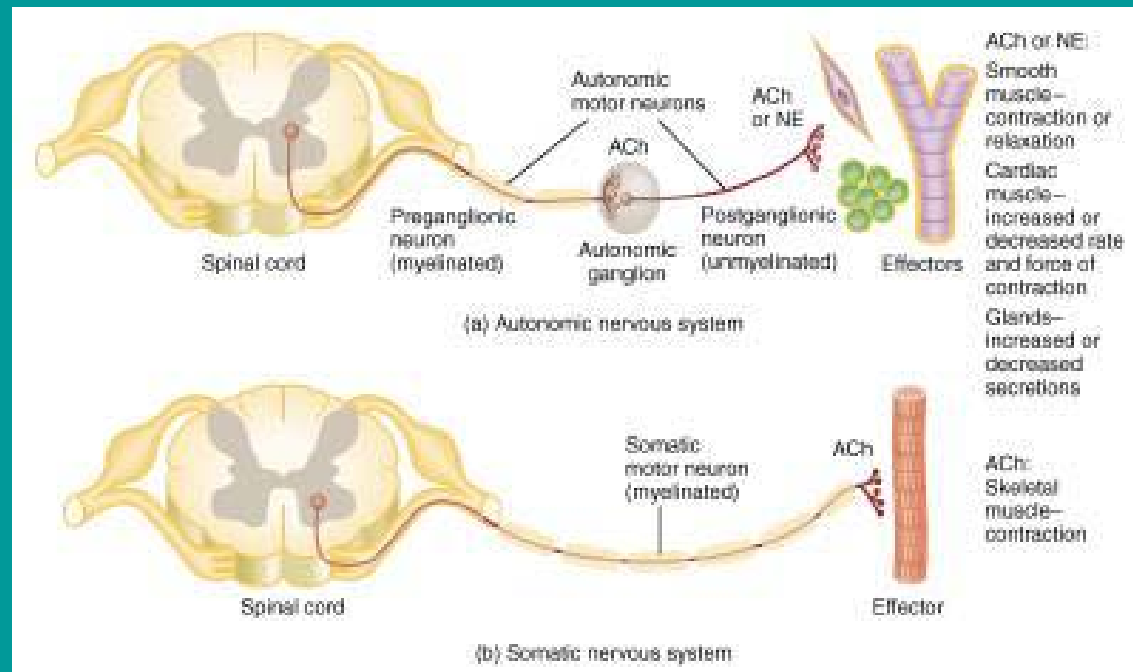


AUTONOMIC

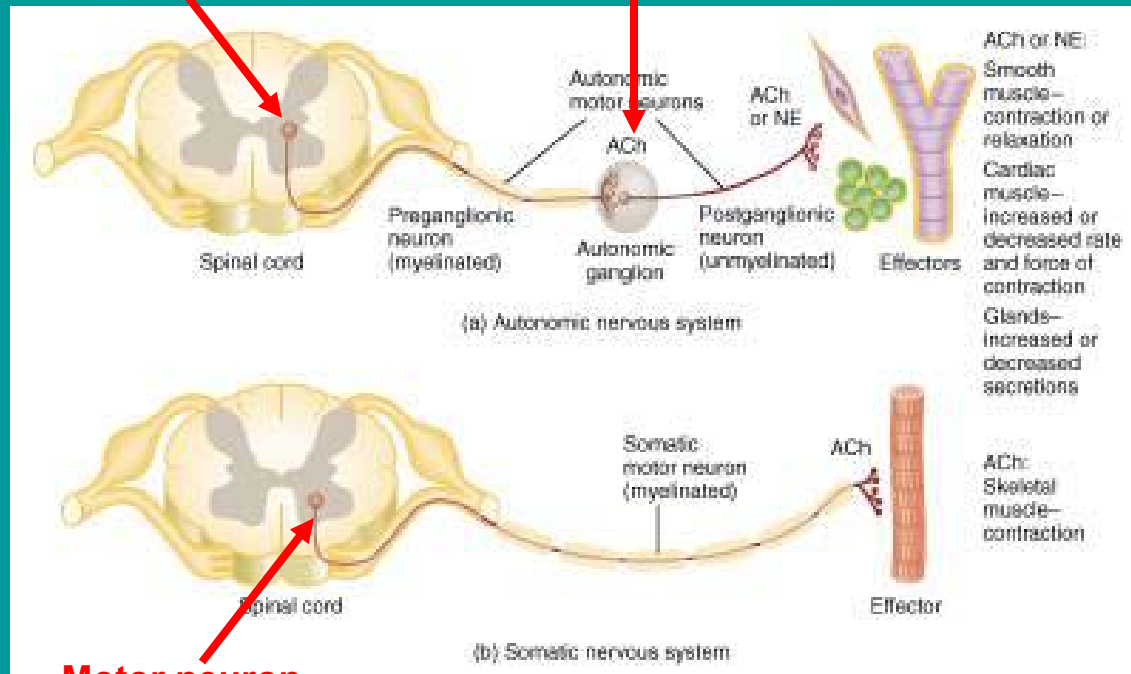
SOMATIC



AUTONOMIC

Preganglionic cell

Postganglionic cell



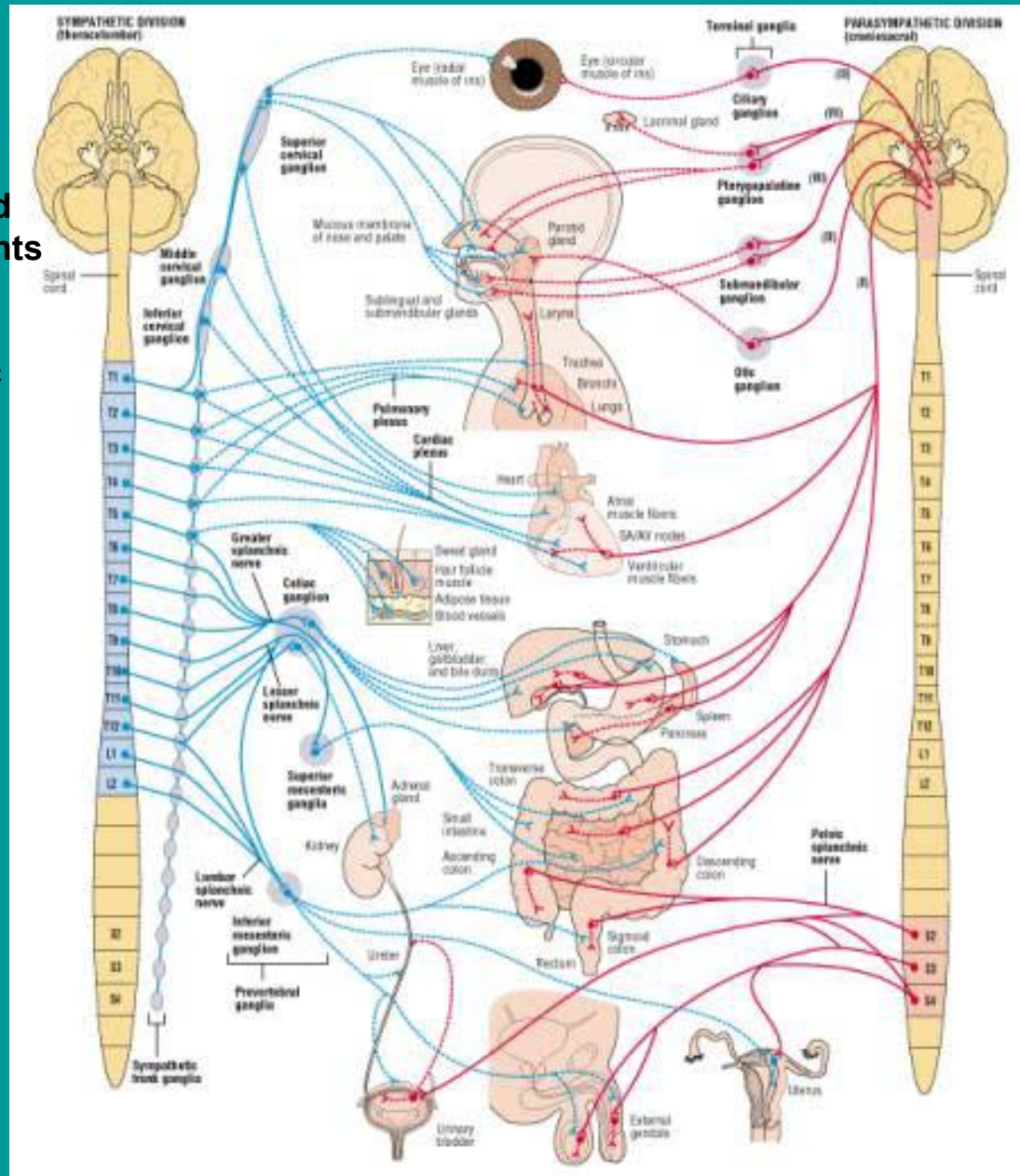
SOMATIC

Motor neuron

AUTONOMIC NS

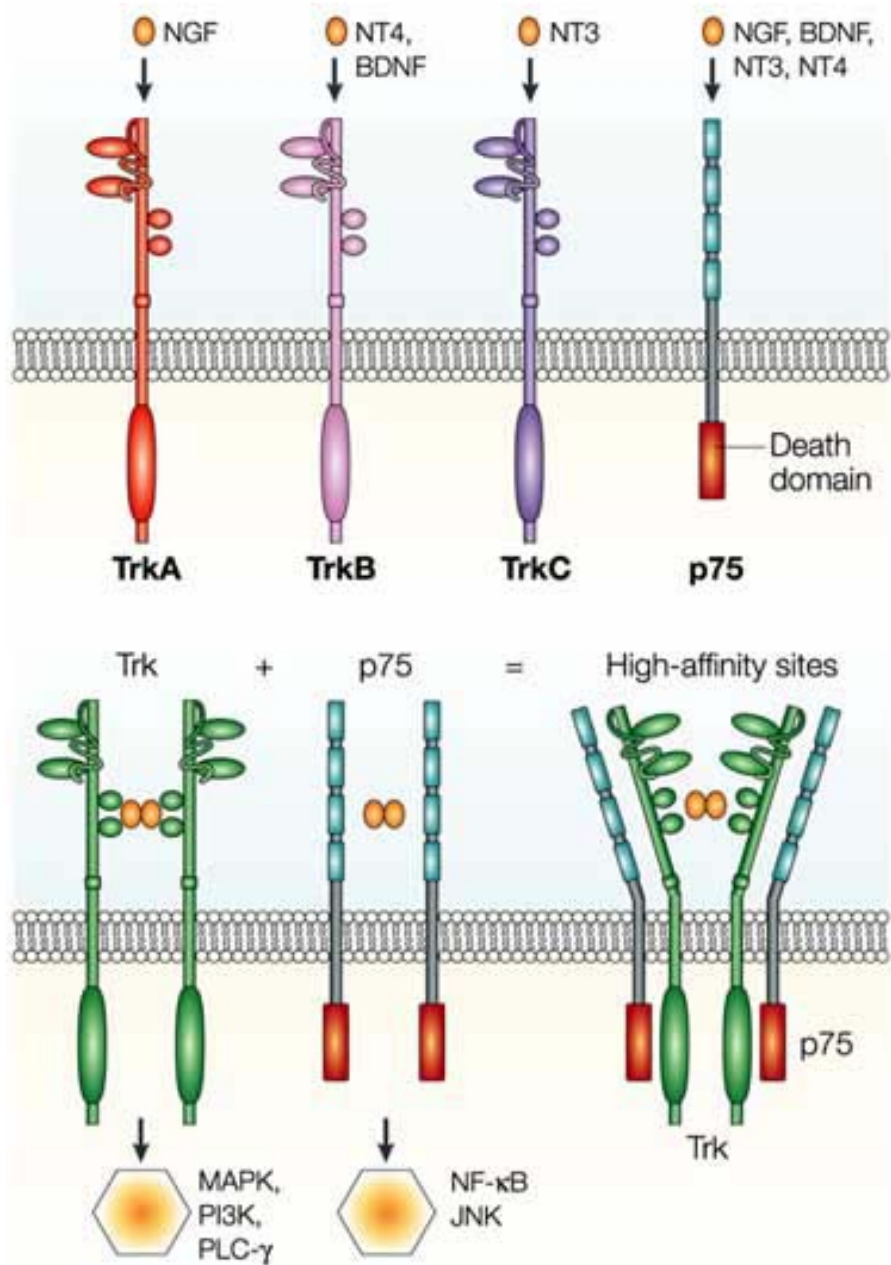
Sympathetic

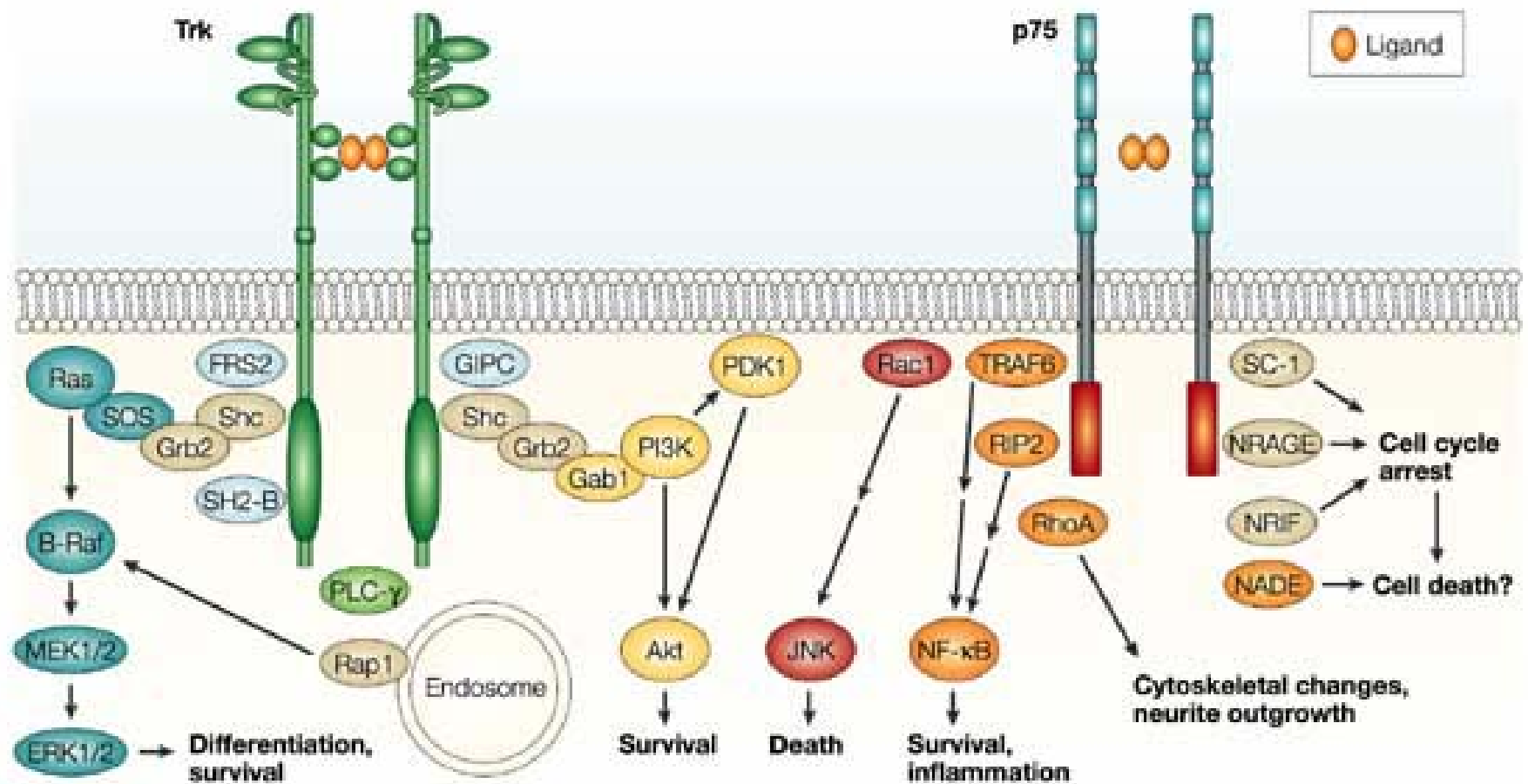
- Preganglionic cell
 - In Thoracic and Lumbar segments
- Postganglionic cell
 - In Sympathetic Chain Ganglion

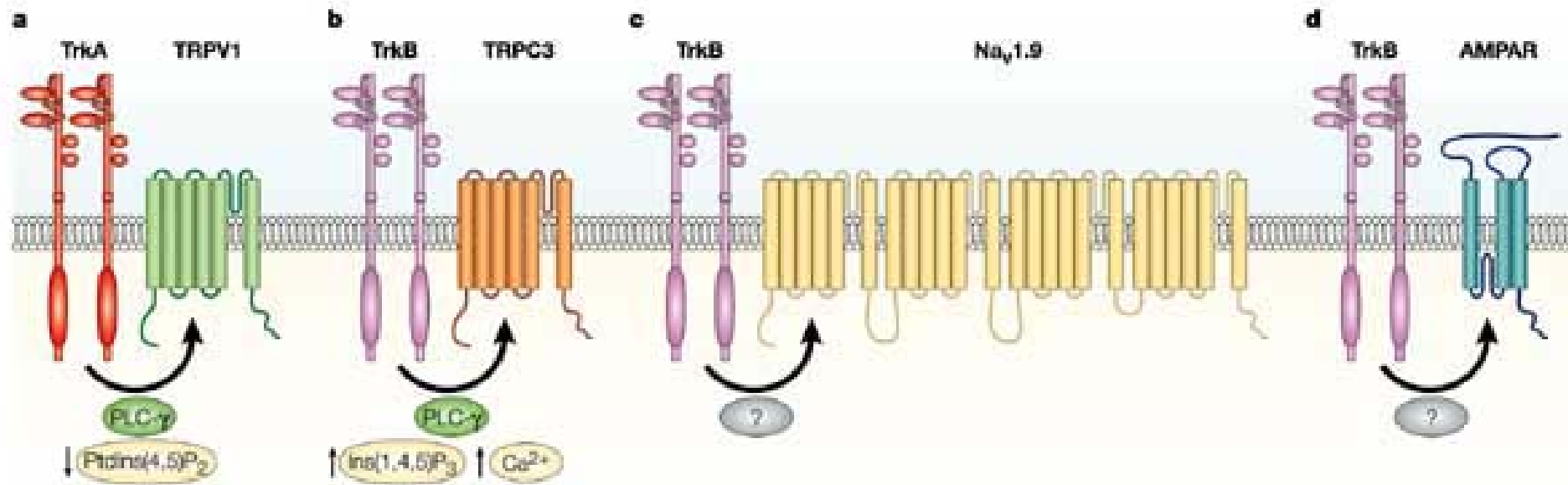


Parasympathetic

- Preganglionic cell
 - In nuclei of four cranial nerves
- Postganglionic cell
 - Very near wall of the target organ

