CLAIMS

1. A kit for multiplex detection of influenza A or influenza A and influenza B virus in a biological sample, the kit comprising a mixture of primers and probes said mixture comprising a set of oligonucleotides comprising at least one forward primer and at least one reverse primer and at least one probe, wherein the forward primer comprises the nucleotide sequence of SEQ ID NO:1, the reverse primer comprises the nucleotide sequence of SEQ ID NO:2 and the probe comprises the nucleotide sequence of SEQ ID NO:3, and further comprising one or more sets of oligonucleotides selected from the group comprising:
    a. a forward primer comprising the nucleotide sequence of SEQ ID NO: 4 and a reverse primer comprising the nucleotide sequence of SEQ ID NO: 5 and at least one probe comprising SEQ ID NO:6 to detect swine-origin H1N1;
    b. a forward primer comprising the nucleotide sequence of SEQ ID NO: 7 and a reverse primer comprising the nucleotide sequence of SEQ ID NO: 8 and at least one probe comprising SEQ ID NO:9 to detect swine-origin H1N1;
    c. a forward primer comprising the nucleotide sequence of SEQ ID NO: 10 and a reverse primer comprising the nucleotide sequence of SEQ ID NO: 11 and at least one probe comprising SEQ ID NO:12 to detect seasonal H1N1;
    d. a forward primer comprising the nucleotide sequence of SEQ ID NO: 13 and a reverse primer comprising the nucleotide sequence of SEQ ID NO: 14 and at least one probe comprising SEQ ID NO:15 to detect seasonal H3N2, and
    e. a forward primer comprising the nucleotide sequence of SEQ ID NO: 16 and a reverse primer comprising the nucleotide sequence selected from SEQ

ID NO: 17 and 18 and at least one probe comprising or consisting of SEQ ID NO:19 to detect influenza B.

2. The kit according to claim 1, wherein the kit comprises a mixture of primers and probes said mixture comprising the sets of oligonucleotides in a) or b), and d) to detect influenza A and influenza A virus subtypes swine-origin H1N1 and seasonal H3N2.

3. The kit according to claim 1, wherein the kit comprises a mixture of primers and probes said mixture comprising the sets of oligonucleotides in a) or b), c) and d) to detect influenza A and influenza A virus subtypes swine-origin H1N1, seasonal H1N1, and seasonal H3N2.

4. The kit according to claim 1, wherein the kit comprises a mixture of primers and probes said mixture comprising the sets of oligonucleotides in a) or b), d) and e) to detect influenza A and influenza A virus subtypes swine-origin H1N1, seasonal H3N2 and influenza B.

5. The kit according to claim 1, wherein the kit comprises a mixture of primers and probes said mixture comprising the sets of oligonucleotides in b), d) and e) to detect influenza A and influenza A virus subtypes swine-origin H1N1, seasonal H3N2 and influenza B.

6. The kit according to claim 1, wherein the kit comprises a mixture of primers and probes said mixture comprising the sets of oligonucleotides in a) or b), and c) to e) to detect influenza A and influenza A virus subtypes swine-origin H1N1, seasonal H1N1, seasonal H3N2 and influenza B.

7. The kit according to claim 1, wherein the kit comprises a mixture of primers and probes said mixture comprising the sets of oligonucleotides in b) to e) to detect influenza A and influenza A virus subtypes swine-origin H1N1, seasonal H1N1, seasonal H3N2 and influenza B.

8. An in vitro method of detecting and/or quantitating the presence of influenza A in a biological sample, the method comprising the steps of:

(a) providing at least one biological sample;

(b) contacting a mixture of primers and probes as defined in any one of claims 1 to 3, with at least one nucleic acid in the biological sample, and/or with at least one nucleic acid extracted, purified and/or amplified from the biological sample; and

(c) detecting and/or quantitating any binding resulting from the contacting in step (b) whereby the virus is present when binding is detected.

9. An in vitro method of detecting and/or quantitating the presence of Influenza A and B virus in a biological sample, the method comprising the steps of:

(a) providing at least one biological sample;

(b) contacting a mixture of primers and probes according to any one of claims 1 and 4 to 7, with at least one nucleic acid in the biological sample, and/or with at least one nucleic acid extracted, purified and/or amplified from the biological sample; and

(c) detecting and/or quantitating any binding resulting from the contacting in step (b) whereby the virus is present when binding is detected.

10. The use of a mixture of primers and probes for multiplex detection of influenza A or influenza A and influenza B virus in a biological sample said mixture comprising a set of oligonucleotides comprising at least one forward primer and at least one reverse primer and at least one probe, wherein the forward primer comprises the nucleotide sequence of SEQ ID NO:1, the reverse primer comprises the nucleotide sequence of SEQ ID NO:2 and the probe comprises the nucleotide sequence of SEQ ID NO:3, and further comprising one or more sets of oligonucleotides selected from the group comprising:

f. a forward primer comprising the nucleotide sequence of SEQ ID NO: 4 and a reverse primer comprising the nucleotide sequence of SEQ ID NO: 5 and at least one probe comprising SEQ ID NO:6 to detect swine-origin H1N1;

g. a forward primer comprising the nucleotide sequence of SEQ ID NO: 7 and a reverse primer comprising the nucleotide sequence of SEQ ID NO: 8 and at least one probe comprising SEQ ID NO:9 to detect swine-origin H1N1;

h. a forward primer comprising the nucleotide sequence of SEQ ID NO: 10 and a reverse primer comprising the nucleotide sequence of SEQ ID NO: 11 and at least one probe comprising SEQ ID NO:12 to detect seasonal H1N1;

i. a forward primer comprising the nucleotide sequence of SEQ ID NO: 13 and a reverse primer comprising the nucleotide sequence of SEQ ID NO: 14 and at least one probe comprising SEQ ID NO:15 to detect seasonal H3N2, and

j. a forward primer comprising the nucleotide sequence of SEQ ID NO: 16 and a reverse primer comprising the nucleotide sequence selected from SEQ ID NO: 17 and 18 and at least one probe comprising or consisting of SEQ ID NO:19 to detect influenza B.