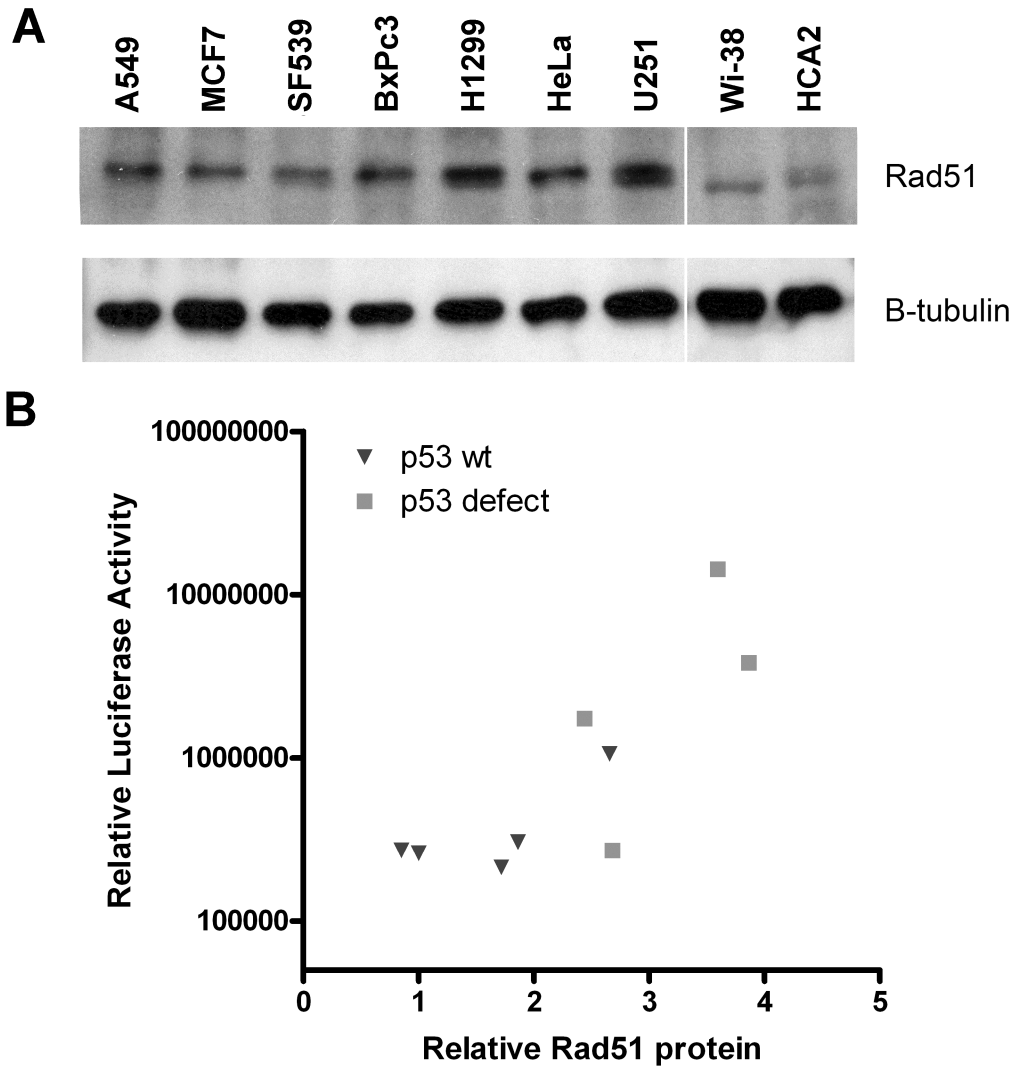
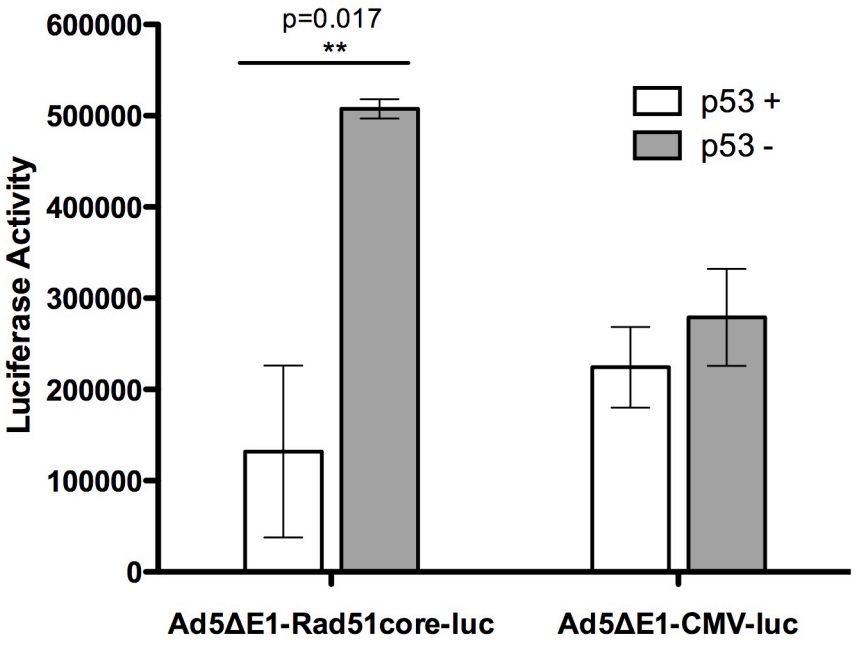
**SUPPORTING INFORMATION S1**

**Rad51core promoter activity correlates with host cell expression of Rad51 protein.**




**LEGEND.** (A) Nuclear extracts were isolated from each cell type and 3μg of total protein was separated on a 10% polyacrylamide gel, transferred to a nitrocellulose membrane, and probed with a monoclonal antibody for Rad51. The blots were stripped and re-probed for β-tubulin as a loading control. All displayed samples were run on the same blot. (B) Rad51 expression was quantitated by densitometry from the blot shown in panel (A) using QuantityOne software (BioRad); Rad51 expression was then normalized in terms of housekeeping protein levels (β-tubulin). Rad51 expression levels in normal fibroblasts (Wi-38 cells) were defined as 1, and Rad51 expression levels in the other cells were then expressed relative to this. Shown is a scatterplot of endogenous Rad51 protein content for each cell line, versus the level of Rad51core promoter activity in the same cell line. Statistical analysis was performed using a non-parametric test and determined to be significant (Spearman rank correlation coefficient = 0.7, $p = 0.04$).

**Overexpression of p53 in HeLa cells suppresses the transcriptional activity of the Rad51 core promoter**




**LEGEND.** HeLa cells were transfected with a plasmid encoding a p53-GFP fusion protein. 12 hrs post-transfection, the cells were transduced with Ad5ΔE1-Rad51core-luc vector or Ad5ΔE1-CMV-luc at a MOI of 100 pfu/cell. 24 hrs thereafter, the cells were collected and sorted into GFP+ and GFP- populations via FACS. The cells were then lysed and luciferase activity measured. Data are presented as mean values of independent experimental triplicates; error bars represent the standard deviation of the data value. The Rad51 promoter activity in p53 positive and negative cells was significantly different, as determined by a paired student's T-test ($p = 0.017$); in contrast, the CMV promoter activity was statistically equivalent in both p53 positive and negative cells.