Claim 1

A primer set for polymerase chain reaction (PCR) for amplification of bacterial DNA, which comprises one primer pair obtained by selecting from the following Group S1:

Group S1:

1-7: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 15 and a reverse primer consisting of any one sequence of SEQ ID: No. 16 to 27.

Claim 2

A primer set according to claim 1, which comprises at least one primer pair of six primer pairs obtained by selecting one primer pair from each group of the following S2 to S7 groups, in addition to one primer selected from the Group S1:

Group S2:

2-1A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 28 and a reverse primer consisting of any one sequence of SEQ ID: No. 45 and 47 to 50;

2-2: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 29 and a reverse primer consisting of any one sequence of SEQ ID: No. 44, 45, 47, 48 and 50;

2-3: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 30 and a reverse primer consisting of any one sequence of SEQ ID: No. 45 and 47 to 50;

2-4: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 31 and a reverse primer consisting of any one sequence of SEQ ID: No. 46 and 47;

2-5: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 32 and a reverse primer consisting of any one sequence of SEQ ID: No. 45 and 47 to 49;

2-6A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 33 and a reverse primer consisting of any one sequence of SEQ ID: No. 44, 45 and 47 to 50;

2-7A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 34 and a reverse primer consisting of any one sequence of SEQ ID: No. 45, 47 and 48;

2-8A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 35 and a reverse primer consisting of any one sequence of SEQ ID: No. 44, 45, 48 and 49;

2-9A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 36 and a reverse primer consisting of any one sequence of SEQ ID: No. 44, 45, 48 and 49;

2-10A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 37 and a reverse primer consisting of any one sequence of SEQ ID: No. 45 and 47 to 50;

2-11: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 38 and a reverse primer consisting of any one sequence of SEQ ID: No. 44 to 50;

2-12A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 39 and a reverse primer consisting of any one sequence of SEQ ID: No. 44 to 48 and 50;

2-13: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 40 and a reverse primer consisting of any one sequence of SEQ ID: No. 44 to 50;

2-14A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 41 and a reverse primer consisting of any one sequence of SEQ ID: No. 45 and 46;

2-15A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 42 and a reverse primer consisting of any one sequence of SEQ ID: No. 48 and 49; or

2-16A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 43 and a reverse primer consisting of any one sequence of SEQ ID: No. 44, 46 to 48 and 50;

Group S3:

a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 51 and a reverse primer consisting of a sequence of SEQ ID: No. 52;

Group S4:

4-1: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 53 and a reverse primer consisting of any one sequence of SEQ ID: No. 57 to 61;

4-2: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 54 and a reverse primer consisting of any one sequence of SEQ ID: No. 59 and 61;

4-3: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 55 and a reverse primer consisting of any one sequence of SEQ ID: No. 57 to 59 and 61; or

4-4: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 56 and a reverse primer consisting of any one sequence of SEQ ID: No. 57 to 59 and 61;

Group S5:

5-1A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 62 and a reverse primer consisting of any one sequence of SEQ ID: No. 70, 73 to 75;

5-2: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 63 and a reverse primer consisting of any one sequence of SEQ ID: No. 70 to 75;

5-3: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 64 and a reverse primer consisting of any one sequence of SEQ ID: No. 70 to 75;

5-4: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 65 and a reverse primer consisting of any one sequence of SEQ ID: No. 70 to 75;

5-5A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 66 and a reverse primer consisting of any one sequence of SEQ ID: No. 70, 72, 73 and 75;

5-6A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 67 and a reverse primer consisting of any one sequence of SEQ ID: No. 70, 71 and 73 to 75;

5-7: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 68 and a reverse primer consisting of any one sequence of SEQ ID: No. 70 to 75; or

5-8: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 69 and a reverse primer consisting of any one sequence of SEQ ID: No. 70 to 75;

Group S6:

6-1A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 76 and a reverse primer consisting of any one sequence of SEQ ID: No. 93, 96 and 101 to 103;

6-2: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 77 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 96 and 101 to 103;

6-3: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 78 and a reverse primer consisting of any one sequence of SEQ ID: No. 91 and 101 to 103;

6-4A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 79 and a reverse primer consisting of any one sequence of SEQ ID: No. 91 and 101 to 103;

6-5: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 80 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 93 and 100 to 103;

6-6: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 81 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 93 and 101 to 103;

6-7: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 82 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 96, 97 and 101 to 103;

6-8: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 83 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 101 to 103;

