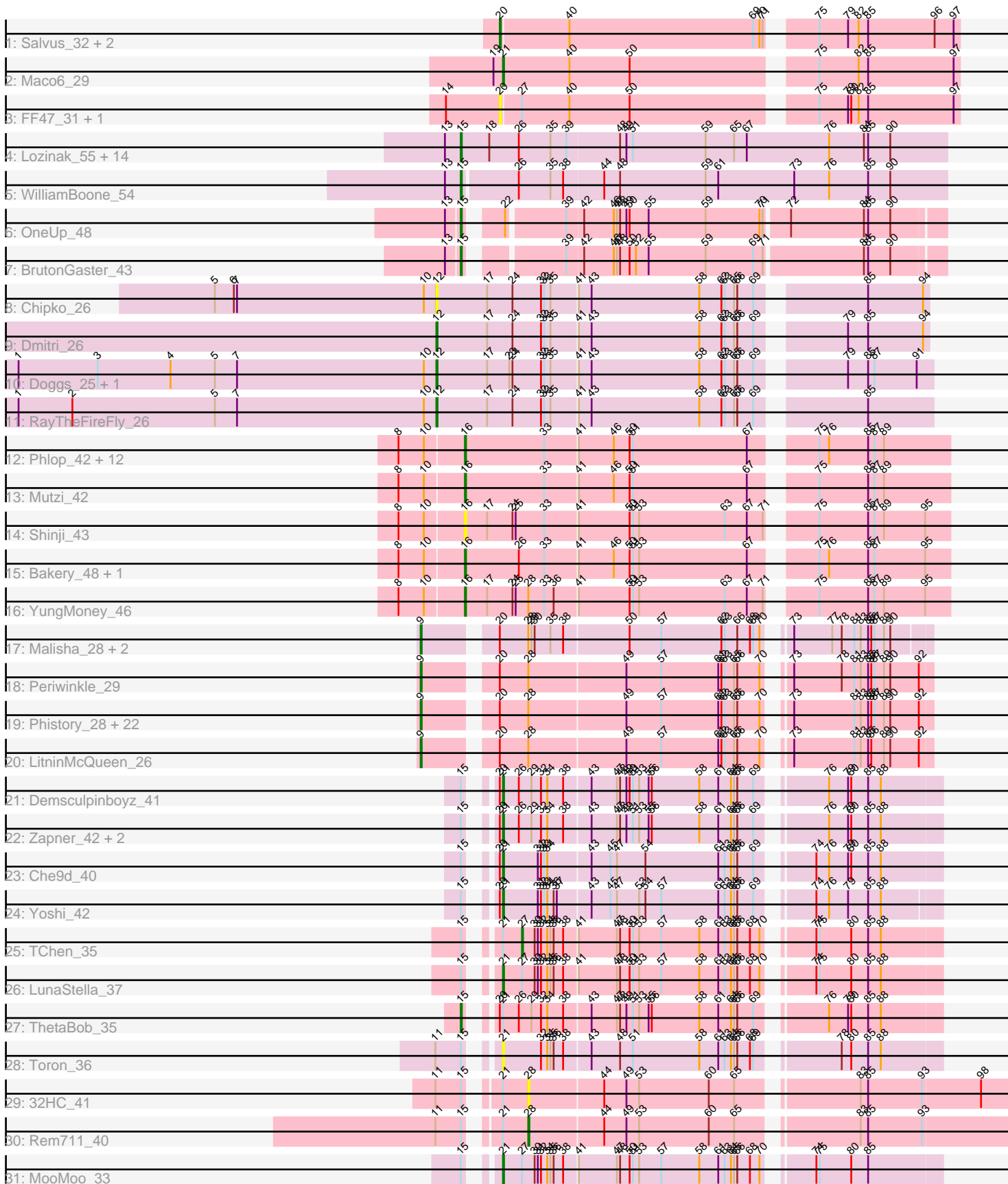


Pham 296459



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 296459 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296459 has 88 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Salvus_32, LongHai_32, Muddy_31
- Track 2 : Maco6_29
- Track 3 : FF47_31, 8UZL_31
- Track 4 : Lozinak_55, ClubL_54, Bachita_56, Geeche_53, Engineer_56, Miskis_52, Norvs_55, Dusty_53, PhinkBoden_54, Abscondus_53, Cucurbita_56, Culver_54, Smoothie_56, Aphelion_54, Toniann_54
- Track 5 : WilliamBoone_54
- Track 6 : OneUp_48
- Track 7 : BrutonGaster_43
- Track 8 : Chipko_26
- Track 9 : Dmitri_26
- Track 10 : Doggs_25, Coriander_26
- Track 11 : RayTheFireFly_26
- Track 12 : Phlop_42, Egi03_43, Sendy_44, Togo_42, Fireball_44, Barb_45, PullumCavea_42, PinkCoffee_45, ClamChowder_45, SmokingBunny_43, Fugax_46, Nubi_43, TillyBobJoe_43
- Track 13 : Mutzi_42
- Track 14 : Shinji_43
- Track 15 : Bakery_48, Sixsevenium_46
- Track 16 : YungMoney_46
- Track 17 : Malisha_28, Spooky_27, Squiddly_29
- Track 18 : Periwinkle_29
- Track 19 : Phistory_28, Kamaru_27, Getalong_28, Horus_27, Phabuloso_26, ShawBrad_27, Lutum_27, CheeseTouch_27, BearBQ_26, Kenna_26, Crater_25, Holliday_27, Apricot_26, Budski_27, BENtherdunthat_27, Frickyeah_26, Asapag_27, Leroy_27, MortyNRick_26, Kuwabara_26, BotCity_27, Birdsong_26, Whitney_28
- Track 20 : LitninMcQueen_26
- Track 21 : Demsculpinboyz_41
- Track 22 : Zapner_42, Jabbawokkie_43, Avani_40
- Track 23 : Che9d_40
- Track 24 : Yoshi_42
- Track 25 : TChen_35
- Track 26 : LunaStella_37
- Track 27 : ThetaBob_35
- Track 28 : Toron_36
- Track 29 : 32HC_41
- Track 30 : Rem711_40

- Track 31 : MooMoo_33

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

The start number called the most often in the published annotations is 9, it was called in 26 of the 75 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Apricot_26, Asapag_27, BENtherdunthat_27, BearBQ_26, Birdsong_26, BotCity_27, Budski_27, CheeseTouch_27, Crater_25, Frickyeah_26, Getalong_28, Holliday_27, Horus_27, Kamaru_27, Kenna_26, Kuwabara_26, Leroy_27, LitninMcQueen_26, Lutum_27, Malisha_28, MortyNRick_26, Periwinkle_29, Phabuloso_26, Phistory_28, ShawBrad_27, Spooky_27, Squiddly_29, Whitney_28,