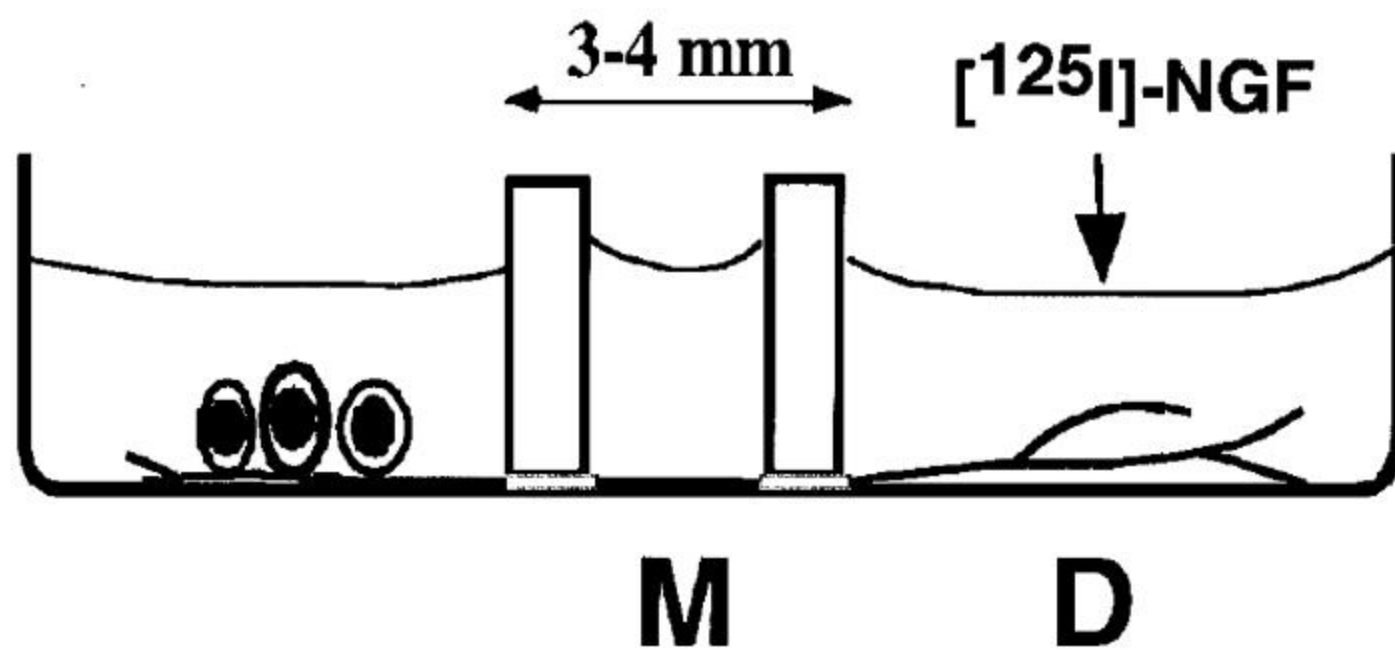






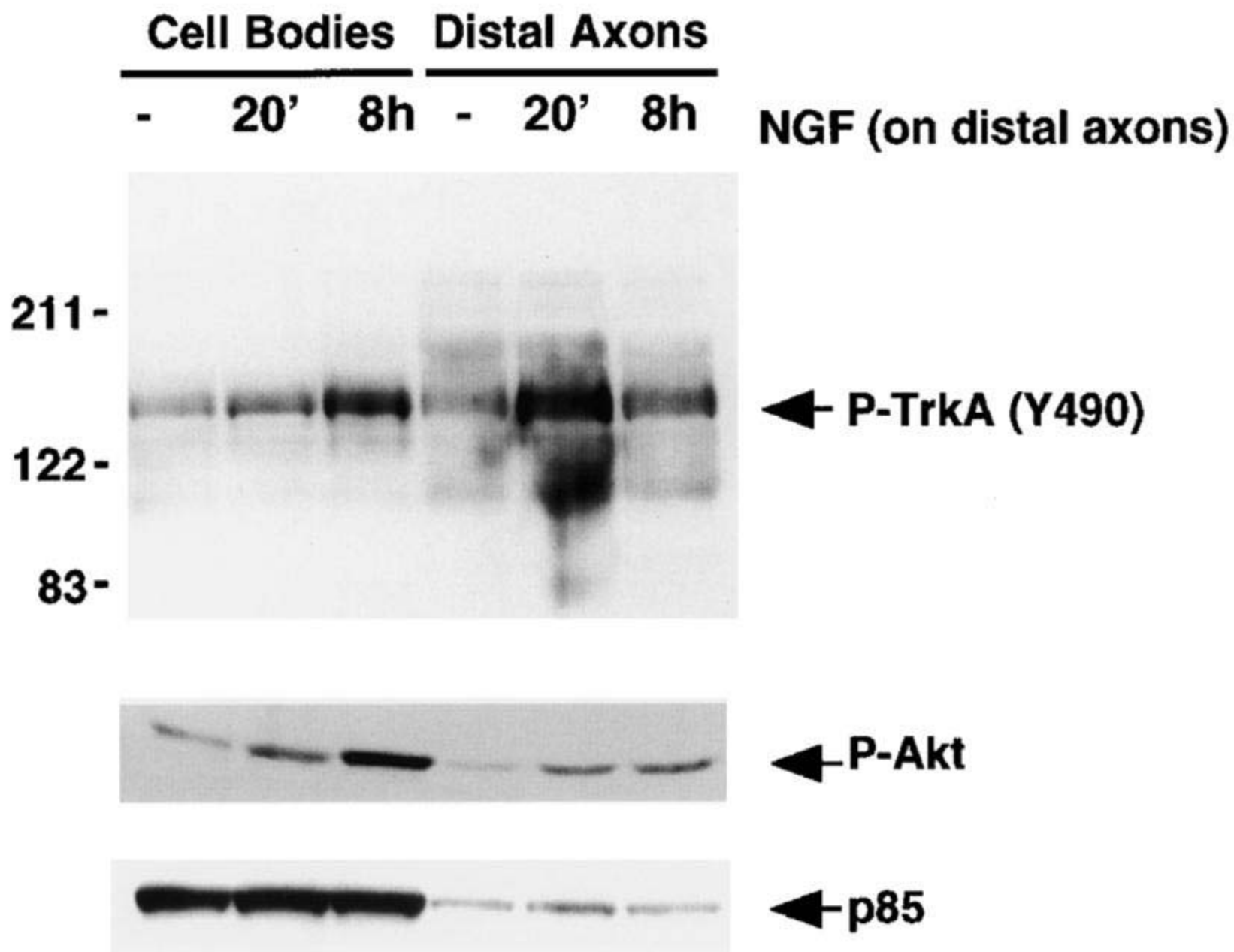


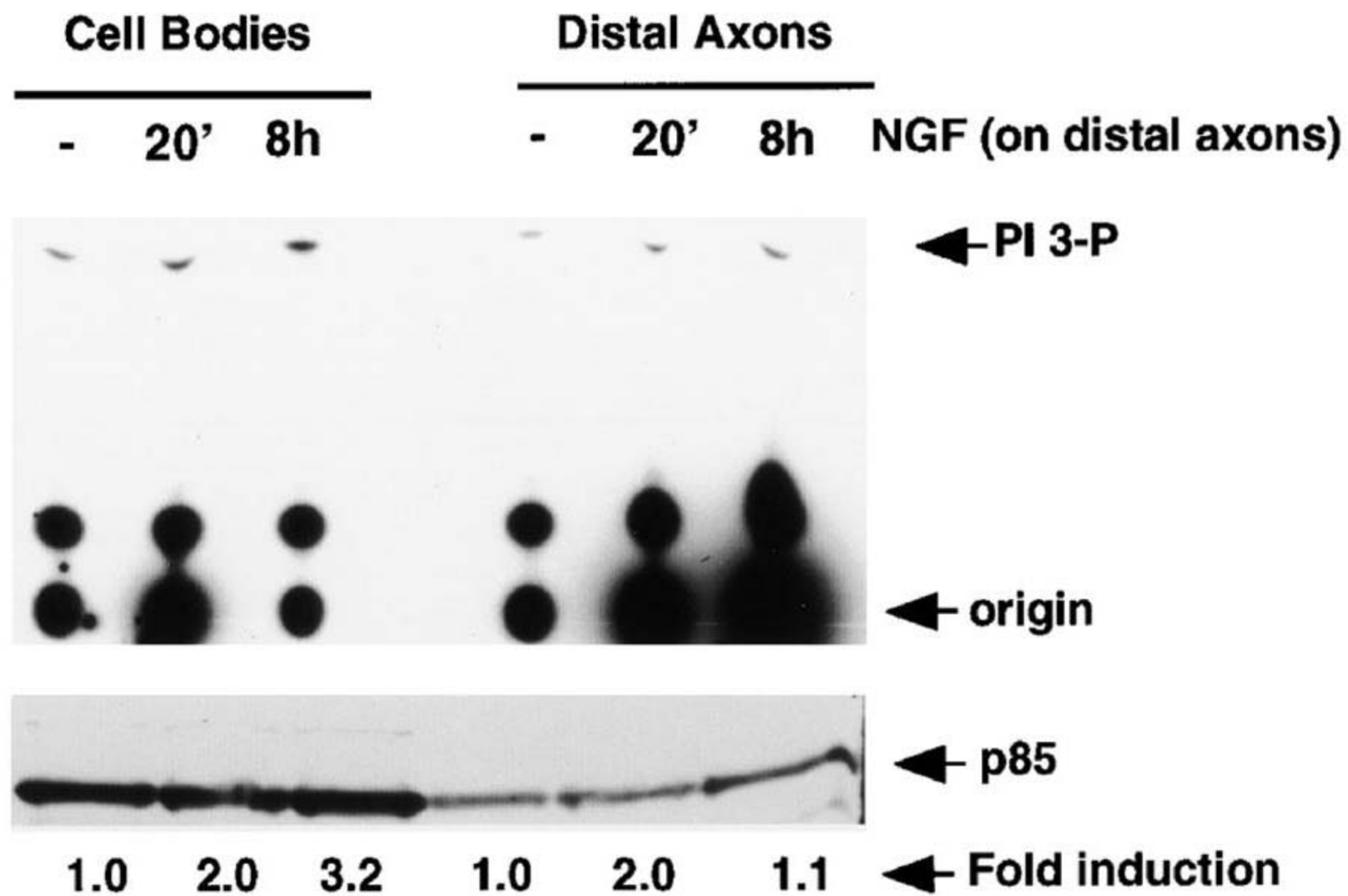
A



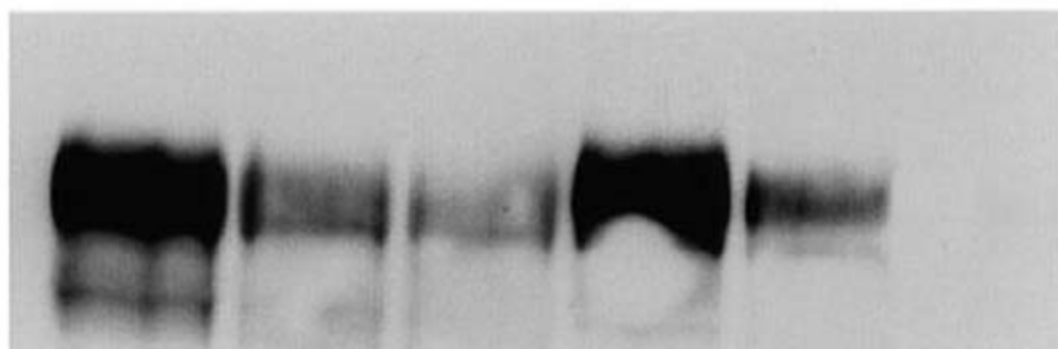
C

S

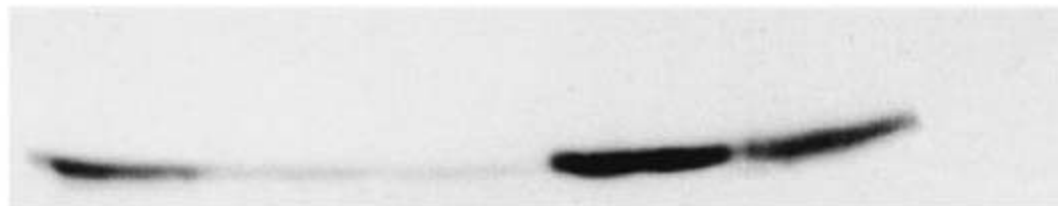
A**B**

B

<u>Cell Bodies</u>			<u>Distal Axons</u>			
-	1.5h	6h	-	1.5h	6h	α -NGF (on distal axons)



