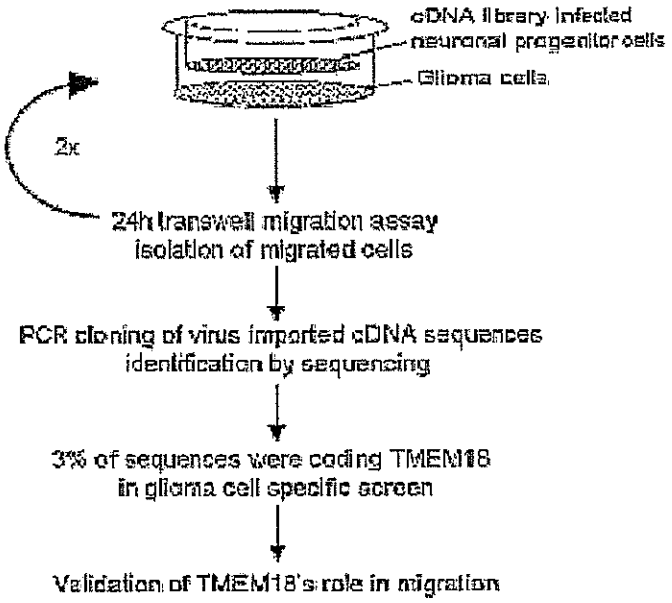
A.


cDNA library infected
neuronal progenitor cells
Glioma cells
2x
24h transwell migration assay
isolation of migrated cells
PCR cloning of virus imported cDNA sequences
identification by sequencing
3% of sequences were coding TMEM18
in glioma cell specific screen
Validation of TMEM18's role in migration

B.

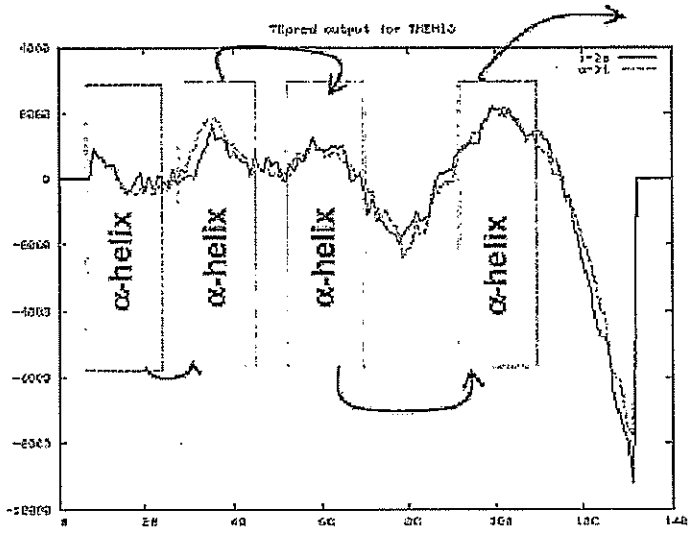

α-helix
α-helix
α-helix
α-helix

FIGURE 1

C.

```
human     ----------------------------------MPSAFSVSSFPVSIPAVLTQTDWTEPW
mouse     ------------------------------------------------------METDWTEPW
rat       ---------------------------------MASPYSVRVFPVSIPAVIMETDWTEPW
dog       //QESGPGPNTRDTSHLRGAPTRNPTCRDAVPPPWGPLLRRVLPRLRLGPRPQTDWTEPW
chicken   ----------MVSLAIWASSREASAVRMRSVAVAMEQPLHGPPGLSTILARTDWAEPW
                                                                .***:***

human     LMGLATFHALCVLLTCLSSRSYRLQIGHFLCLVILVYCAEYINEAAAMNWRLFSKYQYFD
mouse     LLGLLAFHLLCLLLTCFSSQRYKLQIGHFLCLVVLVYSAEYINEVAAVNWRLFSKYQYFD
rat       LLGLLAFHLLCLLLTCFSAQRYKLQIGHFLCLVVLVYCAEYINEVAAMTWRLFAKYQYFD
dog       LLGLAVFHVLCLLLTCLSSQRYKLQVGHFLCLVILVYCAEYINEIAAMNWRLFSKYQYFD
chicken   LLGLAGFHVLCFLLTCFSFQHYRVQIGHFLCMVCLVYCAEYINELAAMNWRLFSKYQYFD
          *:**  ** **.****:* : *::********:* ***:****** **:*****:******

human     SRGMFISIVFSAPLLVNAMIIVVMWVWKTLNVMTDLKNAQERRKEKKRRRKED
mouse     SRGMFISLVFSAPLLFNAMLIVIMWVRKTLTVMTDLKTLQEERKERRRRRKEE
rat       SRGMFISLVFSAPLLFNAMVIVIMWVRKTLTVMSDLKNLQERRKERKRRRKEE
dog       SRGMFISIVFSAPLLLNAMIIVILWVRKTLNVMTDLKTLQEKRRERKRKEE-
chicken   SRGMFISLVFSAPLLVNTIIIVVNWVYRTLNVMTELKTLQQRIKAEKDKKK-
          *******:******* *:: **: ** :** **::**::*:  :  :: :
```

