acids 1-18), a transmembrane domain (amino acids 19-43), and an extensive extracellular domain (amino acids 44-750). PSMA is highly expressed in most prostate cancer cells, and PSMA is over-expressed in the malignant prostate tissues when compared to other organs in the human body such as kidney, proximal small intestine, and salivary glands. Unlike expression of prostate specific antigen (PSA), which is downregulated after androgen ablation, PSMA expression is significantly increased in both primary and metastatic tumor specimens (Kawakami et al., Wright et al.). PSMA is also highly expressed in secondary prostatic tumors and occult metastatic disease. PLUVICTO® (lutetium Lu 177 vipivotide tetraxetan) is an approved therapy for patients with mCRPC who have received prior Androgen Receptor (AR) pathway inhibitor (ARPI) and taxane-based chemotherapy. It targets PSMA-expressing cells with Lutetium-177 (177Lu), a beta particle-emitting radioligand. This treatment results in a 4-month overall survival benefit to a median of 15.3 months and thus there is ample room for further improvement. PLUVICTO® is now being explored in patients who have not been exposed to prior chemotherapy.

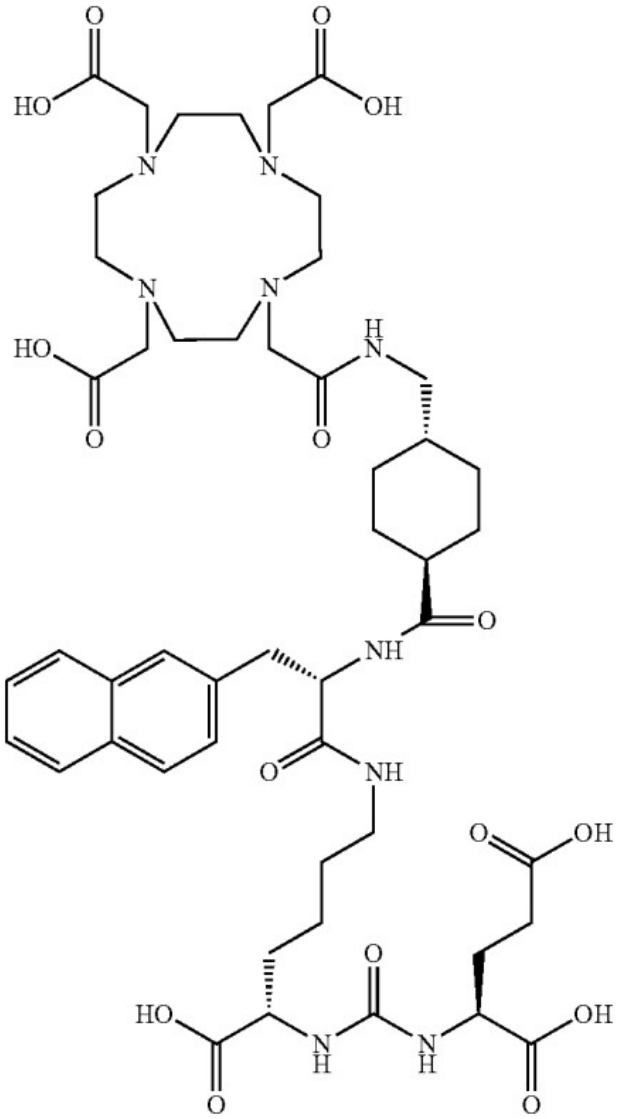
SUMMARY

[0009] The present disclosure provides a method of treating a patient having prostate cancer, comprising administering to the patient a pharmaceutical composition comprising an anti-STEAP1 antigen binding protein at a dose of about 0.1 mg to about 2.0 mg.

[0010] The present disclosure also provides an anti-STEAP1 antigen binding protein for use in treating prostate cancer, wherein the anti-STEAP1 antigen binding protein is formulated for administration at a dose of about 0.1 mg to about 2.0 mg.

[0011] The present disclosure also provides use of an anti-STEAP1 antigen binding protein for preparation of a medicament for treating prostate cancer, wherein the medicament is formulated for administration at a dose of about 0.1 mg to about 2.0 mg.

[0011a] In one aspect, there is provided a use of a use of an anti-STEAP1 antigen binding protein in the manufacture of a medicament for treating prostate cancer, wherein the medicament is formulated for administration at a dose of 0.1 mg to 2.0 mg, and wherein a dose of compound of formula 1 is to be further administered:



wherein the compound is complexed with a metal selected from the group consisting of ^{90}Y, ^{177}Lu, ^{64}Cu, ^{153}Gd, ^{155}Gd, ^{157}Gd, ^{213}Bi, and ^{225}Ac.

[0012] The present disclosure also provides use of an anti-STEAP1 antigen binding protein in the manufacture of a medicament for treating prostate cancer, wherein the medicament is formulated for administration at a dose of about 0.1 mg to about 2.0 mg, and is administered in combination with a dose of lutetium Lu 177 vipivotide tetraxetan. In an example, the anti-STEAP1 antigen binding protein is xaluritamig.

[0013] The present disclosure also provides an anti-STEAP1 antigen binding protein for use in the treatment of prostate cancer, wherein the anti-STEAP1 antigen binding protein is formulated for administration at a dose of about 0.1 mg to about 2.0 mg, and is administered in combination with a dose of lutetium Lu 177 vipivotide tetraxetan. In an example, the anti-STEAP1 antigen binding protein is xaluritamig.

[0014] The present disclosure also provides use of an anti-STEAP1 antigen binding protein in the manufacture of a medicament for treating prostate cancer, wherein the medicament is administered at a dose of about 0.1 mg to about 2.0 mg, and is administered in combination with a dose of lutetium Lu 177 vipivotide tetraxetan. In an example, the anti-STEAP1 antigen binding protein is xaluritamig.

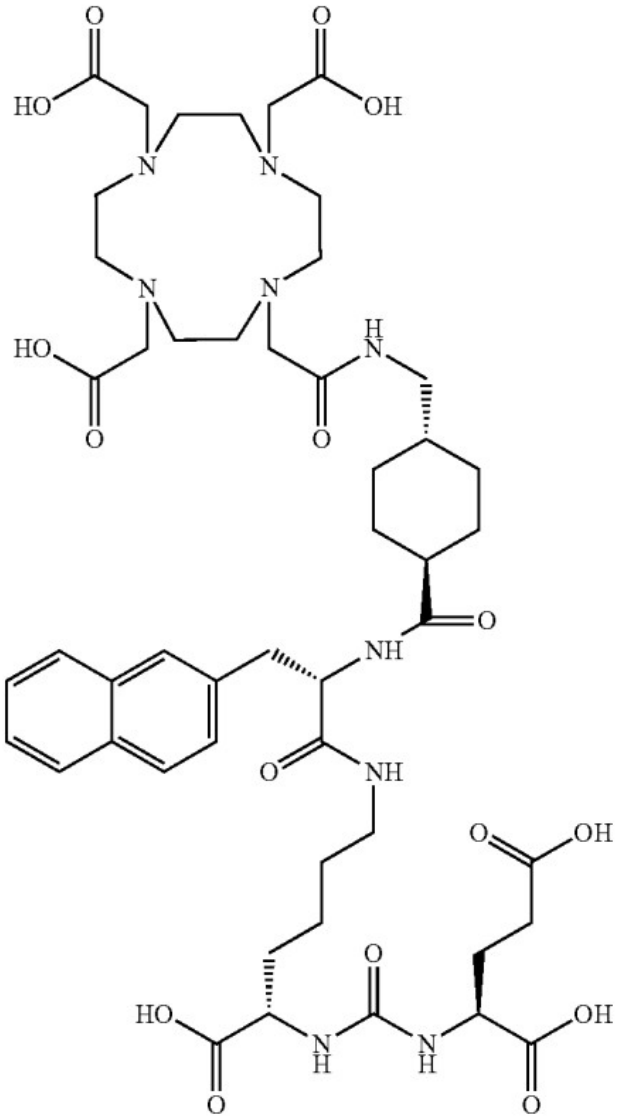
[0015] The present disclosure also provides an anti-STEAP1 antigen binding protein for use in the treatment of prostate cancer, wherein the anti-STEAP1 antigen binding protein is administered at a dose of about 0.1 mg to about 2.0 mg, and is administered in combination with a dose of lutetium Lu 177 vipivotide tetraxetan. In an example, the anti-STEAP1 antigen binding protein is xaluritamig.

