Supplementary figures and table

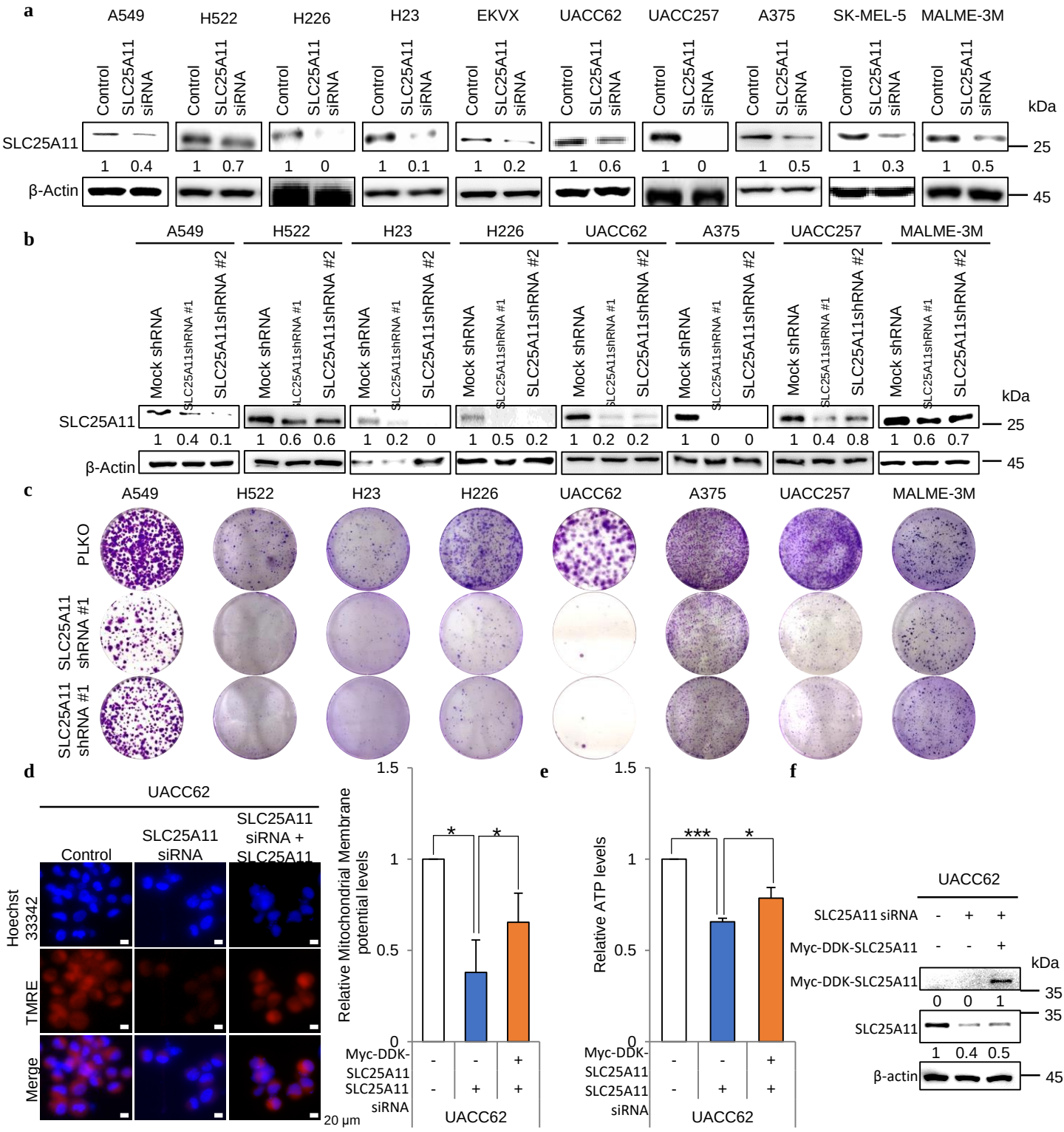


Fig. S1. SLC25A11 knockdown inhibited the growth of melanoma and NSCLC cells. (a) SLC25A11 knock down using siRNA of SLC25A11 in NSCLC and melanoma was determined by Western blot and quantified by ImageJ. (b) SLC25A11 knockdown using shRNA of SLC25A11 in NSCLC and melanoma was determined by Western blot and quantified by ImageJ. (c) Clonogenic assay was performed using NSCLC and melanoma cells stably expressing shSLC25A11 for 2 weeks. (d) The mitochondrial membrane potential of UACC62 cell treated with SLC25A11 siRNA (40 nM) for 24 h and then treated with Myc-DDK-tagged-SLC25A11 (3 μg) for 24 h was analyzed by live cell imaging and intensity analyzed by ZEN software (scale bar, 20 μm). (e) ATP levels were measured in UACC62 treated with SLC25A11 siRNA (40 nM) and Myc-DDK-tagged-SLC25A11 (3 μg) using a ATP Colorimetric assay kit. (f) Western blot confirming the transfection of siRNA and plasmid with SLC25A11 antibody. (Data were presented as mean ± SD. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$)

