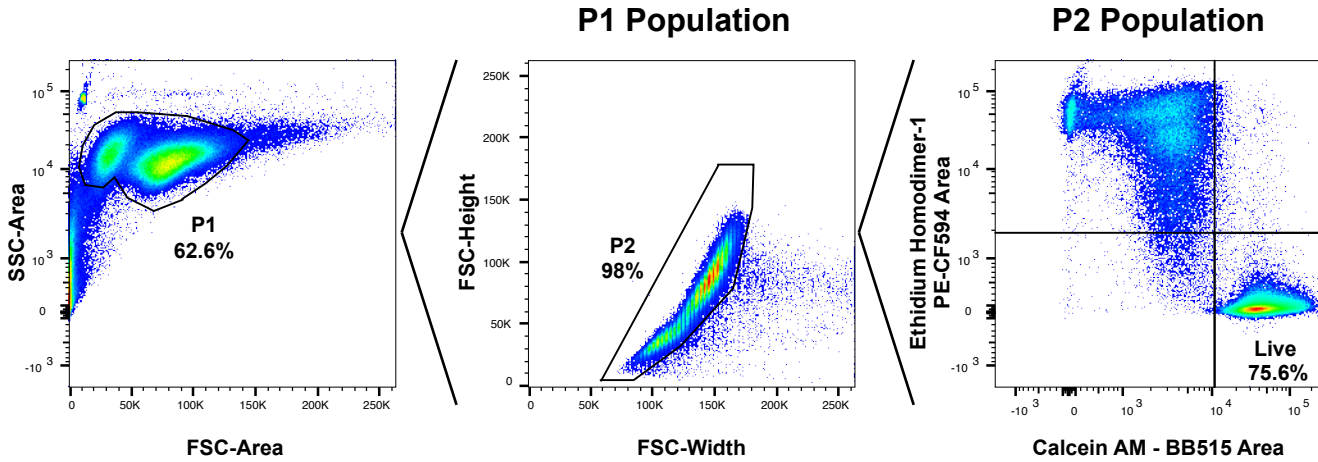


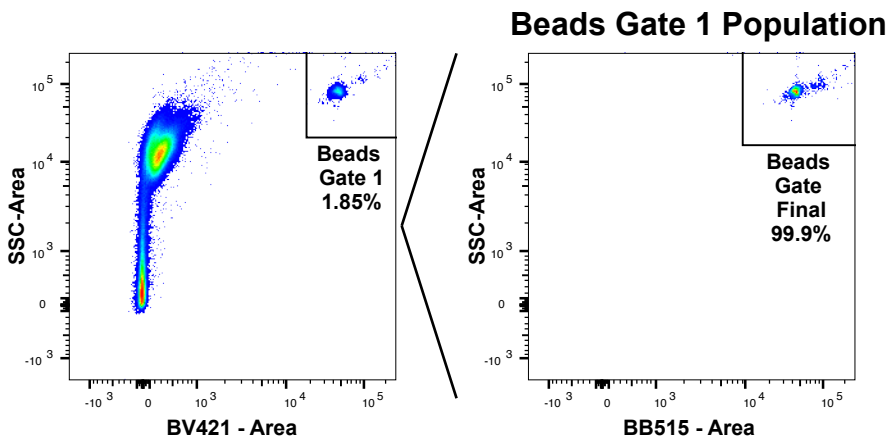
Supplementary Figure 1 - Gating Schematics for FACS Data

Growth Curve Analysis (Fig. 1b and Extended Data Fig. 1d) - Refer to Materials and Methods for Experimental Design

