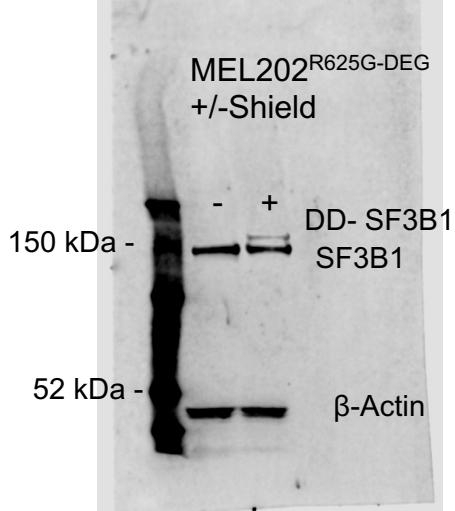


# Source Data- Uncropped scans with size markers

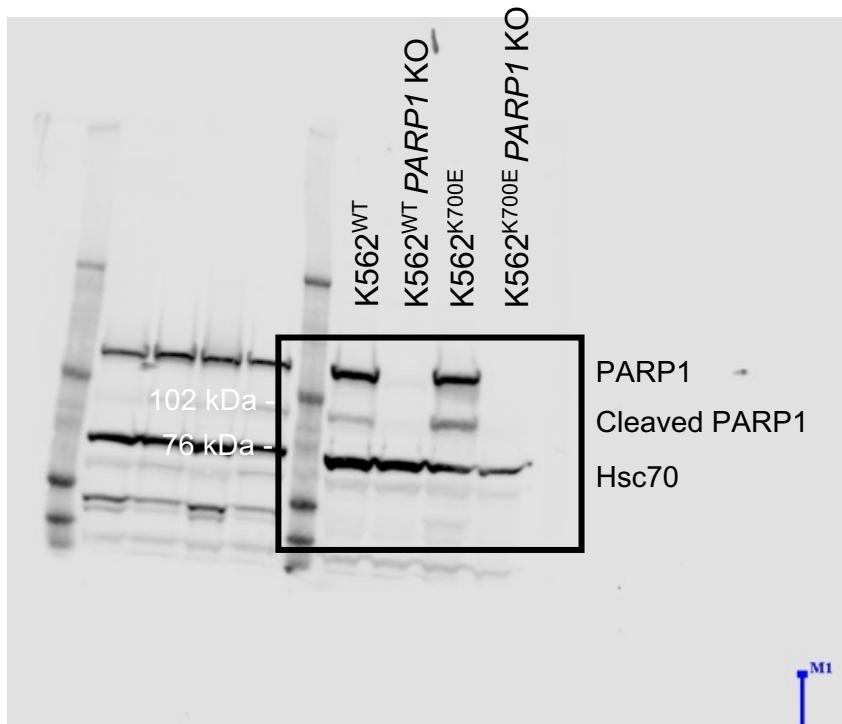
Extended Data Fig. 1f



MEL202<sup>R625G</sup> labelled as C37 in some blots

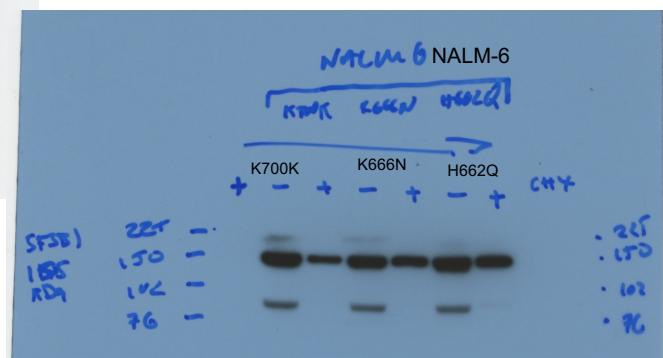
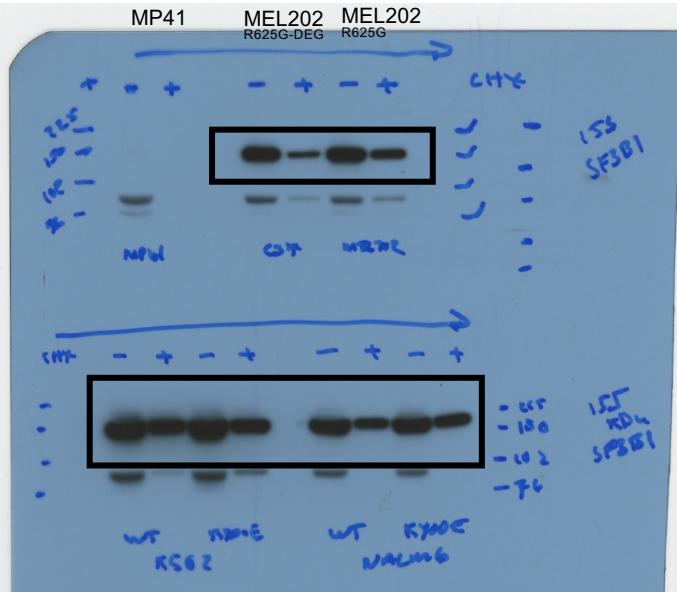
MEL202<sup>R625G</sup> labelled as MEL202 in some blots

