77N-06:78, 06:95, 06:138	
37 ⁴	120 bp 175 bp	430 bp	*06:80 *06:29, 06:76-06:77N, 06:96:01-06:96:02, 06:139, 06:322, 06:337	*03:30, 03:72, 03:100, 03:132, 03:215, 04:09, 04:63, 04:75

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

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Lot No.: **8L7**

Lot-specific information

	245 bp		*06:05:02 [?] , 06:137	
38⁷	170 bp	430 bp	*06:78, 06:123	
	245 bp		*06:137	
	285 bp		*06:72-06:73	
39⁴	120 bp	430 bp	*06:80	
	155 bp		*06:138	
	270 bp		*06:73-06:74	
40^{4,6}	105 bp	430 bp	*06:70	
	190 bp		*06:75N, 06:106, 06:136	
41^{7,8}	215 bp	430 bp	*06:122, 06:130, 06:148, 06:278, 06:302	*03:194
42⁶	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		*05:14
	180 bp		*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	
	185 bp		*06:19:01-06:19:02, 06:136, 06:163	
	235 bp		*06:124	
46	170 bp	430 bp	*06:163	
	240 bp		*06:86, 06:104, 06:107, 06:366	*03:97, 03:329, 03:349, 03:381
47⁴	95 bp	430 bp	*06:29, 06:59, 06:63, 06:87, 06:96:01- 06:96:02, 06:150, 06:322, 06:337	*03:08, 03:137, 03:194
	180 bp		*06:90	
	220 bp		*06:143	
48⁴	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	
50^{4,6}	75 bp	515 bp	*06:134	
	150 bp		*06:101	
	190 bp		*06:140, 06:144N	
	275 bp		*06:120	
51^{4,6,7}	120 bp	430 bp	*06:111, 06:189, 06:265	*03:317:01- 03:317:02, 03:395, 04:17, 05:31, 05:46, 05:108
	240 bp		*06:205	
52⁴	95 bp	430 bp	*06:155	
	130 bp		*06:133	
	165 bp		*06:188, 06:200	
	195 bp		*06:105, 06:185, 06:225	*02:99, 03:249, 03:312, 05:47, 05:159
53	150 bp	430 bp	*06:109-06:110, 06:200, 06:269	*02:106, 03:115, 03:368, 04:43, 05:246
	195 bp		*06:105, 06:185, 06:225	*02:99, 03:249, 03:312, 05:47, 05:159

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

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Lot No.: **8L7**

Lot-specific information

	220 bp		*06:147	
54	190 bp	430 bp	*06:112N, 06:131	*05:03:02 [?]
55	145 bp	430 bp	*06:115	
56	130 bp	515 bp	*06:99:01-06:99:03, 06:233, 06:244, 06:269- 06:270:01, 06:278	
	200 bp		*06:116, 06:187	
57^{4,7}	125 bp	515 bp	*06:07:01-06:07:02, 06:15:01-06:15:02, 06:46, 06:92:01-06:92:02, 06:118:01-06:118:03, 06:275	
	185 bp		*06:89, 06:135	*05:80
	200 bp		*06:158N	
58⁴	85 bp	430 bp	*06:57:01-06:57:02	
	215 bp		*06:153:01-06:153:02, 06:233, 06:244, 06:247, 06:269-06:270:01, 06:278, 06:340	*03:52, 03:179, 03:270
	275 bp		*06:127, 06:205	
	300 bp		*06:52	
59⁷	170 bp	430 bp	*06:163	
	230 bp		*06:117, 06:147, 06:343	
60	140 bp	430 bp	*06:141, 06:179N	
	180 bp		*06:191	
61⁴	65 bp	430 bp	*06:53:01-06:53:02	
62	185 bp	430 bp	*06:184	
	220 bp		*06:23, 06:156, 06:162, 06:169, 06:342	*05:73, 05:98, 05:116
63	155 bp	515 bp	*06:164	
64¹⁰	-	-	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*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.

