

Supplementary Information

Engineering optogenetic control of endogenous p53 protein levels

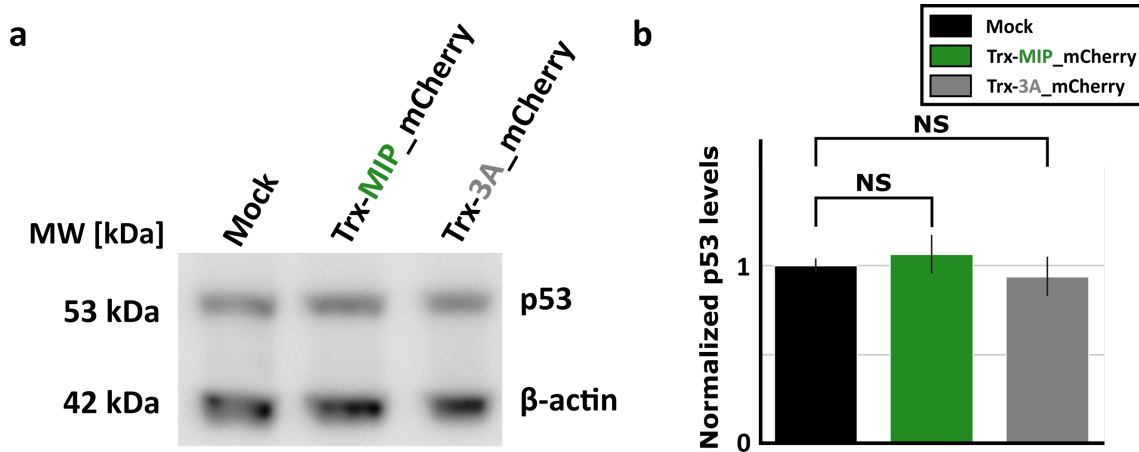
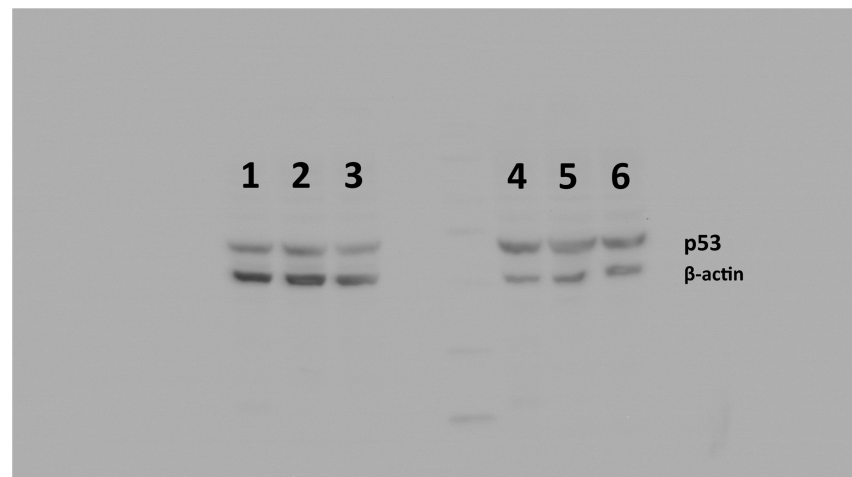


Figure S1. The Mdm2-inhibitory peptide (MIP) does not lead to increased p53 levels in HCT116 cells. (a) Western blot showing the levels of p53 in HCT116 cells transfected with the indicated constructs. Mock indicates cells transfected with empty pcDNA3.1(+). β -actin was used as loading control. (b) Bar plot showing the quantification of three independent western blots with samples as in (a). Data indicate mean \pm standard deviation. NS $p \geq 0.05$, t -test.

a

Lane 1 - Replicate 1 - Trx-3a
Lane 2 - Replicate 1 - Trx-MIP
Lane 3 - Replicate 1 - Mock

b

Lane 1 - Replicate 2 - Mock **Lane 4 - Replicate 3 - Mock**
Lane 2 - Replicate 2 - Trx-MIP **Lane 5 - Replicate 3 - Trx-MIP**
Lane 3 - Replicate 2 - Trx-3a **Lane 6 - Replicate 3 - Trx-3a**

Figure S2. Raw data for the plot shown in Supplementary Figure S1. Only relevant lanes were annotated.

