

Supporting information

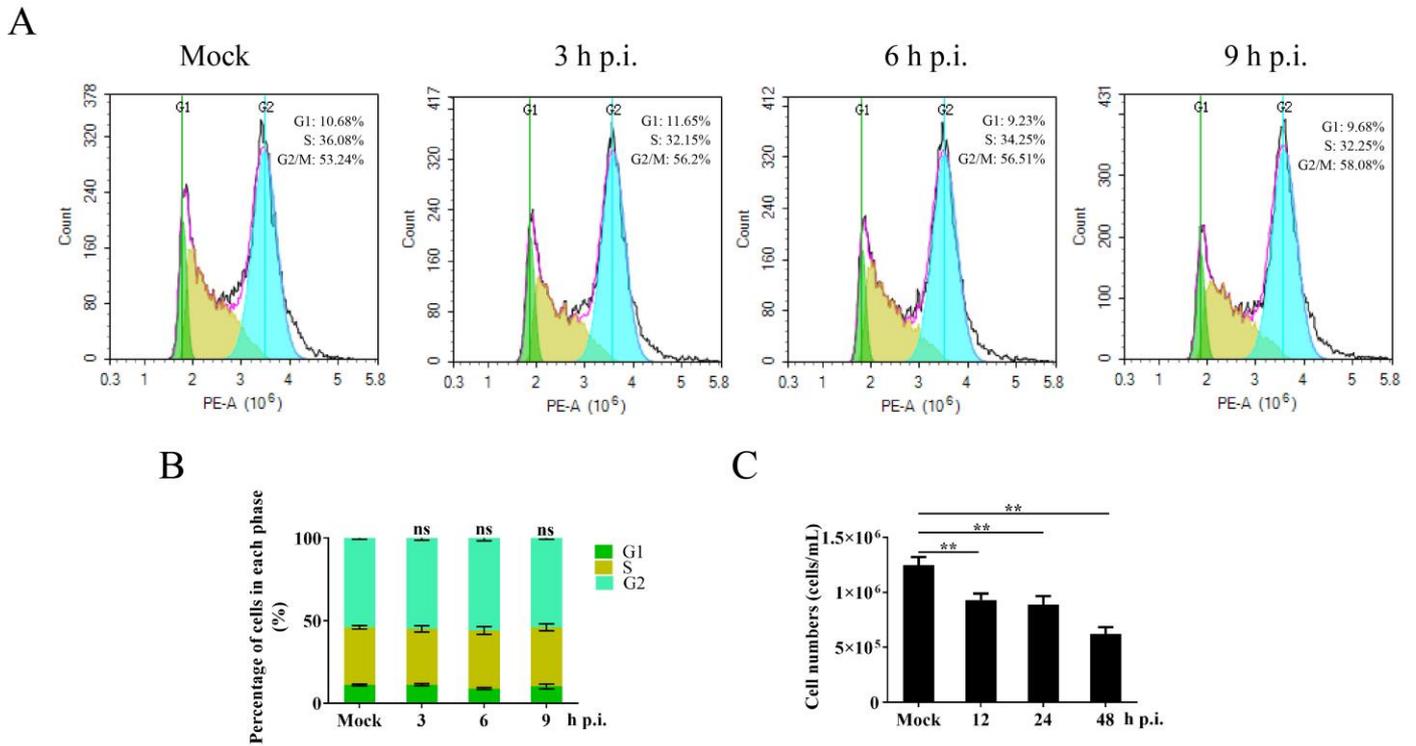


Figure.S1 Cell-cycle analysis in BmN-SWU1 cells infected BmNPV. (A-B) Comparison of cell-cycle distribution in mock and infected cells. (C) Cell numbers were evaluated using TC20™ Automated Cell Counter. (** $p < 0.01$)

