

Raw membranes used in Western blot and Dot blot for

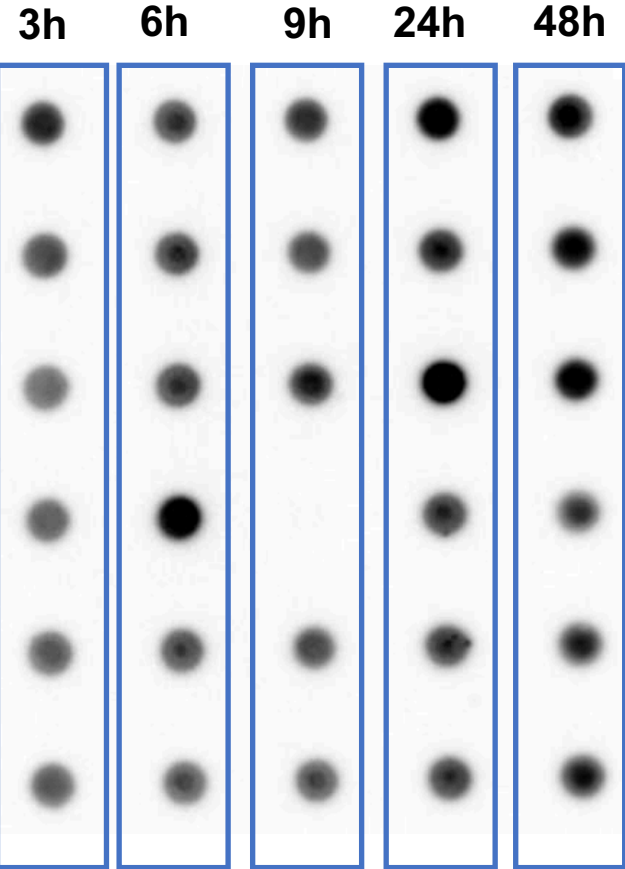
Sleep-wake body temperature variation regulates tau secretion and correlates with CSF and plasma tau

Geoffrey Canet^{1,2}, Felipe Da Gama Monteiro^{1,3}, Emma Rocaboy², Sofia Diego-Diaz², Boutheyna Khelaifia^{1,2}, Kelly Godbout², Aymane Lachhab², Jessica Kim⁴, Daphne I. Valencia⁵, Audrey Yin⁴, Hau-Tieng Wu⁴, Jordan Howell⁴, Emily Blank⁴, Francis Laliberté¹, Nadia Fortin¹, Emmanuelle Boscher^{1,2}, Parissa Fereydouni-Forouzandeh², Stéphanie Champagne², Isabelle Guisle^{1,2}, Sébastien S. Hébert^{1,2}, Vincent Pernet^{1,2,6}, Haiyan Liu⁷, William Lu⁷, Ludovic Debure⁴, David M. Rapoport⁵, Indu Ayappa⁵, Andrew W. Varga⁵, Ankit Parekh⁵, Ricardo S. Osorio⁴, Steve Lacroix^{1,3}, Mark P. Burns⁸, Brendan P. Lucey⁷, Esther M. Blessing^{4*}, Emmanuel Planel^{1,2*}*

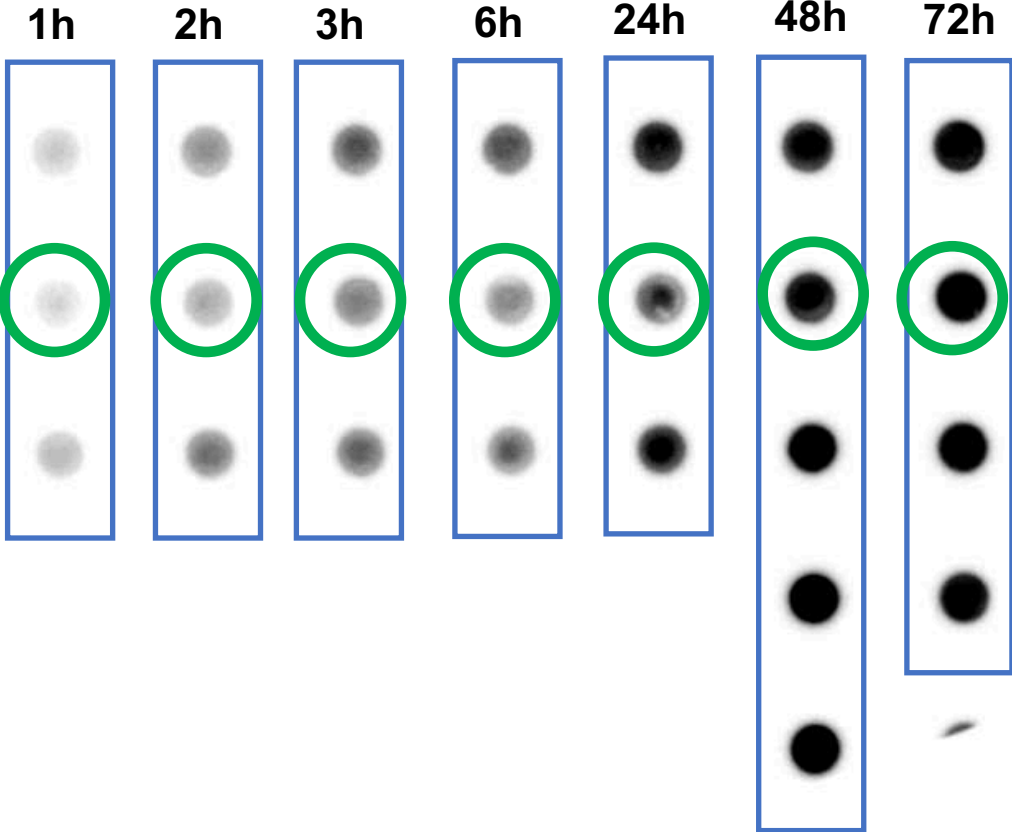
FIGURE 1

Figure 1B

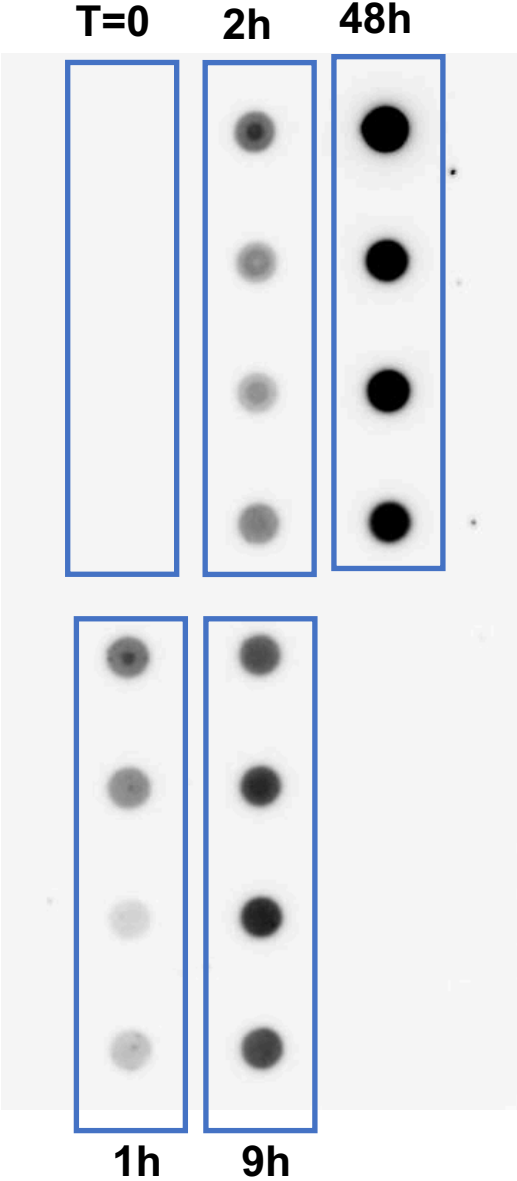
Experiment #1
Total tau (Tau3R)



Experiment #2
Total tau (Tau3R)



Experiment #3
Total tau (Tau3R)

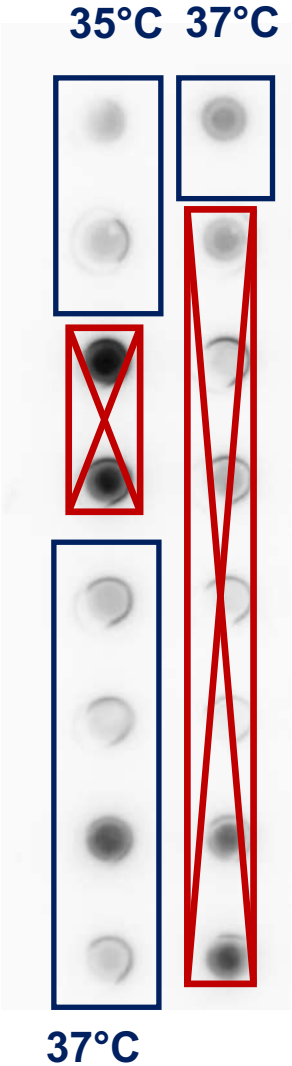


 Dot used in figure

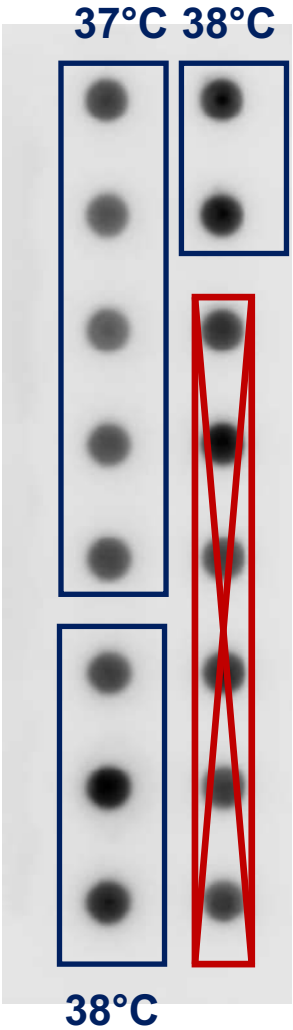
Figure 1D, E

 *Unused condition*
 *Dot used in figure*

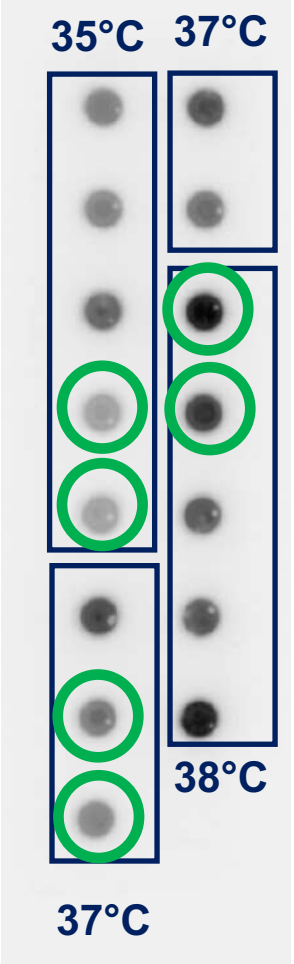
Experiment #1
Tau3R



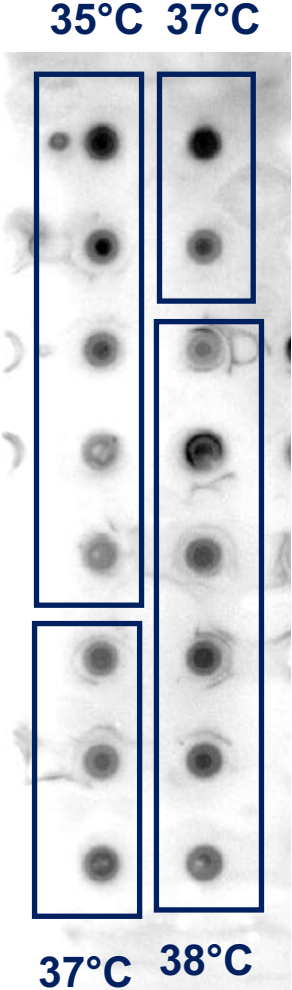
Experiment #2
Tau3R



Experiment #3
Tau3R



Experiment #1
TauC



Experiment #2
TauC

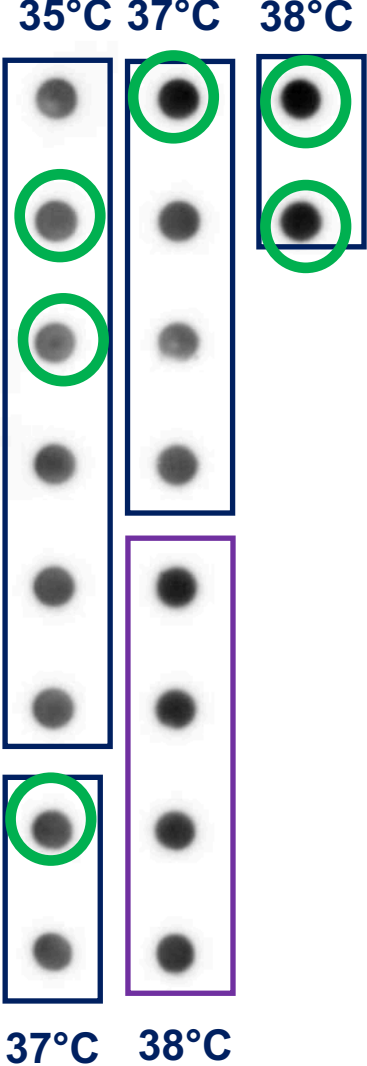
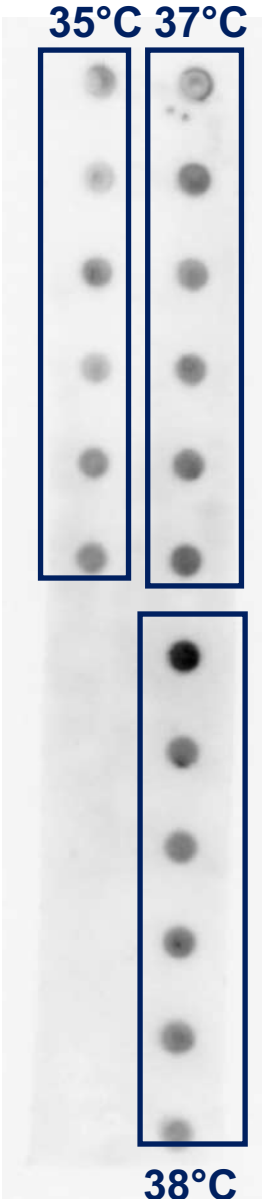


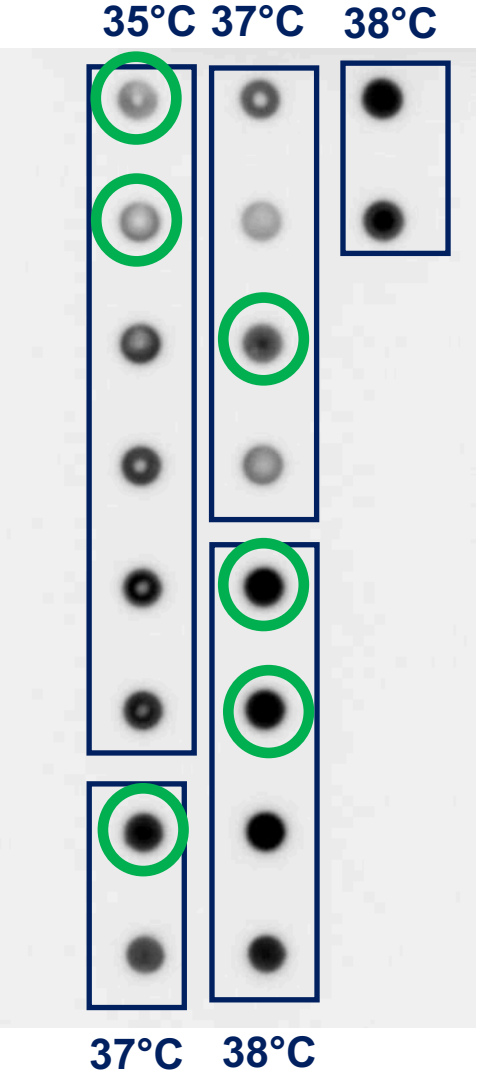
Figure 1 D,E

 Dot used in figure

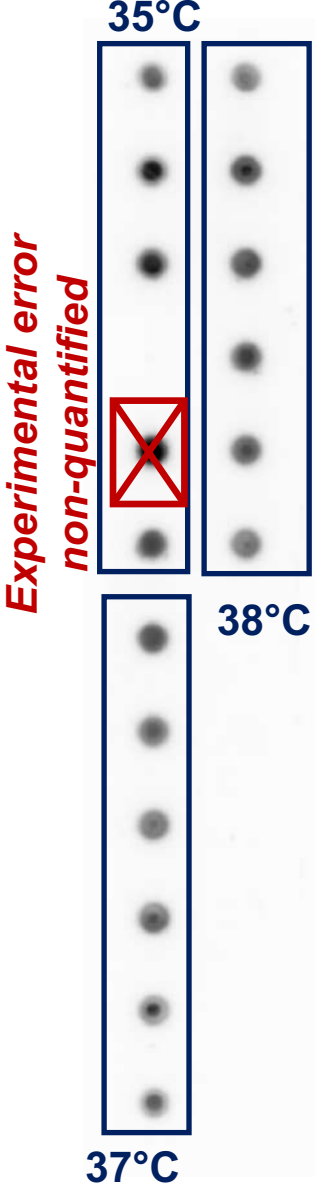
Experiment #1
DA9



Experiment #2
DA9



Experiment #1
Tau12



Experiment #2
Tau12

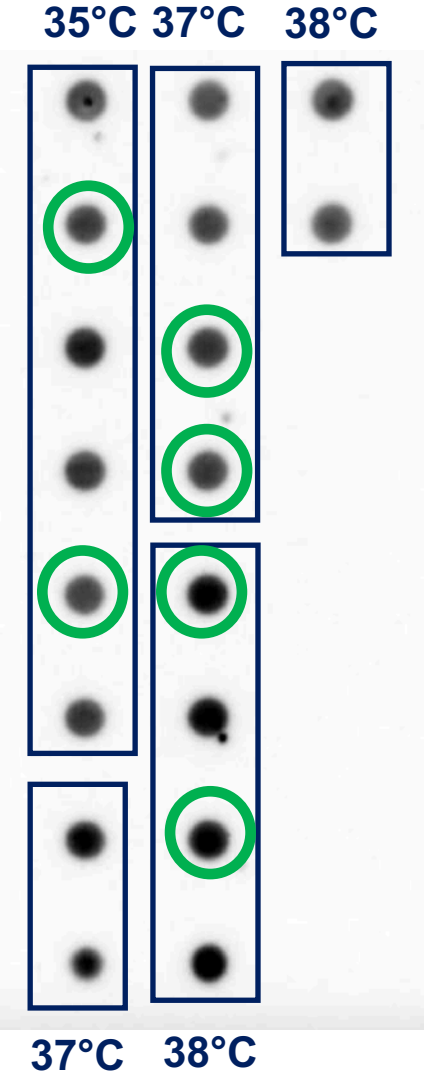


Figure 1 F,G

 *Unused condition*
 *Dot used in figure*

Experiment #1
AT270

Experiment #2
AT270

Experiment #3
AT270

Experiment #1
S199

Experiment #2
S199

Experiment #3
S199

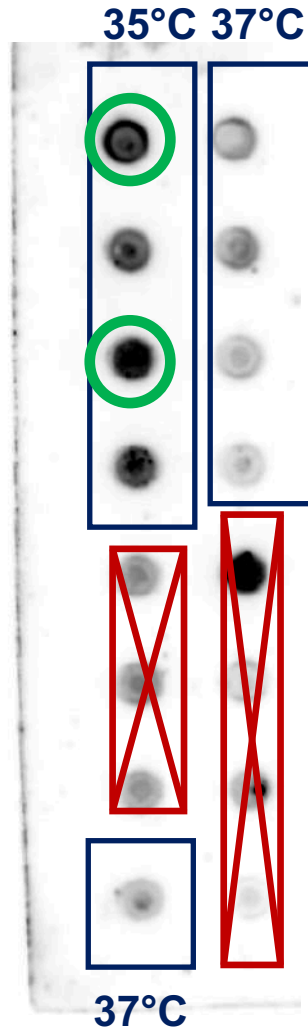
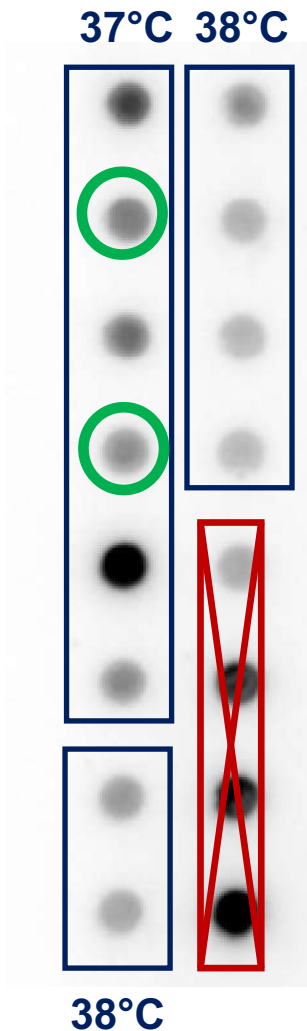
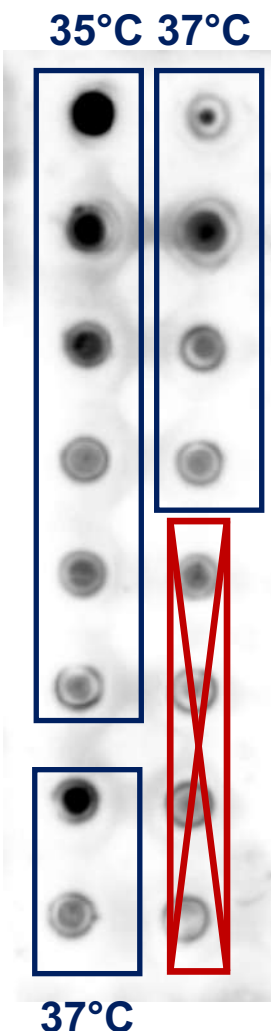
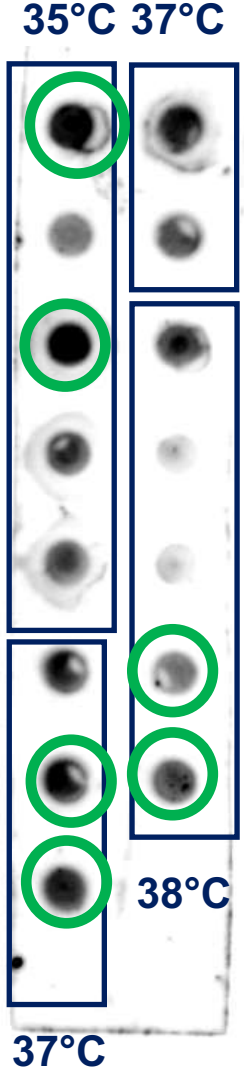
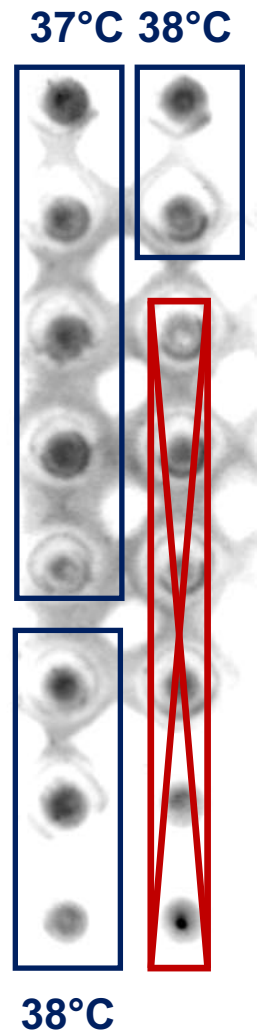
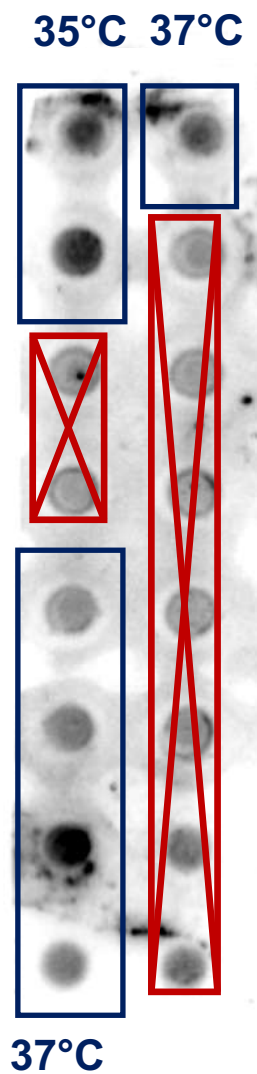
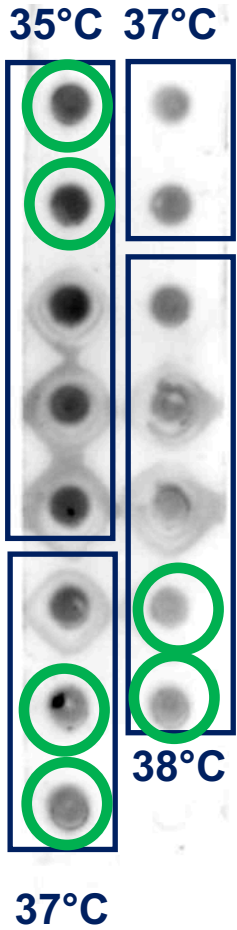


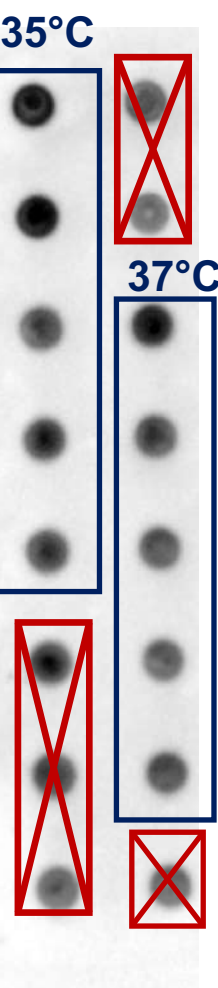
Figure 1 F,G

 *Unused condition*
 *Dot used in figure*

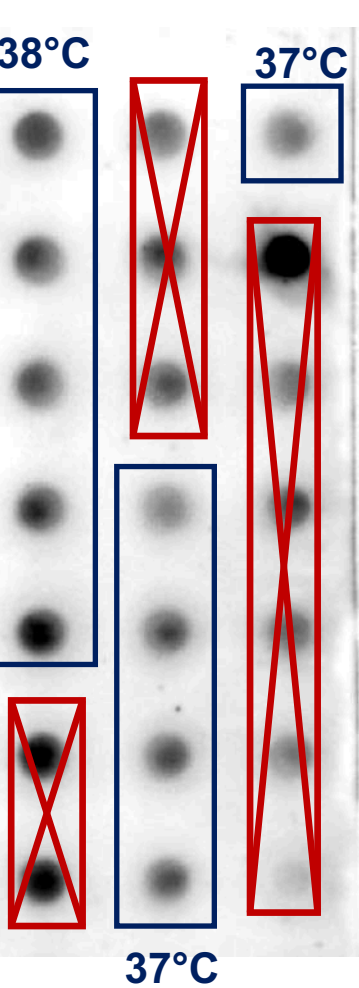
Experiment #1
CP13



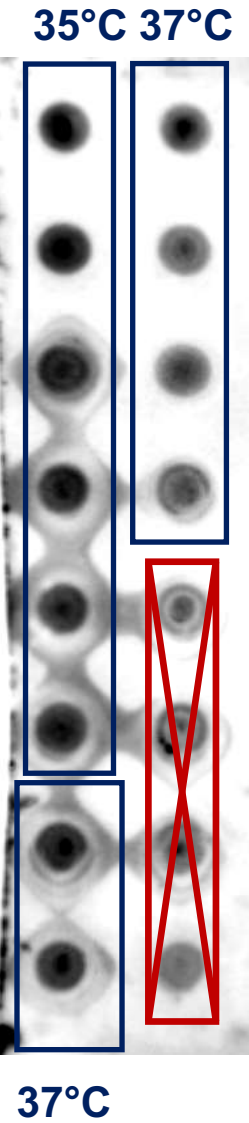
Experiment #2
CP13



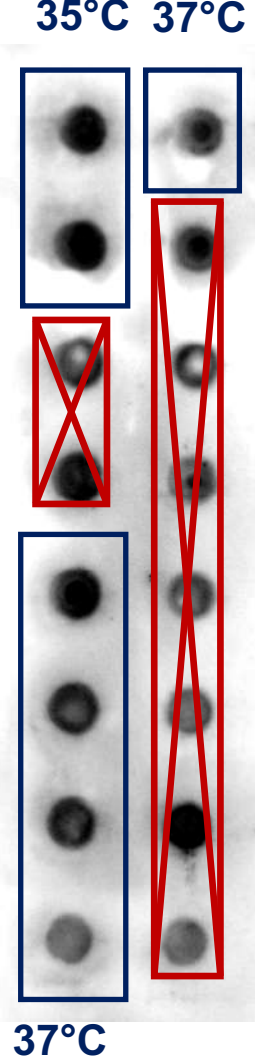
Experiment #3
CP13



Experiment #1
T205



Experiment #2
T205



Experiment #3
T205

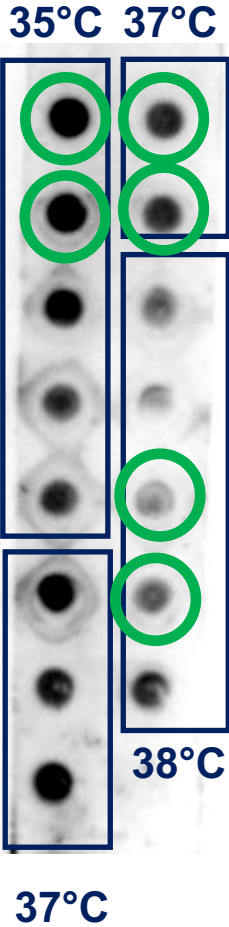


Figure 1 F,G

 *Unused condition*
 *Dot used in figure*

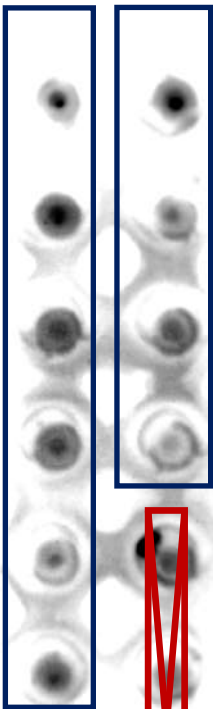
Experiment #1
AT100

Experiment #2
AT100

Experiment #1
MC6

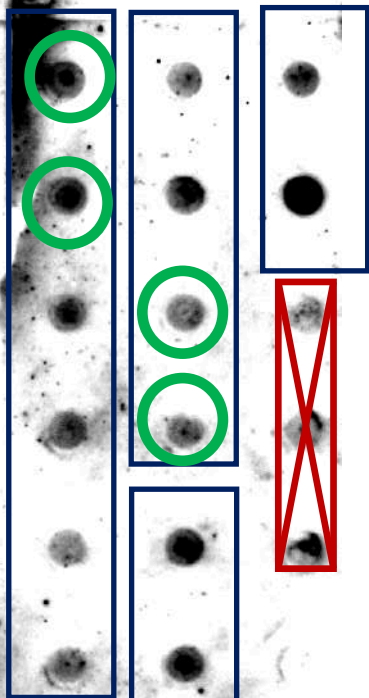
Experiment #2
MC6

37°C 38°C



38°C

35°C 37°C 38°C

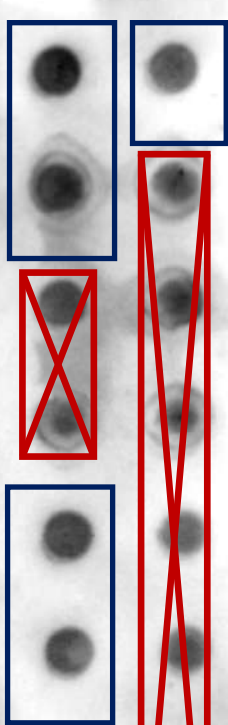


37°C



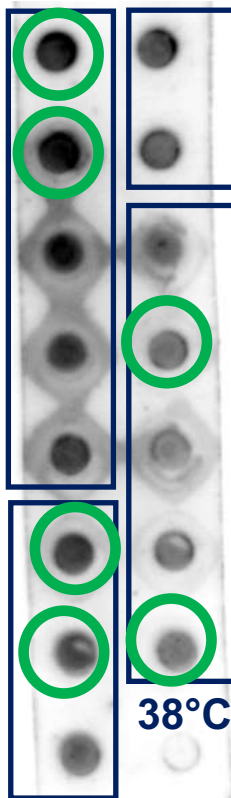
38°C

35°C 37°C



37°C

35°C 37°C



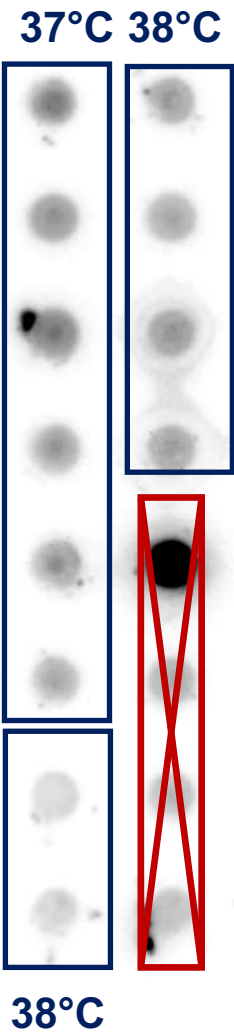
38°C

37°C

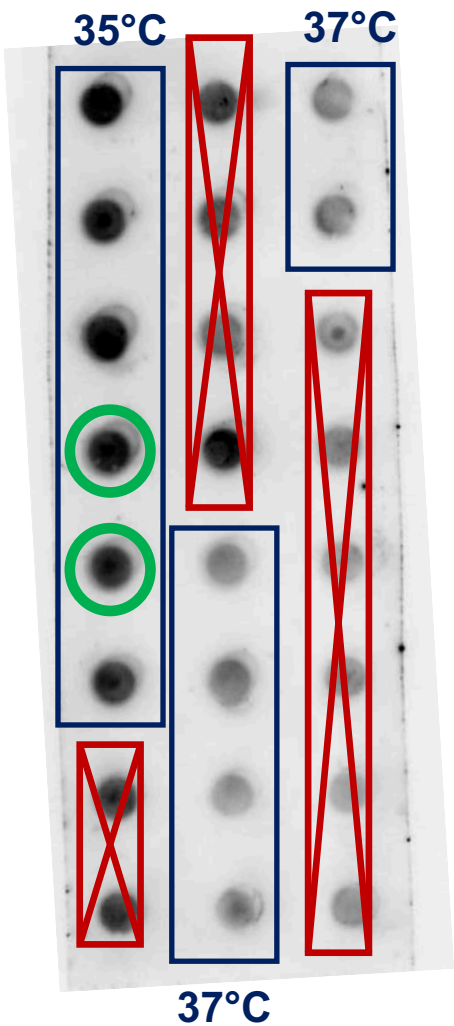
Figure 1 F,G

 *Unused condition*
 *Dot used in figure*

Experiment #1
PHF1



Experiment #2
PHF1



Experiment #3
PHF1

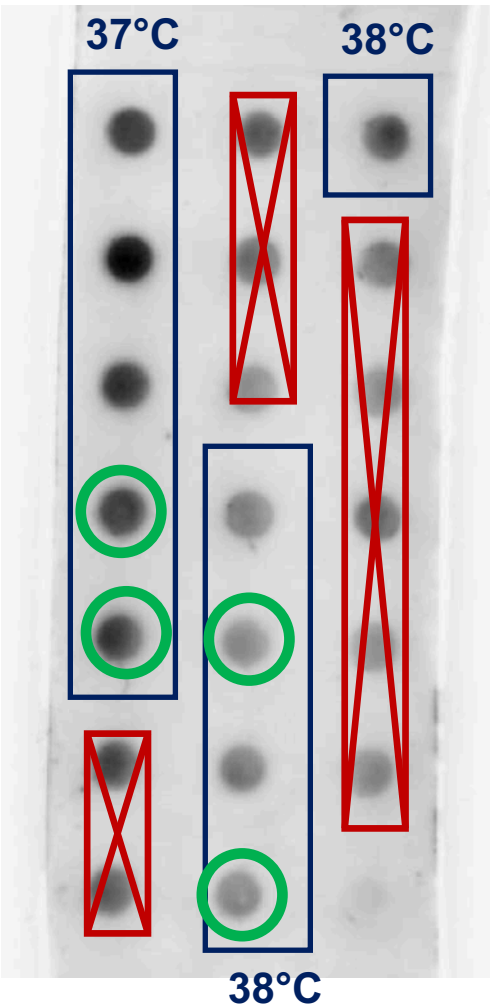


Figure 1 J,K

 Dot used in figure

Experiment #1
Total tau (Tau3R)

Experiment #2
Total Tau (Tau3R)

