Gel Documentation Form and Worksheet

HLA-C\*01 (101.621-12/12u) Lot No: 6K1 Expiry Date: 2023-12-01

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 6, 7, 14, 18 and 22 may have tendencies of unspecific amplifications.

Primer mixes 1 and 13 may give rise to a lower yield of HLA-specific PCR product than the other HLA-C\*01 primer mixes.

Primer mixes 15 and 25 has a tendency to giving rise to primer oligomer formation.

In primer mix 28, alleles C\*01:50 and C\*01:120 cannot be separated and alleles C\*01:81 and C\*01:02:xx cannot be separated.

Primer mix 32 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-C\*01 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 3.25.0, July 2016.

**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 HLA-C\*01 primer mixes have two or more product sizes:

|  |  |  |  |
| --- | --- | --- | --- |
| **Primer Mix** | **Size of spec. PCR product** | **Amplified HLA-C\*01 alleles** | **Other amplified HLA Class I alleles** |
| **2** | 90 bp  270 bp | \*01:03, 01:24, 01:78, 01:146:01-01:146:02  \*01:15:01 | \*03:58, 04:37, 05:85, 07:364 |
| **5** | 105 bp  150 bp  200 bp | \*01:38  \*01:20  \*01:06 |  |
| **6** | 195 bp  230 bp | \*01:07:01-01:07:02  \*01:37N, 01:83 | \*06:43:01, 14:24:02, **A\*03:356**  \*14:35N, 16:132N |
| **7** | 70 bp  150 bp  195 bp | \*01:67  \*01:20  \*01:08 | \*03:03:10, 03:04:28, 04:01:11, 06:02:21, 07:01:58, 07:02:36, 12:03:36, 16:01:19, **A\*01:01:33, A\*02:01:29, A\*03:01:42, A\*11:01:40, A\*24:07:02, A\*26:01:09, A\*32:01:09, A\*33:01:07, A\*68:01:06, B\*07:02:21, B\*13:02:03, B\*14:02:21, B\*15:01:39, B\*27:05:06, B\*35:08:07, B\*37:01:18, B\*40:01:10, B\*40:02:11, B\*44:02:37, B\*44:03:08, B\*51:01:24, B\*58:01:27, B\*73:01-73:02, B\*82:02:02** |
| **8** | 210 bp  260 bp | \*01:04, 01:09:01-01:09:02, 01:22, 01:35, 01:160  \*01:143N | \*03:302, 06:23, 06:179, 07:177, 12:178, 15:37, **B\*40:243, B\*54:38** |
| **9** | 160 bp  225 bp | \*01:52  \*01:10, 01:83 | **B\*40:243** |
| **10** | 210 bp  255 bp  290 bp | \*01:22, 01:35, 01:160  \*01:30  \*01:11 | \*03:302, 07:177, 15:37, **B\*40:243, B\*54:38** |
| **11** | 140 bp  355 bp | \*01:39  \*01:12:01-01:12:02, 01:34, 01:79:01-01:79:02, 01:97, 01:101-01:102, 01:114:01-01:114:02, 01:131, 01:137N |  |
| **12** | 80 bp  155 bp  255 bp | \*01:84  \*01:13  \*01:82 | \*03:213  \*01:13, 02:51, 03:87:01-03:87:02, 03:414, 04:223:01-04:223:02, 04:387, 05:09:01-05:09:03, 05:17, 05:52, 05:201, 05:206, 07:130, 08:15:01-08:15:02, 08:51, 12:144, 12:185, 16:27, **B\*15:33, B\*15:248** |
| **14** | 120 bp  240 bp | \*01:41  \*01:17, 01:21, 01:23, 01:69N, 01:128, 01:152, 01:157 | \*07:316, 07:338, 07:579, 12:215 |
| **15** | 115 bp  230 bp | \*01:42, 01:73  \*01:16, 01:18, 01:74 | **B\*13:102, B\*15:393, B\*46:60, B\*51:129** |
| **16** | 130 bp  255 bp  295 bp | \*01:43  \*01:19  \*01:23, 01:58 | \*05:200  \*07:316, 07:338, 07:579, **A\*01:24** |
| **17** | 75 bp  255 bp | \*01:24-01:25  \*01:82 |  |
| **18** | 195 bp  260 bp  295 bp  345 bp | \*01:26  \*01:34, 01:146:01  \*01:145N  \*01:36, 01:49:01, 01:55 |  |
| **19** | 100 bp  265 bp | \*01:27  \*01:30, 01:45 |  |
| **20** | 80 bp  110 bp  285 bp | \*01:84  \*01:28  \*01:56N | \*03:213  \*03:59, 03:123, 06:157, 12:248, 15:167, **B\*15:513** |
| **21** | 125 bp  160 bp  245 bp | \*01:33  \*01:80  \*01:29, 01:69N |  |
| **22** | 110 bp  250 bp  335 bp  355 bp | \*01:40  \*01:32:01-01:32:02  \*01:50, 01:131  \*01:05, 01:36, 01:55, 01:79:01-01:79:02, 01:120 | \*06:110, **B\*08:230** |
| **23** | 90 bp  120 bp  235 bp | \*01:04, 01:54, 01:103, 01:152  \*01:44, 01:141, 01:176  \*01:31, 01:35, 01:107 | \*06:23, 12:178, 14:45, 16:18  \*03:302 |
| **24** | 90 bp  165 bp  260 bp | \*01:86N, 01:103  \*01:66  \*01:143N |  |
| **25** | 85 bp  240 bp  270 bp | \*01:99  \*01:16  \*01:70 | **A\*24:112, A\*24:414, B\*13:102, B\*44:322, B\*51:129** |
| **26** | 155 bp  230 bp | \*01:117N  \*01:74, 01:98N |  |
| **27** | 350 bp  545 bp | \*01:14, 01:59, 01:118  \*01:85 | \*04:37, 05:85, 05:107, 06:23, 06:179, 06:204, 15:37, 15:102  \*02:178, 03:357, 03:376, 03:452, 04:277, 05:212, 06:266, 08:22:01:01-08:22:01:02, 08:56, 08:102, 08:154, 08:178, 12:290, 15:29, 15:87, 16:133 |
| **28** | 155 bp  295 bp  325 bp  360 bp |  |  |
| **29** | 135 bp  295 bp  350 bp | \*01:109N  \*01:89N  \*01:14, 01:59, 01:118 | \*04:37, 05:85, 05:107, 06:23, 06:179, 06:204, 15:37, 15:102 |
| **30** | 125 bp  235 bp | \*01:93  \*01:121Q |  |
| **31** | 155 bp  265 bp | \*01:117N  \*01:14, 01:154 | \*05:200, 15:104 |