Extended Data Fig. 1j

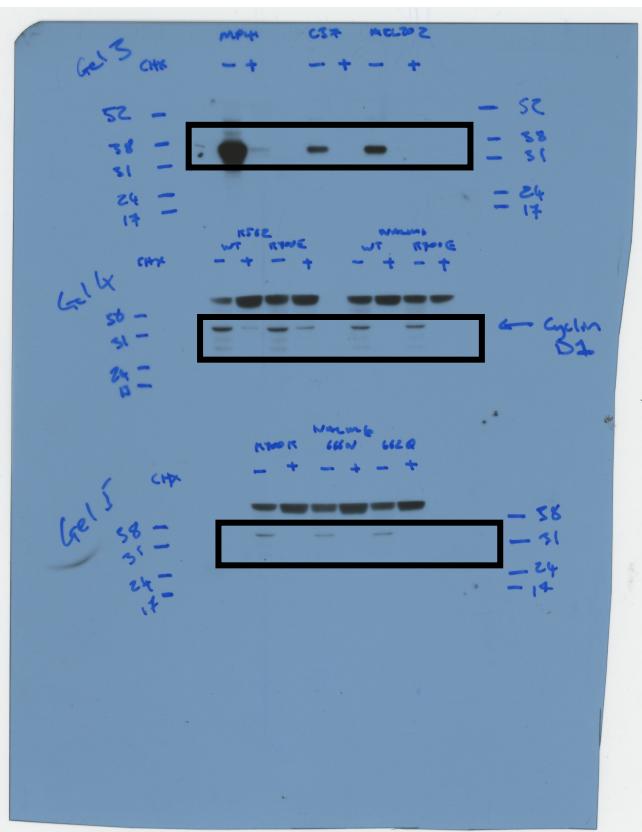


## Extended Data Fig. 2e

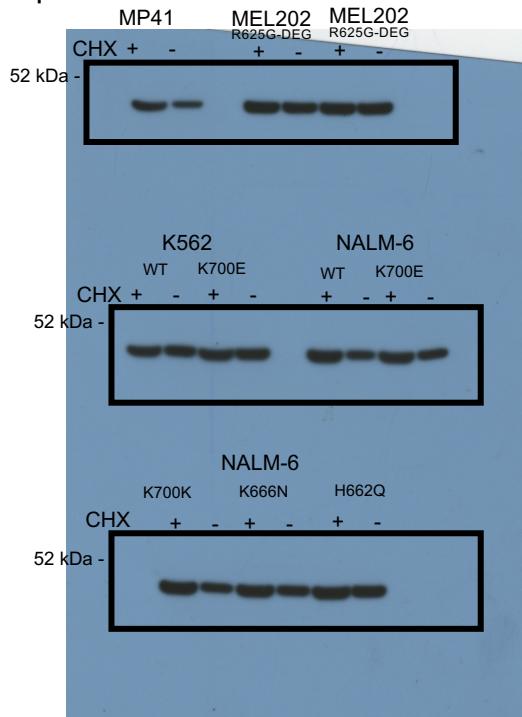
### SF3B1



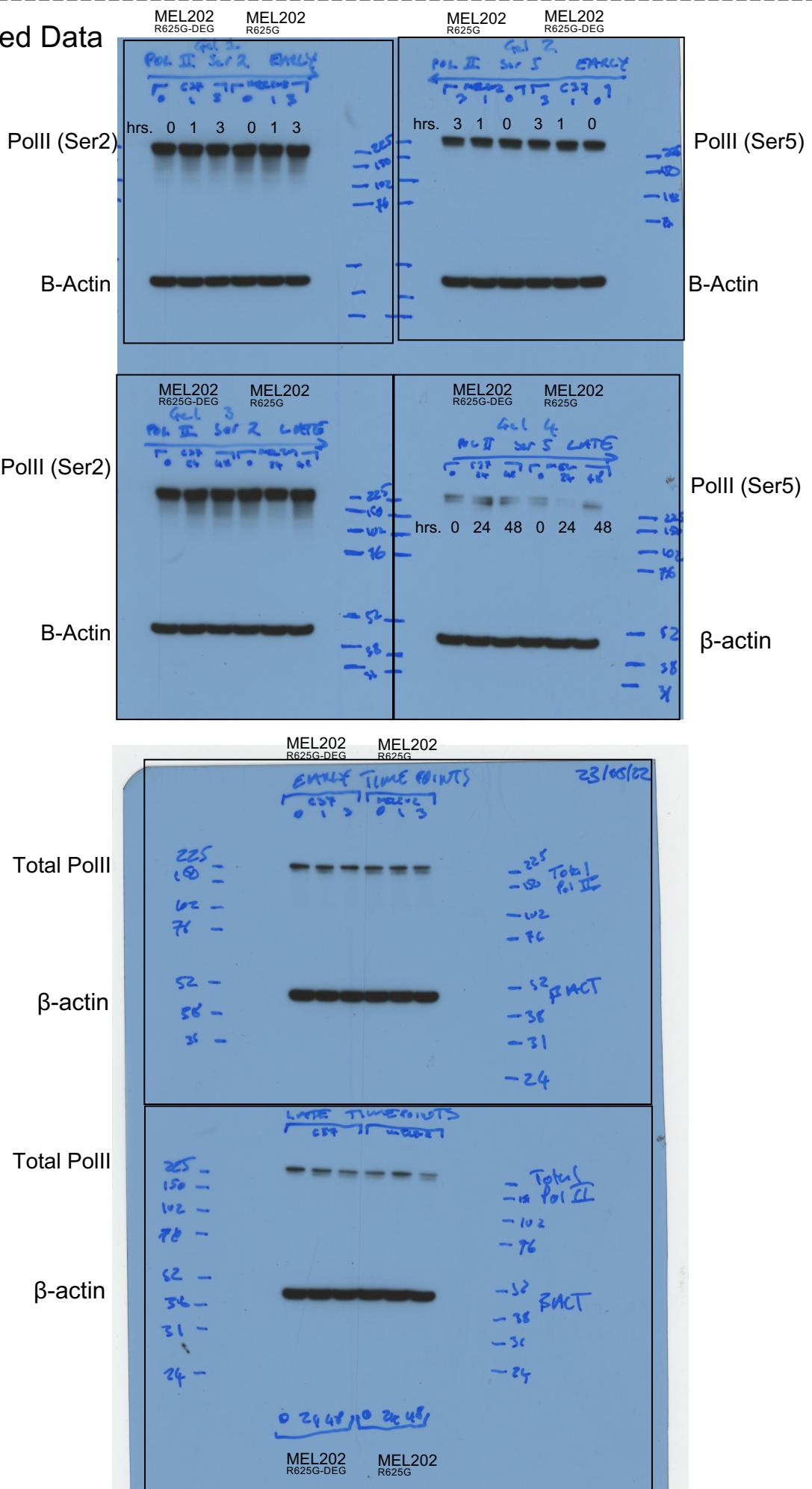
### CCND1



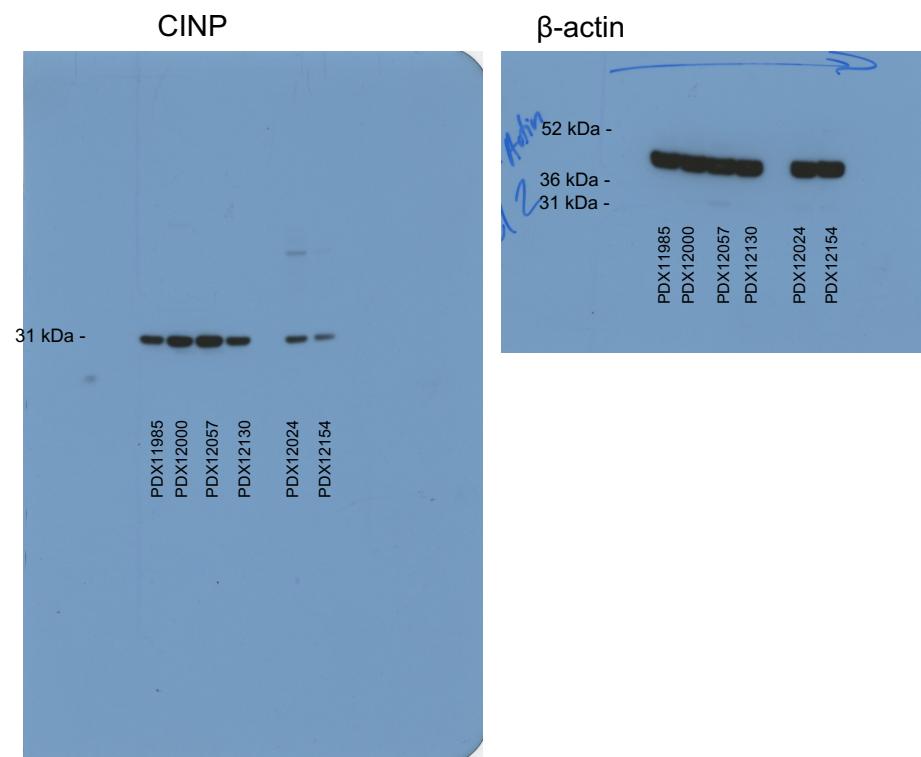
### $\beta$ -actin



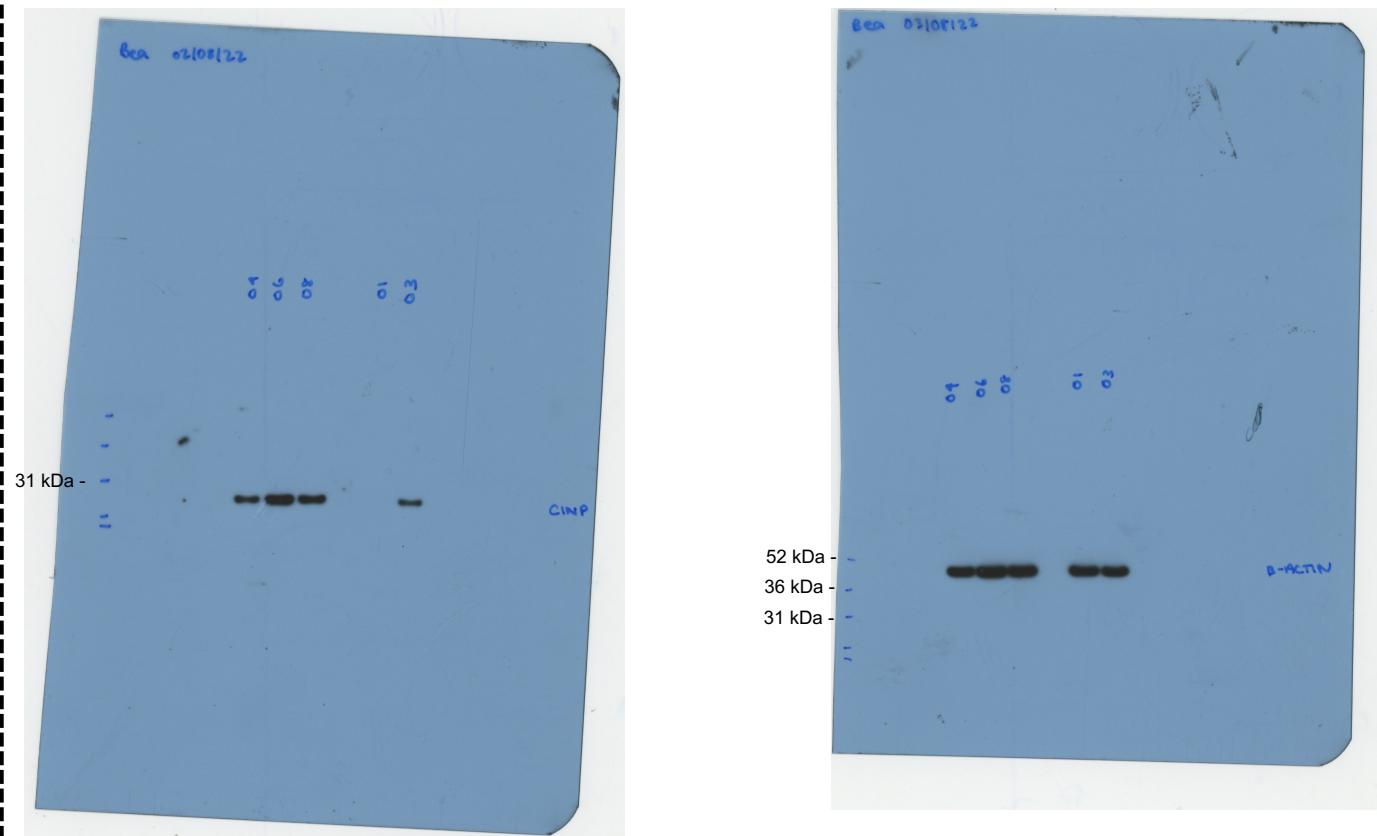
Extended Data  
Fig. 3e



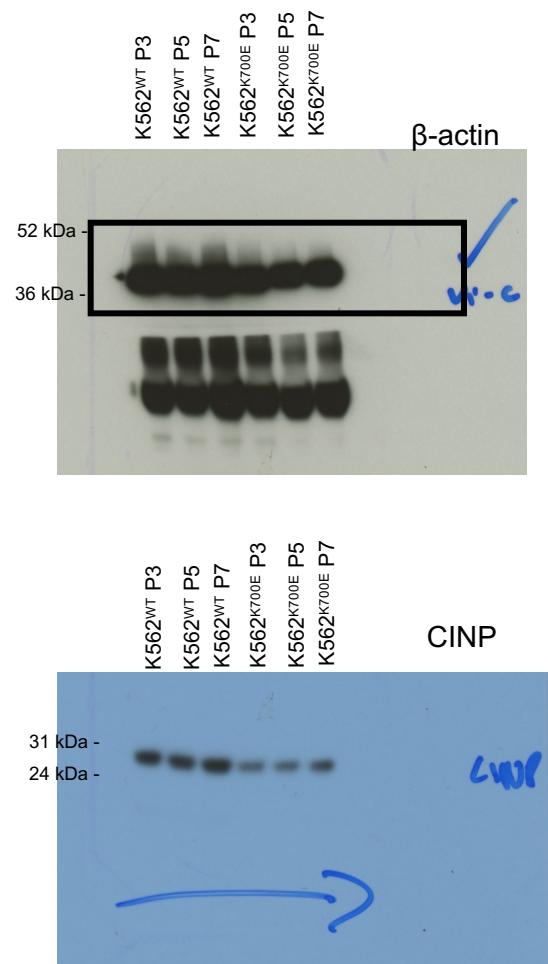
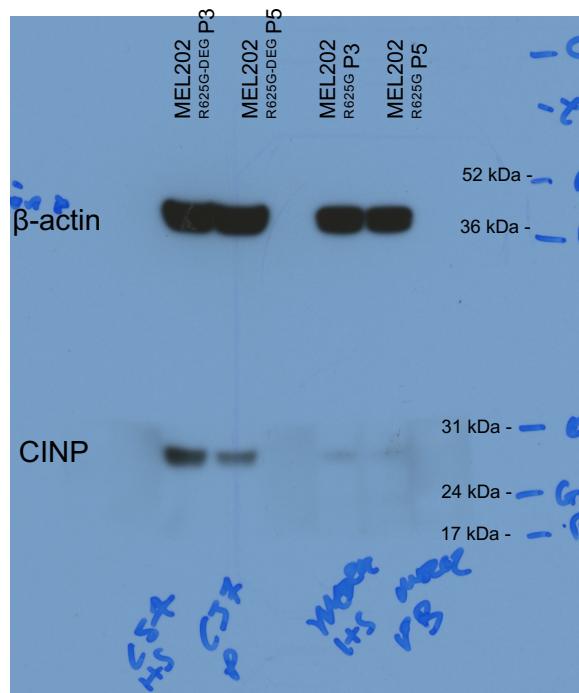
**Figure 2f**



