**Table S1. Thermofluor stability of *At*SS1 wild type protein treated with ADP (positive control), NADH, NADPH and NADP+.**

Results are expressed as differences in melting temperatures between treated and untreated (0 mM) samples. Thermostability of *At*SS1 was tested with a variant of the Thermofluor assay. The enzyme was diluted to 0.1 mg/mL in a buffer containing 20 mM Tris pH 8.0, 100 mM NaCl and 2X Sypro orange dye (Sigma-Aldrich, S5692). Various components were added to this buffer as specified in the results section. 50 μL of this solution were placed in individual wells of RT-PCR plates (MicroAmp® Optical 96-well reaction plate from Applied Biosystems, 4306737), sealed with adhesive film and centrifuged to remove bubbles and to create a flat surface. The plates were loaded in a 7500 RT-PCR system (Applied Biosystems) and subjected to a modified ramp protocol heating from 25 °C to 95 °C over 73 minutes (approx. 1 °C min-1). Fluorescence was monitored with ROX filters and the minimum points of its derivative were read manually and interpreted as melting temperatures (Tm).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Compound** | **0 mM** | **0.5 mM** | **1 mM** | **2 mM** | **3 mM** | **4 mM** |
| **ADP** | 0 | 0.5 | 0.7 | 1.4 | 1.4 | 2.4 |
| **NADH** | 0 | 0 | 0 | 0.1 | 0.3 | 0.1 |
| **NADPH** | 0 | 0 | 0 | -0.1 | -0.1 | -0.3 |
| **NADP+** | 0 | 0 | 0.2 | 0 | 0.4 | 0.6 |
| **Compound** | **0 mM** | **1 mM** | **3 mM** | **6 mM** | **10 mM** | **20 mM** |
| **NADPH** | 0 | 0.2 | 0.2 | 0 | 0.2 | -0.1 |
| **NADP+** | 0 | 0.2 | 0.4 | 0.7 | 0.9 | 1.5 |