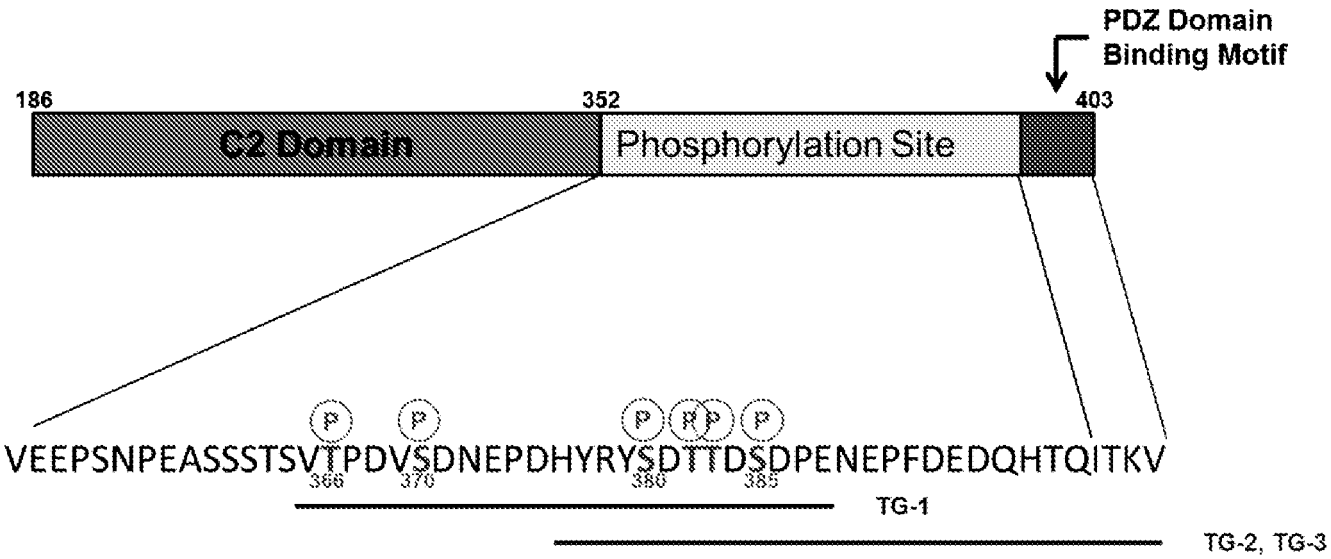
Figure 1

A.



B.

