Additional File 1: Supplemental Data S1

List of ORFs contained in 25 duplications detected by oaCGH in five control and 25 adaptive recovery experimental *C. elegans* lines following 180-212 generations of population expansion under competitive conditions. The duplications are listed in Table 1. Duplication breakpoint coordinates and ORFs contained therein are based on Wormbase version WS243.

Duplication in 7B:

Chr IV:6,837,045..6,879,487
Size = 42,443 bp
5 protein-coding genes:
lip-1 (C05B10.1), R13H7.2, *srx-20* (R13H7.1), *srx-19* (T05A12.1), *tre-2* (T05A12.2; partial duplication)
1 pseudogene:
R13H7.3

Duplication in 7B:

Chr V:19,505,848..20,101,145
Size = 595,298 bp
94 protein-coding genes:
Y43F8B.3 (partial duplication), Y43F8B.19, phy-4 (Y43F8B.4), Y43F8B.3, Y43F8B.2, Y43F8B.1, B0399.2, B0399.1, *nlp-25* (Y43F8C.1), Y43F8C.20, *oac-1* (B0399.2), *kcn1-1* (B0399.1), *nlp-25* (Y43F8C.1), *grsp-1* (Y43F8C.20), *nlp-26* (Y43F8C.2),Y43F8C.3, dyf-19 (Y43F8C.4), Y43F8C.5, Y43F8C.6, Y43F8C.7, *mrps-28* (Y43F8C.8), Y43F8C.9, *dmd-3* (Y43F8C.10), Y43F8C.11, *mrp-7* (Y43F8C.12), Y43F8C.13, *ani-3* (Y43F8C.14), Y43F8C.18, *srv-3* (Y43F8C.19), Y43F8C.15, Y43F8C.23, Y43F8C.16, Y43F8C.17, Y116F11A.6, Y116F11A.3, Y116F11A.1, W04E12.7, *fbxa-131* (W04E12.1), W04E12.2, W04E12.3, W04E12.4, W04E12.5, *clec-49* (W04E12.6), *clec-50* (W04E12.8), W04E12.9, M162.5, M162.15 *fbxa-118* (M162.8), *fbxa-194* (M162.11), *srt-45* (M162.3), *clec-258* (M162.2), M162.7, Y116F11B.2, *daf-28* (Y116F11B.1), Y116F11B.17, *pcp-4* (Y116F11B.3), *srw-38* (Y116F11B.5), Y116F11B.6, Y116F11B.7, Y116F11B.8, Y116F11B.1, *gly-4* (Y116F11B.12), Y116F11B.13, *fars-2* (Y60A3A.13), Y116F11B.14, *chk-2* (Y60A3A.12), Y60A3A.19, Y60A3A.16, *skr-4* (Y60A3A.18), Y60A3A.14, *dhs-24* (Y60A3A.10), Y60A3A.9, Y60A3A.8, Y60A3A.7, *srh-172* (Y60A3A.6), *srh-171* (Y60A3A.5), *srh-173* (Y60A3A.4), *srh-183* (Y60A3A.3), Y60A3A.24, *clec-260* (Y60A3A.2), *sri-67* (Y60A3A.22), Y60A3A.25, *unc-51* (Y60A3A.1), Y60A3A.23, Y60A3A.21, *lgc-55* (Y113G7A.5), Y113G7A.16, *spe-19* (Y113G7A.10), *srh-233* (Y113G7A.1), *ttx-1* (Y113G7A.6), *fre-1* (Y113G7A.8), *dcs-1* (Y113G7A.9), *sec-23* (Y113G7A.3), Y113G7A.15 (partial duplication)
43 pseudogenes:
B0399.t16, B0399.t15, B0399.t14, B0399.t1, B0399.t13, B0399.t12, B0399.t2, B0399.t4, B0399.t3, B0399.t5, B0399.t11, B0399.t10, B0399.t9, B0399.t8, B0399.t7, B0399.t6, Y43F8C.t1, Y43F8C.t9, Y43F8C.t2, Y43F8C.t8, Y43F8C.t3, Y43F8C.t4, Y43F8C.t7, Y43F8C.t6, Y43F8C.t5, Y43F8C.24, Y116F11A.4, W04E12.10,

M162.12, M162.13, M162.9, M162.4, M162.14, M162.6, Y116F11B.4, Y116F11B.10, Y60A3A.17, Y60A3A.15, Y60A3A.10, Y60A3A.28, Y60A3A.t1, Y60A3A.t2, Y113G7A.2

Duplication in 7D:
Chr IV:505,050..701,113
Size = 196,064 bp
38 protein-coding genes + 3 tRNA genes:
W03G1.5, *pig-1* (W03G1.6), *asm-3* (W03G1.7), W03G1.2, W03G1.8, *glt-7* (W03G1.1), F09C11.1, F56A11.4, *efn-4* (F56A11.3), F56A11.7, F56A11.5, *gex-2* (F56A11.1), F56A11.6, C18H7.12, C18H7.5, C18H7.6, C18H7.4, C18H7.7, C18H7.11, *srt-59* (C18H7.8), *prmt-4* (C18H7.9), *col-102* (C18H7.3), *inx-18* (C18H7.2), C18H7.1, *nhr-76* (C05G6.2), K11H12.9, K11H12.1, *rpl-15* (K11H12.2), K11H12.8, K11H12.7, K11H12.6, K11H12.11, K11H12.3, K11H12.4, K11H12.10, K11H12.5, *cut1-28* (F41A4.1), *cut1-26* (Y55F3C.7) (partial duplication)
1 pseudogene:
Y55F3C.17

