HLA-A\*03 (101.413-24/04, -24u/04u) Lot No: 3L4 Expiry Date: 2024-07-01

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 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.

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 the 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-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, 03:345:01:01-03:345:01:02 | \*01:86, 11:153:01-11:153:02, 11:351Q, 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, 03:309, 03:314, 03:318-03:319, 03:332-03:333, 03:348, 03:356, 03:373, 03:385 | \*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, 24:458, 30:04:01:01-30:04:03, 30:06, 30:09, 30:17, 30:29, 30:46, 30:77, 30:90, 30:99, 30:103, 30:105, 30:117, 30:139, 30:150, 30:155, 31:03-31:04:01:02, 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, 31:02:01-31:02:02, 31:07, 31:91, 32:05, 32:31 |
| **14** | | 105 bp  235 bp | \*03:11N  \*03:59 | \*11:137:02N  \*01:342 |
| **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, 30:04:01:01-30:04:03, 30:06, 30:17, 30:29, 30:46, 30:77, 30:90, 30:103, 30:105, 30:117, 30:139, 30:150, 30:155, 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, 31:02:01-31:02:02, 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, 24:458, 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, 01:01:67-01:02:02, 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, 01:256-01:266:02, 01:268-01:283, 01:285N-01:286, 01:288-01:300, 01:302-01:306, 01:308N-01:314, 01:316-01:343, 11:27, 11:38-11:39, 11:94, 11:209, 11:271, 11:326, 24:51, 24:92, 24:458, 25:59, 30:75, 80:01:01:01-80:06 |
| **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  \*03:75, 03:347, 03:377 | \*31:139, 32:52, **C\*06:187**  \*02:237, 02:809, 24:18, 24:204, 24:213, 31:139, 32:52  \*11:130, 32:52, 36:02, **C\*06:187**  \*24:18, 24:204, 24:213, **C\*06:187** |
| **27** | | 95 bp  145 bp  170 bp  240 bp | \*03:71, 03:348  \*03:25  \*03:251  \*03:149, 03:245 | \*66:37  \*11:49  \*11:200, 68:193 |
| **28** | | 170 bp  220 bp  495 bp | \*03:26, 03:318  \*03:269N  \*03:41, 03:63, 03:88, 03:382 | \*11:77, 11:126, 11:348  \*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 | \*02:748N, 32:112N |
| **33** | | 180 bp  210 bp  285 bp | \*03:93  \*03:30, 03:152, 03:273  \*03:62:01:01-03:62:01:02 | \*01:341, 32:37, 80:01:01:01w-80:06w  \*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, 74:33 |
| **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, 30:160  \*32:112N |
| **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, **C\*01:163**  \*32:131  \*02:575, 29:138, 30:30, 31:69, **C\*04:341, 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, C\*15:198**  **\***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, 23:92, 23:96, 24:271, 33:151, 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, 30:04:01:01-30:04:03, 30:06, 30:17, 30:29, 30:46, 30:77, 30:90, 30:103, 30:105, 30:117, 30:139, 30:150, 30:155, 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, 02:01:02:01-02:01:02:02, 02:07:14, 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, 03:312 | \*33:49  \*01:315, 02:45, 02:56:01-02:56:02, 02:78, 02:103, 02:169, 02:195, 02:829, 23:09, 24:129, 24:191, 25:59, 26:19, 26:72, 26:184, 34:19, 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**  **\***33:179, **C\*05:214** |
| **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, 31:03-31:04:01:02, 33:49, 33:144, 74:23  \*02:113:02N  **B\*56:28Nw** |

**4**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\*03:104, 03:312 | 53 |
| A\*03:25, 03:71 | 27 | A\*03:118, 03:134 | 57 |
| A\*03:27, 03:49 | 30 | A\*03:128, 03:144 | 59 |
| A\*03:29, 03:67 | 32 | A\*03:132, 03:162N | 62 |

**5**The HLA-A\*03 primer set cannot separate the following alleles. These alleles can be distinguished by the HLA-A low resolution kit and/or the HLA-A\*74 high resolution kit.

|  |
| --- |
| Alleles |
| A\*03:95, 03:215, 03:343, A\*74:13 |

Abbreviations

w: may be weakly amplified

Changes in revision R01 compared to R00:

1. Primer mix 53 amplifies the A\*03:312 and the A\*01:315 alleles. This has been corrected in the Product Insert and the Worksheet.