Supplementary material

Investigation of biological cell–small molecular interactions based gold surface plasmon resonance sensor using a laser scanning confocal imaging–surface plasmon resonance system

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Fig. S1. Scheme of the LSCI-SPR instrument with the angle depended SPR.
**Fig. S2.** The XRD diagram of the gold surface

**Fig. S3.** FTIR spectra of bare gold film (Blue curve), cysteamine assembled on the gold film (Black curve) and FA interact with the cysteamine on the gold surface (Red curve).
Fig. S4. The change of SPR peak during the chip modification process flowing the step of bare Au-cysteamine-FA+NHS+EDC-L5178Y cell.

Fig. S5. Gold chip interact with the L5178Y cells: The cells flow over the bare gold chip (Black line); The cells flow over the gold chip modified cysteamine (Red line); The cells flow over the gold chip with the cysteamine and FA modification (Green line).
Fig. S6. The real time SPR signal of FA covered chip for the L5178Y, Cl.Ly, A549, KB, and EL4 cells with the concentrations of $1.0 \times 10^3$, $3.3 \times 10^3$, $1.0 \times 10^4$, $3.3 \times 10^4$, $1.0 \times 10^5$, $3.3 \times 10^5$, and $1.0 \times 10^6$ cells/mL, respectively.