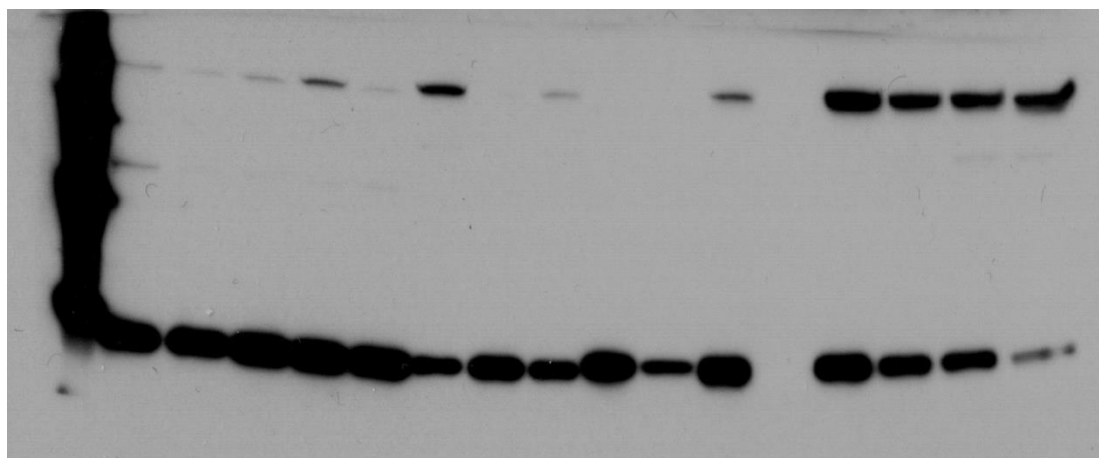


FIGURE 3C ORIGINAL BLOTS

Membrane
cut here →



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

← SHH-FL, ~55 kDa

← SHH-N, 25kDa

Lane 1: Ladder

Lane 2: WT pan 1

Lane 3: WT pan 2

Lane 4: WT pan 3

Lane 5: WT pan 4

Lane 6: $\Delta Men1$ PNET 1

Lane 7: $\Delta Men1$ PNET 2

Lane 8: $\Delta Men1$ PNET 3

Lane 9: $\Delta Men1$ PNET 4

Lane 10: WT DUO 1

Lane 11: WT DUO 2

Lane 12: WT DUO 3

Lane 13: WT DUO 4

Lane 14: $\Delta Men1$ SI-NET 1

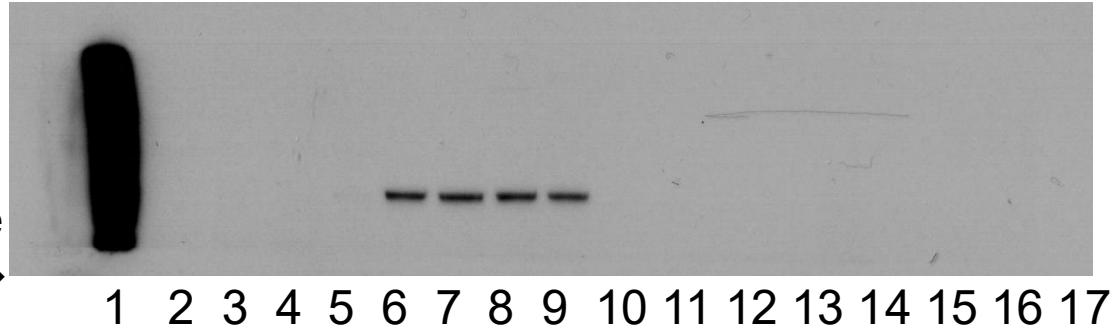
Lane 15: $\Delta Men1$ SI-NET 2

Lane 16: $\Delta Men1$ SI-NET 3

Lane 17: $\Delta Men1$ SI-NET 4

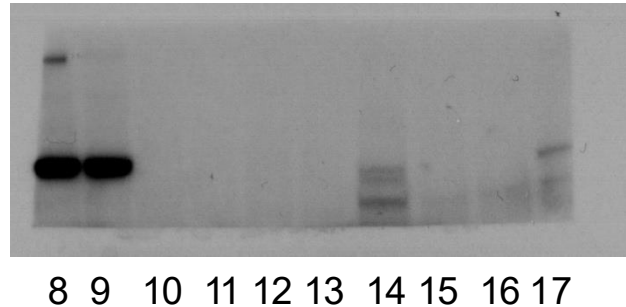
15 minute exposure

Membrane
cut here →



← GLI1, 110 kDa

Same PVDF membrane was cut and developed a second time in ECL reagent to boost sensitivity for the right half of the membrane (since the left half was saturating the signal)