FIGURE 1 (CONTINUED)

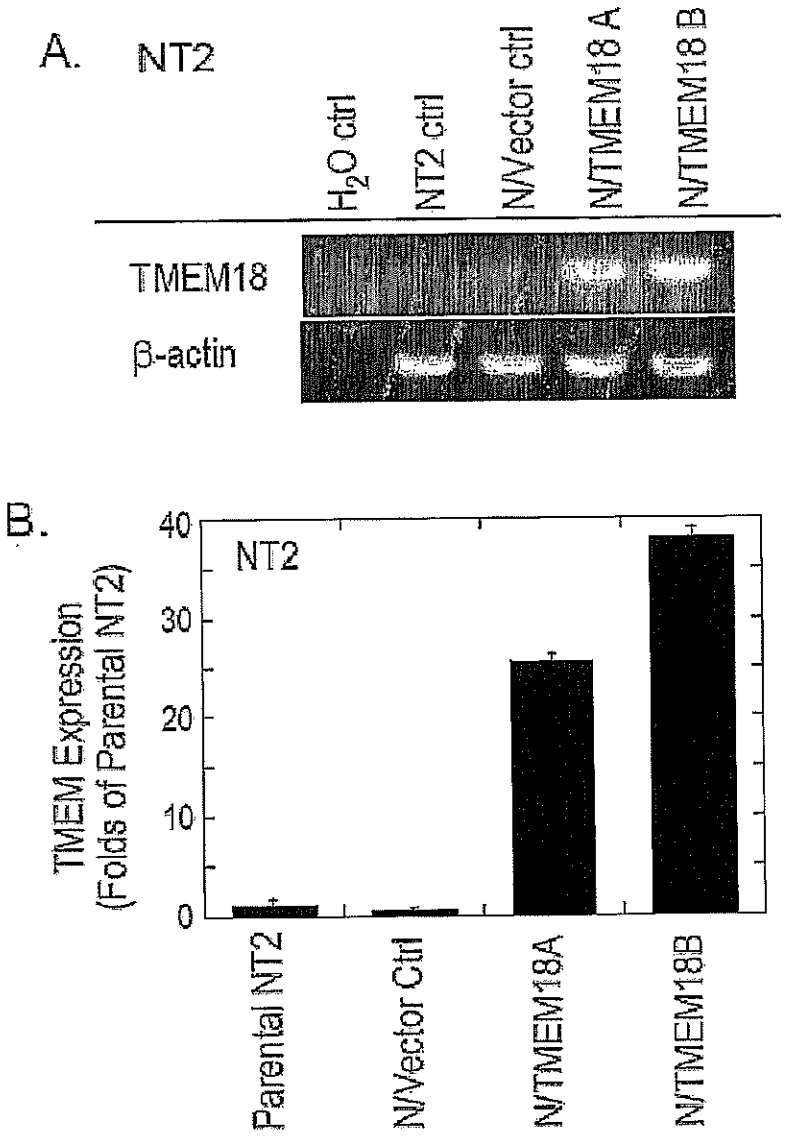

A.
NT2
H2O ctrl
NT2 ctrl
N/Vector ctrl
N/TMEM18 A
N/TMEM18 B
TMEM18
β-actin
B.
NT2
TMEM Expression
(Folds of Parental NT2)
40
30
20
10
0
Parental NT2
N/Vector Ctrl
N/TMEM18A
N/TMEM18B