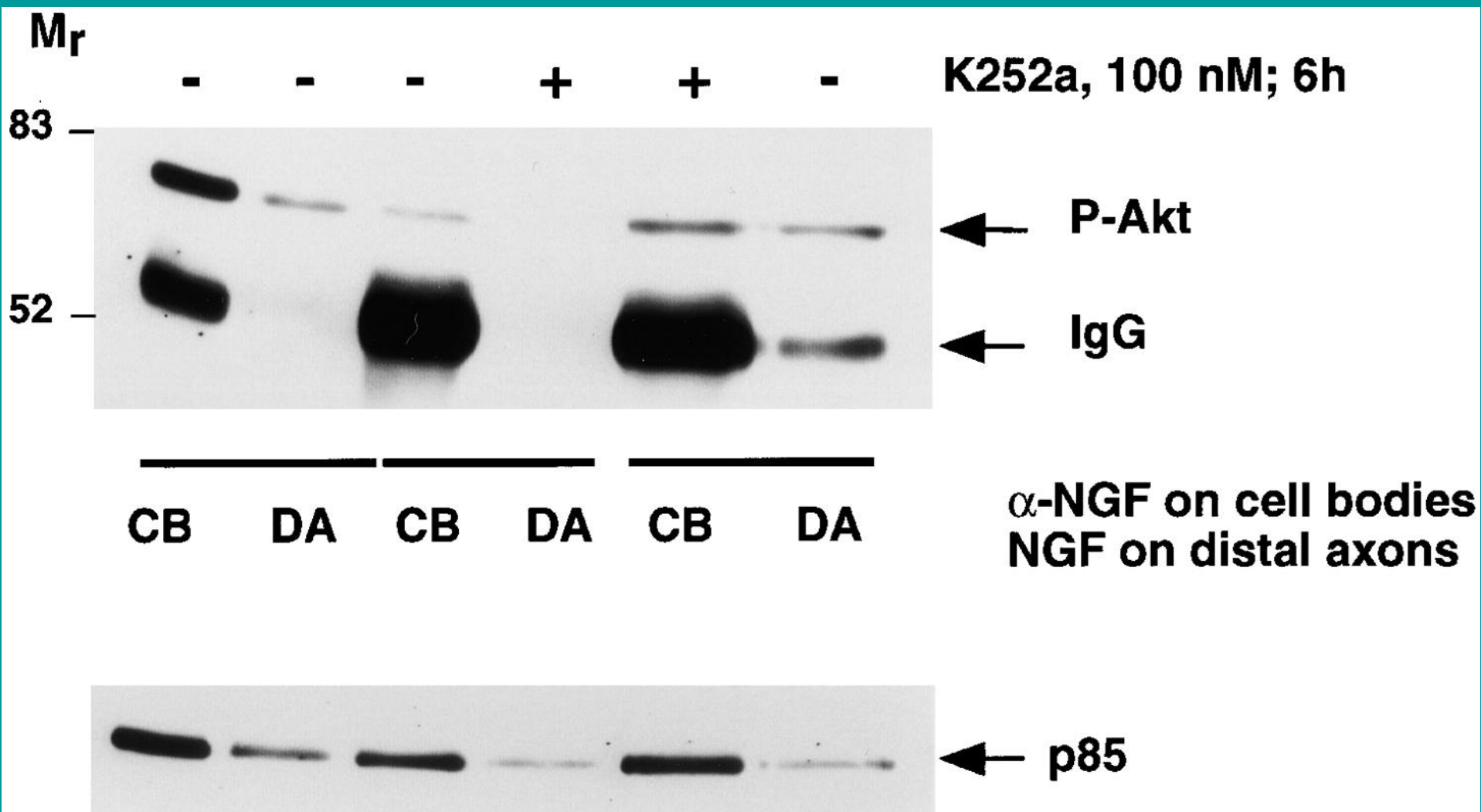
← P-TrkA (Y490)

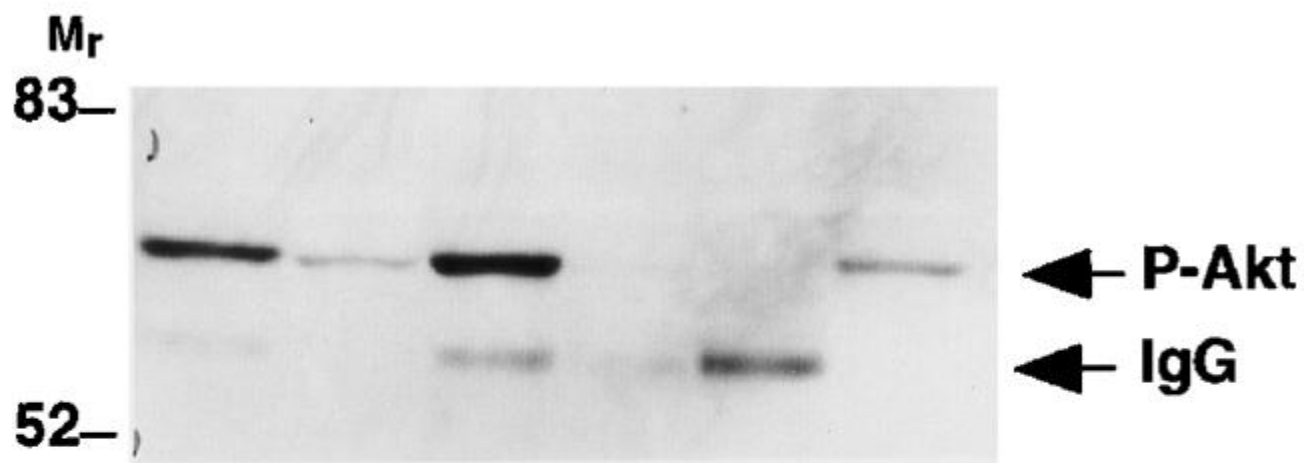


← P-Akt



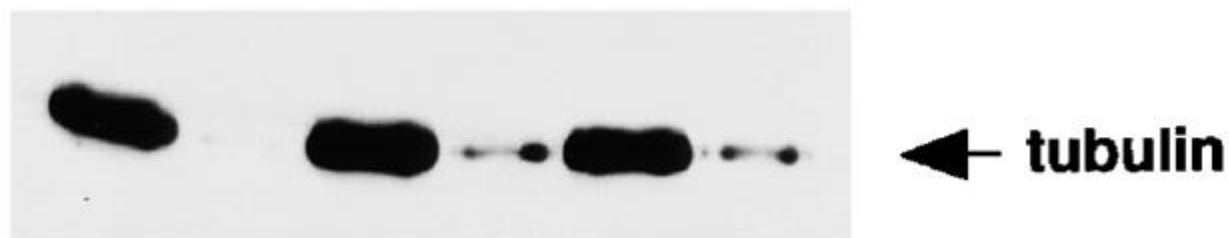
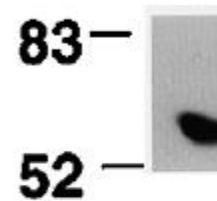
← p85



A

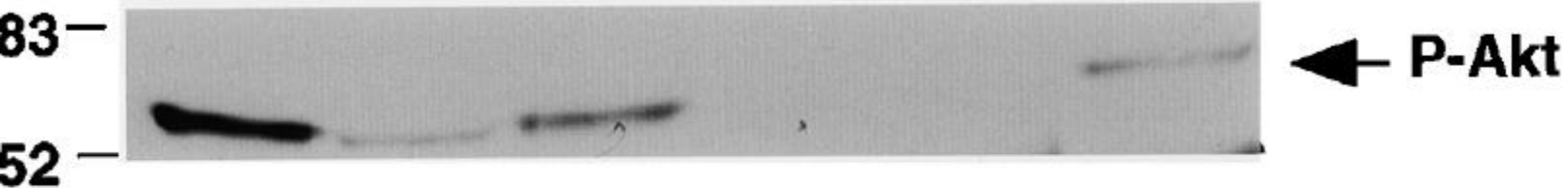
CB		DA		CB		DA		CB		DA	
+	+	+	+	+	+	+	+	+	+	+	+
-	-	-	+	-	+	+	-	+	+	-	-

