Fig. 1

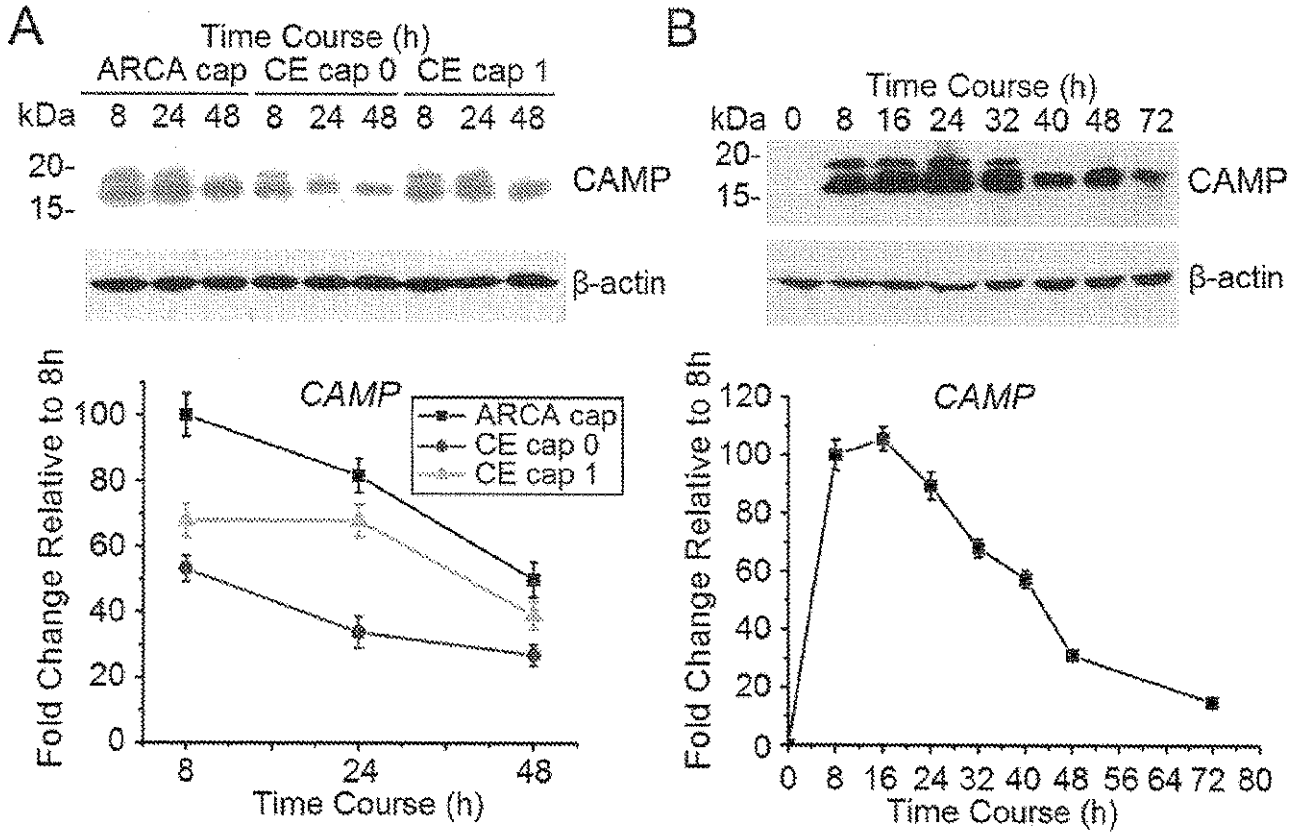

A
Time Course (h)
ARCA cap
CE cap 0
CE cap 1
kDa
8 24 48 8 24 48 8 24 48
20-
15-
CAMP
β-actin
B
Time Course (h)
kDa 0 8 16 24 32 40 48 72
20-
15-
CAMP
β-actin
CAMP
ARCA cap
CE cap 0
CE cap 1
Fold Change Relative to 8h
Time Course (h)
CAMP
Fold Change Relative to 8h
Time Course (h)

