Electronic Supplementary Information (ESI)

**Article title:** Single cell arrays of hematological cancer cells for assessment of lymphocyte cytotoxicity dynamics, serial killing, and extracellular molecules

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Supplementary figures

Figure S1. Effects of capturing antibody on cell viability. CCRF-SB cells (10^5 cells/well) were added in 96 wells coated with anti-CD19 or anti-CD44 (2.5 μg/ml, 37 °C for 1 h) and cultured for 4 h. To assess cell viability, cells was harvested, stained with propidium iodide (PI), and analyzed by flow cytometry. Viability was measured by the percentage of PI^- cells. Data are representative of three independent experiments. Mann-Whitney test was used, ns: not significant.

Figure S2. Effects of capturing antibody and adhesion molecule on cytotoxicity. CCRF-SB cells labeled with CFSE (10^5 cells/well) and NK-92 cells (10^5 cells/well) were added in 96 wells coated with various capturing antibodies (2.5 μg/ml, 37 °C for 1 h) and adhesion molecules(2.27 μM, 37 °C for 1 h ) and cultured for 4 h. To assess cytotoxicity, dead cells were labeled with propidium iodide (PI) staining and flow cytometry was performed. Cytotoxicity was measured by the percentage of CFSE^+PI^- cells. Data are representative of three independent experiments. Mann-Whitney test was used, ns: not significant.
**Supplementary movie legends**

**Movie S1.** A representative movie of an NK-92 cell interacting with a CCRF-SB cell loaded on a fibronectin-coated microwell with inter-microwell distance of 30 µm. Scale bar: 10 µm. Elapsed time: hh:mm

**Movie S2.** A representative movie of an NK-92 cell interacting with a CCRF-SB cell loaded on a BSA-coated microwells with inter-microwell distance of 30 µm. Scale bar: 10 µm. Elapsed time: hh:mm

**Movie S3.** A representative movie of a CCRF-SB cell loaded in microwell killed by an NK-92 cell exhibiting membrane blebbing and cessation of morphology change prior to SYTOX (green) staining. Scale bar: 10 µm. Elapsed time: hh:mm

**Movie S4.** A representative movie of an NK-92 interacting with CCRF-SB cells loaded on fibronectin-coated microwells with inter-microwell distance of 10 µm. Scale bar: 10 µm. Elapsed time: hh:mm

**Movie S5.** A representative movie of an NK-92 on interacting with CCRF-SB cells loaded in BSA-coated microwells with inter-microwell distance of 10 µm. Scale bar: 10 µm. Elapsed time: hh:mm.