Supplemental Table 1: Strains used in this study

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| --- | --- | --- |
| Name | Genotype | Source |
| JEL730 | *brc-1(xoe4) III* | Li *et al.* 2018 |
| JEL735 | *brc-1(xoe4) brd-1(dw1) III* | This study |
| DW102 | *brc-1(tm1145) brd-1(dw1) III* | *C. elegans* Deletion Mutant Consortium 2012 |
| RB1426 | *brd-1(ok1623) III* | OMRF knockout group |
| DW101 | *atl-1(tm853)* *V/nT1 [unc-?(n754) let-? qIs50] (IV;V).* | *C. elegans* Deletion Mutant Consortium 2012 |
| VC381 | *atm-1(gk186) I* | *C. elegans* Reverse Genetics Core Facility UBC |
| JEL530 | *atm-1(gk186) I; brc-1(tm1145) brd-1(dw1) III* | This study |
| RB964 | *cku-80(ok861) III* | OMRF knockout group |
| JEL815 | *brc-1(xoe4) cku-80(ok861) III* | This study |
| FX1524 | *cku-70(tm1524) III* | *C. elegans* Deletion Mutant Consortium 2012 |
| JEL445 | *brc-1(tm1145) brd-1(dw1) cku-70(tm1524) III* | This study |
| JEL578 | *brd-1(ok1623) cku-70(tm1524) III* | This study |
| JEL515 | *gfp::brc-1 III* | Li *et al.* 2018 |
| JEL273 | *gtls2368[pie-1p::gfp::rpa-1 + unc-119(+)] II* | Sonneville *et al.* 2012 |
| JEL565 | *pie-1::gfp::rpa-1 II; brc-1(tm1145) brd-1(dw1) III* | This study |
| JEL543 | *gfp::brc-1; spo-11(ok79) IV/nT1 [unc-?(n754) let-?] (IV;V)* | Li *et al.* 2018 |
| JEL918 | *gfp::brc-1; rad-50(ok197) V/nT1 [unc-?(n754) let-? qIs50] (IV;V)* | This study |
| JEL928 | *gfp::brc-1; mre-11(ok179) V/nT1[unc-?(n754) let-?] (IV;V)* | This study |
| JEL978 | *gfp::brc-1; mre-11(iow1) V/nT1[qIs51] (IV;V)* | This study |
| AV106 | *spo-11(ok79) IV/nT1[ unc-?(n754) let-? qIs50] (IV:V)* | Dernburg *et al.,* 1998 |
| AV270 | *﻿spo-11(ok79) IV/nT1[ unc-?(n754) let-? qIs50] IV; rad-50 (ok197) V/nT1 V* | Hayashi *et al.,* 2007 |
| AV630 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II* | Yokoo *et al.,* 2012 |
| JEL743 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; brc-1(xoe4) III* | This study |
| JEL698 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; brd- 1(ok1623) III* | Li *et al.,* 2018 |
| JEL478 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; him-8(me4) IV* | This study |
| JEL862 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; brc-1(xoe4) III; him-8(me4) IV* | This study |
| JEL899 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; brd-1(ok1623) III; him-8(me4) IV* | This study |
| JEL548 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; zim-2(tm547) IV* | This study |
| JEL877 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; brc-1(xoe4) III; zim-2(tm547) IV* | This study |
| JEL929 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; brd-1(ok1623) III; zim-2(tm547) IV* | This study |
| JEL772 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; zim-1(tm1813)IV/nT1 [unc-?(n754) let-?] (IV;V)* | Li *et al.* 2018 |
| JEL490 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; brc-1(tm1145) III; zim-1(tm1813)IV* | Li *et al.* 2018 |
| JEL798 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II*; *brc-1(xoe4) III; zim-1(tm1813) IV/nT1 [unc-?(n754) let-?] (IV;V)* | This study |
| JEL691 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; brd-1(ok1623) III; zim-1(tm1813) IV* | Li *et al.* 2018 |
| JEL930 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; zim-3(xoe15) IV/nT1 [unc-?(n754) let-?] (IV;V)* | This study |
| JEL935 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II*; *brc-1(xoe4) III; zim-3(xoe15) IV/nT1 [unc-?(n754) let-?] (IV;V)* | This study |
| JEL955 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II*; *brd-1(ok1623) III; zim-3(xoe15) IV/nT1 [unc-?(n754) let-?] (IV;V)* | This study |
| JEL934 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; syp-1(me17)/nT1 [unc-?(n754) let-?] (IV;V)* | Li *et al.* 2018 |
| JEL936 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II*, *brc-1(xoe4); syp-1(me17)V/nT1 [unc-?(n754) let-?] (IV;V)* | This study |
| JEL983 | *meIs8[unc-119(+) pie-1promoter::gfp::cosa-1] II; brd-1(ok1623) III; syp-1(me17)V/nT1 [unc-?(n754) let-?] (IV;V)* | This study |
| JEL831 | *zim-1(xoe6)IV/nT1 [unc-?(n754) let-?] (IV;V)* | This study |
| CB4856 | Hawaiian | L. Hollen |
| JEL942 | *brc-1(xoe4)* (Hawaiian) | This study |
| JEL958 | *zim-1(xoe6)* (Hawaiian) | This study |