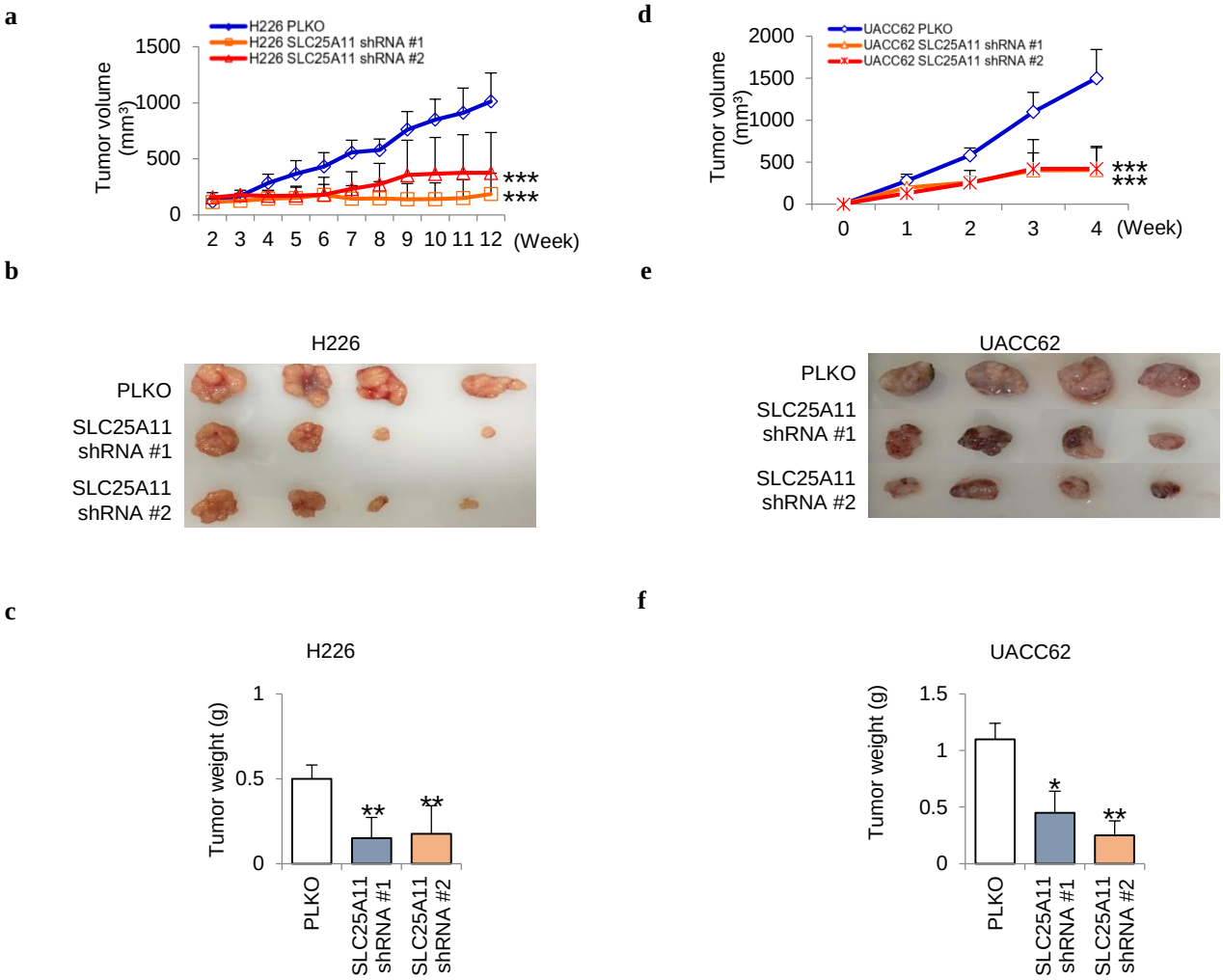


Fig. S2. SLC25A11 knockdown reduced tumor growth of NSCLC and melanoma. (a) Volume of subcutaneous tumors derived from H226 treated with SLC25A11 shRNAs were measured. (b) Representative photographs of tumors of H226 treated with SLC25A11 shRNAs were taken. (c) Weight of subcutaneous tumors of H226 treated with SLC25A11 shRNAs were measured. (d) Volume of subcutaneous tumors of UACC62 treated with SLC25A11 shRNAs