

**Table S1.** List of strains used in this work.

Strain	Genotype	Source and/or parent strains <sup>a</sup>	Relevant Tables and Figures
WT	N2 (Bristol)	CGC	Tables 1, S2; Figs 2, 3B, 3E, 3F, 4B, 4C, 4E, 5B, 5C
CX3596	<i>kyIs128(str-3p::gfp; lin-15+)</i> X	(Peckol <i>et al.</i> 2001)	Tables 1, S2; Figs 2, 3C, 5E, S3
PY6561	<i>srbc-64(tm1946) I; srbc-66(tm2943) V</i>	(Kim <i>et al.</i> 2009)	Tables 1, S2; Fig 2, 4E
KHK742	<i>srbc-64(tm1946) I; srbc-66(tm2943) V; kyIs128(str-3p::gfp; lin-15+) X</i>	PY6561, CX3596	Table 1
KHK787	<i>srg-36 srg-37(kyIr88), kyIs128(str-3p::gfp; lin-15+) X</i>	PY8244, CX3596	Table 1
PY8300	<i>oy103; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Tables 1, S2; Fig 2
PY8301	<i>oy104; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Tables 1, S2; Fig 2
PY8302	<i>oy105; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Tables 1, S2; Figs 2, 4B, 4C
PY8303	<i>oy106; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Tables 1, S2; Figs 2, 3B, 3C
PY8304	<i>oy107; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Tables 1, S2; Figs 2, 5B
PY8373	<i>oy108; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Tables 1, S2; Figs 2, 3E, 3F
PY10757	<i>oy109; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Tables 1, S2; Fig 2
PY10754	<i>oy113; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Table 1
PY10759	<i>oy117; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Table 1
PY10760	<i>oy118; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Table 1
PY10761	<i>oy119; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Table 1
PY10762	<i>oy120; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Table 1
PY10767	<i>oy125; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Table 1
PY10768	<i>oy126; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Table 1
PY10769	<i>oy127; kyIs128(str-3p::gfp; lin-15+) X</i>	CX3596	Table 1

PY10771	<i>oy129; kyls128(str-3p::gfp; lin-15+)</i> X	CX3596	Table 1
PY10773	<i>oy131; kyls128(str-3p::gfp; lin-15+)</i> X	CX3596	Table 1
PY10776	<i>oy134; kyls128(str-3p::gfp; lin-15+)</i> X	CX3596	Table 1
PY10777	<i>oy135; kyls128(str-3p::gfp; lin-15+)</i> X	CX3596	Table 1
PY10779	<i>oy137; kyls128(str-3p::gfp; lin-15+)</i> X	CX3596	Table 1
PY10780	<i>oy138; kyls128(str-3p::gfp; lin-15+)</i> X	CX3596	Table 1
PY10781	<i>oy139; kyls128(str-3p::gfp; lin-15+)</i> X	CX3596	Table 1
PY10782	<i>oy140; kyls128(str-3p::gfp; lin-15+)</i> X	CX3596	Table 1
PY10783	<i>oy141; kyls128(str-3p::gfp; lin-15+)</i> X	CX3596	Table 1
PY10784	<i>oy142; kyls128(str-3p::gfp; lin-15+)</i> X	CX3596	Table 1
PY10785	<i>oy143; kyls128(str-3p::gfp; lin-15+)</i> X	CX3596	Table 1
PY10786	<i>oy144; kyls128(str-3p::gfp; lin-15+)</i> X	CX3596	Table 1
PY10792	<i>oy106; kyls128(str-3p::gfp; lin-15+)</i> X; Ex[ <i>che-12</i> gDNA, <i>unc-122p::gfp</i> ] line 1	injected into PY8303	Fig 3B
PY10793	<i>oy106; kyls128(str-3p::gfp; lin-15+)</i> X; Ex[ <i>che-12</i> gDNA, <i>unc-122p::gfp</i> ] line 2	injected into PY8303	Fig 3B
PY10869	<i>oy106; kyls128(str-3p::gfp; lin-15+)</i> X; Ex[ <i>che-12p::che-12::gfp, unc-122p::dsRed</i> ] line 1	injected into PY8303	Fig 3B
PY10870	<i>oy106; kyls128(str-3p::gfp; lin-15+)</i> X; Ex[ <i>che-12p::che-12::gfp, unc-122p::dsRed</i> ] line 2	injected into PY8303	Fig 3B
CB3332	<i>che-12(e1812)</i> V	CGC	Fig 3B
PY10833	<i>che-12(e1812)</i> V; Ex[ <i>che-12</i> gDNA, <i>unc-122p::gfp</i> ] line 1	injected into CB3332	Fig 3B
PY10834	<i>che-12(e1812)</i> V; Ex[ <i>che-12</i> gDNA, <i>unc-122p::gfp</i> ] line 2	injected into CB3332	Fig 3B
PY10871	Ex[ <i>srbc-66p::mCherry, unc-122p::dsRed</i> ]	injected into WT	Figs 3C, 5E, S3
PY10872	<i>oy106; Ex[srbc-66p::mCherry,</i>	injected into	Fig 3C

