Supplementary Table S1

Yeast strains used in this work.

Strain	Genotype	Source
W303-1A	*MAT***a** *ade2-1 can1-100 ura3-1 his3-11,15 leu2-3,112 trp1-1 RAD5*	R. Rothstein
MC001	*MAT***a** *uls1Δ::TRP1*	This study
MC002	*MAT***a** *rad51Δ::kanMX6*	This study
MC003	*MAT***a** *uls1Δ::TRP1 rad51Δ::kanMX6*	This study
MC004	*MAT***a** *rad57Δ::kanMX6*	This study
MC005	*MAT***a** *uls1Δ::TRP1 rad57Δ::kanMX6*	This study
MC006	*MAT***a** *rad52Δ::kanMX6*	This study
MC007	*MAT***a** *uls1Δ::TRP1 rad52Δ::kanMX6*	This study
MC008	*MAT***a** *mus81Δ::kanMX6*	This study
MC009	*MAT***a** *uls1Δ::TRP1 mus81Δ::kanMX6*	This study
MC010	*MAT***a** *srs2Δ::kanMX6*	This study
MC011	*MAT***a** *uls1Δ::TRP1 srs2Δ::kanMX6*	This study
MC012	*MAT***a** *sgs1Δ::kanMX6*	This study
MC013	*MAT***a** *uls1Δ::TRP1 sgs1Δ::kanMX6*	This study
MC012	*MAT***a** *rmi1Δ::kanMX6*	This study
MC013	*MAT***a** *uls1Δ::TRP1 rmi1Δ::kanMX6*	This study
MC012	*MAT***a** *yen1Δ::kanMX6*	This study
MC013	*MAT***a** *uls1Δ::TRP1 yen1Δ::kanMX6*	This study
W1868-8B	*MAT***a** *SUP4-***o***::URA3*	R. Rothstein
MC014	*MAT***a** *uls1Δ::TRP1 SUP4-***o***::URA3*	This study
JJ001	*MAT***a** *sgs1::kanMX6 SUP4-***o***::URA3*	This study
JJ002	*MAT***a** *uls1Δ::TRP1 sgs1::kanMX6 SUP4-***o***::URA3*	This study
W4314-2C	*MATα rDNA::ADE2-CAN1*	R. Rothstein
W6666-6D	*MAT***a** *sgs1::HIS3 rDNA::ADE2-CAN1*	R. Rothstein
JJ003	*MATα uls1Δ::TRP1 rDNA::ADE2-CAN1*	This study
JJ004	*MAT***a** *uls1Δ::TRP1 sgs1::HIS3 rDNA::ADE2-CAN1*	This study

MC015	*MAT***a** *top3Δ::kanMX6*	This study
MC016	*MAT***a** *uls1Δ::TRP1 top3Δ::kanMX6*	This study
MC017	*MAT***a** *rad5Δ::kanMX6*	This study
MC018	*MAT***a** *uls1Δ::TRP1 rad5Δ::kanMX6*	This study
MC019	*MAT***a** *rad18Δ::kanMX6*	This study
MC020	*MAT***a** *uls1Δ::TRP1 rad18Δ::kanMX6*	This study
MC021	*MAT***a** *rev3Δ::kanMX6*	This study
MC022	*MAT***a** *uls1Δ::TRP1 rev3Δ::kanMX6*	This study
MC023	*MAT***a** *rad59Δ::kanMX6*	This study
MC024	*MAT***a** *uls1Δ::TRP1 rad59Δ::kanMX6*	This study
MC025	*MAT***a** *mph1Δ::kanMX6*	This study
MC026	*MAT***a** *uls1Δ::TRP1 mph1Δ::kanMX6*	This study