[0016] The disclosure provides a method wherein an anti-STEAP1 antigen binding protein is administered according to a method of the present disclosure. The present disclosure also provides an anti-STEAP1 antigen binding protein for use in the treatment of prostate cancer, wherein the anti-STEAP1 antigen binding protein is formulated for administration according to a method of the present disclosure. In an example, the dose of the anti-STEAP antigen binding protein is about 0.1 mg to about 1.5 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.3 mg to about 1.3 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.5 mg to about 1 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.75 mg to about 1 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.1 mg, about 0.2 mg, about 0.3 mg, about 0.4 mg, about 0.5 mg, about 0.6 mg, about 0.7 mg, about 0.75 mg, about 0.8 mg, about 0.9 mg, about 1.0 mg, about 1.1 mg, about 1.2 mg, about 1.3 mg, about 1.4 mg, about 1.5 mg, about 1.6 mg, or about 1.7 mg. In an example, the dose of the anti-STEAP antigen binding protein is 0.1 mg, 0.2 mg, 0.3 mg, 0.4 mg, 0.5 mg, 0.6 mg, 0.7 mg, 0.75 mg, 0.8 mg, 0.9 mg, 1.0 mg, 1.1 mg, 1.2 mg, 1.3 mg, 1.4 mg, 1.5 mg, 1.6 mg, or 1.7 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.1 mg. In an example, the dose of the anti-STEAP antigen

binding protein is about 0.3 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.75 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 1 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 1.5 mg. In an example, the dose of the anti-STEAP antigen binding protein is 0.1 mg. In an example, the dose of the anti-STEAP antigen binding protein is 0.3 mg. In an example, the dose of the anti-STEAP antigen binding protein is 0.75 mg. In an example, the dose of the anti-STEAP antigen binding protein is 1 mg. In an example, the dose of the anti-STEAP antigen binding protein is 1.5 mg. In an example, the dose of the anti-STEAP antigen binding protein is administered once per one week. In an example, the dose of the anti-STEAP antigen binding protein is administered once per two weeks. In an example, the dose of the anti-STEAP antigen binding protein is administered once per three weeks. In an example, the dose of the anti-STEAP antigen binding protein is administered once per four weeks. In an example, the dose of the anti-STEAP antigen binding protein is administered by intravenous administration. In an example, the dose of the anti-STEAP antigen binding protein is administered once per week beginning in cycle one. In an example, the dose of the anti-STEAP antigen binding protein is administered once per week beginning in cycle two. In an example, the dose of the anti-STEAP antigen binding protein is administered once per two weeks beginning in cycle two. In an example, the dose of the anti-STEAP antigen binding protein is administered once per three weeks beginning in cycle two. In an example, the dose of the anti-STEAP antigen binding protein is administered once per four weeks beginning in cycle two. In an example, the dose of the anti-STEAP antigen binding protein is administered once per week for the first cycle, and then administered once per two weeks beginning on day one of cycle two. In an example, the dose of the anti-STEAP antigen binding protein is administered once per week for the first cycle, and then administered once per two weeks once the target dose of the anti-STEAP antigen binding protein has been achieved. In an example, the dose of the anti-STEAP antigen binding protein is administered once per week for the first cycle, and then administered once per three weeks once the target dose of the anti-STEAP antigen binding protein has been achieved. In an example, the dose of the anti-STEAP antigen binding protein is administered once per week for the first cycle, and then administered once per four weeks once the target dose of the anti-STEAP antigen binding protein has been achieved. In some examples, cycle two is repeated 11 times after cycle 1 has been

completed (e.g., for total treatment period of about 12 months). In some examples, cycle 2 is repeated five times after cycle 1 is completed (e.g., for a total treatment period of about six months). In an example, the anti-STEAP1 antigen binding protein is xaluritamig.

[0017] The present disclosure provides a method of treating a patient having prostate cancer, comprising administering to the patient a pharmaceutical composition comprising an anti-STEAP1 antigen binding protein, and further comprising administering to the patient a dose of a compound of formula 1:

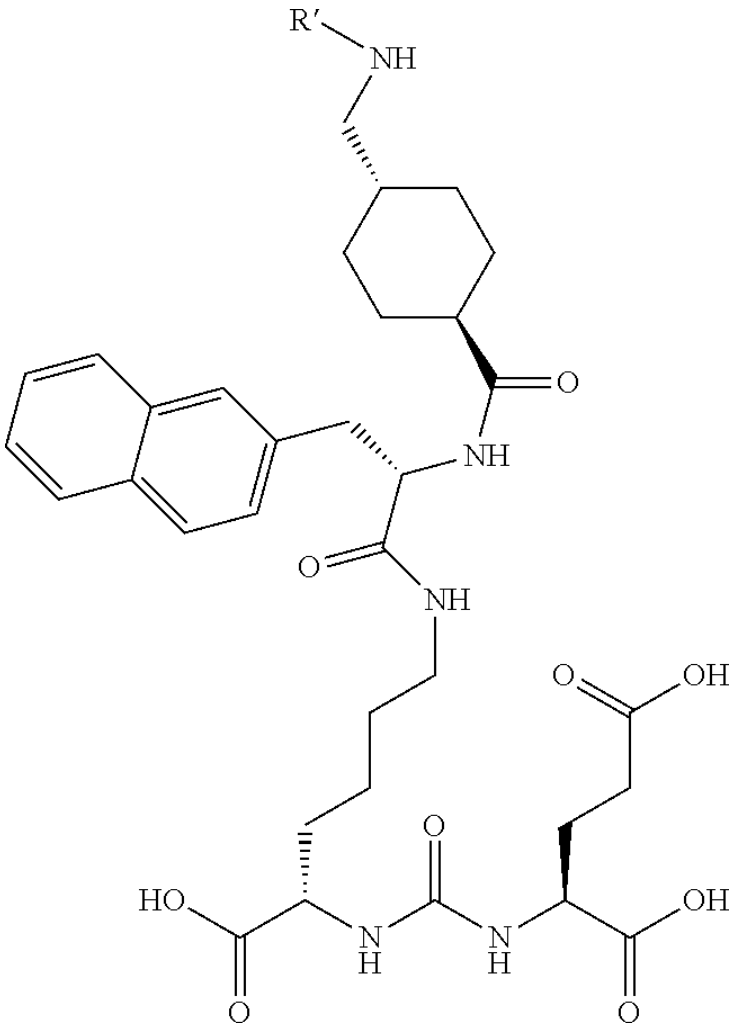


[0018] wherein the compound is complexed with a metal selected from the group consisting of 90Y, 177Lu, 64Cu, 153Gd, 155Gd, 157Gd, 213Bi, 68Ga, and 225Ac.

