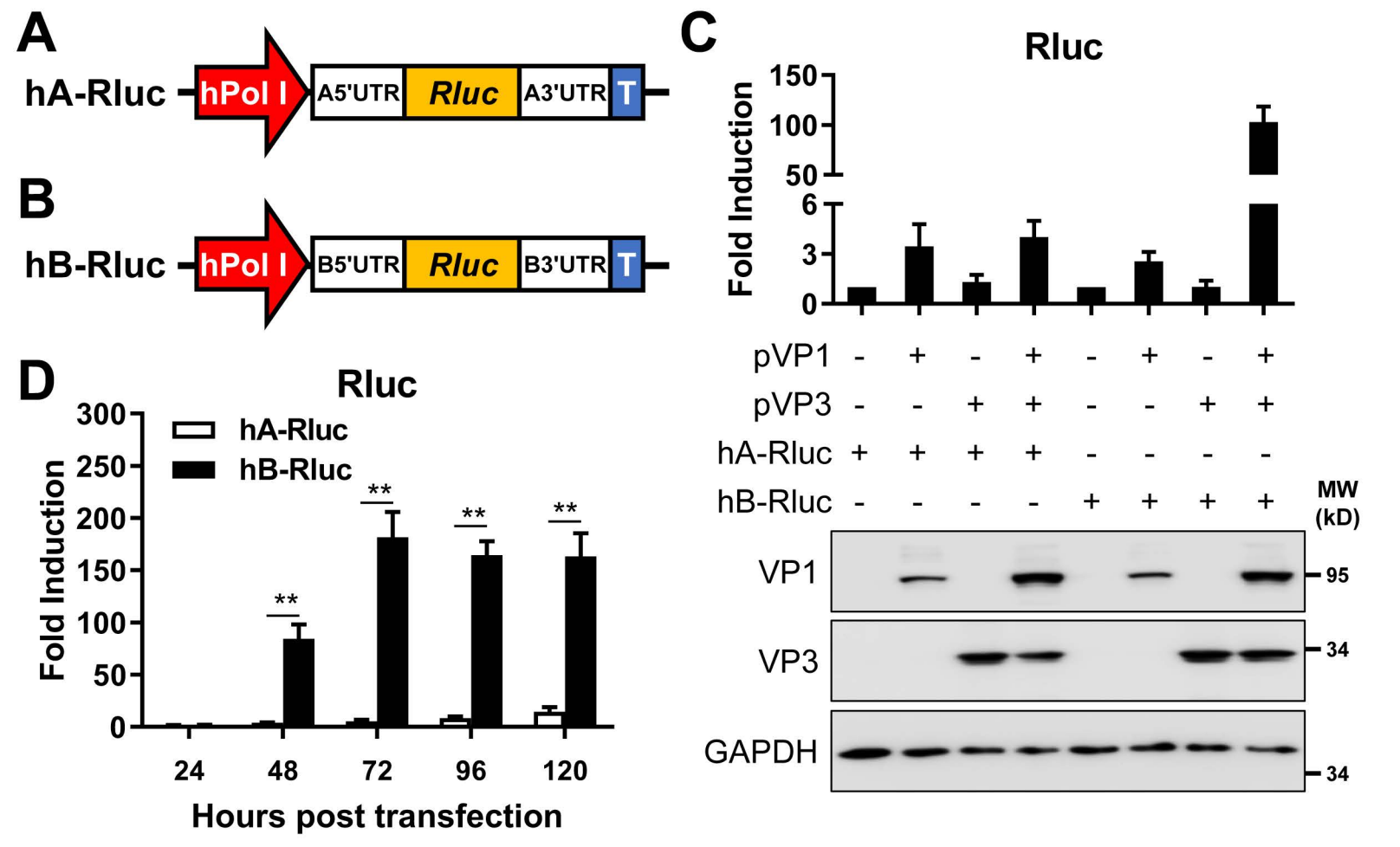
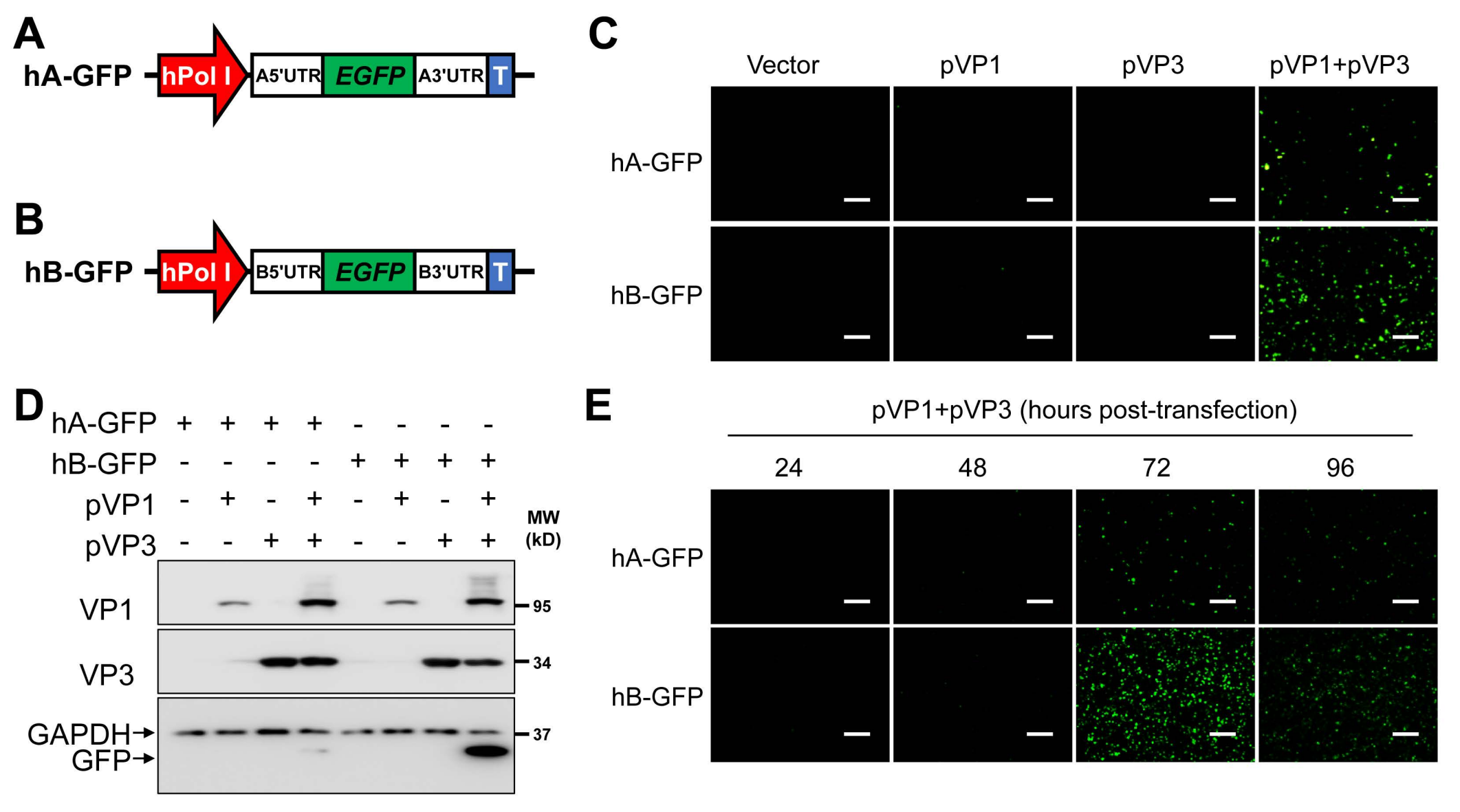
