CLAIMS

1. A method for identifying an olfactory receptor for detecting a cancer in nematodes, comprising identifying the olfactory receptor by testing the reaction of a mutant nematode to a body fluid, cells, tissues, a culture of the cells or tissues, or a preservative solution of the cells or tissues,

wherein the mutant nematode has at least one modification selected from the group consisting of deletion of the olfactory receptor, inhibition of the expression or function of the olfactory receptor, and high expression or high-functionalization of the olfactory receptor,

wherein the body fluid, cells, tissues, culture, or preservative solution are from cancer patients, and

wherein, when the mutant nematode is not reactive to smell of the body fluid, cells, tissues, culture, or preservative solution, the olfactory receptor can be determined as a receptor to the smell.

2. The method of claim 1, wherein the mutant nematode is the mutant nematode in which expression of a gene encoding the olfactory receptor gene is inhibited.

3. The method of claim 2, wherein the expression of the gene is inhibited by RNAi.

4. The method of any one of claims 1 to 3, wherein the type of an olfactory receptor to be identified is different depending on the cancer types.

5. The method of any one of claims 1 to 4, wherein the nematode is *Caenorhabditis elegans.*

6. A method for preparing a mutant nematode, comprising identifying an olfactory receptor in nematodes by the method of any one of claims 1-5, modifying

nematodes with at least one modification selected from the group consisting of deletion of the olfactory receptor, inhibition of the expression or function of the olfactory receptor, and high expression or high-functionalization of the olfactory receptor, thereby preparing the mutant nematode.