Gel Documentation Form and Worksheet

DQB1\*03 (101.214-24/06, -24u/06u) Lot No: 7G4 Expiry Date: 2021-04-01

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

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

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

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

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

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

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

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

**Gel Picture**

|  |
| --- |
| PHOTO DOCUMENT |





‘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 3, 5, 23, 25, 30, 43, 45, 46 and 61 may have a tendency to giving rise to primer oligomer formation.

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

Primer mixes 1, 2, 18, 27 and 33 may give rise to a lower yield of HLA-specific PCR product than the other DQB1\*03 primer mixes.

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

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















**1**HLA-DQB1 alleles in bold lettering are listed as confirmed alleles on the IMGT/HLA web page [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla), release 3.29.0, August 2017.

**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\*03 primer mixes have two or more product sizes:

|  |  |  |  |
| --- | --- | --- | --- |
| Primer Mix | Size of spec. PCR product | Amplified DQB1\*03alleles | Other amplified  DQB1 alleles |
| **6** | 95 bp  130 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, 03:226, 03:244, 03:250, 03:262, 03:272 | \*04:09, 05:131 |
| **7** | 115 bp  150 bp | \*03:03:06, 03:06, 03:25:01-03:25:02, 03:42, 03:88  \*03:84N | \*04:01:03, 04:02:16, 04:03:03 |
| **8** | 110 bp  145 bp | \*03:15  \*03:07, 03:16 |  |
| **9** | 65 bp  145 bp | \*03:40  \*03:08, 03:119, 03:137, 03:194 | \*06:02:02, 06:03:02 |
| **10** | 135 bp  260 bp | \*03:09  \*03:11, 03:26, 03:244 |  |
| **11** | 135 bp  255 bp | \*03:10:01-03:10:02:02, 03:12, 03:14:01-03:14:02, 03:70, 03:179, 03:183, 03:195  \*03:47 | \*06:01:01:01-06:01:06, 06:01:08-06:01:17, 06:06?, 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, 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 |
| **13** | 115 bp  170 bp  205 bp | \*03:255  \*03:13, 03:232  \*03:48 |  |
| **17** | 165 bp  225 bp | \*03:43, 03:87  \*03:18, 03:85 |  |
| **20** | 150 bp  240 bp | \*03:21  \*03:246 | \*02:64, 02:79, 05:35, 06:243, 06:255 |
| **23** | 95 bp  125 bp  150 bp  185 bp | \*03:41, 03:224  \*03:25:02, 03:89, 03:234, 03:239  \*03:84N  \*03:45 | \*04:03:01-04:03:03 |
| **24** | 120 bp  210 bp | \*03:39  \*03:27, 03:48, 03:56 |  |
| **25** | 105 bp  155 bp  180 bp  240 bp | \*03:206  \*03:80, 03:257  \*03:29, 03:118N, 03:237N  \*03:34 | \*02:14:01 |
| **27** | 170 bp  225 bp  250 bp | \*03:32, 03:87  \*03:85  \*03:31 |  |
| **28** | 200 bp  230 bp | \*03:37, 03:46, 03:252, 03:277  \*03:225 |  |
| **29** | 110 bp  165 bp  255 bp | \*03:33, 03:245  \*03:35  \*03:243 | \*06:228 |
| **30** | 135 bp  175 bp | \*03:36, 03:149  \*03:150 |  |
| **31** | 115 bp  195 bp  225 bp | \*03:255  \*03:28  \*03:56, 03:83 |  |
| **33** | 85 bp  160 bp | \*03:59  \*03:204 | \*06:37 |
| **35** | 135 bp  190 bp  235 bp | \*03:190, 03:205, 03:214  \*03:51, 03:54  \*03:117 | \*04:15, 04:42, 05:102, 06:223  \*04:35 |
| **36** | 145 bp  175 bp  200 bp | \*03:205, 03:214  \*03:55, 03:60, 03:250  \*03:269N | \*04:15 |
| **37** | 180 bp  230 bp | \*03:60, 03:77  \*03:53, 03:62, 03:225 |  |
| **38** | 170 bp  225 bp | \*03:58, 03:194, 03:232  \*03:57, 03:83 | \*06:82, 06:233 |
| **39** | 105 bp  140 bp  190 bp  235 bp | \*03:240  \*03:25:01-03:25:02, 03:66N, 03:234, 03:239  \*03:68  \*03:86 | \*04:03:01-04:03:03, 06:193N |
| **40** | 180 bp  230 bp | \*03:67-03:68, 03:228  \*03:212 | \*06:17, 06:24, 06:30, 06:42  \*02:47 |
| **41** | 135 bp  175 bp  210 bp | \*03:282N  \*03:63, 03:75, 03:168  \*03:201, 03:269N |  |
| **42** | 80 bp  165 bp  220 bp | \*03:188  \*03:64, 03:76-03:77  \*03:201 |  |
| **43** | 175 bp  250 bp | \*03:198, 03:222, 03:247  \*03:97 | \*06:86, 06:104 |
| **44** | 160 bp  220 bp  270 bp | \*03:199, 03:211  \*03:78  \*03:71 |  |
| **45** | 90 bp  135 bp  170 bp  230 bp | \*03:65  \*03:282N  \*03:133, 03:200  \*03:81, 03:159 | \*02:84, 04:14 |
| **46** | 115 bp  175 bp | \*03:88-03:89  \*03:191 |  |
| **49** | 150 bp  175 bp | \*03:94, 03:164, 03:182  \*03:191 | \*04:44 |
| **50** | 105 bp  150 bp | \*03:206  \*03:98, 03:165, 03:182 |  |
| **51** | 105 bp  140 bp  165 bp | \*03:90N, 03:240  \*03:213N, 03:239  \*03:115, 03:228 | \*02:106, 04:43, 06:17, 06:24, 06:30, 06:42, 06:109 |
| **52** | 80 bp  185 bp | \*03:188  \*03:99Q, 03:118N, 03:133, 03:162, 03:183, 03:200, 03:223, 03:233, 03:237N | \*02:84, 04:14 |
| **53** | 125 bp  155 bp  190 bp | \*03:130, 03:271  \*03:139, 03:199  \*03:162, 03:183, 03:204, 03:223, 03:233 |  |
| **54** | 95 bp  170 bp  220 bp | \*03:91Q  \*03:146, 03:158, 03:170, 03:207  \*03:181 |  |
| **55** | 155 bp  195 bp | \*03:102  \*03:114 |  |
| **56** | 155 bp  200 bp | \*03:95N, 03:210  \*03:150, 03:170 |  |
| **57** | 100 bp  215 bp  240 bp | \*03:196  \*03:169  \*03:246 | \*05:45 |
| **58** | 155 bp  180 bp | \*03:102  \*03:197Q |  |
| **61** | 115 bp  155 bp  255 bp | \*03:116  \*03:221  \*03:243 | \*06:51:01-06:51:02 |