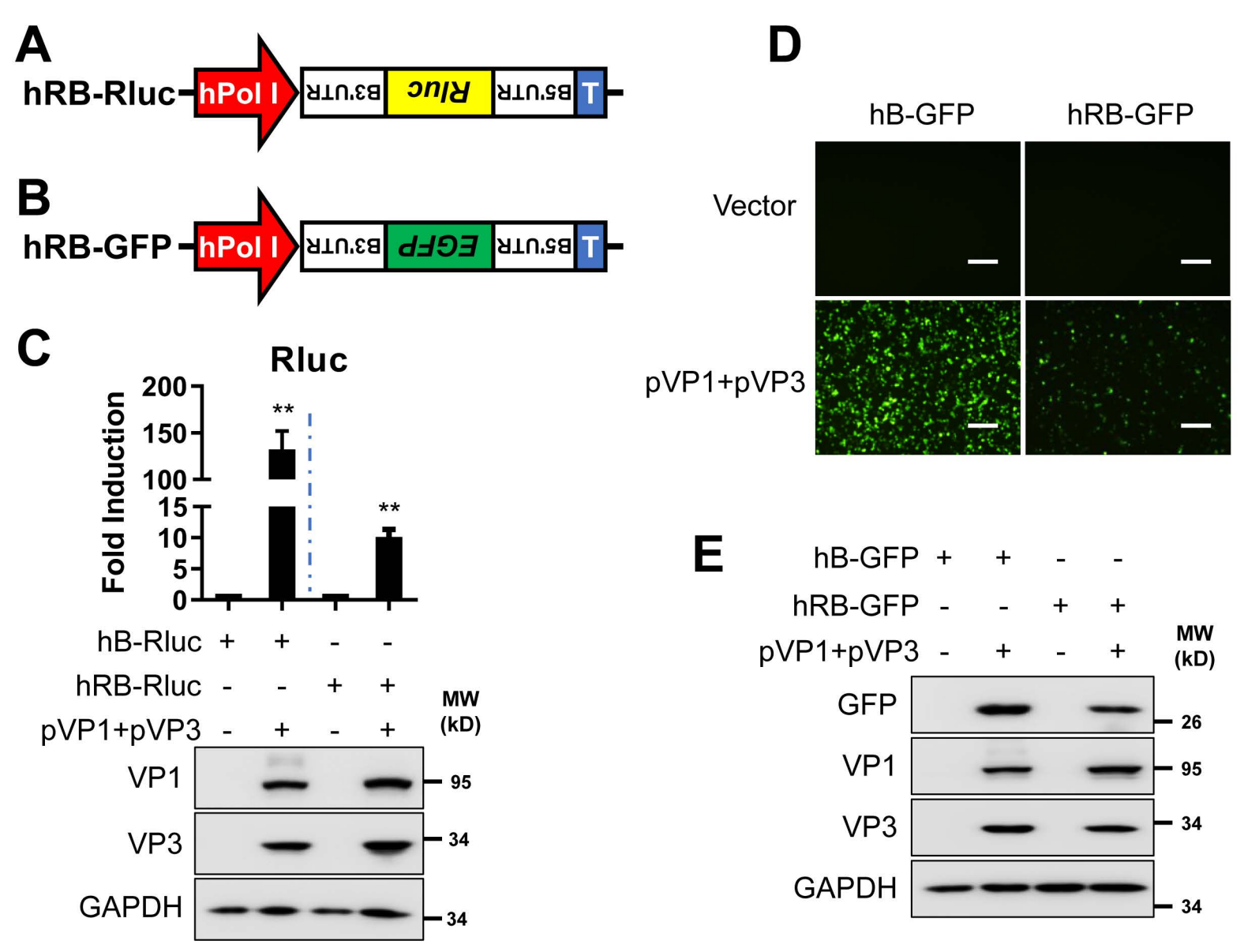
