

Supplementary Materials

PRODH/POX-dependent celecoxib-induced apoptosis in MCF-7 breast cancer.

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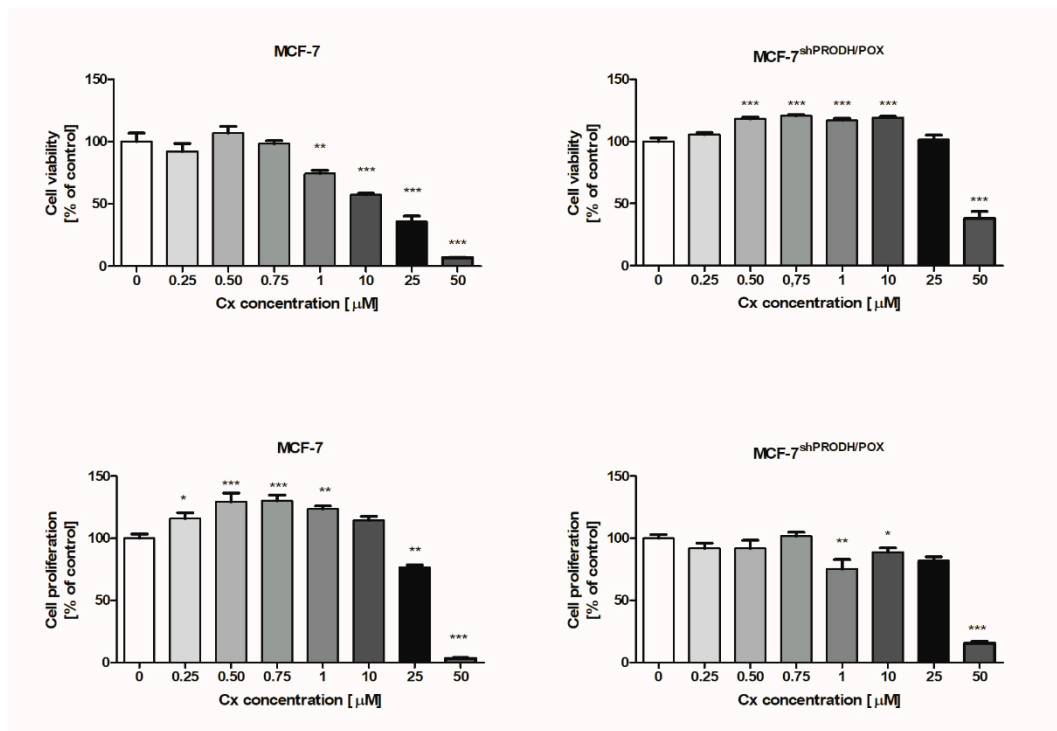


Figure S1. MCF-7 and MCF-7^{shPRODH/POX} cell viability and proliferation after 48 h treatment with a wide range of Celecoxib concentrations. * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

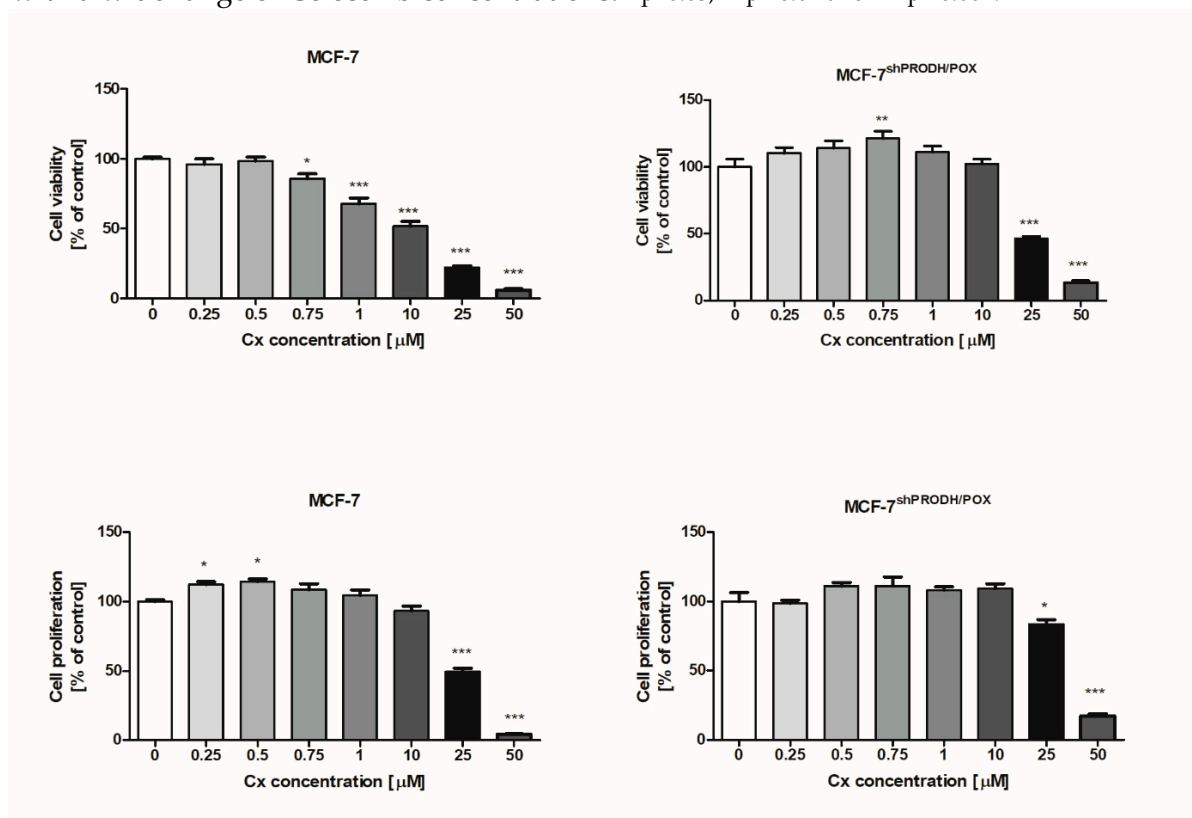


Figure S2. MCF-7 and MCF-7^{shPRODH/POX} cell viability and proliferation after 72 h treatment with a wide range of Celecoxib concentrations. * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

