

CLAIMS

1. A in vitro method of screening for colorectal cancer in a subject, the method comprising:
 - determining a methylation status for each of the following, in a subject's DNA sample:
 - (a) a methylation locus within gene ZNF132;
 - (b) a first methylation locus within gene ADAMTS2; and
 - (c) a second methylation locus within gene ADAMTS2; and
 - comparing the data obtained with reference values obtained from healthy individuals,
 - diagnosing colorectal cancer in the subject if a hyper-methylation of the loci is detected, as compared to the reference sample.
2. The method of claim 1 , further comprising determining a methylation status for each of the following, in a subject's DNA sample:
 - (d) a methylation locus within gene ZNF542; and
 - (e) a methylation locus within gene LONRF2.
3. The method of claims 1 to 2, further comprising determining a methylation status for a methylation locus within gene ZNF492 in a subject's DNA sample.
4. The method of claims 1 to 3, wherein the methylation locus within gene ZNF132 comprises ZNF132 '415 (SEQ ID NO: 40).
5. The method of claims 1 to 4, wherein the first methylation locus within gene ADAMTS2 comprises ADAMTS2 '254 (SEQ ID NO: 21).
6. The method of claims 1 to 5, wherein the second methylation locus within gene ADAMTS2 comprises ADAMTS2 '284 (SEQ ID NO: 22).
7. The method of claims 2 to 6, wherein the methylation locus within gene ZNF542 comprises ZNF542 '502 (SEQ ID NO: 35).
8. The method of claims 2 to 7, wherein the methylation locus within gene LONRF2 comprises LONRF2 '281 (SEQ ID NO: 19).

9. The method of claims 3 to 8, wherein the methylation locus within gene ZNF492 comprises ZNF492 '069 (SEQ ID NO: 42).

10. The method of any one of claims 1 to 9, wherein the DNA is isolated from blood or plasma of the human subject.

11. The method of claims 1 to 10, wherein the DNA is cell-free DNA of the human subject.

12. The method of claims 1 to 11, wherein methylation status is determined using quantitative polymerase chain reaction (qPCR).