

**S1 Table: Fission yeast strains used in this study**

| <u>Name</u>            | <u>Relevant Genotype</u>                       | <u>Source</u> |
|------------------------|--|---------------|
| JS77 (parental strain) | <i>ade6-m216 leu1-32 ura4-D18 his3-D1 (h-)</i> | [1]           |
| JS78 (parental strain) | <i>ade6-m210 leu1-32 ura4-D18 his3-D1 (h+)</i> | [1]           |
| AS 2387                | <i>ppn1Δ::hygMX</i>                            | This study    |
| AS 2428                | <i>ppn1-(81-710)::hygMX</i>                    | This study    |
| AS 2388                | <i>ppn1-(173-710)::hygMX</i>                   | This study    |
| AS 2463                | <i>ppn1-(331-710)::hygMX</i>                   | This study    |
| AS 2554                | <i>ppn1-(386-710)::hygMX</i>                   | This study    |
| AS 2555                | <i>ppn1-(451-710)::hygMX</i>                   | This study    |
| AS 2556                | <i>ppn1-(488-710)::hygMX</i>                   | This study    |
| AS 2390                | <i>ppn1-(1-639)::hygMX</i>                     | This study    |
| AS 2389                | <i>ppn1-(1-606)::hygMX</i>                     | This study    |
| AS 2464                | <i>ppn1-(1-593)::hygMX</i>                     | This study    |
| AS 2557                | <i>ppn1-(1-532)::hygMX</i>                     | This study    |
| AS 2465                | <i>ppn1-(1-496)::hygMX</i>                     | This study    |
| AS 2558                | <i>ppn1-(173-639)::hygMX</i>                   | This study    |
| AS 2559                | <i>ppn1-(331-639)::hygMX</i>                   | This study    |
| BB0003                 | <i>ppn1-(173-532)::hygMX</i>                   | This study    |
| BB0001                 | <i>ppn1-(386-593)::hygMX</i>                   | This study    |
| BB0002                 | <i>ppn1-(386-532)::hygMX</i>                   | This study    |
| BB0004                 | <i>ppn1-(501-506A)::hygMX</i>                  | This study    |
| BB0048                 | <i>ppn1-V508A::hygMX</i>                       | This study    |
| BB0050                 | <i>ppn1-W510A::hygMX</i>                       | This study    |
| BB0052                 | <i>ppn1-(D515A L516A)::hygMX</i>               | This study    |
| BB0054                 | <i>ppn1-(R586A Y588A K589A)::hygMX</i>         | This study    |
| BB0109                 | <i>rpb1-CTD-Y1F::natMX</i>                     | [2]           |
| BB0110                 | <i>rpb1-CTD-S2A::natMX</i>                     | [3]           |
| BB0111                 | <i>rpb1-CTD-T4A::natMX</i>                     | [2]           |
| BB0112                 | <i>rpb1-CTD-S7A::natMX</i>                     | [2]           |
| AS 2218                | <i>dis2Δ::natMX</i>                            | [2]           |
| AS 2020                | <i>dis2Δ::ura4<sup>+</sup></i>                 | [4]           |
| BB0113                 | <i>sds21Δ::ura4<sup>+</sup></i>                | [4]           |
| BB0114                 | <i>ctf1Δ::kanMX</i>                            | [2]           |
| BB0115                 | <i>rhn1Δ::kanMX</i>                            | [2]           |
| BB0116                 | <i>ssu72-C13S::kanMX</i>                       | [5]           |
| AS612                  | <i>ssu72-C13S::natMX</i>                       | [2]           |
| BB0117                 | <i>pin1Δ::kanMX</i>                            | [6]           |
| BS286                  | <i>dis2-ΔC::kanMX</i>                          | This study    |
| BS350                  | <i>dis2-(sds21-dis2)::kanMX</i>                | This study    |
| BS467                  | <i>dis2-(sds21-ΔC)::natMX</i>                  | This study    |

## References

1. Pei Y, Du H, Singer J, Stamour C, Granitto S, Shuman S, et al. Cyclin-dependent kinase 9 (Cdk9) of fission yeast is activated by the CDK-activating kinase Csk1, overlaps functionally with the TFIIH-associated kinase Mcs6, and associates with the mRNA cap methyltransferase Pcm1 in vivo. *Mol Cell Biol.* 2006; 26:777-788.
2. Sanchez AM, Shuman S, Schwer B. RNA polymerase II CTD interactome with 3' processing and termination factors in fission yeast and its impact on phosphate homeostasis. *Proc Natl Acad Sci USA.* 2018; 115:E10652-E10661.
3. Schwer B, Bitton DA, Sanchez AM, Bähler J, Shuman S. Individual letters of the RNA polymerase II CTD code govern distinct gene expression programs in fission yeast. *Proc Natl Acad Sci USA.* 2014; 111:4185-4190.
4. Parua PK, Booth GT, Sansó M, Benjamin B, Tanny JC, Lis JT, et al. A Cdk9-PP1 switch regulates the elongation-termination transition of RNA polymerase II. *Nature.* 2018; 558:460-464.
5. Schwer B, Sanchez AM, Shuman S. RNA polymerase II CTD phospho-sites Ser5 and Ser7 govern phosphate homeostasis in fission yeast. *RNA.* 2015; 21:1770-1780.
6. Sanchez AM, Garg A, Shuman S, Schwer B. Genetic interactions and transcriptomics implicate fission yeast CTD prolyl isomerase Pin1 as an agent of RNA 3' processing and transcription termination that functions via its effects on CTD phosphatase Ssu72. *Nucleic Acids Res.* 2020; 48:4811-4826.