Experiment #1
pT205

Experiment #2
pT205

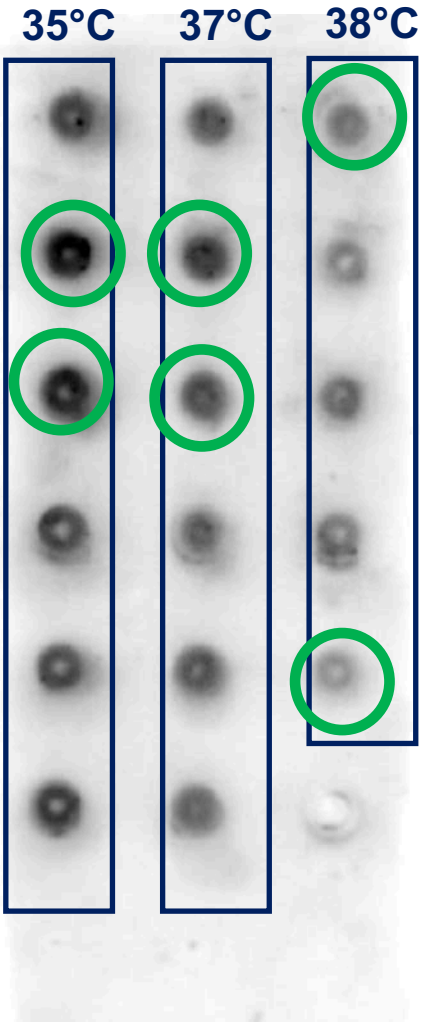
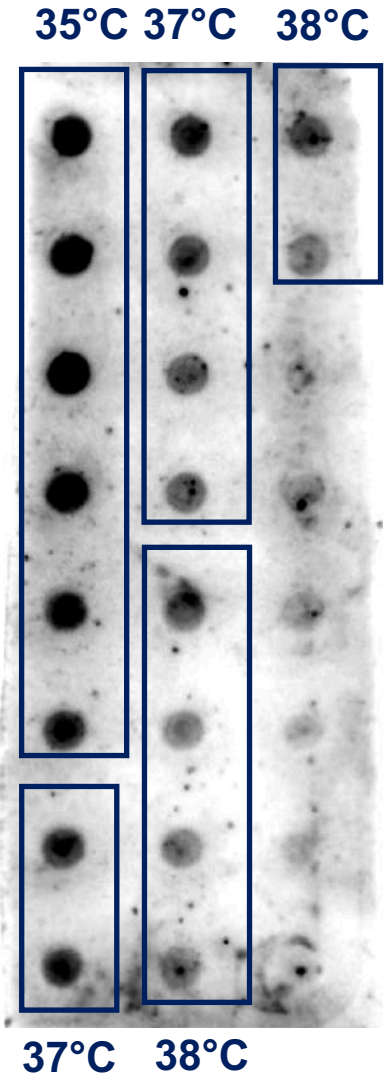
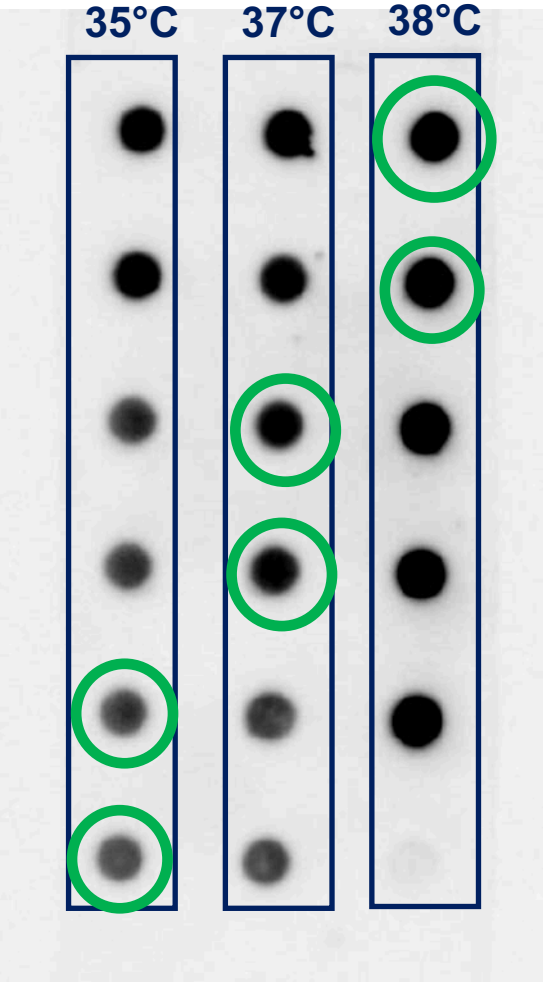
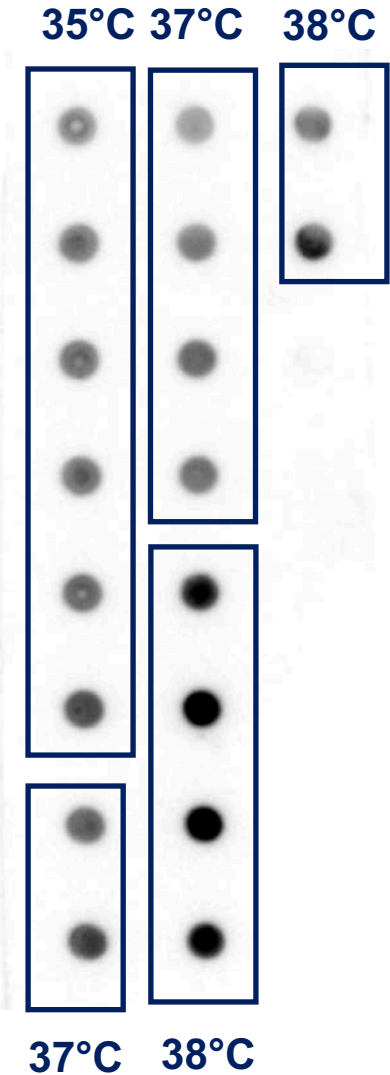


Figure 1 J,K

 Dot used in figure

Experiment #1
pS199

Experiment #2
pS199

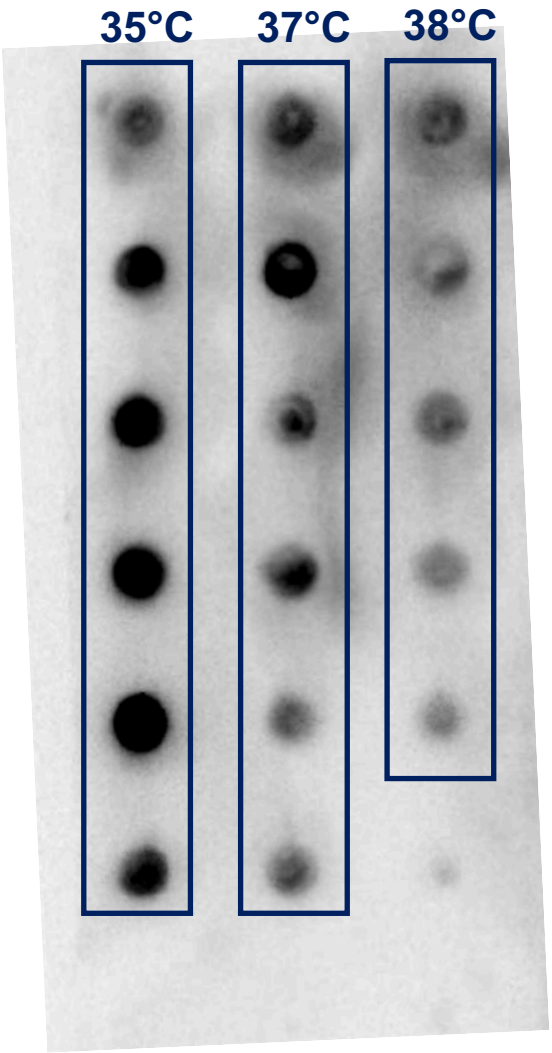
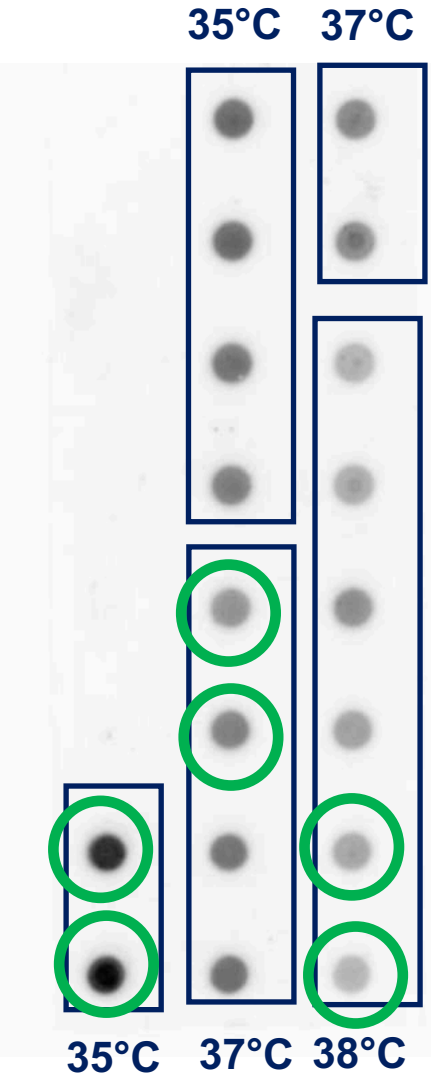
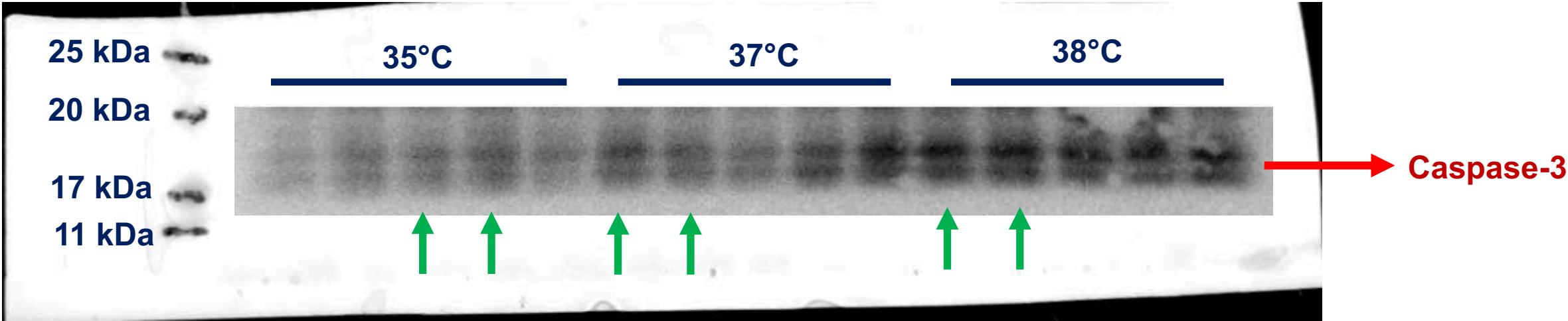


FIGURE 2

Figure 2B

→ Dot used in figure

Caspase-3 - SH-Tau3R



Corresponding Actin

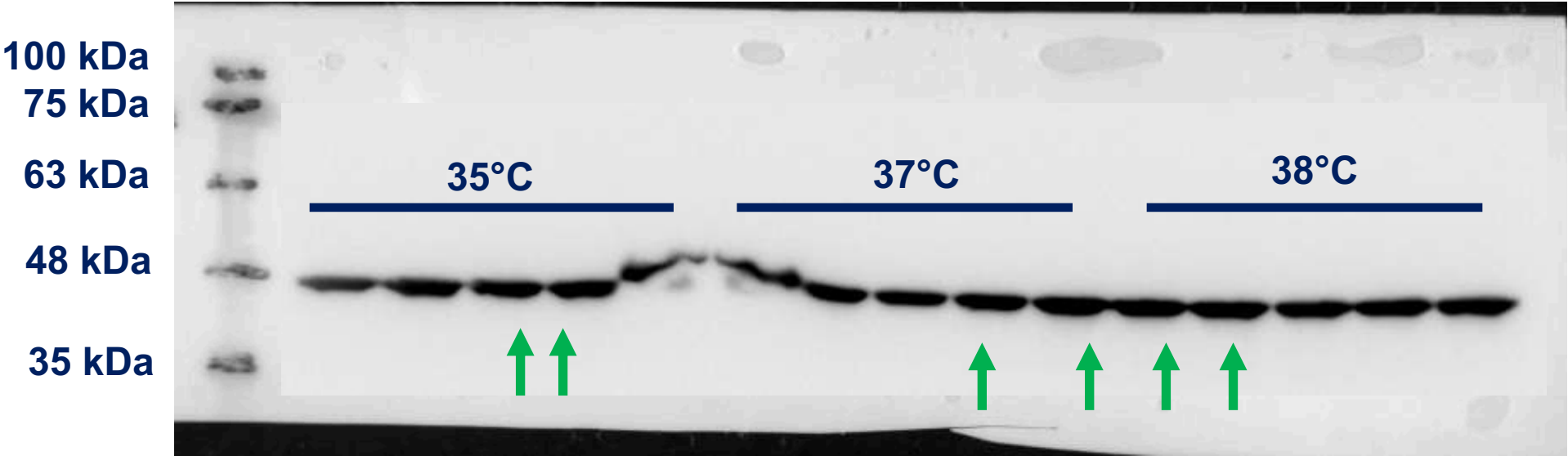
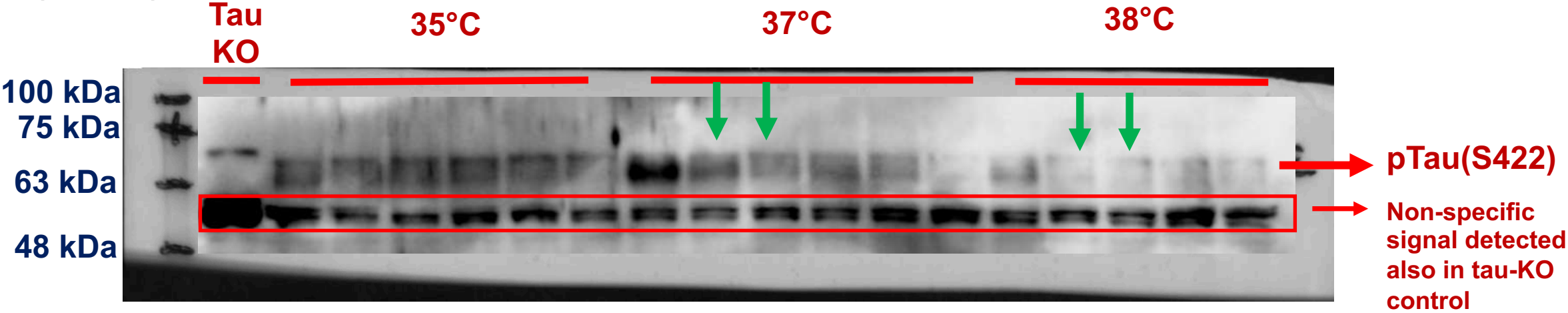


Figure 2B

→ Dot used in figure

pTau(Ser422) - SH-Tau3R



Corresponding total tau (TauC)

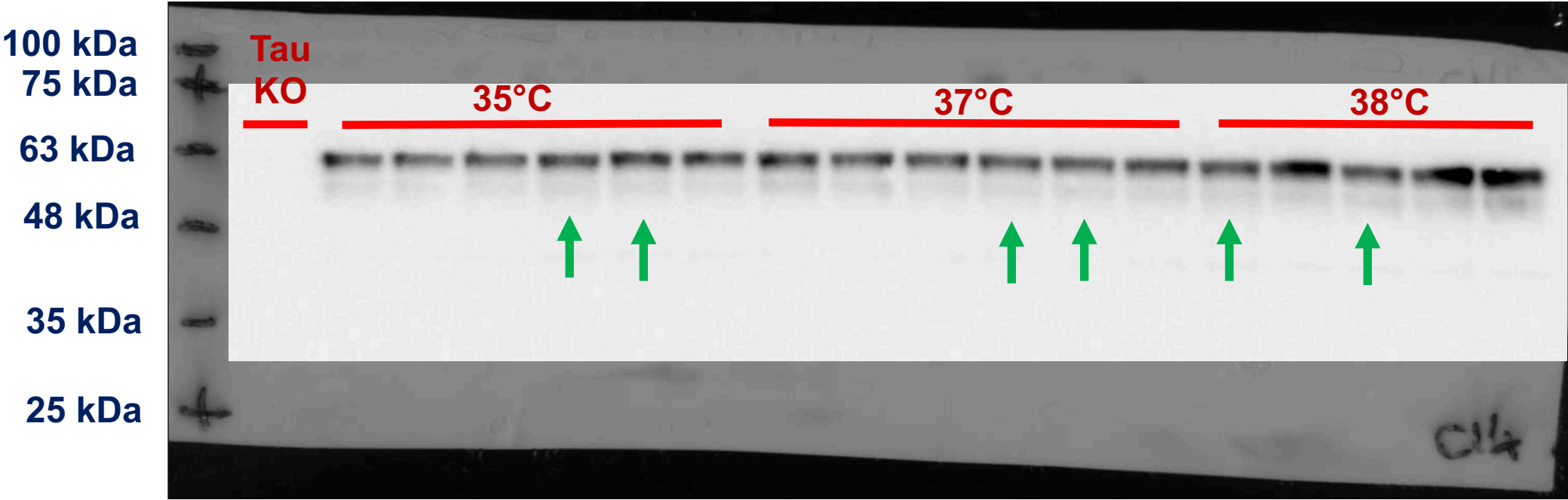
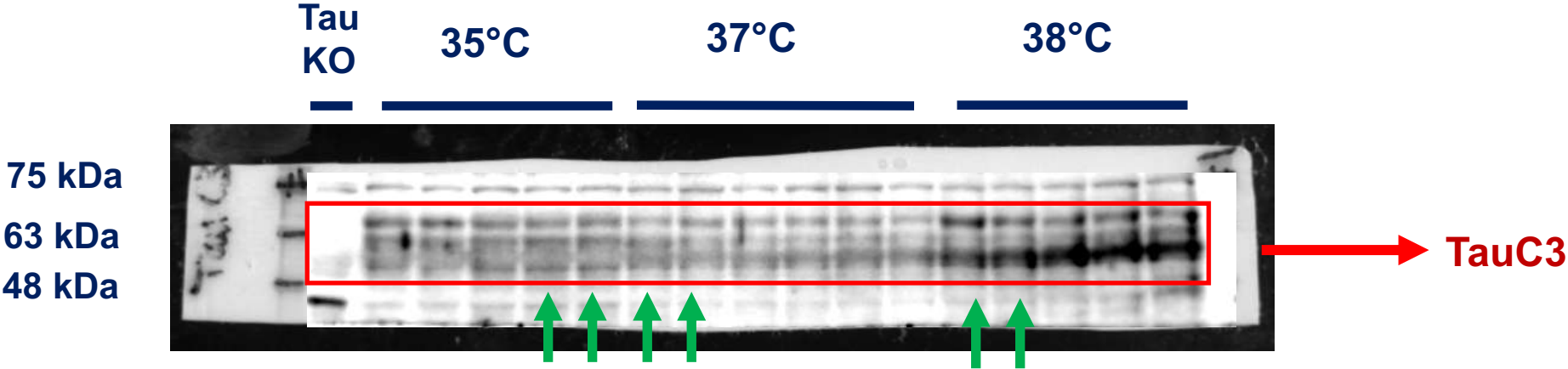


Figure 2B

→ Dot used in figure

TauC3 - SH-Tau3R



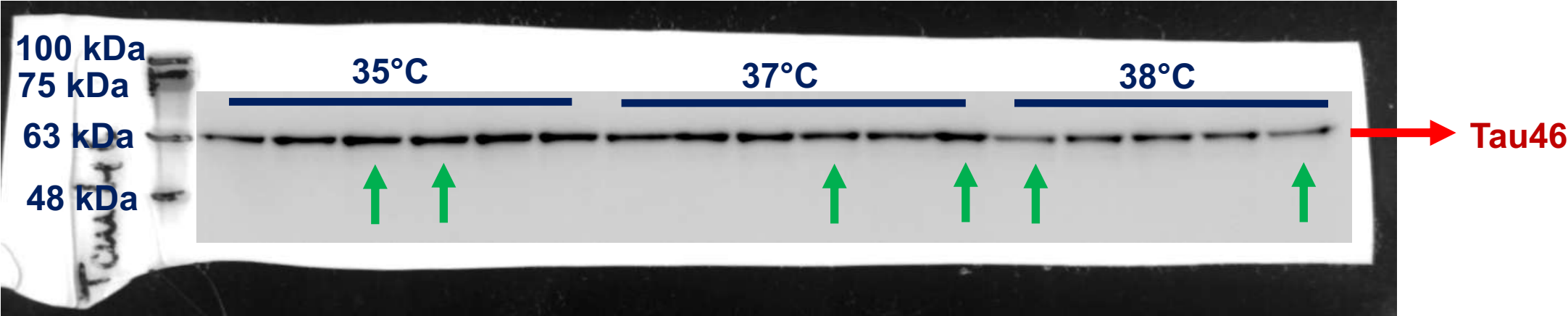
Corresponding actin



Figure 2B

→ Dot used in figure

Tau46 - SH-Tau3R



Corresponding Actin

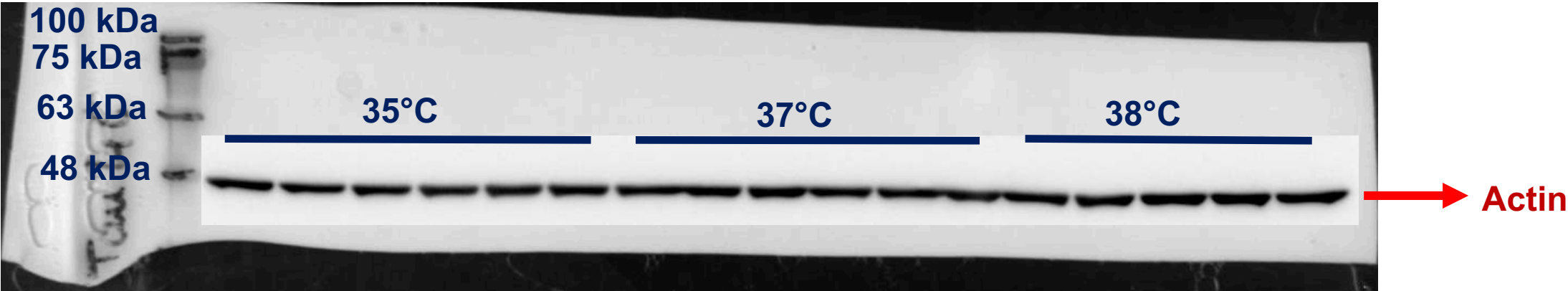
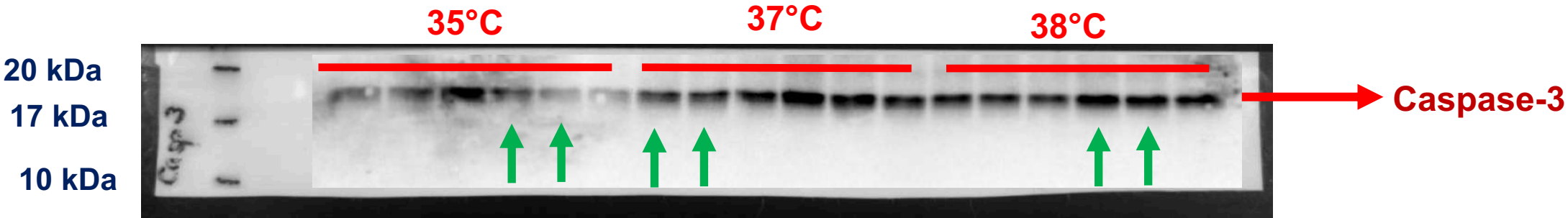


Figure 2B

→ Dot used in figure

Caspase-3 – Primary neurons



Corresponding actin

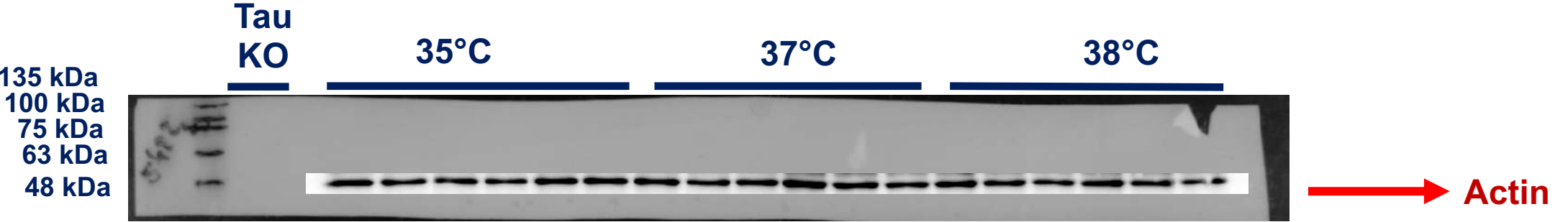
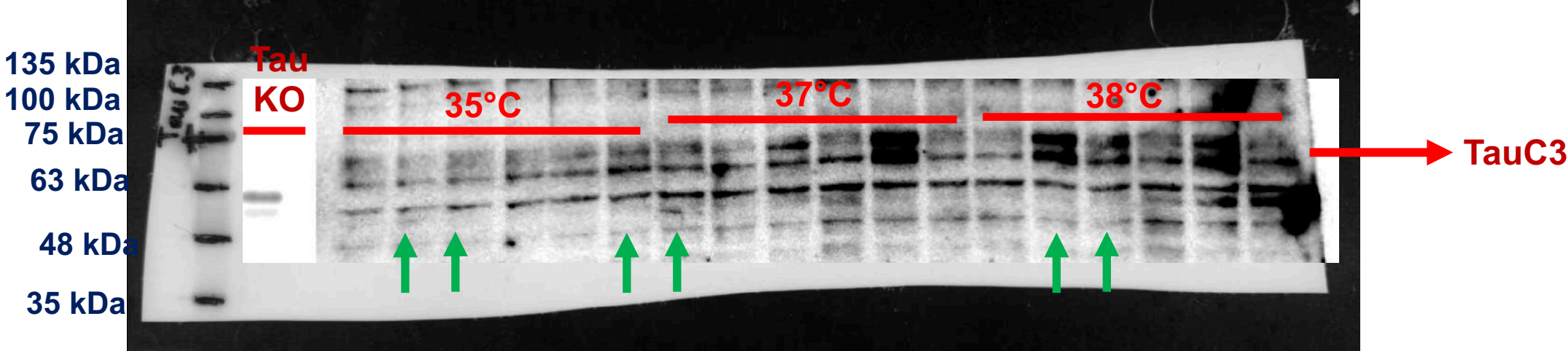


Figure 2B

→ Dot used in figure

TauC3 – Primary neurons



Corresponding actin

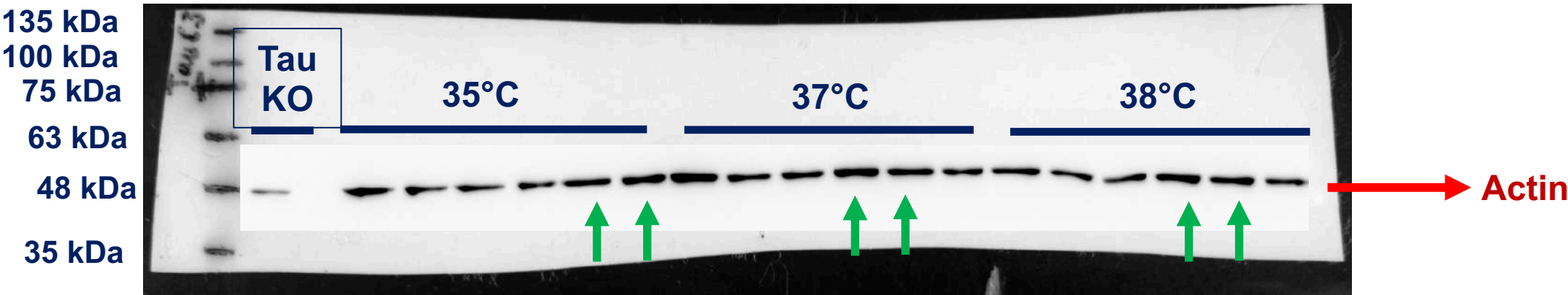
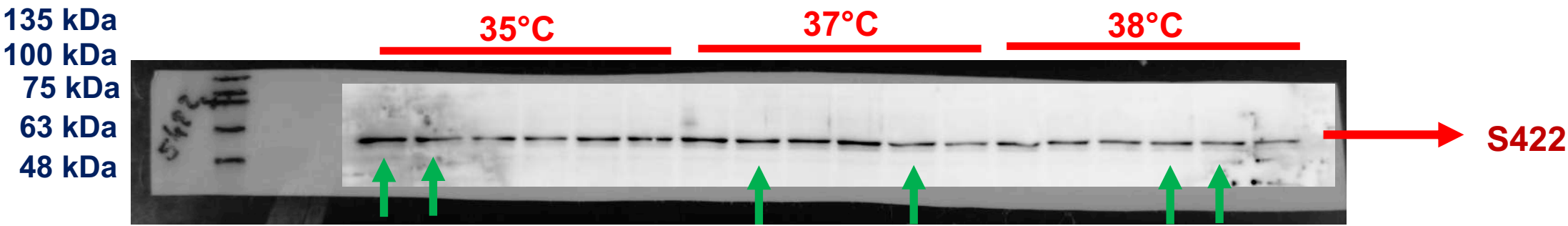


Figure 2B

→ Dot used in figure

S422 – Primary neurons



Corresponding Total tau

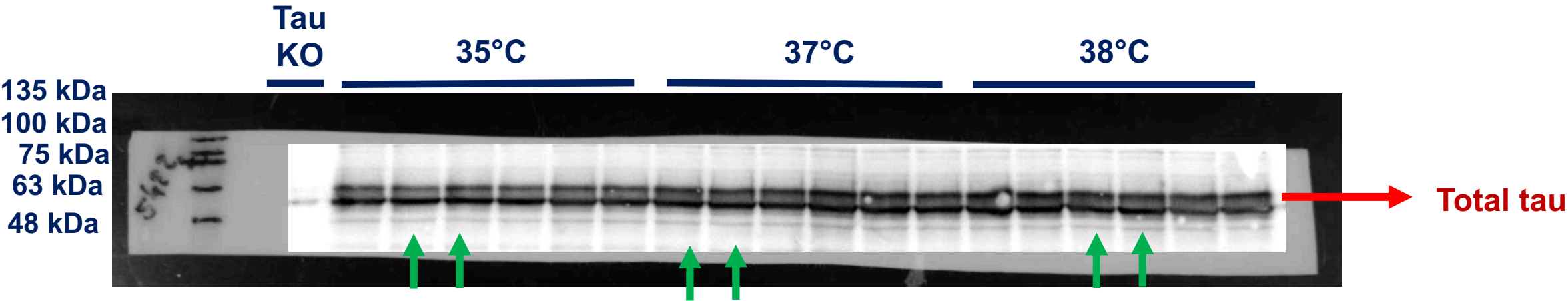
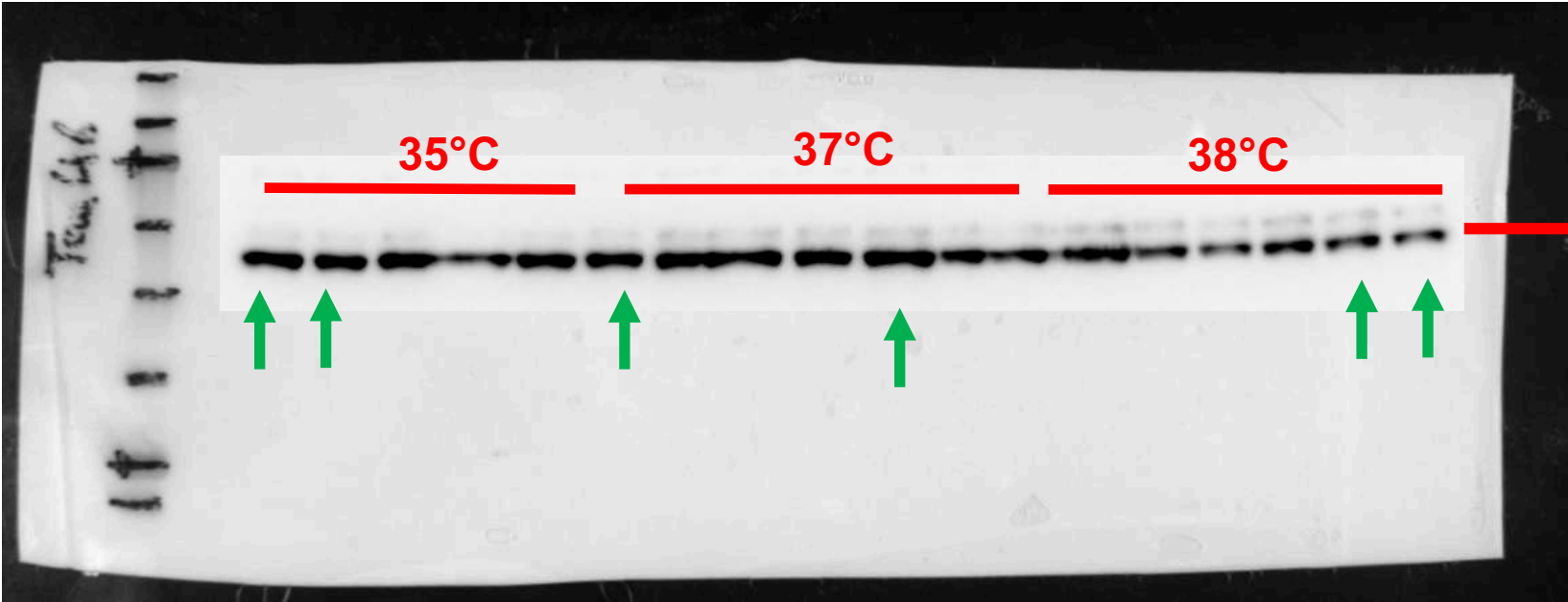


Figure 2B

→ Dot used in figure

Tau46 – Primary neurons

135 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa



Corresponding actin

48 kDa
35 kDa
25 kDa
20 kDa

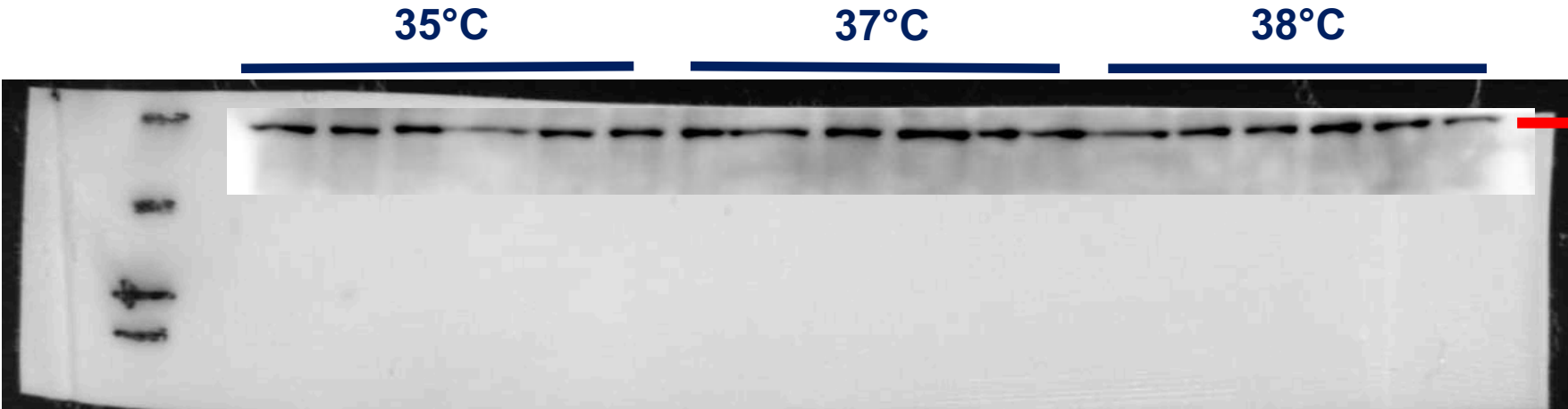
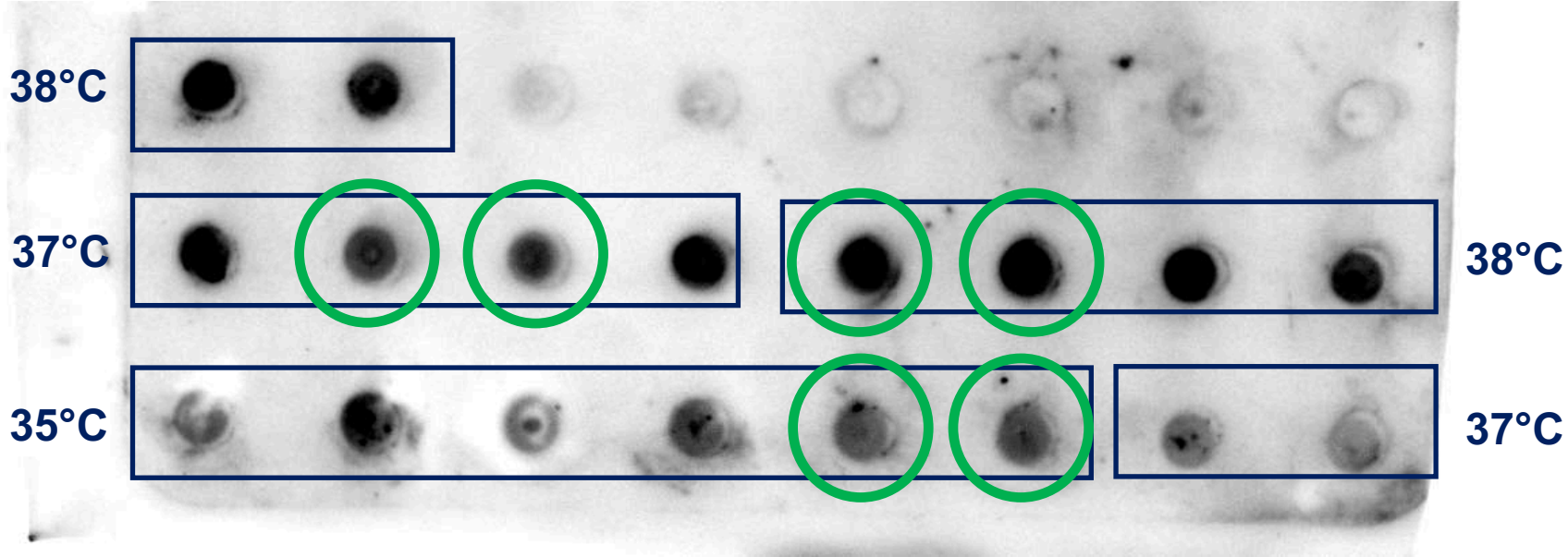


