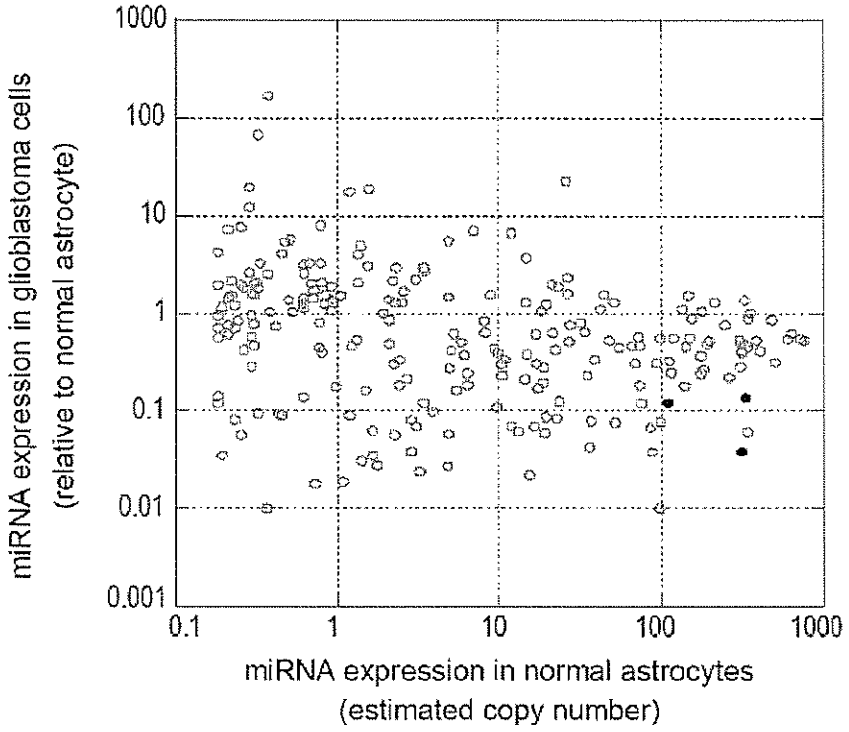
miRNA oligo	Sequence	SEQ ID NO
3X-mir31-top	5'-AGCTTcagctatgccagcatcttgccCGATcagctatgccagcatcttgcc TCACcagctatgccagcatcttgccA-3'	10
3X-mir31-bottom	5'-AGCTTggcaagatgctggcatagctgGTGAggcaagatgctggcatagctg ATCGggcaagatgctggcatagctgA-3'	11
3X-mir127-top	5'-AGCTTagccaagctcagacggatccgaCGATagccaagctcagacggatccga TCACagccaagctcagacggatccgaA-3'	12
3X-mir127-bottom	5'-AGCTTtcggatccgtctgagcttggctGTGAtcggatccgtctgagcttggct ATCGtcggatccgtctgagcttggctA-3'	13
3X-mir143-top	5'-AGCTTtgagctacagtgcttcatctcaCGATtgagctacagtgcttcatctca TCACtgagctacagtgcttcatctcaA-3'	14
3X-Mir143-bottom	5'-AGCTTtgagatgaagcactgtagctcaGTGAtgagatgaagcactgtagctca ATCGtgagatgaagcactgtagctcaA-3'	15
Mix-mir-top	5'-AGCTTcagctatgccagcatcttgccCGATagccaagctcagacggatccga TCACtgagctacagtgcttcatctcaA-3'	16
Mix-mir-bottom	5'-AGCTTtgagatgaagcactgtagctcaGTGAtcggatccgtctgagcttggct ATCGggcaagatgctggcatagctgA-3'	17

TABLE 1

a


1000
100
10
1
0.1
0.01
0.001
0.1
1
10
100
1000
miRNA expression in glioblastoma cells
(relative to normal astrocyte)
miRNA expression in normal astrocytes
(estimated copy number)