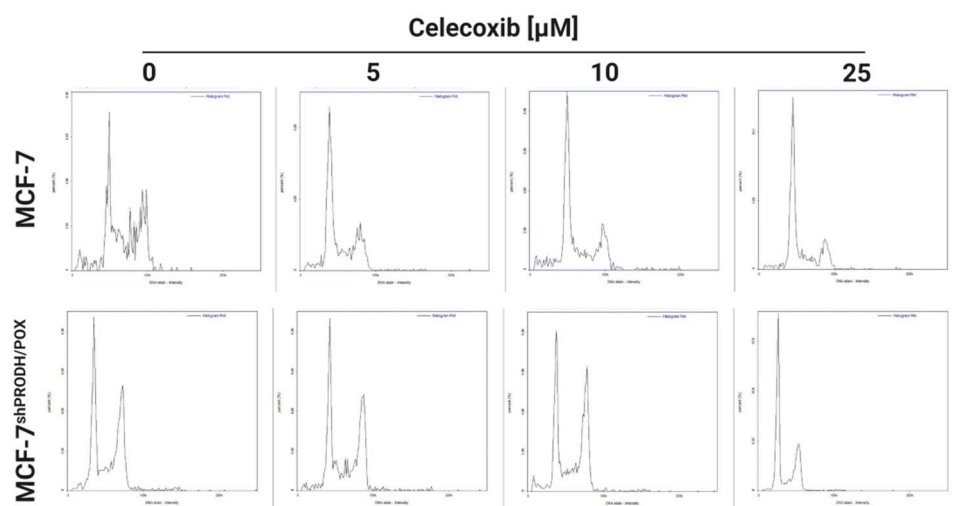
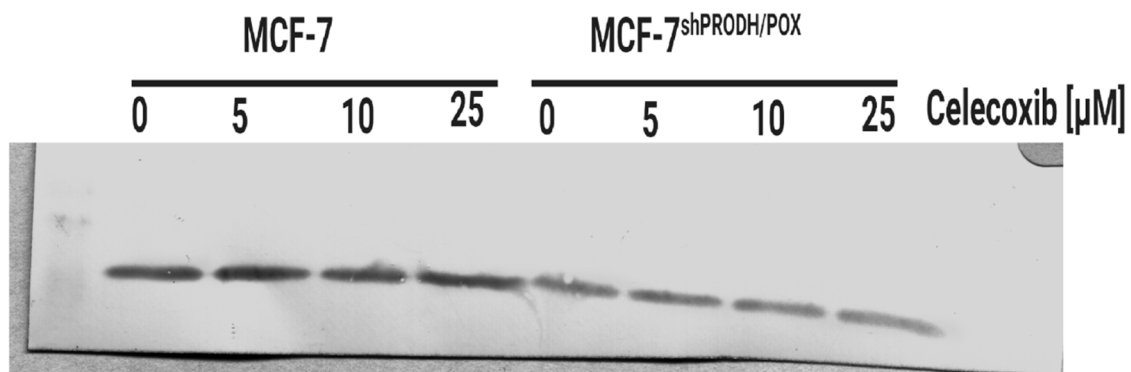
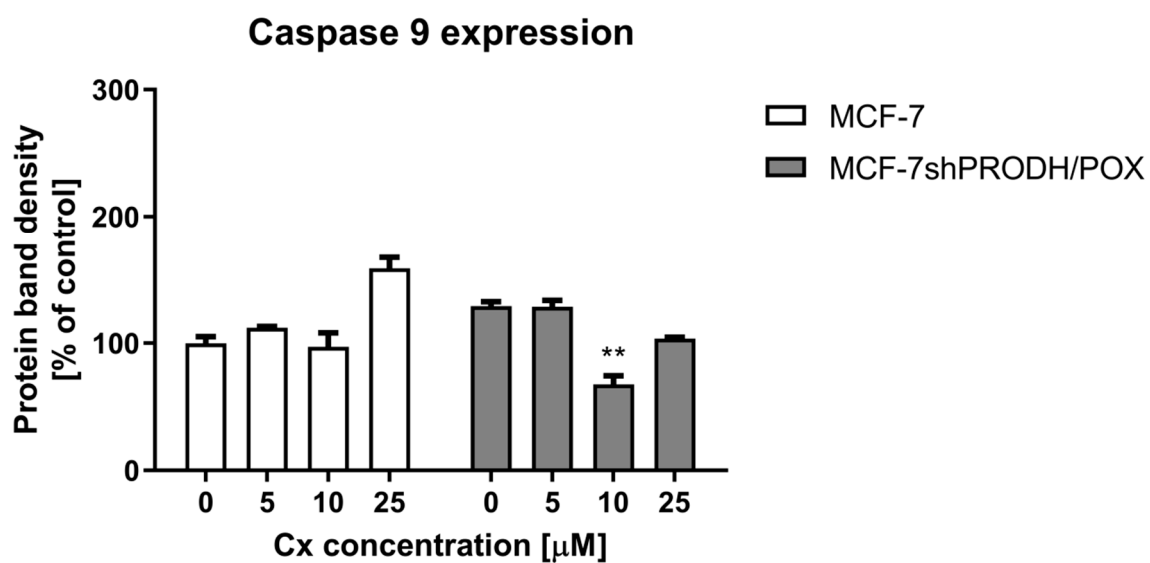
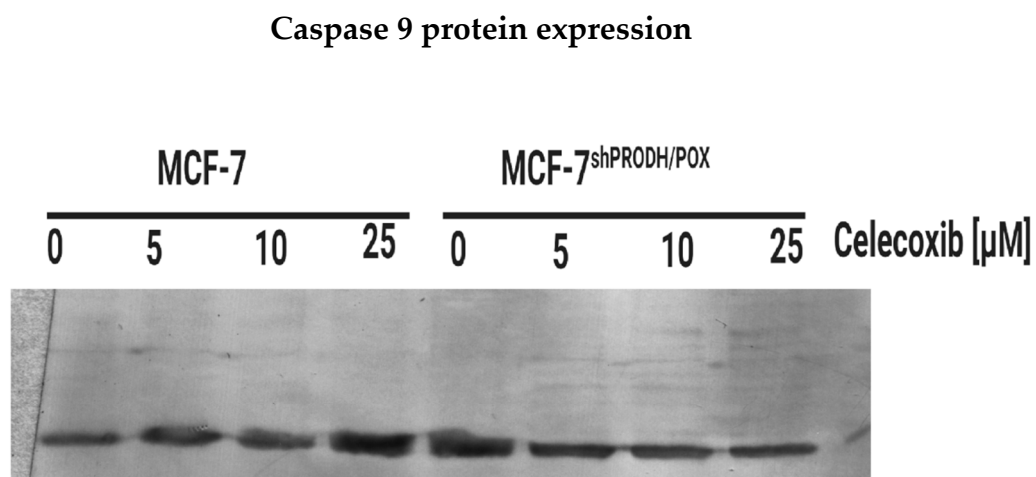
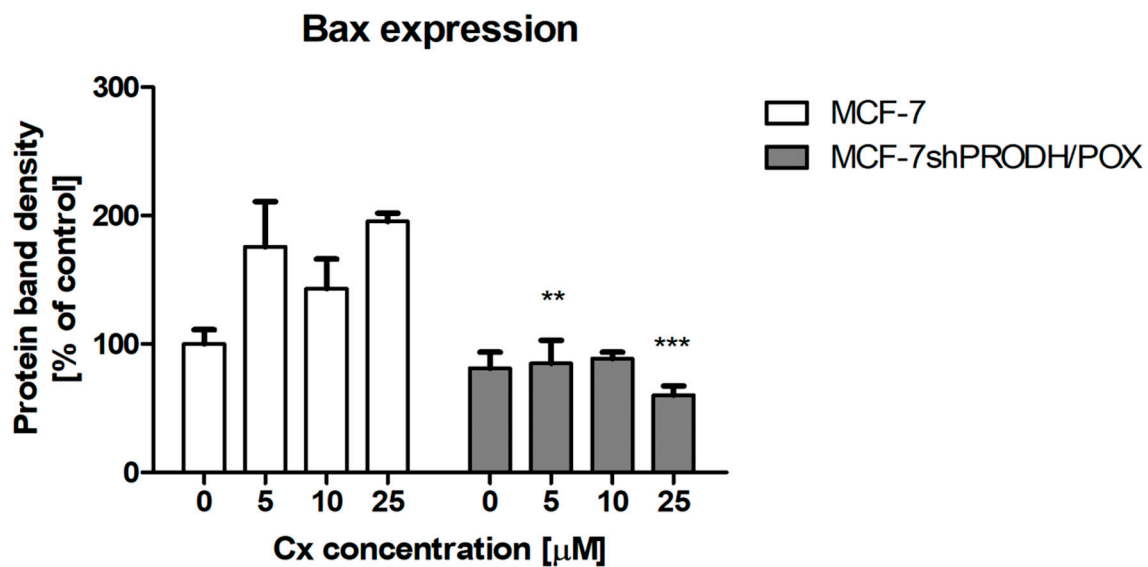