Figure 2D

 Dot used in figure

Experiment #1
TauC3 - SH-Tau3R



Experiment #2
TauC3 - SH-Tau3R

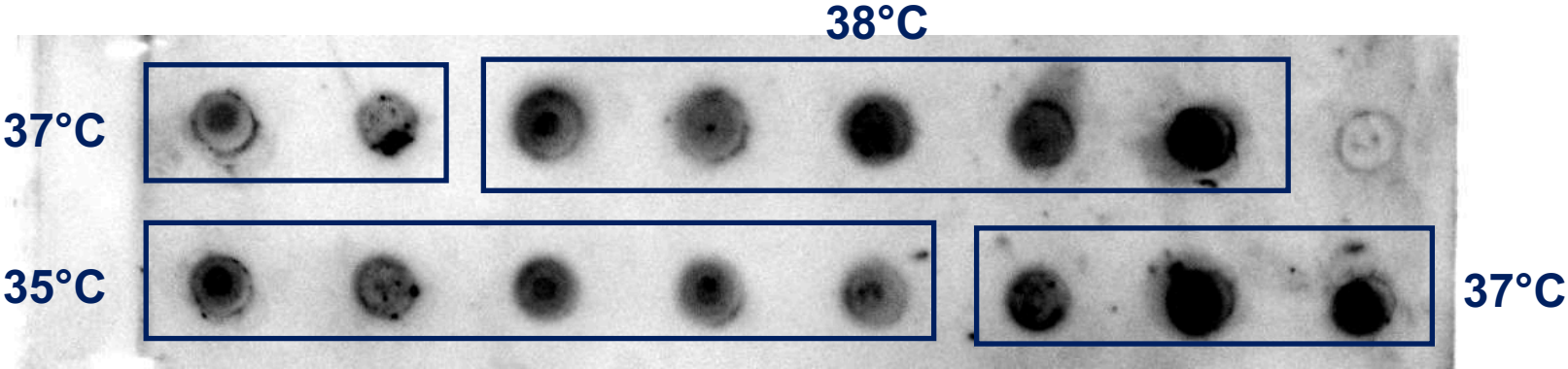
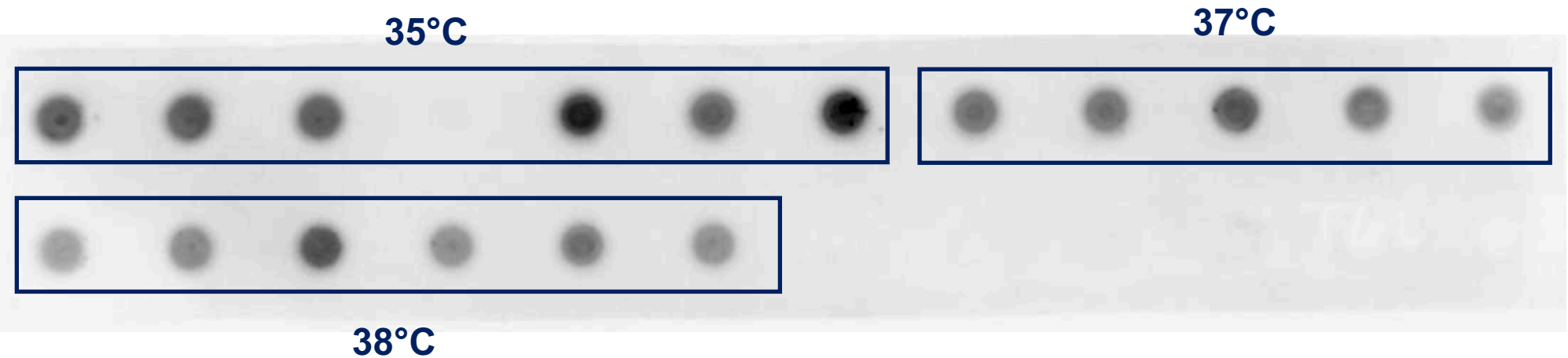


Figure 2D

 Dot used in figure

Experiment #1
Tau46 – SH-Tau3R



Experiment #2
Tau46 – SH-Tau3R

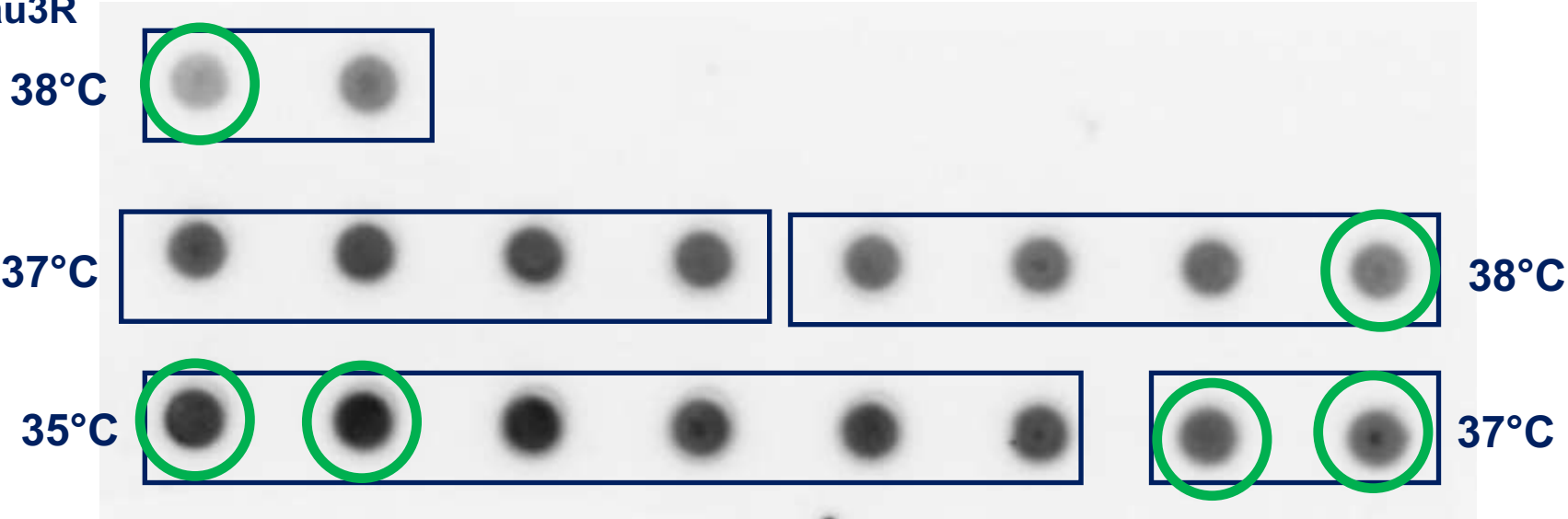
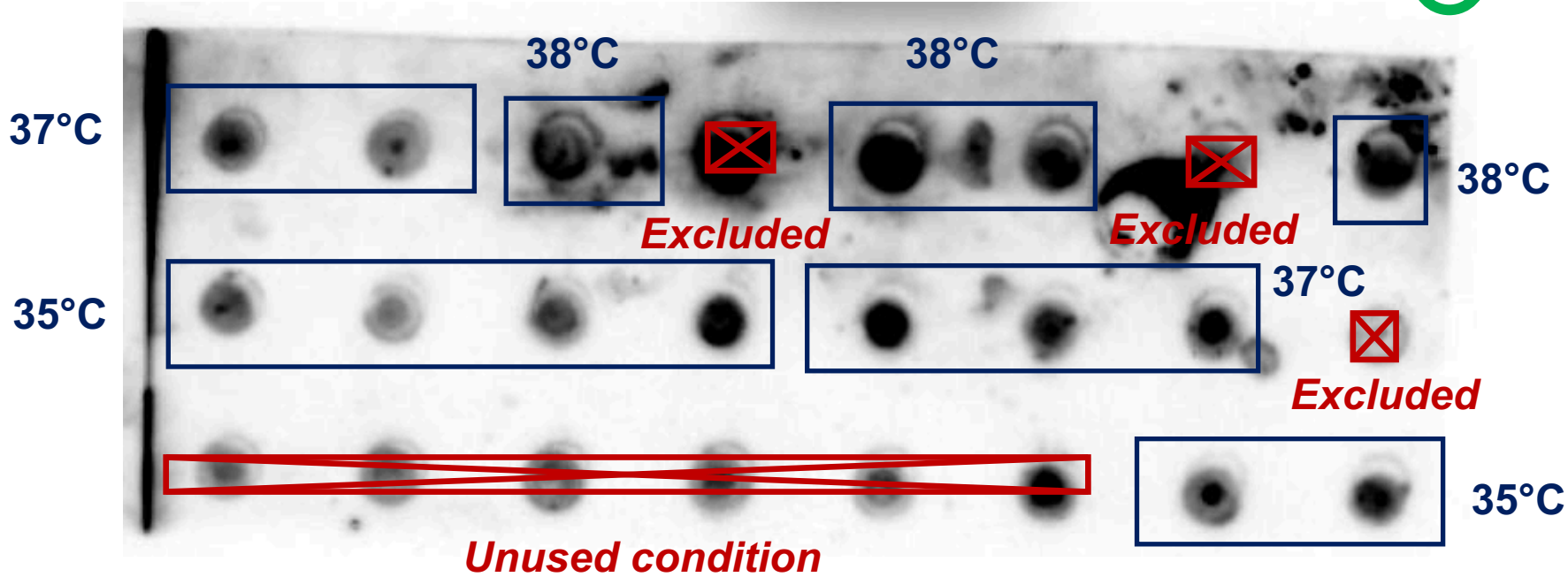


Figure 2D

 Dot used in figure

Experiment #1
TauC3 – Primary
Neurons



Experiment #2
TauC3 – Primary Neurons

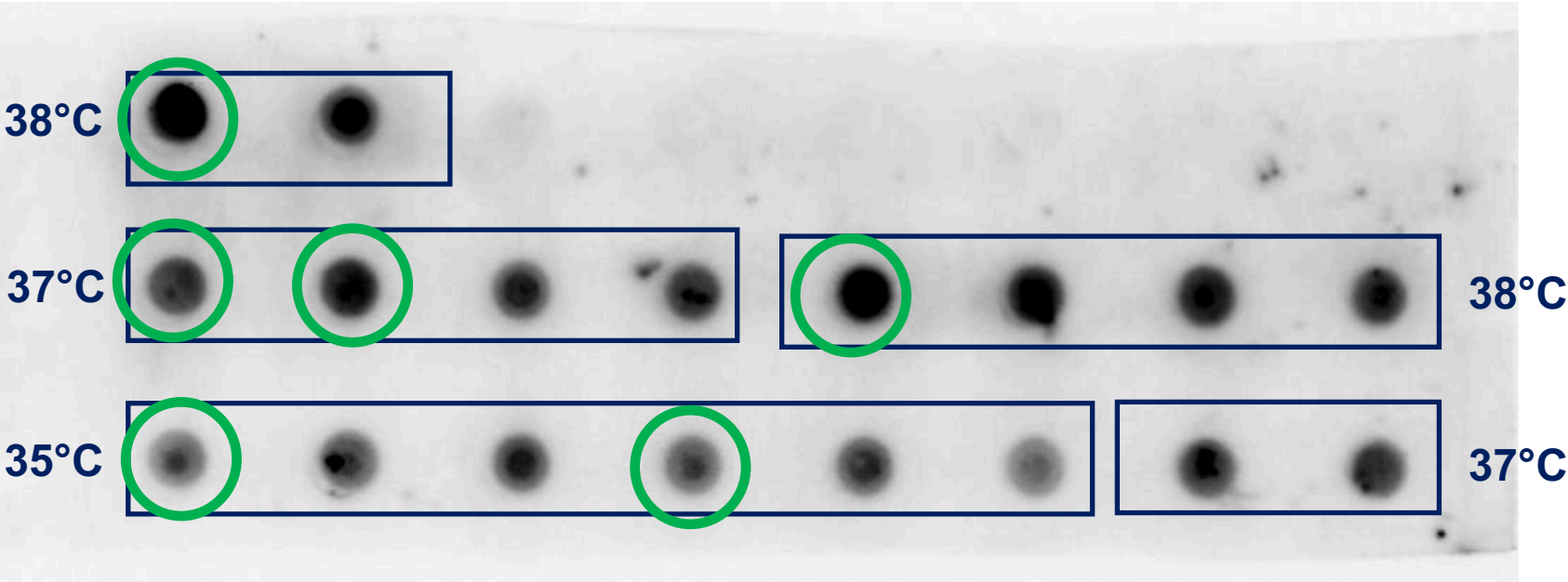


Figure 2D

 *Dot used in figure*

Tau46 – Primary Neurons

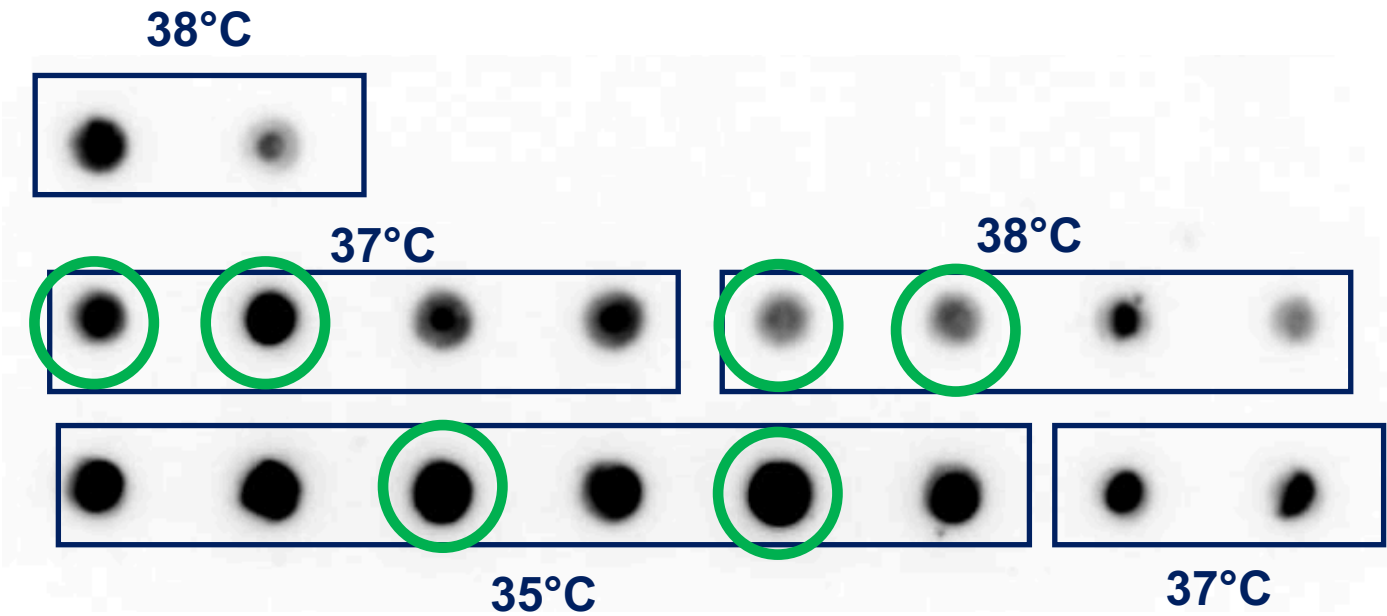
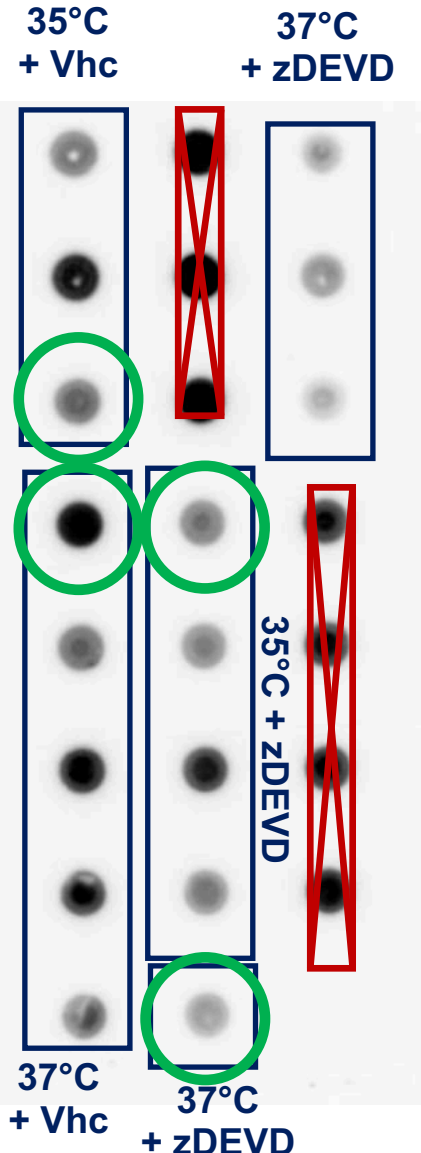


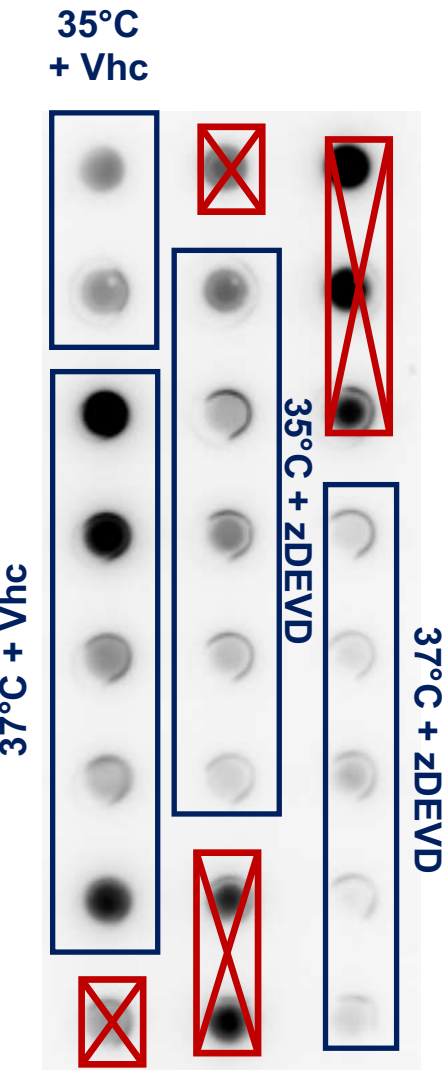
Figure 2F

 Dot used in figure  Unused condition

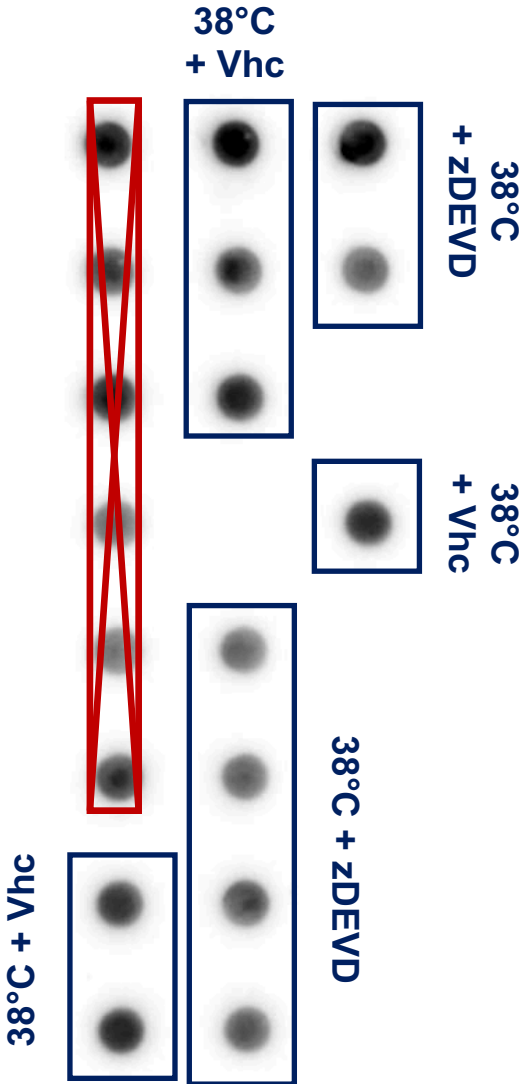
Experiment #1
Total Tau



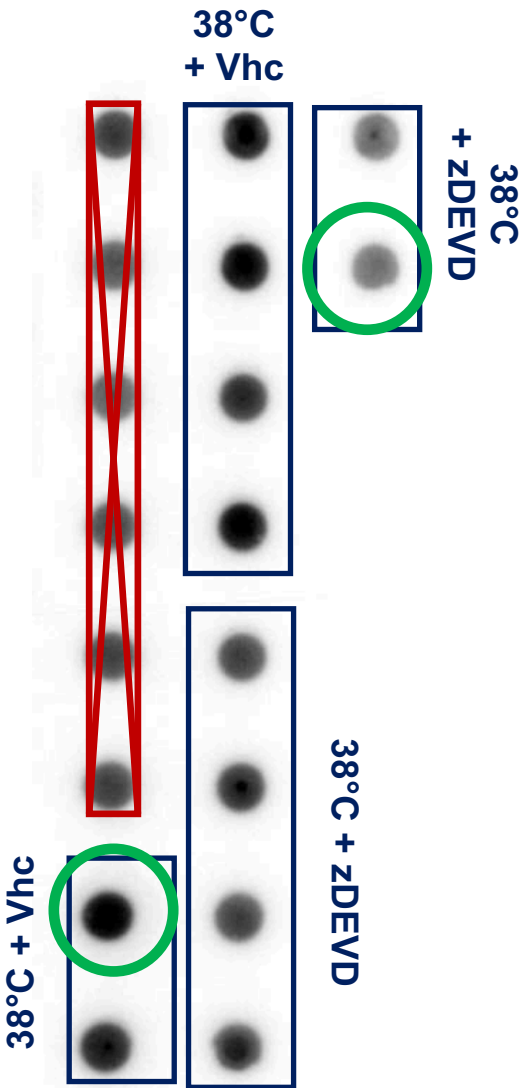
Experiment #2
Total Tau



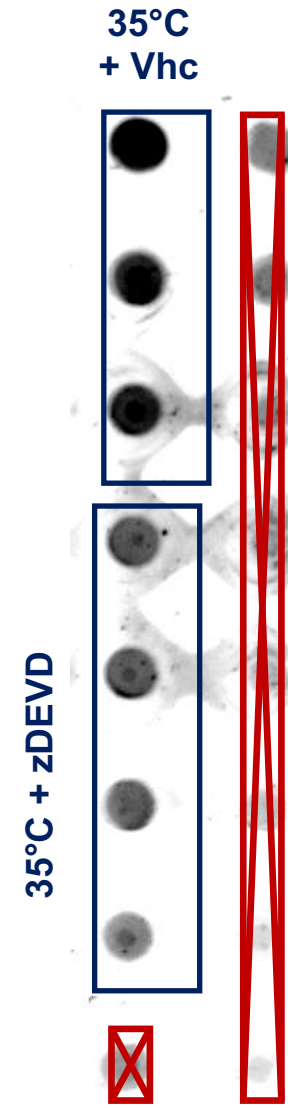
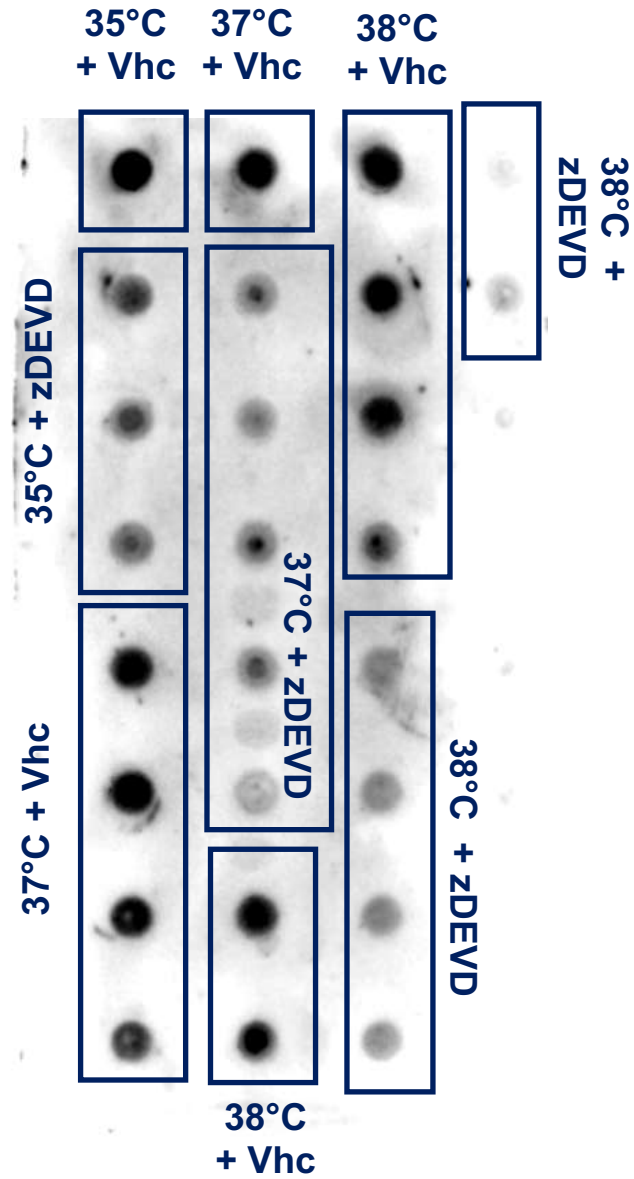
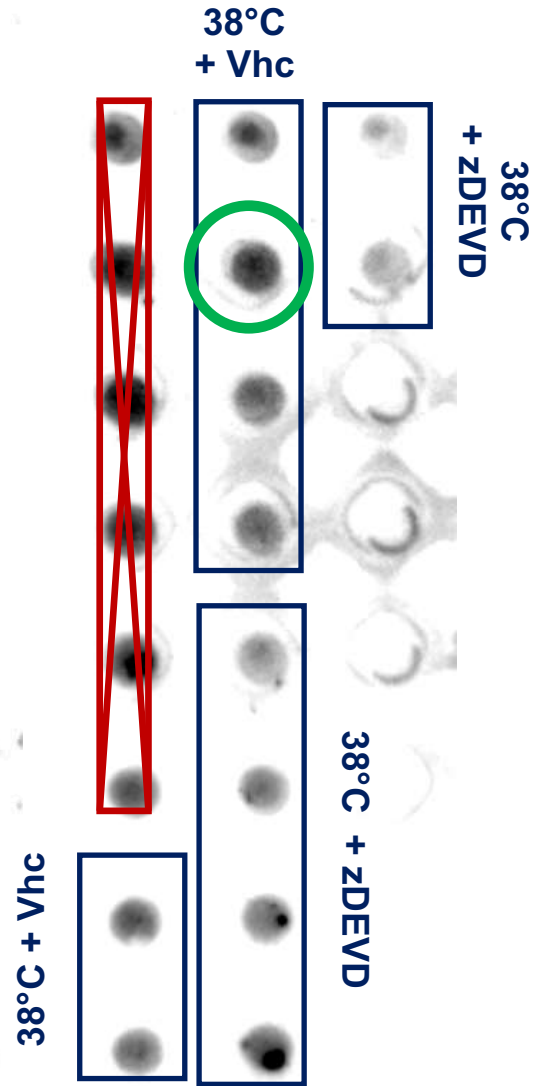
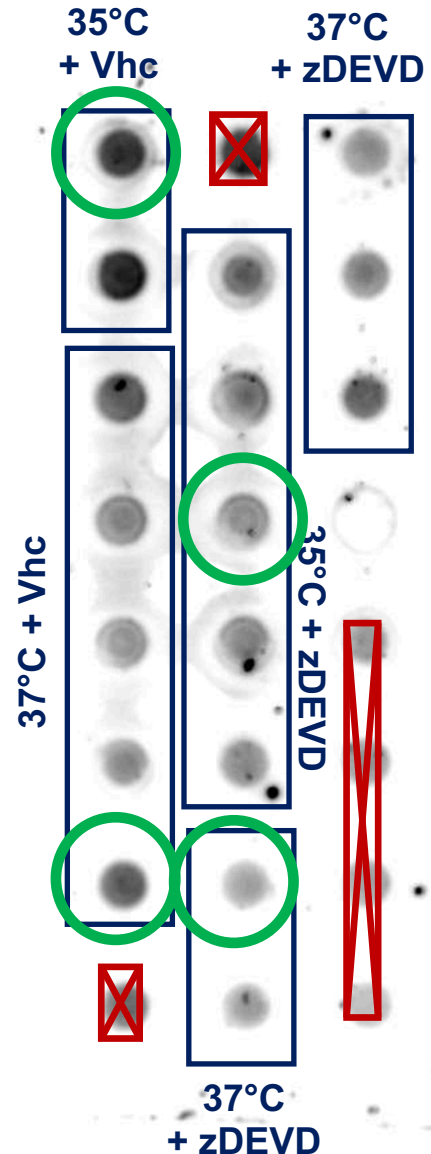
Experiment #3
Total tau



Experiment #4
Total tau



 *Dot used in figure*  *Unused condition*



 *Dot used in figure*  *Unused condition*

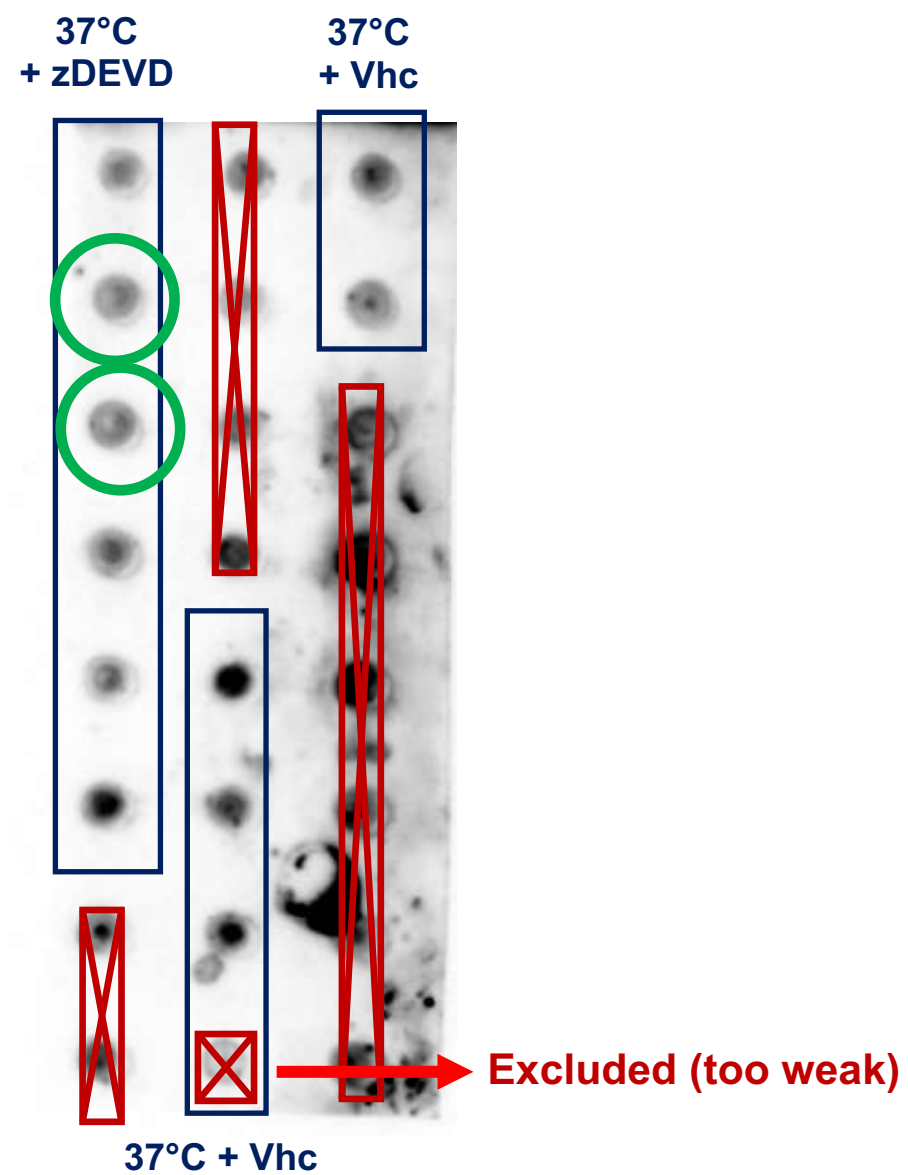
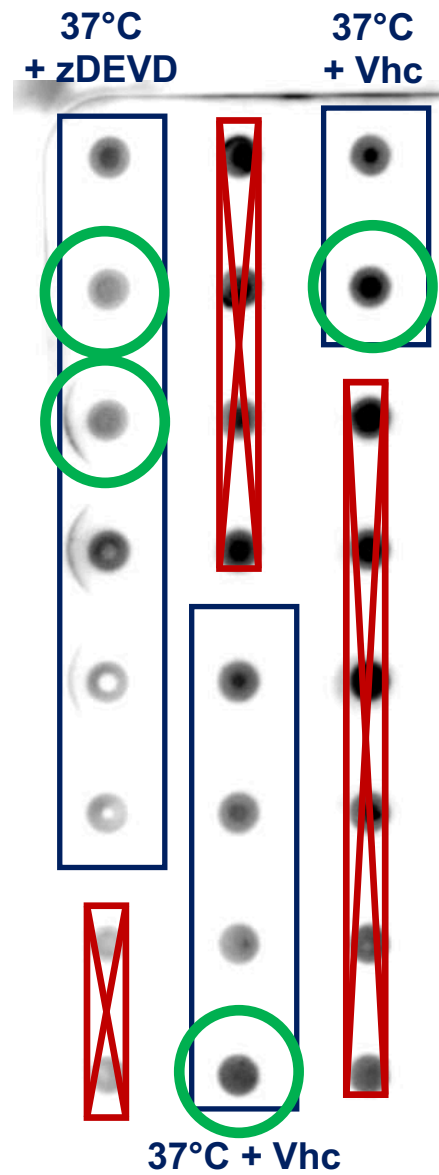
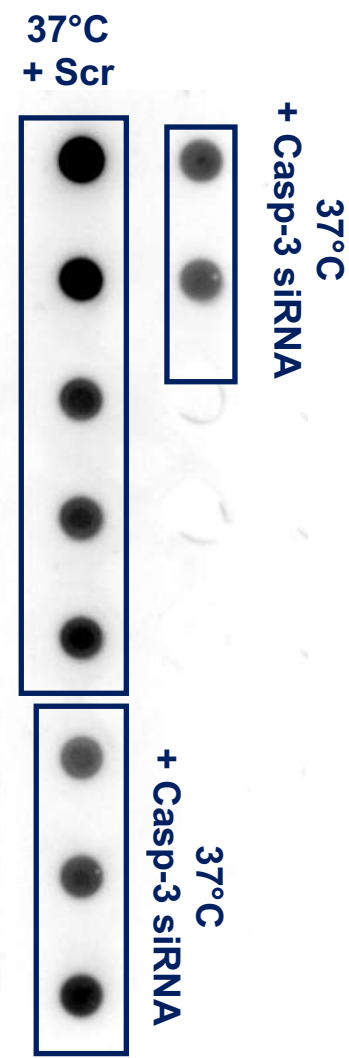


