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 bp  245 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 bp  565 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 bp  135 bp  590 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 bp  140 bp  185 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 bp  185 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 bp  430 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 bp  295 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 bp  275 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 bp  200 bp  230 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 bp  180 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 bp  210 bp | \*12:105N, 12:219N  \*12:100 |  |
| **34** | 85 bp  235 bp  260 bp | \*12:171  \*12:109  \*12:125 | \*03:171, 03:211:01, 04:144, 05:93, 06:73, 08:20, 08:40 |
| **35** | 195 bp  260 bp | \*12:110, 12:143  \*12:125 | \*15:154 |
| **37** | 90 bp  225 bp  285 bp | \*12:163  \*12:108  \*12:73 | **B\*14:51, B\*53:34, B\*58:21** |
| **38** | 105 bp  145 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 bp  225 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 bp  240 bp | \*12:90, 12:148N  \*12:164 | **B\*56:08**  \*15:67 |
| **44** | 145 bp  290 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 bp  190 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 |