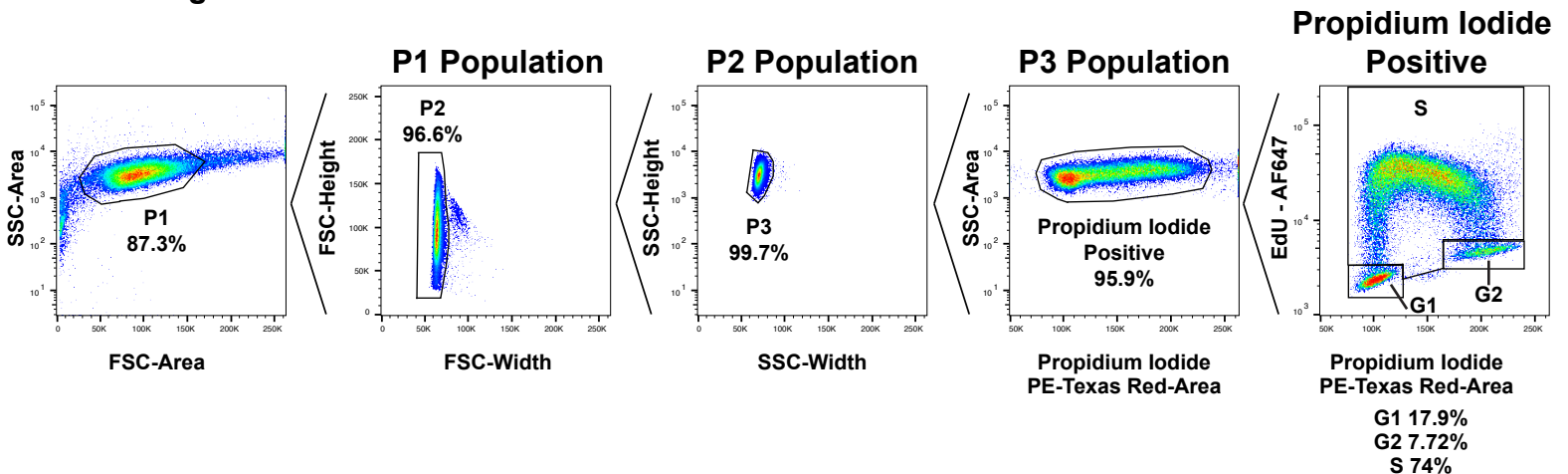
Gating for Live Single Cells



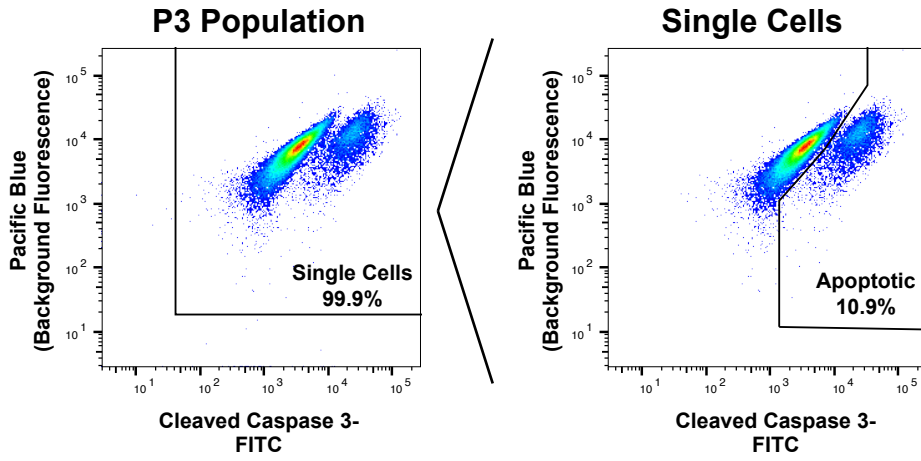
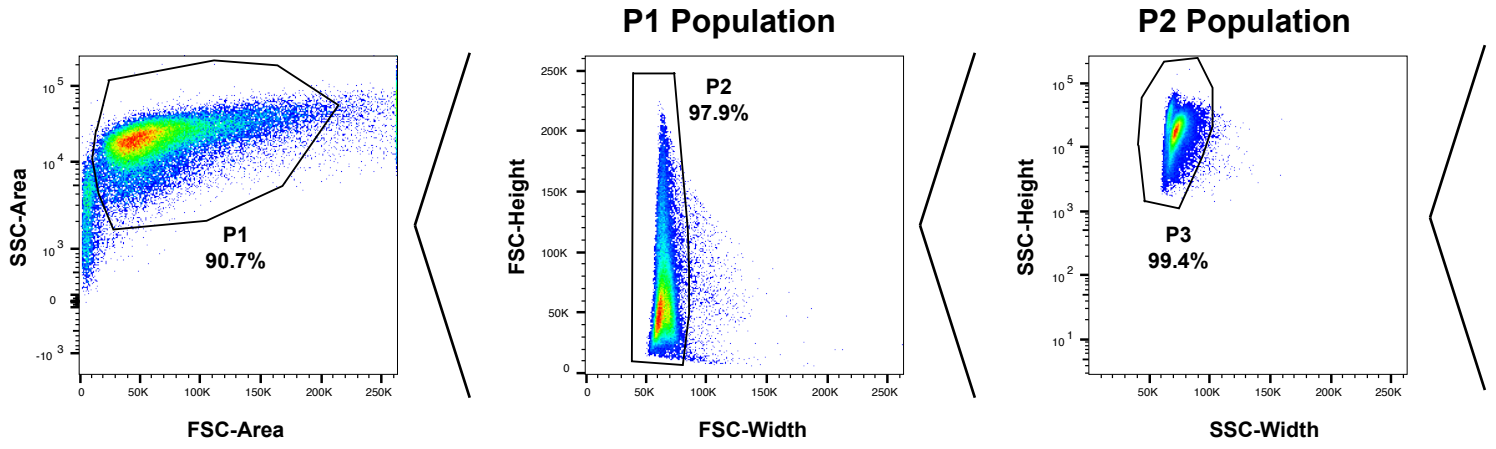
Gating for CountBright Absolute Counting Beads



Cell Cycle Analysis (Fig. 1c and Extended Data Fig. 1e) - Refer to Materials and Methods for Experimental Design



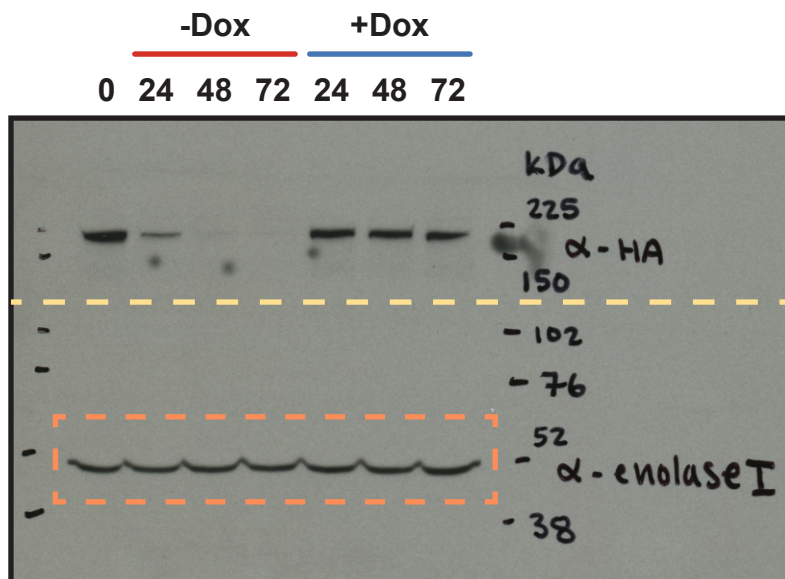
Apoptosis Analysis (Fig. 1d and Extended Data Fig. 1f) - Refer to Materials and Methods for Experimental Design



Supplementary Figure 2 - Uncropped Western Blots

Fig. 1a:

Exposure used for Enolase



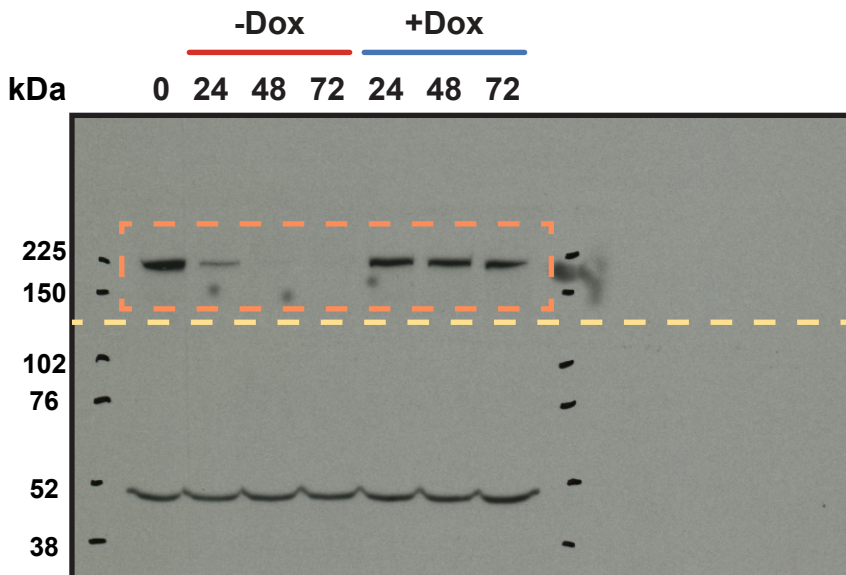
Hours

Anti-HA High Affinity Antibody (Roche 11867423001)

Approximate location membrane was cut.