were measured. (e) Representative photographs of tumors of UACC62 treated with SLC25A11 shRNAs were taken. (f) Weight of subcutaneous tumors of UACC62 treated with SLC25A11 shRNAs. (Data were analyzed statistically by two-way analysis of variance ANOVA tests using GraphPad PRISM 5 ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$)

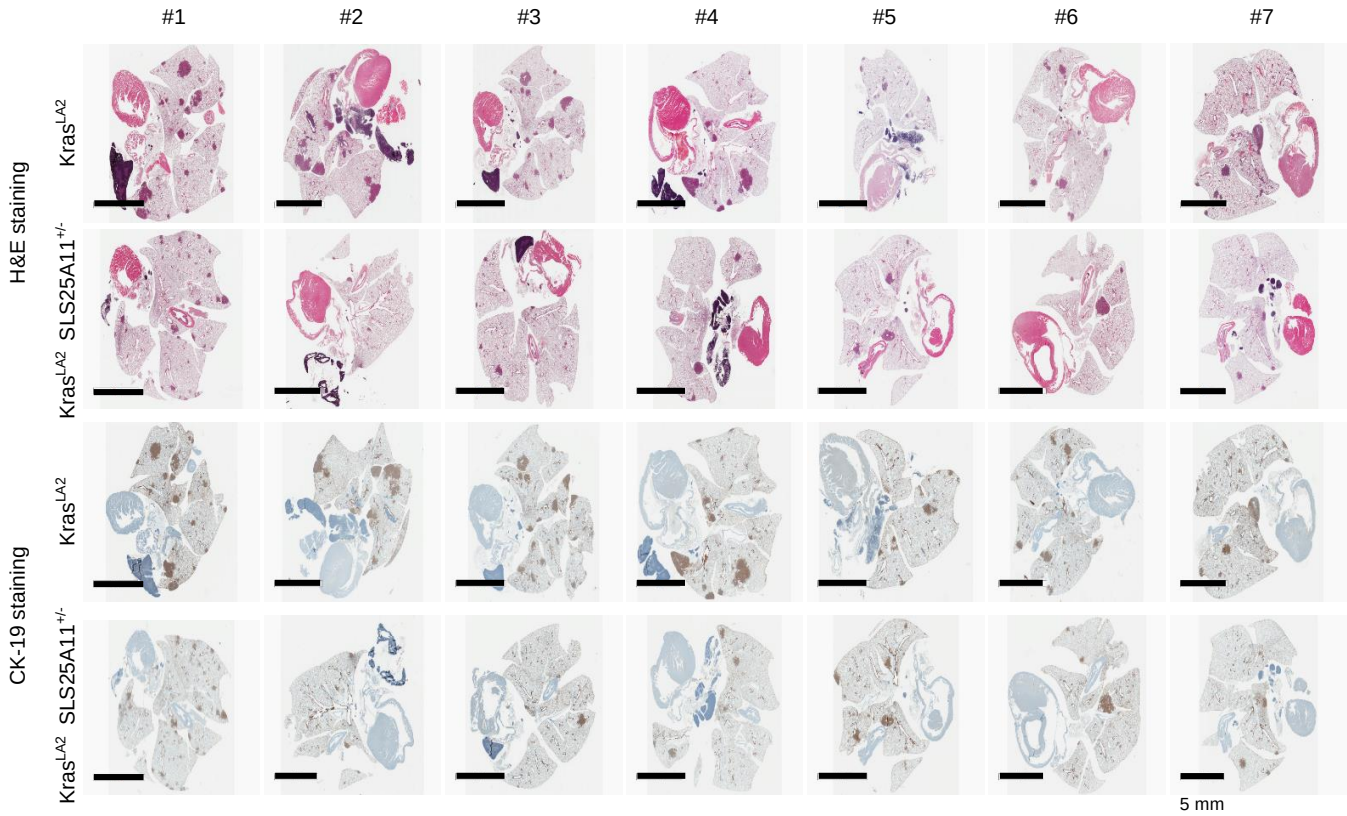
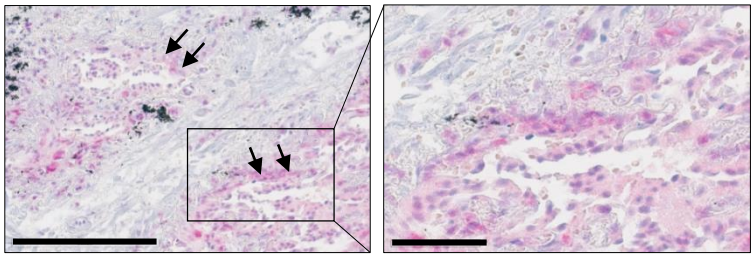
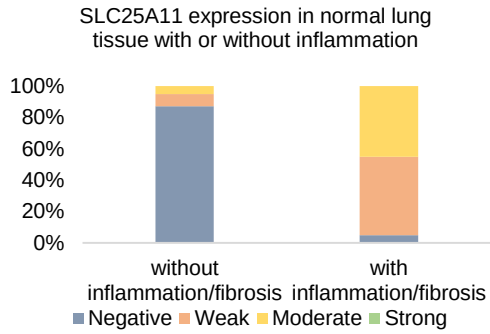