← GLI1, 110 kDa

Lane 1: Ladder

Lane 2: WT pan 1

Lane 3: WT pan 2

Lane 4: WT pan 3

Lane 5: WT pan 4

Lane 6: $\Delta Men1$ PNET 1

Lane 7: $\Delta Men1$ PNET 2

Lane 8: $\Delta Men1$ PNET 3

Lane 9: $\Delta Men1$ PNET 4

Lane 10: WT DUO 1

Lane 11: WT DUO 2

Lane 12: WT DUO 3

Lane 13: WT DUO 4

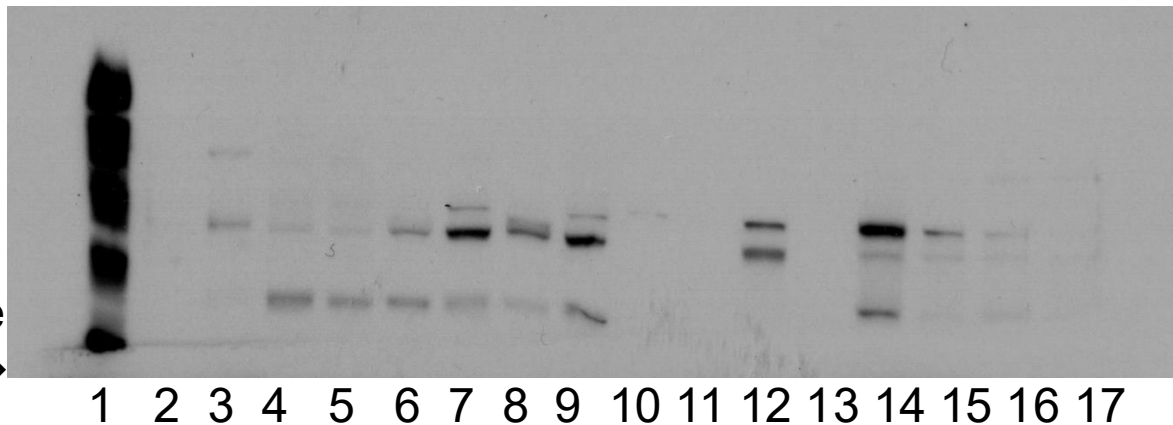
Lane 14: $\Delta Men1$ SI-NET 1

Lane 15: $\Delta Men1$ SI-NET 2

Lane 16: $\Delta Men1$ SI-NET 3

Lane 17: $\Delta Men1$ SI-NET 4

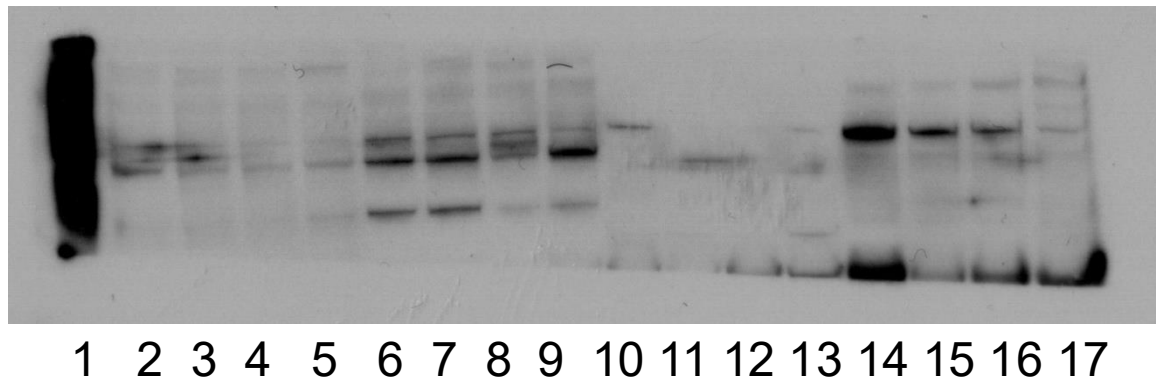
Membrane
cut here →



← GLI2, 80 kDa
proteolytic active
(cleaved) form

Replicate #2

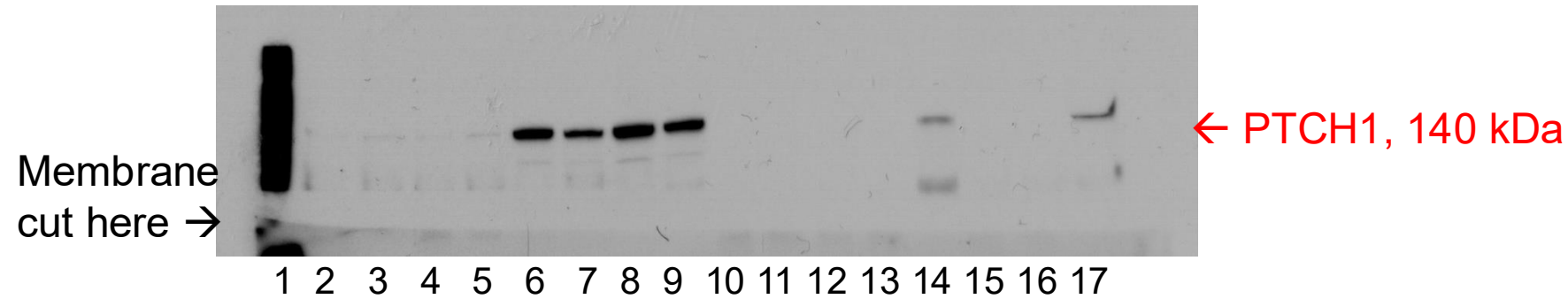
Membrane
cut here →



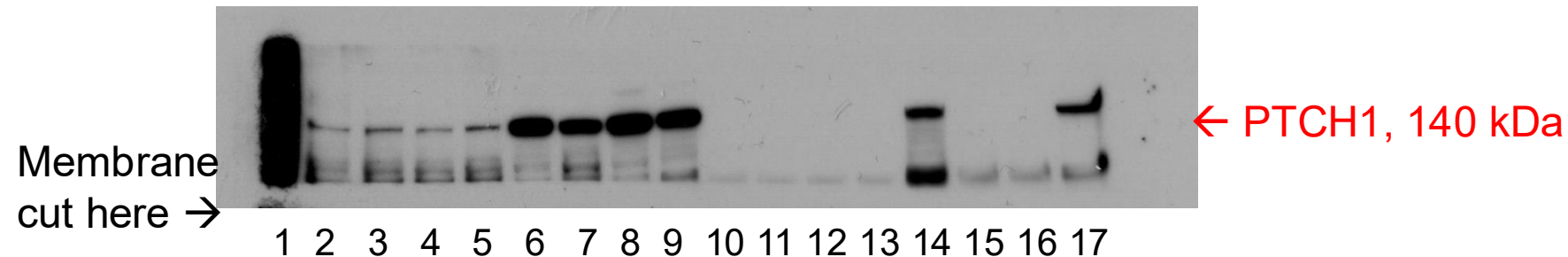
← GLI2, 80 kDa
proteolytic active
(cleaved) form

- Lane 1: Ladder
- Lane 2: WT pan 1
- Lane 3: WT pan 2
- Lane 4: WT pan 3
- Lane 5: WT pan 4
- Lane 6: $\Delta Men1$ PNET 1
- Lane 7: $\Delta Men1$ PNET 2
- Lane 8: $\Delta Men1$ PNET 3
- Lane 9: $\Delta Men1$ PNET 4
- Lane 10: WT DUO 1
- Lane 11: WT DUO 2
- Lane 12: WT DUO 3
- Lane 13: WT DUO 4
- Lane 14: $\Delta Men1$ SI-NET 1
- Lane 15: $\Delta Men1$ SI-NET 2
- Lane 16: $\Delta Men1$ SI-NET 3
- Lane 17: $\Delta Men1$ SI-NET 4

15 second exposure



1 minute exposure



Lane 1: Ladder

Lane 2: WT pan 1

Lane 3: WT pan 2

Lane 4: WT pan 3

Lane 5: WT pan 4

Lane 6: $\Delta Men1$ PNET 1

Lane 7: $\Delta Men1$ PNET 2

Lane 8: $\Delta Men1$ PNET 3

Lane 9: $\Delta Men1$ PNET 4

Lane 10: WT DUO 1

Lane 11: WT DUO 2

Lane 12: WT DUO 3

Lane 13: WT DUO 4

Lane 14: $\Delta Men1$ SI-NET 1

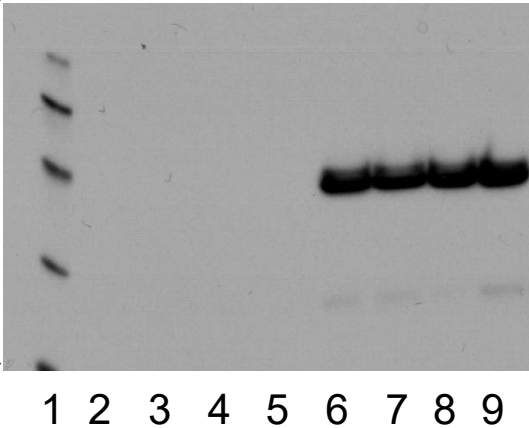
Lane 15: $\Delta Men1$ SI-NET 2

Lane 16: $\Delta Men1$ SI-NET 3

Lane 17: $\Delta Men1$ SI-NET 4

Membrane
cut here →

Membrane
cut here →



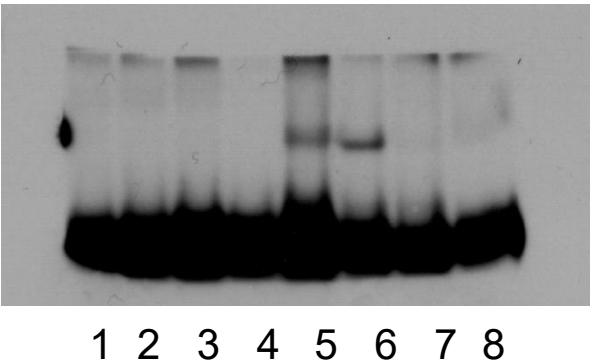
← SYP, 40 kDa

← IgG light chain

Lane 1: Ladder
Lane 2: WT pan 1
Lane 3: WT pan 2
Lane 4: WT pan 3
Lane 5: WT pan 4
Lane 6: $\Delta Men1$ PNET 1
Lane 7: $\Delta Men1$ PNET 2
Lane 8: $\Delta Men1$ PNET 3
Lane 9: $\Delta Men1$ PNET 4

Membrane
cut here →

Membrane
cut here →



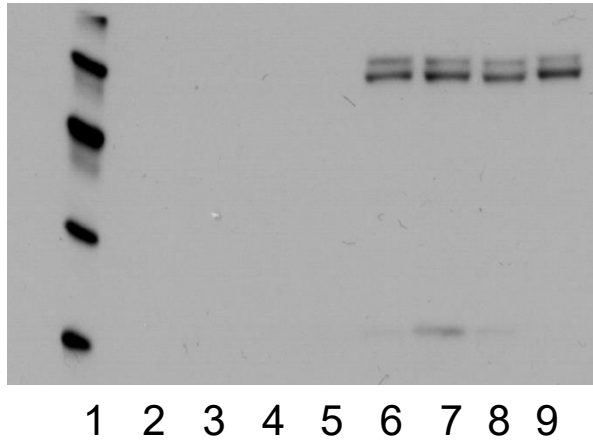
← SYP, 40 kDa

← IgG light chain

Lane 1: WT DUO 1
Lane 2: WT DUO 2
Lane 3: WT DUO 3
Lane 4: WT DUO 4
Lane 5: $\Delta Men1$ SI-NET 1
Lane 6: $\Delta Men1$ SI-NET 2
Lane 7: $\Delta Men1$ SI-NET 3
Lane 8: $\Delta Men1$ SI-NET 4

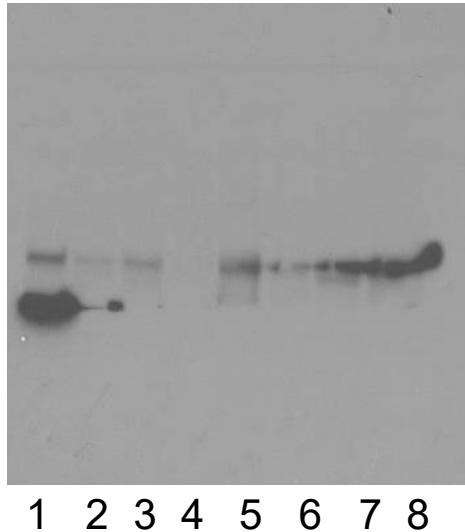
Membrane
cut here →

Membrane
cut here →



← PAX6, 50 kDa

Lane 1: Ladder
Lane 2: WT pan 1
Lane 3: WT pan 2
Lane 4: WT pan 3
Lane 5: WT pan 4
Lane 6: $\Delta Men1$ PNET 1
Lane 7: $\Delta Men1$ PNET 2
Lane 8: $\Delta Men1$ PNET 3
Lane 9: $\Delta Men1$ PNET 4

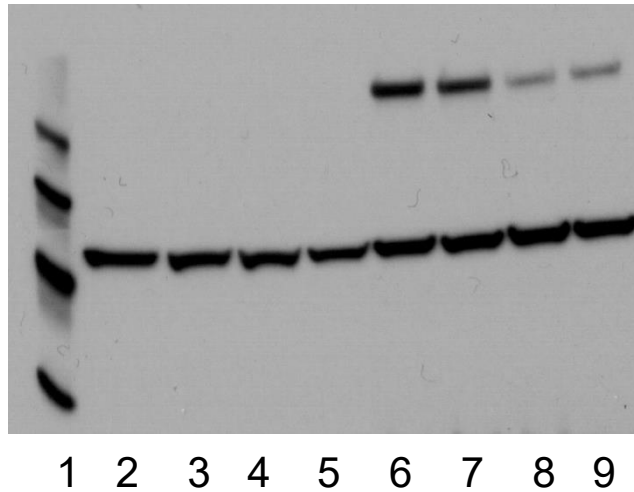


← PAX6, 50 kDa

Lane 1: WT DUO 1
Lane 2: WT DUO 2
Lane 3: WT DUO 3
Lane 4: WT DUO 4
Lane 5: $\Delta Men1$ SI-NET 1
Lane 6: $\Delta Men1$ SI-NET 2
Lane 7: $\Delta Men1$ SI-NET 3
Lane 8: $\Delta Men1$ SI-NET 4

