

**Table S3 Oligos used for this study**

Primer	Description	Sequence
1335	PU6 primer for site-directed mutagenesis	caagacatctcgcaatagg
1349	sgRNA template sequencing oligo	ctctgacacatgcagctcccgg
1432	Generation of <i>kfp-12</i> CRISPR/Cas9 plasmid by Q5 mutagenesis (pJW1138; pair with oligo 1335)	atccacaagttacaattggGTTTTAGAGCTAGAAATAGCAAGT
1436	<i>kfp-12</i> genotyping-F	ccatcgaataatccatccacaagtt
1437	<i>kfp-12</i> genotyping-R	gtttcgcttgggggtgcatgtt
1582	Generation of <i>nhr-25</i> CRISPR/Cas9 plasmid by Q5 mutagenesis (pJW1185; pair with oligo 1335)	catacactgctgtgccgtacaGTTTTAGAGCTAGAAATAGCAAGT
1584	<i>nhr-25</i> C-terminal insert screening-F	agagaagagaagcatcgggaag
1586	<i>nhr-25</i> C-terminal insert screening-R	tgtgagggtttgggcactagg
1586	<i>nhr-23</i> C-terminal insert screening-F	gtgtgcggtgaaaggattctg
1587	<i>nhr-23</i> C-terminal insert screening-R	aatgaggaactctctgcaac
1715	FLAG-specific oligo for direct screening. Pair with oligo 1585 or 1587.	gggattacaaggatgacgacg
1734	Generation of <i>nhr-23</i> CRISPR/Cas9 plasmid by Q5 mutagenesis (pJW1254; pair with oligo 1335)	aagagctattcactgcagatGTTTAAGAGCTATGCTGGAAACAG
1763	Generation of <i>kfp-12</i> CRISPR/Cas9 plasmid by Q5 mutagenesis (pJW1236; pair with oligo 1335)	atccacaagttacaattggGTTTAAGAGCTATGCTGGAACAG
1785	deletion of PU6-sgRNA template in pJW1219 to generate pJW1259-F	cgacgttgaataacgacggccagt
1786	deletion of PU6-sgRNA template in pJW1219 to generate pJW1259-R	ccgggagctgcatgtgtagagg
1787	PU6-F for generating pJW1310 and cloning PU6 for PCR-derived sgRNA templates	attgtgtcgttgagtgacct
1788	PU6-R for generating pJW1310 and cloning PU6 for PCR-derived sgRNA templates	caagacatctcgcaataggagg
1789	sgRNA-F for generating pJW1311	gtttaagagctatgctggaaac
1790	sgRNA-R for generating pJW1311 and cloning PU6::sgRNA templates	aaaaataggcgtatcacgagg
1793	nested PU6-sgRNA template-F	aacgtcgtgactgggaaaacc
1794	nested PU6-sgRNA template-R	ggtgtgaaataccgacagatgc
1827	<i>nhr-23</i> PAM #3 PU6-sgRNA template by PCR fusion (pair with oligo 1790)	cctcctattgcgagatgtcttGaaagcttttcagatgatgtGTTAAGAGCTATGCTGGA
1828	<i>nhr-23</i> PAM #1 PU6-sgRNA template by PCR fusion (pair with oligo 1790)	cctcctattgcgagatgtcttGagagctattcactgcagatGTTAAGAGCTATGCTGGA
1829	Generation of <i>nhr-23</i> PAM#2 CRISPR/Cas9 plasmid by Q5 mutagenesis (pJW1268; pair with oligo 1335)	agtgaatagctctttagaGTTTAAGAGCTATGCTGGAAACAG
1897	Generation of <i>pha-1</i> CRISPR/Cas9 plasmid by Q5 mutagenesis (pJW1285; pair with oligo 1335)	atgaataactgatgaacatGTTTAAGAGCTATGCTGGAAACAG