b

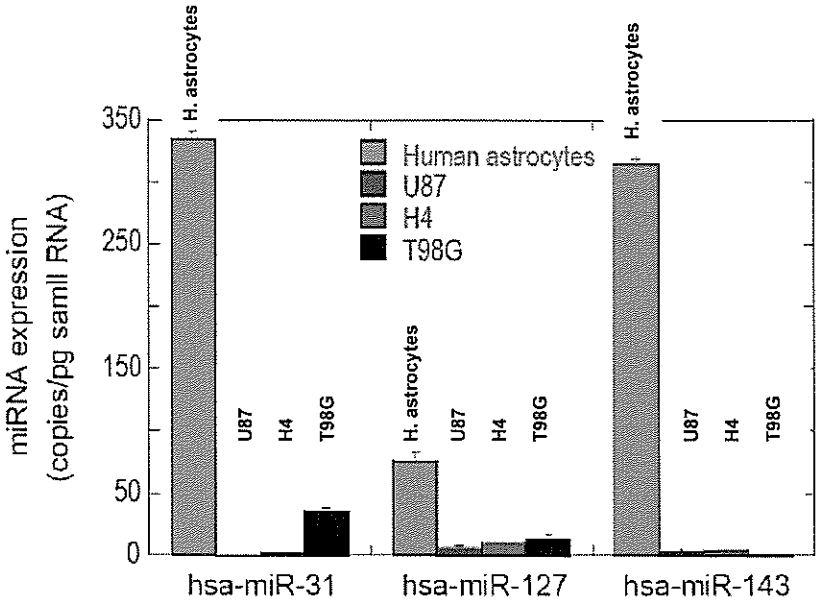

350
250
150
50
0
miRNA expression
(copies/pg samll RNA)
H. astrocytes
U87
H4
T98G
Human astrocytes
U87
H4
T98G
hsa-miR-31
hsa-miR-127
hsa-miR-143