NGF (200 ng/ml)
Wort. (100 nM; 30 min)

**B**

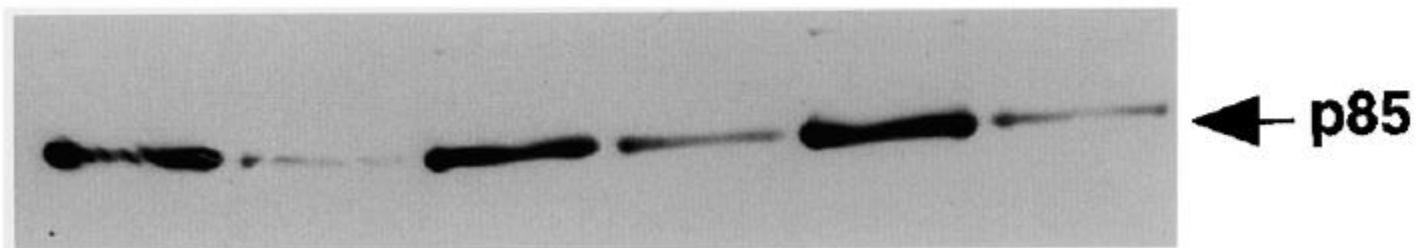
C



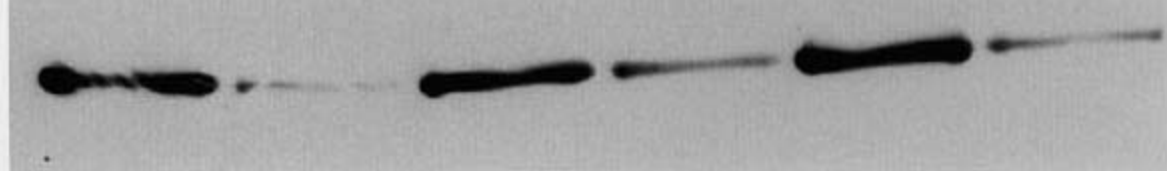


α-NGF on cell bodies		NGF on distal axons				
CB	DA	CB	DA	CB	DA	
-	-	-	+	+	-	LY(50 μM) ; 8h

(in)



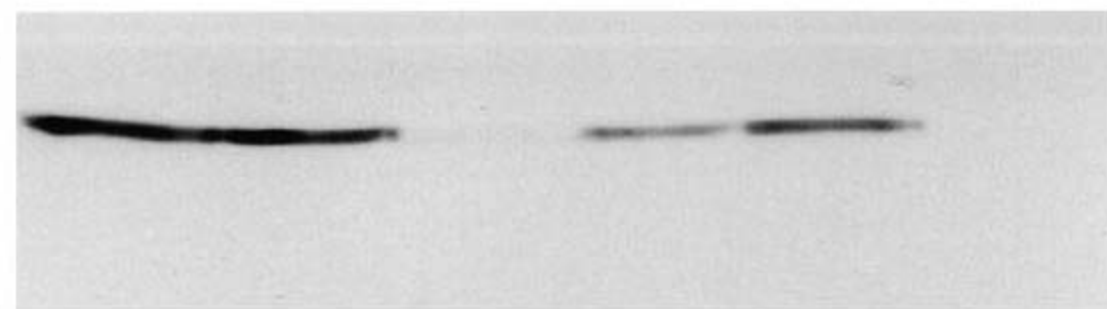
← tubulin



83-

52-

← P-Akt



α-NGF on cell bodies
NGF on distal axons

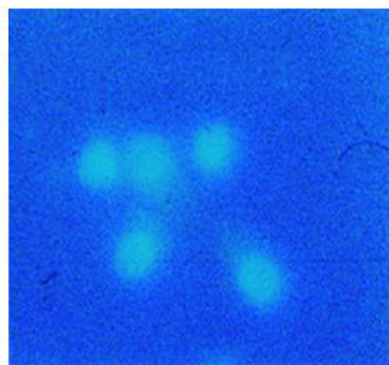
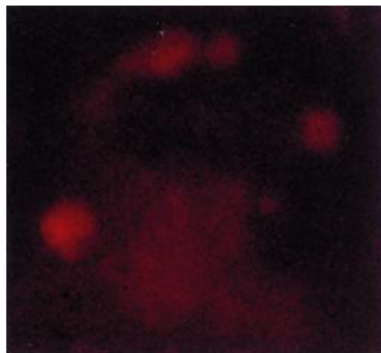
LY (100 μ M) ; 48h

CB	DA	CB	DA	CB	DA
-	-	+	-	-	+

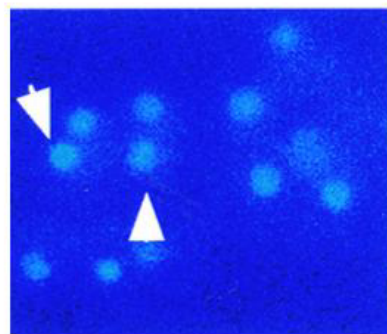
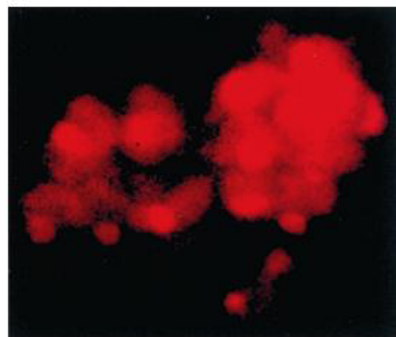


← p85

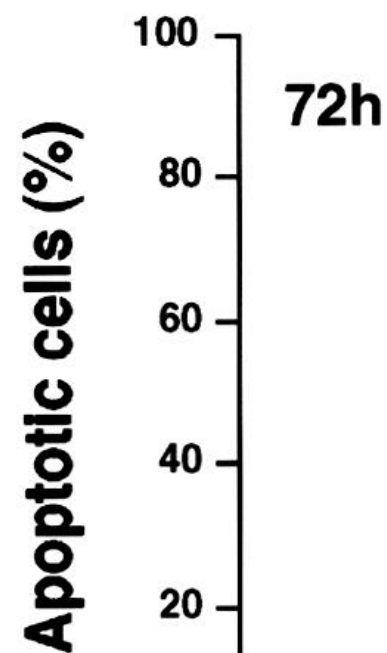
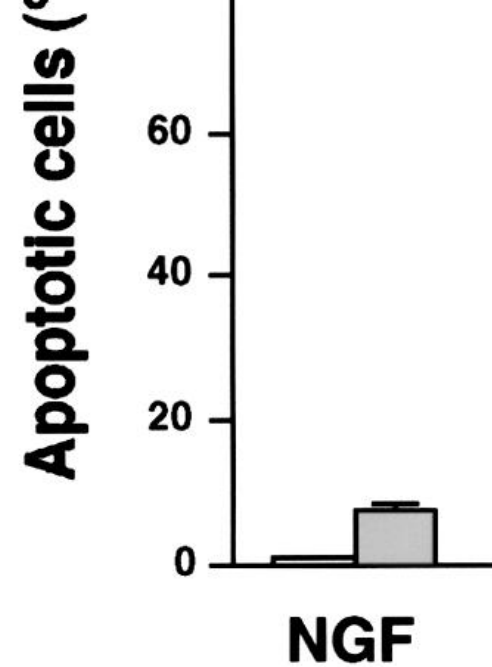
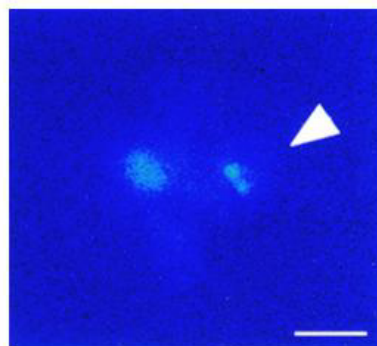
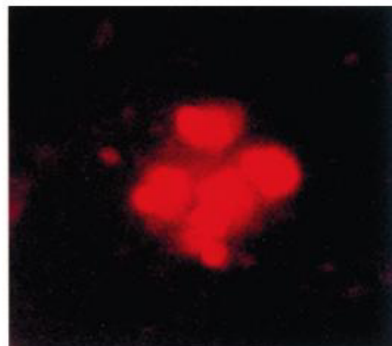
NGF

