Gel Documentation Form and Worksheet

DRB1\*11 (101.115-24/03, -24u/03u) Lot No: 7F2 Expiry Date: 2020-07-01

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.

In order to have as little co-amplification as possible of non-DRB1\*11 alleles by the primer pairs of the DRB1\*11 subtyping kit, the DRB1\*11 characteristic sequence motif in codon 58, ‘Ag’, has been used in either the 5’-primer or the 3’-primer in many of the DRB1\*11 primer mixes and consequently many of the specific PCR products are shorter than 100 base pairs.

Primer mix 4 may faintly amplify the DRB1\*13:29 allele.

Primer mix 10 may faintly amplify the DRB1\*11:53 allele.

Primer mix 4 has a tendency giving rise to primer oligomer formation.

Primer mixes 6, 13, 19, 32 and 44 may have tendencies of unspecific amplifications.

Primer mix 17 may give rise to a lower yield of HLA-specific PCR product than the other DRB1\*11 primer mixes. Primer mix 12 may amplify the DRB1\*11:60 and 11:109 and the DRB1\*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.







 















**1**DRB1\*11 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 3.29.0, 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 DRB1\*11 primer mixes have two or more product sizes:

|  |  |  |  |
| --- | --- | --- | --- |
| Primer Mix | Size of spec. PCR product | Amplified DRB1\*11 alleles | Other amplified DRB alleles |
|  **9** | 85 bp 115 bp | \*11:07:01-11:07:02, 11:103:01-11:103:02, 11:105, 11:107, 11:125, 11:173\*11:77 | \*03:08, 03:65, 03:140, **DRB3\*01:42** |
| **10**  | 85 bp 120 bp | \*11:07:01-11:07:02, 11:23:01-11:23:02, 11:25, 11:45, 11:55, 11:64, 11:67, 11:103:01-11:103:02, 11:105, 11:107, 11:119, 11:125, 11:173\*11:74:01-11:74:02 | \*03:08, 03:65, 03:140, 08:63, 08:75, **DRB3\*01:42** |
| **11** | 155 bp 200 bp 255 bp | \*11:75\*11:08:01-11:08:03, 11:36, 11:42:01-11:42:02, 11:57, 11:64, 11:68, 11:130\*11:06:01-11:06:03, 11:21, 11:47, 11:57, 11:129, 11:174  | \*13:20, 13:25, 13:29, 13:43, 13:56, 13:60, 13:71, 13:78, 13:88, 13:119, 13:134, 13:149, 13:180, 13:224, 13:231, 13:235, 14:03:01-14:03:02, 14:12:01-14:12:02, 14:40, 14:69, 14:74, 14:77, 14:84-14:85, 14:98, 14:102, 14:115-14:116, 14:135, 14:144, 14:156, 14:173-14:174, 14:181\*03:20, 13:58, 13:81, 13:163, 14:29, 14:99 |
| **12**  | 95 bp 145 bp 185 bp | \*11:61, 11:214\*11:90\*11:30 | **DRB3\*01:42, DRB3\*02:18** |
| **15** | 60 bp 105 bp | \*11:66\*11:10:01-11:10:02, 11:12:01-11:13:02, 11:17,11:52, 11:114, 11:149, 11:170, 11:179, 11:189-11:191, 11:196, 11:200, 11:202 | \*14:11, 14:148, **DRB3\*01:42** |
| **16** | 110 bp 255 bp | \*11:15, 11:24, 11:44, 11:49:01-11:50, 11:76, 11:85, 11:114, 11:127, 11:183, 11:196\*11:91 | \*03:26, 03:33, 03:43-03:44, 03:71:01-03:71:02, 13:34, 13:62, 13:64, 13:68, 13:106, 13:136, 13:151, 13:174, 13:204, 13:216, 13:221, 14:41, 14:77, 14:97, 14:110, **DRB3\*01:14, DRB3\*01:25?, DRB3\*02:54?** |