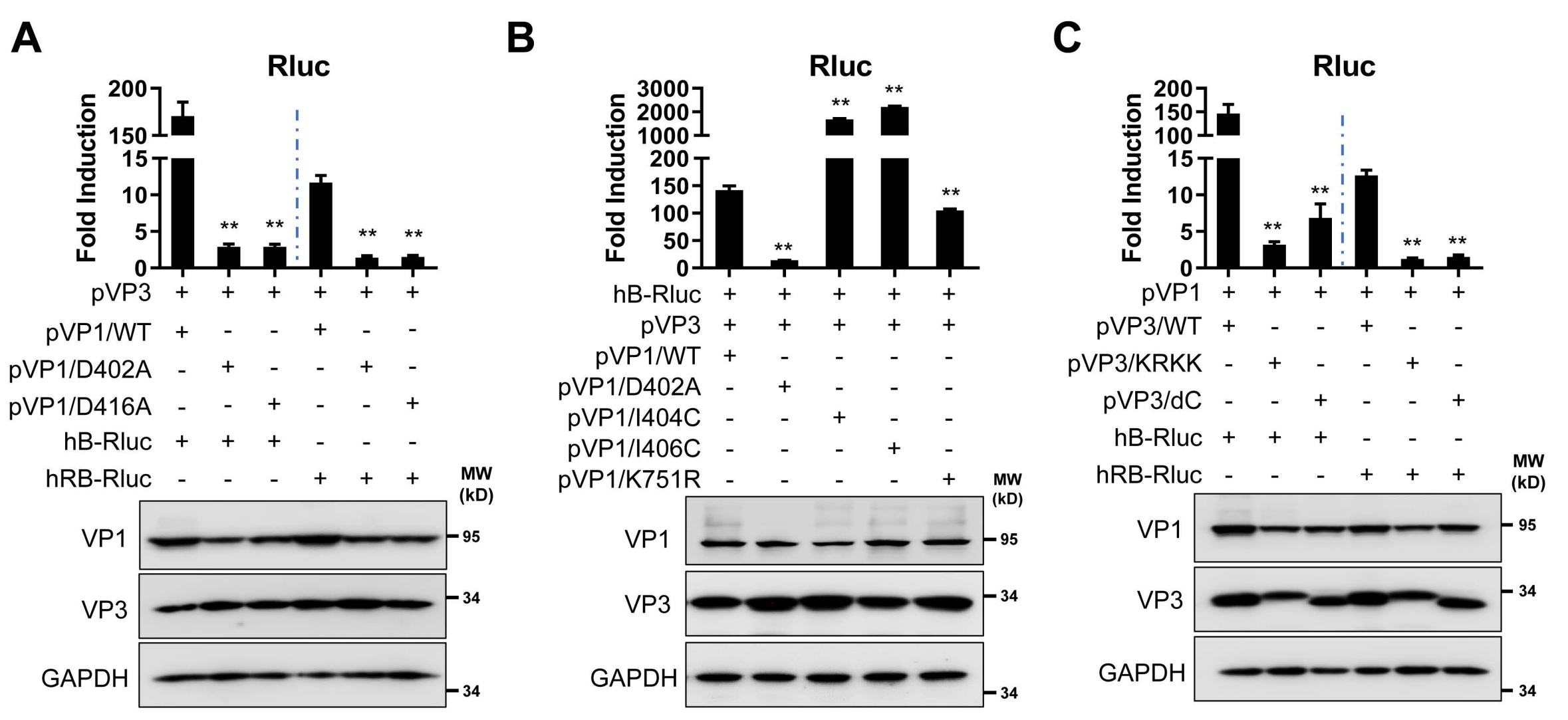
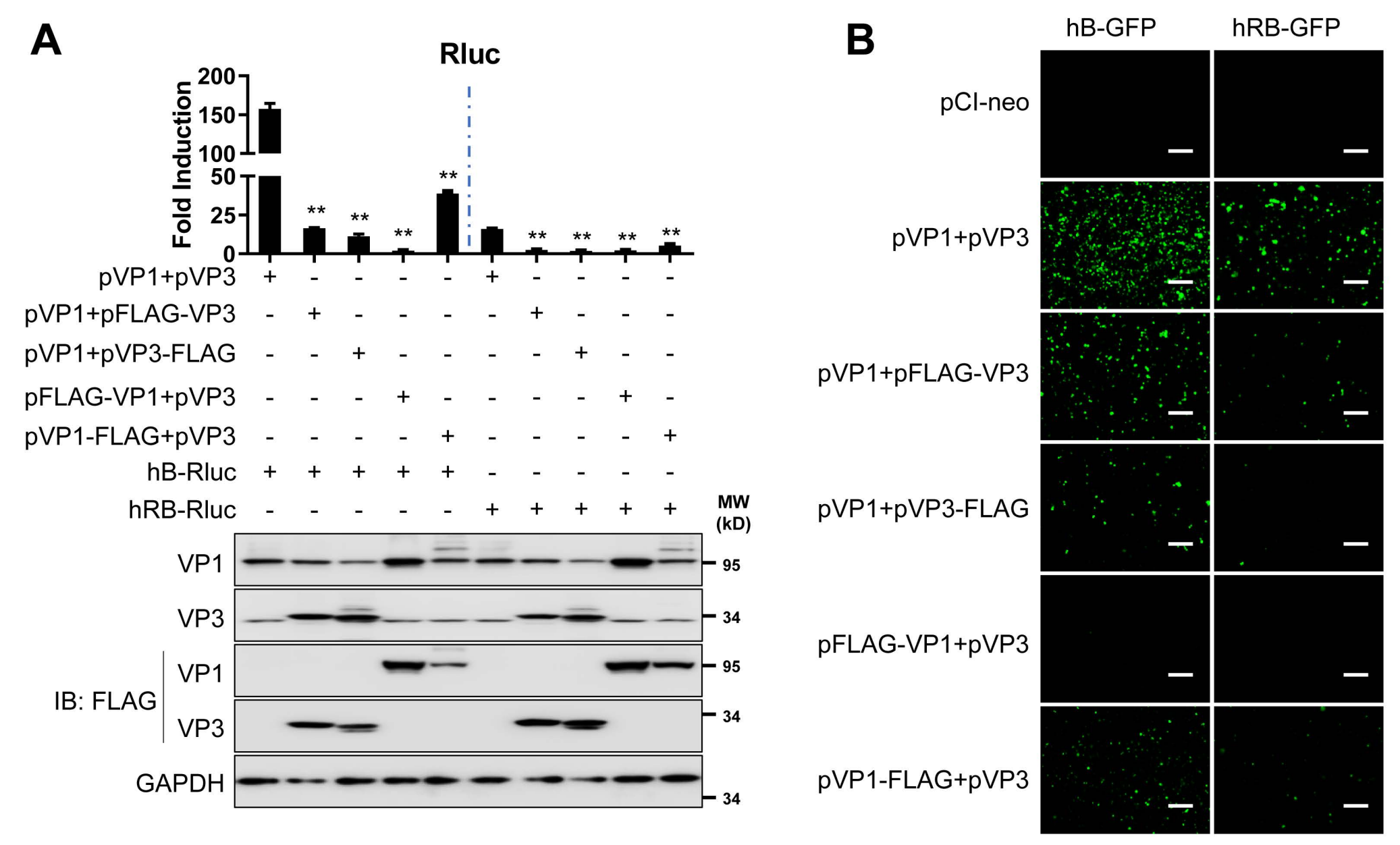
