HLA-C\*06 (101.614-12/12u) Lot No: 5L6 Expiry Date: 2024-09-01

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 17 and 31 have tendencies to give 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 63 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\*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, 05:01:29-05:01:51, 05:03-05:28, 05:30-05:47, 05:49-05:91N, 05:93-05:128N, 05:130-05:154N, 05:156-05:189, 05:191-05:194, 05:196, 05:198-05:232, 08:10, 12:21, 12:33, 15:107, 15:178, 17:05\*01:04, 01:09:01-01:09:02, 02:21, 12:178 |
|  **6** | 250 bp290 bp | \*06:05-06:06, 06:204, 06:271\*06:50  | \*01:02:01:01-01:03, 01:05-01:07:01, 01:08, 01:10-01:20, 01:23-01:34, 01:36:01-01:130, 01:132-01:159, 01:161-01:168, 01:169:02-01:191, 04:110?, 05:01:01:01-05:01:51, 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, 05:185-05:232, 08:02:01:01-08:02:29, 08:05, 08:07, 08:12:01:01-08:12:01:02, 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, 08:179-08:181N, 08:183-08:185, 08:191, 08:195, 08:198, 08:200-08:202, 08:206-08:207, 12:09, 12:24, 12:85, 12:233, 14:02:01:01-14:02:31, 14:02:33-14:05, 14:07N-14:14, 14:17-14:52, 14:54-14:62, 14:64-14:76, 14:78-14:86, 14:88-14:89, 14:91-14:104, 14:106-14:117N, 15:08:01-15:08:02, 15:102, 15:143, 15:148, 16:53, 16:68, 16:88, 17:17, 18:01:01:01-18:02:05, 18:04-18:14\*12:53 |
|  **7** | 110 bp 185 bp 235 bp | \*06:07\*06:19\*06:33, 06:104 | \*04:353 |
|  **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, 12:31:01-12:31:02, 12:144, 18:03, **B\*15:137, B\*15:488, B\*37:66, B\*50:47**\*01:04, 01:09:01-01:09:02, 12:178\*04:397, 07:07, 07:09, 07:76:01-07:76:02, 07:315, 07:328, 07:406, 07:559, 07:598, 07:656, 18:01:01:01-18:14 |
| **11** | 130 bp 185 bp | \*06:11, 06:122w, 06:124w, 06:147, 06:217, 06:248, 06:252\*06:22 | \*07:01:13, 07:04:01:01-07:04:11, 07:04:13-07:04:20, 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, 07:742, 07:751N, 07:780, 07:797N, 07:831, 07:838-07:839N, 12:02:11, 12:03:09, 16:01:16, **B\*15:434**\*07:107, 07:224, 12:293, 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, 04:370, 07:10w, 07:43:01, 07:196, 07:568, 15:25, 15:62, 15:169, **B\*15:357, B\*35:178, B\*35:282, B\*35:316** |
| **15** | 135 bp360 bp | \*06:116N\*06:15 | \*03:428, 07:709 |
| **19** | 85 bp 160 bp245 bp | \*06:28\*06:32\*06:122, 06:124 | \*02:14:01-02:14:02, 02:164, 03:67, 04:42:01-04:42:02, 05:43, 07:20:01-07:20:02, 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\*08:56:01-08:56:03, B\*08:180,** **B\*15:142, B\*35:218, B\*35:256, B\*51:68, B\*57:49**\*07:559, 07:656 |
| **20** | 115 bp235 bp 275 bp | \*06:29\*06:05w, 06:44w, 06:124, 06:138w, 06:198w, 06:217, 06:248\*06:27  | \*07:134\*02:14:01w-02:14:02w, 02:107w, 02:164w, 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 bp215 bp380 bp | \*06:36, 06:87\*06:72\*06:25  | \*02:113, 02:159, 02:161, 12:45, 12:56, 12:166, 16:61, **A\*02:817, A\*68:76:01-68:76:02****\***04:81 |
