Gel Documentation Form and Worksheet

HLA-B\*39 (101.566-12/04 -12u/04u) Lot No: 6L3 Expiry Date: 2024-11-01

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 mixes 3 and 22 have a tendency giving rise to primer oligomer formation.

Primer mixes 3, 5, 8, 11, 15, 16, 20, 24, 28 and 30 may have tendencies of unspecific amplifications.

Primer mixes 25 and 28 may give rise to a long unspecific amplification product of approximately 600 bp. This should be disregarded when interpreting the B\*39 typings.

Primer mix 24 may give rise to a lower yield of HLA-specific PCR product than the other B\*39 primer mixes.

Primer mix 45 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-B\*39 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 3.29.0, August 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-B\*39 primer mixes have two or more product sizes:

|  |  |  |  |
| --- | --- | --- | --- |
| Primer Mix | Size of spec. PCR product | Amplified HLA-B\*39 alleles | Other amplified HLA-Class I alleles |
| **4** | 65 bp  145 bp  385 bp | \*39:58, 39:83:02  \*39:26  \*39:51 | \*08:01:24, 35:01:64, 35:03:17, 38:74, 38:166, 51:01:68  \*14:83 |
| **7** | 120 bp  165 bp  220 bp | \*39:68, 39:155  \*39:17  \*39:03:01:01-39:03:01:03, 39:14:01:01-39:14:01:03, 39:24:01-39:24:02, 39:29, 39:37:01:01-39:37:01:02, 39:76, 39:120, 39:144, 39:152 | \*08:55, 40:424, 67:03, **A\*02:403, A\*03:378, A\*24:327, A\*30:63, A\*68:108, C\*05:70, C\*06:40, C\*07:137:01-07:137:02, C\*07:868, C\*15:51**  \*50:49  **\***08:55, 38:19 |
| **8** | 180 bp  405 bp | \*39:04, 39:47, 39:50  \*39:46 | \*07:214, 07:327, 08:01:24, 13:140, 14:28, 14:46, 15:189, 35:01:64, 35:03:17, 35:26, 38:33, 38:63, 38:159, 40:36, 40:77, 40:86, 40:314, 40:330, 40:368, 48:07, 49:26, 51:01:68, **C\*02:111** |
| **9** | 100 bp  230 bp  310 bp | \*39:01:05, 39:18  \*39:06:01-39:06:06, 39:57, 39:62, 39:64, 39:83:01-39:83:03, 39:90, 39:109, 39:127, 39:129, 39:132, 39:140-39:141, 39:154  \*39:59 | \*15:69, 15:186, 15:265, 15:449, 15:494, 38:01:03, 40:424, **C\*04:188, C\*06:40, C\*14:63, C\*15:51**  \*35:276, 50:49, 51:101, 52:71, 52:84 |
| **10** | 105 bp  165 bp  210 bp  255 bp | \*39:19:01-39:19:02  \*39:07, 39:91, 39:134  \*39:09:01:01-39:09:04, 39:43, 39:88, 39:155, 39:158 | \*15:376, 18:33, 35:82, 35:85, 35:135, 35:294, 37:57, 51:22, 78:03  \*15:69, 15:186, 15:265, 15:449, 15:494, 35:35, 58:84, **C\*06:40, C\*07:137:01-07:137:02, C\*14:63**  \*14:56, 15:38:01-15:38:02, 15:185, 15:335, 15:364, 15:368, 18:01:01:01-18:09, 18:12:01-18:15, 18:17N-18:20, 18:22-18:25, 18:27-18:34, 18:36-18:40, 18:42-18:55, 18:57:01-18:57:02, 18:59-18:60, 18:62-18:100, 18:102-18:109, 18:111-18:121, 18:123-18:147, 18:149-18:163, 18:167, 18:169-18:188, 18:190, 18:192-18:195, 35:21, 35:24:01-35:24:02, 35:188, 35:190, 35:287, 38:156, 51:37, 51:45, 51:63:01-51:63:02, 51:97, 51:216, 51:251, 52:39, 52:97, 53:02, 53:06, 53:28, 56:31, 57:14:01-57:14:02, 58:09, 58:76, **C\*02:142, C\*06:207, C\*07:137:01-07:137:02, C\*07:516, C\*07:521:01-07:521:02, C\*12:87, C\*14:76**  \*18:18:01:01-18:18:01:02, **C\*07:516** |
