

Figure W1. PIK1 is frequently overexpressed in human HCCs. 27 pairs of HCCs (T1-T27) and corresponding noncancerous liver tissues (N1-N27) were obtained by surgery. (A) Protein was extracted from the tissue samples and was analyzed by anti-PIK1 and anti- β -actin immunoblot analysis. (B) Determination of PIK1 mRNA by quantitative PCR. Expression levels of PIK1 mRNA were normalized against glyceraldehyde-3-phosphate dehydrogenase. Data represent PIK1 mRNA levels in HCC tissue samples divided by the PIK1 mRNA level in normal liver tissue of the same patient. The numbers above the columns indicate the fold PIK1 in the HCC sample of the corresponding noncancerous tissue.

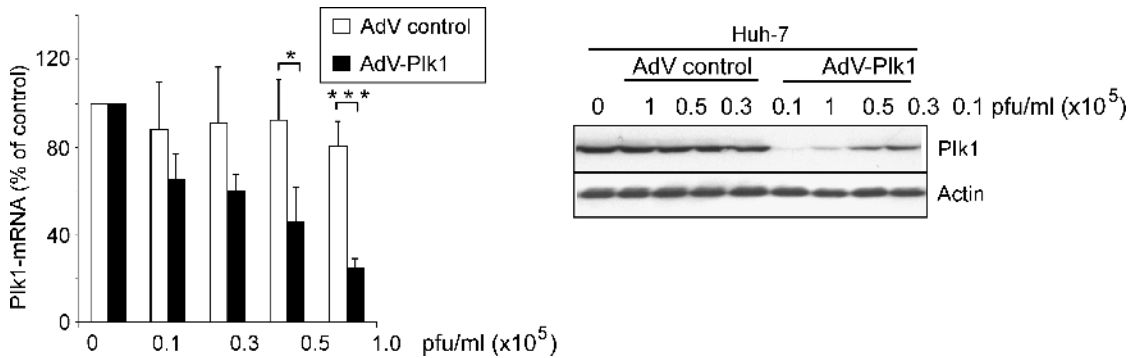


Figure W2. AdV-PIK1, but not AdV control, inhibited PIK1 expression in cultured HCC cell lines. Huh-7 cells were infected with 10^5 pfu/ml or the indicated amount of AdV-PIK1 or AdV control. At 48 hours later, the cells were lysed and analyzed for PIK1 mRNA (left panel) as well as by anti-PIK1 and anti- β -actin immunoblot analysis (right panel). Asterisks (*) indicate a significant difference between control AdV- and AdV-PIK1-treated cells.

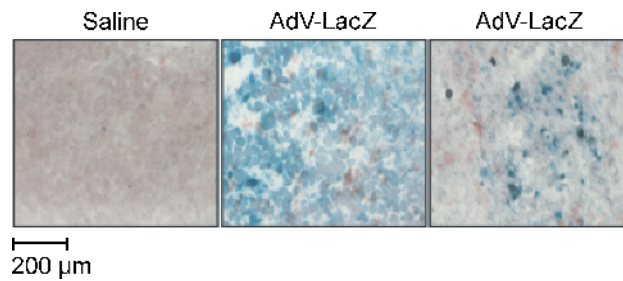


Figure W3. Intravenously infused AdV effectively infects Huh-7 tumors in nude mice. When the tumors reached a diameter of 2 to 3 mm, 300 μ l (7×10^9 pfu) of AdV-LacZ suspension or saline were injected intravenously. Three days later, the mice were sacrificed, and the tumors were excised. Cryosections were stained with X-Gal and counterstained with Nuclear Fast Red. Pictures were taken using a CCD camera and reveal that xenografts from AdV-LacZ-treated animals but not from saline-treated animals showed significant X-Gal staining. Magnification, $\times 200$.