Duplication in 16B*:
Chr V: 19,295,123..19,839,705
Size = 544,583 bp
110 protein-coding genes:
F55C9.6 (partial duplication), *fbxb-60* (F55C9.7), F55C9.14, *fbxb-62* (F55C9.8), *fbxb-63* (F55C9.13), *fbxb-61* (F55C9.10), F55C9.15, F55C9.11, C43D7.8, *fbxb-64* (C43D7.9), *srh-208* (C43D7.6), C43D7.7, *sdz-6* (C43D7.5), C43D7.4, *fbxb-65* (C43D7.2), C14B4.2, Y43F8A.1, Y43F8A.2, Y43F8A.3, *srw-84* (Y43F8A.4), Y43F8A.5, C25F9.8, C25F9.13, *srw-86* (C25F9.7), C25F9.12, C25F9.6, C25F9.10, C25F9.5, C25F9.4, C25F9.9, C25F9.15, C25F9.2, *srw-85* (C25F9.1), C25F9.11, C25F9.16, C25F9.14, M04C3.1, M04C3.2, M04C3.5, Y43F8B.14, Y43F8B.13, Y43F8B.24, Y43F8B.15, Y43F8B.25, Y43F8B.23, Y43F8B.12, Y43F8B.11, Y43F8B.10, Y43F8B.9, Y43F8B.22, Y43F8B.17,Y43F8B.28, Y43F8B.18, Y43F8B.7, Y43F8B.29, *scl-21* (Y43F8B.5), Y43F8B.3, Y43F8B.19, *phy-4* (Y43F8B.4), Y43F8B.2, Y43F8B.1, Y43F8B.20, *oac-1* (B0399.2), *kcnl-1* (B0399.1), *nlp-25* (Y43F8C.1), *grsp-1* (Y43F8C.20), *nlp-26* (Y43F8C.2), Y43F8C.3, *dyf-19* (Y43F8C.4), Y43F8C.5, Y43F8C.6, Y43F8C.7, mrps-28 (Y43F8C.8), Y43F8C.9, *dmd-3* (Y43F8C.10), Y43F8C.11, *mrp-7* (Y43F8C.12), Y43F8C.13, *ani-3* (Y43F8C.14), Y43F8C.18, *srv-3* (Y43F8C.19), Y43F8C.15, Y43F8C.23, Y43F8C.16, Y43F8C.17, Y116F11A.6, Y116F11A.3, Y116F11A.1, W04E12.7, *fbxa-131* (W04E12.1), W04E12.2, W04E12.3, W04E12.4, W04E12.5, *clec-49* (W04E12.6), *clec-50* (W04E12.8), W04E12.9, M162.5, M162.15, *fbxa-118* (M162.8), *fbxa-194* (M162.11), *srt-45* (M162.3), *clec-258* (M162.2), *clec-259* (M162.1), M162.7, Y116F11B.2, *daf-28* (Y116F11B.1), Y116F11B.17, *pcp-4* (Y116F11B.3), *srw-38* (Y116F11B.5)
52 pseudogenes:
C43D7.10, C43D7.11, C43D7.12, C43D7.3, C43D7.1, C14B4.t1, Y43F8A.t1, C25F9.t3, C25F9.t2, C25F9.t1, C25F9.t4, C25F9.t5, Y43F8B.8, Y43F8B.21,

Y43F8B.6, B0399.t16, B0399.t15, B0399.t14, B0399.t1, B0399.t13, B0399.t12, B0399.t2, B0399.t3, B0399.t4, B0399.t5, B0399.t11, B0399.t10, B0399.t9, B0399.t8, B0399.t7, B0399.t6, Y43F8C.t1, Y43F8C.t9, Y43F8C.t2, Y43F8C.t8, Y43F8C.26, Y43F8C.t3, Y43F8C.t4, Y43F8C.t7, Y43F8C.t6, Y43F8C.t5, Y43F8C.24, Y116F11A.4, W04E12.10, M162.12, M162.13, M162.9, M162.4, M162.14, M162.6, Y116F11B.4, *srz-35* (Y116F11B.4) (partial duplication)

Duplication in 16C:
Chr IV:9,054,304..9,457,751
Size = 403,448 bp
89 protein-coding genes:
nhr-11 (ZC410.1), *mppb-1* (ZC410.2), *mans-4* (ZC410.3), *twk-8* (ZC410.4), ZC410.5, *1pl-1* (ZC410.7), *icln-1* (C01F6.8), C01F6.9, *cpna-3* (C01F6.1), C01F6.2, C01F6.14, *fem-3* (C01F6.4), *aly-1* (C01F6.5), *nrfl-1* (C01F6.6), *delm-1* (F23B2.3), *daf-10* (F23B2.4), *flp-1* (F23B2.5), *rpb-12* (F23B2.13), *aly-2* (F23B2.6), F23B2.7, F23B2.10, *pcp-3* (F23B2.11), *pcp-2* (F23B2.12), C07C7.3, C07C7.1, C46C2.5, C46C2.7, *wnk-1* (C46C2.1), C46C2.6, C46C2.2, C46C2.3, Y11D7A.3, *rab-28* (Y11D7A.4), Y11D7A.5, Y11D7A.7, Y11D7A.8, Y11D7A.9, Y11D7A.10, *col-120* (Y11D7A.11), *flh-1* (Y11D7A.12), Y11D7A.19, *flh-13* (Y11D7A.13), *hum-9* (Y11D7A.14), *nhr-267* (H22D14.1), *nhr-264* (F14A5.1), F49C12.1, F49C12.2, F49C12.3, F49C12.4, F49C12.5, F49C12.6, F49C12.7, F49C12.9, *rpn-7* (F49C12.8), F49C12.10, F49C12.11, F49C12.12, *vha-17* (F49C12.13), F49C12.14, F49C12.15, *CLEC-183* (T20D3.1), T20D3.2, T20D3.3, T20D3.5, T20D3.6, *vps-26* (T20D3.7), T20D3.8, T20D3.11, C10C5.1, C10C5.2, C10C5.3, C10C5.4, C10C5.5, C10C5.7, *daf-15* (C10C5.6), *col-121* (F56D5.1), F56D5.2, F56D5.3, F56D5.6, F56D5.5, F56D5.9, *srxa-2* (F56D5.10), F59B8.1, *idh-1* (F59B8.2), F38E11.9, *hsp-12.3* (F38E11.1), *hsp-12.6* (F38E11.2), *cut1-17* (F38E11.4), *cpin-1* (F38E11.3)
8 pseudogenes:
F23B2.9, F23B2.8, C46C2.4, Y11D7A.1, Y11D7A.16, *srg-52* (Y11D7A.18), F56D5.4, F56D5.8