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

-

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

- 32HC_41, 8UZL_31, Abscondus_53, Aphelion_54, Avani_40, Bachita_56, Bakery_48, Barb_45, BrutonGaster_43, Che9d_40, Chipko_26, ClamChowder_45, ClubL_54, Coriander_26, Cucurbita_56, Culver_54, Demsculpinboyz_41, Dmitri_26, Doggs_25, Dusty_53, Egi03_43, Engineer_56, FF47_31, Fireball_44, Fugax_46, Geeche_53, Jabbawokkie_43, LongHai_32, Lozinak_55, LunaStella_37, Maco6_29, Miskis_52, MooMoo_33, Muddy_31, Mutzi_42, Norvs_55, Nubi_43, OneUp_48, PhinkBoden_54, Phlop_42, PinkCoffee_45, PullumCavea_42, RayTheFireFly_26, Rem711_40, Salvus_32, Sendy_44, Shinji_43, Sixsevenium_46, SmokingBunny_43, Smoothie_56, TChen_35, ThetaBob_35, TillyBobJoe_43, Togo_42, Toniann_54, Toron_36, WilliamBoone_54, Yoshi_42, YungMoney_46, Zapner_42,

Summary by start number:

Start 9:

- Found in 28 of 88 (31.8%) of genes in pham
- Manual Annotations of this start: 26 of 75
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apricot_26 (DN3), Asapag_27 (DN1), BENtherdunthat_27 (DN1), BearBQ_26 (DN), Birdsong_26 (DN), BotCity_27 (DN), Budski_27 (DN), CheeseTouch_27 (DN1), Crater_25 (DN3), Frickyeah_26 (DN1), Getalong_28 (DN1), Holliday_27 (DN1), Horus_27 (DN1), Kamaru_27 (DN1), Kenna_26 (DN1), Kuwabara_26 (DN4), Leroy_27 (DN1), LitninMcQueen_26 (DN1), Lutum_27 (DN1), Malisha_28 (DN), MortyNRick_26 (DN), Periwinkle_29 (DN1), Phabuloso_26 (DN1), Phistory_28 (DN1), ShawBrad_27 (DN1), Spooky_27 (DN2), Squiddly_29 (DN2), Whitney_28 (DN1),

Start 12:

- Found in 5 of 88 (5.7%) of genes in pham
- Manual Annotations of this start: 4 of 75
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chipko_26 (DB), Coriander_26 (DB), Dmitri_26 (DB), Doggs_25 (DB), RayTheFireFly_26 (DB),

Start 15:

- Found in 31 of 88 (35.2%) of genes in pham
- Manual Annotations of this start: 18 of 75
- Called 61.3% of time when present
- Phage (with cluster) where this start called: Abscondus_53 (CQ1), Aphelion_54 (CQ1), Bachita_56 (CQ1), BrutonGaster_43 (CQ2), ClubL_54 (CQ1), Cucurbita_56 (CQ1), Culver_54 (CQ1), Dusty_53 (CQ1), Engineer_56 (CQ1), Geeche_53 (CQ1), Lozinak_55 (CQ1), Miskis_52 (CQ1), Norvs_55 (CQ1), OneUp_48 (CQ2), PhinkBoden_54 (CQ1), Smoothie_56 (CQ1), ThetaBob_35 (F4), Toniann_54 (CQ1), WilliamBoone_54 (CQ1),

Start 16:

- Found in 18 of 88 (20.5%) of genes in pham
- Manual Annotations of this start: 15 of 75
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bakery_48 (DC1), Barb_45 (DC1), ClamChowder_45 (DC1), Egi03_43 (DC1), Fireball_44 (DC1), Fugax_46 (DC1), Mutzi_42 (DC1), Nubi_43 (DC1), Phlop_42 (DC1), PinkCoffee_45 (DC1), PullumCavea_42 (DC1), Sendy_44 (DC), Shinji_43 (DC1), Sixsevenium_46 (DC), SmokingBunny_43 (DC1), TillyBobJoe_43 (DC1), Togo_42 (DC1), YungMoney_46 (DC1),

Start 20:

- Found in 40 of 88 (45.5%) of genes in pham
- Manual Annotations of this start: 1 of 75
- Called 12.5% of time when present
- Phage (with cluster) where this start called: 8UZL_31 (AB), FF47_31 (AB), LongHai_32 (AB), Muddy_31 (AB), Salvus_32 (AB),

Start 21:

- Found in 14 of 88 (15.9%) of genes in pham
- Manual Annotations of this start: 9 of 75
- Called 71.4% of time when present
- Phage (with cluster) where this start called: Avani_40 (F2), Che9d_40 (F2), Demsculpinboyz_41 (F2), Jabbawokkie_43 (F2), LunaStella_37 (F4), Maco6_29 (AB), MooMoo_33 (singleton), Toron_36 (F6), Yoshi_42 (F2), Zapner_42 (F2),

Start 27:

- Found in 5 of 88 (5.7%) of genes in pham
- Manual Annotations of this start: 1 of 75
- Called 20.0% of time when present
- Phage (with cluster) where this start called: TChen_35 (F4),

Start 28:

- Found in 31 of 88 (35.2%) of genes in pham
- Manual Annotations of this start: 1 of 75
- Called 6.5% of time when present
- Phage (with cluster) where this start called: 32HC_41 (Z), Rem711_40 (Z),

Summary by clusters:

There are 16 clusters represented in this pham: DN, F2, AB, F4, F6, DB, DC, singleton, DN4, DN1, DN3, DN2, CQ2, CQ1, Z, DC1,

Info for manual annotations of cluster AB:

- Start number 20 was manually annotated 1 time for cluster AB.
- Start number 21 was manually annotated 1 time for cluster AB.

Info for manual annotations of cluster CQ1:

- Start number 15 was manually annotated 15 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 15 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster DB:

- Start number 12 was manually annotated 4 times for cluster DB.

Info for manual annotations of cluster DC1:

- Start number 16 was manually annotated 15 times for cluster DC1.

Info for manual annotations of cluster DN:

- Start number 9 was manually annotated 6 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 9 was manually annotated 15 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 9 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 9 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 9 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster F2:

- Start number 21 was manually annotated 6 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 15 was manually annotated 1 time for cluster F4.
- Start number 21 was manually annotated 1 time for cluster F4.
- Start number 27 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster Z:

- Start number 28 was manually annotated 1 time for cluster Z.

Gene Information:

Gene: 32HC_41 Start: 30730, Stop: 31161, Start Num: 28

Candidate Starts for 32HC_41:

(11, 30664), (Start: 15 @30688 has 18 MA's), (Start: 21 @30706 has 9 MA's), (Start: 28 @30730 has 1 MA's), (44, 30799), (49, 30820), (53, 30832), (60, 30898), (65, 30922), (83, 31021), (85, 31027), (93, 31078), (98, 31132),

Gene: 8UZL_31 Start: 24782, Stop: 25192, Start Num: 20

Candidate Starts for 8UZL_31:

(14, 24731), (Start: 20 @24782 has 1 MA's), (Start: 27 @24800 has 1 MA's), (40, 24845), (50, 24902), (75, 25061), (79, 25088), (80, 25091), (82, 25097), (85, 25106), (97, 25187),

Gene: Abscondus_53 Start: 33557, Stop: 34012, Start Num: 15

Candidate Starts for Abscondus_53:

(13, 33542), (Start: 15 @33557 has 18 MA's), (18, 33584), (26, 33611), (35, 33641), (39, 33656), (48, 33704), (49, 33710), (51, 33716), (59, 33785), (65, 33812), (67, 33824), (76, 33902), (84, 33935), (85, 33938), (90, 33959),

Gene: Aphelion_54 Start: 33826, Stop: 34281, Start Num: 15

Candidate Starts for Aphelion_54:

(13, 33811), (Start: 15 @33826 has 18 MA's), (18, 33853), (26, 33880), (35, 33910), (39, 33925), (48, 33973), (49, 33979), (51, 33985), (59, 34054), (65, 34081), (67, 34093), (76, 34171), (84, 34204), (85, 34207), (90, 34228),

Gene: Apricot_26 Start: 20622, Stop: 21062, Start Num: 9

Candidate Starts for Apricot_26:

(Start: 9 @20622 has 26 MA's), (Start: 20 @20679 has 1 MA's), (Start: 28 @20706 has 1 MA's), (49, 20796), (57, 20829), (61, 20883), (62, 20886), (63, 20889), (65, 20898), (66, 20901), (70, 20922), (73, 20934), (81, 20991), (83, 20997), (85, 21003), (86, 21006), (87, 21009), (89, 21018), (90, 21024), (92, 21051),

Gene: Asapag_27 Start: 21064, Stop: 21504, Start Num: 9

Candidate Starts for Asapag_27:

(Start: 9 @21064 has 26 MA's), (Start: 20 @21121 has 1 MA's), (Start: 28 @21148 has 1 MA's), (49, 21238), (57, 21271), (61, 21325), (62, 21328), (63, 21331), (65, 21340), (66, 21343), (70, 21364), (73, 21376), (81, 21433), (83, 21439), (85, 21445), (86, 21448), (87, 21451), (89, 21460), (90, 21466), (92, 21493),

Gene: Avani_40 Start: 28789, Stop: 29178, Start Num: 21

Candidate Starts for Avani_40:

(Start: 15 @28774 has 18 MA's), (Start: 20 @28786 has 1 MA's), (Start: 21 @28789 has 9 MA's), (26, 28804), (29, 28816), (32, 28825), (34, 28831), (38, 28846), (43, 28870), (47, 28894), (48, 28897), (49, 28903), (51, 28909), (53, 28915), (55, 28924), (56, 28927), (58, 28972), (61, 28990), (64, 29002), (65, 29005), (66, 29008), (69, 29023), (76, 29074), (79, 29092), (80, 29095), (85, 29110), (88, 29122),

Gene: BENtherdunthat_27 Start: 21061, Stop: 21501, Start Num: 9

Candidate Starts for BENtherdunthat_27:

(Start: 9 @21061 has 26 MA's), (Start: 20 @21118 has 1 MA's), (Start: 28 @21145 has 1 MA's), (49, 21235), (57, 21268), (61, 21322), (62, 21325), (63, 21328), (65, 21337), (66, 21340), (70, 21361), (73, 21373), (81, 21430), (83, 21436), (85, 21442), (86, 21445), (87, 21448), (89, 21457), (90, 21463), (92, 21490),

Gene: Bachita_56 Start: 34259, Stop: 34714, Start Num: 15

Candidate Starts for Bachita_56:

(13, 34244), (Start: 15 @34259 has 18 MA's), (18, 34286), (26, 34313), (35, 34343), (39, 34358), (48, 34406), (49, 34412), (51, 34418), (59, 34487), (65, 34514), (67, 34526), (76, 34604), (84, 34637), (85,

34640), (90, 34661),

Gene: Bakery_48 Start: 37078, Stop: 37512, Start Num: 16

Candidate Starts for Bakery_48:

(8, 37018), (10, 37042), (Start: 16 @37078 has 15 MA's), (26, 37129), (33, 37153), (41, 37183), (46, 37216), (50, 37231), (51, 37234), (53, 37240), (67, 37342), (75, 37390), (76, 37399), (85, 37435), (87, 37441), (95, 37489),

Gene: Barb_45 Start: 36050, Stop: 36484, Start Num: 16

Candidate Starts for Barb_45:

(8, 35990), (10, 36014), (Start: 16 @36050 has 15 MA's), (33, 36125), (41, 36155), (46, 36188), (50, 36203), (51, 36206), (67, 36314), (75, 36362), (76, 36371), (85, 36407), (87, 36413), (89, 36422),

Gene: BearBQ_26 Start: 21901, Stop: 22341, Start Num: 9

Candidate Starts for BearBQ_26:

(Start: 9 @21901 has 26 MA's), (Start: 20 @21958 has 1 MA's), (Start: 28 @21985 has 1 MA's), (49, 22075), (57, 22108), (61, 22162), (62, 22165), (63, 22168), (65, 22177), (66, 22180), (70, 22201), (73, 22213), (81, 22270), (83, 22276), (85, 22282), (86, 22285), (87, 22288), (89, 22297), (90, 22303), (92, 22330),

Gene: Birdsong_26 Start: 20794, Stop: 21234, Start Num: 9

Candidate Starts for Birdsong_26:

(Start: 9 @20794 has 26 MA's), (Start: 20 @20851 has 1 MA's), (Start: 28 @20878 has 1 MA's), (49, 20968), (57, 21001), (61, 21055), (62, 21058), (63, 21061), (65, 21070), (66, 21073), (70, 21094), (73, 21106), (81, 21163), (83, 21169), (85, 21175), (86, 21178), (87, 21181), (89, 21190), (90, 21196), (92, 21223),

Gene: BotCity_27 Start: 21062, Stop: 21502, Start Num: 9

Candidate Starts for BotCity_27:

(Start: 9 @21062 has 26 MA's), (Start: 20 @21119 has 1 MA's), (Start: 28 @21146 has 1 MA's), (49, 21236), (57, 21269), (61, 21323), (62, 21326), (63, 21329), (65, 21338), (66, 21341), (70, 21362), (73, 21374), (81, 21431), (83, 21437), (85, 21443), (86, 21446), (87, 21449), (89, 21458), (90, 21464), (92, 21491),

Gene: BrutonGaster_43 Start: 30940, Stop: 31359, Start Num: 15

Candidate Starts for BrutonGaster_43:

(13, 30928), (Start: 15 @30940 has 18 MA's), (39, 31015), (42, 31030), (46, 31057), (47, 31060), (48, 31063), (50, 31072), (52, 31078), (55, 31090), (59, 31144), (69, 31189), (71, 31198), (84, 31288), (85, 31291), (90, 31312),

Gene: Budski_27 Start: 21169, Stop: 21609, Start Num: 9

Candidate Starts for Budski_27:

(Start: 9 @21169 has 26 MA's), (Start: 20 @21226 has 1 MA's), (Start: 28 @21253 has 1 MA's), (49, 21343), (57, 21376), (61, 21430), (62, 21433), (63, 21436), (65, 21445), (66, 21448), (70, 21469), (73, 21481), (81, 21538), (83, 21544), (85, 21550), (86, 21553), (87, 21556), (89, 21565), (90, 21571), (92, 21598),

Gene: Che9d_40 Start: 28798, Stop: 29187, Start Num: 21

Candidate Starts for Che9d_40:

(Start: 15 @28783 has 18 MA's), (Start: 20 @28795 has 1 MA's), (Start: 21 @28798 has 9 MA's), (31, 28831), (32, 28834), (33, 28837), (34, 28840), (43, 28879), (45, 28897), (47, 28903), (54, 28930), (61, 28999), (63, 29005), (64, 29011), (65, 29014), (66, 29017), (69, 29032), (74, 29071), (76, 29083), (79, 29101), (80, 29104), (85, 29119), (88, 29131),

