HLA-A\*02 (101.412-24/04, -24u/04u) Lot No: 9R1 Expiry Date: 2027-07-01

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.

The specific primers in primer mixes 3, 6, 31, 34, 39 and 55 may give rise to a lower yield of HLA-specific PCR product than the other A\*02 primer mixes.

Primer mixes 7, 11, 25, 33, 42, 46, 54, 57, 73, 81, 84, 87, 88, 93 and 94 have a tendency giving rise to primer oligomer formation.

Primer mixes 11, 13, 14, 17, 20, 27, 31, 32, 33, 34, 40, 41, 42, 46, 54, 59, 60, 61, 65, 71, 72, 75, 89 and 91 may have tendencies of unspecific amplifications, most pronounced in primer mixes 41 and 91.

Primer mixes 11 and 34 may give rise to a long fragment of approx. 600 bp in some HLA-A alleles. This band should not be considered in the interpretation of HLA-A\*02 typings.

Primer mix 18 may faintly amplify the C\*04:01:01:01-04:01:150 alleles.

For some samples primer mix 1 may amplify the A\*02:07:01-02:07:23 alleles.

Primer mix 34 may give rise to a lower yield of HLA-specific PCR product than the other HLA-A\*02 high resolution primer mixes for the A\*30 alleles.

In primer mixes 25 and 73 the positive control band may be weaker than for other HLA-A\*02 primer mixes.

Primer mix 96 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\*02 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 3.25.0, July 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-A\*02 primer mixes have two or more product sizes:

|  |  |  |  |
| --- | --- | --- | --- |
| Primer Mix | Size of spec. PCR product | Amplified HLA-A\*02 alleles | Other amplified HLA-A alleles |
|  **7** | 170 bp210 bp | \*02:02:01:01-02:02:07, 02:05:01:01-02:05:13, 02:08:01-02:08:02, 02:14, 02:47, 02:63, 02:102, 02:115, 02:154-02:155, 02:172, 02:179, 02:186, 02:209, 02:229, 02:232, 02:286, 02:320, 02:324, 02:337, 02:344, 02:359, 02:373N, 02:376, 02:413, 02:421, 02:433, 02:484, 02:489, 02:492, 02:495-02:496, 02:507, 02:517, 02:531-02:532, 02:542, 02:546, 02:572, 02:577, 02:591:01-02:591:02, 02:593, 02:601, 02:626, 02:636, 02:643N, 02:646, 02:655, 02:667, 02:670, 02:676, 02:709, 02:717, 02:731, 02:734, 02:766, 02:778, 02:790-02:791N, 02:799, 02:807N, 02:817-02:818, 02:826Q, 02:843, 02:867, 02:872, 02:881, 02:907, 02:922, 02:925, 02:951, 02:961, 02:963, 02:967, 02:990, 02:999N, 02:1019-02:1020, 02:1025, 02:1048, 02:1059N, 02:1064Q, 02:1086, 02:1095\*02:540N | \*31:126N, 33:213N, **C\*02:38:02N** |