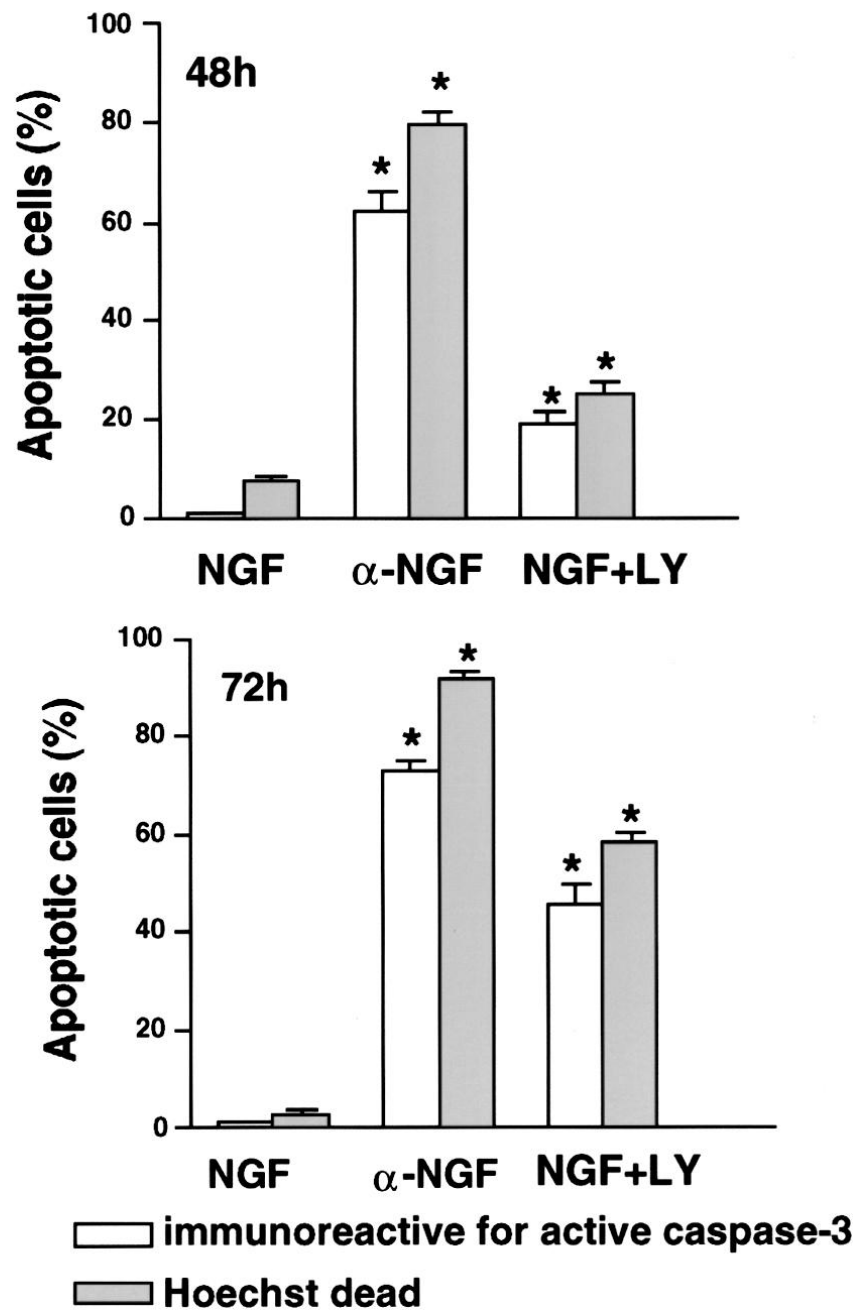


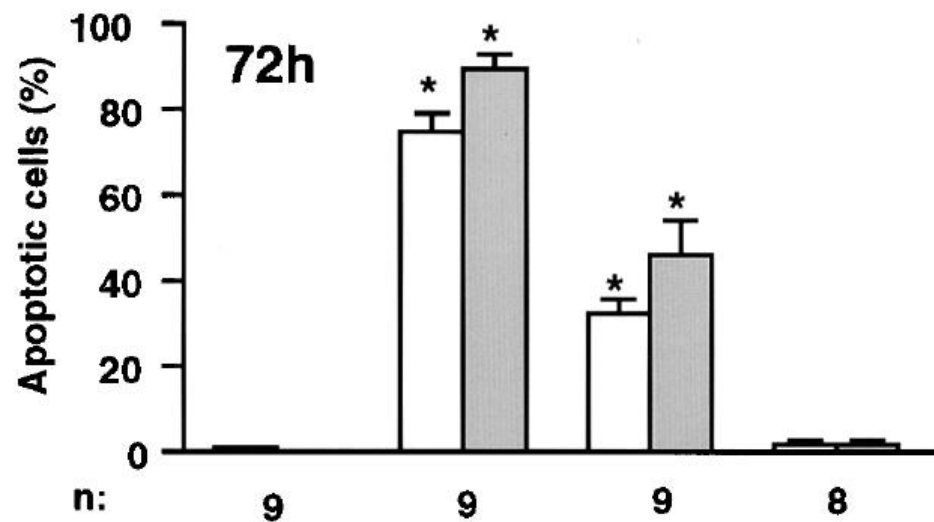
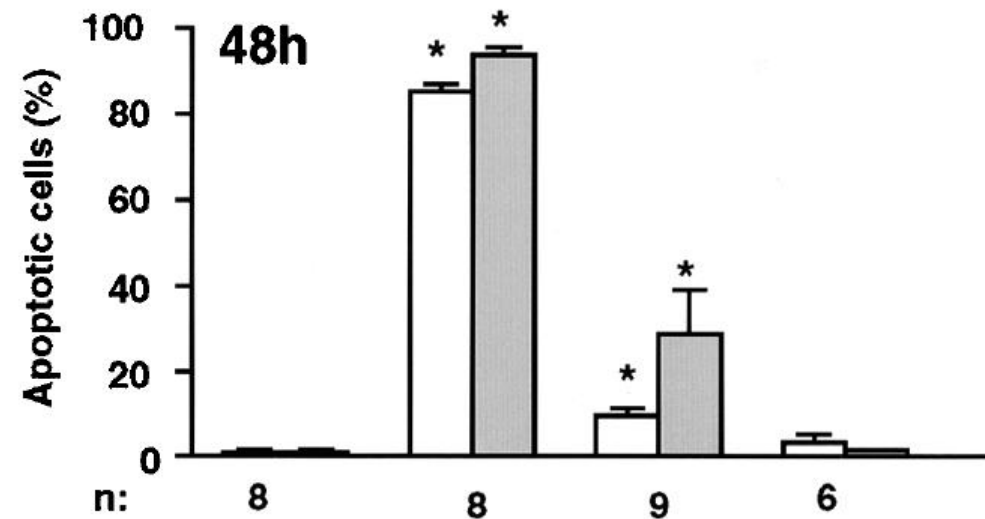
LY294002 for 72h



α -NGF for 48h



B

A

cell body:

NGF

 α NGFNGF
LY

NGF

distal axon:

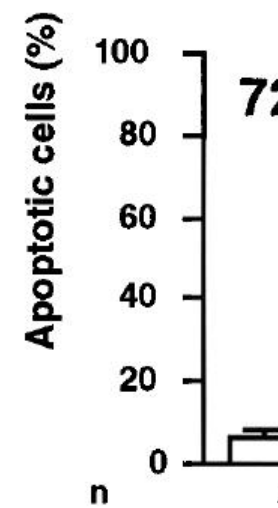
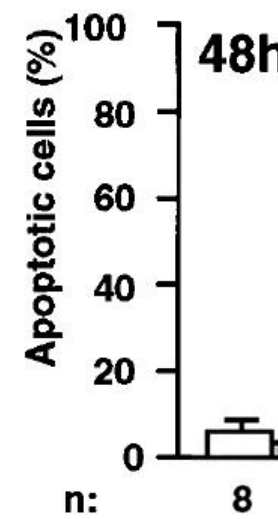
NGF

 α NGF

NGF

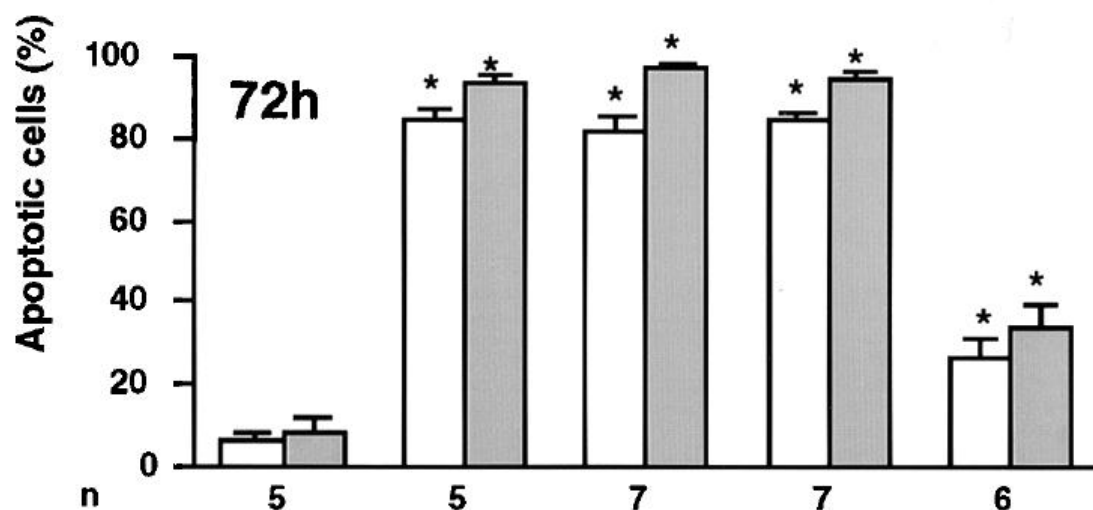
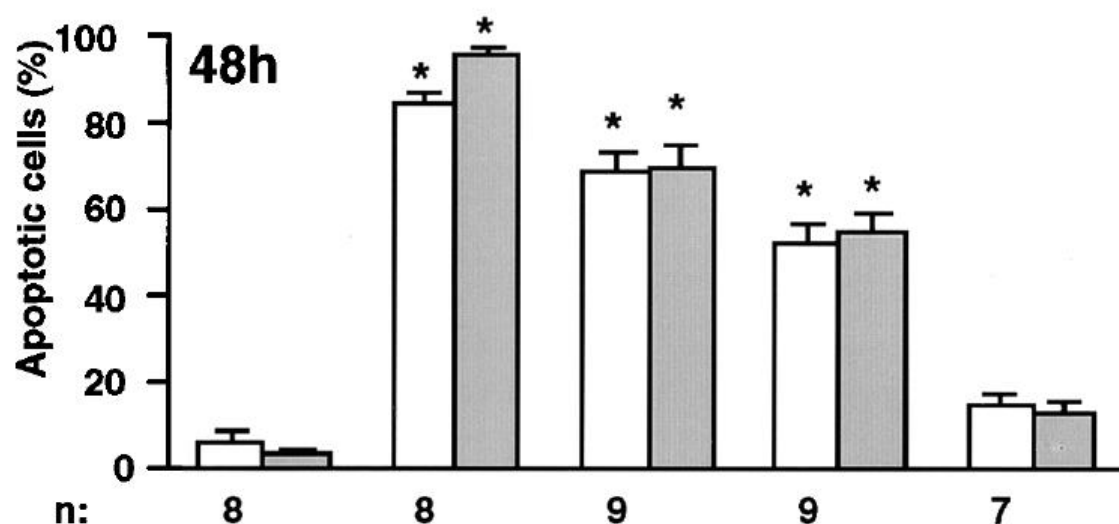
NGF
LY

LY

Bcell body: α NGF

distal axon: NGF

C

B

cell body:	α NGF	α NGF	α NGF	α NGF	α NGF
distal axon:	NGF	α NGF	NGF	NGF	NGF
			LY	LY	LY

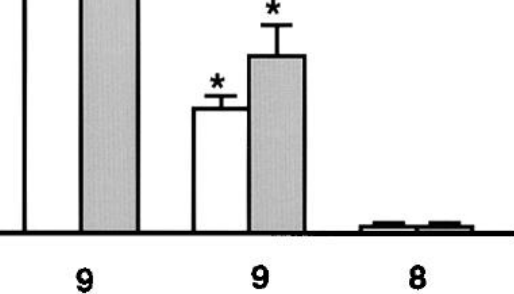
6

8

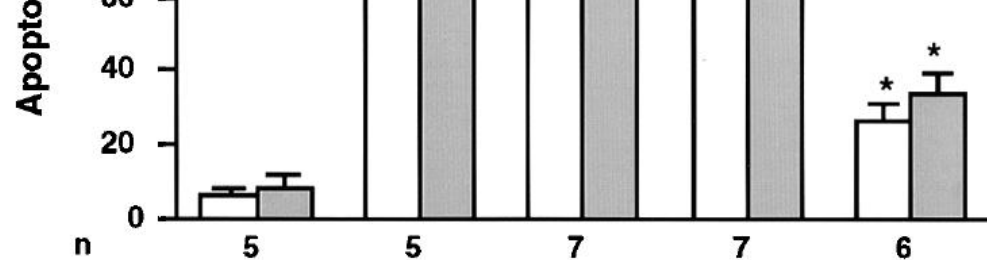
NGF

NGF

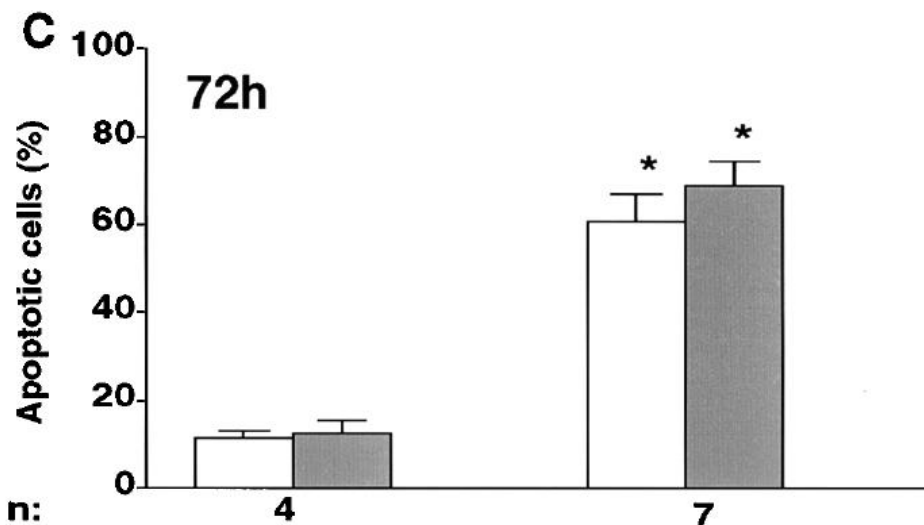
LY



α NGF
 α NGF
 NGF LY



cell body: α NGF α NGF α NGF LY α NGF LY α NGF
 distal axon: NGF α NGF NGF LY NGF NGF LY



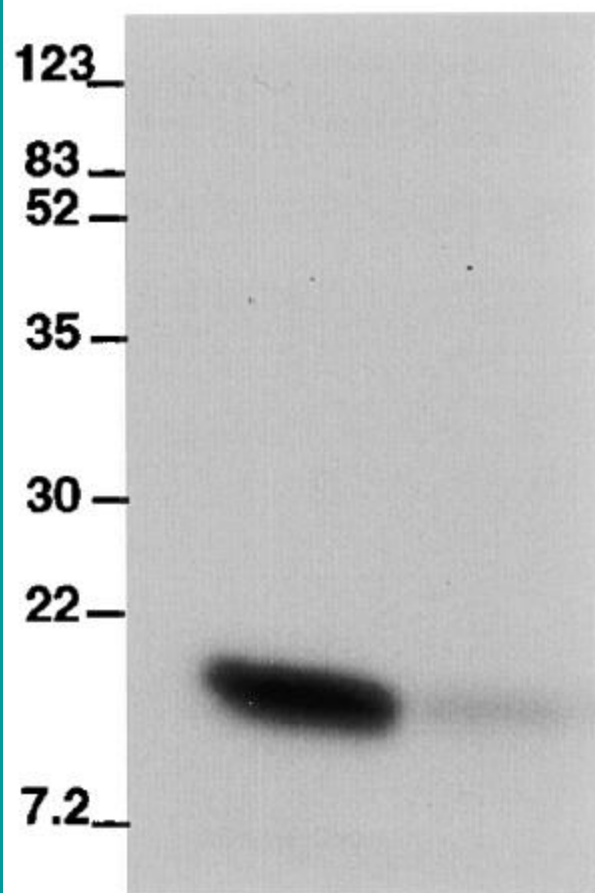
cell body:
 distal axon:

0.5 ng/ml NGF
 0.5 ng/ml NGF; 100 μ M LY

[White bar] caspase positive
 [Grey bar] Hoechst dead

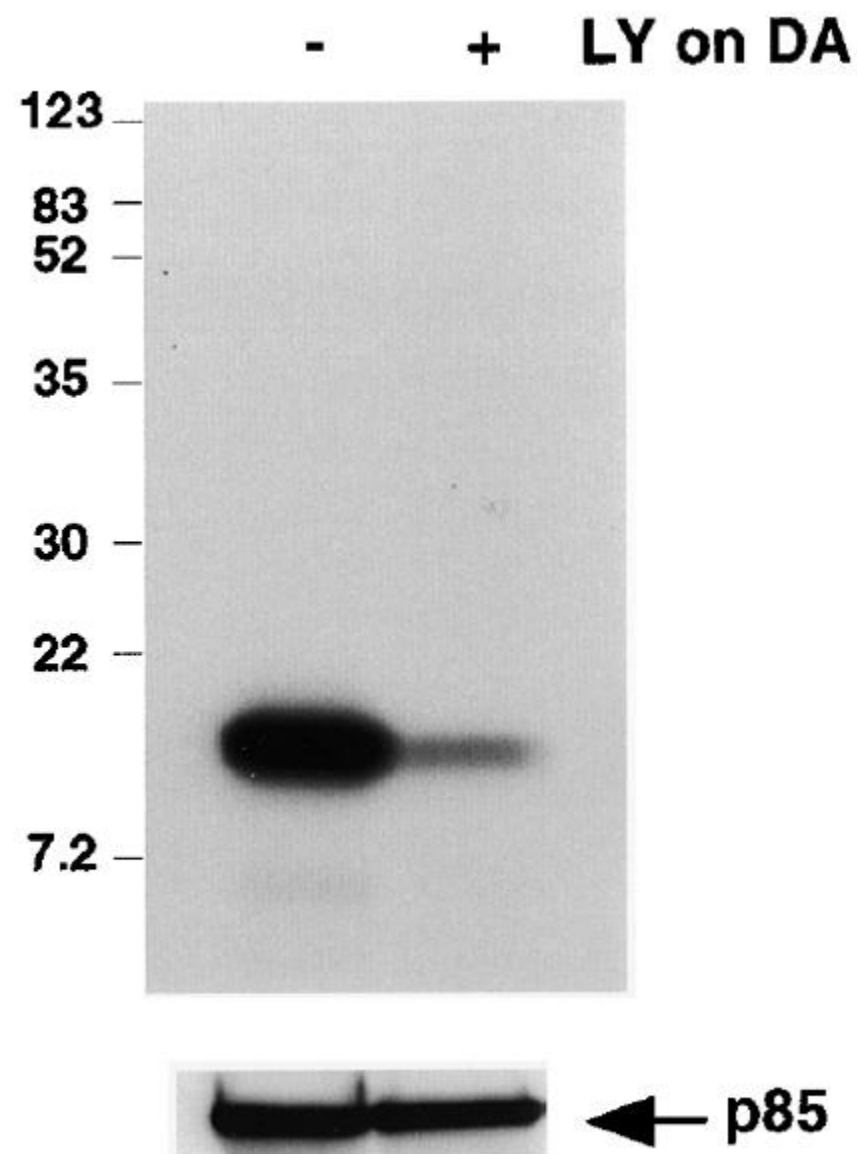
A

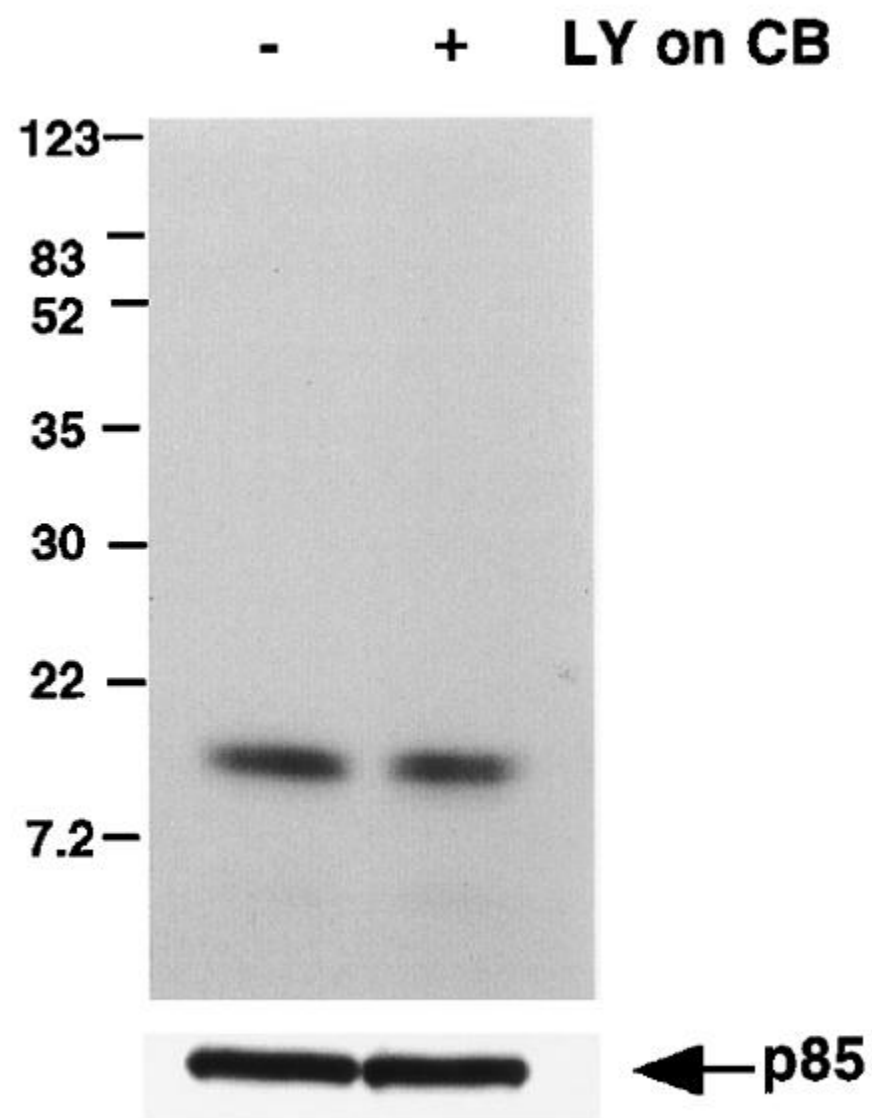
- + **K252a on DA**



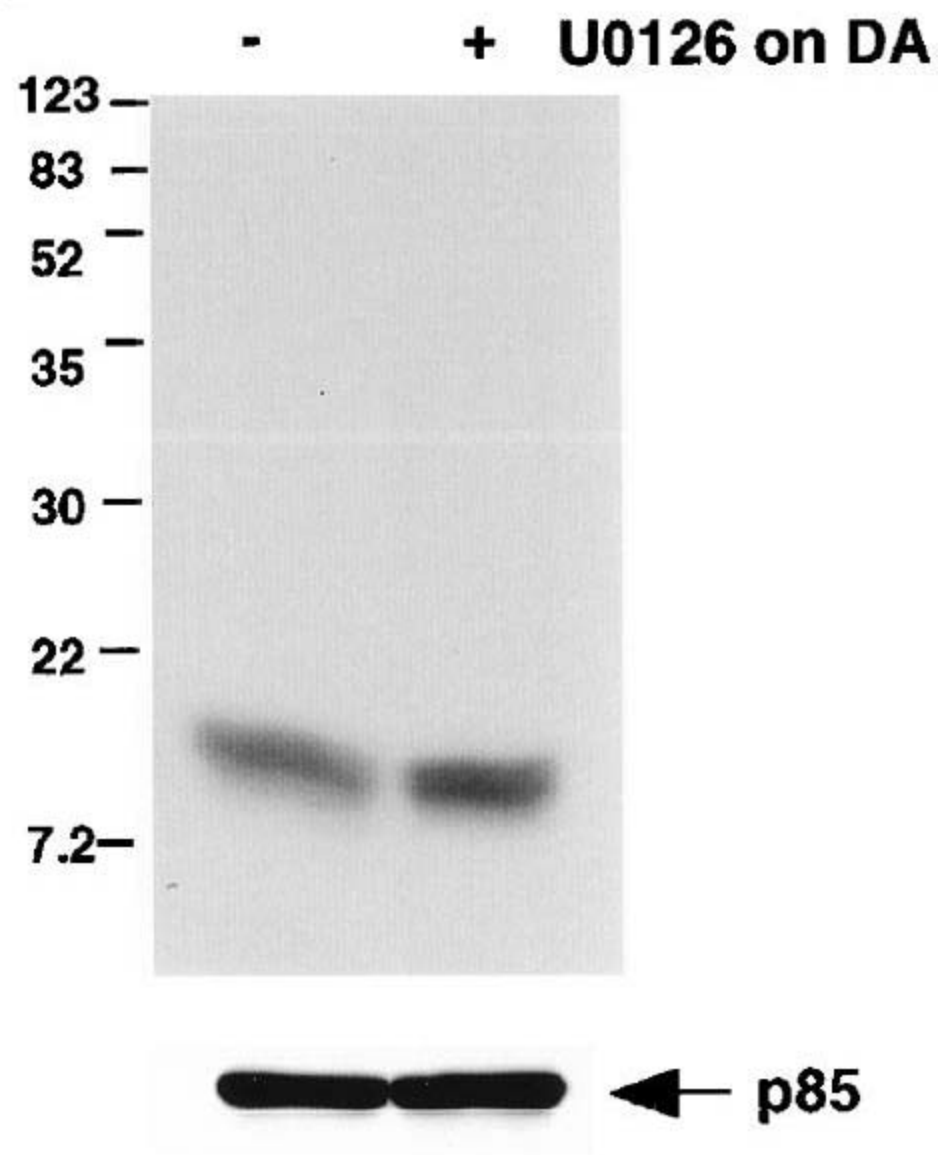
← **p85**

B



C

D

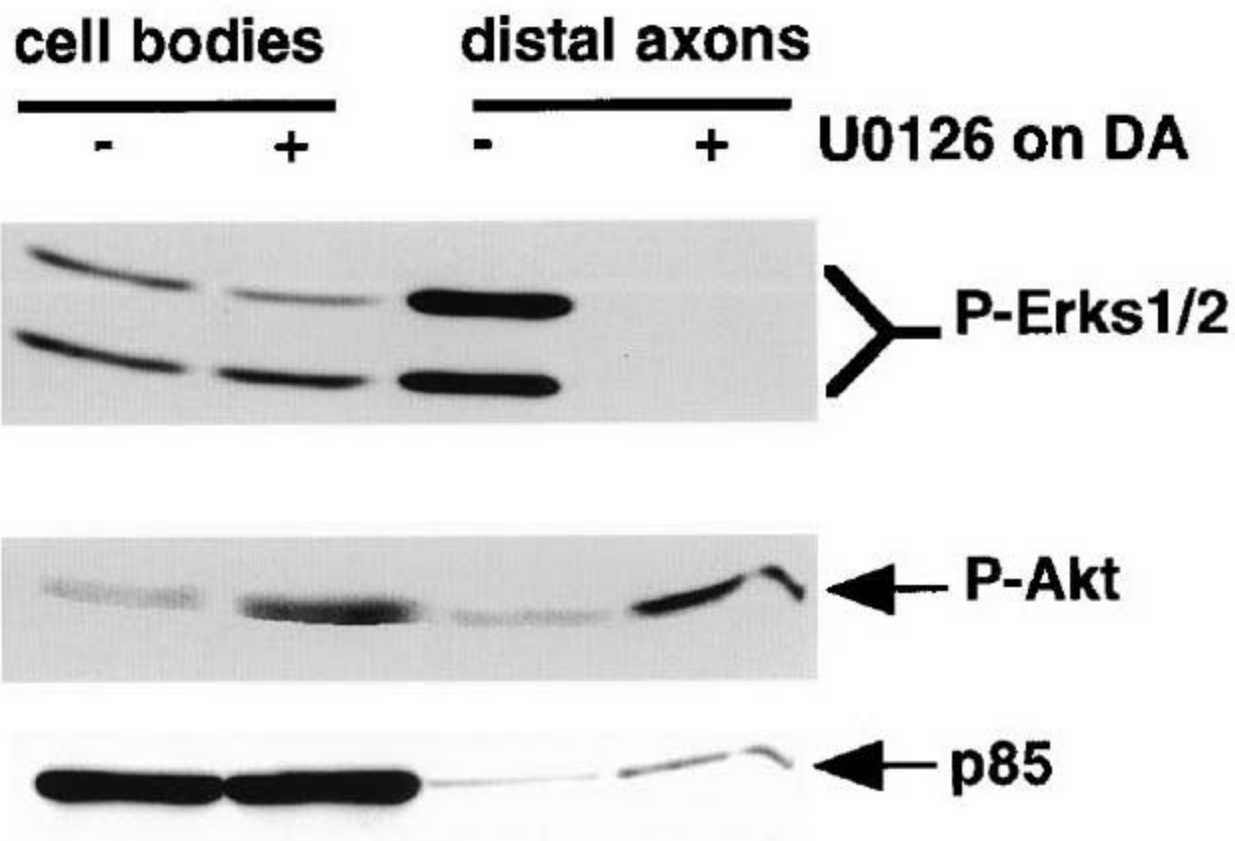


p85

U0126 on DA

E

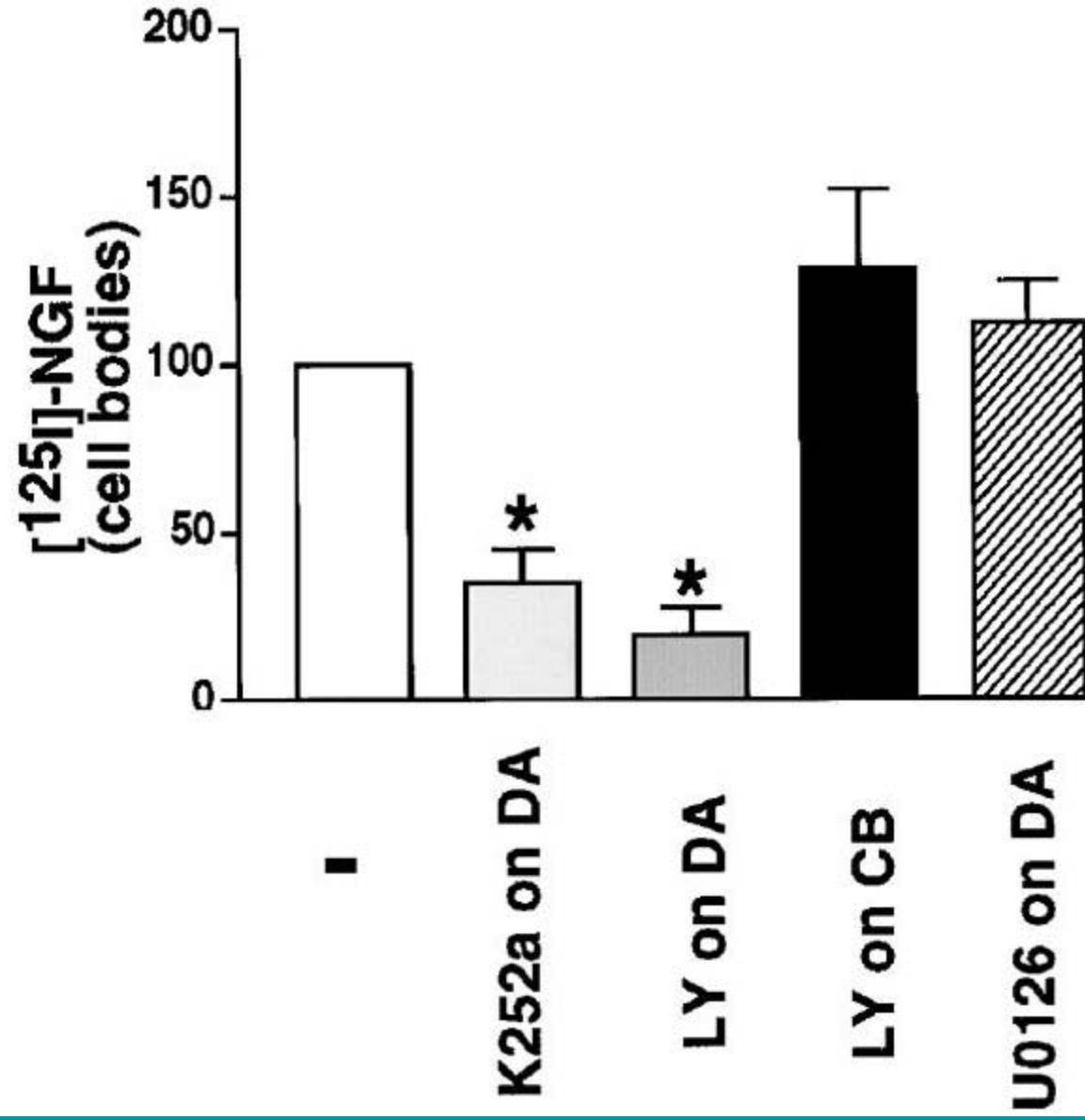
F



[¹²⁵I]-NGF (cell bodies)

