

A role in apoptosis regulation for *rad-51* gene of *Caenorhabditis elegans*

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Strain	genotype	Source
N2	Wild type, Bristol	CGC
	<i>rad-51</i> [knu isoform A deletion] (IV) = <i>rad-51</i> (<i>A</i> ⁻)	This study
DW102	<i>brc-1(tm1145)</i> III	CGC
AV276	<i>syp-2</i> (ok307) V/nT1 [unc-?(n754) let-? qls 50] (IV;V)	M. Colaiacovo
VC172	<i>cep-1(gk138)</i> I	CGC
	<i>rad-51</i> (<i>A</i> ⁻) IV ; <i>brc-1(tm1145)</i> III	This study
	<i>rad-51</i> (<i>A</i> ⁻); <i>syp-2(ok307)</i> /nT1 [unc-?(n754) let-? qls 50] (IV;V)	This study
TG9	<i>dpy-13(e184)</i> <i>rad-51(lg8701)</i> IV/nT1 [let-?(m435)] (IV;V).	CGC
	<i>dpy-13(e184)</i> <i>rad-51(lg8701)</i> IV/nT1 [unc-?(n754) let-? qls 50] (IV;V)	This study
WS1973	<i>egl-1</i> V; <i>unc-119(ed3)</i> III; <i>opls56</i>	CGC
	<i>rad-51</i> (<i>A</i> ⁻) IV; <i>egl-1</i> V; <i>unc-119(ed3)</i> III; <i>opls56</i>	This study

Table S1. List of all strains used in this study

PRIMER	GENE	SEQUENCE (5'- 3')
Upper-rad-51	<i>rad-51</i> (F)	TATGGGACAATCTTGGGG
Upper-rad-51(A ⁻)	<i>rad-51</i> [in <i>rad-51(A⁻)</i> strain] (F)	ACGAAGTTATGGCTGCTCG
Lower rad-51	<i>rad-51</i> (R)	ACGAAGTTATGGCTGCTCG
Upper-brc-1	<i>brc-1</i> (F)	TGTCGCATCGTCGGCATTAA
Lower brc-1	<i>brc-1</i> (R)	AATATAAGGCACCGGGGGGA
Upper-GFP	<i>gfp</i> [in WS1973 strain] (F)	GCCCGAAGGTTATGTACAGG
Lower-GFP	<i>gfp</i> [in WS1973 strain] (R)	CCCGGGCATTGTATAGTTC
RT-upper-all isoforms	<i>rad-51</i> (F)	AAGCTTGCCGATGAATATGG
RT-lower-all isoforms	<i>rad-51</i> (R)	TTCGGCTCTGGTAAATTGG
RT-upper-ced-3	<i>ced-3</i> (F)	GAGCTTGCTAGAGAGGAACA
RT-lower-ced-3	<i>ced-3</i> (R)	GGTGACATTGGACACTCGAA
RT-upper-ced-4	<i>ced-4</i> (F)	GCGACACGGATGACTCGC
RT-lowerced-4	<i>ced-4</i> (R)	GTGCGTTGCAGATCATCC
RT-upper -pmp-3	<i>pmp-3</i> (F)	GTTCCCGTGTTCATCACTCAT
RT-lower-pmp-3	<i>pmp-3</i> (R)	ACACCGTCGAGAAGCTGTAGA

Table S2. List of all primers used in this study

Figure S legends

Figure S1 genetic cross

P₀ *rad-51(A⁻)* homozygous hermaphrodites were crossed with P₀ *rad-51(lg8701) dpy-13 /nT1 [unc-? (n754) let-? qls50J(IV;V)* males. The heterozygous *rad-51(A⁻)/rad-51(lg8701) dpy-13* hermaphrodite F1 was selected, isolated and left to segregate. In the F2 the 25% of the progeny that was homozygous for *rad-51(lg8701) dpy-13* was selected and analyzed.

Figure S2. RAD-51 foci in different regions of the gonad after exposure to IR

Representative images of indicated regions of the gonads stained with the anti-RAD-51 antibody (in red) and DAPI (in blue) in wt and *rad-51(A⁻)* strains 1 hour post irradiation (120 Gy). Scale bar, 5 μm.

Figure S3. Immunostaining of RAD-51 in *syp-2; rad-51(A⁻)* strains

Representative images of middle pachytene nuclei in *syp-2* and *syp-2;rad-51(A⁻)* immunostained for RAD-51.

