HLA-B\*13 (101.515-12/12u) Lot No: 6S4 Expiry Date: 2027-10-01

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 may give rise to a weak band of about 500 bp. This band should be disregarded when interpreting HLA-B\*13 SSP subtypings.

Primer mixes 1, 5 and 24 may give rise to a lower yield of HLA-specific PCR product than the other B\*13 primer mixes.

Primer mixes 7, 8, 12 and 16 may have tendencies of unspecific amplifications.

In primer mix 26 the positive control band may be weaker than for other HLA-B\*13 primer mixes.

Primer mixes 26 has a tendency to giving rise to primer oligomer formation.

Primer mix 31 contains a negative control, which will amplify the majority of the 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. The PCR product generated by the positive control primer pair is 200 base pairs.















**1**HLA-B\*13 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 3.26.0, October 2016.

**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\*13 primer mixes have two or more product sizes:

|  |  |  |  |
| --- | --- | --- | --- |
| Primer Mix | Size of spec. PCR product | Amplified HLA-B\*13 alleles | Other amplified HLA Class I alleles |
| **5** | 125 bp 155 bp180 bp | \*13:03, 13:22:01-13:22:02, 13:45, 13:48, 13:128, 13:145, 13:153, 13:159, 13:178\*13:16, 13:20, 13:31, 13:41, 13:48, 13:128, 13:131, 13:145, 13:164, 13:178\*13:03, 13:48, 13:120, 13:146, 13:164 | \*07:78, 15:42, 15:73:01:01-15:73:01:02, 15:86, 15:224, 15:303, 15:485-15:486, 15:552, 18:191, 35:60, 35:432, 35:446, 35:545, 40:71, 44:10, 46:11, 46:18, 51:15, 51:62, 51:106:01-51:106:02, 51:157, 51:223, 51:225, 51:300, 52:25:01-52:25:02, 54:01:01:01-54:03, 54:05N, 54:07-54:08N, 54:10, 54:12-54:13, 54:17-54:41, 54:43-54:46, 55:01:01:01-55:03, 55:05, 55:07, 55:09-55:12, 55:15-55:16, 55:18-55:19, 55:21-55:22, 55:24-55:26, 55:29-55:31, 55:33-55:40, 55:42-55:45, 55:47-55:48, 55:52-55:57, 55:59-55:67, 55:69-55:80, 55:82-55:85, 55:87-55:109, 55:111-55:133, 56:01:01:01-56:01:04, 56:01:06-56:02:01:02, 56:02:03, 56:04:01:01-56:04:05, 56:07-56:08, 56:10, 56:13-56:14, 56:16-56:17, 56:19N-56:20:02, 56:23-56:30, 56:33-56:49, 56:51-56:59, 56:62-56:87, 56:89-56:93, 56:95, 58:73, 59:01:01:01-59:01:01:02, 59:04-59:09, 59:12, 82:01:01:01-82:04, **C\*01:90, C\*15:91, C\*15:128**\*07:78, 15:42, 15:73:01:01-15:73:01:02, 15:303, 15:486, 51:62, 51:106:01-51:106:02, 51:223, 51:225, 51:300, 52:25:01-52:25:02, 54:20, 54:33, 54:40, 55:01:01:01-55:01:30, 55:03, 55:05, 55:09, 55:11, 55:15, 55:21, 55:24-55:25, 55:29, 55:31, 55:33, 55:36, 55:38, 55:40, 55:44-55:45, 55:52-55:55N, 55:59-55:60, 55:64, 55:66, 55:73-55:76, 55:78-55:79, 55:84-55:85, 55:87, 55:90-55:95, 55:97N-55:106, 55:108-55:109, 55:111, 55:113-55:116, 55:118N-55:119, 55:121-55:122, 55:124-55:127, 56:25, 56:37, 56:43, 56:66, 59:12, **C\*01:90, C\*15:91, C\*15:128**\*15:73:01:01-15:73:01:02, 15:303, 15:486, 15:552, 35:432, 35:446, 35:545, 40:71, 44:10, 46:11, 51:15, 51:62, 51:106:01-51:106:02, 51:223, 51:225, 52:25:01-52:25:02, 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, 56:04:01:01-56:04:05, 56:07-56:08, 56:13-56:14, 56:16-56:17, 56:20:01-56:20:02, 56:24-56:30, 56:33-56:49, 56:51-56:53, 56:55:01:02-56:59, 56:61-56:65, 56:67-56:87, 56:89-56:93, 56:95, 58:73, 59:04, 59:12, 82:01:01:01-82:04 |
