### Figure 2—Source Data 1. Apparent kinetic parameters for ATP hydrolysis by topo VI.

|  |  |
| --- | --- |
| Parameter | Experimental condition |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Apoenzyme (basal) | 400 μM bp  sheared salmon-sperm DNA (800:1 basepairs:enzyme) | 400 μM bp  2.9 kb supercoiled plasmid DNA (800:1 basepairs:enzyme) |
| kcat,app (ATP/enzyme/min) | N/A\* | 1.04±0.09 | 2.63±0.10 |
| Km,app(mM ATP) | N/A\* | 0.45±0.13 | 0.22±0.03 |
| (kcat/Km)app (mM-1min-1) | N/A\* | 2.3±0.7 | 11.9±1.9 |
| Relative efficiency |  | ~1x | ~5x |

\* data not fit to model due to negligible ATP hydrolysis rates above background.

\*\*Standard errors in fit parameters are reported.

\*\*\*The ATPase data collected in this particular study cannot distinguish between true and apparent Michaelis-Menten modes. The fitting parameters are therefore apparent in nature, and should not be taken to imply that the ATPase mechanism has been definitively determined.