Table 1S Primers used for vector construction

Primer name	Sequence (5' – 3')
HIS5 CRG.F[a]	CCGCAGAGCAGATTGTACTGAGAGTGCACCACGCTTTTCACGTACG**T CTTGTACTGTCTTTCGCCGAAACC**
HIS5 CRG.R[a]	TTCGATGATAAGCTGTCAAACATGAGAATTGGTCGACGCACGTACG**TT GGGTTGGCCATGAATACG**
HIS5 up BsiWI-17.F[a]	AAAATAGGCGTATCACGAGGCCCTTTCGTCTTCAAGAATTCGTACG**TC TTGTACTGTCTTTCGCCGAAACC**
HIS5 down BsiWI-2064.R[a]	CAGTTGGACGATCGATGATAAGCTGTCAAACATGAGAATTCGTACG**TT GGGTTGGCCATGAATACG**
URA3 CRG.F[b]	CTTCAAAATAGACAAGACGAAAAAACGGTGAAAATGGGTGACGTC**ATA ACTGATATAATTAAATTGAAGC**
URA3 CRG.R[b]	CTCCCCGCGCGTTGGCCGATTCATTAATGCAGGCCCGGGCGACGTC **GGATCCTCTAGAGTCGACCTGCAGG**

[a]Sequences with homology to HIS5 are shown in bold.
[b]Sequences with homology to URA3 are shown in bold.

Table 2S Cloning primers used for the standard cloning method

Gene	Primer name	Sequence (5' – 3')
aex-3	aex-3 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**GGT ACCATTCCTTGAATTGAAACTCG**
	aex-3 up.R	**CCGCCAAAATAATATCGGGGAAGG**
	aex-3 down.F	**AAATGTTGTGGGCGTAGAAGCTATTC**
	aex-3 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**TTG GATGGCTCTGGGATTTGTAG**
bar-1	bar-1 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TGG CCAAGACCATTTATCAATTGTGG**
	bar-1 up.R	**TGTAGAAACATACATCACGAAACC**
	bar-1 down.F	**CAAATACACTAATTTCGTTTGCCAGC**
	bar-1 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**GTT TGCGCGTTATGGATCAACTGG**
C02H7.1	C02H7.1 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TTTT CCTGGAACAGGCACTGGGG**
	C02H7.1 up.R	**TCTTTCGACAGACGCTCAACTCC**
	C02H7.1 down.F	**TCTAGATTGGCCCATATTTCTAGTGTCC**
	C02H7.1 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**TTG GGTAATGCCTCAAAACCTCC**
che-2	che-2 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TTAT TGGTTACCCACTAAACATCCG**
	che-2 up.R	**ATTAGGTAAGCATATCTCCGTAGC**
	che-2 down.F	**CCCTTATAGCTCAGTGGTAGAGCG**
	che-2 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**AAA CGTTTGGTATAGAATTACCGC**
col-19	col-19 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**CTCC ACTTTGAAAGAGTATAGCTCGG**
	col-19 up.R	**CCTTCTACGTTCCAATTGATGTGG**
	col-19 down.F	**GAACTGCTGGTTAGCAATCTCCGAGC**
	col-19 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**GCT CACTTTTGTGCTTCTAGCGGG**
daf-3	daf-3 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**GCA AACAGCCAGATTTGATGGCC**
	daf-3 up.R	**TCGTTCATGTTTTCACAATCCCG**
	daf-3 down.F	**CCATTTCTTAACTCTGTTTATGTCGGC**
	daf-3 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**CTA TAGTTCGGGAGATCAAGGTGG**