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

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

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

⁵Primer mixes 9, 16, 24, 30 and 32 may give rise to a lower yield of HLA-specific PCR product than the other

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Lot-specific information

DQB1*06 primer mixes.

⁶Primer mixes 19, 20, 31, 32, 40, 42, 50 and 51 have a tendency to giving rise to primer oligomer formation.

⁷Primer mixes 8, 9, 10, 15, 20, 21, 22, 25, 27, 30, 31, 34, 38, 41, 51, 57 and 59 may have tendencies of unspecific amplifications.

⁸Primer mix 41 may give rise to a long unspecific amplification product of approximately 600 bp. This should be disregarded when interpreting the DQB1*06 typings.

⁹The 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.

¹⁰Primer mix 64 contains a negative control, which will amplify a majority 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 200 base pairs.

Abbreviations

?: nucleotide sequence information is not available for the primer matching sequence.

w: might be weakly amplified.

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Lot No.: **8L7**

Lot-specific information
PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7	8	9	10	11	12
Length of spec.	220	210	185	130	160	170	210	90	130	260	210	100
PCR product								175				135 180 215
Length of int.	515	430	430	430	430	515	515	515	430	515	430	430
pos. control ¹												
5'-primer(s) ²	26(173) 5'-TTA ^{3'}	30(184) 5'-gAT ^{3'}	9(122) 5'-gTT ^{3'}	27(177) 5'-gTA ^{3'}	9(122) 5'-gTA ^{3'}	27(177) 5'-gTA ^{3'}	30(184) 5'-gAC ^{3'}	27(177) 5'-gTA ^{3'}	27(177) 5'-gTA ^{3'}	13(134) 5'-ggA ^{3'}	30(184) 5'-gAT ^{3'}	27(177) 5'-gTA ^{3'}
		30(184) 5'-gAT ^{3'}					30(184) 5'-gAC ^{3'}			14(136) 5'-gCC ^{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'}	70(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'}	48(238) 5'-gCA ^{3'}
	86(354) 5'-AAT ^{3'}	86(354) 5'-AAA ^{3'}	58(270) 5'-TCC ^{3'}	57(267) 5'-gCg ^{3'}		70(304) 5'-CCC ^{3'}	86(354) 5'-TAT ^{3'}	70(304) 5'-CCT ^{3'}		87(356) 5'-ggA ^{3'}		59(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.	185	130	105	195	110	145	140	110	155	130	160	155
PCR product	225	215	185	215		185	225	210		195		
						225		260				
Length of int.	430	430	430	515	430	430	430	515	430	515	515	430
pos. control ¹												
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'-TCT ^{3'}	26(173) 5'-TCT ^{3'}	14(136) 5'-gCg ^{3'}	9(122) 5'-gTT ^{3'}	34(196) 5'-ACT ^{3'}	30(184) 5'-gAC ^{3'}	9(122) 5'-gTT ^{3'}
					26(173) 5'-TTA ^{3'}		154(558) 5'-ACT ^{3'}	29(181) 5'-CCT ^{3'}		57(266) 5'-TgA ^{3'}	30(184) 5'-gAC ^{3'}	
								31(187) 5'-ACT ^{3'}		133(494) 5'-TCA ^{3'}		
								62(282) 5'-AAg ^{3'}				
								63(285) 5'-Agg ^{3'}				
3'-primer(s) ³	57(265) 5'-gCT ^{3'}	57(266) 5'-CAA ^{3'}	30(184) 5'-gTg ^{3'}	60(274) 5'-gTT ^{3'}	48(240) 5'-gCg ^{3'}	61(278) 5'-TCT ^{3'}	57(265) 5'-gCT ^{3'}	86(353) 5'-ACg ^{3'}	47(236) 5'-ggT ^{3'}	86(353) 5'-ACC ^{3'}	70(304) 5'-CCC ^{3'}	47(237) 5'-CgA ^{3'}
	70(304) 5'-CCT ^{3'}	86(353) 5'-ACg ^{3'}	57(266) 5'-Cgg ^{3'}	66(294) 5'-ATg ^{3'}		71(307) 5'-ggC ^{3'}	61(278) 5'-TCT ^{3'}		48(240) 5'-gCg ^{3'}	185(650) 5'-Cgg ^{3'}	70(304) 5'-CCC ^{3'}	48(240) 5'-gCg ^{3'}
		86(353) 5'-ACg ^{3'}				77(327) 5'-ACT ^{3'}	87(355) 5'-gTg ^{3'}		49(241) 5'-TgC ^{3'}			
						87(355) 5'-gTg ^{3'}	186(653) 5'-CCg ^{3'}					
							186(654) 5'-TAA ^{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

