

What is claimed is:

1. A method of diagnosing liver cancer in a subject, the method comprising determining in a sample obtained from the subject the gene expression level of all three marker genes selected from the group consisting of the tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) gene, the amphiregulin (AREG) gene and the GTPase IMAP family member 5 (GIMAP5) gene.
2. The method of claim 1, wherein the liver cancer is hepatocellular carcinoma (HCC).
3. The method of any of the preceding claims, wherein the subject is a human.
4. The method of claim 3, wherein the human does not show signs of HCC.
5. The method of any of the preceding claims, wherein the determined expression level is compared to a control sample.
6. The method of any of claims 3 to 5, comprising distinguishing a subject suffering from HCC from a subject suffering from Chronic Hepatitis B
7. The method of claim 6, wherein the HCC is Barcelona Clinic Liver Cancer (BCLC) stage A HCC.
8. The method of any of claims 3 to 7, wherein the human has liver cirrhosis.
9. The method of any of the preceding claims, wherein the sample comprises a blood cell or liver tissue.
10. The method of claim 9, wherein the blood cell is a leukocyte.
11. The method of any of the preceding claims, wherein determining the gene expression level is carried out using a nucleic acid amplification assay.
12. The method of claim 11, wherein the amplification assay is a quantitative PCR assay or a real time PCR assay.

13. A method of diagnosing liver cancer in a subject, the method comprising determining in the sample obtained from the subject the presence or amount of all three marker proteins selected from the group consisting of tumor necrosis factor, alpha-induced protein 3 (TNFAIP3, SwissProt accession number: P21580), amphiregulin (AREG, SwissProt accession number P15514) and GTPase IMAP family member 5 (GIMAP5, SwissProt accession number Q96F15).

14. A kit for the diagnosis of liver cancer by determining the expression level of all three markers genes selected from the group consisting of the tumor necrosis factor, alpha-induced protein 3 (TNFAIP3) gene, the amphiregulin (AREG) gene and the GTPase, IMAP family member 5 (GIMAP5) gene by a method as defined in any of claims 1-12, the kit containing only three kinds of one or more oligonucleotides, wherein each kind of the one or more oligonucleotides is complementary to one of the three marker gene nucleic acid molecules.

15. The kit of claim 14, wherein the oligonucleotides are oligonucleotide probes.

16. The kit of claim 15, wherein the oligonucleotides probes are amplification primers.

17. The kit of claim 16, wherein said amplification primers are suitable to amplify a marker nucleic acid molecule in an amplification step.

18. The kit of any of claims 14 to 17, wherein the oligonucleotides are up to about 30, about 60, or about 100 nucleotides in length.

19. The kit of any of claims 14 to claim 18, wherein said oligonucleotide probes are labelled.

20. The kit of claim 19, wherein the label is a radioactive, fluorescent, chemoluminescent, affinity, or enzymatic label.