FIGURE 1

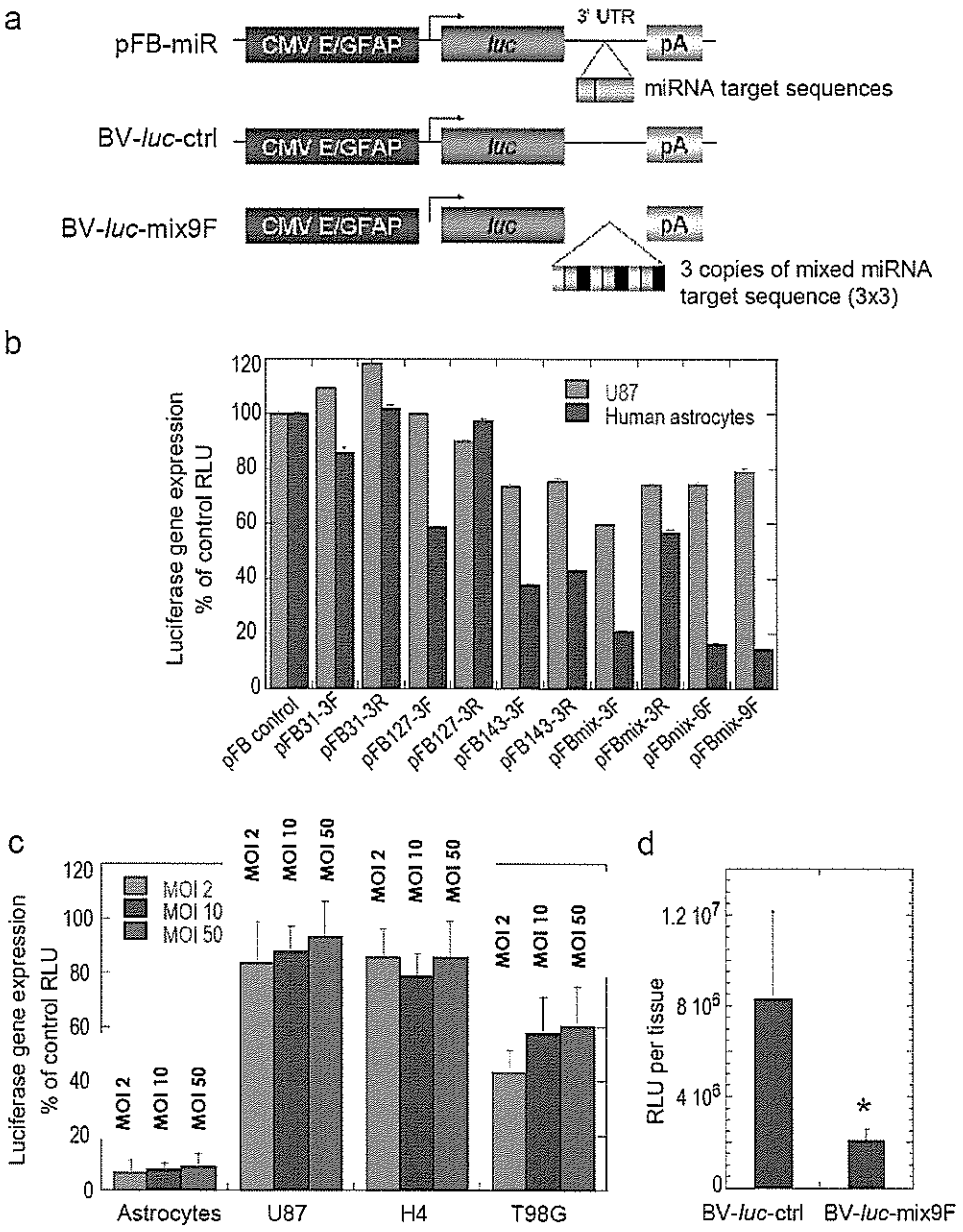

a
pFB-miR
CMV E/GFAP
luc
3' UTR
pA
miRNA target sequences
BV-luc-ctrl
CMV E/GFAP
luc
pA
BV-luc-mix9F
CMV E/GFAP
luc
pA
3 copies of mixed miRNA target sequence (3x3)
b
Luciferase gene expression % of control RLU
U87
Human astrocytes
pFB control
pFB31-3F
pFB31-3R
pFB127-3F
pFB127-3R
pFB143-3F
pFB143-3R
pFBmix-3F
pFBmix-3R
pFBmix-9F
pFBmix-9F
c
Luciferase gene expression % of control RLU
MOI 2
MOI 10
MOI 50
Astrocytes
U87
H4
T98G
d
RLU per tissue
BV-luc-ctrl
BV-luc-mix9F

