Gel Documentation Form and Worksheet

HLA-A\*03 (101.413-24/04, -24u/04u) Lot No: 9G9 Expiry Date: 2021-05-01

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 2, 3, 17, 18, 47, 51, 55 and 58 may give rise to a lower yield of HLA-specific PCR product than the other A\*03 primer mixes.

Primer mixes 17, 19, 31, 50 and 51 may have tendencies of unspecific amplifications.

Primer mixes 23, 28, 42, 57 and 63 have a tendency to giving rise to primer oligomer formation, most pronounced in primer mix 23.

Primer mix 9 may give rise to a long unspecific amplification product of approximately 750 bp. This should be disregarded when interpreting the A\*03 typings.

Primer mix 64 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’, may be weakly amplified.

Change in revision R01 compared to R00:

1. Primer mix 29 amplifies the A\*03:29 and the A\*68:40 and 68:85 alleles. Thus, this lot of the A\*03 subtyping kit cannot distinguish the A\*03:29 and A\*03:67 alleles. This has been corrected in the Specificity and Interpretation Tables.

Change in revision R02 compared to R01:

1. Primer mix 24 amplifies the A\*01:04:01:02N allele. This has been corrected in the Specificity and Interpretation Tables.









**1**HLA-A\*03 alleles in bold lettering are listed as confirmed alleles on the on the IMGT/HLA web page [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla), release 3.28.0, April 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-A\*03 primer mixes have two or more product sizes:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Primer Mix | Size of spec. PCR product | | Amplified HLA-A\*03 alleles | Other amplified HLA-A alleles |
| **6** | | 190 bp  275 bp | \*03:234Q  \*03:04:01-03:04:03 | \*01:86, 11:153:01-11:153:02, 30:34 |
| **10** | | 65 bp  205 bp | \*03:60  \*03:02:01-03:02:04, 03:07:01, 03:10, 03:31-03:32, 03:42, 03:73, 03:76, 03:82, 03:90, 03:106, 03:113, 03:133, 03:160, 03:171, 03:198, 03:218, 03:223, 03:236-03:237, 03:242, 03:244, 03:253, 03:274-03:275N, 03:281, 03:285 | \*01:12, 01:19, 01:21, 01:126, 01:200, 01:244, 02:156, 02:338, 11:31, 11:35, 11:60, 11:158, 11:183, 11:209, 24:92, 30:04:01-30:04:02, 30:06, 30:09, 30:17, 30:29, 30:46, 30:77, 30:90, 30:99, 30:103, 30:105, 30:117, 31:03-31:04, 33:49, 33:144, 68:103:01-68:103:02, 74:23 |
| **13** | | 55 bp  145 bp | \*03:157:01, 03:172, 03:176  \*03:01:01:02N | \*01:191, 02:45, 11:224, 23:28, 24:77, 31:02, 31:07, 31:91, 32:05, 32:31 |
| **14** | | 105 bp  235 bp | \*03:11N  \*03:59 | \*11:137:02N |
| **18** | | 135 bp  215 bp | \*03:13  \*03:50, 03:64, 03:66, 03:225, 03:266N | \*01:98, 11:08, 11:44, 11:183, 11:191, 11:269, 25:43, 30:04:01-30:04:02,  30:06, 30:17, 30:29, 30:46, 30:77, 30:90, 30:103, 30:105, 30:117, 36:02, 68:103:01-68:103:02 |
| **19** | | 125 bp  205 bp  240 bp | \*03:202  \*03:145:02  \*03:15, 03:19, 03:84 |  |