6-9: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 84 and a reverse primer consisting of any one sequence of SEQ ID: No. 91 and 101 to 103;

6-10: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 85 and a reverse primer consisting of any one sequence of SEQ ID: No. 91 and 101 to 103;

6-11A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 86 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 93 and 101 to 103;

6-12: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 87 and a reverse primer consisting of any one sequence of SEQ ID: Nos. 91, 96 and 101 to 103;

6-13: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 88 and a revers primer consisting of any one sequence of SEQ ID: No. 91 and 101 to 103;

6-14: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 89 and a reverse primer consisting of any one sequence of SEQ ID: No. 91 and 101 to 103; or

6-15: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 90 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 92, 96 and 101 to 103;

Group S7:

7-1A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 104 and a reverse primer consisting of any one sequence of SEQ ID: No. 5 and 118 to 125, 127, 128, 130 and 131;

7-2A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 105 and a reverse primer consisting of any one sequence of SEQ ID: No. 5 and 118 to 125;

7-3A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 106 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 116 and 118 to 131;

7-4A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 107 and a reverse primer consisting of any one sequence of SEQ ID: No. 120 and 121;

7-5A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 108 and a reverse primer consisting of any one sequence of SEQ ID: No. 120 and 123;

7-6A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 109 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 118 to 122, 124 and 126;

7-7A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 110 and a reverse primer consisting of any one sequence of SEQ ID: No. 118, 120, 121, 124 and 126 to 130;

7-8A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 111 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 118 to 131;

7-9A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 112 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 116, and 118 to 125;

7-10A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 113 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5, 118 to 126, 130 and 131;

7-11A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 114 and a reverse primer consisting of a sequence of SEQ ID: No. 5; or

7-12A: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 115 and a reverse primer consisting of any one sequence of SEQ ID: No. 2 and 5.

Claim 3

A primer set according to claim 2, wherein one primer pair obtained by selecting form the Group S1 is the following primer pair 1) and six primer pairs obtained by selecting one primer pair from each group of the S2 to S7 are the following six primer pairs 2) to 7):

1) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 15 and a reverse primer consisting of a sequence of SEQ ID: No. 16;

2) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 43 and a reverse primer consisting of a sequence of SEQ ID: No. 50;

3) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 51 and a reverse primer consisting of a sequence of SEQ ID: No. 52;

4) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 53 and a reverse primer consisting of a sequence of SEQ ID: No. 57;

5) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 62 and a reverse primer consisting of a sequence of SEQ ID: No. 70;

6) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 81 and a reverse primer consisting of a sequence of SEQ ID: No. 103; and

7) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 115 and a reverse primer consisting of a sequence of SEQ ID: No. 5.

Claim 4

A primer set according to claim 3, comprising the following combination (A):

(A) primer pair 1), and at least 3 primer pairs selected form 2) to 7).

Claim 5

A primer set according to any one of claims 1 to 4 for detection of a bacterial species.

Claim 6

A primer set according to claim 4 for detection and/or identification of a bacterial species.

Claim 7

A primer set according to claim 2, comprising at least 3 primer pairs of the six primer pairs.

Claim 8

A kit for detection of a bacterial species, which comprises one primer pair obtained by selecting from the following Group K1:

Group K1:

1-7: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 15 and a reverse primer consisting of any one sequence of SEQ ID: No. 16 to 27.

Claim 9

A kit according to claim 8, which comprises at least one primer pair of six primer pairs obtained by selecting one primer pair from each group of the following K2 to K7 groups, in addition to one primer selected from the Group K1:
Group K2:

2-1: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 28 and a reverse primer consisting of any one sequence of SEQ ID: No. 44, 45 and 47 to 50;

2-2: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 29 and a reverse primer consisting of any one sequence of SEQ ID: No. 44, 45, 47, 48 and 50;

2-3: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 30 and a reverse primer consisting of any one sequence of SEQ ID: No. 45 and 47 to 50;

2-4: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 31 and a reverse primer consisting of any one sequence of SEQ ID: No. 46 and 47;

2-5: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 32 and a reverse primer consisting of any one sequence of SEQ ID: No. 45 and 47 to 49;

2-6: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 33 and a reverse primer consisting of any one sequence of SEQ ID: No. 44 to 50;

2-7: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 34 and a reverse primer consisting of any one sequence of SEQ ID: No. 45 to 50;