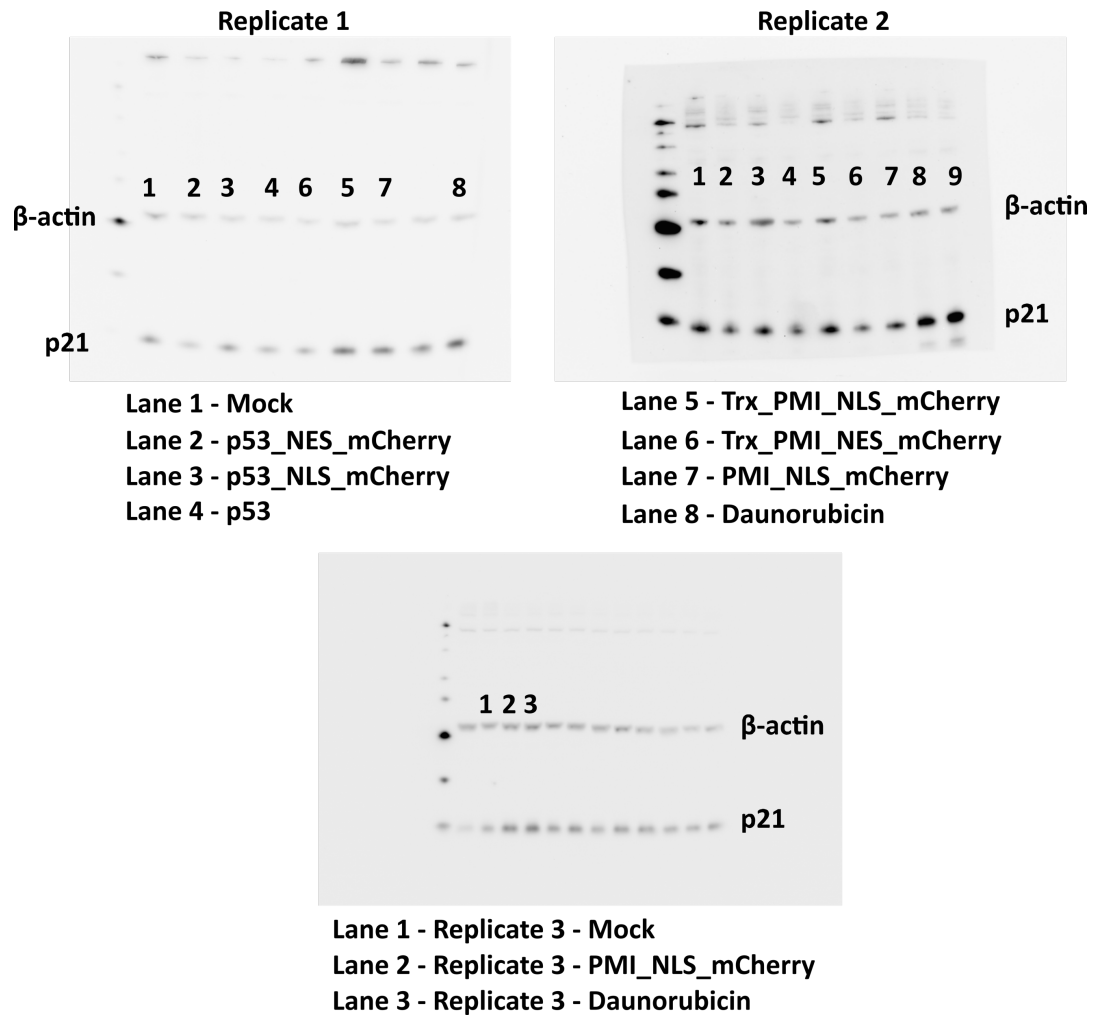