Gene: CheeseTouch_27 Start: 21055, Stop: 21495, Start Num: 9

Candidate Starts for CheeseTouch_27:

(Start: 9 @21055 has 26 MA's), (Start: 20 @21112 has 1 MA's), (Start: 28 @21139 has 1 MA's), (49, 21229), (57, 21262), (61, 21316), (62, 21319), (63, 21322), (65, 21331), (66, 21334), (70, 21355), (73, 21367), (81, 21424), (83, 21430), (85, 21436), (86, 21439), (87, 21442), (89, 21451), (90, 21457), (92, 21484),

Gene: Chipko_26 Start: 22113, Stop: 22553, Start Num: 12

Candidate Starts for Chipko_26:

(5, 21903), (6, 21921), (7, 21924), (10, 22101), (Start: 12 @22113 has 4 MA's), (17, 22161), (24, 22185), (32, 22212), (33, 22215), (35, 22221), (41, 22245), (43, 22257), (58, 22359), (62, 22380), (63, 22383), (65, 22392), (66, 22395), (69, 22410), (85, 22497), (94, 22548),

Gene: ClamChowder_45 Start: 36050, Stop: 36484, Start Num: 16

Candidate Starts for ClamChowder_45:

(8, 35990), (10, 36014), (Start: 16 @36050 has 15 MA's), (33, 36125), (41, 36155), (46, 36188), (50, 36203), (51, 36206), (67, 36314), (75, 36362), (76, 36371), (85, 36407), (87, 36413), (89, 36422),

Gene: ClubL_54 Start: 33748, Stop: 34203, Start Num: 15

Candidate Starts for ClubL_54:

(13, 33733), (Start: 15 @33748 has 18 MA's), (18, 33775), (26, 33802), (35, 33832), (39, 33847), (48, 33895), (49, 33901), (51, 33907), (59, 33976), (65, 34003), (67, 34015), (76, 34093), (84, 34126), (85, 34129), (90, 34150),

Gene: Coriander_26 Start: 22098, Stop: 22541, Start Num: 12

Candidate Starts for Coriander_26:

(1, 21702), (3, 21777), (4, 21846), (5, 21888), (7, 21909), (10, 22086), (Start: 12 @22098 has 4 MA's), (17, 22146), (23, 22167), (24, 22170), (32, 22197), (33, 22200), (35, 22206), (41, 22230), (43, 22242), (58, 22344), (62, 22365), (63, 22368), (65, 22377), (66, 22380), (69, 22395), (79, 22464), (85, 22482), (87, 22488), (91, 22527),

Gene: Crater_25 Start: 20622, Stop: 21062, Start Num: 9

Candidate Starts for Crater_25:

(Start: 9 @20622 has 26 MA's), (Start: 20 @20679 has 1 MA's), (Start: 28 @20706 has 1 MA's), (49, 20796), (57, 20829), (61, 20883), (62, 20886), (63, 20889), (65, 20898), (66, 20901), (70, 20922), (73, 20934), (81, 20991), (83, 20997), (85, 21003), (86, 21006), (87, 21009), (89, 21018), (90, 21024), (92, 21051),

Gene: Cucurbita_56 Start: 35118, Stop: 35573, Start Num: 15

Candidate Starts for Cucurbita_56:

(13, 35103), (Start: 15 @35118 has 18 MA's), (18, 35145), (26, 35172), (35, 35202), (39, 35217), (48, 35265), (49, 35271), (51, 35277), (59, 35346), (65, 35373), (67, 35385), (76, 35463), (84, 35496), (85, 35499), (90, 35520),

Gene: Culver_54 Start: 33557, Stop: 34012, Start Num: 15

Candidate Starts for Culver_54:

(13, 33542), (Start: 15 @33557 has 18 MA's), (18, 33584), (26, 33611), (35, 33641), (39, 33656), (48, 33704), (49, 33710), (51, 33716), (59, 33785), (65, 33812), (67, 33824), (76, 33902), (84, 33935), (85, 33938), (90, 33959),

Gene: Demsculpinboyz_41 Start: 28731, Stop: 29120, Start Num: 21

Candidate Starts for Demsculpinboyz_41:

(Start: 15 @28716 has 18 MA's), (Start: 20 @28728 has 1 MA's), (Start: 21 @28731 has 9 MA's), (26, 28746), (29, 28758), (32, 28767), (34, 28773), (38, 28788), (43, 28812), (47, 28836), (48, 28839), (49, 28845), (50, 28848), (51, 28851), (53, 28857), (55, 28866), (56, 28869), (58, 28914), (61, 28932), (64, 28944), (65, 28947), (66, 28950), (69, 28965), (76, 29016), (79, 29034), (80, 29037), (85, 29052), (88, 29064),

Gene: Dmitri_26 Start: 22153, Stop: 22593, Start Num: 12

Candidate Starts for Dmitri_26:

(Start: 12 @22153 has 4 MA's), (17, 22201), (24, 22225), (32, 22252), (33, 22255), (35, 22261), (41, 22285), (43, 22297), (58, 22399), (62, 22420), (63, 22423), (65, 22432), (66, 22435), (69, 22450), (79, 22519), (85, 22537), (94, 22588),

Gene: Doggs_25 Start: 21797, Stop: 22240, Start Num: 12

Candidate Starts for Doggs_25:

(1, 21401), (3, 21476), (4, 21545), (5, 21587), (7, 21608), (10, 21785), (Start: 12 @21797 has 4 MA's), (17, 21845), (23, 21866), (24, 21869), (32, 21896), (33, 21899), (35, 21905), (41, 21929), (43, 21941), (58, 22043), (62, 22064), (63, 22067), (65, 22076), (66, 22079), (69, 22094), (79, 22163), (85, 22181), (87, 22187), (91, 22226),

Gene: Dusty_53 Start: 33557, Stop: 34012, Start Num: 15

Candidate Starts for Dusty_53:

(13, 33542), (Start: 15 @33557 has 18 MA's), (18, 33584), (26, 33611), (35, 33641), (39, 33656), (48, 33704), (49, 33710), (51, 33716), (59, 33785), (65, 33812), (67, 33824), (76, 33902), (84, 33935), (85, 33938), (90, 33959),

Gene: Egi03_43 Start: 35531, Stop: 35965, Start Num: 16

Candidate Starts for Egi03_43:

(8, 35471), (10, 35495), (Start: 16 @35531 has 15 MA's), (33, 35606), (41, 35636), (46, 35669), (50, 35684), (51, 35687), (67, 35795), (75, 35843), (76, 35852), (85, 35888), (87, 35894), (89, 35903),

Gene: Engineer_56 Start: 34232, Stop: 34687, Start Num: 15

Candidate Starts for Engineer_56:

(13, 34217), (Start: 15 @34232 has 18 MA's), (18, 34259), (26, 34286), (35, 34316), (39, 34331), (48, 34379), (49, 34385), (51, 34391), (59, 34460), (65, 34487), (67, 34499), (76, 34577), (84, 34610), (85, 34613), (90, 34634),

Gene: FF47_31 Start: 24709, Stop: 25119, Start Num: 20

Candidate Starts for FF47_31:

(14, 24658), (Start: 20 @24709 has 1 MA's), (Start: 27 @24727 has 1 MA's), (40, 24772), (50, 24829), (75, 24988), (79, 25015), (80, 25018), (82, 25024), (85, 25033), (97, 25114),

Gene: Fireball_44 Start: 35995, Stop: 36429, Start Num: 16

Candidate Starts for Fireball_44:

(8, 35935), (10, 35959), (Start: 16 @35995 has 15 MA's), (33, 36070), (41, 36100), (46, 36133), (50, 36148), (51, 36151), (67, 36259), (75, 36307), (76, 36316), (85, 36352), (87, 36358), (89, 36367),

Gene: Frickyeah_26 Start: 20827, Stop: 21267, Start Num: 9

Candidate Starts for Frickyeah_26:

(Start: 9 @20827 has 26 MA's), (Start: 20 @20884 has 1 MA's), (Start: 28 @20911 has 1 MA's), (49, 21001), (57, 21034), (61, 21088), (62, 21091), (63, 21094), (65, 21103), (66, 21106), (70, 21127), (73, 21139), (81, 21196), (83, 21202), (85, 21208), (86, 21211), (87, 21214), (89, 21223), (90, 21229), (92, 21256),

Gene: Fugax_46 Start: 36042, Stop: 36476, Start Num: 16

Candidate Starts for Fugax_46:

(8, 35982), (10, 36006), (Start: 16 @36042 has 15 MA's), (33, 36117), (41, 36147), (46, 36180), (50, 36195), (51, 36198), (67, 36306), (75, 36354), (76, 36363), (85, 36399), (87, 36405), (89, 36414),

Gene: Geeche_53 Start: 33648, Stop: 34103, Start Num: 15

Candidate Starts for Geeche_53:

(13, 33633), (Start: 15 @33648 has 18 MA's), (18, 33675), (26, 33702), (35, 33732), (39, 33747), (48, 33795), (49, 33801), (51, 33807), (59, 33876), (65, 33903), (67, 33915), (76, 33993), (84, 34026), (85, 34029), (90, 34050),

Gene: Getalong_28 Start: 21864, Stop: 22304, Start Num: 9

Candidate Starts for Getalong_28:

(Start: 9 @21864 has 26 MA's), (Start: 20 @21921 has 1 MA's), (Start: 28 @21948 has 1 MA's), (49, 22038), (57, 22071), (61, 22125), (62, 22128), (63, 22131), (65, 22140), (66, 22143), (70, 22164), (73, 22176), (81, 22233), (83, 22239), (85, 22245), (86, 22248), (87, 22251), (89, 22260), (90, 22266), (92, 22293),

Gene: Holliday_27 Start: 21169, Stop: 21609, Start Num: 9

Candidate Starts for Holliday_27:

(Start: 9 @21169 has 26 MA's), (Start: 20 @21226 has 1 MA's), (Start: 28 @21253 has 1 MA's), (49, 21343), (57, 21376), (61, 21430), (62, 21433), (63, 21436), (65, 21445), (66, 21448), (70, 21469), (73, 21481), (81, 21538), (83, 21544), (85, 21550), (86, 21553), (87, 21556), (89, 21565), (90, 21571), (92, 21598),

Gene: Horus_27 Start: 21086, Stop: 21526, Start Num: 9

Candidate Starts for Horus_27:

(Start: 9 @21086 has 26 MA's), (Start: 20 @21143 has 1 MA's), (Start: 28 @21170 has 1 MA's), (49, 21260), (57, 21293), (61, 21347), (62, 21350), (63, 21353), (65, 21362), (66, 21365), (70, 21386), (73, 21398), (81, 21455), (83, 21461), (85, 21467), (86, 21470), (87, 21473), (89, 21482), (90, 21488), (92, 21515),

Gene: Jabbawokkie_43 Start: 30179, Stop: 30568, Start Num: 21

Candidate Starts for Jabbawokkie_43:

(Start: 15 @30164 has 18 MA's), (Start: 20 @30176 has 1 MA's), (Start: 21 @30179 has 9 MA's), (26, 30194), (29, 30206), (32, 30215), (34, 30221), (38, 30236), (43, 30260), (47, 30284), (48, 30287), (49, 30293), (51, 30299), (53, 30305), (55, 30314), (56, 30317), (58, 30362), (61, 30380), (64, 30392), (65, 30395), (66, 30398), (69, 30413), (76, 30464), (79, 30482), (80, 30485), (85, 30500), (88, 30512),

Gene: Kamaru_27 Start: 21169, Stop: 21609, Start Num: 9

Candidate Starts for Kamaru_27:

(Start: 9 @21169 has 26 MA's), (Start: 20 @21226 has 1 MA's), (Start: 28 @21253 has 1 MA's), (49, 21343), (57, 21376), (61, 21430), (62, 21433), (63, 21436), (65, 21445), (66, 21448), (70, 21469), (73, 21481), (81, 21538), (83, 21544), (85, 21550), (86, 21553), (87, 21556), (89, 21565), (90, 21571), (92, 21598),

Gene: Kenna_26 Start: 21062, Stop: 21502, Start Num: 9

Candidate Starts for Kenna_26:

(Start: 9 @21062 has 26 MA's), (Start: 20 @21119 has 1 MA's), (Start: 28 @21146 has 1 MA's), (49, 21236), (57, 21269), (61, 21323), (62, 21326), (63, 21329), (65, 21338), (66, 21341), (70, 21362), (73, 21374), (81, 21431), (83, 21437), (85, 21443), (86, 21446), (87, 21449), (89, 21458), (90, 21464), (92, 21491),

Gene: Kuwabara_26 Start: 20488, Stop: 20928, Start Num: 9

Candidate Starts for Kuwabara_26:

(Start: 9 @20488 has 26 MA's), (Start: 20 @20545 has 1 MA's), (Start: 28 @20572 has 1 MA's), (49, 20662), (57, 20695), (61, 20749), (62, 20752), (63, 20755), (65, 20764), (66, 20767), (70, 20788), (73, 20800), (81, 20857), (83, 20863), (85, 20869), (86, 20872), (87, 20875), (89, 20884), (90, 20890), (92, 20917),

Gene: Leroy_27 Start: 21087, Stop: 21527, Start Num: 9

Candidate Starts for Leroy_27:

(Start: 9 @21087 has 26 MA's), (Start: 20 @21144 has 1 MA's), (Start: 28 @21171 has 1 MA's), (49, 21261), (57, 21294), (61, 21348), (62, 21351), (63, 21354), (65, 21363), (66, 21366), (70, 21387), (73, 21399), (81, 21456), (83, 21462), (85, 21468), (86, 21471), (87, 21474), (89, 21483), (90, 21489), (92, 21516),

Gene: LitninMcQueen_26 Start: 20818, Stop: 21258, Start Num: 9

Candidate Starts for LitninMcQueen_26:

(Start: 9 @20818 has 26 MA's), (Start: 20 @20875 has 1 MA's), (Start: 28 @20902 has 1 MA's), (49, 20992), (57, 21025), (61, 21079), (62, 21082), (63, 21085), (65, 21094), (66, 21097), (70, 21118), (73, 21130), (81, 21187), (83, 21193), (85, 21199), (86, 21202), (89, 21214), (90, 21220), (92, 21247),