|  **8** | 415 bp 505 bp | \*02:02:01:01-02:02:02, 02:02:04-02:02:07, 02:05:01:01-02:05:13, 02:14, 02:47, 02:63, 02:102, 02:115, 02:154-02:155, 02:172, 02:179, 02:186, 02:209, 02:229, 02:232, 02:271, 02:286, 02:320, 02:324, 02:337, 02:344, 02:359, 02:373N, 02:376, 02:413, 02:421, 02:433, 02:484, 02:489, 02:492, 02:495-02:496, 02:507, 02:517, 02:531-02:532, 02:546, 02:572, 02:577, 02:591:01-02:591:02, 02:593, 02:601, 02:626, 02:636, 02:643N, 02:646, 02:655, 02:667, 02:670, 02:676, 02:709, 02:717, 02:731, 02:734, 02:766, 02:778, 02:790-02:791N, 02:799, 02:807N, 02:817-02:818, 02:826Q, 02:843, 02:867, 02:872, 02:881, 02:907, 02:922, 02:925, 02:951, 02:961, 02:963, 02:967, 02:990, 02:999N, 02:1019, 02:1025, 02:1048, 02:1059N, 02:1064Q, 02:1086, 02:1095\*02:32N |  |
| **11**  | 135 bp225 bp 350 bp | \*02:506N\*02:89:01\*02:04:01-02:04:02, 02:17:02:01-02:17:04, 02:57, 02:65, 02:108, 02:110, 02:152, 02:268, 02:300, 02:303, 02:334, 02:617, 02:657, 02:664, 02:680, 02:710N, 02:804, 02:890, 02:963, 02:985, 02:1054, 02:1072, 02:1092, 02:1094 | \*23:12, 24:28, 24:30, 24:42, 24:89, 24:309, 24:379, 29:19, 29:48, 29:74, 29:159, 32:08, 33:24, 33:184, 68:05, 68:20, 68:255, 74:06, 74:21, 74:39 |
| **14**  | 95 bp 170 bp | \*02:91, 02:322\*02:07:01:01-02:07:23, 02:15N, 02:18, 02:103, 02:112, 02:130, 02:191, 02:219, 02:255, 02:261, 02:265, 02:282, 02:319, 02:335, 02:369, 02:403, 02:426, 02:429, 02:432, 02:437Q, 02:449-02:452, 02:474, 02:477-02:478, 02:513, 02:541, 02:544, 02:566-02:567, 02:575, 02:583, 02:586, 02:622N, 02:652, 02:678, 02:721, 02:764, 02:771, 02:787, 02:822, 02:840, 02:855, 02:859, 02:897, 02:912, 02:918, 02:924, 02:935, 02:937, 02:941, 02:966, 02:973, 02:981, 02:1010, 02:1051, 02:1066-02:1067, 02:1075, 02:1098 | \*68:239 |
| **15** | 125 bp 265 bp 305 bp | \*02:21, 02:186, 02:587, 02:667, 02:764 \*02:87, 02:112, 02:129, 02:136, 02:571\*02:96 | \*23:01:13, 24:340, **B\*51:01:58, B\*53:01:10** |
| **16** | 110 bp 155 bp | \*02:50, 02:73, 02:93:01-02:93:02, 02:122, 02:156, 02:172, 02:279, 02:594, 02:631, 02:651, 02:932, 02:952, 02:1072\*02:09:01:01-02:09:01:04, 02:49:01-02:49:02, 02:597, 02:1013 | \*01:88:02-01:88:03, 01:236, 11:119:01-11:119:02, 11:209, 23:31, 23:45, 23:55, 24:15, 24:41, 24:51, 24:92, 24:235, 24:504, 24:557, 26:10, 32:28, 32:66, 32:158, 68:02:01:01-68:02:23, 68:15, 68:18N, 68:25, 68:27:01-68:28, 68:31, 68:34, 68:40, 68:44, 68:48-68:49N, 68:51, 68:53-68:54, 68:60-68:62, 68:64, 68:67, 68:74, 68:77-68:78, 68:80-68:82, 68:86, 68:92, 68:97, 68:110, 68:119:01-68:119:02, 68:124-68:125, 68:128, 68:138, 68:147, 68:153, 68:160, 68:163, 68:169-68:170, 68:174, 68:178, 68:184, 68:186-68:187, 68:193, 68:198, 68:201, 68:216N, 68:219, 68:225, 68:236N-68:237, 68:242, 68:250, 68:262, 68:272, 68:274-68:275, 68:278, 68:291-68:292N, 68:294, 68:299, 69:04, **B\*07:136:02, B\*40:323:02, B\*44:59:02, B\*44:136, B\*51:136, B\*53:60, C\*06:209:02, C\*07:204:01, C\*07:482, C\*12:37** |
| **17** | 205 bp 360 bp | \*02:83N\*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 | \*23:12, 24:28, 24:30, 24:42, 24:89, 24:309, 24:379 |