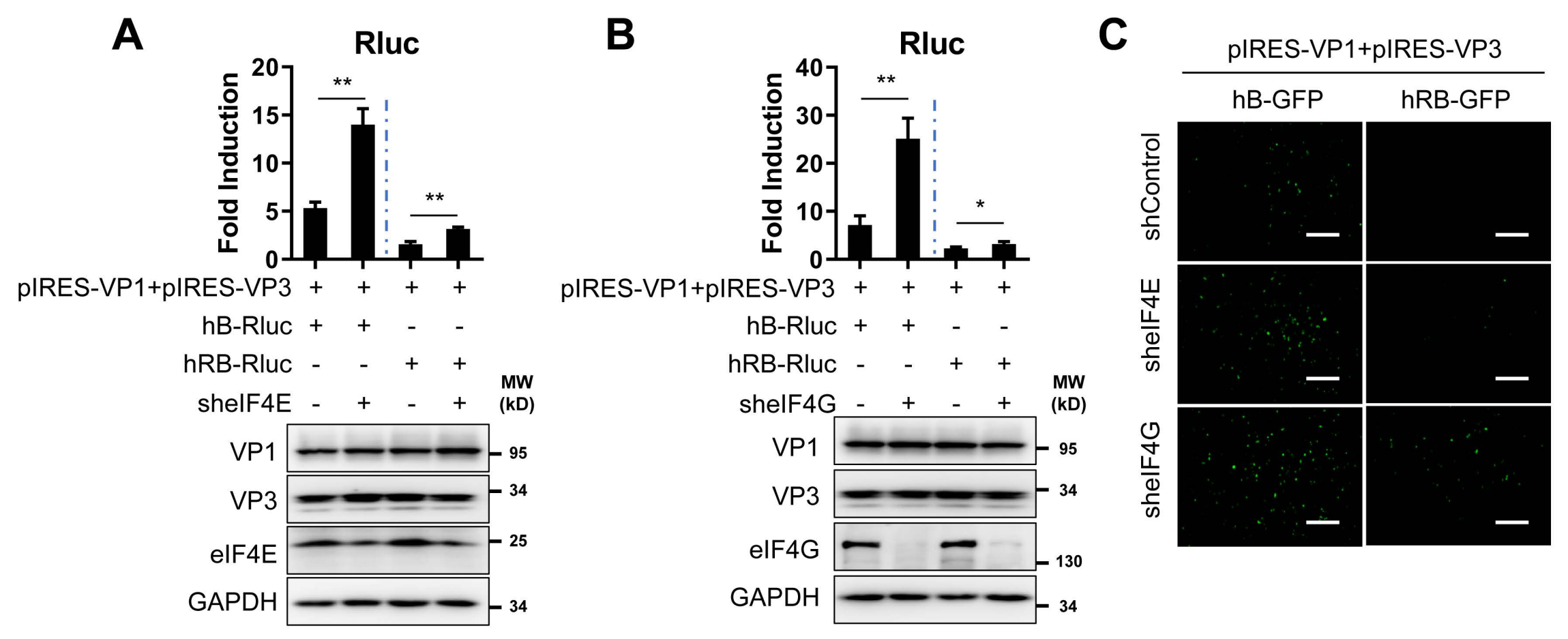