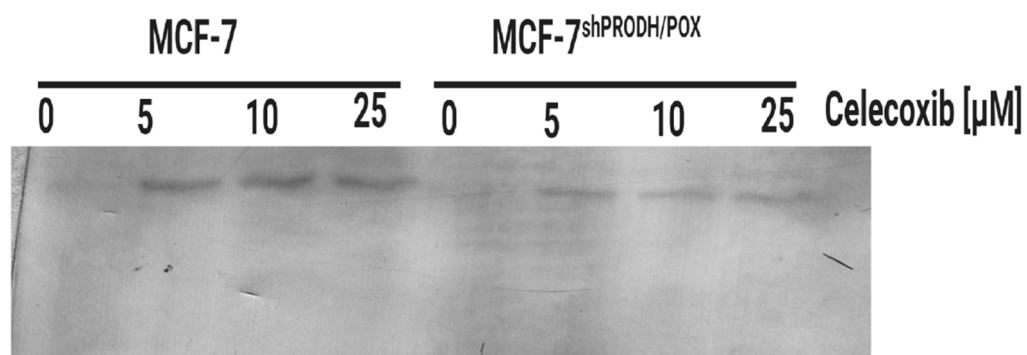
Figure S3. Graphical representation of the cell cycle Analysis upon Cx treatment for 24 h. MCF-7 and MCF-7^{shPRODH/POX} cells were treated with 0, 5, 10 and 25 μM of Cx.

Bax protein expression

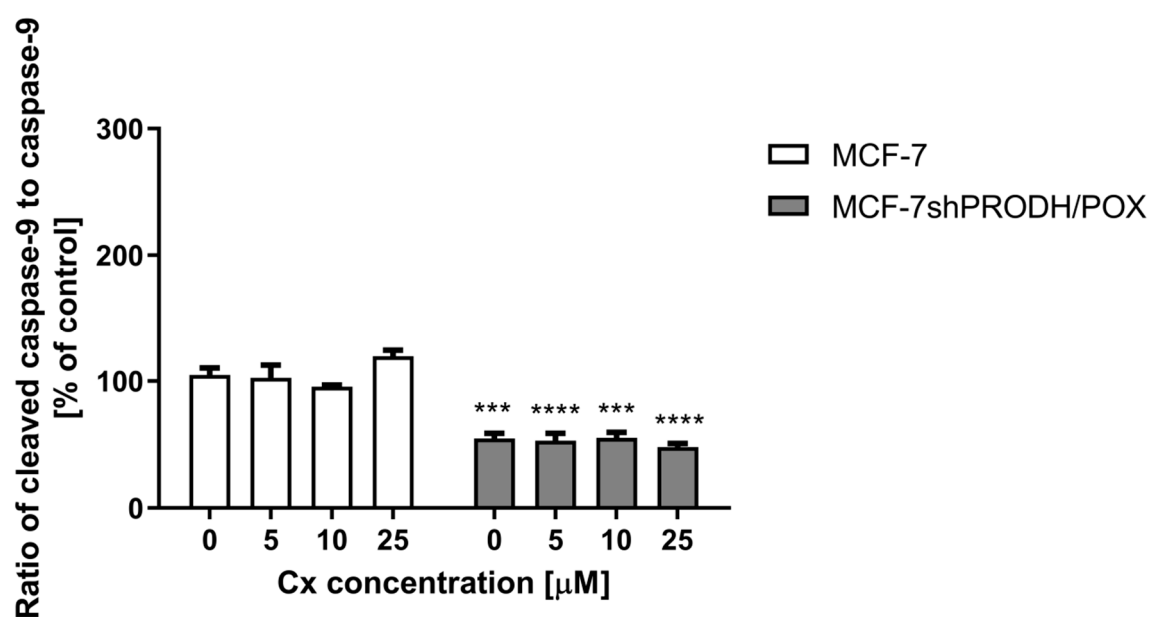
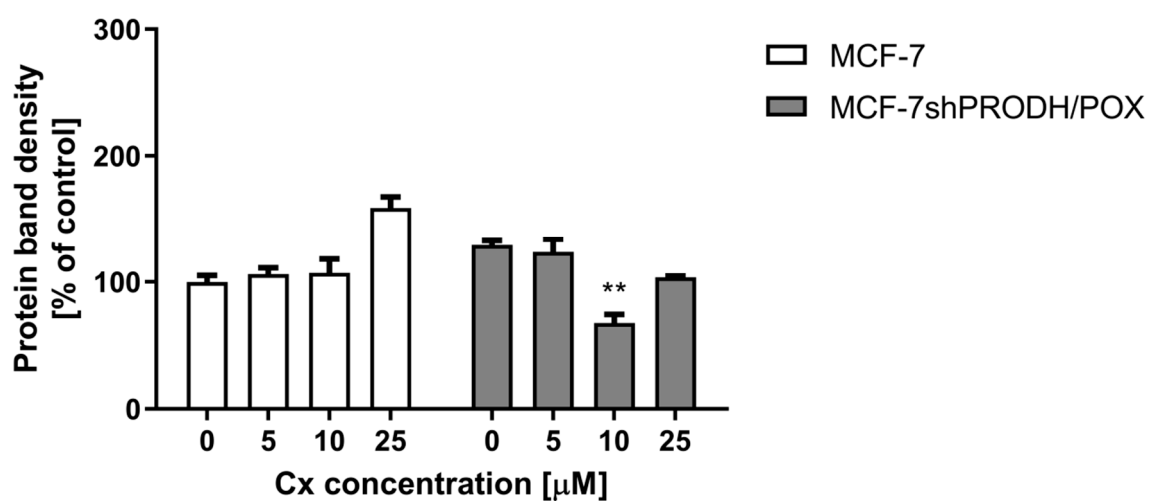




