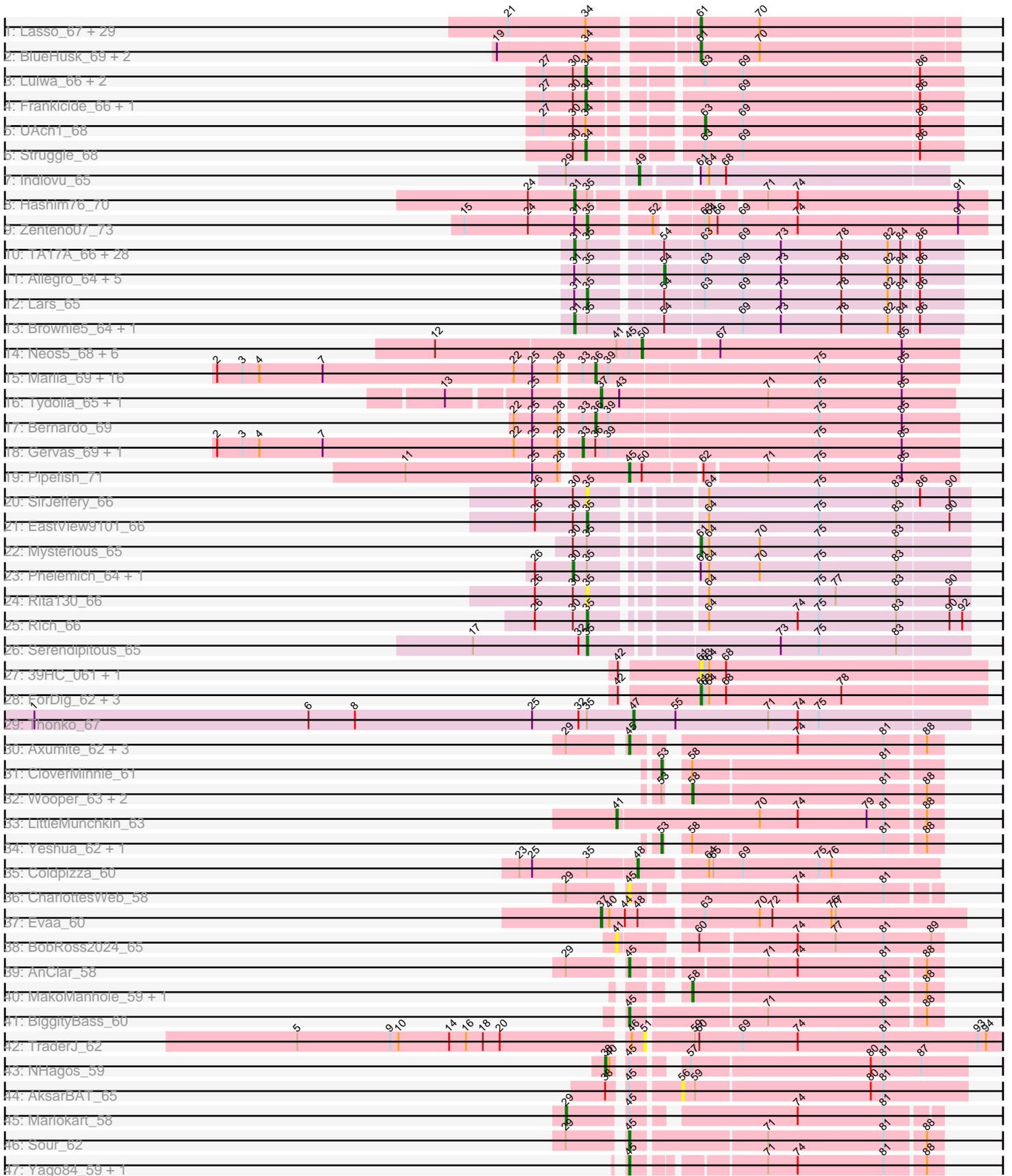


Pham 290908



Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 290908 Report

This analysis was run 03/28/26 on database version 641.

Pham number 290908 has 152 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Lasso_67, MelsMeow_67, Buckeye_68, Phareon_66, Inverness_66, Basato_67, DonSanchon_64, Grand2040_66, ElvisPhasley_68, BlackStallion_68, Chorkpop_68, Gyarad_0067, Mikota_65, Dingo_65, CaspiBoi_67, RedRaider89_70, ImtiyazSitla_68, Sheila_64, Adriana_69, GeneCoco_68, Horchata_65, TooFast2Furius_69, MiniBoss_65, Hamish_65, AltPhacts_66, Scrick_67, Potter_65, Maskar_68, Nathan_68, Ashraf_68
- Track 2 : BlueHusk_69, Melc17_65, Dati_65
- Track 3 : Lulwa_66, Usavi_69, Zaider_69
- Track 4 : Frankicide_66, Gwilliam_69
- Track 5 : UAch1_68
- Track 6 : Struggle_68
- Track 7 : Indlovu_65
- Track 8 : Hashim76_70
- Track 9 : Zenteno07_73
- Track 10 : TA17A_66, West99_64, Kheth_64, Tres_64, Ares_64, Rhinoforte_64, Glass_65, Blocker23_64, Calamitous_65, LizLemon_64, Bananafish_65, Kolhan_65, Boyle_64, Lephleur_64, Holeinone_64, ItsyBitsy1_63, FrenchFry_65, LilSmirk_64, Eaglehorse_64, Qyrzula_58, Godines_65, MasterPo_65, Arbiter_62, Rosebush_63, Opia_65, Hedgerow_64, Sabella_64, Laurie_64, PrinceCharming_65
- Track 11 : Allegro_64, Faze9_63, Coffee_64, Kaleb_64, Vic9_00063, Phantasmagoria_63
- Track 12 : Lars_65
- Track 13 : Brownie5_64, Tinciduntolum_65
- Track 14 : Neos5_68, Obutu_70, SlippinJimmy_71, Briakila_68, Chentzyk_70, Marley1013_69, Phayeta_71
- Track 15 : Marlia_69, Kronus_68, MmasiCarm_69, Chandler_68, Compostia_67, Yahalom_66, Mulaychimus_69, Phaedrus_63, LestyG_66, Kamiyu_68, Shenandoah_67, Baloo_67, Mortcellus_68, SwainyDoc_69, Olivio_68, Daisy_67, Akoma_68
- Track 16 : Tydolla_65, HarveySr_67
- Track 17 : Bernardo_69
- Track 18 : Gervas_69, Ben11_68
- Track 19 : Pipefish_71
- Track 20 : SirJeffery_66
- Track 21 : EastView9101_66
- Track 22 : Mysterious_65
- Track 23 : Phelemich_64, Reprobate_65

- Track 24 : Rita130_66
- Track 25 : Rich_66
- Track 26 : Serendipitous_65
- Track 27 : 39HC_061, 40BC_061
- Track 28 : ForDig_62, Jolie1_061, KayaCho_61, Hosp_059
- Track 29 : Thonko_67
- Track 30 : Axumite_62, Shatter_62, Ligma_62, Fresco_62
- Track 31 : CloverMinnie_61
- Track 32 : Wooper_63, FelixTres_63, Blackpen_61
- Track 33 : LittleMunchkin_63
- Track 34 : Yeshua_62, AnarQue_64
- Track 35 : Coldpizza_60
- Track 36 : CharlottesWeb_58
- Track 37 : Evaa_60
- Track 38 : BobRoss2024_65
- Track 39 : AnClar_58
- Track 40 : MakoManhole_59, CaiB_62
- Track 41 : BiggityBass_60
- Track 42 : TraderJ_62
- Track 43 : NHagos_59
- Track 44 : AksarBAT_65
- Track 45 : Mariokart_58
- Track 46 : Sour_62
- Track 47 : Yago84_59, Sisko_60

Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 61, it was called in 34 of the 131 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 39HC_061, 40BC_061, Adriana_69, AltPhacts_66, Ashraf_68, Basato_67, BlackStallion_68, BlueHusk_69, Buckeye_68, CaspiBoi_67, Chorkpop_68, Dati_65, Dingo_65, DonSancho_64, ElvisPhasley_68, ForDig_62, GeneCoco_68, Grand2040_66, Gyarad_0067, Hamish_65, Horchata_65, Hosp_059, ImtiyazSitla_68, Inverness_66, Jolie1_061, KayaCho_61, Lasso_67, Maskar_68, Melc17_65, MelsMeow_67, Mikota_65, MiniBoss_65, Mysterious_65, Nathan_68, Phareon_66, Potter_65, RedRaider89_70, Scrick_67, Sheila_64, TooFast2Furious_69,

Genes that have the "Most Annotated" start but do not call it:

- Indlovu_65, Phelemich_64, Reprobate_65,

Genes that do not have the "Most Annotated" start:

- Akoma_68, AksarBAT_65, Allegro_64, AnClar_58, AnarQue_64, Arbiter_62, Ares_64, Axumite_62, Baloo_67, Bananafish_65, Ben11_68, Bernardo_69, BiggityBass_60, Blackpen_61, Blocker23_64, BobRoss2024_65, Boyle_64, Briakila_68, Brownie5_64, CaiB_62, Calamitous_65, Chandler_68, CharlottesWeb_58, Chentzyk_70, CloverMinnie_61, Coffee_64, Coldpizza_60, Compostia_67, Daisy_67, Eaglehorse_64, EastView9101_66, Evaa_60, Faze9_63, FelixTres_63, Frankicide_66, FrenchFry_65, Fresco_62, Gervas_69, Glass_65,

Godines_65, Gwilliam_69, HarveySr_67, Hashim76_70, Hedgerow_64, Holeinone_64, ItsyBitsy1_63, Kaleb_64, Kamiyu_68, Kheth_64, Kolhan_65, Kronus_68, Lars_65, Laurie_64, Lephleur_64, LestyG_66, Ligma_62, LilSmirk_64, LittleMunchkin_63, LizLemon_64, Lulwa_66, MakoManhole_59, Mariokart_58, Marley1013_69, Marlia_69, MasterPo_65, MmasiCarm_69, Mortcellus_68, Mulaychimus_69, NHagos_59, Neos5_68, Obutu_70, Olivio_68, Opia_65, Phaedruss_63, Phantasmagoria_63, Phayeta_71, Pipefish_71, PrinceCharming_65, Qyrzula_58, Rhinoforte_64, Rich_66, Rita130_66, Rosebush_63, Sabella_64, Serendipitous_65, Shatter_62, Shenandoah_67, SirJeffery_66, Sisko_60, SlippinJimmy_71, Sour_62, Struggle_68, SwainyDoc_69, TA17A_66, Thonko_67, Tinciduntolum_65, TraderJ_62, Tres_64, Tydolla_65, UAch1_68, Usavi_69, Vic9_00063, West99_64, Wooper_63, Yago84_59, Yahalom_66, Yeshua_62, Zaider_69, Zenteno07_73,

Summary by start number:

Start 29:

- Found in 9 of 152 (5.9%) of genes in pham
- Manual Annotations of this start: 1 of 131
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Mariokart_58 (DR),

Start 30:

- Found in 14 of 152 (9.2%) of genes in pham
- Manual Annotations of this start: 2 of 131
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Phelemich_64 (B5), Reprobate_65 (B5),

Start 31:

- Found in 40 of 152 (26.3%) of genes in pham
- Manual Annotations of this start: 31 of 131
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Arbiter_62 (B2), Ares_64 (B2), Bananafish_65 (B2), Blocker23_64 (B2), Boyle_64 (B2), Brownie5_64 (B2), Calamitous_65 (B2), Eaglehorse_64 (B2), FrenchFry_65 (B2), Glass_65 (B2), Godines_65 (B2), Hashim76_70 (B13), Hedgerow_64 (B2), Holeinone_64 (B2), ItsyBitsy1_63 (B2), Kheth_64 (B2), Kolhan_65 (B2), Laurie_64 (B2), Lephleur_64 (B2), LilSmirk_64 (B2), LizLemon_64 (B2), MasterPo_65 (B2), Opia_65 (B2), PrinceCharming_65 (B2), Qyrzula_58 (B2), Rhinoforte_64 (B2), Rosebush_63 (B2), Sabella_64 (B2), TA17A_66 (B2), Tinciduntolum_65 (B2), Tres_64 (B2), West99_64 (B2),

Start 33:

- Found in 20 of 152 (13.2%) of genes in pham
- Manual Annotations of this start: 2 of 131
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Ben11_68 (B3), Gervas_69 (B3),

Start 34:

- Found in 40 of 152 (26.3%) of genes in pham
- Manual Annotations of this start: 6 of 131
- Called 15.0% of time when present

- Phage (with cluster) where this start called: Frankicide_66 (B1), Gwilliam_69 (B1), Lulwa_66 (B1), Struggle_68 (B1), Usavi_69 (B1), Zaider_69 (B1),

Start 35:

- Found in 50 of 152 (32.9%) of genes in pham
- Manual Annotations of this start: 5 of 131
- Called 14.0% of time when present
- Phage (with cluster) where this start called: EastView9101_66 (B5), Lars_65 (B2), Rich_66 (B5), Rita130_66 (B5), Serendipitous_65 (B5), SirJeffery_66 (B5), Zenteno07_73 (B13),

Start 36:

- Found in 20 of 152 (13.2%) of genes in pham
- Manual Annotations of this start: 13 of 131
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Akoma_68 (B3), Baloo_67 (B3), Bernardo_69 (B3), Chandler_68 (B3), Compostia_67 (B3), Daisy_67 (B3), Kamiyu_68 (B3), Kronus_68 (B3), LestyG_66 (B3), Marlia_69 (B3), MmasiCarm_69 (B3), Mortcellus_68 (B3), Mulaychimus_69 (B3), Olivio_68 (B3), Phaedrus_63 (B3), Shenandoah_67 (B3), SwainyDoc_69 (B3), Yahalom_66 (B3),

Start 37:

- Found in 3 of 152 (2.0%) of genes in pham
- Manual Annotations of this start: 3 of 131
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Evaa_60 (DR), HarveySr_67 (B3), Tydolla_65 (B3),

Start 38:

- Found in 2 of 152 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 131
- Called 50.0% of time when present
- Phage (with cluster) where this start called: NHagos_59 (DR),

Start 41:

- Found in 9 of 152 (5.9%) of genes in pham
- Manual Annotations of this start: 1 of 131
- Called 22.2% of time when present
- Phage (with cluster) where this start called: BobRoss2024_65 (DR), LittleMunchkin_63 (DR),

Start 45:

- Found in 21 of 152 (13.8%) of genes in pham
- Manual Annotations of this start: 10 of 131
- Called 52.4% of time when present
- Phage (with cluster) where this start called: AnClar_58 (DR), Axumite_62 (DR), BiggityBass_60 (DR), CharlottesWeb_58 (DR), Fresco_62 (DR), Ligma_62 (DR), Pipefish_71 (B3), Shatter_62 (DR), Sisko_60 (DR), Sour_62 (DR), Yago84_59 (DR),

Start 47:

- Found in 1 of 152 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 131
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Thonko_67 (B8),

Start 48:

- Found in 2 of 152 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 131
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Coldpizza_60 (DR),

Start 49:

- Found in 1 of 152 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 131
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Indlovu_65 (B11),

Start 50:

- Found in 8 of 152 (5.3%) of genes in pham
- Manual Annotations of this start: 6 of 131
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Briakila_68 (B3), Chentzyk_70 (B3), Marley1013_69 (B3), Neos5_68 (B3), Obutu_70 (B3), Phayeta_71 (B3), SlippinJimmy_71 (B3),

Start 51:

- Found in 1 of 152 (0.7%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TraderJ_62 (DR),

Start 53:

- Found in 6 of 152 (3.9%) of genes in pham
- Manual Annotations of this start: 3 of 131
- Called 50.0% of time when present
- Phage (with cluster) where this start called: AnarQue_64 (DR), CloverMinnie_61 (DR), Yeshua_62 (DR),

Start 54:

- Found in 38 of 152 (25.0%) of genes in pham
- Manual Annotations of this start: 6 of 131
- Called 15.8% of time when present
- Phage (with cluster) where this start called: Allegro_64 (B2), Coffee_64 (B2), Faze9_63 (B2), Kaleb_64 (B2), Phantasmagoria_63 (B2), Vic9_00063 (B2),

Start 56:

- Found in 1 of 152 (0.7%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AksarBAT_65 (DR),

Start 58:

- Found in 8 of 152 (5.3%) of genes in pham
- Manual Annotations of this start: 3 of 131
- Called 62.5% of time when present

- Phage (with cluster) where this start called: Blackpen_61 (DR), CaiB_62 (DR), FelixTres_63 (DR), MakoManhole_59 (DR), Wooper_63 (DR),

Start 61:

- Found in 43 of 152 (28.3%) of genes in pham
- Manual Annotations of this start: 34 of 131
- Called 93.0% of time when present
- Phage (with cluster) where this start called: 39HC_061 (B6), 40BC_061 (B6), Adriana_69 (B1), AltPhacts_66 (B1), Ashraf_68 (B1), Basato_67 (B1), BlackStallion_68 (B1), BlueHusk_69 (B1), Buckeye_68 (B1), Caspiboi_67 (B1), Chorkpop_68 (B1), Dati_65 (B1), Dingo_65 (B1), DonSanchon_64 (B1), ElvisPhasley_68 (B1), ForDig_62 (B6), GeneCoco_68 (B1), Grand2040_66 (B1), Gyarad_0067 (B1), Hamish_65 (B1), Horchata_65 (B1), Hosp_059 (B6), ImtiyazSitla_68 (B1), Inverness_66 (B1), Jolie1_061 (B6), KayaCho_61 (B6), Lasso_67 (B1), Maskar_68 (B1), Melc17_65 (B1), MelsMeow_67 (B1), Mikota_65 (B1), MiniBoss_65 (B1), Mysterious_65 (B5), Nathan_68 (B1), Phareon_66 (B1), Potter_65 (B1), RedRaider89_70 (B1), Scrick_67 (B1), Sheila_64 (B1), TooFast2Furius_69 (B1),

Start 63:

- Found in 49 of 152 (32.2%) of genes in pham
- Manual Annotations of this start: 1 of 131
- Called 2.0% of time when present
- Phage (with cluster) where this start called: UAch1_68 (B1),

Summary by clusters:

There are 9 clusters represented in this pham: B8, B11, B5, B6, B1, B2, B3, DR, B13,

Info for manual annotations of cluster B1:

- Start number 34 was manually annotated 6 times for cluster B1.
- Start number 61 was manually annotated 31 times for cluster B1.
- Start number 63 was manually annotated 1 time for cluster B1.

