

Supplementary Figure 1

CD29 CD44 Sca-1 CD51 ckit CD11b CD45 CD31 CD34



WT isolate 1

WT isolate 2

WT isolate 3

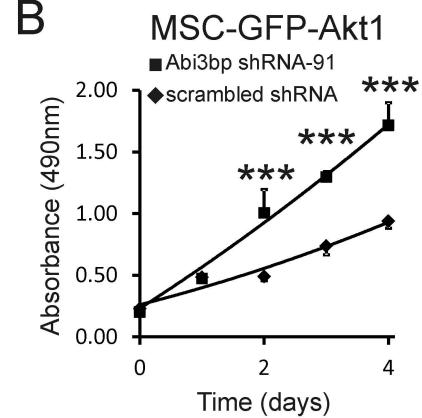
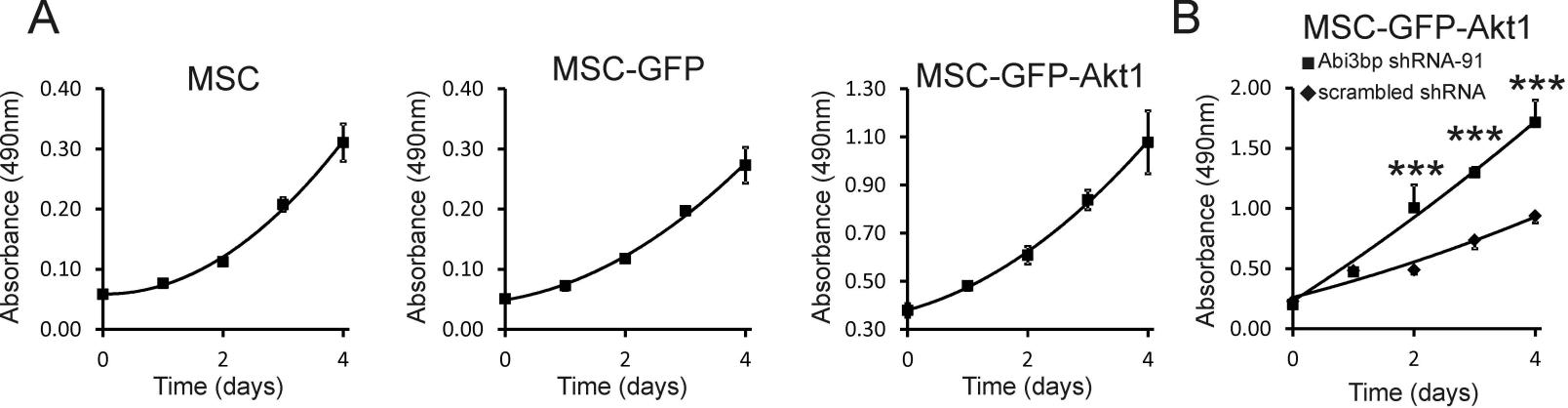
KO isolate 1

KO isolate 2

KO isolate 3

Lung

Liver



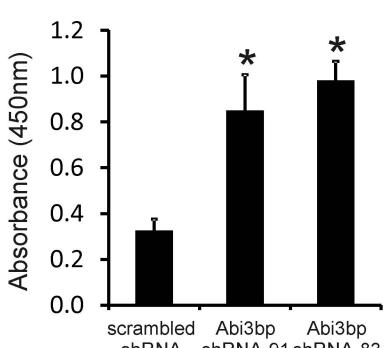
C G0/G1-phase

Scrambled shRNA $61.6 \pm 0.4\%$
 Abi3bp shRNA-91 $57.8 \pm 0.7\%^{**}$
 Abi3bp shRNA-83 $59.2 \pm 0.4\%^*$

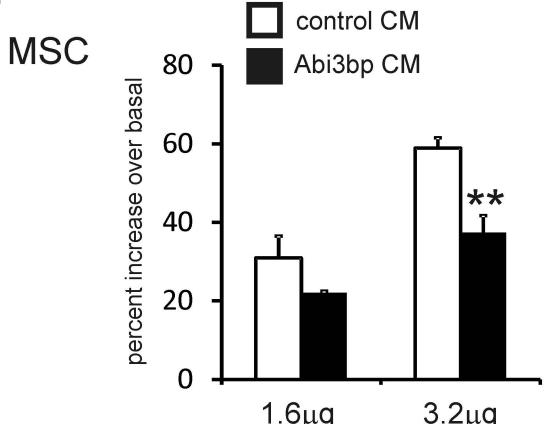
S-phase

Scrambled shRNA $34.0 \pm 0.4\%$
 Abi3bp shRNA-91 $40.0 \pm 0.6\%^{***}$
 Abi3bp shRNA-83 $38.6 \pm 0.6\%^{***}$