2-8: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 35 and a reverse primer consisting of any one sequence of SEQ ID: No. 44 to 50;

2-9: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 36 and a reverse primer consisting of any one sequence of SEQ ID: No. 44 to 46 and 48 to 50;

2-10: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 37 and a reverse primer consisting of any one sequence of SEQ ID: No. 45 to 50;

2-11: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 38 and a reverse primer consisting of any one sequence of SEQ ID: No. 44 to 50;

2-12: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 39 and a reverse primer consisting of any one sequence of SEQ ID: No. 44 to 50;

2-13: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 40 and a reverse primer consisting of any one sequence of SEQ ID: No. 44 to 50;

2-14: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 41 and a reverse primer consisting of any one sequence of SEQ ID: No. 44 to 50;

2-15: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 42 and a reverse primer consisting of any one sequence of SEQ ID: No. 44 to 50; or

2-16: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 43 and a reverse primer consisting of any one sequence of SEQ ID: No. 44 to 48 and 50;

Group K3:

a primer pair , which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 51 and a reverse primer consisting of a sequence of SEQ ID: No. 52;

Group K4:

4-1: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 53 and a reverse primer consisting of any one sequence of SEQ ID: No. 57 to 61;

4-2: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 54 and a reverse primer consisting of any one sequence of SEQ ID: No. 59 and 61;

4-3: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 55 and a reverse primer consisting of any one sequence of SEQ ID: No. 57 to 59 and 61; or

4-4: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 56 and a reverse primer consisting of any one sequence of SEQ ID: No. 57 to 59 and 61;

Group K5:

5-1: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 62 and a reverse primer consisting of any one sequence of SEQ ID: No. 70, 71 and 73 to 75;

5-2: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 63 and a reverse primer consisting of any one sequence of SEQ ID: No. 70 to 75;

5-3: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 64 and a reverse primer consisting of any one sequence of SEQ ID: No. 70 to 75;

5-4: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 65 and a reverse primer consisting of any one sequence of SEQ ID: No. 70 to 75;

5-5: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 66 and a reverse primer consisting of any one sequence of SEQ ID: No. 70 to 75;

5-6: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 67 and a reverse primer consisting of any one sequence of SEQ ID: No. 70 to 75;

5-7: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 68 and a reverse primer consisting of any one sequence of SEQ ID: No. 70 to 75; or

5-8: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 69 and a reverse primer consisting of any one sequence of SEQ ID: No. 70 to 75;

Group K6:

6-1: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 76 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 93, 96 and 101 to 103;

6-2: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 77 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 96 and 101 to 103;

6-3: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 78 and a reverse primer consisting of any one sequence of SEQ ID: No. 91 and 101 to 103;

6-4: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 79 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 97 and 101 to 103;

6-5: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 80 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 93 and 100 to 103;

6-6: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 81 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 93 and 101 to 103;

6-7: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 82 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 96, 97 and 101 to 103;

6-8: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 83 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 101 to 103;

6-9: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 84 and a reverse primer consisting of any one sequence of SEQ ID: No. 91 and 101 to 103;

6-10: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 85 and a reverse primer consisting of any one sequence of SEQ ID: No. 91 and 101 to 103;

6-11: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 86 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 93, 97 and 101 to 103;

6-12: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 87 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 96 and 101 to 103;

6-13: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 88 and a reverse primer consisting of any one sequence of SEQ ID: No. 91 and 101 to 103;

6-14: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 89 and a reverse primer consisting of any one sequence of SEQ ID: No. 91 and 101 to 103; or

6-15: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 90 and a reverse primer consisting of any one sequence of SEQ ID: No. 91, 92, 96 and 101 to 103;

Group K7:

7-1: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 104 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 116 to 131;

7-2: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 105 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 116 to 131;

7-3: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 106 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 116 to 131;

7-4: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 107 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 116 to 131;

7-5: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 108 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 116 to 131;

7-6: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 109 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 116 to 131;

7-7: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 110 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 116 to 131;

7-8: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 111 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 116 to 131;

7-9: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 112 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 116 to 131;

7-10: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 113 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 116 to 131;

7-11: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 114 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5 and 125; or

7-12: a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 115 and a reverse primer consisting of any one sequence of SEQ ID: No. 2, 5, 116, 118, 123 and 125 to 128.