Fig. S3. Representative photomicrographs of lung tumor nodules were taken by staining H&E and CK-19 from each 7 different littermates of $Kras^{LA2}$ and $Kras^{LA2}$ /$SLS25A11^{+/-}$

a

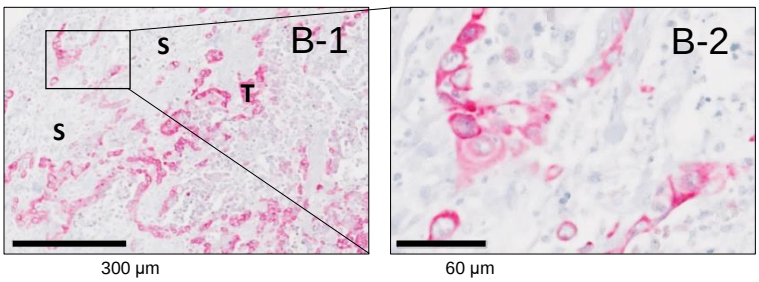


SLC25A11 intensity	None	Weak	Moderate	Strong	Total
Normal lung tissue **without** inflammation/fibrosis	34	3	2	0	39
Normal lung tissue **with** inflammation/fibrosis	1	10	9	0	20

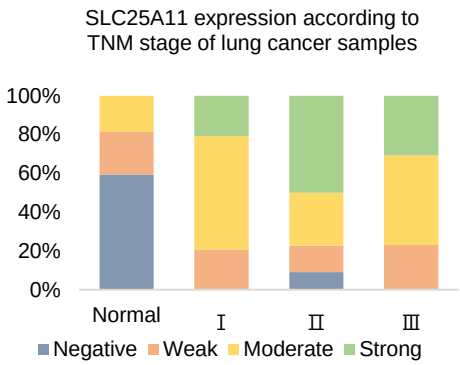


(*P<0.001, Fisher's Exact Test)

b



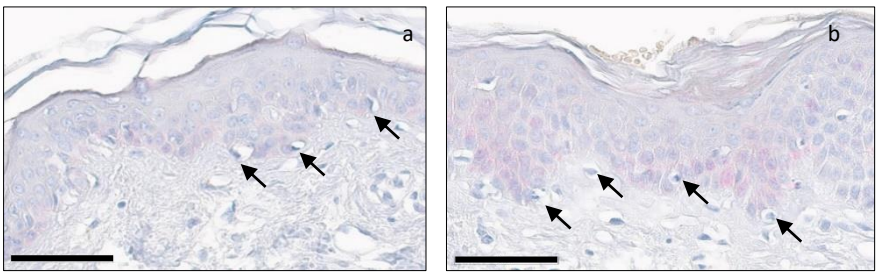
c



SLC25A11 intensity	None	Weak	Moderate	Strong	Total	p value compared to normal
Normal	35	13	11	0	59	
TNM Stage Ⅰ	0	5	14	5	24	p<0.001
TNM Stage Ⅱ	2	3	6	11	22	p<0.001
TNM Stage Ⅲ	0	3	6	4	13	p<0.001

Fig. S4. Expression of SLC25A11 in inflamed non-cancerous lung and normal and distribution in lung cancer samples according to TNM stage. (a) Low (A-1, X200, scale bar 200μm), high (A-2, x400, scale bar 60μm) magnification pictures and percentile distribution (lower panels) of inflamed non-cancerous lung tissue with fibrosis showing staining at alveolar epithelial cells (arrows). (b) Low (B-1, X100, scale bar 300μm), high (B-2, x400, scale bar 60 μm) magnification pictures