200.0
150.0
100.0
50.0
0

— p85

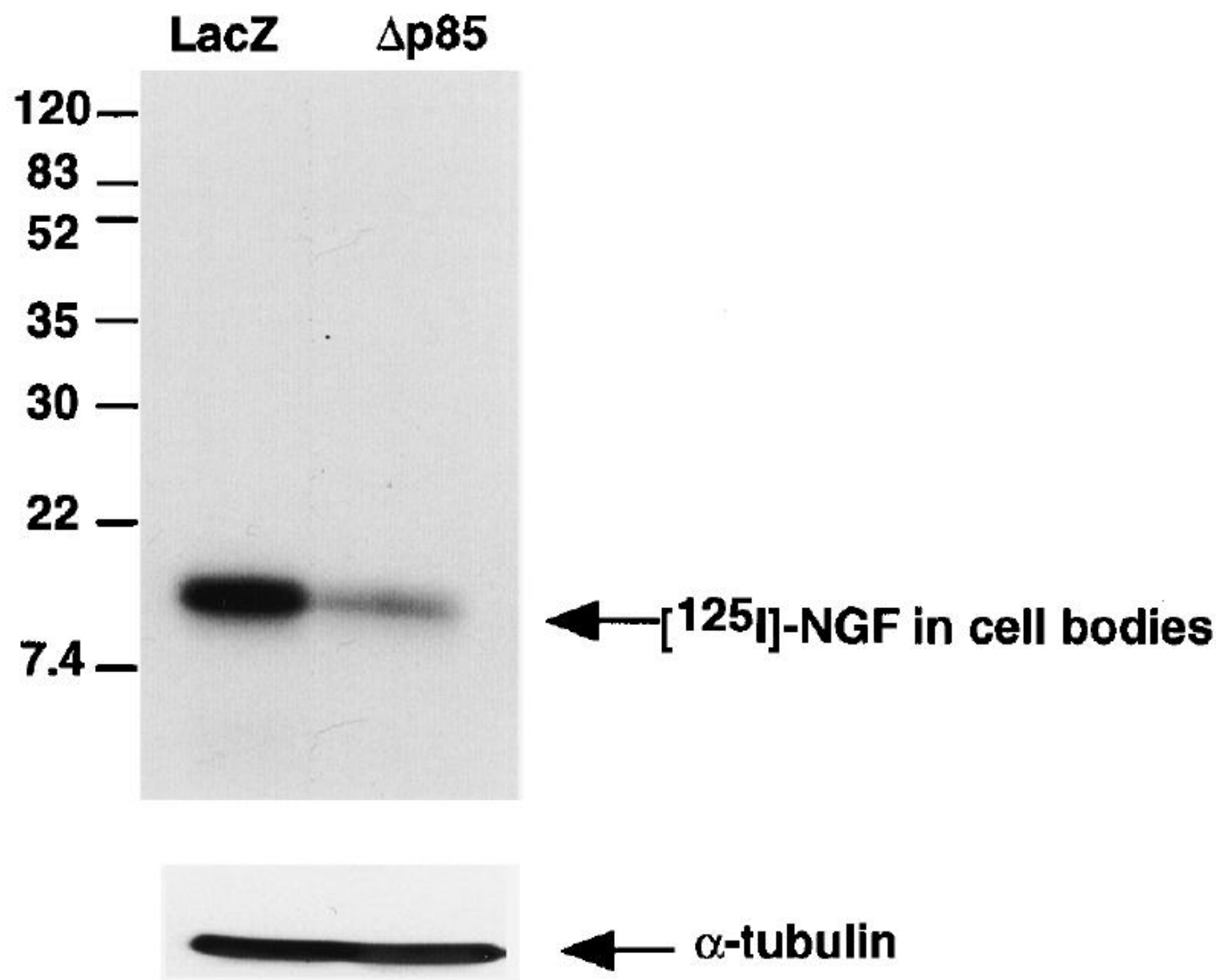
F

- U0126 on DA

- P-Erks1/2

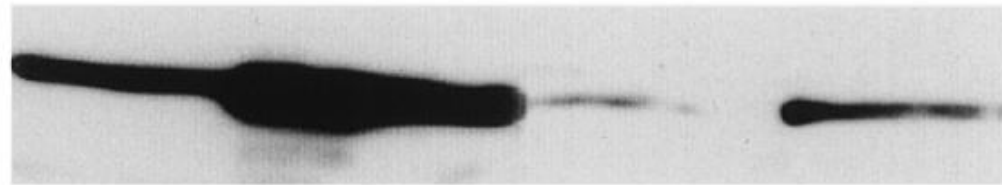
- P-Akt

- p85

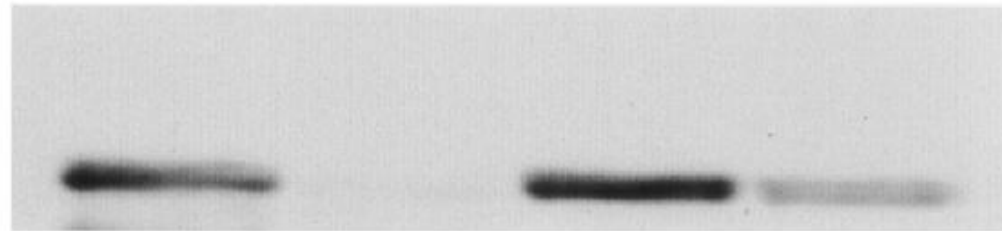
B

cell bodies

distal axons



← **p85**



← **P-Akt**

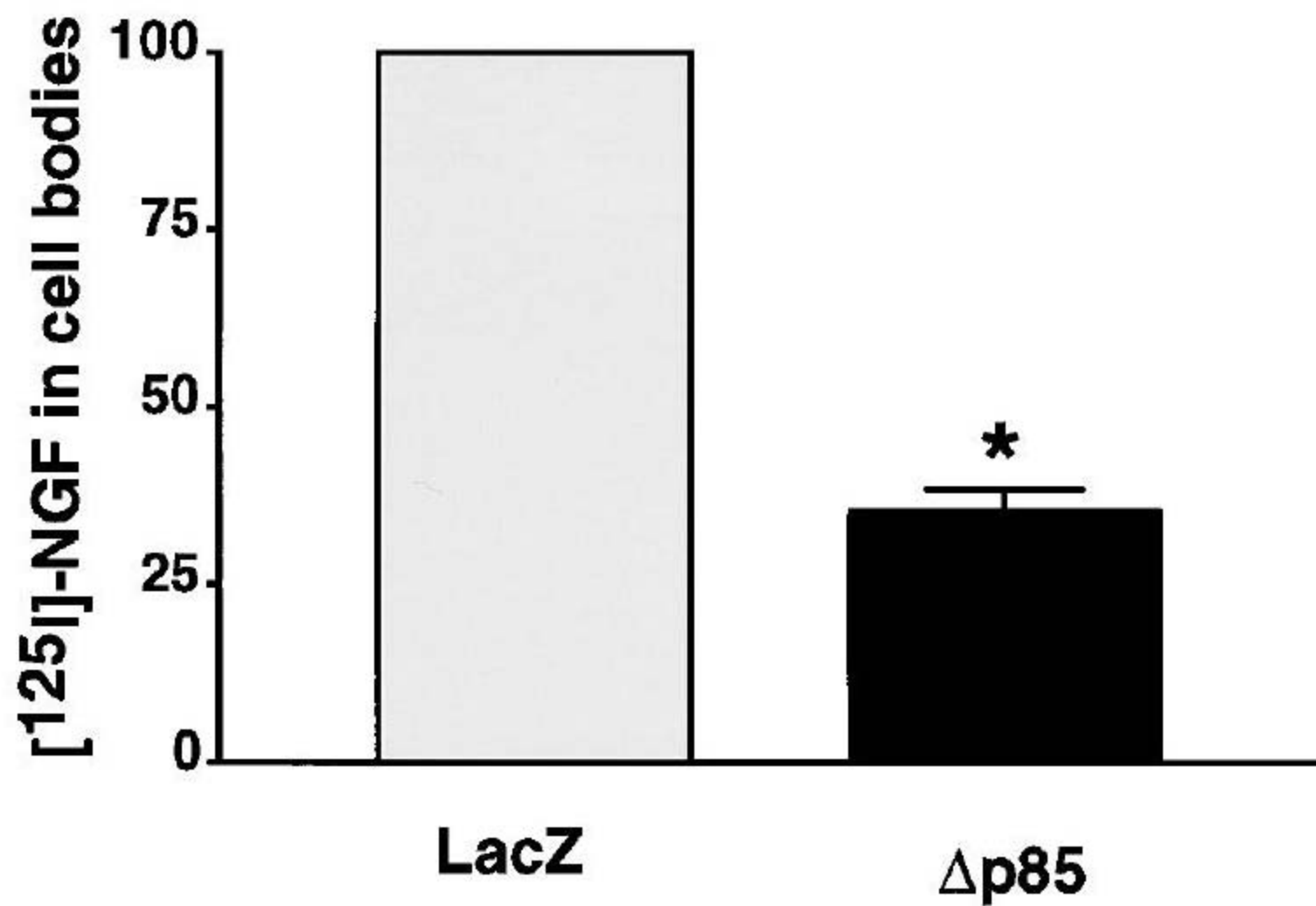
LacZ

$\Delta p85$

LacZ

$\Delta p85$

C



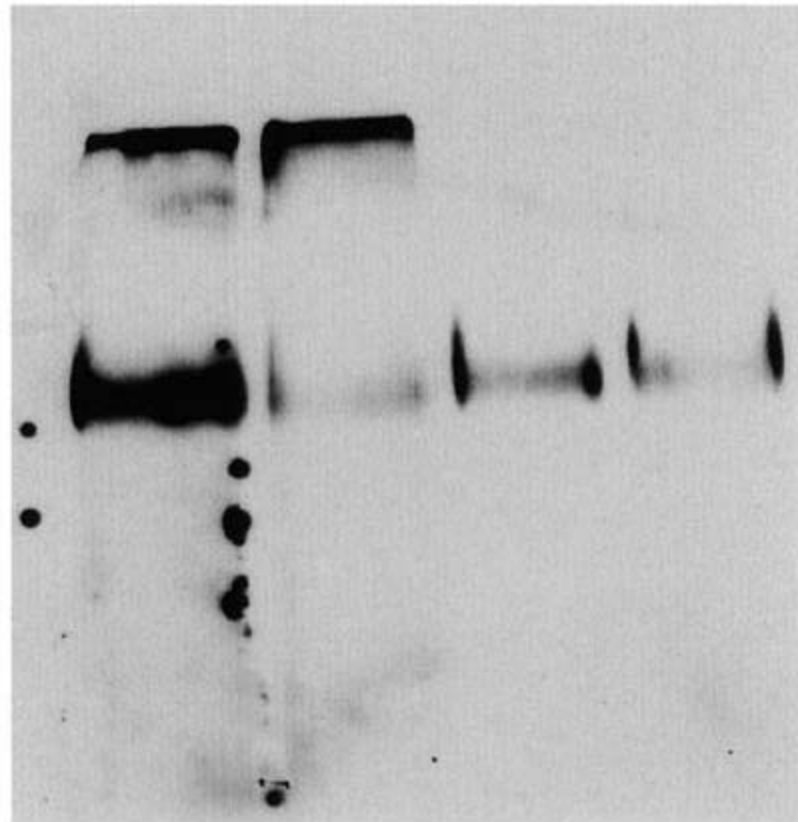
cell bodies distal axons

M_r

210 —

122 —

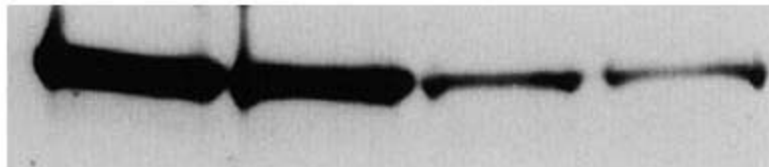
83 —



← P-TrkA (Y490)