*** TGN-1 Peptide : RRRRRRRR-VTPDV[pS]DNEPDHYRY[pS]DTTD[pS]DPE-amide**

*** TGN-2 Peptide : RRRRRRRR-HYRY[pS]DTTD[pS]DPENEPFDEDQHTQITKV-amide**

*** TGN-3 Peptide : RRRRRRRR-HYRYVDTTDVDPENEPFDEDQHTQITKV-amide**

*** TGN-4 Peptide : RRRRRRRR-SDDEYTDNPDSRYVSDTPVDTEH-amide** → TGN-1 scrambled sequence

*** TGN-5 Peptide : RRRRRRRR-DEHDTEYTPDYRQETHFNSQPTDKSDVI-amide** → TGN-2,3 scrambled sequence

Figure 2

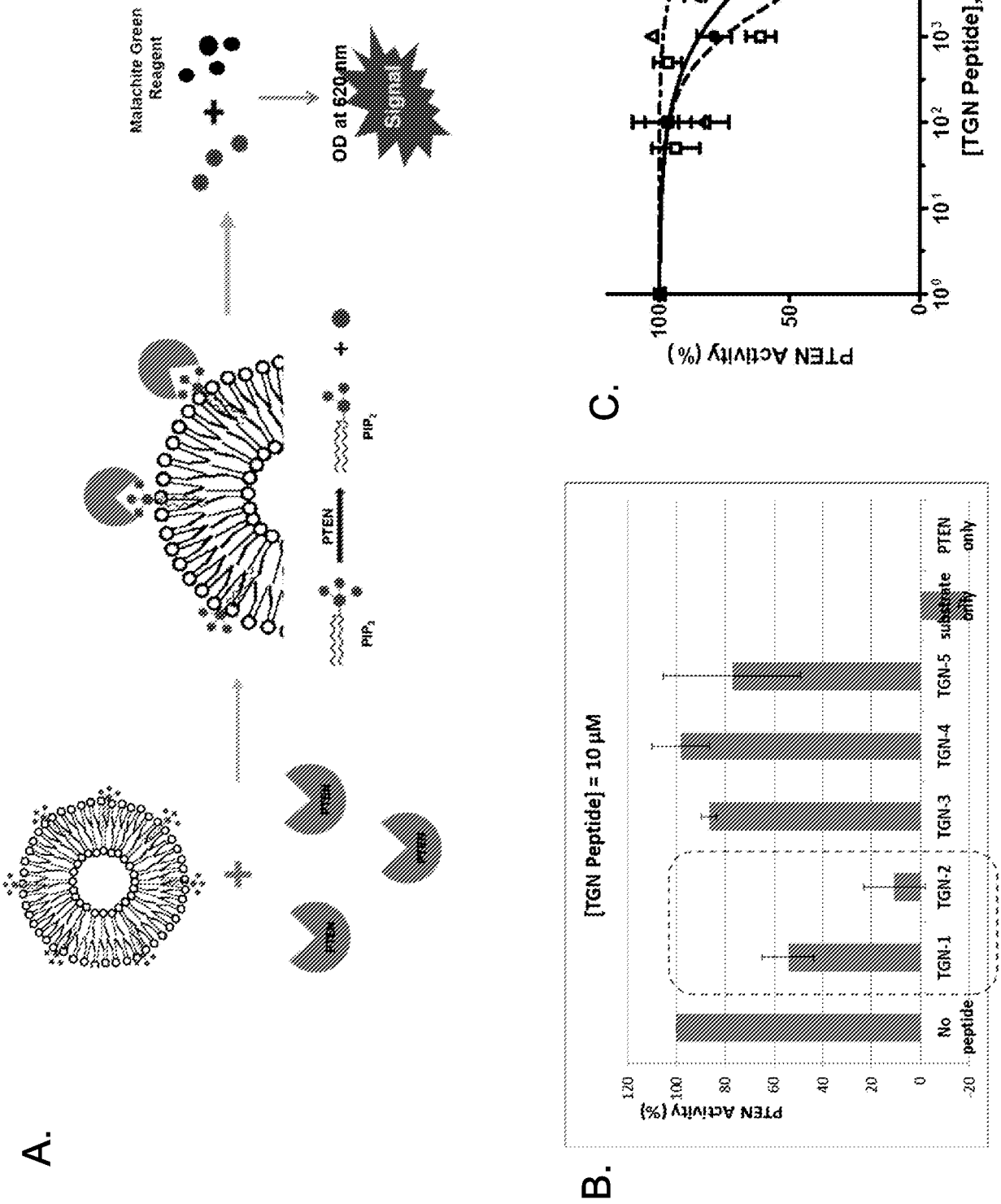
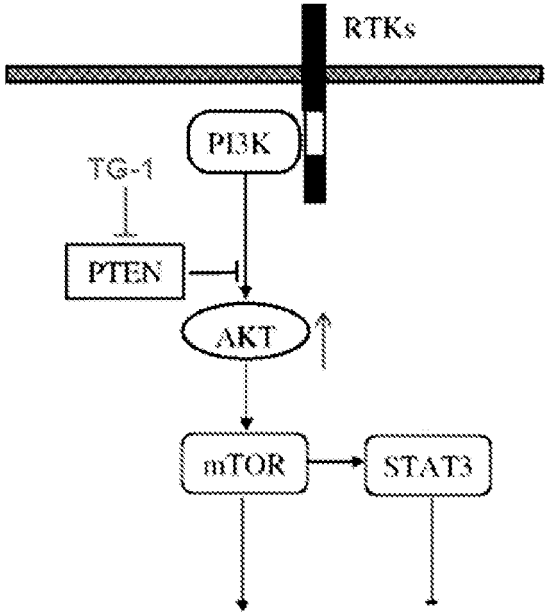
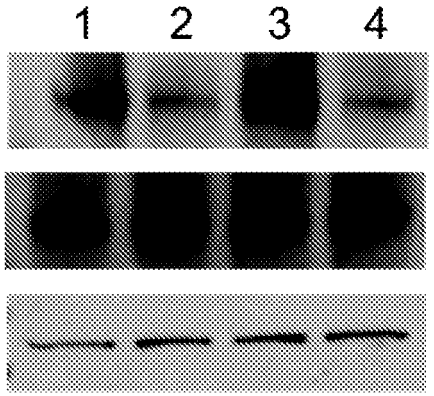

A.
Malachite Green Reagent
OD at 620nm
Signal
PTEN
PIP2
PIP3
B.
[TGN Peptide] = 10 µM
PTEN Activity (%)
No peptide
TGN-1
TGN-2
TGN-3
TGN-4
TGN-5
substrate only
PTEN only
C.
TGN-1
TGN-2
TGN-3
PTEN Activity (%)
[TGN Peptide], nM

Figure 3

A.



B.



