



**S4 Fig.** Vacuolar protein sorting 34 (Vps34) inhibited the hepatocellular carcinoma (HCC) cell spreading level in mouse liver. (A) The small animal *in vivo* imaging of enhanced-GFP spreading signal intensity in nude mice injected with SMMC-7721 cells stably expressing Vps34 or Vector control, which were enhanced-GFP labeled. (B) Immunohistochemistry staining of GFP in the liver of nude mice mentioned above. Red arrows indicated the GFP-positive HCC cells in the liver of nude mice. In each mouse, 40 pictures were taken and the mean GFP-positive area percentage of each picture was measured by Image J software to quantify the spreading level of SMMC-7721 cells in mouse liver (40 images per mouse,  $n \geq 3$  mice per group). Data were showed as mean $\pm$ standard error of mean. \* $p < 0.05$ ; ns, no significant difference.