Fig. 2

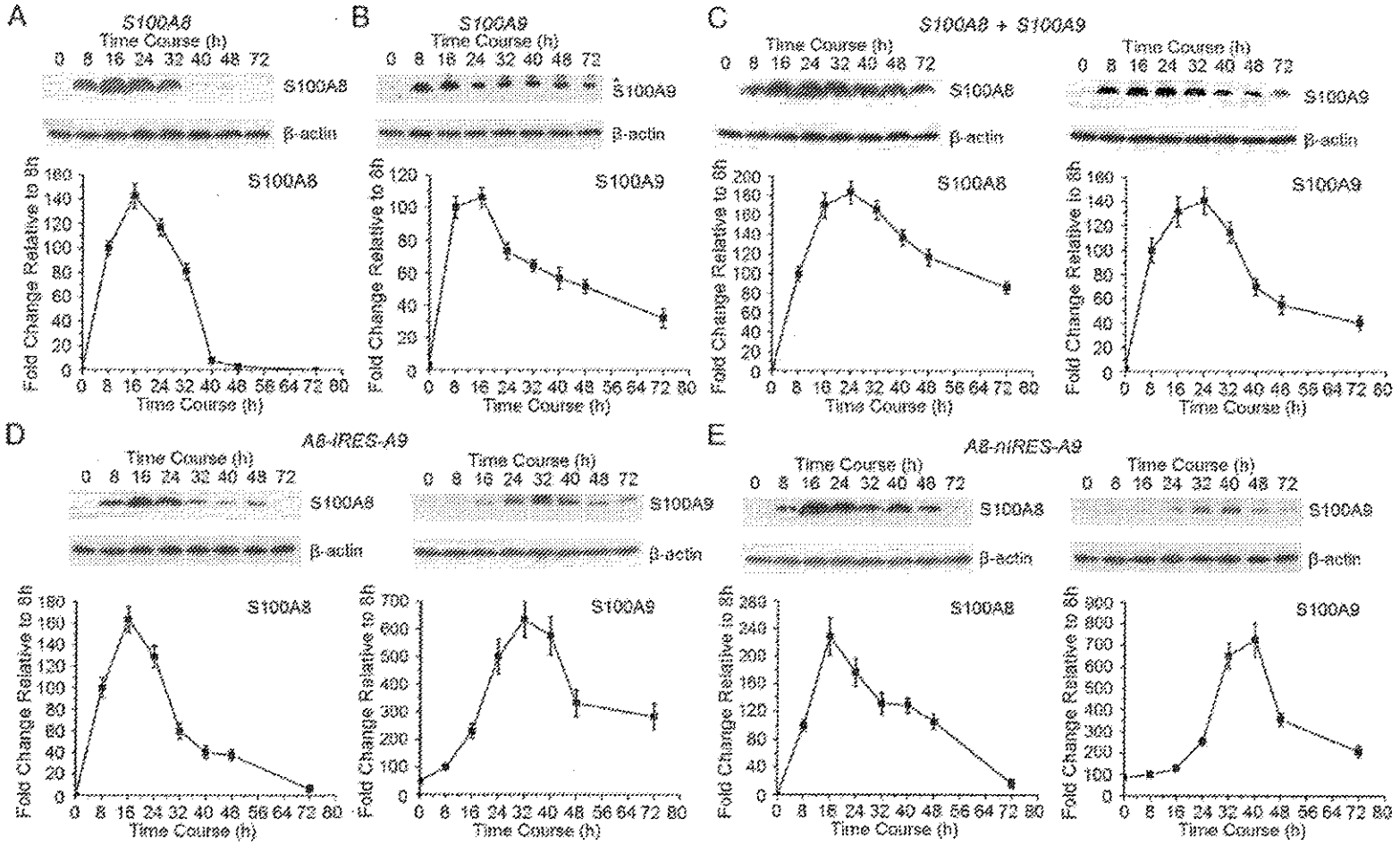

A
S100A8
Time Course (h)
0 8 16 24 32 40 48 72
S100A8
β-actin
S100A8
Fold Change Relative to 8h
Time Course (h)
B
S100A9
Time Course (h)
0 8 16 24 32 40 48 72
S100A9
β-actin
S100A9
Fold Change Relative to 8h
Time Course (h)
C
S100A8 + S100A9
Time Course (h)
0 8 16 24 32 40 48 72
S100A8
β-actin
S100A8
Fold Change Relative to 8h
Time Course (h)
Time Course (h)
0 8 16 24 32 40 48 72
S100A9
β-actin
S100A9
Fold Change Relative to 8h
Time Course (h)
D
A8-IRES-A9
Time Course (h)
0 8 16 24 32 40 48 72
S100A8
β-actin
S100A8
Fold Change Relative to 8h
Time Course (h)
Time Course (h)
0 8 16 24 32 40 48 72
S100A9
β-actin
S100A9
Fold Change Relative to 8h
Time Course (h)
E
A8-nIRES-A9
Time Course (h)
0 8 16 24 32 40 48 72
S100A8
β-actin
S100A8
Fold Change Relative to 8h
Time Course (h)
Time Course (h)
0 8 16 24 32 40 48 72
S100A9
β-actin
S100A9
Fold Change Relative to 8h
Time Course (h)

Fig. 3

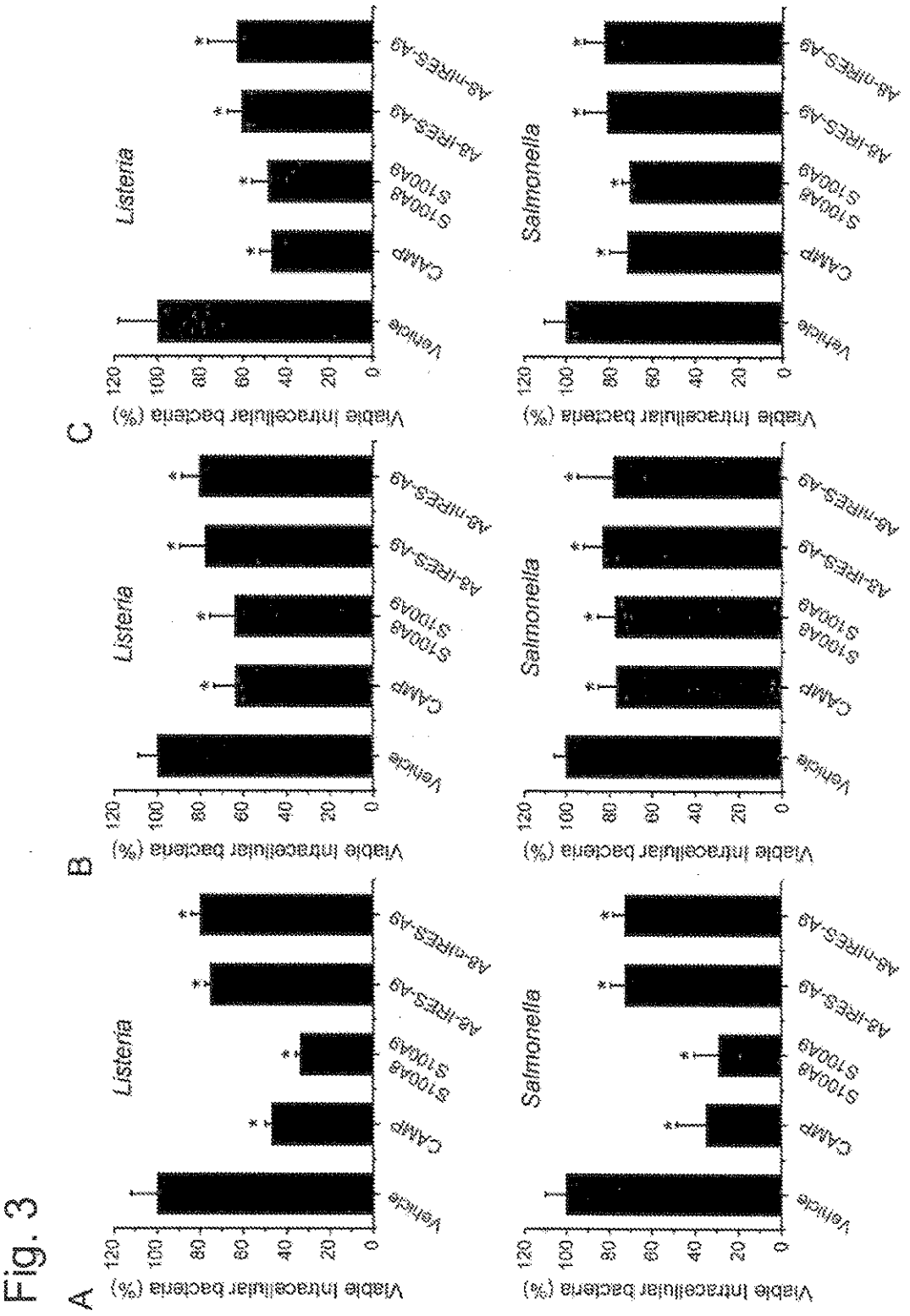

A
B
C
Listeria
Salmonella
Viable intracellular bacteria (%)
0
20
40
60
80
100
120
Vehicle
CAMP
S100A8 S100A9
Aβ-IRES-Aβ
Aβ-nIRES-Aβ
*