Info for manual annotations of cluster B11:

- Start number 49 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B13:

- Start number 31 was manually annotated 1 time for cluster B13.
- Start number 35 was manually annotated 1 time for cluster B13.

Info for manual annotations of cluster B2:

- Start number 31 was manually annotated 30 times for cluster B2.
- Start number 35 was manually annotated 1 time for cluster B2.
- Start number 54 was manually annotated 6 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 33 was manually annotated 2 times for cluster B3.
- Start number 36 was manually annotated 13 times for cluster B3.
- Start number 37 was manually annotated 2 times for cluster B3.
- Start number 45 was manually annotated 1 time for cluster B3.
- Start number 50 was manually annotated 6 times for cluster B3.

Info for manual annotations of cluster B5:

- Start number 30 was manually annotated 2 times for cluster B5.
- Start number 35 was manually annotated 3 times for cluster B5.
- Start number 61 was manually annotated 1 time for cluster B5.

Info for manual annotations of cluster B6:

- Start number 61 was manually annotated 2 times for cluster B6.

Info for manual annotations of cluster B8:

- Start number 47 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster DR:

- Start number 29 was manually annotated 1 time for cluster DR.
- Start number 37 was manually annotated 1 time for cluster DR.
- Start number 38 was manually annotated 1 time for cluster DR.
- Start number 41 was manually annotated 1 time for cluster DR.
- Start number 45 was manually annotated 9 times for cluster DR.
- Start number 48 was manually annotated 1 time for cluster DR.
- Start number 53 was manually annotated 3 times for cluster DR.
- Start number 58 was manually annotated 3 times for cluster DR.

Gene Information:

Gene: 39HC_061 Start: 56330, Stop: 56530, Start Num: 61

Candidate Starts for 39HC_061:

(42, 56279), (Start: 61 @56330 has 34 MA's), (Start: 63 @56333 has 1 MA's), (64, 56336), (68, 56348),

Gene: 40BC_061 Start: 56330, Stop: 56530, Start Num: 61

Candidate Starts for 40BC_061:

(42, 56279), (Start: 61 @56330 has 34 MA's), (Start: 63 @56333 has 1 MA's), (64, 56336), (68, 56348),

Gene: Adriana_69 Start: 57994, Stop: 58173, Start Num: 61

Candidate Starts for Adriana_69:

(21, 57871), (Start: 34 @57925 has 6 MA's), (Start: 61 @57994 has 34 MA's), (70, 58036),

Gene: Akoma_68 Start: 57286, Stop: 57534, Start Num: 36

Candidate Starts for Akoma_68:

(2, 57025), (3, 57043), (4, 57055), (7, 57100), (22, 57235), (25, 57247), (28, 57265), (Start: 33 @57277 has 2 MA's), (Start: 36 @57286 has 13 MA's), (39, 57295), (75, 57439), (85, 57496),

Gene: AksarBAT_65 Start: 51976, Stop: 52173, Start Num: 56

Candidate Starts for AksarBAT_65:

(Start: 38 @51946 has 1 MA's), (Start: 45 @51955 has 10 MA's), (56, 51976), (59, 51985), (80, 52105), (81, 52114),

Gene: Allegro_64 Start: 55516, Stop: 55722, Start Num: 54

Candidate Starts for Allegro_64:

(Start: 31 @55462 has 31 MA's), (Start: 35 @55471 has 5 MA's), (Start: 54 @55516 has 6 MA's), (Start: 63 @55543 has 1 MA's), (69, 55570), (73, 55597), (78, 55639), (82, 55672), (84, 55681), (86, 55693),

Gene: AltPhacts_66 Start: 56481, Stop: 56660, Start Num: 61

Candidate Starts for AltPhacts_66:

(21, 56358), (Start: 34 @56412 has 6 MA's), (Start: 61 @56481 has 34 MA's), (70, 56523),

Gene: AnClar_58 Start: 51779, Stop: 51976, Start Num: 45

Candidate Starts for AnClar_58:

(Start: 29 @51743 has 1 MA's), (Start: 45 @51779 has 10 MA's), (71, 51857), (74, 51878), (81, 51938), (88, 51965),

Gene: AnarQue_64 Start: 52219, Stop: 52398, Start Num: 53

Candidate Starts for AnarQue_64:

(Start: 53 @52219 has 3 MA's), (Start: 58 @52228 has 3 MA's), (81, 52360), (88, 52387),

Gene: Arbiter_62 Start: 55569, Stop: 55829, Start Num: 31

Candidate Starts for Arbiter_62:

(Start: 31 @55569 has 31 MA's), (Start: 35 @55578 has 5 MA's), (Start: 54 @55623 has 6 MA's), (Start: 63 @55650 has 1 MA's), (69, 55677), (73, 55704), (78, 55746), (82, 55779), (84, 55788), (86, 55800),

Gene: Ares_64 Start: 55540, Stop: 55800, Start Num: 31

Candidate Starts for Ares_64:

(Start: 31 @55540 has 31 MA's), (Start: 35 @55549 has 5 MA's), (Start: 54 @55594 has 6 MA's), (Start: 63 @55621 has 1 MA's), (69, 55648), (73, 55675), (78, 55717), (82, 55750), (84, 55759), (86, 55771),

Gene: Ashraf_68 Start: 57146, Stop: 57325, Start Num: 61

Candidate Starts for Ashraf_68:

(21, 57023), (Start: 34 @57077 has 6 MA's), (Start: 61 @57146 has 34 MA's), (70, 57188),

Gene: Axumite_62 Start: 50626, Stop: 50826, Start Num: 45

Candidate Starts for Axumite_62:

(Start: 29 @50590 has 1 MA's), (Start: 45 @50626 has 10 MA's), (74, 50728), (81, 50788), (88, 50815),

Gene: Baloo_67 Start: 57118, Stop: 57366, Start Num: 36

Candidate Starts for Baloo_67:

(2, 56857), (3, 56875), (4, 56887), (7, 56932), (22, 57067), (25, 57079), (28, 57097), (Start: 33 @57109 has 2 MA's), (Start: 36 @57118 has 13 MA's), (39, 57127), (75, 57271), (85, 57328),

Gene: Bananafish_65 Start: 55470, Stop: 55730, Start Num: 31

Candidate Starts for Bananafish_65:

(Start: 31 @55470 has 31 MA's), (Start: 35 @55479 has 5 MA's), (Start: 54 @55524 has 6 MA's), (Start: 63 @55551 has 1 MA's), (69, 55578), (73, 55605), (78, 55647), (82, 55680), (84, 55689), (86, 55701),

Gene: Basato_67 Start: 57199, Stop: 57378, Start Num: 61

Candidate Starts for Basato_67:

(21, 57076), (Start: 34 @57130 has 6 MA's), (Start: 61 @57199 has 34 MA's), (70, 57241),

Gene: Ben11_68 Start: 57494, Stop: 57751, Start Num: 33

Candidate Starts for Ben11_68:

(2, 57242), (3, 57260), (4, 57272), (7, 57317), (22, 57452), (25, 57464), (28, 57482), (Start: 33 @57494 has 2 MA's), (Start: 36 @57503 has 13 MA's), (39, 57512), (75, 57656), (85, 57713),

Gene: Bernardo_69 Start: 57484, Stop: 57732, Start Num: 36
Candidate Starts for Bernardo_69:
(22, 57433), (25, 57445), (28, 57463), (Start: 33 @57475 has 2 MA's), (Start: 36 @57484 has 13 MA's),
(39, 57493), (75, 57637), (85, 57694),

Gene: BiggityBass_60 Start: 52323, Stop: 52532, Start Num: 45
Candidate Starts for BiggityBass_60:
(Start: 45 @52323 has 10 MA's), (71, 52413), (81, 52494), (88, 52521),