**Figure 2h**



## Extended Data Fig. 4b

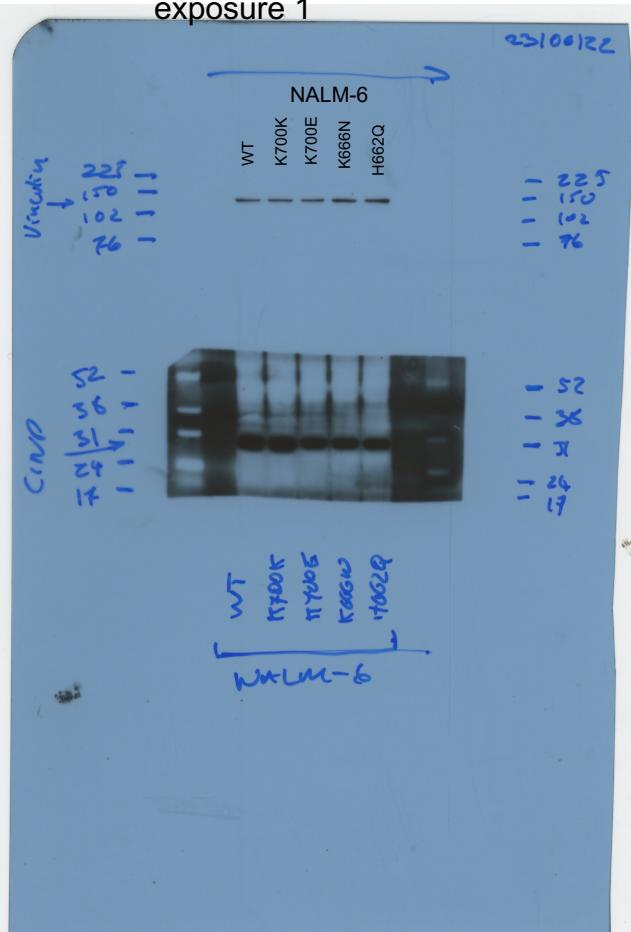


# Extended Data Fig. 4b

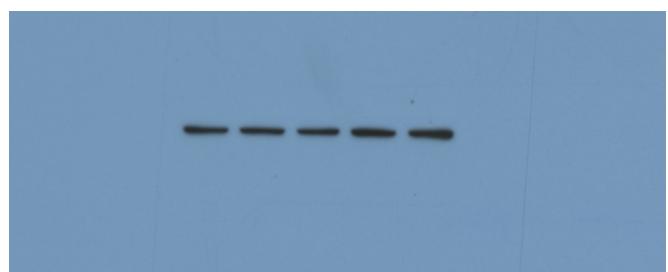
CINP MP41



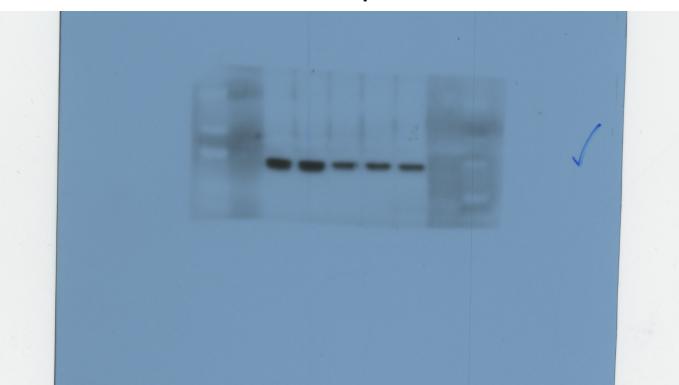
CINP NALM-6 series  
exposure 1



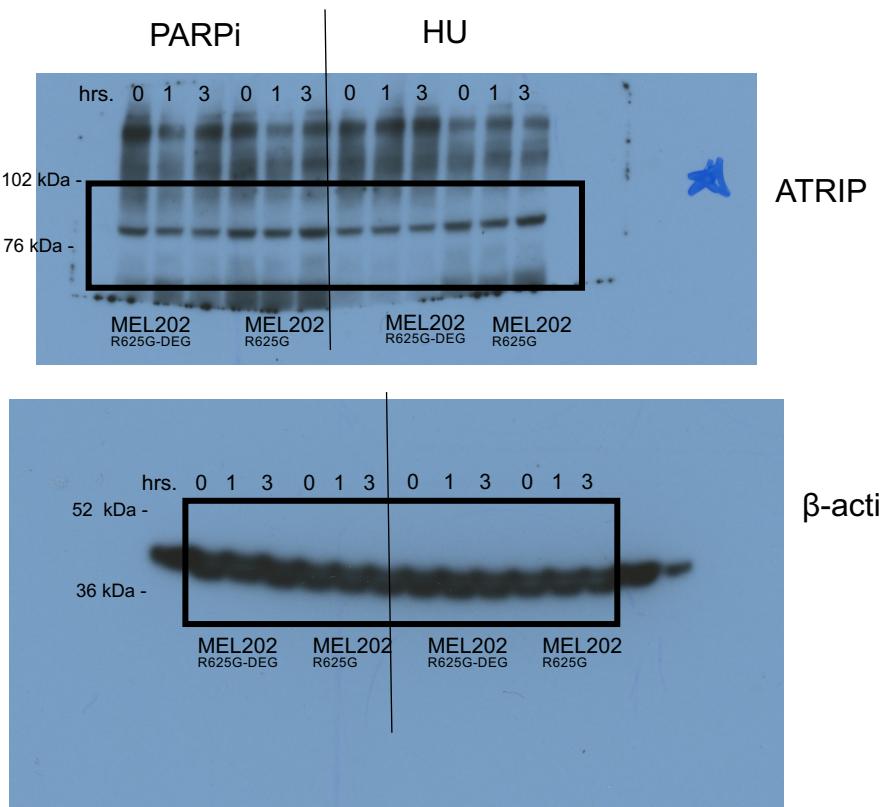
vinculin NALM-6 series exposure used



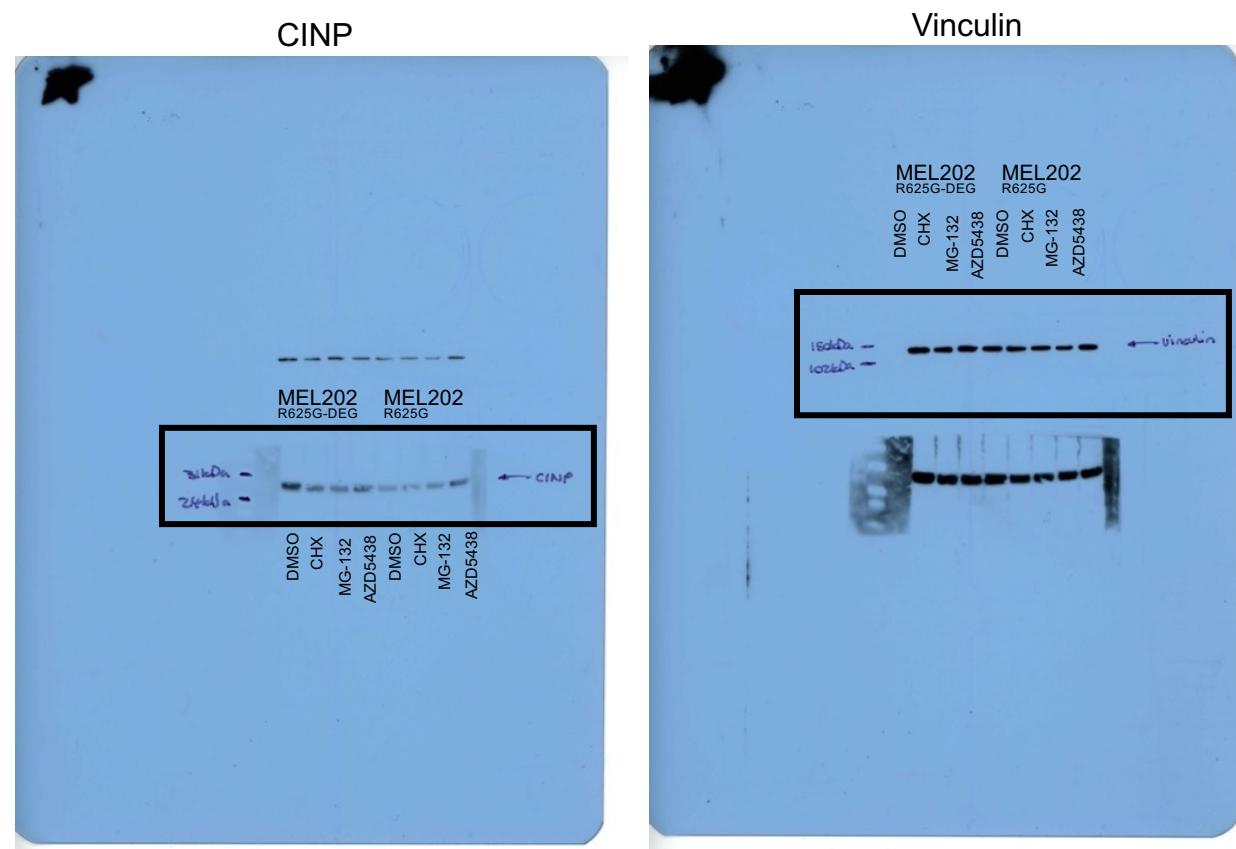
CINP NALM-6 series exposure used