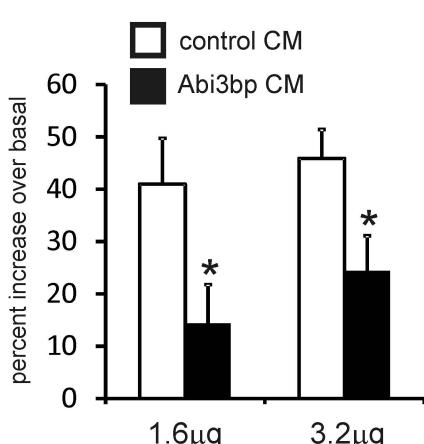
D



E

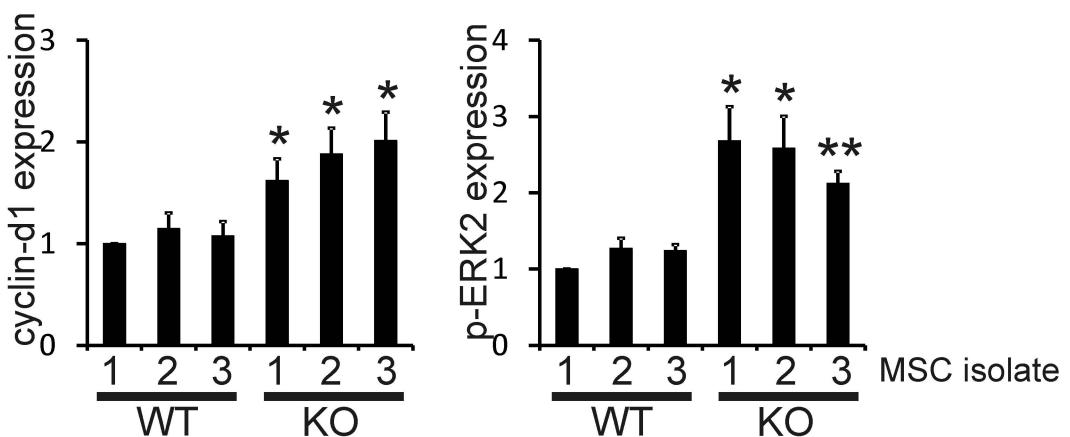


MSC-GFP-Akt1

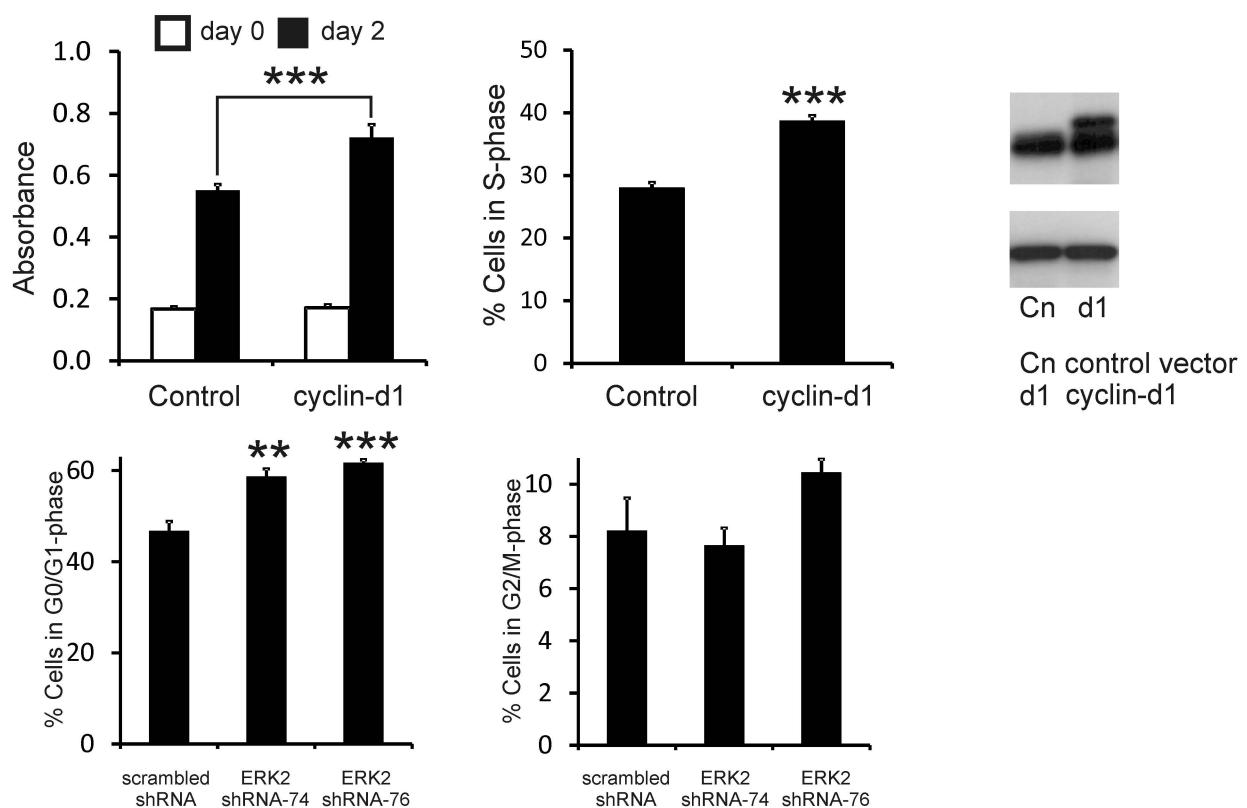


Supplementary Figure 3

A

