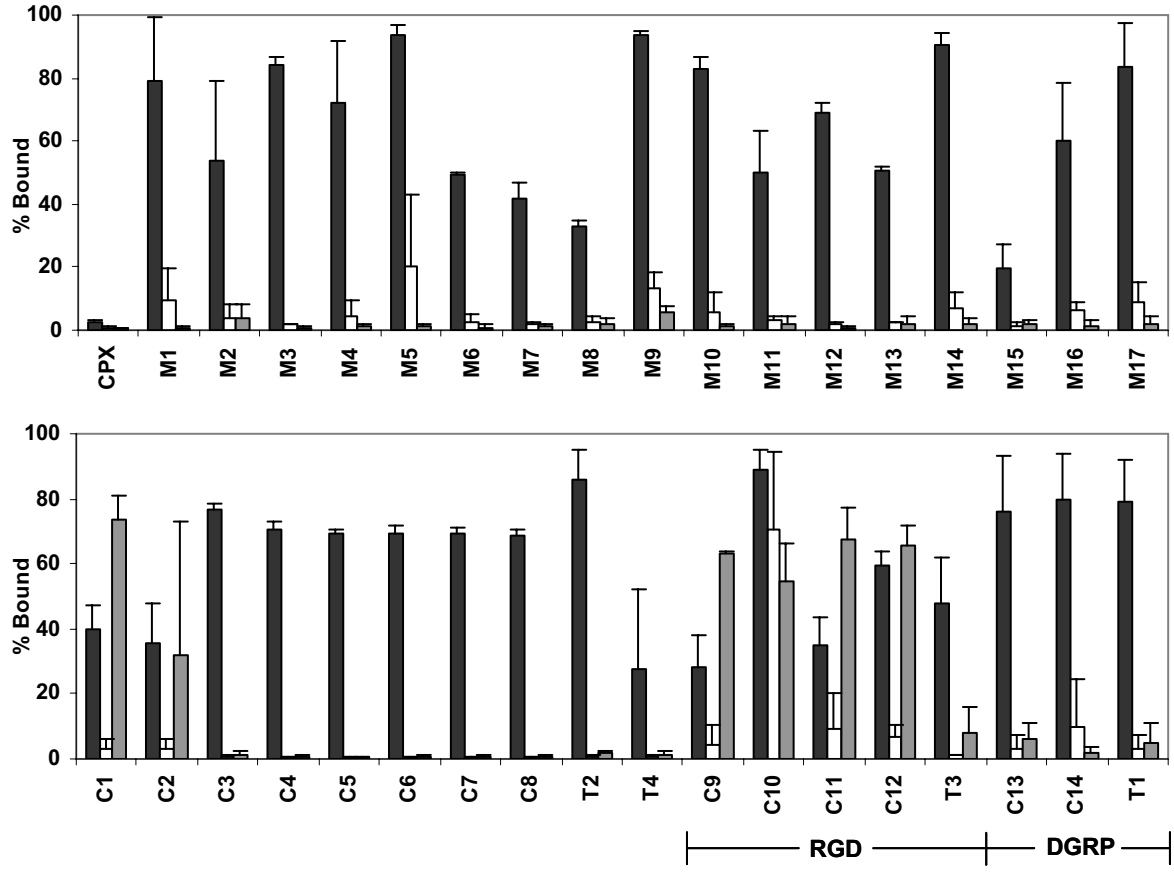
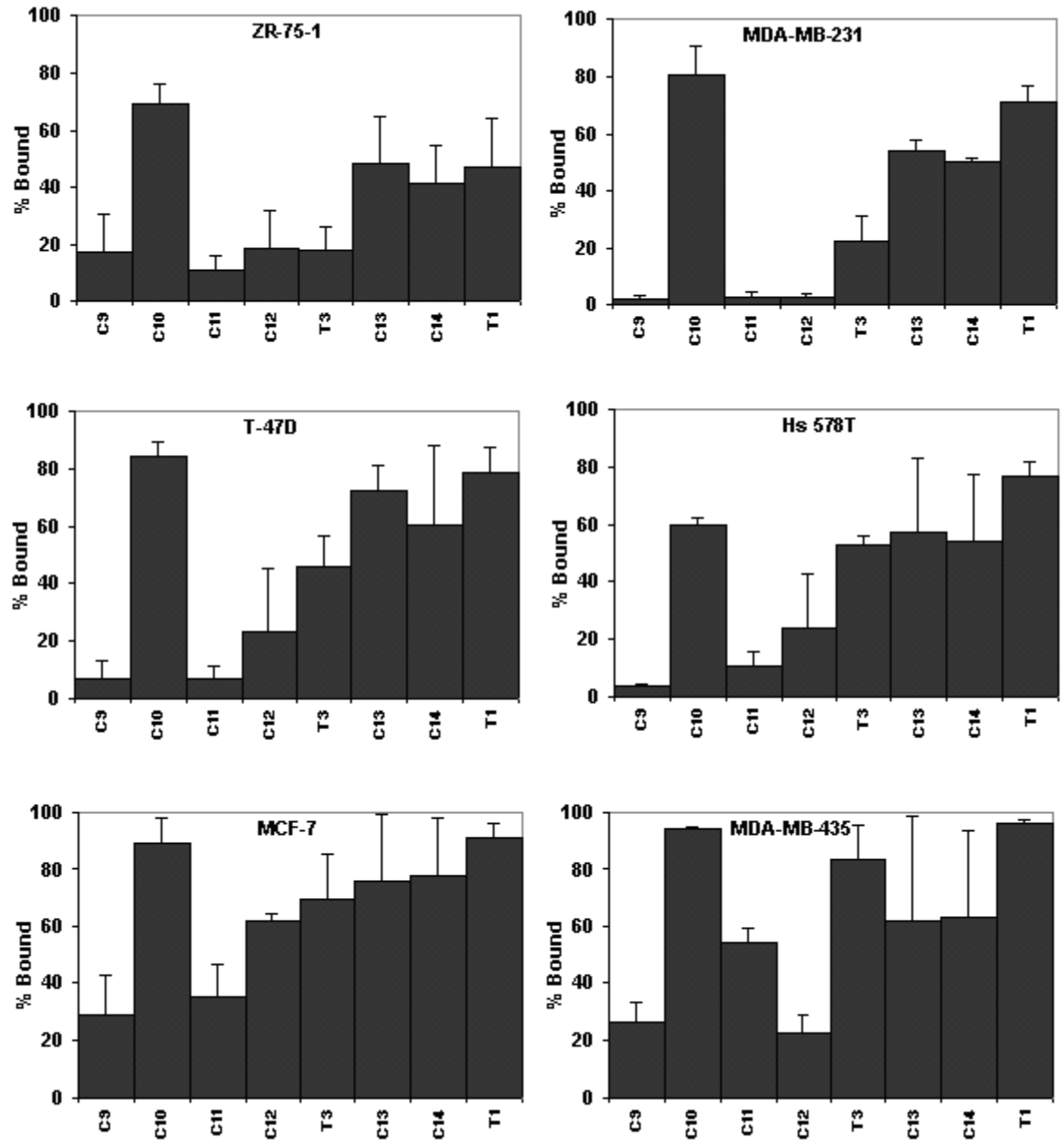
Supplemental Figure 1. Specificity of tumor cell binding peptides measured using flow cytometry. (A, B) Bacteria selected against MDA-MB-231 (M peptides), MCF-7 (C peptides), and T47-D (T peptides) breast tumor cells (black bars) exhibit high specificity when compared to normal MCF-10A (white bars) and HMEC cells (grey bars). Percent bound indicates the number of tumor cells with bacteria bound with error bars representing duplicate samples assayed on separate days.

