Gel Documentation Form and Worksheet

HLA-B\*48 (101.546-06/06u) Lot No: 8E2 Expiry Date: 2019-07-01

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sample ID:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DNA Conc.(ng/ul):\_\_\_\_\_\_\_\_

Test Date: \_\_\_\_\_\_\_\_\_\_\_

Tested By: \_\_\_\_\_\_\_\_\_\_\_

Review Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Reviewed By:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Interpretation:\_\_\_\_\_\_\_\_\_\_\_ Failed lanes: \_\_\_\_\_\_\_\_\_\_\_ Comments:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

**Gel Picture**

|  |
| --- |
| PHOTO DOCUMENT |



‘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 8, 10 and 15 may have tendencies of unspecific amplifications.

Primer mix 9 has a tendency to giving rise to primer oligomer formation.

Primer mix 13 might faintly amplify the B\*13 alleles.

Primer mix 20 contains a negative control, which will amplify more than 95% 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 430 base pairs.















**1**HLA-B\*48 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**Primer mix 5: Specific PCR fragment of 230 bp in the B\*48:26 and the B\*07:197 and 27:36 alleles. Specific PCR fragment of 285 bp in the B\*48:03:01-48:03:02, 48:17, 48:23 and 48:40 and the B\*07:07, 07:12, 07:14, 07:18:01-07:18:02, 07:77, 07:137, 07:162-07:163, 07:193, 07:214, 07:248, 07:255, 15:138, 15:241, 15:297, 18:35, 18:110, 27:125, 38:63, 40:01:01-40:01:17, 40:01:19-40:01:48, 40:07, 40:10:01-40:10:02, 40:12, 40:14:01-40:14:03, 40:21-40:23, 40:25, 40:33, 40:36, 40:38, 40:42-40:43, 40:46-40:49, 40:52, 40:54-40:55, 40:59-40:63, 40:65-40:67, 40:69, 40:72:01-40:74, 40:76-40:77, 40:79, 40:81, 40:84, 40:87:01-40:88, 40:100-40:102, 40:106, 40:108, 40:112-40:114:02, 40:116-40:118N, 40:121, 40:123, 40:125-40:126, 40:128, 40:132, 40:134-40:141, 40:146-40:147, 40:149-40:156, 40:158, 40:160:01-40:160:02, 40:166, 40:168, 40:170-40:172, 40:175, 40:179, 40:182-40:183, 40:185-40:188, 40:191-40:199, 40:204, 40:207-40:208, 40:210, 40:212-40:213, 40:215-40:218, 40:221-40:223, 40:227-40:228, 40:231, 40:234-40:242, 40:245, 40:247, 40:249-40:253, 40:257-40:265N, 40:272-40:273, 40:277-40:282, 40:285-40:286N, 40:288, 40:299-40:301, 40:308, 40:310, 40:312, 40:315, 40:319, 40:321, 40:323-40:329, 40:332-40:333, 40:338N-40:339, 40:344, 41:08, 44:31, 44:150 and 46:06 and in the C\*02:23, C\*03:260, C\*04:77 and C\*07:38:01-07:38:02 alleles. Specific PCR fragment of 230 bp and 285 bp in the B\*15:230 and 40:124:01-40:124:02 alleles.

Primer mix 6: Specific PCR fragment of 90 bp in the B\*48:20 allele. Specific PCR fragment of 170 bp in the B\*48:05 allele. Specific PCR fragment of 285 bp in the B\*48:21 and 48:26 and the B\*07:197 and 27:36 alleles.

Primer mix 8: Specific PCR fragment of 85 bp in the B\*48:16 allele. Specific PCR fragment of 225 bp in the B\*48:07 and 48:17 and the B\*07:78, 07:115, 07:214, 38:63, 40:36, 40:48, 40:77 and 40:280 and in the C\*04:77 alleles.

Primer mix 9: Specific PCR fragment of 75 bp in the B\*48:27 and the B\*08:77 alleles. Specific PCR fragment of 215 bp in the B\*48:05, 48:08, 48:19 and 48:24 and the B\*07:02:01-07:02:25, 07:02:27-07:02:38, 07:02:40-07:03, 07:05:01:01-07:06:02, 07:08-07:11, 07:13, 07:15-07:17, 07:20-07:24, 07:27-07:33:03, 07:35-07:42, 07:44N, 07:46-07:47, 07:49N-07:51, 07:53-07:65, 07:67N-07:73, 07:75-07:76, 07:79, 07:81-07:83, 07:85-07:130, 07:132-07:134, 07:136:01-07:136:02, 07:138-07:145, 07:148-07:161N, 07:165-07:177, 07:179-07:192, 07:194-07:195, 07:199-07:208, 07:210-07:213, 07:215-07:222, 07:224, 07:228-07:234, 07:236-07:238, 07:240-07:247, 07:249-07:254, 07:256-07:270, 07:272N-07:281, 07:283, 08:20, 08:40, 08:70, 08:79, 08:156, 15:07:01-15:07:03, 15:45, 15:68, 15:126, 15:207, 15:324, 15:331, 15:405, 35:66, 35:232, 37:07, 40:15-40:16, 40:32, 40:98 and 46:12 and in the C\*02:60 alleles. Specific PCR fragment of 75 and 215 bp in the 07:74 allele.