Duplication in 16C:
Chr V:800,408..1,103,333
Size = 302,926 bp
57 protein-coding genes:
nhr-270 (R13D11.8), R13D11.11, R13D11.4, R13D11.10, R13D11.3, R13D11.1, *srx-32* (R13D11.9), *srx-31* (F41H8.4), F41H8.2, F41H8.1, K09C6.7, K09C6.10, K09C6.8, K09C6.6, *srbc-13* (K09C6.5), *srbc-12* (K09C6.4), K09C6.3, K09C6.9, K09C6.2, K09C6.1, T02B11.3, T02B11.4, T02B11.9, T02B11.8, *srg-53* (T02B11.1), *srj-38* (T02B11.5), T02B11.6, T02B11.10, *nas-32* (T02B11.7), *fmo-5* (H24K24.5), H24K24.4, H24K24.3, H24K24.2, Y50D4C.2, Y50D4C.3, Y50D4C.6, *sqv-6* (Y50D4C.4), *unc-34* (Y50D4C.1), Y50D4C.5, *ergo-1* (R09A1.1), R09A1.2, R09A1.3, *flp-34* (R09A1.5), *nra-4* (C02E11.1), K10C9.4, K10C9.9, *str-224* (K10C9.8), K10C9.3, *str-67* (K10C9.6), K10C9.7, K10C9.1, Y50D4B.7, Y50D4B.6, *clec-203* (Y50D4B.5), Y50D4B.4, Y50D4B.3, Y50D4B.2 (partial duplication)
2 pseudogenes:

srx-30 (F41H8.3), *str-53* (T02B11.2),

Duplication in 16D:
Chr II: 6,248,049..6,406,772
Size = 158,724 bp
48 protein-coding genes:
T24H7.3 (partial duplication), T24H7.2, *phb-2* (T24H7.1), F13H8.5, F13H8.11, *nmgp-1* (F13H8.4), F13H8.12, F13H8.3, F13H8.8, F13H8.2, *bpl-1* (F13H8.10), F13H8.9, F13H8.1, F13H8.6, F13H8.7, C29F5.3, *mps-1* (C29F5.4), C29F5.5, *sdz-3* (C29F5.2), C29F5.1, C29F5.8, *glb-10* (C29F5.7), C32D5.3, C32D5.4, *sma-6* (C32D5.2), *set-4* (C32D5.5), C32D5.6, C32D5.14, C32D5.7, C32D5.8, C32D5.1, *lgg-1* (C32D5.9), C32D5.10, C32D5.11, C32D5.12, K10B2.4, *ani-2* (K10B2.5), *clec-88* (K10B2.3), K10B2.2, *lin-23* (K10B2.1), F58F12.1, F58F12.4, F58F12.2, F58F12.3, *zig-10* (T25D10.2), *btb-2* (T25D10.5), T25D10.1, *spp-11* (T25D10.3) (partial duplication)
1 pseudogene:
K10B2.t1

Duplication in 16D:
Chr V: 19,746,828..19,885,746
Size = 138,919 bp
26 protein-coding genes:
W04E12.4 (partial duplication), W04E12.5, *clec-49* (W04E12.6), *clec-50* (W04E12.8), W04E12.9, M162.5, M162.15, *fbxa-118* (M162.8), *fbxa-194* (M162.11), *srt-45* (M162.3), *clec-258* (M162.2), *clec-259* (M162.1), M162.7, Y116F11B.2, *daf-28* (Y116F11B.1), Y116F11B.17, *pcp-4* (Y116F11B.3), *srw-38* (Y116F11B.5), Y116F11B.6, Y116F11B.7, Y116F11B.9, Y116F11B.8, Y116F11B.9a, Y116F11B.11, *gly-4* (Y116F11B.12), Y116F11B.13 (partial duplication)
8 pseudogenes:
M162.12, M162.13, M162.9, *srt-46* (M162.4), M162.14, M162.6, *srz-35* (Y116F11B.4), Y116F11B.10

Duplication in 16E*:
Chr V:19,295,580..19,840,162
Size = 544,583 bp
110 protein-coding genes:
F55C9.6 (partial duplication), *fbxb-60* (F55C9.7), F55C9.14, *fbxb-62* (F55C9.8), *fbxb-63* (F55C9.13), *fbxb-61* (F55C9.10), F55C9.15, F55C9.11, C43D7.8, *fbxb-64* (C43D7.9), *srh-208* (C43D7.6), C43D7.7, *sdz-6* (C43D7.5), C43D7.4, *fbxb-65* (C43D7.2), C14B4.2, Y43F8A.1, Y43F8A.2, Y43F8A.3, *srw-84* (Y43F8A.4), Y43F8A.5, C25F9.8, C25F9.13, *srw-86* (C25F9.7), C25F9.12, C25F9.6, C25F9.10, C25F9.5, C25F9.4, C25F9.9, C25F9.15, C25F9.2, *srw-85* (C25F9.1), C25F9.11, C25F9.16, C25F9.14, M04C3.1, M04C3.2, M04C3.5, Y43F8B.14, Y43F8B.13, Y43F8B.24, Y43F8B.15, Y43F8B.25, Y43F8B.23, Y43F8B.12, Y43F8B.11, Y43F8B.10, Y43F8B.9, Y43F8B.22, Y43F8B.17,Y43F8B.28, Y43F8B.18, Y43F8B.7, Y43F8B.29, *scl-21* (Y43F8B.5), Y43F8B.3, Y43F8B.19, *phy-4*

