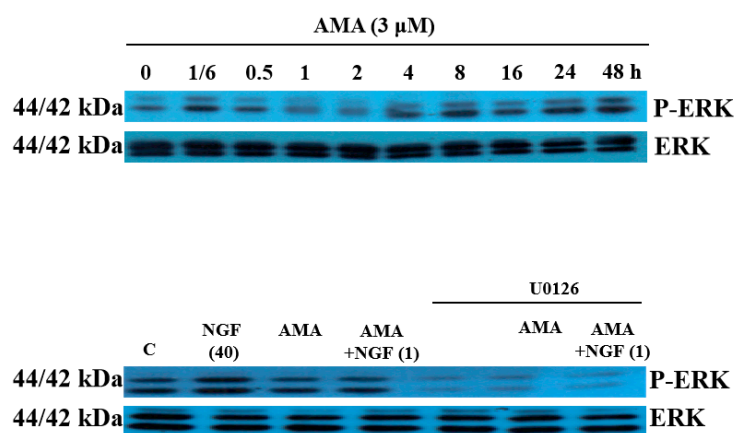
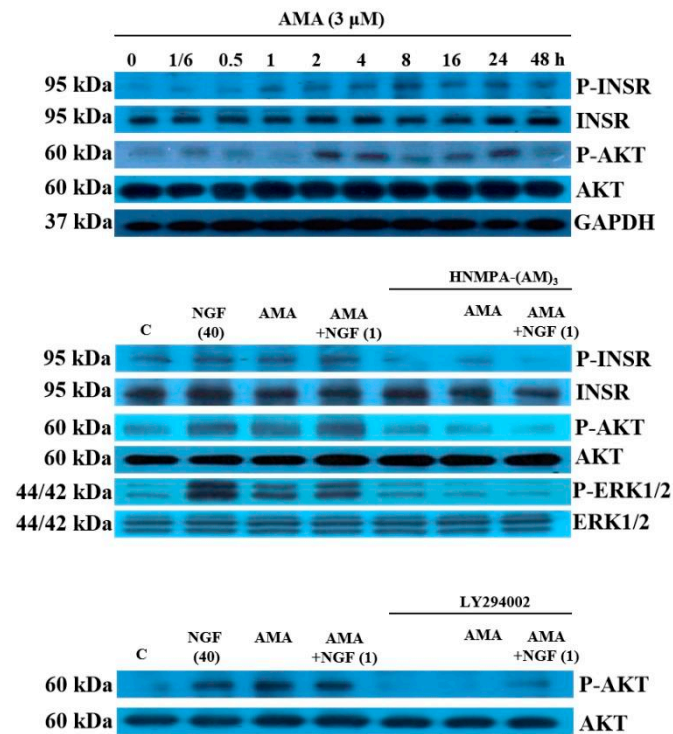


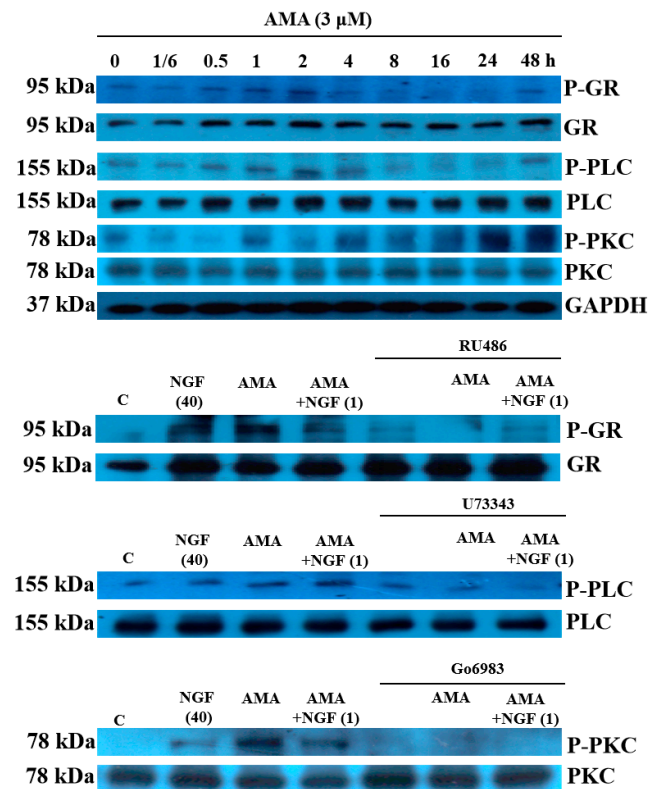
**Supplementary Figure 1.** Differentiation of PC12 cells expressing dominant negative Ras (PC12(rasN17)) or membrane-targeted GAP (PC12(mtGAP)) induced by AMA or AMA combined with NGF.