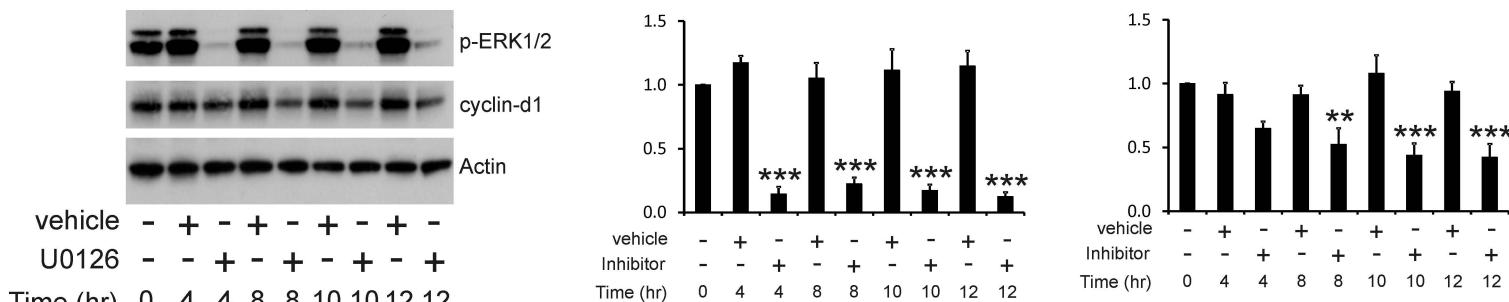


B

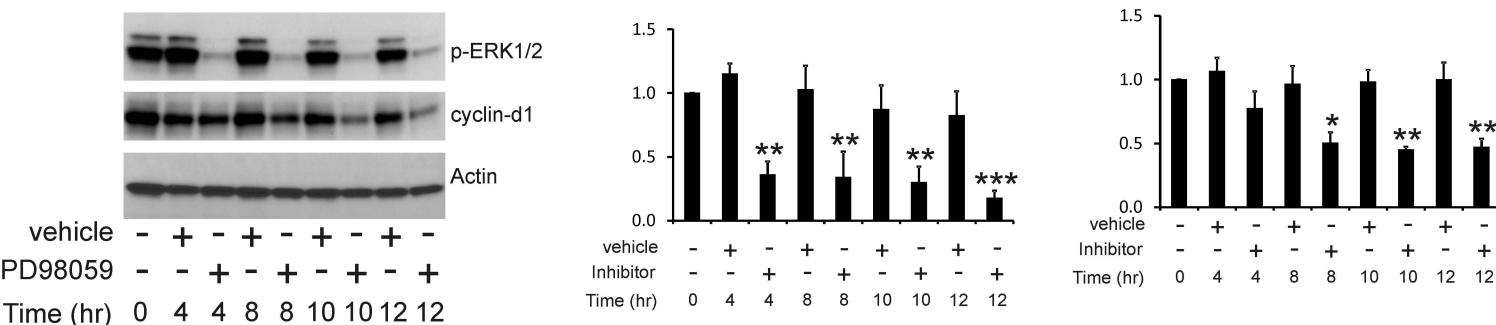


C

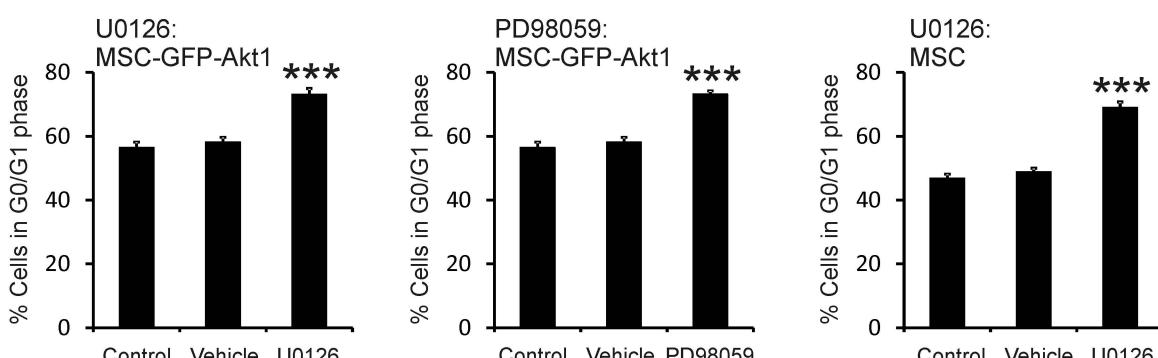
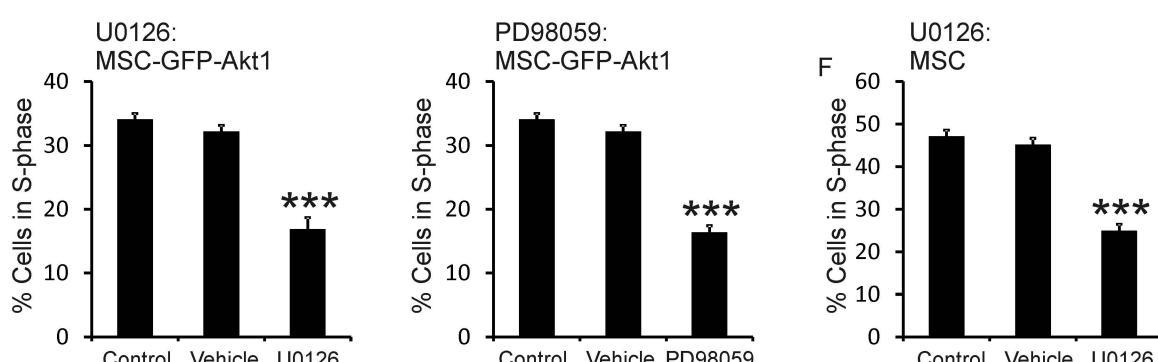
A U0126



