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 bp210 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 bp135 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 bp215 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 bp215 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 bp185 bp225 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 bp225 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 bp195 bp 220 bp 265 bp | \*06:114\*06:40, 06:81, 06:132\*06:57\*06:33 |  |
| **28** | 130 bp180 bp 300 bp | \*06:102N\*06:50\*06:34 |  |
| **31** | 100 bp 220 bp | \*06:44, 06:47\*06:43 |  |
| **35** | 135 bp185 bp260 bp | \*06:66, 06:172, 06:320 \*06:54N, 06:135\*06:05:02?, 06:06?, 06:58 |  |
| **37** | 120 bp 175 bp245 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 bp245 bp 285 bp | \*06:78, 06:123\*06:137\*06:72-06:73 |  |
| **39** | 120 bp 155 bp270 bp | \*06:80\*06:138\*06:73-06:74 |  |
| **40** | 105 bp 190 bp | \*06:70\*06:75N, 06:106, 06:136 |  |
| **42** | 130 bp165 bp190 bp | \*06:93-06:94, 06:170\*06:121, 06:142, 06:168\*06:60-06:61 |  |
| **43** | 150 bp180 bp |  \*06:07:01?, 06:20?, 06:68, 06:131 | \*05:14\*05:03:02? |
| **44** | 130 bp180 bp220 bp | \*06:113\*06:67, 06:174, 06:191\*06:143 |  |
| **45** | 150 bp195 bp235 bp | \*06:97\*06:136\*06:124 |  |
| **46** | 170 bp240 bp | \*06:163\*06:86, 06:104, 06:107 | \*03:97, 03:329, 03:349, 03:381 |
| **47** | 95 bp180 bp220 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 bp150 bp190 bp 275 bp | \*06:134\*06:101\*06:140, 06:144N\*06:120 |  |
| **51** | 120 bp240 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 bp130 bp165 bp195 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 bp195 bp220 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 bp200 bp | \*06:99:01-06:99:03, 06:233, 06:244, 06:269-06:270:01, 06:278 \*06:116, 06:187 |  |
| **57** | 125 bp185 bp200 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 bp275 bp300 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 bp230 bp | \*06:163\*06:117, 06:147, 06:343 | \*03:52, 03:179, 03:270 |
| **60** | 140 bp180 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.