Supplemental Data Legends

Table S1. Peptides were characterized and verified by MALDI mass spectrometry. Table shows the expected and observed molecular weight of the peptides.

Table S2. Physical properties of peptides studied in this report. RP-HPLC conditions 10-60% acetonitrile against 0.1% trifluoroacetic acid over 30 minutes through a C18 column (PROTO 300, 10 micron, 250 x 4.6 mm) where the injection peak at 3.6 min. 5-90% acetonitrile against 0.1% trifluoroacetic acid over 30 minutes through a C18 column (PROTO 200, 5 micron, 250x 10 mm). Injection peak at 6.8 min.

Figure S1.
A) Expression levels of the wild type EGFR determined by Western blot in A431, U87-MG, and Gli36Δ5 cell lines. Cell lysates were derived from each cell type and 50 μg of each separated using SDS-PAGE. The gels were then transferred to nitrocellulose membrane and probed for wild type EGFR (DAKO, Carpenteria, CA, clone DAK-H1-WT). Loading control was determined by blotting against β-actin. B) Quantification of the western blot data from S1A. Protein expression levels of wild type EGFR are represented in log10 scale. A431 cells overexpress wild type EGFR more than 60 and 20-fold relative to U87-MG and Gli36Δ5 cells, respectively. C) Saturation binding assay. Compound 2 was incubated with A431 cells at increasing concentrations for 1 hour, washed, and cell associated Cy5.5 was quantified. The Kd determined for the A431 cell line was 8.0±3.0 μM. D) Cell uptake of compound 2 in the presence of hEGF ligand. A431 cells were plated in 96-well plates and were treated with 1 μM of Cy5.5-EGFpep in the presence of increasing amounts of hEGF (or no treatment) for 90 minutes. Uptake increased with increasing EGF stimulation. These data suggest that uptake of labeled ligand is specific to EGF receptors. *, P>0.01; **, P>001.