Fig. 4

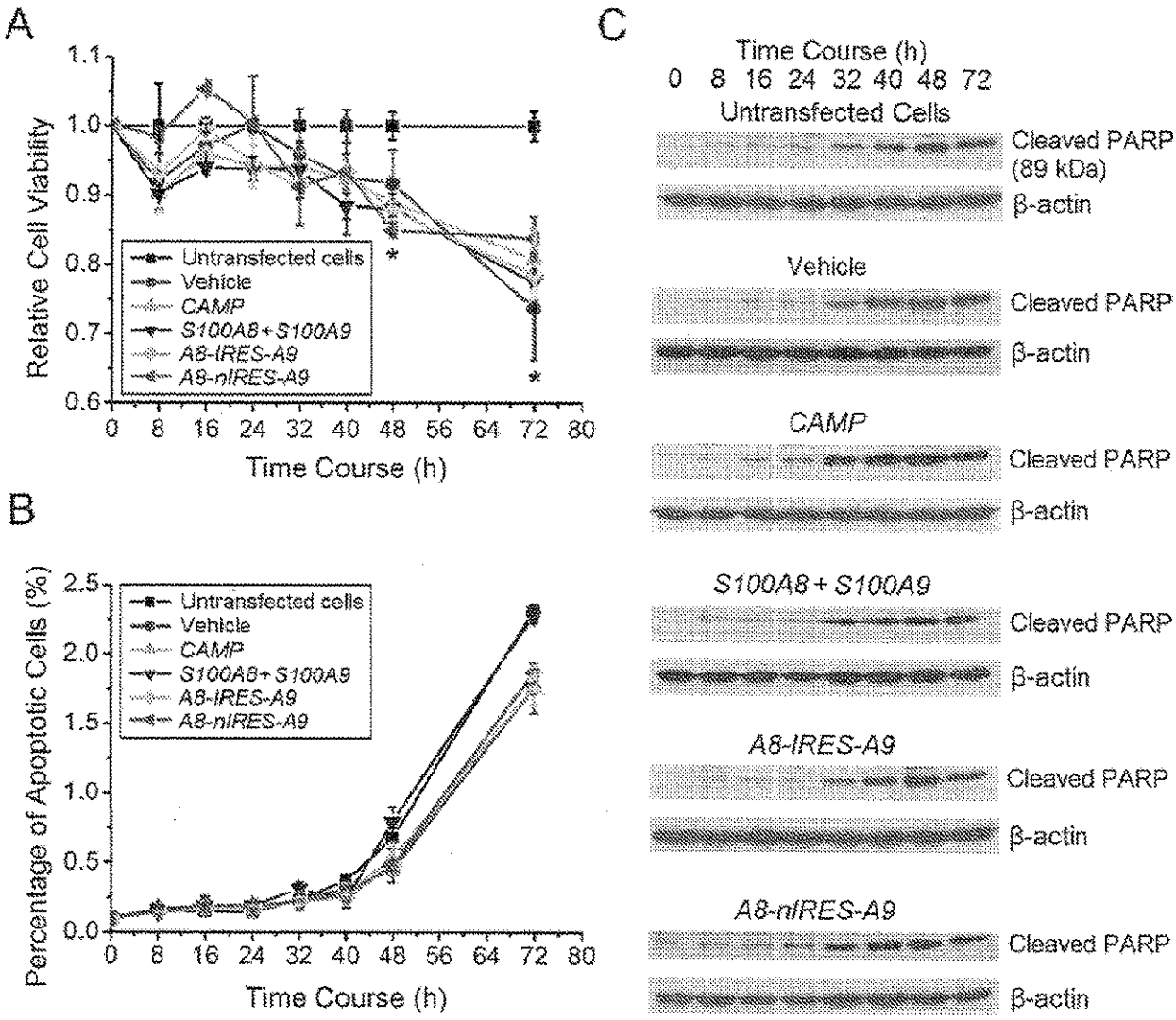

A
Relative Cell Viability
1.1
1.0
0.9
0.8
0.7
0.6
0 8 16 24 32 40 48 56 64 72 80
Time Course (h)
Untransfected cells
Vehicle
CAMP
S100A8+S100A9
A8-IRES-A9
A8-nIRES-A9
*
*
B
Percentage of Apoptotic Cells (%)
2.5
2.0
1.5
1.0
0.5
0.0
0 8 16 24 32 40 48 56 64 72 80
Time Course (h)
Untransfected cells
Vehicle
CAMP
S100A8+S100A9
A8-IRES-A9
A8-nIRES-A9
C
Time Course (h)
0 8 16 24 32 40 48 72
Untransfected Cells
Cleaved PARP (89 kDa)
β-actin
Vehicle
Cleaved PARP
β-actin
CAMP
Cleaved PARP
β-actin
S100A8 + S100A9
Cleaved PARP
β-actin
A8-IRES-A9
Cleaved PARP
β-actin
A8-nIRES-A9
Cleaved PARP
β-actin

Fig. 5

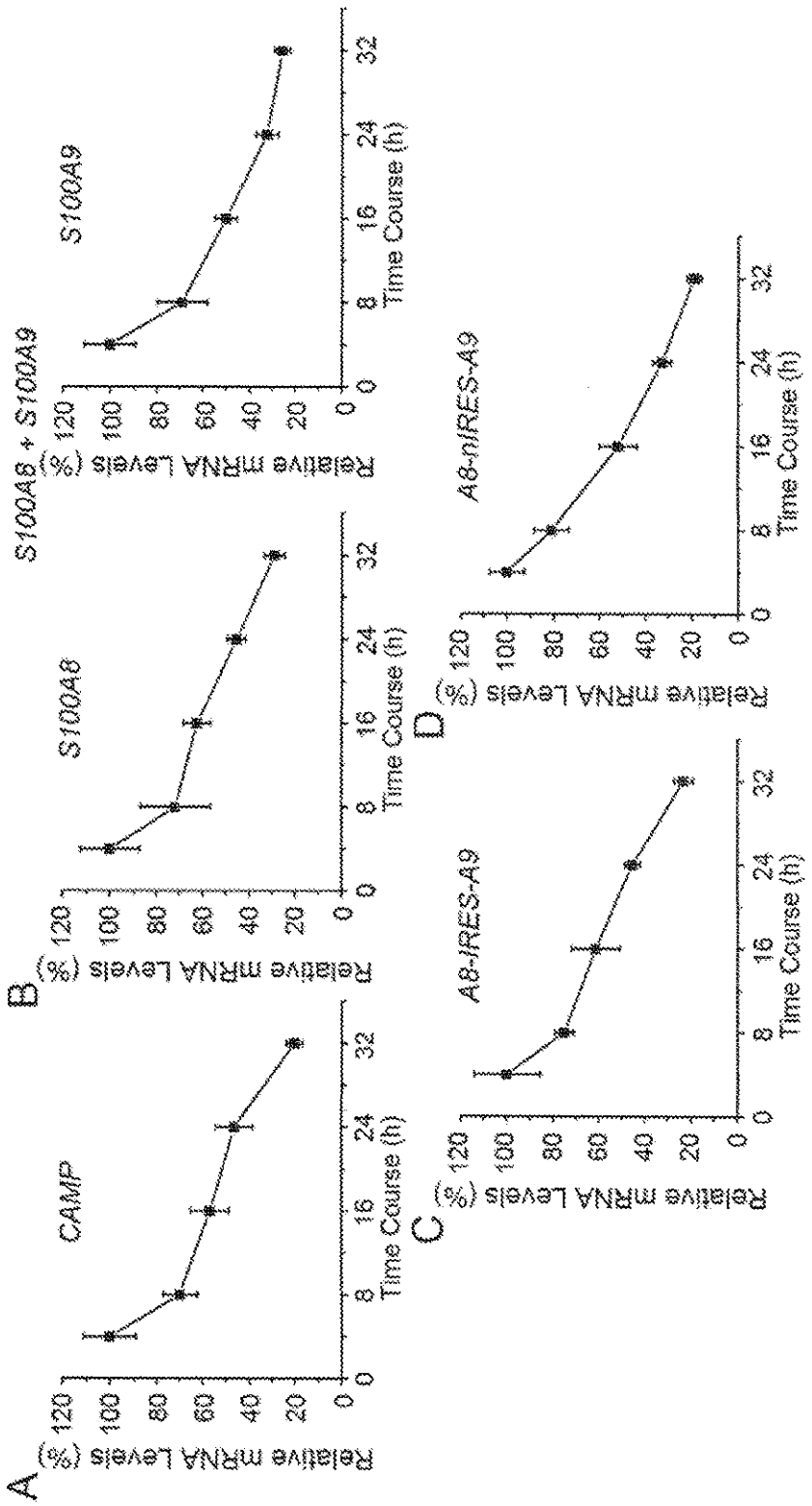

A
CAMP
B
S100A8
S100A8 + S100A9
S100A9
C
A8-IRES-A9
D
A8-nIRES-A9
Relative mRNA Levels (%)
Time Course (h)
0
20
40
60
80
100
120
8
16
24
32