F13C5.1	F13C5.1 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**AGTGTCCAGGTTTTGCTTGACATCGC**
	F13C5.1 up.R	**GTGATGCTCCGCTGAAGGTATTGG**
	F13C5.1 down.F	**TAAATCTAAAGCTGCCATAGCGGC**
	F13C5.1 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**AAAAGGAACCGCACCACTATCCGG**
F13C5.2	F13C5.2 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**CTAGAAAGTTGTTTGATGCGAGACG**
	F13C5.2 up.R	**CTATTCAAGCTCGTAGTTTTCTGC**
	F13C5.2 down.F	**CGCAATGTCAGCTGGAAATATCTCG**
	F13C5.2 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**CACTCATCCAGAGGAAGTACTCCG**
F28C10.2	F28C10.2 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**ACAGAAATAGTTGAATCGAGTATTGG**
	F28C10.2 up.R	**GCCTACATTGATGACAGAGTGTCC**
	F28C10.2 down.F	**AAGGAGCATCAGATTTTCTGTGAACC**
	F28C10.2 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**CTGCTTTCTCTAAGTTTTCAAACGC**
F39H12.4	F39H12.4 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**GACAGTCCTGATGAGCATTTCGGTCTCC**
	F39H12.4 up.R	**CATCTGCGTAAAGGGGCTTTGTCG**
	F39H12.4 down.F	**ACTTGTGTGTTGCTTATAAAGCTACCG**
	F39H12.4 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**GAAGACTTTCCACTTTCTGAATGTCG**
F56F10.1	F56F10.1 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**AACCCGCATTGTACTTTAATTCTGC**
	F56F10.1 up.R	**AACCATCAACGAGCTTCTTACCG**
	F56F10.1 down.F	**CTTCATTCGCGTTTTCTAATGGATTCG**
	F56F10.1 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**AATTATTCCCGGCAACCTACCTCC**
F56F10.3	F56F10.3 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**GTTCCAGAAGATTGCAAGAAAAGTGGAG**
	F56F10.3 up.R	**GCACTACCATGACGAATTTTAGCACTAC**
	F56F10.3 down.F	**TAAAGATTGTGTGGTTAAATGGCGC**
	F56F10.3 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**CCGTACTTGTTCACACAGAAACAGC**
F56F10.4	F56F10.4 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**ATCAATTGCCGCGCACCTGATTAATGC**
	F56F10.4 up.R	**TCCATACCTTATCAACGGAACTGC**
	F56F10.4 down.F	**TGATAGATGTTGACGAAGTGATGAAGC**
	F56F10.4 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**GTTAACGTACCTGCTAGCCATACC**
fem-3	fem-3 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TGAGGAGCGACCATGGTATTCGATGG**
	fem-3 up.R	**TTCATCAAGTGTCATTGTCTGTGG**
	fem-3 down.F	**AAATGGCTCGTGCTATTGCTATCG**
	fem-3 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**TGGAGCTCTTCTTGGAGCTTCTGG**
gei-10	gei-10 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TACAAGGTTTTCTGGGAGAAAATAAAGG**
	gei-10 up.R	**GGATTAAGGATGTGAAAGTGCCC**
	gei-10 down.F	**TCTCGAATTCTACACGCATTACTAGAGG**
	gei-10 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**TAGCCATCGGAGTTCACAAAACC**
hsp-16.2	hsp-16.2 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TCGAGTTCTACAATGTTAATGAGGCC**
	hsp-16.2 up.R	**TCAACACCAGAACCACTACAACGG**
	hsp-16.2 down.F	**TTTGATCATCTATTTCAAACGTGTGC**
	hsp-16.2 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**TCT**

		TCGTGGTAATTGAGTATCAGG
ifc-2	ifc-2 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TGA ACGTTAGAAAATTCGCTGAACTGG**
	ifc-2 up.R	**AGCATGAGAACCCCAAATCTACG**
	ifc-2 down.F	**ACACTGTCCCCTTAGAGAAGATCACC**
	ifc-2 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**AAA GTTCTAAGCCAATTCCGCCG**
irk-2	irk-2 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TACC TTTATGTATATAAATTATCACC**
	irk-2 up.R	**AGGTGGTCAGTGCGAATTTGGCG**
	irk-2 down.F	**CCATTAAACTAAGATCCTACCTTCCG**
	irk-2 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**GCA AGTGTAATGGGTATGAATAGCATG**
let-60[a]	CEOP4472 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**GAA CTTGAACACTCCTGTAGTCATCG**
	CEOP4472 up.R	**CAAACGCCTACATGTTCATATCGG**
	CEOP4472 down.F	**AGCGCCCGAGTACGTCTGAGGAAGC**
	CEOP4472 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**GG GCCGTTTCTGGGAGTTTAAAGG**
let-756	let-756 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**GCA TATTCGTCCATTTAGTTTTCCC**
	let-756 up.R	**ATCAGTTTGGAGGTATCAGTTGGG**
	let-756 down.F	**ACAAGACTCCAAAATAACAGAGATGGC**
	let-756 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**ACC TCATGCTTGCCTATAAAGGCC**
mab-7	mab-7 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TTTA ATCGACAGCCTAGTTATCTCGC**
	mab-7 up.R	**GAAGCCTTTTGTCTACTCGATAGC**
	mab-7 down.F	**CACCTCCTAGGCTACAAATTATTCACA**
	mab-7 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**GG GGTCAAACGGTAAATAAAATGGATC**
mes-6[b]	CEOP4294up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**AAC AAATAAGGAATTGTGACGACCC**
	CEOP4294 up.R	**GAAATGGAGCATCTCTTTGTGAGG**
	CEOP4294 down.F	**CAATACTCTATTGTTTAGATTTCAGC**
	CEOP4294 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**AGA TTTATAACTAAGCAGTTATGC**
mrp-1[c]	mrp-1 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TCTA ATCGGTATTGTGAGTCCTGACACC**
	mrp-1 up.R	**ATATGCTTGTGTGCGTAAGAGGG**
	mrp-1 down.F	**TTTCACATTGGATTACTCGCAGAAGG**
	mrp-1 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**TAT TCTTGTTTGCCTATGCGCGG**
nas-38	nas-38 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**CATC GCTACACTGCACACAAAATGC**
	nas-38 up.R	**ATCGTGGCGATTTCAAATCTATCC**
	nas-38 down.F	**ACAATTCCGACCTTCTCACTTGGCG**
	nas-38 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**TTC AGGGTTTCGTGAGGCTAGCGCG**
pqn-40	pqn-40 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TAG AACCGTAGAGAGCCATTGGG**
	pqn-40 up.R	**CGCGACCTCTTGGATGACAGAGC**
	pqn-40 down.F	**CACACCACACGGTGTAACTATAGAAAGC**
	pqn-40 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**CAT GGATTAAATCCATTGCCGGG**
rol-6	rol-6 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**CGA CTCGAAATGAAATATGATGGC**
	rol-6 up.R	**AAATTTAGTTCTCCTGAGGACACC**