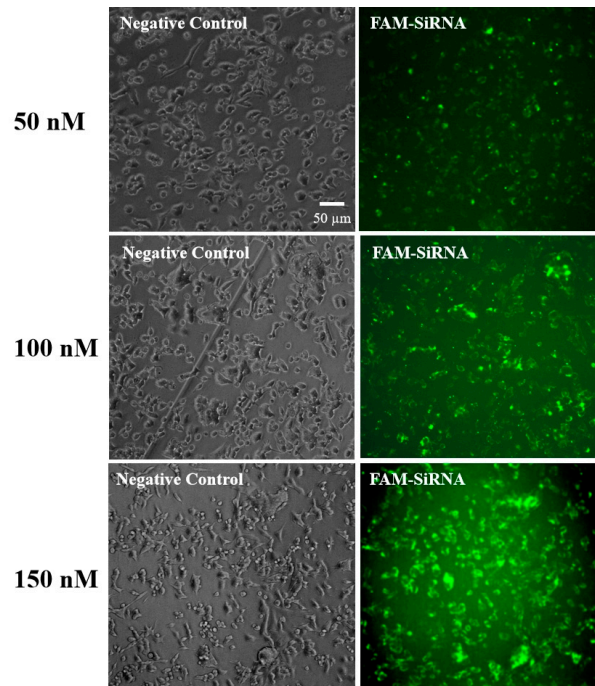
**Supplementary Figure 2.** Origin data of Western blot analysis in Figure 3g.



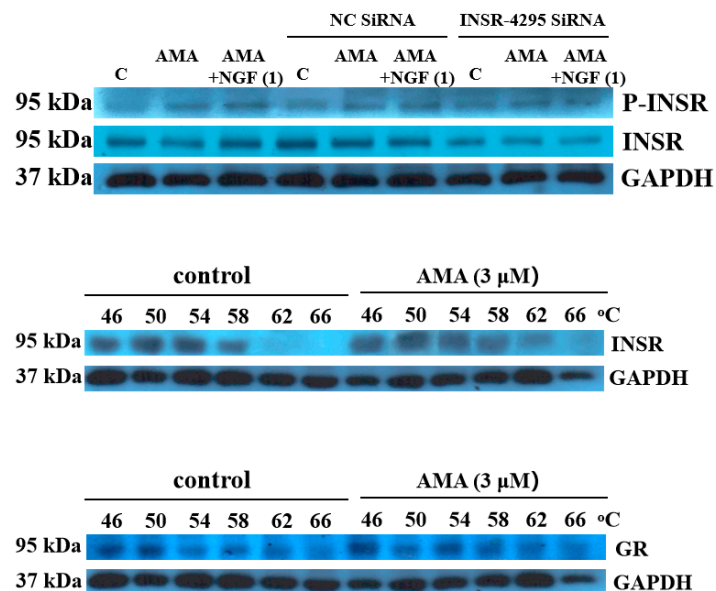
**Supplementary Figure 3.** Origin data of Western blot analysis in Figure 4c, 4d and 4e.