Fig. 6

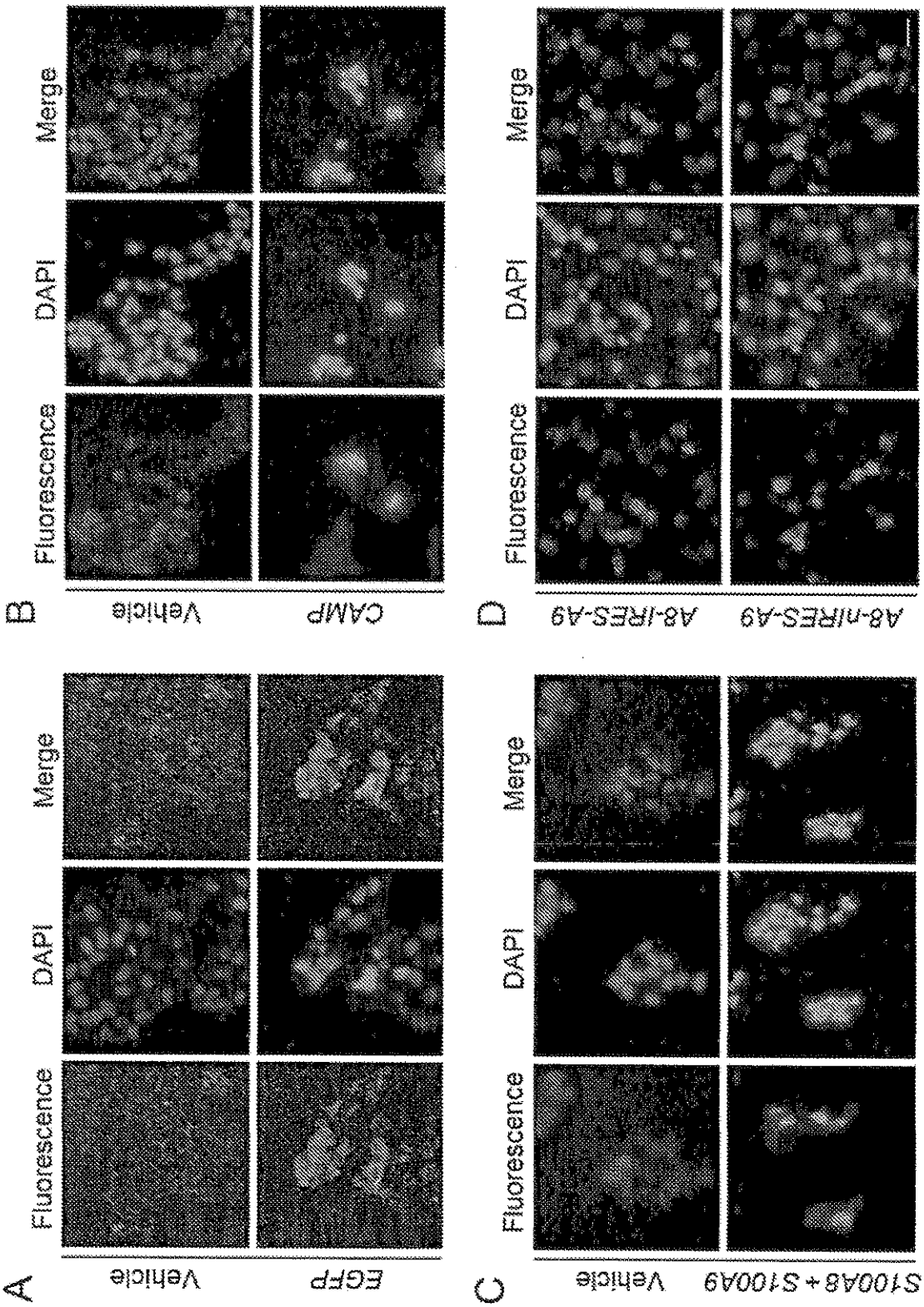

A
Fluorescence
DAPI
Merge
Vehicle
EGFP
B
Fluorescence
DAPI
Merge
Vehicle
CAMP
C
Fluorescence
DAPI
Merge
Vehicle
S100A8 + S100A9
D
Fluorescence
DAPI
Merge
A8-nIRES-A9
A8-IRES-A9

Fig. 7

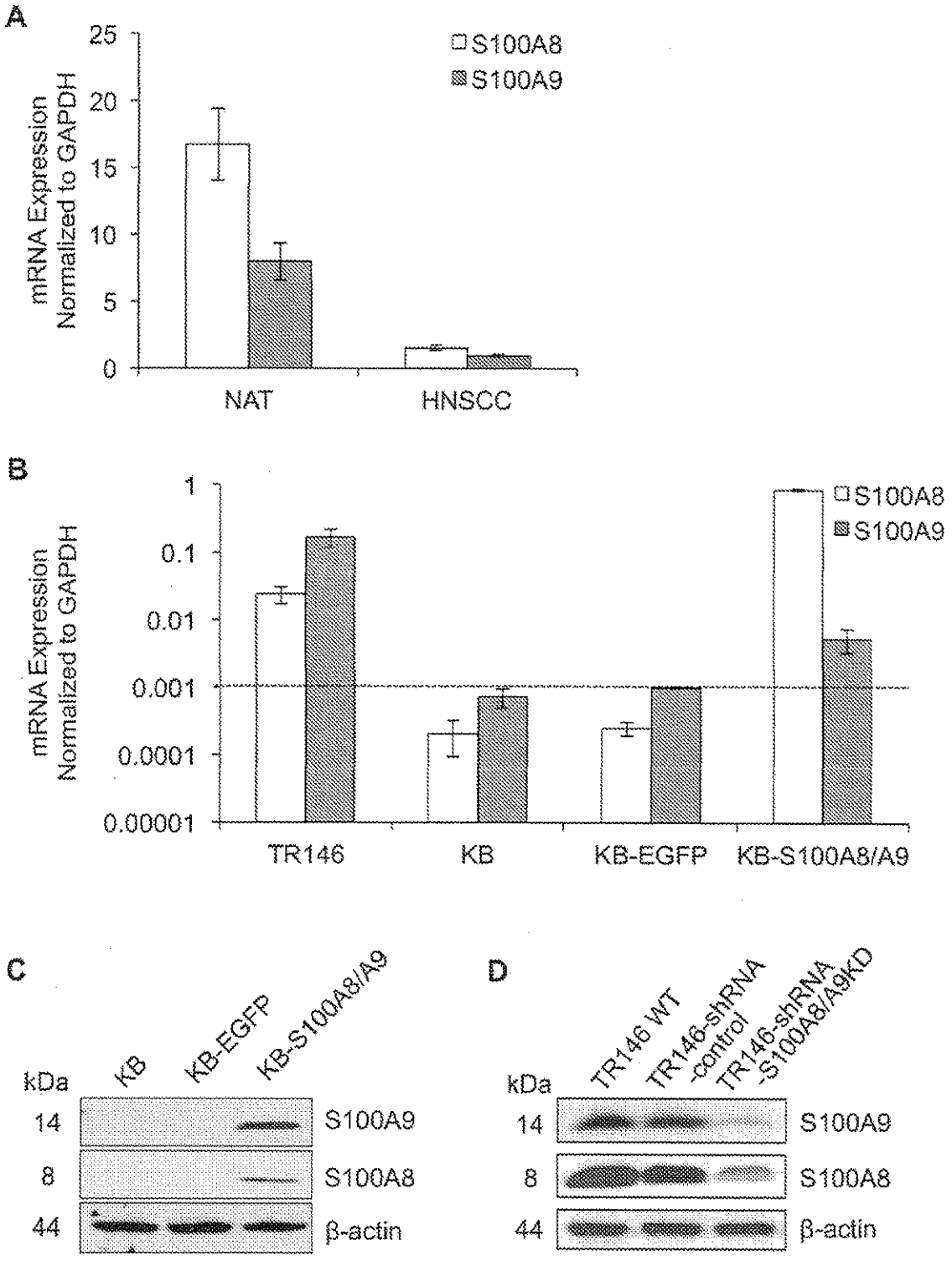

A
mRNA Expression Normalized to GAPDH
25
20
15
10
5
0
S100A8
S100A9
NAT
HNSCC
B
mRNA Expression Normalized to GAPDH
1
0.1
0.01
0.001
0.0001
0.00001
S100A8
S100A9
TR146
KB
KB-EGFP
KB-S100A8/A9
C
kDa
KB
KB-EGFP
KB-S100A8/A9
14
8
44
S100A9
S100A8
β-actin
D
kDa
TR146 WT
TR146-shRNA -control
TR146-shRNA -S100A8/A9KD
14
8
44
S100A9
S100A8
β-actin