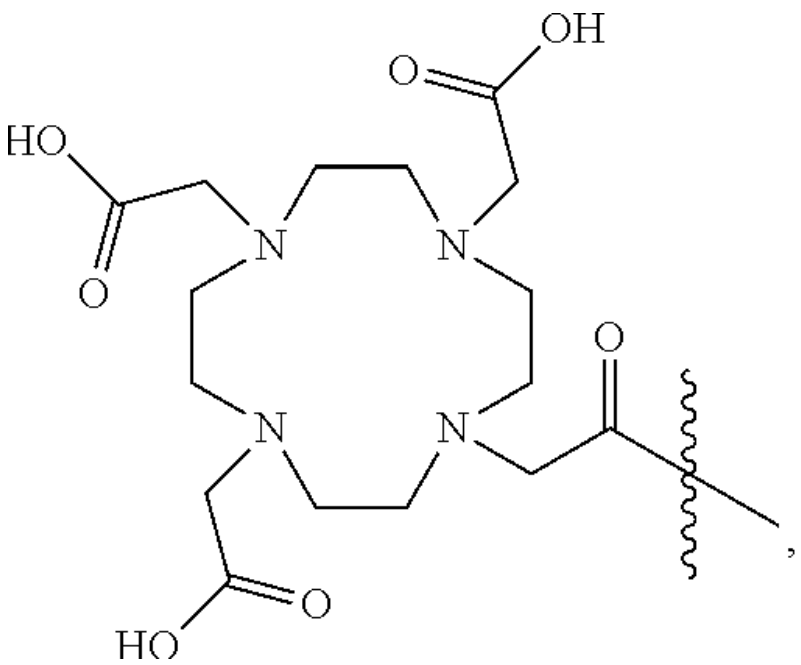
[0019] The present disclosure provides an anti-STEAP1 antigen binding protein for use in the treatment of prostate cancer, wherein the anti-STEAP1 antigen binding protein is formulated for administration at a dose of about 0.1 mg to about 2.0 mg and is administered in combination with a dose of a compound of formula 1 wherein the compound is complexed with a metal selected from the group consisting of 90Y, 177Lu, 64Cu, 153Gd, 155Gd, 157Gd, 213Bi, 68Ga, and 225Ac. The present disclosure also provides use of an anti-STEAP1 antigen binding protein in the manufacture of a medicament for treating prostate cancer, wherein the medicament is formulated for administration at a dose of about 0.1 mg to about 2.0 mg and is administered in combination with a dose of a compound of formula 1 wherein the compound is complexed with a metal selected from the group consisting of 90Y, 177Lu, 64Cu, 153Gd, 155Gd, 157Gd, 213Bi, 68Ga, and 225Ac. The present disclosure provides an anti-STEAP1 antigen binding protein for use in the treatment of prostate cancer, wherein the anti-STEAP1 antigen binding protein is administered at a dose of about 0.1 mg to about 2.0 mg and is administered in combination with a dose of a compound of formula 1 wherein the compound is complexed with a metal selected from the group consisting of 90Y, 177Lu, 64Cu, 153Gd, 155Gd, 157Gd, 213Bi, 68Ga, and 225Ac. The present disclosure also provides use of an anti-STEAP1 antigen binding protein in the manufacture of a medicament for treating prostate cancer, wherein the medicament is administered at a dose of about 0.1 mg to about 2.0 mg and is administered in combination with a dose of a compound of formula 1 wherein the compound is complexed with a metal selected from the group consisting of 90Y, 177Lu, 64Cu, 153Gd, 155Gd, 157Gd, 213Bi, 68Ga, and 225Ac. In an example, the dose of the anti-STEAP antigen binding protein is about 0.1 mg to about 1.5 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.3 mg to about 1.3 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.5 mg to about 1 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.75 mg to about 1 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.1 mg, about 0.2 mg, about 0.3 mg, about 0.4 mg, about 0.5 mg, about 0.6 mg, about 0.7 mg, about 0.75 mg, about 0.8 mg, about 0.9 mg, about 1.0 mg, about 1.1 mg, about 1.2 mg, about 1.3 mg, about 1.4 mg, about 1.5 mg, about 1.6 mg, or about 1.7 mg. In an example, the dose of the anti-STEAP antigen binding protein is 0.1 mg, 0.2 mg, 0.3 mg, 0.4

mg, 0.5 mg, 0.6 mg, 0.7 mg, 0.75 mg, 0.8 mg, 0.9 mg, 1.0 mg, 1.1 mg, 1.2 mg, 1.3 mg, 1.4 mg, 1.5 mg, 1.6 mg, or 1.7 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq.

[0020] The present disclosure provides a method of treating a patient having prostate cancer, comprising administering to the patient a pharmaceutical composition comprising an anti-STEAP1 antigen binding protein, and further comprising administering to the patient a dose of a compound:



or a salt thereof, wherein R' is a chelator of the formula:

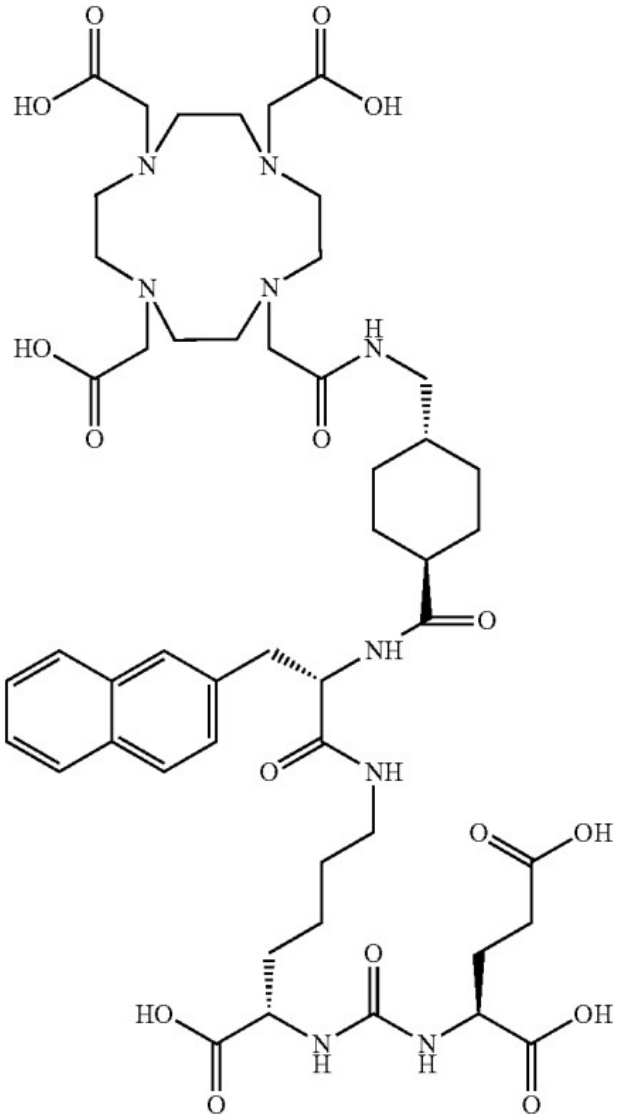


and ^{90}Y, ^{177}Lu, ^{64}Cu, ^{153}Gd, ^{155}Gd, ^{157}Gd, ^{213}Bi, ^{68}Ga, or ^{225}Ac is complexed to the chelator. In an example, ^{177}Lu is complexed to the chelator.

[0021] In an example, the compound complexed with a metal is lutetium Lu 177 vipivotide tetraxetan. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is from about 2 GBq to about 13 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is about 5.9 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is about 7.4 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 5.9 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is about 7.4 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is administered one time per six weeks. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is7.4 GBq administered one time every six weeks for up to six doses. In an example, the dose of the anti-STEAP antigen binding protein is about 0.1 mg to about 1.5 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.3 mg to about 1.3 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.5 mg to about 1 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.75 mg to about 1 mg. In an example, the dose of the anti-STEAP antigen binding protein is about 0.1 mg,

about 0.2 mg, about 0.3 mg, about 0.4 mg, about 0.5 mg, about 0.6 mg, about 0.7 mg, about 0.75 mg, about 0.8 mg, about 0.9 mg, about 1.0 mg, about 1.1 mg, about 1.2 mg, about 1.3 mg, about 1.4 mg, about 1.5 mg, about 1.6 mg, or about 1.7 mg. In an example, the dose of the anti-STEAP antigen binding protein is 0.1 mg, 0.2 mg, 0.3 mg, 0.4 mg, 0.5 mg, 0.6 mg, 0.7 mg, 0.75 mg, 0.8 mg, 0.9 mg, 1.0 mg, 1.1 mg, 1.2 mg, 1.3 mg, 1.4 mg, 1.5 mg, 1.6 mg, or 1.7 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq.