	rol-6 down.F	**TTCCTTGTCATTAATCACAACTGCG**
	rol-6 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**CAA ATTAGGGTCTCCAGAAGTCGG**
skr-7	skr-7 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**CAG CTTAATTGTGTTTAAACTCTACG**
	skr-7 up.R	**GTTCTCTCAACAACATTTATCGGC**
	skr-7 down.F	**GGTGTTGTTTGGAGAACTGAGTGTCG**
	skr-7 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**TAC ACTTCTATCATAGATAATTCC**
sli-1	sli-1 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**CAT GACGCAAATAAACTTCAGTTCGC**
	sli-1 up.R	**TGTCACAAACTAAAGGTTAGTGC**
	sli-1 down.F	**TGCAAGGTGCTACAGCGTCTTCTGG**
	sli-1 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**AGC AACAAACGATCTGGAGCTCG**
T04G9.1	T04G9.1 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**GTTT CTACACTTTCTGGCGTCGATGG**
	T04G9.1 up.R	**TACGACCTAACTAGGGAACCCCG**
	T04G9.1 down.F	**ATTGAAGGTTGCACTGACAAACGTCG**
	T04G9.1 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**ATG ATGAAGATGAAGCCATCGGC**
T19D7.3	T19D7.3 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TTGA CACCCGTTTGATGTGTAACTGC**
	T19D7.3 up.R	**AGGCATGTTAAACACTGATTGCGG**
	T19D7.3 down.F	**GTGATTTGAGTGAAAAGTGCCAAGC**
	T19D7.3 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**TAG CACTGTCATTCAAATCCATACG**
tra-2[e]	CEOP2268 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TACC AAACTGCCATAAATGTTGTGC**
	CEOP2268 up.R	**GATCGTTTCGGATCCAGAAATTCC**
	CEOP2268 down.F	**CGTCGGTTCATCAATGTTTCCACC**
	CEOP2268 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**ATC CATTGAATGCAGAGATTGGCG**
unc-54	unc-54 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**AATT TAACCAGCATGTCAGTGTTGC**
	unc-54 up.R	**GTGCAGTCGTAGGGTTGTTATTGC**
	unc-54 down.F	**TAGATGAAGCATTAGGAAATGCCAGC**
	unc-54 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**TGC CCAACGGTTTGAGTATAGAGC**

Sequences with homology to pCATCHR1 vector are shown in regular type; sequences that are homologous to the target worm gene are shown in bold.
[a]*let-60* is in operon CEOP4472.
[b]*mes-6* is in operon CEOP4294.
[c]*mrp-1* is the most upstream gene in operon CEOPX154. The downstream gene in the operon, *mrp-2*, was not subcloned.
[e]*tra-2* is in operon CEOP2268.