| **24** | 160 bp210 bp  | \*06:09:01-06:09:02, 06:34:01-06:34:02, 06:144, 06:168\*06:35 | \*02:22, 02:47, 02:111, 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, 12:31:01-12:31:02, 12:144, 12:298, 18:03, **B\*13:31, B\*13:41, B\*13:131, B\*15:58, B\*15:73:01:01-15:73:01:02, B\*15:137, B\*15:303, B\*15:486, B\*15:488**, **B\*35:413, B\*37:66, B\*39:36, B\*46:61, B\*50:47, B\*54:33, B\*54:40, B\*55:21, B\*56:43****B\*37:66** |
| **25** | 85 bp190 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 bp225 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 bp215 bp  | \*06:41\*06:47, 06:123 | \*12:32\*02:57, 07:447, 12:11, **B\*15:554** |
| **29** | 125 bp170 bp 210 bp | \*06:152N\*06:43:01-06:43:02, 06:107, 06:179\*06:47  | **A\*66:39N, B\*15:528N**\*01:09:01-01:09:02, 02:19, 02:119, 03:21, 03:80:01-03:80:02, 03:142, 03:287:01-03:287:02, 03:413, 03:512, 12:222, 12:235, **A\*26:79,** **A\*68:114, B\*15:207, B\*15:349:01-15:349:02**\*12:11 |
| **30** | 100 bp160 bp | \*06:44, 06:252 \*06:126, 06:171:01:01N-06:171:01:02N | \*07:01:13 |
| **31** | 110 bp155 bp | \*06:128N\*06:45 | \*04:205N, 15:115N\*02:85 |
| **32** | 85 bp195 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 bp275 bp | \*06:74Q\*06:20 | \*15:32Q\*01:32:01-01:32:02, 02:56, 03:102, 03:263:01-03:263:02, 03:514, 04:180:01, 05:217, 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 bp235 bp 380 bp | \*06:134N\*06:65, 06:93\*06:46N | \*07:571\*02:150N |
| **36** | 120 bp195 bp 220 bp | \*06:57\*06:87\*06:58, 06:81 | \*02:159, 02:161, 12:45, 12:166, 16:61, **A\*02:817, A\*68:76:01-68:76:02****\***02:37, 12:251, **B\*15:417** |
| **37** | 115 bp210 bp | \*06:148, 06:151\*06:49N, 06:101 | **B\*15:432**\*02:182, 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 bp225 bp 470 bp | \*06:70:01-06:70:02, 06:120, 06:132:01\*06:211:01:01N-06:211:01:02N\*06:73  | \*02:02:13, 02:02:29, 07:562, 18:12\*02:170, 03:171, 03:211:01, 04:144, 05:93, 08:20, 08:40, 12:109 |
| **40** | 140 bp260 bp | \*06:133\*06:54, 06:220N | \*16:52 |
| **44** | 120 bp215 bp | \*06:77\*06:100 | \*03:278, 03:504, 07:714, 07:724, 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 bp250 bp280 bp | \*06:175N\*06:220N\*06:129 | \*05:16, 05:85, 05:107, 07:364, 08:12:01:01-08:12:01:02, **B\*14:32** |
| **50** | 160 bp195 bp | \*06:158\*06:175N |  |
| **52** | 120 bp210 bp | \*06:91, 06:151\*06:47, 06:136, 06:142 | \*02:11**, 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 bp265 bp | \*06:90\*06:208N | \*01:108, 16:28, 16:156 |
| **62** | 225 bp260 bp | \*06:211:01:01N-06:211:01:02N\*06:111 | \*01:183, 03:354, 05:108 |

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

|  |
| --- |
| Alleles |
| C\*06:76:02, C\*04:360 |
| C\*06:127:01-06:127:02, 06:264, C\*04:220 |

**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\*06:49N, 06:148 | 37 |
| C\*06:15, 06:116N | 15 | 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.

Changes in revision R02 compared to R01:

1. Primer mix 16 does not amplify the C\*06:16N allele. The correction has been implemented in the Specificity and Interpretation tables.