[0022] The present disclosure provides a method of treating a patient having prostate cancer, comprising administering to the patient a pharmaceutical composition comprising formula 1:



[0023] complexed with ^{177}Lu, and a pharmaceutical formulation of a dose of 0.1-2.0 mg xaluritamig. In an example, the dose of xaluritamig is 1.5 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 5.9 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is about 7.4 GBq, and the dose of xaluritamig is about 0.75 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is about 7.4 GBq, and the dose of xaluritamig is about 1 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is about 7.4 GBq, and the dose of xaluritamig is about 1.5 mg. In an example, the dose of lutetium Lu

177 vipivotide tetraxetan is 7.4 GBq, and the dose of xaluritamig is 0.75 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq, and the dose of xaluritamig is 1 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq, and the dose of xaluritamig is 1.5 mg.

[0024] The present disclosure provides a method of treating a patient having prostate cancer, comprising administering to the patient a pharmaceutical composition comprising lutetium Lu 177 vipivotide tetraxetan, and a pharmaceutical formulation of a dose of 0.1-2.0 mg xaluritamig. In an example, the dose of xaluritamig is 1.5 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 5.9 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is about 7.4 GBq, and the dose of xaluritamig is about 0.75 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is about 7.4 GBq, and the dose of xaluritamig is about 1 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is about 7.4 GBq, and the dose of xaluritamig is about 1.5 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq, and the dose of xaluritamig is 0.75 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq, and the dose of xaluritamig is 1 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq, and the dose of xaluritamig is 1.5 mg.

[0025] The present disclosure provides use of an anti-STEAP1 antigen binding protein for preparation of a medicament for treating prostate cancer, which medicament is formulated for administration at a dose of about 0.1 mg to about 2.0 mg, and the patient is also administered a dose of a compound of formula 1 complexed with a metal selected from the group consisting of ^{90}Y, ^{177}Lu, ^{64}Cu, ^{153}Gd, ^{155}Gd, ^{157}Gd, ^{68}Ga, ^{213}Bi, and ^{225}Ac. The present disclosure provides use of an anti-STEAP1 antigen binding protein in the manufacture of a medicament for treating prostate cancer, which medicament is formulated for administration at a dose of about 0.1 mg to about 2.0 mg, and the patient is also administered a dose of a compound of formula 1 complexed with a metal selected from the group consisting of 90Y, 177Lu, 64Cu, 153Gd, 155Gd, 157Gd, 68Ga, 213Bi, and 225Ac. The present disclosure provides an anti-STEAP1 antigen binding protein for use in the treatment of prostate cancer, which anti-STEAP1 antigen binding protein is formulated for administration at a dose of about 0.1 mg to about 2.0 mg, and is administered in combination with a dose of a compound of formula 1 complexed with a metal selected from the

group consisting of 90Y, 177Lu, 64Cu, 153Gd, 155Gd, 157Gd, 68Ga, 213Bi, and 225Ac. The present disclosure provides use of an anti-STEAP1 antigen binding protein in the manufacture of a medicament for treating prostate cancer, which medicament is administered at a dose of about 0.1 mg to about 2.0 mg, and is administered in combination with a dose of a compound of formula 1 complexed with a metal selected from the group consisting of 90Y, 177Lu, 64Cu, 153Gd, 155Gd, 157Gd, 68Ga, 213Bi, and 225Ac. The present disclosure provides an anti-STEAP1 antigen binding protein for use in the treatment of prostate cancer, which anti-STEAP1 antigen binding protein is administered at a dose of about 0.1 mg to about 2.0 mg, and is administered in combination with a dose of a compound of formula 1 complexed with a metal selected from the group consisting of 90Y, 177Lu, 64Cu, 153Gd, 155Gd, 157Gd, 68Ga, 213Bi, and 225Ac. In an example, the anti-STEAP1 antigen binding protein is xaluritamig.

[0026] In an example, the compound complexed with a metal is lutetium Lu 177 vipivotide tetraxetan. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is from about 2 GBq to about 13 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is about 5.9 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is about 7.4 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 5.9 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is administered one time per six weeks. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is7.4 GBq administered one time every six weeks for up to six doses. In an example, the anti-STEAP1 antigen binding protein is administered to the patient after administration to the patient of lutetium Lu 177 vipivotide tetraxetan. In an example, the dose of the anti-STEAP1 antigen-binding protein is about 0.01 mg to about 2.0 mg. In an example, the dose of the anti-STEAP1 antigen-binding protein is about 0.1 mg to about 1.5 mg. In an example, the dose of the anti-STEAP1 antigen-binding protein is 0.1 mg, 0.2 mg, 0.3 mg, 0.4 mg, 0.5 mg, 0.6 mg, 0.7 mg, 0.75 mg, 0.8 mg, 0.9 mg, 1.0 mg, 1.1 mg, 1.2 mg, 1.3 mg, 1.4 mg, 1.5 mg, 1.6 mg, 1.7 mg, 1.8, 1.9, or 2.0 mg. In an example, the dose of the anti-STEAP1 antigen-binding protein is about 0.1 mg. In an example, the dose of the anti-STEAP1 antigen-binding protein is about 0.3 mg. In an example, the dose of the anti-STEAP1 antigen-binding protein is about 0.75 mg. In an example, the dose of the anti-STEAP1 antigen-binding protein is about 1 mg. In an

example, the dose of the anti-STEAP1 antigen-binding protein is about 1.5 mg. In an example, the dose of the anti-STEAP1 antigen-binding protein is 0.1 mg. In an example, the dose of the anti-STEAP1 antigen-binding protein is 0.3 mg. In an example, the dose of the anti-STEAP1 antigen-binding protein is 0.75 mg. In an example, the dose of the anti-STEAP1 antigen-binding protein is 1 mg. In an example, the dose of the anti-STEAP1 antigen-binding protein is 1.5 mg. In an example, the dose of the anti-STEAP1 antigen-binding protein is administered once per one week. In an example, the dose of the anti-STEAP1 antigen-binding protein is administered once per two weeks. In an example, the dose of the anti-STEAP1 antigen-binding protein is administered once per three weeks. In an example, the dose of the anti-STEAP1 antigen-binding protein is administered once per four weeks. In an example, the dose of the anti-STEAP1 antigen-binding protein is administered by intravenous administration. In an example, the dose of the anti-STEAP1 antigen-binding protein is administered once per week beginning in cycle two. In an example, the dose of the anti-STEAP1 antigen-binding protein is administered once per two weeks beginning in cycle two. In an example, the dose of the anti-STEAP1 antigen-binding protein is administered once per three weeks beginning in cycle two. In an example, the dose of the anti-STEAP1 antigen-binding protein is administered once per four weeks beginning in cycle two. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq, and the dose of the anti-STEAP1 antigen binding protein is 0.75 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq, and the dose of the anti-STEAP1 antigen binding protein is 1 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq, and the dose of the anti-STEAP1 antigen binding protein is 1.5 mg. In an example, the anti-STEAP1 antigen binding protein is xaluritamig.