| **9** | 130 bp 230 bp | \*13:42\*13:08  | \*51:38 |
| **10** | 105 bp 210 bp | \*13:01:11, 13:21, 13:71\*13:09, 13:39, 13:67 | \*07:05:01:01-07:06:01:04, 07:06:03-07:06:05, 07:32, 07:34, 07:40, 07:53, 07:69, 07:78, 07:80, 07:90, 07:97, 07:105, 07:112, 07:123, 07:137-07:138, 07:140, 07:176, 07:182N, 07:201N, 07:206-07:207, 07:209-07:210, 07:213, 07:222, 07:249, 07:258, 07:264, 07:269-07:270, 07:278, 07:283, 07:287, 07:293, 07:304, 07:317, 07:324, 07:327, 07:332-07:333, 07:340, 07:349, 07:352-07:353, 07:356-07:358, 07:368, 07:378, 07:387, 07:389, 07:395, 07:399, 07:407-07:408, 07:426Q, 07:434, 07:443, 07:474, 07:480, 08:01:02, 08:01:13, 08:20:01, 08:53:02, 08:79:01, 08:213:01, 15:150, 15:188, 18:189, 27:07:01-27:07:06, 27:11, 27:20, 27:24, 27:27, 27:33, 27:43, 27:125, 27:130, 27:164, 27:168, 27:180, 27:187, 27:218-27:219, 27:233, 27:251, 35:09:02-35:09:03, 35:18, 35:31, 35:88, 35:230, 35:534, 38:63, 39:136, 40:01:01-40:01:13, 40:01:15-40:01:20, 40:01:22-40:01:25, 40:01:27, 40:01:29, 40:01:31, 40:01:33-40:01:45, 40:01:47-40:01:49, 40:01:51-40:02:09, 40:02:11-40:02:12, 40:02:14-40:02:17, 40:02:19, 40:02:21-40:02:25, 40:02:27-40:02:38, 40:04:01:01-40:06:04:03, 40:06:06-40:06:09, 40:06:11-40:08:01:02, 40:10:01:01-40:13, 40:14:03-40:16:01:02, 40:19, 40:21-40:23, 40:25, 40:27:01-40:27:03, 40:29-40:30, 40:34-40:35:01, 40:36-40:40, 40:43, 40:45-40:51, 40:53-40:58, 40:61-40:70:02, 40:72:02-40:76, 40:79-40:86, 40:87:02-40:88, 40:90-40:94, 40:96-40:97, 40:99-40:114:01:02, 40:115-40:119, 40:122-40:123, 40:125:01-40:130:02, 40:132-40:135, 40:137-40:157, 40:160:01-40:171, 40:173-40:179, 40:182-40:183, 40:185-40:186:02, 40:188-40:236, 40:239-40:266, 40:268-40:279, 40:281-40:283, 40:285-40:304, 40:306, 40:308-40:311, 40:313-40:329, 40:331-40:340, 40:342-40:351, 40:353:01:01-40:367, 40:369-40:380, 40:381:02-40:389, 40:392-40:413, 40:415-40:421Q, 40:423-40:428N, 40:430-40:457, 40:459-40:497, 40:499-40:521, 40:523-40:535, 40:537-40:547, 41:08, 44:31, 48:01:01:01-48:01:14, 48:03:01:01-48:07, 48:09-48:11, 48:13, 48:15-48:16, 48:18-48:22, 48:24, 48:28-48:45, 48:47-48:58, 51:01:09, 51:01:21, 51:01:25, 51:10, 51:24:02-51:24:04, 51:81, 51:217, 51:279, 51:338, 52:01:50, 52:54, 54:11, 55:04, 55:08, 55:49, 55:86, 56:20:02, 58:27, 67:03, 81:01:01:01-81:10, **C\*01:90, C\*01:116, C\*02:68, C\*03:317, C\*05:238, C\*07:775, C\*12:282, C\*15:24, C\*15:128**\*07:177, 08:102, 08:122, 14:48, 15:53, 15:183, 15:212, 15:336, 15:345, 15:511, 15:559, 18:80, 18:102, 18:107, 27:08, 27:12:01:01-27:12:01:03, 27:18, 27:26, 27:33, 27:40, 27:42, 27:44, 27:89, 27:153, 27:165w, 27:204:01:01-27:204:01:02, 27:242, 35:63, 35:84, 35:90, 35:150:01-35:150:02, 35:184, 35:201, 35:217, 35:317, 35:441, 40:01:01-40:01:10, 40:01:12-40:09, 40:11:01:01-40:11:02, 40:14:01-40:16:01:02, 40:18, 40:20:01:01-40:20:01:02, 40:22N-40:40, 40:42-40:46, 40:48-40:57, 40:59-40:75, 40:77-40:95, 40:97-40:108, 40:111-40:116, 40:118N-40:136, 40:138-40:148, 40:150-40:156, 40:158-40:187, 40:189-40:200, 40:202-40:214, 