**Table S1. List of *S. pombe* strains used in this study.**

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| --- | --- | --- | --- |
| SPY9851 | *h- leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6* | Ref. 1 (SPY5088) | Figure 1  Figure 1Supp1  Figure 2B,D,E  Figure 3A,B,C  Figure 2Supp3  Figure 3Supp2A  Figure 4A,B  Figure 4C,D  Figure 4Supp1 |
| SPY9852 | *h+ leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6* | Ref. 1 (SPY5089) | Figure 1  Figure 1Supp1  Figure 3G  Figure 3Supp1A  Figure 3Supp2C |
| SPY9853 | *h- leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 crb3Δ::crb3-L389P-ura4-hphMX6* | This study | Figure 2Supp3 |
| SPY9854 | *h- leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 crb3Δ::crb3-D198N isolate 1* | This study | Figure 2B,D,E  Figure 2Supp3 |
| SPY9855 | *h- leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 crb3Δ::crb3-D198N isolate 2* | This study | Figure 2B,D,E  Figure 2Supp3 |
| SPY9856 | *h- leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 grc3Δ::grc3-V70M isolate 3* | This study | Figure 2B,D,E  Figure 3A,B,C  Figure 2Supp3 |
| SPY9857 | *h- leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 grc3Δ::grc3-V70M isolate 1* | This study | Figure 2B,D,E  Figure 2Supp3 |
| SPY9858 | *h- leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 grc3Δ::grc3-G409E isolate 1* | This study | Figure 2B,D,E  Figure 4C,D  Figure 2Supp3 |
| SPY9859 | *h- leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 grc3Δ::grc3-G409E isolate 2* | This study | Figure 2B,D,E  Figure 2Supp3 |
| SPY78 | *KGP425 h- leu1-32 ade6-M210 ura4-D18 his3-Dr* | C. Hoffman | Figure 2Supp2 A,B  Figure 3Supp1 C,D,E |
| SPY76 | *fWP44 h+ leu1-32 ade6-M216* | C. Hoffman | Figure 2Supp2 A,B |
| SPY6704 | *h90 ade6? ura4-DS/E CenH(HindIII):ura4* | Ref. 2 | Figure 2Supp2 A |
| SPY9860 | *h90 leu1-32 ade6? ura4Δ:10xtetO-ade6 CenH(HindIII):ura4 crb3Δ::crb3-D198N* | This study | Figure 2Supp2 A |
| SPY9861 | *h+ otr1R(SphI)::ura4 ura4-DS/E leu1-32 ade6-M210* | Ref. 3 | Figure 2Supp2 B |
| SPY9863 | *h+ otr1R(SphI)::ura4 ura4-DS/E leu1-32 ade6-M210 crb3Δ::crb3-D198N isolate 2* | This study | Figure 2Supp2 B |
| SPY9864 | *h+ otr1R(SphI)::ura4 ura4-DS/E leu1-32 ade6-M210 crb3Δ::crb3-D198N isolate 3* | This study | Figure 2Supp2 B |
| SPY9865 | *h+ leu1-32 ade6-M216* *ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 crb3Δ::crb3-WT-TAP isolate 1* | This study | Figure 3A,B,C  Figure 3G  Figure 3Supp1 A,B  Figure 3Supp2C |
| SPY9866 | *h+ leu1-32 ade6-M216* *ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 crb3Δ::crb3-WT-TAP isolate 2* | This study | Figure 3G  Figure 3Supp1A  Figure 3Supp2C |
| SPY9867 | *h+ leu1-32 ade6-M216* *ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 crb3Δ::crb3-WT-TAP grc3Δ::grc3-V70M isolate 2* | This study | Figure 3A,B,C  Figure 3G  Figure 3Supp1B  Figure 3Supp2C |
| SPY9868 | *h+ leu1-32 ade6-M216* *ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 crb3Δ::crb3-WT-TAP grc3Δ::grc3-V70M isolate 1* | This study | Figure 3G  Figure 3Supp2C |