[0027] The present disclosure provides a method of treating a patient having prostate cancer, wherein the method comprises first administering to the patient a pharmaceutical composition comprising an anti-STEAP1 antigen binding protein until a target dose of the anti-STEAP1 antigen binding protein is achieved, followed by administering to the patient lutetium Lu 177 vipivotide tetraxetan. In an example, the present disclosure provides a method of treating a patient having prostate cancer, wherein the method comprises first administering to the patient a pharmaceutical composition comprising an anti-STEAP1 antigen binding protein until a target dose of the anti-STEAP1 antigen binding protein is achieved, followed by administering to

the patient lutetium Lu 177 vipivotide tetraxetanin in combination with the anti-STEAP1 antigen binding protein. In an example, the target dose of the anti-STEAP1 antigen binding protein is 0.75 mg. In an example, the target dose of the anti-STEAP1 antigen binding protein is 1 mg. In an example, the target dose of the anti-STEAP1 antigen binding protein is 1.5 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq. In an example, the anti-STEAP1 antigen binding protein is xaluritamig.

[0028] The present disclosure also provides a method of treating a patient having prostate cancer, said method comprising administering to the patient the pharmaceutical composition comprising a dose of an anti-STEAP1 antigen binding protein and a dose of lutetium Lu 177 vipivotide tetraxetan of the present disclosure, said method comprising at least one cycle, in which in one cycle the anti-STEAP1 antigen binding protein is administered on days in which lutetium Lu 177 vipivotide tetraxetan is not administered. In an example, the anti-STEAP1 antigen binding protein is administered every 7 days during an administration cycle of lutetium Lu 177 vipivotide tetraxetan. In an example, the anti-STEAP1 antigen binding protein is administered every 7 days during an administration cycle of lutetium Lu 177 vipivotide tetraxetan. In an example, the anti-STEAP1 antigen binding protein is administered every 14 days during an administration cycle of lutetium Lu 177 vipivotide tetraxetan. In an example, in one cycle the anti-STEAP1 antigen binding protein is administered 7 days, 21 days, and 35 days after administration of one dose of lutetium Lu 177 vipivotide tetraxetan. In an example, in one cycle the anti-STEAP1 antigen binding protein is administered 2 days, 16 days, and 30 days after administration of one dose of lutetium Lu 177 vipivotide tetraxetan. The present disclosure provides use of an anti-STEAP1 antigen binding protein for preparation of a medicament for treating prostate cancer, said use comprising administering to the patient a dose of the pharmaceutical composition comprising an anti-STEAP1 antigen binding protein and the dose of lutetium Lu 177 vipivotide tetraxetan of the present disclosure, said use comprising at least one cycle, in which in one cycle the anti-STEAP1 antigen binding protein is administered every 14 days during an administration cycle of lutetium Lu 177 vipivotide tetraxetan. The present disclosure provides use of an anti-STEAP1 antigen binding protein in the manufacture of a medicament for treating prostate cancer, said use comprising administering to the patient a dose of the pharmaceutical composition comprising an anti-STEAP1 antigen binding protein and the dose of lutetium Lu 177 vipivotide tetraxetan of the present disclosure, said use comprising at

least one cycle, in which in one cycle the anti-STEAP1 antigen binding protein is administered every 14 days during an administration cycle of lutetium Lu 177 vipivotide tetraxetan. The present disclosure provides an anti-STEAP1 antigen binding protein for use in the treatment of prostate cancer, said use comprising administering to the patient a dose of the pharmaceutical composition comprising an anti-STEAP1 antigen binding protein and a dose of lutetium Lu 177 vipivotide tetraxetan of the present disclosure, said use comprising at least one cycle, in which in one cycle the anti-STEAP1 antigen binding protein is administered every 14 days during an administration cycle of lutetium Lu 177 vipivotide tetraxetan. In an example, in one cycle the anti-STEAP1 antigen binding protein is administered 7 days, 21 days, and 35 days after administration of one dose of lutetium Lu 177 vipivotide tetraxetan. In an example, in one cycle the anti-STEAP1 antigen binding protein is administered 2 days, 16 days, and 30 days after administration of one dose of lutetium Lu 177 vipivotide tetraxetan. In an example, method comprises one cycle, two cycles, three cycles, four cycles, five cycles, or six cycles. In an example, the lutetium Lu 177 vipivotide tetraxetan is administered by intravenous administration. In an example, the administration cycle of lutetium Lu 177 vipivotide tetraxetan is 6-weeks. In an example, the anti-STEAP1 antigen binding protein is administered by step dosing prior to reaching a target dose. In an example, the anti-STEAP1 antigen binding protein is administered at a target dose after administering to the patient lutetium Lu 177 vipivotide tetraxetan. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq, and the dose of the anti-STEAP1 antigen binding protein is 0.75 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq, and the dose of the anti-STEAP1 antigen binding protein is 1 mg. In an example, the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq, and the dose of the anti-STEAP1 antigen binding protein is 1.5 mg. In an example, the anti-STEAP1 antigen binding protein is xaluritamig.

[0029] The present disclosure also provides a method of treating a patient having prostate cancer, wherein the method comprises administering to the patient a dose of a pharmaceutical composition comprising an anti-STEAP1 antigen binding protein at a dose of about 0.1 mg to about 2.0 mg, and further comprising administering to the patient a dose of abiraterone. The present disclosure provides use of an anti-STEAP1 antigen binding protein for preparation of a medicament for treating prostate cancer, wherein the medicament is formulated for administration at a dose of about 0.1 mg to about 2.0 mg, and the use further comprises administering to the patient a dose of abiraterone. In an example, the dose of abiraterone is about 750 mg to about 1000 mg. In an example, the dose of abiraterone is about 1000 mg. In an example, the dose of abiraterone is 1000 mg. In an

example, the dose of abiraterone is administered orally. Optionally, abiraterone is administered once a day. In an example, the patient is further administered prednisone (or prednisolone). In an example, the patient is further administered 5 mg of prednisone two times per day. In an example, the patient is further administered 10 mg of prednisone one time per day. In an example, the patient is administered YONSA® dosed at 500 mg by mouth once daily in combination with methyl prednisone 4 mg twice daily. In an example, the dose of the anti-STEAP1 antigen binding protein is about 0.1 mg to about 2.0 mg. In an example, the dose of the anti-STEAP1 antigen binding protein is about 0.1 mg to about 1.5 mg. In an example, the dose of the anti-STEAP1 antigen binding protein is about 0.75 mg. In an example, the dose of the anti-STEAP1 antigen binding protein is about 1 mg. In an example, the dose of the anti-STEAP1 antigen binding protein is about 1.5mg. In an example, the dose of the anti-STEAP1 antigen binding protein is 0.75 mg. In an example, the dose of the anti-STEAP1 antigen binding protein is 1 mg. In an example, the dose of the anti-STEAP1 antigen binding protein is 1.5mg. In an example, the dose of the anti-STEAP1 antigen binding protein is 1.5mg. In an example, the dose of the anti-STEAP1 antigen binding protein is administered once per week. In an example, the dose of the anti-STEAP1 antigen binding protein is administered once per two weeks. In an example, the patient is administered a dose of the anti-STEAP1 antigen binding protein and a dose of abiraterone on the same day. In an example, the patient is administered a dose of the anti-STEAP1 antigen binding protein and a dose of abiraterone on cycle 1 day 1. In an example, the patient is administered a dose of abiraterone starting on cycle 1 day 1.