Membrane
cut here →

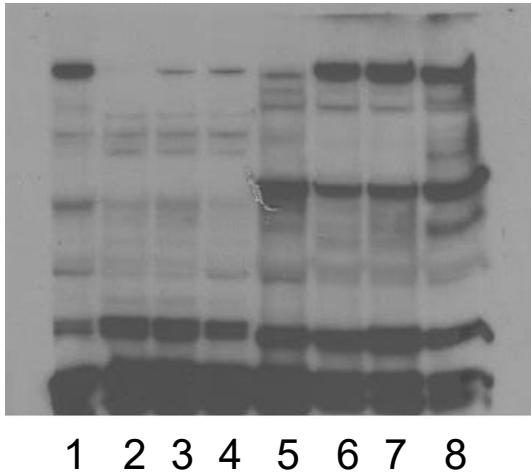
Membrane
cut here →



← CHGA, 50 kDa

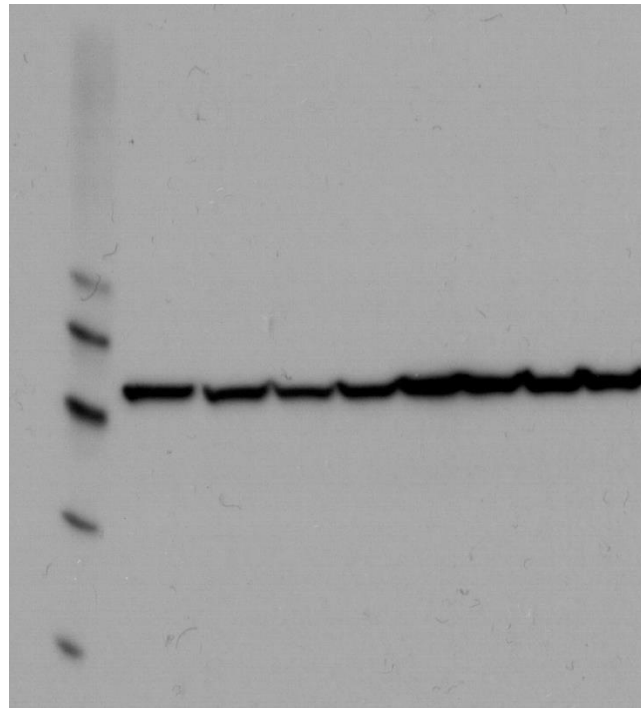
← Beta-actin, 42 kDa

Lane 1: Ladder
Lane 2: WT pan 1
Lane 3: WT pan 2
Lane 4: WT pan 3
Lane 5: WT pan 4
Lane 6: $\Delta Men1$ PNET 1
Lane 7: $\Delta Men1$ PNET 2
Lane 8: $\Delta Men1$ PNET 3
Lane 9: $\Delta Men1$ PNET 4



← CHGA, 50 kDa

Lane 1: WT DUO 1
Lane 2: WT DUO 2
Lane 3: WT DUO 3
Lane 4: WT DUO 4
Lane 5: $\Delta Men1$ SI-NET 1
Lane 6: $\Delta Men1$ SI-NET 2
Lane 7: $\Delta Men1$ SI-NET 3
Lane 8: $\Delta Men1$ SI-NET 4



1 2 3 4 5 6 7 8 9

← Beta-actin, 42 kDa

Lane 1: Ladder

Lane 2: WT DUO 1

Lane 3: WT DUO 2

Lane 4: WT DUO 3

Lane 5: WT DUO 4

Lane 6: $\Delta Men1$ SI-NET 1

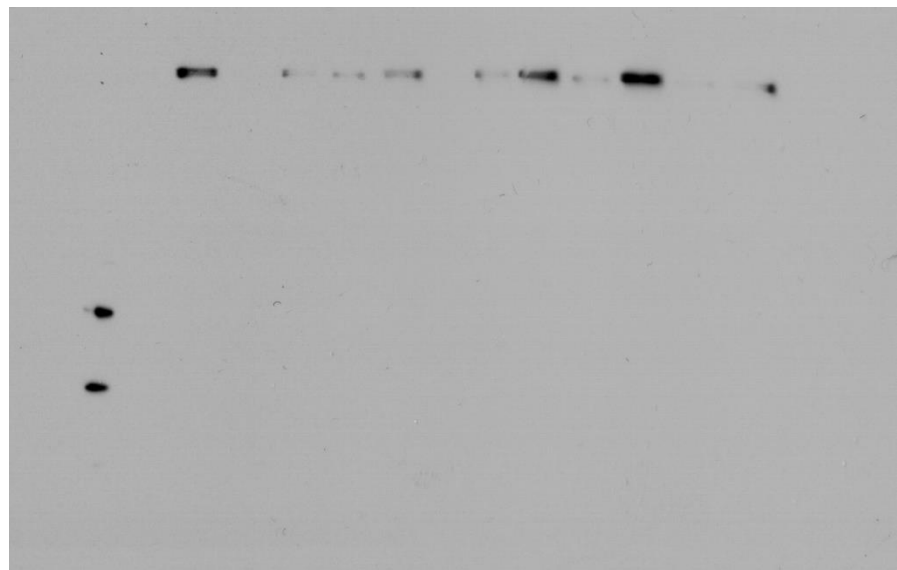
Lane 7: $\Delta Men1$ SI-NET 2

Lane 8: $\Delta Men1$ SI-NET 3

Lane 9: $\Delta Men1$ SI-NET 4

FIGURE 5H ORIGINAL BLOTS

Membrane
cut here →



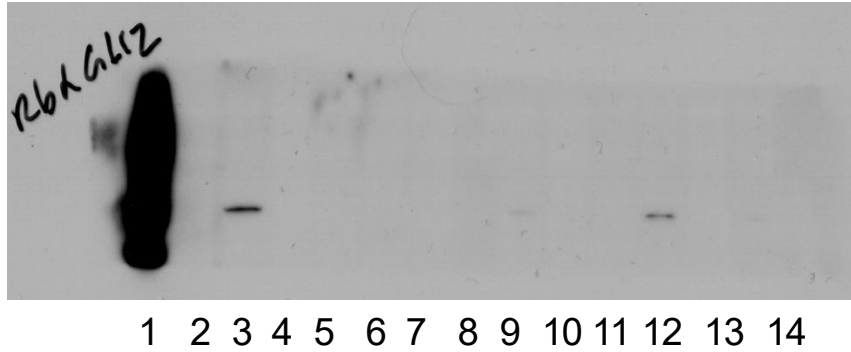
1 2 3 4 5 6 7 8 9 10 11 12 13 14

← SHH-FL, ~55 kDa

biological
replicate #2

- Lane 1: Ladder
- Lane 2: DMSO
- Lane 3: SHH
- Lane 4: SHH+ITZ
- Lane 5: SHH+VISMO
- Lane 6: ITZ
- Lane 7: VISMO
- Lane 8: Empty
- Lane 9: DMSO
- Lane 10: SHH
- Lane 11: SHH+ITZ
- Lane 12: SHH+VISMO
- Lane 13: ITZ
- Lane 14: VISMO

Membrane
cut here →

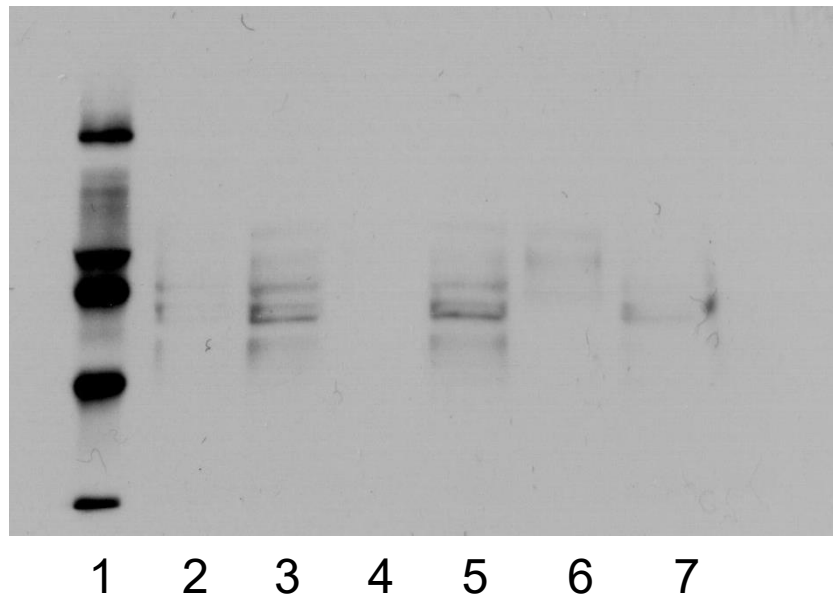


← GLI2, 80 kDa
proteolytic active (cleaved) form

biological
replicate #2

- Lane 1: Ladder
- Lane 2: DMSO
- Lane 3: SHH
- Lane 4: SHH+ITZ
- Lane 5: SHH+VISMO
- Lane 6: ITZ
- Lane 7: VISMO
- Lane 8: Empty
- Lane 9: DMSO
- Lane 10: SHH
- Lane 11: SHH+ITZ
- Lane 12: SHH+VISMO
- Lane 13: ITZ
- Lane 14: VISMO

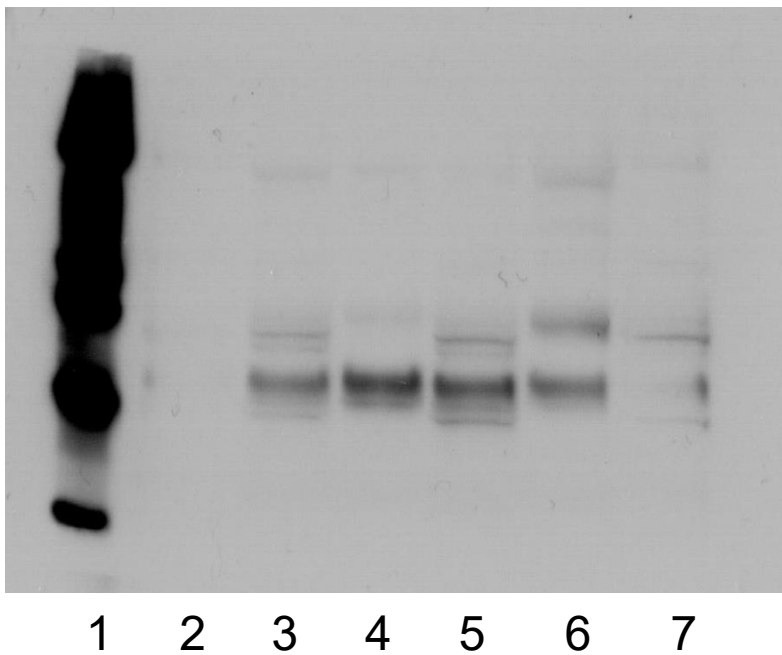
Membrane
cut here →



← PTCH1

Lane 1: Ladder
Lane 2: DMSO
Lane 3: SHH
Lane 4: SHH+ITZ
Lane 5: SHH+VISM
Lane 6: ITZ
Lane 7: VISM