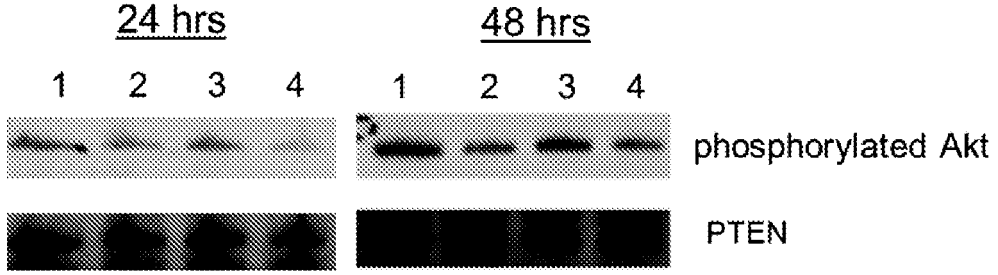
1: PC12 cell lysate : w/TGN-1 (10 µM)

2: PC12 cell lysate : w/TGN-4 (10 µM)

3: PC12 cell lysate : w/TGN-1 (100 µM)

4: PC12 cell lysate : w/DMSO (2 µL)

C.



1: PTEN transfection + TGN-1

2: PTEN transfection + TGN-4

3: TGN-1 only

4: TGN-4 only

Figure 4

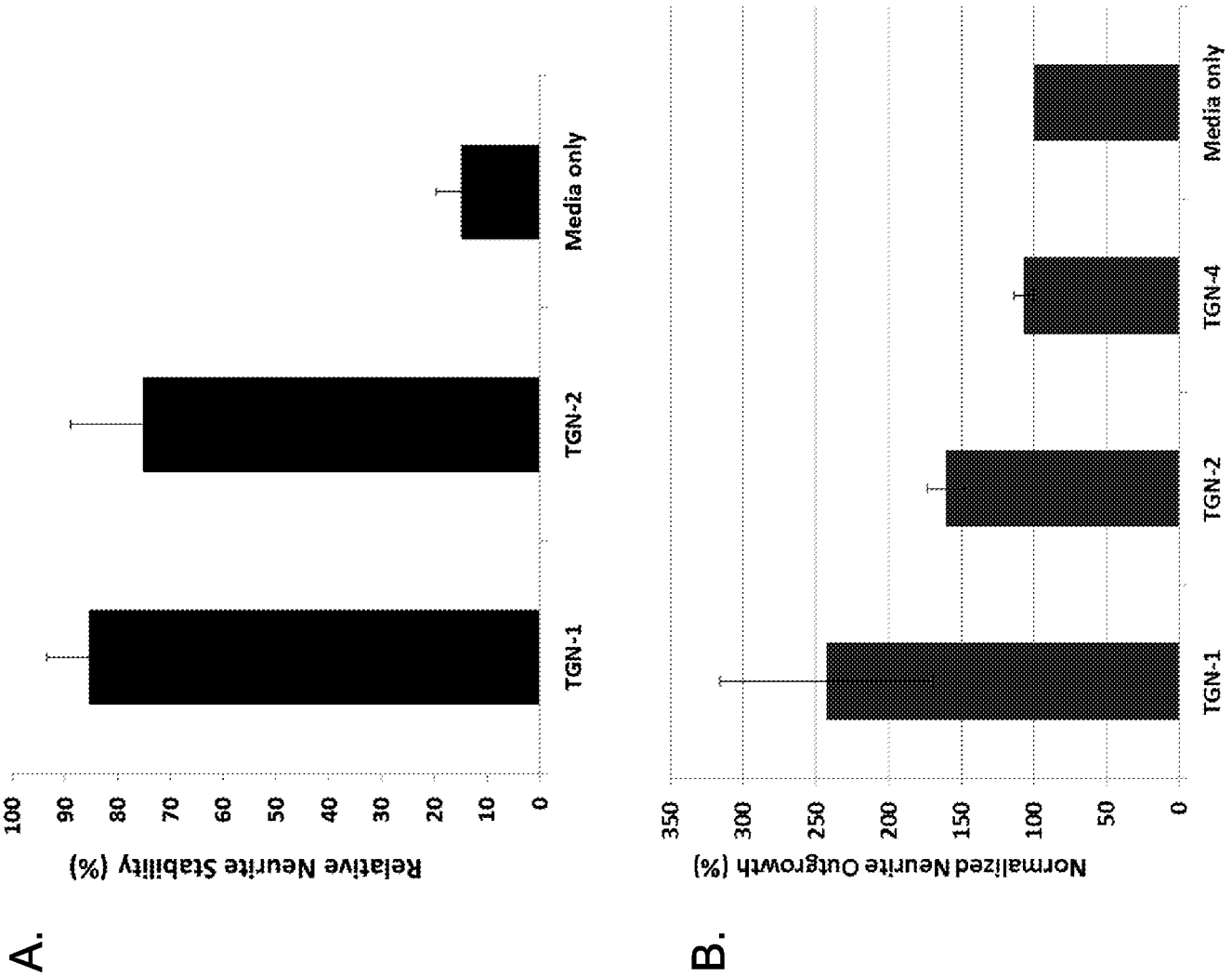
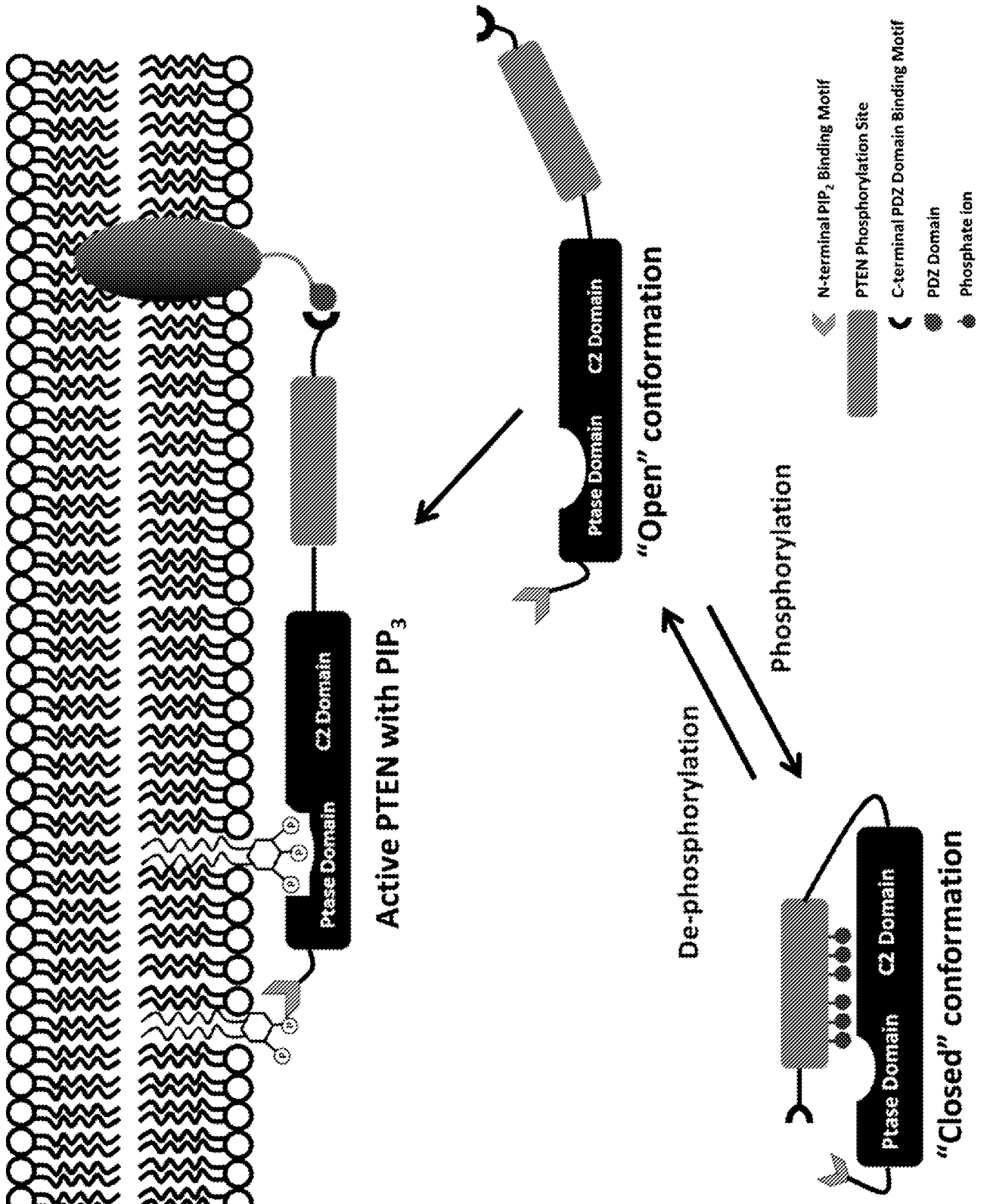

A.
Relative Neurite Stability (%)
100
90
80
70
60
50
40
30
20
10
0
TGN-1
TGN-2
Media only
B.
Normalized Neurite Outgrowth (%)
350
300
250
200
150
100
50
0
TGN-1
TGN-2
TGN-4
Media only

Figure 5


Ptase Domain
C2 Domain
Active PTEN with PIP3
"Open" conformation
Phosphorylation
De-phosphorylation
"Closed" conformation
N-terminal PIP2 Binding Motif
PTEN Phosphorylation Site
C-terminal PDZ Domain Binding Motif
PDZ Domain
Phosphate ion