Table 3S Cloning primers used for the alternative cloning method

Gene	Primer name	Sequence (5' – 3')
bar-1	bar-1 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TGG CCAAGACCATTTATCAATTGTGG**
	CATCHR2 bar-1 up.R	CAGTCGACTCGTCGTCGAGGCGAGCAAGTGTTTAGACGTT**TGT AGAAACATACATCACGAAACC**
	CATCHR2 bar-1 down.F	ACATTTCCCCGAAAAGTGCCACCTGACGTGCCCGGGCGAT**CAA ATACACTAATTTCGTTTGCCAGC**
	bar-1 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**GTT TGCGCGTTATGGATCAACTGG**

snr-1	snr-1 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**CGA CCAATATTTGATGCTGTATTCC**
	CATCHR2 snr-1 up.R	CAGTCGACTCGTCGTCGAGGCGAGCAAGTGTTTAGACGTT**AAA CTGACGATCATTTCTTCCCGG**
	CATCHR2 snr-1 down.F	ACATTTCCCCGAAAAGTGCCACCTGACGTGCCCGGGCGAT**AAA TGCTTGATTTTCCCCGTTTTCG**
	snr-1 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**ACG CAATTCGTCATCACATCGACC**
tra-1[a]	tra-1 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**TTAT TGGTTACCCACTAAACATCCG**
	CATCHR2-Srf tra-1 up.R	CAGTCGACTCGTCGTCGAGGCGAGCAAGTGTTTAGACGTT**GCC CGGGCCTTGAGAAGGAAGAAAAAGTG**
	CATCHR2 tra-1 down.F	ACATTTCCCCGAAAAGTGCCACCTGACGTGCCCGGGCGAT**GAA GTCTCGGTTCGTGATAGC**
	tra-1 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**AAA CGTTTGGTATAGAATTACCGC**
Y87G2A.10[b]	CEOP1708 up.F	ATCCGTCCTAAGAAACCATTATTATCATGACAGCGGCCGC**CTAC ATTCTCCCGCTCTTTCAGATGG**
	CATCHR2 CEOP1708 up.R	CAGTCGACTCGTCGTCGAGGCGAGCAAGTGTTTAGACGTT**TAG CCAAGTAAGGTAGTCATGTGC**
	CATCHR2 CEOP1708 down.F	ACATTTCCCCGAAAAGTGCCACCTGACGTGCCCGGGCGAT**TCT GAATTTTTCACTAAAGTCGGGC**
	CEOP1708 down.R	AAGCGTGGTGCACTCTCAGTACAATCTGCTCTGCGGCCGC**CAA CTTCGGATGGATGTAACACGG**

Sequences with homology to pCATCHR1 or pCATCHR2 vectors are shown in regular type; sequences that are homologous to the target worm gene are shown in bold.
[a]the primer CATCHR2-Srf tra-1 up.R has an SrfI site, creating an intermediate targeting vector with an SrfI restriction site between the upstream target region boundary and pCATCHR2. SrfI linearization of the targeting vector results in a plasmid with free worm DNA ends and no flanking *URA3* marker.
[b]*Y87G2A.10* is in operon CEOP1708.

Table 4S Targeted tag primers used to amplify GF-URA3-FP

Gene	Primer name	Sequence (5' – 3')
aex-3	aex-3 gfp tag N.F	TTTGTCCAGGCTTGCACCAATGTACCTATCCTAATAAAAA**A TGAGTAAAGGAGAAGAACTTTTC**
	aex-3 gfp tag N.R	AGTCAATCAGACGAGGGCATATCTCTTTTTCTTTGTCATT**T TTGTATAGTTCATCCATGCCATG**
bar-1	bar-1 gfp tag N.F	GATTCATAAAAAAATATTTGGCTTTTTTTTTCAGAAAACTGG G**ATGAGTAAAGGAGAAGAACTTTTC**
	bar-1 gfp tag N.R	GATAAATTTGTGTCGTCATGGTTAATAACTAGGTTCGGATC CAGGTC**TTTGTATAGTTCATCCATGCCATG**
col-19 (N-terminus)	col-19 gfp tag N.F	AGGAAACGGTCACCATTTAGAAAGACATCAGTTCATCAAC **ATGAGTAAAGGAGAAGAACTTTTC**
	col-19 gfp tag N.R	ACACAAGTACTCCGCAGGATCCAACCACAATGAGCTTGCC **TTTGTATAGTTCATCCATGCCATG**
col-19 (C-terminus)	col-19 gfp tag C.F	TGGATATTGTCCATGCCCATCTCGTGCAGCTTACAAGGCT **AGTAAAGGAGAAGAACTTTTC**
	col-19 gfp tag C.R	AATGTTCGAAAATTTATAAAAAAGACAGAGAAAGGCAGAA**C TATTTGTATAGTTCATCCATGCC**
daf-3	daf-3 gfp tag C.F	GGAAGATTTTGCAAAATTGGGAATCAACGTCAGTGATGAC **AGTAAAGGAGAAGAACTTTTC**
	daf-3 gfp tag C.R	TAAATCAGTATCTAGTAGGGTGAGTGAAAAAAGTTATCAT**C TATTTGTATAGTTCATCCATGCC**
F56F10.3	F56F10.3 gfp tag N.F	ATTTACTATTCAATATGACAACATTCCTGTTTTCAGAAAA**AT GAGTAAAGGAGAAGAACTTTTC**
	F56F10.3 gfp tag N.R	AGATTTCACGAATTTGAACAACTAACTGAACAAATGATAT**T TTGTATAGTTCATCCATGCCATG**