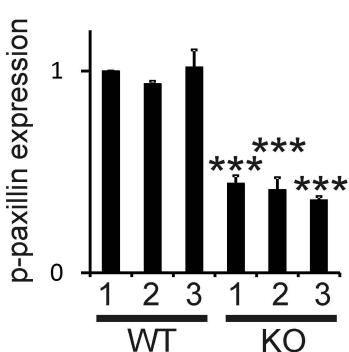
PD98059



B



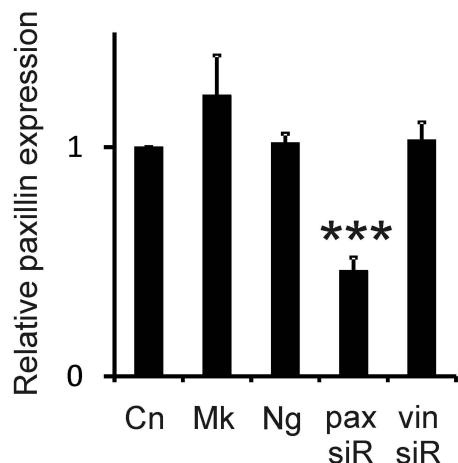
C



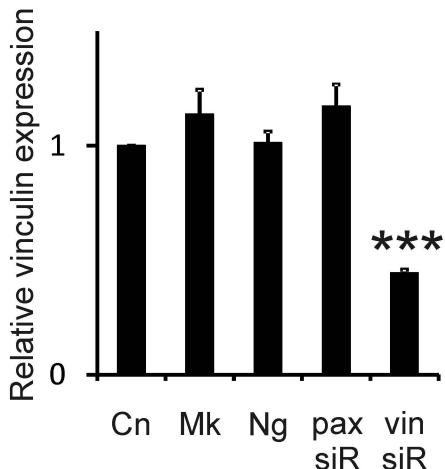
Supplementary Figure 5

A

paxillin antibody

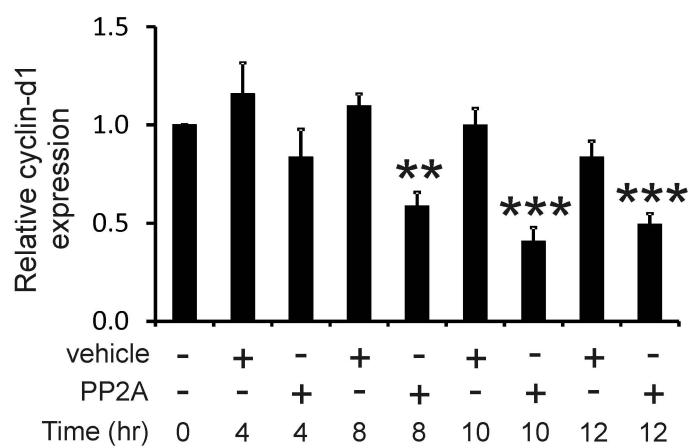
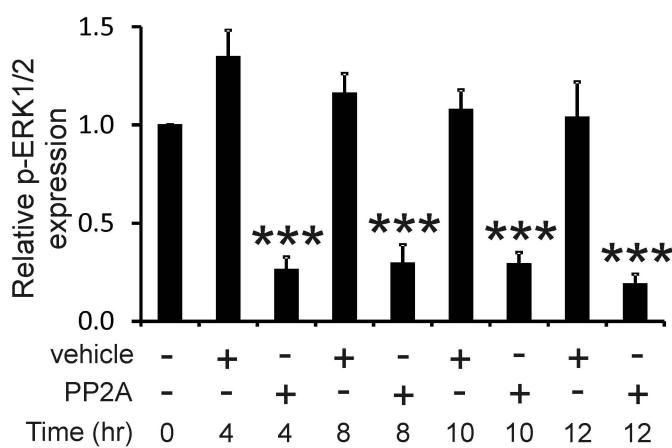