Fig. 8

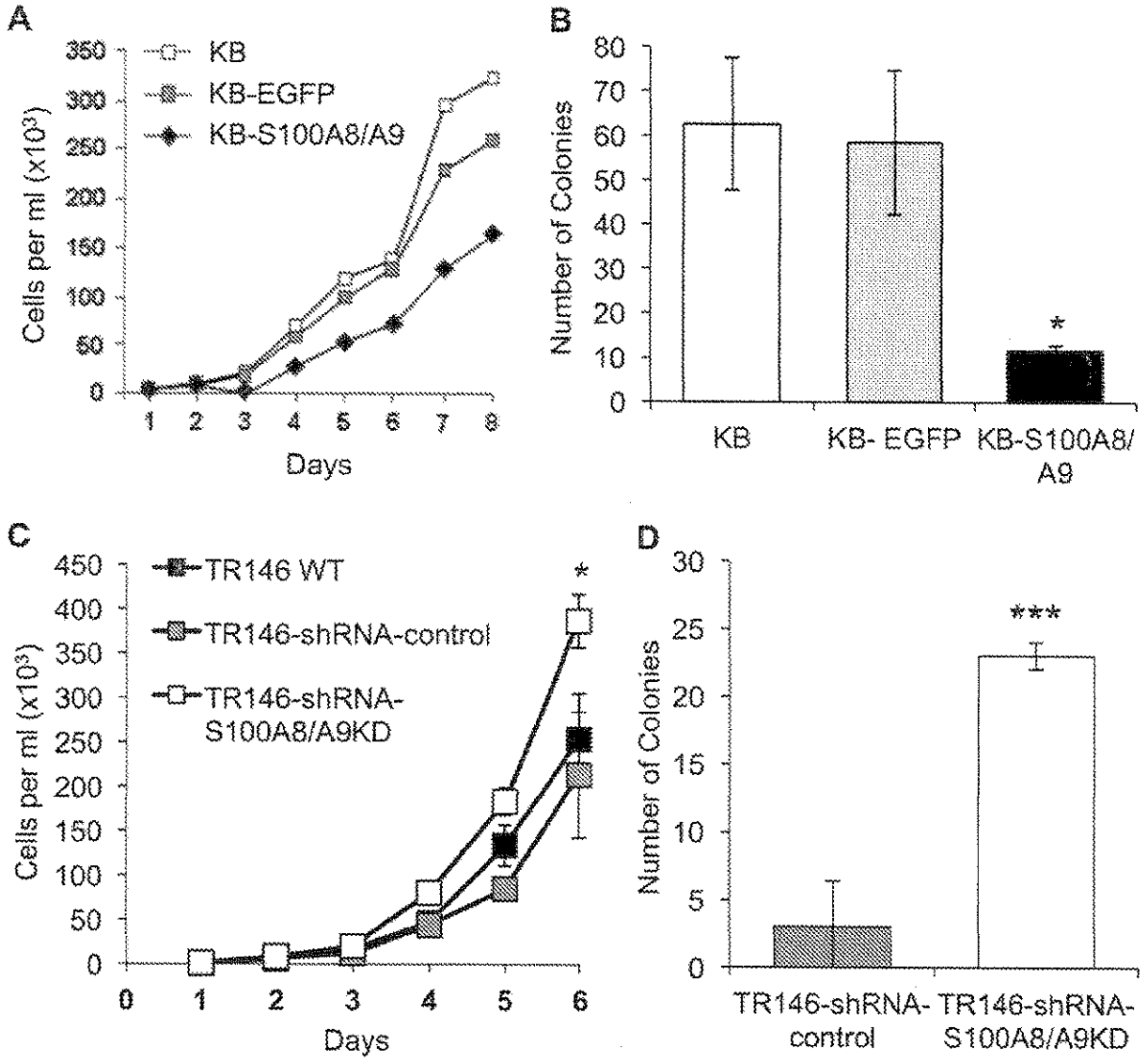

A
KB
KB-EGFP
KB-S100A8/A9
Cells per ml (x10³)
Days
B
Number of Colonies
KB
KB- EGFP
KB-S100A8/A9
C
TR146 WT
TR146-shRNA-control
TR146-shRNA-S100A8/A9KD
Cells per ml (x10³)
Days
D
Number of Colonies
TR146-shRNA-control
TR146-shRNA-S100A8/A9KD

Fig. 9

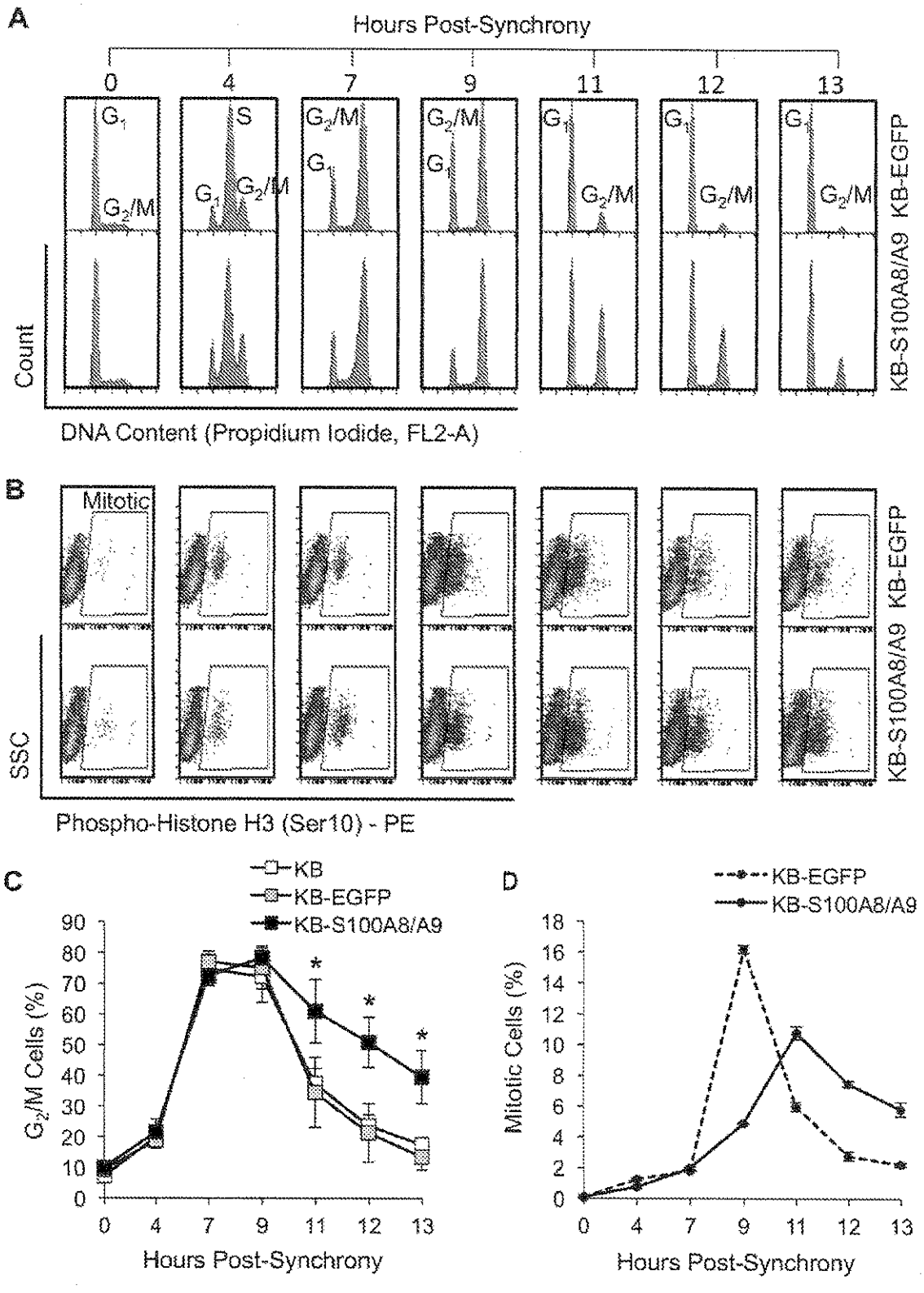

A
Hours Post-Synchrony
0
4
7
9
11
12
13
G1
S
G2/M
KB-EGFP
KB-S100A8/A9
Count
DNA Content (Propidium Iodide, FL2-A)
B
Mitotic
SSC
Phospho-Histone H3 (Ser10) - PE
C
KB
KB-EGFP
KB-S100A8/A9
G2/M Cells (%)
Hours Post-Synchrony
D
KB-EGFP
KB-S100A8/A9
Mitotic Cells (%)
Hours Post-Synchrony