| **20** | | 60 bp  185 bp  405 bp | \*03:61, 03:157:01, 03:172, 03:176  \*03:16, 03:79  \*03:61 | \*01:191, 02:45, 11:224, 23:28, 24:77, 31:02, 31:07, 31:91, 32:05, 32:31 |
| **21** | | 140 bp  195 bp  290 bp | \*03:17:01-03:17:02, 03:102, 03:171  \*03:74  \*03:297N | \*01:88:01-01:88:03, 01:236, 02:156, 02:338, 11:119:01-11:119:02, 11:209, 24:51, 24:92, 30:61, 30:74, 68:103:01-68:103:02 |
| **22** | | 90 bp  250 bp | \*03:191, 03:236  \*03:18, 03:97, 03:122, 03:135, 03:167 | \*11:59  \*01:01:01:01-01:01:65, 01:01:67-01:02, 01:04:01:01N-01:04:01:02N, 01:06-01:19, 01:21-01:33, 01:35-01:62, 01:64-01:65, 01:67:01-01:71, 01:74-01:101, 01:103-01:129, 01:131-01:166, 01:168-01:191, 01:193-01:199, 01:201-01:243, 01:245-01:254, 01:256-01:261, 11:27, 11:38-11:39, 11:94, 11:209, 11:271, 24:51, 24:92, 30:75, 80:01:01:01-80:03 |
| **23** | | 95 bp  185 bp  210 bp  240 bp | \*03:22:01-03:22:02, 03:248, 03:274  \*03:19, 03:103:01-03:103:02, 03:282  \*03:56, 03:88, 03:99, 03:177, 03:186, 03:238  \*03:75 | \*32:52, **C\*06:187**  \*02:237, 24:18, 24:204, 24:213, 32:52  \*11:130, 32:52, 36:02, **C\*06:187**  \*24:18, 24:204, 24:213, **C\*06:187** |
| **26** | | 190 bp | \*03:24, 03:93 | \*01:51, 25:03, 25:30, 32:15, 32:37, 34:08, 68:71 |
| **27** | | 95 bp  145 bp  170 bp  240 bp | \*03:71  \*03:25  \*03:251  \*03:149, 03:245 | \*11:49  \*11:200 |
| **28** | | 170 bp  220 bp  495 bp | \*03:26  \*03:269N  \*03:41, 03:63, 03:88 | \*11:77, 11:126  \*11:130, 36:02, **C\*06:187** |
| **30** | | 140 bp  210 bp | \*03:27, 03:102  \*03:49, 03:139 | \*01:157, 11:233 |
| **31** | | 125 bp  200 bp  230 bp | \*03:202  \*03:56, 03:88, 03:99, 03:143, 03:177, 03:186, 03:262N  \*03:28 | \*11:130, 32:52, 36:02, **C\*06:187** |
| **32** | | 150 bp  220 bp  270 bp | \*03:67  \*03:29  \*03:91N |  |
| **33** | | 180 bp  210 bp  285 bp | \*03:93  \*03:30, 03:152, 03:273  \*03:62 | \*32:37, 80:01:01:01w-80:03w  \*23:64, 24:104, 32:05, 32:79  \*01:144 |
| **34** | | 125 bp  160 bp | \*03:58  \*03:31 | \*11:273 |
| **35** | | 235 bp  275 bp | \*03:32  \*03:55 | \*31:21, 74:07 |
| **36** | | 120 bp  160 bp  210 bp | \*03:81  \*03:33  \*03:70 |  |
| **37** | | 95 bp  120 bp  225 bp | \*03:48, 03:168N  \*03:81  \*03:34 | \*02:525N |
| **38** | | 170 bp  195 bp  250 bp | \*03:35, 03:130  \*03:79, 03:192N  \*03:73 | \*01:167 |
| **39** | | 200 bp  235 bp | \*03:36N, 03:182  \*03:45 | \*01:109, 11:100, 11:175  \*30:77 |
| **40** | | 240 bp  280 bp  415 bp | \*03:37  \*03:220  \*03:279N |  |
| **41** | | 185 bp  280 bp | \*03:38, 03:192N, 03:223  \*03:68N, 03:297N |  |
| **42** | | 110 bp  190 bp  215 bp  245 bp | \*03:52  \*03:143  \*03:39, 03:238, 03:269N  \*03:84 |  |
| **43** | | 150 bp  260 bp | \*03:20  \*03:47, 03:76 |  |
| **44** | | 170 bp  240 bp | \*03:51:01, 03:130, 03:286N  \*03:40 |  |
| **45** | | 150 bp  270 bp | \*03:43, 03:186  \*03:91N | \*30:89 |