vinculin antibody

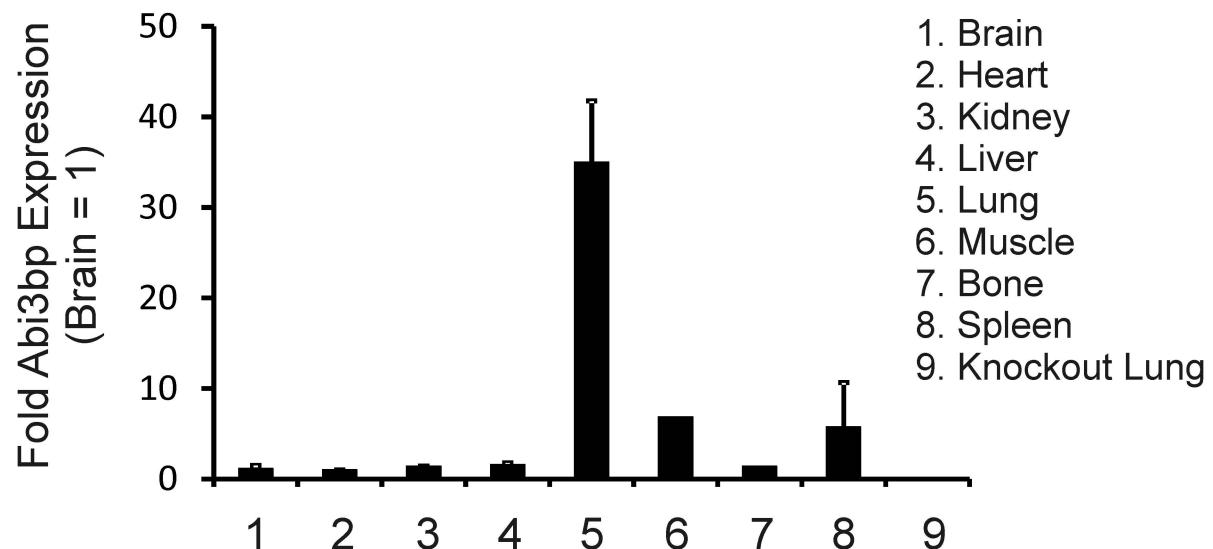


Cn: control, Mk: Mock, Ng: control siRNA, pax siR: paxillin siRNA, vin siR: vinculin siRNA