**4**The HLA-C\*01 primer set cannot separate the C\*01:21 allele from the C\*12:215 allele. These alleles can be distinguished by the HLA-C low resolution kit and/or by the HLA-C\*12 high resolution kit.

The HLA-C\*01 primer set cannot separate the C\*01:123 and the C\*01:125 alleles from the C\*03:86, 03:94 and 03:99:01-01:99:02 alleles. These alleles can be distinguished by the HLA-C low resolution kit and/or by the HLA-C\*03 high resolution kit.

The HLA-C\*01 primer set cannot separate the C\*01:21 allele from the C\*12:215 allele. These alleles can be distinguished by the HLA-C low resolution kit and/or by the HLA-C\*12 high resolution kit.

The HLA-C\*01 primer set cannot separate the C\*01:49:02, C\*01:158, C\*03:416 and B\*54:18 alleles. These alleles can be distinguished by the HLA-C low resolution kit and/or by the HLA-C\*12 high resolution kit.

5The HLA-C\*01 primer set cannot separate the C\*01:50 allele and the 01:120 allele.

The HLA-C\*01 primer set cannot separate the C\*01:81 allele and the 01:02:01:01-01:02:63 alleles.

6The following HLA-C\*01 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |  |  |
| --- | --- | --- | --- |
| Alleles | Primer mix | Alleles | Primer mix |
| C\*01:06, 01:38 | 5 | C\*01:29, 01:33 | 21 |
| C\*01:10, 01:52 | 9 | C\*01:31, 01:44, 01:107, 01:141 | 23 |
| C\*01:17, 01:41, 01:128, 01:157 | 14 | C\*01:32:01-01:32:02, 01:40 | 22 |
| C\*01:18, 01:42 | 15 | C\*01:39, 01:137N | 11 |
| C\*01:19, 01:43, 01:58 | 16 | C\*01:70, 01:99 | 25 |
| C\*01:26, 01:145N | 18 | C\*01:89N, 01:109N | 29 |
| C\*01:27, 01:45 | 19 | C\*01:93, 01:121Q | 30 |
| C\*01:28, 01:56N | 20 |