Supplementary Figure Legends:

Supplementary Figure 1: Densitometry analysis of breast and prostate cancer cell lines shown in Figure 1A for levels of phospho-Akt, phospho-S6K and B7-H1 protein (a) or B7-H1 mRNA, *=$P < 0.05$ (b). Monosomal and polysomal mRNA fractions were probed for B7-H1 mRNA by northern blot (c) and % of total RNA was determined by densitometry. BT549 cells (d) or PC-3 cells (e) were treated with PI(3) kinase pathway inhibitors prior to monosomal and polysomal mRNA fractionation. Percentage of total RNA determined using densitometry and quantitative RT-PCR. BT549 (f) or PC-3 (g) cells were treated with mTor pathway inhibitors as in (d) and levels of phospho-AKT, phospho-S6K, phospho-S6 and B7-H1 proteins were examined by densitometry. (h-i) Densitometric analysis of S6 and B7-H1 following transfection with a non-specific (scramble) siRNA or siRNA targeting S6.

Supplementary Figure 2: (a-b) siRNA knockdown of B7-H1 in PTEN mutant cell lines was confirmed by western blot at the time of coculture experiments. (b) Findings from BT549 and PC-3 cells were confirmed in the PTEN mutant cell lines LnCap and ZR-75-1. (c) PTEN knockdown in PTEN wild type cells BT-20 and DU-145 was confirmed by western blot at the time of coculture experiments. An associated increase in B7-H1 protein expression following PTEN knockdown was also confirmed. (d) B7-H1 blocking antibody (eBioscience) was added prior to coculture at a concentration of 25 μg/ ml and cells stained for CD45, AnnexinV FITC and 7-AAD as described above. (e) Densitometric analysis of B7-H1 stably transfected PTEN WT cells and siRNA

transfection efficiency was confirmed using pre-validated siRNA specific for GAPDH. (f) B7-H1 protein levels were unaffected by GAPDH siRNA.