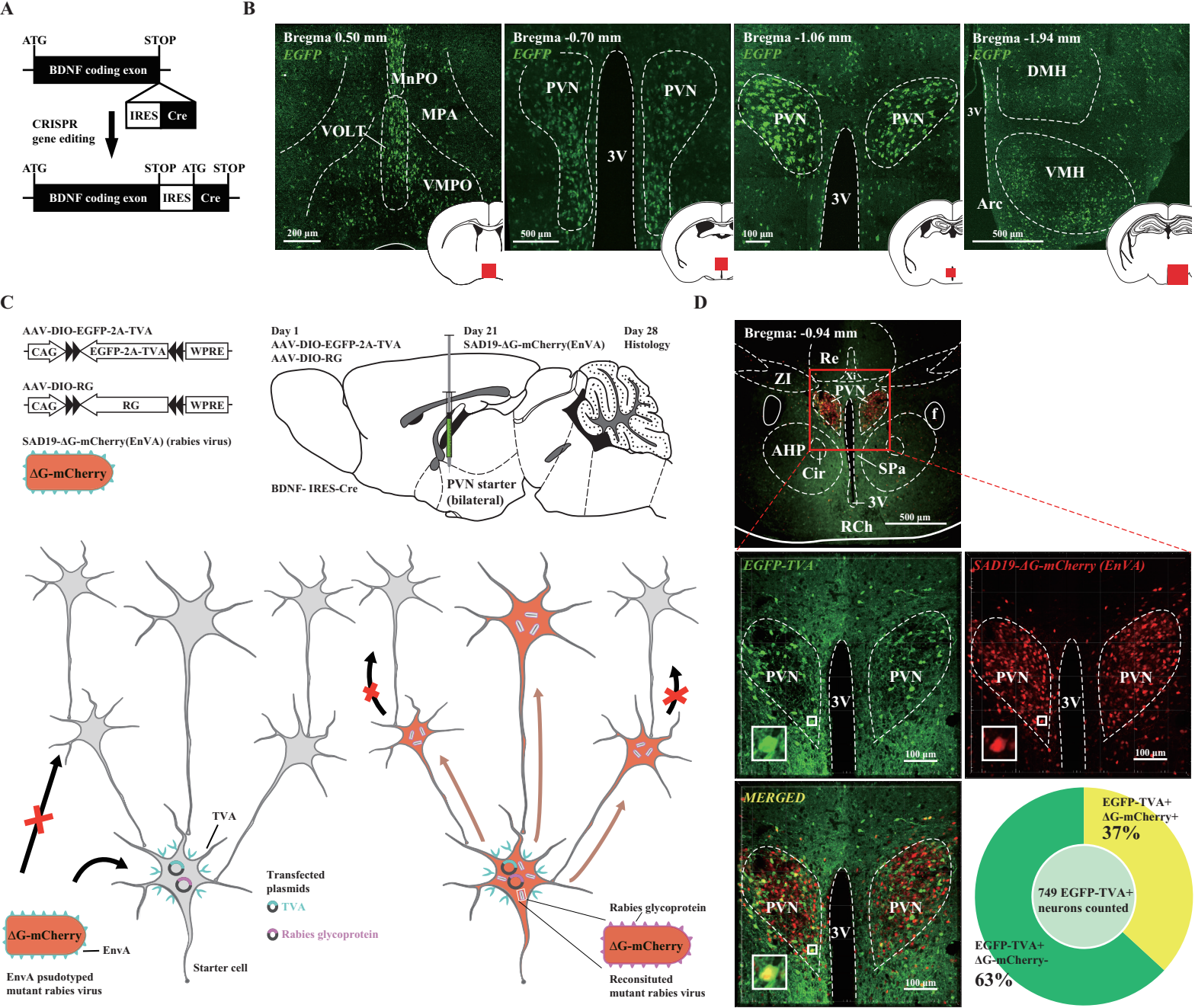
A
ATG
STOP
BDNF coding exon
IRES
Cre
CRISPR
gene editing
ATG
STOP
ATG
STOP
BDNF coding exon
IRES
Cre
B
Bregma 0.50 mm
EGFP
MnPO
MPA
VOLT
VMPO
200 µm
Bregma -0.70 mm
EGFP
PVN
PVN
3V
500 µm
Bregma -1.06 mm
EGFP
PVN
PVN
3V
400 µm
Bregma -1.94 mm
EGFP
DMH
3V
VMH
Arc
500 µm
C
AAV-DIO-EGFP-2A-TVA
CAG
EGFP-2A-TVA
WPRE
AAV-DIO-RG
CAG
RG
WPRE
SAD19-ΔG-mCherry(EnVA) (rabies virus)
ΔG-mCherry
Day 1
AAV-DIO-EGFP-2A-TVA
AAV-DIO-RG
Day 21
SAD19-ΔG-mCherry(EnVA)
Day 28
Histology
BDNF- IRES-Cre
PVN starter
(bilateral)
TVA
ΔG-mCherry
EnvA
EnvA psudotyped
mutant rabies virus
Starter cell
Transfected
plasmids
TVA
Rabies glycoprotein
Rabies glycoprotein
ΔG-mCherry
Reconsituted
mutant rabies virus
D
Bregma: -0.94 mm
Re
ZI
PVN
f
AHP
Cir
SPa
3V
RCh
500 µm
EGFP-TVA
PVN
PVN
3V
100 µm
SAD19-ΔG-mCherry (EnVA)
PVN
PVN
3V
100 µm
MERGED
PVN
PVN
3V
100 µm
EGFP-TVA+
ΔG-mCherry+
37%
749 EGFP-TVA+
neurons counted
EGFP-TVA+
ΔG-mCherry-
63%