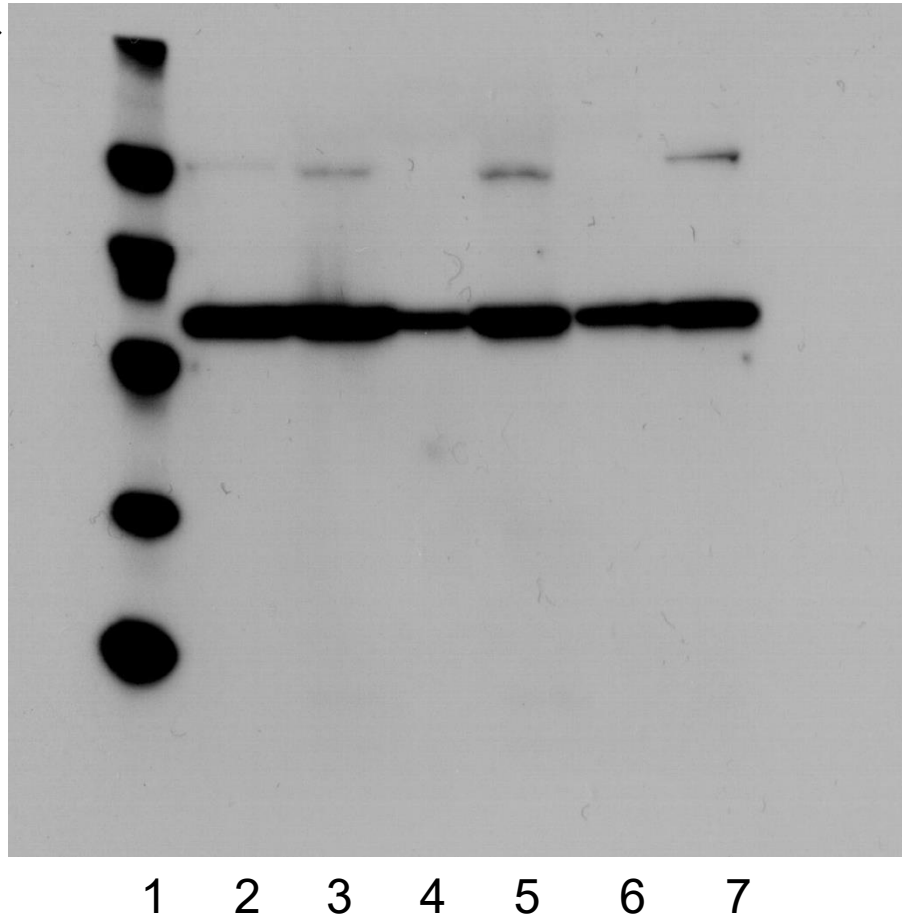
Membrane
cut here →



← SMO

Lane 1: Ladder
Lane 2: DMSO
Lane 3: SHH
Lane 4: SHH+ITZ
Lane 5: SHH+VISMO
Lane 6: ITZ
Lane 7: VISMO

Membrane
cut here →



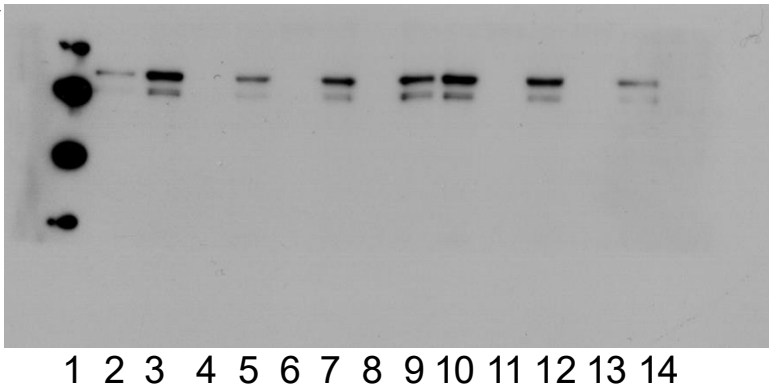
← AKT

← Beta-actin, 42kDa (re-probe)

Lane 1: Ladder
Lane 2: DMSO
Lane 3: SHH
Lane 4: SHH+ITZ
Lane 5: SHH+VISMO
Lane 6: ITZ
Lane 7: VISMO

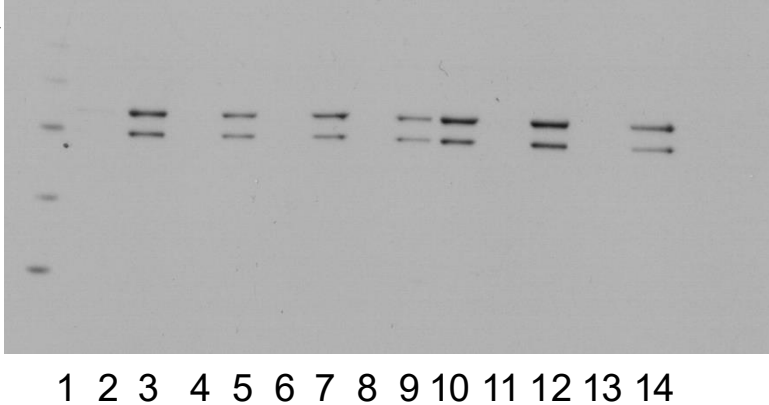
FIGURE 5J ORIGINAL BLOTS

Membrane
cut here →



← p-ERK (T202/Y204), 44kDa

Membrane
cut here →

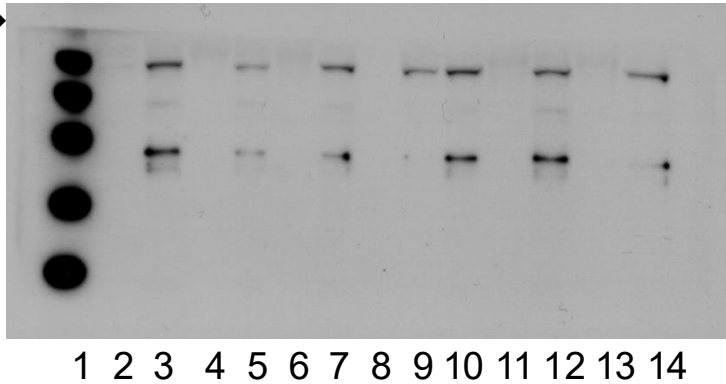


← ERK (total), 44kDa

biological
replicate #2

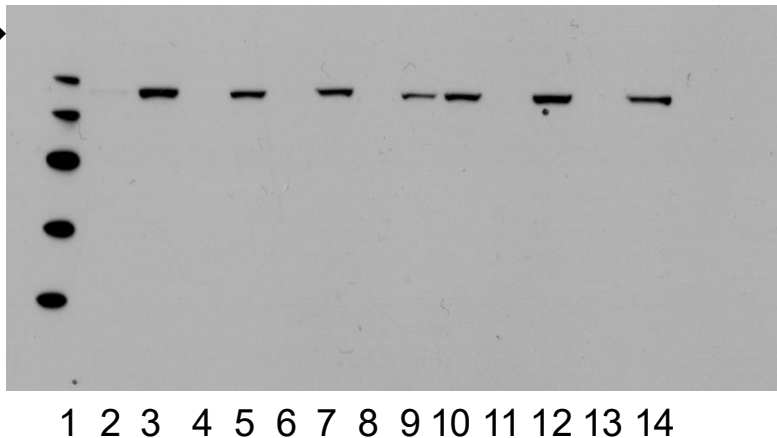
- Lane 1: Ladder
- Lane 2: DMSO
- Lane 3: SHH
- Lane 4: SHH+ITZ
- Lane 5: SHH+VISMO
- Lane 6: ITZ
- Lane 7: VISMO
- Lane 8: Empty
- Lane 9: DMSO
- Lane 10: SHH
- Lane 11: SHH+ITZ
- Lane 12: SHH+VISMO
- Lane 13: ITZ
- Lane 14: VISMO

Membrane
cut here →



← p-AKT (S473), 57kDa

Membrane
cut here →



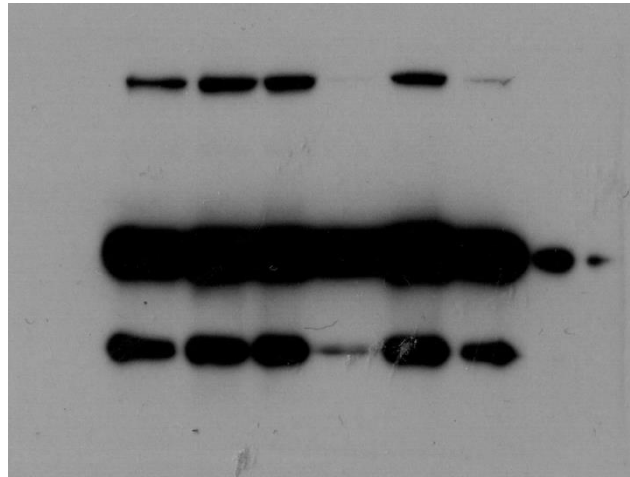
← pan-AKT, 57kDa

biological
replicate #2

- Lane 1: Ladder
- Lane 2: DMSO
- Lane 3: SHH
- Lane 4: SHH+ITZ
- Lane 5: SHH+VISMO
- Lane 6: ITZ
- Lane 7: VISMO
- Lane 8: Empty
- Lane 9: DMSO
- Lane 10: SHH
- Lane 11: SHH+ITZ
- Lane 12: SHH+VISMO
- Lane 13: ITZ
- Lane 14: VISMO