fem-3	fem-3 gfp tag N.F	GTAAAAATAAGAGAGATTTCCATTTATTTCAATTGTAACTGT A**ATGAGTAAAGGAGAAGAACTTTTC**
	fem-3 gfp tag N.R	GTTTCTCTGTCAGCTTCTACATCATCTGAACCCGGATCCAC CTC**TTTGTATAGTTCATCCATGCCATG**
hsp-16.2	hsp-16.2 gfp tag N.F	CATTTGCTCTAATTGTGAAATTAGAAATCTTCAAACTATAAT C**ATGAGTAAAGGAGAAGAACTTTTC**
	hsp-16.2 gfp tag N.R	CAAAAACGGAACGTTGAGCTGGACGGAAATAGTGGTAAAG TGA**TTTGTATAGTTCATCCATGCCATG**
ifc-2	ifc-2 gfp tag N.F	CTTCACTTTTATTGTTCTTTTTCTAGGGTCCTCATCACAA**AT GAGTAAAGGAGAAGAACTTTTC**
	ifc-2 gfp tag N.R	ATCGCTCATCGTCGGTACTAAATGGTGTGGATGTTAACGA **TTTGTATAGTTCATCCATGCCATG**
let-60	let-60 gfp tag N.F	CATTTTTCCATATTCAACTATGCGTCTTTTTTCAGAAAAGG GTA**ATGAGTAAAGGAGAAGAACTTTTC**
	let-60 gfp tag N.R	CAACTCCTCCATCTCCAACTACCACAAGCTTGTACTCCGT**T TTGTATAGTTCATCCATGCCATG**
let-756	let-756 gfp tag N.F	CAATATTTCCAAATCATTACAATTTCTTCAAATGTTCAGATG AATAT**ATGAGTAAAGGAGAAGAACTTTTC**
	let-756 gfp tag N.R	GCTCCTCCGTATGAAACTATCGATGAGGCGGCAGGAACG GC**TTTGTATAGTTCATCCATGCCATG**
mab-7	mab-7 gfp tag N.F	TTATATACTCTACAATGGTCTACAGTTCAATCAGCAAAAA**A TGAGTAAAGGAGAAGAACTTTTC**
	mab-7 gfp tag N.R	TGGTTTGTAAACTCTCAAGAAAATATTTTGATGATATTTT**TT TGTATAGTTCATCCATGCCATG**
mes-6	mes-6 gfp tag N.F	GTTTTTATTTTGTTATATATTGTTTCTTGCCTTTTTCCCAAAA ACCTGA**ATGAGTAAAGGAGAAGAACTTTTC**
	mes-6 gfp tag N.R	CAAACCCGTGAAGATTTAATGATTTGAACTTTTTCGTGTGC TC**TTTGTATAGTTCATCCATGCCATG**
pqn-40	pqn-40 gfp tag C.F	AAAACGAACGACTGCTAAGCCTCGTTACGTCCGTGTGCCA **AGTAAAGGAGAAGAACTTTTC**
	pqn-40 gfp tag C.R	TAAGTATTGCAGACATCATCATGGATTTTTTTGTAGATAT**CT ATTTGTATAGTTCATCCATGCC**
rol-6	rol-6 gfp tag N.F	CAATTAAAAATTTCTGGATATATCTTTAGATCTAACTGAAAA TTTCCAG**ATGAGTAAAGGAGAAGAACTTTTC**
	rol-6 gfp tag N.R	CCAGAAAATACAATGGCGCCGGACGTCGCCGTAGTTAGG GT**TTTGTATAGTTCATCCATGCCATG**
skr-7	skr-7 gfp tag N.F	CTATATTGATTTATATCTTTCCAGAAATCACCCTAACTTTCA AAA**ATGAGTAAAGGAGAAGAACTTTTC**
	skr-7 gfp tag N.R	GCCTCGTTGGCTTGAACTTCGACGGCGGCGGCTTCAGCA GA**TTTGTATAGTTCATCCATGCCATG**
sli-1	sli-1 gfp tag C.F	ACCACACCACCCATACACAAATACGAACAGTGAGCGGGAG **AGTAAAGGAGAAGAACTTTTC**
	sli-1 gfp tag C.R	AATTGCAGTATAAAGCGGTAAGATGAACATTTACACAAGT**C TATTTGTATAGTTCATCCATGCC**
snr-1	snr-1 gfp tag N.F	GTTTTCTCCCTTCAAGCCGAATCTACAGAATCAAAATTTTC AGA**ATGAGTAAAGGAGAAGAACTTTTC**
	snr-1 gfp tag N.R	CTTCGGCCTCATGAAGAATCTTGATTGGGACACCAACTGA AGT**TTTGTATAGTTCATCCATGCCATG**
tra-1 (N-terminus)	tra-1 gfp tag N.F	TCTCCAAATTCAACAGGAAATCAAAAACAACGAAAACGGC GGCATG**ATGAGTAAAGGAGAAGAACTTTTC**
	tra-1 gfp tag N.R	GTTTTTTAATTCAAAATTCCTCGAATTAACCTCAGTACTGG GGGC**TTTGTATAGTTCATCCATGCCATG**
tra-1 (C-terminus)	tra-1 gfp tag C.F	AAGGACGATTCGGAGAATATTCCCAAAAAGCCACGTCATC AATTT**AGTAAAGGAGAAGAACTTTTCACT**
	tra-1 gfp tag C.R	CATGGTACATTAGTCATGGGAGCACACACAAAAAAAATGA ATGGGGGTC**CTATTTGTATAGTTCATCCATGCC**
tra-2	tra-2 gfp tag C.F	CAAGATGAAGCACGGGAAGGCGACCTATCAGACCCAGAG GTT**AGTAAAGGAGAAGAACTTTTC**