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Lot No.: **8L7**

Lot-specific information

Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Length of spec.	210	165	155	130	90	115	70	115	190	155	135	165
PCR product	260	190	195	180			100				185	
			265	300			220				260	
Length of int. pos. control ¹	430	430	430	515	430	430	430	430	430	515	430	430
5'-primer(s) ²	13(134) 5'-ggT 3'	38(209) 5'-CgT 3'	11(129) 5'-TTA 3'	30(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'	9(122) 5'-gCT 3'	13(134) 5'-ggC 3'	9(122) 5'-gTT 3'
	30(184) 5'-gAC 3'	45(230) 5'-ggA 3'	31(187) 5'-ACg 3'	102(400) 5'-TCT 3'	70(304) 5'-AgA 3'		154(558) 5'-ACT 3'				39(211) 5'-CgT 3'	
	30(184) 5'-gAC 3'		31(187) 5'-ACT 3'								55(260) 5'-gCC 3'	
	30(185) 5'-ATg 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'	76(322) 5'-gTg 3'	86(353) 5'-ACC 3'	154(558) 5'-AAA 3'	23(163) 5'-gCA 3'	154(558) 5'-AAA 3'	87(356) 5'-ggA 3'	47(237) 5'-CgA 3'	61(279) 5'-TTT 3'	48(238) 5'-gCA 3'
	86(354) 5'-AAg 3'			131(488) 5'-ACT 3'	86(354) 5'-TAT 3'		73(314) 5'-CCA 3'				86(353) 5'-ACC 3'	50(244) 5'-CAT 3'
				189(661) 5'-CCA 3'			174(618) 5'-ACT 3'					51(247) 5'-CgA 3'
												53(253) 5'-CTT 3'
												53(253) 5'-CTA 3'
Well No.	25	26	27	28	29	30	31	32	33	34	35	36
Well No.	37	38	39	40	41	42	43	44	45	46	47	48
Length of spec.	120	170	120	105	215	130	150	130	150	170	95	110
PCR product	175	245	155	190		165	180	180	185	240	180	205
	245	285	270			190		220	235		220	
Length of int. pos. control ¹	430	430	430	430	430	430	430	430	430	430	430	430
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'		102(400) 5'-TCT 3'	24(166) 5'-gCA 3'	45(230) 5'-ggC 3'
							133(494) 5'-TCA 3'	25(169) 5'-TgT 3'			48(238) 5'-ACA 3'	45(230) 5'-ggA 3'
								41(217) 5'-TCC 3'			55(260) 5'-gCC 3'	48(238) 5'-ACA 3'
3'-primer(s) ³	36(203) 5'-ACC 3'	51(247) 5'-CgA 3'	36(203) 5'-ACC 3'	31(188) 5'-Agg 3'	70(304) 5'-CCC 3'	55(260) 5'-gCA 3'	57(266) 5'-CAT 3'	70(304) 5'-CCC 3'	46(232) 5'-CAA 3'	52(251) 5'-gCA 3'	70(304) 5'-CCC 3'	70(304) 5'-CCC 3'
	53(253) 5'-CTA 3'	55(260) 5'-gCA 3'	48(238) 5'-gCA 3'	59(271) 5'-CTT 3'		59(271) 5'-CTT 3'	170(604) 5'-gAC 3'		53(254) 5'-CCA 3'	74(317) 5'-ACC 3'		
	55(260) 5'-gCg 3'	78(328) 5'-CAT 3'	82(341) 5'-AgC 3'	60(274) 5'-gTg 3'		66(294) 5'-ATg 3'			60(274) 5'-gTg 3'	172(611) 5'-AgA 3'		
	56(262) 5'-AgA 3'	88(359) 5'-CgA 3'	88(359) 5'-CgA 3'	60(276) 5'-CAC 3'		72(311) 5'-CCg 3'			74(316) 5'-CTC 3'			
	78(328) 5'-CAT 3'	91(369) 5'-TTT 3'				76(322) 5'-gTg 3'						
						77(326) 5'-CCA 3'						
Well No.	37	38	39	40	41	42	43	44	45	46	47	48



