Intracellular targeting of annexin A2 inhibits tumor cell adhesion, migration, and *in vivo* grafting

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Supplementary information

Table S1. Mass spectrometry analysis of protein candidates isolated from fraction F46.

Mass-spec retrieved peptides	Position on the protein (residues)	Protein name	Protein ID
GFSVVADTPELQR	96-109	LASP1	NP_006139.1
TQDQISNIK	112-120		
YHEEFEK	122-128		
FITHAPPGEFNEVFNDVR	20-37	CAPZA1	NP_006126.1
LLLNNDNLLR	38-47		
EASDPQPEEADGGLK	103-118		
FTITPPTAQVVGVLK	179-193		
DVQDSLTVSNEAQTAK	211-238		
QDIAFAYQR	87-95	annexin A2	AAH66955.2
TPAQYDASELK	123-133		
TNQELQEINR	154-163		
RAEDGSVIDYELIDQDAR	197-214		

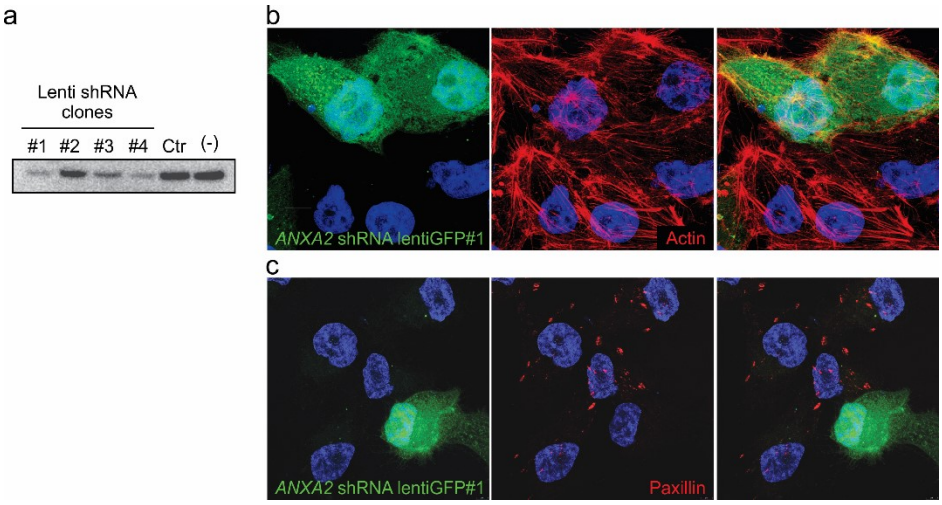

Figure S1. Silencing of annexin A2 disrupts the organization of actin filaments and focal adhesions. (**a**) The expression of annexin A2 was silenced in KS1767 cells by transduction with four alternative lentiviral shRNA (clones #1-4) against human annexin A2. A scrambled shRNA was used as a negative control (Ctr); (-), no lentivirus. GFP-positive (shRNA-transduced) cells were sorted and grown into 6-well plates to 80% confluence. Cell were lysed and protein extracts were separated by SDS-PAGE, blotted to nitrocellulose membranes and decorated with a specific anti-annexin A2 antibody. (**b, c**) Pools of cells infected with the best performing lentiviral shRNA clone (#1) were grown overnight onto circular coverslips coated with fibronectin and vitronectin, fixed and stained for IF and confocal imaging. Green, shRNA-transduced cells; (**b**) red: actin (rhodamine-phalloidin); (**c**), red: paxillin (Alexa 647 secondary antibody). Scale bar, 10 μm.