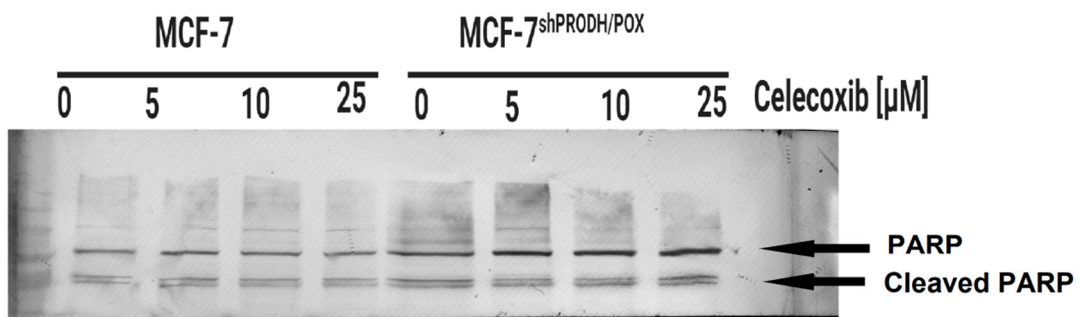
Cleaved Caspase 9 protein expression



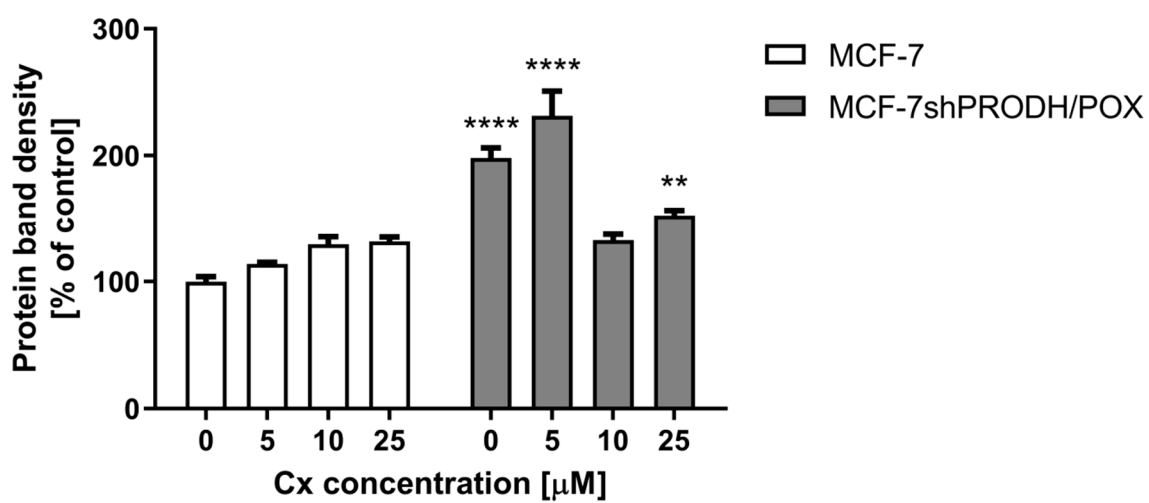
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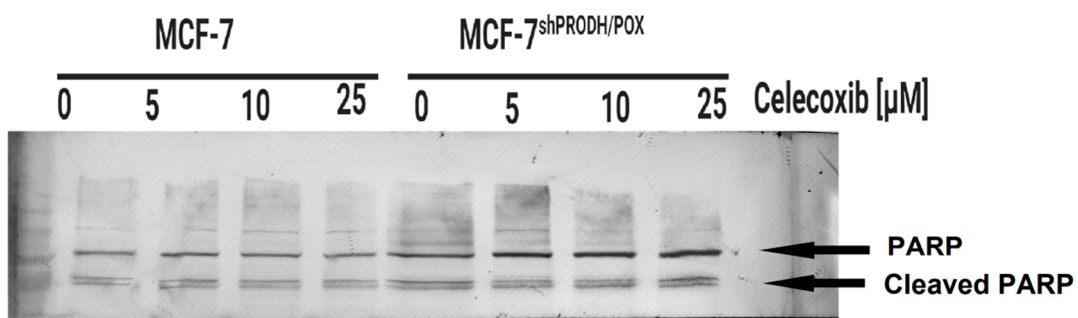
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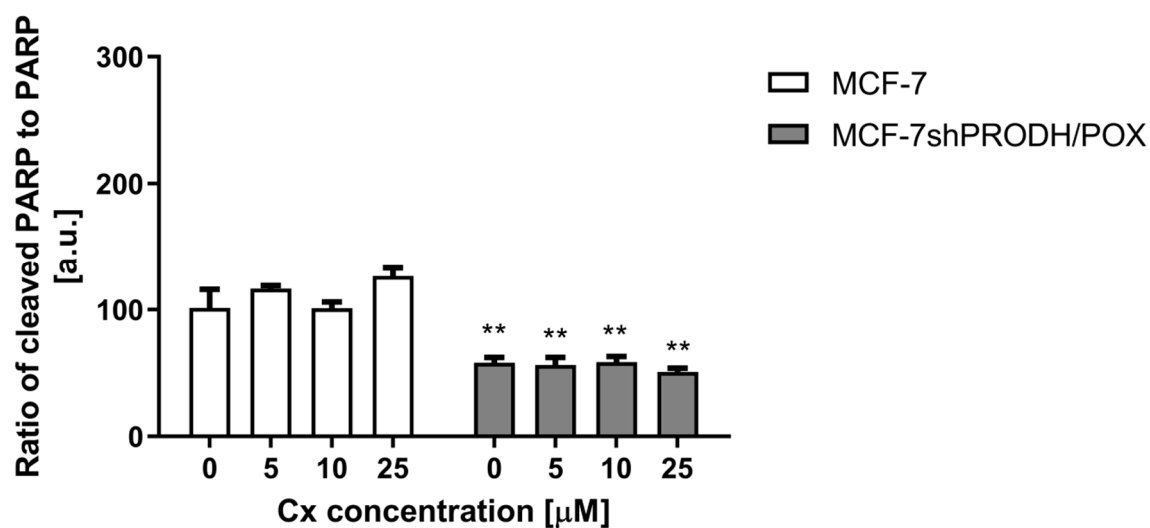
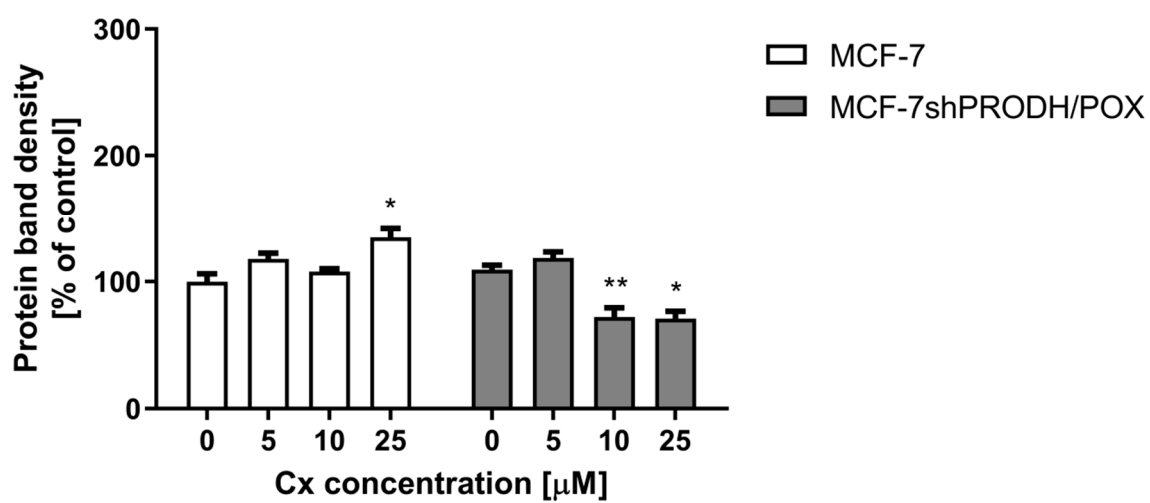
