HLA-A\*33 (101.432-12/12u) Lot No: 4R1 Expiry Date: 2026-11-01

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 6, 11, 13, 25 and 27 may have tendencies of unspecific amplifications.

Primer mixes 10, 15 and 18 have a tendency to giving rise to primer oligomer formation.

Primer mixes 9 and 10 may give rise to a long unspecific amplification product of approximately 640 bp. This should be disregarded when interpreting the HLA-A\*33 typings.

Primer mix 3 may give rise to a lower yield of HLA-specific PCR product than the other A\*33 primer mixes.

Primer mix 32 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\*33 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-A\*33 primer mixes have two or more product sizes:

|  |  |  |  |
| --- | --- | --- | --- |
| Primer Mix | Size of spec. PCR product | Amplified HLA-A\*33 alleles | Other amplified HLA-A alleles |
| **6** | 105 bp  170 bp | \*33:20  \*33:05, 33:58, 33:196 | \*31:94  \*29:12, 29:92, 29:162 |
| **7** | 75 bp  105 bp  230 bp | \*33:21, 33:53  \*33:06  \*33:51, 33:119 | \*11:98, 11:250, 11:396, 31:210, 66:15, 68:04:01 |
| **8** | 160 bp  235 bp | \*33:07  \*33:24, 33:184 | \*02:444, 31:54  \*02:243:01-02:243:03, 26:177, 29:19, 29:48, 29:159 |
| **9** | 135 bp  160 bp  185 bp | \*33:22  \*33:14, 33:58  \*33:01:02, 33:08-33:09 | \*02:24:02, 29:22, 31:99  \*29:12, 29:92  **\***02:243:01-02:243:03, 29:02:23, 29:48 |
| **10** | 135 bp  215 bp  285 bp | \*33:22  \*33:08, 33:53, 33:183  \*33:13, 33:184 | \*02:24:02, 29:22, 31:99  \*02:243:01-02:243:03, 24:82, 29:48, 31:02:01-31:02:02, 31:07-31:08, 31:91, 31:109  **\***01:143, 11:43, 26:177, 26:207, 29:66, 31:03, 31:164, **C\*07:449** |
| **13** | 95 bp  165 bp | \*33:12  \*33:25, 33:232 |  |
| **14** | 120 bp  335 bp  390 bp | \*33:15, 33:84  \*33:19, 33:187  \*33:80N | \*02:140, 02:821, 26:99, 29:130, 31:48  \*01:301Q, 02:10, 02:17:02:01-02:17:04, 02:39, 02:108, 02:110, 02:148, 02:242, 02:244, 02:268, 02:300, 02:303, 02:398, 02:453, 02:604, 02:617, 02:628, 02:630, 02:657, 02:680, 02:804, 02:963, 02:1025, 02:1054, 03:15, 03:19, 03:347, 11:139, 24:04, 24:19, 24:28, 24:44, 24:89, 24:109, 24:129, 24:290, 24:406, 24:424, 29:07, 29:49, 31:29  \*01:268, 02:789N, 11:137:01N, 26:60N, 74:32N |
| **15** | 140 bp  215 bp  255 bp | \*33:16, 33:23  \*33:65  \*33:64 |  |
| **16** | 95 bp  140 bp  210 bp  245 bp | \*33:36  \*33:140N  \*33:21  \*33:17 | \*01:57N, 03:381N, 30:59N, 66:39N, 80:09N |
| **17** | 145 bp  215 bp | \*33:18:01-33:18:02, 33:26  \*33:65 | \*01:244, 03:42, 03:133, 23:53, 23:70, 29:01:01:01-29:04, 29:06-29:31, 29:34, 29:36-29:50, 29:52-29:70, 29:72-29:76, 29:78N, 29:81, 29:84-29:86, 29:88-29:103, 29:105-29:131, 29:133:01:01-29:137, 29:139-29:152, 29:154-29:162, 29:164-29:172, 31:03-31:04:02, 31:06, 31:179, 32:30:01-32:30:02, 32:32, 68:168 |
| **18** | 100 bp  145 bp  240 bp | \*33:27  \*33:57  \*33:82 | \*31:196 |
| **20** | 95 bp  225 bp | \*33:29, 33:143N  \*33:39 | \*02:480, 02:924-02:925, 32:53, 68:176:01-68:176:02 |
| **21** | 115 bp  245 bp | \*33:30  \*33:73N, 33:82, 33:129N | \*02:342  \*31:196 |
| **22** | 120 bp  255 bp  545 bp | \*33:31, 33:84  \*33:44  \*33:123N | \*02:241, 02:684, 02:751, 02:981, 26:24, 29:116, 31:209 |
| **24** | 95 bp  205 bp | \*33:34, 33:164  \*33:54 | \*01:01:114, 03:01:18, 11:01:28, 11:01:77, 24:21:03, 24:208:01, 29:09, 29:33, 29:144, 31:24, 31:200, 32:33:01, 32:33:03  \*29:59 |
| **25** | 215 bp  245 bp | \*33:69, 33:83, 33:109  \*33:129N |  |
| **26** | 100 bp  150 bp  190 bp | \*33:36, 33:80N  \*33:77  \*33:74N, 33:111, 33:220 | \*01:268, 11:137:01N, 26:60N, 32:160N, 74:32N  \*29:145, 31:132 |
| **28** | 230 bp  545 bp | \*33:70, 33:90  \*33:123N | \*01:84, 01:140:02, 02:214, 02:784, 03:145:02, 03:371, 11:54:01, 24:561:01, **B\*40:381:01, B\*40:390, C\*04:35:02** |
| **30** | 260 bp  545 bp | \*33:86  \*33:03:03Q | \*03:265, 32:51, **B\*18:173, B\*44:287, C\*07:756**  \*01:01:38L, 02:01:14Q, 03:01:96, 11:01:98, 24:02:03Q, 30:02:25, 34:01:06, 68:01:59 |
| **31** | 155 bp  220 bp  260 bp | \*33:96N  \*33:90  \*33:68 | \*01:52:01N, 26:107N  \*01:84, 02:214, 03:371  \*24:114, 29:61, 32:98 |

**4**The following HLA-A\*33 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |  |  |
| --- | --- | --- | --- |
| **Alleles** | **Primer mix** | **Alleles** | **Primer mix** |
| A\*33:03:03Q, 33:86 | 30 | A\*33:29, 33:39 | 20 |
| A\*33:15, 33:187 | 14 | A\*33:30, 33:73N | 21 |
| A\*33:16, 33:64 | 15 | A\*33:31, 33:44 | 22 |
| A\*33:17, 33:140N | 16 | A\*33:54, 33:164 | 24 |

**5**The following alleles give rise to identical amplification patterns with the HLA-A\*33 subtyping kit. These alleles can be distinguished by e.g. the HLA-A low resolution kit and/or the respective subtyping kits.

|  |  |
| --- | --- |
| **Alleles** | **Alleles** |
| A\*33:13, A\*26:207 | A\*33:51, 33:119, A\*31:210, A\*66:15 |
| A\*33:18:01-33:18:02, A\*29:105, 29:164 | A\*33:184, A\*26:177 |