Gel Documentation Form and Worksheet

HLA-C\*02 (101.622-12/12u) Lot No: 2E7 Expiry Date: 2019-03-01

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 13 and 16 may give a lower yield of HLA-specific PCR product than the other C\*02 primer mixes.

Primer mixes 10, 16 and 30 may have tendencies of unspecific amplifications.

Primer mix 42 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\*02 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 3.24.0, April 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 3: Specific PCR fragment of 100 bp in the C\*02:03, 02:16:02, 02:18 and 02:31 and the C\*03:03:22 and 03:04:34 and in the B\*27:34, B\*35:01:30w, B\*40:02:07, 40:06:02, B\*51:01:52w, B\*57:01:16w and 57:03:02w alleles. Specific PCR fragment of 135 bp in the C\*02:20 allele.

##### Primer mix 4: Specific PCR fragment of 65 bp in the C\*02:56 and in the B\*35:01:30, B\*51:01:52, B\*57:01:16 and 57:03:02 alleles. Specific PCR fragment of 150 bp in the C\*02:04 and the C\*04:198, 08:119, 12:115 and 14:41 alleles.

##### Primer mix 5: Specific PCR fragment of 145 bp in the C\*02:22 and the C\*05:105, 08:31 and in the B\*07:02:07, B\*27:05:15 and B\*48:04:02 alleles. Specific PCR fragment of 240 bp in the C\*02:05:01-02:05:03, 02:17 and 02:81 and the C\*01:10, 06:08, 12:119, 14:25, 16:29, 16:50 and 17:21 and in the B\*07:239, B\*14:46 and B\*40:243 alleles.

##### Primer mix 6: Specific PCR fragment of 160 bp in the C\*02:06:01-02:06:02 and C\*02:47 and the C\*06:168, 12:15 and 15:74 alleles. Specific PCR fragment of 210 bp in the C\*02:46 and 02:64 and the C\*12:162 alleles.

Primer mix 8: Specific PCR fragment of 70 bp in the C\*02:08 and the C\*03:18:02, 03:64:01, 03:301, 12:03:23 and 15:10:02-15:10:03 and in the B\*58:74 alleles. Specific PCR fragment of 280 bp in the C\*02:33 allele.

Primer mix 11: Specific PCR fragment of 85 bp in the C\*02:18 and 02:32 alleles. Specific PCR fragment of 170 bp in the C\*02:09 allele.

Primer mix 12: Specific PCR fragment of 150 bp in the C\*02:11, 02:14:01-02:14:02 and 02:107 and the C\*04:42:01-04:42:02, 04:220, 05:43, 06:05w, 07:02:09, 08:37, 12:16, 12:147, 15:23, 15:63, 16:21 and 16:80 and in the B\*27:84 alleles. Specific PCR fragment of 230 bp in the C\*02:17 and the C\*14:25 alleles.

Primer mix 13: Specific PCR fragment of 225 bp in the C\*02:12 and 02:27:01-02:27:02 and the C\*03:308 and 16:34 alleles. Specific PCR fragment of 265 bp in the C\*02:49 and 02:75 and the C\*04:03:01-04:03:02, 04:06, 04:80, 04:147, 04:160, 04:171 and 04:190 alleles.

Primer mix 14: Specific PCR fragment of 80 bp in the C\*02:13 allele. Specific PCR fragment of 115 bp in the C\*02:43 and the C\*05:106 and 12:03:17 alleles.

Primer mix 15: Specific PCR fragment of 130 bp in the C\*02:21 allele. Specific PCR fragment of 190 bp in the C\*02:15 and 02:71 and in the B\*07:221 alleles.

Primer mix 17: Specific PCR fragment of 110 bp in the C\*02:31 and 02:43 and the C\*05:106 and 12:03:17 alleles. Specific PCR fragment of 160 bp in the C\*02:23 allele.

Primer mix 20: Specific PCR fragment of 180 bp in the C\*02:24 and 02:71 and in the B\*07:113, B\*08:64 and B\*40:192 alleles. Specific PCR fragment of 215 bp in the C\*02:72 and in the B\*07:52 alleles.

Primer mix 21: Specific PCR fragment of 115 bp in the C\*02:30 and the C\*15:19 alleles. Specific PCR fragment of 210 bp in the C\*02:25Q, 02:64 and 02:67Q and the C\*12:162 alleles.

