Gel Documentation Form and Worksheet

DRB1\*04 (101.114-24/03, -24u/03u) Lot No: 3F5 Expiry Date: 2020-03-01

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

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

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

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

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

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

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

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

|  |
| --- |
| PHOTO DOCUMENT |

**Gel Picture**





‘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 21 and 22 may have tendencies of unspecific amplifications.

Primer mixes 14 and 31 have a tendency to giving rise to primer oligomer formation.

Primer mix 36 may amplify the DRB1\*11:60, 11:109 and 15:68 alleles.

Primer mix 48 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.

Change in revision R01 compared to R00:

1. Primer mix 10 weakly amplifies the DRB1\*04:26 allele. This has been corrected in the Interpretation and Specificity Tables.













**1**DRB1\*04 alleles in bold lettering are listed as confirmed alleles on the on the IMGT/HLA web page [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla), release 3.27.0, January 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 DRB1\*04 primer mixes have two or more product sizes:

|  |  |  |  |
| --- | --- | --- | --- |
| Primer Mix | Size of spec. PCR product | **Amplified DRB1\*04 alleles** | Other amplified DRB alleles |
| **11** | 175 bp  220 bp | \*04:15, 04:61, 04:138, 04:145, 04:154, 04:170  \*04:22, 04:98:02 | \*11:22 |
| **12** | 180 bp  265 bp | \*04:16, 04:180  \*04:23, 04:52, 04:151, 04:203, 04:207 |  |
| **13** | 170 bp  225 bp | \*04:46  \*04:12, 04:18, 04:25, 04:31, 04:54-04:55, 04:58, 04:86, 04:103, 04:126, 04:185, 04:191 |  |
| **15** | 175 bp  215 bp | \*04:123  \*04:34 | \*01:10 |
| **19** | 140 bp  210 bp | \*04:39  \*04:24, 04:69, 04:78, 04:101, 04:168 | \*14:10, 14:143, 14:182 |
| **20** | 100 bp  175 bp  255 bp | \*04:63, 04:110, 04:161  \*04:40  \*04:27 |  |
| **21** | 155 bp  210 bp | \*04:29  \*04:37, 04:58, 04:73, 04:105:01-04:105:02, 04:122, 04:132, 04:206 |  |
| **23** | 135 bp  255 bp | \*04:33  \*04:201 |  |
| **25** | 125 bp  230 bp  260 bp | \*04:26  \*04:45  \*04:64 |  |
| **27** | 115 bp  265 bp | \*04:10:01-04:12, 04:60, 04:67, 04:91, 04:126, 04:136, 04:147, 04:201, 04:203, 04:207, 04:219  \*04:49 | \*03:12, 08:06, 08:10, 08:12, 08:22, 08:54, 08:70, 12:46, 13:04, 13:32, 13:48, 13:58, 13:75, 13:81, 13:89, 13:93-13:94:02, 13:108, 13:164, 13:169, 14:65, 14:78, 14:169-14:170, 15:12 |
| **29** | 75 bp  270 bp | \*04:07:01-04:07:05, 04:17:01-04:17:02, 04:20, 04:69, 04:74, 04:92, 04:102, 04:129, 04:160, 04:170, 04:172, 04:197, 04:199, 04:209, 04:212N  \*04:19-04:21, 04:64, 04:192, 04:213 | \*01:17, 09:01:02-09:01:05, 09:01:08-09:02:02, 09:04-09:05, 09:07-09:08, 09:10-09:30, 14:07:01-14:07:02, 14:14, 14:36, 14:42, 14:44:01-14:44:03, 14:51, 14:68:01-14:68:02, 14:93, 14:134, 14:143, **DRB5\*01:12** |
| **31** | 85 bp  200 bp  260 bp | \*04:14, 04:106, 04:132  \*04:214N  \*04:64 | \*01:03, 01:39N, 08:40, 11:11:01, 11:11:03, 11:14:01-11:14:02, 11:20, 11:68, 11:73, 11:93, 11:122, 11:168, 11:184, 13:02:01-13:02:03, 13:02:05-13:02:09, 13:02:11-13:03:06, 13:23:01-13:23:02, 13:29, 13:31, 13:33:01-13:34, 13:36-13:39, 13:41, 13:45, 13:63, 13:65-13:67, 13:73-13:74, 13:85, 13:88, 13:90, 13:95-13:97:02, 13:99, 13:101, 13:103-13:104, 13:107, 13:115, 13:120, 13:122-13:124, 13:126, 13:128, 13:135, 13:139, 13:143, 13:145, 13:147, 13:151-13:152, 13:155, 13:159, 13:165, 13:167-13:168, 13:170-13:172, 13:174, 13:179-13:180, 13:182, 13:188, 13:194-13:195, 13:198, 13:202, 13:207-13:212, 13:216, 13:219-13:220, 13:225, 13:227, 13:230 |
| **35** | 210 bp  245 bp | \*04:81N  \*04:51, 04:70 |  |
| **36** | 120 bp  180 bp | \*04:96  \*04:71 |  |
| **38** | 140 bp  225 bp | \*04:89  \*04:73, 04:75, 04:105:01-04:105:02, 04:122, 04:178N |  |
| **39** | 100 bp  175 bp | \*04:83  \*04:15, 04:61-04:62, 04:69, 04:138, 04:145-04:146, 04:154, 04:170 | \*11:22, 14:10, 14:57, 14:143, 14:182 |
| **40** | 145 bp  200 bp | \*04:30, 04:85  \*04:38, 04:56:01-04:56:02, 04:88, 04:100, 04:107, 04:125, 04:205 |  |
| **41** | 165 bp  205 bp | \*04:76, 04:108  \*04:182 |  |
| **42** | 110 bp  140 bp | \*04:41, 04:77, 04:102, 04:113, 04:152, 04:164, 04:211  \*04:79 | \*14:10, 14:57, 14:143, 14:182 |
| **44** | 165 bp  240 bp | \*04:127  \*04:87, 04:94:01N, 04:120N, 04:129, 04:157N, 04:186N, 04:212N |  |
| **46** | 75 bp  200 bp | \*04:92  \*04:214N |  |
| **47** | 140 bp  250 bp | \*04:117  \*04:119N, 04:142N |  |

**4**The following DRB1\*04 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |  |  |
| --- | --- | --- | --- |
| Alleles | Primer mix | Alleles | Primer mix |
| DRB1\*04:16, 04:151 | 12 | DRB1\*04:49, 04:219 | 27 |
| DRB1\*04:23, 04:180 | 12 | DRB1\*04:89, 04:178N | 38 |
| DRB1\*04:27, 04:110 | 20 | DRB1\*04:117, 04:119N | 47 |
| DRB1\*04:39, 04:101 | 19 |

‘w’, might be weakly amplified.

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