Primer mix 12: Specific PCR fragment of 110 bp in the B\*48:22 and 48:30 and the B\*07:143, 13:23, 13:55, 15:71, 15:175, 15:204, 15:225, 15:344, 15:381, 18:01:01:01-18:01:12, 18:01:14-18:03, 18:05-18:15, 18:17N-18:24, 18:26-18:42, 18:44:01-18:72:01, 18:73-18-18:87, 18:89-18:101, 18:103-18:106, 18:108-18:123, 18:126-18:127, 18:129-18:130, 27:75, 35:50, 35:84, 35:162, 35:231, 35:280, 35:323, 37:01:01-37:01:06, 37:01:08-37:54, 37:56-37:61, 40:83, 40:185, 40:209, 40:248, 42:02:01:01-42:02:01:02, 42:09, 42:17-42:18, 46:14, 49:03, 51:116, 51:151, 52:51, 57:39, 57:73, 58:41 and 73:01-73:02 alleles. Specific PCR fragment of 135 bp in the B\*48:23 and the B\*15:116, 15:124, 40:52, 40:59, 46:06, 46:43, 57:59 and 58:05 and in the C\*07:123, 07:173 and 07:294 alleles. Specific PCR fragment of 110 bp and 135 bp in the B\*18:88 allele.

Primer mix 14: Specific PCR fragment of 100 bp in the B\*48:09 and 48:14 and the B\*07:09, 07:11, 07:17, 07:237, 08:28, 08:35, 08:37, 15:07:01-15:07:03, 15:55, 15:68, 15:126, 15:197:02, 15:207, 15:331, 15:360, 15:383, 15:405, 18:14, 35:05:01-35:05:03, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 35:114, 35:232, 40:03, 40:105, 40:267, 40:284, 41:24, 42:09, 46:12, 53:14 and 58:18 and in the C\*02:60, C\*07:294, 07:526 and 07:530 alleles. Specific PCR fragment of 250 bp in the B\*48:11 allele.

Primer mix 15: Specific PCR fragment of 140 bp in the B\*48:12, 48:14 and 48:29 and the B\*07:68:01-07:68:03, 07:100, 07:237, 07:262, 08:71, 14:05, 14:13, 14:53, 15:07:01-15:07:03, 15:45, 15:55, 15:68, 15:126, 15:197:02, 15:207, 15:324, 15:329, 15:331, 15:360, 15:383, 15:405, 18:14, 27:32, 27:138, 35:05:01-35:05:03, 35:22, 35:51, 35:58, 35:66, 35:72, 35:89, 35:97, 35:199, 35:232, 39:03, 39:14, 39:24:01-39:24:02, 39:29, 39:37, 39:76, 39:120, 40:35:01-40:35:02, 40:71, 41:24, 42:10, 42:17, 44:54, 44:106, 44:135, 44:158, 44:184, 44:213, 46:12, 51:64, 53:14 and 58:18 alleles. Specific PCR fragment of 435 bp in the B\*48:18 and the B\*07:36, 07:38, 07:81, 07:180, 07:219, 08:03, 08:52, 08:78, 38:01:01-38:01:12, 38:05-38:07, 38:09-38:14, 38:16, 38:20-38:22, 38:24-38:28, 38:30-38:34N, 38:36-38:42, 38:51-38:61, 38:63, 38:65, 40:19?, 40:109?, 40:117?, 40:292?, 40:340?, 41:46, 44:18, 49:01:01-49:01:08, 49:03-49:14 and 49:16-49:46 alleles. Specific PCR fragment of 140 bp and 435 bp in the B\*38:19 allele.

**4**The B\*48 primer set cannot separate the B\*48:10 and the B\*39:13:02 and 42:11 alleles. These alleles can be distinguished by the HLA-B low resolution and/or HLA-B\*39 and HLA-B\*42 kits.

**5**The following HLA-B\*48 alleles can be distinguished by the different sizes of the HLA-specific PCR product:

|  |  |
| --- | --- |
| **Alleles** | **Primer mix** |
| B\*48:09, 48:11 | 14 |
| B\*48:18, 48:29 | 15 |
| B\*48:19, 48:27 | 9 |

The B\*48 primer set cannot separate the silent mutations in the B\*48:01:01- 48:01:06, the B\*48:02:01-48:02:03, the B\*48:03:01-48:03:02 or the B\*48:04:01-48:04:02 alleles.

‘w’, may be weakly amplified.

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