

1 **HERP Binds TBK1 to Activate Innate Immunity and Repress Virus Replication**
2 **in Response to Endoplasmic Reticulum Stress**

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11 **Supplemental Information**

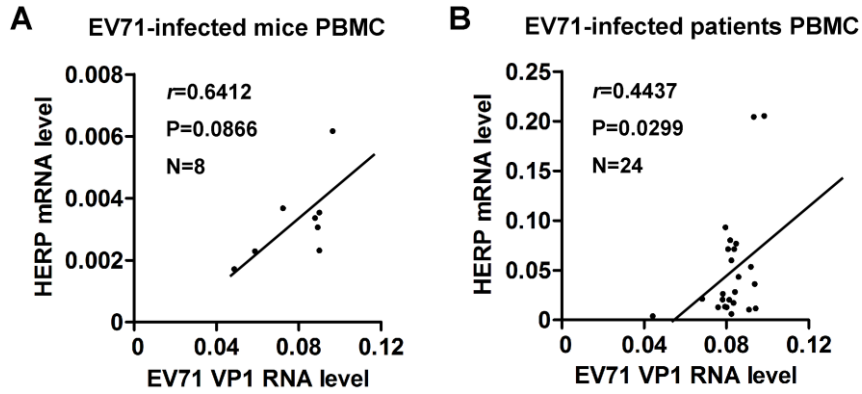
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14 Supplemental Figures and Legends

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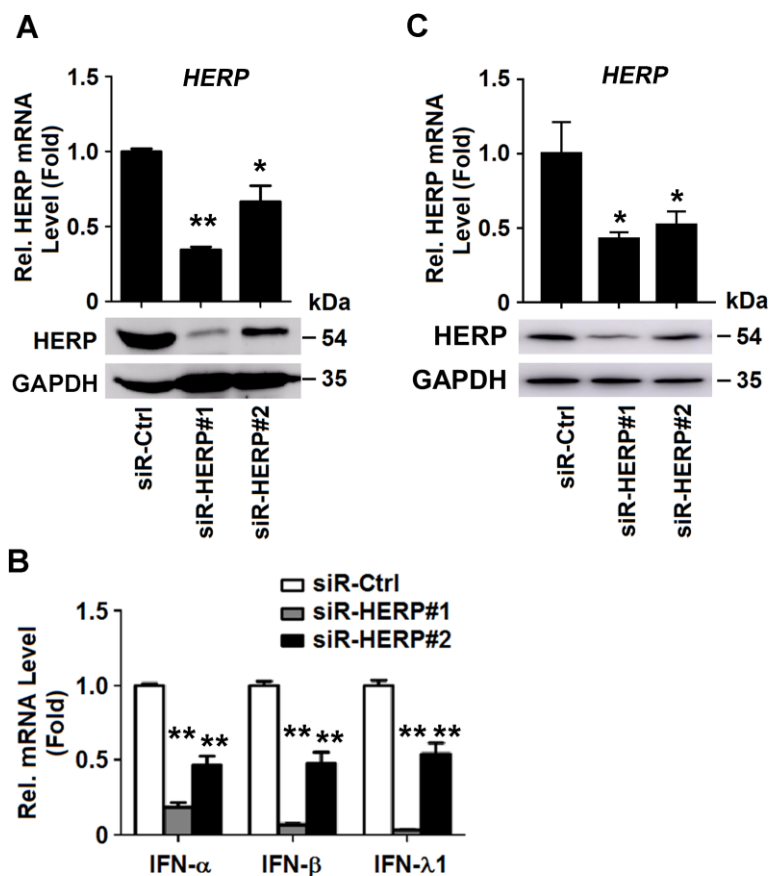
Figure S1



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17 **Figure S1. Correlation of EV71 VP1 and HERP expression.**

18 (A and B) Pearson's correlation analyses of mRNA levels between EV71 *VP1* and
19 *HERP* in PBMCs isolated from EV71-infected mice (n = 8) (A) and patients (n = 24)
20 (B). EV71 *VP1* RNA level is quantified using Image J software from semi-RT PCR
21 data in Figure 1, and then normalized to *GAPDH* as an internal reference.