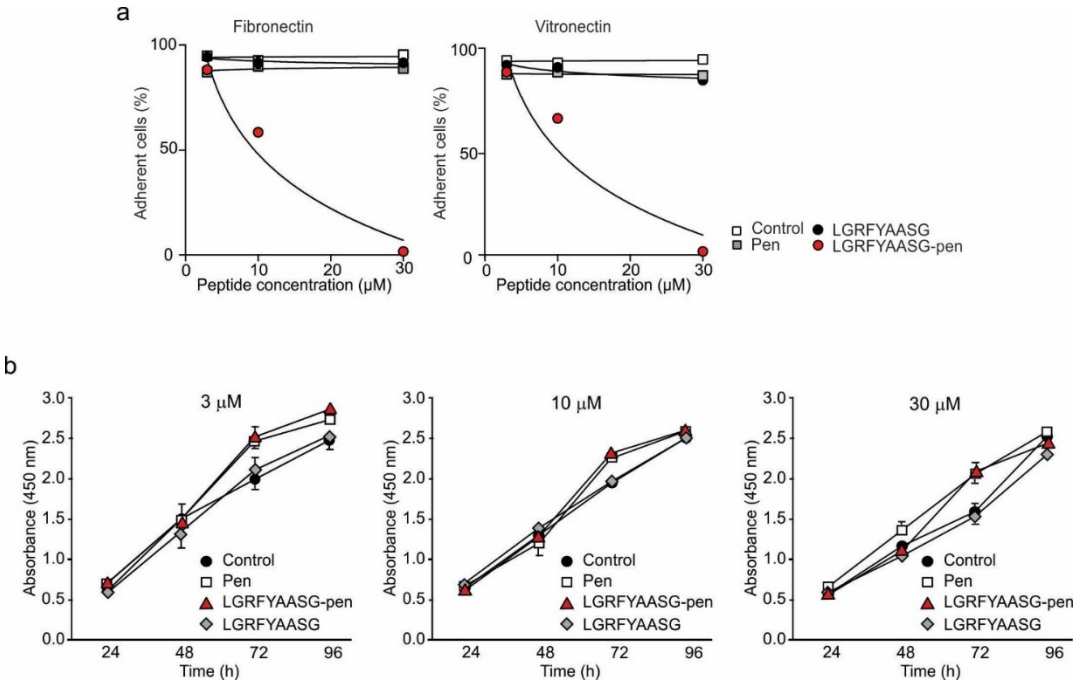

Figure S2. Tumor cell migration and viability assays. (**a**) KS1767 cells were exposed to increasing peptide concentrations (3-10-30 μM), followed by evaluation of cell adhesion to different matrix proteins (**b**) or proliferation at different time points by WST assay. Bars represent mean ± SEM of triplicate experimental points.

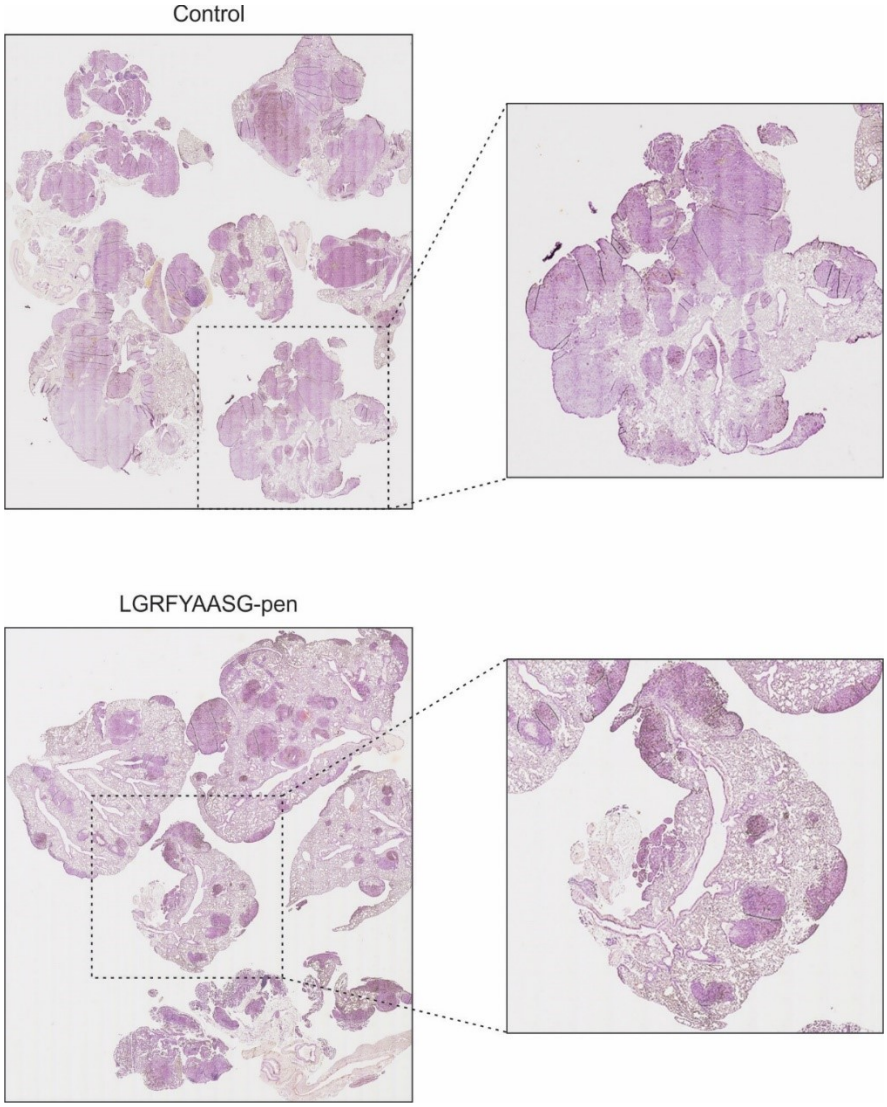

Figure S3. Pathological analysis of lungs in tumor-bearing mice. Representative histological analysis of tumor foci in lungs from animals administered with B16F10 cells. Slide sections were obtained from formalin-fixed and paraffin-embedded tissue (5-μm slices) and stained with H&E.