A
hA-Rluc
hPol I
A5'UTR
Rluc
A3'UTR
T
B
hB-Rluc
hPol I
B5'UTR
Rluc
B3'UTR
T
C
Rluc
Fold Induction
150
100
50
6
3
0
pVP1 - + - + - + - +
pVP3 - - + + - - + +
hA-Rluc + + + + - - - -
hB-Rluc - - - - + + + +
MW (kD)
VP1
95
VP3
34
GAPDH
34
D
Rluc
hA-Rluc
hB-Rluc
Fold Induction
300
250
200
150
100
50
0
**
**
**
**
24
48
72
96
120
Hours post transfection

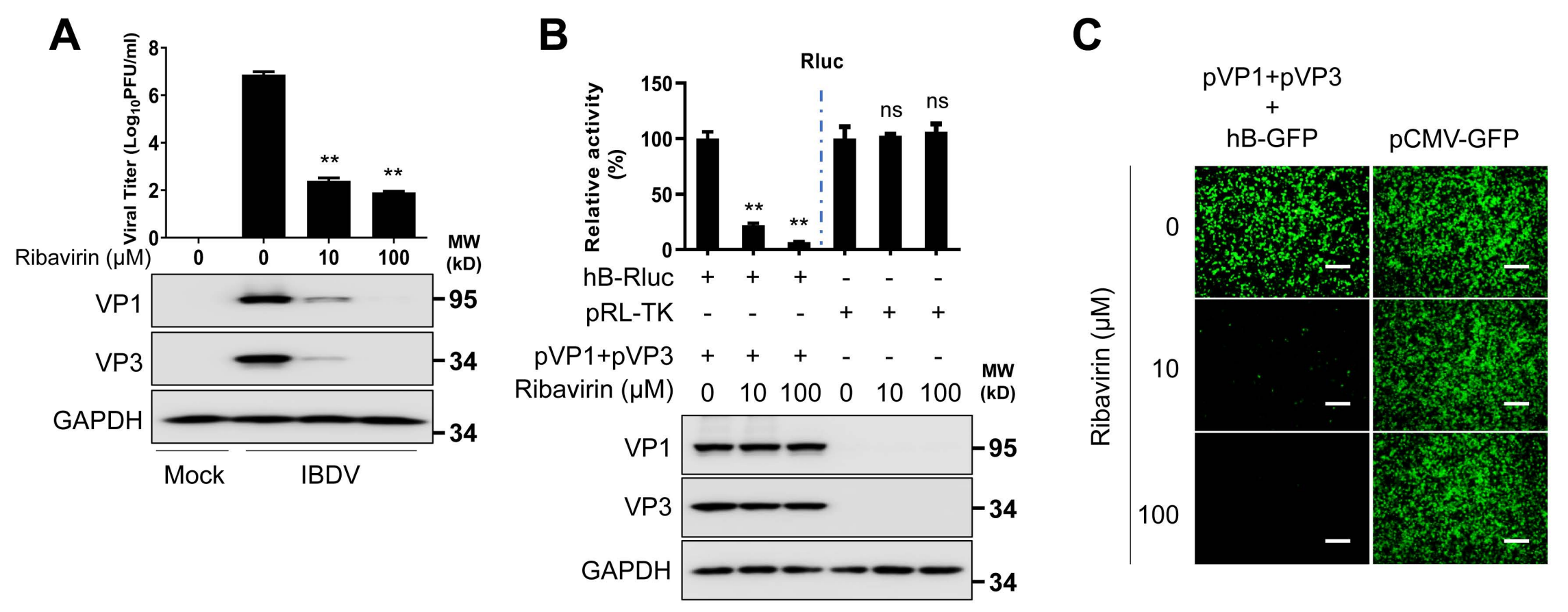

A
hA-GFP
hPol I
A5'UTR
EGFP
A3'UTR
T
B
hB-GFP
hPol I
B5'UTR
EGFP
B3'UTR
T
C
Vector
pVP1
pVP3
pVP1+pVP3
hA-GFP
hB-GFP
D
hA-GFP + + + + - - - -
hB-GFP - - - - + + + +
pVP1 - + - + - + - +
pVP3 - - + + - - + +
MW (kD)
VP1
VP3
GAPDH
GFP
95
34
37
E
pVP1+pVP3 (hours post-transfection)
24
48
72
96
hA-GFP
hB-GFP


A
hRB-Rluc
hPol I
B3'UTR
Rluc
B5'UTR
T
B
hRB-GFP
hPol I
B3'UTR
EGFP
B5'UTR
T
C
Rluc
Fold Induction
200
150
100
15
10
5
0
**
**
hB-Rluc + + - -
hRB-Rluc - - + +
pVP1+pVP3 - + - +
MW (kD)
VP1
VP3
GAPDH
95
34
34
D
hB-GFP
hRB-GFP
Vector
pVP1+pVP3
E
hB-GFP + + - -
hRB-GFP - - + +
pVP1+pVP3 - + - +
MW (kD)
GFP
VP1
VP3
GAPDH
26
95
34
34


A
Rluc
Fold Induction
200
150
15
10
5
0
**
**
**
**
pVP3 + + + + + +
pVP1/WT + - - + - -
pVP1/D402A - + - - + -
pVP1/D416A - - + - - +
hB-Rluc + + + - - -
hRB-Rluc - - - + + +
MW (kD)
VP1
VP3
GAPDH
95
34
34
B
Rluc
Fold Induction
3000
2000
1000
200
150
100
50
0
**
**
**
**
hB-Rluc + + + + +
pVP3 + + + + +