Gene: BlackStallion_68 Start: 57193, Stop: 57372, Start Num: 61
Candidate Starts for BlackStallion_68:
(21, 57070), (Start: 34 @57124 has 6 MA's), (Start: 61 @57193 has 34 MA's), (70, 57235),

Gene: Blackpen_61 Start: 50667, Stop: 50837, Start Num: 58
Candidate Starts for Blackpen_61:
(Start: 53 @50658 has 3 MA's), (Start: 58 @50667 has 3 MA's), (81, 50799), (88, 50826),

Gene: Blocker23_64 Start: 55537, Stop: 55797, Start Num: 31
Candidate Starts for Blocker23_64:
(Start: 31 @55537 has 31 MA's), (Start: 35 @55546 has 5 MA's), (Start: 54 @55591 has 6 MA's),
(Start: 63 @55618 has 1 MA's), (69, 55645), (73, 55672), (78, 55714), (82, 55747), (84, 55756), (86,
55768),

Gene: BlueHusk_69 Start: 56949, Stop: 57128, Start Num: 61
Candidate Starts for BlueHusk_69:
(19, 56817), (Start: 34 @56880 has 6 MA's), (Start: 61 @56949 has 34 MA's), (70, 56991),

Gene: BobRoss2024_65 Start: 51837, Stop: 52049, Start Num: 41
Candidate Starts for BobRoss2024_65:
(Start: 41 @51837 has 1 MA's), (60, 51882), (74, 51948), (77, 51975), (81, 52008), (89, 52041),

Gene: Boyle_64 Start: 55578, Stop: 55838, Start Num: 31
Candidate Starts for Boyle_64:
(Start: 31 @55578 has 31 MA's), (Start: 35 @55587 has 5 MA's), (Start: 54 @55632 has 6 MA's),
(Start: 63 @55659 has 1 MA's), (69, 55686), (73, 55713), (78, 55755), (82, 55788), (84, 55797), (86,
55809),

Gene: Briakila_68 Start: 57517, Stop: 57732, Start Num: 50
Candidate Starts for Briakila_68:
(12, 57373), (Start: 41 @57499 has 1 MA's), (Start: 45 @57508 has 10 MA's), (Start: 50 @57517 has 6
MA's), (67, 57568), (85, 57694),

Gene: Brownie5_64 Start: 55580, Stop: 55840, Start Num: 31
Candidate Starts for Brownie5_64:
(Start: 31 @55580 has 31 MA's), (Start: 35 @55589 has 5 MA's), (Start: 54 @55634 has 6 MA's), (69,
55688), (73, 55715), (78, 55757), (82, 55790), (84, 55799), (86, 55811),

Gene: Buckeye_68 Start: 58013, Stop: 58192, Start Num: 61
Candidate Starts for Buckeye_68:
(21, 57890), (Start: 34 @57944 has 6 MA's), (Start: 61 @58013 has 34 MA's), (70, 58055),

Gene: CaiB_62 Start: 52012, Stop: 52182, Start Num: 58
Candidate Starts for CaiB_62:

(Start: 58 @52012 has 3 MA's), (81, 52144), (88, 52171),

Gene: Calamitous_65 Start: 55468, Stop: 55728, Start Num: 31

Candidate Starts for Calamitous_65:

(Start: 31 @55468 has 31 MA's), (Start: 35 @55477 has 5 MA's), (Start: 54 @55522 has 6 MA's), (Start: 63 @55549 has 1 MA's), (69, 55576), (73, 55603), (78, 55645), (82, 55678), (84, 55687), (86, 55699),

Gene: Caspiboi_67 Start: 57156, Stop: 57335, Start Num: 61

Candidate Starts for Caspiboi_67:

(21, 57033), (Start: 34 @57087 has 6 MA's), (Start: 61 @57156 has 34 MA's), (70, 57198),

Gene: Chandler_68 Start: 58065, Stop: 58313, Start Num: 36

Candidate Starts for Chandler_68:

(2, 57804), (3, 57822), (4, 57834), (7, 57879), (22, 58014), (25, 58026), (28, 58044), (Start: 33 @58056 has 2 MA's), (Start: 36 @58065 has 13 MA's), (39, 58074), (75, 58218), (85, 58275),

Gene: CharlottesWeb_58 Start: 49213, Stop: 49410, Start Num: 45

Candidate Starts for CharlottesWeb_58:

(Start: 29 @49177 has 1 MA's), (Start: 45 @49213 has 10 MA's), (74, 49315), (81, 49375),

Gene: Chentzyk_70 Start: 58269, Stop: 58484, Start Num: 50

Candidate Starts for Chentzyk_70:

(12, 58125), (Start: 41 @58251 has 1 MA's), (Start: 45 @58260 has 10 MA's), (Start: 50 @58269 has 6 MA's), (67, 58320), (85, 58446),

Gene: Chorkpop_68 Start: 56930, Stop: 57109, Start Num: 61

Candidate Starts for Chorkpop_68:

(21, 56807), (Start: 34 @56861 has 6 MA's), (Start: 61 @56930 has 34 MA's), (70, 56972),

Gene: CloverMinnie_61 Start: 51166, Stop: 51345, Start Num: 53

Candidate Starts for CloverMinnie_61:

(Start: 53 @51166 has 3 MA's), (Start: 58 @51175 has 3 MA's), (81, 51307),

Gene: Coffee_64 Start: 55626, Stop: 55832, Start Num: 54

Candidate Starts for Coffee_64:

(Start: 31 @55572 has 31 MA's), (Start: 35 @55581 has 5 MA's), (Start: 54 @55626 has 6 MA's), (Start: 63 @55653 has 1 MA's), (69, 55680), (73, 55707), (78, 55749), (82, 55782), (84, 55791), (86, 55803),

Gene: Coldpizza_60 Start: 52423, Stop: 52629, Start Num: 48

Candidate Starts for Coldpizza_60:

(23, 52342), (25, 52351), (Start: 35 @52390 has 5 MA's), (Start: 48 @52423 has 1 MA's), (64, 52468), (65, 52471), (69, 52492), (75, 52546), (76, 52555),

Gene: Compostia_67 Start: 57686, Stop: 57934, Start Num: 36

Candidate Starts for Compostia_67:

(2, 57425), (3, 57443), (4, 57455), (7, 57500), (22, 57635), (25, 57647), (28, 57665), (Start: 33 @57677 has 2 MA's), (Start: 36 @57686 has 13 MA's), (39, 57695), (75, 57839), (85, 57896),

Gene: Daisy_67 Start: 56849, Stop: 57097, Start Num: 36

Candidate Starts for Daisy_67:

(2, 56588), (3, 56606), (4, 56618), (7, 56663), (22, 56798), (25, 56810), (28, 56828), (Start: 33 @56840 has 2 MA's), (Start: 36 @56849 has 13 MA's), (39, 56858), (75, 57002), (85, 57059),

Gene: Dati_65 Start: 57259, Stop: 57438, Start Num: 61

Candidate Starts for Dati_65:

(19, 57127), (Start: 34 @57190 has 6 MA's), (Start: 61 @57259 has 34 MA's), (70, 57301),

Gene: Dingo_65 Start: 56457, Stop: 56636, Start Num: 61

Candidate Starts for Dingo_65:

(21, 56334), (Start: 34 @56388 has 6 MA's), (Start: 61 @56457 has 34 MA's), (70, 56499),

Gene: DonSanchon_64 Start: 56612, Stop: 56791, Start Num: 61

Candidate Starts for DonSanchon_64:

(21, 56489), (Start: 34 @56543 has 6 MA's), (Start: 61 @56612 has 34 MA's), (70, 56654),

Gene: Eaglehorse_64 Start: 55458, Stop: 55718, Start Num: 31

Candidate Starts for Eaglehorse_64:

(Start: 31 @55458 has 31 MA's), (Start: 35 @55467 has 5 MA's), (Start: 54 @55512 has 6 MA's), (Start: 63 @55539 has 1 MA's), (69, 55566), (73, 55593), (78, 55635), (82, 55668), (84, 55677), (86, 55689),

Gene: EastView9101_66 Start: 58038, Stop: 58286, Start Num: 35

Candidate Starts for EastView9101_66:

(26, 58002), (Start: 30 @58029 has 2 MA's), (Start: 35 @58038 has 5 MA's), (64, 58104), (75, 58182), (83, 58236), (90, 58272),

Gene: ElvisPhasley_68 Start: 57946, Stop: 58125, Start Num: 61

Candidate Starts for ElvisPhasley_68:

(21, 57823), (Start: 34 @57877 has 6 MA's), (Start: 61 @57946 has 34 MA's), (70, 57988),

Gene: Evaa_60 Start: 49769, Stop: 50017, Start Num: 37

Candidate Starts for Evaa_60:

(Start: 37 @49769 has 3 MA's), (40, 49775), (44, 49784), (Start: 48 @49793 has 1 MA's), (Start: 63 @49835 has 1 MA's), (70, 49874), (72, 49883), (76, 49925), (77, 49928),