FIGURE 6E ORIGINAL BLOTS

Membrane
cut here →



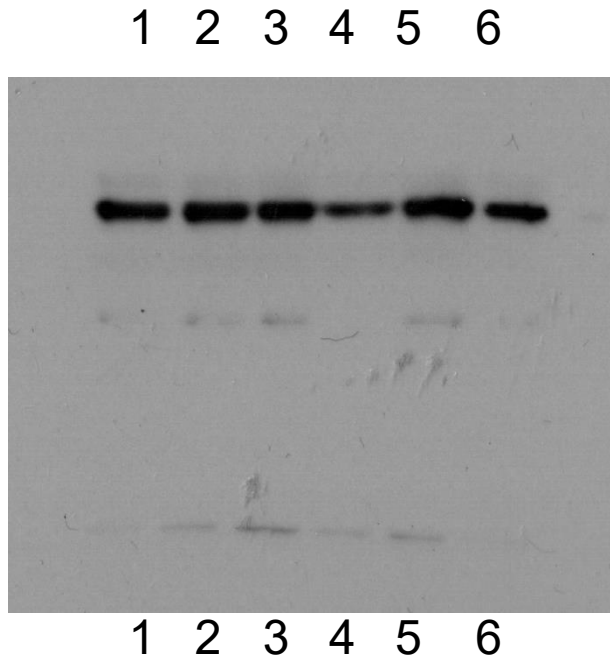
← SHH-FL, 55kDa

← GAPDH, 38kDa (reprobe)

← SHH-N, 25kDa

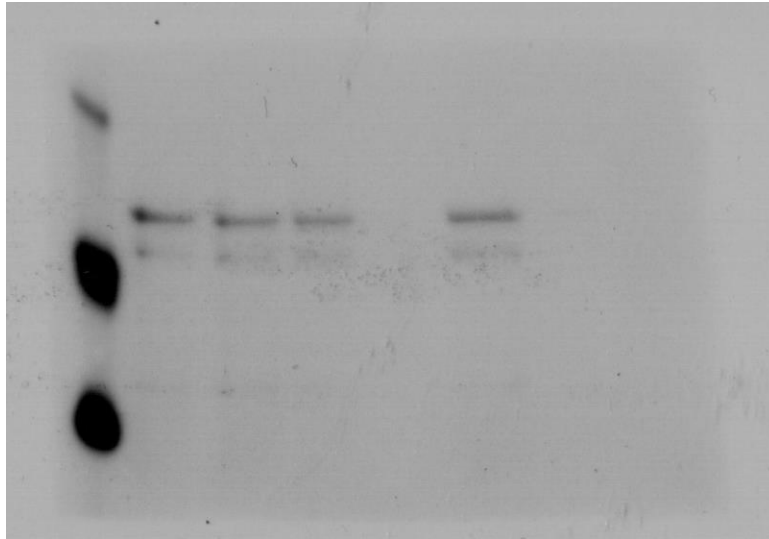
Lane 1: DMSO
Lane 2: SHH
Lane 3: VISMO
Lane 4: ITZ
Lane 5: SHH+VISMO
Lane 6: SHH+ITZ

Membrane
cut here →



← GAPDH, 38kDa

Membrane
cut here →

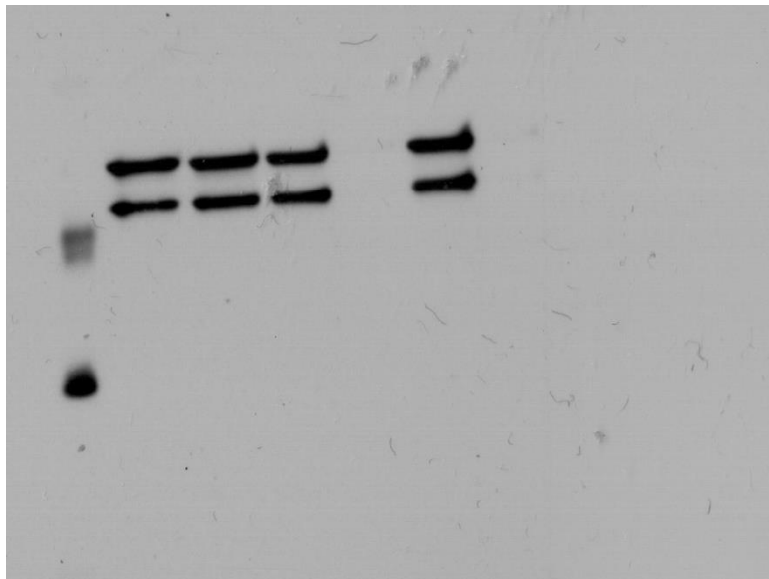


1 2 3 4 5 6 7

← p-ERK (T202/Y204), 44kDa

Lane 1: Ladder
Lane 2: DMSO
Lane 3: SHH
Lane 4: VISMO
Lane 5: ITZ
Lane 6: SHH+VISMO
Lane 7: SHH+ITZ

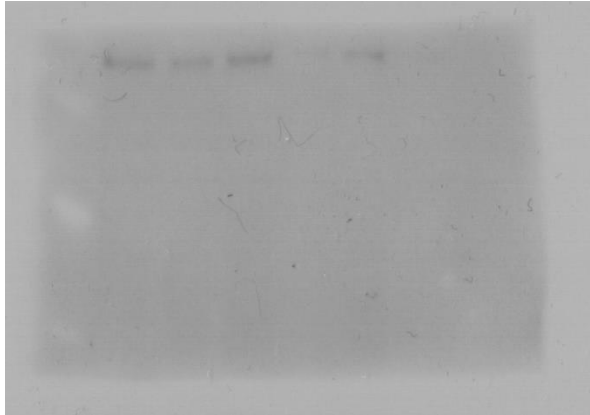
Membrane
cut here →



1 2 3 4 5 6 7

← ERK1/2 (total), kDa

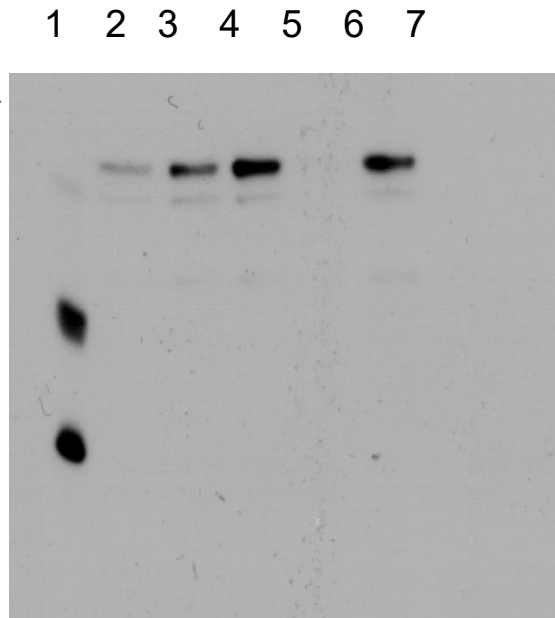
Membrane
cut here →



← p-AKT (S473), 57kDa

Lane 1: Ladder
Lane 2: DMSO
Lane 3: SHH
Lane 4: VISMO
Lane 5: ITZ
Lane 6: SHH+VISMO
Lane 7: SHH+ITZ