FIGURE 2

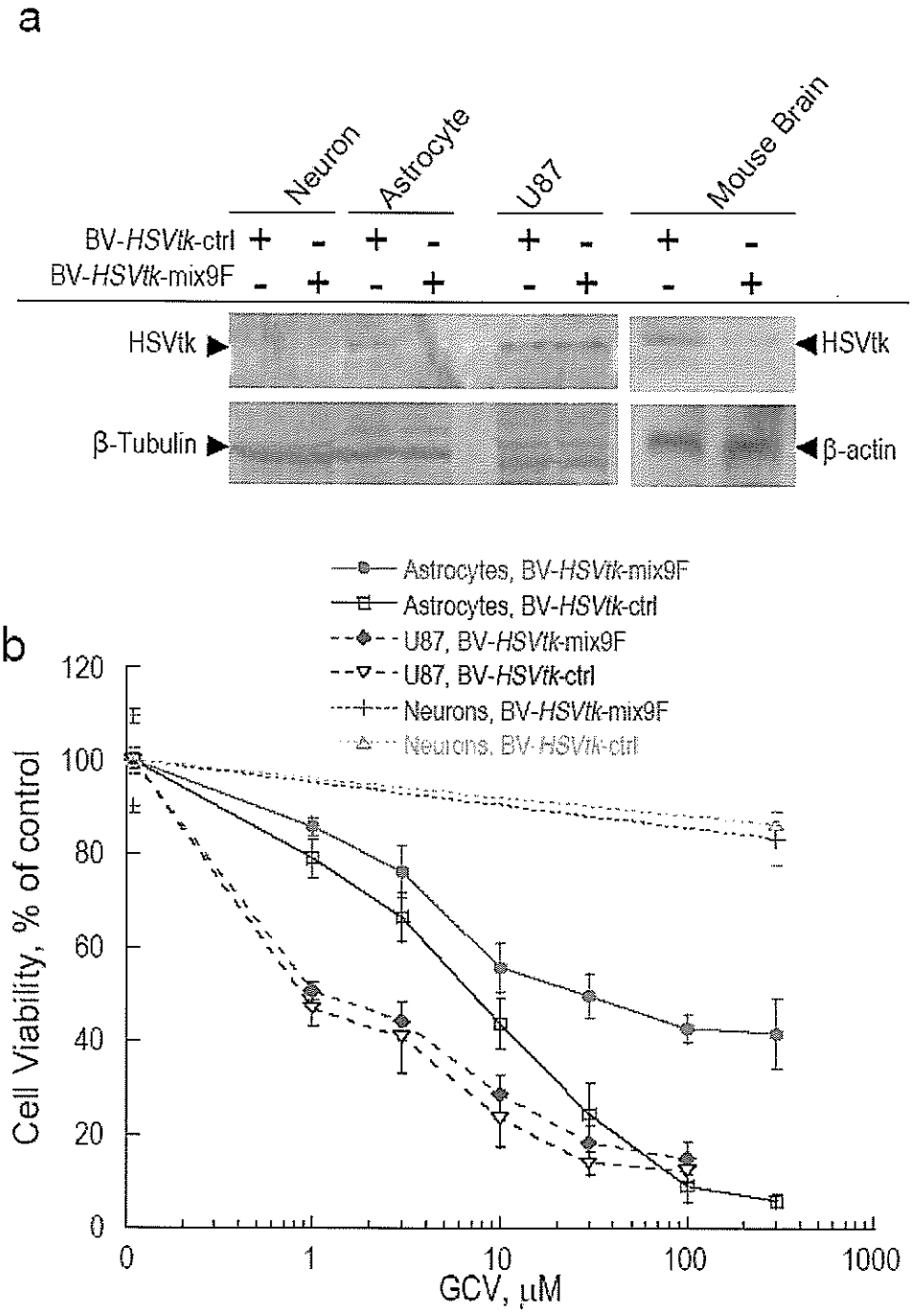

a
Neuron
Astrocyte
U87
Mouse Brain
BV-HSVtk-ctrl + - + - + - + -
BV-HSVtk-mix9F - + - + - + - +
HSVtk
β-Tubulin
HSVtk
β-actin
b
Astrocytes, BV-HSVtk-mix9F
Astrocytes, BV-HSVtk-ctrl
U87, BV-HSVtk-mix9F
U87, BV-HSVtk-ctrl
Neurons, BV-HSVtk-mix9F
Neurons, BV-HSVtk-ctrl
Cell Viability, % of control
120
100
80
60
40
20
0
0
1
10
100
1000
GCV, μM

FIGURE 3

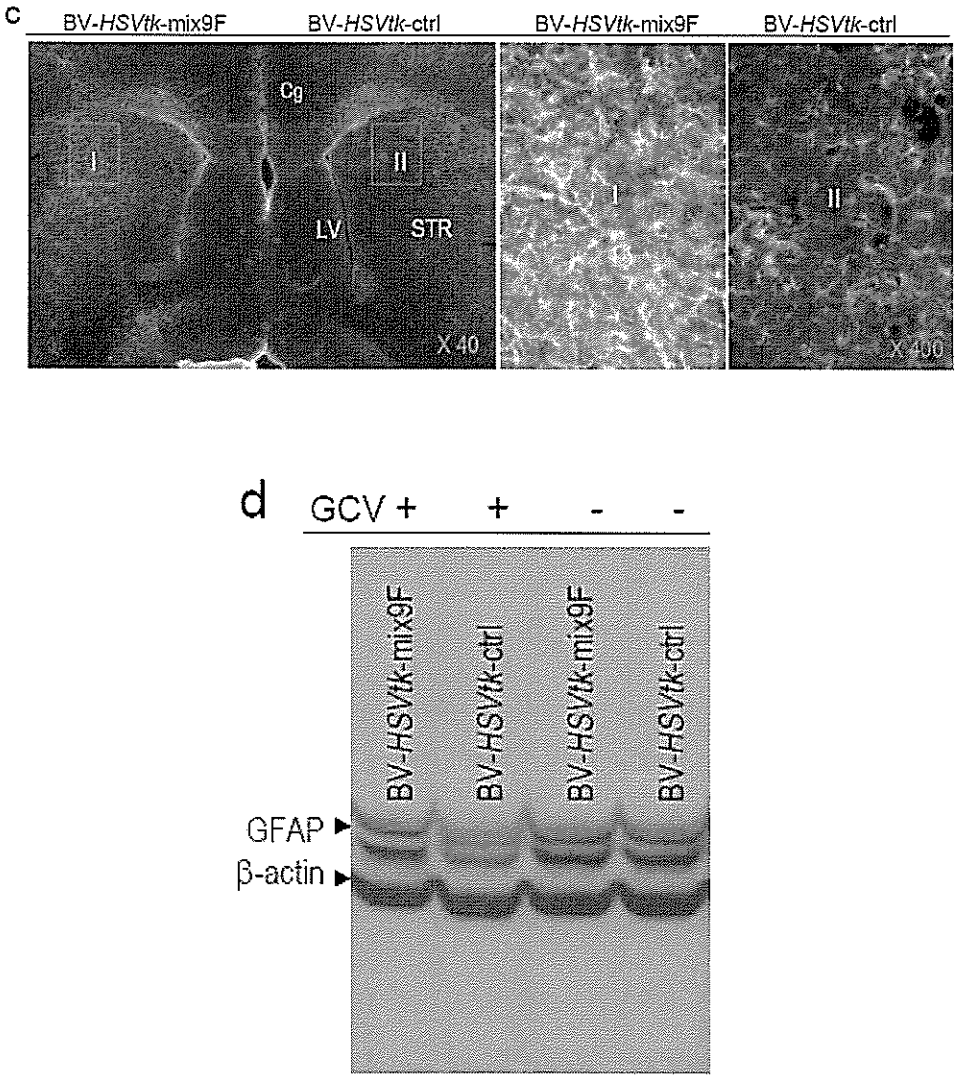


FIGURE 3 (CONTINUED)