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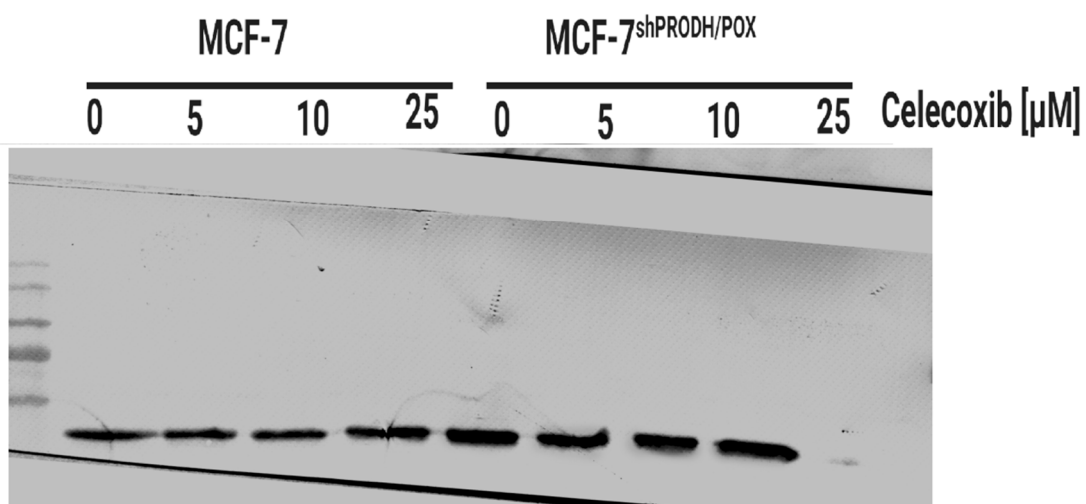
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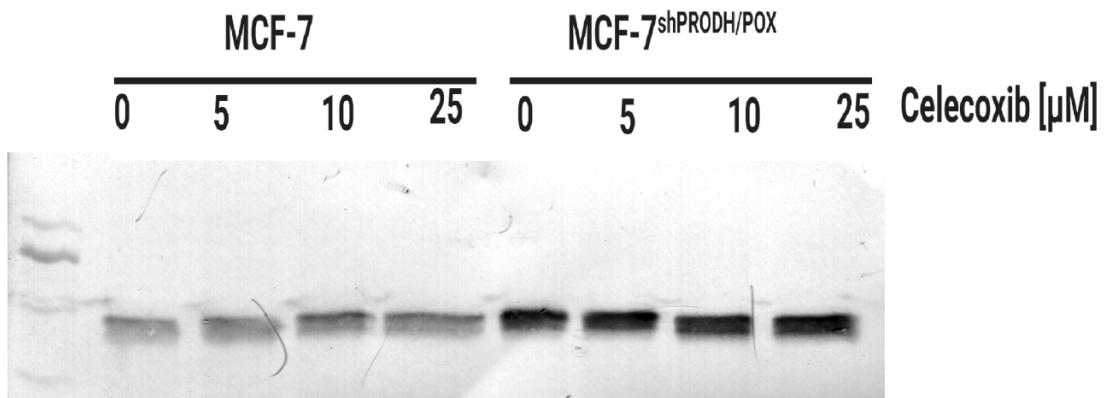
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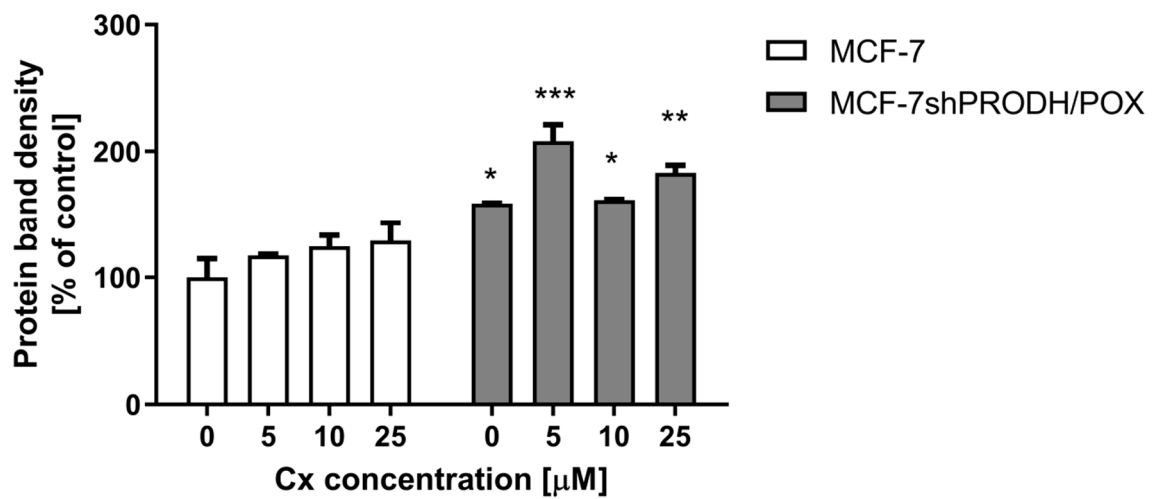
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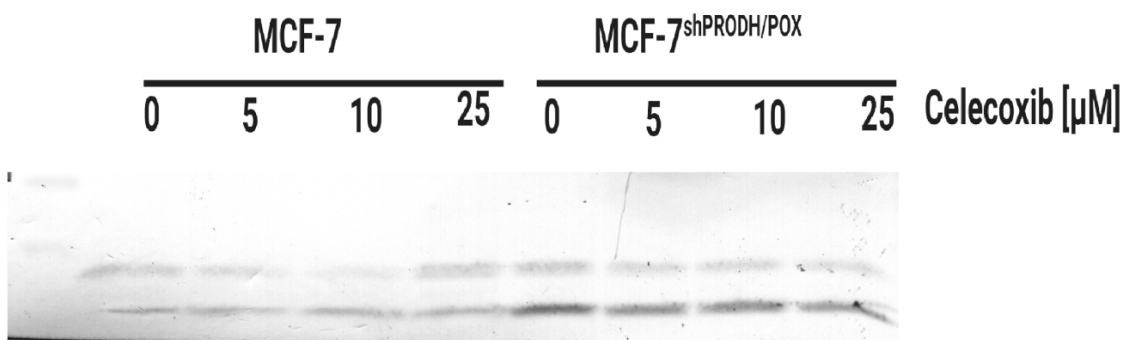
Beclin 1 protein expression



