Supplementary Table S1. Synthetic lethal interactions of *S. cerevisiae* genes that are homologous to human DNA repair and checkpoint genes implicated in cancer.

<table>
<thead>
<tr>
<th>Protein</th>
<th>Homolog <em>S. cerevisiae</em></th>
<th>Synthetic lethality <em>S. cerevisiae</em></th>
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<tbody>
<tr>
<td>RAD51B</td>
<td>rad51</td>
<td>rad27, cf4, cf18, ddc1, mrc1, pol32, pol3, elg1, rad24, sr2, ulp1, yku70, mrr202, mus81, nup133, nup120, ccm4, ctk1, ctk2, ctk3, kis4, lsm7, nup84, pop2, mrr4, sod1, swi6, tsa1, pop3, ubc9</td>
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<tr>
<td>CIP</td>
<td>sae2</td>
<td>sgs1, rad27, rrm3, dia2, pop3</td>
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<tr>
<td>MRE11</td>
<td>mre11</td>
<td>rad27, bim1, ct4, ddc1, top1, chs1, chs5, kre9, rm3, sap30, elg1, sis2, yku80, ulp1, xrs2, rad50, nup133, nup120, hsp82, orc6, cdc6, ccr4, dia2, css1, ctk1, ctk2, ctk3, mds12, pop2, mrr4, sod1, swi6, tsa1, rcc2, pph3, gcs1, dna2</td>
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<tr>
<td>MSH2</td>
<td>msh2</td>
<td>pol3</td>
</tr>
<tr>
<td>MLH1</td>
<td>mlh1</td>
<td>cdc7, pol3, mms4</td>
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<tr>
<td>MSH6</td>
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<td>pol3</td>
</tr>
<tr>
<td>PMS1, PMS2</td>
<td>pms1</td>
<td>pol3</td>
</tr>
<tr>
<td>BLM, WRN, RECQL4</td>
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<td>mec1</td>
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<td>NBS1</td>
<td>xrs2</td>
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<td>dun1/rad53</td>
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<td>rad14</td>
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<td>XPB</td>
<td>rad25</td>
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<td>mph1</td>
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<td>rad27</td>
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</tbody>
</table>

Supplementary references

SUPPLEMENTARY INFORMATION


Vijeh Motlagh, N. D., Seki, M., Branzei, D. & Enomoto, T. Ms61 and Rad18/Rad5/Mms2 are required for survival of Saccharomyces cerevisiae mutants with novel temperature/cold sensitive alleles of the DNA polymerase delta subunit, Pol31. *DNA Repair (Amst)* **5**, 1459-74 (2006).


