Gel Documentation Form and Worksheet

HLA-C\*01 (101.621-12/12u) Lot No: 2E2 Expiry Date: 2019-05-01

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 6, 7, 14 and 18 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 mix 25 has a tendency to giving rise to primer oligomer formation.

Primer mix 32 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-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**Primer mix 2: Specific PCR product of 90 bp in the C\*01:03, 01:24 and 01:78 and the C\*03:58, 04:37, 05:85 and 07:364 alleles. Specific PCR product of 270 bp in the C\*01:15 allele.

Primer mix 5: Specific PCR product of 105 bp in the C\*01:38 allele. Specific PCR product of 150 bp in the C\*01:20 allele. Specific PCR product of 200 bp in the C\*01:06 allele.

Primer mix 6: Specific PCR product of 195 bp in the C\*01:07:01-01:07:02 and the C\*06:43:01 and 14:24:02 alleles. Specific PCR product of 230 bp in the C\*01:37N and 01:83 and the C\*14:35N alleles.

Primer mix 7: Specific PCR product of 70 bp in the C\*01:67 and the C\*03:03:10, 03:04:28, 04:01:11, 06:02:21, 07:02:36, 12:03:36 and 16:01:19 and in the 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\*15:01:39, B\*27:05:06, B\*35:08:07, B\*40:01:10, 40:02:11, B\*44:02:37, 44:03:08, B\*51:01:24, B\*73:01-73:02 and B\*82:02:02 alleles. Specific PCR product of 150 bp in the C\*01:20 allele. Specific PCR product of 195 bp in the C\*01:08 allele.

Primer mix 9: Specific PCR fragment of 160 bp in the C\*01:52 allele. Specific PCR fragments of 225 bp in the C\*01:10 and 01:83 and in the B\*40:243 allele.

Primer mix 10: Specific PCR fragment of 210 bp in the C\*01:22 and 01:35 and the C\*03:302, 07:177, 15:37 and in the B\*40:243 alleles. Specific PCR fragment of 255 bp in the C\*01:30 allele. Specific PCR fragments of 290 bp in the C\*01:11 allele.

Primer mix 11: Specific PCR product of 140 bp in the C\*01:39 allele. Specific PCR product of 345 bp in the C\*01:12:01-01:12:02, 01:34, 01:79:01-01:79:02, 01:97, 01:101-01:102 and 01:114 alleles.

Primer mix 12: Specific PCR product of 80 bp in the C\*01:84 and the C\*03:213 alleles. Specific PCR product of 155 bp in the C\*01:13 and the C\*02:51, 03:87:01-03:87:02, 04:223, 05:09:01-05:09:03, 05:17, 05:52, 07:130, 08:15:01-08:15:02, 08:51, 12:144, 12:185 and 16:27 and in the B\*15:33 and 15:248 alleles. Specific PCR product of 255 bp in the C\*01:82 allele.

Primer mix 14: Specific PCR product of 120 bp in the C\*01:41 allele. Specific PCR product of 240 bp in the C\*01:17, 01:21, 01:23 and 01:69N and the C\*07:316 and 07:338 alleles.

Primer mix 15: Specific PCR product of 115 bp in the C\*01:42 and 01:73 and in the B\*15:393, B\*46:60 and B\*51:129 alleles. Specific PCR product of 230 bp in the C\*01:16, 01:18 and 01:74 alleles.

Primer mix 16: Specific PCR product of 130 bp in the C\*01:43 allele. Specific PCR product of 255 bp in the C\*01:19 allele. Specific PCR product of 295 bp in the C\*01:23, 01:58 and the C\*07:316 and 07:338 and in the A\*01:24 alleles.

Primer mix 17: Specific PCR fragment of 75 bp in the C\*01:24 and 01:25 alleles. Specific PCR fragments of 255 bp in the 01:82 allele.

Primer mix 18: Specific PCR product of 195 bp in the C\*01:26 allele. Specific PCR product of 260 bp in the C\*01:34 allele. Specific PCR product of 345 bp in the C\*01:36, 01:49:01 and 01:55 alleles.

Primer mix 19: Specific PCR fragment of 100 bp in the C\*01:27 allele. Specific PCR fragments of 265 bp in the C\*01:30 and 01:45 alleles.

