

**Table S1 Oligonucleotides used in this study**

**A: Oligonucleotides used for gRNA construction**

corres p. plasmid	name	sequence	locus	strand	use with	HR or NHEJ observed?
pJA45	AF-JA-79	TCTGTGCCATTAAGTATGTATGT	<i>rde-1(D718)</i>	forward	AF-JA-80	yes
	AF-JA-80	AAACACATACATAGTTAATGGCAC	<i>rde-1(D718)</i>	reverse	AF-JA-79	
pJA46	AF-JA-84	TCTTGATATTGTAGTCTATCGAGA	<i>rde-1(D801)</i>	forward	AF-JA-85	yes
	AF-JA-85	AAACTCTCGATAGACTACAATATC	<i>rde-1(D801)</i>	reverse	AF-JA-84	
pJA14	AF-JA-6	TCTTGATAAATGAGCATAATGAAC	<i>rde-1(H974)</i>	forward	AF-JA-7	yes
	AF-JA-7	AAACGTTCAATTATGCTCATTATC	<i>rde-1(H974)</i>	reverse	AF-JA-6	
pJA42	AF-JA-56	TCTTGTGAGACGTCAACAATATGG	<i>rol-6(su1006)</i>	forward	AF-JA-57	yes
	AF-JA-57	AAACCCATATTGTTGACGTCTCAC	<i>rol-6(su1006)</i>	reverse	AF-JA-56	
pJA52	AF-JA-105	TCTTGTGAGACGTCCACAATATGG	<i>rol-6(su1006)</i>	forward	AF-JA-106	no
	AF-JA-106	AAACCCATATTGTTGACGTCTCAC	<i>rol-6(su1006)</i>	reverse	AF-JA-105	
pJA43	AF-JA-67	TCTTGCGCGAGTTTTATTAGAAG	<i>unc-43(n498)</i>	forward	AF-JA-68	no
	AF-JA-68	AAACCTTCTGAATAAACTCGCGC	<i>unc-43(n498)</i>	reverse	AF-JA-67	
pJA50	AF-JA-101	TCTTGTCACGCACATGGTCACTA	<i>unc-58(e665)</i>	forward	AF-JA-102	yes
	AF-JA-102	AAACTAGTGACCATGTGCGTGGAC	<i>unc-58(e665)</i>	reverse	AF-JA-101	
pJA44	AF-JA-72	TCTTGGGAAACAAATTTTCTTTC	<i>unc-58(e665)</i>	forward	AF-JA-73	no
	AF-JA-73	AAACGAAAGAAAAATTTGTTTCCC	<i>unc-58(e665)</i>	reverse	AF-JA-72	
pJA48	AF-JA-94	TCTTGTTTTCTTTCAGGTCTTTCCG	<i>unc-58(e665)</i>	forward	AF-JA-95	no
	AF-JA-95	AAACCGGAAAGACCTGAAAGAAAAC	<i>unc-58(e665)</i>	reverse	AF-JA-94	
pJA59	AF-ZF-821	TCTTGGAACCTCGTGCAAAACAAC	<i>unc-109(n499)</i>	forward	AF-ZF-822	yes
	AF-ZF-822	AAACGTTGTTTTGACACGAGTTCC	<i>unc-109(n499)</i>	reverse	AF-ZF-821	
pJA58	AF-ZF-825	TCTTGCTACCATAGGCACCACGAG	<i>dpy-10(cn64)</i>	forward	AF-ZF-826	yes
	AF-ZF-826	AAACCTCGTGGTGCCTATGGTAGC	<i>dpy-10(cn64)</i>	reverse	AF-ZF-825	
pJA54	AF-JA-109	TCTTGTGTGGAGTTGGGGTAGCGT	<i>sqt-1(e1350)</i>	forward	AF-JA-110	yes
	AF-JA-110	AAACACGCTACCCAACTCCACA C	<i>sqt-1(e1350)</i>	reverse	AF-JA-109	
pJA55	AF-JA-111	TCTTGGGAAGGACATAGTTGTCAT	<i>sqt-1(e1350)</i>	forward	AF-JA-112	yes
	AF-JA-112	AAACATGACAACATATGTCCTTCCC	<i>sqt-1(e1350)</i>	reverse	AF-JA-111	
L8191	AF-KLA-164	TCTTGATTGTGACCTTGAAGAGG	<i>lin-14 C-term</i>	forward	AF-KLA-171	yes
	AF-KLA-171	AAACCTCTTCAAGGTCCACAATC	<i>lin-14 C-term</i>	reverse	AF-KLA-164	

**B: Donor oligonucleotides for HR**

name	sequence	locus
AF-JA-53	TGTGGGTTGATATGGTTAAACTTGGAGCAGGAACCGCTTCCAACCGTGTGCGGTGCCAACAATA TGGAGGATATGGAGCCACTGGTGTTCAGCCACCAGCACCAAC	<i>rol-6(su1006)</i>
AF-JA-65	TAAGTTCGATAAAGCTCTTTCGCTTTTTCACATGATAAAGCAGCATAATGAACCGGAACAGGCAA	<i>rde-</i>