Gene: Faze9_63 Start: 55651, Stop: 55857, Start Num: 54

Candidate Starts for Faze9_63:

(Start: 31 @55597 has 31 MA's), (Start: 35 @55606 has 5 MA's), (Start: 54 @55651 has 6 MA's), (Start: 63 @55678 has 1 MA's), (69, 55705), (73, 55732), (78, 55774), (82, 55807), (84, 55816), (86, 55828),

Gene: FelixTres_63 Start: 51482, Stop: 51652, Start Num: 58

Candidate Starts for FelixTres_63:

(Start: 53 @51473 has 3 MA's), (Start: 58 @51482 has 3 MA's), (81, 51614), (88, 51641),

Gene: ForDig_62 Start: 56642, Stop: 56842, Start Num: 61

Candidate Starts for ForDig_62:

(42, 56591), (Start: 61 @56642 has 34 MA's), (Start: 63 @56645 has 1 MA's), (64, 56648), (68, 56660), (78, 56741),

Gene: Frankicide_66 Start: 56878, Stop: 57120, Start Num: 34

Candidate Starts for Frankicide_66:

(27, 56848), (Start: 30 @56869 has 2 MA's), (Start: 34 @56878 has 6 MA's), (69, 56968), (86, 57091),

Gene: FrenchFry_65 Start: 55583, Stop: 55843, Start Num: 31

Candidate Starts for FrenchFry_65:

(Start: 31 @55583 has 31 MA's), (Start: 35 @55592 has 5 MA's), (Start: 54 @55637 has 6 MA's), (Start: 63 @55664 has 1 MA's), (69, 55691), (73, 55718), (78, 55760), (82, 55793), (84, 55802), (86, 55814),

Gene: Fresco_62 Start: 50626, Stop: 50826, Start Num: 45

Candidate Starts for Fresco_62:

(Start: 29 @50590 has 1 MA's), (Start: 45 @50626 has 10 MA's), (74, 50728), (81, 50788), (88, 50815),

Gene: GeneCoco_68 Start: 57462, Stop: 57641, Start Num: 61

Candidate Starts for GeneCoco_68:

(21, 57339), (Start: 34 @57393 has 6 MA's), (Start: 61 @57462 has 34 MA's), (70, 57504),

Gene: Gervas_69 Start: 57701, Stop: 57958, Start Num: 33

Candidate Starts for Gervas_69:

(2, 57449), (3, 57467), (4, 57479), (7, 57524), (22, 57659), (25, 57671), (28, 57689), (Start: 33 @57701 has 2 MA's), (Start: 36 @57710 has 13 MA's), (39, 57719), (75, 57863), (85, 57920),

Gene: Glass_65 Start: 55585, Stop: 55845, Start Num: 31

Candidate Starts for Glass_65:

(Start: 31 @55585 has 31 MA's), (Start: 35 @55594 has 5 MA's), (Start: 54 @55639 has 6 MA's), (Start: 63 @55666 has 1 MA's), (69, 55693), (73, 55720), (78, 55762), (82, 55795), (84, 55804), (86, 55816),

Gene: Godines_65 Start: 55844, Stop: 56104, Start Num: 31

Candidate Starts for Godines_65:

(Start: 31 @55844 has 31 MA's), (Start: 35 @55853 has 5 MA's), (Start: 54 @55898 has 6 MA's), (Start: 63 @55925 has 1 MA's), (69, 55952), (73, 55979), (78, 56021), (82, 56054), (84, 56063), (86, 56075),

Gene: Grand2040_66 Start: 57405, Stop: 57584, Start Num: 61

Candidate Starts for Grand2040_66:

(21, 57282), (Start: 34 @57336 has 6 MA's), (Start: 61 @57405 has 34 MA's), (70, 57447),

Gene: Gwilliam_69 Start: 57728, Stop: 57970, Start Num: 34

Candidate Starts for Gwilliam_69:

(27, 57698), (Start: 30 @57719 has 2 MA's), (Start: 34 @57728 has 6 MA's), (69, 57818), (86, 57941),

Gene: Gyarad_0067 Start: 56782, Stop: 56961, Start Num: 61

Candidate Starts for Gyarad_0067:

(21, 56659), (Start: 34 @56713 has 6 MA's), (Start: 61 @56782 has 34 MA's), (70, 56824),

Gene: Hamish_65 Start: 56845, Stop: 57024, Start Num: 61

Candidate Starts for Hamish_65:

(21, 56722), (Start: 34 @56776 has 6 MA's), (Start: 61 @56845 has 34 MA's), (70, 56887),

Gene: HarveySr_67 Start: 56727, Stop: 56969, Start Num: 37

Candidate Starts for HarveySr_67:

(13, 56631), (25, 56685), (Start: 37 @56727 has 3 MA's), (43, 56739), (71, 56841), (75, 56877), (85, 56934),

Gene: Hashim76_70 Start: 58554, Stop: 58817, Start Num: 31

Candidate Starts for Hashim76_70:

(24, 58521), (Start: 31 @58554 has 31 MA's), (Start: 35 @58563 has 5 MA's), (71, 58665), (74, 58686), (91, 58797),

Gene: Hedgerow_64 Start: 55555, Stop: 55815, Start Num: 31

Candidate Starts for Hedgerow_64:

(Start: 31 @55555 has 31 MA's), (Start: 35 @55564 has 5 MA's), (Start: 54 @55609 has 6 MA's), (Start: 63 @55636 has 1 MA's), (69, 55663), (73, 55690), (78, 55732), (82, 55765), (84, 55774), (86, 55786),

Gene: Holeinone_64 Start: 55443, Stop: 55703, Start Num: 31

Candidate Starts for Holeinone_64:

(Start: 31 @55443 has 31 MA's), (Start: 35 @55452 has 5 MA's), (Start: 54 @55497 has 6 MA's), (Start: 63 @55524 has 1 MA's), (69, 55551), (73, 55578), (78, 55620), (82, 55653), (84, 55662), (86, 55674),

Gene: Horchata_65 Start: 56937, Stop: 57116, Start Num: 61

Candidate Starts for Horchata_65:

(21, 56814), (Start: 34 @56868 has 6 MA's), (Start: 61 @56937 has 34 MA's), (70, 56979),

Gene: Hosp_059 Start: 54555, Stop: 54755, Start Num: 61

Candidate Starts for Hosp_059:

(42, 54504), (Start: 61 @54555 has 34 MA's), (Start: 63 @54558 has 1 MA's), (64, 54561), (68, 54573), (78, 54654),

Gene: ImtiyazSitla_68 Start: 57146, Stop: 57325, Start Num: 61

Candidate Starts for ImtiyazSitla_68:

(21, 57023), (Start: 34 @57077 has 6 MA's), (Start: 61 @57146 has 34 MA's), (70, 57188),

Gene: Indlovu_65 Start: 58320, Stop: 58526, Start Num: 49

Candidate Starts for Indlovu_65:

(Start: 29 @58278 has 1 MA's), (Start: 49 @58320 has 1 MA's), (Start: 61 @58353 has 34 MA's), (64, 58359), (68, 58371),

Gene: Inverness_66 Start: 56946, Stop: 57125, Start Num: 61

Candidate Starts for Inverness_66:

(21, 56823), (Start: 34 @56877 has 6 MA's), (Start: 61 @56946 has 34 MA's), (70, 56988),

Gene: ItsyBitsy1_63 Start: 55673, Stop: 55933, Start Num: 31

Candidate Starts for ItsyBitsy1_63:

(Start: 31 @55673 has 31 MA's), (Start: 35 @55682 has 5 MA's), (Start: 54 @55727 has 6 MA's), (Start: 63 @55754 has 1 MA's), (69, 55781), (73, 55808), (78, 55850), (82, 55883), (84, 55892), (86, 55904),

Gene: Jolie1_061 Start: 56473, Stop: 56673, Start Num: 61

Candidate Starts for Jolie1_061:

(42, 56422), (Start: 61 @56473 has 34 MA's), (Start: 63 @56476 has 1 MA's), (64, 56479), (68, 56491), (78, 56572),

Gene: Kaleb_64 Start: 55644, Stop: 55850, Start Num: 54

Candidate Starts for Kaleb_64:

(Start: 31 @55590 has 31 MA's), (Start: 35 @55599 has 5 MA's), (Start: 54 @55644 has 6 MA's), (Start: 63 @55671 has 1 MA's), (69, 55698), (73, 55725), (78, 55767), (82, 55800), (84, 55809), (86, 55821),

Gene: Kamiyu_68 Start: 57245, Stop: 57493, Start Num: 36

Candidate Starts for Kamiyu_68:

(2, 56984), (3, 57002), (4, 57014), (7, 57059), (22, 57194), (25, 57206), (28, 57224), (Start: 33 @57236 has 2 MA's), (Start: 36 @57245 has 13 MA's), (39, 57254), (75, 57398), (85, 57455),

