**Supplementary legends**

**Fig. S1. Analysis of the purified NRP-body by Coomassie Blue staining and western blotting.** (A) The NRP-body was produced in FD11-CHO cells as described in the Materials and methods. Purified NRP-body from each sample was analyzed by sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE; 10% gels) and stained with Coomassie Brilliant Blue. (B)Purified NRP-body was prepared and immunoblotted with antibodies specific for the human Fc region.

**Fig. S2. Cytotoxicity of the NRP-body.** (A) exNK cells were treated with the NRP-body at 0, 1, 10, and 50 μg/mL for 24, 48, and 72 h. Viability was measured with a CellTiter-Glo luminescent cell viability assay. The data represent the average of three independent experiments.

**Fig. S3. MSLN expression by various cancer cells.** Binding of MSLN-Fc antibodies was analyzed by flow cytometry. MiaPaCa-2, BxPC-2, MDA-MD-231, OVCAR-3, and MCF-7 cells were incubated with MSLN-Fc (0.5 µg/mL), which was detected using a FITC-conjugated goat anti-human IgG antibody. Data were analyzed with FlowJo software (Tree Star).

**Fig. S4. exNK cells proliferate in the tumor.**(A) Panc-1 cells (1 × 106) stably expressing a firefly luciferase gene were orthotopically (*n* = 5), intravenously (*n* = 5), or subcutaneously injected into NSG mice (*n* = 5). Two weeks later, mice received an intraperitoneal injection of NRP-body (1 mg/kg). One day later, DiR+ exNK cells (1 × 107/mouse) were injected intravenously. Mice were sacrificed 5 days after injection of DiR+ exNK cells. DiRintensity on DiR+ exNK cells was analyzed by flow cytometry. (B) Panc-1 cells (1 × 106) stably expressing a firefly luciferase gene were injected orthotopically into NSG mice (*n* = 5). Two weeks later, mice received an intraperitoneal injection of NRP-body (1 mg/kg). One day later, DiR+ exNK cells (1 × 107/mouse) were injected intravenously. Mice were sacrificed 5 days after injection of DiR+ exNK cells. DiRintensity on DiR+ exNK cells was analyzed by flow cytometry.

**Fig. S5.** **A** **CXCL16 neutralizing antibody blocks exNK cell infiltration of the tumor site.** Two weeks after orthotopic injection of Panc-1 cells (1 × 106) into an orthotopic tumor model, mice received an intraperitoneal injection of the NRP-body (1 mg/kg) or a CXCL16 neutralizing antibody. One day later, DiR+ exNK cells (1 × 107/mouse) were injected intravenously. Five days after the injection, infiltration by DiR+ exNK cells was measured using the IVIS system. All data were obtained from three independent experiments, and all tests were performed in triplicate. Data are expressed as the mean ± SD (\**P* < 0.01 and \*\**P* < 0.05, versus non-cleavable NRP-body).

**Fig. S6. Enrichment of CD56+ exNK cells infiltrating pancreatic tumors.** CD56+ exNK cells in the sections of pancreatic tumor tissues, as revealed by IHC staining, at ×250 and ×400 magnification. A polymeric HRP-linker antibody conjugate was used as the secondary antibody. The DAB chromogen was used to visualize staining. Sections were counterstained with hematoxylin.

**Fig. S7. Intravenous injection of the NRP-body increases the therapeutic response of exNK cells.** (A) Panc-1 cells stably expressing a firefly luciferase gene were injected intravenously into NSG mice (*n* = 5). Two weeks later, tumor-bearing mice received the NRP-body (1 mg/kg) intraperitoneally or intravenously every other day over 2 weeks. The exNK cells were injected once intravenously. (B) The absolute number of exNK cells in dissected tumor was analyzed by flow cytometry (\**P* < 0.01 and \*\**P* < 0.05, versus the exNK cell-injected group).

**Fig. S8.** **The** **NRP-body increases the cytotoxicity of exNK cells.** (A) exNK cells were treated with CXCL16 (0.5 µg/mL) or PMA/IONO and then incubated with Panc-1 cells for 4 h. Target-mediated degranulation of exNK cells was assessed by flow cytometry analysis of CD107a. (B) Panc-1 cells were strained with CFSE (150 nM) and then incubated with exNK cells for 4 h. Panc-1 cells were stained with FVD, and dead cells were analyzed by flow cytometry. Data were obtained from three independent experiments, and all tests were performed in triplicate. Data are expressed as the mean ± SD (\**P* < 0.01 and \*\**P* < 0.05, versus PBS).

**Fig. S9.** **DNA sequence of NRP-body.** The DNA sequence of hMSLN scFv, IgG1, furin cleavage site, and CXCL16 in NRP-body.