THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. An isolated polypeptide consisting of the amino acid sequence of SEQ ID No.1.

2. The polypeptide according to claim 1, wherein one or more amino acid residues in the amino acid sequence of SEQ ID No.1 selected from the group consisting of Thr90, Ser231, Ser263, Tyr309 and a combination thereof are phosphorylated.

3. The polypeptide according to claim 2, wherein the Thr90 is phosphorylated.

4. Use of an antibody specific for the polypeptide of any one of claims 1-3 in the manufacture of a kit for determining the presence, stage and/or metastasis of a tumor by detecting the level of a polypeptide consisting of the amino acid sequence of SEQ ID No.1 in a plasma sample.

5. Use of an antibody specific for the polypeptide of any one of claims 1-3 in the manufacture of a kit for screening the presence of a tumor in a high-risk population by detecting the level of a polypeptide consisting of the amino acid sequence of SEQ ID No.1 in a plasma sample.

6. Use of an antibody specific for the polypeptide of any one of claims 1-3 in the manufacture of a kit for determining the prognosis of a patient having a tumor by detecting the level of a polypeptide consisting of the amino acid sequence of SEQ ID No.1 in a plasma sample.

7. Use of an antibody specific for the polypeptide of any one of claims 1-3 in the manufacture of a kit for determining the efficiency of a surgery, radiotherapy or chemotherapy treatment to a patient having a tumor and/or for determining when the treatment should be ceased by detecting the level of a polypeptide consisting of the amino acid sequence of SEQ ID No.1 in a plasma sample.

8. The use according to any one of claims 4-7, wherein the tumor is selected from the group consisting of lung cancer, liver cancer, gastric cancer, esophagus cancer, osteosarcoma, pancreatic cancer, lymphoma, colorectal cancer, breast cancer, prostate cancer, ovarian cancer, oral cancer, nasopharyngeal carcinoma, cervical carcinoma, leukemia, malignant melanoma, sarcoma, renal carcinoma, and cholangiocarcinoma.

9. The use according to any one of claims 4-8, wherein the antibody is a monoclonal antibody or an antigen binding fragment thereof.

10. The use according to claim 9, wherein the antigen-binding fragment is selected from the group consisting of scFv, Fab, Fab' and F(ab')2.

11. The use according to claim 9, wherein the antibody is MAb E9 or D10 produced by the cell line deposited under CGMCC No. 2903 or 2904, respectively.

12. The use according to any one of claims 4-8, wherein the antibody specifically binds to the polypeptide present in plasma.

13. The use according to any one of claims 4-8, wherein the antibody specifically binds to a phosphorylated form of the polypeptide, said phosphorylated form of the polypeptide containing one or more phosphorylated amino acid residues in the amino acid sequence corresponding to SEQ ID No.1 selected from the group consisting of Thr90, Ser231, Ser263, Tyr309 and a combination thereof.

14. The use according to claim 13, wherein the antibody specifically binds to the polypeptide which is phosphorylated at Thr90.

15. Use of an antibody specific for the polypeptide of any one of claims 1-3 in the manufacture of a pharmaceutical composition for preventing or treating cancer metastasis.

16. The use according to claim 15, wherein the antibody is a humanized antibody or an antigen binding fragment thereof.

17. The use according to claim 15 or claim 16, wherein the antibody specifically binds to a phosphorylated form of the polypeptide, said phosphorylated form of the polypeptide containing one or more phosphorylated amino acid residues in the amino acid sequence of SEQ ID No.1 selected from the group consisting of Thr90, Ser231, Ser263, Tyr309 and a combination thereof.

18. The use according to claim 17, wherein the antibody specifically binds to the polypeptide which is phosphorylated at Thr90.

19. The use according to claim 15, wherein the antibody is MAb E9 or D10 produced by the cell line deposited under CGMCC No. 2903 or 2904, respectively.

20. The use according to any one of claims 15-19, wherein the cancer is selected from the group consisting of lung cancer, liver cancer, gastric cancer, esophagus cancer, osteosarcoma, pancreatic cancer, lymphoma, colorectal cancer, breast cancer, prostate cancer, ovarian cancer, oral cancer, nasopharyngeal carcinoma, cervical carcinoma, leukemia, malignant melanoma, sarcoma, renal carcinoma, and cholangiocarcinoma.

We claim:

1. An isolated polypeptide comprising or consisting of the amino acid sequence of SEQ ID No.1.

2. The polypeptide according to claim 1, wherein one or more amino acid residues in the amino acid sequence of SEQ ID No.1 selected from the group consisting of Thr90, Ser231, Ser263, Tyr309 and a combination thereof are phosphorylated.