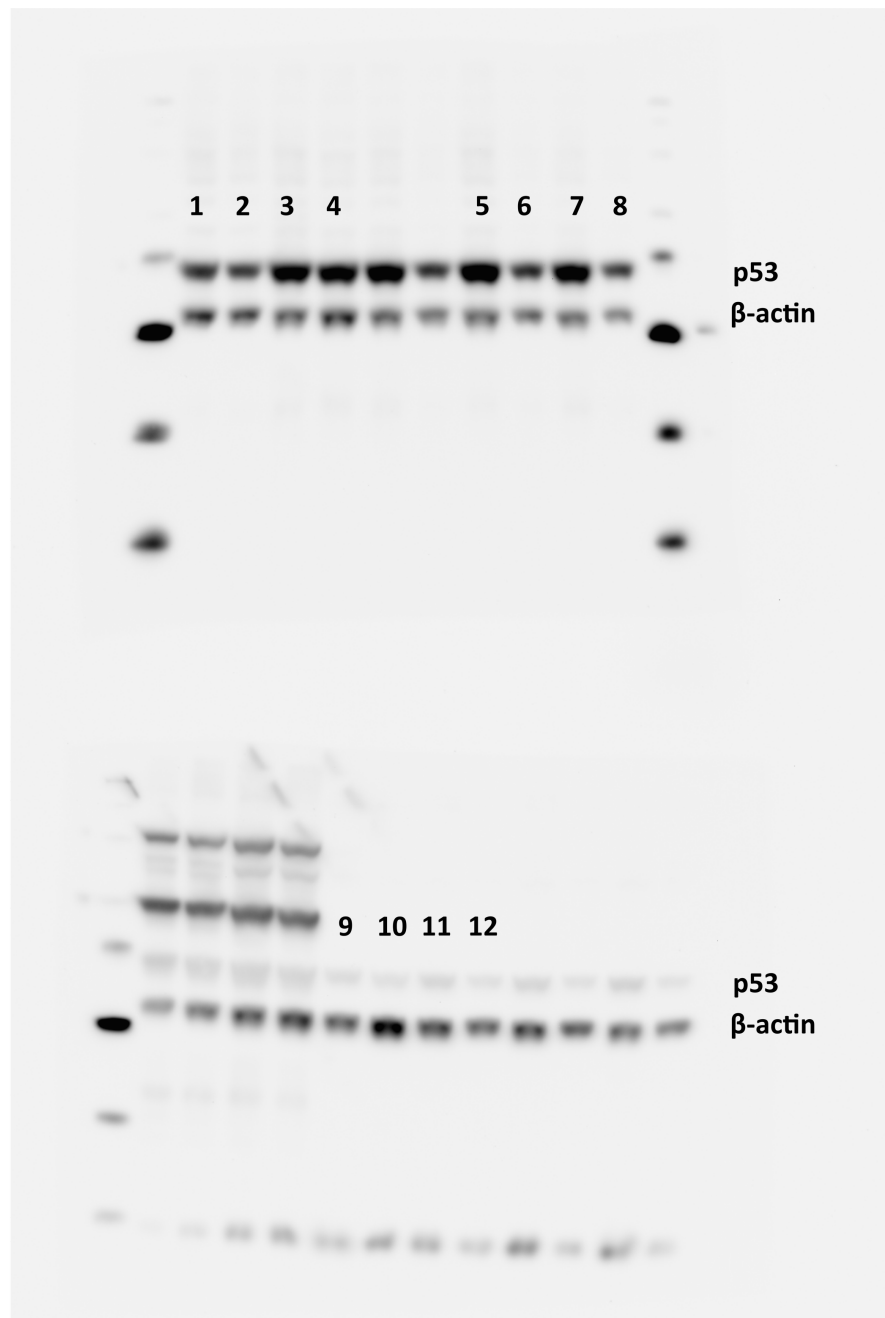