(Y43F8B.4), Y43F8B.2, Y43F8B.1, Y43F8B.20, *oac-1* (B0399.2),kcnl-1 (B0399.1), *nlp-25* (Y43F8C.1), *grsp-1* (Y43F8C.20), *nlp-26* (Y43F8C.2), Y43F8C.3, *dyf-19* (Y43F8C.4), Y43F8C.5, Y43F8C.6, Y43F8C.7, *mrps-28* (Y43F8C.8), Y43F8C.9, *dmd-3* (Y43F8C.10), Y43F8C.11, *mrp-7* (Y43F8C.12), Y43F8C.13, *ani-3* (Y43F8C.14), Y43F8C.18, *srv-3* (Y43F8C.19), Y43F8C.15, Y43F8C.23, Y43F8C.16, Y43F8C.17, Y116F11A.6, Y116F11A.3, Y116F11A.1, W04E12.7, *fbxa-131* (W04E12.1), W04E12.2, W04E12.3, W04E12.4, W04E12.5, *clec-49* (W04E12.6), *clec-50* (W04E12.8), W04E12.9, M162.5, M162.15, *fbxa-118* (M162.8), *fbxa-194* (M162.11), *srt-45* (M162.3), *clec-258* (M162.2), *clec-259* (M162.1), M162.7, Y116F11B.2, *daf-28* (Y116F11B.1), Y116F11B.17, *pcp-4* (Y116F11B.3), *srw-38* (Y116F11B.5)

52 pseudogenes:

C43D7.10, C43D7.11, C43D7.12, C43D7.3, C43D7.1, C14B4.t1, Y43F8A.t1, C25F9.t3, C25F9.t2, C25F9.t1, C25F9.t4, C25F9.t5, Y43F8B.8, Y43F8B.21, Y43F8B.6, B0399.t16, B0399.t15, B0399.t14, B0399.t1, B0399.t13, B0399.t12, B0399.t2, B0399.t3, B0399.t4, B0399.t5, B0399.t11, B0399.t10, B0399.t9, B0399.t8, B0399.t7, B0399.t6, Y43F8C.t1, Y43F8C.t9, Y43F8C.t2, Y43F8C.t8, Y43F8C.26, Y43F8C.t3, Y43F8C.t4, Y43F8C.t7, Y43F8C.t6, Y43F8C.t5, Y43F8C.24, Y116F11A.4, W04E12.10, M162.12, M162.13, M162.9, M162.4, M162.14, M162.6, Y116F11B.4, *srz-35* (Y116F11B.4) (partial duplication)

Duplication in 19C:

Chr V:7,637,941..7,641,911
Size = 3,971 bp
3 protein-coding genes:

clec-46 (F07C4.9) (partial duplication), *clec-45* (F07C4.2), F07C4.10

0 pseudogenes:

Duplication in 19C:

Chr II:14,037,517.. 14,039,164
Size = 7,572 bp
1 protein-coding genes:

daf-45 (W01G7.1) (partial duplication)

0 pseudogenes:

Duplication in 19E:

Chr X:813,802.. 821,373
Size = 7,572 bp
2 protein-coding genes:

ifd-2 (F25E2.4), *daf-3* (F25E2.5) (partial duplication)

0 pseudogenes:

Duplication in 19E:

Chr X:829,580.. 835,392
Size = 5,813 bp
2 protein-coding genes:

F39H12.2, F39H12.1 (partial duplication)
0 pseudogenes:

Duplication in 50A:
Chr V:19,780,484.. 19,972,052
Size = 191,569 bp
30 protein-coding genes:
srt-45 (M162.3), *clec-258* (M162.2), *clec-259* (M162.1), M162.7, Y116F11B.2, *daf-28* (Y116F11B.1), Y116F11B.17, *pcp-4* (Y116F11B.3), *srw-38* (Y116F11B.5), Y116F11B.6, Y116F11B.7, Y116F11B.9, Y116F11B.8, Y116F11B.9a, Y116F11B.11, *gly-4* (Y116F11B.12), Y116F11B.13, *fars-2* (Y60A3A.13), Y116F11B.14, *chk-2* (Y60A3A.12), Y60A3A.19, Y60A3A.16, *skr-4* (Y60A3A.18), Y60A3A.14, *dhs-24* (Y60A3A.10), Y60A3A.9, Y60A3A.8, Y60A3A.7, *srh-172* (Y60A3A.6), *srh-171* (Y60A3A.5) (partial duplication)
8 pseudogenes:
srt-46 (M162.4), M162.14, M162.6, *srz-35* (Y116F11B.4), Y116F11B.10, Y60A3A.17, *nhr-240* (Y60A3A.15), Y60A3A.11