| **20** | 135 bp 170 bp260 bp295 bp320 bp | \*02:200\*02:229\*02:198\*02:49:01, 02:682-02:683, 02:848, 02:910\*02:672Q, 02:1041Q |  |
| **21** | 155 bp220 bp 255 bp | \*02:09:01:01-02:09:01:04, 02:49:01-02:49:02, 02:597, 02:1013\*02:15N, 02:356N\*02:291 |  |
| **23** | 140 bp 180 bp | \*02:31, 02:161, 02:360, 02:387\*02:17:02:01-02:17:04, 02:108, 02:110, 02:268, 02:300, 02:303, 02:617, 02:657, 02:680, 02:963, 02:1054 | \*24:94, 24:138, 24:188, 24:228, 24:293, 24:515 |
| **24** | 75 bp 110 bp 160 bp200 bp | \*02:230, 02:459\*02:27, 02:393, 02:541, 02:589, 02:592, 02:662, 02:682\*02:233:01\*02:227N | \*01:88:02-01:88:03, 01:236, 11:119:01-11:119:02, 24:59, 24:190, 24:210, 24:229, 24:285, 24:395, 24:503, 68:271, **C\*07:204:01, C\*07:482****\***24:219 |
| **25** | 135 bp 160 bp190 bp  | \*02:16, 02:131:01:01-02:131:03, 02:226N, 02:487, 02:560, 02:693\*02:283, 02:468:01N\*02:384  | \*24:55, 24:315, 24:374, 68:157, 68:171:02N, **B\*07:136:02, B\*40:323:02****\***24:02:70 |
| **26** | 125 bp 165 bp 260 bp305 bp | \*02:33\*02:52, 02:992\*02:198\*02:696:01N |  |
| **27**  | 95 bp 140 bp175 bp540 bp | \*02:28, 02:155, 02:185, 02:601\*02:10, 02:50, 02:52, 02:73, 02:93:01, 02:95, 02:110, 02:114, 02:117, 02:122, 02:156, 02:242, 02:244, 02:279, 02:282, 02:300, 02:304, 02:339, 02:407, 02:409, 02:449, 02:453, 02:527, 02:580, 02:582, 02:630-02:631, 02:651, 02:681, 02:743, 02:890, 02:932, 02:952, 02:985, 02:1072\*02:597\*02:28, 02:155, 02:185, 02:601, 02:705 | \*30:13, 30:16, 30:44, 30:46\*03:123:01-03:123:02, 03:171, 03:428, 03:442, 11:16, 11:35, 11:57, 11:73, 11:158, 24:131, 24:138, 24:188, 24:218, 24:515, 29:51, 29:73, 32:109, 68:01:01:01-68:11N, 68:13:01-68:48, 68:51-68:116, 68:118-68:119:02, 68:121:01-68:128, 68:130:01-68:130:02, 68:132-68:172, 68:175:01-68:199N, 68:201-68:204, 68:206-68:229, 68:231-68:243, 68:245N-68:282, 68:284-68:292N, 68:294-68:300\*68:126 |
| **29** | 220 bp 300 bp | \*02:45-02:46, 02:48, 02:56:01w-02:56:02w, 02:78w, 02:92, 02:103w, 02:129, 02:169w, 02:195w, 02:358, 02:369, 02:571, 02:829w, 02:1028w\*02:180 | \*11:199:02w-11:199:03w, 23:01:13, 24:340, 30:166w, 32:01:43w |
| **30** | 130 bp 160 bp210 bp | \*02:163, 02:583, 02:618Q \*02:43N, 02:104, 02:1055N\*02:608N | \*03:234Q |
| **31**  | 95 bp 220 bp | \*02:82N, 02:773N \*02:45, 02:56:01-02:56:02, 02:78, 02:103, 02:169, 02:195, 02:829, 02:1022 | \*23:08N\*11:199:02-11:199:03, 30:166, 32:01:43 |
| **32** | 85 bp120 bp205 bp 230 bp 255 bp | \*02:675N\*02:131:01:01-02:131:02, 02:691N, 02:820\*02:176\*02:46, 02:48, 02:70, 02:129, 02:571, 02:1050\*02:47, 02:479 | \*01:37:01:01-01:37:01:02, 03:360, 11:172, 23:01:13, 24:155N, 24:340, 24:438, 26:160, 29:75, 30:156, 30:170 |