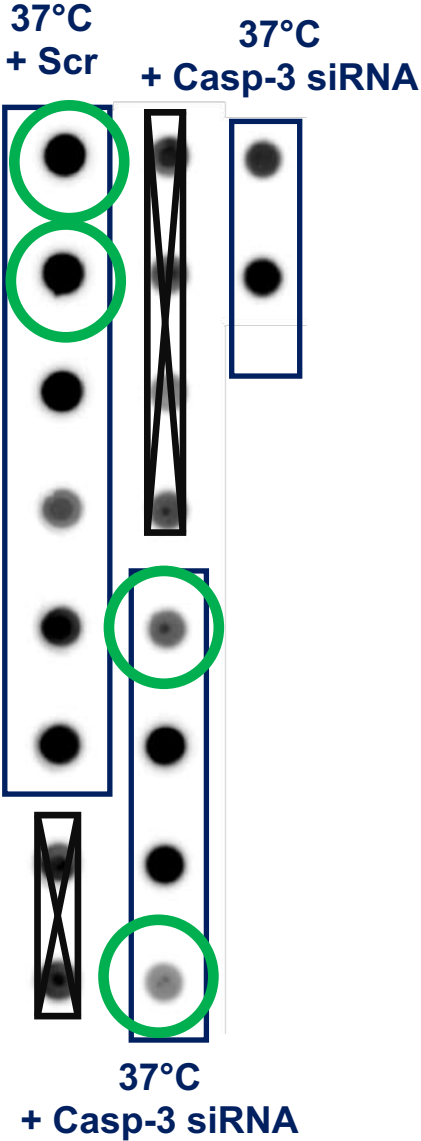
Figure 2I

 Dot used in figure

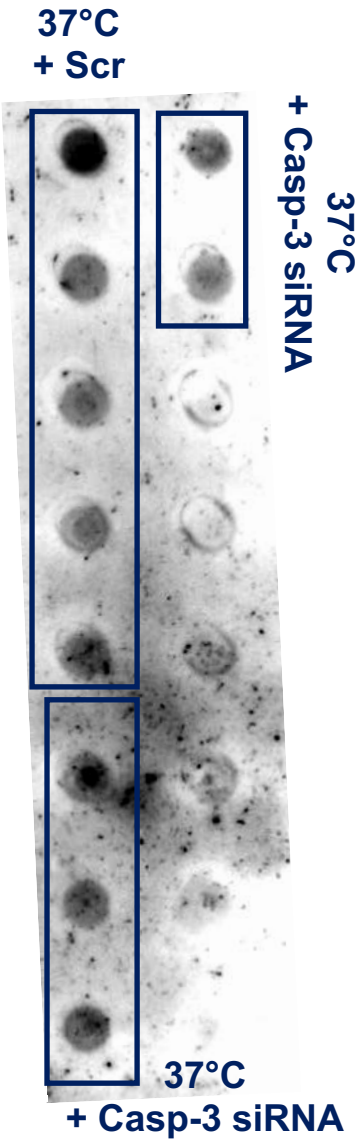
Experiment #1
Total Tau



Experiment #2
Total Tau



Experiment #1
TauC3



Experiment #2
TauC3

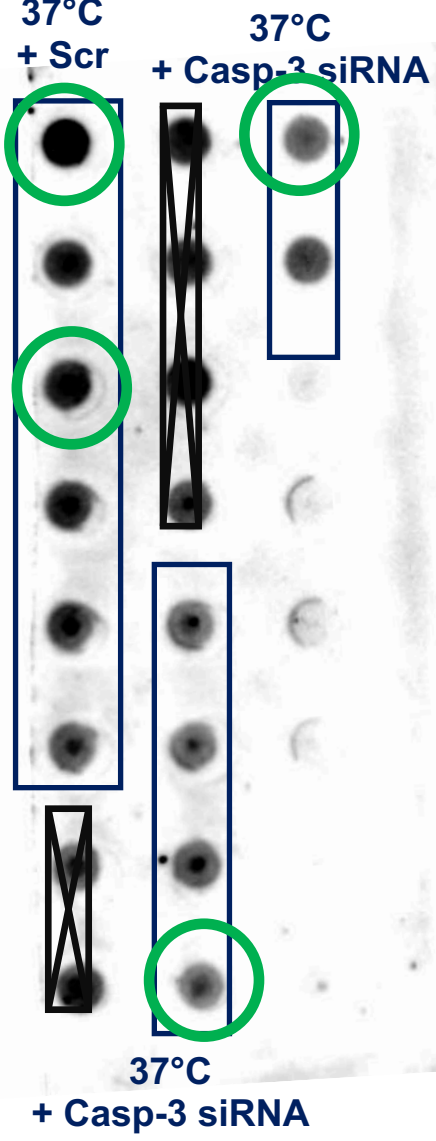


FIGURE 3

Figure 3A,B **Syndecan-3 – SH-Tau3R**

→ *Dot used in figure*

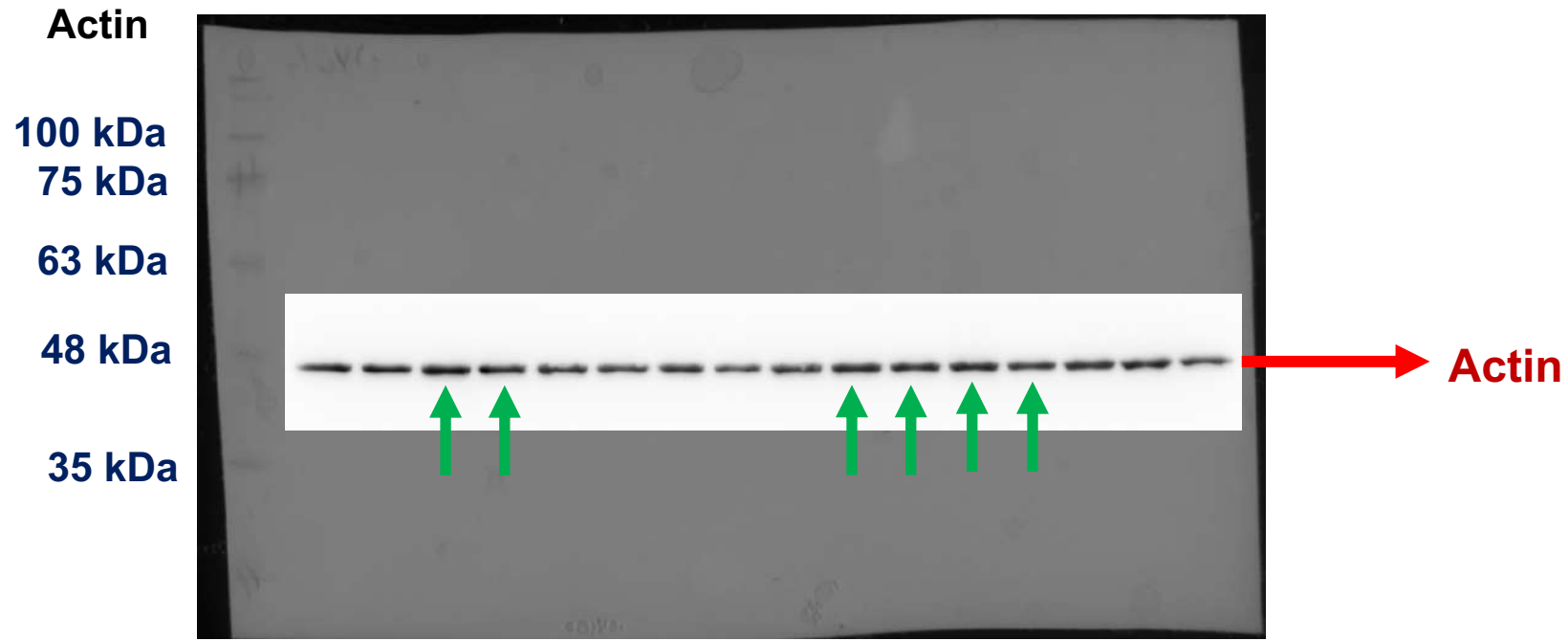
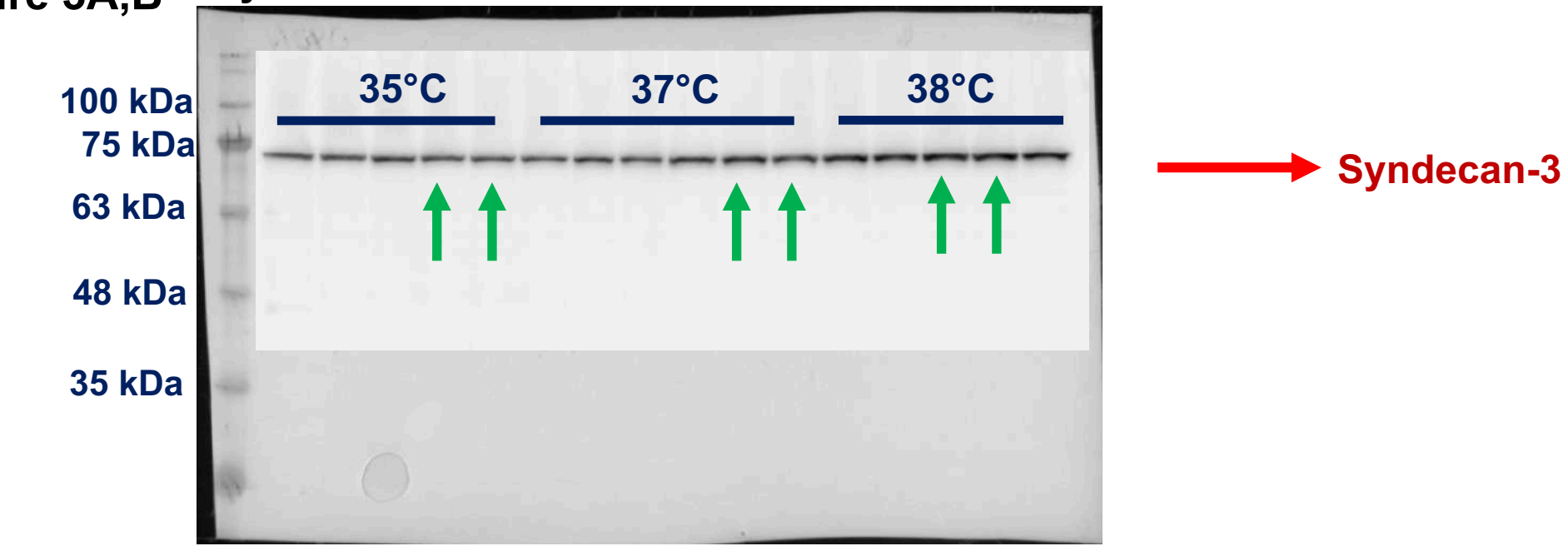
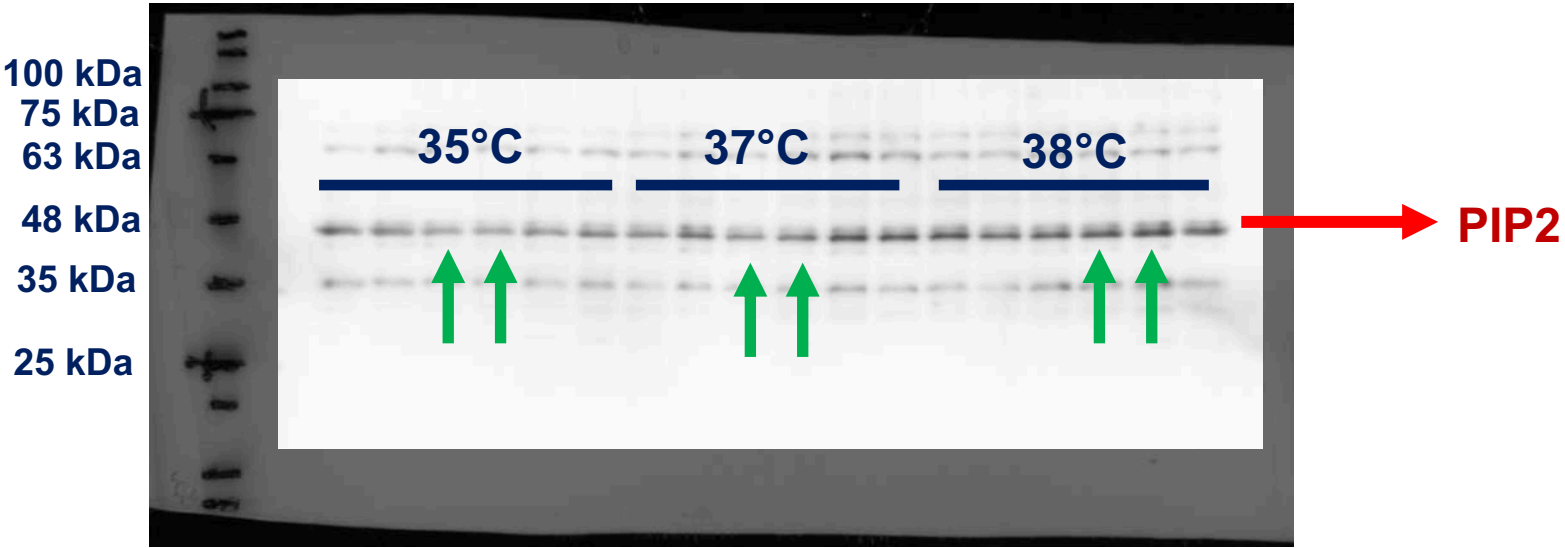


Figure 3A,B

→ Dot used in figure

PIP2 – SH-Tau3R



Actin

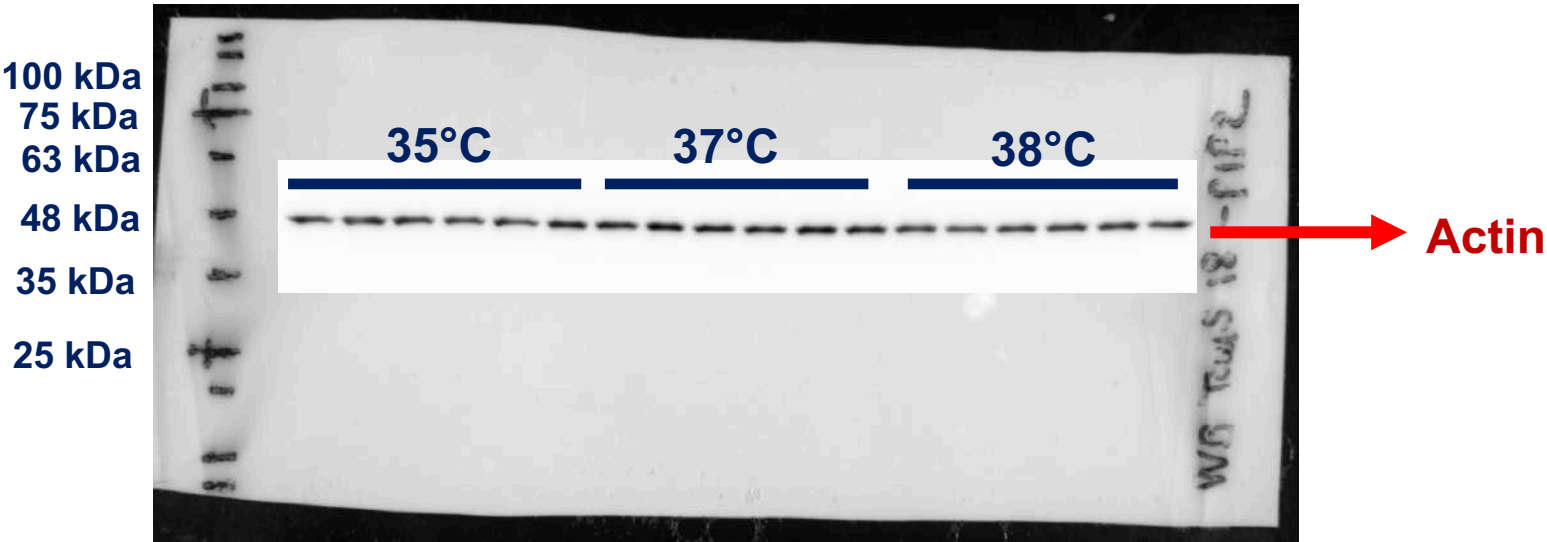


Figure 3A,B **Syndecan-3 – Primary neurons** ➡ *Dot used in figure*

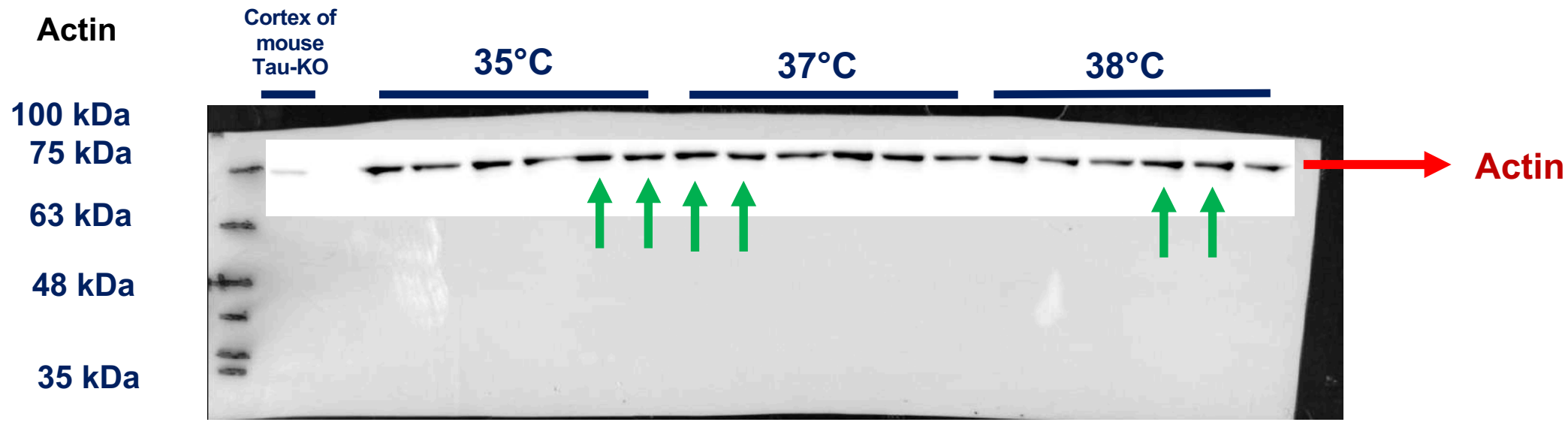
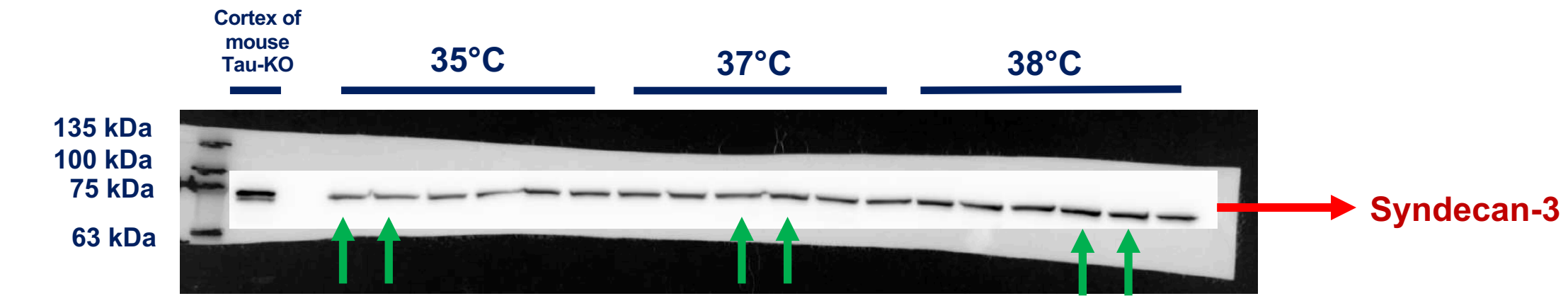
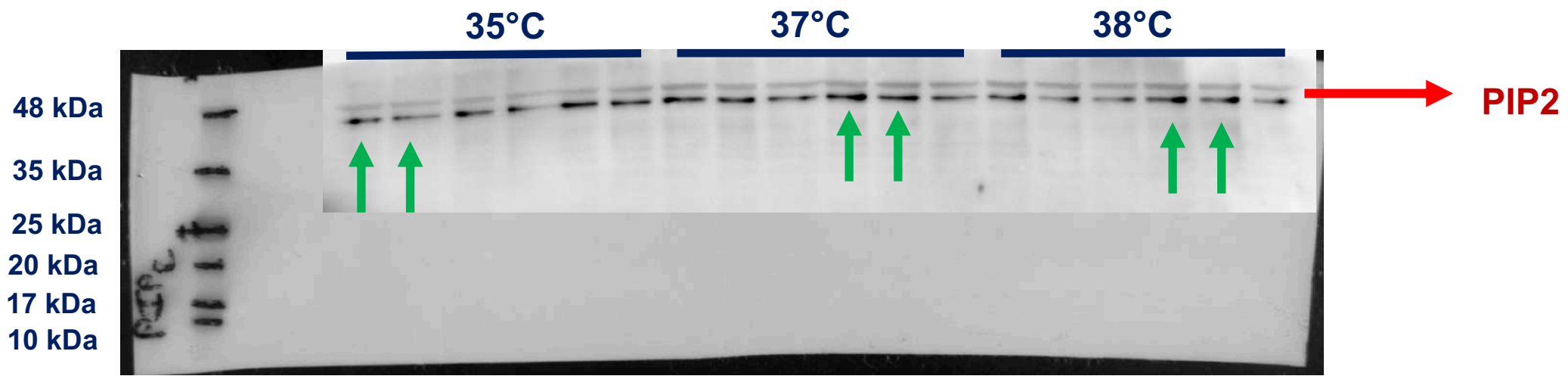


Figure 3A,B

PIP2 – Primary neurons

→ Dot used in figure



Actin

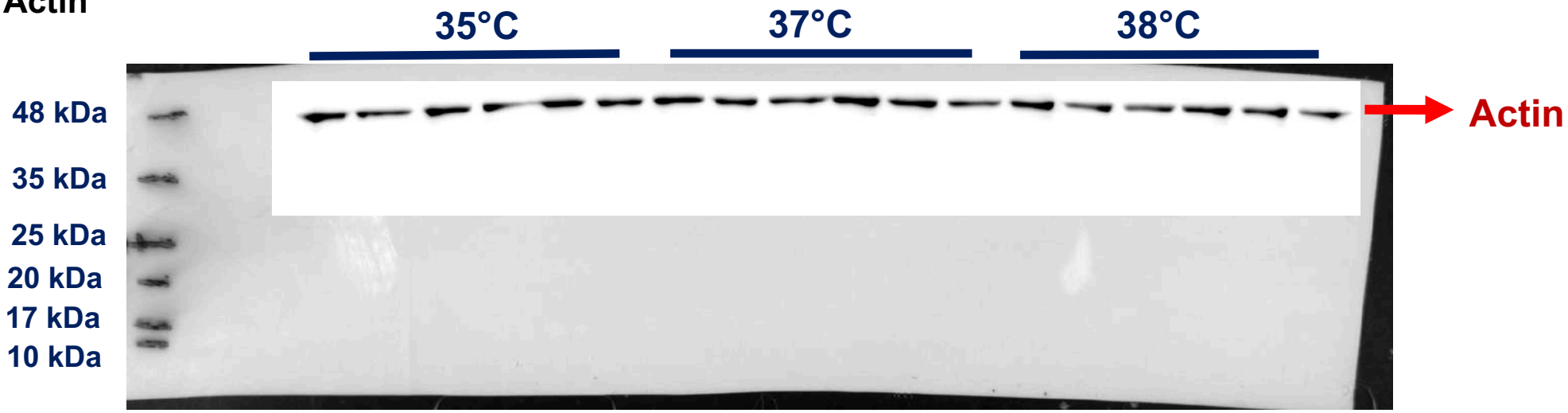


FIGURE 4

Figure 4A

 *Dot used in figure*

Total tau

Scrambled siRNA

Caspase-3 siRNA



Syndecan-3 siRNA

Caspase-3 siRNA
+
Syndecan-3 siRNA

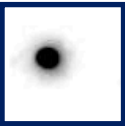
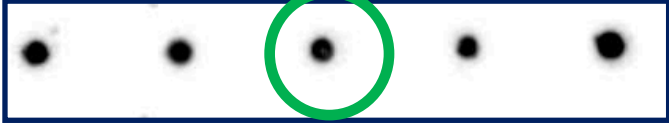
Figure 4B

 Dot used in figure

TauC3 – first duplicate

Scrambled siRNA

Caspase-3 siRNA



Syndecan-3 siRNA

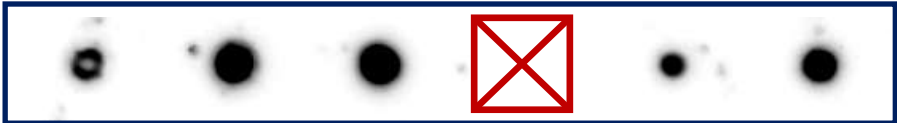
Caspase-3 siRNA +
Syndecan-3 siRNA

Caspase-3 siRNA

TauC3 – second duplicate

Scrambled siRNA

Caspase-3 siRNA



Syndecan-3 siRNA

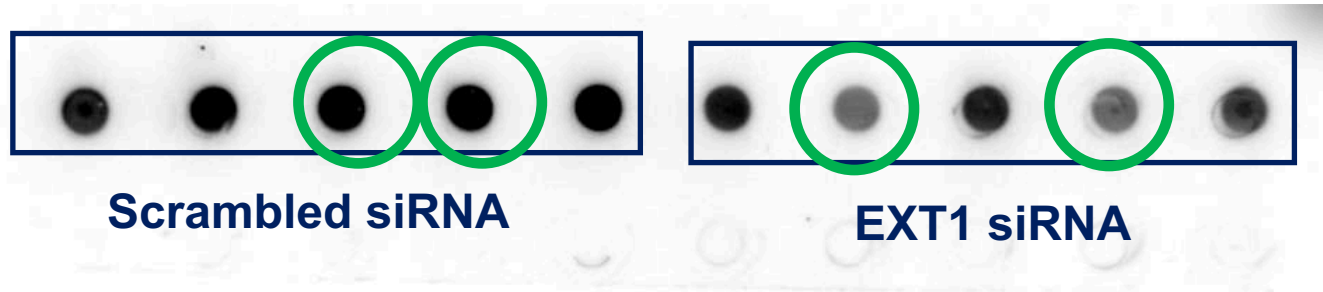
Caspase-3 siRNA +
Syndecan-3 siRNA

Figure 4C

 *Dot used in figure*

Total tau

Experiment #1



Experiment #2

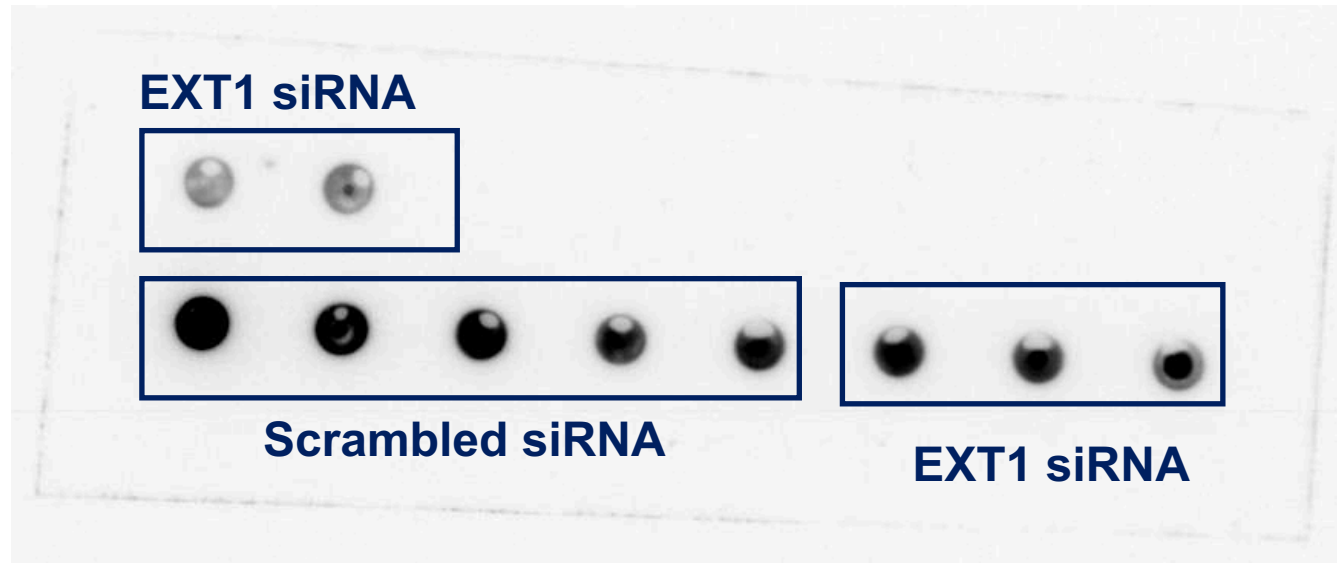
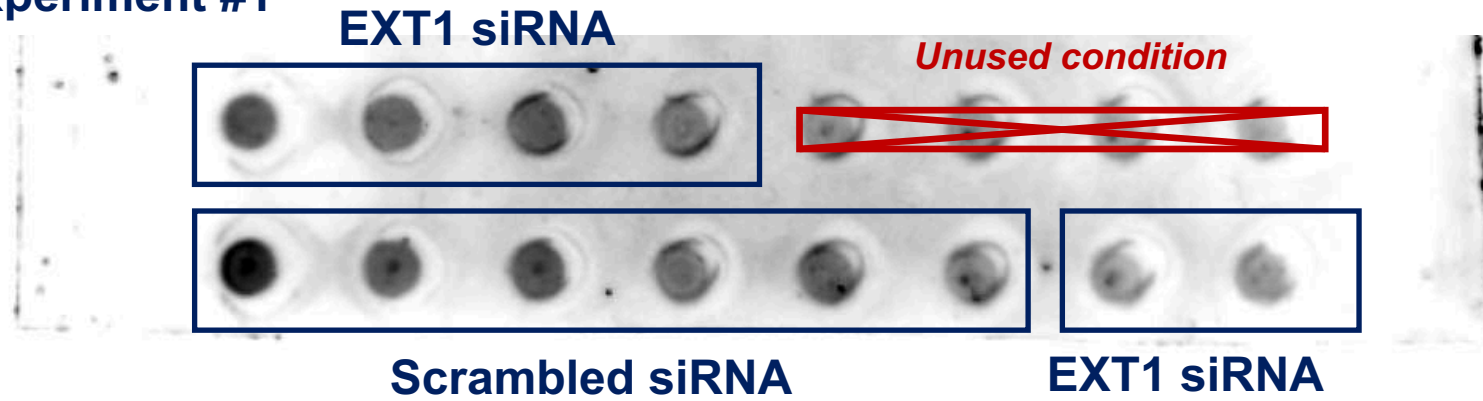


Figure 4C

 Dot used in figure

TauC3

Experiment #1



Experiment #2

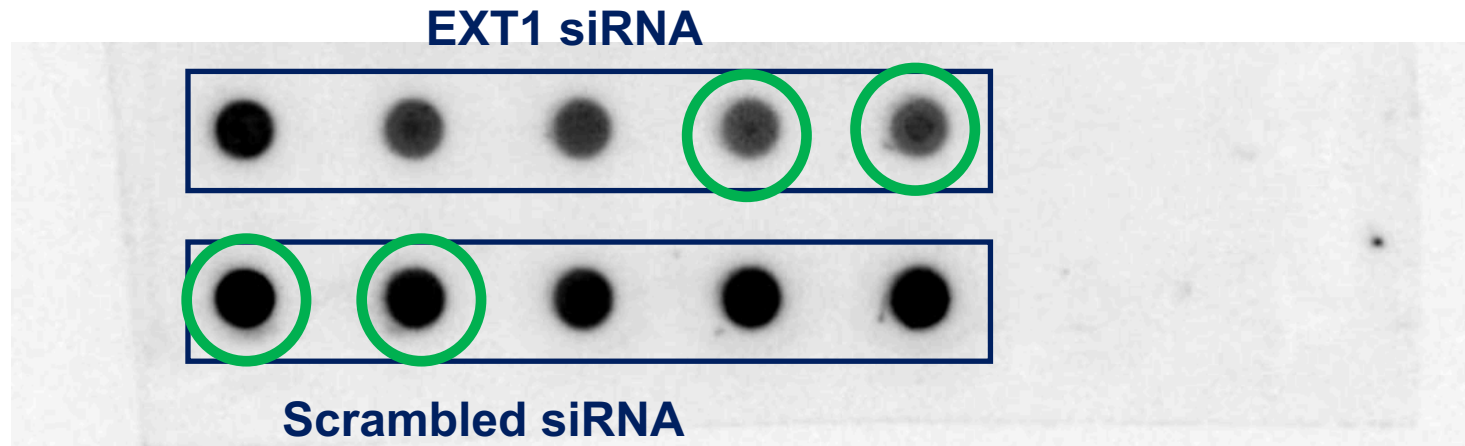
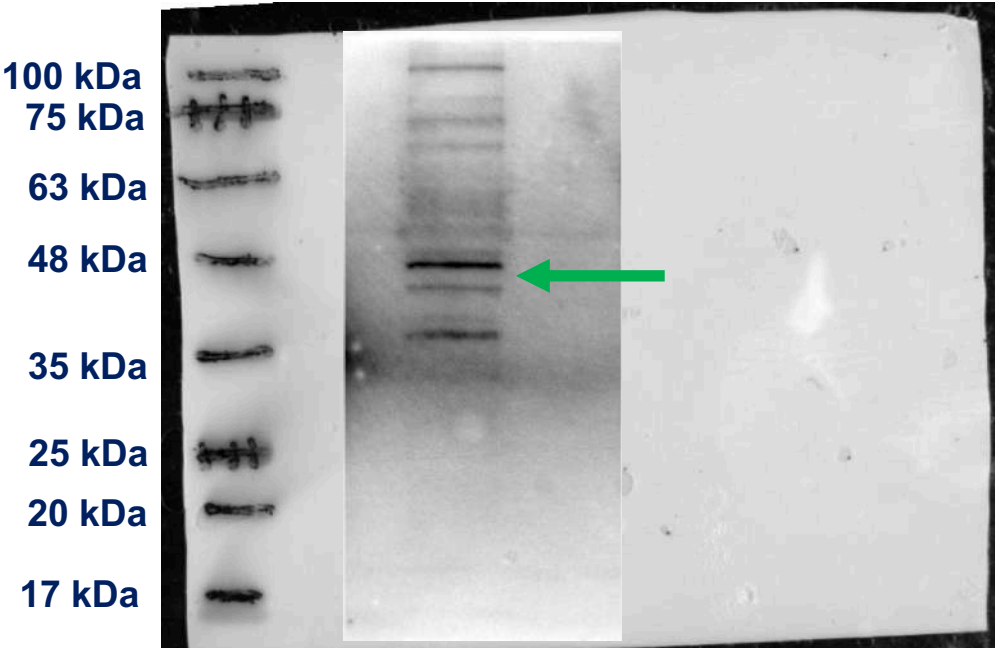


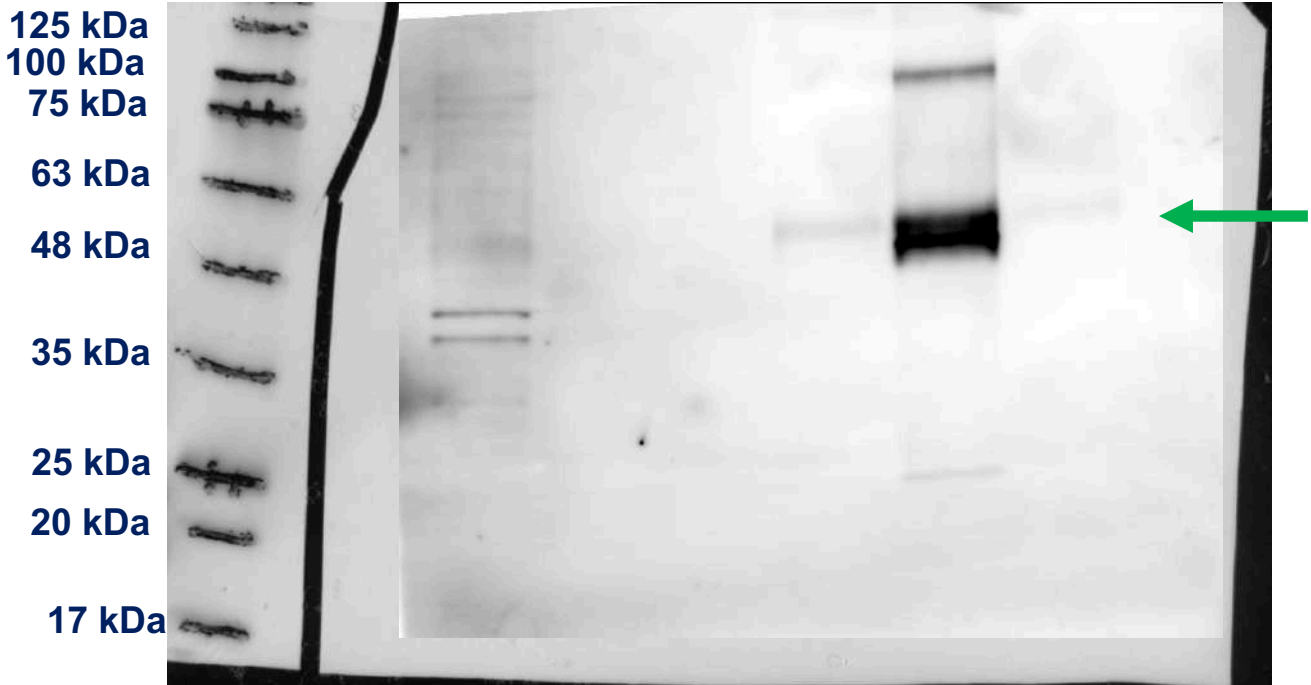
Figure 4F

→ Dot used in figure

PIP2 performed on
cell lysate



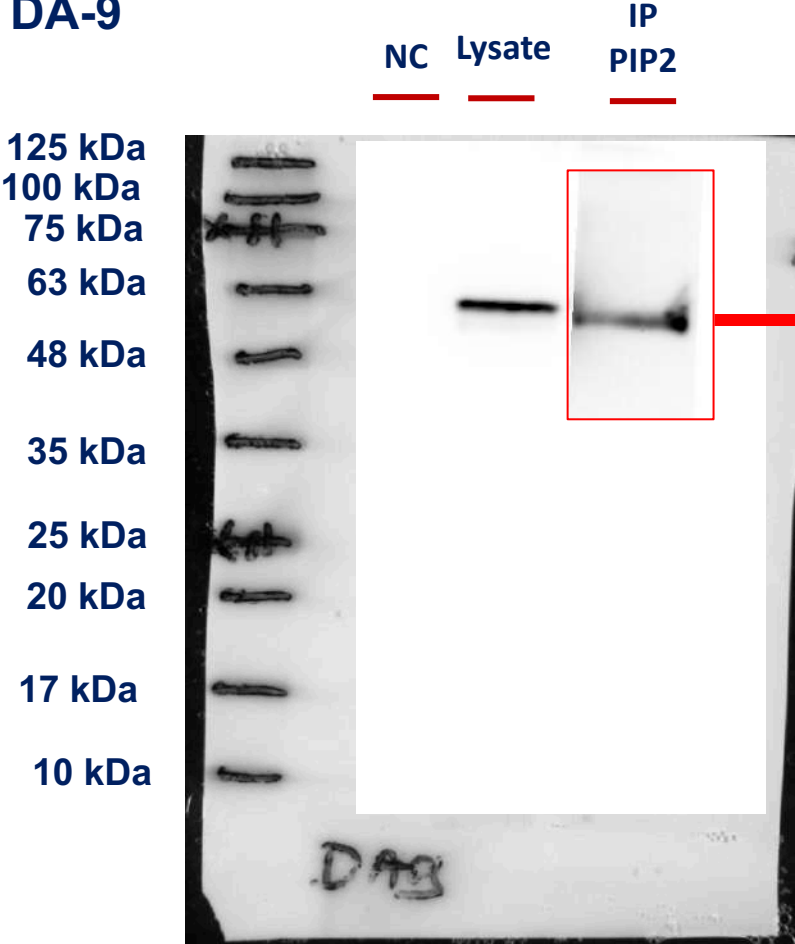
Negative control
↓
Lysate IP DA9 IP TauC3 IP Tau46