PY10873	<i>unc-122p::dsRed]</i> <i>che-12(e1812) V; Ex[srbc-66p::mCherry, unc-122p::dsRed]</i>	PY8303 injected into CB3332	Fig 3C
RB2329	<i>maco-1(ok3165) I</i>	CGC	Figs 3E, 3F
PY10796	<i>oy108; kyIs128(str-3p::gfp; lin-15+) X; Ex[maco-1 gDNA, unc-122p::gfp]</i> line 1	injected into PY8373	Figs 3E, 3F
PY10797	<i>oy108; kyIs128(str-3p::gfp; lin-15+) X; Ex[maco-1 gDNA, unc-122p::gfp]</i> line 2	injected into PY8373	Figs 3E, 3F
KHK728	<i>oy108; kyIs128(str-3p::gfp; lin-15+) X; Ex[srg-47p::maco-1, unc-122p::gfp]</i> line 1	injected into PY8373	Figs 3E, 3F
KHK729	<i>oy108; kyIs128(str-3p::gfp; lin-15+) X; Ex[srg-47p::maco-1, unc-122p::gfp]</i> line 2	injected into PY8373	Figs 3E, 3F
KHK733	<i>oy108; kyIs128(str-3p::gfp; lin-15+) X; Ex[sra-9p::maco-1, unc-122p::gfp]</i> line 1	injected into PY8373	Figs 3E, 3F
KHK734	<i>oy108; kyIs128(str-3p::gfp; lin-15+) X; Ex[sra-9p::maco-1, unc-122p::gfp]</i> line 2	injected into PY8373	Figs 3E, 3F
KHK739	<i>oy108; kyIs128(str-3p::gfp; lin-15+) X; Ex[trx-1p::maco-1, unc-122p::gfp]</i> line 1	injected into PY8373	Figs 3E, 3F
KHK740	<i>oy108; kyIs128(str-3p::gfp; lin-15+) X; Ex[trx-1p::maco-1, unc-122p::gfp]</i> line 2	injected into PY8373	Figs 3E, 3F
PY10798	<i>qui-1(gb404) IV</i>	outcrossed from NA404	Figs 4B, 4C, 4E
PY10790	<i>oy105; kyIs128(str-3p::gfp; lin-15+) X; Ex[qui-1 gDNA, unc-122p::gfp]</i> line 1	injected into PY8302	Figs 4B, 4C
PY10791	<i>oy105; kyIs128(str-3p::gfp; lin-15+) X; Ex[qui-1 gDNA, unc-122p::gfp]</i> line 2	injected into PY8302	Figs 4B, 4C
PY8377	<i>oy105; kyIs128(str-3p::gfp; lin-15+) X; Ex[sra-6p::qui-1, unc-122p::gfp]</i> line 1	injected into PY8302	Figs 4B, 4C
PY8378	<i>oy105; kyIs128(str-3p::gfp; lin-15+) X; Ex[sre-1Δp::qui-1, unc-122p::gfp]</i> line 1	injected into PY8302	Figs 4B, 4C
PY8379	<i>oy105; kyIs128(str-3p::gfp; lin-15+) X; Ex[sra-6p::qui-1, sre-1Δp::qui-1, unc-122p::gfp]</i>	injected into PY8302	Figs 4B, 4C