pVP1/WT + - - - -
pVP1/D402A - + - - -
pVP1/I404C - - + - -
pVP1/I406C - - - + -
pVP1/K751R - - - - +
MW (kD)
VP1
VP3
GAPDH
95
34
34
C
Rluc
Fold Induction
200
150
100
15
10
5
0
**
**
**
**
pVP1 + + + + + +
pVP3/WT + - - + - -
pVP3/KRKK - + - - + -
pVP3/dC - - + - - +
hB-Rluc + + + - - -
hRB-Rluc - - - + + +
MW (kD)
VP1
VP3
GAPDH
95
34
34


A
Rluc
Fold Induction
200
150
100
50
25
0
**
pVP1+pVP3
pVP1+pFLAG-VP3
pVP1+pVP3-FLAG
pFLAG-VP1+pVP3
pVP1-FLAG+pVP3
hB-Rluc
hRB-Rluc
MW (kD)
VP1
VP3
IB: FLAG
GAPDH
95
34
B
hB-GFP
hRB-GFP
pCI-neo
pVP1+pVP3
pVP1+pFLAG-VP3
pVP1+pVP3-FLAG
pFLAG-VP1+pVP3
pVP1-FLAG+pVP3


A
Rluc
Fold Induction
20
15
10
5
0
**
**
pIRES-VP1+pIRES-VP3 + + + +
hB-Rluc + + - -
hRB-Rluc - - + +
sheIF4E - + - +
MW (kD)
VP1
VP3
eIF4E
GAPDH
95
34
25
34
B
Rluc
Fold Induction
40
30
20
10
0
**
*
pIRES-VP1+pIRES-VP3 + + + +
hB-Rluc + + - -
hRB-Rluc - - + +
sheIF4G - + - +
MW (kD)
VP1
VP3
eIF4G
GAPDH
95
34
130
34
C
pIRES-VP1+pIRES-VP3
hB-GFP
hRB-GFP
shControl
sheIF4E
sheIF4G


A
Viral Titer (Log10PFU/ml)
8
6
4
2
0
**
**
Ribavirin (μM)
0
0
10
100
MW (kD)
VP1
95
VP3
34
GAPDH
34
Mock
IBDV
B
Rluc
Relative activity (%)
150
100
50
0
**
**
ns
ns
hB-Rluc + + + - - -
pRL-TK - - - + + +
pVP1+pVP3 + + + - - -
Ribavirin (μM) 0 10 100 0 10 100
MW (kD)
VP1
95
VP3
34
GAPDH
34
C
pVP1+pVP3
+
hB-GFP
pCMV-GFP
Ribavirin (μM)
0
10
100