[0030] The present disclosure also provides a method of treating a patient having prostate cancer, wherein the method comprises administering to the patient a pharmaceutical composition comprising an anti-STEAP1 antigen binding protein at a dose of about 0.1 mg to about 2.0 mg, and further comprising administering to the patient enzalutamide. The present disclosure provides use of an anti-STEAP1 antigen binding protein for preparation of a medicament for treating prostate cancer, wherein the medicament is formulated for administration at a dose of about 0.1 mg to about 2.0 mg, and the use further comprises administering to the patient a dose of

enzalutamide. In an example, the dose of enzalutamide is about 120 mg to about 160 mg. In an example, the dose of enzalutamide is about 160 mg. In an example, the dose of enzalutamide is 160 mg. In an example, the dose of enzalutamide is administered orally. In an example, the dose of the anti-STEAP1 antigen binding protein is about 0.01 mg to about 2.0 mg. In an example, the dose of the anti-STEAP1 antigen binding protein is about 0.75 mg. In an example, the dose of the anti-STEAP1 antigen binding protein is about 1 mg. In an example, the dose of the anti-STEAP1 antigen binding protein is about 1.5mg. In an example, the dose of the anti-STEAP1 antigen binding protein is 1.5mg. In an example, the patient is administered a dose of enzalutamide starting on cycle 1 day 1.

[0031] The present disclosure also provides a method of treating a patient having prostate cancer, wherein the method comprises administering to the patient a pharmaceutical composition comprising an anti-STEAP1 antigen binding protein at a dose of about 0.1 mg to about 2.0 mg, and further comprising administering to the patient darolutamide. The present disclosure provides use of an anti-STEAP1 antigen binding protein for preparation of a medicament for treating prostate cancer, wherein the medicament is formulated for administration at a dose of about 0.1 mg to about 2.0 mg, and the use further comprises administering to the patient a dose of darolutamide. In an example, the dose of darolutamide is about 450 mg to about 600 mg. In an example, the dose of darolutamide is about 600 mg. In an example, the dose of darolutamide is 600 mg. In an example, the dose of darolutamide is administered orally. In an example, the dose of darolutamide is administered orally, twice daily. In an example, the dose of darolutamide is administered orally, twice daily, by two 300 mg tablets. In an example, the dose of the anti-STEAP1 antigen binding protein is about 0.01 mg to about 2.0 mg. In an example, the dose of the anti-STEAP1 antigen binding protein is about 1.5mg. In an example, the dose of the anti-STEAP1 antigen binding protein is 0.75 mg. In an example, the dose of the anti-STEAP1 antigen binding protein is 1 mg. In an example, the dose of the anti-STEAP1 antigen binding protein is 1.5mg.

[0032] The present disclosure also provides a method of treating a patient having prostate cancer, wherein the method comprises administering to the patient a pharmaceutical composition comprising an anti-STEAP1 antigen binding protein at a dose of about 0.1 mg to about 2.0 mg, and further comprising administering to the patient apalutamide. The present disclosure provides use of an anti-STEAP1 antigen binding protein for preparation of a medicament for treating

prostate cancer, wherein the medicament is formulated for administration at a dose of about 0.1 mg to about 2.0 mg, and the use further comprises administering to the patient a dose of apalutamide. In an example, the dose of apalutamide is about 180 mg to about 240 mg. In an example, the dose of apalutamide is about 240 mg. In an example, the dose of apalutamide is 240 mg. In an example, the dose of apalutamide is administered orally. In an example, the dose of apalutamide is administered orally, once daily. In an example, the dose of apalutamide is administered orally, once daily, by four 60 mg tablets. In an example, the dose of the anti-STEAP1 antigen binding protein is about 0.01 mg to about 2.0 mg. In an example, the dose of the anti-STEAP1 antigen binding protein is about 1.5mg. In an example, the dose of the anti-STEAP1 antigen binding protein is 1.5mg.

[0033] In an example, the anti-STEAP1 antigen binding protein is administered by step dosing. In an example, the anti-STEAP1 antigen binding protein is administered in two steps. In an example, the anti-STEAP1 antigen binding protein is administered in two or three steps. In an example, the anti-STEAP1 antigen binding protein is administered on day 1 at 0.1mg, day 8 at 0.3mg, day 15 at 1.0mg, and day 22 at 1.5mg. In an example, wherein the anti-STEAP1 antigen binding protein is administered on day 1 at 0.1mg, day 8 at 0.3mg, day 15 at 0.75mg, and day 22 at 0.75mg. In an example, the method further comprises administering to the patient an anti-STEAP1 antigen binding protein once per week, once per two weeks, once per three weeks, or once per four weeks after administration of the step dosing. In an example, the anti-STEAP1 antigen binding protein is administered at 1.5 mg once every two weeks after the step dosing. In an example, the anti-STEAP1 antigen binding protein is administered at 1.5 mg once every three weeks after the step dosing. In an example, the anti-STEAP1 antigen binding protein is administered at 1.5 mg once every four weeks after the step dosing.

[0034] In an example, a dose of anti-STEAP1 antigen binding protein is administered once per week for the first cycle, and then administered once per three weeks once the target dose has been achieved. In an example, a dose of anti-STEAP1 antigen binding protein is administered once per week for the first cycle, and then administered once per four weeks once the target dose has been achieved.

[0035] In an example, the anti-STEAP1 antigen binding protein is administered in two cycles. In an example, cycle one comprises administering the anti-STEAP1 antigen binding

protein on day 1 or day 2 at a dose in the range of about 0.1 mg to about 0. 3 mg, day 7, 8, or 9 at a dose in the range of about 0.2 mg to about 0.4 mg, day 14, 15, or 16 at a dose in the range of about 0.8 mg to about 1.2 mg, and day 21, 22, or 23 at a dose in the range of about 1.3 mg to about 1.6 mg. In an example, cycle two, which follows cycle 1, comprises administering the anti-STEAP1 antigen binding protein at 1.5 mg once every two weeks for five months after cycle one is completed. Each cycle is optionally 28 days.

[0036] In an example, cycle one comprises administering the anti-STEAP1 antigen binding protein on day 1 at 0.1 mg, day 8 at 0.3 mg, day 15 at 1.0 mg, and day 22 at 1.5 mg. In an example, cycle two, which follows cycle 1, comprises administering the anti-STEAP1 antigen binding protein at 1.5 mg once every two weeks for five months after cycle one is completed. Each cycle is optionally 28 days.

[0037] In an example, cycle one comprises administering the anti-STEAP1 antigen binding protein on day 1 at 0.1 mg, day 8 at 0.3 mg, day 15 at 1.0 mg, and day 22 at 1.5 mg. In an example, cycle two comprises administering the anti-STEAP1 antigen binding protein at 1.5 mg once every four weeks for 11 months after cycle one is completed. Each cycle is optionally 28 days. The disclosure further provides a method of treating a patient having prostate cancer, comprising administering to the patient a pharmaceutical composition comprising xaluritamig over the course of at least two 28 day cycles, wherein (i) Cycle 1 comprises administering about 0.1 mg to about 0.3 mg of xaluritamig on day 1 or day 2, administering about 0.2 mg to about 0.4 mg of xaluritamig on day 7, 8, or 9, administering about 0.8 to about 1.2 mg of xaluritamig on day 14, 15, or 16 and administering about 1.3 to about 1.6 mg of xaluritamig on day 21, 22, or 23 followed by one or more additional cycles (Cycle 2) comprising administering 1.5 mg of xaluritamig once per two weeks.

[0038] In an example, the anti-STEAP1 antigen binding protein is an XmAb 2+1 molecule. As used herein, an "XmAb® 2+1" molecule (used interchangeably with a "multichain T cell engager molecule" or "central-scFv" molecule) contains two Fab domains and one scFv domain, wherein each Fab domain binds a target (e.g., STEAP1) and the scFv domain binds another target (e.g., CD3).

[0039] In an example, the anti-STEAP1 antigen binding protein comprises two Fab binding domains, wherein each Fab binding domain binds STEAP1.