| **33**  | 155 bp 195 bp240 bp | \*02:165, 02:168, 02:400, 02:420-02:421\*02:85, 02:757\*02:19, 02:36-02:37, 02:54, 02:255, 02:417, 02:696:01N, 02:723, 02:848, 02:883, 02:949 | \*25:08, 26:47, 66:18\*01:20, 01:66, 01:73, 01:130, 24:14:01:01-24:14:01:04, 24:52, 24:291, 24:324, 25:36, 25:65, 26:29, 26:49, 26:205, 66:10, 69:09, **B\*07:64, B\*15:12:01-15:12:03, B\*15:19, B\*15:270, B\*15:298, B\*15:304N, B\*15:649, C\*04:95N** |
| **34**  | 120 bp 170 bp | \*02:88N, 02:643N\*02:34-02:35:02, 02:56:01-02:56:02, 02:62, 02:78, 02:103, 02:395N, 02:580, 02:741, 02:907, 02:1095 | \*03:01:59, 11:199:02, 30:01:01:01-30:01:24, 30:08:01-30:08:02, 30:11:01-30:11:02, 30:14L-30:20, 30:23-30:24, 30:26, 30:30-30:31, 30:35-30:43, 30:48-30:49, 30:52-30:56, 30:58-30:60, 30:62-30:63, 30:65, 30:72-30:75, 30:78N-30:79, 30:81-30:83, 30:86-30:87, 30:89, 30:91-30:95, 30:97-30:98, 30:102, 30:104, 30:106, 30:109-30:116, 30:118, 30:120, 30:122-30:123N, 30:125-30:126, 30:128-30:132N, 30:134-30:138, 30:140-30:143, 30:145N, 30:147-30:148, 30:154, 30:159, 30:161, 30:163-30:165, 30:167-30:168, 30:170-30:173, 30:176, 30:178N-30:181, 30:183-30:187, 30:190-30:192, 30:194-30:197N, 30:199, 30:201-30:203, 30:205, 30:207, 30:209N, 68:01:11, 68:01:25, 68:02:07, 69:07, **C\*03:82** |
| **35** | 110 bp 155 bp | \*02:40:01-02:40:02, 02:51, 02:130\*02:77 | \*23:01:01:01-23:01:37, 23:02w, 23:04-23:23, 23:25-23:33, 23:35-23:56, 23:58-23:65, 23:67-23:68, 23:71-23:82, 23:84N-23:103N, 23:105-23:112, 23:114-23:127, 23:129, 24:24, 24:71, 24:315, 24:392, 24:527, 24:569, 29:101:01, 31:67-31:68, 32:28, 32:66, 32:158, 33:32:01, 68:51w, 68:168, **B\*40:323:02, B\*53:60** |
| **36** | 85 bp 445 bp | \*02:94N\*02:24:01-02:24:02, 02:65, 02:135, 02:137, 02:152, 02:309, 02:507, 02:901, 02:927, 02:1000 | \*01:104, 01:134, 01:229, 01:405, 03:09, 03:89:01-03:89:02, 03:108, 03:172, 03:198, 11:06, 11:18, 11:312, 25:11, 26:03:01:01-26:03:01:02, 26:03:03, 26:06, 26:21, 26:30, 26:36, 26:78, 26:92, 26:111, 26:146, 26:177, 26:193, 26:229, 29:19, 29:48, 29:74, 29:159, 30:13, 30:16, 30:44, 30:46, 30:127, 32:08, 33:24, 33:184, 74:06, 74:21, 74:39, 80:01:01:01w |
| **38** | 125 bp 225 bp | \*02:41, 02:80, 02:117, 02:289:01-02:289:02, 02:304, 02:454, 02:872\*02:351 | \*32:109, 68:262 |
| **39**  | 80 bp170 bp 250 bp300 bp | \*02:390\*02:18\*02:153:01-02:153:02, 02:159, 02:293Q, 02:439N, 02:912, 02:921:01-02:921:02\*02:170, 02:364 |  |
| **40**  | 100 bp 220 bp250 bp | \*02:52, 02:67, 02:404, 02:423, 02:855, 02:992\*02:40:01-02:40:02, 02:51, 02:130, 02:500Q \*02:153:01-02:153:02, 02:921:01-02:921:02 | \*30:47\*29:22, 31:99, 33:22, **B\*27:256** |