Gene: LongHai_32 Start: 25084, Stop: 25494, Start Num: 20

Candidate Starts for LongHai_32:

(Start: 20 @25084 has 1 MA's), (40, 25147), (69, 25321), (70, 25327), (71, 25330), (75, 25363), (79, 25390), (82, 25399), (85, 25408), (96, 25471), (97, 25489),

Gene: Lozinak_55 Start: 34287, Stop: 34742, Start Num: 15

Candidate Starts for Lozinak_55:

(13, 34272), (Start: 15 @34287 has 18 MA's), (18, 34314), (26, 34341), (35, 34371), (39, 34386), (48, 34434), (49, 34440), (51, 34446), (59, 34515), (65, 34542), (67, 34554), (76, 34632), (84, 34665), (85, 34668), (90, 34689),

Gene: LunaStella_37 Start: 30071, Stop: 30460, Start Num: 21

Candidate Starts for LunaStella_37:

(Start: 15 @30056 has 18 MA's), (Start: 21 @30071 has 9 MA's), (Start: 27 @30089 has 1 MA's), (30, 30101), (31, 30104), (32, 30107), (34, 30113), (35, 30116), (36, 30119), (38, 30128), (41, 30140), (47, 30176), (48, 30179), (50, 30188), (51, 30191), (53, 30197), (57, 30218), (58, 30254), (61, 30272), (63, 30278), (64, 30284), (65, 30287), (66, 30290), (68, 30302), (70, 30311), (74, 30344), (75, 30347), (80, 30377), (85, 30392), (88, 30404),

Gene: Lutum_27 Start: 21062, Stop: 21502, Start Num: 9

Candidate Starts for Lutum_27:

(Start: 9 @21062 has 26 MA's), (Start: 20 @21119 has 1 MA's), (Start: 28 @21146 has 1 MA's), (49, 21236), (57, 21269), (61, 21323), (62, 21326), (63, 21329), (65, 21338), (66, 21341), (70, 21362), (73, 21374), (81, 21431), (83, 21437), (85, 21443), (86, 21446), (87, 21449), (89, 21458), (90, 21464), (92, 21491),

Gene: Maco6_29 Start: 24049, Stop: 24459, Start Num: 21

Candidate Starts for Maco6_29:

(19, 24040), (Start: 21 @24049 has 9 MA's), (40, 24112), (50, 24169), (75, 24328), (82, 24364), (85, 24373), (97, 24454),

Gene: Malisha_28 Start: 22947, Stop: 23384, Start Num: 9

Candidate Starts for Malisha_28:

(Start: 9 @22947 has 26 MA's), (Start: 20 @23004 has 1 MA's), (Start: 28 @23031 has 1 MA's), (29, 23034), (30, 23037), (35, 23052), (38, 23064), (50, 23124), (57, 23154), (62, 23211), (63, 23214), (66, 23226), (68, 23238), (69, 23241), (70, 23247), (73, 23259), (77, 23295), (78, 23304), (81, 23316), (83, 23322), (85, 23328), (86, 23331), (87, 23334), (89, 23343), (90, 23349),

Gene: Miskis_52 Start: 33592, Stop: 34047, Start Num: 15

Candidate Starts for Miskis_52:

(13, 33577), (Start: 15 @33592 has 18 MA's), (18, 33619), (26, 33646), (35, 33676), (39, 33691), (48, 33739), (49, 33745), (51, 33751), (59, 33820), (65, 33847), (67, 33859), (76, 33937), (84, 33970), (85, 33973), (90, 33994),

Gene: MooMoo_33 Start: 28618, Stop: 29007, Start Num: 21

Candidate Starts for MooMoo_33:

(Start: 15 @28603 has 18 MA's), (Start: 21 @28618 has 9 MA's), (Start: 27 @28636 has 1 MA's), (30, 28648), (31, 28651), (32, 28654), (34, 28660), (35, 28663), (36, 28666), (38, 28675), (41, 28687), (47, 28723), (48, 28726), (50, 28735), (51, 28738), (53, 28744), (57, 28765), (58, 28801), (61, 28819), (63, 28825), (64, 28831), (65, 28834), (66, 28837), (68, 28849), (70, 28858), (74, 28891), (75, 28894), (80, 28924), (85, 28939),

Gene: MortyNRick_26 Start: 20794, Stop: 21234, Start Num: 9

Candidate Starts for MortyNRick_26:

(Start: 9 @20794 has 26 MA's), (Start: 20 @20851 has 1 MA's), (Start: 28 @20878 has 1 MA's), (49, 20968), (57, 21001), (61, 21055), (62, 21058), (63, 21061), (65, 21070), (66, 21073), (70, 21094), (73, 21106), (81, 21163), (83, 21169), (85, 21175), (86, 21178), (87, 21181), (89, 21190), (90, 21196), (92, 21223),

Gene: Muddy_31 Start: 24990, Stop: 25400, Start Num: 20

Candidate Starts for Muddy_31:

(Start: 20 @24990 has 1 MA's), (40, 25053), (69, 25227), (70, 25233), (71, 25236), (75, 25269), (79, 25296), (82, 25305), (85, 25314), (96, 25377), (97, 25395),

Gene: Mutzi_42 Start: 36730, Stop: 37164, Start Num: 16

Candidate Starts for Mutzi_42:

(8, 36670), (10, 36694), (Start: 16 @36730 has 15 MA's), (33, 36805), (41, 36835), (46, 36868), (50, 36883), (51, 36886), (67, 36994), (75, 37042), (85, 37087), (87, 37093), (89, 37102),

Gene: Norvs_55 Start: 33831, Stop: 34286, Start Num: 15

Candidate Starts for Norvs_55:

(13, 33816), (Start: 15 @33831 has 18 MA's), (18, 33858), (26, 33885), (35, 33915), (39, 33930), (48, 33978), (49, 33984), (51, 33990), (59, 34059), (65, 34086), (67, 34098), (76, 34176), (84, 34209), (85, 34212), (90, 34233),

Gene: Nubi_43 Start: 35875, Stop: 36309, Start Num: 16

Candidate Starts for Nubi_43:

(8, 35815), (10, 35839), (Start: 16 @35875 has 15 MA's), (33, 35950), (41, 35980), (46, 36013), (50, 36028), (51, 36031), (67, 36139), (75, 36187), (76, 36196), (85, 36232), (87, 36238), (89, 36247),

Gene: OneUp_48 Start: 31264, Stop: 31683, Start Num: 15

Candidate Starts for OneUp_48:

(13, 31252), (Start: 15 @31264 has 18 MA's), (22, 31288), (39, 31339), (42, 31354), (46, 31381), (47, 31384), (48, 31387), (49, 31393), (50, 31396), (55, 31414), (59, 31468), (70, 31519), (71, 31522), (72, 31543), (84, 31612), (85, 31615), (90, 31636),

Gene: Periwinkle_29 Start: 21531, Stop: 21971, Start Num: 9

Candidate Starts for Periwinkle_29:

(Start: 9 @21531 has 26 MA's), (Start: 20 @21588 has 1 MA's), (Start: 28 @21615 has 1 MA's), (49, 21705), (57, 21738), (61, 21792), (62, 21795), (63, 21798), (65, 21807), (66, 21810), (70, 21831), (73, 21843), (78, 21888), (81, 21900), (83, 21906), (85, 21912), (86, 21915), (87, 21918), (89, 21927), (90, 21933), (92, 21960),