| **46** | | 115 bp  170 bp  190 bp | \*03:44:01-03:44:02, 03:52  \*03:213  \*03:53 | \*02:164:01-02:164:02, 02:380, 29:108, 30:69, 30:109, 31:19  \*02:575, 30:30, 31:69, **C\*05:123, C\*07:35, C\*07:352, C\*08:48** |
| **48** | | 70 bp  120 bp  145 bp  190 bp | \*03:54  \*03:284N  \*03:46  \*03:197N | **C\*07:86**  **\***02:314N, 32:48N, **C\*07:55N** |
| **49** | | 70 bp  170 bp  195 bp  545 bp | \*03:283N  \*03:251  \*03:161N  \*03:78 | \*11:49  \*01:45, 02:453, 02:557, 02:690, 11:108, 24:271, 66:17 |
| **50** | | 130 bp  165 bp  200 bp | \*03:86  \*03:213  \*03:145:02, 03:262N |  |
| **51** | | 215 bp  285 bp | \*03:50  \*03:87 | \*11:183, 11:191, 11:269, 25:43, 30:04:01-30:04:02, 30:06, 30:17, 30:29, 30:46, 30:77, 30:90, 30:103, 30:105, 30:117, 68:103:01-68:103:02  \*01:101, 11:30, 30:92 |
| **52** | | 90 bp  170 bp  215 bp | \*03:96, 03:168N  \*03:275N  \*03:89:02, 03:152, 03:172, 03:176, 03:198, 03:273 | \*74:14N  \*01:83:01-01:83:02, 01:191, 02:01:02, 02:50, 23:64, 24:104, 32:05, 32:31, 32:79, 74:04, 74:21 |
| **53** | | 190 bp  225 bp  260 bp  400 bp | \*03:234Q, 03:286N  \*03:150, 03:153  \*03:104  \*03:242 | \*33:49  \*02:45, 02:56:01-02:56:02, 02:78, 02:103, 02:169, 02:195, 23:09, 24:129, 24:191, 26:19, 26:72, 66:23, 68:66:01-68:66:02, 68:178 |
| **54** | | 145 bp  240 bp | \*03:195  \*03:111, 03:178N |  |
| **56** | | 180 bp  215 bp | \*03:182, 03:275N  \*03:113, 03:157:02 | \*01:109, 11:100, 11:175, 74:14N |
| **57** | | 180 bp  280 bp  400 bp | \*03:134  \*03:118, 03:220  \*03:112 |  |
| **59** | | 105 bp  145 bp  240 bp | \*03:144  \*03:195  \*03:128, 03:178N |  |
| **60** | | 310 bp  400 bp | \*03:218  \*03:112, 03:129N, 03:279N | \*01:246, 11:86 |
| **62** | | 190 bp  245 bp  375 bp | \*03:132, 03:197N  \*03:204, 03:288  \*03:162N | \*02:314N, 32:48N, **C\*07:55N** |
| **63** | | 90 bp  135 bp  175 bp  205 bp  525 bp  555 bp | \*03:283N  \*03:284N  \*03:123:01-03:123:02, 03:171  \*03:42, 03:133, 03:139 | \*02:113:02N  \*02:156, 02:338, 11:16, 11:35, 11:57, 11:73, 11:158, 68:103:01-68:103:02  \*01:244, 30:09, 31:03-31:04, 33:49, 33:144, 74:23  \*02:113:02N  **B\*56:28Nw** |

**4**The HLA-A\*03 primer set cannot separate the A\*03:95, 03:215 and A\*74:13 alleles. These alleles can be distinguished by the HLA-A low resolution kit and/or the HLA-A\*74 high resolution kit.

**5**The following HLA-A\*03 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |  |  |
| --- | --- | --- | --- |
| **Alleles** | **Primer mix** | **Alleles** | **Primer mix** |
| A\*03:16, 03:61 | 20 | A\*03:38, 03:68N | 41 |
| A\*03:17:01-03:17:02, 03:74 | 21 | A\*03:44:01-03:44:02, 03:53 | 46 |
| A\*03:20, 03:47 | 43 | A\*03:78, 03:161N | 49 |
| A\*03:22:01-03:22:02, 03:103:01-03:103:02, 03:248, 03:282 | 23 | A\*03:118, 03:134 | 57 |
| A\*03:25, 03:71 | 27 | A\*03:128, 03:144 | 59 |
| A\*03:27, 03:49 | 30 | A\*03:132, 03:162N | 62 |

**6**This lot of the A\*03 subtyping kit cannot distinguish the A\*03:29 and A\*03:67 alleles.

‘w’, may be weakly amplified.