Claim 10

A kit according to claim 9, wherein one primer pair obtained by selecting form the Group K1 is the following primer pair 1) and six primer pairs obtained by selecting one primer pair from each group of the K2 to K7 are the following six primer pairs 2) to 7):

1) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 15 and a reverse primer consisting of a sequence of SEQ ID: No. 16;

2) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 43 and a reverse primer consisting of a sequence of SEQ ID: No. 50;

3) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 51 and a reverse primer consisting of a sequence of SEQ ID: No. 52;

4) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 53 and a reverse primer consisting of a sequence of SEQ ID: No. 57;

5) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 62 and a reverse primer consisting of a sequence of SEQ ID: No. 70;

6) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 81 and a reverse primer consisting of a sequence of SEQ ID: No. 103; and

7) a primer pair, which consists of a combination of a forward primer consisting of a sequence of SEQ ID: No. 115 and a reverse primer consisting of a sequence of SEQ ID: No. 5.

Claim 11

A kit according to claim 10, comprising the following combination (A):

(A) primer pair 1), and at least 3 primer pairs selected form 2) to 7).

Claim 12

A kit according to claim 11 for detection and/or identification of a bacterial species.

Claim 13

A kit according to claim 9, which comprises at least three primer pairs of the six primer pairs.

Claim 14

A kit according to any one of claims 8 to 13, which further comprises an additional primer pair of a forward primer consisting of a sequence of SEQ ID: No. 1 and a reverse primer consisting of any one sequence of SEQ ID: No. 2 to 5.

Claim 15

A kit according to claim 14, wherein the additional primer pair consists of a forward primer consisting of a sequence of SEQ ID: No. 1 and a reverse primer consisting of a sequence of SEQ ID: No. 5.

Claim 16

A kit according to any one of claims 8 to 15, which further comprise an enzyme for PCR.

Claim 17

A kit according to claim 16, wherein the primers and the enzyme for PCR have, independently or as a whole, a contamination amount of bacterial nucleic acid of 10 fg or less than 10 fg.

Claim 18

A kit according to claim 16, which further comprises at least one of a pH buffer, dNTP, $MgCl_2$ and a vessel for measurement.

Claim 19

A kit according to claim 18, wherein the pH buffer, dNTP, $MgCl_2$ and the vessel for measurement have, independently or as a whole, a contamination amount of bacterial nucleic acid of 10 fg or less than 10 fg.

Claim 20

A kit according to of claim 19, wherein the primers, the enzyme for PCR, the pH buffer, dNTP, $MgCl_2$ and the vessel for measurement are individually packaged and the contamination amount of bacterial nucleic acid in each of the packages is 10 fg or less than 10 fg.

Claim 21

A kit according to of claim 16 or 17, which further comprises fluorochrome.

Claim 22

A kit for identification of a bacterial species according to claim 21, wherein the primer, the enzyme for PCR, the pH buffer, dNTP, the fluorochrome,

$MgCl_2$ and the vessel for measurement have, independently or as a whole, a contamination amount of bacterial nucleic acid of 10 fg or less than 10 fg.

Claim 23

A kit according to claim 22, wherein the primer, the enzyme for PCR, the pH buffer, dNTP, the fluorochrome, $MgCl_2$ and the vessel for measurement are individually packaged and the contamination amount of bacterial nucleic acid in each of the packages is 10 fg or less than 10 fg.

Claim 24

A kit according to claim 19, 20, 22 or 23, wherein the contamination amount of bacterial nucleic acid is reduced to 10 fg or less than 10fg by conducting any one of gamma ray treatment, an ultrafiltration and an EMA treatment.

Claim 25

A kit according to any one of claims 18 to 20 and 22 to 23, wherein dNTP is chemically modified for hot start PCR.

Claim 26

A kit according to any one of claims 16 to 25, wherein the enzyme for PCR is a Taq DNA Polymerase having an amount of bacterial DNA of less than 10 fg/μl.

Claim 27

A method of detection and/or identification of a bacterial species as a target in a sample, comprises

a step of conducting PCR using bacterial genome DNA prepared from the sample, primers to obtain amplification product comprising a target gene specific to the bacterial species as a target, a thermostable DNA polymerase, and

a step of detecting and/or identifying the bacterial species as a target in the sample by detecting the target gene in the amplification product by PCR, or analyzing the amplification product by PCR,

wherein, as the primers, the primer set according to any one of claim 1 to 7 or the kit according to any one of claims 8 to 26 is used.

Claim 28

A method of identification of a bacterial species according to claim 27, wherein a kit according to any one of claims 8 to 26 is used.