Used for figure

Figure 4G

DA-9



2nd imaging
(Lysate signal was
hidden to reveal
the signal of the
sample)

TauC

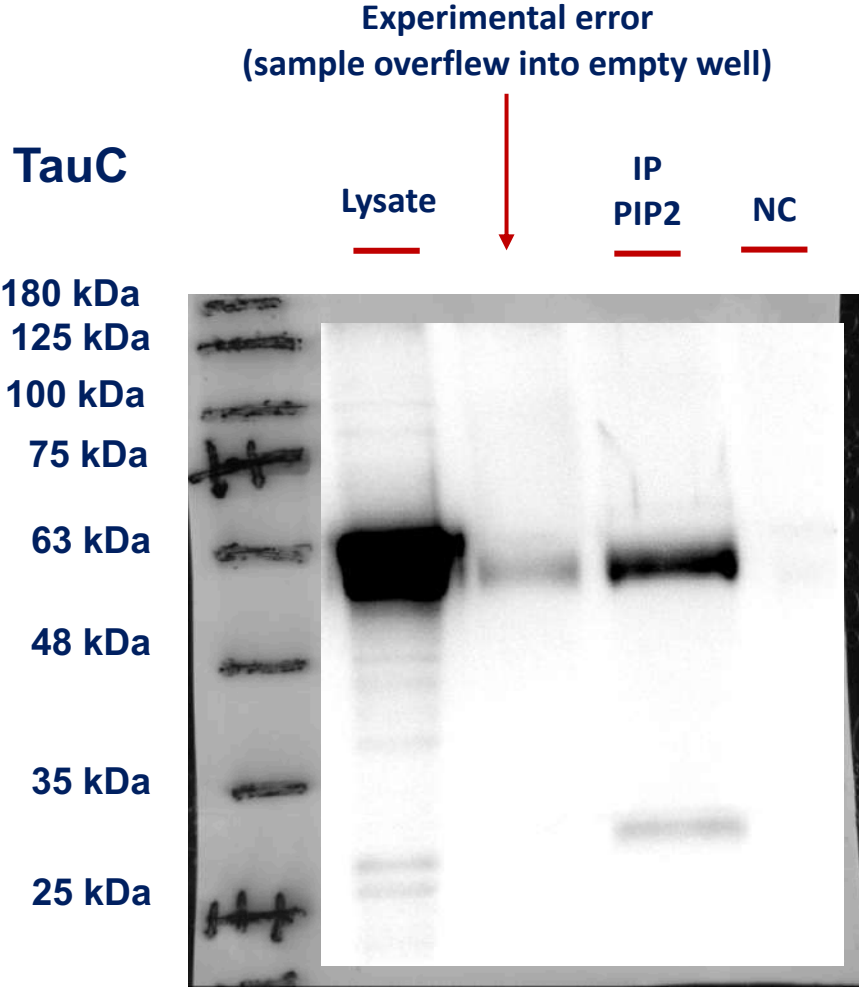
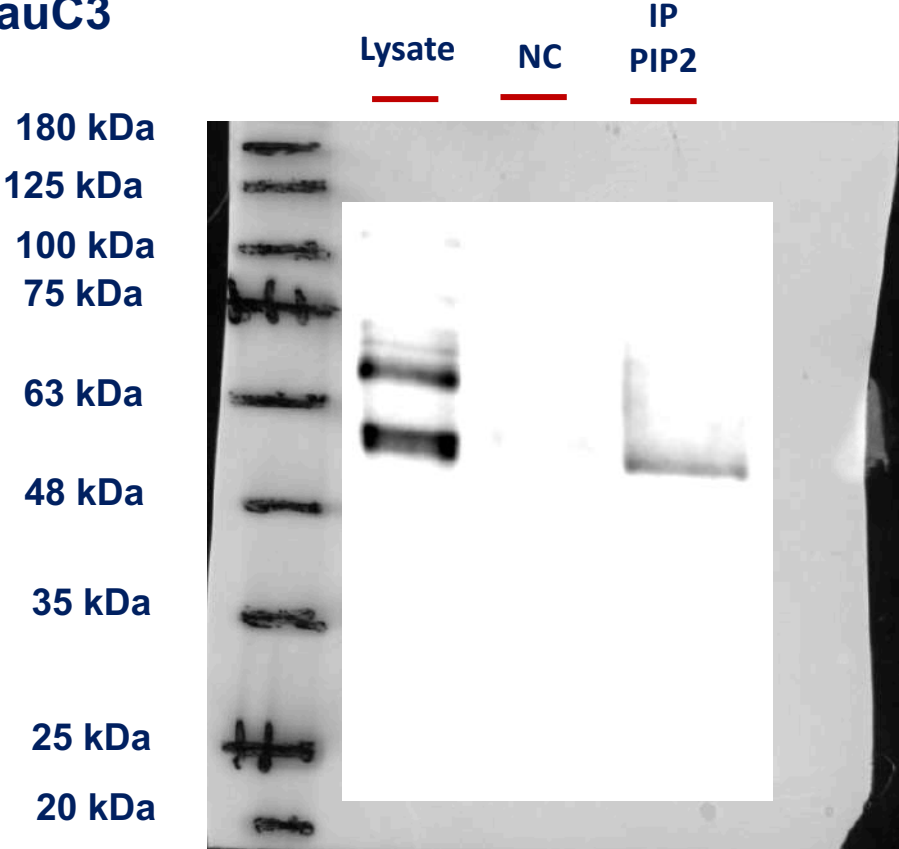


Figure 4G

TauC3



Tau46

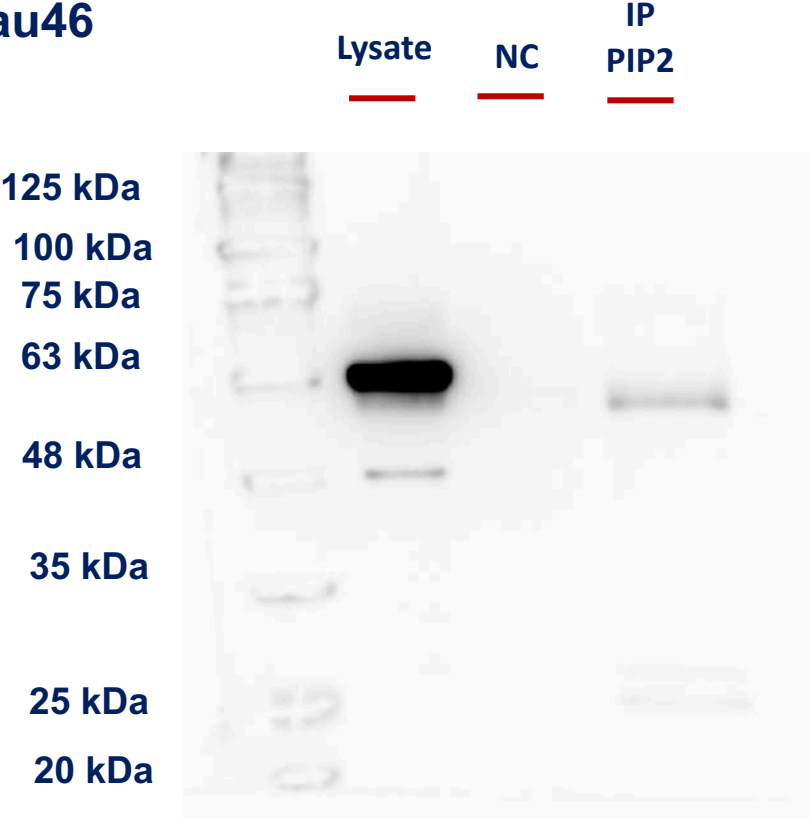


Figure 4G

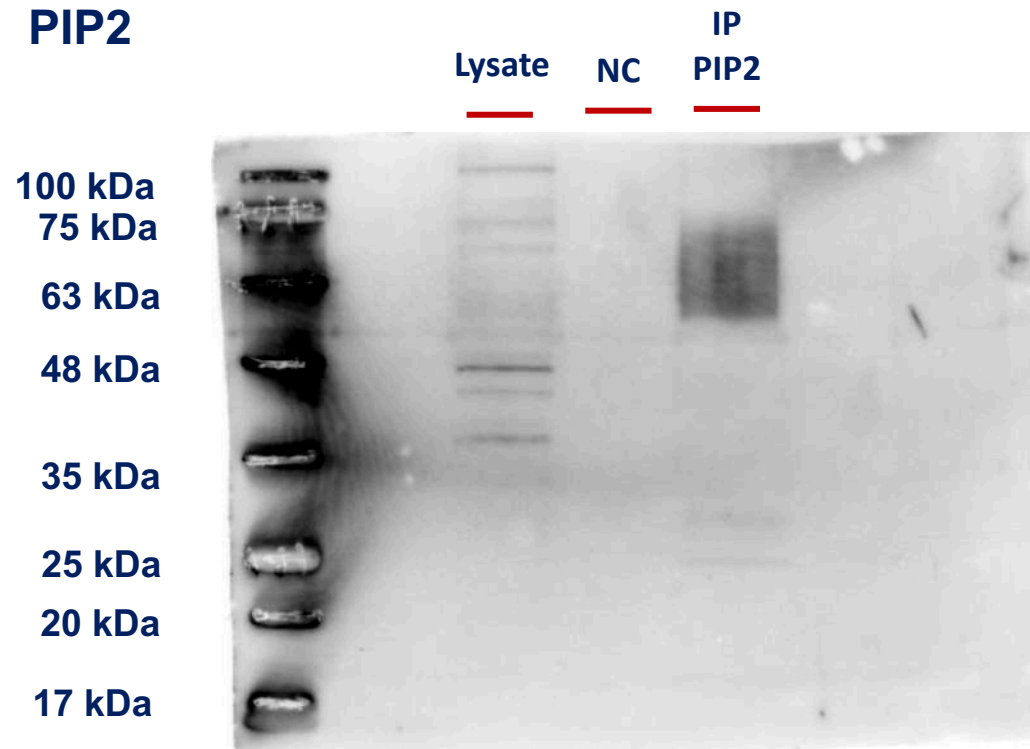


Figure 4H

Tau3R

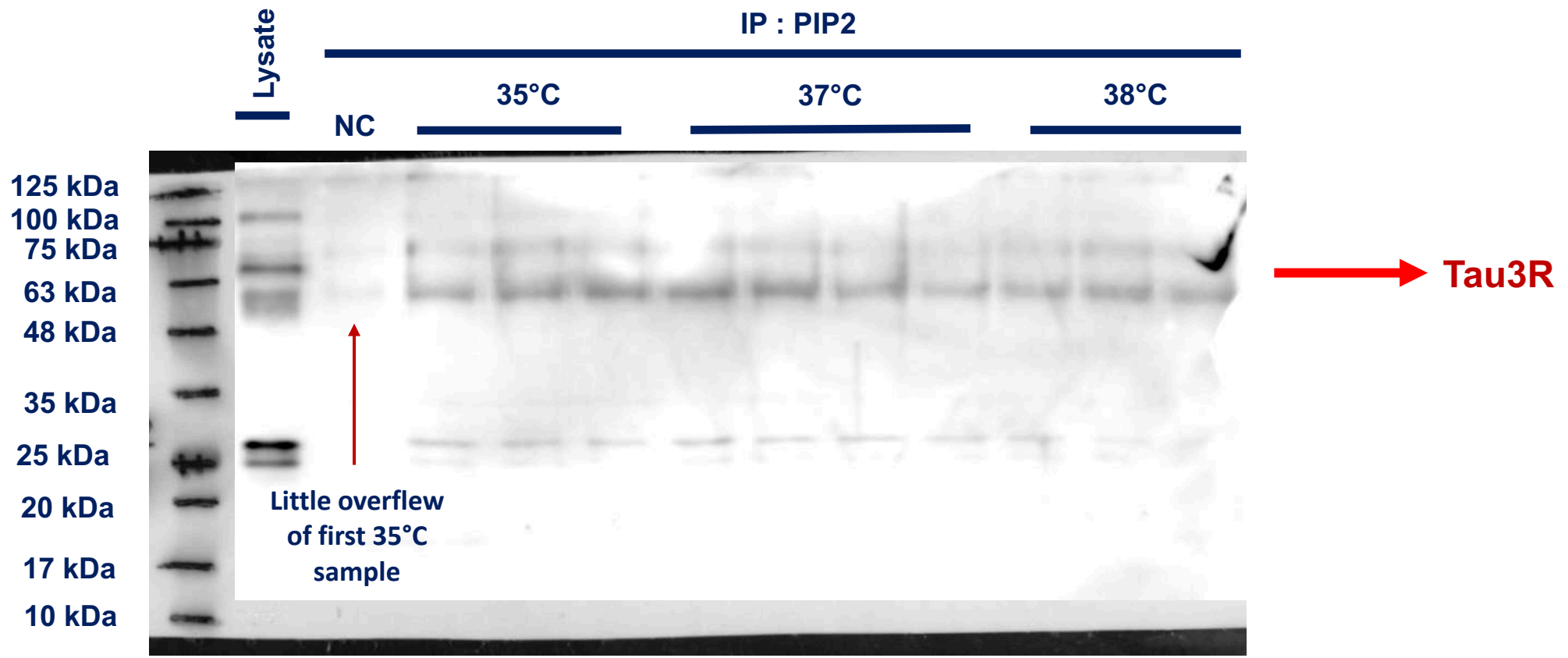


Figure 4H

TauC3

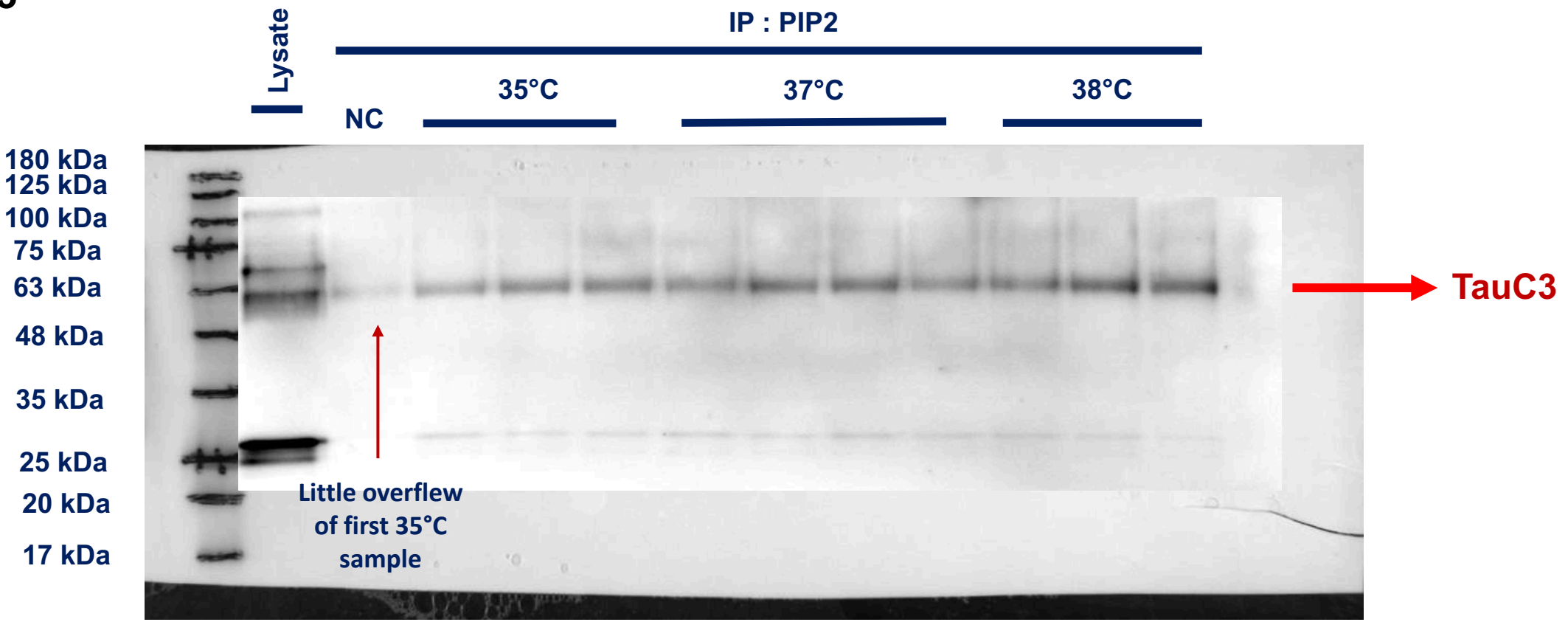
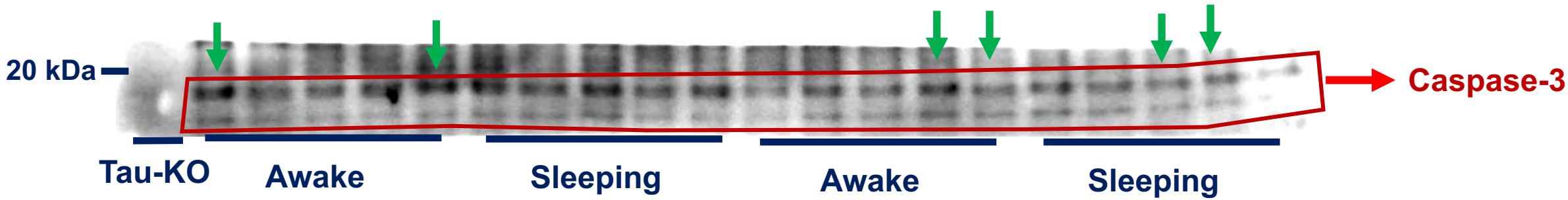


FIGURE 5

Figure 5C,D

→ Dot used in figure

Caspase-3



Actin

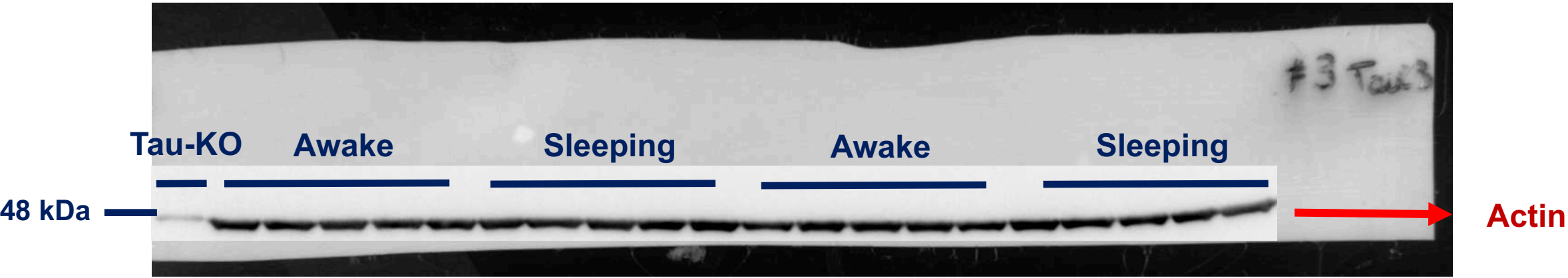
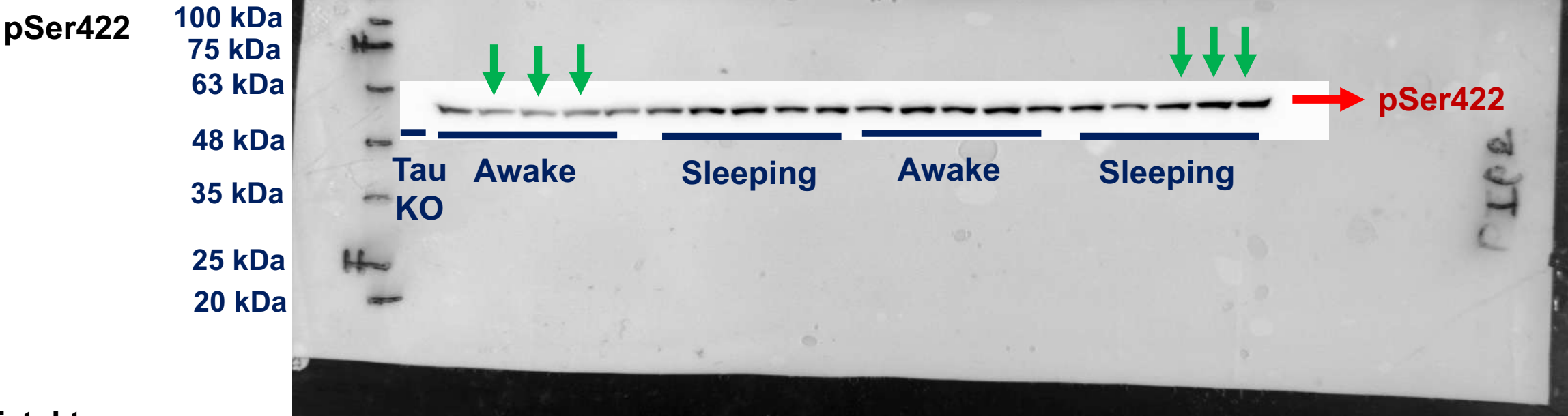


Figure 5C,D → *Dot used in figure*



Total tau

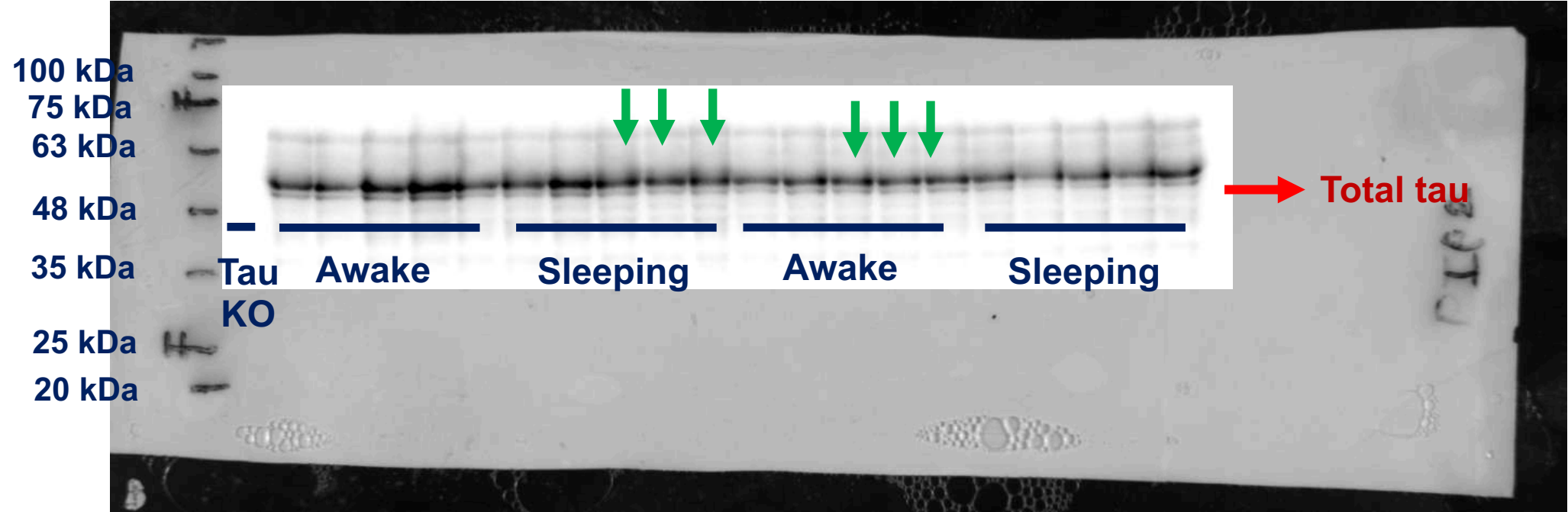
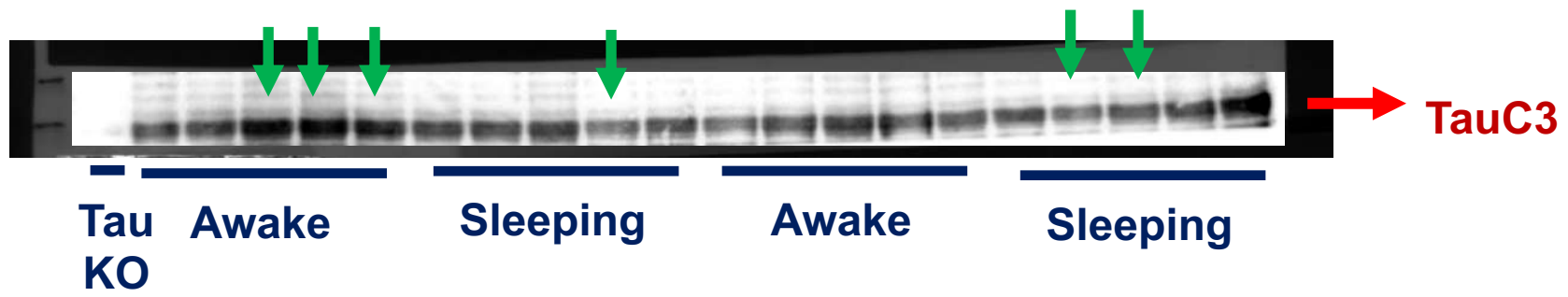


Figure 5C,D

→ *Dot used in figure*

TauC3

75 kDa
63 kDa



Actin

75 kDa
63 kDa
48 kDa

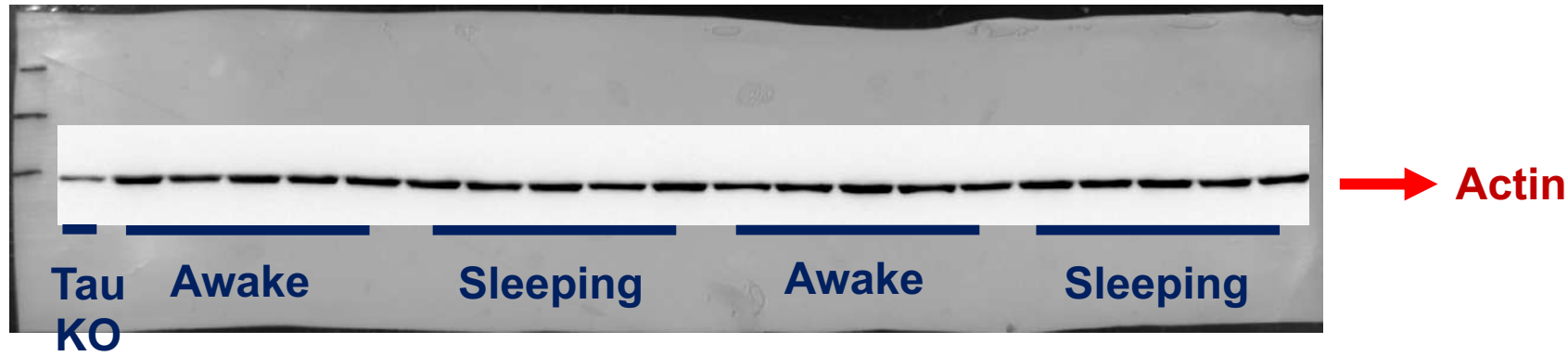


Figure 5C,D → *Dot used in figure*

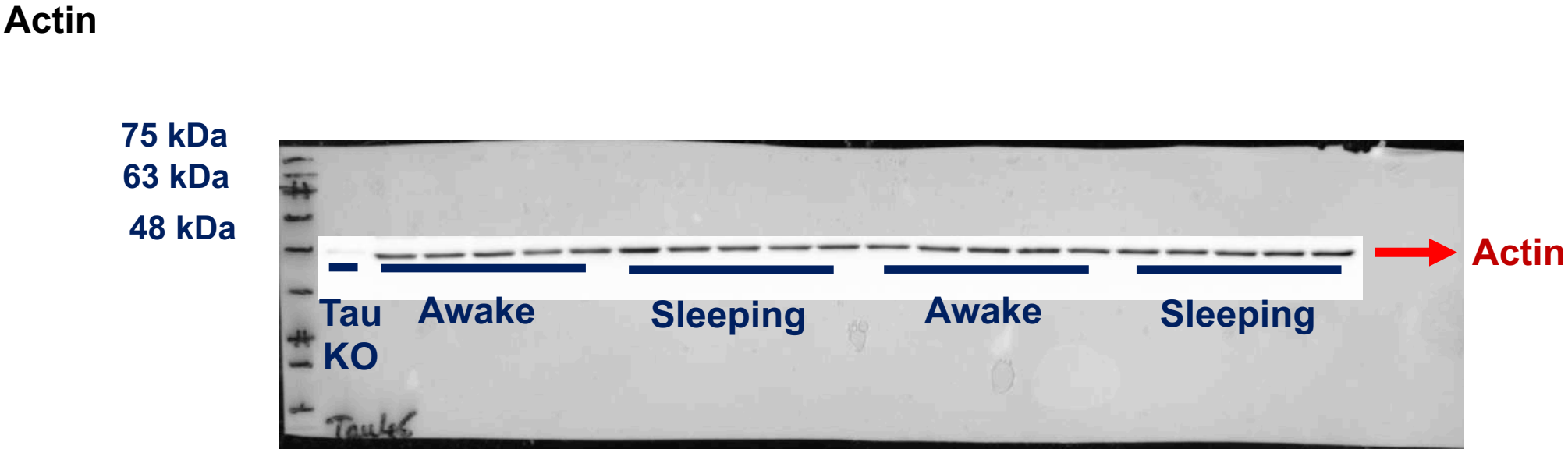
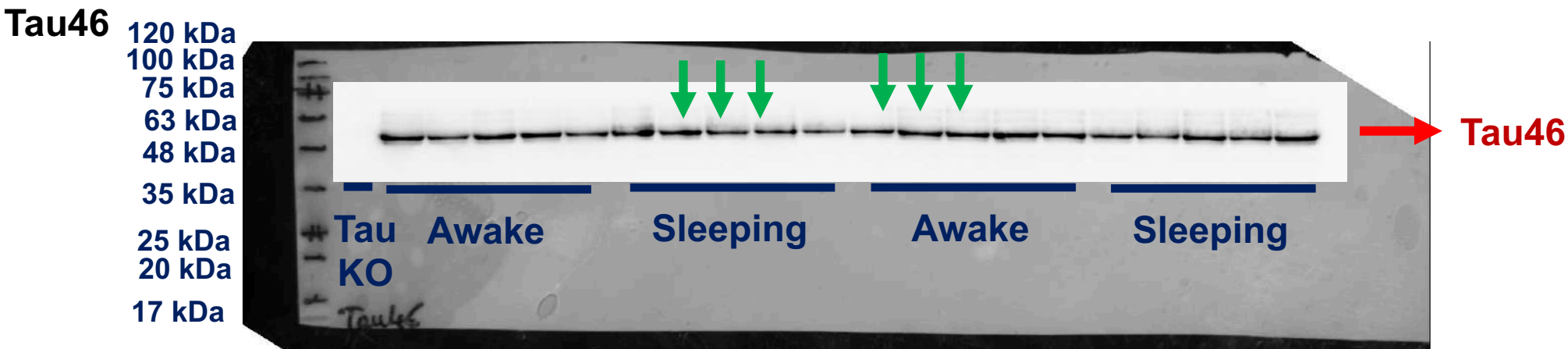
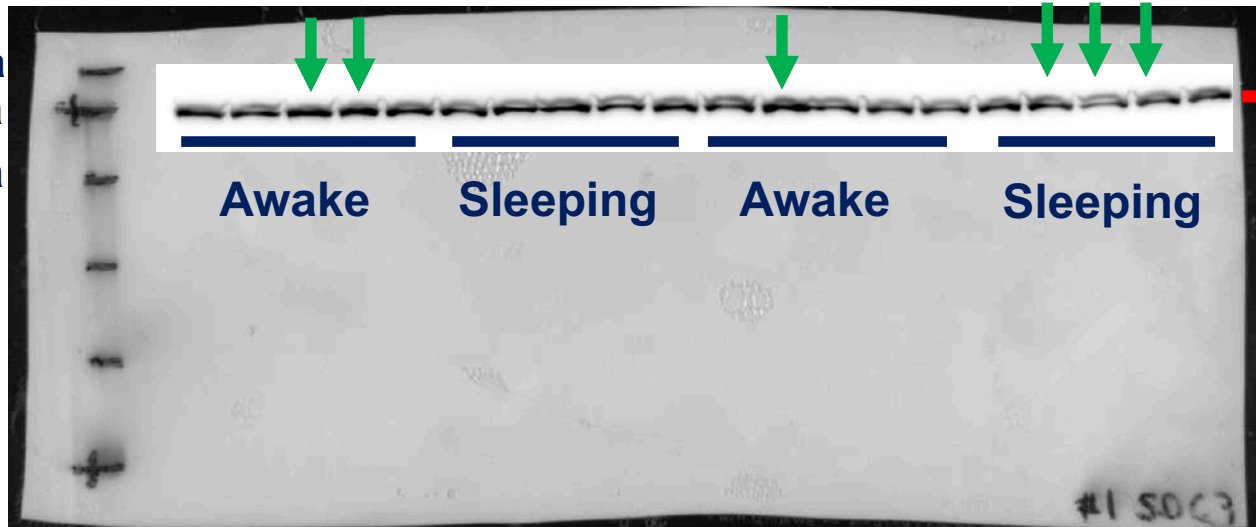