	tra-2 gfp tag C.R	GAAATGAAATTTTGGAACCAAATTCTGAAAAAGGAAACAGA CATT**CTATTTGTATAGTTCATCCATGCC**
unc-54	unc-54 gfp tag N.F	CATTAGTTTTGAGGTAGAGAAACCATTTGAAAGAAGCGAG AAATC**ATGAGTAAAGGAGAAGAACTTTTC**
	unc-54 gfp tag N.R	GGTACGGCGGAGATATTGCCATCCTGGGTCCTTCTCGTGC TC**TTTGTATAGTTCATCCATGCCATG**

Core sequences with homology to *gfp* are shown in bold, sequences that are homologous to the target integration site in the worm gene are shown regular type. N-terminal targeted tag primers include the *gfp* start codon and exclude the stop codon. C-terminal targeted tag primers exclude the *gfp* start codon and include the stop codon.

Table 5S Universal diagnostic primers to detect presence of correct insert

Primer name	Sequence (5' – 3')
pCATCHR up diag.F	AACACAGAGTAAATTCCCAAATTATTCC
pCATCHR down diag.R	AAGTAGTCATCAAACAGGTTTCGG

Corresponding gene-specific diagnostic primers are listed in **Table 6S**.

Table 6S Gene-specific diagnostic primers to detect presence of correct insert

Gene	Primer name	Sequence (5' – 3')
aex-3	aex-3 diag up.R	GACGATGAAATAAAGTCCGCTGGC
	aex-3 diag down.F	TTCACAAAACCACCTCACAAAGTTG
bar-1	bar-1 diag up.R	AATTTCTGCTAAATTGAGAAGTGC
	bar-1 diag down.F	GTTTCTGCTGATCTGTTCTGGTTACC
C02H7.1	C02H7.1 diag up.R	ATGCTGACGGAAAAGGACTCTGC
	C02H7.1 diag down.F	TTCCAGCAGGAGGAGGCTGTCTGATCG
che-2	che-2 diag up.R	GTAGTCTTGGTAGGATATACATCG
	che-2 diag down.F	TCCCACGCGATAAAGATCCACAAACC
col-19	col-19 diag up.R	ATCGTTCATTACTGCAACCACGCC
	col-19 diag down.F	AACACTGAGTGAAAATGTCCCACAGG
daf-3	daf-3 diag up.R	ATCTCTGTGTGCTCATTGCATGC
	daf-3 diag down.F	TTCACTTTGGCAGGAATGTTTCCAGG
F13C5.1	F13C5.1 diag up.R	TCATGCTCCACAAGCGGTTGAAGC
	F13C5.1 diag down.F	TCGAATCTTTGCTCCCAGAATTTCGG
F13C5.2	F13C5.2 diag up.R	TTCCCGCCCGAGTAATTTTACAGC
	F13C5.2 diag down.F	GAGGCTGTTTCCAATACACAAAGTGC
F28C10.2	F28C10.2 diag up.R	ACATTGGAGGACACGTTGCACCCG
	F28C10.2 diag down.F	CTGGCAAAAGGTGTAATTTTCTGACC
F39H12.4	F39H12.4 diag up.R	GTGTTGATTCCTCTGGGAGACCCC
	F39H12.4 diag down.F	CGTTTTTTCTTAATACTCCGAGCCTTC
F56F10.1	F56F10.1 diag up.R	GTTTTCTTCAGGCCAGCAAATCC
	F56F10.1 diag down.F	GTCCTCTCCTTCTCTGCCTGTATATCGG
F56F10.3	F56F10.3 diag up.R	CAGAATTTTCTACAGTAGCAGCAGGTAG
	F56F10.3 diag down.F	AGCTTAAAAGTAACCGTAAAACTGGGCC