FIGURE 2

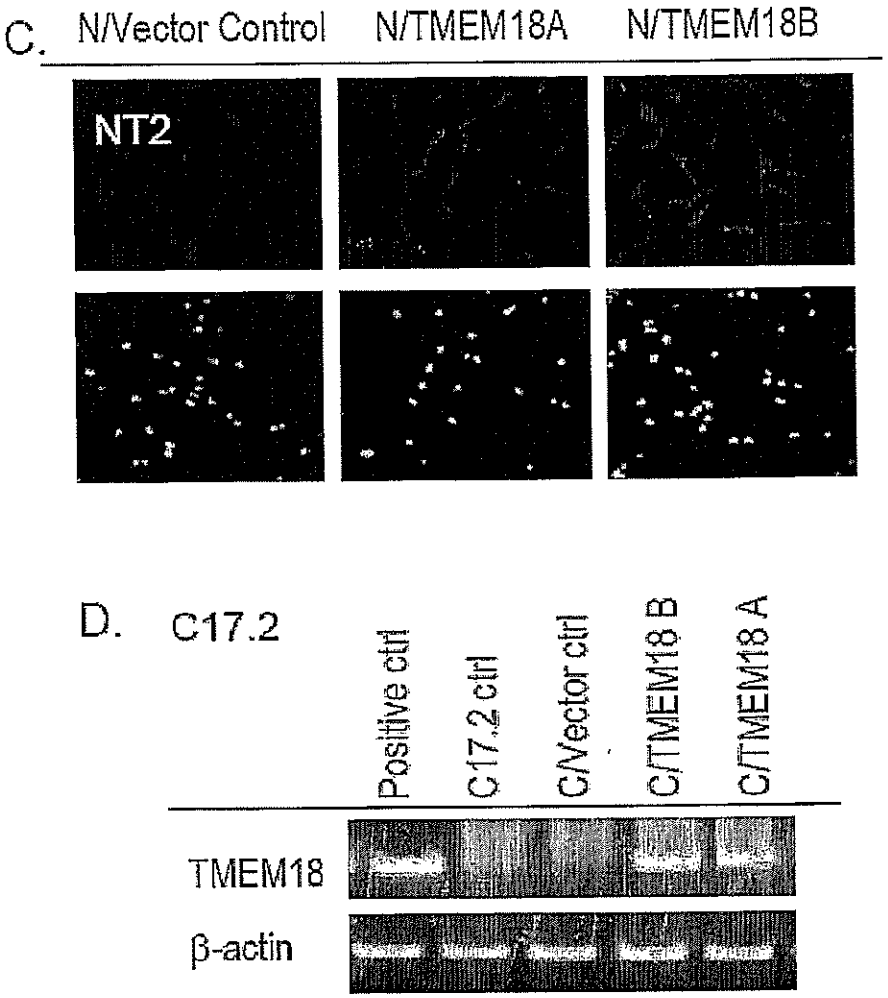


FIGURE 2 (CONTINUED)

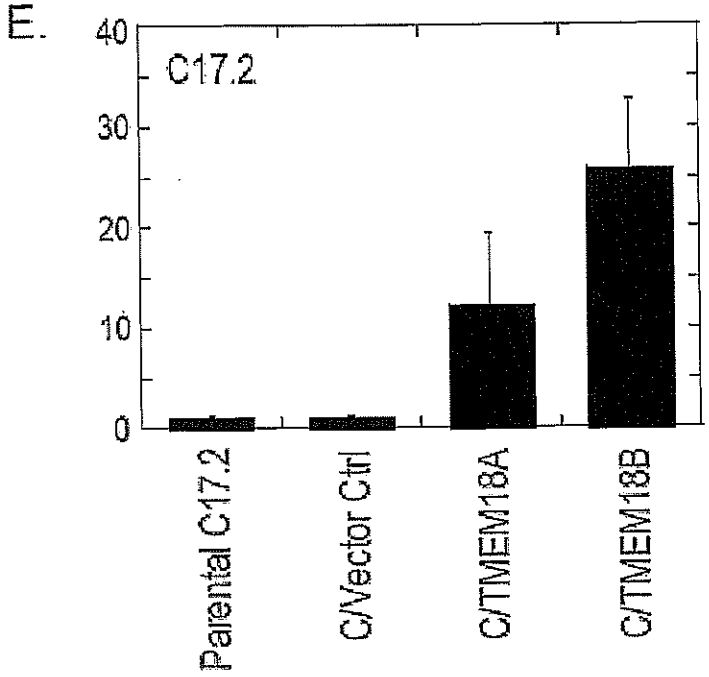


FIGURE 2 (CONTINUED)

