Gel Documentation Form and Worksheet

DQB1\*06

(101.212-24/04 – 24u/04u) Lot No: 5K0 Expiry Date: 2023-11-01

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sample ID:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DNA Conc.(ng/ul):\_\_\_\_\_\_\_\_\_

Test Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tested By:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Review Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Reviewed By:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Interpretation:\_\_\_\_\_\_\_\_\_\_\_ Failed lanes*: \_\_\_\_\_\_\_\_\_\_\_\_ *Comments:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

**Gel Picture**

|  |
| --- |
| PHOTO DOCUMENT |



Abbreviations

ICB: Internal Control Band

AmpS: Amplicon Size

**Notes:**

Product sizes are approximate. For detailed information, see the lot-specific Specificity Table and Interpretation Table.

This table is intended as a guide. For interpretation always use the Interpretation Table and/or Specificity Table.

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

Primer mixes 9, 16, 24, 30 and 32 may give rise to a lower yield of HLA-specific PCR product than the other DQB1\*06 primer mixes.

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

Primer mixes 8, 9, 10, 15, 20, 22, 25, 27, 30, 31, 34, 38, 41, 51, 57, 59 and 62 may have tendencies of unspecific amplifications.

Primer 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.

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

Primer 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.















**1**HLA-DQB1 in bold lettering are listed as confirmed alleles on the IMGT/HLA web page 2016-July-14, release 3.25.0, [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla).

