4. The method of claim 1, further comprising comparing the sera between patients and healthy subjects to determine the level of auto-antibodies against the corresponding biomarker(s).

5. The method of claim 1, further comprising comparing different sera obtained from different patients at different stages to generate signature patterns for staging.

6. The method of claim 1, wherein the set of proteins comprises at least one of the amino acid sequences of SEQ ID NOS. 1 to 15.

7. The method of claim 1, wherein the plurality of tumor biomarkers comprises at least one of Bmi-1, VCCl, SUMO-4, RhoA, TXN, ET-1, UBE2C, HDGF2, FGF21, LECT2, SODl, STMN4, Midkine, IL-17A and IL26.

8. The method of claim 1, wherein the tumor cells comprises cells from hepatocellular carcinoma (HCC) tumor.

9. The method of claim 1, wherein each of the fluorescent microsphere beads has a unique fluorescent emission wavelength specific for each of the proteins corresponding to the presence of a specific tumor biomarker while the PE signal generated by the PE-conjugated secondary antibody bound to the protein-bead conjugate of each of the proteins for the specific tumor biomarker is an indicator of the presence of the auto-antibody so produced in patients' sera and the fluorescent intensity of the PE signal is proportional to the abundance of the specific tumor biomarker.

10. The method of claim 1, wherein each of the tumor biomarkers present in the auto-antibodies is as low as about 0.15 ng/mL.

11. A kit for diagnosing and staging liver cancers by detecting and quantifying auto-antibodies from patients against a plurality of tumor biomarkers, the kit comprising a set of proteins expressed from cDNA clones, purified and coupled to fluorescent microsphere beads with different emission wavelengths to form a protein-bead conjugate for immunologically binding the auto-antibodies and subsequently being targeted by PE-conjugated secondary antibody such that fluorescent signal and intensity are measured to determine level of auto-antibodies in the patients compared with normal subjects.

12. The kit of claim 11, wherein the set of proteins comprises at least one of the amino acid sequences of SEQ ID NOS. 1 to 15.

13. The kit of claim 11, wherein the tumor biomarkers comprises at least one of Bmi-1, VCC1, SUMO-4, RhoA, TXN, ET-1, UBE2C, HDGF2, FGF21, LECT2, SOD1, STMN4, Midkine, IL-17A and IL26.

14. The kit of claim 11, wherein each of the cDNA clones comprises a His tagged plasmid containing a corresponding cDNA insert of the protein to be expressed in a competent cell for being coupled to the fluorescent microsphere beads with different emission wavelengths in order to form the protein-bead conjugate for immunologically binding the auto-antibodies and subsequently being targeted by PE-conjugated secondary antibody.