Figure S2

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23 **Figure S2. Interference effect of siR-HERP.**24 (A and B) HEK293T cells (1×10^6) were transfected with siRNAs specific to HERP

25 (siR-HERP#1 and siR-HERP#2) at 50 nM, siR-Ctrl was transfected as a control. (A)

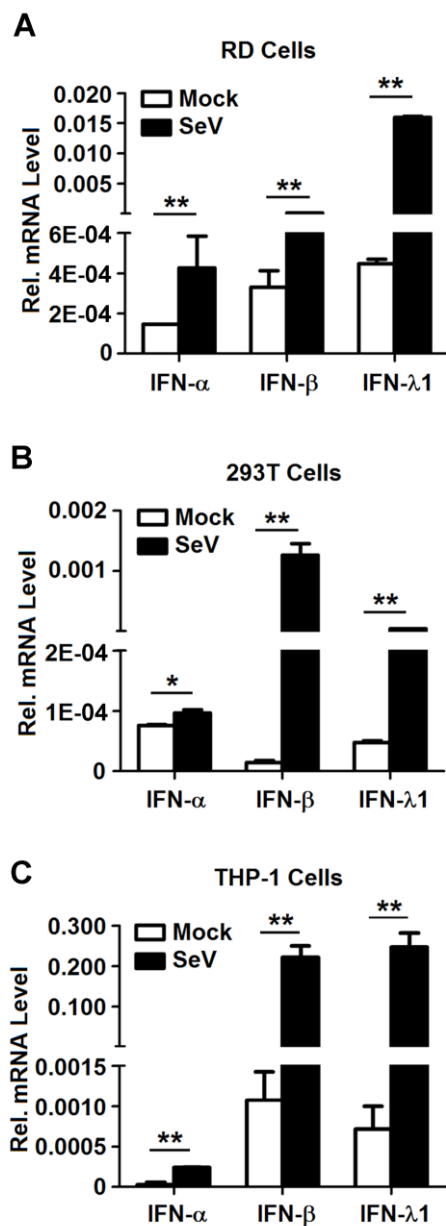
26 The efficiency of silencing of HERP was evaluated by qRT-PCR and Western blot

27 assays. (B) The mRNA levels of *IFN- α* , *IFN- β* and *IFN- λ 1* were evaluated by28 qRT-PCR. (C) THP-1 cells (1×10^6) were transfected with siR-HERP#1 and

29 siR-HERP#2 at 50 nM, the efficiency of siRNA knock-down was evaluated by

30 qRT-PCR and Western blot assays. Graphs show mean \pm SD, n = 3; *, $P < 0.05$; **, $P < 0.01$.31 $P < 0.01$.

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Figure S3

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34 **Figure S3. The antiviral response of cell lines to SeV.**

35 RD cells, HEK293T cells and THP-1 cells were infected with proper MOI of SeV for

36 12 h. Total RNAs were extracted. (A–C) The levels of *IFN- α* , *IFN- β* and *IFN- λ 1*37 mRNA were determined by qRT-PCR analyses. Graphs show mean \pm SD, n = 3; *,38 $P < 0.05$; **, $P < 0.01$.

39 **Supplemental Tables**

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41 **Table S1. List of primers used in this study.**

Primer title	Orientation
HERP-Fwd (EcoRI)	5'-AAGAATTCATGGAGTCCGAGACCGAAC
HERP-Rev (Sall)	5'-AAGTCGACTCAGTTTGCATGGCTG
HERP R87-Rev (Sall)	5'-AAGTCGACATTGCACACCAGATGCAAAACAT
HERP F88-Fwd (EcoRI)	5'-AAGAATTCGTGAAGAGTCCTTCAAAAATGCC
HERP R240-Rev (Sall)	5'-AAGTCGACGGCTCCAGGATTAACAA
Lenti-HERP (mouse) Fwd (XbaI)	5'-ATAGAAGACACCGACTCTAGAATGGAGCCC GAGCCACAG
Lenti-HERP (mouse) Rev (BamHI)	5'-TTTGTAGTCAGCCCGGGATCCGTTGGCTA GGGCTGGTGG

42 The sequences of primer involved in this study are listed in the table. Fwd, forward;

43 Rev, reverse. The letters in italics indicate as restriction enzyme sites.