Membrane
cut here →



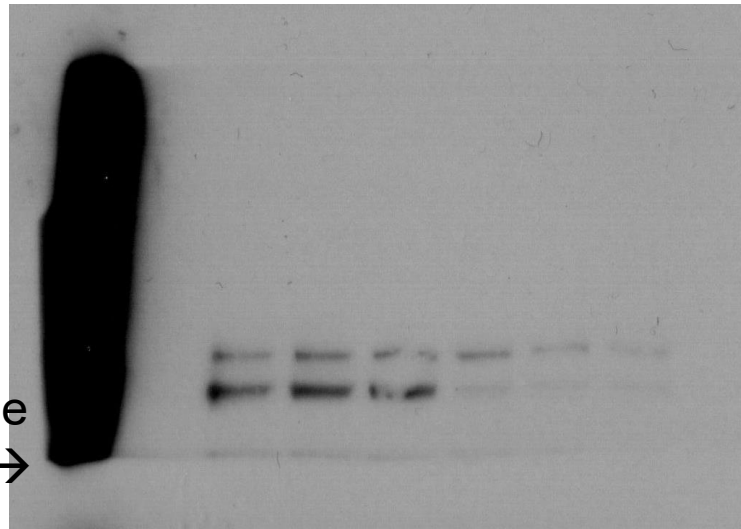
← AKT (total), 57kDa

1 2 3 4 5 6 7

FIGURE 7F ORIGINAL BLOTS

5 min exposure

Membrane
cut here →



1 2 3 4 5 6 7 8

← non-specific band
← Menin, ~75-80 kDa

Lane 1: Ladder

Lane 2: Empty

Lane 3: si-Non targeting rep #1

Lane 4: si-Non targeting rep #2

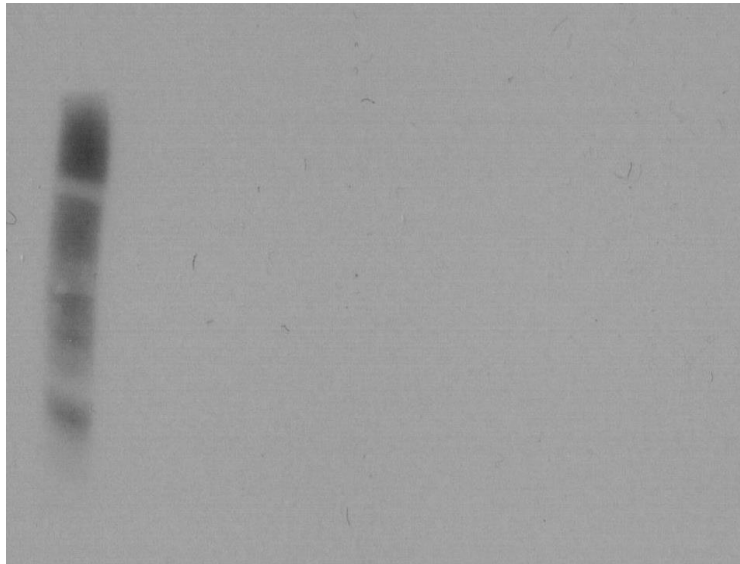
Lane 5: si-Non targeting rep #3

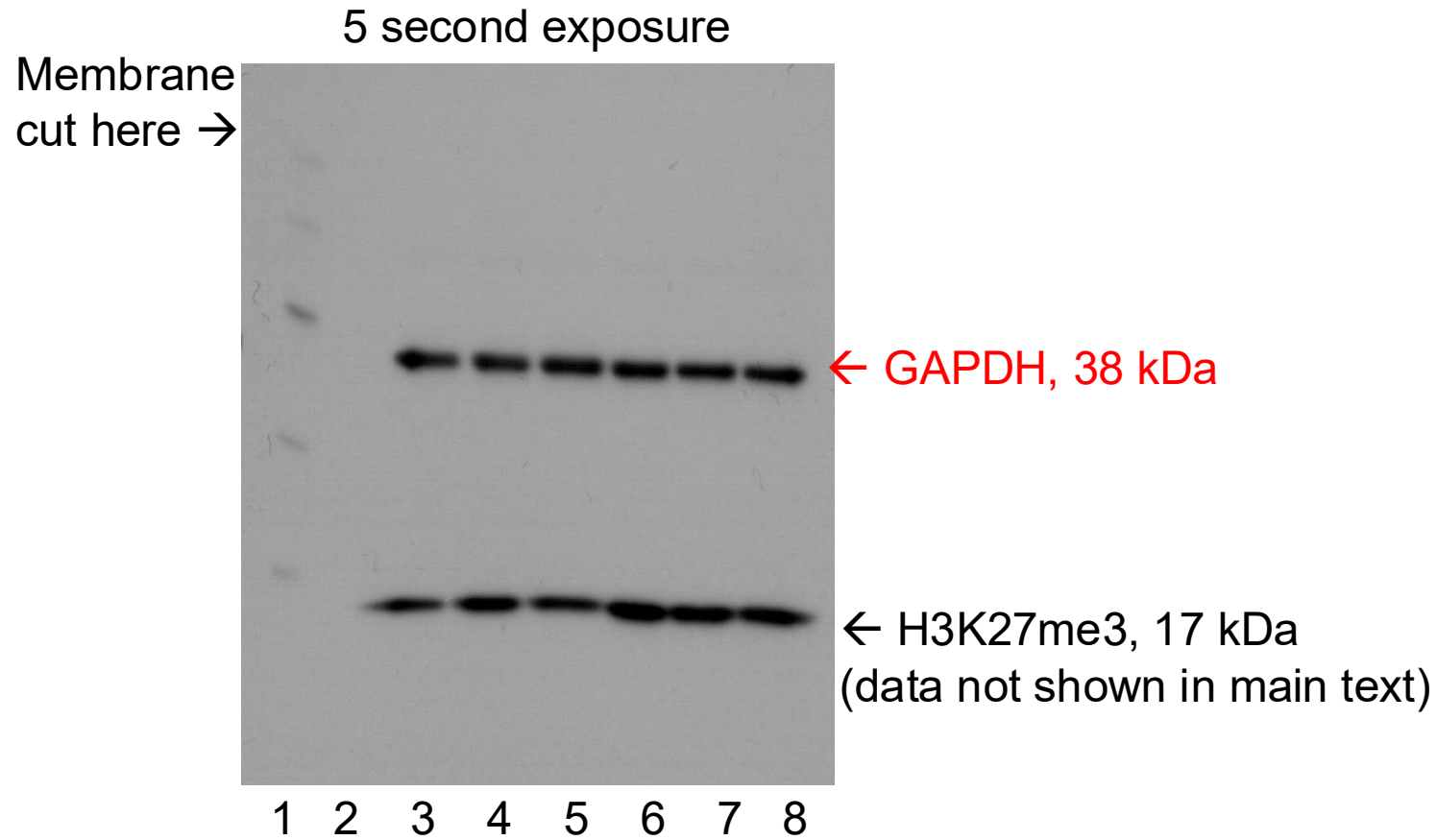
Lane 6: *siMen1* rep #1

Lane 7: *siMen1* rep #2

Lane 8: *siMen1* rep #3

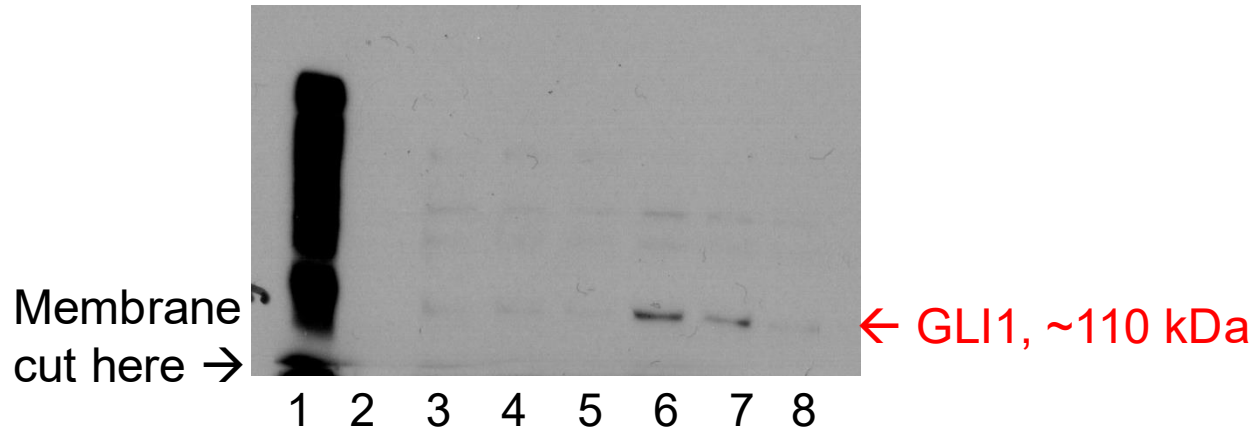
10 second exposure (lane 1=ladder)





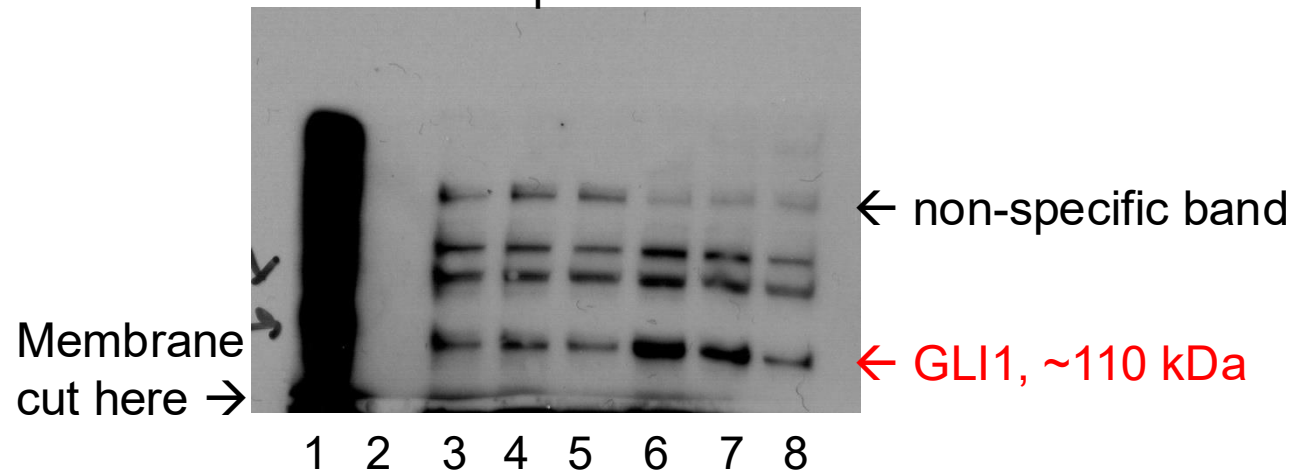
Lane 1: Ladder
Lane 2: Empty
Lane 3: si-Non targeting rep #1
Lane 4: si-Non targeting rep #2
Lane 5: si-Non targeting rep #3
Lane 6: *siMen1* rep #1
Lane 7: *siMen1* rep #2
Lane 8: *siMen1* rep #3

10 second exposure

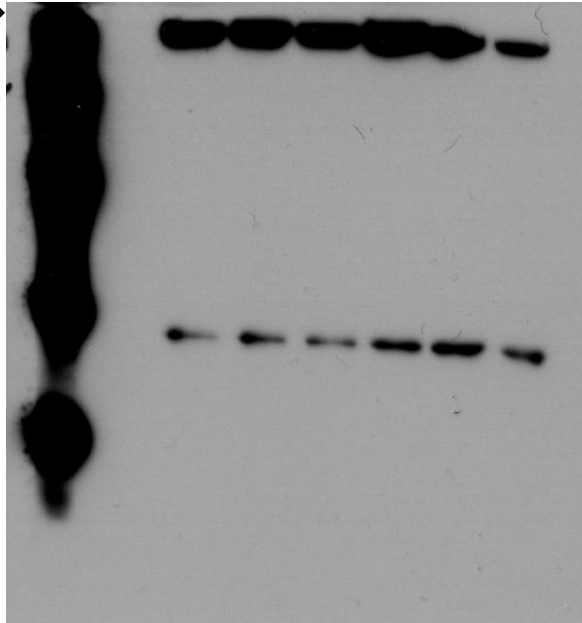


Lane 1: Ladder
Lane 2: Empty
Lane 3: si-Non targeting rep #1
Lane 4: si-Non targeting rep #2
Lane 5: si-Non targeting rep #3
Lane 6: *siMen1* rep #1
Lane 7: *siMen1* rep #2
Lane 8: *siMen1* rep #3