Enolase I (CST 3810S)

Exposure used for HA-Cdk12



Hours

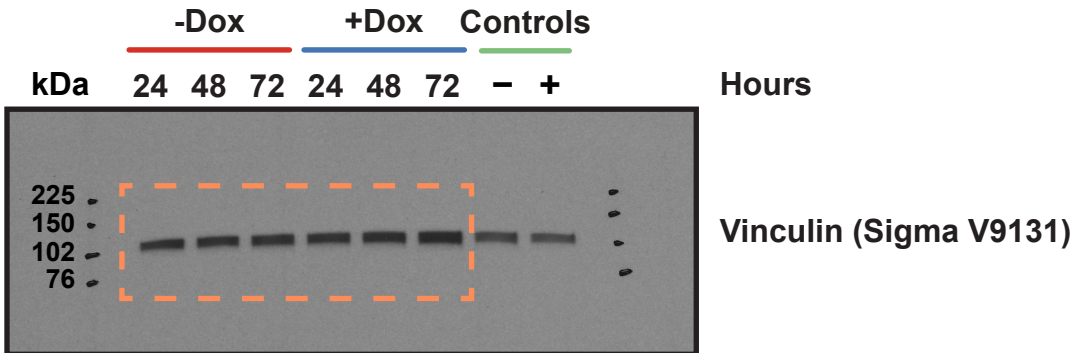
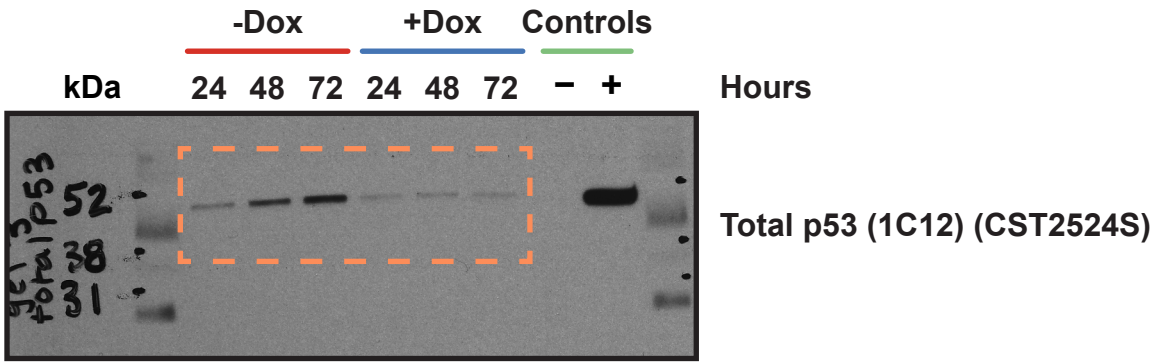
Anti-HA High Affinity Antibody (Roche 11867423001)

Approximate location membrane was cut.

Enolase I (CST 3810S)

Fig. 1f:

Total p53 Gel



pSer15-p53 Gel

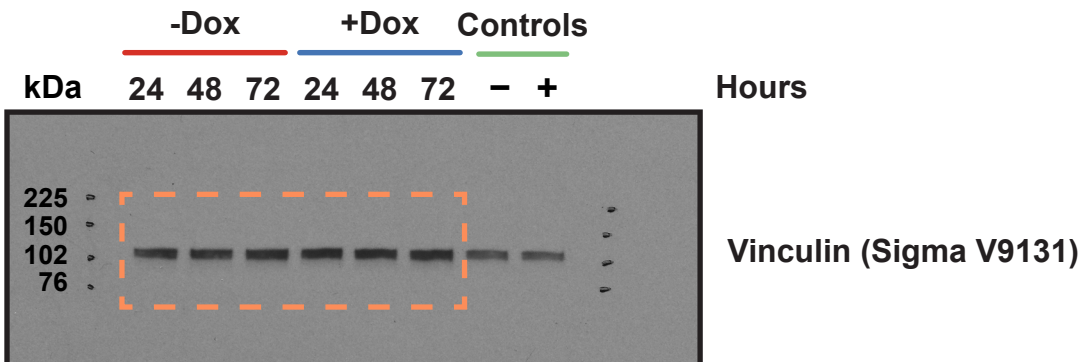
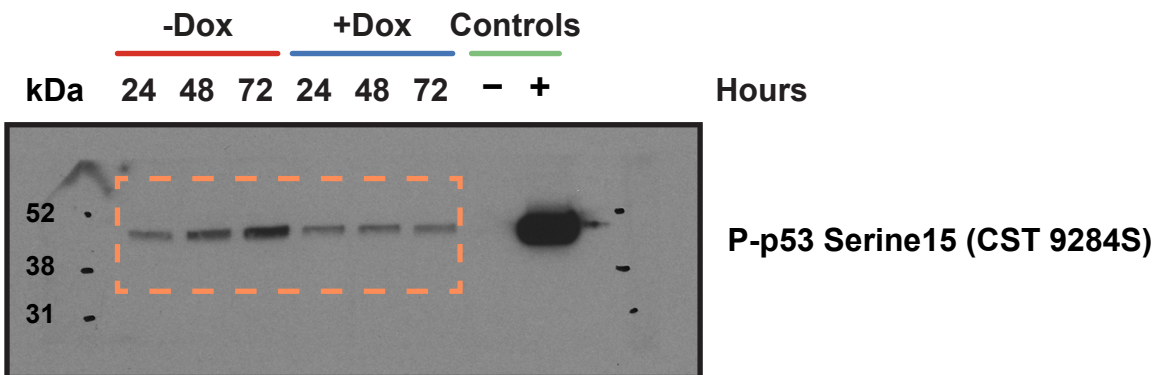