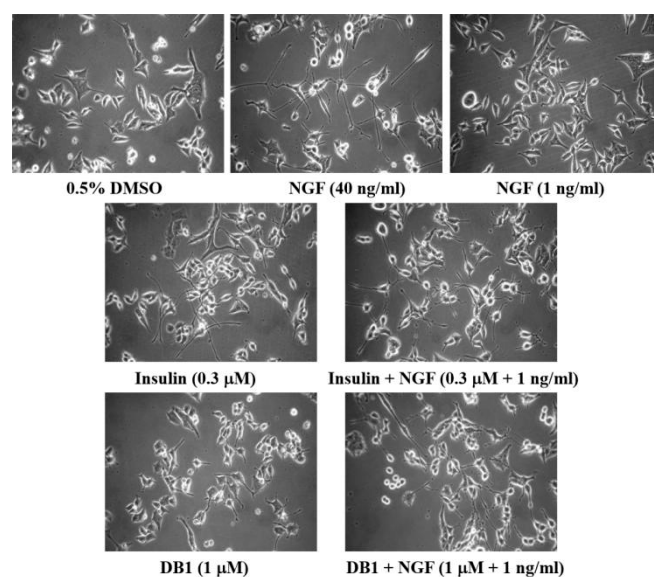
**Supplementary Figure 4.** Origin data of Western blot analysis in Figure 5d and 5e.



**Supplementary Figure 5.** Microphotograph of PC12 cells after transfection with different concentrations of FAM-siRNA (50 nM, 100 nM and 150 nM).



**Supplementary Figure 6.** Origin data of Western blot analysis in Figure 6c, 6d and 6e.



**Supplementary Figure 7.** Microphotograph of PC12 cells after treatment with insulin and Demethylasterriquinone B1.

**Supplementary Table 1.** List of inhibitors used in this study.

Protein	Inhibitor	Product No.	Tested concentration
TrkA	k252a	#82497, Sigma-Aldrich Co.	0.1 μM
TrkB	ANA-12	#S7745, Selleck	1 μM
INSR	HNMPA-[AM] <sub>3</sub>	#sc-221730, Santa Cruz Biotechnology	1 μM
GR	RU486	#M8046, Sigma-Aldrich Co.	20 μM
PI3K	LY294002	#440202, Sigma-Aldrich Co.	10 μM
MEK/ERK	U0126	#19-147, Sigma-Aldrich Co.	20 μM
PLC	U73343	#S8011, Selleck	10 μM
PKC	Go6983	#G1918, Sigma-Aldrich Co.	1 μM
Ras	farnesylthiosalicylic acid	#10010501, Cayman Chemical	3 μM
Raf	AZ628	#sc-364418, Santa Cruz Biotechnology	3 μM

**Supplementary Table 2.** List of antibodies used in this study.

Primary antibody	Product No.	Tested dilution of primary antibody	Secondary antibody	Tested dilution of secondary antibody
Insulin receptor antibody	#3025, Cell Signaling Technology	1:1000	Goat Anti-Rabbit IgG, HRP Conjugated	1:5000
Phospho-insulin receptor antibody	#3024, Cell Signaling Technology	1:1000	Goat Anti-Rabbit IgG, HRP Conjugated	1:5000
AKT antibody	#9272, Cell Signaling Technology	1:1000	Goat Anti-Rabbit IgG, HRP Conjugated	1:5000
Phospho-AKT antibody	#4060, Cell Signaling Technology	1:1000	Goat Anti-Rabbit IgG, HRP Conjugated	1:5000
ERK1/2 antibody	#9102, Cell Signaling Technology	1:1000	Goat Anti-Rabbit IgG, HRP Conjugated	1:5000
Phospho-ERK1/2 antibody	#9101, Cell Signaling Technology	1:1000	Goat Anti-Rabbit IgG, HRP Conjugated	1:5000
PLC antibody	#2822, Cell Signaling Technology	1:1000	Goat Anti-Rabbit IgG, HRP Conjugated	1:5000
Phospho-PLC $\gamma$ antibody	#2821, Cell Signaling Technology	1:1000	Goat Anti-Rabbit IgG, HRP Conjugated	1:5000
PKC antibody	#ab181558, Abcam	1:1000	Goat Anti-Rabbit IgG, HRP Conjugated	1:5000
Phospho-PKC antibody	#9371, Cell Signaling Technology	1:1000	Goat Anti-Rabbit IgG, HRP Conjugated	1:5000
GR antibody	#sc-393232, Santa Cruz	1:1000	Goat Anti-Mouse IgG, HRP Conjugated	1:5000
Phospho-GR antibody	#AF2004, Affinity BioReagents	1:1000	Goat Anti-Rabbit IgG, HRP Conjugated	1:5000
GAPDH Mouse Monoclonal Antibody	#CW0100, Cowin Biotech Company	1:1000	Goat Anti-Mouse IgG, HRP Conjugated	1:5000