

## Supplementary Figures Legends

**Figure S1: PLA2R1 decreased favors RCC tumor growth.** ACHN cells were infected with a ctrl or with shRNA targeting PLA2R1 encoding vectors, puromycin selected and injected into nude mice as described in the figure 4. (A) Photographs show a representative picture of mouse at necropsy for each condition. (B) Statistical table with at each time of measure; the number of mice, the average of tumor volume, the SEM and the p value calculated using T-test.

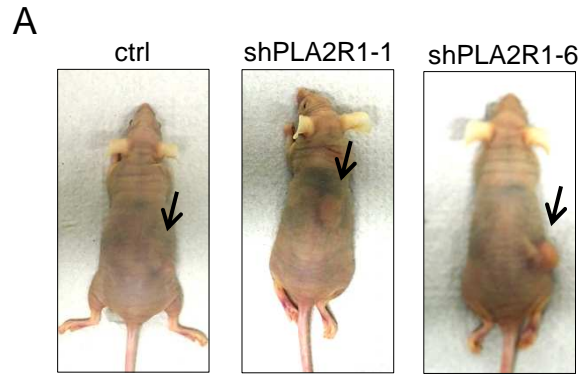
**Figure S2: PLA2R1 expression inhibits transformation and decreases tumor growth in 786-0 cells.** 786-0 cells were infected with a control or a PLA2R1 encoding retroviral vector and puromycin selected. (A) Ectopic expression of PLA2R1 was checked by Western-Blotting. Tubulin was used as loading control. (B) Twelve thousand and five hundred 786-O cells were seeded in agar and let to grow. After 1 week, colonies were counted for each indicated conditions and representative photographs are displayed. Histograms show a representative experiment from 3 independent experiments. Statistics were performed using T-test. \*\*\* represent p value < 0.005. (C) Five millions of 786-O cells were grafted in the right flank of 7 weeks old Nude mice. Tumor growth was monitored using caliper. Tumor volume was calculated using  $V=L \times l \times H/2$ . (D) Photographs show a representative picture of mice (upper panel) and tumor (lower panel) at necropsy for each condition. Scale bar represent 1cm. (E) Statistical table representing; the time of the measure, the number of mice, the average of the tumor volume, the SEM and the p value calculated using T-test.

**Figure S3: PLA2R1 increased blocks ACHN tumorigenicity.** ACHN were infected with a control vector or a vector encoding PLA2R1, selected and injected in nude mice as described

in the figure 6 legends. (A) Photographs show a representative picture of mice at necropsy. (B) Statistical table showing for each group; the number of mice, the tumor volume average, the SEM and the  $p$  value calculated using T-test.

**Figure S4: PLA2R1 induces cell death and a proliferation decreased in 786-O derived tumors.** Control or PLA2R1 constitutively expressing 786-O-derived tumors were collected, fixed and embedded. Tissue sections from tumors were then used to analyze proliferation and cell death for each experimental condition. (A-B) Immunohistochemistry against Ki-67 proliferation marker was performed. Nuclei were counterstained by an hematoxylin solution. (A) Histogram representing the percentage of Ki-67 positive cells was displayed. Positive cells were counted on at least 4 independent fields per tumor and at least 3 independent tumors. (B) Representative photographs are shown. (C-D) TUNEL assays were performed to label dying cells. After nuclear staining by Hoechst dye, the percentage of TUNEL positive cells was calculated (at least 3 independent tumors and at least 4 independent fields/ tumor analyzed). (C) Relative TUNEL positive cells were represented. (D) Images are shown.