| SPY9869 | *h- leu1-32 ade6-M216* *ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 crb3Δ::crb3-WT-TAP isolate 1* | This study | Figure 3-Supp2 A |
| SPY9870 | *h- leu1-32 ade6-M216* *ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 crb3Δ::crb3-WT-TAP isolate 2* | This study | Figure 3-Supp2 A |
| SPY9871 | *h- leu1-32 ade6-M216* *ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 crb3Δ::crb3-D198N-TAP isolate 1* | This study | Figure 3-Supp2 A |
| SPY9872 | *h- leu1-32 ade6-M216* *ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 crb3Δ::crb3-D198N-TAP isolate 2* | This study | Figure 3-Supp2 A |
| SPY9873 | *h+ leu1-32 ade6-216 ura4Δ::10xtetO-ura4-gfp chk1Δ::chk1-HA isolate 1* | This study | Figure 5G |
| SPY9874 | *h+ leu1-32 ade6-216 ura4+ chk1Δ::chk1-HA isolate 2* | This study | Figure 3E,F  Figure 3Supp2B,D,E  Figure 6Supp1 B-F |
| SPY9875 | *h+ leu1-32 ade6-216 ura4+ chk1Δ::chk1-HA dhp1-1 (:ura4) isolate 1* | This study | Figure 5G  Figure 6Supp1 B-F |
| SPY9876 | *h+ leu1-32 ade6-216 ura4+ chk1Δ::chk1-HA dhp1-1 (:ura4) isolate 2* | This study | Figure 6Supp1 B-F |
| SPY9877 | *h+ leu1-32 ade6-216 ura4Δ::10xtetO-ura4-gfp chk1Δ::chk1-HA grc3Δ::grc3-V70M isolate 1* | This study | Figure 5G  Figure 6Supp1 B-F |
| SPY9878 | *h+ leu1-32 ade6-216 ura4+ chk1Δ::chk1-HA grc3Δ::grc3-V70M isolate 2* | This study | Figure 5H,I  Figure 6Supp1 B-F |
| SPY5470 | *fWP44 h+ leu1-32 ade6-M216 clr4Δ::kanMX6* | Lab stock | Figure 3H  Figure 6Supp1A |
| SPY9879 | *h+ leu1-32 ade6-210 ura4Δ::10xtetO-ura4-gfp crb3Δ::crb3-WT-TAP isolate 1* | This study | Figure 3E,F  Figure 3Supp2B,D,E |
| SPY9880 | *h+ leu1-32 ade6-210 ura4Δ::10xtetO-ura4-gfp crb3Δ::crb3-WT-TAP isolate 2* | This study | Figure 3E,F  Figure 3Supp2B,D,E |
| SPY9881 | *h+ leu1-32 ade6-210 ura4Δ::10xtetO-ura4-gfp crb3Δ::crb3-WT-TAP grc3Δ::grc3-V70M isolate 1* | This study | Figure 3E,F  Figure 3Supp2B,D,E |
| SPY9882 | *h+ leu1-32 ade6-210 ura4Δ::10xtetO-ura4-gfp crb3Δ::crb3-WT-TAP grc3Δ::grc3-V70M isolate 2* | This study | Figure 3E,F  Figure 3Supp2B,D,E |
| SPY9883 | *h- leu1-32 ade6-M210 ura4-D18 his3-Dr crb3Δ::crb3-WT-TAP isolate 1* | This study | Figure 3Supp1 C,D,E |
| SPY9884 | *h- leu1-32 ade6-M210 ura4-D18 his3-Dr crb3Δ::crb3-WT-TAP isolate 2* | This study | Figure 3Supp1 C,D,E |
| SPY9885 | *h- leu1-32 ade6-M210 ura4-D18 his3-Dr crb3Δ::crb3-D198N-TAP isolate 1* | This study | Figure 3Supp1 C,D,E |
| SPY9886 | *h- leu1-32 ade6-M210 ura4-D18 his3-Dr crb3Δ::crb3-D198N-TAP isolate 2* | This study | Figure 3Supp1 C,D,E |
| SPY5465 | *fWP44 h+ leu1-32 ade6-M216* *ago1Δ::kanMX6* | Lab stock | Figure 2F,G |
| SPY3225 | *KGP425 h- leu1-32 ade6-M210 ura4-D18 his3-Dr clr4Δ::hphMX6 isolate 1* | Lab stock | Figure 2F,G |
| SPY3226 | *KGP425 h- leu1-32 ade6-M210 ura4-D18 his3-Dr clr4Δ::hphMX6 isolate 2* | Lab stock | Figure 2F,G |
| SPY9887 | *WP44 h+ leu1-32 ade6-M210/M216 crb3Δ::crb3-D198N isolate 1* | This study | Figure 2F,G |