Beclin 1 expression



LC3A/B protein expression



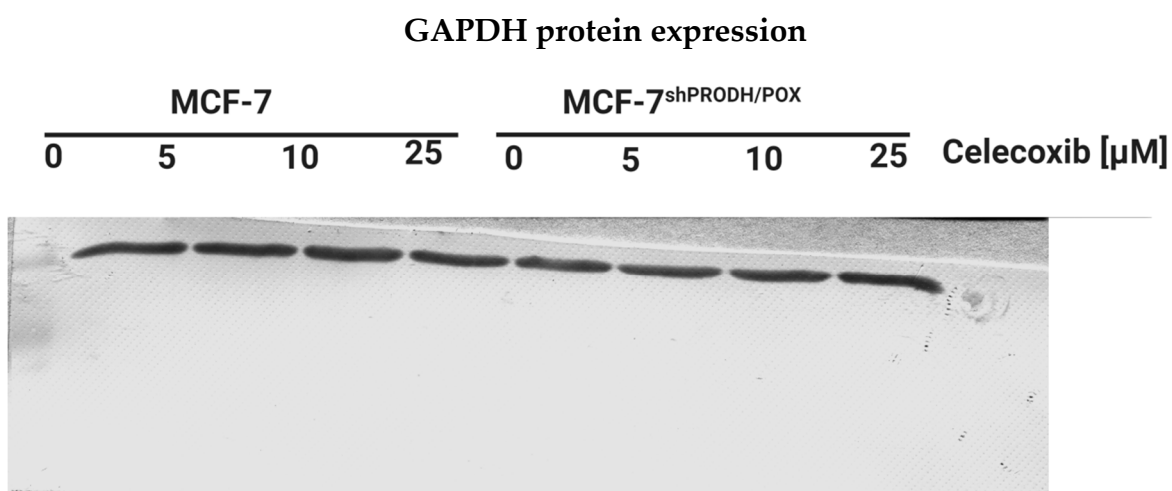
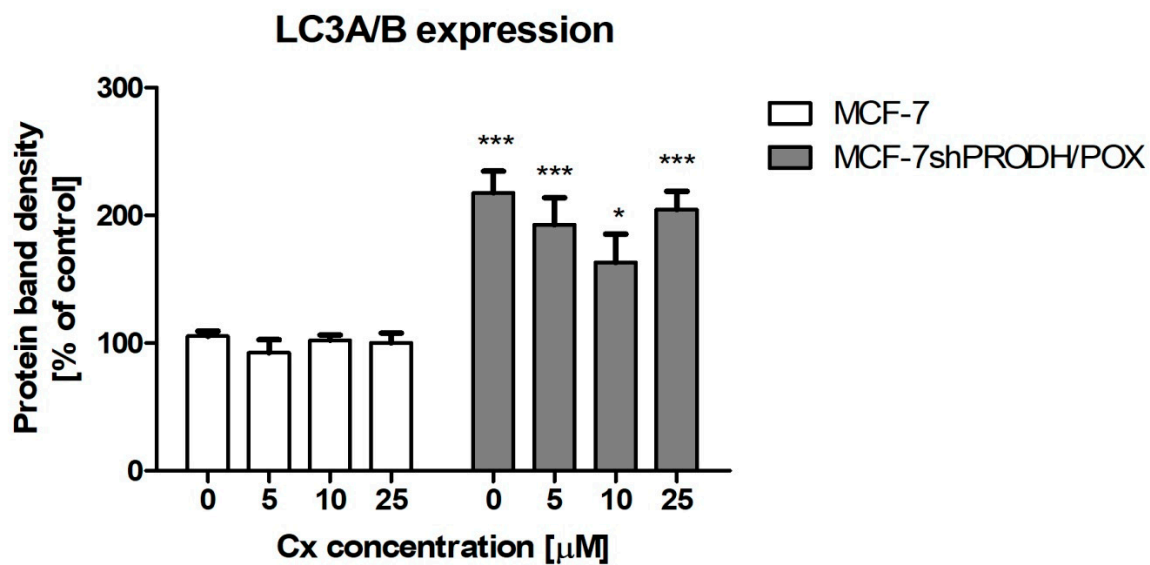
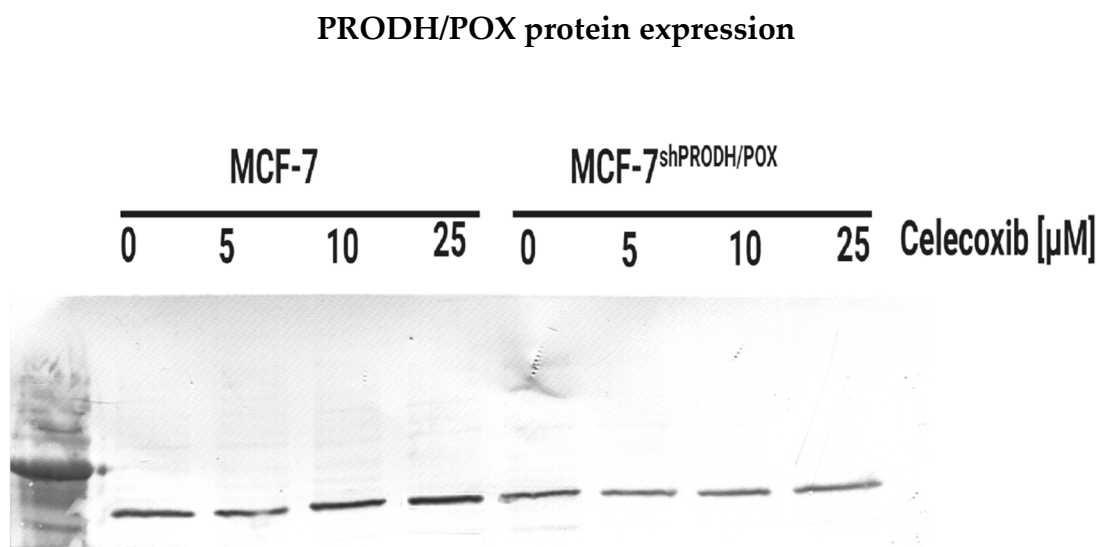
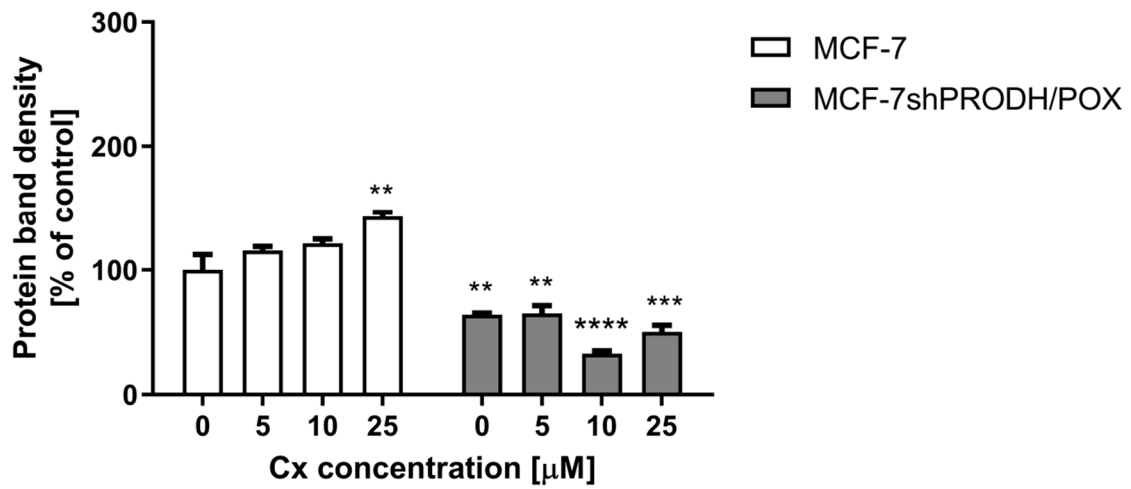


