

**Table S1. Strains used in this study.**

Strain Name	Genotype
<b>20°C</b>	
N2	wild-type Bristol isolate
CB4856	wild-type Hawaiian isolate
CB1489	<i>him-8(e1489)</i> IV
OCF8	<i>Itls37</i> [pAA64: <i>pie-1p::mCherry::his-58 + unc-119(+)</i> ]; <i>jjls1092</i> [pNUT1: <i>npp-1::gfp + unc-119(+)</i> ]; <i>Itls24</i> [pAZ132: <i>pie-1p::gfp::tba-2 + unc-119(+)</i> ]
VC1474	<i>top-2(ok1930Δ)/mIn1</i> [ <i>mls14 (myo-2::gfp;pes-10::gfp) dpy-10(e1280)</i> ] II
AG261	<i>top-2(ok1930Δ)/mIn1</i> [ <i>mls14 (myo-2::gfp;pes-10::gfp) dpy-10(e1280)</i> ] II; <i>him-8(e1489)</i> IV
SP419	<i>unc-4(e120) rol-1(e91)</i> II
AG270	<i>cin-4(av59) dpy-10(av60)</i> II
AG271	<i>cin-4(av61) dpy-10(av60)</i> II
CB128	<i>dpy-10(e128)</i> II
TN64	<i>dpy-10(cn64)</i> II
AG274 &	<i>top-2(av64)</i> [TOP-2::3XFLAG via CRISPR/Cas9 in N2] II
AG275	
AG297	<i>unc-4(e120) top-2(it7av74)</i> (CRISPR reverted line) II
AG323	<i>mel-20(b317)/mnC1</i> [ <i>let-?</i> ; <i>nls190 (myo-2::gfp)</i> ] II; <i>him-8(e1489)</i> IV
AV106	<i>spo-11(ok79) IV/nT1</i> [ <i>unc-?(n754) let-?</i> ] (IV;V)
<b>15°C</b>	
KK381	<i>unc-4(e120) top-2(it7ts)</i> II
AG259	<i>top-2(it7ts)</i> II; <i>him-8(e1489)</i> IV
AG260	<i>top-2(it7ts)</i> II; <i>Itls37</i> [pAA64: <i>pie-1p::mCherry::his-58 + unc-119(+)</i> ]; <i>jjls1092</i> [pNUT1: <i>npp-1::gfp + unc-119(+)</i> ]; <i>Itls24</i> [pAZ132: <i>pie-1p::gfp::tba-2 + unc-119(+)</i> ]
AG302	<i>fem-1(hc17ts) dpy-20(e1282)</i> IV
AG303	<i>spo-11(ok79) IV/nT1</i> [ <i>qls51 (myo-2::GFP; pes-10::GFP; F22B7.9::GFP)</i> ] (IV;V); <i>top-2(it7ts)</i> II
AG287-289	<i>top-2(av73ts)</i> (CRISPR recreate of <i>it7ts</i> in N2) II
AG304	<i>top-2(av77ts)::3xflag</i> (CRISPR recreate of <i>it7ts</i> in AG274 and AG275) II.