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

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Lot No.: **8L7**

Lot-specific information

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	85	170	140
PCR product	230	150	240	130	195			200	185	215	230	180
		190		165	220				200	275		
		275		195						300		
Length of int. pos. control ¹	430	515	430	430	430	430	430	515	515	430	430	430
5'-primer(s) ²	23(163) 5'-AgT 3'	9(121) 5'-TgA 3'	104(406) 5'-CAA 3'	27(177) 5'-gTA 3'	9(122) 5'-gTT 3'	8(119) 5'-CgC 3'	57(266) 5'-TgA 3'	9(121) 5'-TgC 3'	34(196) 5'-ACT 3'	9(121) 5'-TgC 3'	9(122) 5'-gTT 3'	24(167) 5'-CgA 3'
	37(206) 5'-gTC 3'	37(206) 5'-gTC 3'	141(517) 5'-CCA 3'	135(500) 5'-TgA 3'	135(500) 5'-TgA 3'	10(124) 5'-TCT 3'		100(394) 5'-TgT 3'	38(209) 5'-CgT 3'	98(389) 5'-CAT 3'	102(400) 5'-TCT 3'	34(196) 5'-ACT 3'
	38(209) 5'-CAT 3'	37(207) 5'-TAA 3'	146(533) 5'-CCT 3'					105(411) 5'-AgC 3'	39(211) 5'-CgT 3'	104(406) 5'-CAA 3'		39(211) 5'-Cgg 3'
	39(211) 5'-TgA 3'	49(242) 5'-ggA 3'							57(267) 5'-gAT 3'	110(426) 5'-AAA 3'		
		75(319) 5'-Agg 3'										
3'-primer(s) ³	86(353) 5'-ACg 3'	86(353) 5'-ACg 3'	170(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'	23(163) 5'-gCA 3'	52(251) 5'-gCA 3'	70(304) 5'-CCC 3'
				57(265) 5'-ATT 3'	168(599) 5'-CTT 3'			154(558) 5'-AAA 3'		66(294) 5'-ACT 3'	69(302) 5'-CCC 3'	
				176(624) 5'-TgA 3'	175(619) 5'-CAT 3'					185(650) 5'-Cgg 3'	167(596) 5'-CAA 3'	
				179(633) 5'-AgT 3'	176(624) 5'-TgA 3'							
				186(652) 5'-CAT 3'	186(652) 5'-CAT 3'							
Well No.	49	50	51	52	53	54	55	56	57	58	59	60
Well No.	61	62	63									
Length of spec.	65	185	155									
PCR product		220										
Length of int. pos. control ¹	430	430	515									
5'-primer(s) ²	45(230) 5'-ggA 3'	28(179) 5'-gAC 3'	48(239) 5'-CCA 3'									
		39(212) 5'-gCA 3'										
3'-primer(s) ³	53(254) 5'-CCT 3'	87(356) 5'-ggA 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.: **8L7**

Lot-specific information

CELL LINE VALIDATION SHEET																				
DQB1*06 SSP subtyping kit ²																				
				Well																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				Prod. No.	202127701	202127702	202127703	202127704	202127705	202127706	202127707	202127708	202127709	202127710	202127711	202127712	202127713	202127714	202127715	202127716
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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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Lot No.: **8L7**