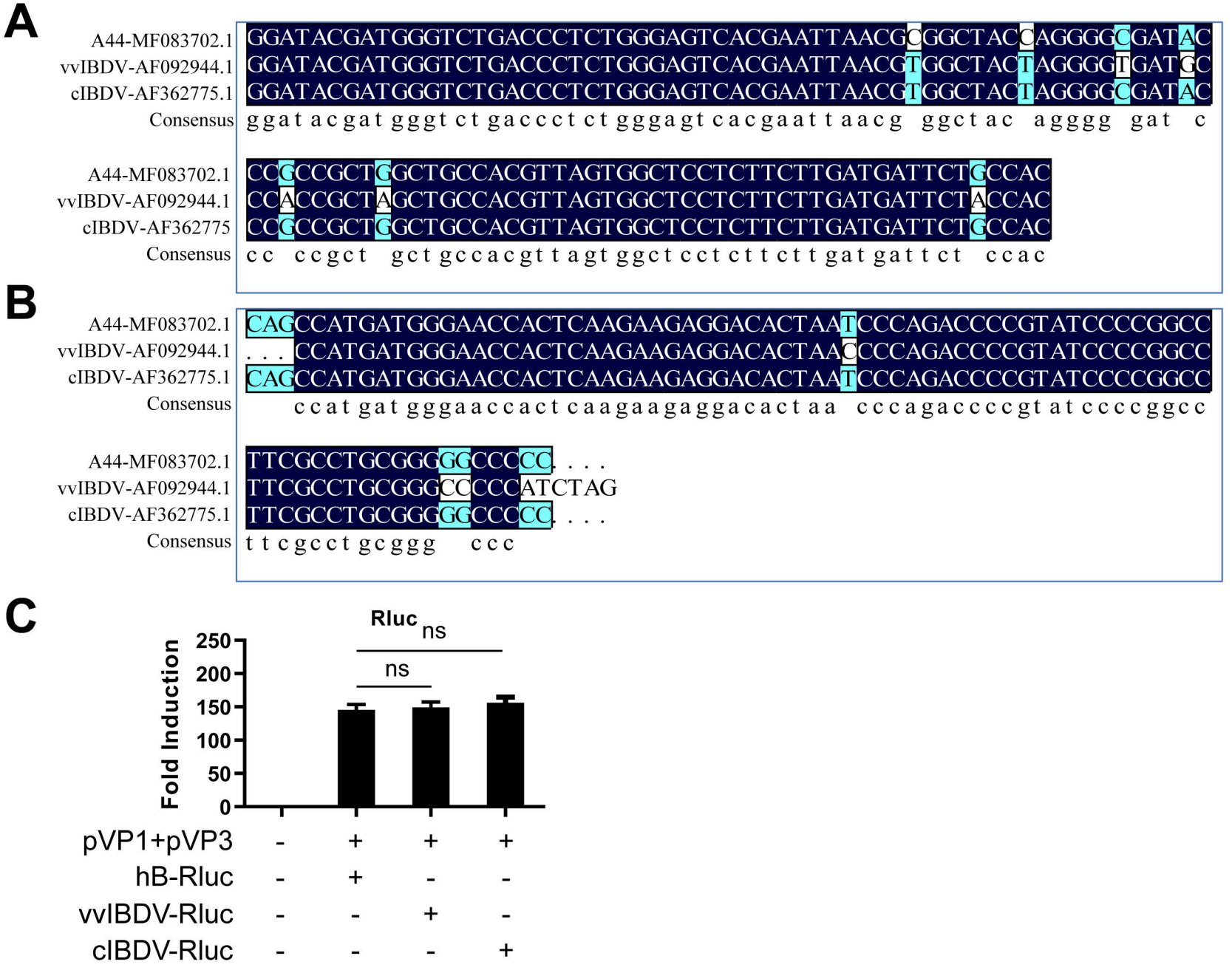

A
A44-MF083702.1
vvIBDV-AF092944.1
cIBDV-AF362775.1
Consensus
GGATACGATGGGTCTGACCCTCTGGGAGTCACGAATTAACGCGGCTACCAGGGGCGATAC
GGATACGATGGGTCTGACCCTCTGGGAGTCACGAATTAACGTGGCTACTAGGGGTGATGC
GGATACGATGGGTCTGACCCTCTGGGAGTCACGAATTAACGTGGCTACTAGGGGCGATAC
ggat acgat gggt ct gaccct ct gggagt cacgaatt aacg ggct ac agggg gat c
A44-MF083702.1
vvIBDV-AF092944.1
cIBDV-AF362775
Consensus
CCGCCGCTGGCTGCCACGTTAGTGGCTCCTCTTCTTGATGATTCTGCCAC
CCACCGCTAGCTGCCACGTTAGTGGCTCCTCTTCTTGATGATTCTACCAC
CCGCCGCTGGCTGCCACGTTAGTGGCTCCTCTTCTTGATGATTCTGCCAC
cc ccgct gct gccacgt t agt ggct cct ct t ct t gat gat t ct ccac
B
A44-MF083702.1
vvIBDV-AF092944.1
cIBDV-AF362775.1
Consensus
CAGCCATGATGGGAACCACTCAAGAAGAGGACACTAATCCCAGACCCCGTATCCCCGGCC
. . . CCATGATGGGAACCACTCAAGAAGAGGACACTAACCCCAGACCCCGTATCCCCGGCC