	CGAGATGGGTTTTTCGACATCTAGCAGAGAGAAAAAG	1(H974)
AF-JA-69	TTTACTTTTAAATTTACAATTTTCTATCCGAAATACTCACCTTGCATCCGCCTTTGAATAAAACTCGC GAGCAACAATGTCCTCAAACAGTTCTCCTCCGGTAAC	unc-43(n498)
AF-JA-76	ATTTTGTGGTATAAAAATAGCCGAGTTAGGAAACAAATTTTCTTTTCAGGTTTCTCAGTAGTGACCA TGTGCGTGGATCTTGCCTCCACACATCTCAAGGCGTACTT	unc-58(e665)
AF-JA-81	ATATCACCAGAAGAAAAAGAAAGACGGAAACAATGCCATTAACATGTACGTAGGAATTGCTG TAACTCATCCAACCTCCTACAGTGAATTGATTATTCTATAGCGGCTG	rde-1(D718)
AF-JA-86	CTTTCAGAACAACGACAATCGAGCACCAGCGCATATTGTAGTCTATCGAG CCGGC GTTAGCGATTCGGAGATGCTACGTGTTAGTCATGATGAGCTTCGATCTTT	rde-1(D801)
AF-JA-91	GGGGATCCATCAGCATGTGGAGTTGGGGTAGCGTGTGCTCTTTCATATTGGCAGCGGACACGCT TGCTAGATCTTCCGATGACAACATGTCCCTCCACAATCC	sqt-1(e1350)
AF-JA-113	TTGACTGGTGGAGCAGATGGGATCCATCAGCATGTGGAGTTGGGGTAGCGTTCGTTCTCTTCA TATTGGCAGCGGACACGCTTGTAGATCTTCCGATAAACCATATGTCCTTCCACAATCCATTGGTA GATTGCTAGAAAATTAATAA	sqt-1(e1350)
AF-JA-116	CAGCCGCTATAGAATAATCAATTCCTACTGTAGGAGTTGGATGAGTTACAGCAATTCCTACGTAC ATAGTTAATGGCATTGTTTTCCGCTTTCTTTTCTTCTGGTGATAT	rde-1(D718)
AF-ZF-827	CACTTGAACCTCAATACGGCAAGATGAGAATGACTGGAAACCGTACCGCATGCGGTGCCTATGG TAGCGGAGCTTACATGGCTTACAGCAACAGCCTAT	dpy-10(cn64)
AF-ZF-820	GAAAGGTTAGGAGAGGCAATATATCAACCAACTGAGCAAGATATTCTCGAACATGTGTAATAA CTACTGGTATTGTTGAAGTTCACCTTACATTCAAAAATCTCAATTTCAAGTGAG	unc-109(n499)

#### C: Oligonucleotides for single worm PCR

name	sequence	locus	use with
AF-JA-54	GCCATTGTATTTTCTGGAGCCAC	<i>rol-6(su1006)</i>	AF-JA-55
AF-JA-55	CTCCACGTGGTCCTCCTCCATTC	<i>rol-6(su1006)</i>	AF-JA-54
AF-JA-77	TGCTGTAAACAATGGGAGGAGG	<i>rde-1(H974)</i>	AF-JA-78
AF-JA-78	AGATATGATGCTCACGTTCAAACG	<i>rde-1(H974)</i>	AF-JA-77
AF-JA-82	GCCAAATGAAAACAGAGGAGCGCA	<i>rde-1(D718)</i>	AF-JA-83
AF-JA-83	ATCTTTATTGACCACTGGCTTATC	<i>rde-1(D718)</i>	AF-JA-82
AF-JA-87	AGTCACAAAAGCTTTGGCATCAC	<i>rde-1(D801)</i>	AF-JA-88
AF-JA-88	ATCTAAAATCGCTAACTGCTATTC	<i>rde-1(D801)</i>	AF-JA-87
AF-JA-96	CGGAGATATCGTTGTGACTGATTAC	<i>unc-58(e665)</i>	AF-JA-75
AF-JA-75	CTGACTGGAAGGAATTGTGACGGA	<i>unc-58(e665)</i>	AF-JA-96
AF-JA-70	CAAACAAGTGACAAACCTTCAAGTC	<i>unc-43(n498)</i>	AF-JA-71
AF-JA-71	GAAGCTCAAAGTTTCAAACACG	<i>unc-43(n498)</i>	AF-JA-70
AF-ZF-823	GATGTGGTGGCAGCAATGGAGGACAC	<i>unc-109(n499)</i>	AF-ZF-824
AF-ZF-824	AATTTCTACTGTTGTCTCATCTTC	<i>unc-109(n499)</i>	AF-ZF-823
AF-ZF-831	GTCAGATGATCTACCGGTGTGTCAC	<i>dpy-10(cn64)</i>	AF-ZF-832
AF-ZF-832	GTCTCTCCTGGTCTCCGTCTTAC	<i>dpy-10(cn64)</i>	AF-ZF-831
AF-JA-92	GCGTCGCGTCCCTTCTCTCCTG	<i>sqt-1(e1350)</i>	AF-ZF-93
AF-JA-93	ACATCCGACTCCTTATCTCCCG	<i>sqt-1(e1350)</i>	AF-ZF-92
AF-KLA-175	ACTCGAACTATGCAAATCTTC	<i>lin-14 C-term</i>	AF-KLA-176
AF-KLA-176	GAGATACTACAATGTGCGAA	<i>lin-14 C-term</i>	AF-KLA-175

#### D: Oligonucleotides for *rde-1* PCR donor construct and screening

name	sequence	raison d'etre
AF-JA-21	AAACATCTTTATGAAACCGTTATC	reverse PCR primer for <i>rde-1</i> donor PCR product, with AF-JA-82
AF-ZF-438	GTGTAAGTGTTTTCTACGTAGATT	with AF-JA-82, forward PCR primer for screening for integration
AF-JA-36	GTGAGTACCAATGAGCGATGTCATC	with AF-JA-77, reverse PCR primer for screening for integration