| **19** | 180 bp 225 bp 260 bp | \*11:31, 11:52, 11:96, 11:148\*11:23:01-11:23:02, 11:25, 11:32, 11:45, 11:55, 11:64, 11:70, 11:119 \*11:86  | \*03:10, 13:43, 13:45, 13:159, 13:179, 13:191, 13:217, 14:01:01-14:01:04, 14:07:01-14:08, 14:16, 14:22, 14:25-14:26, 14:32:01-14:32:03, 14:34-14:35, 14:38:01-14:39, 14:49, 14:53-14:55, 14:58, 14:60, 14:62, 14:69-14:70, 14:72, 14:74-14:75, 14:82, 14:86-14:88, 14:90, 14:92N, 14:97, 14:99, 14:104-14:105, 14:110-14:114, 14:117-14:119, 14:122, 14:124-14:125, 14:128-14:133, 14:137N, 14:139-14:140, 14:142, 14:146-14:147, 14:149-14:151, 14:153, 14:157-14:158, 14:162-14:164, 14:166N, 14:168, 14:171-14:173, 14:184-14:186\*08:20, 13:13, 13:18, 13:47, 13:55, 13:119, 13:144, 13:146, 13:154, 13:156, 13:158, 13:164, 13:232, 14:03:01-14:03:02, 14:12:01-14:12:02, 14:27:01-14:27:02, 14:40, 14:55, 14:63, 14:67, 14:77-14:78, 14:84-14:85, 14:89, 14:102, 14:115-14:116, 14:135-14:136, 14:144, 14:156, 14:164, 14:173-14:174, 14:181\*13:16 |
| **21** | 135 bp 175 bp | \*11:59, 11:80, 11:83, 11:87, 11:135, 11:142, 11:182 \*11:22 | \*03:08, 03:65, 03:140, **DRB3\*01:42**\*04:15, 04:61, 04:138, 04:145, 04:154, 04:170 |
| **22** | 115 bp 180 bp 215 bp 245 bp | \*11:15 \*11:33, 11:35, 11:65:01-11:65:02, 11:130\*11:69, 11:82\*11:81  | \*03:71:02, 13:62, 13:151\*13:09, 13:129, 13:192, 14:24, 14:37\*03:136w |
| **23** | 120 bp190 bp | \*11:38\*11:217N |  |
| **24** | 155 bp 250 bp | \*11:39, 11:43, 11:50, 11:115, 11:145, 11:151, 11:168, 11:171, 11:174 \*11:06:01-11:06:03, 11:21, 11:47, 11:57, 11:81, 11:129, 11:174  | 03:17, 03:37, 03:80, 03:140, 13:118, 13:131, 13:135, 13:150, 14:59, 14:86, 14:96, 14:153-14:154, **DRB3\*02:54?**\*03:20, 03:136w, 13:58, 13:81, 13:163, 14:29, 14:99 |
| **26** | 120 bp 160 bp | \*11:09-11:10:02, 11:13:01-11:13:02, 11:16-11:17, 11:20, 11:40, 11:46:01-11:46:02, 11:52, 11:59, 11:62:01-11:62:02, 11:80, 11:83, 11:87, 11:113, 11:118, 11:122, 11:149, 11:182, 11:189-11:190, 11:202, 11:213\*11:78, 11:152  | \*03:08, 03:65, 03:140, 14:11, 14:148, **DRB3\*01:42** |
| **34** | 80 bp 135 bp290 bp | \*11:31, 11:96, 11:148\*11:169N\*11:97 | \*03:10, 13:43, 13:45, 13:179, 13:217, 14:35, 14:53, 14:72, 14:128, 14:132, 14:138, 14:186 |
| **35** | 85 bp190 bp | \*11:98\*11:217N |  |
| **36** | 90 bp115 bp 165 bp245 bp | \*11:102:01-11:102:02, 11:175\*11:99\*11:110\*11:128  | \*03:49, 14:161 |
| **42** | 135 bp180 bp | \*11:72, 11:92, 11:180 \*11:104 | \*01:75 |
| **43** | 105 bp235 bp | \*11:147:01-11:147:02\*11:112, 11:137  | \*03:78 |
| **44** | 105 bp200 bp270 bp | \*11:147:01-11:147:02\*11:111\*11:187 |  |
| **46** | 70 bp110 bp | \*11:60, 11:109\*11:198 |  |
| **47** | 110 bp210 bp | \*11:198\*11:193:01-11:193:02, 11:209  | \*08:05, 08:18, 08:24:01-08:24:02, 08:29, 08:31, 08:40-08:41, 12:01:02, 12:02:04, 12:16:01, 12:49, 12:66, 13:17, 13:116, 13:175, 13:214, 14:04:01-14:04:03, 14:11, 14:28, 14:31, 14:52, 14:68:01-14:68:02, 14:71, 14:73, 14:120, 14:126:01-14:126:02, 14:138, 14:145, 14:148, 14:152N, 14:175, 14:180 |

**4**The following DRB1\*11 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |
| --- | --- |
| Alleles | Primer mix |
| DRB1\*11:24, 11:91 | 16 |
| DRB1\*11:61, 11:90 | 12 |
| DRB1\*11:97, 11:169N | 34 |
| DRB1\*11:99, 11:128, 11:175 | 36 |

‘w’, may be weakly amplified.

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