Figure 5C,D

SDC3

100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa

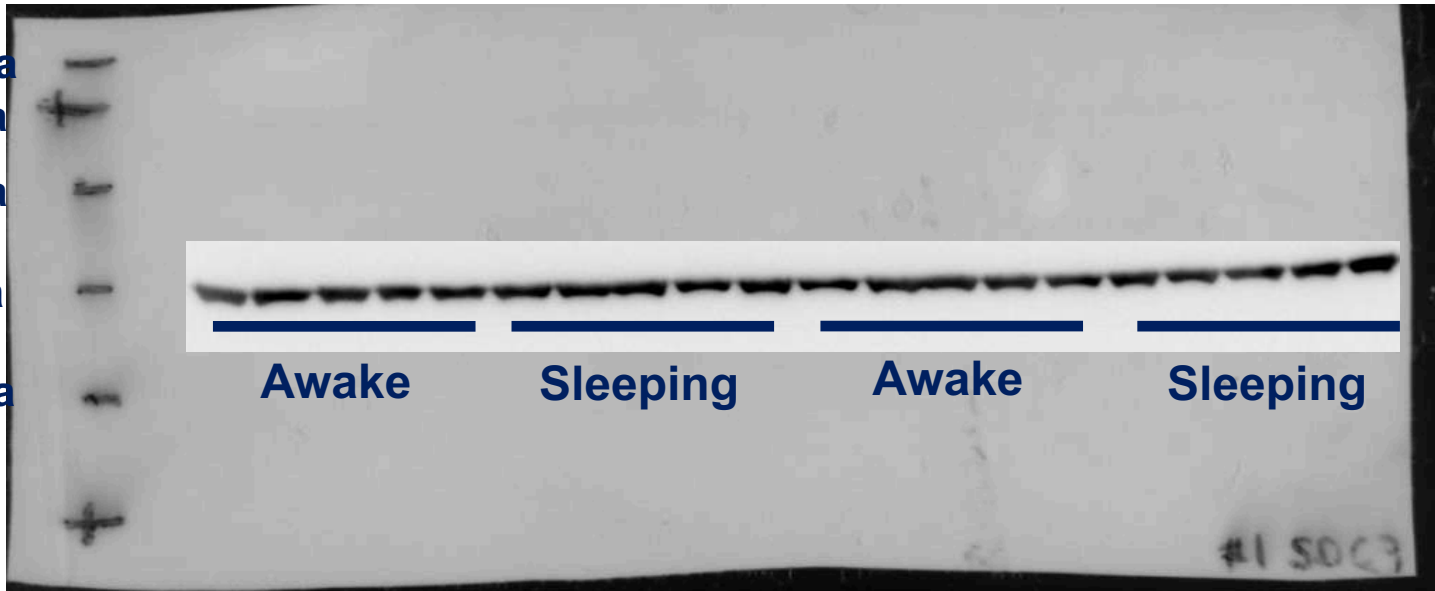


→ Dot used in figure

SDC3

Actin

100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa



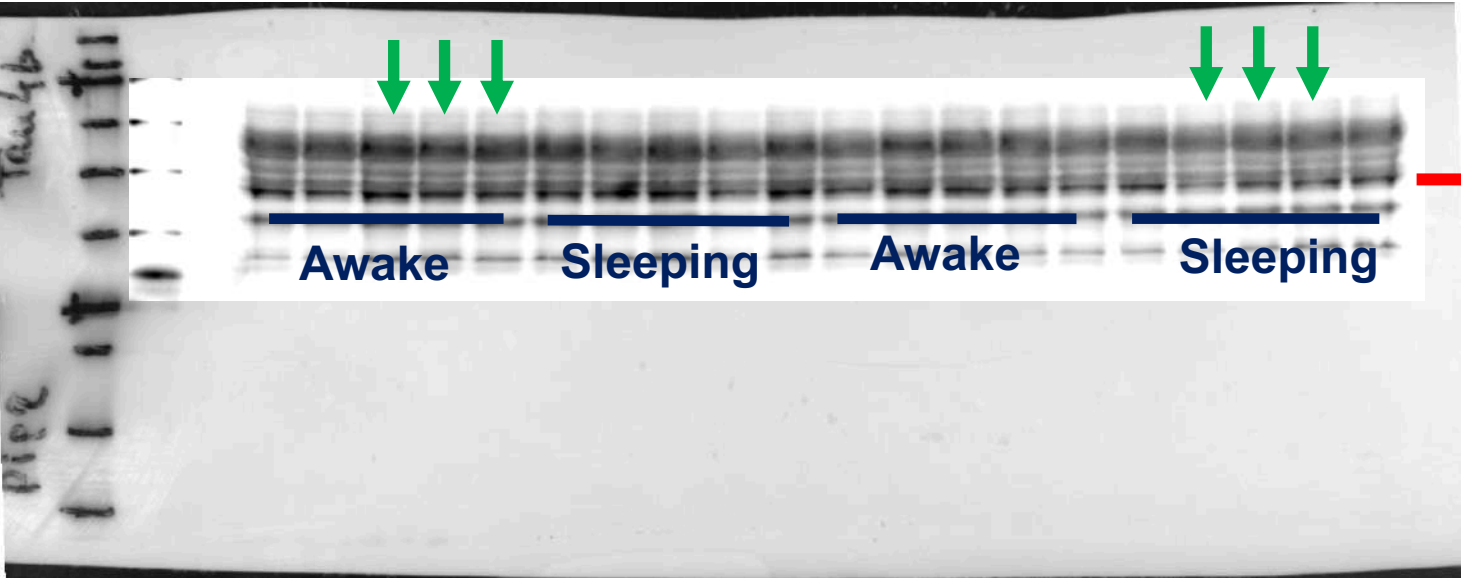
Actin

Figure 5C,D

→ Dot used in figure

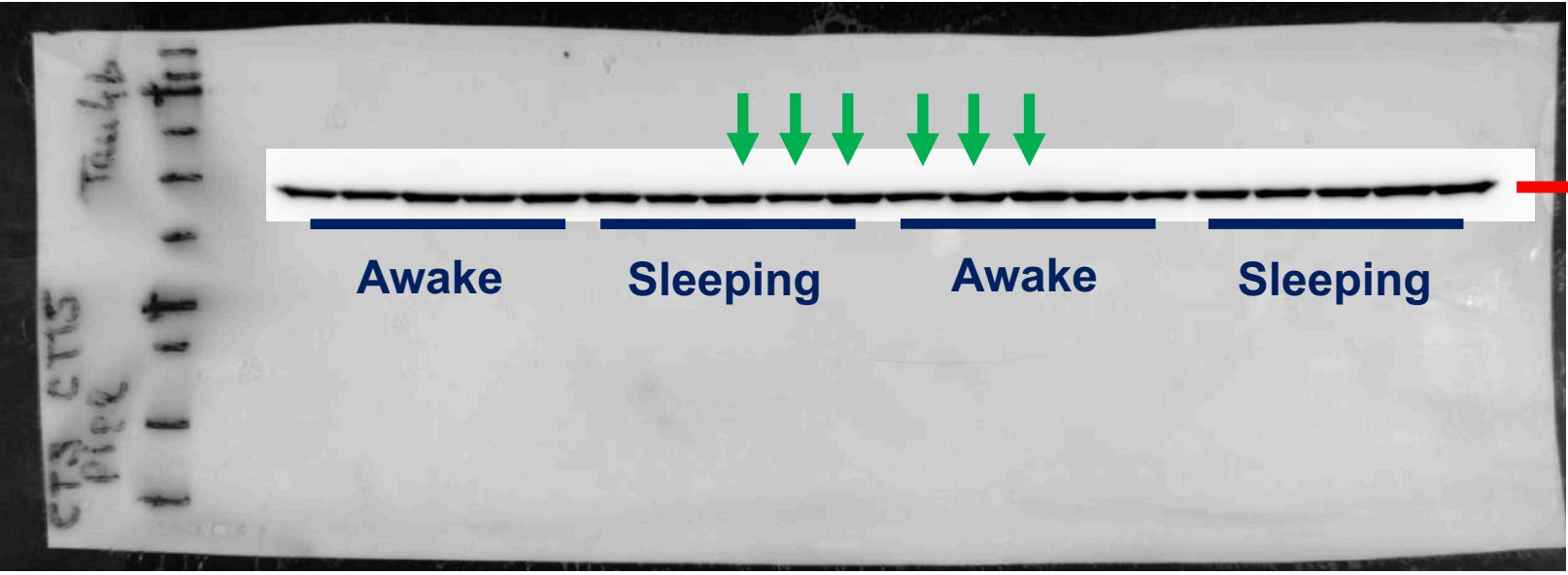
PIP2

120 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa
17 kDa
10 kDa



PIP2

Actin

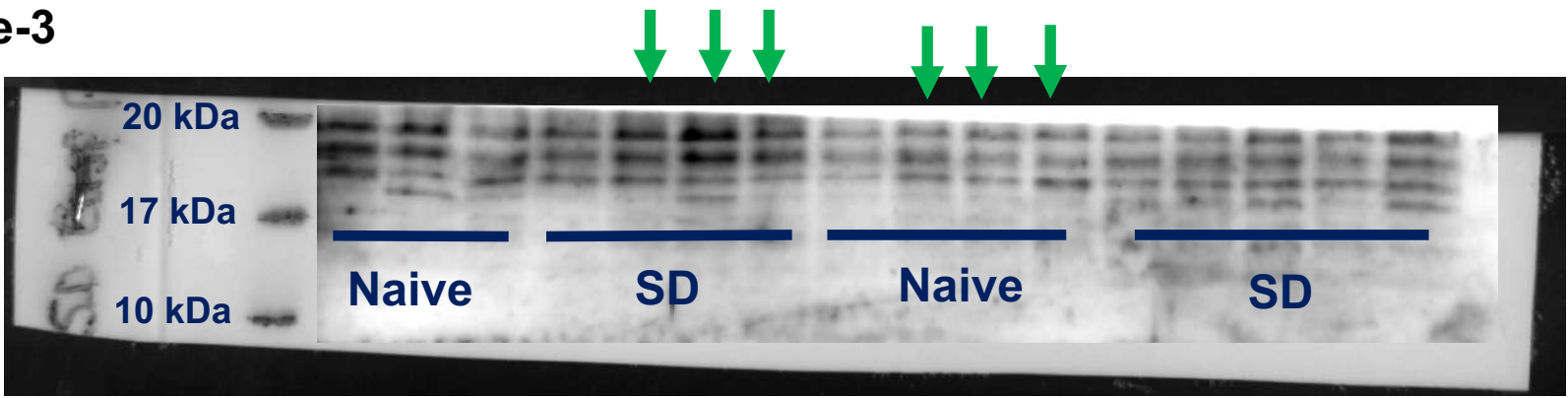


Actin

Figure 5G,H

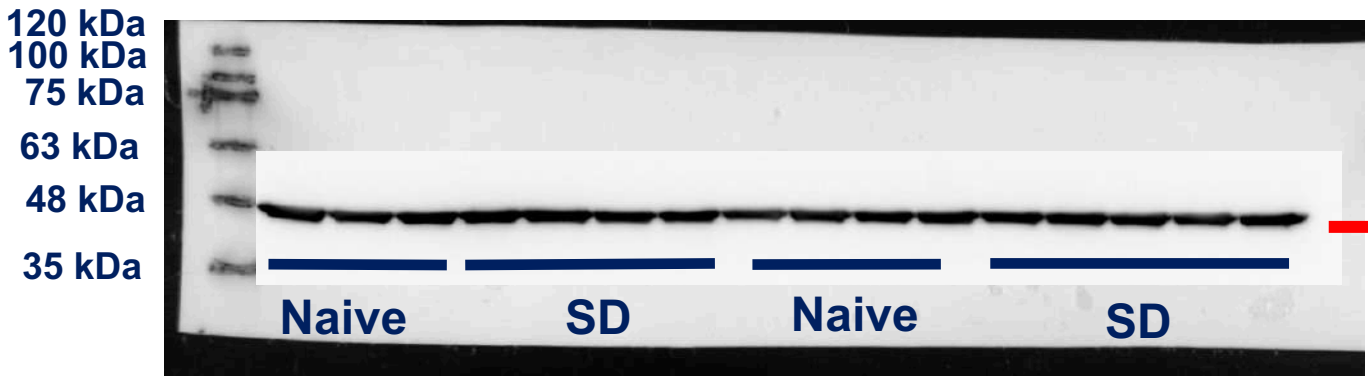
→ Dot used in figure

Caspase-3



→ Caspase-3

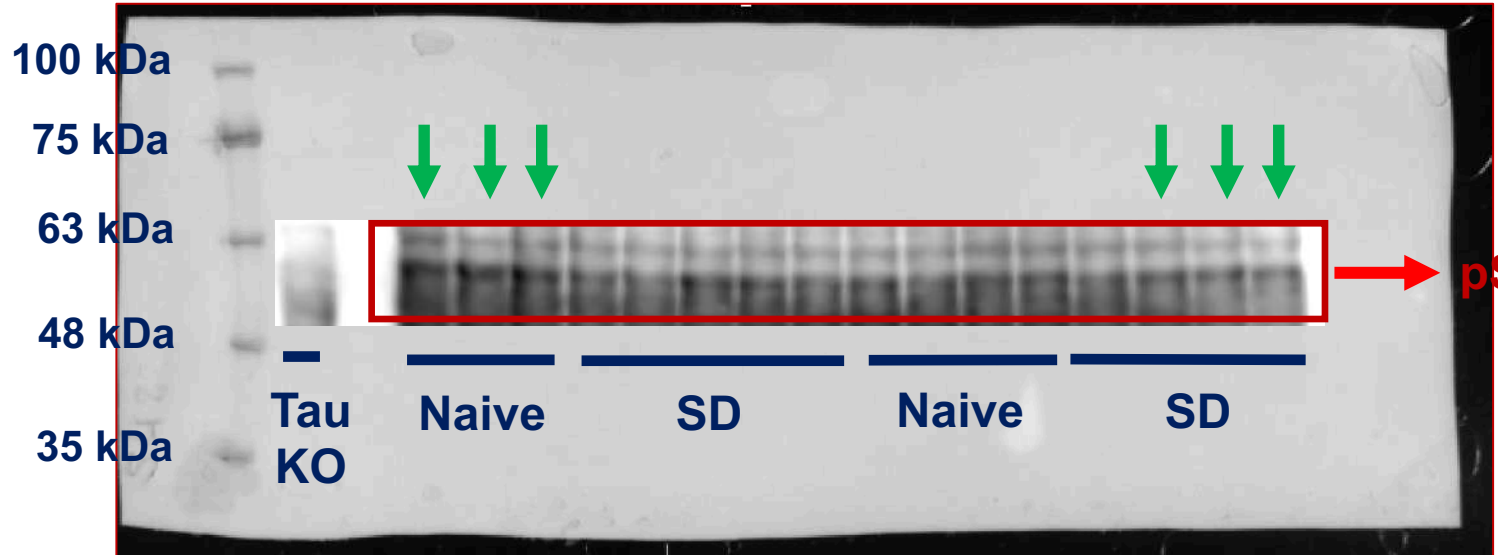
Actin



→ Actin

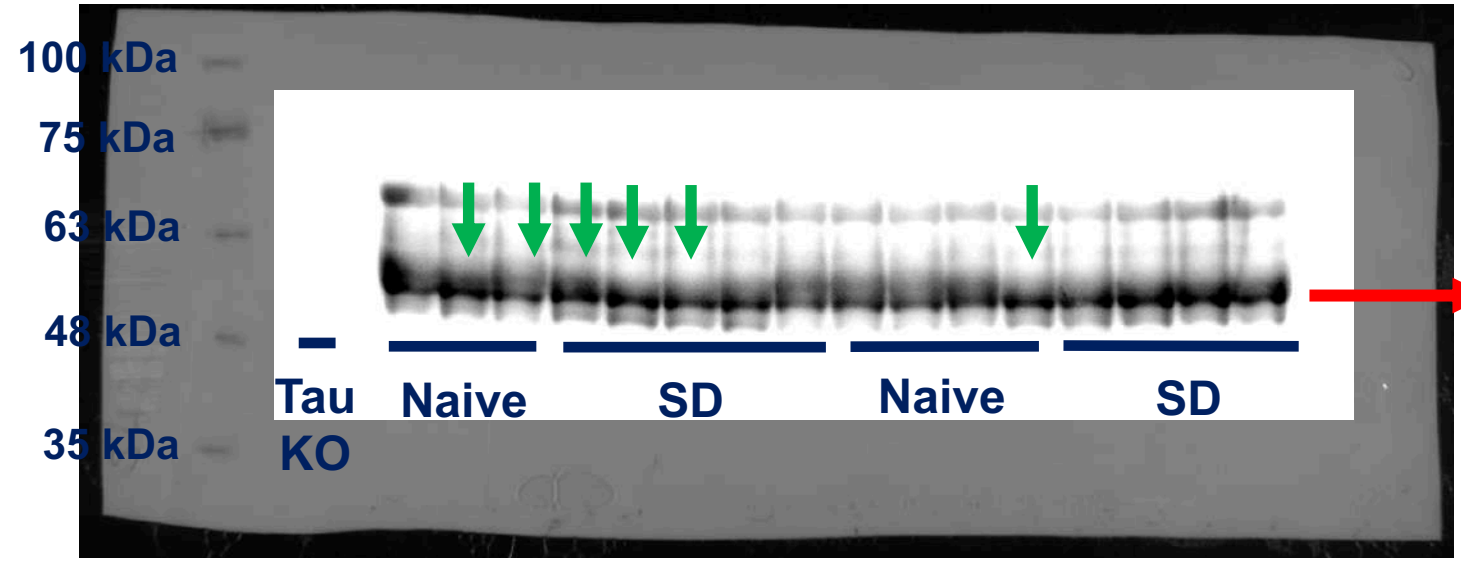
Figure 5G,H

pSer422



→ Dot used in figure

Total tau

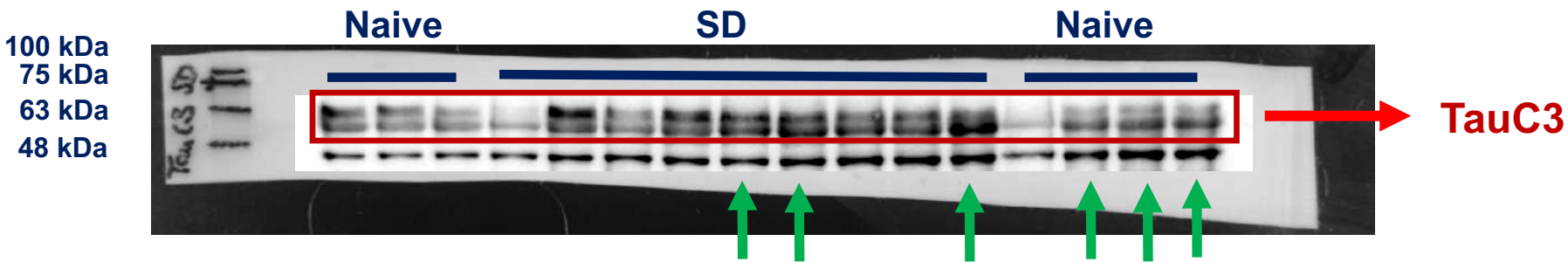


Total tau

Figure 5 G,H

→ Dot used in figure

TauC3



Actin

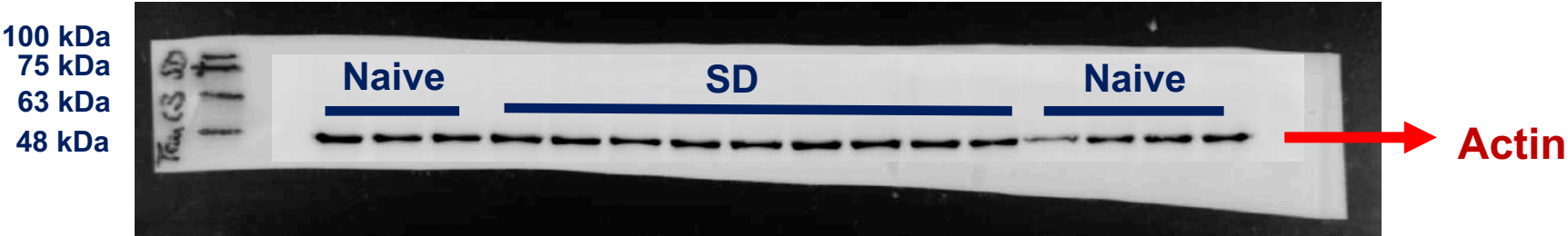
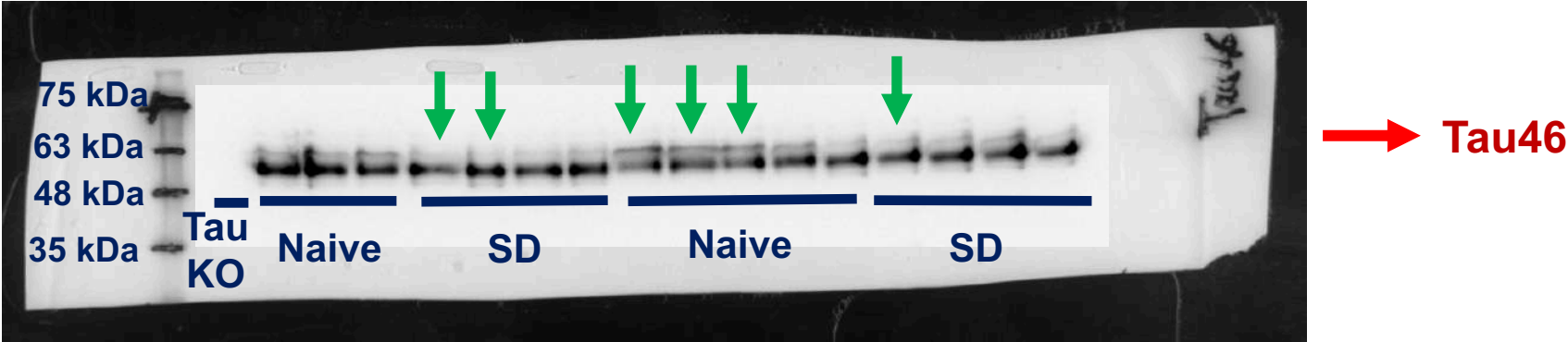


Figure 5 G,H

→ Dot used in figure

Tau46



Actin

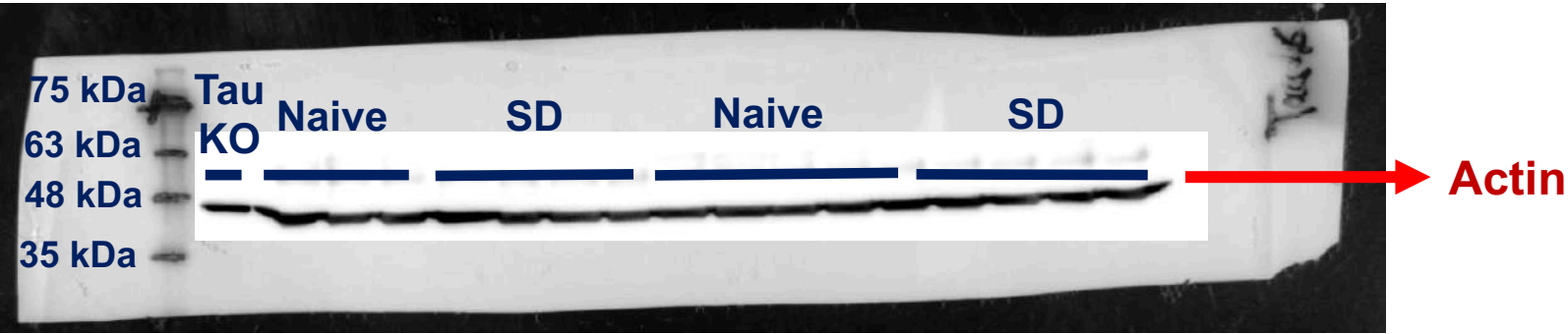
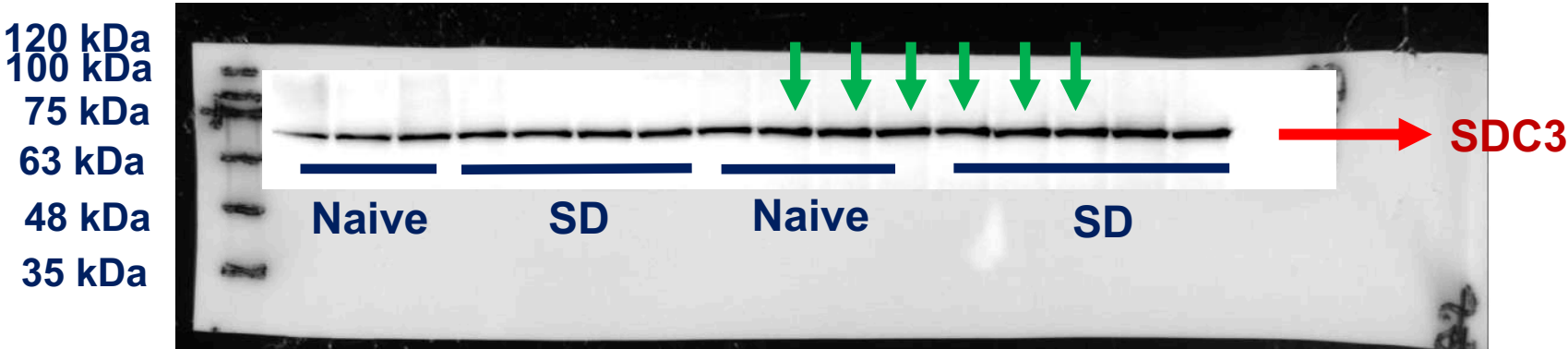


Figure 5 G,H

→ Dot used in figure

SDC3



Actin

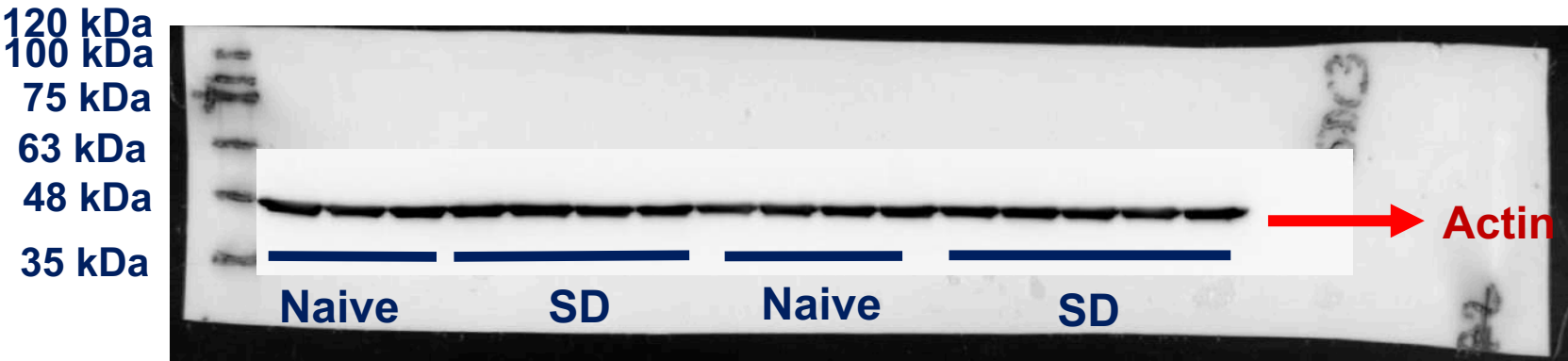
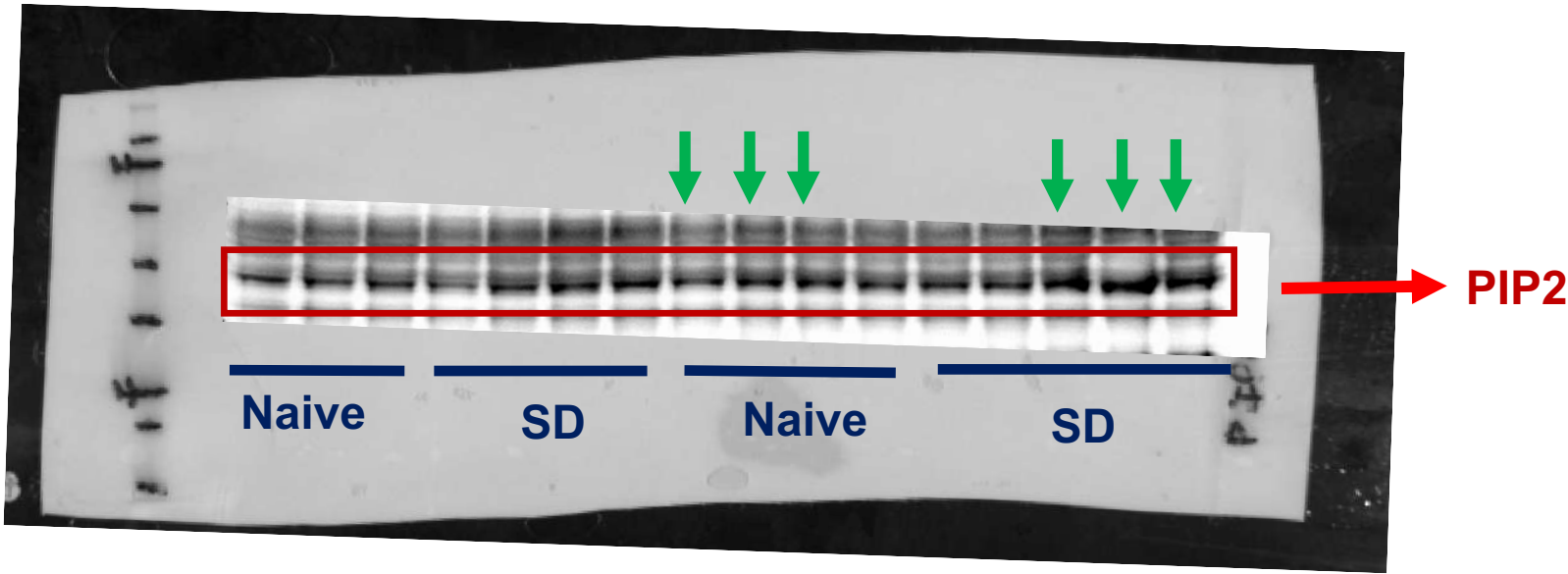


Figure 5 G,H

→ Dot used in figure

PIP2

120 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa
17 kDa



Actin

120 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa
17 kDa
10 kDa

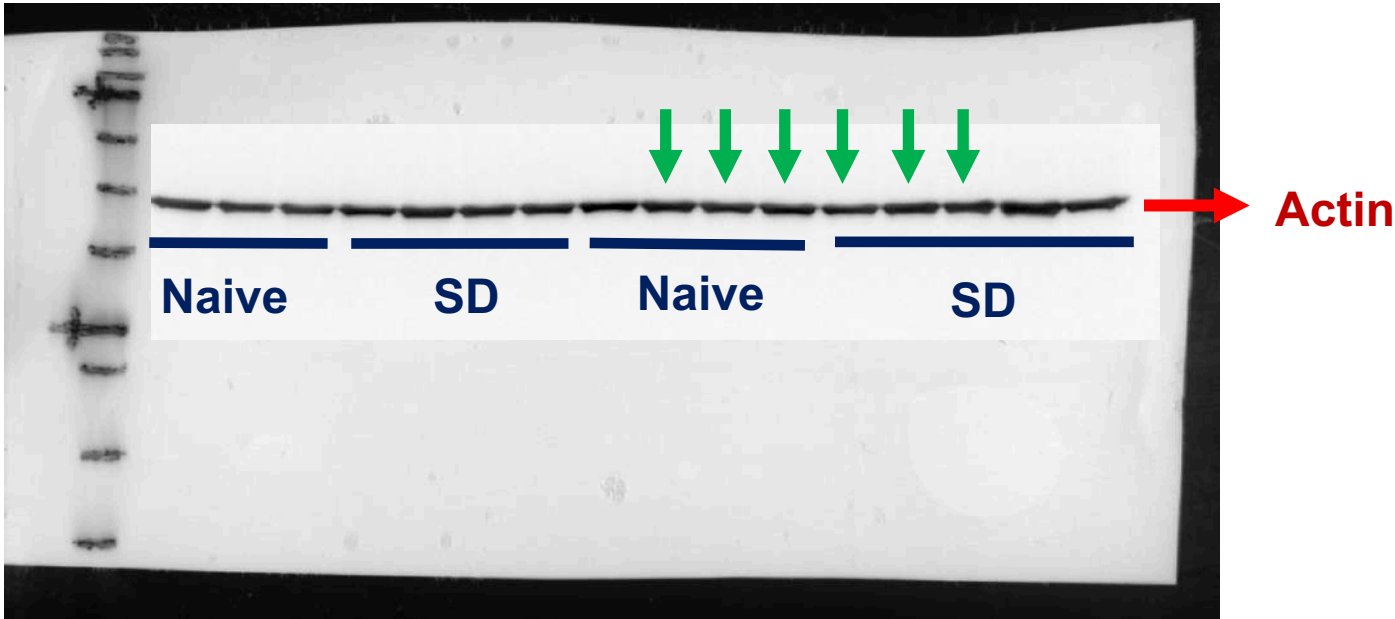


FIGURE S1

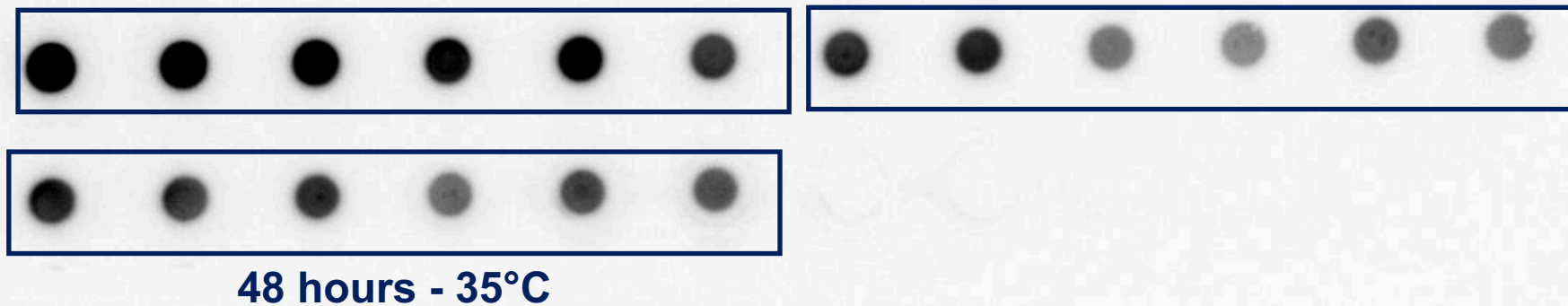
 Dot used in figure

Unused condition

6 hours - 38°C



48 hours - 37°C



Supp Figure 1F

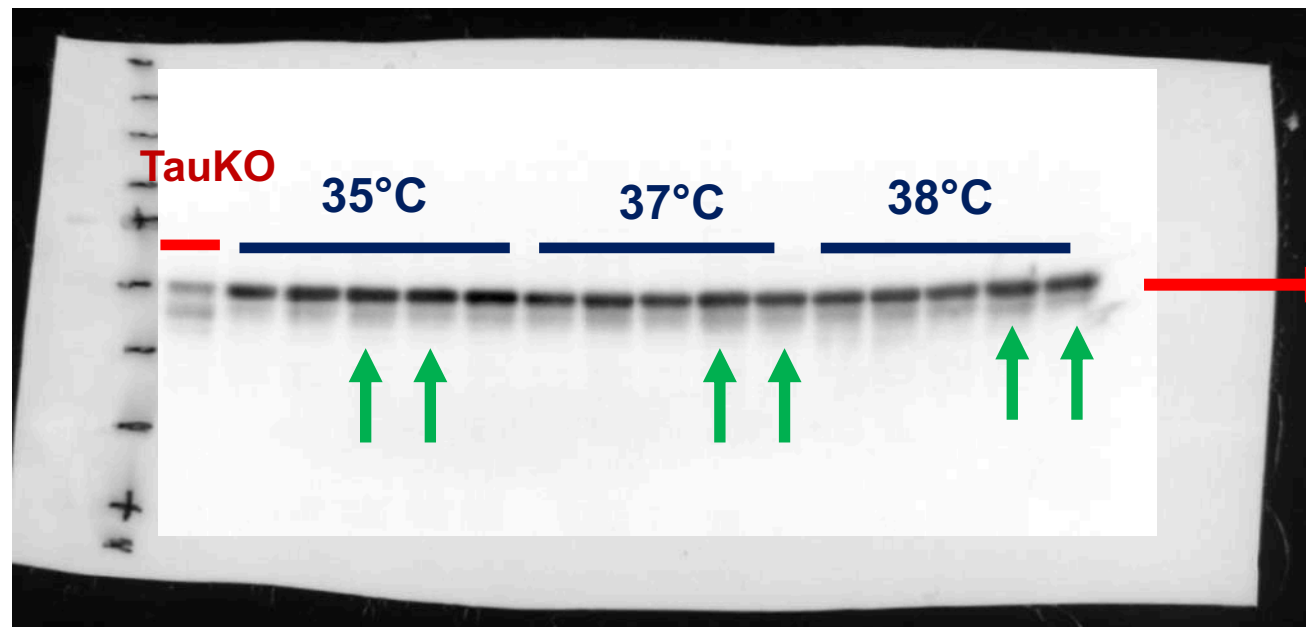
→ Dot used in figure

Total tau - SH-Tau3R

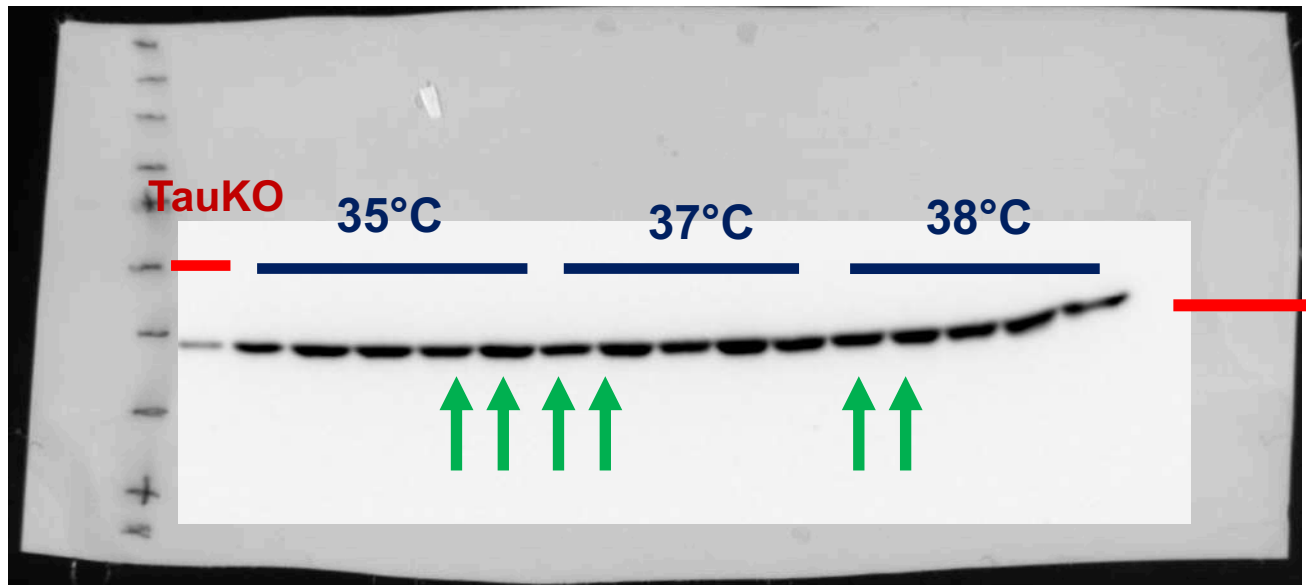
245 kDa
180 kDa
135 kDa
100 kDa
75 kDa

63 kDa
48 kDa
35 kDa

25 kDa
20 kDa



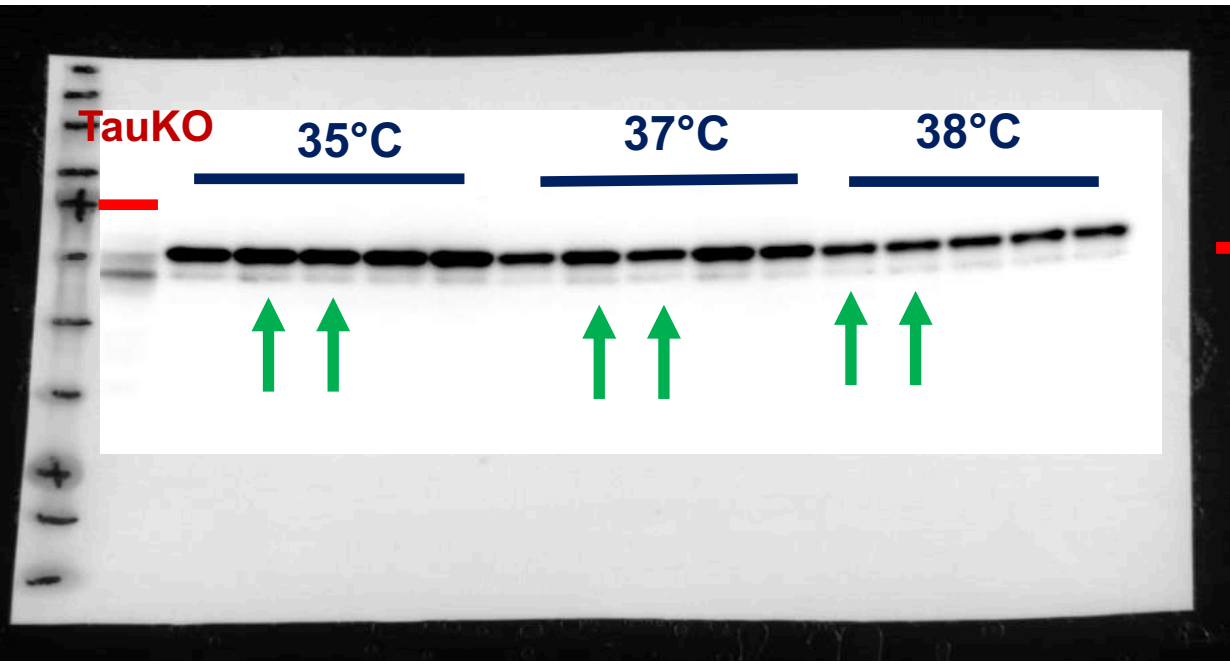
Corresponding Actin



Supp Figure 1F

AT270 - SH-Tau3R

245 kDa
180 kDa
135 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa
17 kDa