Scale bar, 10 μm.

Figure S4. qRT-PCR analysis of core apoptotic factors CED-4 and CED-3

The expression levels of the *ced-4* and *ced-3* gene is not significantly altered in *rad-51 (A⁻)* mutant comparated to wild type.

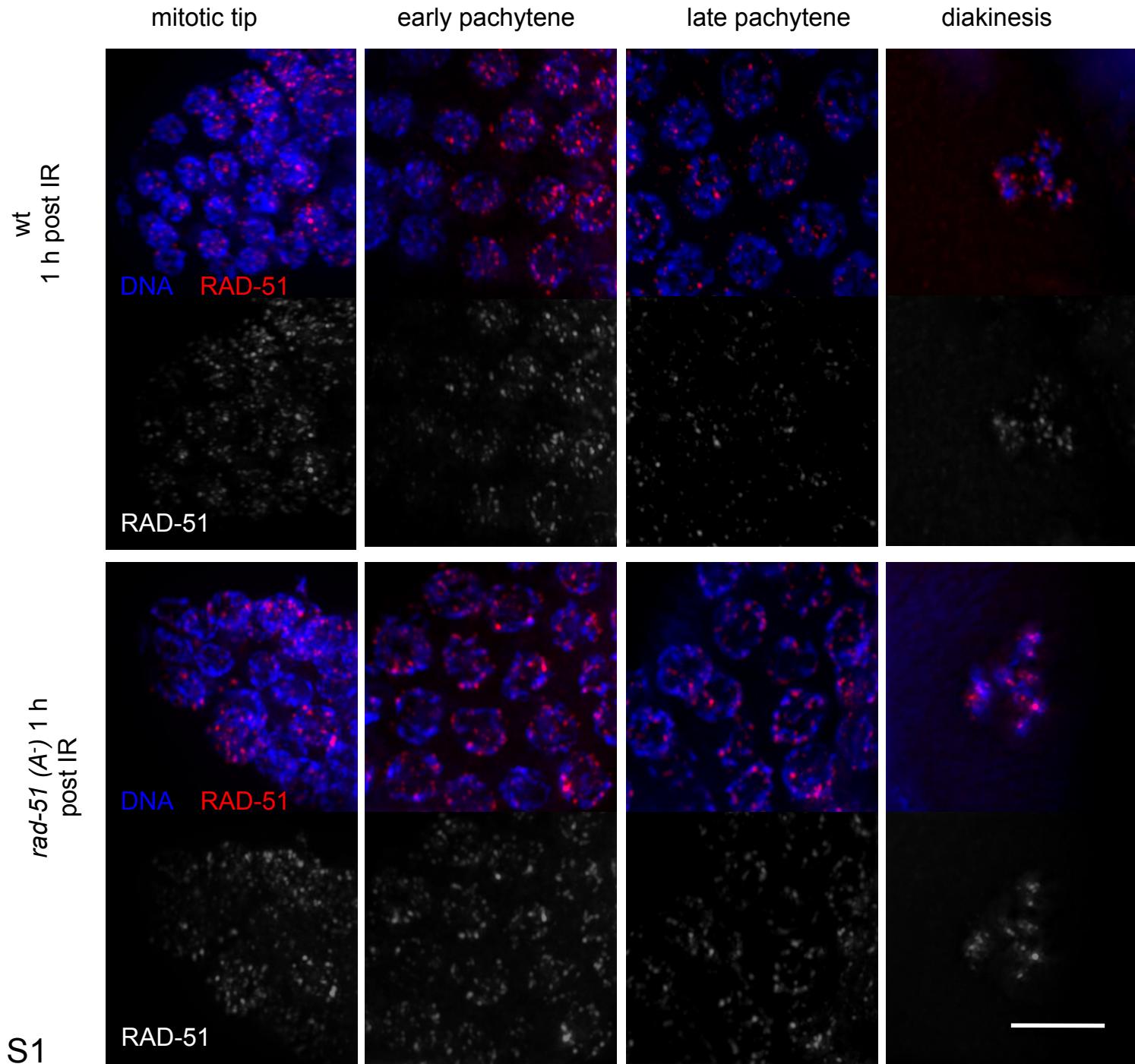


Figure S1