Duplication in 50A:
Chr X:8,624,771..9,024,484
Size = 399,714 bp
64 protein-coding genes:
K01A12.3 (partial duplication), *stg-2* (F12D9.1), F12D9.2, *rig-1* (K09E2.4), K09E2.2, K09E2.3, K09E2.1, *frpr-8* (K09E2.5), *jbts-14* (F53A9.4), F53A9.3, F53A9.2, F53A9.1, F53A9.6, F53A9.7, F53A9.8, F53A9.9, *tnt-2* (F53A9.10), EGAP4.1, M02D8.6, M02D8.3, M02D8.2, M02D8.7, *asns-2* (M02D8.4), M02D8.5, M02D8.1, ZK271.4, ZK271.3, *unc-27* (ZK271.2), *chup-1* (ZK271.1), R04E5.7, R04E5.8, R04E5.9, R04E5.2, *ifd-1* (R04E5.10), C28G1.5. C28G1.6, *sec-15* (C28G1.3), C28G1.2, *ubc-23* (C28G1.1), C28G1.10, C28G1.4, C06E2.5, C06E2.9, *ins-9* (C06E2.8), *ubc-22* (C06E2.7), *ubc-21* (C06E2.3), C06E2.1, C06E2.2, C13E3.1, D1009.3, *cyn-8* (D1009.2), *nlp-14* (D1009.4), *acs-2* (D1009.1), *dylt-2* (D1009.5), D1073.1, *aexr-3* (C48C5.3), *nmur-1* (C48C5.1), *twk-18* (C24A3.6), C24A3.4, C24A3.2, C24A3.1, C24A3.9, T25B6.4, T25B6.5
0 pseudogenes:

Duplication in 50B:
Chr V:19,781,064.. 19,972,507
Size = 191,444 bp
30 protein-coding genes:
srt-45 (M162.3), *clec-258* (M162.2), *clec-259* (M162.1), M162.7, Y116F11B.2, *daf-28* (Y116F11B.1), Y116F11B.17, *pcp-4* (Y116F11B.3), *srw-38* (Y116F11B.5), Y116F11B.6, Y116F11B.7, Y116F11B.9, Y116F11B.8, Y116F11B.9a, Y116F11B.11, *gly-4* (Y116F11B.12), Y116F11B.13, *fars-2* (Y60A3A.13), Y116F11B.14, *chk-2* (Y60A3A.12), Y60A3A.19, Y60A3A.16, *skr-4* (Y60A3A.18), Y60A3A.14, *dhs-24* (Y60A3A.10), Y60A3A.9, Y60A3A.8, Y60A3A.7, *srh-172* (Y60A3A.6), *srh-171* (Y60A3A.5)

8 pseudogenes:

srt-46 (M162.4), M162.14, M162.6, *srz-35* (Y116F11B.4), Y116F11B.10, Y60A3A.17, *nhr-240* (Y60A3A.15), Y60A3A.11

Duplication in 50C:

Chr V:19,659,829.. 19,976,506
Size = 316,680 bp
58 protein-coding genes:

Y43F8C.11, *mrp-7* (Y43F8C.11), Y43F8C.13, *ani-3* (Y43F8C.14), Y43F8C.18, *srv-3* (Y43F8C.19), Y43F8C.15, Y43F8C.23, Y43F8C.16, Y43F8C.17, Y116F11A.6, Y116F11A.3, Y116F11A.1, W04E12.7, *fbxa-131* (W04E12.1), W04E12.2, W04E12.3, W04E12.4, W04E12.5a, W04E12.5b, *clec-49* (W04E12.6), *clec-50* (W04E12.8), W04E12.9, M162.5, M162.15, *fbxa-118* (M162.8), *fbxa-194* (M162.11), *srt-45* (M162.3), *clec-258* (M162.2), *clec-259* (M162.1), M162.7, Y116F11B.2, *daf-28* (Y116F11B.1), Y116F11B.17, *pcp-4* (Y116F11B.13), *srw-38* (Y116F11B.5), Y116F11B.6, Y116F11B.7, Y116F11B.8, Y116F11B.9a, Y116F11B.11, *gly-4* (Y116F11B.12), Y116F11B.13, *fars-2* (Y60A3A.13), Y116F11B.14, *cchk-2* (Y60A3A.12), Y60A3A.19, Y60A3A.16, *skr-4* (Y60A3A.18), Y60A3A.14, *dhs-24* (Y60A3A.10), Y60A3A.9, Y60A3A.8, Y60A3A.7, *srh-172* (Y60A3A.6), *srh-171* (Y60A3A.5), *srh-173* (Y60A3A.4), *srh-183* (Y60A3A.3) (partial duplication)

20 pseudogenes:

Y43F8C.t7, Y43F8C.t6, Y43F8C.t5, Y43F8C.24, Y116F11A.4, W04E12.10, M162.12, M162.13, M162.9, *srt-46* (M162.4), M162.14, M162.6, *srz-35* (Y116F11B.4), Y116F11B.10, Y60A3A.17, *nhr-240* (Y60A3A.15), Y60A3A.17, *nhr-240* (Y60A3A.15), Y60A3A.11, Y60A3A.28

Duplication in 50D:

Chr IV:560,240.. 1,024,886
Size = 464,647 bp
84 protein-coding genes:

efn-4 (F56A11.3), F56A11.7, F56A11.5, *gex-2* (F56A11.1), F56A11.6, C18H7.12, C18H7.5, C18H7.6, C18H7.4, C18H7.7, C18H7.11, *srt-59* (C18H7.8), *prmt-4* (C18H7.9), *col-102* (C18H7.3), *inx-18* (C18H7.2), C18H7.1, *nhr-76* (C05G6.2), K11H12.9, K11H12.1, *rpl-15* (K11H12.2), K11H12.8, K11H12.7, K11H12.6, K11H12.11, K11H12.3, K11H12.4, K11H12.10, K11H12.5, *cut1-28* (F41A4.1), *cut1-26* (Y55F3C.7), *clec-164* (Y55F3C.5), Y55F3C.10, Y55F3C.9, *srt-24* (Y55F3C.8), *kvs-5* (Y55F3C.3), *srt-23* (Y55F3C.2), *gst-40* (F56B3.10), *col-103* (F56B3.1), F56B3.2, F56B3.3, F56B3.9, *mrpl-2* (F56B3.8), *ugt-52* (F56B3.7), F56B3.4, F56B3.6, *skr-18* (F56B3.12), F56B3.11, *ech-5* (F56B3.5), *mrpl-46* (Y55F3BL.1), Y55F3BL.4, Y55F3BL.6, Y55F3BL.2, *madf-1* (Y55F3BR.5), Y55F3BR.10, Y55F3BR.6, Y55F3BR.7, *lgc-33* (Y55F3BR.4), *lem-4* (Y55F3BR.8), Y55F3BR.11, Y55F3BR.2, Y55F3BR.1, *mak-2* (C44C8.6), *fbxc-1* (C44C8.4), *fbxc-9* (C44C8.10), *fbxc-2* (C44C8.3), *fbxc-10* (C44C8.9), *fbxc-4* (C44C8.2), *fbxc-11* (C44C8.8), *fbxc-5* (C44C8.1), *fbxc-12* (C44C8.7), *fbxc-3* (F58H7.8), *fbxc-8* (F58H7.7), F58H7.5, *lgc-30* (F58H7.3), F58H7.1, *faah-3* (F58H7.2), *plx-1*

