Supporting information for

Enhancing both CT imaging and natural killer cell-mediated cancer cell killing by a GD2-targeting nanoconstruct

Peifu Jiao,\textsuperscript{a,b} Mario Otto,\textsuperscript{c} Qiaohong Geng,\textsuperscript{b} Chencan Li,\textsuperscript{d} Faming Li,\textsuperscript{b} Elizabeth R. Butch,\textsuperscript{e} Scott E. Snyder,\textsuperscript{e} Hongyu Zhou\textsuperscript{a}* and Bing Yan\textsuperscript{a}* 

a. School of Chemistry and Chemical Engineering, Shandong University, Jinan, Shandong 250100, China
b. Department of Chemistry, Qilu Normal University, Jinan, Shandong 250013, China
c. Department of Pediatrics, Division of Pediatric Hematology, Oncology and Bone Marrow Transplant, University of Wisconsin-Madison, Madison, WI 53705, USA
d. TR Pharma & Tech Co., Ltd., Jinan, Shandong 250101, China here.
e. St. Jude Children’s Research Hospital, Memphis, Tennessee 38105, United States

*Correspondence address - drbingyan@yahoo.com or byan992000@yahoo.com
**Figure S1.** Preparation of Cys-hu14.18K322A.

**Figure S2.** GD2 expressions on the surface of PC-3, NB1691, and M21 cells. Top: cells were treated with APC mouse antihuman IgG. Bottom: cells were treated with hu14.18K322A, then with APC mouse antihuman IgG.
Figure S3. Confocal microscopy images showed HGNPs were specifically recognized by M21 (GD2 positive) tumor cells but not by PC-3 (GD2 negative) cells (secondary antibody: goat-anti-human IgG Alexa Fluor 488).

Figure S4. Without NK cells, HGNPs does not show cytotoxicity to the PC-3, NB1691 and M21 (Incubation time: 12 hr).
Figure S5. Antibody-dependent cytotoxicity of NK cells to PC-3, NB-1691 or M21 cells. Cells were incubated with NK cells with or without hu14.18K322A (3.3 nM) or HGNPs (0.2 nM, equivalent hu14.18K322A concentration 3.3 nM) for 4 hr, respectively. The ratio of NK cells to PC-3, NB1691 or M21 cells was 10:1.