Gene: KayaCho_61 Start: 56583, Stop: 56783, Start Num: 61

Candidate Starts for KayaCho_61:

(42, 56532), (Start: 61 @56583 has 34 MA's), (Start: 63 @56586 has 1 MA's), (64, 56589), (68, 56601), (78, 56682),

Gene: Kheth_64 Start: 55502, Stop: 55762, Start Num: 31

Candidate Starts for Kheth_64:

(Start: 31 @55502 has 31 MA's), (Start: 35 @55511 has 5 MA's), (Start: 54 @55556 has 6 MA's), (Start: 63 @55583 has 1 MA's), (69, 55610), (73, 55637), (78, 55679), (82, 55712), (84, 55721), (86, 55733),

Gene: Kolhan_65 Start: 55479, Stop: 55739, Start Num: 31

Candidate Starts for Kolhan_65:

(Start: 31 @55479 has 31 MA's), (Start: 35 @55488 has 5 MA's), (Start: 54 @55533 has 6 MA's), (Start: 63 @55560 has 1 MA's), (69, 55587), (73, 55614), (78, 55656), (82, 55689), (84, 55698), (86, 55710),

Gene: Kronus_68 Start: 58341, Stop: 58589, Start Num: 36

Candidate Starts for Kronus_68:

(2, 58080), (3, 58098), (4, 58110), (7, 58155), (22, 58290), (25, 58302), (28, 58320), (Start: 33 @58332 has 2 MA's), (Start: 36 @58341 has 13 MA's), (39, 58350), (75, 58494), (85, 58551),

Gene: Lars_65 Start: 55572, Stop: 55823, Start Num: 35

Candidate Starts for Lars_65:

(Start: 31 @55563 has 31 MA's), (Start: 35 @55572 has 5 MA's), (Start: 54 @55617 has 6 MA's), (Start: 63 @55644 has 1 MA's), (69, 55671), (73, 55698), (78, 55740), (82, 55773), (84, 55782), (86, 55794),

Gene: Lasso_67 Start: 57164, Stop: 57343, Start Num: 61

Candidate Starts for Lasso_67:

(21, 57041), (Start: 34 @57095 has 6 MA's), (Start: 61 @57164 has 34 MA's), (70, 57206),

Gene: Laurie_64 Start: 55263, Stop: 55523, Start Num: 31

Candidate Starts for Laurie_64:

(Start: 31 @55263 has 31 MA's), (Start: 35 @55272 has 5 MA's), (Start: 54 @55317 has 6 MA's), (Start: 63 @55344 has 1 MA's), (69, 55371), (73, 55398), (78, 55440), (82, 55473), (84, 55482), (86, 55494),

Gene: Lephleur_64 Start: 55428, Stop: 55688, Start Num: 31

Candidate Starts for Lephleur_64:

(Start: 31 @55428 has 31 MA's), (Start: 35 @55437 has 5 MA's), (Start: 54 @55482 has 6 MA's), (Start: 63 @55509 has 1 MA's), (69, 55536), (73, 55563), (78, 55605), (82, 55638), (84, 55647), (86, 55659),

Gene: LestyG_66 Start: 56771, Stop: 57019, Start Num: 36
Candidate Starts for LestyG_66:
(2, 56510), (3, 56528), (4, 56540), (7, 56585), (22, 56720), (25, 56732), (28, 56750), (Start: 33 @56762 has 2 MA's), (Start: 36 @56771 has 13 MA's), (39, 56780), (75, 56924), (85, 56981),

Gene: Ligma_62 Start: 50626, Stop: 50826, Start Num: 45
Candidate Starts for Ligma_62:
(Start: 29 @50590 has 1 MA's), (Start: 45 @50626 has 10 MA's), (74, 50728), (81, 50788), (88, 50815),

Gene: LilSmirk_64 Start: 55461, Stop: 55721, Start Num: 31
Candidate Starts for LilSmirk_64:
(Start: 31 @55461 has 31 MA's), (Start: 35 @55470 has 5 MA's), (Start: 54 @55515 has 6 MA's), (Start: 63 @55542 has 1 MA's), (69, 55569), (73, 55596), (78, 55638), (82, 55671), (84, 55680), (86, 55692),

Gene: LittleMunchkin_63 Start: 53357, Stop: 53581, Start Num: 41
Candidate Starts for LittleMunchkin_63:
(Start: 41 @53357 has 1 MA's), (70, 53456), (74, 53483), (79, 53531), (81, 53543), (88, 53570),

Gene: LizLemon_64 Start: 55590, Stop: 55850, Start Num: 31
Candidate Starts for LizLemon_64:
(Start: 31 @55590 has 31 MA's), (Start: 35 @55599 has 5 MA's), (Start: 54 @55644 has 6 MA's), (Start: 63 @55671 has 1 MA's), (69, 55698), (73, 55725), (78, 55767), (82, 55800), (84, 55809), (86, 55821),

Gene: Lulwa_66 Start: 56139, Stop: 56381, Start Num: 34
Candidate Starts for Lulwa_66:
(27, 56109), (Start: 30 @56130 has 2 MA's), (Start: 34 @56139 has 6 MA's), (Start: 63 @56202 has 1 MA's), (69, 56229), (86, 56352),

Gene: MakoManhole_59 Start: 50530, Stop: 50700, Start Num: 58
Candidate Starts for MakoManhole_59:
(Start: 58 @50530 has 3 MA's), (81, 50662), (88, 50689),

Gene: Mariokart_58 Start: 49462, Stop: 49695, Start Num: 29
Candidate Starts for Mariokart_58:
(Start: 29 @49462 has 1 MA's), (Start: 45 @49498 has 10 MA's), (74, 49600), (81, 49660),

Gene: Marley1013_69 Start: 58226, Stop: 58441, Start Num: 50
Candidate Starts for Marley1013_69:
(12, 58082), (Start: 41 @58208 has 1 MA's), (Start: 45 @58217 has 10 MA's), (Start: 50 @58226 has 6 MA's), (67, 58277), (85, 58403),

Gene: Marlia_69 Start: 57714, Stop: 57962, Start Num: 36
Candidate Starts for Marlia_69:
(2, 57453), (3, 57471), (4, 57483), (7, 57528), (22, 57663), (25, 57675), (28, 57693), (Start: 33 @57705 has 2 MA's), (Start: 36 @57714 has 13 MA's), (39, 57723), (75, 57867), (85, 57924),

Gene: Maskar_68 Start: 57146, Stop: 57325, Start Num: 61
Candidate Starts for Maskar_68:
(21, 57023), (Start: 34 @57077 has 6 MA's), (Start: 61 @57146 has 34 MA's), (70, 57188),

Gene: MasterPo_65 Start: 55460, Stop: 55720, Start Num: 31

Candidate Starts for MasterPo_65:

(Start: 31 @55460 has 31 MA's), (Start: 35 @55469 has 5 MA's), (Start: 54 @55514 has 6 MA's), (Start: 63 @55541 has 1 MA's), (69, 55568), (73, 55595), (78, 55637), (82, 55670), (84, 55679), (86, 55691),

Gene: Melc17_65 Start: 57547, Stop: 57726, Start Num: 61

Candidate Starts for Melc17_65:

(19, 57415), (Start: 34 @57478 has 6 MA's), (Start: 61 @57547 has 34 MA's), (70, 57589),

Gene: MelsMeow_67 Start: 57199, Stop: 57378, Start Num: 61

Candidate Starts for MelsMeow_67:

(21, 57076), (Start: 34 @57130 has 6 MA's), (Start: 61 @57199 has 34 MA's), (70, 57241),

Gene: Mikota_65 Start: 56445, Stop: 56624, Start Num: 61

Candidate Starts for Mikota_65:

(21, 56322), (Start: 34 @56376 has 6 MA's), (Start: 61 @56445 has 34 MA's), (70, 56487),

Gene: MiniBoss_65 Start: 56250, Stop: 56429, Start Num: 61

Candidate Starts for MiniBoss_65:

(21, 56127), (Start: 34 @56181 has 6 MA's), (Start: 61 @56250 has 34 MA's), (70, 56292),

Gene: MmasiCarm_69 Start: 57696, Stop: 57944, Start Num: 36

Candidate Starts for MmasiCarm_69:

(2, 57435), (3, 57453), (4, 57465), (7, 57510), (22, 57645), (25, 57657), (28, 57675), (Start: 33 @57687 has 2 MA's), (Start: 36 @57696 has 13 MA's), (39, 57705), (75, 57849), (85, 57906),

Gene: Mortcellus_68 Start: 58358, Stop: 58606, Start Num: 36

Candidate Starts for Mortcellus_68:

(2, 58097), (3, 58115), (4, 58127), (7, 58172), (22, 58307), (25, 58319), (28, 58337), (Start: 33 @58349 has 2 MA's), (Start: 36 @58358 has 13 MA's), (39, 58367), (75, 58511), (85, 58568),

