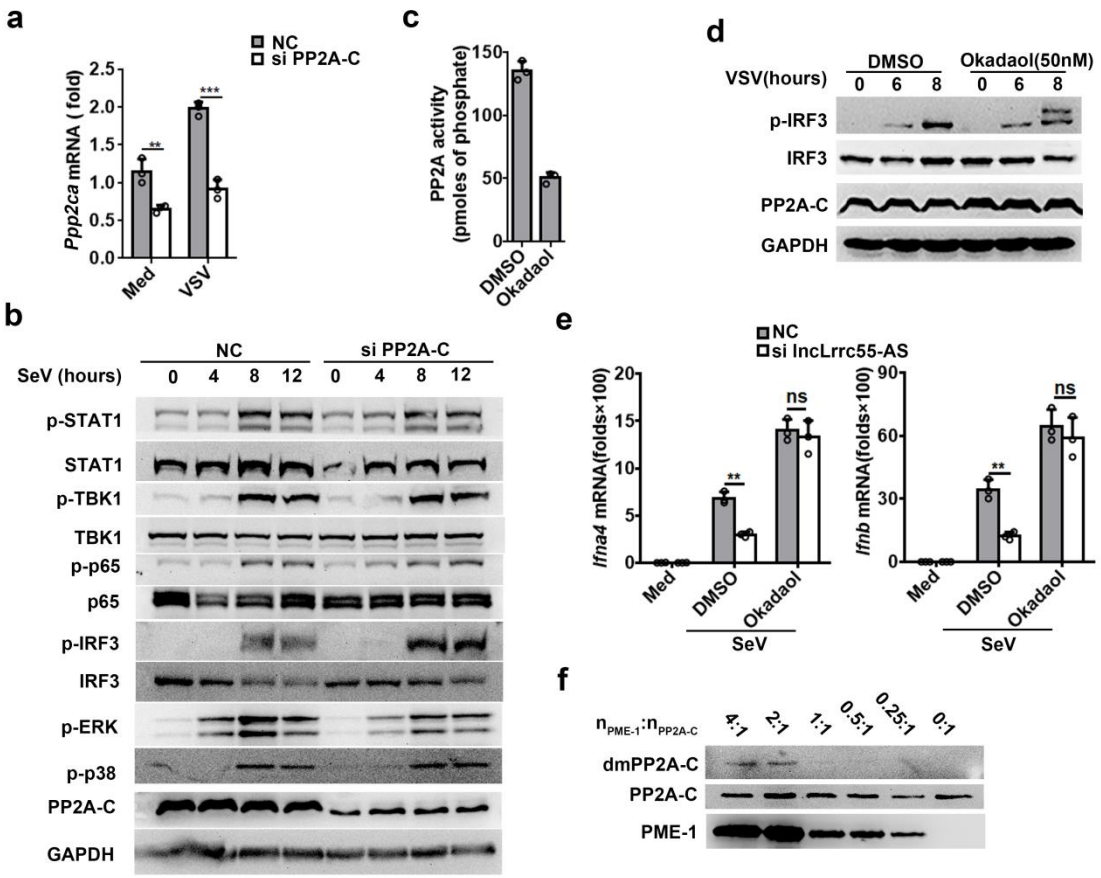


**Supplementary information, Fig. S9** lncLrrc55-AS inhibits PP2A-mediated negative regulation of IRF3- induction of IFN-I via promoting the deactivation and demethylation of PP2A. **a** RT-qPCR analysis of the silencing efficiency of siRNA targeting to *Ppp2ca*. **b** Western blot analysis of phosphorylated (p-) or total proteins in lysates of NC control and PP2A C subunit-silenced peritoneal macrophages infected with SeV for indicated hours. **c** Phosphatase activity analysis of PP2A in lysates of macrophages treated with or without Okadaol (50nM). **d** Western blot analysis of phosphorylated (p-) or total IRF3 in lysates of macrophages treated with or without Okadaol and then infected with VSV for indicated hours. **e** RT-qPCR analysis of *Ifna4*, *Ifnb* mRNA expression in NC control or lncLrrc55-AS silenced macrophages treated

with or without Okadaol (50 nM) one hour before infected with SeV for 12 hours. **f** Western blot analysis of demethylation level of recombinant PP2A-C proteins (dmPP2A-C) catalyzed by PME-1 in *vitro*. The molar ratio (MR) of recombinant PP2A-C and PME-1 molecular was as indicated, and the optimal MR ($n_{PME\text{-}1}$:$n_{PP2A\text{-}C}$=1:1) was adopted for further investigate process. Data are from three independent experiments (**a**, **c**, **e**, mean ± SEM) or are representative of three independent experiments with similar results (**b**, **d**, **f** ). **P < 0.01; *** p < 0.005; ns, no significance (Student's *t*-test or ANOVA).