F56F10.4	F56F10.4 diag up.R	CCAAATGGCTCTCTCGACCCATGG
	F56F10.4 diag down.F	AGAAGTTGTTTATTCCTATTGGAGACG
fem-3	fem-3 diag up.R	AGTGTGGACATTTGGAGATGGTGC
	fem-3 diag down.F	CATCTCAGCTTTCTACATTCATTGCC
gei-10	gei-10 diag up.R	TCTTTTTAAGTGAGGGTGGGTGG
	gei-10 diag down.F	ATCGAAAAGTAATAGTCTGTCGGTTTGC
hsp-16.2	hsp-16.2 diag up.R	ATTTGTTCAAGTTGTGAGCATGGG
	hsp-16.2 diag down.F	CCGCAAAATCTTTGTATTATAACC
ifc-2	ifc-2 diag up.R	AACTTTGCTGAAACTTGACCGGG
	ifc-2 diag down.F	ATCACTACAAATGACCATTTCGAGG
irk-2	irk-2 diag up.R	GTTTTGTGTATGTGGGAGGAGGG

	irk-2 diag down.F	AGCAATCTGTTGCTTTCAGGTCCTCC
let-60	CEOP4472 diag up.R	CACACGAGTTTCTGACGTTTCACC
	CEOP4472 diag down.F	AAATATGGATGGAGTATGGACAGTCG
let-756	let-756 diag up.R	AAGAATAAGAGGCAGCTGACATGG
	let-756 diag down.F	GTAATCCTCAAAGGCGCAACATCG
mab-7	mab-7 diag up.R	CTTTTCATGTGGTGAACGATGACG
	mab-7 diag down.F	CCCGGTATTTGTATATTATCGACACG
mes-6	CEOP4294 diag up.R	TGATTTCGATGAGCTCCCACTTCC
	CEOP4294 diag down.F	AGAAGAAGAAGAGGAAGAGTCCATCC
mrp-1	mrp-1 diag up.R	AGCCCATTGACCATCTGTTACCC
	mrp-1 diag down.F	TGATGGTTTGGACTTTATTTCAGCTGC
nas-38	nas-38 diag up.R	TTTGGGCCAGGATGGCGGTGTTGG
	nas-38 diag down.F	GAACAACGGTAAAACTCACTATAGGC
pqn-40	pqn-40 diag up.R	GTAACCGCGAACACACATAGCGG
	pqn-40 diag down.F	TTTTCACTACTGTCCATTTTGAGCC
rol-6	rol-6 diag up.R	TCATAACCGACTAGACTGCTTAGG
	rol-6 diag down.F	ATCAATGATTCTAAACTTATAGAACC
skr-7	skr-7 diag up.R	GACAATACCTGCATCGTGAGCTCC
	skr-7 diag down.F	AAACGTTGCAAATCTGTGAAATTGG
sli-1	sli-1 diag up.R	TTATATACAACCAATAGGTACCG
	sli-1 diag down.F	TGAGGGGTAAGTACCAGTTTGTTTGG
snr-1	snr-1 diag up.R	CCTCATGATCTCTGGTTTGAATCG
	snr-1 diag down.F	AAAGTTGGGTACCGTTAGGAACTGG
T04G9.1	T04G9.1 diag up.R	TAGGAACGTGCGAAAGATTCACG
	T04G9.1 diag down.F	TTTTACGAGCCACTCCGTTGTACTGACC
T19D7.3	T19D7.3 diag up.R	ATTTGCTTTTGCCAGCCAATACG
	T19D7.3 diag down.F	TCGGCTTTACAGTTTGCACATCC
tra-1	tra-1 diag up.R	GATACAGTACCCCACAAGACGC
	tra-1 diag down.F	CCGAAAGAACAGAATTATGACG
tra-2	CEOP2268 diag up.R	CTGGGCAATTCGCTTCTTGATAGC
	CEOP2268 diag down.F	AGGTAGGTAGGAAGTTTACCTGCTGG
unc-54	unc-54 diag up.R	CAGAAGTTGCATTATATTGAAGGG
	unc-54 diag down.F	AAAGAGCACCCATGACAAACAAAGG
Y87G2A.10	CEOP1708 diag up.R	AAAATTGGCAACCGACCAAATACG
	CEOP1708 diag down.F	GAATCGGCAATCTTCTCGAATTGTGC