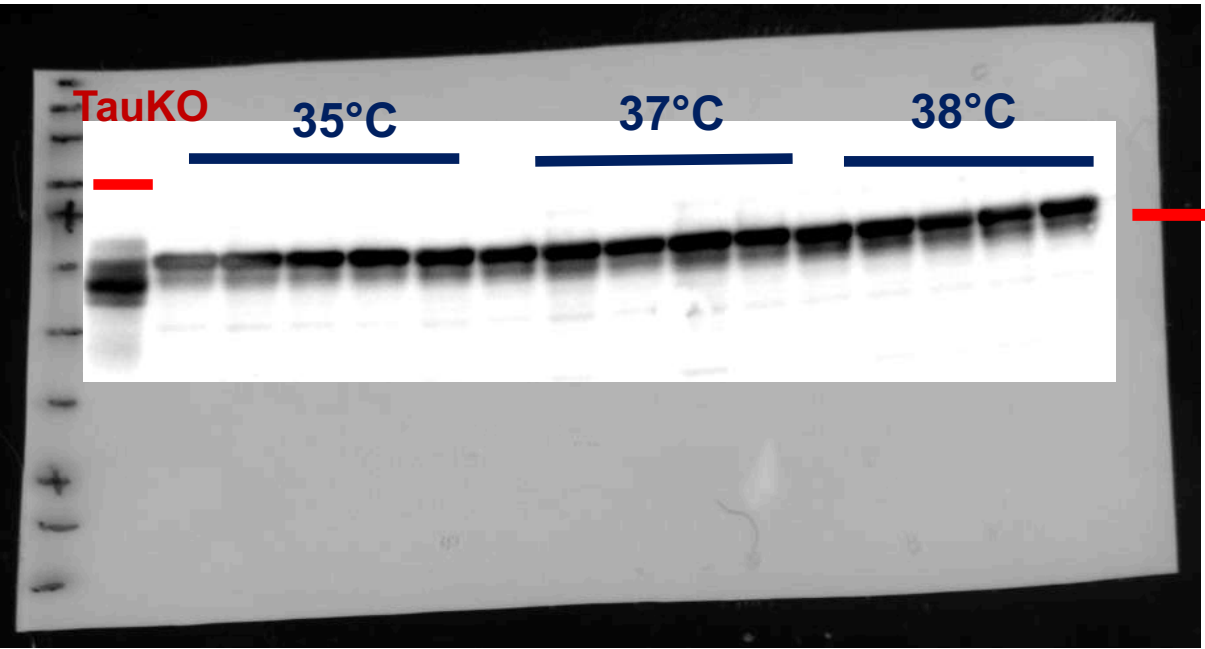


→ Dot used in figure

AT270

Corresponding Total tau

245 kDa
180 kDa
135 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa
17 kDa

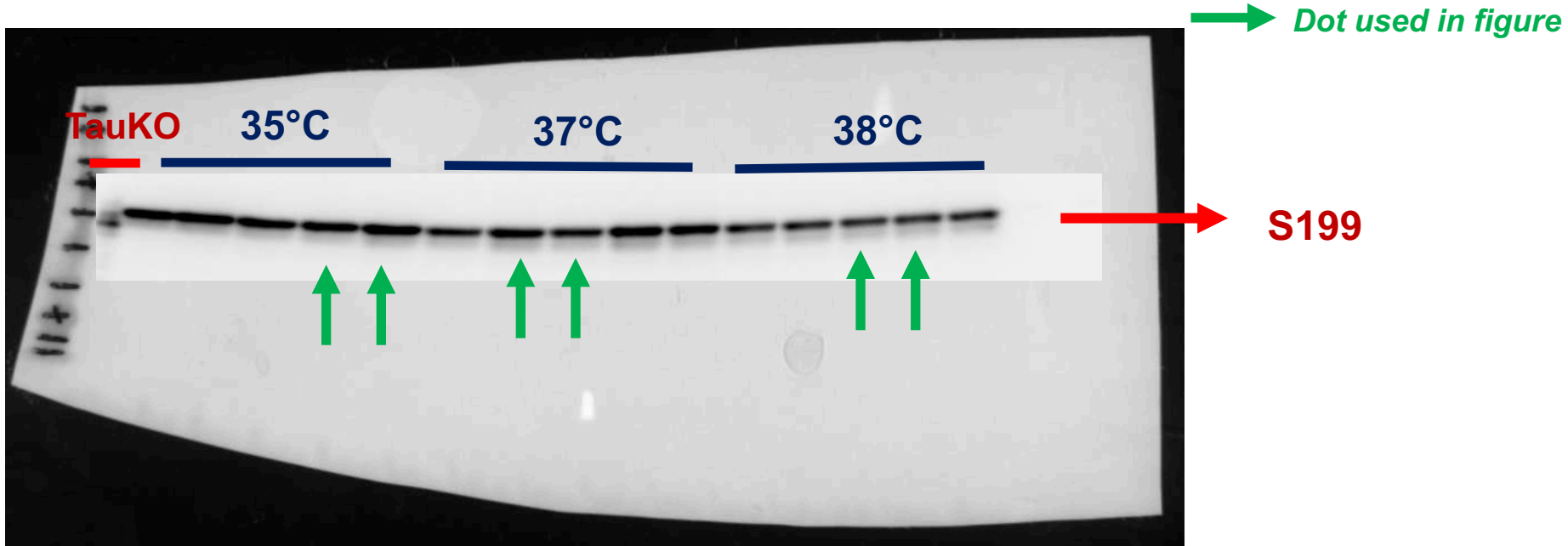


TauC

Supp Figure 1F

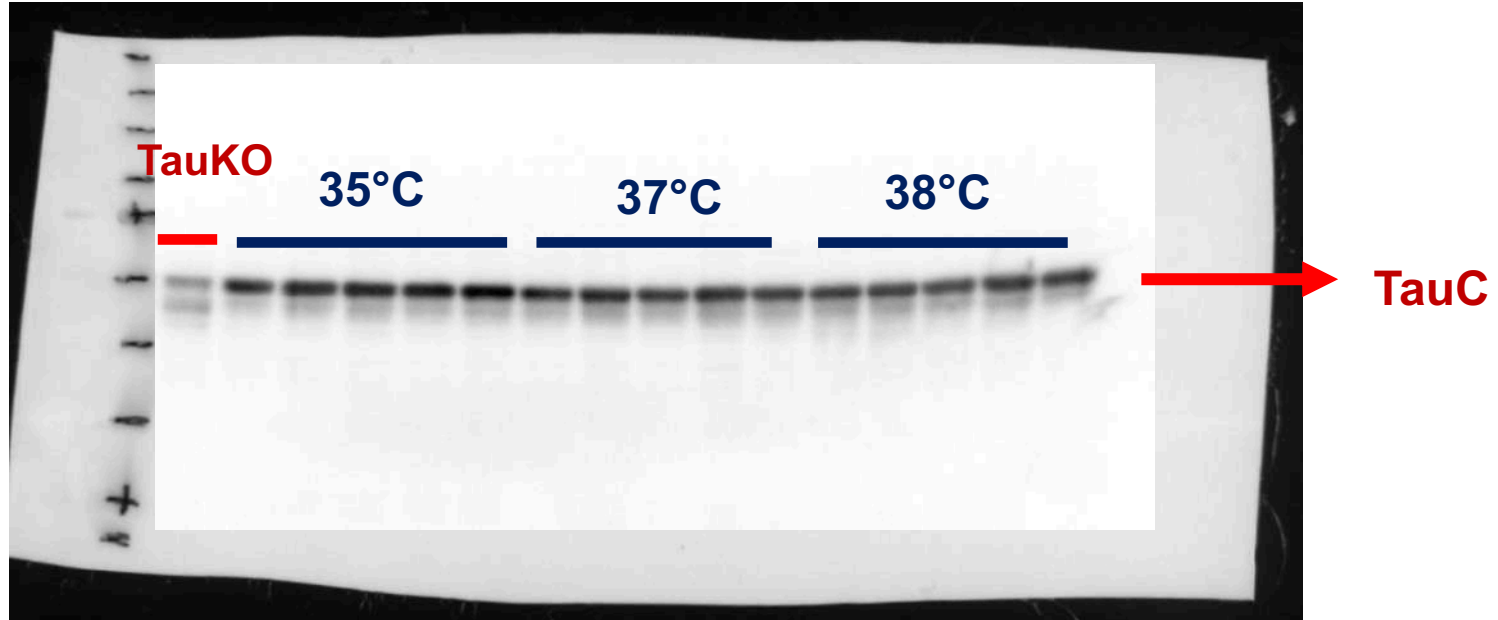
S199 - SH-Tau3R

100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa



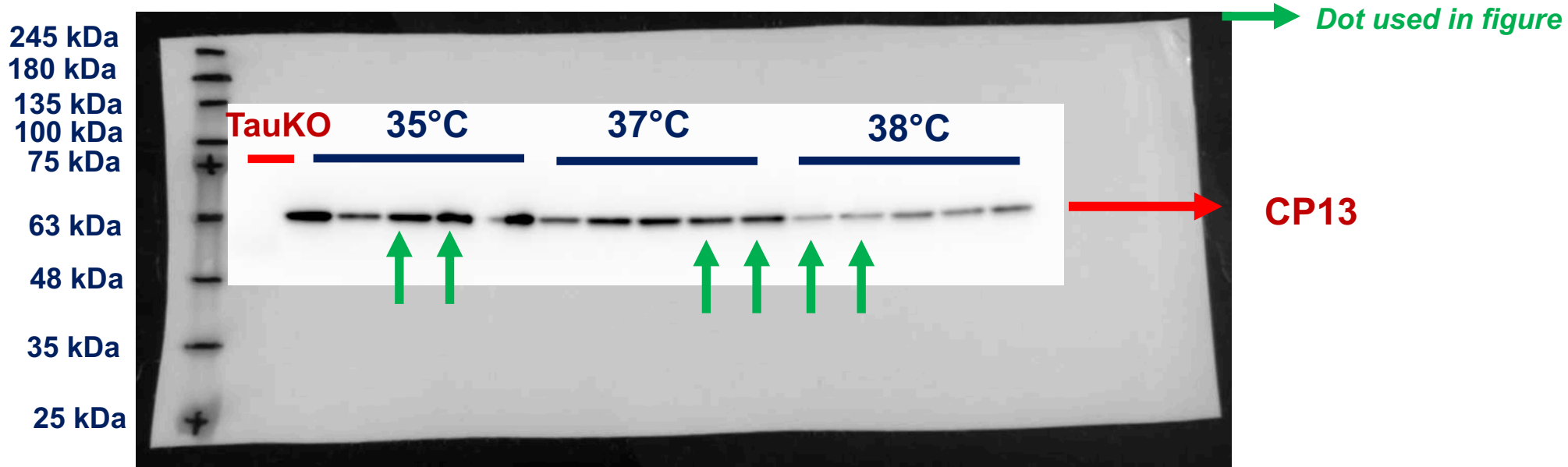
Corresponding Total tau

245 kDa
180 kDa
135 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa

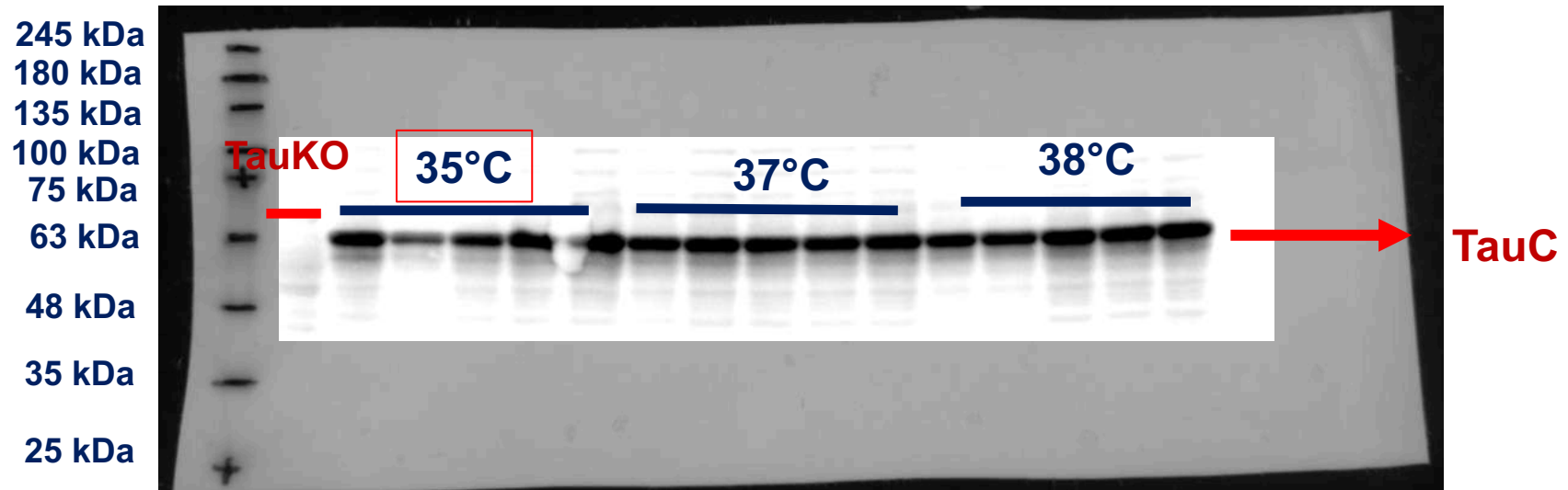


Supp Figure 1F

CP13 - SH-Tau3R



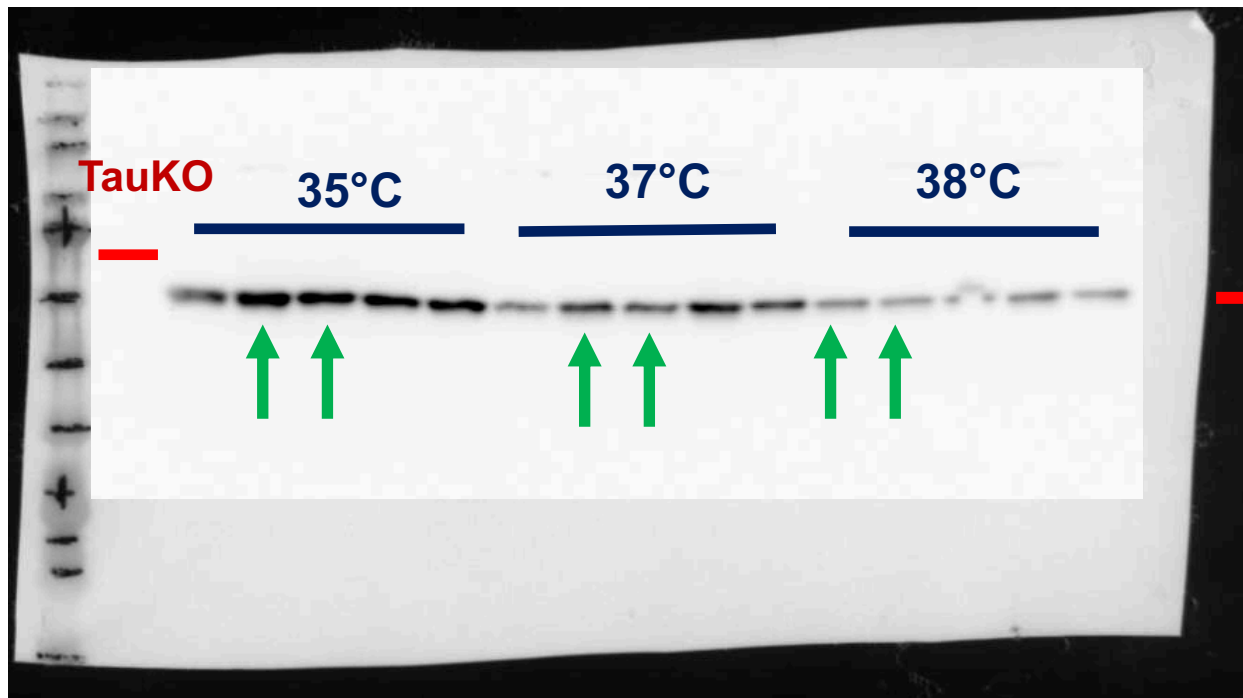
Corresponding Total tau



Supp Figure 1F

T205 - SH-Tau3R

245 kDa
180 kDa
135 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa
17 kDa

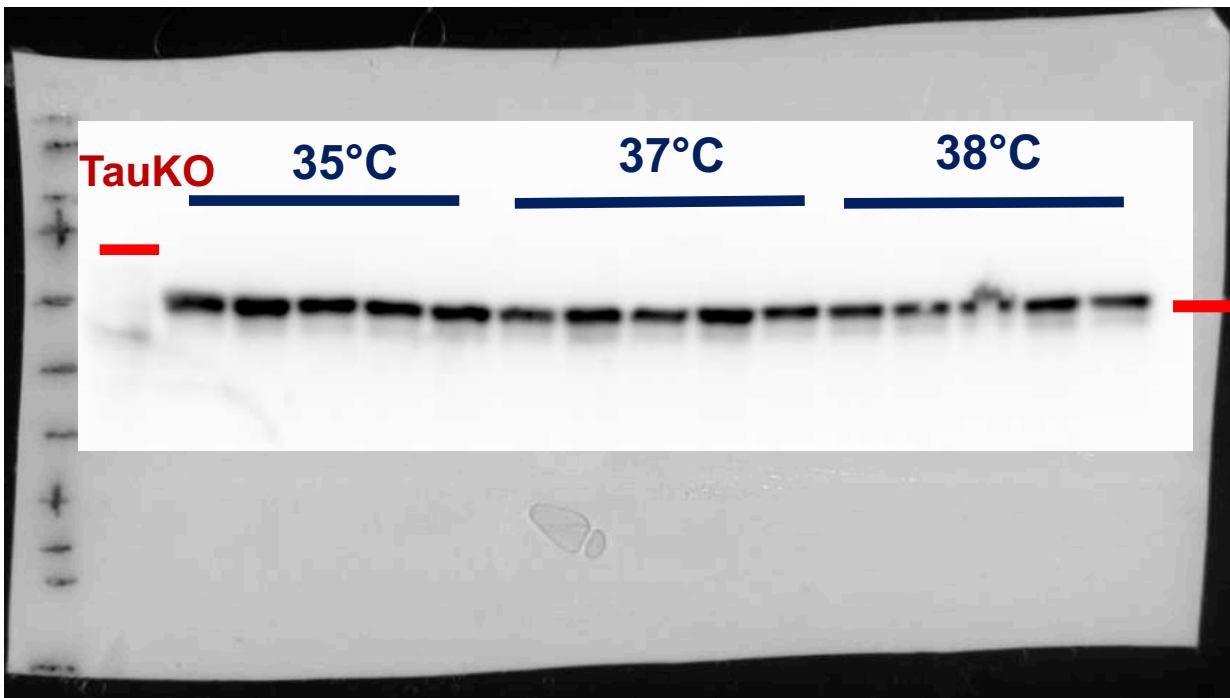


→ Dot used in figure

T205

Corresponding Total tau

245 kDa
180 kDa
135 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa
17 kDa

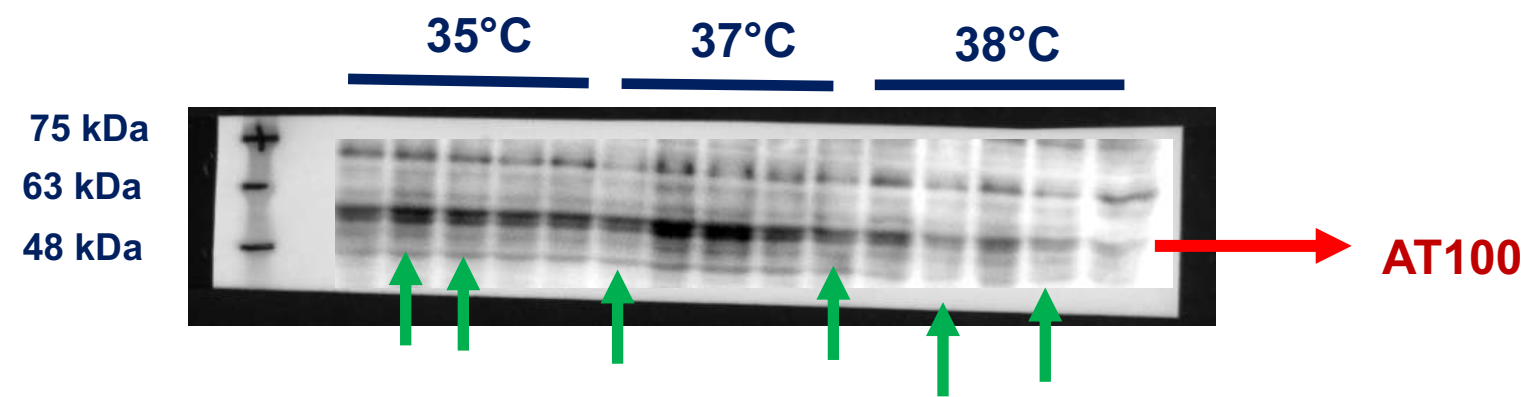


TauC

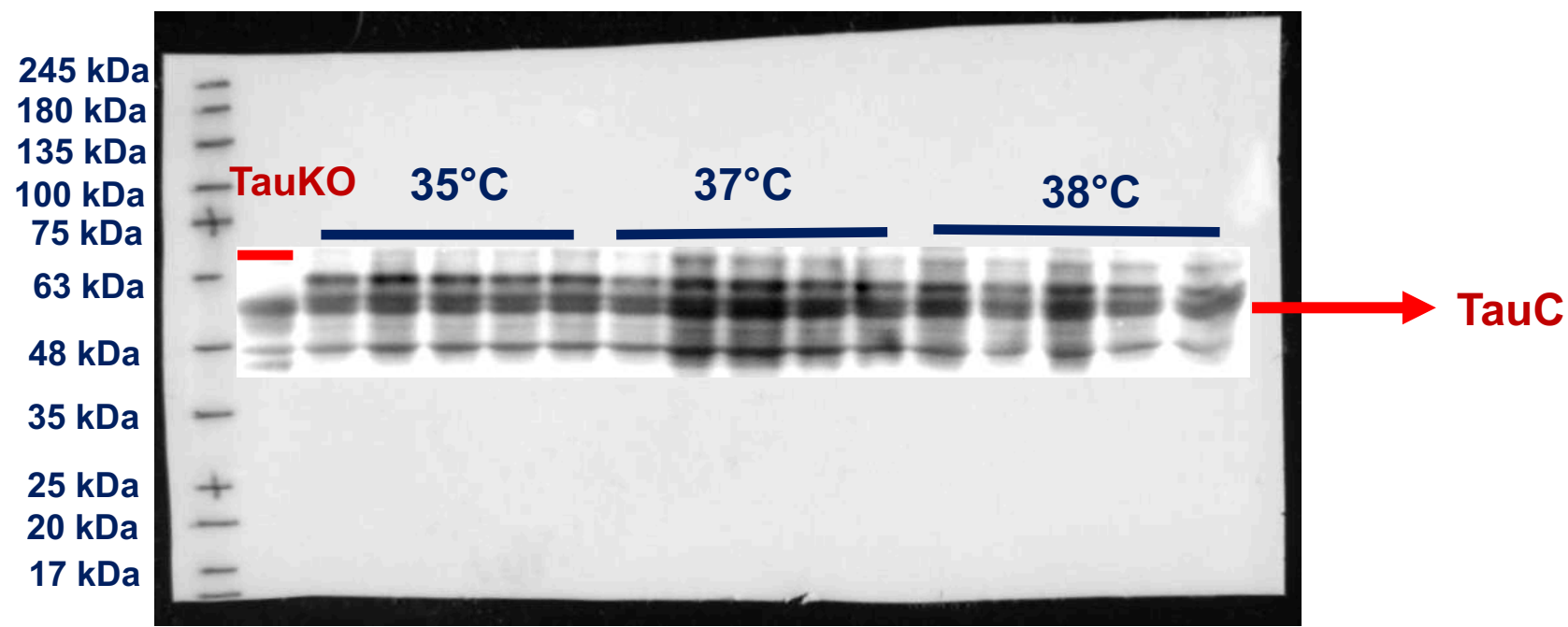
Supp Figure 1F

→ Dot used in figure

AT100 - SH-Tau3R

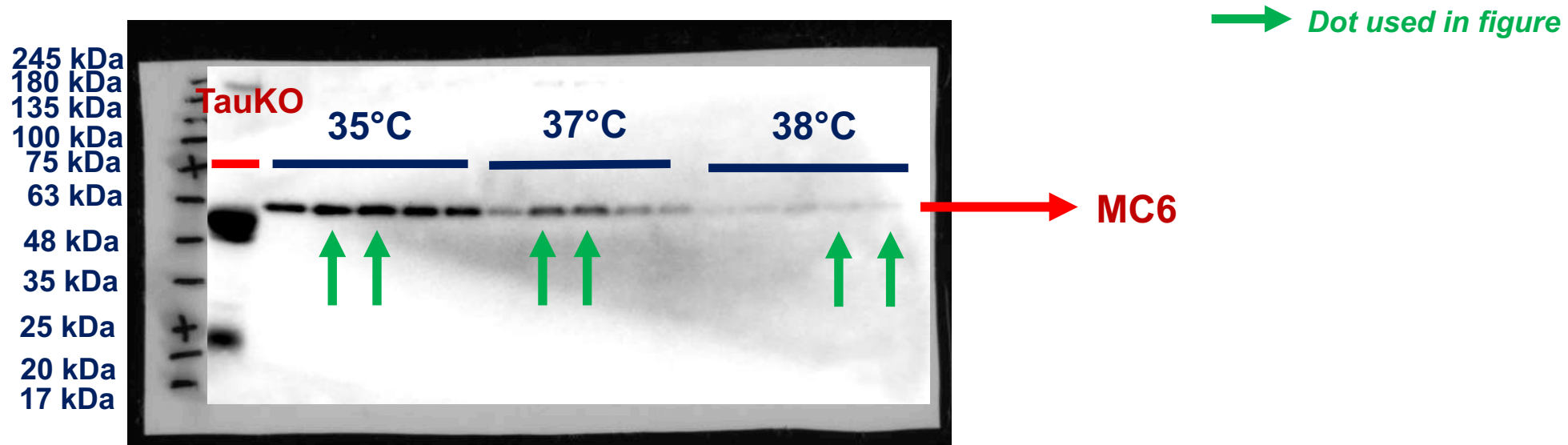


Corresponding Total tau

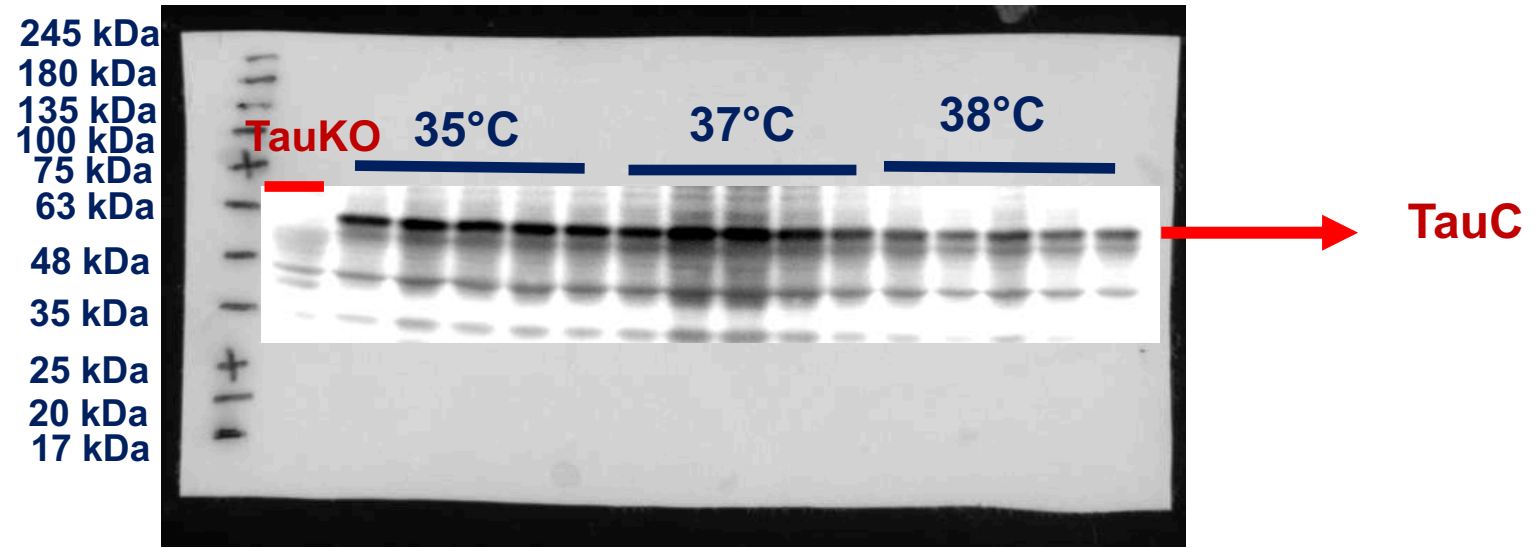


Supp Figure 1F

MC6 - SH-Tau3R



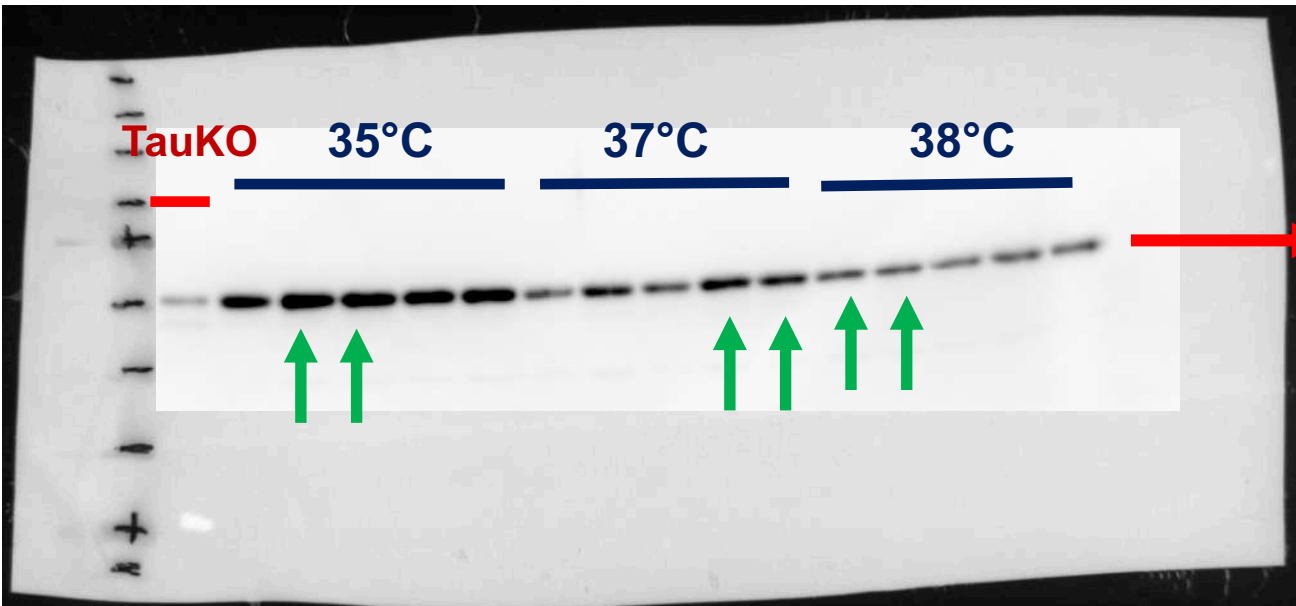
Corresponding Total tau



Supp Figure 1F

PHF1 - SH-Tau3R

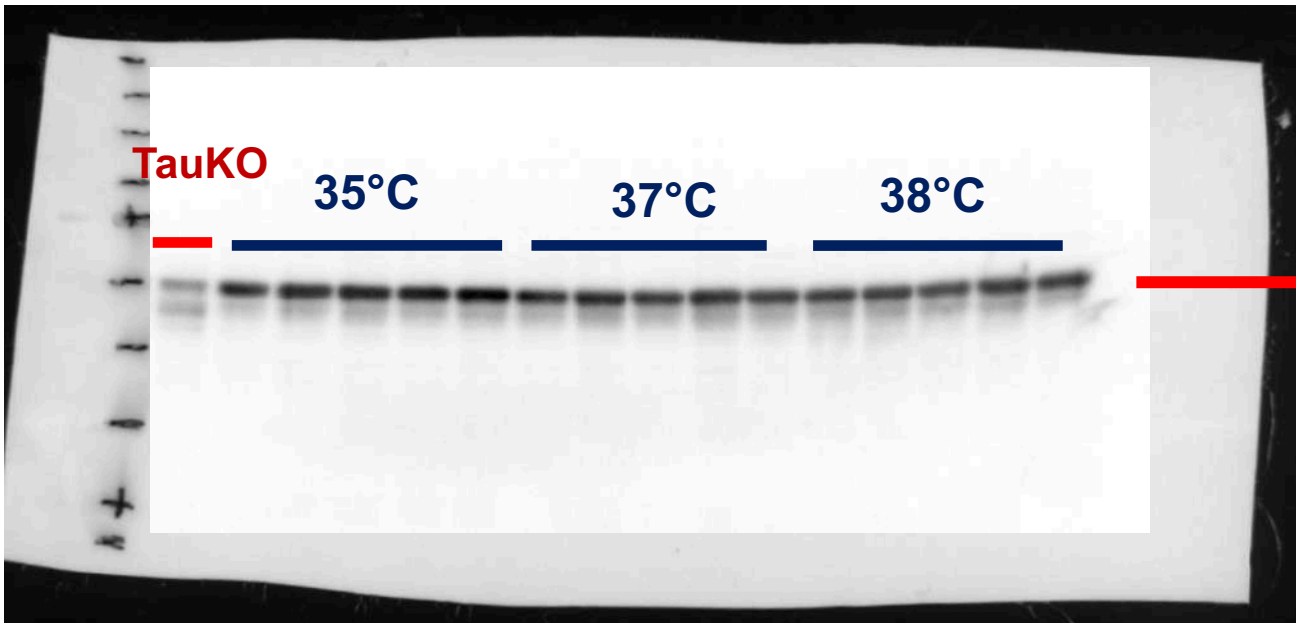
245 kDa
180 kDa
135 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa



→ Dot used in figure

Corresponding Total tau

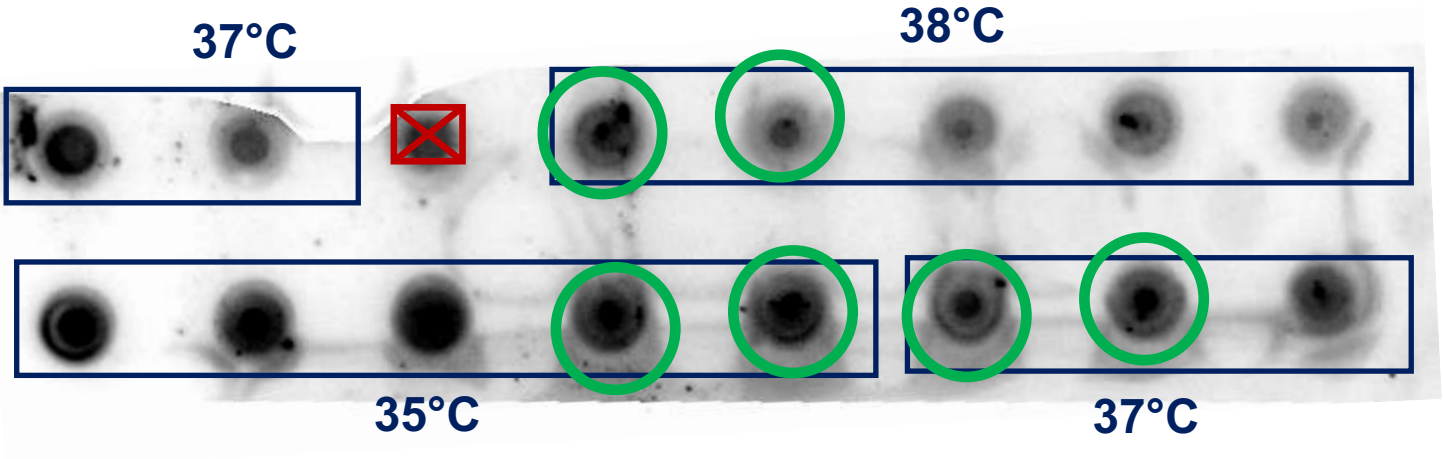
245 kDa
180 kDa
135 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa



TauC

Supp Figure 1H

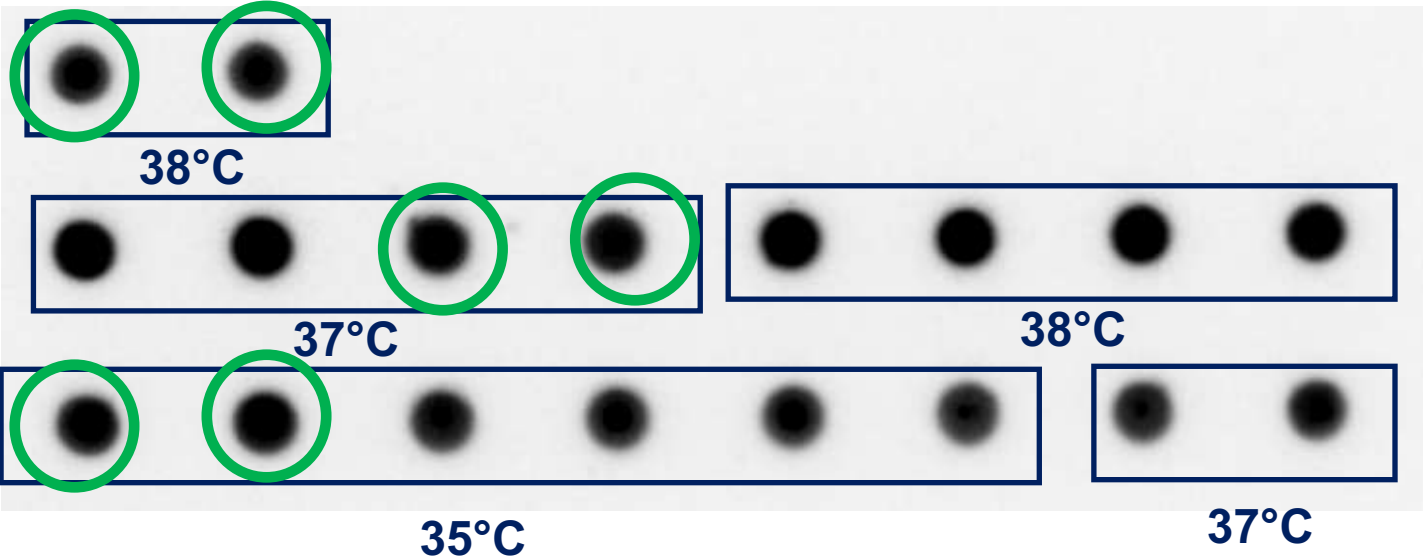
MAP2



 Dot used in figure

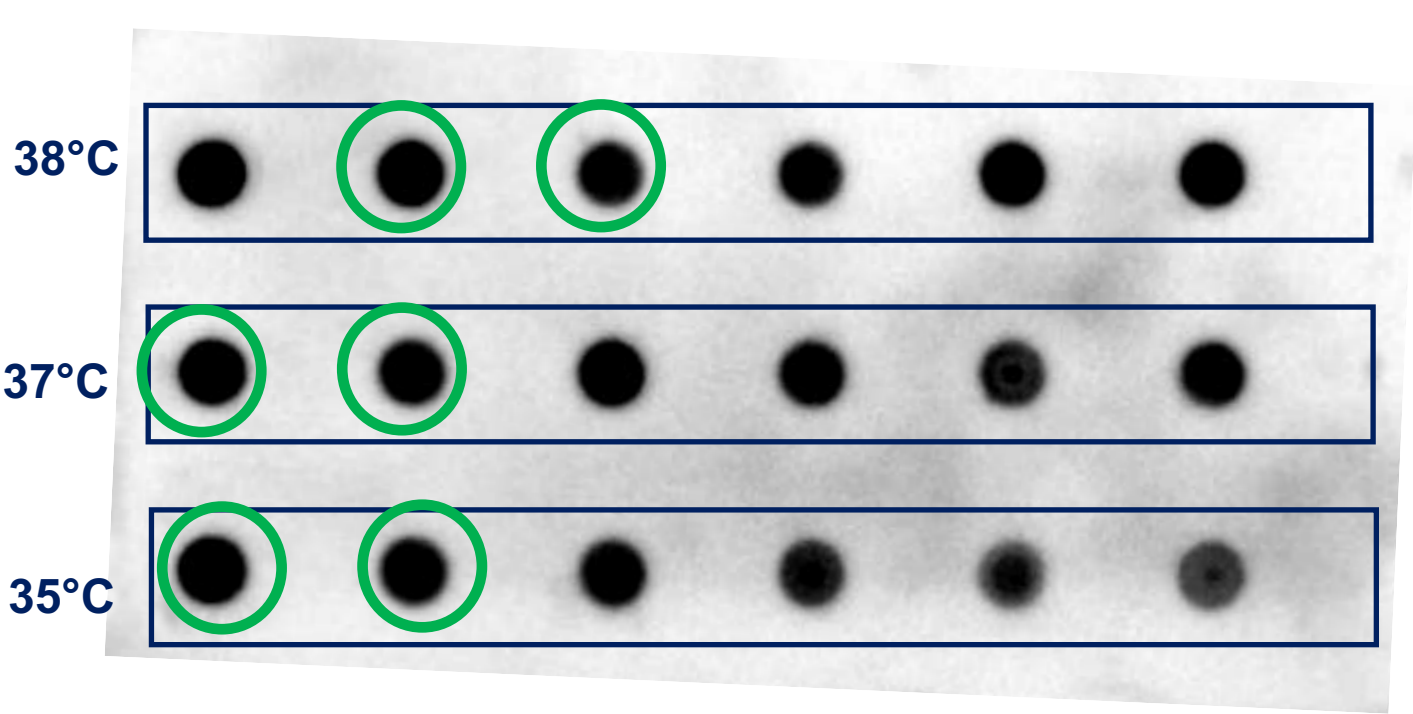
 Unused condition

Alpha-synuclein



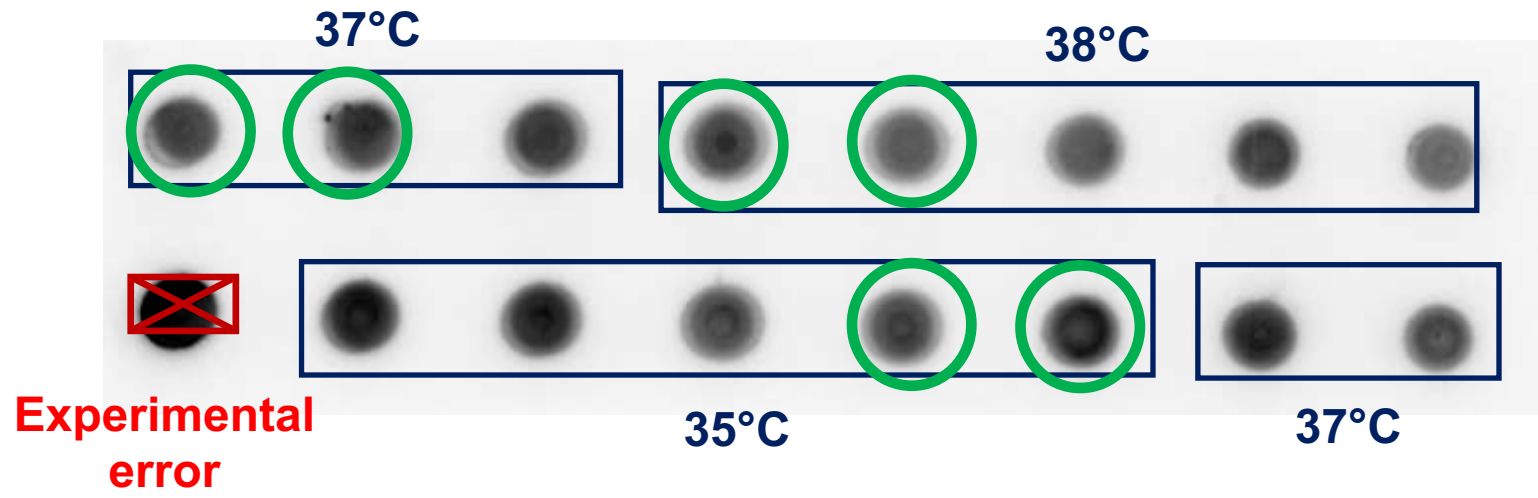
Supp Figure 1H

FGF2



 Dot used in figure

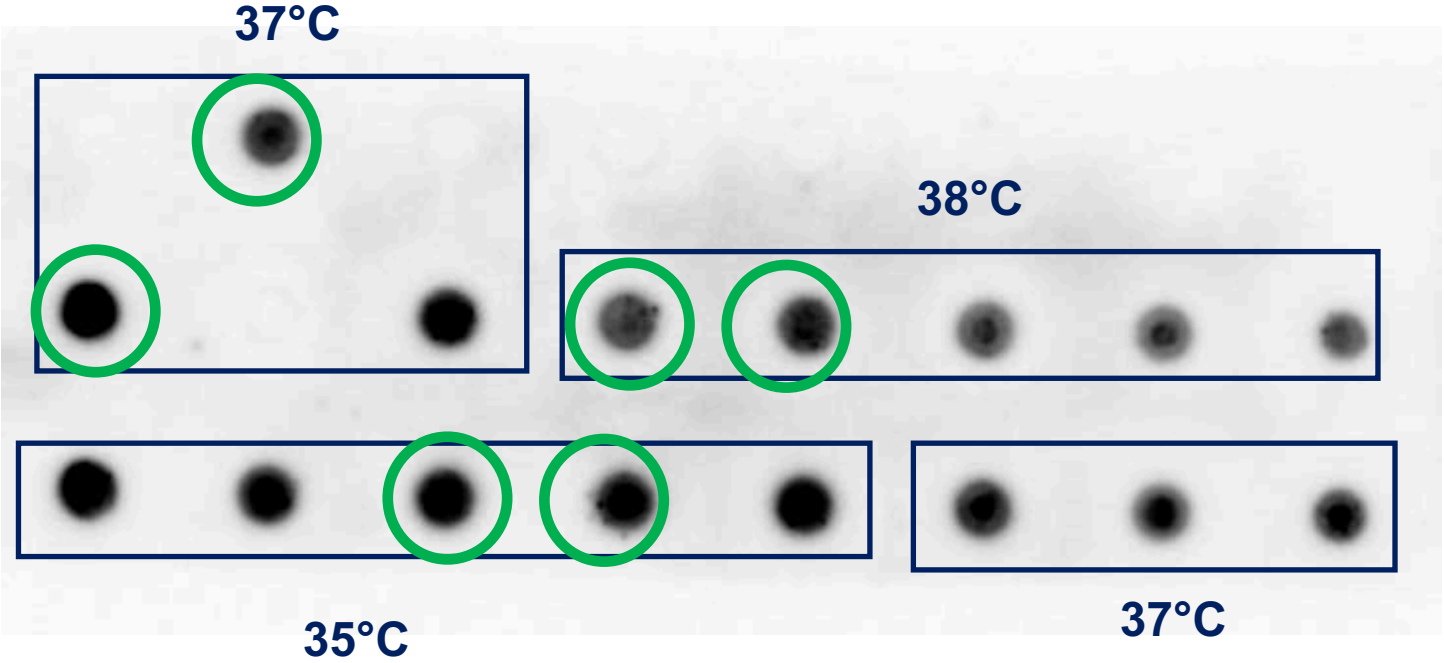
Caspase-1



Supp Figure 1H

 *Dot used in figure*

NfL



Supp Figure 1J

FGF2 - SH-Tau3R

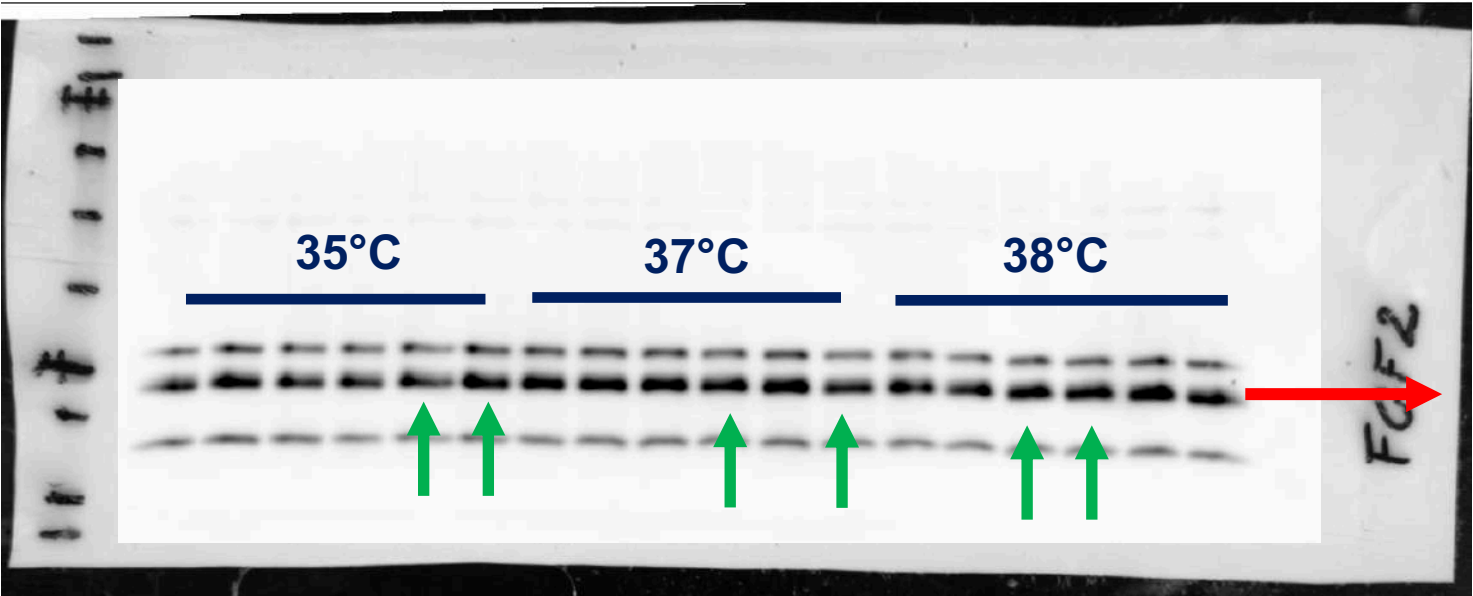
135 kDa
100 kDa
75 kDa
63 kDa

48 kDa

35 kDa

25 kDa
20 kDa

17 kDa



Dot used in figure

FGF2

Actin

Corresponding Actin

100 kDa
75 kDa
63 kDa

48 kDa

35 kDa
25 kDa
20 kDa

17 kDa

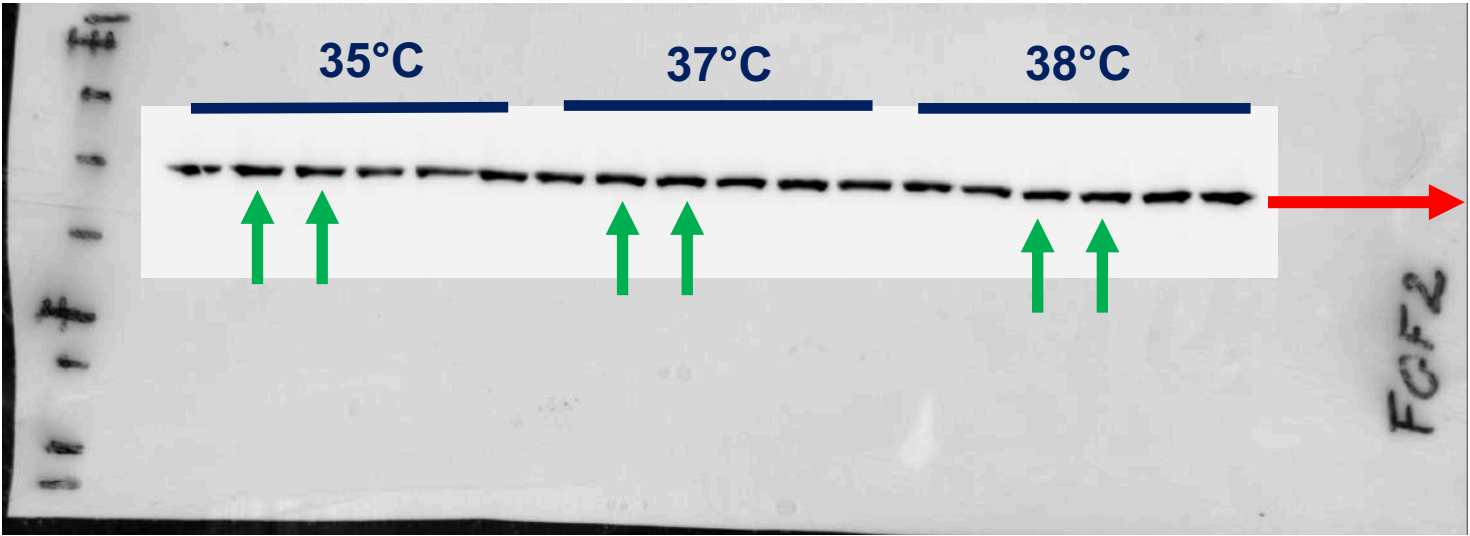
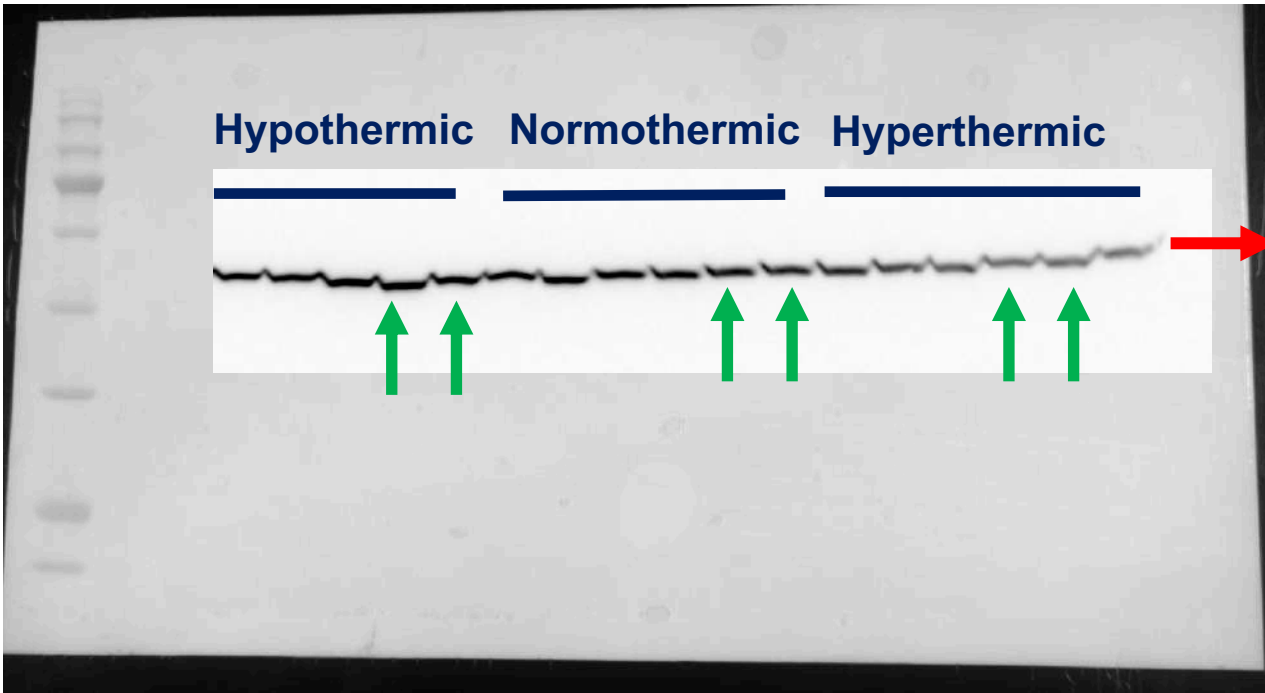


FIGURE S6

Supp Figure 6C

pSer422

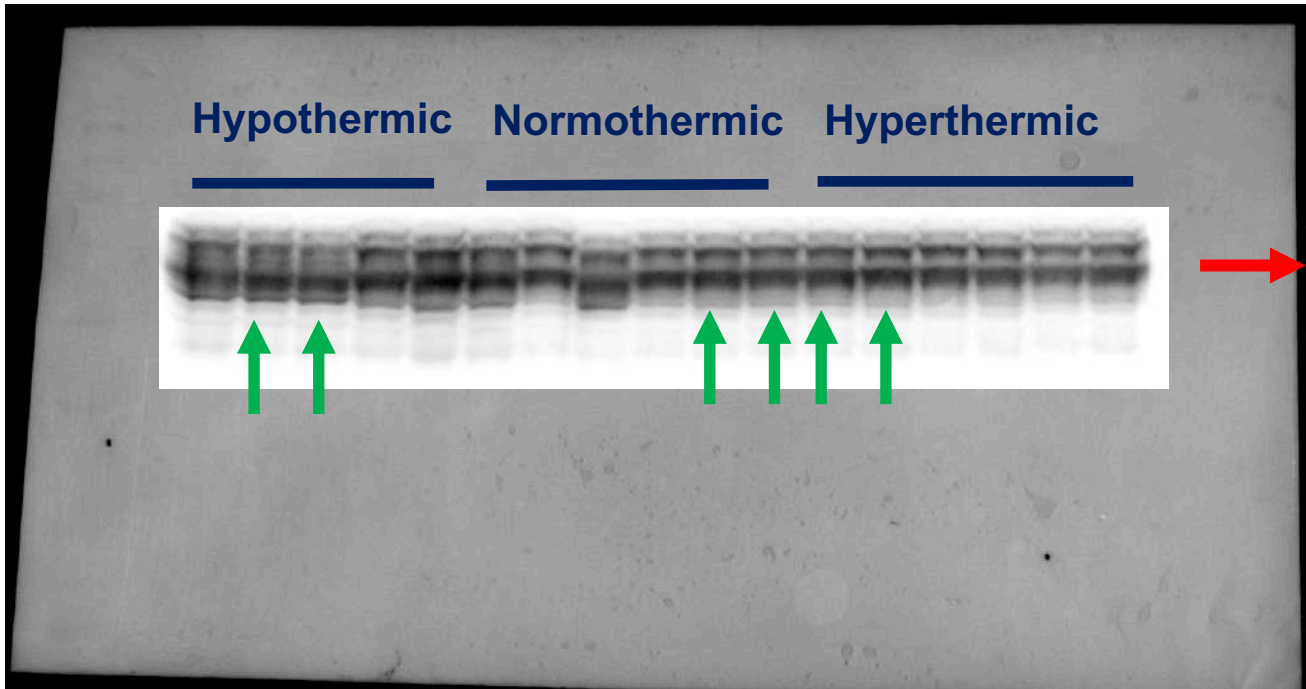
120 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa



pSer422

Total tau

120 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa



Total tau

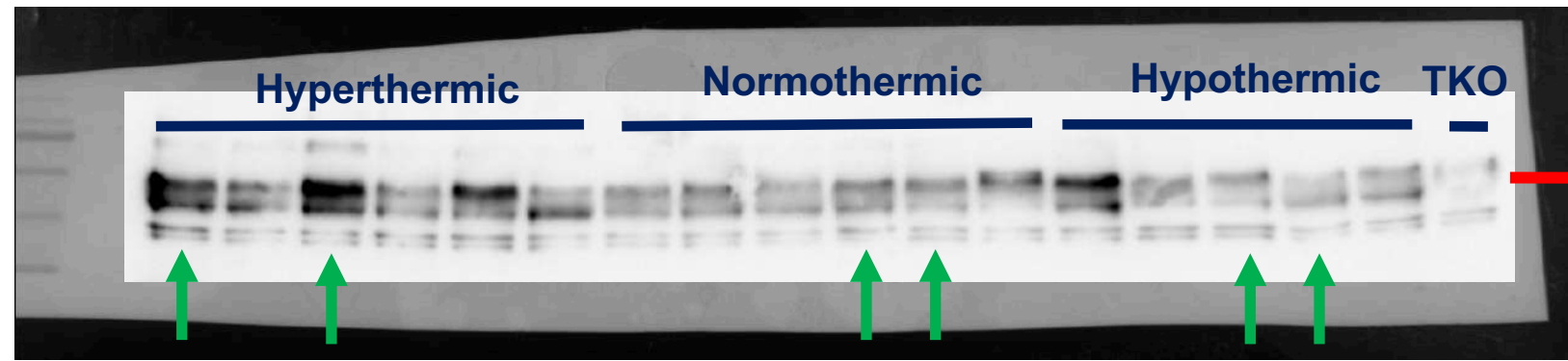
→ Dot used in figure

Supp Figure 6C

→ Dot used in figure

TauC3

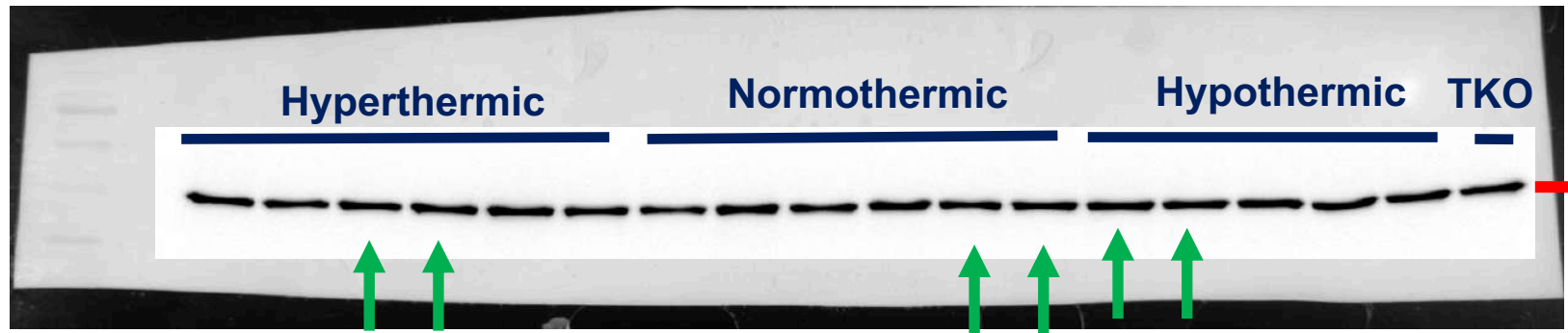
120 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa



TauC3

Actin

120 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa



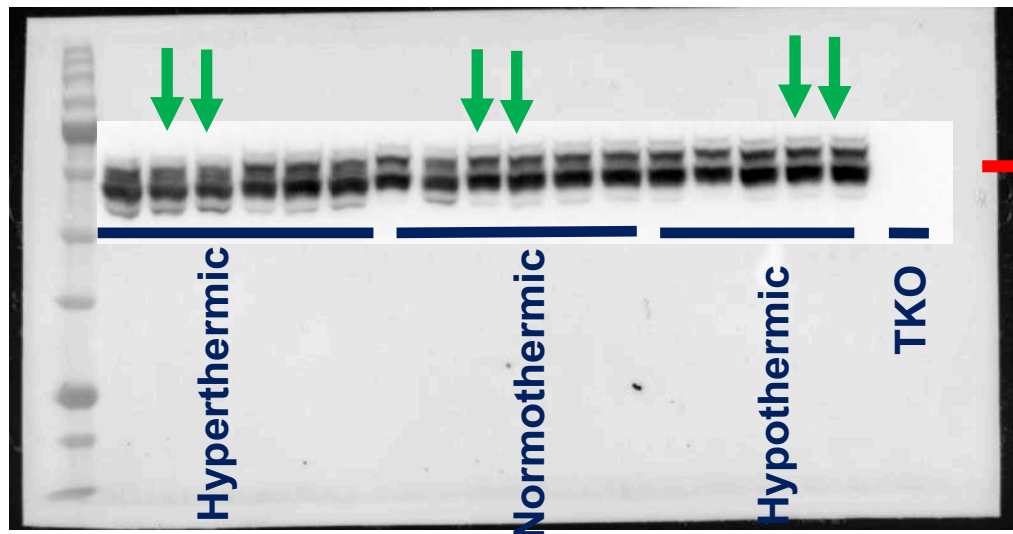
Actin

Supp Figure 6C

Tau46

120 kDa
100 kDa
75 kDa
63 kDa
48 kDa
35 kDa

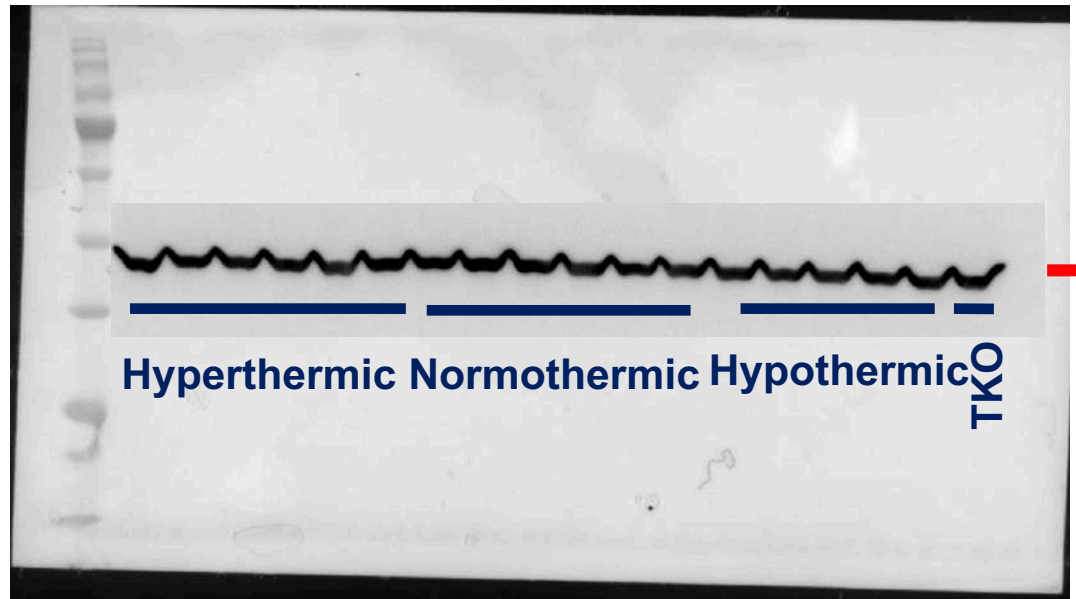
25 kDa
20 kDa
17 kDa



→ Dot used in figure

Tau46

Actin

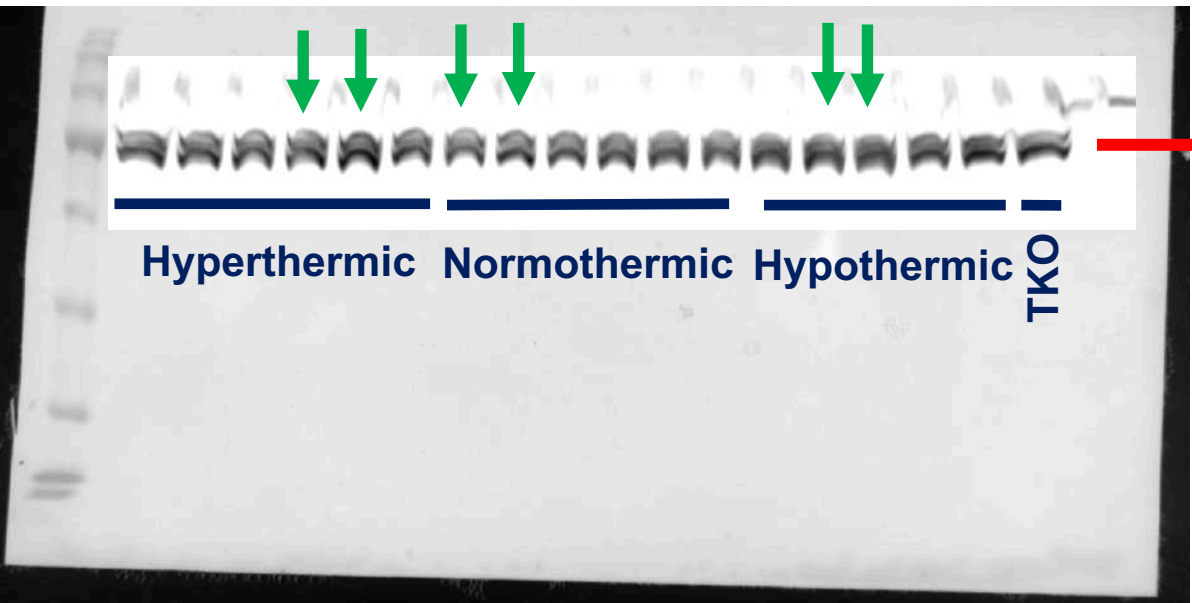


Actin

Supp Figure 6C

SDC3

100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa

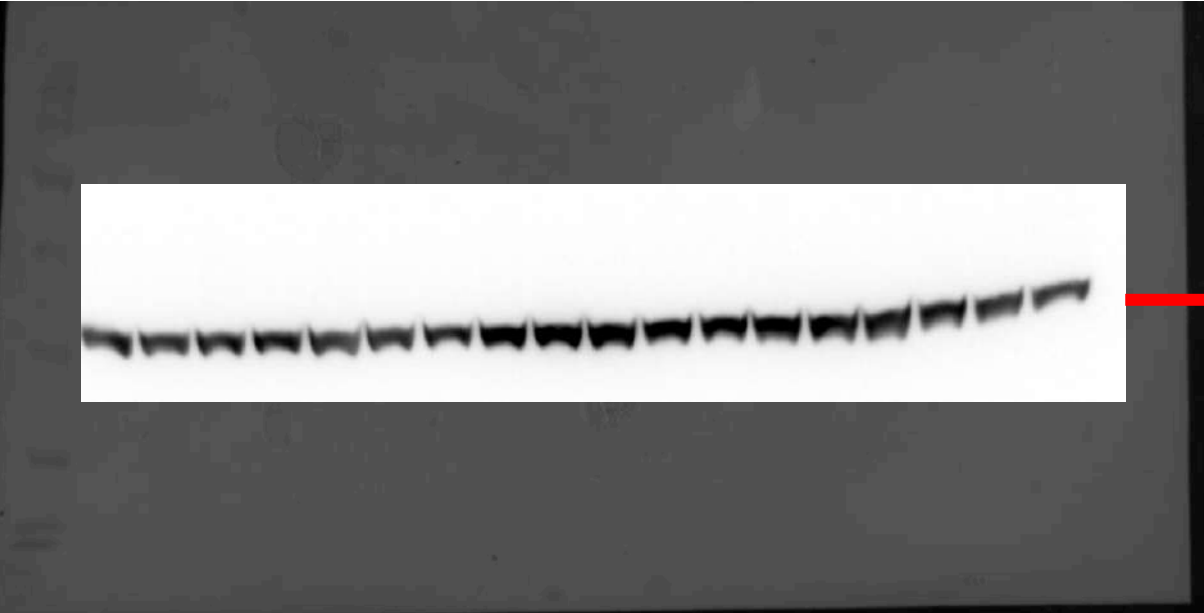


SDC3

→ Dot used in figure

Actin

100 kDa
75 kDa
63 kDa
48 kDa
35 kDa
25 kDa
20 kDa

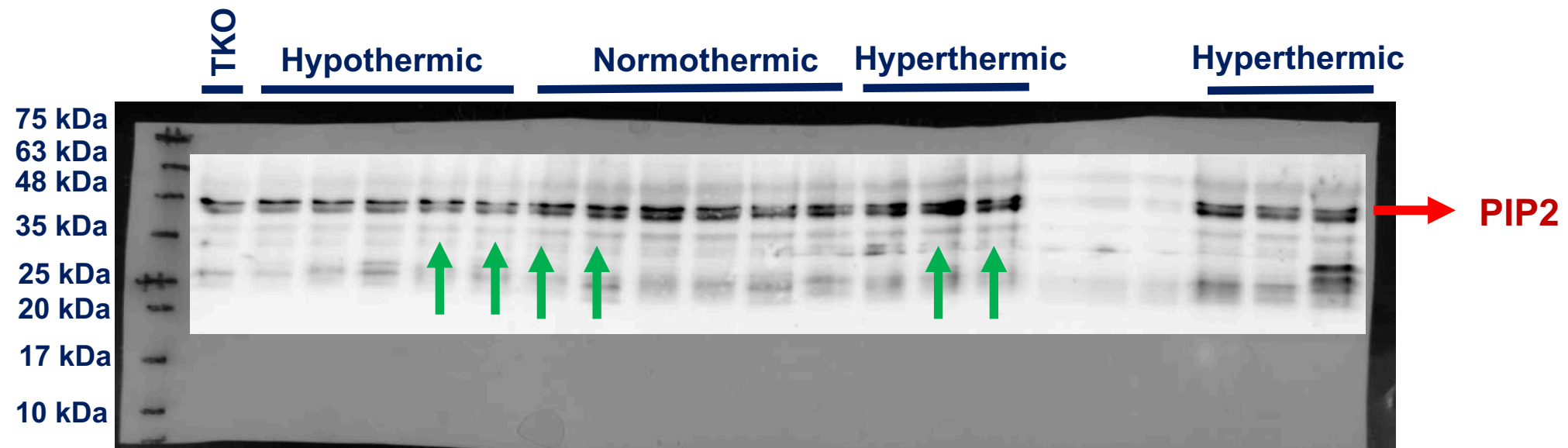


Actin

Supp Figure 6C

→ *Dot used in figure*

PIP2



Actin