Primer mix 22: Specific PCR fragment of 65 bp in the C\*02:56 and in the B\*35:01:30, B\*51:01:52, B\*57:01:16 and B\*57:03:02 alleles. Specific PCR fragment of 110 bp in the C\*02:34 and the C\*16:09 alleles.

Primer mix 23: Specific PCR fragment of 85 bp in the C\*02:70 alleles. Specific PCR fragment of 210 bp in the C\*02:29 and 02:69 alleles. Specific PCR fragment of 390 bp in the C\*02:35 allele.

Primer mix 25: Specific PCR fragment of 160 bp in the C\*02:19 and 02:23 and the C\*01:09, 03:21, 03:80, 03:142, 03:287 and 06:107 and in the B\*15:63, 15:248 and 15:287 alleles. Specific PCR fragment of 215 bp in the C\*02:60 and in the B\*08:70, B\*15:07:01-15:07:03, 15:68, 15:126, 15:207, 15:324, 15:331, B\*46:12 and B\*48:19 alleles. Specific PCR fragment of 160 bp and 215 bp in the B\*07:55, 07:100 and 15:45 alleles.

Primer mix 26: Specific PCR fragment of 140 bp in the C\*02:39 allele. Specific PCR fragment of 255 bp in the C\*02:40:01-02:40:02 and 02:53:01-02:53:02 and the C\*12:124 and in the B\*15:363 and B\*18:91 alleles.

Primer mix 28: Specific PCR fragment of 90 bp in the C\*02:52N allele. Specific PCR fragment of 165 bp in the C\*02:37, 02:46, 02:60 and 02:67Q and in the B\*27:34 and B\*40:02:07 alleles.

Primer mix 29: Specific PCR fragment of 165 bp in the C\*02:83 and the C\*08:24 and 16:90 alleles. Specific PCR fragment of 210 bp in the C\*02:12, 02:49 and 02:55:01-02:55:02 and the C\*04:03:01, 04:06, 04:80, 04:107, 04:147, 04:160, 04:171 and 04:190 alleles.

Primer mix 30: Specific PCR fragment of 80 bp in the C\*02:38N allele. Specific PCR fragment of 270 bp in the C\*02:58 and the C\*01:35, 01:107, 04:08, 04:34, 04:147, 04:212, 05:27, 05:39, 06:96, 08:41, 08:115, 12:83, 12:106, 12:122, 14:20, 15:15, 15:77, 17:07 and 18:08 alleles.

Primer mix 31: Specific PCR fragment of 100 bp in the C\*02:42 and 02:107 and the C\*01:02:34, 01:21, 04:140, 04:166, 04:220, 05:98, 06:05, 07:02:09, 08:14, 08:80, 08:103, 12:16, 12:147, 15:63, 15:113 and 16:80 and in the B\*67:02 alleles. Specific PCR fragment of 165 bp in the C\*02:83 and the C\*08:24 and 16:90 alleles.

Primer mix 32: Specific PCR fragment of 215 bp in the C\*02:92N allele. Specific PCR fragment of 245 bp in the C\*02:81 allele.

**4**The HLA-C\*02 primer set cannot separate the C\*02:10:01:01-02:10:01:03 and 02:89 alleles from the C\*06:18 allele. These alleles can be distinguished by the HLA-C low resolution kit and/or the HLA-C\*06 high resolution kit.

**5**The following HLA-C\*02 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |  |  |
| --- | --- | --- | --- |
| **Alleles** | **Primer mix** | **Alleles** | **Primer mix** |
| C\*02:05:02-02:05:03, 02:22 | 5 | C\*02:35, 02:69, 02:70 | 23 |
| C\*02:15, 02:21 | 15 | C\*02:37, 02:52N | 28 |
| C\*02:25Q, 02:30 | 21 |

The HLA-C\*02 primer set cannot distinguish the following silent mutations: the C\*02:02:01-02:02:03, 02:02:06-02:02:12, 02:02:15-02:02:25 and 02:02:27-02:02:30 alleles, the C\*02:02:05 and 02:02:13-02:02:14 alleles, the C\*02:05:02-02:05:03 alleles, the C\*02:10:01:01-02:10:01:03 alleles, the C\*02:14:01-02:14:02 alleles, the C\*02:26:01-02:26:03 or the C\*02:53:01-02:53:02 alleles.

 ‘w’, might be weakly amplified.