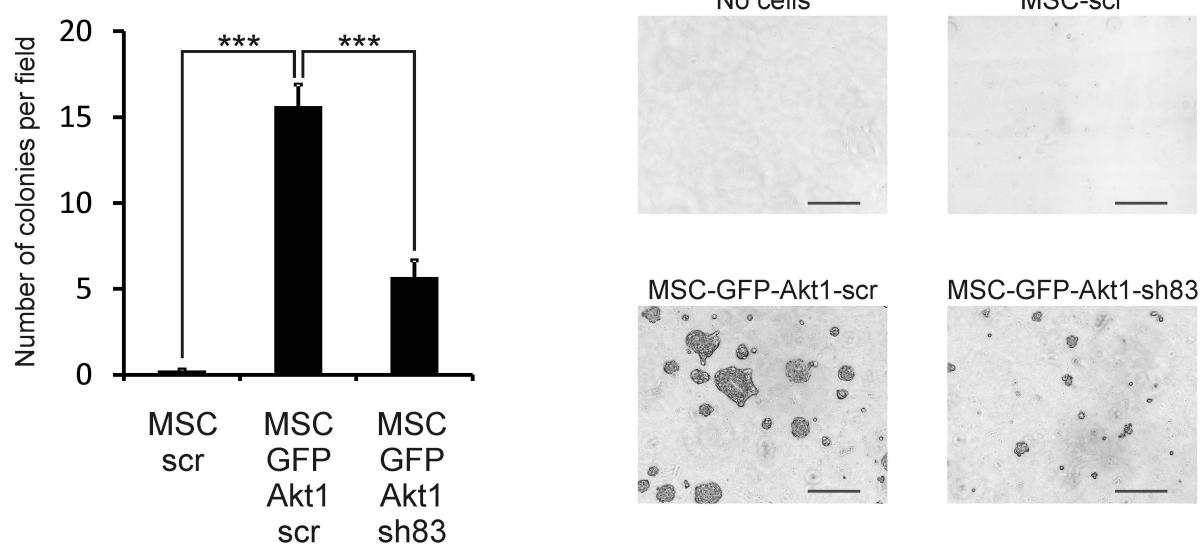
B



A

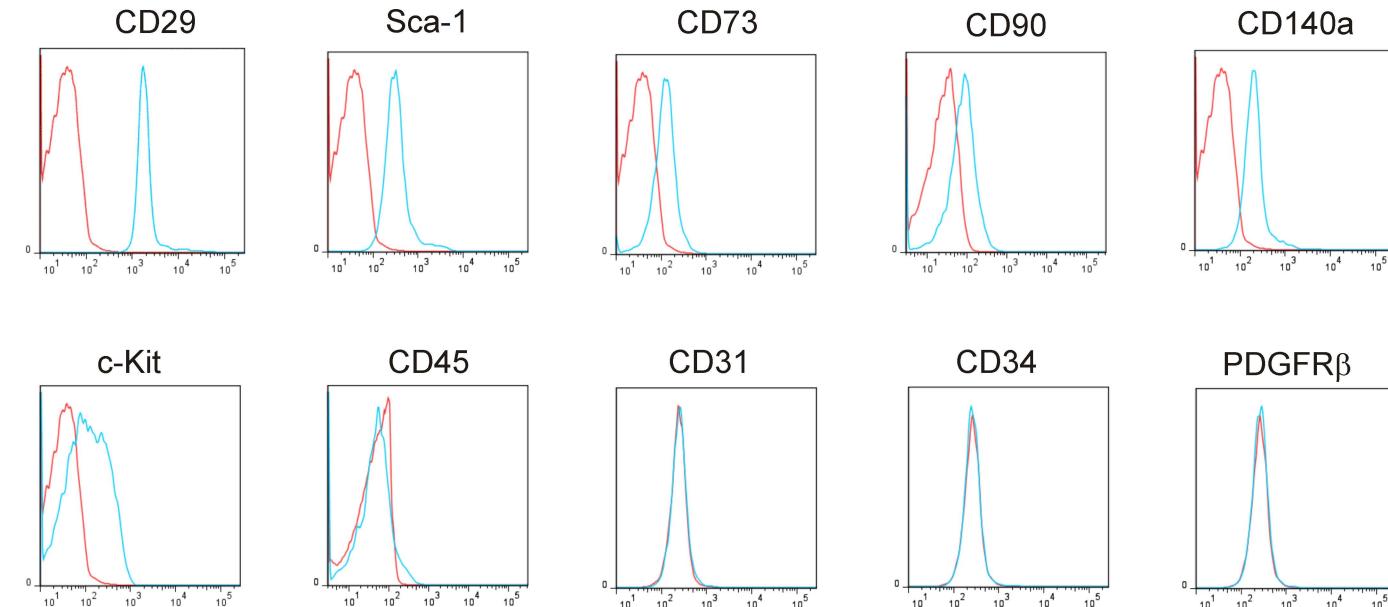


B

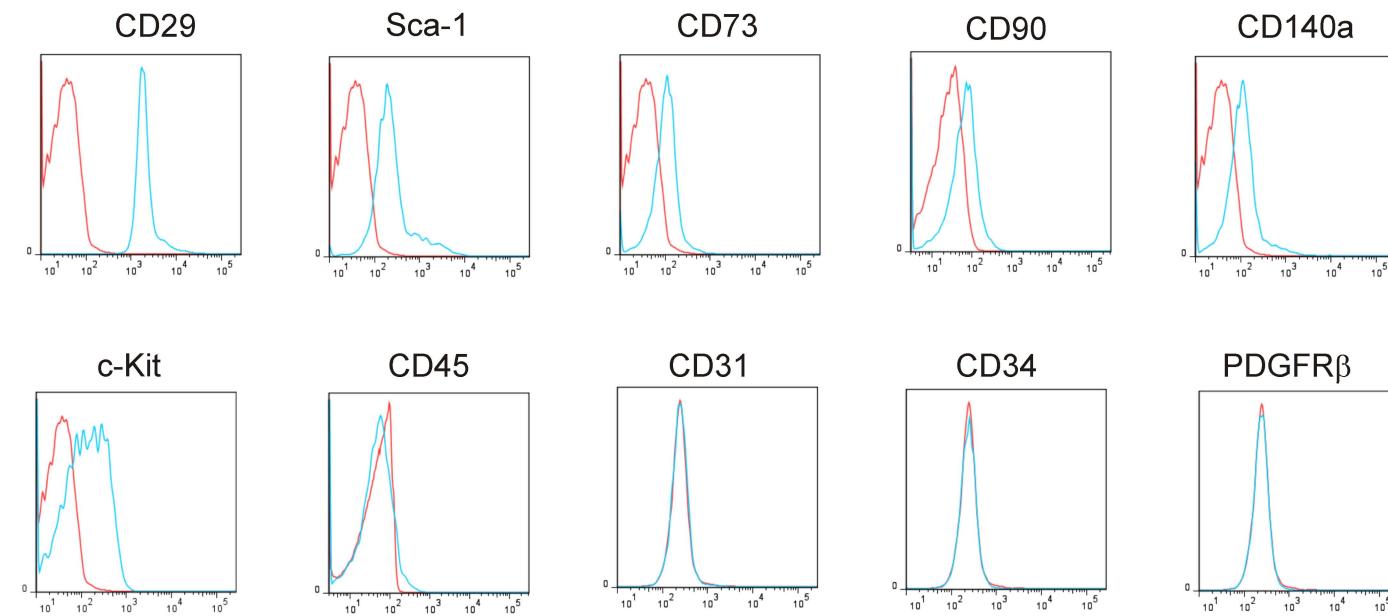


A. CD45^{neg}[CD44-CD105]^{pos} in bone marrow

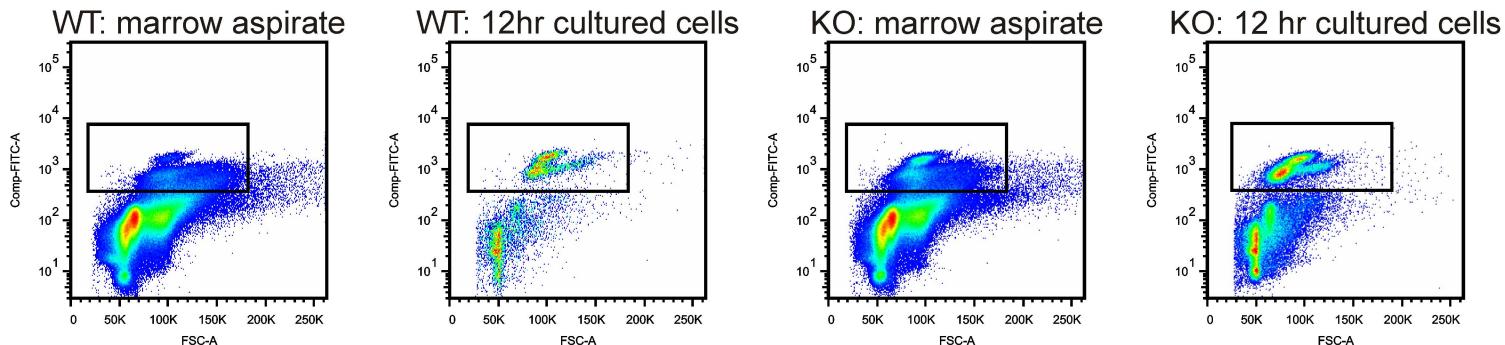
Wild-type bone marrow



Knockout bone marrow