Gene: Mulaychimus_69 Start: 57713, Stop: 57961, Start Num: 36

Candidate Starts for Mulaychimus_69:

(2, 57452), (3, 57470), (4, 57482), (7, 57527), (22, 57662), (25, 57674), (28, 57692), (Start: 33 @57704 has 2 MA's), (Start: 36 @57713 has 13 MA's), (39, 57722), (75, 57866), (85, 57923),

Gene: Mysterious_65 Start: 58405, Stop: 58593, Start Num: 61

Candidate Starts for Mysterious_65:

(Start: 30 @58336 has 2 MA's), (Start: 35 @58345 has 5 MA's), (Start: 61 @58405 has 34 MA's), (64, 58411), (70, 58447), (75, 58489), (83, 58543),

Gene: NHagos_59 Start: 49828, Stop: 50055, Start Num: 38

Candidate Starts for NHagos_59:

(Start: 38 @49828 has 1 MA's), (40, 49831), (Start: 45 @49837 has 10 MA's), (57, 49864), (80, 49987), (81, 49996), (87, 50023),

Gene: Nathan_68 Start: 57281, Stop: 57460, Start Num: 61

Candidate Starts for Nathan_68:

(21, 57158), (Start: 34 @57212 has 6 MA's), (Start: 61 @57281 has 34 MA's), (70, 57323),

Gene: Neos5_68 Start: 57688, Stop: 57903, Start Num: 50

Candidate Starts for Neos5_68:

(12, 57544), (Start: 41 @57670 has 1 MA's), (Start: 45 @57679 has 10 MA's), (Start: 50 @57688 has 6 MA's), (67, 57739), (85, 57865),

Gene: Obutu_70 Start: 57908, Stop: 58123, Start Num: 50

Candidate Starts for Obutu_70:

(12, 57764), (Start: 41 @57890 has 1 MA's), (Start: 45 @57899 has 10 MA's), (Start: 50 @57908 has 6 MA's), (67, 57959), (85, 58085),

Gene: Olivio_68 Start: 57508, Stop: 57756, Start Num: 36

Candidate Starts for Olivio_68:

(2, 57247), (3, 57265), (4, 57277), (7, 57322), (22, 57457), (25, 57469), (28, 57487), (Start: 33 @57499 has 2 MA's), (Start: 36 @57508 has 13 MA's), (39, 57517), (75, 57661), (85, 57718),

Gene: Opia_65 Start: 55480, Stop: 55740, Start Num: 31

Candidate Starts for Opia_65:

(Start: 31 @55480 has 31 MA's), (Start: 35 @55489 has 5 MA's), (Start: 54 @55534 has 6 MA's), (Start: 63 @55561 has 1 MA's), (69, 55588), (73, 55615), (78, 55657), (82, 55690), (84, 55699), (86, 55711),

Gene: Phaedrus_63 Start: 56718, Stop: 56966, Start Num: 36

Candidate Starts for Phaedrus_63:

(2, 56457), (3, 56475), (4, 56487), (7, 56532), (22, 56667), (25, 56679), (28, 56697), (Start: 33 @56709 has 2 MA's), (Start: 36 @56718 has 13 MA's), (39, 56727), (75, 56871), (85, 56928),

Gene: Phantasmagoria_63 Start: 55526, Stop: 55732, Start Num: 54

Candidate Starts for Phantasmagoria_63:

(Start: 31 @55472 has 31 MA's), (Start: 35 @55481 has 5 MA's), (Start: 54 @55526 has 6 MA's), (Start: 63 @55553 has 1 MA's), (69, 55580), (73, 55607), (78, 55649), (82, 55682), (84, 55691), (86, 55703),

Gene: Phareon_66 Start: 56635, Stop: 56814, Start Num: 61

Candidate Starts for Phareon_66:

(21, 56512), (Start: 34 @56566 has 6 MA's), (Start: 61 @56635 has 34 MA's), (70, 56677),

Gene: Phayeta_71 Start: 57812, Stop: 58027, Start Num: 50

Candidate Starts for Phayeta_71:

(12, 57668), (Start: 41 @57794 has 1 MA's), (Start: 45 @57803 has 10 MA's), (Start: 50 @57812 has 6 MA's), (67, 57863), (85, 57989),

Gene: Phelemich_64 Start: 58168, Stop: 58425, Start Num: 30

Candidate Starts for Phelemich_64:

(26, 58141), (Start: 30 @58168 has 2 MA's), (Start: 35 @58177 has 5 MA's), (Start: 61 @58237 has 34 MA's), (64, 58243), (70, 58279), (75, 58321), (83, 58375),

Gene: Pipefish_71 Start: 58442, Stop: 58660, Start Num: 45

Candidate Starts for Pipefish_71:

(11, 58295), (25, 58382), (28, 58400), (Start: 45 @58442 has 10 MA's), (Start: 50 @58451 has 6 MA's), (62, 58487), (71, 58529), (75, 58565), (85, 58622),

Gene: Potter_65 Start: 56927, Stop: 57106, Start Num: 61

Candidate Starts for Potter_65:

(21, 56804), (Start: 34 @56858 has 6 MA's), (Start: 61 @56927 has 34 MA's), (70, 56969),

Gene: PrinceCharming_65 Start: 55515, Stop: 55775, Start Num: 31

Candidate Starts for PrinceCharming_65:

(Start: 31 @55515 has 31 MA's), (Start: 35 @55524 has 5 MA's), (Start: 54 @55569 has 6 MA's), (Start: 63 @55596 has 1 MA's), (69, 55623), (73, 55650), (78, 55692), (82, 55725), (84, 55734), (86, 55746),

Gene: Qyrzula_58 Start: 55591, Stop: 55851, Start Num: 31

Candidate Starts for Qyrzula_58:

(Start: 31 @55591 has 31 MA's), (Start: 35 @55600 has 5 MA's), (Start: 54 @55645 has 6 MA's), (Start: 63 @55672 has 1 MA's), (69, 55699), (73, 55726), (78, 55768), (82, 55801), (84, 55810), (86, 55822),

Gene: RedRaider89_70 Start: 57358, Stop: 57537, Start Num: 61

Candidate Starts for RedRaider89_70:

(21, 57235), (Start: 34 @57289 has 6 MA's), (Start: 61 @57358 has 34 MA's), (70, 57400),

Gene: Reprobate_65 Start: 58173, Stop: 58430, Start Num: 30

Candidate Starts for Reprobate_65:

(26, 58146), (Start: 30 @58173 has 2 MA's), (Start: 35 @58182 has 5 MA's), (Start: 61 @58242 has 34 MA's), (64, 58248), (70, 58284), (75, 58326), (83, 58380),

Gene: Rhinoforte_64 Start: 55513, Stop: 55773, Start Num: 31

Candidate Starts for Rhinoforte_64:

(Start: 31 @55513 has 31 MA's), (Start: 35 @55522 has 5 MA's), (Start: 54 @55567 has 6 MA's), (Start: 63 @55594 has 1 MA's), (69, 55621), (73, 55648), (78, 55690), (82, 55723), (84, 55732), (86, 55744),

Gene: Rich_66 Start: 59397, Stop: 59645, Start Num: 35

Candidate Starts for Rich_66:

(26, 59361), (Start: 30 @59388 has 2 MA's), (Start: 35 @59397 has 5 MA's), (64, 59463), (74, 59526), (75, 59541), (83, 59595), (90, 59631), (92, 59640),

Gene: Rita130_66 Start: 58235, Stop: 58483, Start Num: 35

Candidate Starts for Rita130_66:

(26, 58199), (Start: 30 @58226 has 2 MA's), (Start: 35 @58235 has 5 MA's), (64, 58301), (75, 58379), (77, 58391), (83, 58433), (90, 58469),

Gene: Rosebush_63 Start: 55576, Stop: 55836, Start Num: 31

Candidate Starts for Rosebush_63:

(Start: 31 @55576 has 31 MA's), (Start: 35 @55585 has 5 MA's), (Start: 54 @55630 has 6 MA's), (Start: 63 @55657 has 1 MA's), (69, 55684), (73, 55711), (78, 55753), (82, 55786), (84, 55795), (86, 55807),

Gene: Sabella_64 Start: 55412, Stop: 55672, Start Num: 31

Candidate Starts for Sabella_64:

(Start: 31 @55412 has 31 MA's), (Start: 35 @55421 has 5 MA's), (Start: 54 @55466 has 6 MA's), (Start: 63 @55493 has 1 MA's), (69, 55520), (73, 55547), (78, 55589), (82, 55622), (84, 55631), (86, 55643),

Gene: Scrick_67 Start: 56929, Stop: 57108, Start Num: 61

Candidate Starts for Scrick_67:

(21, 56806), (Start: 34 @56860 has 6 MA's), (Start: 61 @56929 has 34 MA's), (70, 56971),