40:216N-40:247, 40:249-40:281, 40:283-40:291N, 40:293-40:324, 40:326-40:339, 40:341-40:350, 40:352-40:363, 40:366-40:393, 40:395-40:399N, 40:402-40:456, 40:458-40:525, 40:527-40:547, 41:01:01:01-41:04, 41:06-41:11, 41:13-41:21, 41:23-41:25, 41:27-41:35, 41:37-41:45N, 41:47-41:59, 41:61-41:82, 44:09, 44:46:01-44:46:02, 44:75, 44:90, 44:129, 44:131, 44:254, 44:277, 44:356, 44:438N, 45:01:01:01-45:01:08, 45:01:10-45:15, 45:17-45:25, 45:27-45:32, 46:10, 47:02, 47:03w, 50:01:01:01-50:02:01:02, 50:04:01-50:22, 50:31-50:76, 50:78-50:79, 56:36, 73:01:01:01-73:03, **C\*03:504, C\*07:828** |
| **13** | 90 bp 160 bp245 bp | \*13:19 \*13:57\*13:12:01-13:12:02  | \*49:34\*15:587, 35:287 |
| **15** | 105 bp 245 bp | \*13:02:26, 13:22:01, 13:128, 13:145, 13:178\*13:14, 13:83  | \*07:78, 15:73:01:01-15:73:01:02, 15:303, 15:486, 40:48, 40:377, 49:01:14, 50:01:19, 54:01:10, 54:22, 56:01:03, 56:20:02, **C\*08:207:01, C\*15:91, C\*15:128**\*07:149, 07:453, 18:09w, 27:01w, 27:142w, 37:10w, 38:02:01:01-38:02:06, 38:02:08-38:04, 38:08, 38:15, 38:18, 38:23, 38:29, 38:35, 38:43-38:50, 38:62, 38:64, 38:72, 38:74-38:76, 38:79, 38:82, 38:84w, 38:85, 38:92, 38:97-38:98, 38:103N-38:105, 38:160, 38:162-38:165N, 38:167, 38:172-38:173Q, 40:96w, 40:157w, 40:201w, 44:103w, 44:130, 44:212w, 44:224, 48:56 |
| **16** | 90 bp 205 bp | \*13:17, 13:33, 13:57\*13:15  | \*15:399, 35:46, 35:207, 57:88\*14:37, 18:191, 49:09, 50:58, 51:62, 51:106:01-51:106:02, 51:223, 51:225, 52:25:01-52:25:02, 56:34 |
| **17** | 160 bp 220 bp | \*13:49N\*13:27, 13:43  | **C\*02:159, C\*02:161** |
| **18** | 155 bp 205 bp 275 bp | \*13:28\*13:32\*13:44 |  |
| **19** | 195 bp240 bp315 bp 345 bp | \*13:34\*13:76N\*13:96 \*13:38, 13:52 | \*07:172:02, **C\*17:08**\*39:77\*07:427 |
| **21** | 120 bp180 bp 245 bp | \*13:29\*13:30, 13:40\*13:103N  | \*44:219\*08:252N, 15:528N, 27:64N, 40:118N, 40:291N, 44:448N, 52:110N |
| **22** | 135 bp 175 bp300 bp | \*13:25, 13:156\*13:40\*13:86  | \*07:225, 35:02:01:01-35:02:07, 35:02:08w, 35:02:09-35:02:21, 35:81, 35:83, 35:95, 35:129N, 35:146, 35:154, 35:157, 35:162, 35:172, 35:182-35:184, 35:211, 35:220, 35:258, 35:270, 35:273, 35:285, 35:309, 35:311, 35:323:01-35:323:02, 35:335, 35:339, 35:357, 35:361, 35:366-35:367, 35:372, 35:374, 35:377-35:379, 35:387, 35:391, 35:394, 35:396, 35:403, 35:407, 35:410, 35:419, 35:443, 35:468, 35:483, 35:487, 35:492, 35:501, 35:505, 35:508N, 35:522, 35:546, 35:550, 35:553, 35:557, 35:562, 35:565, 35:582, 35:586, 45:12, 50:36, 53:19, 53:36, 58:65 |
| **23** | 130 bp 200 bp 275 bp | \*13:42\*13:37\*13:44  | \*51:38 |
| **25** | 160 bp430 bp | \*13:70\*13:64 |  |
| **26** | 120 bp145 bp175 bp | \*13:50\*13:103N \*13:47 | \*07:345, 27:82\*27:64N, 40:118N, 40:291N, **A\*66:39N, A\*80:09N, C\*02:216N** |
| **27** | 80 bp115 bp165 bp185 bp | \*13:96\*13:52\*13:61\*13:69  | \*39:77\*07:427\*08:298, 42:25 |

**4**The following HLA-B\*13 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |
| --- | --- |
| **Alleles** | **Primer mix** |
| B\*13:02:26, 13:14 | 15 |
| B\*13:15, 13:33 | 16 |
| B\*13:27, 13:49N | 17 |
| B\*13:34, 13:38 | 19 |

Abbreviations

‘w’, may be weakly amplified.