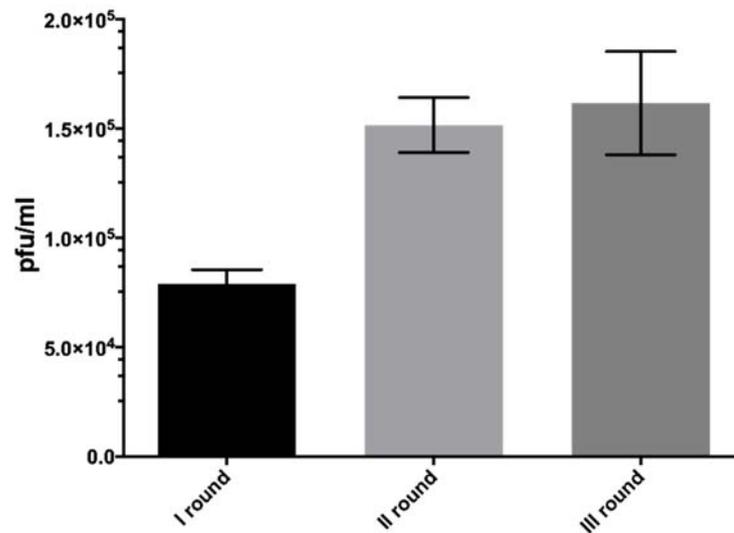
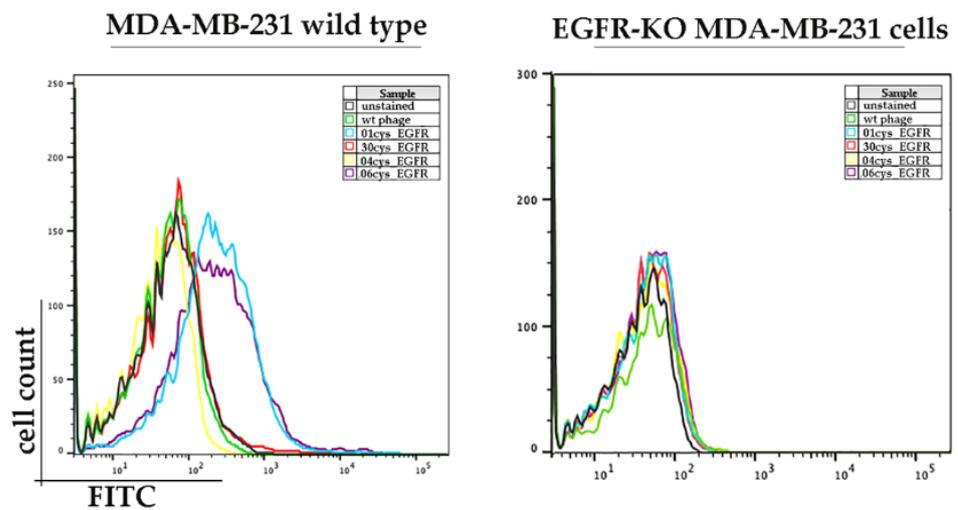


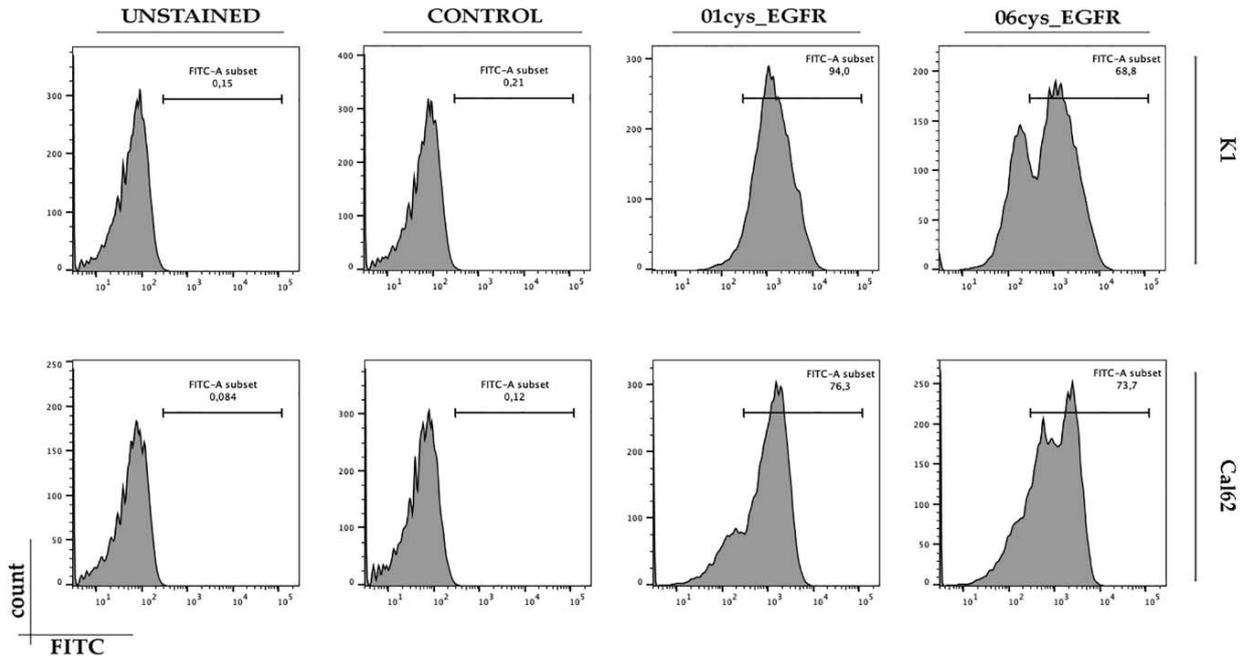
Supplementary Figures



**Figure S1.** Phage enrichment during EGFR phage-display screening. Titers of eluted phages after each round of biopanning were plotted as pfu/mL. A progressive increase in the colony-forming capacity of EGFR bound clones was observed during first ( $8 \times 10^4$  pfu/mL), second ( $1.5 \times 10^5$  pfu/mL) and third round ( $1.6 \times 10^5$  pfu/mL) of bio panning.



**Figure S2.** Analysis of phage binding ability to MDA-MB-231 cells using flow cytometry. FACS analysis of binding ability of FITC- conjugate phages 01cysEGFR, 04cys\_EGFR, 06cys\_EGFR and 30cys\_EGFR on wild type MDA-MB-231 cells compared to EGFR KO MDA-MB-231. Wild type M13 phage was used as a negative control.



**Figure S3.** Peptide binding assay in EGFR-positive thyroid cancer cells using flow cytometry. Flow cytometric analysis showing EGFR-overexpressing thyroid cancer cell lines K1 and Cal62 unstained or stained with 10uM of FITC- conjugate peptides (control, 01\_cysEGFR and 06cys\_EGFR) for 45 min.