

Figure S1. G9a silencing suppressed cell proliferation in

### A549 and H1299 NSCLCs

**A.** G9a was suppressed in NSCLC cell lines transfected with G9a siRNA. **B.** Cell proliferation was suppressed upon silence of G9a in NSCLCs. \*\* p < 0.01 (compared to control siRNA).



## Figure S2. Cell migration and invasion was suppressed in NSCLCs treated

#### by G9a inhibitor UNC0638

A. Representative images of invasive cells showed that cell migration was

suppressed in NSCLC cell lines treated by UNC0638. Scale bar refers to  $400 \mu m.$ 

B. Representative image of invasive cells showed that cell invasive ability was

suppressed in NSCLC cell lines treated by UNC0638. Scale bar refers to 2000µm.



### Figure S3. G9a overexpression increased cell proliferation in NSCLCs.

**A.** Western blots showed that G9a was overexpressed in NSCLCs. **B.** Cell proliferation was enhanced upon overexpression of G9a in NSCLCs. \* p < 0.05 (Compared to pcDNA 3.1).



#### Figure S4. FAK inhibitor attenuates the enhanced cell migration and invasion by G9a overexpression

A. Western blots showing that activation of FAK signal pathway was attenuated by FAK inhibitor in G9a overexpressed NSCLC cells. **B**. Representative images of scratch experiments at 0h and 24h for H1299, 0h and 36h for A549 shows the enhanced migration was reversed by FAK inhibitor in NSCLC cell lines. Scale bar refers to 400µm. C. Quantitative analysis of migration distances in A549 and H1299 cells treated with FAK inhibitor. \*\* P < 0.01, \*\*\* P < 0.001, NS, no significant difference. D. The enhanced invasive ability was attenuated by FAK inhibitor in A549 and H1299 cell lines. Representative image of invasive cells in NSCLC cells treated with FAK inhibitor. Scale bar refers to 2000µm. E. Quantitative analysis for invasive cells in G9a-overexpressed A549 and H1299 cancer cells treated with FAK inhibitor. Data are presented as percentage of control, \* P < 0.05; NS, no significant difference. Data are presented as means  $\pm$  standard division (SD). Three independent experiments were performed.



### Figure S5. knockdown of G9a suppressed tumor metastasis in vivo.

- **A.** Livers collected from tai vein injected mice.
- **B**. Lungs collected from tail vein injected mice.



#### Figure S6 NF-KB signaling pathway is independent of Wnt signaling pathway.

**A.** Licl treatment increased top flash luciferase report activity, activated Wnt signaling pathway. \*\*\* p < 0.001.

**B.** No significant difference on NF- κB luciferase activity between Ctrl and Licl treated group. NS represents for no significant difference.