

## SUPPORTING INFORMATION

Quantitative Profiling of CD13 on Single Acute Myeloid Leukemia Cells by Super-resolution imaging and its Implication in Targeted Drug Susceptibility Assessment

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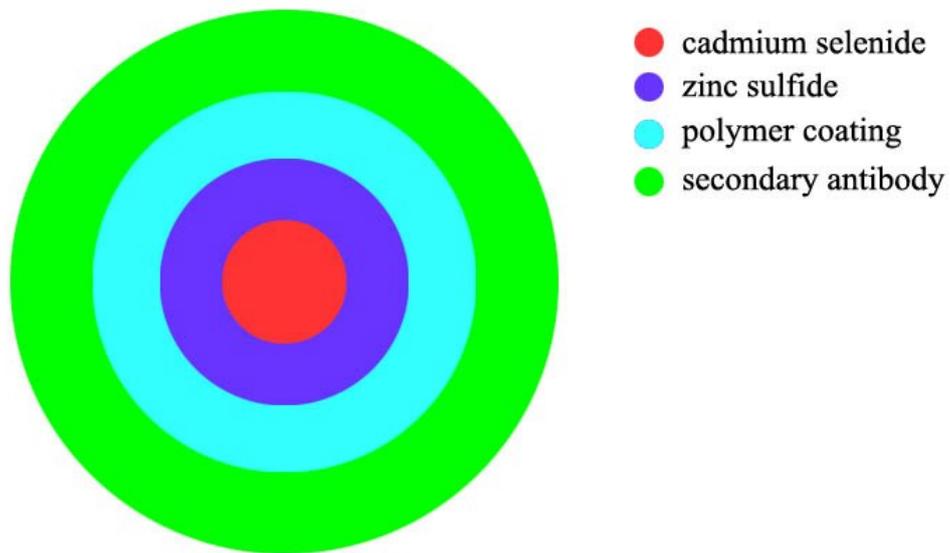
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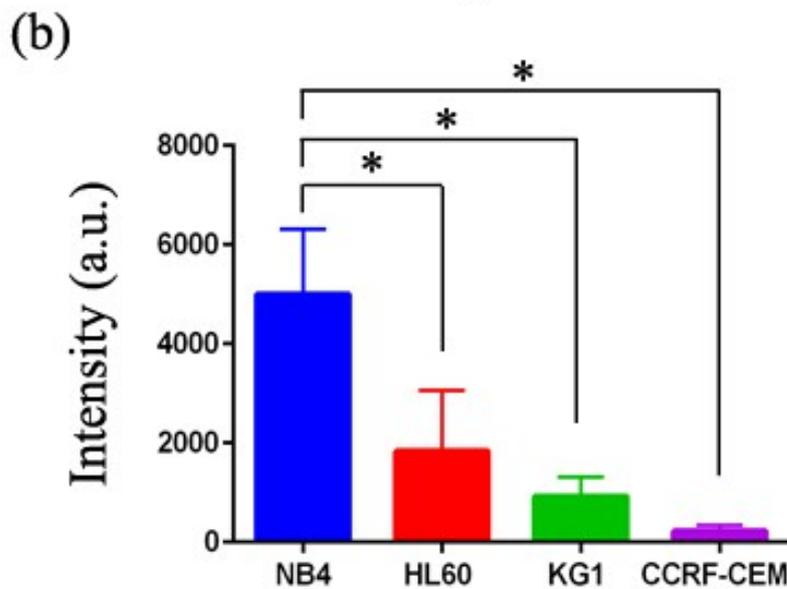
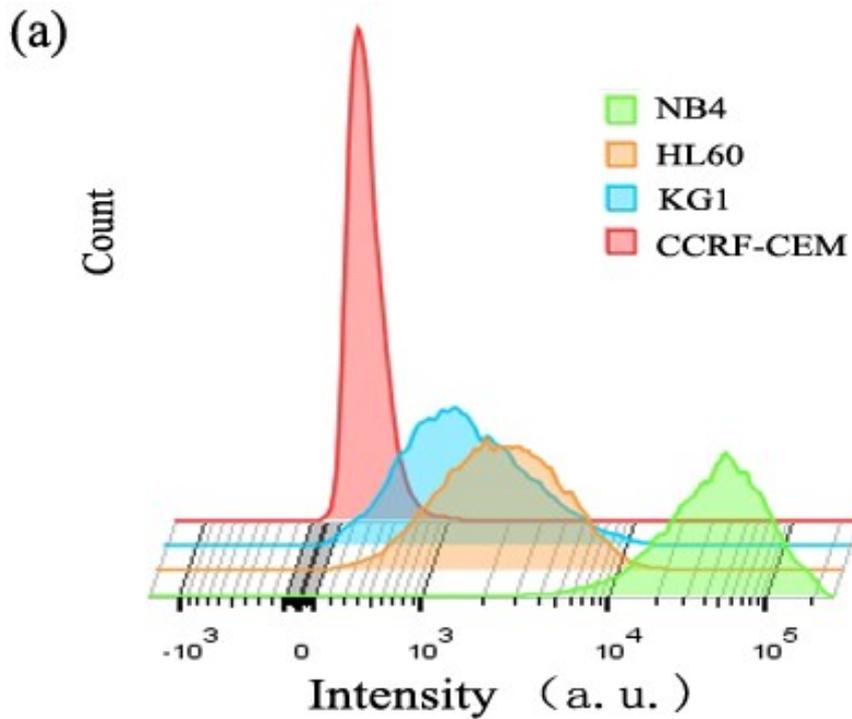
**Keywords:** single cell, super-resolution imaging, acute myeloid leukemia, CD13, quantum dot

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Supporting Figure S1. Schematic structure of the secondary antibody conjugated quantum dot. The layers represent the distinct structural elements of the QD nanocrystal conjugates. The illustration is drawn according to the specification of quantum dot product (Wuhan Jiayuan, CN, QD605).



Supporting Figure S2. The CD13 expression on AML (NB4, HL60 and KG1) cells, which were evaluated by the flow cytometry. The CD13 expression of NB4, HL60 and KG1 cells can be detected by the flow cytometry, but the expression cannot be quantified. CCRF-CEM cells are detected as a negative control.

**Supporting information S3. Steps of SIM image reconstruction analysis.**

1. Drag and drop the SIM image file into Bitplane Imaris 7.2.3.
2. Adjust the color balance, go to the Edit menu and select Show Display Adjustment. Move the arrows as needed to adjust the brightness/contrast.
3. Set View mode to Surpass. Utilize the Camera Pointer in Navigate mode to rotate the dendrite in 3D or use the mouse wheel to zoom in or out.
4. Click on the icon to Add New Spots.
5. In the window that appears, select the Point Style / Quality window, select Sphere and set the parameters Radius Scale as 0.5.
6. In the Styles menu, select the Statistics icon, view the Total Number of Spots.
7. Click on the icon to Add New Surfaces.
8. In the window that appears, select the Source Chanel window, select Smooth and set the parameters Surfaces Area Detail Level as 1 $\mu$ m.
9. In the Styles menu, select the Statistics icon, select the Detailed window, view the value of Area.

**Supporting Video S4.** Panorama video showing discrete distribution of CD13 on single NB4 cell. Red, CD13 protein particles labeled by

quantum dot 605. Blue, nuclear stained by Hoechst 33258. Bar, 5 $\mu$ m.