| **41**  | 85 bp185 bp | \*02:675N\*02:02:01:01-02:02:07, 02:05:01:01-02:05:13, 02:08:01-02:08:02, 02:14, 02:17:02:01-02:17:04, 02:47, 02:57-02:58, 02:63, 02:75, 02:102, 02:108, 02:110, 02:115, 02:154-02:155, 02:172, 02:179, 02:186, 02:209, 02:229, 02:232, 02:271, 02:286, 02:300, 02:303, 02:320, 02:324, 02:337, 02:344, 02:359, 02:373N, 02:376, 02:413, 02:421, 02:433, 02:484, 02:489, 02:492, 02:495-02:496, 02:507, 02:517, 02:527, 02:531-02:532, 02:546, 02:572, 02:577, 02:591:01-02:591:02, 02:593, 02:601, 02:617, 02:626, 02:631, 02:636, 02:643N, 02:646, 02:655, 02:657, 02:667, 02:670, 02:676, 02:680, 02:709, 02:717, 02:731, 02:766, 02:778, 02:790-02:791N, 02:799, 02:807N, 02:817-02:818, 02:826Q, 02:843, 02:867, 02:872, 02:881, 02:907, 02:922, 02:925, 02:951, 02:961, 02:963, 02:967, 02:990, 02:999N, 02:1019-02:1020, 02:1025, 02:1048, 02:1054, 02:1059N, 02:1064Q, 02:1086, 02:1095 | \*24:94, 24:138, 24:188, 24:228, 24:293, 24:515, **B\*07:449, B\*15:343, C\*01:129, C\*04:363, C\*05:125, C\*06:325, C\*07:386, C\*07:700, C\*12:94, C\*14:48** |
| **42**  | 220 bp245 bp | \*02:143, 02:217:01-02:217:02, 02:419:01-02:419:02, 02:881\*02:34-02:35:03, 02:56:01-02:56:02, 02:62, 02:78, 02:103, 02:580, 02:741, 02:907, 02:1095 | \*11:199:03 |
| **43** | 180 bp 225 bp | \*02:71\*02:03:01:01-02:03:12, 02:22:01:01-02:22:02, 02:49:01-02:49:02, 02:104, 02:117, 02:136, 02:148, 02:191, 02:230, 02:253, 02:258, 02:264:01:01-02:264:01:02, 02:267, 02:281, 02:315, 02:323, 02:345, 02:355, 02:370, 02:382, 02:402, 02:412, 02:427, 02:431, 02:447, 02:463, 02:466, 02:480, 02:505, 02:529, 02:544, 02:557, 02:568, 02:582, 02:595, 02:612, 02:633-02:634, 02:641, 02:651, 02:666, 02:682-02:684, 02:711, 02:774-02:775N, 02:809, 02:833N, 02:838, 02:841, 02:849-02:850, 02:854, 02:860, 02:914, 02:929, 02:949, 02:971, 02:976-02:977, 02:979, 02:988, 02:997Q, 02:1000, 02:1002, 02:1014, 02:1068Q, 02:1070-02:1071, 02:1091 | \*26:22, 66:09, 68:83, 68:105:01:01-68:105:01:02, **B\*07:451, C\*02:74** |
| **44** | 125 bp 160 bp 200 bp | \*02:203\*02:59, 02:220, 02:513, 02:564, 02:602 \*02:222N, 02:342  | \*03:385, 25:79\*11:247 |
| **45** | 105 bp 160 bp185 bp270 bp | \*02:60:01-02:60:02, 02:254, 02:594, 02:1029\*02:391\*02:19, 02:39, 02:44, 02:79:01-02:79:02, 02:86:01-02:86:02, 02:400, 02:408, 02:436, 02:619:01-02:619:02, 02:856, 02:860, 02:901, 02:927, 02:948, 02:1084\*02:501N  | \*01:20, 01:66, 01:130, 03:95, 03:343, 11:288, 24:14:01:01-24:14:01:04, 24:93, 24:324, 24:570 |
| **46**  | 135 bp205 bp | \*02:66\*02:61 |  |
| **47** | 165 bp 205 bp 255 bp 305 bp | \*02:63\*02:144, 02:205\*02:35:01-02:35:03, 02:48, 02:78, 02:90, 02:331, 02:580, 02:741, 02:907, 02:941, 02:1095\*02:207 | \*11:199:02-11:199:03, 34:02:04, 68:01:32 |