Figure 1e Uncropped Blots Control Lanes:

- +Lane (Positive Control)= wild type mESCs treated with 1uM Doxorubicin for 6hrs
- Lane (Negative Control)= wild type mESCs treated with DMSO (vehicle control) for 6hrs

Fig. 4d:

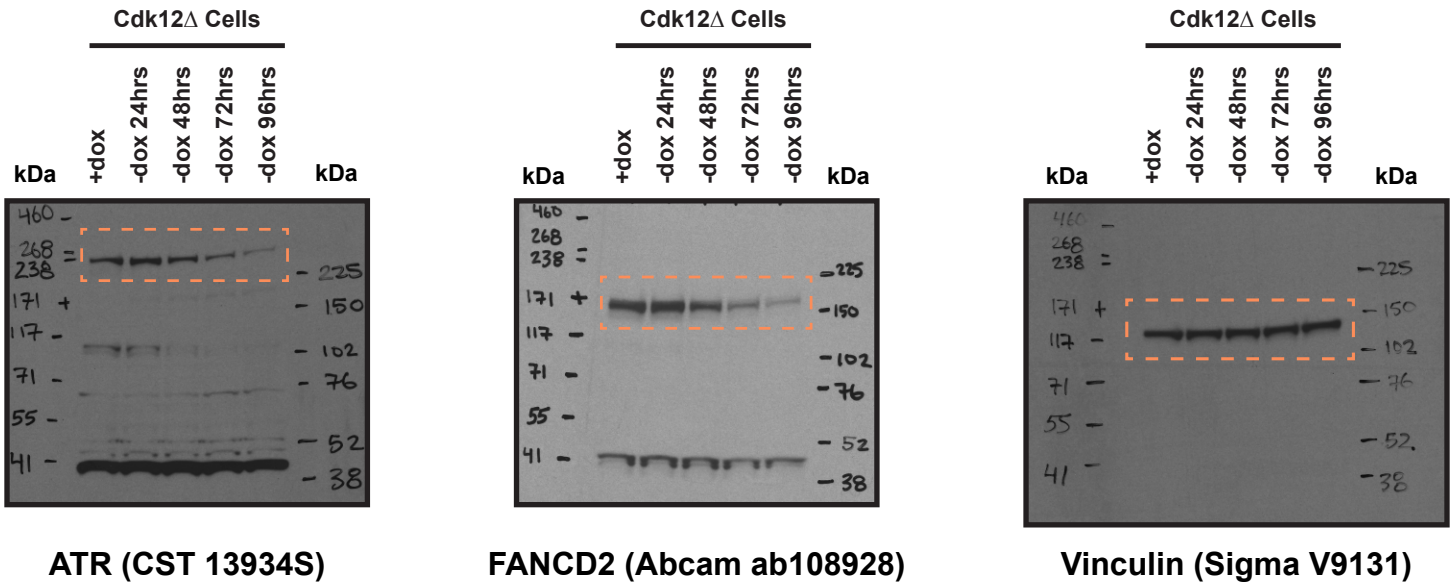
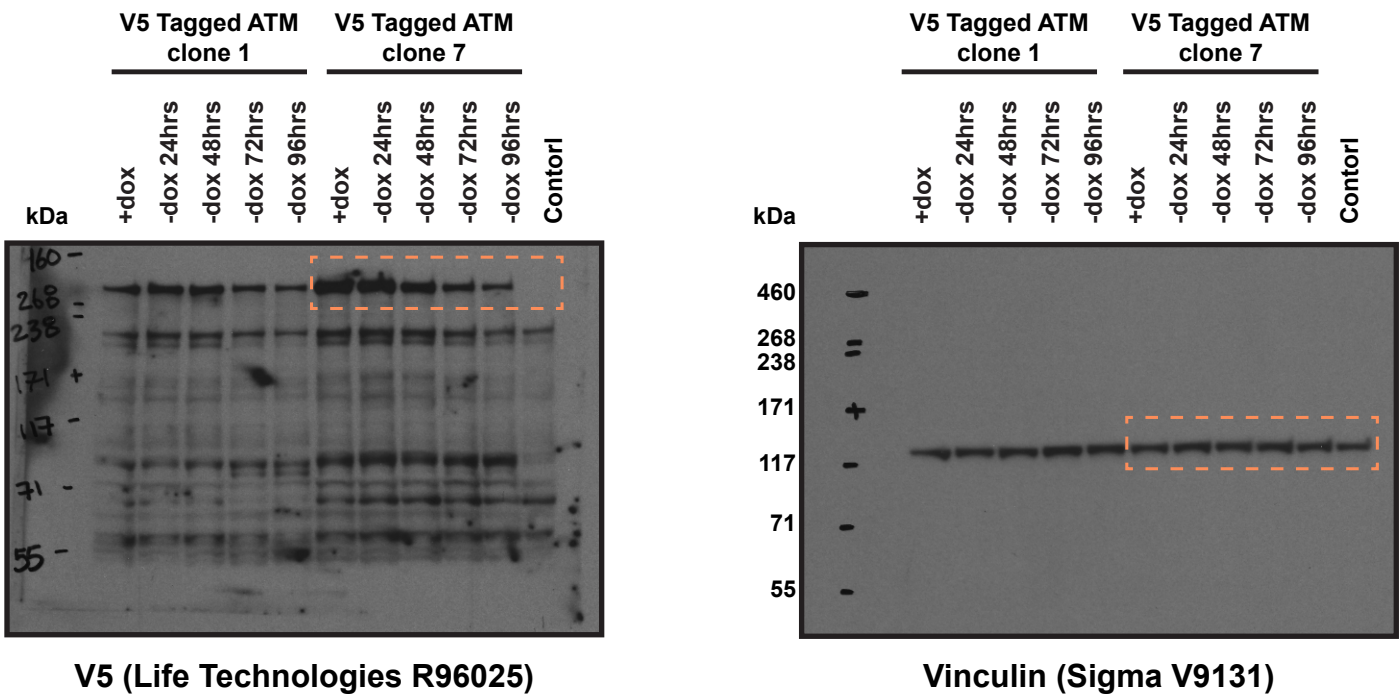


