

Figure S1. The effects of DDX56 overexpression on transcription of antiviral genes in THP-1 cells. (A-E) The DDX56-overexpression stable THP-1 cells ( $4 \times 10^5$ ) were left uninfected or infected with SeV for 12 h before Q-PCR was performed. Shown are representative experiments of three independent experiments with mean  $\pm$  s.d. of three technical replicates.  $**P < 0.01$ . (F) Effects of DDX56 on 293T cells apoptosis. 293T cells were transfected with empty vector or Flag-DDX56 plasmids (1  $\mu$ g) for 24 h. The cellular apoptosis rate was measured by flow cytometry. Western blotting was used to analyze protein expression of DDX56. (G) Effects of DDX56 on 293T cells viability. 293T cells were transfected with empty vector or Flag-DDX56 plasmids for 24 h. Cells viability was measured by MTT. Shown are representative experiments of three independent experiments with mean  $\pm$  s.d. of three technical replicates. NS, not significant. EV, empty vector.

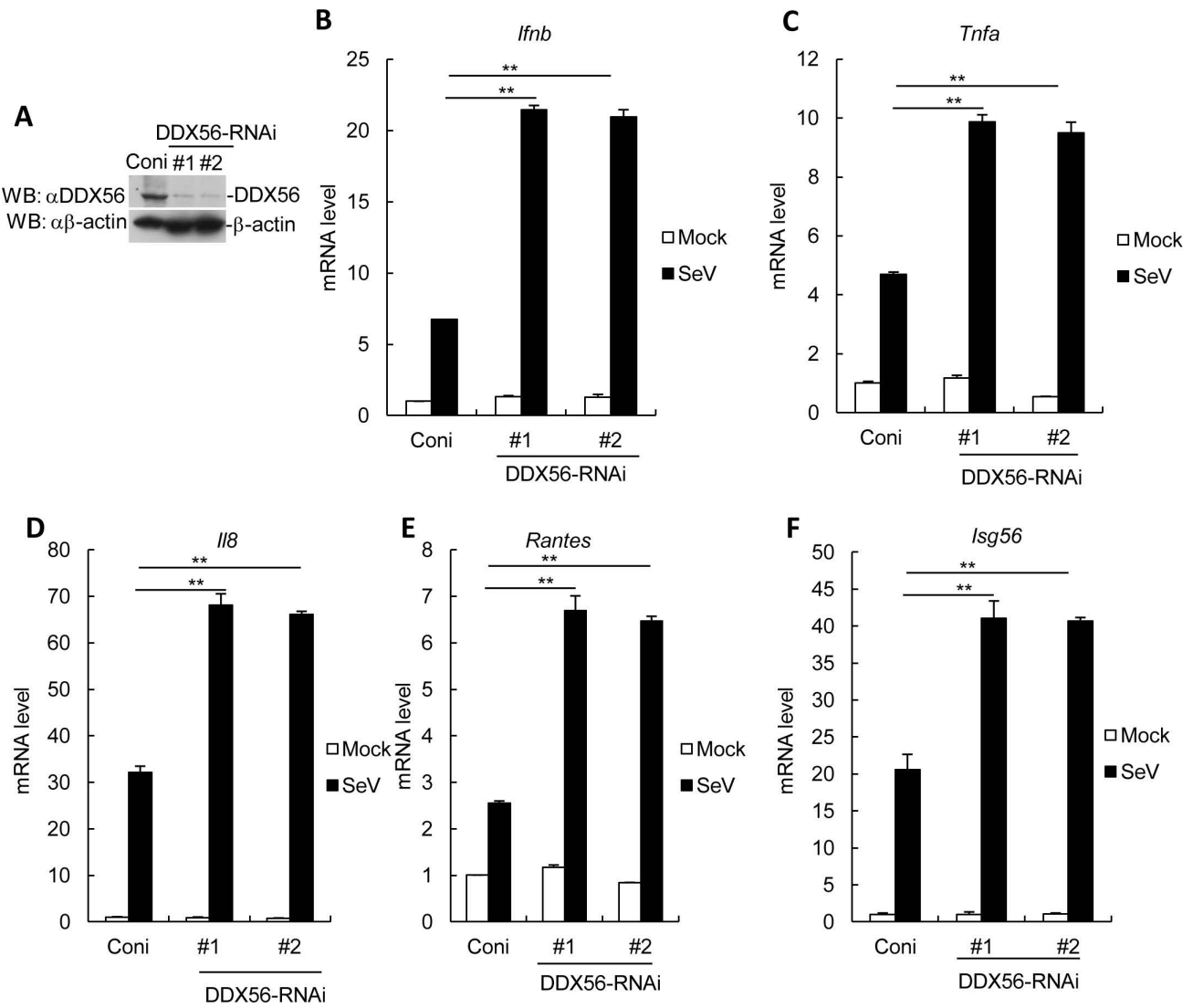
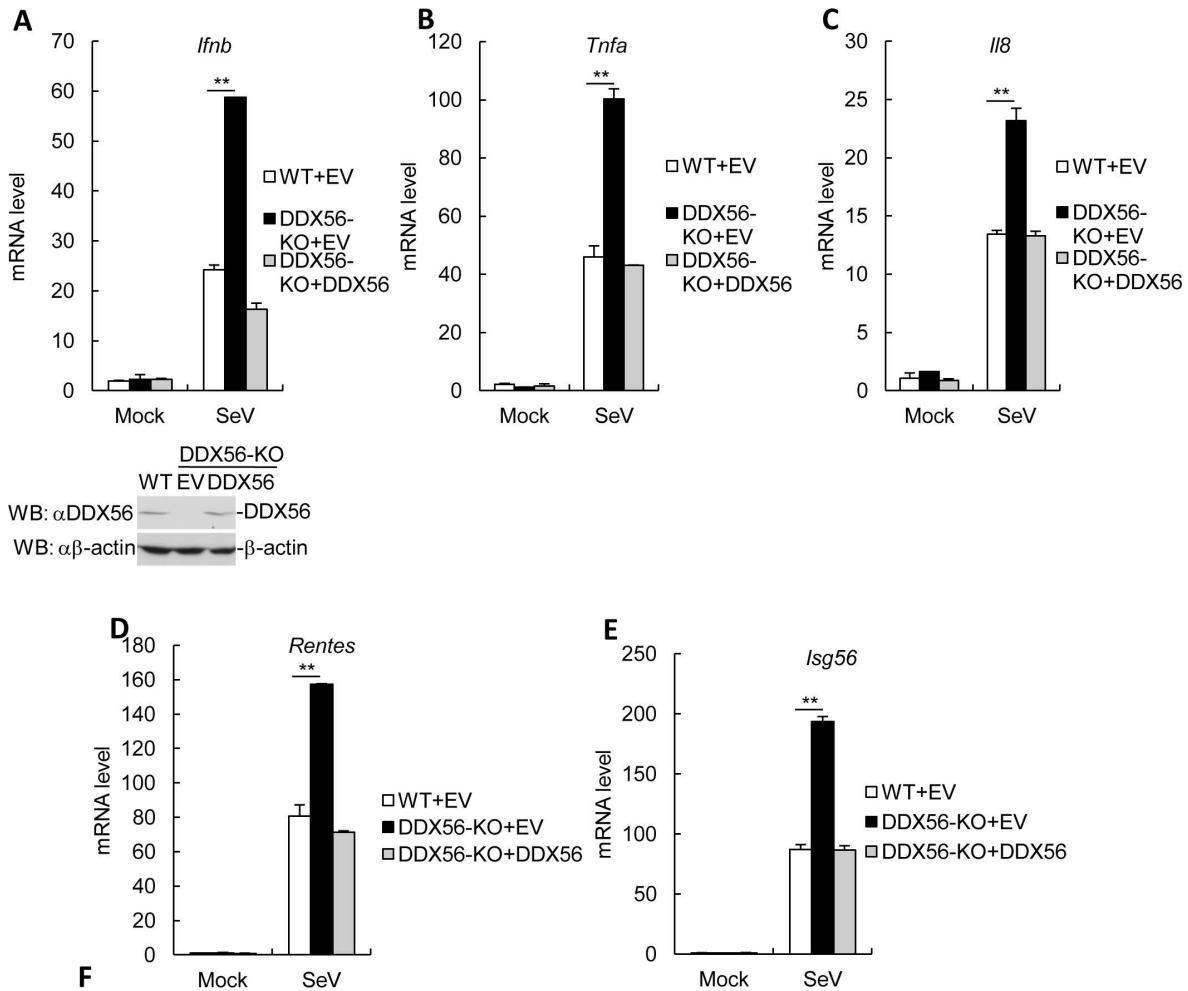