| **48** | 115 bp185 bp | \*02:64:01-02:64:02, 02:177-02:178, 02:412, 02:676, 02:678\*02:210, 02:451 |  |
| **49** | 110 bp 165 bp | \*02:27, 02:267, 02:408, 02:476N, 02:590, 02:662, 02:682\*02:283  | \*01:88:02-01:88:03, 01:236, 11:119:01-11:119:02, 24:59, 24:190, 24:210, 24:229, 24:285, 24:395, 24:503, 68:230, 68:271, **C\*07:204:01, C\*07:482** |
| **54**  | 240 bp 310 bp350 bp | \*02:189-02:190, 02:438\*02:228\*02:74:01-02:74:02, 02:655, 02:783 |  |
| **55**  | 85 bp160 bp200 bp265 bp | \*02:343\*02:486\*02:01:83, 02:01:105, 02:01:107, 02:01:129, 02:01:138, 02:13, 02:26, 02:30:01-02:30:02, 02:40:01-02:40:02, 02:49:02, 02:51, 02:99:01-02:99:02, 02:130, 02:226N, 02:323, 02:393, 02:399, 02:402, 02:541, 02:547, 02:589, 02:592, 02:598, 02:619:01-02:619:02, 02:668, 02:693, 02:699, 02:701, 02:782, 02:801, 02:811:01-02:811:02, 02:838, 02:856, 02:859, 02:879N, 02:927, 02:1077, 02:1090, 02:1094\*02:313 | \*03:95, 03:343, 29:22, 31:99, 33:22, **B\*07:451, B\*08:204, B\*27:256, C\*02:74** |
| **56** | 150 bp180 bp 275 bp | \*02:175, 02:181\*02:173, 02:496\*02:53N, 02:81, 02:124, 02:829 | \*32:01:43 |
| **57**  | 105 bp 145 bp220 bp | \*02:42:01-02:42:02, 02:310, 02:528:01-02:528:02\*02:160, 02:175\*02:143, 02:217:01, 02:419:02 |  |
| **59** | 145 bp 200 bp | \*02:97:01-02:97:02\*02:305N, 02:608N |  |
| **63** | 60 bp95 bp 155 bp205 bp | \*02:25, 02:171:02\*02:259, 02:524:01-02:524:02 \*02:105, 02:301N\*02:490N, 02:516N, 02:540N, 02:605Q  | \*03:248, 25:19:01-25:19:02, 25:30, 26:43:01, 31:113, 34:02:01:01-34:02:01:08, 34:02:03-34:02:07, 34:04, 34:07-34:10N, 34:13, 34:15, 34:20-34:21, 34:24-34:26N, 34:28-34:30N, 66:06\*03:51:01-03:51:02, 23:60, 23:128, 30:37, 31:122, 32:46:01, **B\*44:03:47**\*03:269N, 31:60N, 31:126N, 32:132N, 33:213N |
| **64** | 125 bp 180 bp 235 bp260 bp | \*02:106, 02:145\*02:164:01-02:164:01, 02:221, 02:392, 02:564, 02:593 \*02:132\*02:187 | \*24:72\*01:44, 01:129, 03:44:01-03:44:02, 03:341, 03:385, 11:196, 11:201, 23:41, 24:245, 24:286, 25:16, 25:79, 25:84, 29:15, 29:108, 30:69, 30:162, 31:78, 31:183, 66:44 |
| **65** | 150 bp 185 bp 250 bp | \*02:160, 02:251, 02:391, 02:486\*02:107\*02:202:01, 02:437Q, 02:440Q, 02:500Q, 02:581Q |  |
| **66** | 170 bp200 bp | \*02:109, 02:434, 02:709\*02:30:01-02:30:02, 02:547, 02:598 |  |
| **67** | 100 bp 140 bp 180 bp 300 bp | \*02:91, 02:177, 02:322\*02:111, 02:407, 02:449, 02:460\*02:210, 02:330, 02:451, 02:679\*02:350N | \*68:239 |
| **68** | 210 bp 255 bp | \*02:113:01N-02:113:02N, 02:321N\*02:158, 02:184 | **B\*27:05:57** |
| **69** | 170 bp 225 bp 335 bp | \*02:114, 02:246, 02:279, 02:527, 02:582, 02:662, 02:927, 02:985, 02:1029\*02:260\*02:166, 02:1098 |  |
| **70** | 125 bp 180 bp 285 bp | \*02:115, 02:1096\*02:133, 02:367, 02:487\*02:53N, 02:192, 02:269, 02:433, 02:966 |  |