CAGCCATGATGGGAACCACTCAAGAAGAGGACACTAATCCCAGACCCCGTATCCCCGGCC
ccat gat gggaaccact caagaagaggacact aa cccagaccccgt at ccccggcc
A44-MF083702.1
vvIBDV-AF092944.1
cIBDV-AF362775.1
Consensus
TTCGCCTGCGGGGGCCCCC. . .
TTCGCCTGCGGGCCCCCATCTAG
TTCGCCTGCGGGGGCCCCC. . .
t t c gcct gcggg ccc
C
Rluc
ns
ns
Fold Induction
250
200
150
100
50
0
pVP1+pVP3 - + + +
hB-Rluc - + - -
vvIBDV-Rluc - - + -
cIBDV-Rluc - - - +

Fig.1C

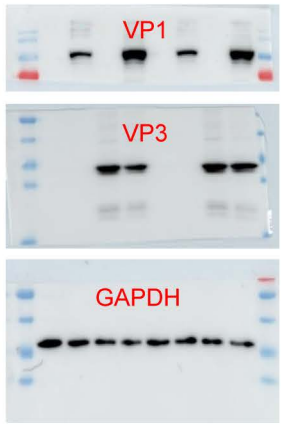


Fig.2D

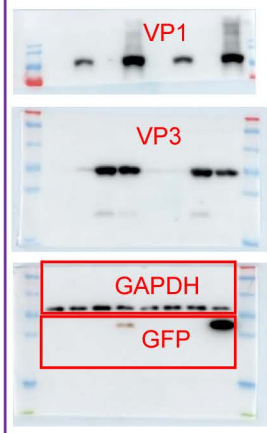


Fig.3C

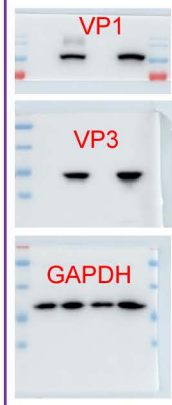


Fig.3E

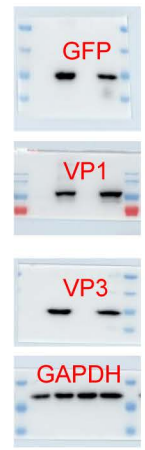


Fig.4A

Fig.4B

Fig.4C

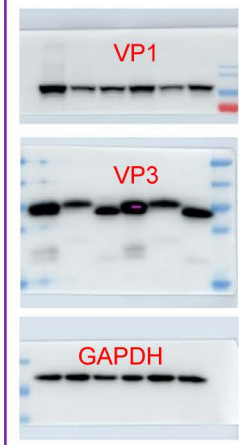


Fig.5A

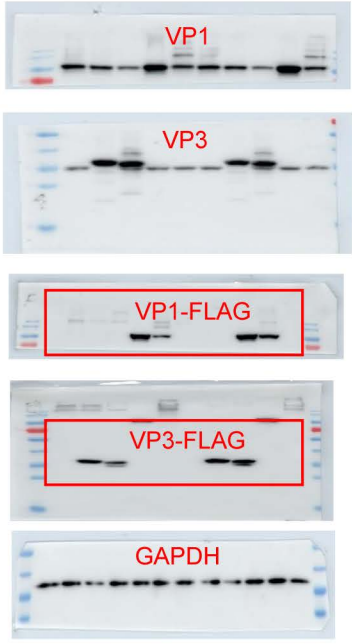


Fig.6A

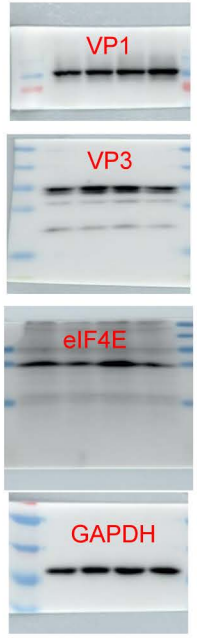


Fig.6B

Fig.7A

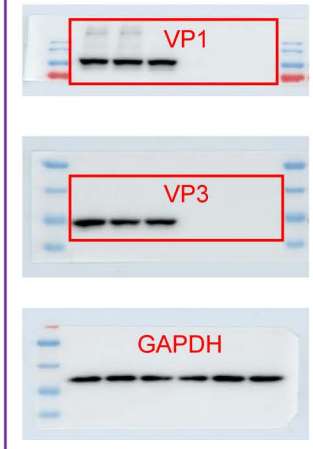



Fig.7B