| **12** | 175 bp  205 bp | \*39:07, 39:15, 39:29, 39:49, 39:55, 39:91  \*39:61, 39:99 | \*15:69, 15:186, 15:449, 15:494, 35:35, 38:29, 58:84, **C\*15:51**  \*40:283? |
| **13** | 80 bp  230 bp | \*39:77  \*39:24:01-39:24:02, 39:28, 39:41-39:42, 39:76, 39:120, 39:152 | \*13:96  \*07:348, 15:265, 35:35, 35:468, 37:40, 38:20:01-38:20:02, 58:84, **C\*15:51** |
| **15** | 145 bp  190 bp | \*39:54  \*39:12:01:01-39:12:01:02, 39:31:01:01-39:31:01:02, 39:38Q, 39:128 | \*08:01:24, 14:28, 18:01:37, 38:84, 49:26, **C\*07:01:59** |
| **16** | 165 bp  220 bp | \*39:14:01:01-39:14:01:03, 39:29, 39:70, 39:126  \*39:09:01:01-39:09:04, 39:16, 39:88, 39:155, 39:158 | **\***08:55, 35:468, 38:73, 40:424, 51:101, 52:71, 52:84  \*38:156, **C\*07:137:01-07:137:02** |
| **17** | 80 bp  180 bp  205 bp | \*39:23, 39:44  \*39:25N  \*39:61 | \*38:72 |
| **25** | 150 bp  235 bp | \*39:01:01:02L | **C\*07:725, C\*15:31** |
| **27** | 180 bp  205 bp | \*39:38Q, 39:63  \*39:32, 39:48 | \*13:15, 14:88, 18:148, 18:191, 35:96, 35:109, 51:13:01-51:13:02, 51:62, 51:92:01-51:92:02, 51:106:01-51:106:02, 51:225, 51:281, 52:14:01-52:14:02, 52:25:01-52:25:02, 52:75, 56:34, 67:06, **C\*15:39, C\*15:130, C\*15:195** |
| **28** | 140 bp  180 bp | \*39:56  \*39:32-39:33, 39:40:01N-39:40:02N, 39:74 | \*13:03, 13:48, 13:120, 15:58, 15:73:01:01-15:73:01:02, 15:133, 15:229, 15:253, 15:303, 15:460, 15:486, 15:552, 35:03:01:01-35:03:05, 35:03:07-35:03:31, 35:06, 35:13, 35:36, 35:38, 35:55-35:56, 35:59:01-35:59:02, 35:70, 35:74-35:75, 35:84-35:85, 35:98, 35:106, 35:109, 35:127-35:128, 35:136, 35:150:01-35:153, 35:155-35:156, 35:160, 35:163, 35:167, 35:169, 35:179, 35:181, 35:193, 35:195, 35:198, 35:204-35:205, 35:221, 35:223, 35:231, 35:235-35:237, 35:242-35:243, 35:246, 35:256-35:257, 35:267, 35:274, 35:278-35:279, 35:281-35:282, 35:290-35:291, 35:296, 35:298, 35:312, 35:320, 35:326, 35:329, 35:344, 35:349, 35:354-35:355, 35:358, 35:360, 35:362, 35:364, 35:371, 35:375, 35:381N, 35:394-35:395, 35:397-35:399, 35:413, 35:415, 35:420, 35:422-35:424, 35:432, 35:434-35:436, 35:438, 35:440, 35:442, 35:450-35:452, 35:455, 35:457, 35:460, 35:469, 35:478, 35:482, 35:486, 35:489, 38:30, 38:65, 40:71, 44:10, 44:339, 45:14, 46:11, 46:61, 50:39w, 50:40, 51:13:01-51:13:02, 51:15, 51:62, 51:92:01-51:92:02, 51:106:01-51:106:02, 51:225, 51:281, 52:14:01-52:14:02, 52:25:01-52:25:02, 52:75, 53:04, 53:31, 53:33, 54:03, 54:33, 54:40, 56:01:01:01-56:01:04, 56:01:06-56:01:12, 56:01:14-56:02:03, 56:04:01:01-56:04:04, 56:07-56:08, 56:11, 56:13-56:14, 56:16-56:17, 56:19N-56:20:02, 56:22, 56:24-56:30, 56:33-56:49, 56:51-56:53, 56:55:01:02-56:59, 56:61-56:65, 56:67-56:74, 57:76, 57:118, 58:34, 58:73, 59:04, 82:01:01:01-82:04, **C\*03:19w**, **C\*03:307w, C\*15:15, C\*15:195** |
| **30** | 65 bp  140 bp  190 bp | \*39:18, 39:35, 39:64  \*39:75, 39:133N  \*39:52, 39:62 | **\***15:69, 15:265, 15:494, 38:32, 51:101, 52:84, **C\*04:188, C\*05:70, C\*06:40, C\*14:63, C\*15:51**  **C\*07:175**  \*38:54, **A\*02:403, A\*03:378, A\*24:327, A\*30:63, A\*68:108** |
| **32** | 190 bp  225 bp | \*39:89  \*39:79 | **C\*06:40, C\*14:63** |
| **33** | 120 bp  150 bp  230 bp | \*39:93  \*39:133N  \*39:87N | \*15:414, 38:58, 38:75  \*15:226N, 38:165N, **C\*01:56N** |