| **72** | 120 bp 230 bp 260 bp | \*02:183, 02:691N\*02:189\*02:19, 02:44, 02:118, 02:135, 02:149:01-02:149:02, 02:152, 02:190, 02:309, 02:402, 02:408, 02:417, 02:436, 02:438, 02:619:01-02:619:02, 02:723, 02:782, 02:804, 02:829, 02:838, 02:842, 02:906, 02:927, 02:948, 02:1002, 02:1084 | \*24:155N |
| **73**  | 80 bp 120 bp200 bp 255 bp | \*02:263\*02:380, 02:528:01-02:528:02, 02:553\*02:119\*02:146, 02:158, 02:644, 02:749 | \*03:52, 30:109, 31:19 |
| **74** | 175 bp 250 bp | \*02:120, 02:549, 02:984\*02:187, 02:223N  | **B\*15:10:07, B\*35:01:60, B\*51:01:34, B\*58:01:24, B\*78:01:02**\*24:597N |
| **75**  | 100 bp 160 bp200 bp | \*02:373N \*02:166, 02:437Q, 02:581Q, 02:1064Q , 02:1098\*02:121, 02:384, 02:425, 02:517, 02:562, 02:850, 02:937, 02:1092 | \*68:49N\*24:350\*23:47, 24:102, 24:234, 24:339, 24:347:02, 24:459:02, 24:566, 68:14, 68:81, 68:158, 68:264, **B\*53:60, C\*06:209:02, C\*12:37w, C\*14:132**  |
| **76** | 115 bp185 bp225 bp | \*02:68\*02:342, 02:392, 02:593\*02:50, 02:122, 02:143, 02:225N, 02:556, 02:984 | \*03:341, 11:247, 24:245 |
| **77** | 80 bp 115 bp260 bp455 bp | \*02:123, 02:295, 02:344\*02:162, 02:525N\*02:366N\*02:139 |  |
| **78** | 80 bp 130 bp 240 bp455 bp545 bp | \*02:03:12, 02:193\*02:84, 02:213, 02:495\*02:124, 02:978\*02:139\*02:01:14Q, 02:03:12 | \*68:01:59\*01:01:38L, 03:01:96, 11:01:98, 24:02:03Q, 30:02:25, 33:03:03Q, 34:01:06, 68:01:59 |
| **79** | 115 bp225 bp 270 bp | \*02:525N\*02:125N, 02:217:02, 02:419:01, 02:881\*02:53N, 02:146, 02:184, 02:192, 02:433, 02:644, 02:749, 02:966 | **B\*27:05:57** |
| **80** | 85 bp 135 bp 230 bp545 bp | \*02:03:12, 02:214\*02:194, 02:558\*02:126\*02:01:14Q, 02:03:12 | \*68:01:59\*01:01:38L, 03:01:96, 11:01:98, 24:02:03Q, 30:02:25, 33:03:03Q, 34:01:06, 68:01:59 |
| **81**  | 110 bp 235 bp 310 bp | \*02:183\*02:165, 02:400, 02:420-02:421 \*02:127, 02:167, 02:299, 02:477 |  |
| **82** | 225 bp 255 bp 295 bp390 bp | \*02:481\*02:291\*02:199\*02:514N |  |
| **83** | 125 bp205 bp250 bp | \*02:215, 02:429, 02:467, 02:1014\*02:85, 02:757\*02:237, 02:313, 02:440Q, 02:500Q, 02:809, 02:927 | \*03:95, 03:343 |
| **84**  | 125 bp180 bp 205 bp 245 bp | \*02:618Q\*02:133, 02:164:01-02:164:02, 02:173, 02:487, 02:496\*02:315, 02:1027\*02:250N, 02:348, 02:394 | \*03:234Q\*01:44, 03:44:01-03:44:02, 25:16, 29:108, 30:69, 31:183 |
| **85** | 170 bp215 bp 260 bp | \*02:314:01N, 02:376, 02:542, 02:622N\*02:481, 02:605Q\*02:134 | \*03:197:01N, 32:48N |
| **86** | 180 bp 255 bp 310 bp | \*02:06:31, 02:135, 02:309, 02:454\*02:174, 02:947\*02:228 |  |
| **87** | 110 bp150 bp 210 bp260 bp305 bp | \*02:380\*02:138, 02:181 \*02:284N\*02:394\*02:498 | \*03:52, 30:109, 31:19 |