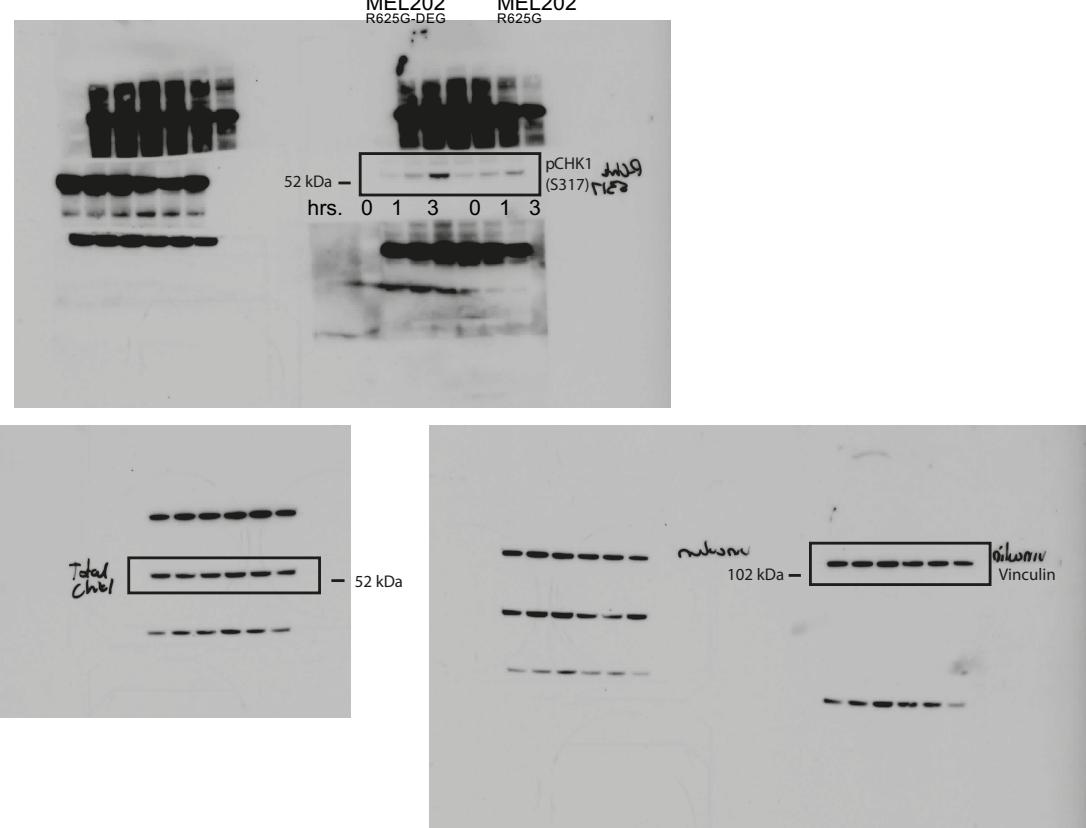
## Extended Data Fig. 4c



## Extended Data Fig. 4d



**Figure 3e**



**Figure 4a**

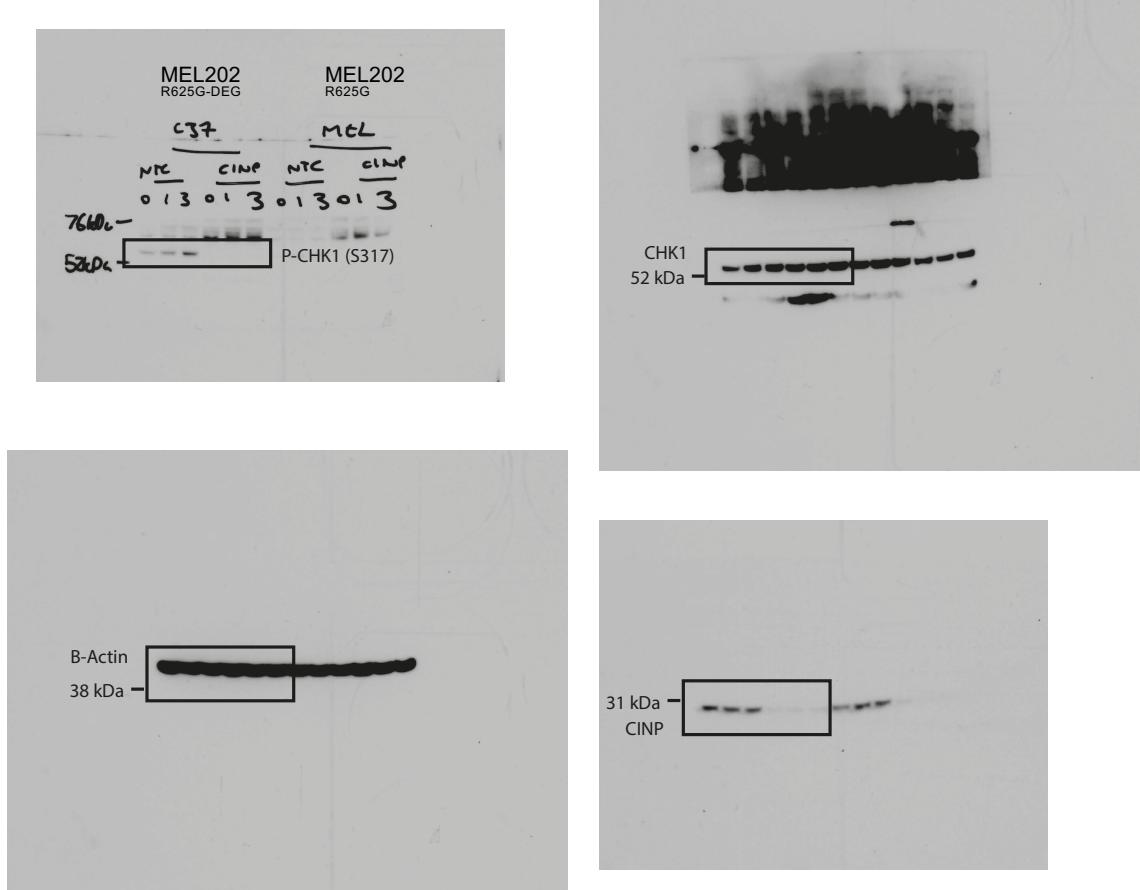
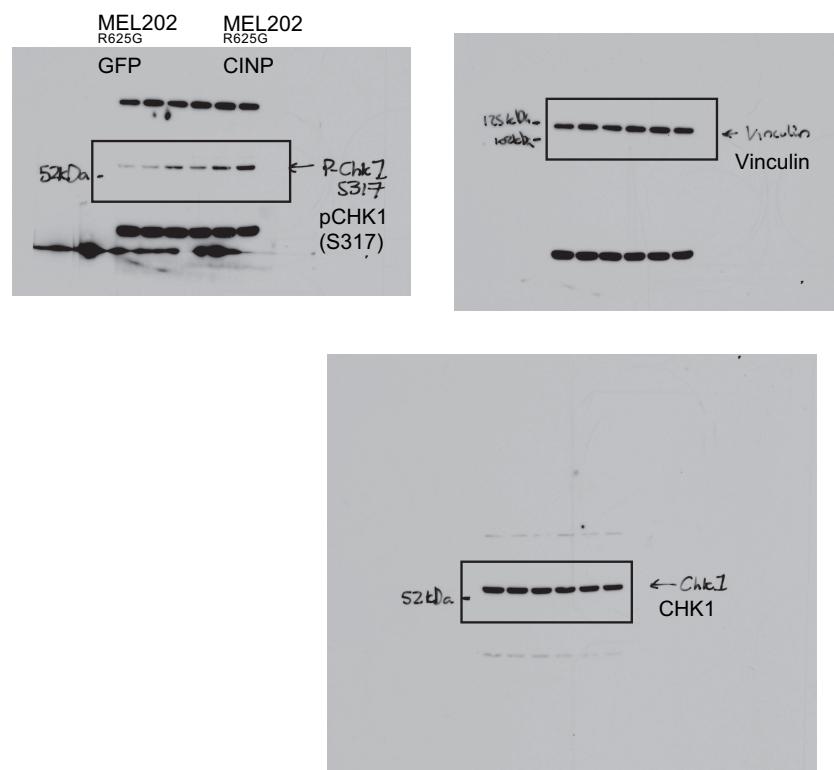
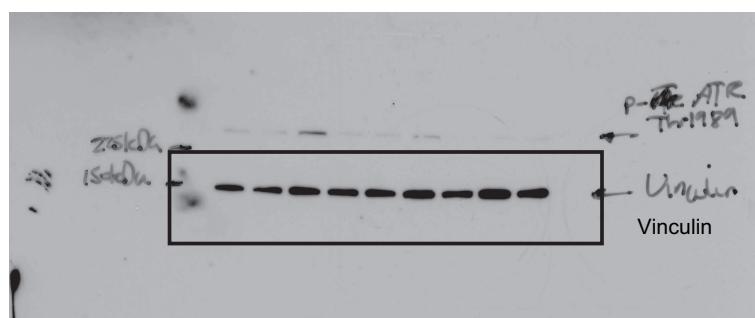
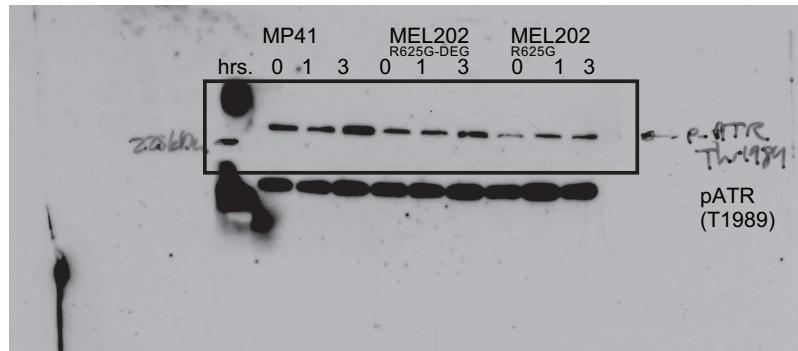


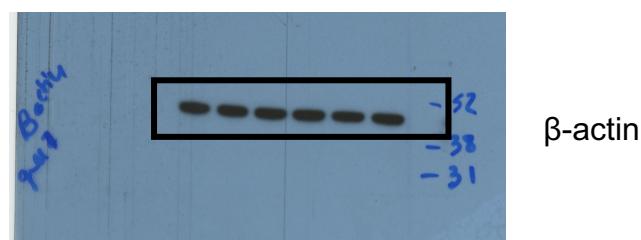
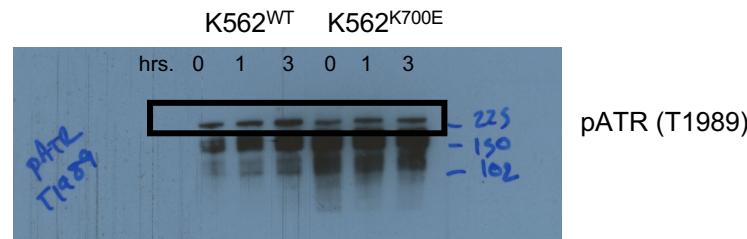
Figure 4c



