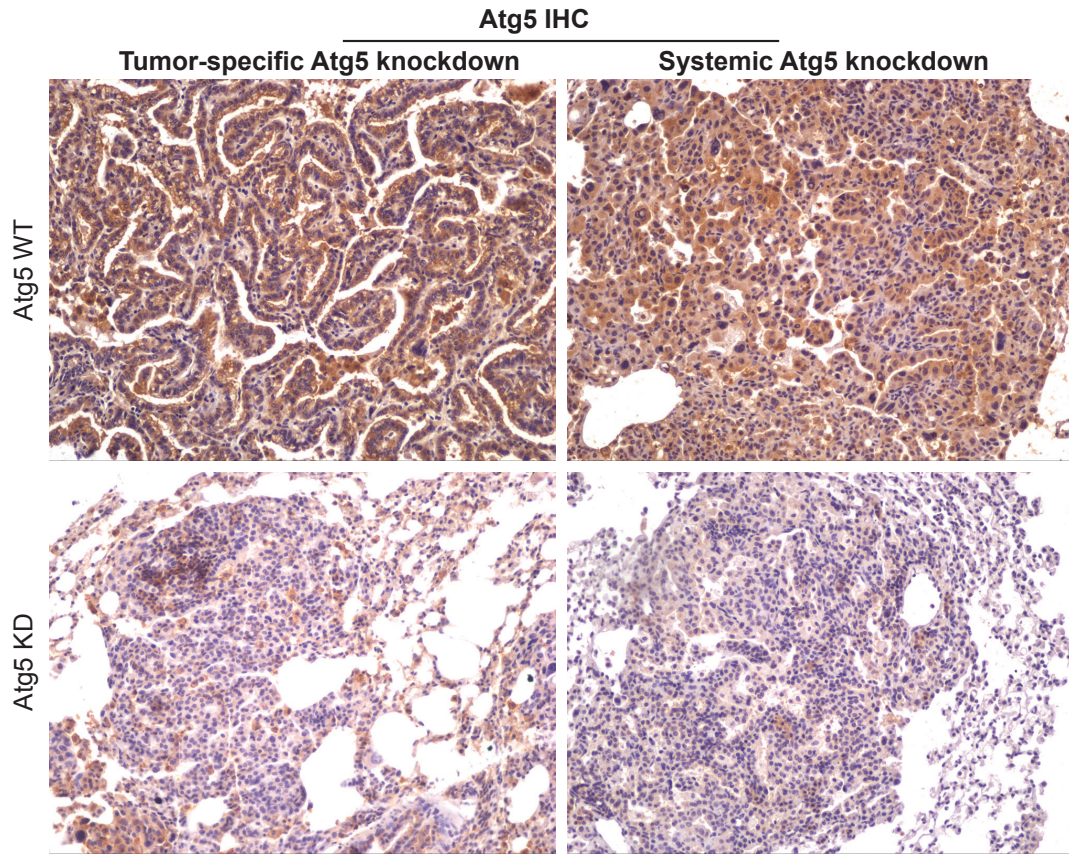


1 **Supplementary Figures**

Supp_Fig. 1



2

3 **Supplementary figure 1.** Representative immunohistochemistry (IHC) for Atg5 of the lung tumors from
4 WT mice, tumor specific-Atg5 knockdown mice and systemic Atg5 knockdown mice at low magnification.

5

6

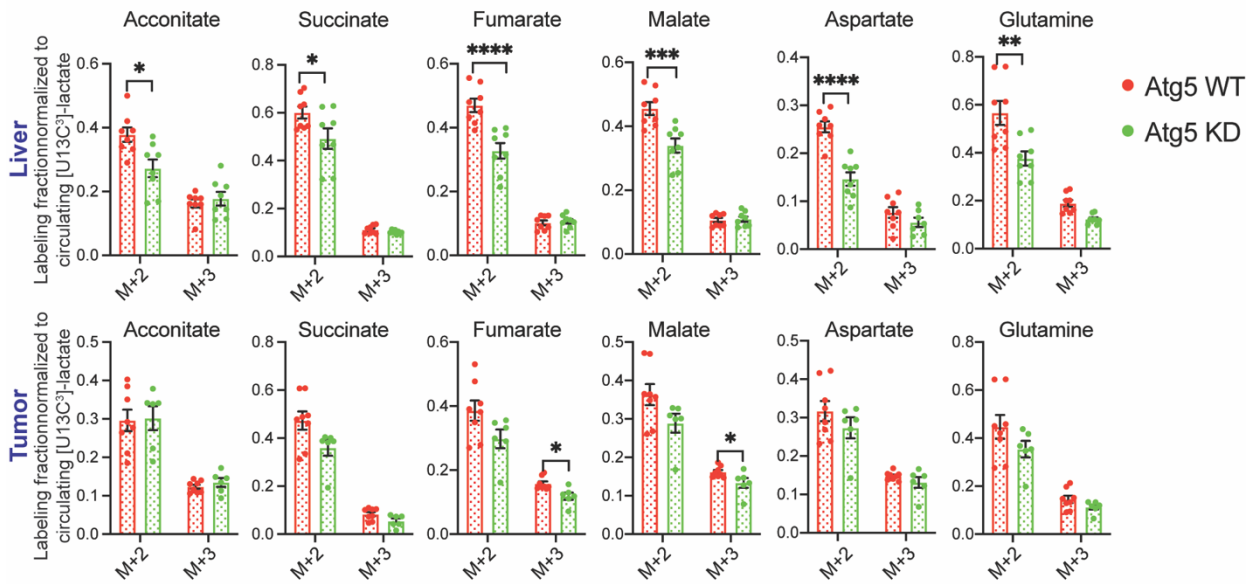
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10

Supp. Fig. 2



1

2 **Supplementary figure 2. Carbon contribution from lactate to TCA cycle metabolites of liver and**
 3 **lung tumors in WT and systemic Atg5 knockdown mice.**

4 M+2, and M+3 isotopomers fractions of TCA cycle metabolites in liver and lung tumors of WT and
 5 systemic Atg5 knockdown mice in fasted state.

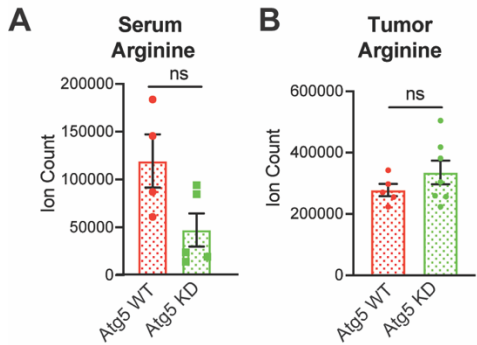
6 Labeling fraction are normalized to circulating serum $[U^{13}C_3]$ -lactate. Data are mean \pm s.e.m. n.s.,

7 $P > 0.05$; * $P < 0.05$; ** $P < 0.01$; *** $P < 0.005$; **** $P < 0.001$

8

1

Supp._Fig. 3



2

3 **Supplementary figure 3. Short-term systemic Atg5 knockdown does not alter circulating and**
4 **tumor arginine levels.**

5 A. Serum arginine level of WT and systemic Atg5 knockdown mice after 6 weeks' Dox treatment.

6 B. Level of arginine in KP lung tumors of WT and systemic Atg5 knockdown mice after 6 weeks' Dox
7 treatment.

8 Data are mean \pm s.e.m. n.s., $P > 0.05$.