

CLAIMS

1. Use of a CD93/IGFBP7 blocking agent that specifically inhibits the IGFBP7/CD93 signaling pathway in the manufacture of a medicament for treating a tumor or cancer in a subject in need thereof.
2. The use of claim 1, wherein the CD93/IGFBP7 blocking agent blocks interaction between CD93 and IGFBP7.
3. The use of claim 2, wherein the CD93/IGFBP7 blocking agent comprises an anti-CD93 antibody specifically recognizing CD93.
4. The use of claim 3, wherein the anti-CD93 antibody also blocks interaction between CD93 and MMRN2 or wherein the anti-CD93 antibody does not block interaction between CD93 and MMRN2.
5. The use of claim 3, wherein the anti-CD93 antibody is a full length antibody, a single-chain Fv (scFv), a Fab, a Fab', a F(ab')₂, an Fv fragment, a disulfide stabilized Fv fragment (dsFv), a (dsFv)₂, a V_HH, a Fv-Fc fusion, a scFv-Fc fusion, a scFv-Fv fusion, a diabody, a tribody, or a tetrabody.
6. The use of claim 3, wherein the anti-CD93 antibody is comprised in a fusion protein.
7. The use of claim 2, wherein the CD93/IGFBP7 blocking agent comprises an anti-IGFBP7 antibody specifically recognizing IGFBP7.
8. The use of claim 7, wherein the anti-IGFBP7 antibody is a full length antibody, a single-chain Fv (scFv), a Fab, a Fab', a F(ab')₂, an Fv fragment, a disulfide stabilized Fv fragment (dsFv), a (dsFv)₂, a V_HH, a Fv-Fc fusion, a scFv-Fc fusion, a scFv-Fv fusion, a diabody, a tribody, or a tetrabody.
9. The use of claim 1, wherein a second agent is to be further administered to the subject.

10. The use of claim 9, wherein the second agent is an immune checkpoint inhibitor, a chemotherapeutic agent, an immune cell or an anti-angiogenesis inhibitor.
11. The use of claim 10, wherein the immune checkpoint inhibitor is an anti-PD1 antibody, an anti-PD-L1 antibody, an anti-CTLA4 antibody, or a combination thereof.
12. The use of claim 10, wherein the anti-angiogenesis inhibitor is an anti-VEGF inhibitor.
13. The use of claim 1, wherein the cancer is characterized by abnormal tumor vasculature.
14. The use of claim 1, wherein the cancer is characterized by high expression of CD93 or IGFBP7.
15. The use of claim 1, wherein the cancer is a solid tumor.
16. The use of claim 15, wherein the cancer is colorectal cancer, non-small cell lung cancer, glioblastoma, renal cell carcinoma, cervical cancer, ovarian cancer, fallopian tube cancer, peritoneal cancer, breast cancer, prostate cancer, bladder cancer, oral squamous cell carcinoma, head and neck squamous cell carcinoma, brain tumors, bone cancer, melanoma.
17. The use of claim 16, wherein the cancer is triple-negative breast cancer (TNBC).
18. The use of claim 17, wherein the cancer is enriched with blood vessels.
19. A method of determining whether a candidate agent is useful for treating cancer, comprising: determining whether the candidate agent disrupts the CD93/IGFBP7 interaction, wherein the candidate agent is useful for treating cancer if it is shown to specifically disrupt the CD93/IGFBP7 interaction.
20. An agent identified by the method of claim 19.

21. A non-naturally occurring polypeptide which is a variant inhibitory CD93 polypeptide comprising the extracellular domain of CD93, wherein the polypeptide blocks interaction between CD93 and IGFBP7.
22. A non-naturally occurring variant inhibitory IGFBP7 polypeptide comprising a variant of IGFBP7, wherein the polypeptide blocks interaction between CD93 and IGFBP7.
23. A pharmaceutical composition comprising the agent of claim 20, the non-naturally occurring polypeptide of claim 21, or the non-naturally occurring variant inhibitory IGFBP7 polypeptide of claim 22 and a pharmaceutically acceptable carrier and/or excipient.