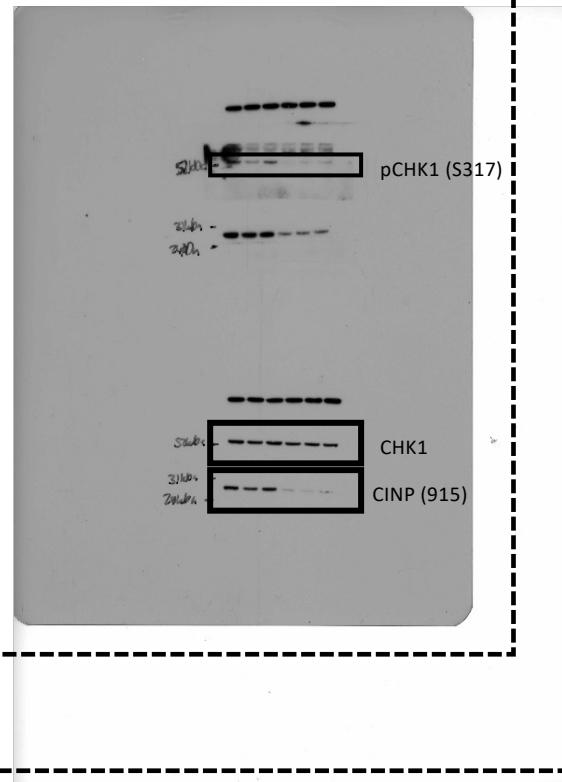
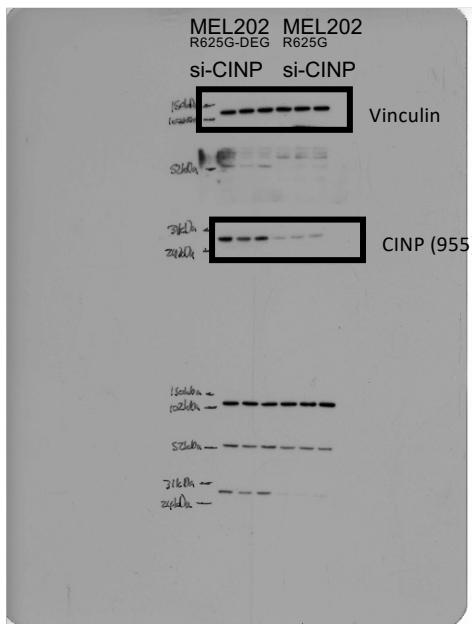
## Extended Data Fig. 5di



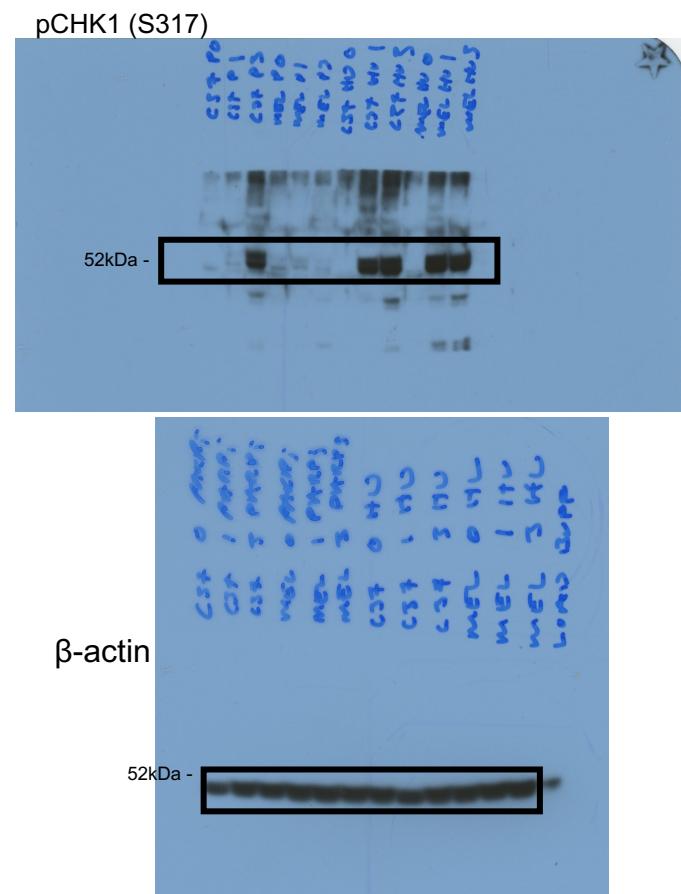
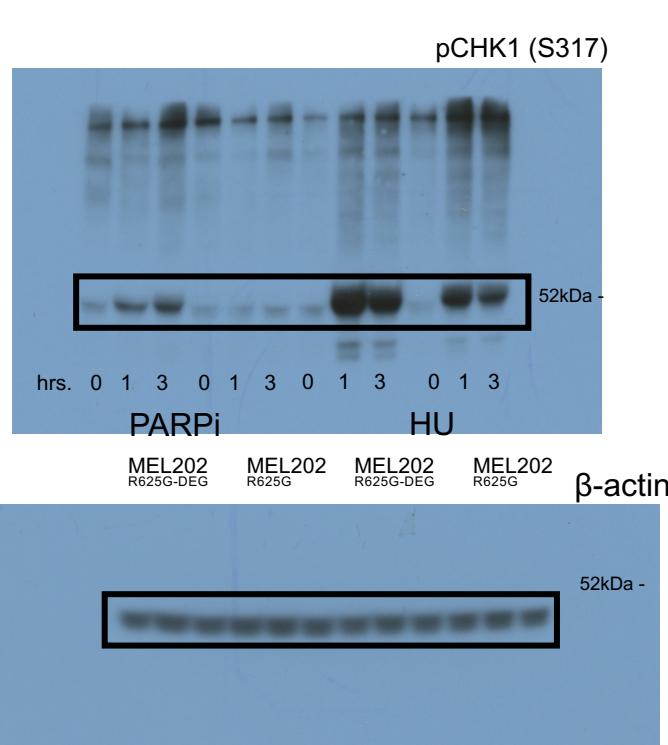
## Extended Data Fig. 5dii



## Extended Data Fig. 4e



## Extended Data Fig. 6a



## Extended Data Fig. 6b

PARPi pCHK1 (S317)

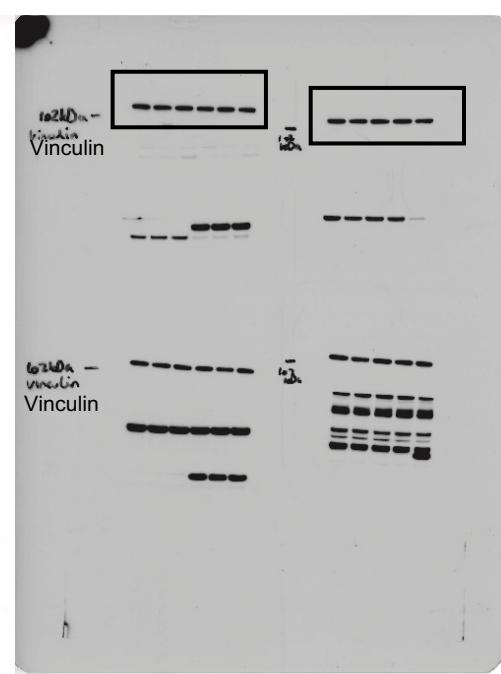
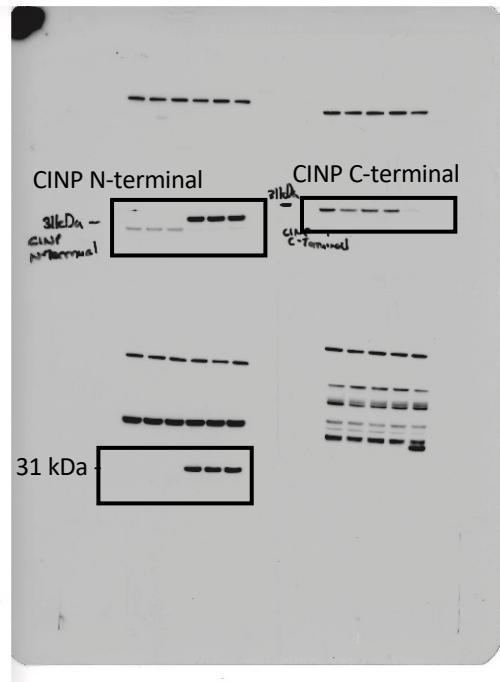
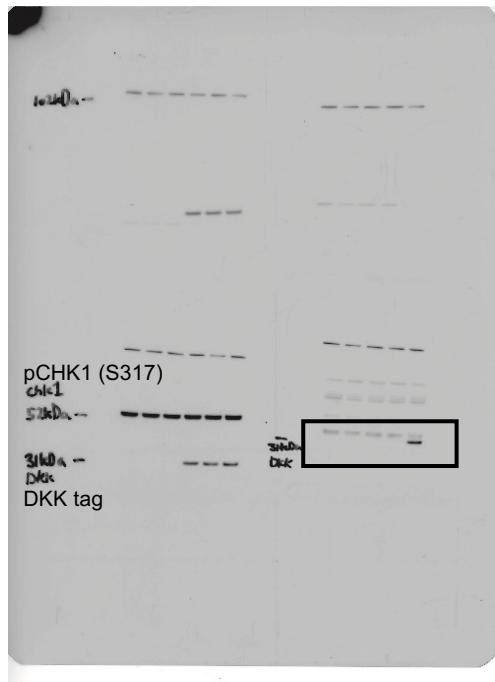
$\beta$ -actin

K562<sup>WT</sup> K562<sup>K700E</sup> K562<sup>WT</sup> K562<sup>K700E</sup>  
hrs. 0 1 3 0 1 3 0 1 3

52kDa -



## Extended Data Fig. 8d-e



## Extended Data Fig. 8h

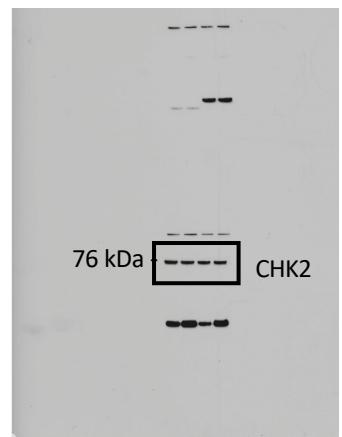
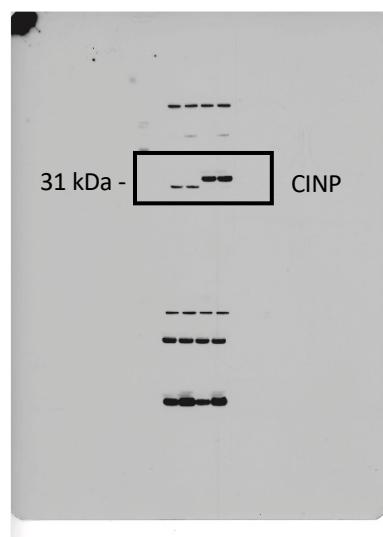