1898	<i>pha-1</i> P <sub>U6</sub> -sgRNA template by PCR fusion (pair with oligo 1790)	cctcctattgcgagatgtctt <u>Gatgaataacttgatgaacat</u> GTTTAAGAGCTATGCTGG
1908	<i>pha-1</i> genotyping-F	caatttggcagccattcatgtg
1909	<i>pha-1</i> genotyping-R	tcgcgcactactgaatcagagtc
1988	<i>nhr-25</i> PAM#2 P <sub>U6</sub> -sgRNA template (pair with oligo 1790)	cctcctattgcgagatgtctt <u>Gatacactgctgtgccgtaca</u> GTTTAAGAGCTATGCTGG
1995	Generation of <i>nhr-25</i> CRISPR/Cas9 plasmid by Q5 mutagenesis (pJW1308; pair with oligo 1335)	atacactgctgtgccgtacaGTTTAAGAGCTATGCTG GAAACAG
2093	<i>nhr-23</i> sgRNA PAM #4 P <sub>U6</sub> -sgRNA template by PCR fusion (pair with oligo 1790)	cctcctattgcgagatgtctt <u>GatgatgttggatcagacattG</u> TTTAAGAGCTATGCTGG
2097	<i>lig-4</i> sgRNA#1 P <sub>U6</sub> -sgRNA template by PCR fusion (pair with oligo 1790)	cctcctattgcgagatgtctt <u>Gacgtcttcaacaagattcgg</u> GTTTAAGAGCTATGCTGG
2098	<i>lig-4</i> sgRNA#2 P <sub>U6</sub> -sgRNA template by PCR fusion (pair with oligo 1790)	cctcctattgcgagatgtctt <u>GttgacgtcttcaacaagattG</u> TTTAAGAGCTATGCTGG
2104	<i>smo-1</i> sgRNA#1 P <sub>U6</sub> -sgRNA template by PCR fusion (pair with oligo 1790); sgRNA is from (Kim <i>et al.</i> 2014)	cctcctattgcgagatgtctt <u>Ggccgatgatgcagctcaagc</u> GTTTAAGAGCTATGCTGG
2114	<i>nhr-23</i> FLAG specific: for sequencing into 5' end of 2xFLAG and 3xFLAG tags in heterozygotes	ttcactgcagatcgacctgg
2115	<i>nhr-23</i> FLAG specific: for sequencing into 3' end of 2xFLAG and 3xFLAG tags in heterozygotes	atgatatatggattcagtcact
2117	<i>nhr-25</i> FLAG specific: for sequencing into 5' end of 2xFLAG and 3xFLAG tags in heterozygotes	gtacctatatggcatcagg
2118	<i>nhr-25</i> FLAG specific: for sequencing into 3' end of 2xFLAG and 3xFLAG tags in heterozygotes	ctcctatgacagagacattact
2127	<i>smo-1</i> genotyping-F	cgctccccagacaatcgata
2128	<i>smo-1</i> genotyping-R	tggaaaaggatggatgggtg
2129	<i>lig-4</i> genotyping-F	ggcaagactcaagctcggat
2130	<i>lig-4</i> genotyping-R	cccatcatcattggtccc
2135	<i>smo-1</i> FLAG specific: for sequencing into 5' end of 2xFLAG tag heterozygotes	ctcccgtataaacgatgga
2136	<i>smo-1</i> FLAG specific: for sequencing into 3' end of 2xFLAG tag heterozygotes	gtgccgctcgtcagcgg
	GSGGGG-2xFLAG epitope (used in <i>nhr-23</i> and <i>nhr-25</i> editing)	ggatccggagggtggcggggattacaaggatgacgacgata aggattacaaggatgacgacgataag
	GSGGGG-3xFLAG epitope (used in <i>nhr-23</i> and <i>nhr-25</i> editing)	ggatccggagggtggcggggactacaagaccatgacggtg attataaagatcatgatatcgattacaaggatgacgatgaca ag
	2xFLAG-GS epitope (used in <i>smo-1</i> editing)	gattacaaggatgacgacgataaggattacaaggatgacga cgataaggatcc

For oligos 1828, 1898, 1988, 2093, 2097, 2098, and 2104, the underlined, lowercase sequence is the sgRNA target site. The uppercase G 1 bp 5' to the sgRNA target is the +1 base of the U6 transcript and the uppercase sequence 3' to the sgRNA target is a portion of the chimeric sgRNA.

For oligos 1432, 1582, 1734, 1763, 1829, 1897, and 1995 the lowercase sequence is the sgRNA target sequence, uppercase sequence is a portion of the chimeric sgRNA .