Table 7S Universal diagnostic primers to detect presence of GF-URA3-FP and reconstituted *gfp*

Primer name	**Sequence (5' – 3')**
gfp tag diag.F[a]	GGCAGACAAACAAAAGAATGG
gfp tag diag.R[a]	GAAAGTAGTGACAAGTGTTGGC
gfp loop out diag.F[b]	GCACTACTGGAAAACTACCTG
gfp loop out diag.R[b]	CCATTCTTTTGTTTGTCTGCC

Corresponding gene-specific diagnostic primers are listed in **Table 8S.**

[a]Primers to detect the presence of GF-URA3-FP. The primer gfp tag diag.F binds the GF-URA3-FP sequence downstream of the direct repeats ('F') in the tag, and corresponding gene-specific reverse primers bind to the worm target region downstream of the tag insertion site. The primer gfp tag diag.R binds the GF-URA3-FP sequence upstream of 'F' in the tag, and corresponding gene-specific forward primers bind to the worm target region upstream of the tag insertion site.

[b]Primers to detect reassembly of the *gfp* tag. The primer gfp loop-out diag.F binds the *gfp* sequence in a region upstream of 'F' in the tag. The primer gfp loop-out diag.R binds the *gfp* sequence in a region downstream of 'F' in the tag. The gene-specific primers are the same as those used to detect the presence of the GF-URA3-FP tag.

Table 8S Gene-specific diagnostic primers to detect presence of GF-URA3-FP and reconstituted *gfp*

Gene	Primer name	Sequence (5' – 3')
aex-3	aex-3 gfp diag N.R	AGTAGTACATCCTTCCGGTTGGC
bar-1	bar-1 gfp diag N.R	GCCTCTGATAAATTTGTGTCG
col-19 (N-terminus)	col-19 gfp diag N.R	GGGTGATAGCCTGAACACAAAG
col-19 (C-terminus)	col-19 gfp diag C.R	GCCAGATTTGAAAAGCTGAAG
daf-3	daf-3 gfp diag C.R	GGGATACATTGTCCTTCTATACAGC
F56F10.3	F56F10.3 gfp diag N.R	GCTTTTGTATGAAGCCATCAGC
fem-3	fem-3 gfp diag N.R	CGTCGAATCTTCTCATTTGTGC
hsp-16.2	hsp16.2 gfp diag N.R	CTGTGAGACGTTGAGATTGATGG
ifc-2	ifc-2 gfp diag N.R	ATTGGTATACCCACTGTATCGC
let-60	let-60 gfp diag N.R	AGCACGATTTATTCGTCTTTGG
let-756	let-756 gfp diag N.R	GAGTACATATAGCTTGAACTTCC
mab-7	mab-7 gfp diag N.R	CTGATTGCATAACGGCTTATGG
mes-6	mes-6 gfp diag N.R	GCTTGTTCCTCATCTATTCCTGC
pqn-40	pqn-40 gfp diag C.R	GTTCCCAAATGCATTAATGTGG
rol-6	rol-6 gfp diag N.R	ATGGGTTTGGAGTTGGTGCTGG
skr-7	skr-7 gfp diag N.R	GTTTCTCACACCACTCAATGACC
sli-1	sli-1 gfp diag C.R	CTCCGTAAAATCTGGGACAGCG
snr-1	snr-1 gfp diag N.R	TTCCTCGGTAAACTTCGCCTGG
tra-1 (N-terminus)	tra-1 gfp diag N.R	TTACACACTGATCGACAAGCTCC
tra-1 (C-terminus)	tra-1 gfp diag C.F	AGACATCCTCATTCTCGTCGTGG
tra-2	tra-2 gfp diag C.F	ATCACATTACCGAGCGTACACCACC
unc-54	unc-54 gfp diag N.R	CACCTCCAAAACCTGCTCTCTGG