Figure 5b

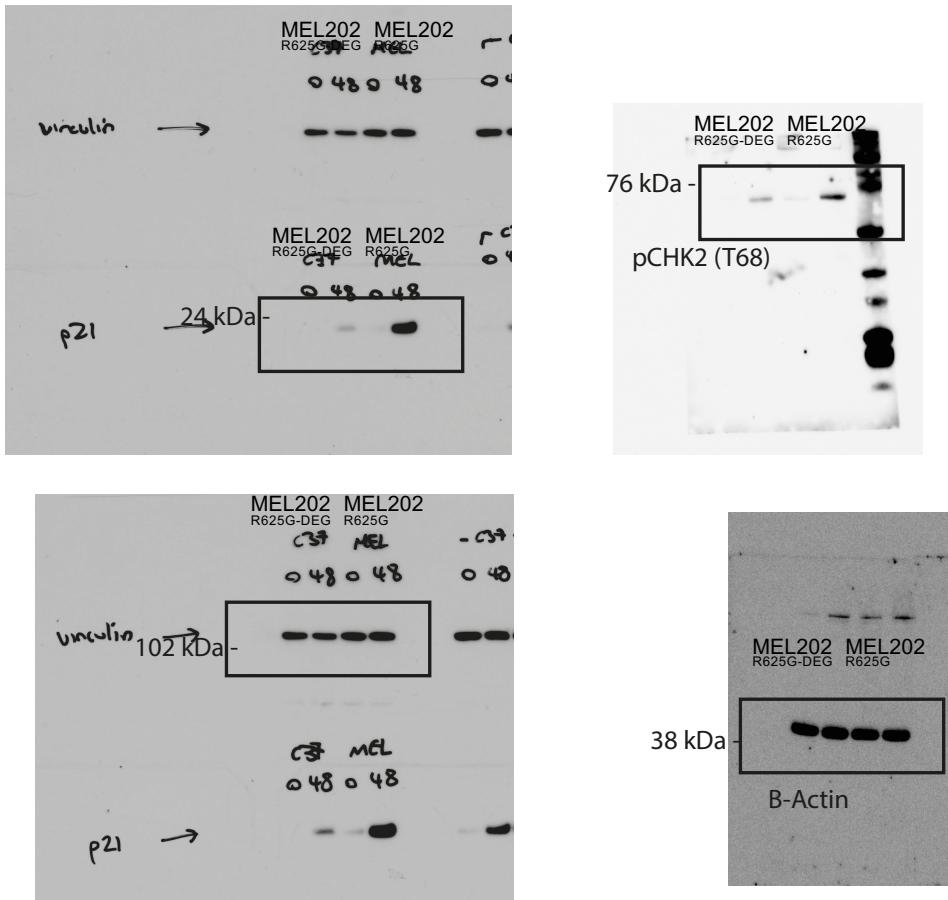


Figure 5d

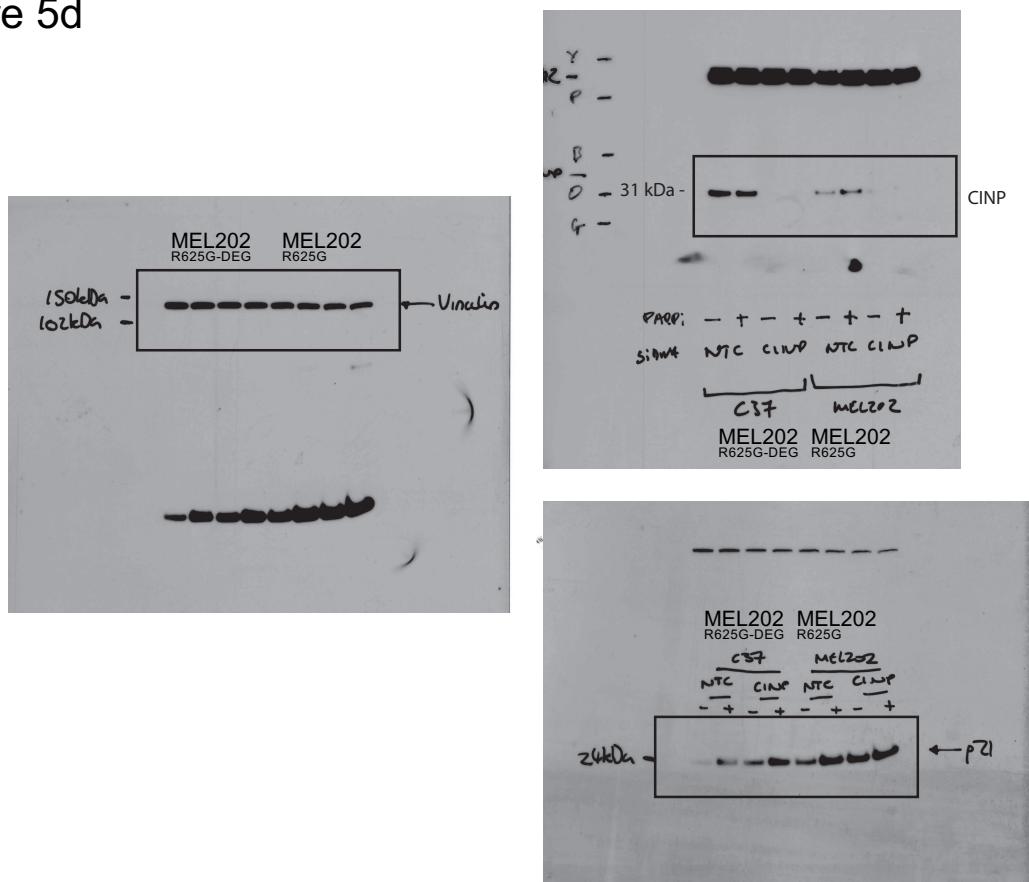


Figure 5e

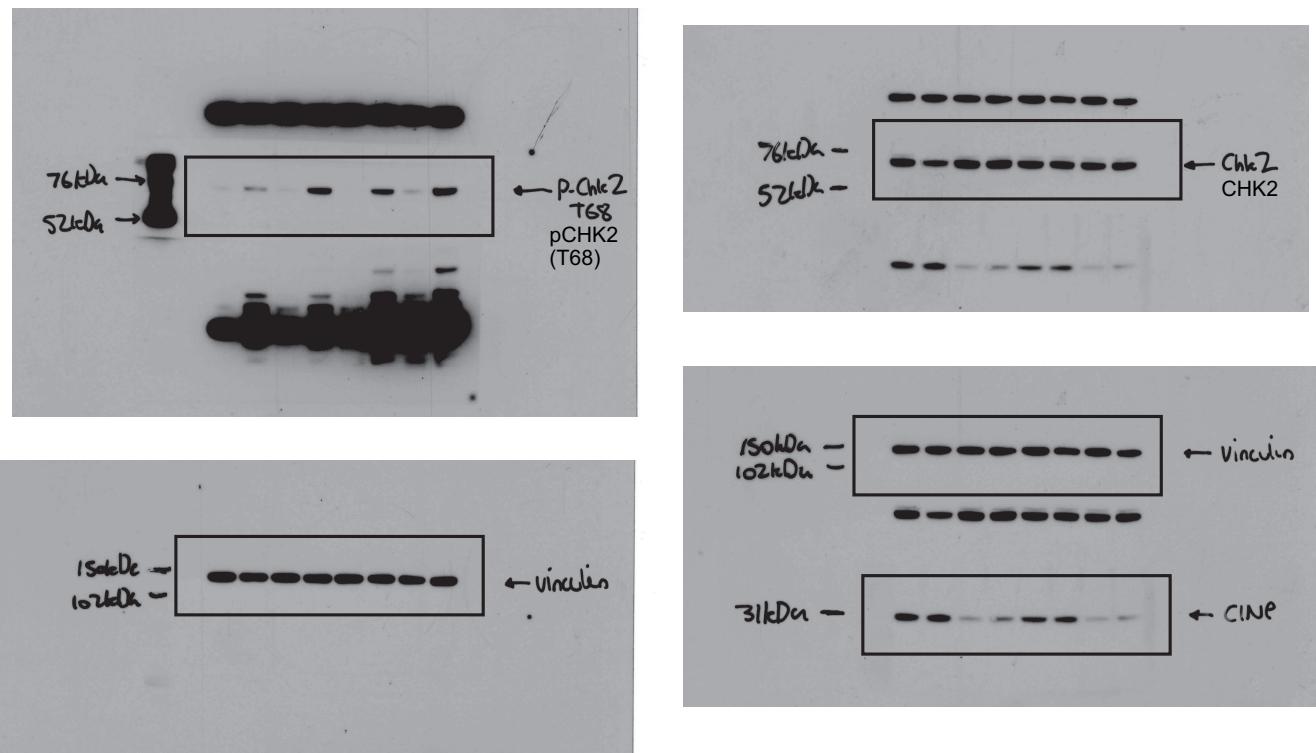


Figure 5g

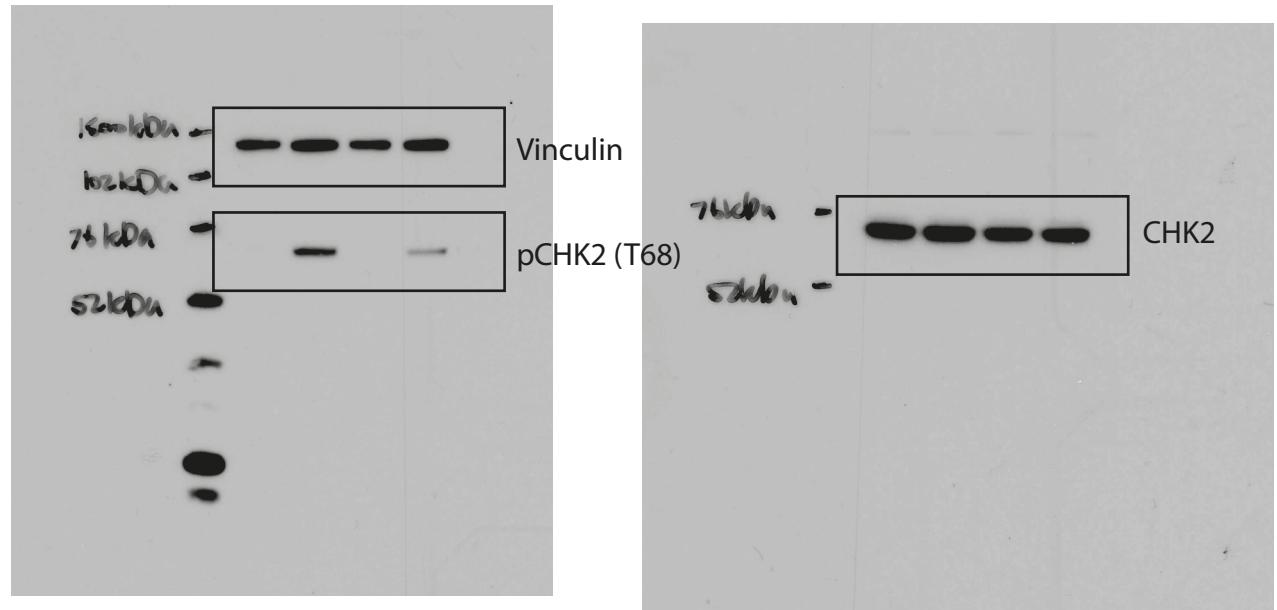
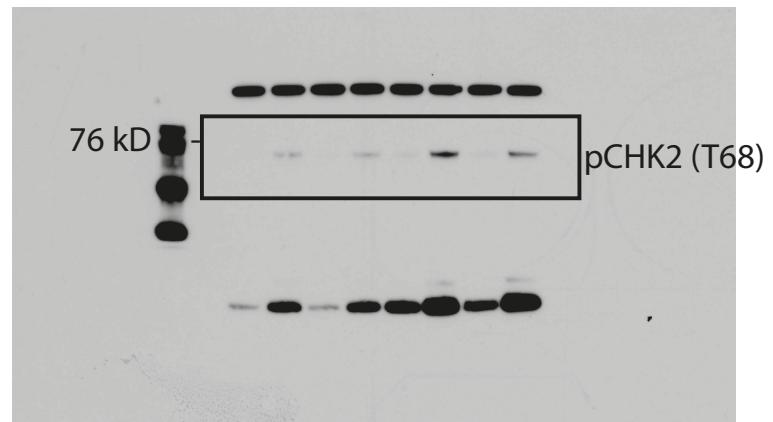
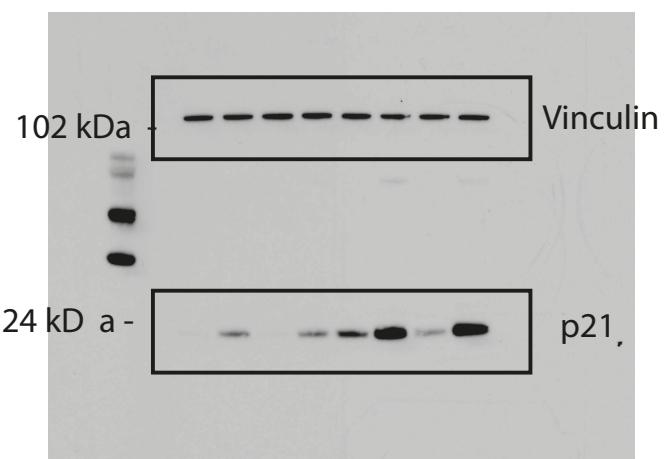
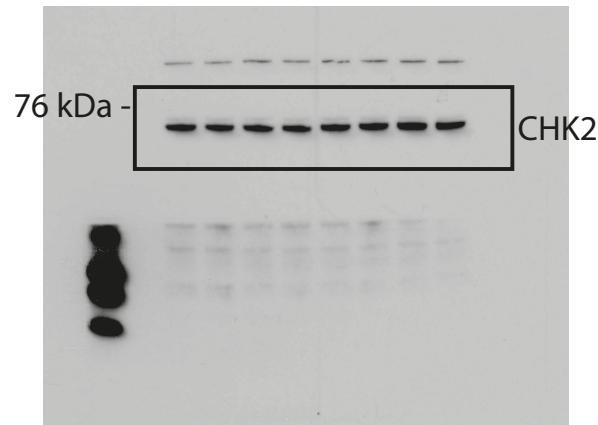