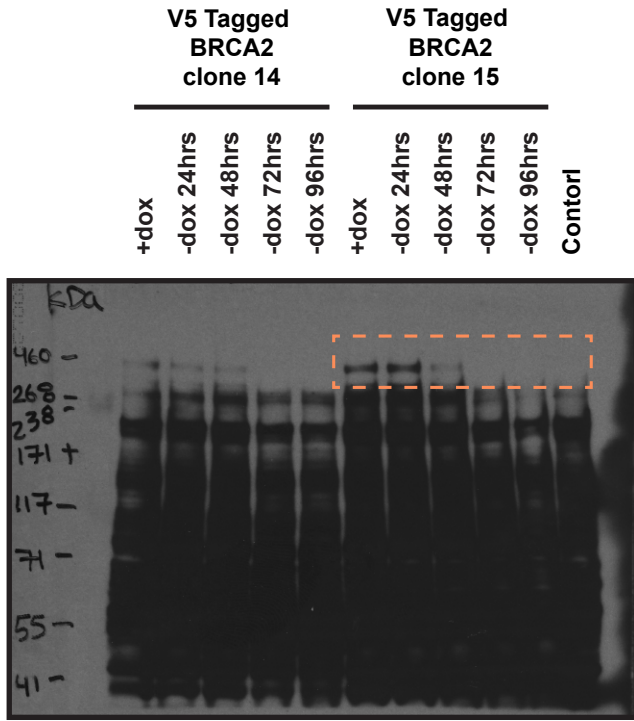
Fig. 4e:



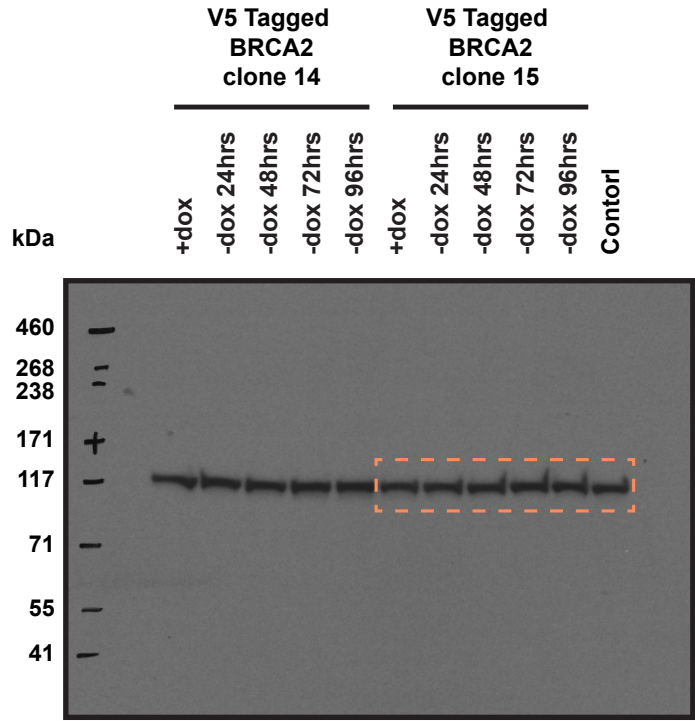
Notes:

- (1) Control lane = lysate from untagged, Cdk12Δ cells (+Dox) shown as an antibody specificity control.
- (2) Second, independently-derived endogenous V5-tagged ATM clone also shown.

Fig. 4e (cont.):



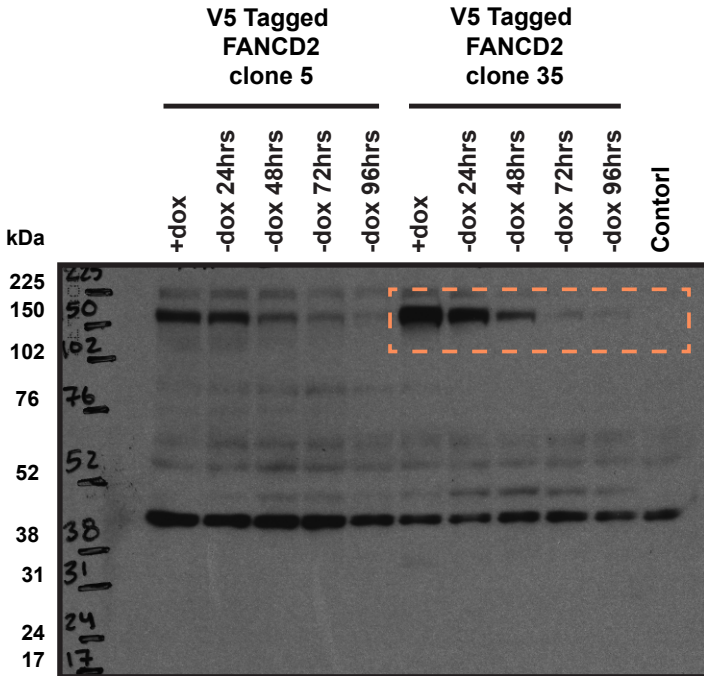
V5 (Life Technologies R96025)



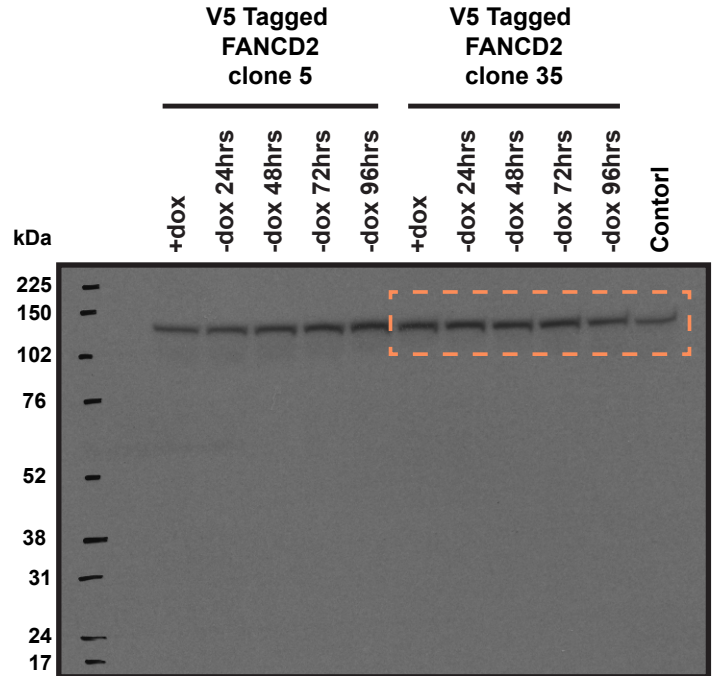
Vinculin (Sigma V9131)

Notes:

- (1) Control lane = lysate from untagged, Cdk12Δ cells (+Dox) shown as an antibody specificity control.
- (2) Second, independently-derived endogenous V5-tagged BRCA2 clone also shown.