Supplementary Figure S1

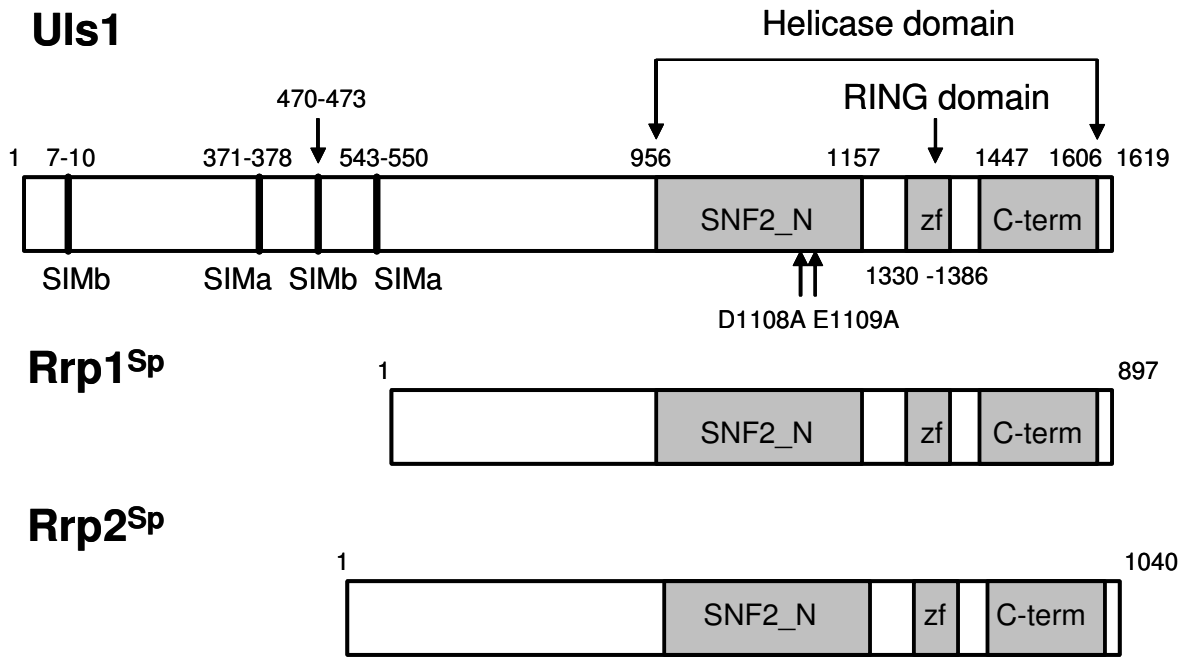

Figure S1. Schematic representation of Uls1, Rrp1^{Sp} and Rrp2^{Sp} domain structures and the sites of point mutations introduced in this study. SIMa, SUMO interacting motif, type a; SIMb, SUMO interacting motif, type b; SNF2_N, SNF2 family N-terminal/helicase ATP-binding domain; zf, RING type zinc finger domain; C-term, C-terminal helicase domain.

Supplementary Figure S2

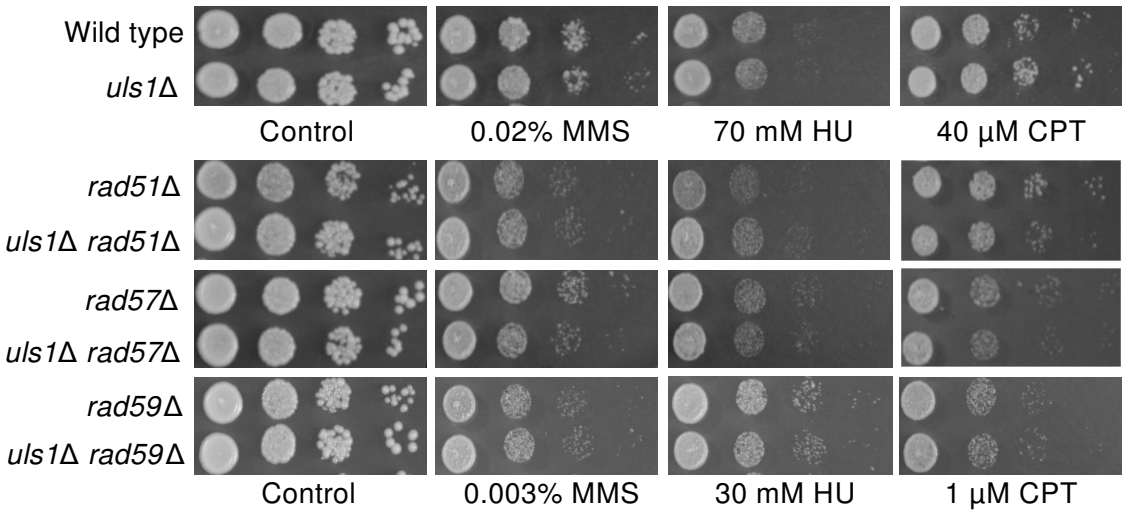

Figure S2. Epistasis analysis between *ULS1* and homologous recombination genes. Ten-fold serial dilutions of each strain were spotted onto YPD plates in the presence or absence of DNA damaging agents. Plates were photographed after 2 days at 28°C.

Supplementary Figure S3

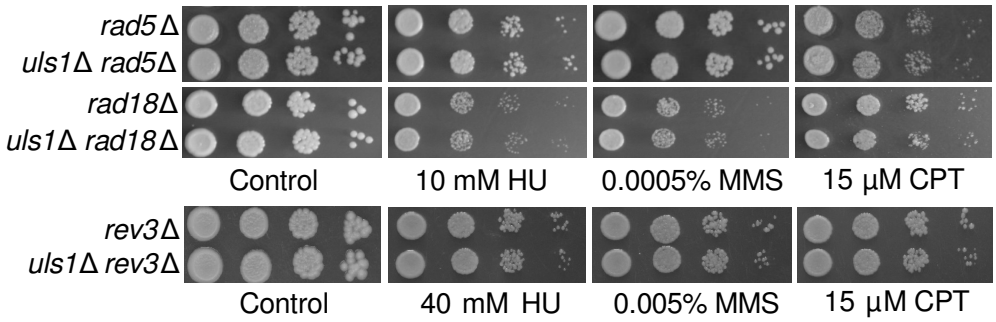

Figure S3. Epistasis analysis between *ULS1* and post-replication repair genes. Ten-fold serial dilutions of each strain were spotted onto YPD plates in the presence or absence of DNA damaging agents. Plates were photographed after 2 days at 28°C.

Supplementary Figure S4

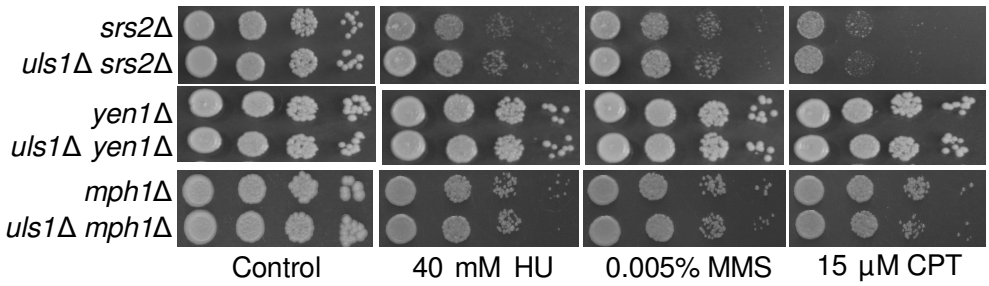

Figure S4. Epistasis analysis between *ULS1* and DNA repair genes. Ten-fold serial dilutions of each strain were spotted onto YPD plates in the presence or absence of DNA damaging agents. Plates were photographed after 2 days at 28°C.