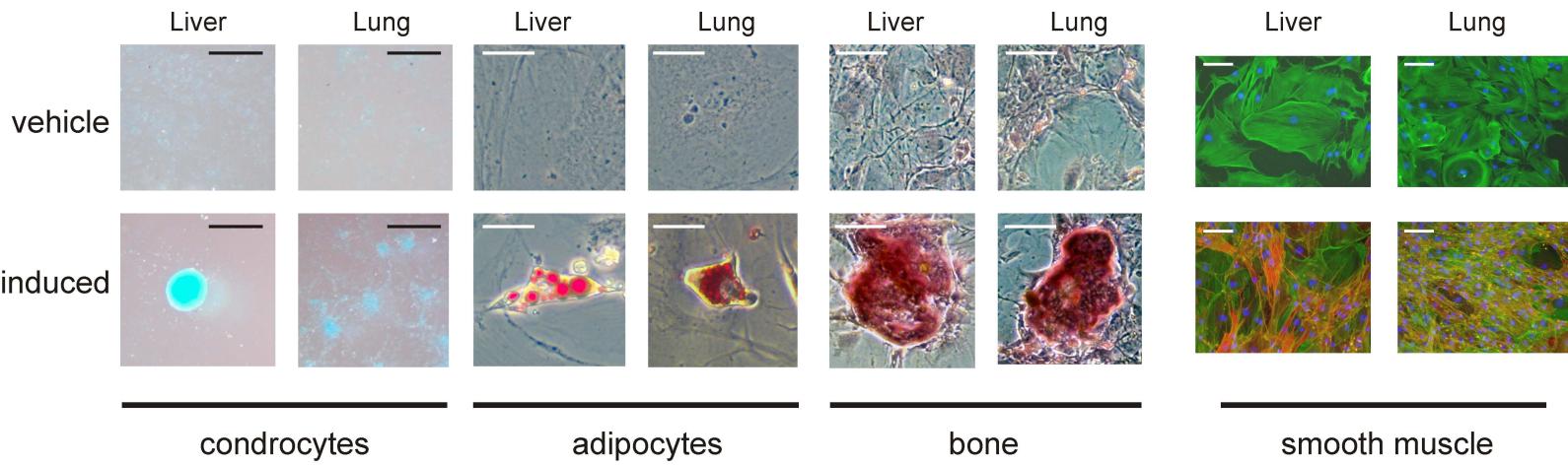


B. CD45^{neg}CD44^{pos} cells are enriched in the tissue culture plastic attached population



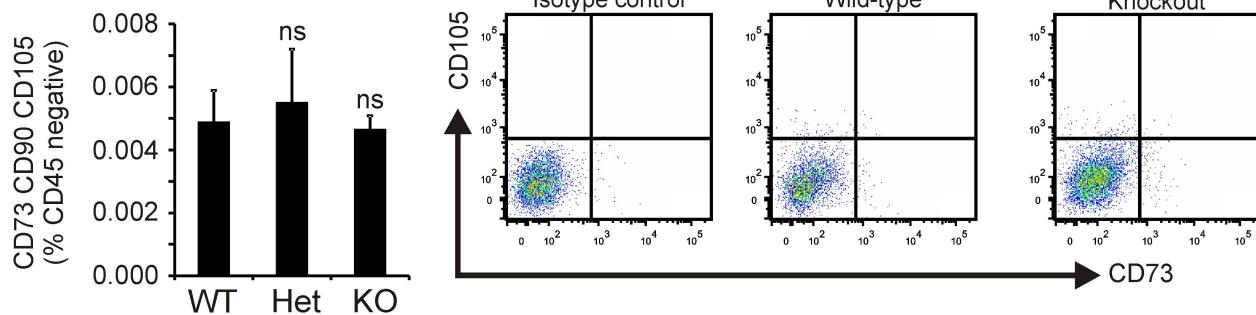
Supplementary Figure 8

A. Lung and liver MSC differentiation

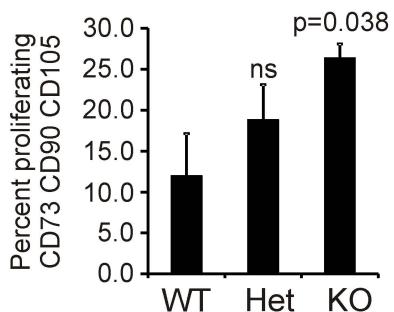


B.

