Gel Documentation Form and Worksheet

HLA-B\*27 (101.521-24/04, -24u/04u) Lot No: 9L4 Expiry Date: 2025-02-01

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 28, 30, 31, 32 and 39 may have tendencies of unspecific amplifications.

Primer mix 43 has a tendency to giving rise to primer oligomer formation.

Primer mix 30 may give rise to a long unspecific amplification product. This band should be disregarded when interpreting the typing results.

Primer mix 24 may give rise to a lower yield of HLA-specific PCR product than the other HLA-B\*27 high resolution primer mixes.

Primer mix 47 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\*27 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-B\*27 primer mixes have two or more product sizes:

|  |  |  |  |
| --- | --- | --- | --- |
| Primer Mix | Size of spec. PCR product | Amplified HLA-B\*27 alleles | Other amplified HLA Class I alleles |
| **10** | 90 bp 185 bp | \*27:06:01:01-27:06:01:02, 27:35, 27:41, 27:78, 27:91, 27:106-27:107, 27:154, 27:192, 27:208, 27:222, 27:227\*27:60 | \*15:129, 15:395, 18:02:01, 18:179, 38:22, **C\*07:05, C\*07:538** |
| **12** | 210 bp 310 bp 425 bp | \*27:74\*27:43\*27:13:01-27:13:02 | \*08:100, 15:292, 15:401, 35:113, 39:62, 40:202, 44:98, 46:27, 52:31:01-52:31:02 |
| **13** | 215 bp 370 bp 400 bp | \*27:47\*27:12:01:01-27:12:01:03, 27:16, 27:92, 27:119, 27:153\*27:53, 27:213 | \*18:33, 37:57, 40:75?, 40:322? |
| **14** | 120 bp 345 bp | \*27:34\*27:17  | \*35:01:30, 40:02:07, 40:06:02, 51:01:52, 57:01:16, 57:03:02, **C\*02:06:02, C’02:23, C’02:36:01, C\*02:68** |
| **17** | 100 bp 310 bp | \*27:14, 27:81\*27:51  | \*44:20, 44:47, 44:100, 44:197, 50:20, 51:85, 51:192, 51:214, 51:261, 51:274, 52:26 |
| **18** | 175 bp 415 bp | \*27:24\*27:49 | \*07:174, 07:202, 07:222, 07:279, 08:213, 40:31, 40:45, 40:80, 48:01:01:01-48:01:10, 48:04:01:01-48:04:02, 48:06-48:07, 48:09, 48:11, 48:15-48:16, 48:18-48:20, 48:22, 48:24, 48:27-48:39, 48:41-48:50, 81:01:01:01-81:10 |
| **19** | 95 bp 240 bp | \*27:35\*27:25, 27:38, 27:47, 27:50:01-27:50:02, 27:63, 27:76, 27:139, 27:213 | \*38:22\*15:129, 15:342, 15:395  |
| **20** | 95 bp 175 bp 215 bp 345 bp | \*27:09\*27:36, 27:173\*27:25, 27:45, 27:108, 27:115, 27:161\*27:69, 27:192 | \*48:21, 48:26\*07:197, 15:129, 15:342\*07:329, 15:227, 18:183, 37:23, 40:213, 42:28, 44:338, 51:32, 58:52 |
| **21** | 110 bp 160 bp | \*27:04:01-27:04:06, 27:06:01:01-27:06:01:02, 27:15, 27:20, 27:21:02, 27:24-27:25, 27:66N, 27:68-27:69, 27:91, 27:100, 27:103, 27:105, 27:109, 27:112-27:115, 27:138, 27:147, 27:149, 27:165, 27:173, 27:192, 27:208, 27:210-27:211, 27:214, 27:222, 27:226, 27:229\*27:39, 27:137 | \*37:47 |
| **22** | 165 bp 195 bp 235 bp 375 bp | \*27:55, 27:149\*27:37\*27:15, 27:28, 27:62, 27:71\*27:26, 27:31, 27:101, 27:157  | \*18:43, 40:210?, 40:229, 40:399N\*18:02:01-18:02:02, 18:179, **A\*32:89, C\*07:05, C\*07:538**\*40:166?, 82:01:01:01-82:04 |
| **26** | 105 bp 145 bp 235 bp  | \*27:52 \*27:64N\*27:72 | \*37:60\*13:103N, 40:118N, 40:291N, **A\*66:39N** |
| **27** | 215 bp320 bp | \*27:104\*27:57  | \*37:27 |
| **28** | 145 bp 325 bp | \*27:64N\*27:48  | \*13:103N, 40:118N, 40:291N, **A\*66:39N**\*18:162 |
| **29** | 70 bp 105 bp 210 bp | \*27:54, 27:123\*27:67\*27:74 |  |
| **30** | 160 bp 240 bp | \*27:59N, 27:137\*27:72-27:73 |  |
| **31**  | 125 bp 160 bp265 bp | \*27:65N\*27:56\*27:118  | **A\*24:185N** |
| **32** | 90 bp 370 bp | \*27:32, 27:70\*27:85 | \*07:28, 07:118, 08:14, 08:87, 15:17:01:01-15:17:07, 15:162, 15:168, 15:177, 15:196, 15:208, 15:216, 15:230, 15:233, 15:269, 15:273, 15:339, 15:356, 15:396, 15:403, 15:411, 15:423-15:424, 15:446, 15:462, 15:500, 15:516, 15:523, 15:532, 15:546Q, 15:553, 15:555, 18:166, 35:234, 40:124:02, 40:180, 40:240, 40:414, 44:02:33, 44:41:01, 44:54, 44:65, 44:106, 44:135, 44:440, **C\*02:07, C\*02:97, C\*02:158** |
| **33** | 150 bp250 bp | \*27:84\*27:73, 27:80  | \*13:130, **C\*02:11****\***40:88 |
| **34** | 160 bp265 bp | \*27:82\*27:118 |  |
| **35** | 120 bp280 bp | \*27:134\*27:83 |  |
| **36** | 190 bp350 bp | \*27:146\*27:94N  | \*37:33N |
| **41** | 105 bp155 bp | \*27:67\*27:91 |  |
| **43** | 155 bp290 bp | \*27:68\*27:05:02:04Q | \*15:201 |
| **44** | 225 bp255 bp290 bp | \*27:66N\*27:01, 27:142\*27:58 | \*13:23, 13:55, 18:09, 37:10, 40:47, 40:96, 40:157, 40:201, 44:15:01:01-44:15:01:02, 44:55, 44:103, 44:188, 44:212, 49:02 |
| **45** | 150 bp230 bp | \*27:84\*27:141 | \*13:130, **C\*02:11** |

**4**The following HLA-B\*27 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |
| --- | --- |
| Alleles | Primer mix |
| B\*27:14, 27:81 | 17 |
| B\*27:37, 27:55, 27:101 | 22 |
| B\*27:53, 27:119 | 13 |
| B\*27:60, 27:227 | 10 |
| B\*27:69, 27:173  | 20 |
| B\*27:83, 27:134 | 35 |

**5**The HLA-B\*27 primer set cannot separate the following alleles. These alleles can be distinguished by the HLA-B low resolution kit and/or the HLA-B\*40 respectively the HLA-B\*18 high resolution kits.

|  |
| --- |
| Alleles |
| B\*27:33, 40:50:01:01-40:50:01:02 |
| B\*27:44, 18:165 |

Abbreviations

‘w’, might be weakly amplified.

‘?’, nucleotide sequence information not available for the primer matching sequence.