**Figure S1,**  
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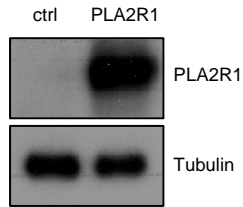


**B**

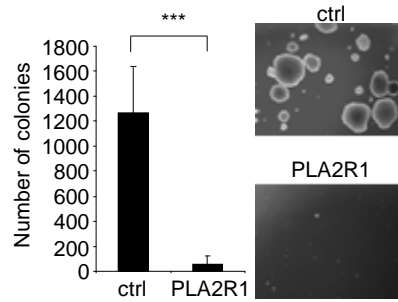
D16	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test/ctrl p value
ctrl	4	13.3	9,1	
shPLA2R1-1	5	41,9	3,5	0,02735
shPLA2R1-6	5	57,4	10,6	0,02033
D23	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test/ctrl p value
ctrl	4	21,2	9,1	
shPLA2R1-1	5	82,6	19,2	0,02991
shPLA2R1-6	5	117,1	32,4	0,03070
D27	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test/ctrl p value
ctrl	4	25,8	8,6	
shPLA2R1-1	5	111,7	23,4	0,01356
shPLA2R1-6	5	146,8	31,1	0,00878
D30	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test/ctrl p value
ctrl	4	46,8	14,8	
shPLA2R1-1	5	147	25,3	0,01268
shPLA2R1-6	5	196,5	31,9	0,00424
D34	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test/ctrl p value
ctrl	4	51,8	16,6	
shPLA2R1-1	5	172,5	35,2	0,02047
shPLA2R1-6	5	227,1	33,8	0,00230
D37	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test/ctrl p value
ctrl	4	62,2	20	
shPLA2R1-1	5	189,7	43,8	0,04337
shPLA2R1-6	5	254,4	31,8	0,00121
D42	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test/ctrl p value
ctrl	4	83,5	35	
shPLA2R1-1	5	222,8	44,2	0,05726
shPLA2R1-6	5	305,2	44,9	0,00665
D47	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test/ctrl p value
ctrl	4	111,8	50,3	
shPLA2R1-1	5	280,6	48,8	0,06233
shPLA2R1-6	5	352,5	57,6	0,01970

**Figure S2,**  
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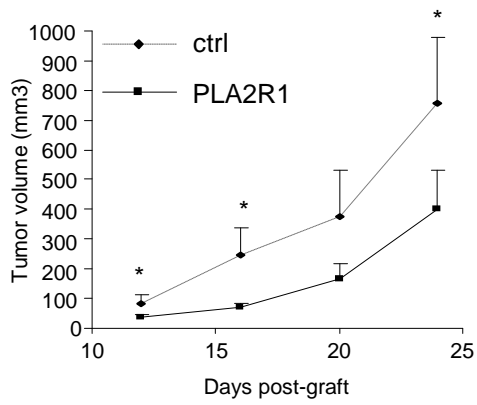
**A**



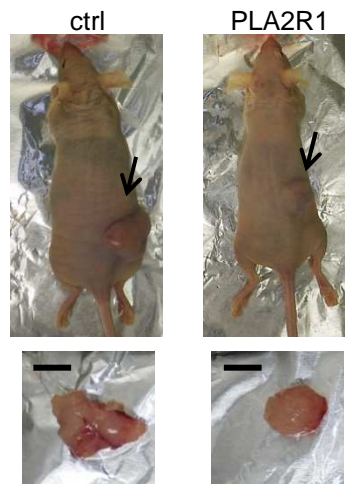
**B**



**C**



**D**



**E**

D12	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test p value
ctrl	4	45.7	14.6	
PLA2R1	4	21.1	5.1	0.019132

D16	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test p value
ctrl	4	117	27.3	
PLA2R1	4	36.6	5.1	0.001143

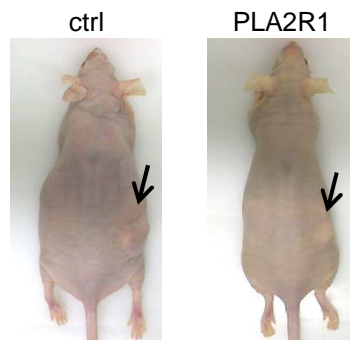
D20	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test p value
ctrl	4	206	101	
PLA2R1	4	94.8	31.1	0.080591

D24	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test p value
ctrl	4	591	248	
PLA2R1	4	257	71.4	0,041398

**Figure S3,**  
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**A**



**B**

D19	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test p value
ctrl	4	75	9.5	
PLA2R1	5	34	4.5	0.00639

D25	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test p value
ctrl	4	105	9	
PLA2R1	5	35	7	0.00058

D39	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test p value
ctrl	4	132.5	18.5	
PLA2R1	5	44	5	0.00227

D60	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test p value
ctrl	4	217	45	
PLA2R1	5	106	13	0.04756

D75	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test p value
ctrl	4	265	42	
PLA2R1	5	147	28	0.05736

D89	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test p value
ctrl	4	351	48	
PLA2R1	5	161	45	0.0286

D104	Nb of mice	Tumor vol. (mm <sup>3</sup> )	SEM	t-Test p value
ctrl	4	391	42	
PLA2R1	5	137	25.5	0.00149

**Figure S4,**  
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