5 min exposure



Membrane
cut here →

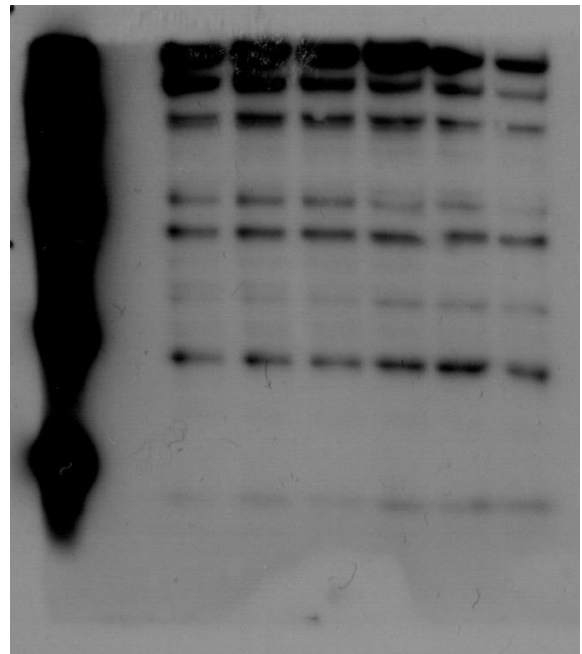


← SHH-N, ~25 kDa

Lane 1: Ladder
Lane 2: Empty
Lane 3: si-Non targeting rep #1
Lane 4: si-Non targeting rep #2
Lane 5: si-Non targeting rep #3
Lane 6: *siMen1* rep #1
Lane 7: *siMen1* rep #2
Lane 8: *siMen1* rep #3

Membrane
cut here →

1 2 3 4 5 6 7 8



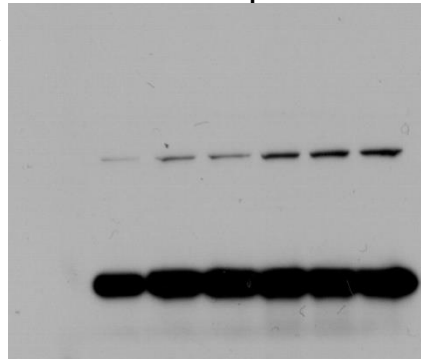
} GFAP, 40-55 kDa
(Multiple isoforms)

← SHH-N, ~25 kDa

Membrane
reprobed with
anti-GFAP

Membrane
cut here →

1 minute exposure

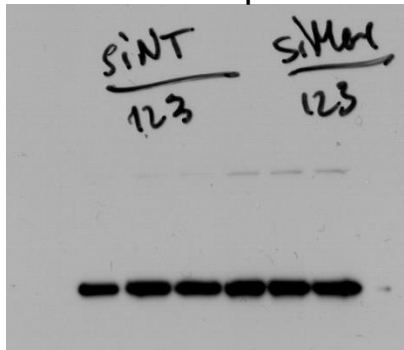


1 2 3 4 5 6 7

← SHH-FL, 55 kDa

← GAPDH, 38 kDa

5 second exposure

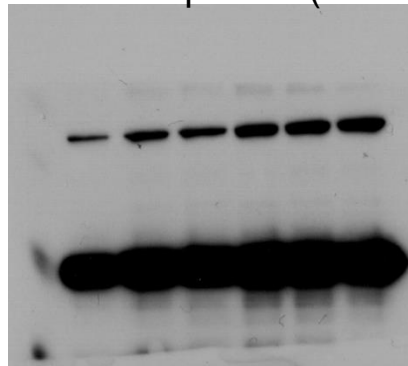


1 2 3 4 5 6 7

← SHH-FL, 55 kDa

← GAPDH, 38 kDa

2 minute exposure (Lane 1 = ladder)



1 2 3 4 5 6 7

← SHH-FL, 55 kDa

← GAPDH, 38 kDa

Lane 1: Ladder

Lane 2: si-Non targeting rep #1

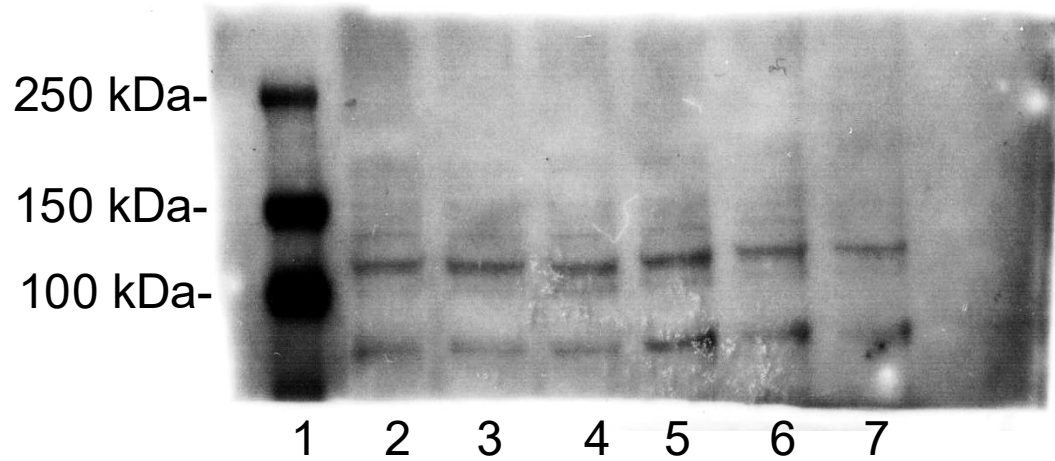
Lane 3: si-Non targeting rep #2

Lane 4: si-Non targeting rep #3

Lane 5: *siMen1* rep #1

Lane 6: *siMen1* rep #2

Lane 7: *siMen1* rep #3



Lane 1: Ladder

Lane 2: si-Non targeting rep #1

Lane 3: si-Non targeting rep #2

Lane 4: si-Non targeting rep #3

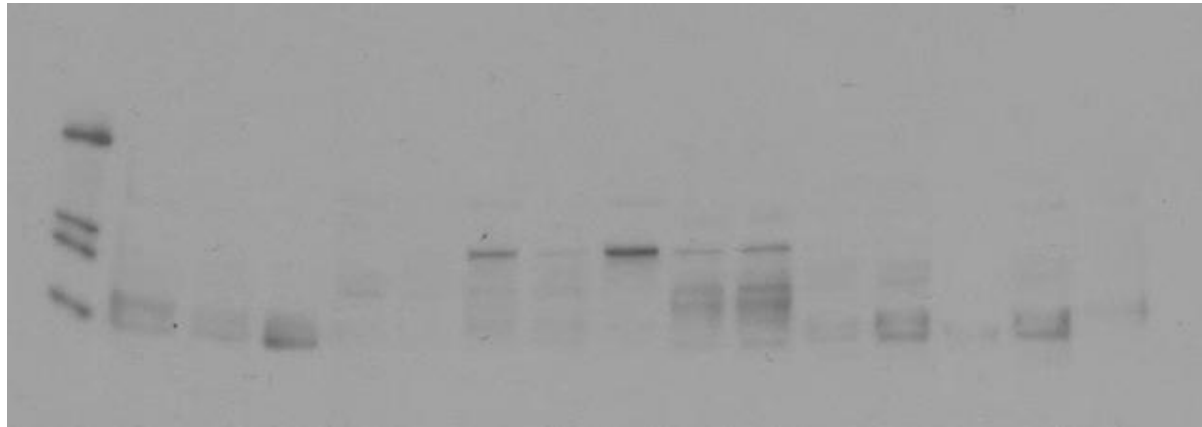
Lane 5: *siMen1* rep #1

Lane 6: *siMen1* rep #2

Lane 7: *siMen1* rep #3

← GLI2, 80 kDa
proteolytic active (cleaved) form

FIGURE 8K ORIGINAL BLOTS



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

← PTCH1, 140kDa

Lane 1: Ladder

Lane 2: WT pan 1

Lane 3: WT pan 2

Lane 4: WT pan 3

Lane 5: WT pan 4

Lane 6: WT pan 5

Lane 7: $\Delta Men1$ PNET 1

Lane 8: $\Delta Men1$ PNET 2

Lane 9: $\Delta Men1$ PNET 3

Lane 10: $\Delta Men1$ PNET 4

Lane 11: $\Delta Men1$ PNET 5

Lane 12: $\Delta Men1; \Delta Kif3a$ pan 1

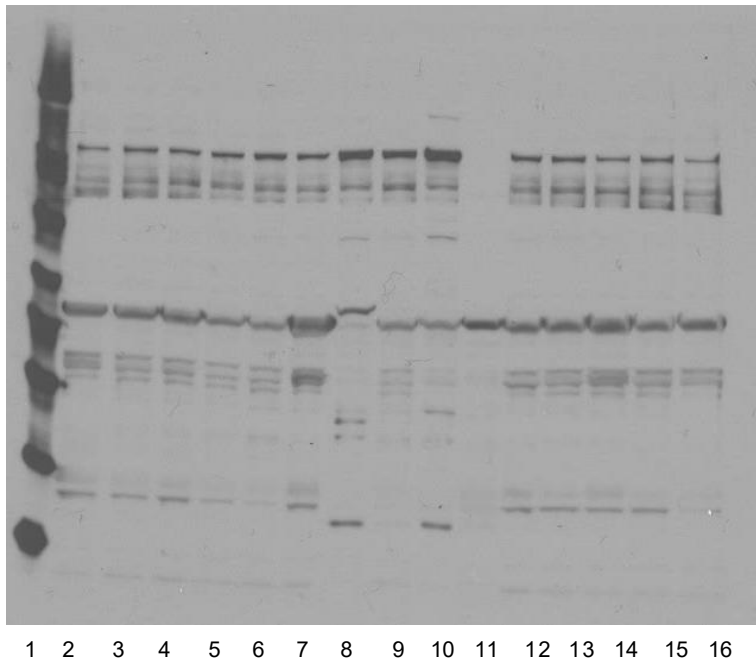
Lane 13: $\Delta Men1; \Delta Kif3a$ pan 2