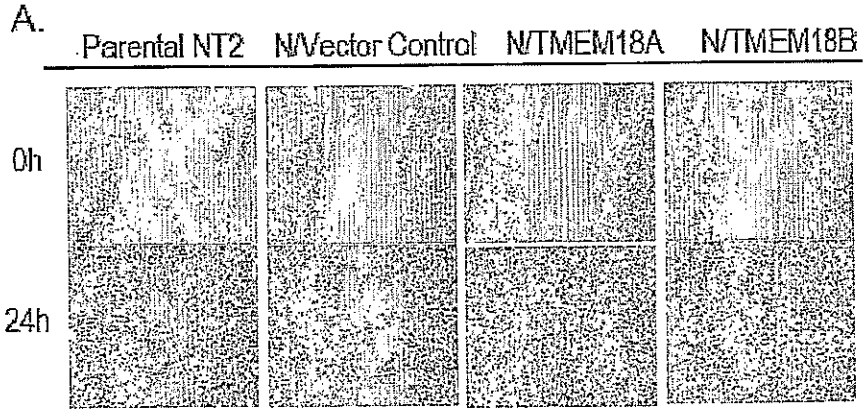


FIGURE 3

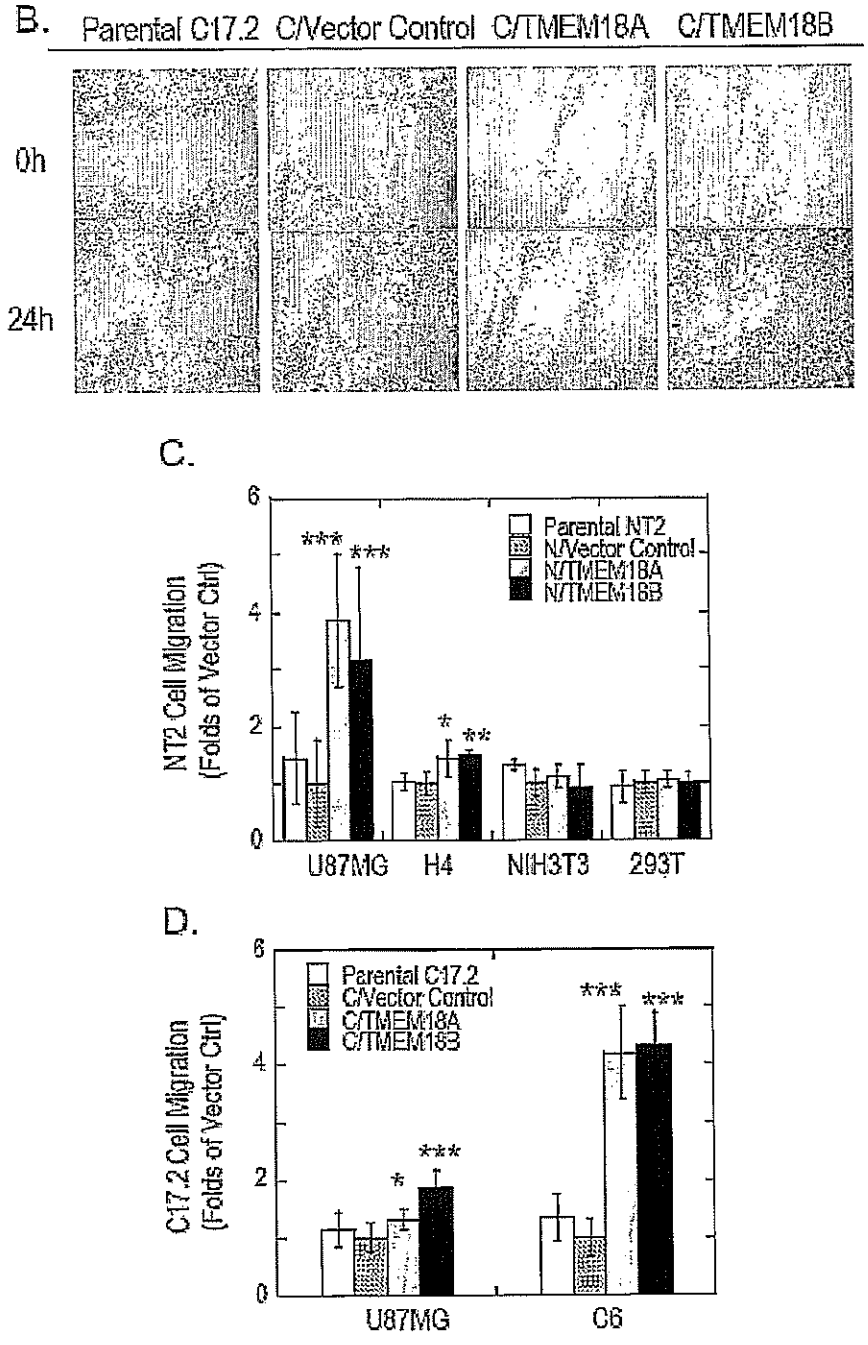


FIGURE 3 (CONTINUED)