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

**3**The following DQB1\*06 primer mixes have two or more product sizes:

|  |  |  |  |
| --- | --- | --- | --- |
| Primer Mix | Size of spec. PCR product | Amplified DQB1\*06alleles | Amplified non-DQB1\*06alleles |
| **8** | 90 bp  175 bp | \*06:65  \*06:04:01-06:07:02, 06:09:01:01-06:09:03, 06:09:05-06:09:11, 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, 06:88-06:89, 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 |  |
| **11** | 155 bp  210 bp | \*06:164  \*06:05:01, 06:05:02?-06:06?, 06:09:01:01-06:09:11, 06:12, 06:15:01-06:15:02, 06:22:01-06:22:03, 06:42, 06:46, 06:66, 06:88, 06:94, 06:118:01-06:119, 06:121, 06:142, 06:189, 06:207, 06:212w, 06:275, 06:281-06:282, 06:287, 06:299, 06:339, 06:348 |  |
| **12** | 100 bp  135 bp  180 bp  215 bp | \*06:64  \*06:94, 06:170  \*06:06, 06:149, 06:276  \*06:06?, 06:129, 06:241 |  |
| **13** | 185 bp  225 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 | \*03:30, 03:72, 03:100, 03:215 |
| **14** | 130 bp  215 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** | 105 bp  185 bp | \*06:14:01-06:14:03, 06:69:01-06:69:02, 06:156, 06:162, 06:206:01-06:206:02  \*06:29, 06:123, 06:139, 06:337 | \*04:28, 05:38, 05:62, 05:119  \*03:132, 03:215 |
| **16** | 195 bp  215 bp | \*06:16  \*06:51:01-06:51:02 | \*04:01:01:01w, 04:01:02w-04:01:04w, 04:02:01:01w, 04:02:02w-04:02:10w, 04:03:01w-04:03:02w, 04:06w-04:36Nw |
| **18** | 145 bp  185 bp  225 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 |
| **19** | 140 bp  225 bp | \*06:10, 06:25, 06:36, 06:130, 06:193N, 06:216N  \*06:171 | \*03:66N |
| **20** | 110 bp  210 bp  260 bp | \*06:37, 06:125  \*06:26N, 06:81  \*06:83 |  |
| **22** | 130 bp  195 bp | \*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 |  |
| **25** | 210 bp  260 bp | \*06:03:01:01-06:03:06, 06:03:08-06:03:37, 06:08:01-06:08:03, 06:14:01, 06:14:03, 06:27:01-06:28, 06:30-06:32:02, 06:40-06:41, 06:44, 06:59-06:65, 06:67, 06:87, 06:90-06:91, 06:98, 06:110, 06:128, 06:133-06:134, 06:141, 06:143-06:145, 06:148, 06:154, 06:168, 06:170, 06:184-06:185, 06:187, 06:190:01-06:191, 06:195-06:196, 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  \*06:05:02?, 06:06?, 06:49 |  |
| **26** | 165 bp  190 bp | \*06:35, 06:53:01-06:53:02, 06:145, 06:208  \*06:28, 06:56, 06:79:01-06:79:02 | \*05:73, 05:98, 05:116 |
| **27** | 155 bp  195 bp  220 bp  265 bp | \*06:114  \*06:40, 06:81, 06:132  \*06:57  \*06:33 |  |
| **28** | 130 bp  180 bp  300 bp | \*06:102N  \*06:50  \*06:34 |  |
| **31** | 100 bp  220 bp | \*06:44, 06:47  \*06:43 |  |
| **35** | 135 bp  185 bp  260 bp | \*06:66, 06:172, 06:320  \*06:54N, 06:135  \*06:05:02?, 06:06?, 06:58 |  |
| **37** | 120 bp  175 bp  245 bp | \*06:80  \*06:29, 06:76-06:77N, 06:96:01-06:96:02, 06:139, 06:322, 06:337  \*06:05:02?, 06:137 | \*03:30, 03:72, 03:100, 03:132, 03:215, 04:09, 04:63 |
| **38** | 170 bp  245 bp  285 bp | \*06:78, 06:123  \*06:137  \*06:72-06:73 |  |
| **39** | 120 bp  155 bp  270 bp | \*06:80  \*06:138  \*06:73-06:74 |  |
| **40** | 105 bp  190 bp | \*06:70  \*06:75N, 06:106, 06:136 |  |
| **42** | 130 bp  165 bp  190 bp | \*06:93-06:94, 06:170  \*06:121, 06:142, 06:168  \*06:60-06:61 |  |
| **43** | 150 bp  180 bp | \*06:07:01?, 06:20?, 06:68, 06:131 | \*05:14  \*05:03:02? |
| **44** | 130 bp  180 bp  220 bp | \*06:113  \*06:67, 06:174, 06:191  \*06:143 |  |
| **45** | 150 bp  195 bp  235 bp | \*06:97  \*06:136  \*06:124 |  |
| **46** | 170 bp  240 bp | \*06:163  \*06:86, 06:104, 06:107 | \*03:97, 03:329, 03:349, 03:381 |
| **47** | 95 bp  180 bp  220 bp | \*06:29, 06:59, 06:63, 06:87, 06:96:01-06:96:02, 06:150, 06:322, 06:337  \*06:90  \*06:143 | \*03:08, 03:137, 03:194 |
| **48** | 110 bp  205 bp | \*06:59, 06:91, 06:145, 06:150, 06:208  \*06:128 | \*03:194 |
| **49** | 190 bp  230 bp | \*06:100, 06:132, 06:140  \*06:126 |  |
| **50** | 75 bp  150 bp  190 bp  275 bp | \*06:134  \*06:101  \*06:140, 06:144N  \*06:120 |  |
| **51** | 120 bp  240 bp | \*06:111, 06:189, 06:265  \*06:205 | \*03:317:01-03:317:02, 03:395, 04:17, 05:31, 05:46, 05:108 |
| **52** | 95 bp  130 bp  165 bp  195 bp | \*06:155  \*06:133  \*06:188, 06:200  \*06:105, 06:185, 06:225 | \*02:99, 03:249, 03:312, 05:47, 05:159 |
| **53** | 150 bp  195 bp  220 bp | \*06:109-06:110, 06:200, 06:269  \*06:105, 06:185, 06:225  \*06:147 | \*02:106, 03:115, 03:368, 04:43  \*02:99, 03:249, 03:312, 05:47, 05:159 |
| **56** | 130 bp  200 bp | \*06:99:01-06:99:03, 06:233, 06:244, 06:269-06:270:01, 06:278  \*06:116, 06:187 |  |
| **57** | 125 bp  185 bp  200 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  \*06:89, 06:135  \*06:158N | \*05:80 |
| **58** | 215 bp  275 bp  300 bp | \*06:153:01-06:153:02, 06:233, 06:244, 06:247, 06:269-06:270:01, 06:278, 06:340  \*06:127, 06:205  \*06:52 | \*03:52, 03:179, 03:270 |
| **59** | 170 bp  230 bp | \*06:163  \*06:117, 06:147, 06:343 | \*03:52, 03:179, 03:270 |
| **60** | 140 bp  180 bp | \*06:141, 06:179N  \*06:191 |  |

**4**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 |

Abbreviations

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

w: might be weakly amplified.

Changes in revision R01 compared to R00:

1. Primer mix 7 does not amplify the DQB1\*06:69:02 allele.

2. Primer mix 23 does not amplify the DQB1\*06:03:07, 06:14:02, 06:206:01 and 06:206:02 alleles.

3. Primer mix 25 does not amplify the DQB1\*06:03:07, 06:14:02, 06:206:01 and 06:206:02 alleles.

The corrections above have been implemented in the specificity and interpretation tables.

Change in revision R02 compared to R01:

1. Primer mix 43 does not amplify the DQB1\*06:103, 06:284, 06:350, DQB1\*03:319, 03:347, DQB1\*04:70, DQB1\*05:84 and 05:211 alleles. This correction has been implemented in the Specificity and Interpretation tables.