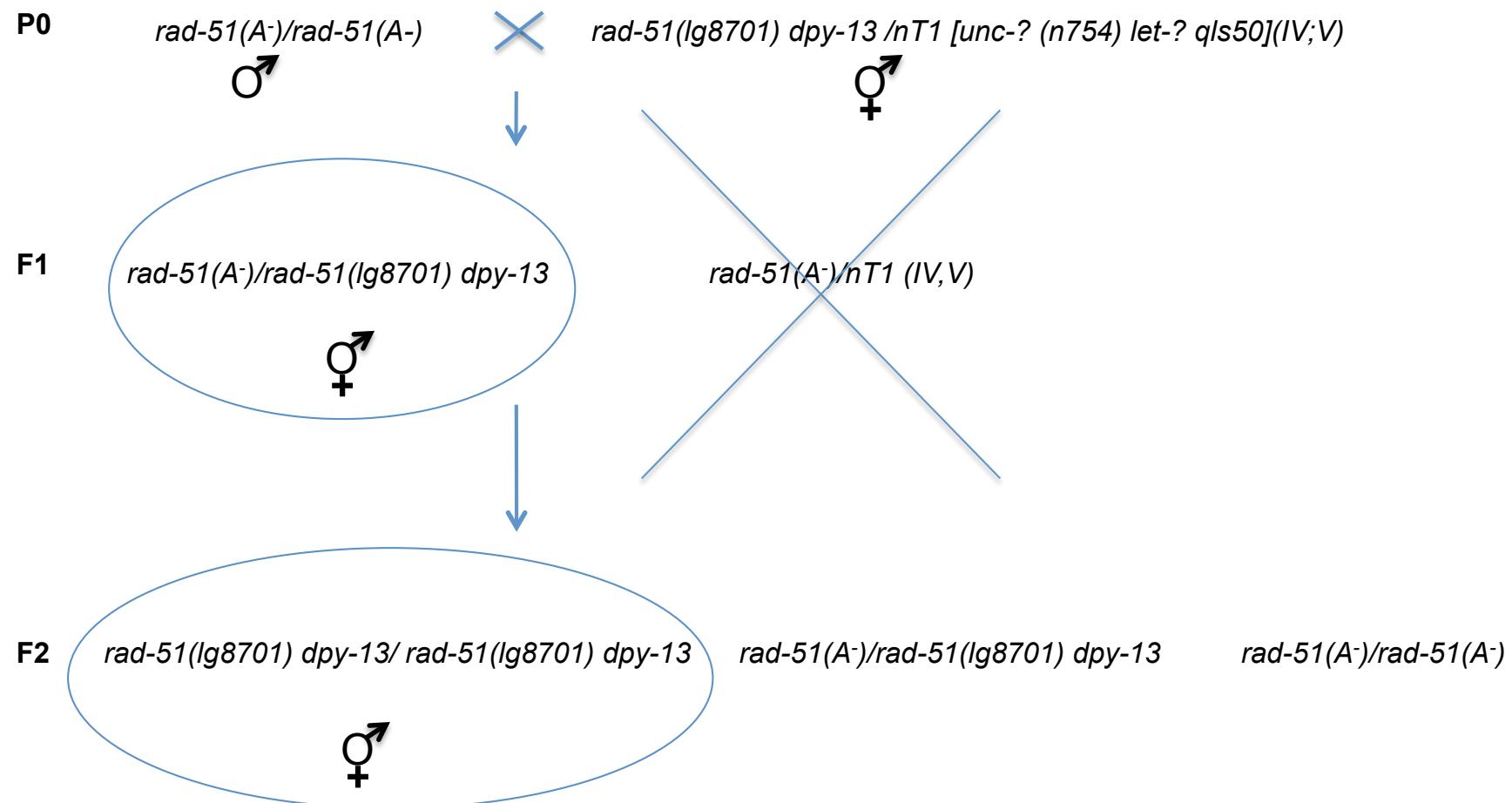


Figure S2

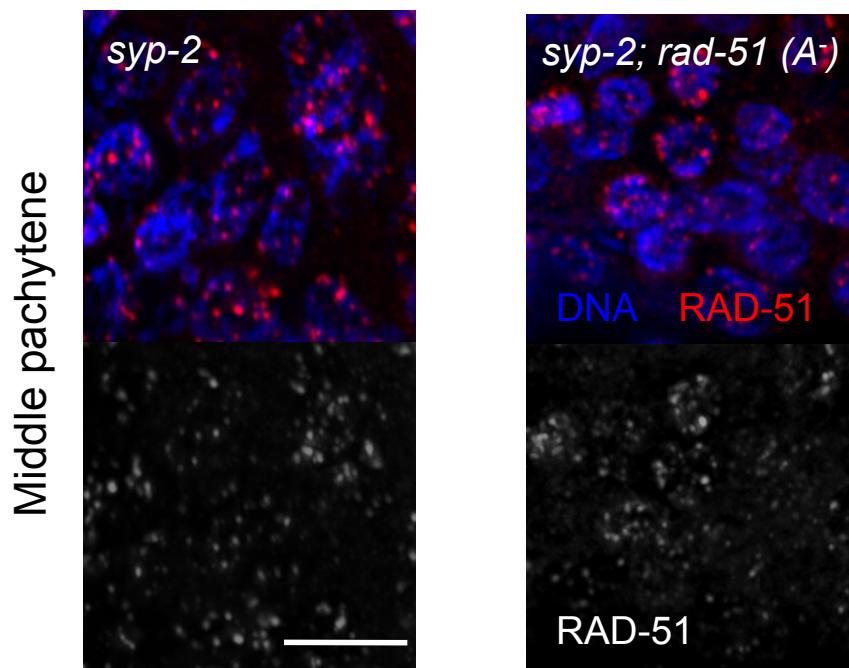


Figure S3

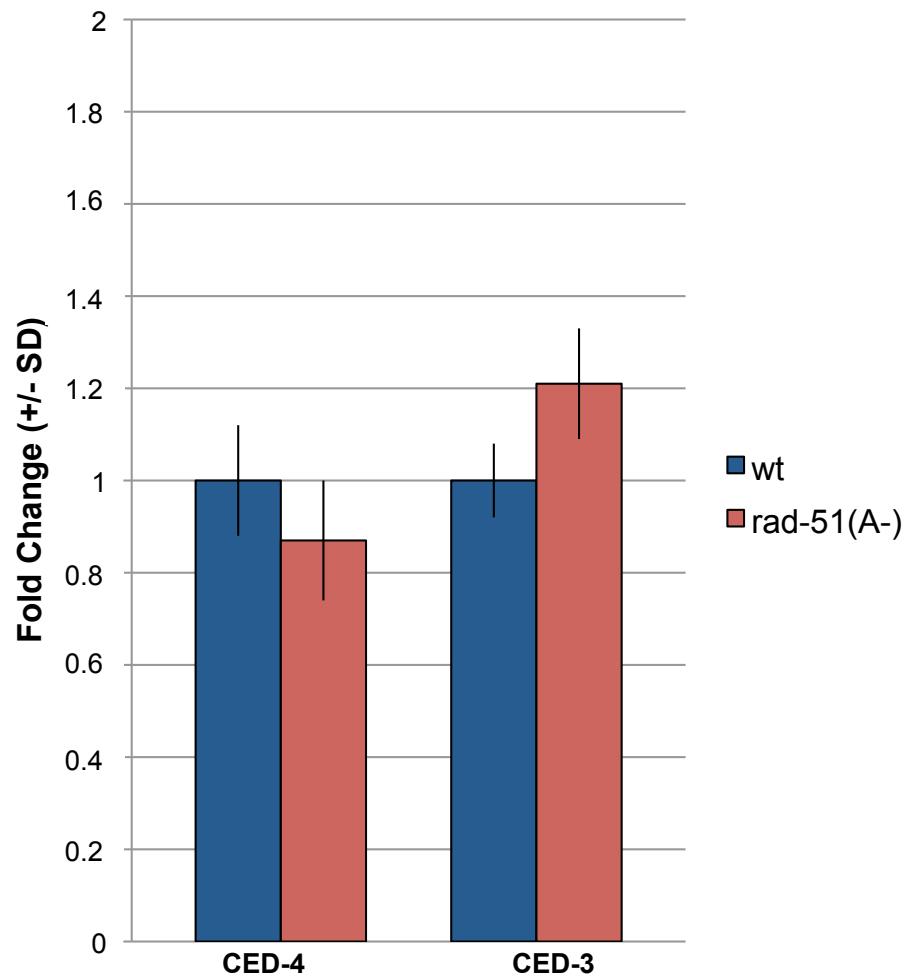


Figure S4