Gel Documentation Form and Worksheet

HLA-C\*06 (101.614-12/12u) Lot No: 6H9 Expiry Date: 2021-12-01

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

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

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

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

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

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

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

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

**Gel Picture**

|  |
| --- |
| PHOTO DOCUMENT |







‘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 mix 17 has a tendency to giving rise to primer oligomer formation.

Primer mixes 19, 20, 21, 22, 39, 42, 47 and 48 may have tendencies of unspecific amplification.

Primer mix 14 may give rise to a lower yield of HLA-specific PCR product than the other HLA-C\*06 resolution primer mixes in the C\*03 alleles.

Primer mix 61 contains a negative control, which will amplify 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 products generated by the HGH positive control primer pair are 200 and 430 base pairs





 













**1**HLA-C\*06 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**The following HLA-C\*06 primer mixes have two or more product sizes:

|  |  |  |  |
| --- | --- | --- | --- |
| Primer Mix | Size of spec. PCR product | Amplified HLA-C\*06 alleles | Other amplified HLA Class I alleles |
| **5** | 160 bp  220 bp | \*06:05, 06:67, 06:103  \*06:18, 06:23, 06:179 | \*02:94, 04:129, 05:01:01:01-05:01:27, 05:01:28w, 05:01:29-05:01:43, 05:03-05:28, 05:30-05:47, 05:49-05:91N, 05:93-05:128N, 05:130-05:154N, 05:156-05:189, 08:10, 12:21, 12:33, 15:107, 17:05  \*01:04, 01:09, 02:21, 12:178 |
| **6** | 250 bp  290 bp | \*06:05-06:06, 06:204  \*06:50 | \*01:02:01:01-01:03, 01:05-01:07:01, 01:08, 01:10-01:20, 01:23-01:34, 01:36-01:130, 01:132-01:159, 01:161-01:166, 03:99:02, 04:110?, 05:01:01:01-05:01:43, 05:03-05:07N, 05:09:01-05:10, 05:12-05:16, 05:18:01-05:26, 05:28-05:50, 05:53-05:61, 05:63-05:67, 05:69, 05:71-05:78:02, 05:80-05:88, 05:90-05:105, 05:107-05:111, 05:113N-05:114, 05:116-05:133, 05:135-05:145, 05:147-05:150, 05:152-05:162, 05:164-05:183, 05:185-05:190, 08:02:01:01-08:02:22, 08:05, 08:07, 08:12, 08:15:01-08:15:02, 08:17-08:19:02, 08:23, 08:25, 08:28, 08:30, 08:32-08:35, 08:37, 08:43, 08:45, 08:47-08:49, 08:51-08:53, 08:55N, 08:62:01-08:63, 08:67-08:71, 08:73-08:77, 08:90, 08:92, 08:94, 08:100, 08:103, 08:107-08:108, 08:110-08:112, 08:114-08:116, 08:118, 08:120, 08:123, 08:125-08:126, 08:132, 08:134, 08:140, 08:146, 08:149-08:152, 08:156, 08:158-08:159, 08:161N, 08:166-08:167, 08:169-08:172, 12:09, 12:24, 12:85, 12:233, 14:02:01:01-14:05, 14:07N-14:14, 14:17-14:52, 14:54-14:62, 14:64-14:76, 14:78-14:86, 14:88-14:89, 14:91-14:100, 15:08, 15:102, 15:143, 15:148, 16:53, 16:68, 16:88, 17:17, 18:01-18:02:02, 18:04-18:11  \*12:53 |
| **7** | 110 bp  185 bp  235 bp | \*06:07  \*06:19  \*06:33, 06:104 |  |