**4**The HLA-DQB1\*03 primer set cannot separate the DQB1\*03:25:01 from the DQB1\*04:03:03 alleles. These alleles can be distinguished by the DQ low resolution kit and/or the HLA-DQB1\*04 high resolution kit.

**5**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 |

6This lot of the DQB1\*03 kit cannot distinguish the DQB1\*03:49 and the DQB1\*03:01:01:01-03:01:01:12, 03:01:01:14-03:01:02, 03:01:04-03:01:07, 03:01:09-03:01:12, 03:01:14, 03:01:16-03:01:24, 03:01:26-03:01:33, 03:01:35-03:01:36, 03:01:38-03:01:41, 03:73, 03:92-03:93, 03:231, 03:241-03:242, 03:253-03:254, 03:264, 03:266 and 03:281 alleles.

‘w’, might be weakly amplified.

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

Change in revision R01 compared to R00:

1. Primer mix 43 does not amplify the DQB1\*03:49 and the DQB1\*02.10, 02:81 and \*05:152 alleles. Thus, this lot of the DQB1\*03 kit cannot distinguish the DQB1\*03:49 and the DQB1\*03:01:01:01-03:01:01:12, 03:01:01:14-03:01:02, 03:01:04-03:01:07, 03:01:09-03:01:12, 03:01:14, 03:01:16-03:01:24, 03:01:26-03:01:33, 03:01:35-03:01:36, 03:01:38-03:01:41, 03:73, 03:92-03:93, 03:231, 03:241-03:242, 03:253-03:254, 03:264, 03:266 and 03:281 alleles. This has been corrected in the Interpretation and Specificity Tables.

Changes in revision R02 compared to R01:

1. Primer mix 28 does not amplify the DQB1\*03:38 allele. This correction has been implemented in the specificity and interpretation tables.

Change in revision R03 compared to R02:

1. Primer mixes 23 and 25 do not amplify the DQB1\*03:24 and 03:79 alleles.

The corrections above have been implemented in the Specificity and Interpretation tables.