Table S1

A

Replicate 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Strains | # of worms | Mean +/- SD | p value vs N2 | p value vs set-26 |
| N2 | 46/57 | 16.96 +/- 0.35 |  |  |
| *set-9* | 48/60 | 17.27 +/- 0.37 | 1 |  |
| *set-26* | 57/66 | 20.60 +/- 0.48 | 3.80E-08 |  |
| *set-9 set-26* | 59/66 | 21.25 +/- 0.46 | 0.00E+00 | 1 |

Replicate 2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Strains | # of worms | Mean +/- SD | p value vs N2 | p value vs *set-26* |
| N2 | 52/65 | 18.62 +/- 0.25 |  |  |
| *set-9* | 44/67 | 18.29 +/- 0.43 | 1 |  |
| *set-26* | 43/72 | 21.35 +/- 0.53 | 5.00E-06 |  |
| *set-9 set-26* | 42/67 | 23.14 +/- 0.42 | 0.00E+00 | 0.1797 |

Replicate 3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Strains | # of worms | Mean +/- SD | p value vs N2 | p value vs *set-26* |
| N2 | 69/73 | 17.77 +/- 0.29 |  |  |
| *set-9* | 61/66 | 16.39 +/- 0.27 | 0.0016 |  |
| *set-26* | 38/41 | 20.74 +/- 0.59 | 0.0000024 |  |
| *set-9 set-26* | 71/74 | 22.64 +/- 0.38 | 0 | 0.0554 |

B

Replicate 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Strains | # of worms | Mean +/- SD | p value vs N2 | p value vs *set-26* |
| N2 | 64 | 11.02 +/- 0.32 |  |  |
| *set-9* | 57 | 11.47 +/- 0.33 | 0.9591 |  |
| *set-26* | 53 | 14.72 +/- 0.43 | 0 |  |
| *set-9 set-26* | 27 | 15.22 +/- 0.59 | 1.2E-08 | 1 |

Replicate 2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Strains | # of worms | Mean +/- SD | p value vs N2 | p value vs *set-26* |
| N2 | 43 | 8.72 +/- 0.19 |  |  |
| *set-9* | 58 | 8.38 +/- 0.20 | 0.7592 |  |
| *set-26* | 63 | 11.29 +/- 0.24 | 0 |  |
| *set-9 set-26* | 57 | 10.95 +/- 0.23 | 6E-09 | 0.785 |

Table S2

A

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | F1 | F2 | F3 | F4 | F5 | F6 |
| N2 | 334 +/- 33 | 340 +/- 32 | 332 +/- 37 | 337 +/- 19 | 346 +/- 26 | 339 +/- 21 |
| *set-9* | 292 +/- 32 | 302 +/- 16 | 293 +/- 31 | 292 +/- 16 | 303 +/- 23 | 299 +/- 24 |
| *set-26* | 283 +/- 29 | 303 +/- 16 | 302 +/- 37 | 291 +/- 18 | 298 +/- 10 | 289 +/- 25 |
| *set-9 set-26* | 213 +/- 36 | 50 +/- 77 | 56 +/- 85 | 45 +/- 68 | 37 +/- 70 | 26 +/- 48 |

B

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | F1 | F2 | F3 | F4 | F5 | F6 |
| N2 | 100% | 100% | 100% | 100% | 100% | 100% |
| *set-9* | 100% | 100% | 100% | 100% | 100% | 100% |
| *set-26* | 100% | 100% | 100% | 100% | 100% | 100% |
| *set-9 set-26* | 100% | 76% | 52% | 28% | 12% | 0% |

C

|  |  |
| --- | --- |
| Progeny | Mean +/- SD |
| Progeny from P0 male X P0 herm | 165 +/- 38 |
| Progeny from F1 male X P0 herm | 163 +/- 39 |
| Progeny from F1 male X F1 herm | 52 +/- 68 |
| Progeny from P0 male X F1 herm | 51 +/- 63 |

D

|  |  |
| --- | --- |
| Strain | Mean +/- SD |
| N2 | 157 +/- 2.51 |
| F1 *set-9 set-26* | 65 +/- 7.4 |
| F2 *set-9 set-26* | 52 +/- 3.6 |
| F3 *set-9 set-26* | 49 +/- 3.7 |
| F4 *set-9 set-26* | 53 +/ -6.2 |
| F5 *set-9 set-26* | 55 +/- 4.6 |
| F6 *set-9 set-26* | 52 +/- 4.2 |