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					
				202127717	202127718	202127719	202127720	202127721	202127722	202127723	202127724	202127725	202127726	202127727	202127728	202127729	202127730	202127731	202127732					
			Prod. No.	IHWC cell line ¹				DQB1																
1	9001	SA	*05:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
2	9280	LK707	*06:01	*02:02	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
3	9011	E4181324	*06:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
4	9275	GU373	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
5	9009	KAS011	*05:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
6	9353	SM	*03:02	*06:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
7	9020	QBL	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
8	9025	DEU	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
9	9026	YAR	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
10	9107	LKT3	*04:01		-	-	-	-	-	-	+	-	-	-	-	-	-	-						
11	9051	PITOUT	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
12	9052	DBB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
13	9004	JESTHOM	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
14	9071	OLGA	*04:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-						
15	9075	DKB	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
16	9037	SWEIG007	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
17	9282	CTM3953540	*02:01	*06:03	-	-	-	-	-	+	-	+	-	-	-	-	+	-						
18	9257	32367	*06:02	*02:02	-	-	-	+	-	-	-	-	-	-	-	-	+	-						
19	9038	BM16	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
20	9059	SLE005	*06:04		-	-	-	-	-	-	-	-	-	-	-	+	-	+						
21	9064	AMALA	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
22	9056	KOSE	*05:03	*06:04	-	-	-	-	-	-	-	-	-	-	-	+	-	+						
23	9124	IHL	*05:03	*06:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
24	9035	JBUSH	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
25	9049	IBW9	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
26	9285	WT49	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
27	9191	CH1007	*04:01	*05:01	-	-	-	-	-	-	+	-	-	-	-	-	-	-						
28	9320	BEL5GB	*02:02	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
29	9050	MOU	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
30	9021	RSH	*04:02		-	-	-	-	-	-	+	-	-	-	-	-	-	-						
31	9019	DUCAF	*02:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
32	9297	HAG	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
33	9098	MT14B	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
34	9104	DHIF	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
35	9302	SSTO	*03:05		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
36	9024	KT17	*03:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
37	9065	HHKB	*06:03		-	-	-	-	-	+	-	+	-	-	-	-	+	-						
38	9099	LZL	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
39	9315	CML	*02:01	*03:01	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
40	9134	WHONP199	*02:02	*03:03	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
41	9055	H0301	*06:09		-	-	-	-	-	-	-	-	-	-	-	+	-	+						
42	9066	TAB089	*06:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
43	9076	T7526	*03:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
44	9057	TEM	*05:03		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
45	9239	SHJO	*02:02		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
46	9013	SCHU	*06:02		-	-	-	-	+	-	-	-	-	-	-	-	+	-						
47	9045	TUBO	*03:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						
48	9303	TER-ND	*05:01		-	-	-	-	-	-	-	-	-	-	-	-	-	-						



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

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Lot No.: **8L7**

Lot-specific information

CELL LINE VALIDATION SHEET																				
DQB1*06 SSP subtyping kit²																				
				Well																
				Prod. No.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
					202127733	202127734	202127735	202127736	202127737	202127738	202127739	202127740	202127741	202127742	202127743	202127744	202127745	202127746	202127747	202127748
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		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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Lot No.: **8L7**

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	
				202127749	202127750	202127751	202127752	202127753	202127754	202127755	202127756	202127757	202127758	202127759	202127760	202127761	202127762	202127763	
			Prod. 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		-	-	-	-	-	-	-	-	-	-	-	-	-		

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

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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 10, 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 solutions 1 to 4, 6 to 8, 12, 14, 16, 18, 19, 23 to 25, 29, 35, 37, 38, 42 and 58 one or more 3'-primers were not possible to test, and in primer solutions 10, 22, 25, 29, 35, 41, 47, 48, 56 to 58 and 62 one to three 5'-primers were not possible to test. In addition, one or more 3'-primers in primer solutions 4 and 21 were tested by separately adding one or two 5'-primers, and one 5'-primer in primer solutions 7, 23 and 25 was tested separately by adding one 3'-primer.

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

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Lot No.: **8L7**

Lot-specific information

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