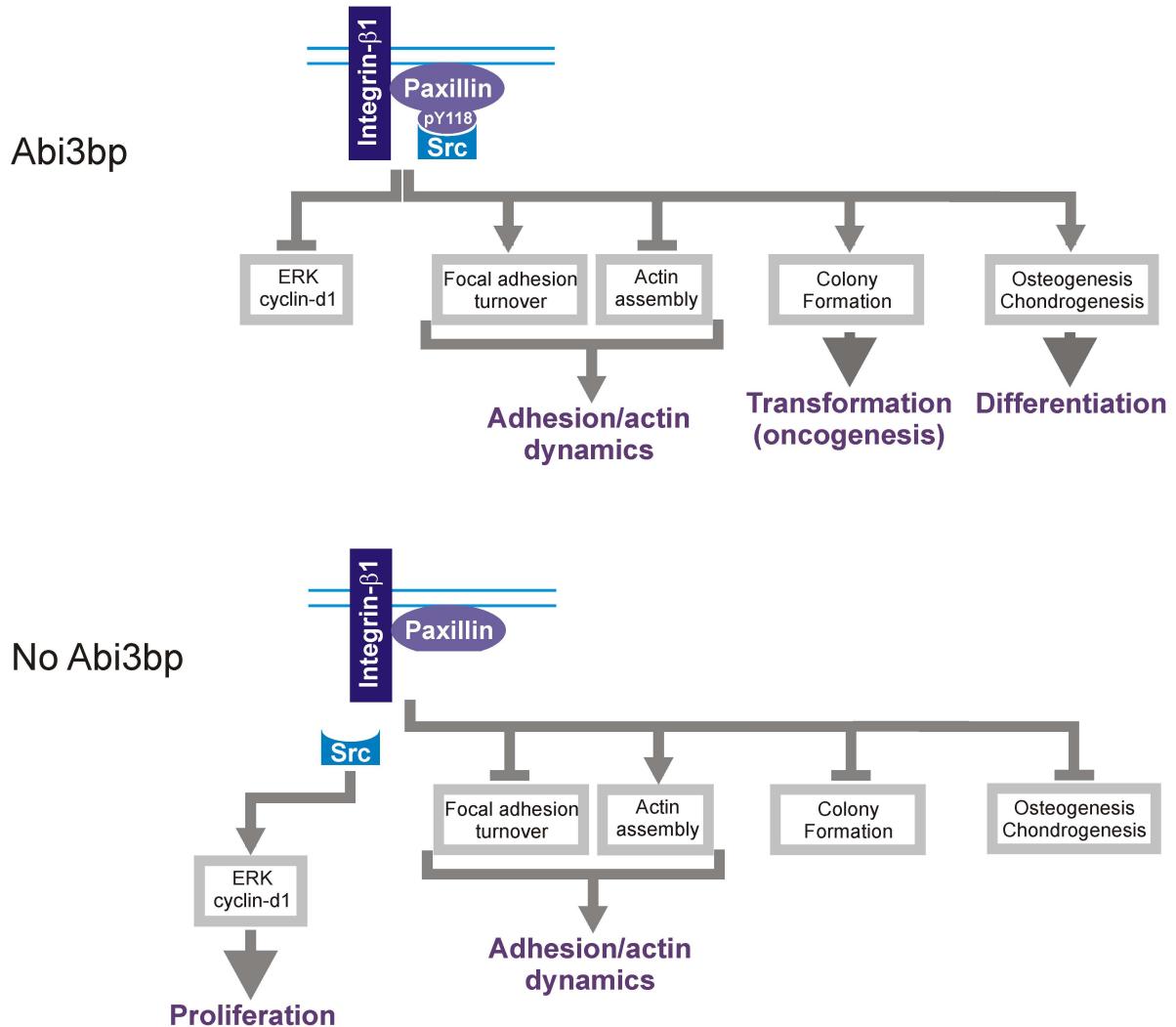
Kidney



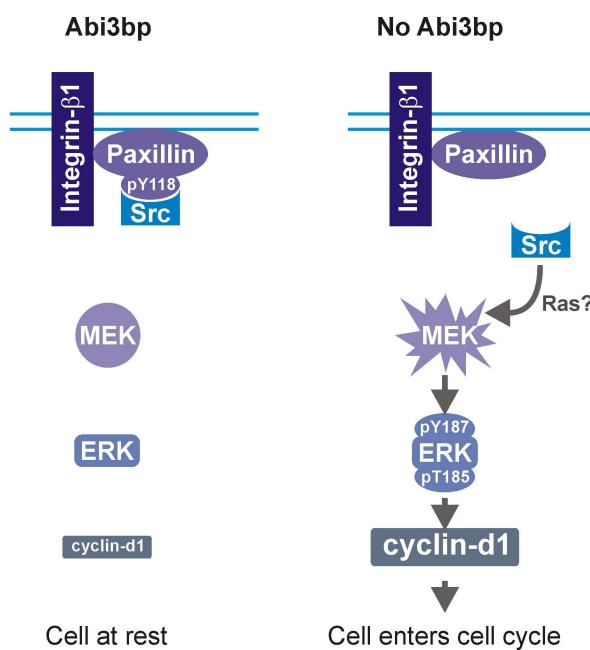
Lung



A. Abi3bp controls proliferation, differentiation, and cell behaviour of MSCs



B. Cell signalling pathway to proliferation



Supplementary Figure 10