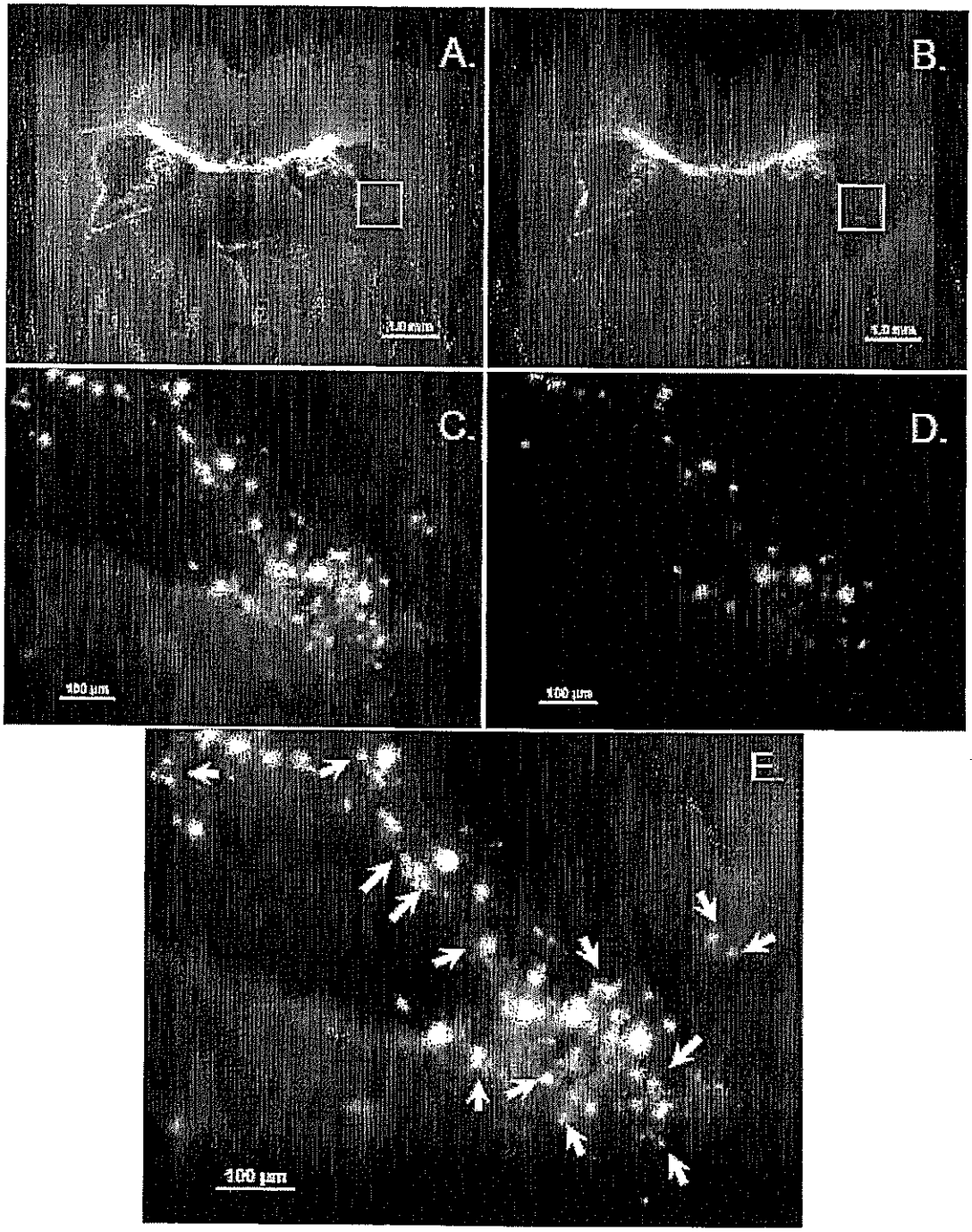


FIGURE 4

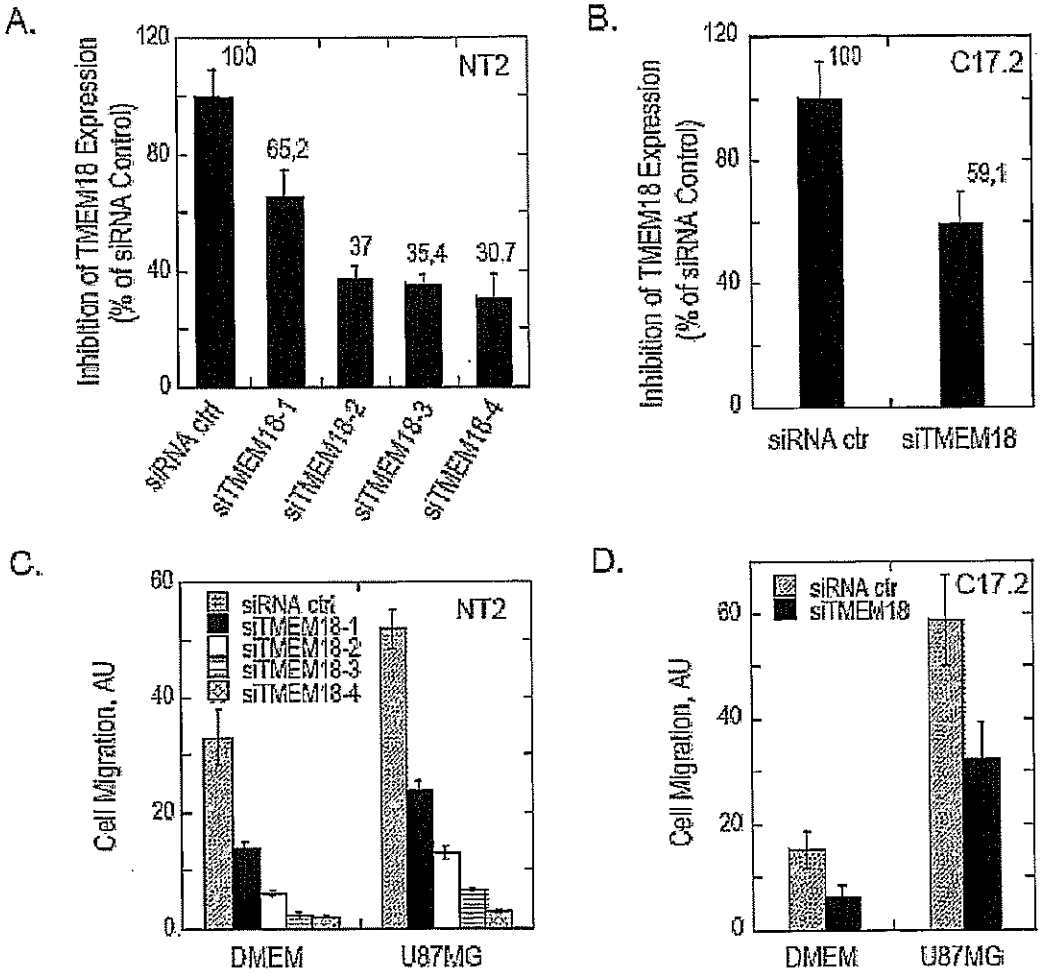

A.
Inhibition of TMEM18 Expression (% of siRNA Control)
120
80
40
0
100
65,2
37
35,4
30,7
NT2
siRNA ctrl
siTMEM18-1
siTMEM18-2
siTMEM18-3
siTMEM18-4
B.
Inhibition of TMEM18 Expression (% of siRNA Control)
120
80
40
0
100
59,1
C17.2
siRNA ctr
siTMEM18
C.
Cell Migration, AU
60
40
20
0
siRNA ctr
siTMEM18-1
siTMEM18-2
siTMEM18-3
siTMEM18-4
NT2
DMEM
U87MG
D.
Cell Migration, AU
60
40
20
0
siRNA ctr
siTMEM18
C17.2
DMEM
U87MG