| **9** | 165 bp  210 bp  435 bp | \*06:09:01-06:09:02, 06:144  \*06:23, 06:179  \*06:17 | \*02:22, 02:118, 04:94:01-04:94:02, 05:08, 05:52, 05:89, 05:106:01-05:106:02, 08:27, 08:29, 08:31, 08:160, 12:31, 12:144, 18:03, **B\*15:137, B\*37:66, B\*50:47**  \*01:04, 01:09, 12:178  \*07:07, 07:09, 07:76:01-07:76:02, 07:315, 07:328, 07:406, 07:559, 07:598, 07:656, 18:01-18:11 |
| **11** | 130 bp  185 bp | \*06:11, 06:122w, 06:124w, 06:147, 06:217  \*06:22 | \*07:01:13, 07:04:01:01-07:04:11, 07:04:13-07:04:16, 07:11-07:12, 07:45, 07:63, 07:68, 07:101, 07:139, 07:142, 07:181, 07:199:01-07:199:02, 07:272, 07:302, 07:323-07:324, 07:329N, 07:338, 07:354-07:355, 07:358, 07:364-07:365, 07:378, 07:394-07:395, 07:420, 07:426, 07:428, 07:447, 07:459, 07:466-07:467, 07:480, 07:487, 07:501, 07:523, 07:534-07:535, 07:552, 07:562-07:563, 07:569, 07:585-07:586, 07:600:01N-07:600:02N, 07:622, 07:626, 07:651, 07:655, 07:656w, 07:664, 07:672N, 07:674, 07:693, 12:02:11, 12:03:09, 16:01:16, **B\*15:434**  \*07:107, 07:224, 16:31, **B\*15:193, B\*35:283** |
| **13** | 155 bp  210 bp | \*06:13  \*06:59 |  |
| **14** | 225 bp  305 bp | \*06:55  \*06:14, 06:143 | \*03:32, 03:45, 03:136, 03:297, 04:80, 04:100, 04:110w, 04:178, 07:10w, 07:43:01, 07:196, 07:568, 15:25, 15:62, **B\*15:357, B\*35:178, B\*35:282, B\*35:316** |
| **15** | 135 bp  360 bp | \*06:116N  \*06:15 |  |
| **16** | 235 bp  340 bp | \*06:16N  \*06:21 | \*02:125, 15:91 |
| **19** | 85 bp  160 bp  245 bp | \*06:28  \*06:32  \*06:122, 06:124 | \*02:14:01-02:14:02, 03:67, 04:42:01-04:42:02, 05:43, 07:20, 07:73:01-07:73:02, 07:172:01-07:172:02, 07:390, 08:37, 12:195:01-12:195:03, 12:217, 15:23:01-15:23:02, 15:138, 15:158, 16:21, 17:20, 18:04, **B\*08:56:01-08:56:02, B\*08:180,** **B\*15:142, B\*35:218, B\*35:256, B\*51:68, B\*57:49**  \*07:559, 07:656 |
| **20** | 115 bp  235 bp  275 bp | \*06:29  06:05w, 06:44w, 06:124, 06:138w, 06:198w, 06:217  \*06:27 | \*07:134  \*02:14:01w-02:14:02w, 02:107w, 03:39, 03:67, 03:344:01:01-03:344:01:02, 05:43w, 07:39-07:40, 07:177, 07:210w, 07:238w, 07:328w, 07:335, 07:563, 08:37, 15:23:01w-15:23:02w, 15:63w, 15:138w, 15:158w, 16:21, 16:80, **B\*08:15**  \*16:47, 16:128 |
| **21** | 190 bp  215 bp  380 bp | \*06:36, 06:87  \*06:72  \*06:25 | \*02:113, 12:45, 12:56 12:166, 16:61, **A\*68:76:01-68:76:02**  **\***04:81 |
| **24** | 160 bp  210 bp | \*06:09:01-06:09:02, 06:34:01-06:34:02  06:103, 06:107, 06:144, 06:168, 06:179  \*06:35 | \*01:09, 02:19, 02:22, 02:47, 02:111, 03:21, 03:80:01-03:80:02, 03:142, 03:287:01-03:287:02, 03:413, 04:94:01-04:94:02, 05:08, 05:52, 05:89, 05:106:01-05:106:02, 07:447, 08:27, 08:29, 08:31, 08:160, 12:31, 12:144, 12:222, 12:235, 18:03, **B\*13:31, B\*13:41, B\*15:58, B\*15:73, B\*15:137, B\*15:303, B\*39:36, B\*46:61, B\*50:47, B\*54:33, B\*55:21, B\*56:43**  **B\*37:66** |
| **25** | 85 bp  190 bp | \*06:38  \*06:118 | \*01:60, 07:31:01-07:31:02, 07:177, 07:364, 07:514, 12:176, 14:17, 17:21 |
| **26** | 120 bp  225 bp | \*06:39, 06:128N \*06:146 | \*02:100, 04:205N, 04:288, 15:115N, 15:150 |
| **27** | 190 bp  225 bp | \*06:42:01-06:42:02  \*06:40 | **\***14:29  **\***14:63, **B\*39:79** |
| **28** | 90 bp  215 bp | \*06:41  \*06:47, 06:123 | \*12:32  \*02:57, 07:447, 12:11 |