Lane 14: $\Delta Men1; \Delta Kif3a$ pan 3

Lane 15: $\Delta Men1; \Delta Kif3a$ pan 4

Lane 16: $\Delta Men1; \Delta Kif3a$ pan 5

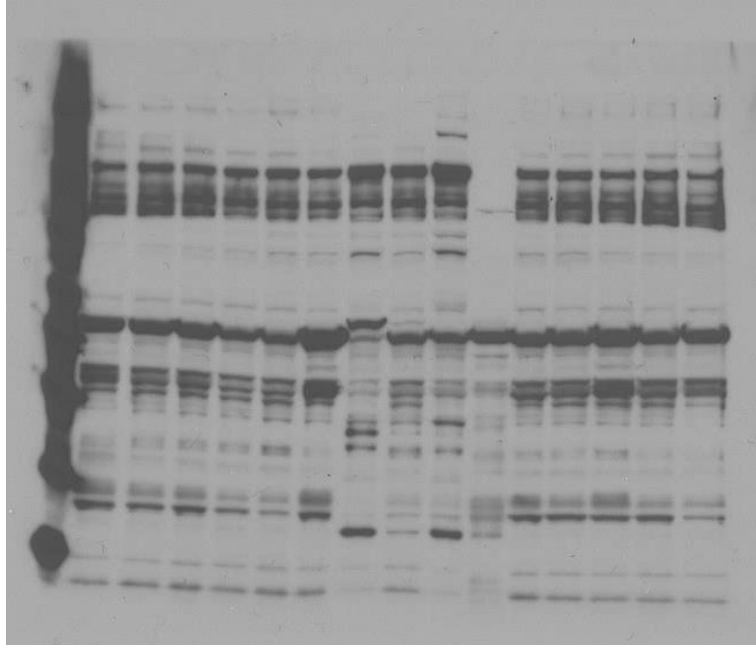
10
second
exposure



← SMO, ~90kDa

← SMO, ~75kDa

1 min
exposure



← SMO, ~75kDa

← IgG heavy chain

← IgG light chain

Lane 1: Ladder

Lane 2: WT pan 1

Lane 3: WT pan 2

Lane 4: WT pan 3

Lane 5: WT pan 4

Lane 6: WT pan 5

Lane 7: $\Delta Men1$ PNET 1

Lane 8: $\Delta Men1$ PNET 2

Lane 9: $\Delta Men1$ PNET 3

Lane 10: $\Delta Men1$ PNET 4

Lane 11: $\Delta Men1$ PNET 5

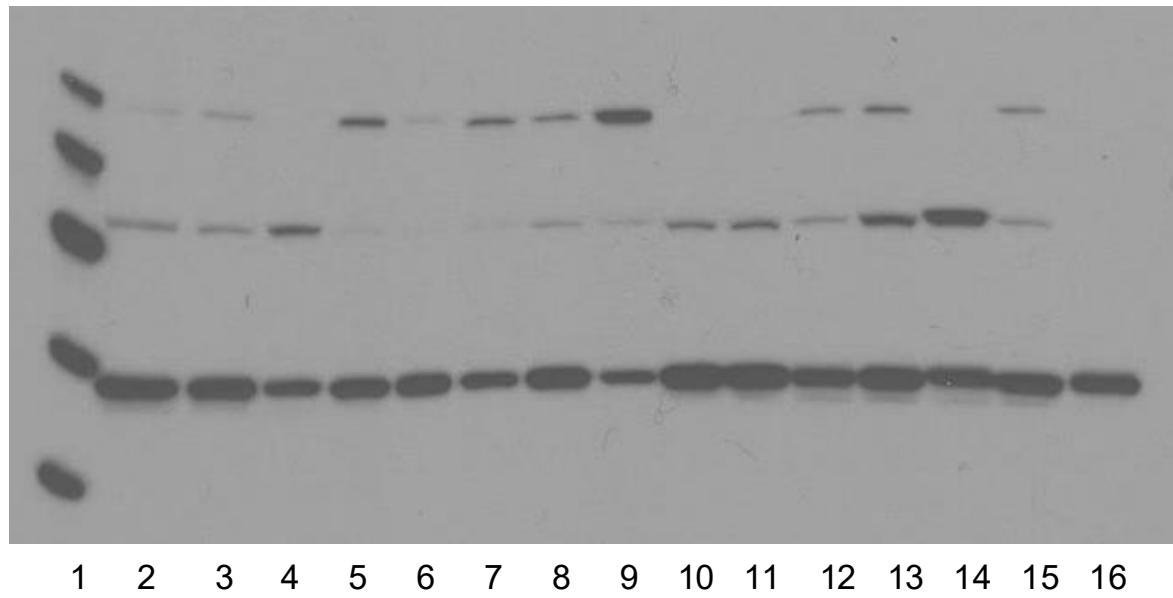
Lane 12: $\Delta Men1; \Delta Kif3a$ pan 1

Lane 13: $\Delta Men1; \Delta Kif3a$ pan 2

Lane 14: $\Delta Men1; \Delta Kif3a$ pan 3

Lane 15: $\Delta Men1; \Delta Kif3a$ pan 4

Lane 16: $\Delta Men1; \Delta Kif3a$ pan 5



Lane 1: Ladder

Lane 2: WT pan 1

Lane 3: WT pan 2

Lane 4: WT pan 3

Lane 5: WT pan 4

Lane 6: WT pan 5

Lane 7: $\Delta Men1$ PNET 1

Lane 8: $\Delta Men1$ PNET 2

Lane 9: $\Delta Men1$ PNET 3

Lane 10: $\Delta Men1$ PNET 4

Lane 11: $\Delta Men1$ PNET 5

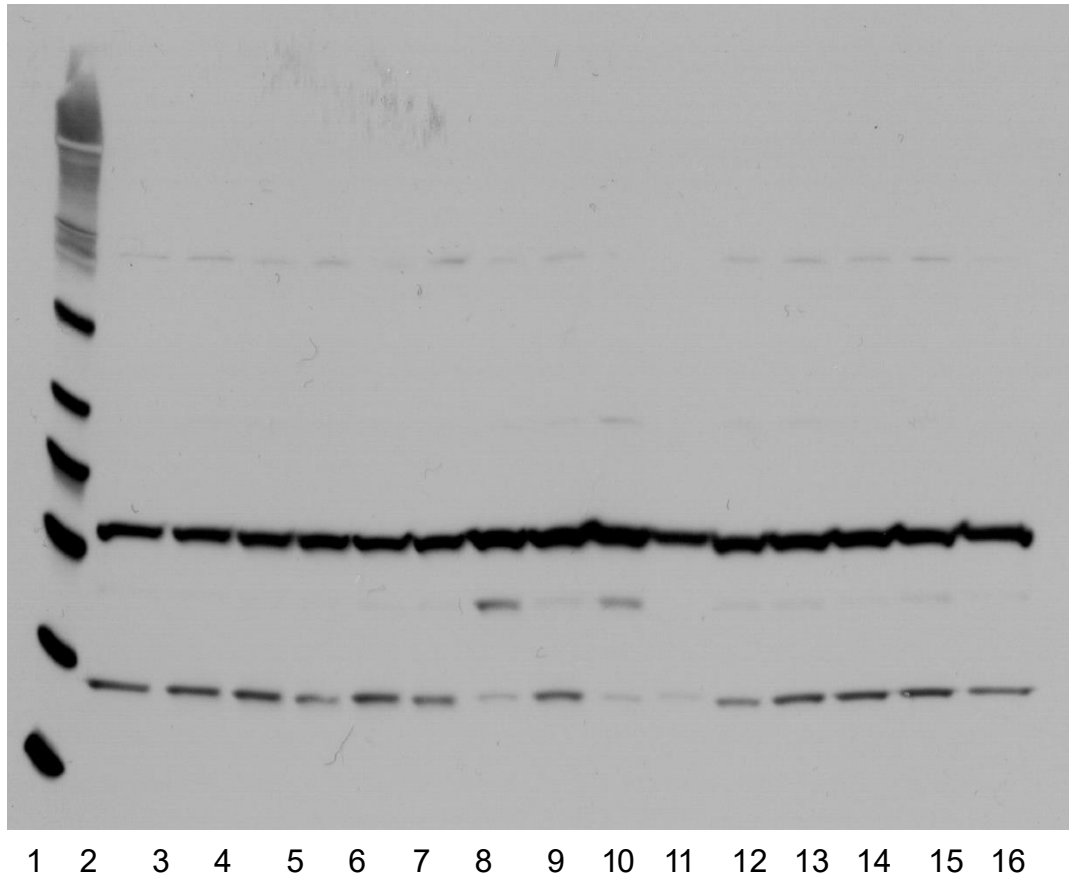
Lane 12: $\Delta Men1; \Delta Kif3a$ pan 1

Lane 13: $\Delta Men1; \Delta Kif3a$ pan 2

Lane 14: $\Delta Men1; \Delta Kif3a$ pan 3

Lane 15: $\Delta Men1; \Delta Kif3a$ pan 4

Lane 16: $\Delta Men1; \Delta Kif3a$ pan 5



Lane 1: Ladder

Lane 2: WT pan 1

Lane 3: WT pan 2

Lane 4: WT pan 3

Lane 5: WT pan 4

Lane 6: WT pan 5

Lane 7: $\Delta Men1$ PNET 1

Lane 8: $\Delta Men1$ PNET 2

Lane 9: $\Delta Men1$ PNET 3

Lane 10: $\Delta Men1$ PNET 4

Lane 11: $\Delta Men1$ PNET 5

Lane 12: $\Delta Men1; \Delta Kif3a$ pan 1

Lane 13: $\Delta Men1; \Delta Kif3a$ pan 2

Lane 14: $\Delta Men1; \Delta Kif3a$ pan 3

Lane 15: $\Delta Men1; \Delta Kif3a$ pan 4

Lane 16: $\Delta Men1; \Delta Kif3a$ pan 5