V5 (Life Technologies R96025)



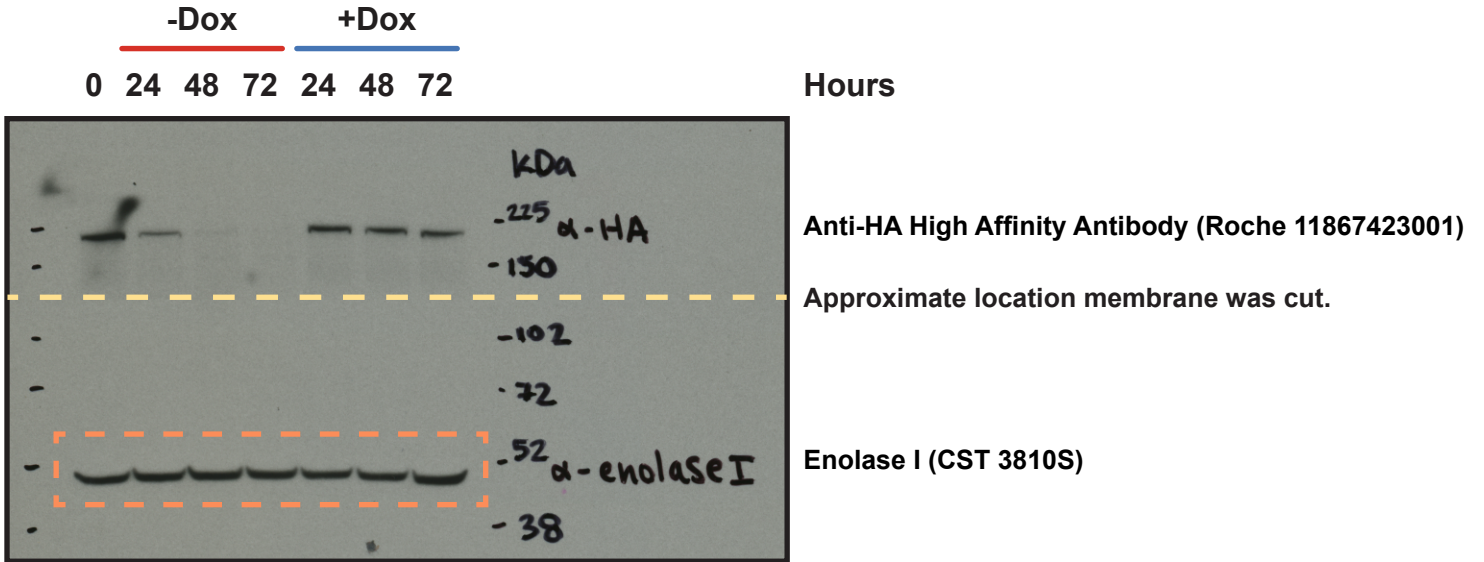
Vinculin (Sigma V9131)

Notes:

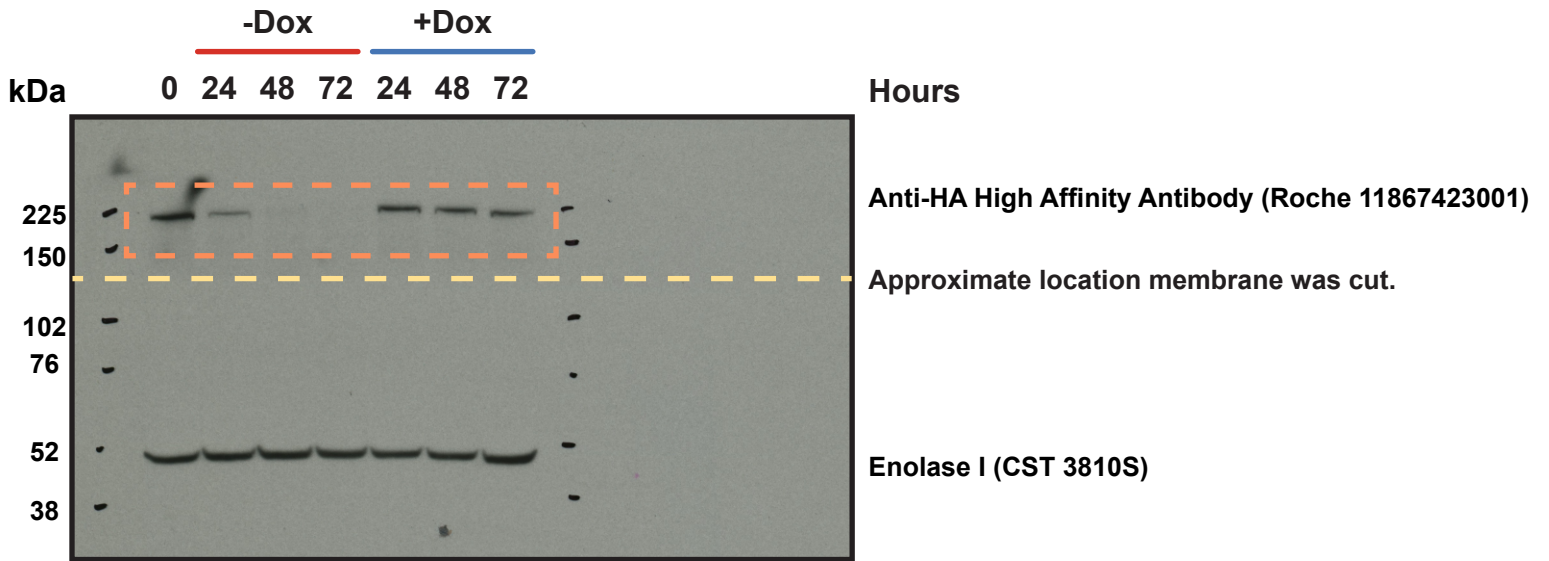
- (1) Control lane = lysate from untagged, Cdk12Δ cells (+Dox) shown as an antibody specificity control.
- (2) Second, independently-derived endogenous V5-tagged FANCD2 clone also shown.