Supplemental Figure 1



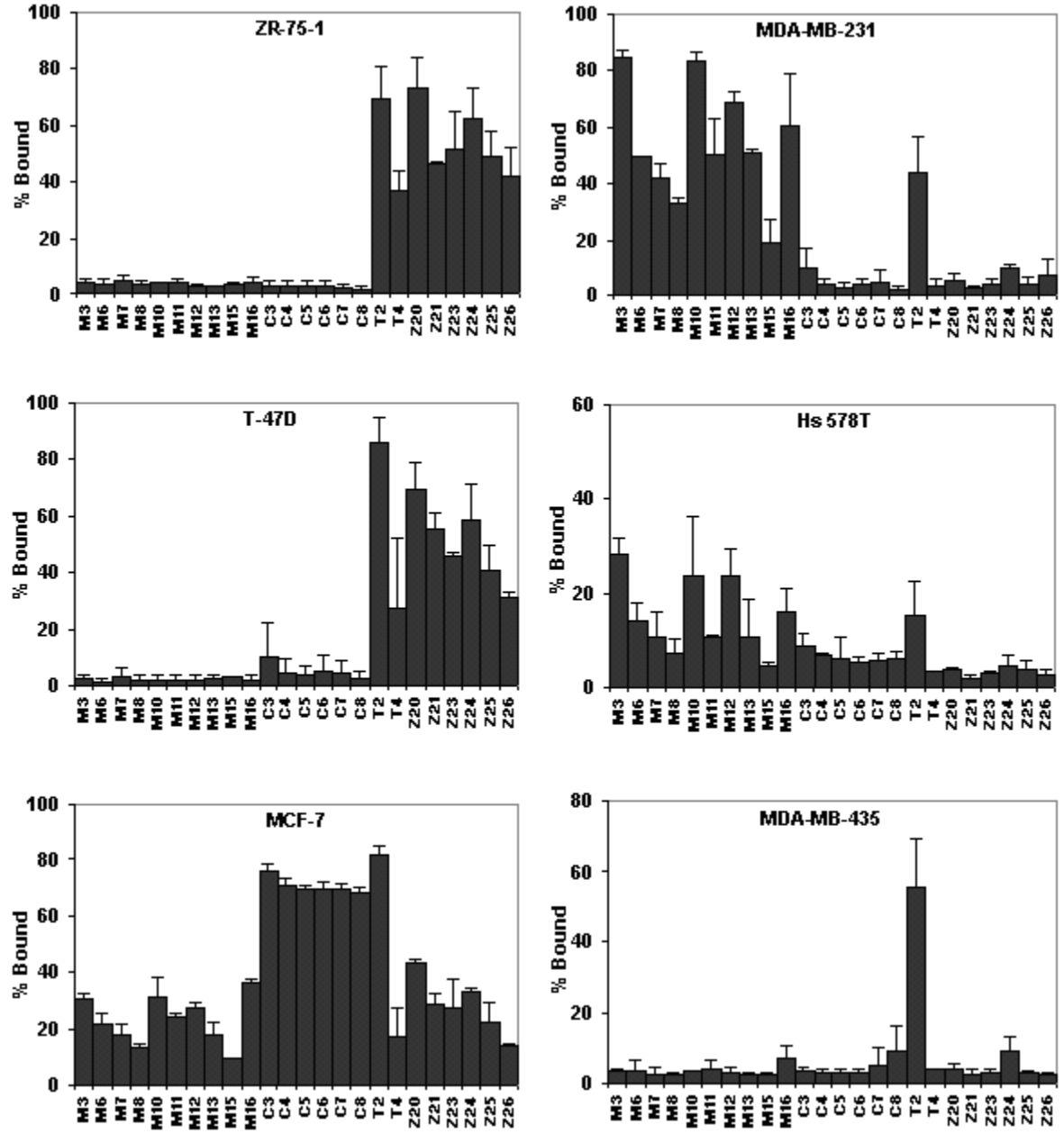
Supplemental Figure 2. Profiling of six tumor cell lines with bacteria expressing selected RGD/DGRP motifs. Bacteria expressing peptides containing the RGD motif (C9, C10, C11, C12, T3) or the DGRP (C13, C14, T1) showed similar binding patterns for ZR-75-1, T47-D, MCF-7, MDA-MB-231, Hs578T and MDA-MB-435. Percent bound indicates the number of tumor cells with bacteria bound with error bars representing duplicate samples assayed on separate days.

Supplemental Figure 2



Supplemental Figure 3. Profiling of six tumor cell lines with selected, tumor-specific bacteria differentiate basal from luminal subtypes. Bacteria expressing peptides selected against MDA-MB-231 (M peptides), MCF-7 (C peptides), T47-D (T peptides), and ZR-75-1 (Z peptides, Dane *et al*) breast tumor cells showed different cross-reactivity patterns when incubated with ZR-75-1, T47-D, MCF-7, and MDA-MB-231. A distinct pattern was seen for these peptides incubated with cell lines Hs578T and MDA-MB-435, not used in the selections. Percent bound indicates the number of tumor cells with bacteria bound with error bars representing duplicate samples assayed on separate days.

Supplemental Figure 3



Supplemental Figure 4. Microparticles labeled with pepC3 bind MCF-7 cells specifically, and pepC3 appears to bind to a receptor normally expressed internally in breast cells. (A) Unlabeled microparticles or particles labeled with an irrelevant pepT7 do not bind to the surface of MCF-7 (black bars), MCF-10A (white bars), or HMEC (grey bars), while particles labeled with pepC3 bind specifically to the surface of MCF-7 cells. (B) Confocal images of membrane-stained MCF-7 cells indicate that microparticles labeled with pepC3 are not internalizing into cells. Large image shows XY axis with corresponding XZ and YZ planes. (C) Cells stained with peptide probes (2 μM) for surface markers (top panels) or internal markers (bottom panels) are evaluated using flow cytometry. Breast cancer cells (MCF-7) and normal cells (MCF-10A and HMEC) were labeled with a red fluorescent probe without peptide (SA-PE, red histograms), with a negative control pepT7 (green histograms) or with tumor specific pepC3 (blue histograms). PepC3 bound the surface of only MCF-7 cancer cells, while staining both tumor and normal cells that were permeabilized to gain access to internal receptors.

Supplemental Figure 4