3. The polypeptide according to claim 2, wherein the Thr90 is phosphorylated.

4. Use of an agent capable of specifically binding to the polypeptide of anyone of claims 1-3 in manufacture of a kit for determining the presence, stage and/or metastasis of a tumor by detecting the level of a polypeptide comprising or consisting of the amino acid sequence of SEQ ID No.1 in a plasma sample.

5. Use of an agent capable of specifically binding to the polypeptide of anyone of claims 1-3 in manufacture of a kit for screening the presence of a tumor in a high-risk population by detecting the level of a polypeptide comprising or consisting of the amino acid sequence of SEQ ID No.1 in a plasma sample.

6. Use of an agent capable of specifically binding to the polypeptide of anyone of claims 1-3 in manufacture of a kit for determining the prognosis of a patient having a tumor by detecting the level of a polypeptide comprising or consisting of the amino acid sequence of SEQ ID No.1 in a plasma sample.

7. Use of an agent capable of specifically binding to the polypeptide of anyone of claims 1-3 in manufacture of a kit for determining the efficiency of a surgery, radiotherapy or chemotherapy treatment to a patient having a tumor and/or for determining when the treatment should be ceased by detecting the level of a polypeptide comprising or consisting of the amino acid sequence of SEQ ID No.1 in a plasma sample.

8. The use according to anyone of claims 4-7, wherein the tumor is selected from the group consisting of lung cancer, liver cancer, gastric cancer, esophagus cancer, osteosarcoma, pancreatic cancer, lymphoma, colorectal cancer, breast cancer, prostate cancer, ovarian cancer, oral cancer, nasopharyngeal carcinoma, cervical carcinoma, leukemia, malignant melanoma, sarcoma, renal carcinoma, and cholangiocarcinoma.

9. The use according to anyone of claims 4-8, wherein the agent is an antibody specific

~~for the polypeptide.~~

10. The use according to claim 9, wherein the antibody is a monoclonal antibody or an antigen binding fragment thereof.

11. The use according to claim 10, wherein the antigen-binding fragment is selected from the group consisting of scFv、Fab、Fab' and F(ab')2.

12. The use according to claim 10, wherein the antibody is MAb E9 or D10 produced by the cell line deposited under CGMCC No. 2903 or 2904, respectively.

13. The use according to claim 9, wherein the antibody specifically binds to the polypeptide present in plasma.

14. The use according to claim 9, wherein the antibody specifically binds to a phosphorylated form of the polypeptide, said phosphorylated form of the polypeptide contains one or more phosphorylated amino acid residues in the amino acid sequence corresponding to SEQ ID No.1 selected from the group consisting of Thr90, Ser231, Ser263, Tyr309 and a combination thereof.

15. The use according to claim 14, wherein the antibody specifically binds to the polypeptide which is phosphorylated at Thr90.

16. Use of an inhibitor of the polypeptide of anyone of claims 1-3 in manufacture of a pharmaceutical composition for preventing or treating cancer metastasis.

17. The use according to claim 16, wherein the inhibitor is an antibody specific for a polypeptide comprising or consisting of the amino acid sequence of SEQ ID No.1.

18. The use according to claim 17, wherein the antibody is a humanized antibody or an antigen binding fragment thereof.

19. The use according to claim 17, wherein the antibody specifically binds to a phosphorylated form of the polypeptide, said phosphorylated form of the polypeptide contains one or more phosphorylated amino acid residues in the amino acid sequence of SEQ ID No.1 selected from the group consisting of Thr90, Ser231, Ser263, Tyr309 and a combination thereof.

20. The use according to claim 19, wherein the antibody specifically binds to the polypeptide which is phosphorylated at Thr90.

21. The use according to claim 16, wherein the antibody is MAb E9 or D10 produced by ~~the cell line deposited under CGMCC No. 2903 or 2904, respectively.~~

~~22. The use according to anyone of claims 16-23, wherein the cancer is selected from the~~ group consisting of lung cancer, liver cancer, gastric cancer, esophagus cancer, osteosarcoma, pancreatic cancer, lymphoma, colorectal cancer, breast cancer, prostate cancer, ovarian cancer, oral cancer, nasopharyngeal carcinoma, cervical carcinoma, leukemia, malignant melanoma, sarcoma, renal carcinoma, and cholangiocarcinoma.

23. A method of inhibiting cancer invasiveness and metastasis, comprising the step of inhibiting the phosphorylation of intracellular Hsp90α in tumor cells.

24. The method according to claim 23, comprising the step of inhibiting the phosphorylation of Hsp90α at Thr90 in tumor cells.

25. The method according to claim 23 or 24, comprising the step of overexpressing a nucleic acid molecule encoding protein phosphatase 5 in tumor cells.

26. The method according to claim 25, wherein the overexpression of the nucleic acid molecule is achieved by gene introduction.

27. The method according to claim 25, wherein the protein phosphatase 5 comprising the ~~amino acid sequence of SEQ ID No.5.~~