Figure S2. The effects of DDX56 knockdown on transcription of antiviral genes in THP-1 cells. (A) Immunoblot analysis of DDX56 protein levels in DDX56-overexpression stable THP-1 cells. (B-F) The DDX56-knockdown stable THP-1 cells ( $4 \times 10^5$ ) were left uninfected or infected with SeV for 12 h before Q-PCR was performed. Shown are representative experiments of three independent experiments with mean  $\pm$  s.d. of three technical replicates. \*\* $P < 0.01$ . EV, empty vector.



Potential off-target sites of the DDX56	Sequencing primers
GACAGGTCCTGTTGAAGAACAGG	F:GGGCCAAACTGCCGACATAA R:CCTCCAGGGCTACTAACC GA
TGAAGGTCGGAGGTAAGACCGG	F:GCATATCTGTCTCTCCCAA R:AGGAATGGTCATGTGACCTGG
AACAGGGCCGGGCTAGAACAGG	F:CAAACCATGCCCATCCTCT R:CTCCAGGGCCATGTGTAAG
AACAGGTGACAGTGGCAGAAGTGG	F:TTTTCATGACCAATGCGGC R:TGCGTTTGCTGTCCATGTTG
GTTACGTCCGTTGGTAGAAGTGG	F:GCCTTAAAGAGTTGGCCTGAG R:TGTGGGACCCCAATGAATC
GGCAGGGACGGTGGGAGAACTGG	F:GGAACCTACCGTCTACCGGG R:GCCAGGGTTTCTCCAAGTC
GGCAGGGCAGGAGGTAGAACCGG	F:GGAGAAAAGTCTGGCCCTCC R:CACCCGGCGTTTCCTTATCA
GAAAGGGCAGCTGGTAGAACAGG	F:ATCAGCAGCCACCTGACATT R:GCAGTTAACGGGCGTGAG
GAAAGGTCGGGTATTAGAAGTGG	F:GGCATTGTGTACCCAGAATAG R:CTTCAGCTCCTGCTGTACAT
GAGAGGTCCTGGGATAGAACAGG	F:GCTAATCCTGTTAGCGTGGC R:TGGTCTGGGAAATAGGGATGG
GACAGGTGGTGTGGGAGAAACAGG	F:GATCATTAGCCATCAGCCCC R:CATGCCTGTGAAAGAGAAGCTC

Figure S3. (A-E) Effects of reconstitution of DDX56 on transcription of *Ifnb*, *Tnfa*, *Il8*, *Rantes* and *Isg56* induced by SeV in DDX56-knockout HeLa cells. The reconstituted cells were left uninfected or infected with SeV for 12 h before Q-PCR. Shown are representative experiments of three independent experiments with mean±s.d. of three technical replicates. \*\* $P < 0.01$ . (F) The potential off-target sites of DDX56 and sequencing primers. EV, empty vector; KO, knockout; WT, wild type.