(Y55F3AL.1), *egrh-2* (Y55F3AM.7), Y55F3AM.6, Y55F3AM.5, *immp-2* (Y55F3AM.8), Y55F3AM.9, *atg-3* (Y55F3AM.4), Y55F3AM.3

2 pseudogenes:

Y55F3C.17, Y55F3C.13,

Duplication in 50D:

Chr V:18,703,541..18,723,878
Size = 20,338 bp

4 protein-coding genes:

Y69H2.9 (partial duplication), Y17D7C.1, Y17D7C.6, Y17D7C.2

5 pseudogenes:

Y69H2.18, Y69H2.16, Y17D7C.5, Y17D7C.4, Y17D7C.3

Duplication in 50D:

Chr V:19,780,935..19,966,260
Size = 185,326 bp

30 protein-coding genes:

srt-45 (M162.3), *clec-258* (M162.2), *clec-259* (M162.1), M162.7, Y116F11B.2, *daf-28* (Y116F11B.1), Y116F11B.17, *pcp-4* (Y116F11B.3), *srw-38* (Y116F11B.5), Y116F11B.6, Y116F11B.7, Y116F11B.9, Y116F11B.8, Y116F11B.9a, Y116F11B.11, *gly-4* (Y116F11B.12), Y116F11B.13, *fars-2* (Y60A3A.13), Y116F11B.14, *chk-2* (Y60A3A.12), Y60A3A.19, Y60A3A.16, *skr-4* (Y60A3A.18), Y60A3A.14, *dhs-24* (Y60A3A.10), Y60A3A.9, Y60A3A.8, Y60A3A.7, *srh-172* (Y60A3A.6), *srh-171* (Y60A3A.5) (partial duplication)

8 pseudogenes:

srt-46 (M162.4), M162.14, M162.6, *srz-35* (Y116F11B.4), Y116F11B.10, Y60A3A.17, Y60A3A.15, Y60A3A.11

Duplication in 50E:

Chr II:6,312,598..6,444,674
Size = 132,077 bp

32 protein-coding genes:

C32D5.3, C32D5.4, *sma-6* (C32D5.2), *set-4* (C32D5.5), C32D5.6, C32D5.14, C32D5.7, C32D5.8, C32D5.1, *lgg-1* (C32D5.9), C32D5.10, C32D5.11, C32D5.12, K10B2.4, *ani-2* (K10B2.5), *clec-88* (K10B2.3), K10B2.2, *lin-23* (K10B2.1), F58F12.1, F58F12.4, F58F12.2, F58F12.3, *zig-10* (T25D10.2), *btb-2* (T25D10.5), T25D10.1, *spp-11* (T25D10.3), T25D10.4, K03H9.3, *col-75* (K03H9.2), K03H9.1, *cutl-16* (K06A1.3), K06A1.2 (partial duplication)

1 pseudogene:

K10B2.t1

Duplication in 50E:

Chr V:19,780,952..19,966,162
Size = 185,211 bp

30 protein-coding genes:

srt-45 (M162.3), *clec-258* (M162.2), *clec-259* (M162.1), M162.7, Y116F11B.2, *daf-28* (Y116F11B.1), Y116F11B.17, *pcp-4* (Y116F11B.3), *srw-38* (Y116F11B.5), Y116F11B.6, Y116F11B.7, Y116F11B.9, Y116F11B.8, Y116F11B.9a, Y116F11B.11, *gly-4* (Y116F11B.12), Y116F11B.13, *fars-2* (Y60A3A.13), Y116F11B.14, *chk-2* (Y60A3A.12), Y60A3A.19, Y60A3A.16, *skr-4* (Y60A3A.18), Y60A3A.14, *dhs-24* (Y60A3A.10), Y60A3A.9, Y60A3A.8, Y60A3A.7, *srh-172* (Y60A3A.6), *srh-171* (Y60A3A.5) (partial duplication)

8 pseudogenes:

srt-46 (M162.4), M162.14, M162.6, *srz-35* (Y116F11B.4), Y116F11B.10, Y60A3A.17, *nhr-240* (Y60A3A.15), Y60A3A.11

Duplication in 66C:

Chr V:19,393,526..20,054,330

Size = 660,805 bp

121 protein-coding genes:

C25F9.8, C25F9.13, *srw-86* (C25F9.7), C25F9.12, C25F9.6, C25F9.10, C25F9.5, C25F9.4, C25F9.9, C25F9.15, C25F9.2, *srw-85* (C25F9.1), C25F9.11, C25F9.16, C25F9.14, M04C3.1, Y43F8B.14, Y43F8B.13, Y43F8B.24, Y43F8B.15, Y43F8B.25, Y43F8B.23, Y43F8B.12, Y43F8B.11, Y43F8B.10, Y43F8B.9, Y43F8B.22, Y43F8B.17, Y43F8B.28, Y43F8B.18, Y43F8B.7, Y43F8B.29, *sc1-21* (Y43F8B.5), Y43F8B.3, Y43F8B.19, *phy-4* (Y43F8B.4b), Y43F8B.2, Y43F8B.1, Y43F8C.20, *oac-1* (B0399.2), *kcnl-1* (B0399.1), *nlp-25* (Y43F8C.1), *grsp-1* (Y43F8C.2 0), *nlp-26* (Y43F8C.2), Y43F8C.3, *dyf-19* (Y43F8C.4), Y43F8C.5, Y43F8C.6, Y43F8C.7, *mrps-28* (Y43F8C.8), Y43F8C.9, *dmd-3* (Y43F8C.10), Y43F8C.11, *mrp-7* (Y43F8C.12), Y43F8C.13, *ani-3* (Y43F8C.14), Y43F8C.18, *srv-3* (Y43F8C.19), Y43F8C.15, Y43F8C.23, Y43F8C.16, Y43F8C.17, Y116F11A.6, Y116F11A.3, Y116F11A.1, W04E12.7, *fbxa-131* (W04E12.1), W04E12.2, W04E12.3, W04E12.4, W04E12.5, *clec-49* (W04E12.6), *clec-50* (W04E12.8), W04E12.9, M162.5, M162.15, *fbxa-118* (M162.8), *fbxa-194* (M162.11), *srt-45* (M162.3), *clec-258* (M162.2), *clec-259* (M162.1), M162.7, Y116F11B.2, *daf-28* (Y116F11B.1), Y116F11B.17, *pcp-4* (Y116F11B.3), *srw-38* (Y116F11B.5), Y116F11B.6, Y116F11B.7, Y116F11B.8, Y116F11B.9a, Y116F11B.11, *gly-4* (Y116F11B.12), Y116F11B.13, *fars-2* (Y60A3A.13), Y116F11B.14, *chk-2* (Y60A3A.12), Y60A3A.19, Y60A3A.16, *skr-4* (Y60A3A.18), Y60A3A.14, *dhs-24* (Y60A3A.10), Y60A3A.9, Y60A3A.8, Y60A3A.7, *srh-172* (Y60A3A.6), *srh-171* (Y60A3A.5), *srh-173* (Y60A3A.4), *srh-183* (Y60A3A.3), Y60A3A.24, *clec-260* (Y60A3A.2), *sri-67* (Y60A3A.22), Y60A3A.25, *unc-51* (Y60A3A.1), Y60A3A.23, Y60A3A.21, *lgc-55* (Y113G7A.5), Y113G7A.16, *spe-19* (Y113G7A.10), *srh-233* (Y113G7A.1), *ttx-1* (Y113G7A.6) (partial duplication)

52 pseudogenes:

Y43F8A.t1, C25F9.t3, C25F9.t2, C25F9.t1, C25F9.t4, C25F9.t5, Y43F8B.8, Y43F8B.21, Y43F8B.6, B0399.t16, B0399.t15, B0399.t14, B0399.t1, B0399.t13, B0399.t12, B0399.t2, B0399.t4, B0399.t3, B0399.t5, B0399.t11, B0399.t10, B0399.t9, B0399.t8, B0399.t7, B0399.t6, Y43F8C.t1, Y43F8C.t9, Y43F8C.t2, Y43F8C.t8, Y43F8C.t3, Y43F8C.t4, Y43F8C.t7, Y43F8C.t6, Y43F8C.t5, Y43F8C.24, Y116F11A.4, W04E12.10, M162.12, M162.13, M162.9, M162.4,

M162.14, M162.6, Y116F11B.4, Y116F11B.10, Y60A3A.17, Y60A3A.15, Y60A3A.11, Y60A3A.28, Y60A3A.t1, Y60A3A.t2, Y113G7A.2

Duplication in 66E:
Chr V:19,295,300..19,839,882
Size = 544,583 bp
111 protein-coding genes:
F55C9.6 (partial duplication), *fbxb-60* (F55C9.7), F55C9.14, *fbxb-62* (F55C9.8), *fbxb-63* (F55C9.13), *fbxb-61* (F55C9.10), F55C9.11, F55C9.15, C43D7.8, *fbxb-64* (C43D7.9), *srh-208* (C43D7.6), C43D7.7, *sdz-6* (C43D7.5), C43D7.4, *fbxb-65* (C43D7.2), C14B4.2, Y43F8A.1, Y43F8A.2, Y43F8A.3, *srw-84* (Y43F8A.4), Y43F8A.5, C25F9.8, C25F9.13, *srw-86* (C25F9.7), C25F9.12, C25F9.6, C25F9.10, C25F9.5, C25F9.4, C25F9.9, C25F9.15, C25F9.2, *srw-85* (C25F9.1), C25F9.11, C25F9.16, C25F9.14, M04C3.1, M04C3.2, M04C3.5, Y43F8B.14, Y43F8B.13, Y43F8B.24, Y43F8B.15, Y43F8B.25, Y43F8B.23, Y43F8B.12, Y43F8B.11, Y43F8B.10, Y43F8B.9, Y43F8B.22, Y43F8B.17, Y43F8B.28, Y43F8B.18, Y43F8B.7, Y43F8B.29, *scl-21* (Y43F8B.5), Y43F8B.3, Y43F8B.19, *phy-4* (Y43F8B.4), Y43F8B.2, Y43F8B.1, Y43F8B.20, *oac-1* (B0399.2), *kcnl-1* (B0399.1), *nlp-25* (Y43F8C.1), *grsp-1* (Y43F8C.20), *nlp-26* (Y43F8C.2), Y43F8C.3, *dyf-19* (Y43F8C.4), Y43F8C.5, Y43F8C.6, Y43F8C.7, *mrps-28* (Y43F8C.8), Y43F8C.9, *dmd-3* (Y43F8C.10), Y43F8C.11, *mrp-7* (Y43F8C.12), Y43F8C.13, *ani-3* (Y43F8C.14), Y43F8C.18, *srv-3* (Y43F8C.19), Y43F8C.15, Y43F8C.23, Y43F8C.16, Y43F8C.17, Y116F11A.6, Y116F11A.3, Y116F11A.1, W04E12.7, *fbxa-131* (W04E12.1), W04E12.2, W04E12.3, W04E12.4, W04E12.5, *clec-49* (W04E12.6), *clec-50* (W04E12.8), W04E12.9, M162.5, M162.15, *fbxa-118* (M162.8), *fbxa-194* (M162.11), *srt-5* (M162.3), *clec-258* (M162.2), *clec-259* (M162.1), M162.7, Y116F11B.2, *daf-28* (Y116F11B.1), Y116F11B.17, *pcp-4* (Y116F11B.3), *srw-38* (Y116F11B.5)
50 pseudogenes:
C43D7.10, C43D7.11, C43D7.12, C43D7.3, C43D7.1, C14B4.t1, Y43F8A.t1, C25F9.t3, C25F9.t2, C25F9.t1, C25F9.t4, C25F9.t5, Y43F8B.8, Y43F8B.21, Y43F8B.6, B0399.t16, B0399.t15, B0399.t14, B0399.t1, B0399.t13, B0399.t12, B0399.t2, B0399.t4, B0399.t3, B0399.t5, B0399.t11, B0399.t10, B0399.t9, B0399.t8, B0399.t7, B0399.t6, Y43F8C.t1, Y43F8C.t9, Y43F8C.t2, Y43F8C.t8, Y43F8C.t3, Y43F8C.t4, Y43F8C.t7, Y43F8C.t6, Y43F8C.t5, Y43F8C.24, Y116F11A.4, W04E12.10, M162.12, M162.13, M162.9, M162.4, M162.14, M162.6, Y116F11B.4 (partial duplication)

