least one of: (i) a T cell engager; (ii) an NK cell engager; (iii) a bi-specific T cell engager (BiTE); (iv) a bi-specific killer cell engager (BiKE); (v) a tri-specific killer cell engager (TriKE); (vi) a MICA/B engager; or (vii) a CD16 engager.

[00031] In yet another aspect, the invention provides a method of enhancing tumor surface MICA/B expression comprising contacting a tumor cell with a sensitizing agent, thereby increasing surface MICA/B expression as compared to MICA/B expression prior to contact with the sensitizing agent. In various embodiments, the sensitizing agent comprises at least one of external beam radiation, brachytherapy, a radiopharmaceutical, and a chemotherapeutic agent. In particular embodiments, the sensitizing agent comprises: (i) at least one of x-ray radiation, gamma radiation, photon radiation, proton radiation, and neutron radiation; or (ii) at least one of calcium-47, carbon-11, carbon-14, chromium-51, cobalt-57, cobalt-58, erbium-169, fluorine-18, gallium-67, gallium-68, hydrogen-3, indium-111, iodine-123, iodine-125, iodine-131, iorn-59, krypton-81m, lutetium-177, nitrogen-13, oxygen-15, phosphorus-32, radium-223, rubidium-82, samarium-153, selenium-75, sodium-22, sodium-24, strontium-89, technetium-99m, thallium-201, xenon-133, and yttrium-90; or (iii) paclitaxel. In various embodiments, the the method further comprises contacting the tumor cell with an antibody that binds to a MIC alpha 3-domain of tumor cell surface MICA/B antigen.

[00032] In one aspect, the invention provides kits comprising one or more compositions described herein, or one or more components thereof. In some embodiments, the kit comprises (i) a cell or population thereof, such as a cell or population thereof in accordance with any of the various aspects described herein; and (ii) a sensitizing agent, such as a sensitizing agent in accordance with any of the various aspects described herein. In some embodiments, the cell or population thereof is an immune cell, an induced pluripotent cell (iPSC) or a derivative cell obtained from differentiating the iPSC; the cell comprises a MICA/B tumor antigen targeting specificity; and the cell optionally comprises one or more exogenous polynucleotides encoding a MICA/B-CAR (chimeric antigen receptor), a CD16 or a variant thereof that mediates ADCC when in combination with an anti-MICA/B antibody, an exogenous TCR targeting a MICA/B tumor antigen, or any combination thereof. In some embodiments, the sensitizing agent increases tumor cell surface levels of MICA/B.

[00032a] In one aspect, provided herein is use of a cell or population thereof in the manufacture of a medicament for treating tumor cells in a subject, wherein: (a) the cell or population thereof is to be administered to the subject; (b) the cell is an immune cell or a derivative cell obtained from differentiating an iPSC; (c) the cell comprises a MICA/B tumor antigen targeting specificity; (d) the cell optionally comprises one or more exogenous polynucleotides encoding a MICA/B-CAR (chimeric antigen receptor), a CD16 or a variant

thereof that mediates ADCC when in combination with an anti-MICA/B antibody, an exogenous TCR targeting a MICA/B tumor antigen, or any combination thereof; (e) the subject has an autoimmune disorder; a hematological malignancy; a solid tumor; cancer, or a virus infection; and (f) (i) the tumor cells comprise tumor cells preconditioned with a sensitizing agent; and/or (ii) the cell comprises an exogenous polynucleotide encoding a CAR with targeting specificity other than MICA/B.

[00032b] In another aspect, provided herein is a cell or population thereof for use in therapy, wherein: (a) the cell is an immune cell or a derivative cell obtained from differentiating an iPSC; (b) the cell comprises a MICA/B tumor antigen targeting specificity; (c) the cell optionally comprises one or more exogenous polynucleotides encoding a MICA/B-CAR (chimeric antigen receptor), a CD16 or a variant thereof that mediates ADCC when in combination with an anti-MICA/B antibody, an exogenous TCR targeting a MICA/B tumor antigen, or any combination thereof; and (d) the cell comprises an exogenous polynucleotide encoding a CAR with targeting specificity other than MICA/B.

[00033] Various objects and advantages of the compositions and methods as provided herein will become apparent from the following description taken in conjunction with the accompanying drawings wherein are set forth, by way of illustration and example, certain embodiments of this invention.