| SPY9888 | *WP44 h+ leu1-32 ade6-M210/M216 crb3Δ::crb3-D198N isolate 2* | This study | Figure 2F,G |
| SPY9889 | *WP44 h+ leu1-32 ade6-M210/M216 crb3Δ::crb3-D198N ago1Δ::kanMX6 isolate 1* | This study | Figure 2F,G |
| SPY9890 | *WP44 h+ leu1-32 ade6-M210/M216 crb3Δ::crb3-D198N ago1Δ::kanMX6 isolate 2* | This study | Figure 2F,G |
| SPY9891 | *h- leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 dhp1-1(:ura4) isolate 1* | This study | Figure 4A,B |
| SPY9892 | *h- leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 dhp1-1(:ura4) isolate 3* | This study | Figure 4A,B |
| SPY9893 | *h- leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 dhp1-1(:ura4) isolate 4* | This study | Figure 4A |
| SPY9894 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 isolate 1* | This study | Figure 3H  Figure 5B,C,D,E  Figure 5Supp1B  Figure 6Supp1A |
| SPY9895 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 isolate 2* | This study | Figure 3H  Figure 5B,C,D,E  Figure 5Supp1B  Figure 5Supp1 C  Figure 6Supp1A |
| SPY9896 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 grc3Δ::grc3-V70M isolate 1* | This study | Figure 3H  Figure 5B,C,D,E  Figure 5Supp1B  Figure 6Supp1A |
| SPY9897 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 grc3Δ::grc3-V70M isolate 2* | This study | Figure 3H  Figure 5B,C,D,E  Figure 5Supp1B  Figure 5Supp1 C  Figure 6Supp1A |
| SPY9898 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 caf1Δ::hphMX6 isolate 1* | This study | Figure 5B,C,D,E |
| SPY9899 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 caf1Δ::hphMX6 isolate 2* | This study | Figure 5B,C,D,E |
| SPY9900 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 caf1Δ::hphMX6 grc3Δ::grc3-V70M isolate 1* | This study | Figure 5B,C,D,E |
| SPY9901 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 caf1Δ::hphMX6 grc3Δ::grc3-V70M isolate 2* | This study | Figure 5B,C,D,E |
| SPY5099 | *h- leu1-32 ade6-M210 ura4Δ::10XtetO-ura4-GFP isolate 1* | Ref. 1 | Figure 3H  Figure 5B,C,D,E  Figure 5Supp1B  Figure 6Supp1A |
| SPY9905 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 dhp1-1 (:ura4) isolate 2* | This study | Figure 5Supp1 C |
| SPY9907 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 grc3Δ::grc3-V70M dhp1-1 (:ura4) isolate 2* | This study | Figure 5Supp1 C |
| SPY5362 | *h- leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 ago1Δ::hphMX6* *isolate 2* | Ref. 1 | Figure 5Supp1 C |
| SPY9909 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6* *swi6Δ::hphMX6 isolate 2* | This study | Figure 5Supp1 C |
| SPY9911 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6* *swi6Δ::hphMX6 grc3Δ::grc3-V70M isolate 2* | This study | Figure 5Supp1 C |
| SPY3 | *SPG1218 mat1Msmto leu1-32 his2 L(Bgl II)::ade6 ade6-DN/N* | Ref. 4 | Figure 5H,I  Figure 6A-H |
| SPY7305 | *SPG1218 mat1Msmto leu1-32 his2 L(Bgl II)::ade6 ade6-DN/N, clr4∆::kanMX6 isolate 1* | Lab stock | Figure 5H,I  Figure 6A-H |
| SPY9912 | *SPG1218 mat1Msmto leu1-32 his2 L(Bgl II)::ade6 ade6-DN/N* *grc3Δ::grc3-V70M isolate 1* | This study | Figure 5H,I  Figure 6A-H |
