CLAIMS

1. A peptide targeting c-Met or a derivative thereof, comprising the following formula I or formula II,

(R)-(X1)-(X2)-(X3)-(X4)-(X5)-(X6) Formula I

(Y1)-(Y2)-(Y3)-(Y4)-(A)-(N)-(Y5) Formula II

wherein, X1-X6 each independently represent any one amino acid or a derivative thereof;

Y1-Y5 each independently represent any one amino acid or a derivative thereof, and the formula II does not comprise the sequence (D)-(Q)-(I)-(I)-(A)-(N)-(N) of CM7-1; and

the peptide or derivative thereof has similar or better binding affinity to c-Met relative to CM7-1.

2. The peptide or derivative thereof according to claim 1, wherein X1 represents S, H or E, X2 represents P, I or D, X3 represents any one amino acid or a derivative thereof, X4 represents A, M or C, X5 represents N, C or P, and X6 represents any one amino acid or a derivative thereof;

Y1 represents any one amino acid or a derivative thereof, Y2 represents Q or A, Y3 represents I or A, Y4 represents I or A, Y5 represents N or A, and the formula II does not comprise (D)-(Q)-(I)-(I)-(A)-(N)-(N).

3. The peptide or derivative thereof according to claim 1 or 2, comprising any one sequence selected from SEQ ID NO:1, SEQ ID NOs:3-6, SEQ ID NO:8, SEQ ID NOs:9-144 and SEQ ID NOs:148-150.

4. The peptide or derivative thereof according to claim 1 or 2, wherein the peptide or derivative thereof comprises any one sequence selected from SEQ ID NO:1, SEQ ID NOs:3-6, SEQ ID NO:8, SEQ ID NOs:9-20, SEQ ID NO:22, SEQ ID NO:28, SEQ ID NO:35, SEQ

ID NO:40, SEQ ID NO:48, SEQ ID NO:64, SEQ ID NO:66, SEQ ID NO:70, SEQ ID NO:72, SEQ ID NOs:79-81, SEQ ID NOs:83-85, SEQ ID NO:90, SEQ ID NO:96, SEQ ID NO:105, SEQ ID NO:111, SEQ ID NO:123, SEQ ID NO:125, SEQ ID NO:135, SEQ ID NO:144 and SEQ ID NOs:148-150.

5. The peptide or derivative thereof according to claim 1, comprising the following formula I,

(R)-(X1)-(X2)-(X3)-(X4)-(X5)-(X6) Formula I

wherein,

X1 is S, X2 is P, X3-6 each independently represent any one amino acid or a derivative thereof, and the peptide or derivative thereof has similar or better binding affinity to c-Met relative to CM7-1.

6. The peptide or derivative thereof according to claim 5, wherein the peptide or derivative thereof comprises any one sequence selected from SEQ ID NOs:148-150.

7. The peptide or derivative thereof according to any one of claims 1-6, wherein compared with the peptide, the derivative comprises any one or more modifications selected from amino acid modification, conservative amino acid substitution and hydrogen substitution in amino acid residue.

8. A drug-peptide conjugate, comprising the peptide or derivative thereof according to any one of claims 1-7 and a drug,

preferably, wherein the peptide or derivative thereof is conjugated with a drug directly or by a linker,

preferably, wherein the drug is selected from at least one of cytotoxic agents,

preferably, wherein the cytotoxic agents comprise camptothecin, docetaxel and paclitaxel.

9. A pharmaceutical composition, comprising the peptide or derivative thereof according to any one of claims 1-7 or the drug-peptide conjugate according to claim 8, and a pharmaceutically acceptable carrier or salt thereof.

10. Use of the peptide or derivative thereof according to any one of claims 1-7 for increasing the water solubility of a drug, wherein the peptide or derivative thereof is conjugated with the drug directly or indirectly.

11. A method for increasing water solubility of a drug, comprising conjugating the peptide or derivative thereof according to any one of claims 1-7 with a drug directly or indirectly.

12. Use of the peptide or derivative thereof according to any one of claims 1-7, the drug-peptide conjugate according to claim 8, or the pharmaceutical composition according to claim 9, in the preparation of a medicament for detecting, preventing or treating a disease.

preferably, wherein the disease comprises cancers,

preferably, wherein the disease comprises solid tumors and/or hematological tumors,

preferably, wherein the disease comprises one or more of thyroid cancer, esophageal cancer, lung cancer, non-small cell lung cancer, gastric cancer, liver cancer, cholangiocarcinoma, kidney cancer, pancreatic cancer, bowel cancer, colorectal cancer, bladder cancer, prostate cancer, breast cancer, uterine cancer, endometrial cancer, ovarian cancer, cervical cancer, fallopian tube cancer, skin cancer, brain tumor, glioma, astrocytoma, melanoma, osteosarcoma, sarcoma, lymphoma, Hodgkin lymphoma, non-Hodgkin lymphoma, multiple myeloma, leukemia, acute lymphoblastic leukemia, chronic lymphoblastic leukemia, acute myeloid leukemia and chronic myeloid leukemia.