5) detecting a substance to be detected that has bound to the protein that specifically binds to the substance in the fusion protein.

3. A method for detecting a substance in a biological sample, which comprises:

1) providing a carrier on which biotin is bound and providing a fusion protein between a protein that specifically binds to a substance to be detected and a biotin-binding protein;

2) binding the fusion protein to the carrier provided in step 1) through binding between biotin and the biotin-binding protein to produce a fusion protein-bound carrier;

3) putting a biotin-binding protein into contact with the fusion protein-bound carrier produced in step 2) to block the carrier;

4) after the blocking step in step 3), mixing

(a) a biological sample, and

(b-i) a cell homogenate extract prepared from cells of the same species as the host cells used for expressing the fusion protein in step 1), and a biotin-binding protein, or

(b-ii) a cell homogenate extract prepared from cells of the same species as the host cells used for expressing the fusion protein in step 1), and genetically engineered to express a biotin-binding protein,

and adding the mixture to the fusion protein-bound carrier; and

5) detecting a substance to be detected that has bound to the protein that specifically binds to the substance in the fusion protein.

4. The method according to claim 1 or 3, wherein step 3(b-i) in claim 1 or step 4(b-i) in claim 3 comprises adding a cell homogenate extract extracted from cells comprising ~~any~~ vector, as the cell homogenate extract,

wherein the vector is selected from

a) an empty vector of the same species as that of the vector used in expression of a protein that specifically binds to a substance to be detected or a fusion protein thereof and does not contain genes that encode these proteins~~,~~;

b) a vector ~~further containing~~comprising an empty vector of the same species as that of the vector used in expression of a protein that specifically binds to a substance to be detected or a fusion protein thereof and does not contain genes that encode these proteins, and

any nucleic acid ~~to the empty vector, or~~and;

c) an~~y~~ empty vector that is different from the vector used in expression of a protein that specifically binds to a substance to be detected or a fusion protein thereof.

5. The method according to any one of claims 1 to 4, wherein the biotin-binding protein is selected from the group consisting of:

(1) a protein comprising an amino acid selected from SEQ ID NO:5 or SEQ ID NO:7;

(2) a protein comprising an amino acid sharing an identity of 80% or more to an amino acid selected from SEQ ID NO:5 or SEQ ID NO:7;

(3) a protein encoded by a nucleic acid comprising a nucleotide sequence of SEQ ID NO:4 or SEQ ID NO:6; and

(4) a protein encoded by a nucleic acid comprising a nucleotide sequence sharing an identity of 80% or more to a nucleotide sequence of SEQ ID NO:4 or SEQ ID NO:6.

6. The method according to any one of claims 1 to 5, wherein the biological sample is selected from the group consisting of blood, serum, cerebrospinal fluid, saliva, sweat, urine, tear, lymph fluid, and mother's milk.