Gel Documentation Form and Worksheet

HLA-C\*12 (101.624-12/12u) Lot No: 1H9 Expiry Date: 2021-08-01

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 1, 5, 12 and 26 may give rise to a lower yield of HLA-specific PCR product than the other C\*12 primer mixes, most pronounced for primer mixes 1 and 5.

Primer mixes 8, 24 and 28 have a tendency to giving rise to primer oligomer formation.

Primer mixes 30 and 40 may have tendencies of unspecific amplifications.

Primer mix 48 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.

 ‘w’, might be weakly amplified.



























**1**HLA-C\*12 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 3.27.0, January 2017.

**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\*12 primer mixes have two or more product sizes:

|  |  |  |  |
| --- | --- | --- | --- |
| Primer Mix | Size of spec. PCR product | Amplified HLA-C\*12 alleles | Other amplified HLA Class I alleles |
| **6** | 75 bp 150 bp 415 bp | \*12:48, 12:102\*12:06\*12:08, 12:81, 12:188  | \*01:118, 01:128, 03:08, 03:29, 03:31, 03:246, 04:112, 04:169, 05:36, 06:44, 14:73, 16:64, 16:70, 16:87 |
| **8** | 95 bp 155 bp 195 bp245 bp | \*12:15\*12:40\*12:80N\*12:07 | \*15:02:14\*16:14**B\*35:310** |
| **13** | 105 bp 150 bp | \*12:31 \*12:10:01-12:10:02, 12:155Q, 12:156  | \*04:01:05, 04:01:75, 05:106:02, 08:01:19, 08:160\*04:01:05, 04:01:75, 14:02:08, 14:02:21 |
| **14** | 100 bp 150 bp | \*12:16, 12:147, 12.227\*12:11, 12:60 12:118  | \*01:02:34, 01:21, 02:42, 02:107, 04:140, 04:166, 04:220, 05:98, 06:05w, 07:02:09, 08:14, 08:80, 08:103, 15:63, 15:113, 16:80, **B\*15:436, B\*67:02** |
| **16** | 185 bp 225 bp | \*12:13:01:01-12:13:01:02\*12:14:01-12:14:02, 12:176 | \*01:60, 04:58, 04:160, 05:23, 05:62, 05:134, 05:143, 05:151, 06:118, 08:07, 08:47, 08:104, 14:17, 15:65, 17:01:01:02-17:31, 17:33-17:34, 17:36-17:40 |
| **17** | 130 bp565 bp | \*12:99:02, 12:159\*12:03:04, 12:03:09, 12:195:01 | **B\*40:02:21w**\*01:02:18, 03:03:40, 06:02:38, 07:447, 14:02:08, **B\*27:05:27, B\*57:01:24** |
| **18** | 145 bp 175 bp 245 bp 270 bp | \*12:17, 12:27\*12:35, 12:201\*12:17, 12:27\*12:35  | \*04:12\*03:53**A\*68:166, B\*07:297, B\*38:60** |
| **20** | 105 bp 175 bp 230 bp | \*12:46N\*12:22, 12:58, 12:94 \*12:19, 12:139, 12:158 | \*01:129, 04:52, 04:55, 05:55, 14:10, 14:48, 15:12, 15:144\*01:31, 14:38 |
| **22** | 100 bp135 bp590 bp | \*12:15, 12:23\*12:99:01-12:99:02, 12:235\*12:21, 12:203  | \*15:02:14\*03:03:40, **B\*40:02:21w**\*05:106:02, 08:01:19 |
| **23** | 105 bp140 bp185 bp | \*12:205 \*12:26, 12:63\*12:172, 12:201 | \*06:56, 07:620, 15:147, **A\*02:362, A\*26:85, B\*13:80, B\*18:116, B\*35:326, B\*44:38****\***07:470, 16:36 |
| **24** | 135 bp185 bp 425 bp | \*12:99:01, 12:235\*12:43\*12:28, 12:135  | \*03:03:40\*04:01:05, 06:02:38, 06:76:02, 07:447 |
| **25** | 80 bp 155 bp430 bp | \*12:39N\*12:02:06, 12:02:08, 12:02:12, 12:21, 12:118, 12:149\*12:167 | \*04:01:05, 05:106:02, 07:413, 07:422, 08:01:19, 08:02:02, **B\*27:05:27, B\*40:02:21****\***02:12, 02:49w, 02:55:01w-02:55:02w, 02:115, 04:226w, 15:03w, 15:16w, 15:25 |
