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 bp275 bp | \*03:234Q\*03:04:01-03:04:03 | \*01:86, 11:153:01-11:153:02, 30:34 |
| **10** | 65 bp205 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 bp145 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 bp205 bp240 bp | \*03:202\*03:145:02\*03:15, 03:19, 03:84 |  |
| **20** | 60 bp185 bp405 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 bp290 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 bp250 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 bp185 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 bp170 bp 240 bp | \*03:71\*03:25\*03:251 \*03:149, 03:245  | \*11:49\*11:200 |
| **28** | 170 bp220 bp495 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 bp200 bp230 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 bp280 bp415 bp | \*03:37\*03:220\*03:279N |  |
| **41** | 185 bp 280 bp | \*03:38, 03:192N, 03:223\*03:68N, 03:297N |  |
| **42** | 110 bp190 bp 215 bp245 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 bp170 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 bp190 bp | \*03:54\*03:284N\*03:46\*03:197N  | **C\*07:86****\***02:314N, 32:48N, **C\*07:55N** |
| **49** | 70 bp170 bp195 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 bp165 bp200 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 bp170 bp215 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 bp225 bp 260 bp400 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 bp240 bp | \*03:195\*03:111, 03:178N |  |
| **56** | 180 bp215 bp | \*03:182, 03:275N \*03:113, 03:157:02 | \*01:109, 11:100, 11:175, 74:14N |
| **57** | 180 bp 280 bp400 bp | \*03:134\*03:118, 03:220\*03:112 |  |
| **59** | 105 bp145 bp240 bp | \*03:144\*03:195\*03:128, 03:178N |  |
| **60** | 310 bp400 bp | \*03:218 \*03:112, 03:129N, 03:279N | \*01:246, 11:86 |
| **62** | 190 bp245 bp375 bp | \*03:132, 03:197N\*03:204, 03:288\*03:162N  | \*02:314N, 32:48N, **C\*07:55N** |
| **63** | 90 bp135 bp175 bp 205 bp525 bp555 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.