| **29** | 125 bp  170 bp  210 bp | \*06:152N  \*06:43:01-06:43:02, 06:107, 06:179  \*06:47 | \*01:09, 02:19, 02:119, 03:21, 03:80:01-03:80:02, 03:142, 03:287:01-03:287:02, 03:413, 12:222, 12:235, **A\*26:79, A\*68:114, B\*15:207, B\*15:349:01-15:349:02**  \*12:11 |
| **30** | 100 bp  160 bp | \*06:44  \*06:126, 06:171N | \*07:01:13 |
| **31** | 110 bp  155 bp  225 bp  260 bp | \*06:128N  \*06:45  \*06:211N  \*06:111 | \*04:205N, 15:115N  \*02:85  \*03:354, 05:108 |
| **32** | 85 bp  195 bp | \*06:71  \*06:19, 06:66 | \*02:144 |
| **33** | 105 bp  240 bp | \*06:60  \*06:69, 06:93, 06:122, 06:124 | \*07:427, **B\*08:138**  **\***07:559, 07:571, 07:656 |
| **34** | 175 bp  275 bp | \*06:74Q  \*06:20 | \*15:32Q  \*01:32:01-01:32:02, 02:56, 03:102, 03:263:01-03:263:02, 04:180:01, 07:81, 07:168, 07:450, 08:123, 08:139, 12:50, 14:82, 14:92, 15:126, 16:98, 16:102, 16:110 |
| **35** | 210 bp  235 bp  380 bp | \*06:134N  \*06:65, 06:93  \*06:46N | \*07:571  \*02:150N |
| **36** | 120 bp  195 bp  220 bp | \*06:57  \*06:87  \*06:58, 06:81 | \*12:45, 12:166, 16:61, **A\*68:76:01-68:76:02**  **\***02:37, 12:251, **B\*15:417** |
| **37** | 115 bp  210 bp | \*06:148, 06:151  \*06:49N, 06:101 | **B\*15:432**  \*04:94:01-04:94:02, 12:10:01-12:10:02, 18:03, **B\*15:27:01-15:27:03, B\*15:109, B\*15:327, B\*15:344, B\*15:398** |
| **38** | 130 bp  225 bp  470 bp | \*06:70:01-06:70:02, 06:120, 06:132:01  \*06:211N  \*06:73 | \*02:02:13, 02:02:29, 07:562  \*03:171, 03:211:01, 04:144, 05:93, 08:20, 08:40, 12:109 |
| **40** | 140 bp  260 bp | \*06:133  \*06:54, 06:220N | \*16:52 |
| **44** | 120 bp  215 bp | \*06:77  \*06:100 | \*03:278, 16:86, **A\*11:47, A\*11:221**, **A\*26:89, B\*18:01:20, B\*18:72:02, B\*37:01:04, B\*40:94, B\*54:02** |
| **49** | 195 bp  250 bp  280 bp | \*06:175N  \*06:220N  \*06:129 | \*05:16, 05:85, 05:107, 07:364, 08:12, **B\*14:32** |
| **50** | 160 bp  195 bp | \*06:158  \*06:175N |  |
| **52** | 115 bp  210 bp | \*06:151  \*06:47, 06:136, 06:142 | **B\*15:432**  \*02:17, 02:77, 07:138, 12:11, 12:118, 12:156, 14:16, **B\*15:32:01-15:32:02, B\*15:299** |
| **57** | 110 bp  265 bp | \*06:90  \*06:208N | \*01:108, 16:28 |

**4**The HLA-C\*06 primer set cannot separate the C\*06:127:01-06:127:02 and C\*04:220 alleles. These alleles can be distinguished by the HLA-C low resolution kit and/or HLA-C\*04 high resolution kit.

**5**The following HLA-C\*06 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |  |  |
| --- | --- | --- | --- |
| **Alleles** | **Primer mix** | **Alleles** | **Primer mix** |
| C\*06:07, 06:33 | 7 | C\*06:45, 06:111 | 31 |
| C\*06:15, 06:116N | 15 | C\*06:49N, 06:148 | 37 |
| C\*06:16N, 06:21 | 16 | C\*06:54, 06:133 | 40 |
| C\*06:20, 06:74Q | 34 | C\*06:57, 06:58 | 36 |
| C\*06:25, 06:36 | 21 | C\*06:66, 06:71 | 32 |
| C\*06:27, 06:29 | 20 | C\*06:70:01-06:70:02, 06:73 | 38 |

Abbreviations

‘w’, may be weakly amplified.

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

Changes in revision R01 compared to R00:

1. Primer mix 56 does not amplify the C\*06:37 allele. The correction has been implemented in the Specificity and Interpretation tables.