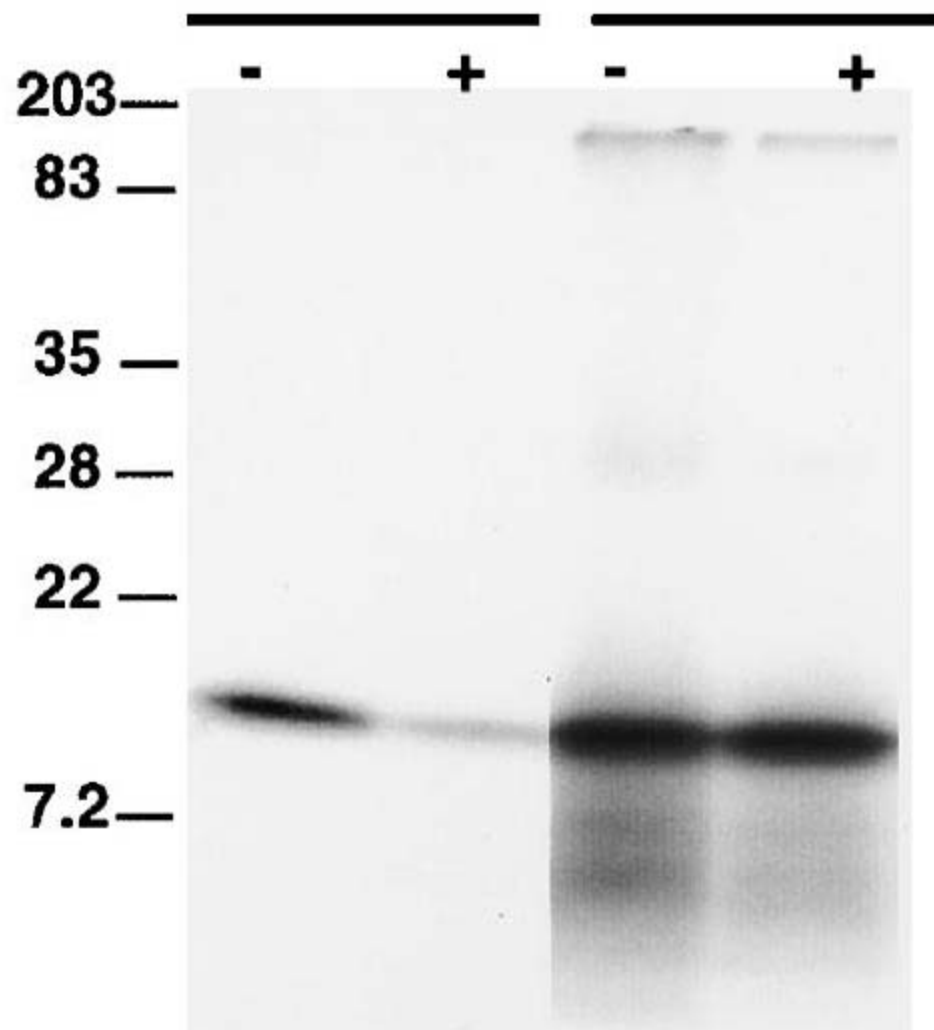
**α -NGF on cell bodies
NGF on distal axons**

LY294002 on DA; 8h



← p85

cell bodies distal axons



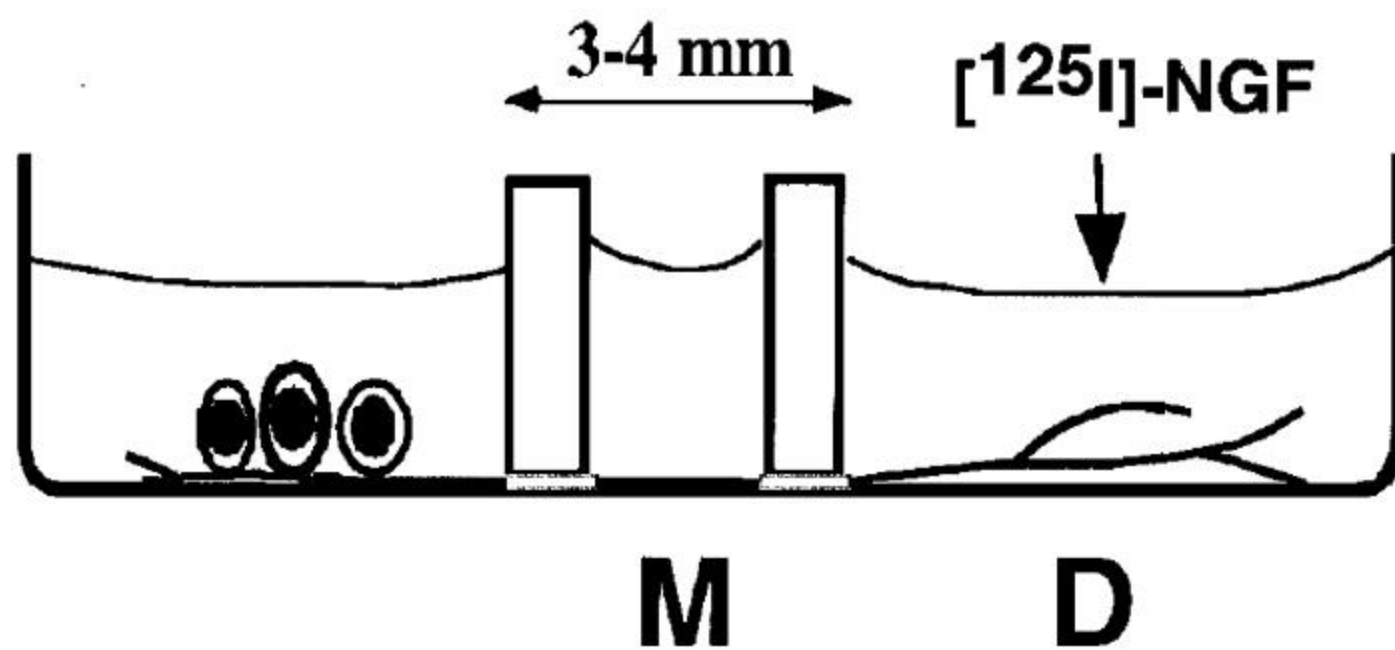
Wort. on DA

**IP: Trk
Autoradiography**



← p85

A



C

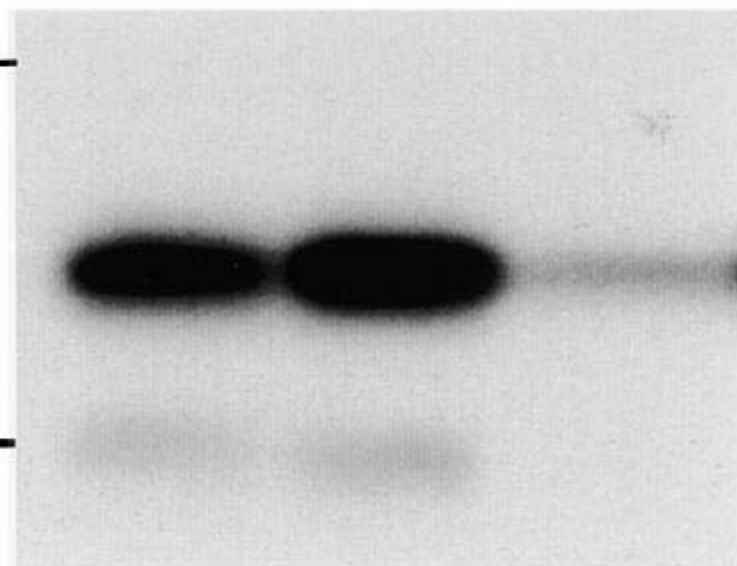
S

B

Mr

22—

7.2—



← **[¹²⁵I]-NGF
in cell bodies**

-

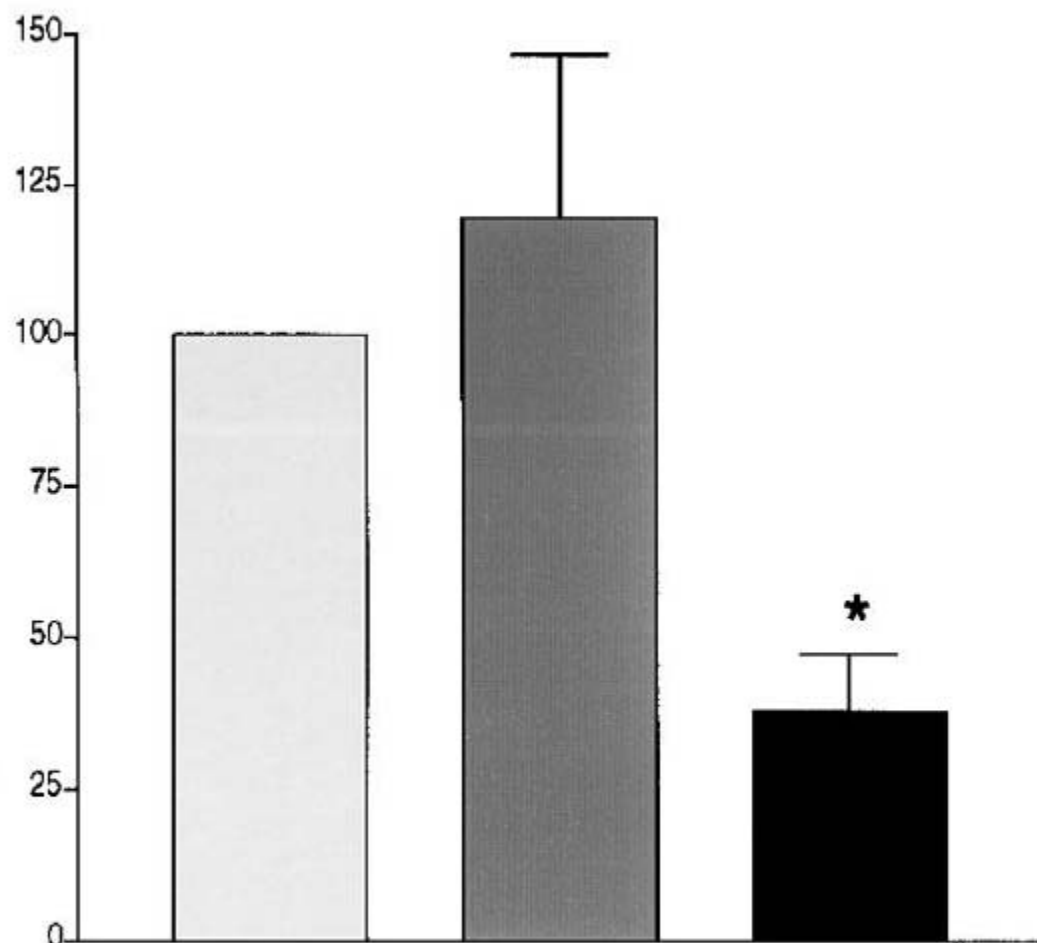
M

D

**LY294002
on axons**

c

[¹²⁵I]-NGF in cell bodies



-

M

D

**LY294002
on axons**

9.013 Numeric Score Distribution (Out of 72)