Gene: Serendipitous_65 Start: 57769, Stop: 58026, Start Num: 35
Candidate Starts for Serendipitous_65:
(17, 57688), (32, 57763), (Start: 35 @57769 has 5 MA's), (73, 57895), (75, 57922), (83, 57976),

Gene: Shatter_62 Start: 50626, Stop: 50826, Start Num: 45
Candidate Starts for Shatter_62:
(Start: 29 @50590 has 1 MA's), (Start: 45 @50626 has 10 MA's), (74, 50728), (81, 50788), (88, 50815),

Gene: Sheila_64 Start: 56299, Stop: 56478, Start Num: 61
Candidate Starts for Sheila_64:
(21, 56176), (Start: 34 @56230 has 6 MA's), (Start: 61 @56299 has 34 MA's), (70, 56341),

Gene: Shenandoah_67 Start: 56910, Stop: 57158, Start Num: 36
Candidate Starts for Shenandoah_67:
(2, 56649), (3, 56667), (4, 56679), (7, 56724), (22, 56859), (25, 56871), (28, 56889), (Start: 33 @56901 has 2 MA's), (Start: 36 @56910 has 13 MA's), (39, 56919), (75, 57063), (85, 57120),

Gene: SirJeffery_66 Start: 58371, Stop: 58619, Start Num: 35
Candidate Starts for SirJeffery_66:
(26, 58335), (Start: 30 @58362 has 2 MA's), (Start: 35 @58371 has 5 MA's), (64, 58437), (75, 58515), (83, 58569), (86, 58584), (90, 58605),

Gene: Sisko_60 Start: 50847, Stop: 51044, Start Num: 45
Candidate Starts for Sisko_60:
(Start: 45 @50847 has 10 MA's), (71, 50925), (74, 50946), (81, 51006), (88, 51033),

Gene: SlippinJimmy_71 Start: 58709, Stop: 58924, Start Num: 50
Candidate Starts for SlippinJimmy_71:
(12, 58565), (Start: 41 @58691 has 1 MA's), (Start: 45 @58700 has 10 MA's), (Start: 50 @58709 has 6 MA's), (67, 58760), (85, 58886),

Gene: Sour_62 Start: 53064, Stop: 53273, Start Num: 45
Candidate Starts for Sour_62:
(Start: 29 @53028 has 1 MA's), (Start: 45 @53064 has 10 MA's), (71, 53154), (81, 53235), (88, 53262),

Gene: Struggle_68 Start: 56927, Stop: 57169, Start Num: 34
Candidate Starts for Struggle_68:
(Start: 30 @56918 has 2 MA's), (Start: 34 @56927 has 6 MA's), (Start: 63 @56990 has 1 MA's), (69, 57017), (86, 57140),

Gene: SwainyDoc_69 Start: 57674, Stop: 57922, Start Num: 36
Candidate Starts for SwainyDoc_69:
(2, 57413), (3, 57431), (4, 57443), (7, 57488), (22, 57623), (25, 57635), (28, 57653), (Start: 33 @57665 has 2 MA's), (Start: 36 @57674 has 13 MA's), (39, 57683), (75, 57827), (85, 57884),

Gene: TA17A_66 Start: 55418, Stop: 55678, Start Num: 31
Candidate Starts for TA17A_66:
(Start: 31 @55418 has 31 MA's), (Start: 35 @55427 has 5 MA's), (Start: 54 @55472 has 6 MA's), (Start: 63 @55499 has 1 MA's), (69, 55526), (73, 55553), (78, 55595), (82, 55628), (84, 55637), (86, 55649),

Gene: Thonko_67 Start: 56230, Stop: 56466, Start Num: 47
Candidate Starts for Thonko_67:

(1, 55804), (6, 55999), (8, 56032), (25, 56158), (32, 56191), (Start: 35 @56197 has 5 MA's), (Start: 47 @56230 has 1 MA's), (55, 56260), (71, 56326), (74, 56347), (75, 56362),

Gene: Tinciduntolum_65 Start: 55579, Stop: 55839, Start Num: 31

Candidate Starts for Tinciduntolum_65:

(Start: 31 @55579 has 31 MA's), (Start: 35 @55588 has 5 MA's), (Start: 54 @55633 has 6 MA's), (69, 55687), (73, 55714), (78, 55756), (82, 55789), (84, 55798), (86, 55810),

Gene: TooFast2Furius_69 Start: 57172, Stop: 57351, Start Num: 61

Candidate Starts for TooFast2Furius_69:

(21, 57049), (Start: 34 @57103 has 6 MA's), (Start: 61 @57172 has 34 MA's), (70, 57214),

Gene: TraderJ_62 Start: 51541, Stop: 51786, Start Num: 51

Candidate Starts for TraderJ_62:

(5, 51304), (9, 51370), (10, 51376), (14, 51412), (16, 51424), (18, 51436), (20, 51448), (46, 51532), (51, 51541), (59, 51571), (60, 51574), (69, 51604), (74, 51643), (81, 51703), (93, 51769), (94, 51775),

Gene: Tres_64 Start: 55433, Stop: 55693, Start Num: 31

Candidate Starts for Tres_64:

(Start: 31 @55433 has 31 MA's), (Start: 35 @55442 has 5 MA's), (Start: 54 @55487 has 6 MA's), (Start: 63 @55514 has 1 MA's), (69, 55541), (73, 55568), (78, 55610), (82, 55643), (84, 55652), (86, 55664),

Gene: Tydolla_65 Start: 57176, Stop: 57418, Start Num: 37

Candidate Starts for Tydolla_65:

(13, 57080), (25, 57134), (Start: 37 @57176 has 3 MA's), (43, 57188), (71, 57290), (75, 57326), (85, 57383),

Gene: UAch1_68 Start: 57127, Stop: 57306, Start Num: 63

Candidate Starts for UAch1_68:

(27, 57034), (Start: 30 @57055 has 2 MA's), (Start: 34 @57064 has 6 MA's), (Start: 63 @57127 has 1 MA's), (69, 57154), (86, 57277),

Gene: Usavi_69 Start: 57492, Stop: 57734, Start Num: 34

Candidate Starts for Usavi_69:

(27, 57462), (Start: 30 @57483 has 2 MA's), (Start: 34 @57492 has 6 MA's), (Start: 63 @57555 has 1 MA's), (69, 57582), (86, 57705),

Gene: Vic9_00063 Start: 56338, Stop: 56544, Start Num: 54

Candidate Starts for Vic9_00063:

(Start: 31 @56284 has 31 MA's), (Start: 35 @56293 has 5 MA's), (Start: 54 @56338 has 6 MA's), (Start: 63 @56365 has 1 MA's), (69, 56392), (73, 56419), (78, 56461), (82, 56494), (84, 56503), (86, 56515),

Gene: West99_64 Start: 55606, Stop: 55866, Start Num: 31

Candidate Starts for West99_64:

(Start: 31 @55606 has 31 MA's), (Start: 35 @55615 has 5 MA's), (Start: 54 @55660 has 6 MA's), (Start: 63 @55687 has 1 MA's), (69, 55714), (73, 55741), (78, 55783), (82, 55816), (84, 55825), (86, 55837),

Gene: Wooper_63 Start: 51561, Stop: 51731, Start Num: 58

Candidate Starts for Wooper_63:

(Start: 53 @51552 has 3 MA's), (Start: 58 @51561 has 3 MA's), (81, 51693), (88, 51720),

Gene: Yago84_59 Start: 50332, Stop: 50529, Start Num: 45

Candidate Starts for Yago84_59:

(Start: 45 @50332 has 10 MA's), (71, 50410), (74, 50431), (81, 50491), (88, 50518),

Gene: Yahalom_66 Start: 57095, Stop: 57343, Start Num: 36

Candidate Starts for Yahalom_66:

(2, 56834), (3, 56852), (4, 56864), (7, 56909), (22, 57044), (25, 57056), (28, 57074), (Start: 33 @57086 has 2 MA's), (Start: 36 @57095 has 13 MA's), (39, 57104), (75, 57248), (85, 57305),

Gene: Yeshua_62 Start: 51529, Stop: 51708, Start Num: 53

Candidate Starts for Yeshua_62:

(Start: 53 @51529 has 3 MA's), (Start: 58 @51538 has 3 MA's), (81, 51670), (88, 51697),

Gene: Zaider_69 Start: 57303, Stop: 57545, Start Num: 34

Candidate Starts for Zaider_69:

(27, 57273), (Start: 30 @57294 has 2 MA's), (Start: 34 @57303 has 6 MA's), (Start: 63 @57366 has 1 MA's), (69, 57393), (86, 57516),

Gene: Zenteno07_73 Start: 58751, Stop: 59014, Start Num: 35

Candidate Starts for Zenteno07_73:

(15, 58664), (24, 58709), (Start: 31 @58742 has 31 MA's), (Start: 35 @58751 has 5 MA's), (52, 58790), (Start: 63 @58817 has 1 MA's), (64, 58820), (66, 58826), (69, 58844), (74, 58883), (91, 58994),