Table S3

A

|  |  |  |  |
| --- | --- | --- | --- |
| Strains | # of worms | Mean +/- SD | p value vs N2+L4440 |
| N2+L4440 | 65/70 | 18.18 +/- 0.41 |  |
| N2*+set-9/26* RNAi | 66/70 | 21.49 +/- 0.50 | 0.0000012 |
| N2*+wdr-5.1* RNAi | 64/67 | 21.63 +/- 0.61 | 0.00000066 |

|  |  |  |  |
| --- | --- | --- | --- |
| Strains | # of worms | Mean +/- SD | p value vs N2+L4440 |
| N2+L4440 | 62/67 | 16.61 +/- 0.52 |  |
| N2*+set-9/26* RNAi | 64/67 | 20.00 +/- 0.55 | 0.0001 |
| N2*+wdr-5.1* RNAi | 68/72 | 20.76 +/- 0.56 | 0.00000099 |

B

|  |  |  |  |
| --- | --- | --- | --- |
| Strains | # of worms | Mean +/- SD | p value vs rrf-1+L4440 |
| *rrf-1*+L4440 | 56/70 | 16.84 +/- 0.47 | n.a |
| *rrf-1+set-9/26* RNAi | 59/70 | 16.50 +/- 0.46 | 1 |
| *rrf-1+wdr-5.1* RNAi | 60/69 | 20.32 +/- 0.68 | 0.0000085 |

|  |  |  |  |
| --- | --- | --- | --- |
| Strains | # of worms | Mean +/- SD | p value vs rrf-1+L4440 |
| *rrf-1*+L4440 | 59/67 | 14.79 +/- 0.44 | n.a |
| *rrf-1+set-9/26* RNAi | 59/66 | 15.43 +/- 0.46 | 0.6413 |
| *rrf-1+wdr-5.1* RNAi | 61/67 | 17.58 +/- 0.56 | 0.0004 |

Table S4

A

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Strains | # of worms | Mean +/- SD | p value vs N2 | p value vs *set-26* |
| N2 | 45/58 | 17.51 +/- 0.33 |  |  |
| *set-26* | 55/61 | 20.62 +/- 0.46 | 0.00000075 |  |
| *set-26::gfp* | 52/61 | 18.77 +/- 0.37 | 0.0195 | 0.0024 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Strains | # of worms | Mean +/- SD | p value vs N2 | p value vs *set-26* |
| N2 | 35/49 | 17.71 +/- 0.35 |  |  |
| *set-26* | 70/86 | 20.88 +/- 0.42 | 0.000000054 |  |
| *set-26::gfp* | 53/80 | 19.25 +/- 0.34 | 0.0042 | 0.0006 |

B

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Strains | # of worms | Mean +/- SD | p value vs N2 | p value vs *set-26* |
| N2 | 61 | 7.02 +/- 0.15 |  |  |
| *set-26* | 60 | 7.97 +/- 0.19 | 0.0002 |  |
| *set-26::gfp* | 52 | 7.15 +/- 0.19 | 1 | 0.0065 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Strains | # of worms | Mean +/- SD | p value vs N2 | p value vs *set-26* |
| N2 | 67 | 7.01 +/- 0.14 |  |  |
| *set-26* | 56 | 7.86 +/- 0.18 | 0.0008 |  |
| *set-26::gfp* | 55 | 7.24 +/- 0.20 | 0.5832 | 0.0691 |

C

|  |  |
| --- | --- |
| Strain | Mean +/- SD |
| N2 | 294 +/- 24 |
| F3 *set-9 set-26* | 39 +/- 60 |
| *set-9::gfp set-26::gfp* | 242 +/- 20 |

Table S5

A

|  |  |
| --- | --- |
| Peptide# | Mean +/- SD |
| P22 | 53716 +/- 14910 |
| P24 | 43989 +/- 18399 |
| P19 | 41971 +/- 35922 |
| P25 | 33272 +/- 13841 |
| P23 | 32016 +/- 16214 |
| P21 | 21673 +/- 20341 |
| P20 | 18864 +/- 24133 |
| P148 | 11574 +/- 14806 |
| P38 | 9542 +/- 10432 |
| H3K4me3 | 0 +/- 0 |
| H3K9me3 | 0 +/- 0 |

Table S6

A

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *tiar-2* | *vit-1* | *Y43D4A.5* | *bli-2* | *wrt-2* | *cah-1* | *grd-11* | *nhr-172* | *bath-3* | *F14D2.11* |
| qPCR | -2.1 | -2.6 | -1.5 | -2.2 | -1.6 | 2.7 | 3.1 | 2.0 | 1.6 | 1.8 |
| RNA-seq | -2.9 | -3.1 | -2.0 | -2.2 | -1.6 | 2.9 | 3.1 | 3.0 | 2.8 | 1.7 |

B

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *asp-12* | *M04C3.1* | *grd-13* | *fipr-2* | *fbn-1* | *his-1* | *catp-3* | *inx-2* | *che-3* | *gst-24* |
| qPCR | -1.8 | -1.6 | -2.3 | -2.0 | -1.9 | 2.0 | 2.9 | 2.3 | 2.6 | 2.3 |
| RNA-seq | -2.2 | -2.0 | -2.0 | -2.0 | -1.9 | 2.4 | 2.0 | 2.9 | 1.9 | 1.9 |