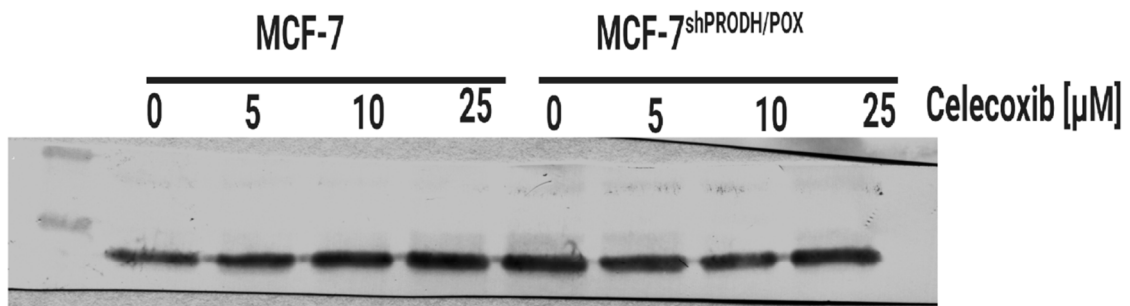
Figure S4. Western immunoblots with densitometric analysis presented in Fig. 2.



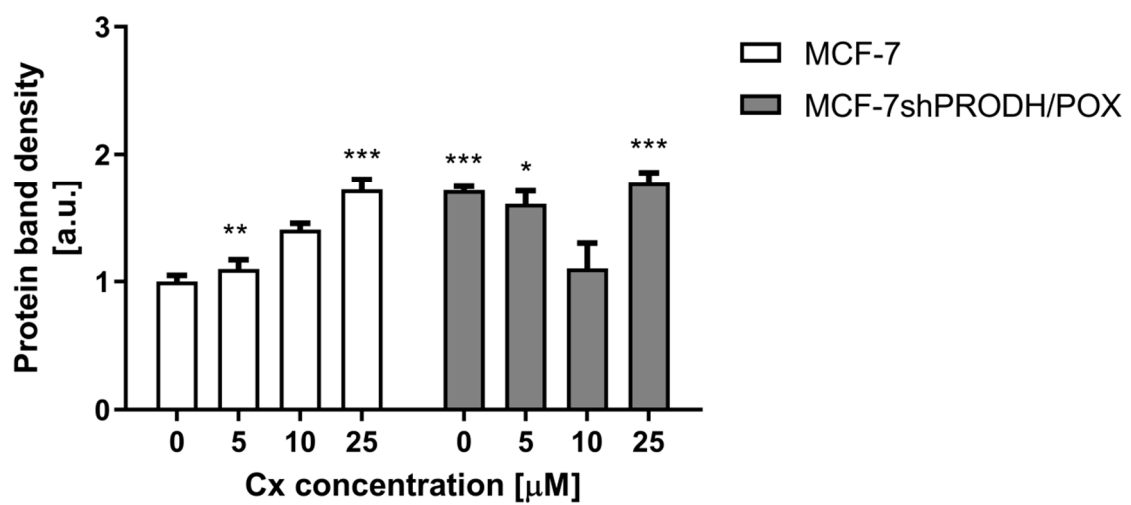
PRODH/POX expression



PYCR1 protein expression



PYCR1 expression



PYCR2 protein expression

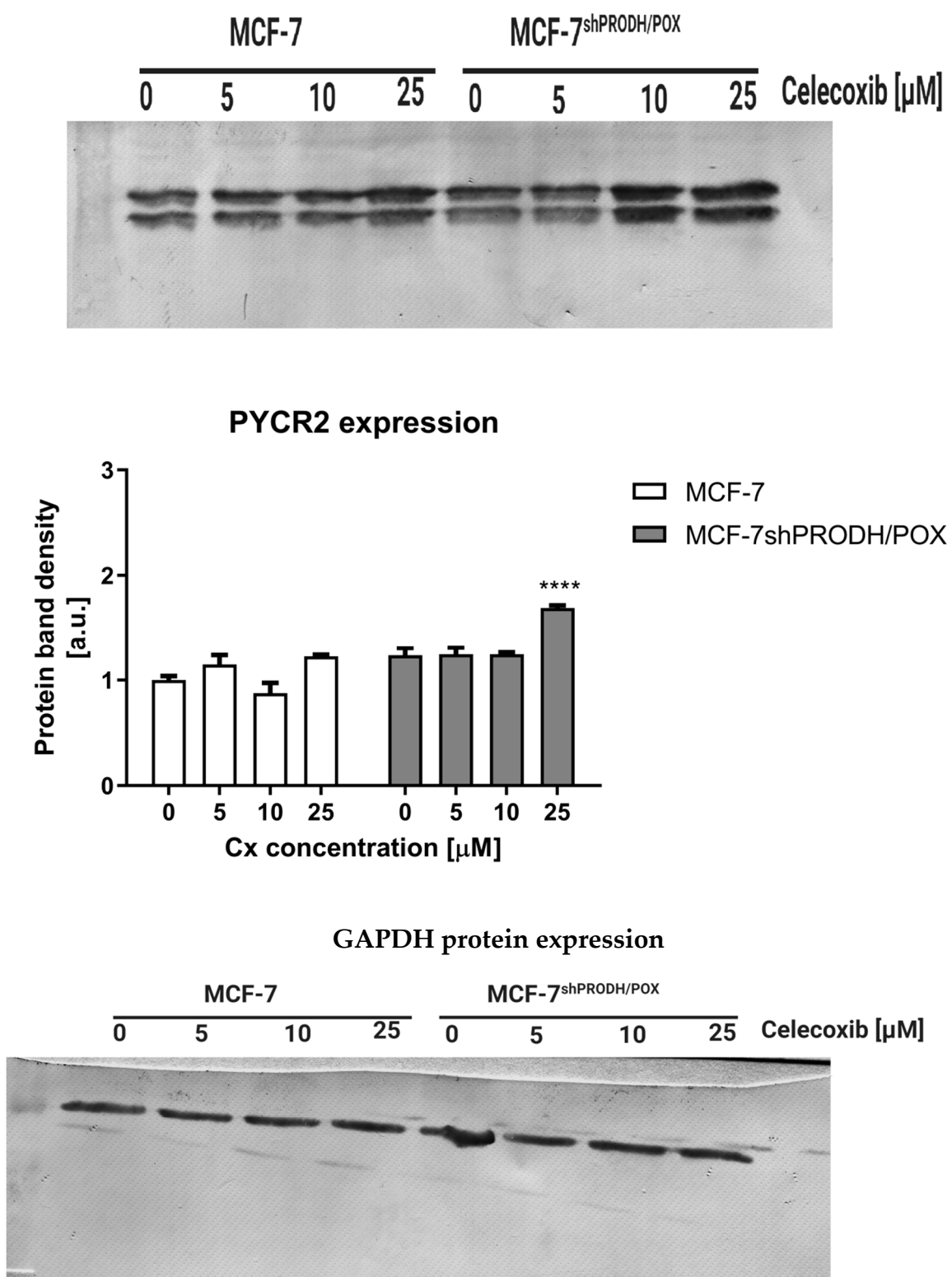


Figure S5. Representative blots with densitometric analysis presented in Fig. 3.

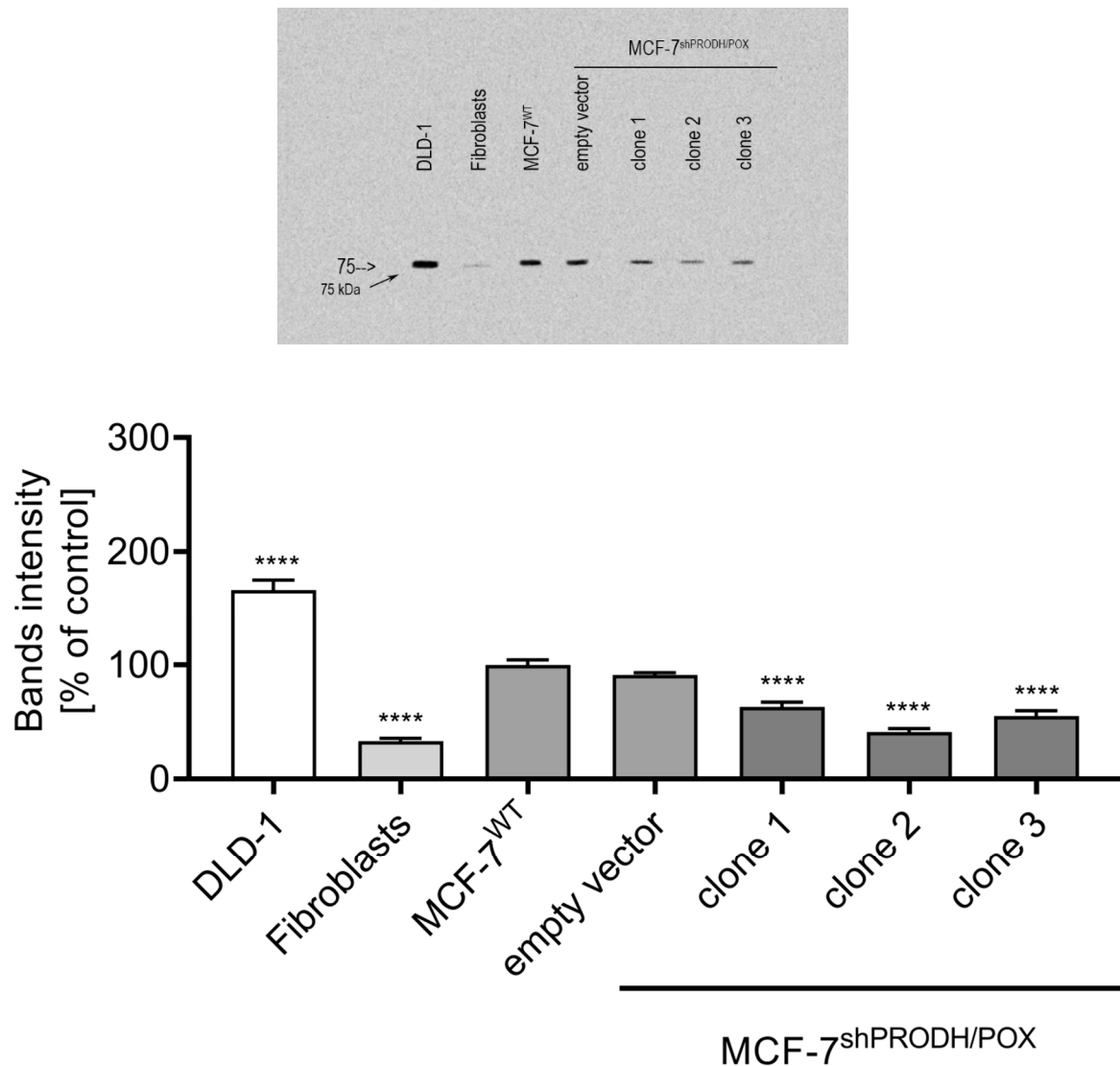


Figure S6. Efficacy of shRNA-based PRODH/POX knock-down in MCF-7 cells. PRODH/POX protein expression in non-treated DLD-1, fibroblasts, MCF-7, and MCF-7^{shPROD}/POX cell lysates analyzed by Western immunoblotting as previously published [1]. DLD-1 cells were used as a positive control and fibroblasts as a negative control for the expression of PRODH/POX. Transfection of the MCF-7 cells with different PRODH/POX shRNA constructs (clone 1-3) were done. Representative blot is presented and the intensity of POX bands was quantified by densitometry and normalized to GAPDH, values represent the mean (% of control) \pm SD of three experiments, *P < 0.001.

References

1. Zareba, I.; Surazynski, A.; Chrusciel, M.; Mityk, W.; Doroszko, M.; Rahman, N.; Palka, J. Functional Consequences of Intracellular Proline Levels Manipulation Affecting PRODH/POX-Dependent Pro-Apoptotic Pathways in a Novel in Vitro Cell Culture Model. *Cell Physiol Biochem* **2017**, *43*, 670-684, doi:10.1159/000480653.