| **88** | 135 bp 260 bp305 bp | \*02:188, 02:235\*02:366N\*02:498 | **B\*15:67, B\*15:343, B\*35:110, B\*58:77, C\*06:325, C\*07:386, C\*07:700, C\*12:94, C\*14:48** |
| **89**  | 120 bp155 bp 200 bp | \*02:140, 02:182, 02:821 \*02:324, 02:426, 02:468:01N-02:468:02N, 02:836, 02:999N\*02:227N, 02:562 | \*24:133, 26:99, 29:130, 31:48, 33:15\*24:02:70, 31:125\*24:102, 24:566 |
| **90** | 100 bp 130 bp 190 bp255 bp | \*02:72, 02:206, 02:275, 02:377, 02:641\*02:161\*02:141\*02:01:02:01-02:01:02:02, 02:01:207, 02:02:07, 02:05:07, 02:06:05, 02:06:09, 02:07:14, 02:50, 02:76:02, 02:99:02, 02:122, 02:243:03, 02:591:01, 02:666 | \*01:134, 01:229, 03:09, 03:89:02, 03:108, 03:172, 03:198, 03:330N, 11:06, 11:18, 11:312, 26:03:01:01-26:03:01:02, 26:03:03, 26:06, 26:21, 26:30, 26:78, 26:92, 26:177, 26:193, 26:227, 26:229, 29:19, 29:48, 29:159, 30:13, 30:16, 30:44, 30:46, 33:24, 33:184, 68:05, 68:15, 68:20, 68:255, 74:06, 74:21, 74:39, **C\*06:247** |
| **93** | 130 bp 245 bp 295 bp | \*02:163, 02:583\*02:147, 02:339, 02:348 \*02:157:01-02:157:02, 02:473 | \*03:170, 23:52, 23:128, 24:73, 24:157, 24:453, 31:120, 32:119, 66:32, **B\*15:173, B\*15:477, B\*18:63, B\*39:90** |
| **94**  | 110 bp150 bp175 bp210 bp 360 bp | \*02:325, 02:377, 02:641\*02:360\*02:597\*02:150:01\*02:197:01-02:197:02, 02:478, 02:494, 02:745, 02:783 |  |
| **95** | 135 bp235 bp | \*02:52, 02:105, 02:147, 02:151, 02:188, 02:339, 02:986, 02:992\*02:132 | \*68:06, **B\*07:449, B\*15:67, B\*15:343, B\*35:110, B\*44:497, B\*58:77, C\*01:129, C\*06:325, C\*07:386, C\*07:700, C\*12:94, C\*14:48** |

**4**The following HLA-A\*02 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |  |  |
| --- | --- | --- | --- |
| Alleles | Primer mix | Alleles | Primer mix |
| A\*02:01:83, 02:01:105, 02:01:107, 02:01:129, 02:01:138, 02:343, 02:399, 02:668, 02:699, 02:879N, 02:1077, 02:1090 | 55 | A\*02:140, 02:468:02N, 02:836 | 89 |
| A\*02:18, 02:912 | 39 | A\*02:141, 02:275 | 90 |
| A\*02:28, 02:409 | 27 | A\*02:145, 02:221  | 64 |
| A\*02:60:01-02:60:02, 02:254, 02:501:01N | 45 | A\*02:150:01, 02:197:01-02:197:02, 02:325, 02:745 | 94 |
| A\*02:70, 02:820 | 32 | A\*02:159, 02:293Q, 02:364, 02:390 | 39 |
| A\*02:96, 02:587 | 15 | A\*02:177, 02:210 | 67 |
| A\*02:97:01-02:97:02, 02:305N | 59 | A\*02:180, 02:358 | 29 |
| A\*02:107, 02:202:01, 02:251 | 65 | A\*02:193, 02:213, 02:978 | 78 |
| A\*02:111, 02:350N, 02:679 | 67 | A\*02:215, 02:237, 02:467 | 83 |
| A\*02:119, 02:263, 02:553 | 73 | A\*02:233:01, 02:459 | 24 |
| A\*02:120, 02:223N | 74 | A\*02:269, 02:367, 02:1096 | 70 |
| A\*02:134, 02:314:01N | 85 | A\*02:301N, 02:524:01-02:524:02 | 63 |
| A\*02:138, 02:284N | 87 |

Abbreviations

w: might be weakly amplified