Supplementary Information (SI) for RSC Chemical Biology. This journal is © The Royal Society of Chemistry 2025

## Raw Data Files for Gels and Blots

## Biochemical Characterization and Inhibitor Discovery for *Pf*Sir2A – New Tricks for

## An Old Enzyme

Dickson Donu<sup>‡</sup>, Emily Boyle<sup>‡</sup>, Alyson Curry<sup>‡</sup>, Yana Cen<sup>‡,#,\*</sup>

<sup>‡</sup>Department of Medicinal Chemistry, Virginia Commonwealth University, Richmond, VA 23219

\*Center for Drug Discovery, Virginia Commonwealth University, Richmond, VA 23219

\*Correspondence: <u>ceny2@vcu.edu</u>, phone: 804-828-7405

Figure 1. Analysis of *Pf*Sir2A interaction with DNAs.





Figure 2. Defatty-acylase activity of *Pf*Sir2A can be activated by dsDNA.

В



Figure 4. *Pf*Sir2A demonstrates nucleosome-dependent deacetylase activity.



С



**Figure 5.** Discovery of *Pf*Sir2A inhibitor from a human sirtuin regulator library.

D