and of tumor cells invasive front into the stroma show stronger staining intensity (T: tumor, S: stroma). (c) SLC25A11 expression patterns according to TNM stages of lung cancer. (Statistical significance was calculated by Fisher's Exact test. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$)

a



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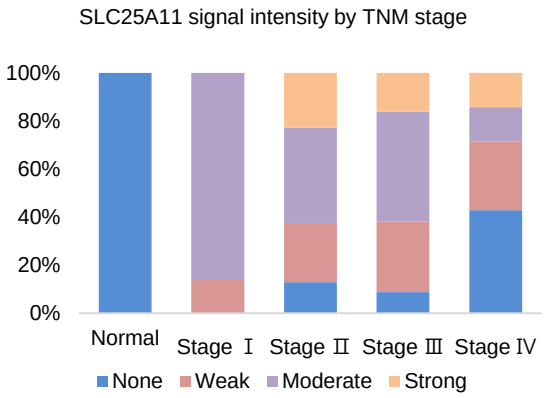

SLC25A11 intensity	None	Weak	Moderate	Strong	Total
Normal	8	0	0	0	8
TNM Stage Ⅰ	0	1	6	0	7
TNM Stage Ⅱ	9	17	28	16	70
TNM Stage Ⅲ	6	20	31	11	68
TNM Stage Ⅳ	3	2	1	1	7

(*P<0.001, Fisher's Exact Test)

Fig. S5. SLC25A11 expression in malignant melanoma samples. (a) a. Normal skin tissue. Melanocytes do not show staining (arrows) (X400, scale bar 60μm). b. Normal skin tissue adjacent to melanoma. Melanocytes do not show staining (arrows) (X400, scale bar 60μm). (b) SLC25A11 expression patterns according to TNM stage of malignant melanoma. (Statistical significance was calculated by Fisher's Exact test. ***p < 0.001, **p < 0.01, *p < 0.05)

genotype	+/+	+/mut	mut/mut
neonate	28	52	0
E14.5	10	5	0
E10.5	14	16	4

Table. S1. Deletion of Slc25a11 gene in mice causes lethality between embryonic day 10.5 and 14.5.