Gene: Phabuloso_26 Start: 20818, Stop: 21258, Start Num: 9

Candidate Starts for Phabuloso_26:

(Start: 9 @20818 has 26 MA's), (Start: 20 @20875 has 1 MA's), (Start: 28 @20902 has 1 MA's), (49, 20992), (57, 21025), (61, 21079), (62, 21082), (63, 21085), (65, 21094), (66, 21097), (70, 21118), (73, 21130), (81, 21187), (83, 21193), (85, 21199), (86, 21202), (87, 21205), (89, 21214), (90, 21220), (92, 21247),

Gene: PhinkBoden_54 Start: 34212, Stop: 34667, Start Num: 15

Candidate Starts for PhinkBoden_54:

(13, 34197), (Start: 15 @34212 has 18 MA's), (18, 34239), (26, 34266), (35, 34296), (39, 34311), (48, 34359), (49, 34365), (51, 34371), (59, 34440), (65, 34467), (67, 34479), (76, 34557), (84, 34590), (85, 34593), (90, 34614),

Gene: Phistory_28 Start: 21852, Stop: 22292, Start Num: 9

Candidate Starts for Phistory_28:

(Start: 9 @21852 has 26 MA's), (Start: 20 @21909 has 1 MA's), (Start: 28 @21936 has 1 MA's), (49, 22026), (57, 22059), (61, 22113), (62, 22116), (63, 22119), (65, 22128), (66, 22131), (70, 22152), (73, 22164), (81, 22221), (83, 22227), (85, 22233), (86, 22236), (87, 22239), (89, 22248), (90, 22254), (92, 22281),

Gene: Phlop_42 Start: 35956, Stop: 36390, Start Num: 16

Candidate Starts for Phlop_42:

(8, 35896), (10, 35920), (Start: 16 @35956 has 15 MA's), (33, 36031), (41, 36061), (46, 36094), (50, 36109), (51, 36112), (67, 36220), (75, 36268), (76, 36277), (85, 36313), (87, 36319), (89, 36328),

Gene: PinkCoffee_45 Start: 36059, Stop: 36493, Start Num: 16

Candidate Starts for PinkCoffee_45:

(8, 35999), (10, 36023), (Start: 16 @36059 has 15 MA's), (33, 36134), (41, 36164), (46, 36197), (50, 36212), (51, 36215), (67, 36323), (75, 36371), (76, 36380), (85, 36416), (87, 36422), (89, 36431),

Gene: PullumCavea_42 Start: 35956, Stop: 36390, Start Num: 16

Candidate Starts for PullumCavea_42:

(8, 35896), (10, 35920), (Start: 16 @35956 has 15 MA's), (33, 36031), (41, 36061), (46, 36094), (50, 36109), (51, 36112), (67, 36220), (75, 36268), (76, 36277), (85, 36313), (87, 36319), (89, 36328),

Gene: RayTheFireFly_26 Start: 22130, Stop: 22573, Start Num: 12

Candidate Starts for RayTheFireFly_26:

(1, 21734), (2, 21785), (5, 21920), (7, 21941), (10, 22118), (Start: 12 @22130 has 4 MA's), (17, 22178), (24, 22202), (32, 22229), (33, 22232), (35, 22238), (41, 22262), (43, 22274), (58, 22376), (62, 22397), (63, 22400), (65, 22409), (66, 22412), (69, 22427), (85, 22514),

Gene: Rem711_40 Start: 30711, Stop: 31142, Start Num: 28

Candidate Starts for Rem711_40:

(11, 30645), (Start: 15 @30669 has 18 MA's), (Start: 21 @30687 has 9 MA's), (Start: 28 @30711 has 1 MA's), (44, 30780), (49, 30801), (53, 30813), (60, 30879), (65, 30903), (83, 31002), (85, 31008), (93, 31059),

Gene: Salvus_32 Start: 25084, Stop: 25494, Start Num: 20

Candidate Starts for Salvus_32:

(Start: 20 @25084 has 1 MA's), (40, 25147), (69, 25321), (70, 25327), (71, 25330), (75, 25363), (79, 25390), (82, 25399), (85, 25408), (96, 25471), (97, 25489),

Gene: Sendy_44 Start: 36076, Stop: 36510, Start Num: 16

Candidate Starts for Sendy_44:

(8, 36016), (10, 36040), (Start: 16 @36076 has 15 MA's), (33, 36151), (41, 36181), (46, 36214), (50, 36229), (51, 36232), (67, 36340), (75, 36388), (76, 36397), (85, 36433), (87, 36439), (89, 36448),

Gene: ShawBrad_27 Start: 21074, Stop: 21514, Start Num: 9

Candidate Starts for ShawBrad_27:

(Start: 9 @21074 has 26 MA's), (Start: 20 @21131 has 1 MA's), (Start: 28 @21158 has 1 MA's), (49, 21248), (57, 21281), (61, 21335), (62, 21338), (63, 21341), (65, 21350), (66, 21353), (70, 21374), (73, 21386), (81, 21443), (83, 21449), (85, 21455), (86, 21458), (87, 21461), (89, 21470), (90, 21476), (92, 21503),

Gene: Shinji_43 Start: 35312, Stop: 35746, Start Num: 16

Candidate Starts for Shinji_43:

(8, 35252), (10, 35276), (Start: 16 @35312 has 15 MA's), (17, 35333), (24, 35357), (25, 35360), (33, 35387), (41, 35417), (50, 35465), (51, 35468), (53, 35474), (63, 35555), (67, 35576), (71, 35591), (75, 35624), (85, 35669), (87, 35675), (89, 35684), (95, 35723),

Gene: Sixsevenium_46 Start: 36307, Stop: 36741, Start Num: 16

Candidate Starts for Sixsevenium_46:

(8, 36247), (10, 36271), (Start: 16 @36307 has 15 MA's), (26, 36358), (33, 36382), (41, 36412), (46, 36445), (50, 36460), (51, 36463), (53, 36469), (67, 36571), (75, 36619), (76, 36628), (85, 36664), (87, 36670), (95, 36718),

Gene: SmokingBunny_43 Start: 35861, Stop: 36295, Start Num: 16

Candidate Starts for SmokingBunny_43:

(8, 35801), (10, 35825), (Start: 16 @35861 has 15 MA's), (33, 35936), (41, 35966), (46, 35999), (50, 36014), (51, 36017), (67, 36125), (75, 36173), (76, 36182), (85, 36218), (87, 36224), (89, 36233),

Gene: Smoothie_56 Start: 34287, Stop: 34742, Start Num: 15

Candidate Starts for Smoothie_56:

(13, 34272), (Start: 15 @34287 has 18 MA's), (18, 34314), (26, 34341), (35, 34371), (39, 34386), (48, 34434), (49, 34440), (51, 34446), (59, 34515), (65, 34542), (67, 34554), (76, 34632), (84, 34665), (85, 34668), (90, 34689),

Gene: Spooky_27 Start: 21156, Stop: 21593, Start Num: 9

Candidate Starts for Spooky_27:

(Start: 9 @21156 has 26 MA's), (Start: 20 @21213 has 1 MA's), (Start: 28 @21240 has 1 MA's), (29, 21243), (30, 21246), (35, 21261), (38, 21273), (50, 21333), (57, 21363), (62, 21420), (63, 21423), (66, 21435), (68, 21447), (69, 21450), (70, 21456), (73, 21468), (77, 21504), (78, 21513), (81, 21525), (83, 21531), (85, 21537), (86, 21540), (87, 21543), (89, 21552), (90, 21558),

Gene: Squiddly_29 Start: 22568, Stop: 23005, Start Num: 9

Candidate Starts for Squiddly_29:

(Start: 9 @22568 has 26 MA's), (Start: 20 @22625 has 1 MA's), (Start: 28 @22652 has 1 MA's), (29, 22655), (30, 22658), (35, 22673), (38, 22685), (50, 22745), (57, 22775), (62, 22832), (63, 22835), (66, 22847), (68, 22859), (69, 22862), (70, 22868), (73, 22880), (77, 22916), (78, 22925), (81, 22937), (83,

22943), (85, 22949), (86, 22952), (87, 22955), (89, 22964), (90, 22970),

Gene: TChen_35 Start: 30090, Stop: 30461, Start Num: 27

Candidate Starts for TChen_35:

(Start: 15 @30057 has 18 MA's), (Start: 21 @30072 has 9 MA's), (Start: 27 @30090 has 1 MA's), (30, 30102), (31, 30105), (32, 30108), (34, 30114), (35, 30117), (36, 30120), (38, 30129), (41, 30141), (47, 30177), (48, 30180), (50, 30189), (51, 30192), (53, 30198), (57, 30219), (58, 30255), (61, 30273), (63, 30279), (64, 30285), (65, 30288), (66, 30291), (68, 30303), (70, 30312), (74, 30345), (75, 30348), (80, 30378), (85, 30393), (88, 30405),

Gene: ThetaBob_35 Start: 29008, Stop: 29412, Start Num: 15

Candidate Starts for ThetaBob_35:

(Start: 15 @29008 has 18 MA's), (Start: 20 @29020 has 1 MA's), (Start: 21 @29023 has 9 MA's), (26, 29038), (29, 29050), (32, 29059), (34, 29065), (38, 29080), (43, 29104), (47, 29128), (48, 29131), (49, 29137), (51, 29143), (53, 29149), (55, 29158), (56, 29161), (58, 29206), (61, 29224), (64, 29236), (65, 29239), (66, 29242), (69, 29257), (76, 29308), (79, 29326), (80, 29329), (85, 29344), (88, 29356),

Gene: TillyBobJoe_43 Start: 35665, Stop: 36099, Start Num: 16

Candidate Starts for TillyBobJoe_43:

(8, 35605), (10, 35629), (Start: 16 @35665 has 15 MA's), (33, 35740), (41, 35770), (46, 35803), (50, 35818), (51, 35821), (67, 35929), (75, 35977), (76, 35986), (85, 36022), (87, 36028), (89, 36037),

Gene: Togo_42 Start: 35861, Stop: 36295, Start Num: 16

Candidate Starts for Togo_42:

(8, 35801), (10, 35825), (Start: 16 @35861 has 15 MA's), (33, 35936), (41, 35966), (46, 35999), (50, 36014), (51, 36017), (67, 36125), (75, 36173), (76, 36182), (85, 36218), (87, 36224), (89, 36233),

Gene: Toniann_54 Start: 33774, Stop: 34229, Start Num: 15

Candidate Starts for Toniann_54:

(13, 33759), (Start: 15 @33774 has 18 MA's), (18, 33801), (26, 33828), (35, 33858), (39, 33873), (48, 33921), (49, 33927), (51, 33933), (59, 34002), (65, 34029), (67, 34041), (76, 34119), (84, 34152), (85, 34155), (90, 34176),

Gene: Toron_36 Start: 29915, Stop: 30304, Start Num: 21

Candidate Starts for Toron_36:

(11, 29876), (Start: 15 @29900 has 18 MA's), (Start: 21 @29915 has 9 MA's), (32, 29951), (34, 29957), (35, 29960), (36, 29963), (38, 29972), (43, 29996), (48, 30023), (51, 30035), (58, 30098), (61, 30116), (63, 30122), (64, 30128), (65, 30131), (66, 30134), (68, 30146), (69, 30149), (78, 30212), (80, 30221), (85, 30236), (88, 30248),

Gene: Whitney_28 Start: 21973, Stop: 22413, Start Num: 9

Candidate Starts for Whitney_28:

(Start: 9 @21973 has 26 MA's), (Start: 20 @22030 has 1 MA's), (Start: 28 @22057 has 1 MA's), (49, 22147), (57, 22180), (61, 22234), (62, 22237), (63, 22240), (65, 22249), (66, 22252), (70, 22273), (73, 22285), (81, 22342), (83, 22348), (85, 22354), (86, 22357), (87, 22360), (89, 22369), (90, 22375), (92, 22402),

Gene: WilliamBoone_54 Start: 33126, Stop: 33575, Start Num: 15

Candidate Starts for WilliamBoone_54:

(13, 33111), (Start: 15 @33126 has 18 MA's), (26, 33174), (35, 33204), (38, 33216), (44, 33252), (48, 33267), (59, 33348), (61, 33360), (73, 33432), (76, 33465), (85, 33501), (90, 33522),

Gene: Yoshi_42 Start: 29099, Stop: 29485, Start Num: 21

Candidate Starts for Yoshi_42:

(Start: 15 @29084 has 18 MA's), (Start: 20 @29096 has 1 MA's), (Start: 21 @29099 has 9 MA's), (31, 29132), (32, 29135), (33, 29138), (34, 29141), (36, 29147), (37, 29150), (43, 29180), (45, 29198), (47, 29204), (53, 29225), (54, 29231), (57, 29246), (61, 29300), (63, 29306), (64, 29312), (65, 29315), (66, 29318), (69, 29333), (74, 29372), (76, 29384), (79, 29402), (85, 29420), (88, 29432),

Gene: YungMoney_46 Start: 38304, Stop: 38738, Start Num: 16

Candidate Starts for YungMoney_46:

(8, 38244), (10, 38268), (Start: 16 @38304 has 15 MA's), (17, 38325), (24, 38349), (25, 38352), (Start: 28 @38364 has 1 MA's), (33, 38379), (36, 38388), (41, 38409), (50, 38457), (51, 38460), (53, 38466), (63, 38547), (67, 38568), (71, 38583), (75, 38616), (85, 38661), (87, 38667), (89, 38676), (95, 38715),

Gene: Zapner_42 Start: 30180, Stop: 30569, Start Num: 21

Candidate Starts for Zapner_42:

(Start: 15 @30165 has 18 MA's), (Start: 20 @30177 has 1 MA's), (Start: 21 @30180 has 9 MA's), (26, 30195), (29, 30207), (32, 30216), (34, 30222), (38, 30237), (43, 30261), (47, 30285), (48, 30288), (49, 30294), (51, 30300), (53, 30306), (55, 30315), (56, 30318), (58, 30363), (61, 30381), (64, 30393), (65, 30396), (66, 30399), (69, 30414), (76, 30465), (79, 30483), (80, 30486), (85, 30501), (88, 30513),