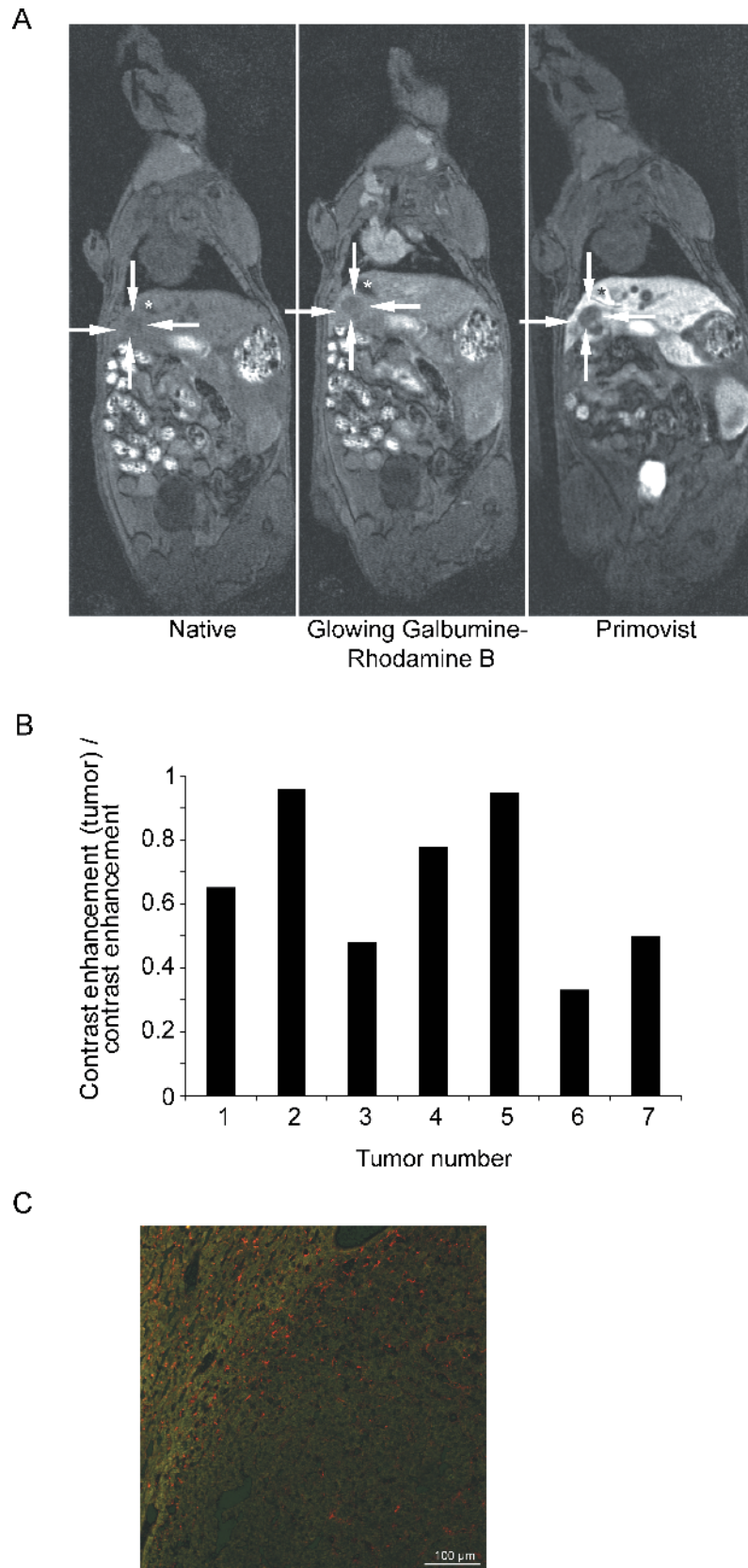


Figure W4. Tumors of *TGF α /c-myc* mice are frequently less perfused than normal liver tissue. (A) MR images of a tumor-bearing HCC before (native) and after intravenous injection of 100 μ l of Glowing Galbumine-Rhodamine B (middle panel). The right panel shows the same tumor by Primovist-enhanced MRI 1 week before. The tumor is marked by arrows. Gallbladders are marked by asterisks. (B) Ratios of contrast enhancement of tumor and corresponding normal liver tissue in the six *TGF α /c-myc* mice. Numbers 2 and 3 are two different tumors of the same mouse. (C) Confocal laser scanning microscopy image of a cryosection from the same mice as (A) and (B). The tumor tissue (lower right part) shows less and a more heterogeneous staining with Rhodamine B (red) compared with the normal liver tissue (upper left part).