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Claims

Claim 1

A polypeptide having a fluorescence property,
5 the polypeptide being defined in any one of (1) to (3)
below:

(1) A polypeptide having an amino acid sequence
represented by SEQ ID NO. 1 or NO. 2,

(2) A polypeptide having a sequence identity of 90% or
10 more with respect to the amino acid sequence represented by
SEQ ID NO. 1 or NO. 2 with the proviso that amino acids 69 and
70 in SEQ ID NO. 1 or NO. 2 are maintained without mutation,
and

(3) A polypeptide that has an amino acid sequence in which
15 at least one of amino acids 85, 151, and 176 of the amino acid
sequence represented by SEQ ID NO. 1 or NO. 2 has been replaced
with another amino acid(s) and which has a sequence identity of
90% or more with respect to the amino acid sequence represented by
SEQ ID NO. 1 or NO. 2, with the proviso that amino acids 69 and
20 70 in SEQ ID NO. 1 or NO. 2 are maintained without mutation.

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Claim 2

The polypeptide according to claim 1,

wherein

5 the polypeptide has a fluorescence quantum yield Φ of
0.4 or more.

Claim 3

A polynucleotide defined in any one of (1) to (3) below:

10 (1) A polynucleotide encoding a polypeptide having an
amino acid sequence represented by SEQ ID NO. 1 or NO. 2,

 (2) A polynucleotide encoding a polypeptide that has a
sequence identity of 90% or more with respect to the amino acid
sequence represented by SEQ ID NO. 1 or NO. 2 and that has a
15 fluorescence property with the proviso that amino acids 69 and
70 in SEQ ID NO. 1 or NO. 2 are maintained without mutation,
and

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(3) A polynucleotide encoding a polypeptide that has an amino acid sequence in which at least one of amino acids 85, 151, and 176 of the amino acid sequence represented by SEQ ID NO. 1 or NO. 2 has been replaced with another amino acid(s) and which has a sequence identity of 90% or more with respect to the amino acid sequence represented by SEQ ID NO. 1 or NO. 2 and that has a fluorescence property, with the proviso that amino acids 69 and 70 in SEQ ID NO. 1 or NO. 2 are maintained without mutation.

Claim 4

An expression cassette comprising:

- (a) an expression regulatory region functional in an expression host; and
- (b) a polynucleotide according to claim 3.

Claim 5

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a fusion polypeptide according to claim 8.

Claim 18

5 The polypeptide according to claim 1,
the polypeptide being defined in (1) or (2) below:

(1) A polypeptide having a sequence identity of 95% or more with respect to the amino acid sequence represented by SEQ ID NO. 1 or NO. 2, and

10 (2) A polypeptide that has an amino acid sequence in which two or three of amino acids 85, 151, and 176 of the amino acid sequence represented by SEQ ID NO. 1 or NO. 2 have been replaced with another amino acid(s) and which has a sequence identity of 90% or more with respect to the amino acid sequence
15 represented by SEQ ID NO. 1 or NO. 2, with the proviso that amino acids 69 and 70 in SEQ ID NO. 1 or NO. 2 are maintained without mutation.