FIGURE 5

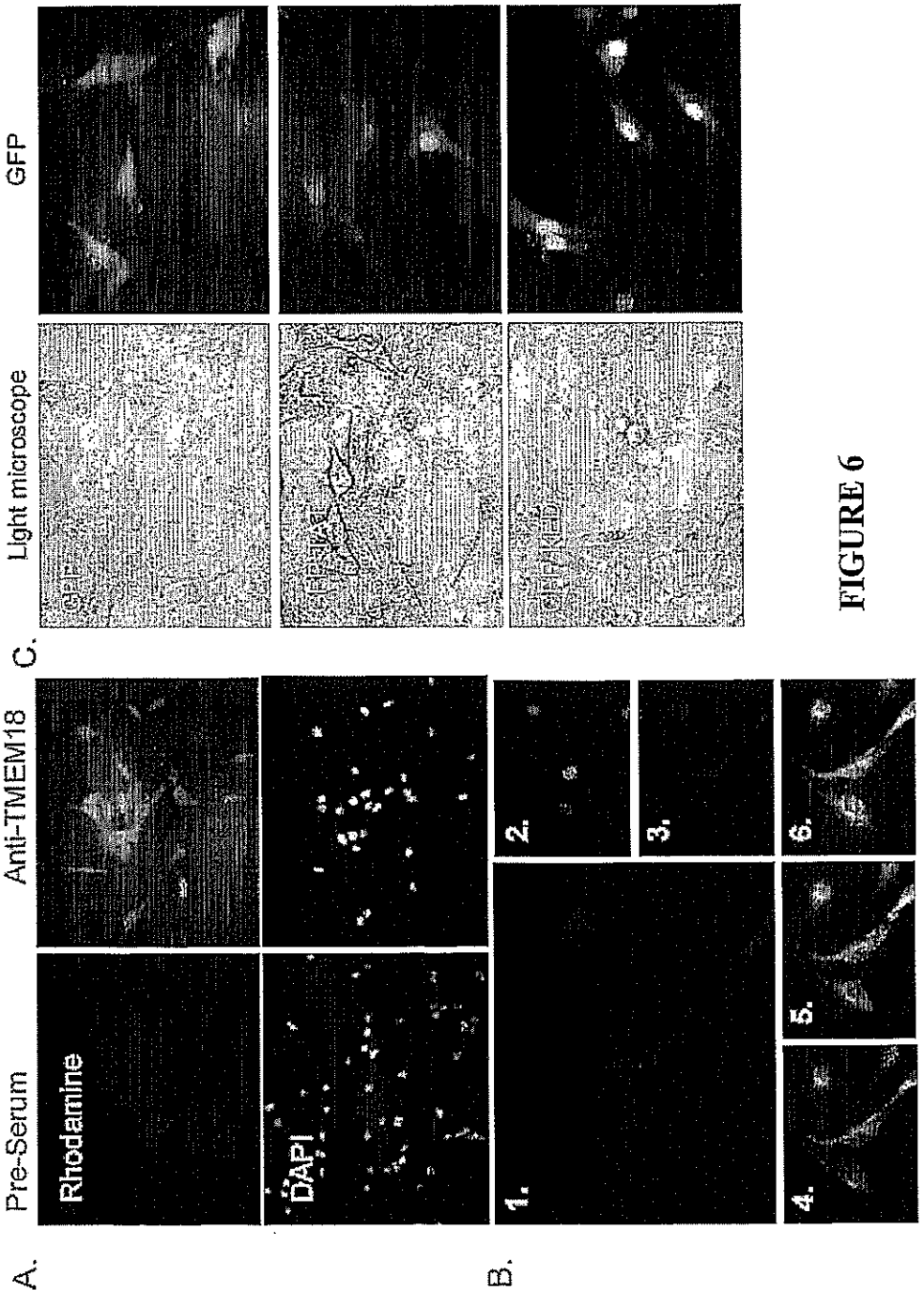

A.
Pre-Serum
Anti-TMEM18
Rhodamine
DAPI
B.
1.
2.
3.
4.
5.
6.
C.
Light microscope
GFP

FIGURE 6