Fig. 10

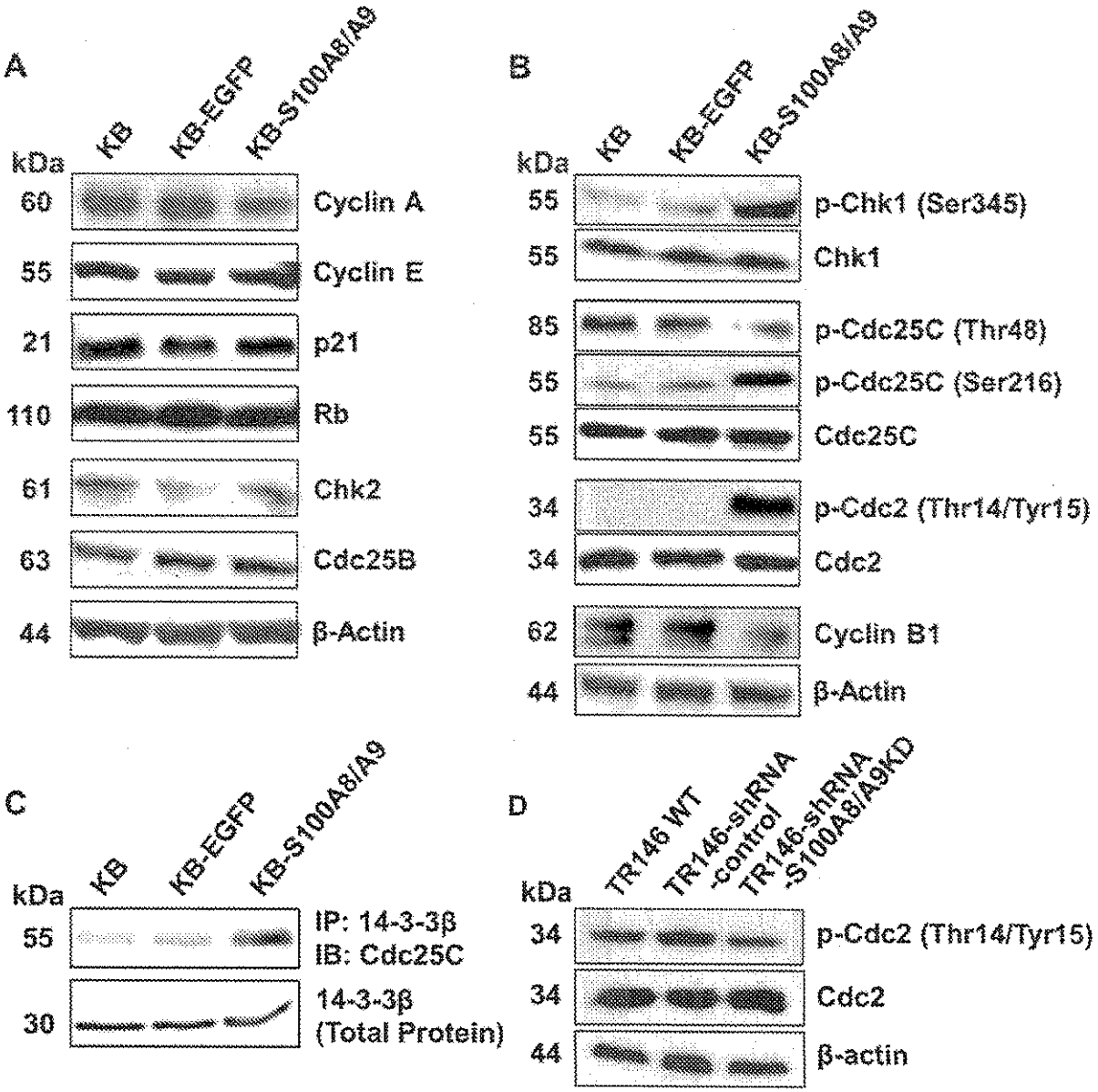

A
KB
KB-EGFP
KB-S100A8/A9
kDa
60
Cyclin A
55
Cyclin E
21
p21
110
Rb
61
Chk2
63
Cdc25B
44
β-Actin
B
KB
KB-EGFP
KB-S100A8/A9
kDa
55
p-Chk1 (Ser345)
55
Chk1
85
p-Cdc25C (Thr48)
55
p-Cdc25C (Ser216)
55
Cdc25C
34
p-Cdc2 (Thr14/Tyr15)
34
Cdc2
62
Cyclin B1
44
β-Actin
C
KB
KB-EGFP
KB-S100A8/A9
kDa
55
IP: 14-3-3β
IB: Cdc25C
30
14-3-3β
(Total Protein)
D
TR146 WT
TR146-shRNA -control
TR146-shRNA -S100A8/A9KD
kDa
34
p-Cdc2 (Thr14/Tyr15)
34
Cdc2
44
β-actin