Duplication in C2:
Chr V:19,295,101..19,839,683
Size = 544,583 bp
111 protein-coding genes:
F55C9.6 (partial duplication), *fbxb-60* (F55C9.7), F55C9.14, *fbxb-62* (F55C9.8), *fbxb-63* (F55C9.13), *fbxb-61* (F55C9.10), F55C9.11, F55C9.15, C43D7.8, *fbxb-64* (C43D7.9), *srh-208* (C43D7.6), C43D7.7, *sdz-6* (C43D7.5), C43D7.4, *fbxb-65* (C43D7.2), C14B4.2, Y43F8A.1, Y43F8A.2, Y43F8A.3, *srw-84* (Y43F8A.4),

Y43F8A.5, C25F9.8, C25F9.13, *srw-86* (C25F9.7), C25F9.12, C25F9.6, C25F9.10, C25F9.5, C25F9.4, C25F9.9, C25F9.15, C25F9.2, *srw-85* (C25F9.1), C25F9.11, C25F9.16, C25F9.14, M04C3.1, M04C3.2, M04C3.5, Y43F8B.14, Y43F8B.13, Y43F8B.24, Y43F8B.15, Y43F8B.25, Y43F8B.23, Y43F8B.12, Y43F8B.11, Y43F8B.10, Y43F8B.9, Y43F8B.22, Y43F8B.17, Y43F8B.28, Y43F8B.18, Y43F8B.7, Y43F8B.29, *scl-21* (Y43F8B.5), Y43F8B.3, Y43F8B.19, *phy-4* (Y43F8B.4), Y43F8B.2, Y43F8B.1, Y43F8B.20, *oac-1* (B0399.2), *kcnl-1* (B0399.1), *nlp-25* (Y43F8C.1), *grsp-1* (Y43F8C.20), *nlp-26* (Y43F8C.2), Y43F8C.3, *dyf-19* (Y43F8C.4), Y43F8C.5, Y43F8C.6, Y43F8C.7, *mrps-28* (Y43F8C.8), Y43F8C.9, *dmd-3* (Y43F8C.10), Y43F8C.11, *mrp-7* (Y43F8C.12), Y43F8C.13, *ani-3* (Y43F8C.14), Y43F8C.18, *srv-3* (Y43F8C.19), Y43F8C.15, Y43F8C.23, Y43F8C.16, Y43F8C.17, Y116F11A.6, Y116F11A.3, Y116F11A.1, W04E12.7, *fbxa-131* (W04E12.1), W04E12.2, W04E12.3, W04E12.4, W04E12.5, *clec-49* (W04E12.6), *clec-50* (W04E12.8), W04E12.9, M162.5, M162.15, *fbxa-118* (M162.8), *fbxa-194* (M162.11), *srt-5* (M162.3), *clec-258* (M162.2), *clec-259* (M162.1), M162.7, Y116F11B.2, *daf-28* (Y116F11B.1), Y116F11B.17, *pcp-4* (Y116F11B.3), *srw-38* (Y116F11B.5)

50 pseudogenes:

C43D7.10, C43D7.11, C43D7.12, C43D7.3, C43D7.1, C14B4.t1, Y43F8A.t1, C25F9.t3, C25F9.t2, C25F9.t1, C25F9.t4, C25F9.t5, Y43F8B.8, Y43F8B.21, Y43F8B.6, B0399.t16, B0399.t15, B0399.t14, B0399.t1, B0399.t13, B0399.t12, B0399.t2, B0399.t4, B0399.t3, B0399.t5, B0399.t11, B0399.t10, B0399.t9, B0399.t8, B0399.t7, B0399.t6, Y43F8C.t1, Y43F8C.t9, Y43F8C.t2, Y43F8C.t8, Y43F8C.t3, Y43F8C.t4, Y43F8C.t7, Y43F8C.t6, Y43F8C.t5, Y43F8C.24, Y116F11A.4, W04E12.10, M162.12, M162.13, M162.9, M162.4, M162.14, M162.6, Y116F11B.4 (partial duplication)