	line 1		
PY8376	<i>oy105; kyIs128(str-3p::gfp; lin-15+)</i> X; Ex[ <i>sra-9p::qui-1, unc-122p::gfp</i> ] line 1	injected into PY8302	Figs 4B, 4C
KHK741	Ex[ <i>sra-6p::qui-1::mCherry, rol-6(su1006)</i> ]	injected into WT	Fig 4D
PY10794	<i>oy107; kyIs128(str-3p::gfp; lin-15+)</i> X; Ex[ <i>F32B6.10</i> gDNA, <i>unc-122p::gfp</i> ] line 1	injected into PY8304	Fig 5B
PY10795	<i>oy107; kyIs128(str-3p::gfp; lin-15+)</i> X; Ex[ <i>F32B6.10</i> gDNA, <i>unc-122p::gfp</i> ] line 2	injected into PY8304	Fig 5B
PY10799	<i>ttbk-3/F32B6.10(tm4006)</i> IV	NBRP	Figs 5B, 5C
PY10800	<i>ttbk-4/W01B6.2(tm4134)</i> IV	NBRP	Figs 5B, 5C
PY10801	<i>ttbk-5/C04G2.2(tm3841)</i> IV	NBRP	Fig 5B
VC2697	<i>ttbk-6/C45G9.1(gk1235)</i> III	CGC	Fig 5B
PY10802	<i>ttbk-7/R90.1(tm4852)</i> V	NBRP	Fig 5B
PY10874	<i>ttbk-3(tm4006)</i> IV; Ex[ <i>sra-9p::ttbk-3::gfp</i> (1 ng/μl), <i>unc-122p::dsRed</i> ] line 1	injected into PY10799	Fig 5C
PY10875	<i>ttbk-3(tm4006)</i> IV; Ex[ <i>sra-9p::ttbk-3::gfp</i> (1 ng/μl), <i>unc-122p::dsRed</i> ] line 2	injected into PY10799	Fig 5C
PY10876	<i>ttbk-3(tm4006)</i> IV; Ex[ <i>srg-47p::ttbk-3::gfp</i> (1 ng/μl), <i>unc-122p::dsRed</i> ] line 1	injected into PY10799	Fig 5C
PY10877	<i>ttbk-3(tm4006)</i> IV; Ex[ <i>srg-47p::ttbk-3::gfp</i> (1 ng/μl), <i>unc-122p::dsRed</i> ] line 2	injected into PY10799	Fig 5C
PY10878	<i>ttbk-3(tm4006)</i> IV; Ex[ <i>ceh-36p::ttbk-3::gfp</i> (1 ng/μl), <i>unc-122p::dsRed</i> ] line 1	injected into PY10799	Fig 5C
PY10879	<i>ttbk-3(tm4006)</i> IV; Ex[ <i>ceh-36p::ttbk-3::gfp</i> (1 ng/μl), <i>unc-122p::dsRed</i> ] line 2	injected into PY10799	Fig 5C
PY10880	<i>ttbk-4(tm4134)</i> IV; Ex[ <i>sra-9p::ttbk-4::gfp</i> (1 ng/μl), <i>unc-122p::dsRed</i> ] line 1	injected into PY10800	Fig 5C
PY10881	<i>ttbk-4(tm4134)</i> IV; Ex[ <i>sra-9p::ttbk-4::gfp</i> (1 ng/μl), <i>unc-122p::dsRed</i> ] line 2	injected into PY10800	Fig 5C
PY10882	<i>ttbk-4(tm4134)</i> IV; Ex[ <i>srg-47p::ttbk-4::gfp</i> (1 ng/μl), <i>unc-122p::dsRed</i> ] line 1	injected into PY10800	Fig 5C
PY10883	<i>ttbk-4(tm4134)</i> IV; Ex[ <i>srg-47p::ttbk-4::gfp</i> (1 ng/μl), <i>unc-</i>	injected into PY10800	Fig 5C

	<i>122p::dsRed</i> ] line 2		
PY10884	<i>ttbk-4(tm4134)</i> IV; Ex[ <i>ceh-36p::ttbk-4::gfp</i> (1 ng/μl), <i>unc-122p::dsRed</i> ] line 1	injected into PY10800	Fig 5C
PY10885	<i>ttbk-4(tm4134)</i> IV; Ex[ <i>ceh-36p::ttbk-4::gfp</i> (1 ng/μl), <i>unc-122p::dsRed</i> ] line 2	injected into PY10800	Fig 5C
PY10886	Ex[ <i>sra-9p::ttbk-3::gfp</i> (15 ng/μl), <i>unc-122p::gfp</i> ]	injected into WT	Fig 5D
PY10888	Ex[ <i>sra-9p::ttbk-4::gfp</i> (15 ng/μl), <i>unc-122p::gfp</i> ]	injected into WT	Fig 5D
PY10890	<i>ttbk-3(tm4006)</i> IV; Ex[ <i>srbc-66p::mCherry</i> , <i>unc-122p::dsRed</i> ]	injected into PY10799	Figs 5E, S3
PY10891	<i>ttbk-4(tm4134)</i> IV; Ex[ <i>srbc-66p::mCherry</i> , <i>unc-122p::dsRed</i> ]	injected into PY10800	Figs 5E, S3
PY10892	<i>ttbk-3(tm4006)</i> IV; <i>kyIs128(str-3p::gfp; lin-15+)</i> X	CX3596, PY10799	Figs 5E, S3
PY10893	<i>ttbk-4(tm4134)</i> IV; <i>kyIs128(str-3p::gfp; lin-15+)</i> X	CX3596, PY10800	Figs 5E, S3
FK181	<i>ksIs2[daf-7p::gfp, rol-6(su1006)]</i>	CGC	Fig S1
KHK743	<i>maco-1(ok3165)</i> I; <i>ksIs2[daf-7p::gfp, rol-6(su1006)]</i>	FK181, RB2329	Fig S1
PY10894	Ex[ <i>ttbk-3p::gfp, unc-122p::dsRed</i> ]	injected into WT	Fig S2
PY10895	Ex[ <i>ttbk-4p::gfp, unc-122p::dsRed</i> ]	injected into WT	Fig S2
PY10896	Ex[ <i>ttbk-5p::gfp, unc-122p::dsRed</i> ]	injected into WT	Fig S2
PY10897	Ex[ <i>ttbk-6p::gfp, unc-122p::dsRed</i> ]	injected into WT	Fig S2
PY10898	Ex[ <i>ttbk-7p::gfp, unc-122p::dsRed</i> ]	injected into WT	Fig S2

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<sup>a</sup>CGC – *Caenorhabditis* Genetics Center; NBRP – National BioResource Project

## REFERENCES

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