Fig. 11

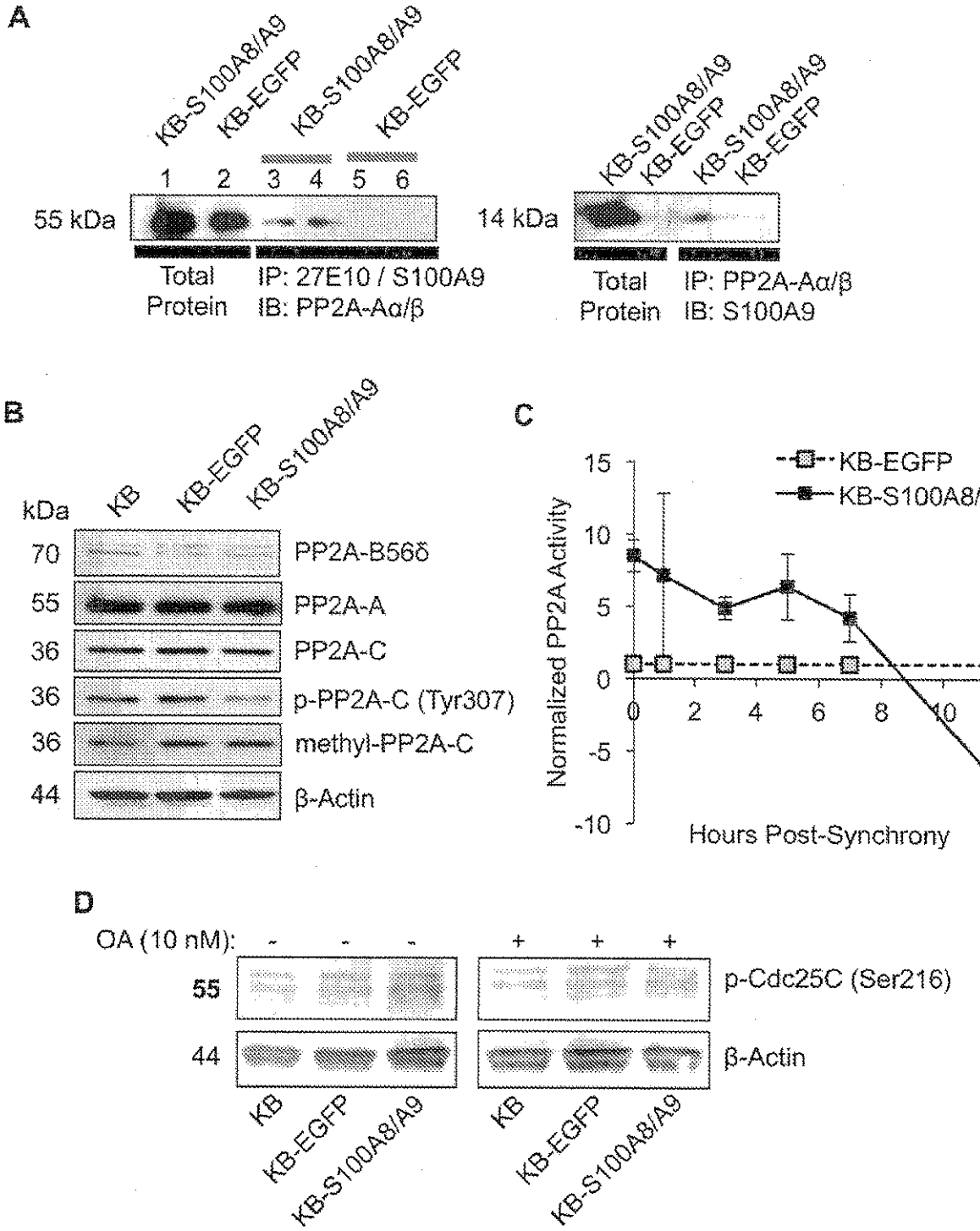

A
KB-S100A8/A9
KB-EGFP
KB-S100A8/A9
KB-EGFP
1 2 3 4 5 6
55 kDa
Total Protein
IP: 27E10 / S100A9
IB: PP2A-Aα/β
14 kDa
KB-S100A8/A9
KB-EGFP
KB-S100A8/A9
KB-EGFP
Total Protein
IP: PP2A-Aα/β
IB: S100A9
B
kDa
KB
KB-EGFP
KB-S100A8/A9
70 PP2A-B56δ
55 PP2A-A
36 PP2A-C
36 p-PP2A-C (Tyr307)
36 methyl-PP2A-C
44 β-Actin
C
KB-EGFP
KB-S100A8/A9
Normalized PP2A Activity
15
10
5
0
-5
-10
0 2 4 6 8 10 12
#
Hours Post-Synchrony
D
OA (10 nM): - - - + + +
55
44
p-Cdc25C (Ser216)
β-Actin
KB
KB-EGFP
KB-S100A8/A9
KB
KB-EGFP
KB-S100A8/A9

Fig. 12

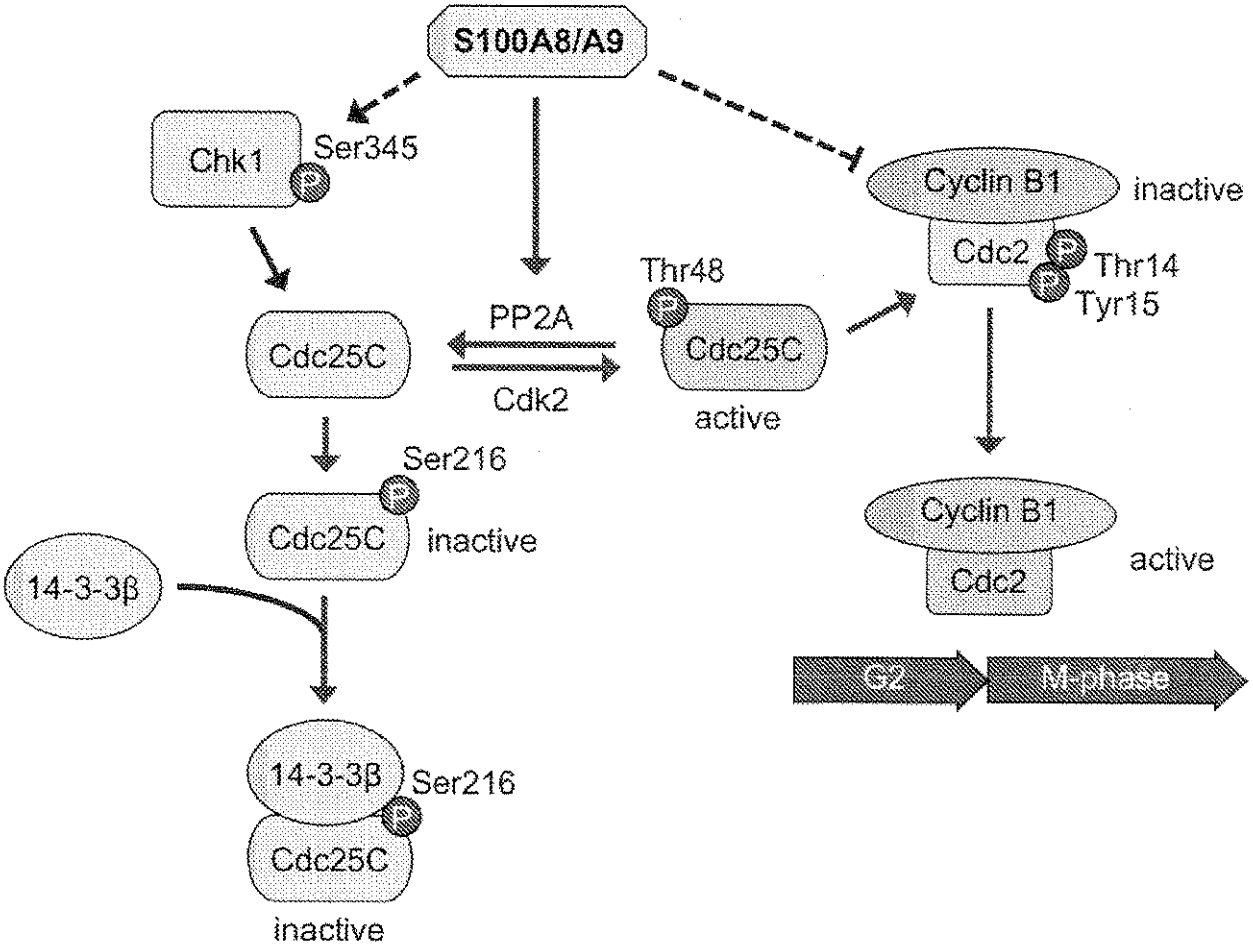

S100A8/A9
Chk1
Ser345
Cyclin B1
inactive
Cdc2
Thr14
Tyr15
Thr48
PP2A
Cdc25C
Cdk2
Cdc25C
active
Ser216
Cdc25C
inactive
Cyclin B1
Cdc2
active
14-3-3β
G2
M-phase
14-3-3β
Ser216
Cdc25C
inactive