Figure S3. Raw data for the plot shown in Figure 1c. Only relevant lanes were annotated.



Lane 1 - Replicate 1 - mock - dark
 Lane 2 - Replicate 1 - mock - light
 Lane 3 - Replicate 2 - mock - dark
 Lane 4 - Replicate 2 - mock - light
 Lane 5 - Replicate 1 - PMI_LEXY - dark
 Lane 6 - Replicate 1 - PMI_LEXY - light

Lane 7 - Replicate 2 - PMI_LEXY - dark
 Lane 8 - Replicate 2 - PMI_LEXY - light
 Lane 9 - Replicate 3 - mock - dark
 Lane 10 - Replicate 3 - mock - light
 Lane 11 - Replicate 3 - PMI_LEXY - dark
 Lane 12 - Replicate 3 - PMI_LEXY - light

Figure S4. Raw data for the plot shown in Figure 3c. Only relevant lanes were annotated.

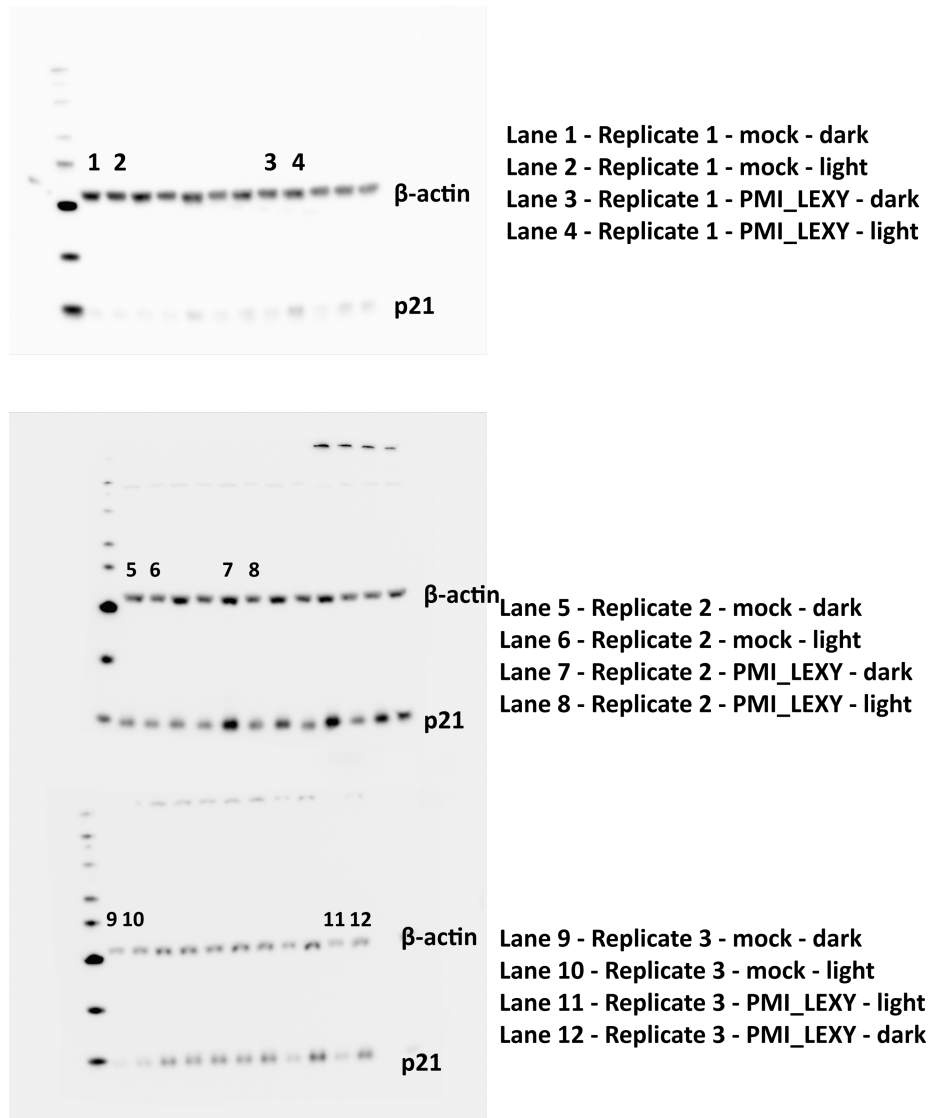


Figure S5. Raw data for the plot shown in Figure 3c. Only relevant lanes were annotated.