Extended Data Fig. 1c:

Exposure used for Enolase

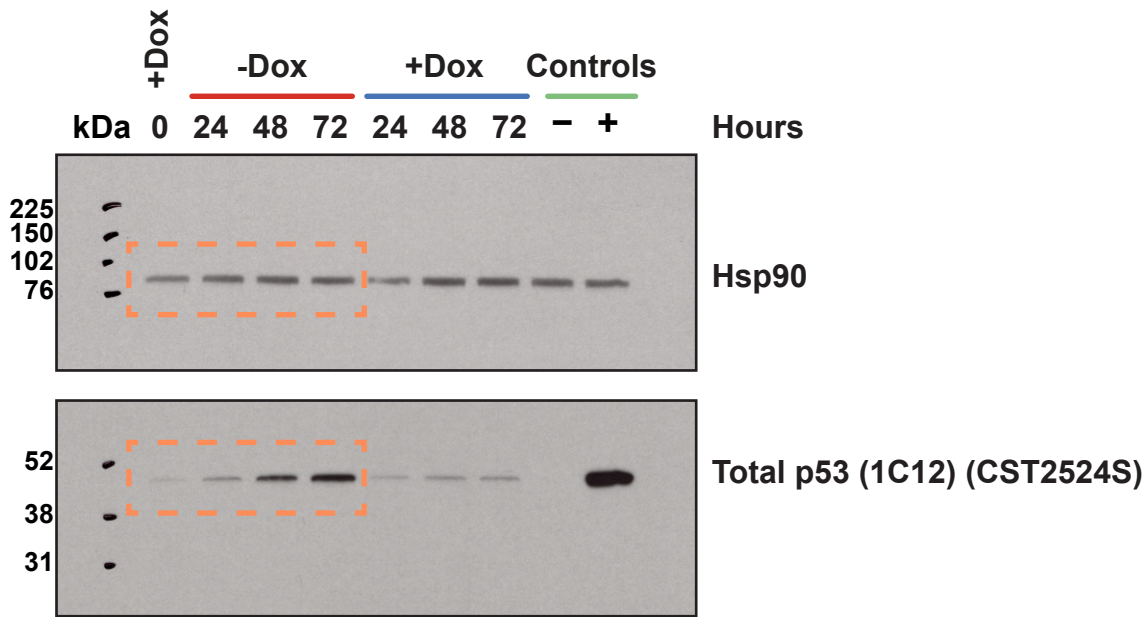


Exposure used for HA-Cdk12

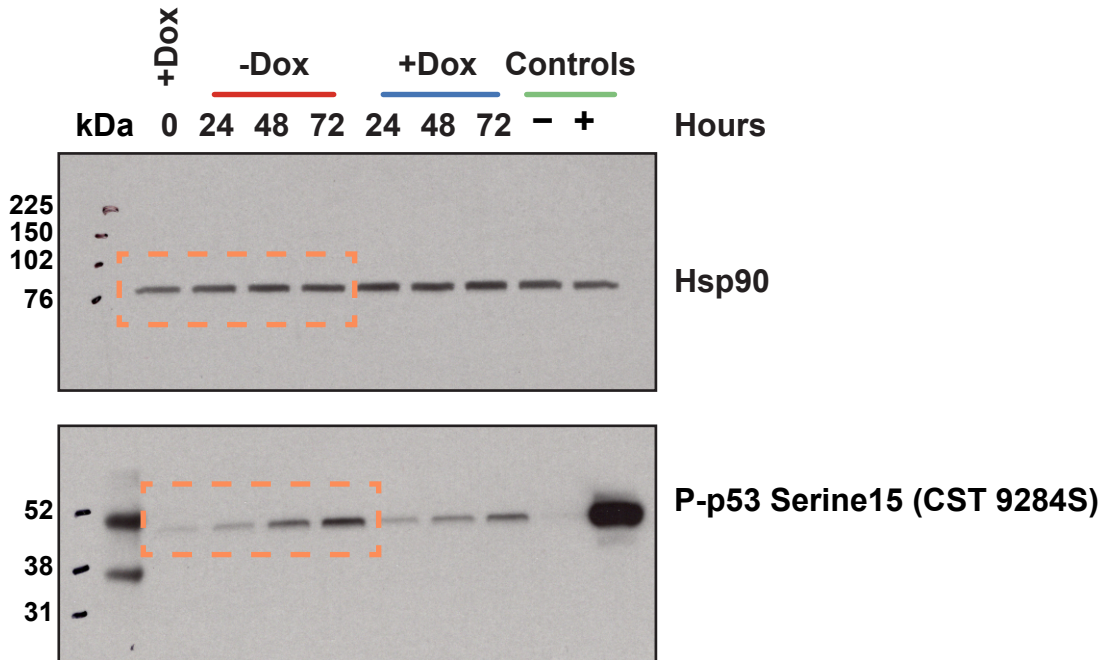


Extended Data Fig. 1h:

Total p53 Gel



pSer15-p53 Gel



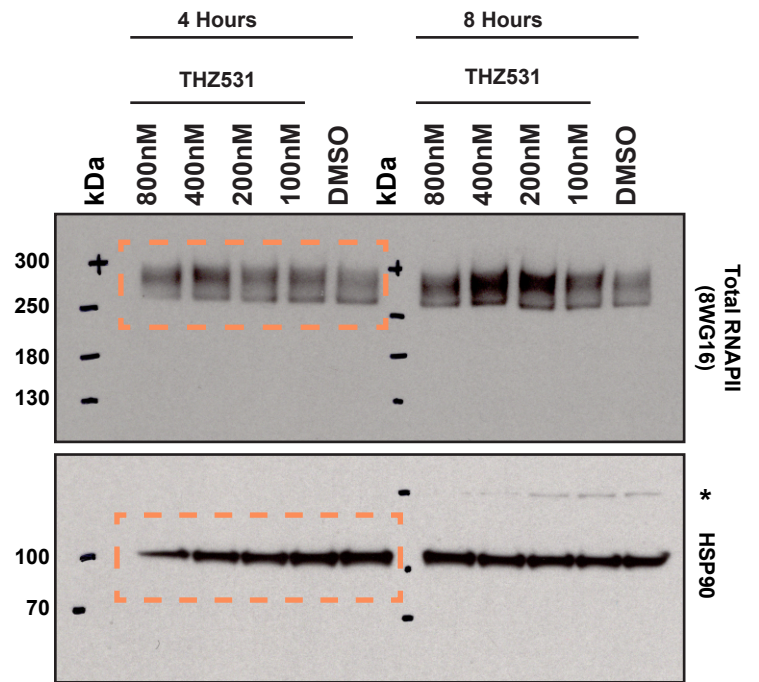
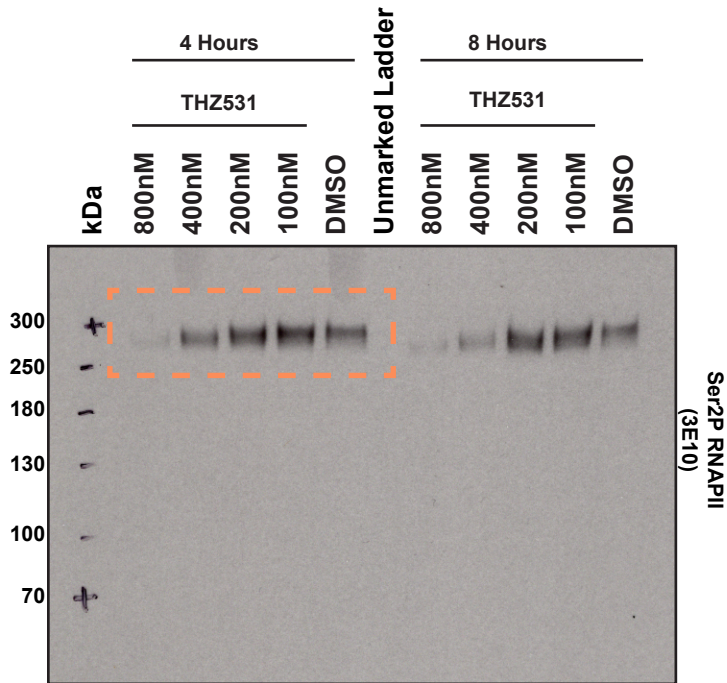
Extended Data Fig. 1h Uncropped Blots Control Lanes:

+Lane (Positive Control)= wild type mESCs treated with 1uM Doxorubicin for 6hrs

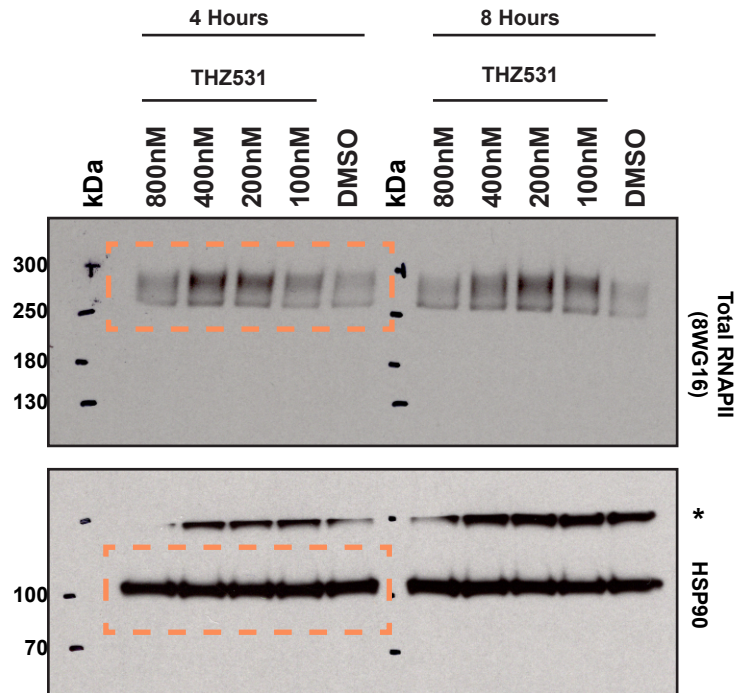
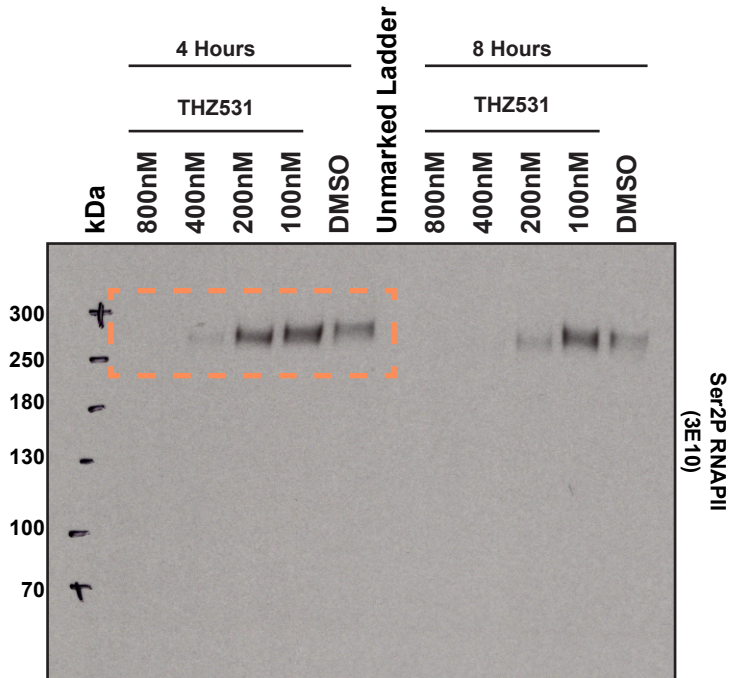
-Lane (Negative Control)= wild type mESCs treated with DMSO (vehicle control) for 6hrs

Extended Data Fig. 10c:

22RV1



PC-3



Note:

* indicates a band from a separate, prior antibody staining that did not strip off completely.

Extended Data Fig. 10c (cont.):

OVCAR4