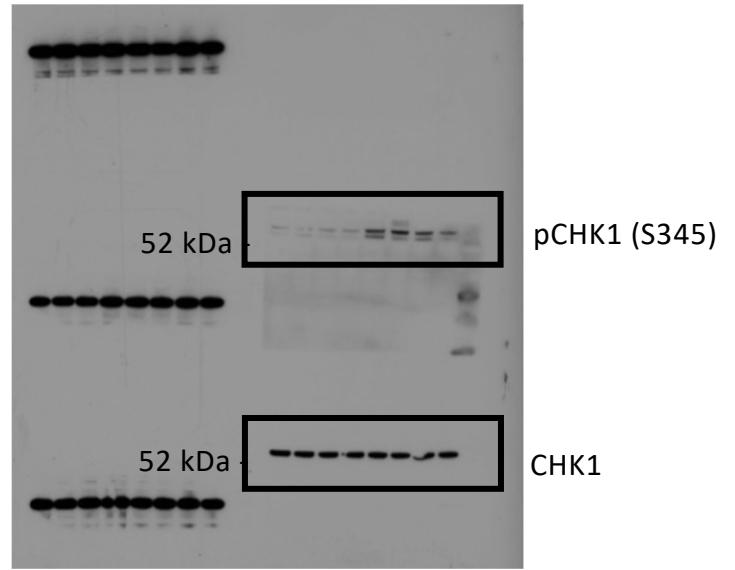
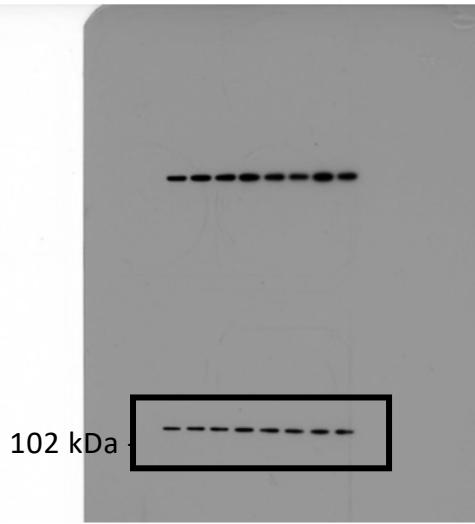


Figure 6b

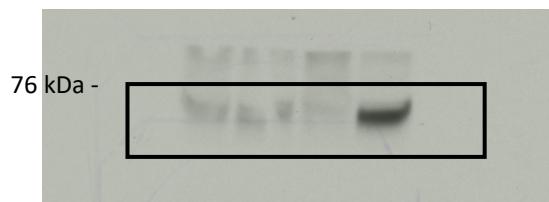


Extended Data Fig. 9c

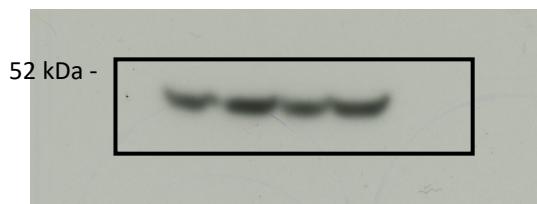


## Extended Data Fig. 9e

pCHK2 (T68)

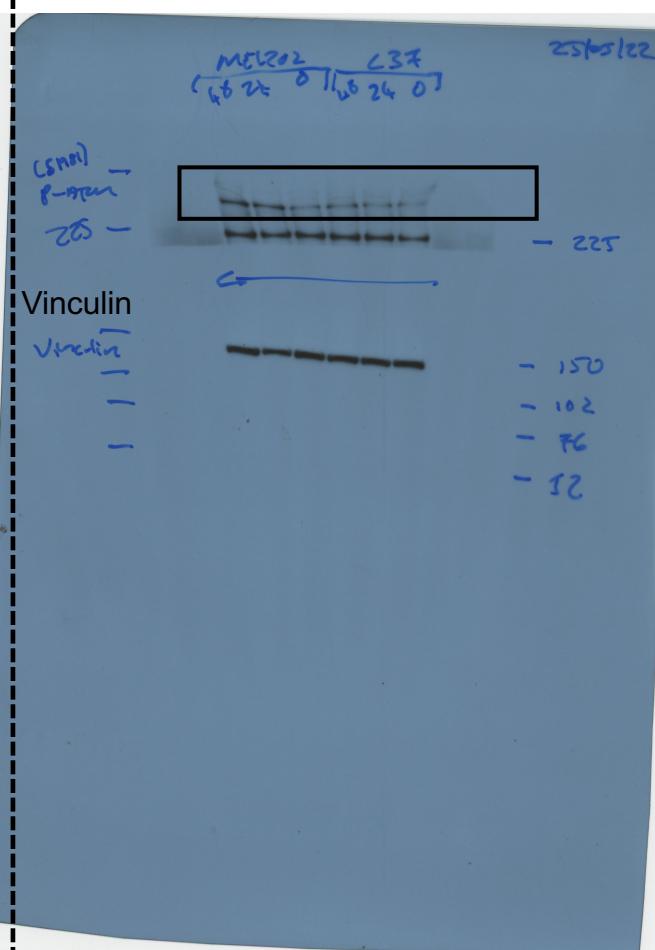


β-actin



## Extended Data Fig. 9f

pATM (S1981)

