[0006] With the foregoing in mind, it is an object of the present invention to provide a nucleic acid molecule that can be used in detection and the like of influenza viruses.

Means for Solving Problems

[0007] In a first aspect, the present disclosure provides a nucleic acid molecule that binds to an influenza virus, the nucleic acid molecule comprising ~~at least one polynucleotide selected from the group consisting of the following polynucleotides (a) to (d):(a)~~ a polynucleotide that has ~~any of~~ a base sequences of SEQ ID NOs: ~~331 to 30;~~

~~(b) a polynucleotide that has a base sequence obtained by deletion, substitution, insertion, and/or addition of one or more bases in any of the base sequences of the polynucleotide (a) and binds to the influenza virus;~~

~~(c) a polynucleotide that has a base sequence with an identity of at least 80% to any of the base sequences of the polynucleotide (a) and binds to the influenza virus; and~~

~~(d) a polynucleotide that has a base sequence complementary to a polynucleotide hybridizing to any of the base sequences of the polynucleotide (a) under stringent conditions and binds to the influenza virus~~.

[0008] In a second aspect, the present disclosure also provides a binding agent that binds to an influenza virus, the binding agent comprising the nucleic acid molecule according to the present disclosure.

Effects of the Invention

[0009] The nucleic acid molecule according to the present invention can bind to influenza viruses, and thus can detect influenza viruses, for example. Therefore, the nucleic acid molecule according to the present invention can be a very useful tool for the detection of influenza viruses in the fields of clinical practice, animal husbandry, and the like, for example.

Brief Description of Drawings

[0010] [FIG. 1] FIG. 1 is a schematic view showing predicted secondary structures of polynucleotides in the present invention.

[FIG. 2] FIG. 2 is a schematic view showing predicted secondary structures of other polynucleotides in the present invention.

[FIG. 3] FIG. 3 is a schematic view showing predicted secondary structures of still other polynucleotides in the present invention.

[FIG. 4] FIG. 4 is a graph showing the binding ability of nucleic acid molecules to target proteins in Example A1 of the present invention.

[FIG. 5] FIG. 5 is a graph showing the binding ability of the nucleic acid molecules to antibodies in Example A1 of the present invention.

[FIG. 6] FIG. 6 is a graph showing the binding ability of nucleic acid molecules to target

CLAIMS

1. A nucleic acid molecule that binds to an influenza virus, the nucleic acid molecule comprising ~~at least one polynucleotide selected from the group consisting of the following polynucleotides (a) to (d):~~

~~(a)~~ a polynucleotide that has ~~any of~~a base sequences ~~of~~ of SEQ ID NO~~s~~: ~~1 to 30~~33;

~~(b) a polynucleotide that has a base sequence obtained by deletion, substitution, insertion, and/or addition of one or more bases in any of the base sequences of the polynucleotide (a) and binds to the influenza virus;~~

~~(c) a polynucleotide that has a base sequence with an identity of at least 80% to any of the base sequences of the polynucleotide (a) and binds to the influenza virus; and~~

~~(d) a polynucleotide that has a base sequence complementary to a polynucleotide hybridizing to any of the base sequences of the polynucleotide (a) under stringent conditions and binds to the influenza virus~~.

~~2. The nucleic acid molecule according to claim 1, comprising two or more polynucleotides selected from the polynucleotides (a) to (d).~~

~~3. The nucleic acid molecule according to claim 2, wherein the two or more polynucleotides are linked to each other via a linker.~~

~~4. The nucleic acid molecule according to claim 2 or 3, comprising two polynucleotides (RHA0006_s19) each having a base sequence of SEQ ID NO: 19 or two polynucleotides (RHA0002_s33) each having a base sequence of SEQ ID NO: 17, with the two polynucleotides being linked to each other via a linker.~~

~~5. The nucleic acid molecule according to claim 4, wherein the two polynucleotides linked to each other via the linker as a whole have a base sequence of SEQ ID NO: 31 or 45.~~

~~6~~2. The nucleic acid molecule according to any one of claim~~s~~ 1 ~~to 5~~, wherein the polynucleotide is DNA.

~~7~~3. A binding agent that binds to an influenza virus, the binding agent comprising the nucleic acid molecule according to ~~any one of~~ claim~~s~~ 1 or 2~~to 6~~.