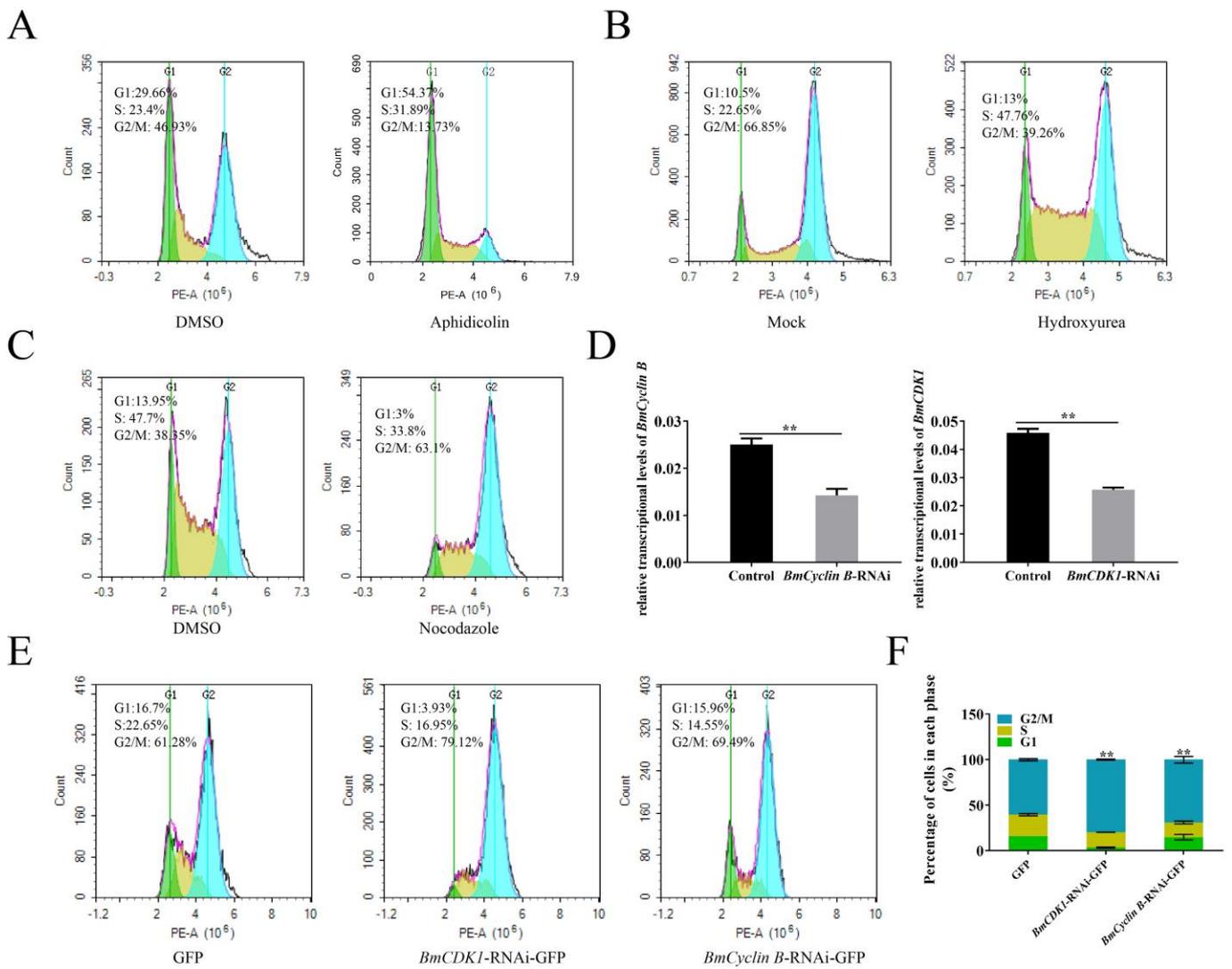


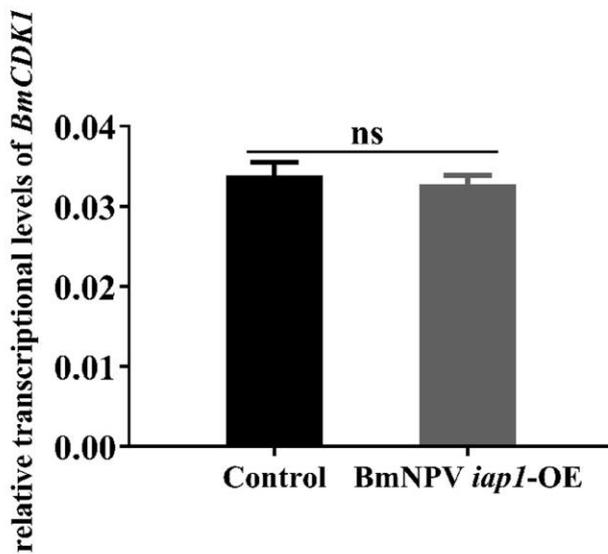
Figure.S2 Analysis of cell-cycle perturbations. (A–C) Cell-cycle perturbations were analyzed after treating the cells with aphidicolin, hydroxyurea and nocodazole, respectively. (D) Relative transcription levels of *BmCDK1* and *BmCyclin B* after treatment with RNAi. (E) Comparison of cell-cycle distribution in pIZ-*eGFP*, pIZ-*BmCDK1*-RNAi-*eGFP*, and pIZ-*BmCyclin B*-RNAi-*eGFP* groups. pIZ-*eGFP* group was used as negative control. (** $p < 0.01$)

A

SgBmNPV *iap1* 41.67%

```
GCGAGTATTGTGAAGCAGAAATAAAAATTGGTCCGAAGACGA
GCGAGTATTGTGAAGCAGAAATAAA-----TTGGTCCGAAGACGA
GCGAGTATTGTGAAGCAG-----AAAATTGGTCCGAAGACGA