[0040] In an example, the anti-STEAP1 antigen binding protein comprises two Fab binding domains, wherein each Fab binding domain binds STEAP1, and each Fab binding domain comprises a variable heavy domain, a variable light domain, a CH1 domain, and a constant light domain, and the variable heavy domain comprises HCDR1 comprising SEQ ID NO: 9, HCDR2 comprising SEQ ID NO: 10, and HCDR3 comprising SEQ ID NO: 11; and the variable light domain comprises LCDR1 comprising SEQ ID NO: 12, LCDR2 comprising SEQ ID NO: 13, and LCDR3 comprising SEQ ID NO: 14.

[0041] In an example, the anti-STEAP1 antigen binding protein comprises an scFv binding domain, wherein the scFv binding domain binds CD3.

[0042] In an example, the anti-STEAP1 antigen binding protein comprises an scFv binding domain, wherein the scFv binding domain binds CD3, and the scFv variable heavy domain comprises HCDR1 comprising SEQ ID NO: 1, HCDR2 comprising SEQ ID NO: 2, and HCDR3 comprising SEQ ID NO: 3; an scFv linker; and an scFv variable light domain, and the scFv variable light domain comprises LCDR1 comprising SEQ ID NO: 4, LCDR2 comprising SEQ ID NO:5, and LCDR3 comprising SEQ ID NO: 6. In an example, each Fab variable heavy domain comprises an amino acid sequence at least 90%, 95%, or 99% identical to SEQ ID NO: 15; each Fab variable light domain comprises an amino acid sequence at least 90%, 95%, or 99% identical to SEQ ID NO: 16; and the scFv variable heavy domain comprises an amino acid sequence at least 90%, 95%, or 99% identical to SEQ ID NO:7; and the scFv variable light domain comprises an amino acid sequence at least 90%, 95%, or 99% identical to SEQ ID NO: 8. In an example, each Fab variable heavy domain comprises SEQ ID NO: 15 or 20; each Fab variable light domain comprises SEQ ID NO: 16; the scFv variable heavy domain comprises SEQ ID NO:7; and the scFv variable light domain comprises SEQ ID NO: 8. In an example, the scFv binding domain which binds CD3 comprises an scFv linker. In an example, each Fab variable heavy domain comprises SEQ ID NO: 15. In an example, each Fab variable heavy domain comprises SEQ ID NO: 20.

[0043] In an example, the anti-STEAP1 antigen binding protein comprises a first Fc domain and a second Fc domain. In an example, the first Fc domain comprises amino acid substitutions E233P, L235V, G236A, S267K, R292C, N297G, V302C, E357Q, and S364K; and

the second Fc domain comprises amino acid substitutions N208D, E233P, L235V, G236A, S267K, R292C, Q295E, N297G, V302C, L368D, K370S, N384D, Q418E, and N421D (all EU numbering). In an example, the first Fc domain and the second Fc domain each comprise a deletion at position 234.

[0044] In an example, the anti-STEAP1 antigen binding protein comprises a HC comprising SEQ ID NO: 17, a HC with inserted CD3 scFv comprising SEQ ID NO: 19, and two light chains, each comprising SEQ ID NO: 18. In an example, the anti-STEAP1 antigen binding protein comprises a HC comprising SEQ ID NO: 23, a HC with inserted CD3 scFv comprising SEQ ID NO: 26, and two light chains, each comprising SEQ ID NO: 18. In an example, the anti-STEAP1 antigen binding protein is an XmAb 2+1 molecule.

[0045] In an example, the anti-STEAP1 antigen binding protein is xaluritamig. In an example, the anti-STEAP1 antigen binding protein is xaluritamig and comprises a HC comprising SEQ ID NO: 17, a HC with inserted CD3 scFv comprising SEQ ID NO: 19, and two light chains, each comprising SEQ ID NO: 18.

[0046] In an example, the patient has metastatic castration-resistant prostate cancer. In an example, the patient has not previously been treated with chemotherapy. In an example, the patient has previously undergone treatment for prostate cancer, and the patient is suffering from recurrent prostate cancer. In an example, the patient has previously been treated with chemotherapy.

BRIEF DESCRIPTION OF THE DRAWINGS

[0047] **Figure 1.** Schematic of an XmAb® 2+1 molecule, depicting two Fabs that each bind STEAP1 and an scFv that binds CD3.

[0048] **Figure 2.** Best percentage change in size of tumor target lesions. Dashed line indicates 30% reduction in tumor SLD from baseline.

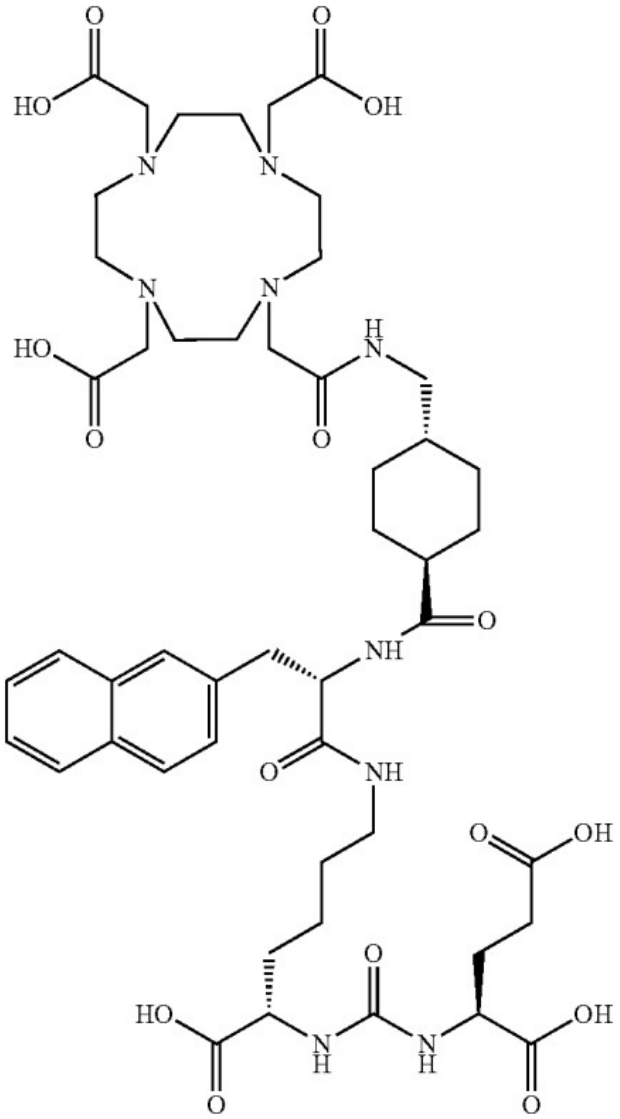
[0049] **Figure 3.** Best PSA percentage change from baseline. Asterisk indicates confirmed PSA responders and dashed lines indicate PSA50 and PSA90 declines.

[0050] **Figure 4.** Example patient showing response by PSA and radiographic assessments: CT scan and PSA curve over time of a heavily pretreated 65-year old patient with stage IV prostate adenocarcinoma. Patient was enrolled into Cohort 12 (3-step 1.5 mg target dose of xaluritamig). CT scans showed 3 target lesions (2 liver, 1 lymph node) and multiple non-target

CLAIMS

What is claimed:

1. Use of an anti-STEAP1 antigen binding protein in the manufacture of a medicament for treating prostate cancer, wherein the medicament is formulated for administration at a dose of 0.1 mg to 2.0 mg, and wherein a dose of compound of formula 1 is to be further administered:



wherein the compound is complexed with a metal selected from the group consisting of ^{90}Y, ^{177}Lu, ^{64}Cu, ^{153}Gd, ^{155}Gd, ^{157}Gd, ^{213}Bi, and ^{225}Ac.