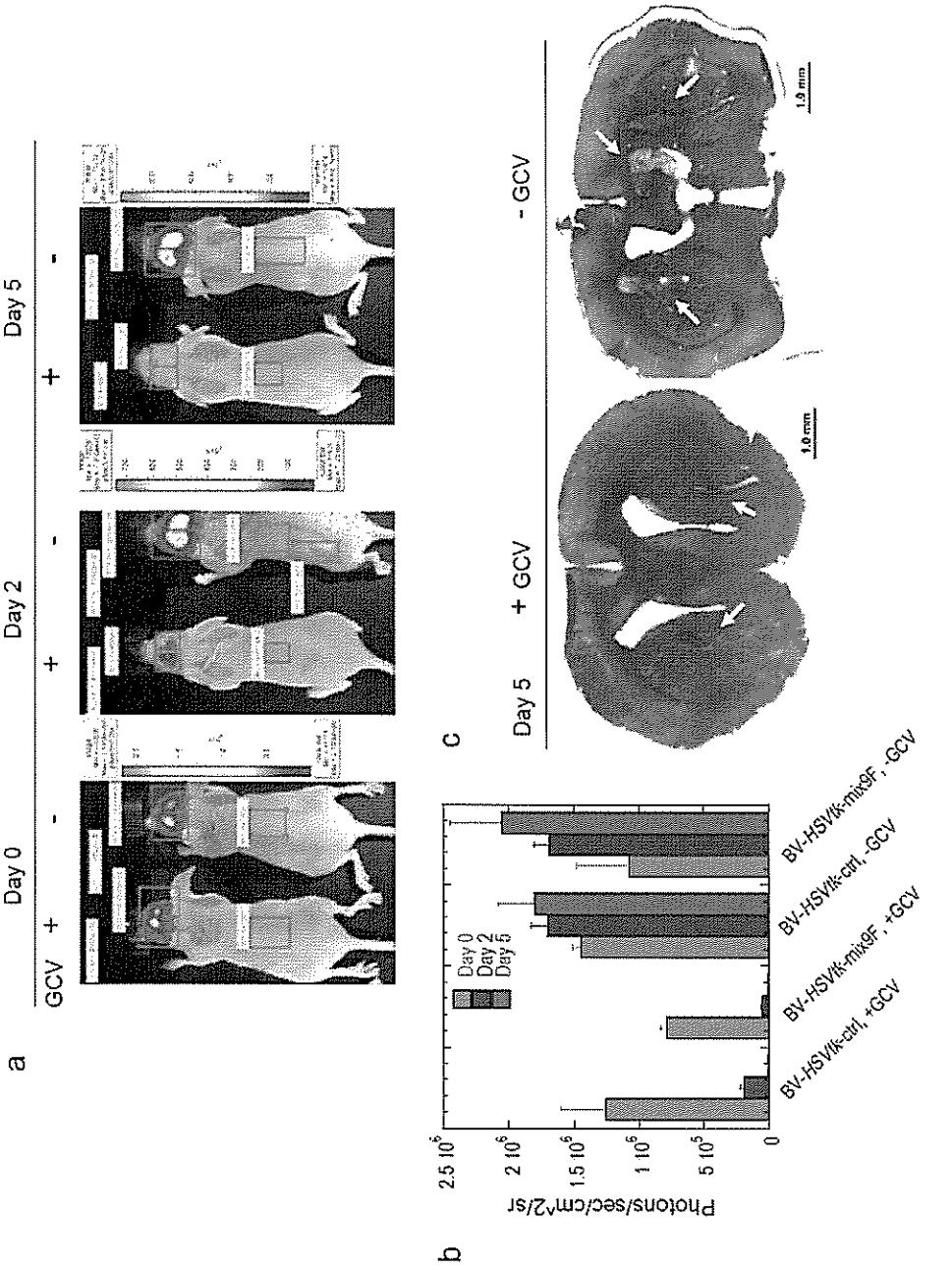

a
Day 0
Day 2
Day 5
GCV
+
-
+
-
+
-
b
Day 0
Day 2
Day 5
Photons/sec/cm^2/sr
2.5 10^6
2 10^6
1.5 10^6
1 10^6
5 10^5
0
BV-HSVtk-mix9F, -GCV
BV-HSVtk-ctrl, -GCV
BV-HSVtk-mix9F, +GCV
BV-HSVtk-ctrl, +GCV
c
Day 5
+ GCV
- GCV
1.0 mm
1.0 mm

FIGURE 4