GCGAGTATTGTGAAGCAG-----AAAAATTGGTCCGAAGACGA
GCGAGTAT-----AATTGGTCCGAAGACGA
```

B



C

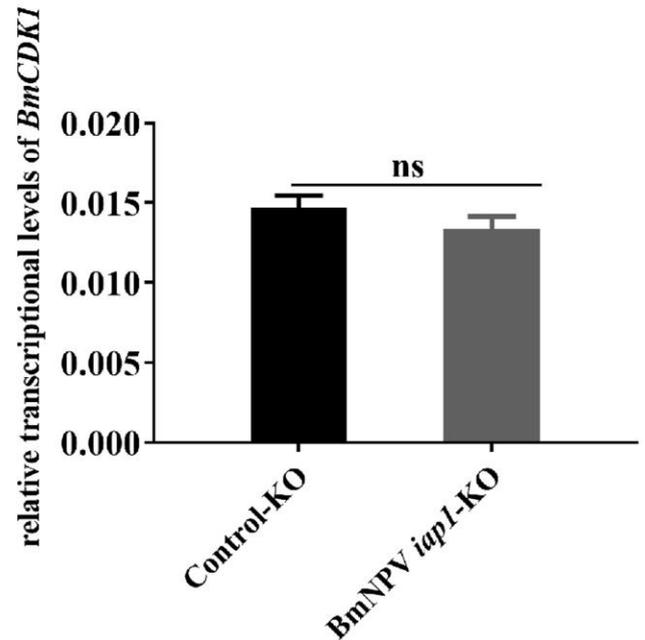


Figure.S3 BmNPV *iap1* has no effect on cellular DNA replication and levels of *BmCDK1* mRNA. (A) BmNPV *iap1* was edited through the CRISPR/Cas9 gene editing system. Briefly, BmNPV *iap1* was amplified by PCR, and then the PCR product was cloned into the pMD19-T vector. The recombinant plasmids were sequenced using M13 primers (B) Analyze the mRNA levels of *BmCDK1* after overexpressing BmNPV *iap1*. (C) Analyze the mRNA levels of *BmCDK1* after knocking down BmNPV *iap1* via the CRISPR/Cas9 gene editing system. (^{ns} $p \geq 0.05$)