2. The use of claim 1, wherein the compound complexed with a metal is lutetium Lu 177 vipivotide tetraxetan.
3. The use of claim 2, wherein the dose of lutetium Lu 177 vipivotide tetraxetan is from 2 GBq to 13 GBq.
4. The use of claim 2 or claim 3, wherein the dose of lutetium Lu 177 vipivotide tetraxetan is 5.9 GBq.
5. The use of any one of claims 2-4, wherein the dose of lutetium Lu 177 vipivotide tetraxetan is 7.4 GBq.
6. The use of any one of 2-5, wherein the dose of lutetium Lu 177 vipivotide tetraxetan is to be administered one time per six weeks.
7. The use of any one of claims 2-476 wherein the anti-STEAP1 antigen binding protein is to be administered after administration of a dose of lutetium Lu 177 vipivotide tetraxetan.
8. The use of any one of claims 2-7, wherein the use comprises at least one cycle, and in one cycle the anti-STEAP1 antigen binding protein is to be administered every 14 days after administration of one dose of lutetium Lu 177 vipivotide tetraxetan.
9. The use of claim 8, wherein the use comprises one cycle, two cycles, three cycles, four cycles, five cycles, or six cycles.
10. The use of any one of claims 2-9, wherein the lutetium Lu 177 vipivotide tetraxetan is to be administered by intravenous administration.
11. The use of any one of claims 1-10, wherein the dose of the anti-STEAP1 antigen binding protein is 0.1 mg to 2 mg.
12. The use of any one of claims 1-11, wherein the dose of the anti-STEAP1 antigen binding protein is 0.1 mg to 1.5 mg.
13. The use of any one of claims 1-12, wherein the dose of the anti-STEAP1 antigen binding protein is about 0.1 mg.
14. The use of any one of claims 1-12, wherein the dose of the anti-STEAP1 antigen binding protein is about 0.3 mg.
15. The use of any one of claims 1-12, wherein the dose of the anti-STEAP1 antigen binding protein is about 0.75 mg.
16. The use of any one of claims 1-12, wherein the dose of the anti-STEAP1 antigen binding protein is about 1 mg.

17. The use of any one of claims 1-12, wherein the dose of the anti-STEAP1 antigen binding protein is about 1.5 mg.
18. The use of any one of claims 1-12, wherein the dose of the anti-STEAP1 antigen binding protein is 1.5 mg.
19. The use of any one of claims 1-18, wherein the dose is to be administered once per one week.
20. The use of any one of claims 1-18, wherein the dose is to be administered once per two weeks.
21. The use of any one of claims 1-20, wherein the dose is to be administered by intravenous administration.
22. The use of any one of claims 1-21, wherein the anti-STEAP1 antigen binding protein is to be first administered by step dosing.
23. The use of claim 22, wherein the anti-STEAP1 antigen binding protein is to be administered by step dosing in two or three steps.
24. The use of claim 23, wherein the anti-STEAP1 antigen binding protein is to be administered by step dosing on day 1 at 0.1mg, day 8 at 0.3mg, day 15 at 1.0mg, and day 22 at 1.5mg.
25. The use of claim 23, wherein the anti-STEAP1 antigen binding protein is to be administered by step dosing on day 1 at 0.1mg, day 8 at 0.3mg, day 15 at 0.75mg, and day 22 at 0.75mg.
26. The use of any one of claims 1-25, wherein the anti-STEAP1 antigen binding protein is to be administered once per week, once per two weeks, once per three weeks, or once per four weeks after completion of the step dosing and reaching a target dose of the anti-STEAP1 antigen binding protein.
27. The use of any one of claims 1-26, wherein the anti-STEAP1 antigen binding protein comprises two Fab binding domains, each Fab binding domain binds STEAP1, and each Fab binding domain comprises a variable heavy domain, a variable light domain, a CH1 domain, and a constant light domain, which variable heavy domain comprises HCDR1 comprising SEQ ID NO: 9, HCDR2 comprising SEQ ID NO: 10, and HCDR3 comprising SEQ ID NO: 11; and the variable light domain comprises LCDR1 comprising

SEQ ID NO: 12, LCDR2 comprising SEQ ID NO: 13, and LCDR3 comprising SEQ ID NO: 14.

28. The use of any one of claims 1-27, wherein the anti-STEAP1 antigen binding protein is an XmAb 2+1 molecule.
29. The use of any one of claims 1-28, wherein the anti-STEAP1 antigen binding protein comprises two Fab binding domains, each Fab binding domain binds STEAP1.
30. The use of any one of claims 1-29, wherein the anti-STEAP1 antigen binding protein comprises two Fab binding domains, each Fab binding domain binds STEAP1, and each Fab binding domain comprises a variable heavy domain, a variable light domain, a CH1 domain, and a constant light domain, the variable heavy domain comprises HCDR1 comprising SEQ ID NO: 9, HCDR2 comprising SEQ ID NO: 10, and HCDR3 comprising SEQ ID NO: 11; and the variable light domain comprises LCDR1 comprising SEQ ID NO: 12, LCDR2 comprising SEQ ID NO: 13, and LCDR3 comprising SEQ ID NO: 14.
31. The use of any one of claims 1-30, wherein the anti-STEAP1 antigen binding protein comprises an scFv binding domain that binds CD3.
32. The use of claim 31, wherein the anti-STEAP1 antigen binding protein comprises an scFv binding domain that binds CD3, and the scFv variable heavy domain comprises HCDR1 comprising SEQ ID NO: 1, HCDR2 comprising SEQ ID NO: 2, and HCDR3 comprising SEQ ID NO: 3; an scFv linker; and an scFv variable light domain that comprises LCDR1 comprising SEQ ID NO: 4, LCDR2 comprising SEQ ID NO:5, and LCDR3 comprising SEQ ID NO: 6.
33. The use of any one of claims 1-32, wherein the anti-STEAP1 antigen binding protein comprises a first Fc domain and a second Fc domain.
34. The use of any one of claims 31-33, wherein each Fab variable heavy domain comprises an amino acid sequence at least 90% identical to SEQ ID NO: 15 or 20; each Fab variable light domain comprises an amino acid sequence at least 90% identical to SEQ ID NO: 16; and the scFv variable heavy domain comprises an amino acid sequence at least 90% identical to SEQ ID NO:7; and the scFv variable light domain comprises an amino acid sequence at least 90% identical to SEQ ID NO: 8.

35. The use of any one of claims 31-34, wherein each Fab variable heavy domain comprises SEQ ID NO: 15 or 20; each Fab variable light domain comprises SEQ ID NO: 16; the scFv variable heavy domain comprises SEQ ID NO:7; and the scFv variable light domain comprises SEQ ID NO: 8.
36. The use of any one of claims 31-35, wherein the scFv binding domain which binds CD3 comprises an scFv linker.
37. The use of any one of claims 33-36 wherein the first Fc domain comprises amino acid substitutions E233P, L235V, G236A, S267K, R292C, N297G, V302C, E357Q, and S364K; and the second Fc domain comprises amino acid substitutions N208D, E233P, L235V, G236A, S267K, R292C, Q295E, N297G, V302C, L368D, K370S, N384D, Q418E, and N421D.
38. The use of any one of claims 33-37, wherein the first Fc domain and the second Fc domain each comprise a deletion at position 234.
39. The use of any one of claims 1-38, wherein the anti-STEAP1 antigen binding protein comprises a HC comprising SEQ ID NO: 17 or 23, a HC with inserted CD3 scFv comprising SEQ ID NO: 19 or 26, and two light chains, each comprising SEQ ID NO: 18.
40. The use of any one of claims 1-39, wherein the anti-STEAP1 antigen binding protein is xaluritamig.
41. The use of any one of claims 1-40, wherein the prostate cancer is metastatic castration-resistant prostate cancer.