**Table S1**. **Product inhibition parameters for the TlGK reaction at 40 ºC.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Inhibitor** | **Variable substrate** | **Inhibition** | **Kiq (µM)** | **Kip (µM)** |
| Mg·AMP | Mg·ADP | C | 28.0 | - |
| Mg·AMP | D-Glucose | NC | 72.2 | - |
| Glucose-6-P | Mg·ADP | NC | - | - |
| Glucose-6-P | D-Glucose | NC | - | 782.3 |

C, competitive inhibition; NC, non-competitive inhibition. Kiq and Kip represents the inhibition constants for Mg·AMP and D-glucose-6-P, respectively.