**4**The following HLA-B\*39 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |  |  |
| --- | --- | --- | --- |
| **Alleles** | **Primer mix** | **Alleles** | **Primer mix** |
| B\*39:01:05, 39:59 | 9 | B\*39:41, 39:77 | 13 |
| B\*39:19:02, 39:134 | 10 | B\*39:62, 39:64 | 30 |
| B\*39:25N, 39:44 | 17 | B\*39:87N, 39:93 | 33 |
| B\*39:26, 39:51 | 4 |

**5**The following alleles will give rise to identical amplification patterns with the HLA-B\*39 subtyping kit. These alleles can be distinguished by the HLA-B low resolution and/or the respective HLA-B kits.

|  |  |
| --- | --- |
| **Alleles** | **Alleles** |
| B\*39:01:01:01, 39:01:01:03-39:01:01:14, 39:01:03:01-39:01:03:02, 39:01:06-39:01:08, 39:01:10-39:01:24, 39:01:28-39:01:29, 39:01:31-39:01:32, 39:65-39:67, 39:69, 39:71, 39:80-39:81, 39:84-39:85, 39:94, 39:100, 39:103, 39:111, 39:114-39:115, 39:117, 39:119, 39:121-39:123, 39:125, 39:130, 39:137-39:138, 39:142N, 39:146N, 39:148, 39:150Q-39:151, 39:153, 39:157N, 39:159-39:160, B\*38:158 | B\*39:82, 39:107, 39:136, 39:156, B\*14:53 |
| B\*39:05:01:01-39:05:03, 39:113, 39:118, 39:147N, 39:149, 39:161N, 39:163, 39:165, 39:167-39:168, B\*38:157 | B\*39:104, B\*38:41 |
| B\*39:09:01:01-39:09:04, 39:158, B\*38:156 |  |

Abbreviations

w: might be weakly amplified.

?: nucleotide sequence information not available for the primer matching sequence.