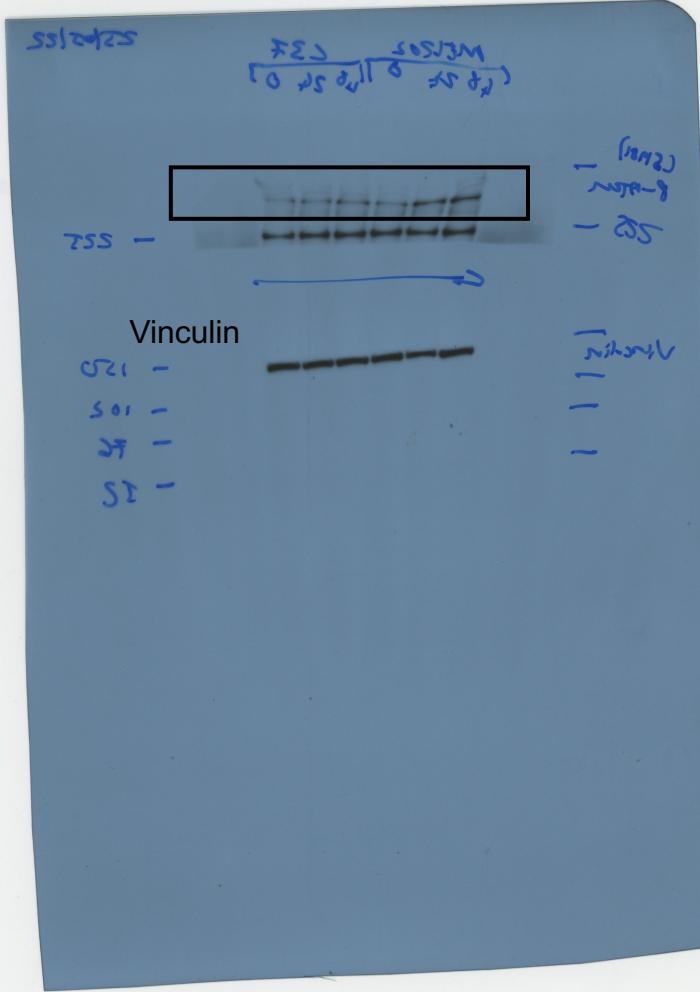


Vinculin

Vinculin  
—  
—  
—  
—

— 225  
— 150  
— 102  
— 72  
— 55

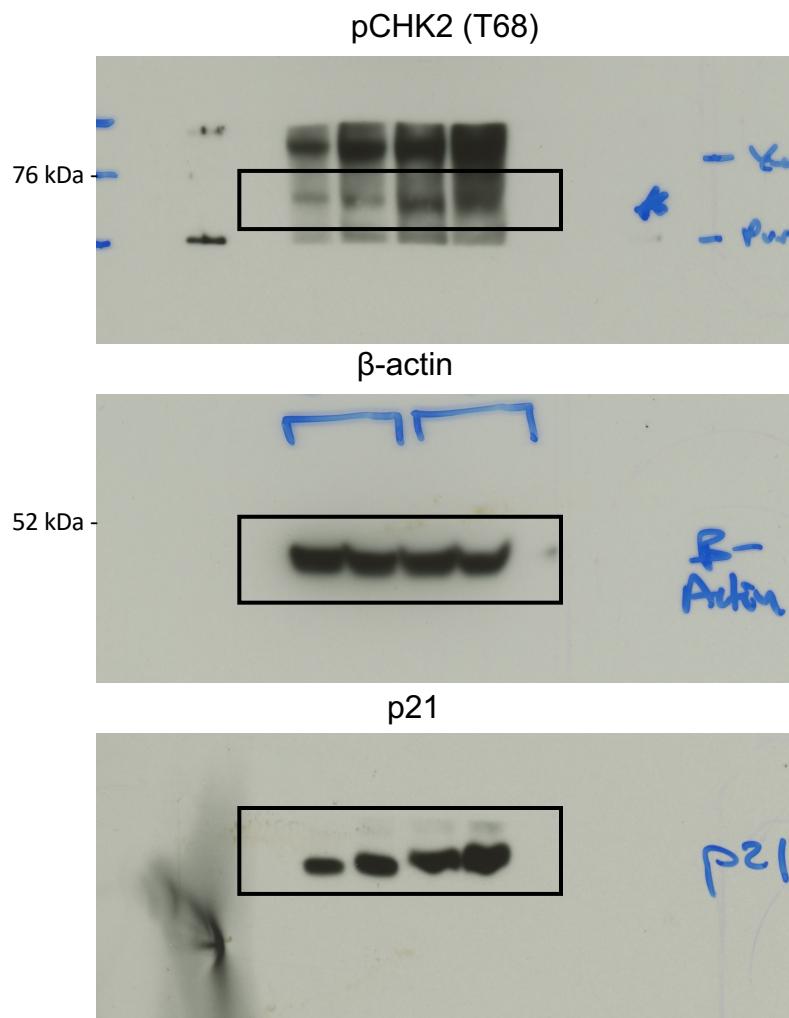
pATM (S1981)



Vinculin

— 225  
— 150  
— 102  
— 72  
— 55

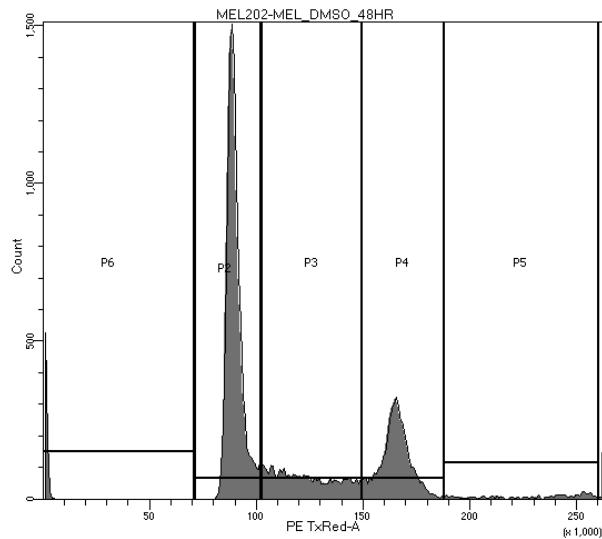
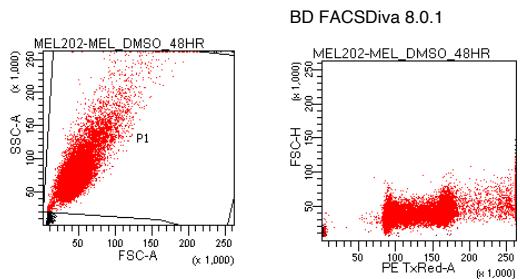
## Extended Data Fig. 10d



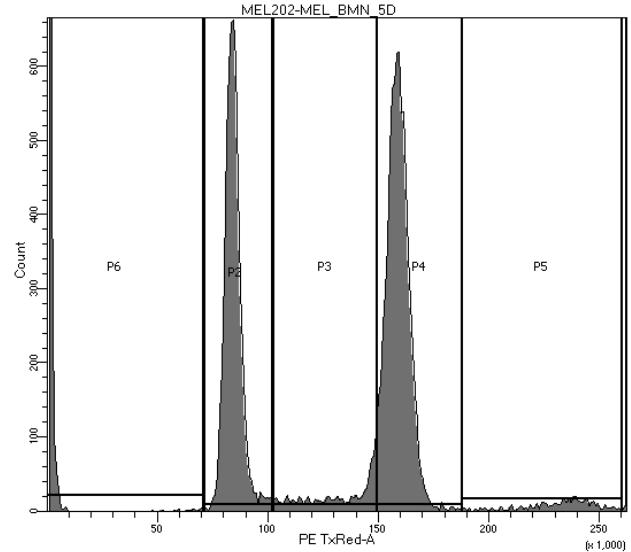
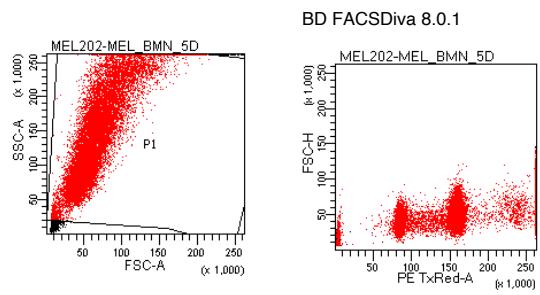
# FACs gating example

## related to Figure 5a

MEL202R625G \_ DMSO



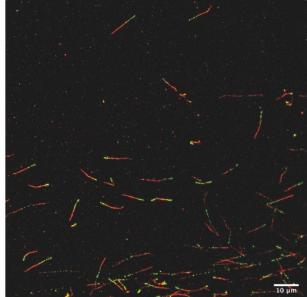
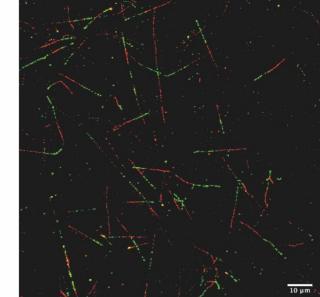
MEL202R625G \_ PARPi



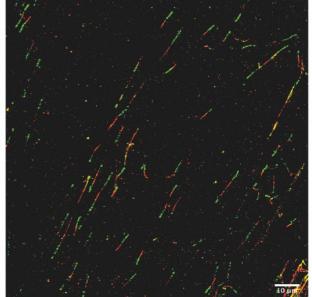
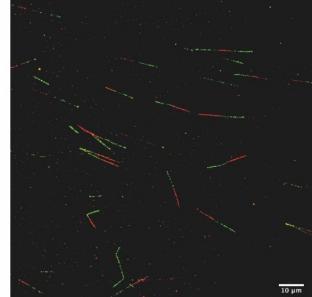
# Fibre images

## related to Figure 3a-d

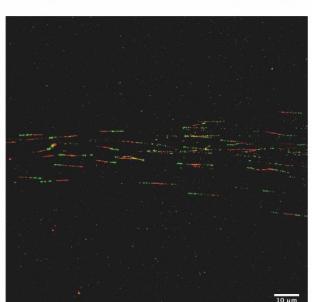
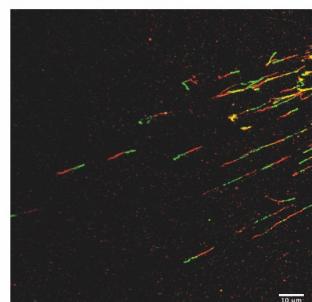
MEL202<sup>R625G-DEG</sup>



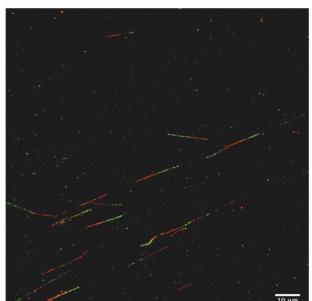
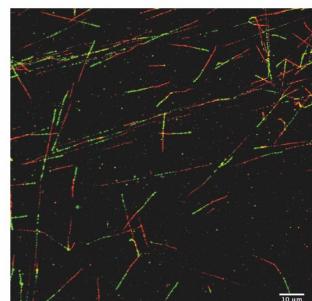
MEL202<sup>R625G</sup>



DMSO



PARPi



# Fibre images

related to Figure 3a-d