| **27** | 100 bp 150 bp 175 bp 215 bp295 bp | \*12:30\*12:03:19, 12:03:32, 12:155Q\*12:94\*12:36, 12:153\*12:101  | **\***07:214, 07:429\*01:04, 14:02:21, 16:02:13\*01:129, 14:48, **A\*02:605Q****\***16:103\*14:84, 16:81 |
| **28** | 165 bp275 bp 350 bp | \*12:232N\*12:50\*12:45, 12:166  | \*01:32:01-01:32:02, 02:56, 03:102, 03:263:01-03:263:02, 04:180:01, 06:20, 07:81, 07:168, 07:450, 08:123, 08:139, 14:82, 14:92, 15:126, 16:98, 16:102, 16:110\*05:81, 06:87, 07:24, 07:218, 14:65, 16:13, 16:61 |
| **29** | 125 bp 185 bp 210 bp | \*12:38, 12:104N, 12:219N\*12:42Q, 12:172\*12:29, 12:86 | \*14:93, **B\*15:181N,** **B\*57:50**\*07:513Q, **B\*46:51Q****\***16:119 |
| **30** | 90 bp200 bp230 bp  | \*12:32, 12:102, 12:144, 12:185 \*12:143, 12:162\*12:34 | \*02:51, 05:08, 05:52, 05:89, 06:41, 08:29, 08:31, **B\*15:33, B\*15:248****\***02:64 |
| **31** | 135 bp 180 bp 240 bp | \*12:47, 12:84N, 12:123 \*12:42Q, 12:80N\*12:164 | \*02:133**, A\*11:197, A\*26:67, A\*68:95**\*07:513Q, **B\*46:51Q**\*15:67 |
| **32** | 50 bp 115 bp180 bp | \*12:54, 12:188 \*12:37 \*12:62 | **\***01:59, 01:118, 02:65, 03:130, 03:140, 03:243, 04:114, 05:20, 06:82, 06:210, 07:49, 07:210, 07:238, 07:247, 07:403, 14:04, 14:64, 14:77, 15:85, 16:57, **A\*03:267, A\*68:46, B\*07:253**\*07:204:01, 07:482, **A\*02:211:01, A\*02:594, A\*24:261, A\*68:76:01-68:76:02****A\*02:335** |
| **33** | 135 bp210 bp | \*12:105N, 12:219N\*12:100 |  |
| **34** | 85 bp235 bp260 bp | \*12:171\*12:109\*12:125  | \*03:171, 03:211:01, 04:144, 05:93, 06:73, 08:20, 08:40 |
| **35** | 195 bp260 bp | \*12:110, 12:143\*12:125 | \*15:154 |
| **37** | 90 bp225 bp285 bp | \*12:163\*12:108\*12:73  | **B\*14:51, B\*53:34, B\*58:21** |
| **38** | 105 bp145 bp | \*12:15, 12:113\*12:156  | \*15:02:14, **B\*40:02:21, B\*57:01:24**\*04:01:05, 14:02:08 |
| **39** | 200 bp225 bp | \*12:136\*12:59, 12:82  | \*04:280w\*07:102, 07:351, **B\*07:13, B\*07:15, B\*07:160, B\*42:18, B\*67:02** |
| **41** | 215 bp240 bp | \*12:90, 12:148N \*12:164  | **B\*56:08**\*15:67 |
| **44** | 145 bp290 bp | \*12:16, 12:147, 12:195:02, 12:217\*12:160 | \*02:14:01-02:14:02, 02:107, 04:42:01-04:42:02, 04:220, 05:43, 06:05, 07:02:09, 08:37, 15:23:01-15:23:02, 15:63, 15:138, 16:21, 16:80 |
| **46** | 175 bp190 bp | \*12:165\*12:143 | \*15:154 |

**4**The HLA-C\*12 primer set cannot separate the C\*12:09, C\*05:16, C\*05:85, C\*05:107 and C\*16:88 alleles, the C\*12:33 and C\*16:91 or the C\*12:208, C\*12:222, C\*12:233, C\*08:05, C\*08:25 and C\*16:15:01 alleles. These alleles can be distinguished by the HLA-C low resolution kit and the HLA-C\*05, HLA-C\*16, or HLA-C\*08 kit, respectively.

**5**The following HLA-C\*12 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |  |  |
| --- | --- | --- | --- |
| Alleles | Primer mix | Alleles | Primer mix |
| C\*12:03:09, 12:159 | 17 | C\*12:32, 12:34 | 30 |
| C\*12:06, 12:48, 12:81 | 6 | C\*12:39N, 12:167  | 25 |
| C\*12:11, 12:227 | 14 | C\*12:45, 12:50, 12:232N  | 28 |
| C\*12:23, 12:203  | 22 | C\*12:46N, 12:139 | 20 |
| C\*12:29, 12:38 | 29 | C\*12:86, 12:104N | 29 |
| C\*12:30, 12:36 | 27 | C\*12:109, 12:171 | 34 |