Primer mix 20: Specific PCR fragment of 80 bp in the C\*01:84 and C\*03:213 alleles. Specific PCR fragment of 110 bp in the C\*01:28 and the C\*03:59, 03:123 and 06:157 alleles. Specific PCR fragments of 285 bp in the C\*01:56N allele.

Primer mix 21: Specific PCR fragment of 125 bp in the C\*01:33 allele. Specific PCR fragments of 160 bp in the C\*01:80 allele. Specific PCR fragments of 245 bp in the C\*01:29 and 01:69N alleles.

Primer mix 22: Specific PCR fragment of 110 bp in the C\*01:40 and 06:110 alleles. Specific PCR fragments of 250 bp in the C\*01:32:01-01:32:02 alleles. Specific PCR fragment of 335 bp in the C\*01:50 alleles.

Primer mix 23: Specific PCR fragment of 90 bp in the C\*01:04, 01:54 and 01:103 and the C\*06:23, 12:178, 14:45 and 16:18 alleles. Specific PCR fragment of 120 bp in the C\*01:44 allele. Specific PCR fragments of 235 bp in the C\*01:31, 01:35 and 01:107 and the C\*03:302 alleles.

Primer mix 24: Specific PCR fragment of 90 bp in the C\*01:86N and 01:103 alleles. Specific PCR fragment of 165 bp in the C\*01:66 allele.

Primer mix 25: Specific PCR fragment of 85 bp in the C\*01:99 allele. Specific PCR fragment of 240 bp in the C\*01:16 allele. Specific PCR fragment of 270 bp in the C\*01:70 and in the A\*24:112 and B\*51:129 alleles.

Primer mix 26: Specific PCR fragment of 155 bp in the C\*01:117N allele. Specific PCR fragment of 230 bp in the C\*01:74 and 01:98N alleles.

Primer mix 27: Specific PCR fragment of 350 bp in the C\*01:14, 01:59 and 01:118 and the C\*04:37, 05:85, 05:107, 06:23, 06:179, 15:37 and 15:102 alleles. Specific PCR fragment of 545 bp in the C\*01:85 and the C\*08:22, 08:56, 08:102, 15:29 and 15:87 alleles.

Primer mix 28: Specific PCR fragment of 155 bp in the C\*01:35 and 01:107 alleles. Specific PCR fragment of 325 bp in the C\*01:81 alleles. Specific PCR fragment of 360 bp in the C\*01:49:01-01:50 alleles.

Primer mix 29: Specific PCR fragment of 135 bp in the C\*01:109N allele. Specific PCR fragment of 295 bp in the C\*01:89N allele. Specific PCR fragment of 350 bp in the C\*01:14, 01:59 and 01:118 and the C\*04:37, 05:85, 05:107, 06:23, 06:179, 15:37 and 15:102 alleles.

Primer mix 30: Specific PCR fragment of 125 bp in the C\*01:93 allele. Specific PCR fragment of 235 bp in the C\*01:121Q allele.

Primer mix 31: Specific PCR fragment of 155 bp in the C\*01:117N allele. Specific PCR fragment of 265 bp in the C\*01:14 and the C\*15:104 allele.

**4**The HLA-C\*01 primer set cannot separate the C\*01:120 from the B\*54:18 allele. These alleles can be distinguished by the HLA-C low resolution kit.

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

**5**The 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 | 23 |
| C\*01:17, 01:41 | 14 | C\*01:32:01-01:32:02, 01:40 | 22 |
| C\*01:18, 01:42 | 15 | C\*01:70, 01:99 | 25 |
| C\*01:19, 01:43, 01:58 | 16 | C\*01:89, 01:109N | 29 |
| C\*01:27, 01:45 | 19 | C\*01:93, 01:121Q | 30 |
| C\*01:28, 01:56N | 20 |

The HLA-C\*01 primer set cannot distinguish the following silent mutations: the C\*01:02:01-01:02:40 alleles, the C\*01:07:01-01:07:02 alleles, the C\*01:12:01-01:12:02 and C\*01:79:01-01:79:02 alleles or the C\*01:32:01-01:32:02 alleles.