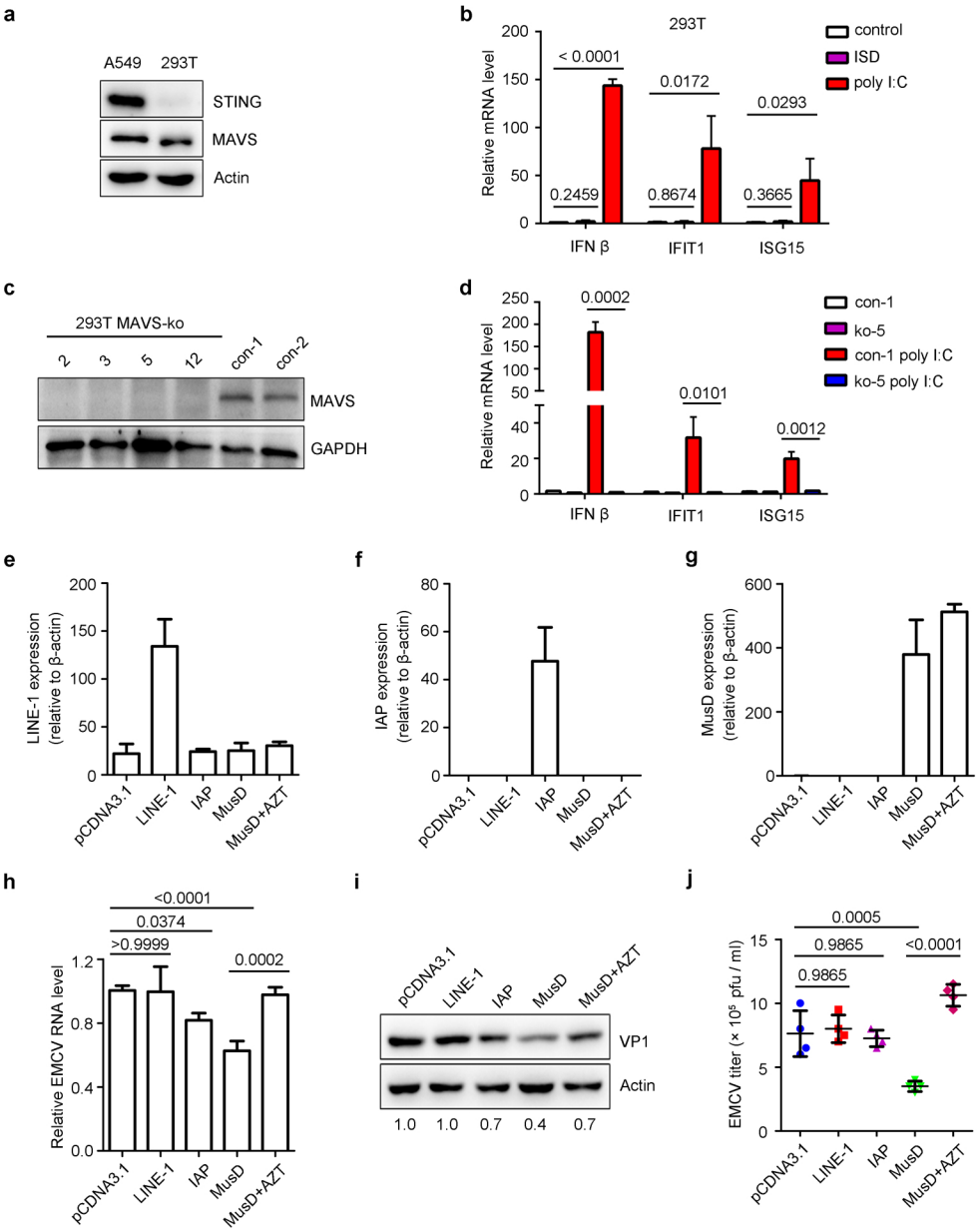
a
A549
293T
STING
MAVS
Actin
b
293T
control
ISD
poly I:C
Relative mRNA level
< 0.0001
0.0172
0.0293
0.2459
0.8674
0.3665
IFN β
IFIT1
ISG15
c
293T MAVS-ko
2
3
5
12
con-1
con-2
MAVS
GAPDH
d
con-1
ko-5
con-1 poly I:C
ko-5 poly I:C
Relative mRNA level
0.0002
0.0101
0.0012
IFN β
IFIT1
ISG15
e
LINE-1 expression (relative to β-actin)
pCDNA3.1
LINE-1
IAP
MusD
MusD+AZT
f
IAP expression (relative to β-actin)
pCDNA3.1
LINE-1
IAP
MusD
MusD+AZT
g
MusD expression (relative to β-actin)
pCDNA3.1
LINE-1
IAP
MusD
MusD+AZT
h
<0.0001
0.0374
>0.9999
0.0002
Relative EMCV RNA level
pCDNA3.1
LINE-1
IAP
MusD
MusD+AZT
i
pCDNA3.1
LINE-1
IAP
MusD
MusD+AZT
VP1
Actin
1.0
1.0
0.7
0.4
0.7
j
0.0005
0.9865
<0.0001
0.9865
EMCV titer (× 10⁵ pfu / ml)
pCDNA3.1
LINE-1
IAP
MusD
MusD+AZT

Fig. S6: The intact endogenous retrovirus inhibits virus infection in IFN pathway-deficient somatic cells.

a, **b**, 293T cells were deficient in DNA sensing. The protein levels of STING and MAVS in 293T and A549 cells were analyzed by immunoblotting (**a**). The mRNA levels of IFNβ, IFIT1 and ISG15 were tested by qRT-PCR in 293T cells after ISD (IFN-stimulatory DNA) or poly I:C dsRNA transfection for 12 h (**b**). **c**, Generation of MAVS knockout cell lines by CRISPR/Cas9. Single clones of MAVS-KO 293T cells were picked and validated by immunoblotting. **d**, MAVS-KO-5 293T cells were deficient in RNA sensing. Cells were transfected with poly I: C dsRNA for 12 h and the mRNA levels of IFNβ, IFIT1 and ISG15 were analyzed by qRT-PCR. **e-j**, MAVS-ko-5 cells were transfected with plasmids containing LINE-1, IAP or MusD for 36 h before infected with EMCV (moi = 1) for 24 h. For one of the MusD overexpression group, cells were pretreated with 100 μM AZT for 6h before virus infection. The expression level of LINE-1 (**e**), IAP (**f**) and MusD (**g**) were evaluated by qRT-PCR with specific primers. The RNA level of EMCV (**h**) were measured by qRT-PCR and the protein level of VP1 was analyzed by immunoblotting (**i**). The viral titer was examined by plaque assay (**j**). Data in **a, c**, **i** are representative of three independent experiments. The graphs represent means ± SD from three (**b**, **d**) or four (**e-h, j**) independent replicates measured in triplicate. Statistics were calculated by the two-tailed unpaired Student's *t*-test (**b**, **d**) or one-way ANOVA with Tukey's post hoc tests (**h**, **j**).