Supplemental Material for Sutherland and Holloman 2018

Loss of cohesin subunit Rec8 switches Rad51 mediator dependence in resistance to formaldehyde toxicity in *Ustilago maydis*

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This file includes:

Figure S1
Table S1

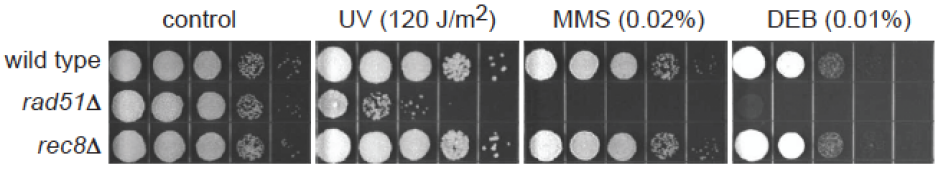

Figure S1. DNA damage resistance of *rec8*Δ. Strains were tested for sensitivity to UV by spotting aliquots of serially diluted cell suspensions on solid medium, then irradiating to deliver the indicated dose. Sensitivity to methylmethane sulfonate (MMS) and to DEB was determined by adding MMS or DEB to the medium as described in Materilas and Methods.

Table S1. Strains used in this study

Nominal genotype*	UMAG[§]	Resistance marker	Source
wild type		-	laboratory
*brh2*Δ	03200	nat	(KOJIC *et al.* 2002)
*rad51*Δ	03290	nat	(KOJIC *et al.* 2002)
*dss1*Δ	10918	nat	(KOJIC *et al.* 2003)
*rad52*Δ	04989	nat	(KOJIC *et al.* 2008)
*rec2*Δ	03096	hyg	(KOJIC *et al.* 2006)
*rad54*Δ	02083	G418	laboratory
*rad5*Δ	00798	hyg	this study
*mph1*Δ	00911	G418	(KOJIC *et al.* 2008)
*recQ1*Δ	04673	nat	this study
*rec8*Δ	00172	G418	this study
*brh2*Δ *rec8*Δ		nat G418	this study
*rad51*Δ *rec8*Δ		nat G418	this study
*dss1*Δ *rec8*Δ		nat G418	this study
*rad52*Δ *rec8*Δ		hyg G418	this study
*rec2*Δ *rec8*Δ		hyg G418	this study
*rad54*Δ *rec8*Δ		G418 nat	this study
*rad5*Δ *rec8*Δ		hyg G418	this study
*mph1*Δ *rec8*Δ		G418 nat	this study
*recQ1*Δ *rec8*Δ		nat G418	this study

*All strains were constructed in UCM350 background (*pan1-1 nar1-6 a1 b1*). *pan, nar, a* and *b* indicate auxotrophic requirement for pantothenate, inability to metabolize nitrate, and mating type loci, respectively. Drug resistance markers are hygromycin (hyg), nourseothricin (nat), geneticin (G418).

[§]Gene identifiers from the *U. maydis* annotated genome database

(http://pedant.helmholtz-muenchen.de/).

Kojic, M., C. F. Kostrub, A. R. Buchman and W. K. Holloman, 2002 BRCA2 homolog required for proficiency in DNA repair, recombination, and genome stability in *Ustilago maydis*. Mol Cell 10**:** 683-691.

Kojic, M., N. Mao, Q. Zhou, M. Lisby and W. K. Holloman, 2008 Compensatory role for Rad52 during recombinational repair in *Ustilago maydis*. Mol Microbiol 67**:** 1156-1168.

Kojic, M., H. Yang, C. F. Kostrub, N. P. Pavletich and W. K. Holloman, 2003 The BRCA2-interacting protein DSS1 is vital for DNA repair, recombination, and genome stability in *Ustilago maydis*. Mol Cell 12**:** 1043-1049.

Kojic, M., Q. Zhou, M. Lisby and W. K. Holloman, 2006 Rec2 interplay with both Brh2 and Rad51 balances recombinational repair in *Ustilago maydis*. Mol Cell Biol 26**:** 678-688.