| SPY9913 | *SPG1218 mat1Msmto leu1-32 his2 L(Bgl II)::ade6 ade6-DN/N* *grc3Δ::grc3-V70M isolate 2* | This study | Figure 5H,I  Figure 6A-H |
| SPY9914 | *SPG1218 mat1Msmto leu1-32 his2 L(Bgl II)::ade6 ade6-DN/N dhp1-1 (:ura4) isolate 1* | This study | Figure 5H,I  Figure 6A-H |
| SPY9915 | *SPG1218 mat1Msmto leu1-32 his2 L(Bgl II)::ade6 ade6-DN/N dhp1-1 (:ura4) isolate 2* | This study | Figure 5H,I  Figure 6A-H |
| SPY9916 | *SPG1218 mat1Msmto leu1-32 his2 L(Bgl II)::ade6 ade6-DN/N clr4Δ::kanMX6-5'(1kb)-3xflag-clr4-W31G isolate 1* | This study | Figure 6A-H |
| SPY9917 | *SPG1218 mat1Msmto leu1-32 his2 L(Bgl II)::ade6 ade6-DN/N clr4Δ::kanMX6-5'(1kb)-3xflag-clr4-W31G isolate 2* | This study | Figure 6A-H |
| SPY9918 | *h- leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 cid14Δ::hphMX6* | This study | Figure 5Supp1 A |
| SPY9919 | *h- leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 cid14Δ::hphMX6 grc3Δ::grc3-V70M* | This study | Figure 5Supp1 A |
| SPY9920 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 cid14Δ::hphMX6 isolate 1* | This study | Figure 5Supp1B |
| SPY9921 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 cid14Δ::hphMX6 isolate 2* | This study | Figure 5Supp1B |
| SPY9922 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 cid14Δ::hphMX6 grc3Δ::grc3-V70M isolate 1* | This study | Figure 5Supp1B |
| SPY9923 | *h+ leu1-32 ade6-M210/M216 ura4Δ::10xtetO-ura4-GFP trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 cid14Δ::hphMX6 grc3Δ::grc3-V70M isolate 2* | This study | Figure 5Supp1B |
| SPY9926 | *h? leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 dis3Δ::dis3-54 isolate 1* | This study | Figure 4Supp1 |
| SPY9927 | *h? leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 dis3Δ::dis3-54 isolate 2* | This study | Figure 4Supp1 |
| SPY9928 | *h? leu1-32 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 dis3Δ::dis3-54 isolate 3* | This study | Figure 4Supp1 |
| SPY5081 | *h- leu1-32 ade6-M210 ura4Δ::10xtetO-ade6, clr4Δ::kanMX6 isolate 1* | Lab stock | Figure 2D,E  Figure 4B |
| SPY5082 | *h- leu1-32 ade6-M210 ura4Δ::10xtetO-ade6, clr4Δ::kanMX6 isolate 2* | Lab stock | Figure 2D,E  Figure 4B |
| SPY10093 | *h+ leu1-32 ade6-216 ura4? chk1Δ::chk1-HA grc3Δ::grc3-V70M dhp1-1 (:ura4) isolate 1* | This study | Figure 5G |
| SPY1574 | *h+ leu1-32 ade6-M216 ura4-D18 his3-Dr swi6Δ::natMX6* | Lab stock | Figure 5G |
| SPY10095 | *h+ leu1-32 ade6-216 ura4? chk1Δ::chk1-HA grc3Δ::grc3-V70M swi6Δ::natMX6 isolate 1* | This study | Figure 5G |
| SPY10097 | *h? leu1-32::ura4-pgrc3-grc3+-tgrc3 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 grc3Δ::grc3-G409E isolate 1* | This study | Figure 4C,D |
| SPY10099 | *h? leu1-32::ura4-pgrc3-grc3-K252A,S253A-tgrc3 ade6-M216 ura4Δ::10xtetO-ade6 trp1: nat-clr4p-NLS-TetR-2xflag-clr4ΔCD epe1Δ::kanMX6 grc3Δ::grc3-G409E isolate 1* | This study | Figure 4C,D |

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