Fig. 13

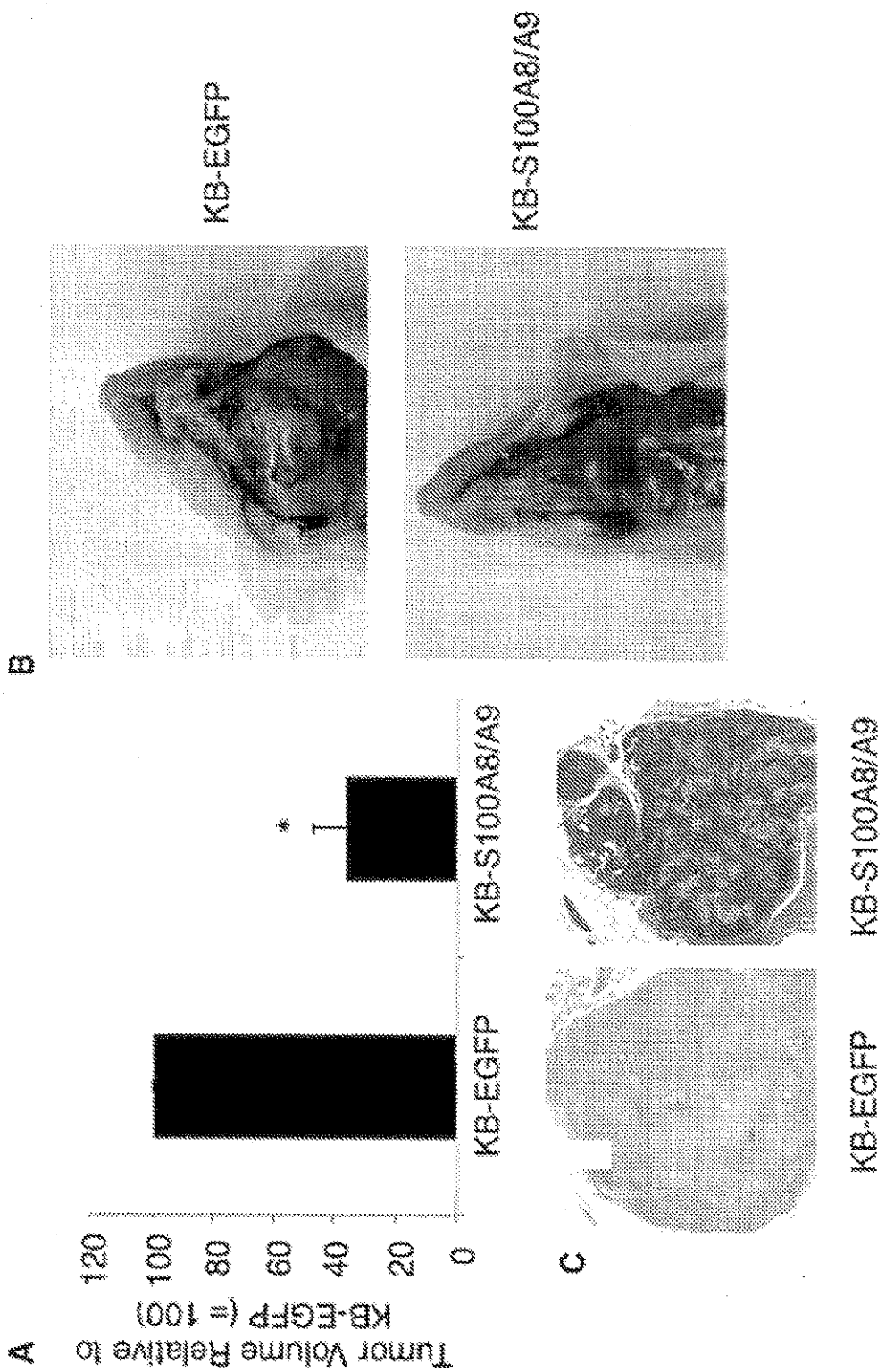
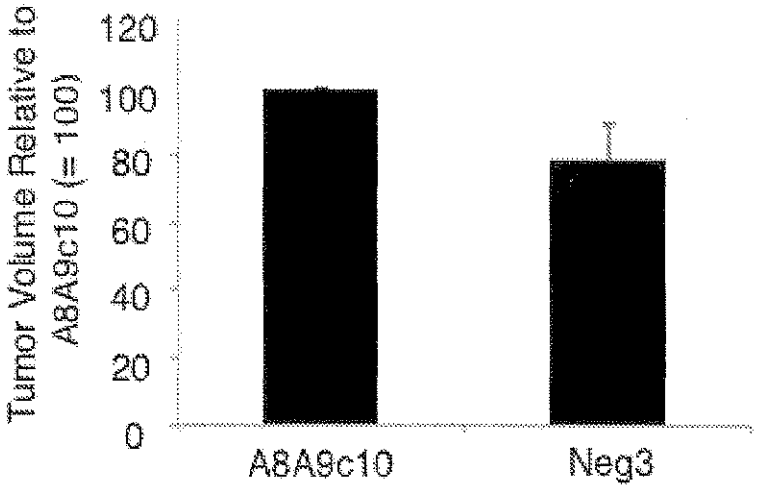

A
Tumor Volume Relative to KB-EGFP (= 100)
120
100
80
60
40
20
0
*
KB-EGFP
KB-S100A8/A9
B
KB-EGFP
KB-S100A8/A9
C
KB-EGFP
KB-S100A8/A9

Fig. 14


Tumor Volume Relative to A8A9c10 (= 100)
120
100
80
60
40
20
0
A8A9c10
Neg3

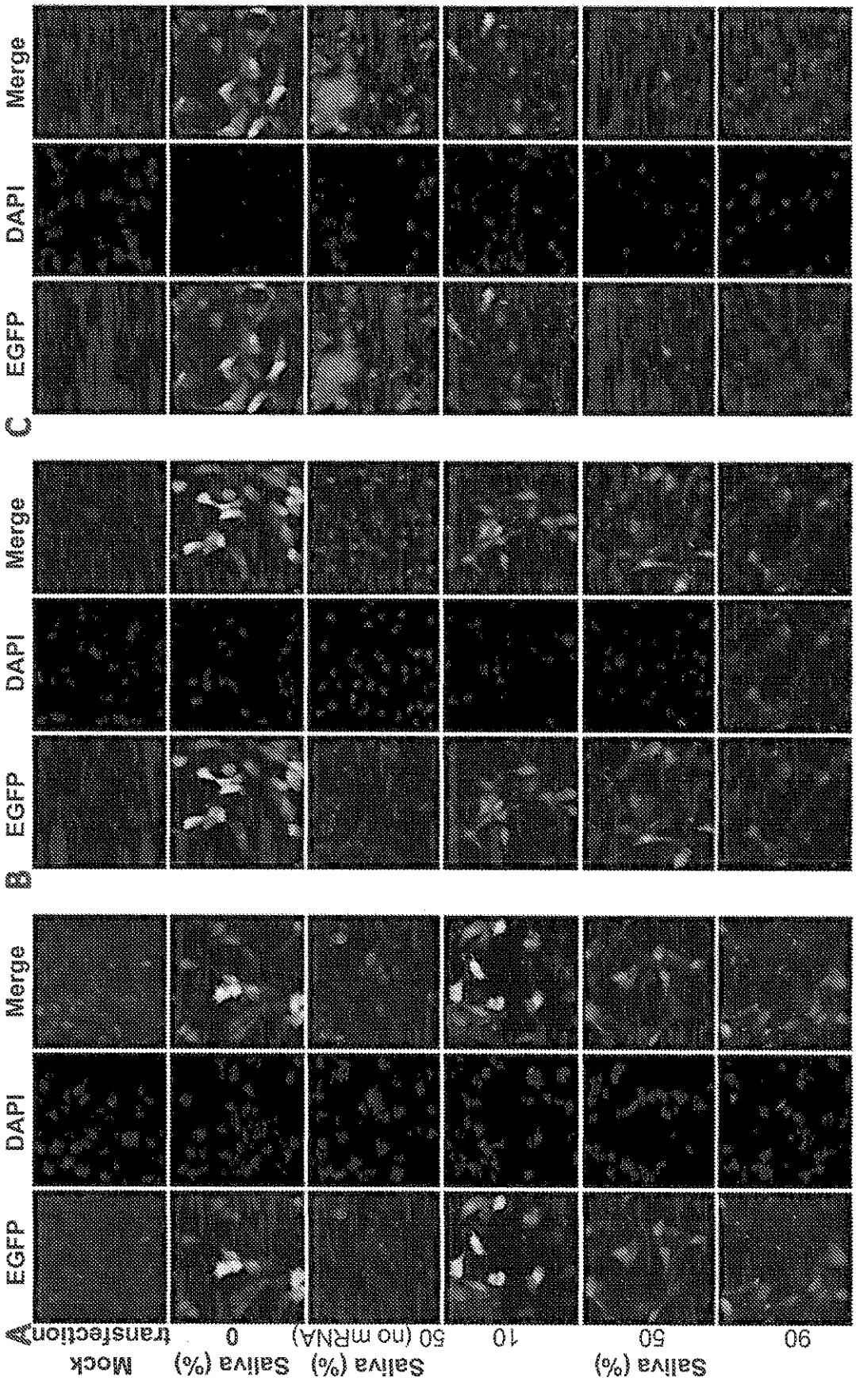

A
B
C
EGFP
DAPI
Merge
Mock transfection
Saliva (%) 0
Saliva (%) 50 (no mRNA)
Saliva (%) 10
Saliva (%) 50
Saliva (%) 90

Fig. 15

Fig. 16

