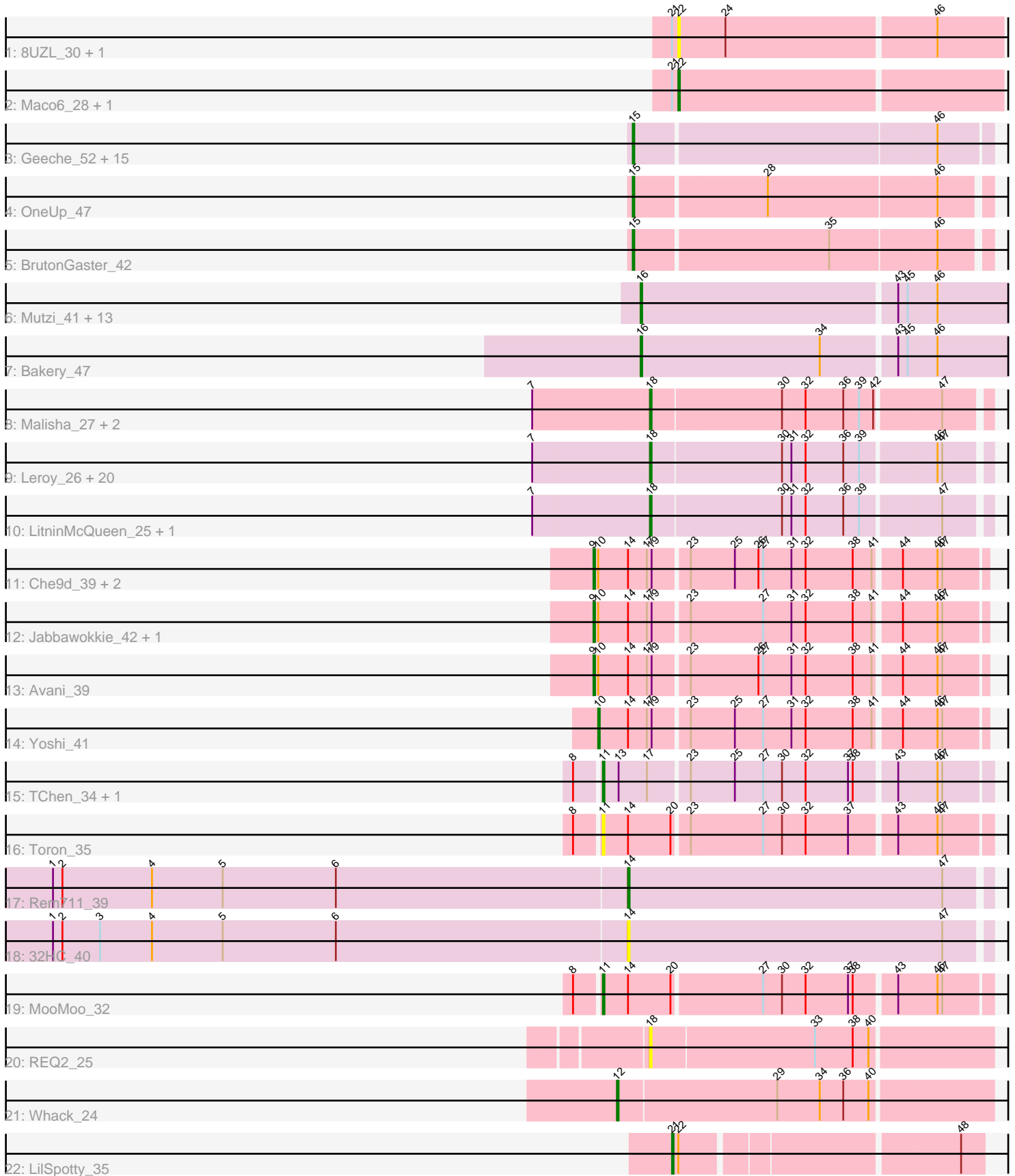


Pham 193944



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 193944 Report

This analysis was run 11/02/24 on database version 579.

Pham number 193944 has 79 members, 12 are drafts.

Phages represented in each track:

- Track 1 : 8UZL_30, FF47_30
- Track 2 : Maco6_28, Muddy_30
- Track 3 : Geeche_52, Norvs_54, Culver_53, Dusty_51, Smoothie_55, ClubL_53, WilliamBoone_53, Cucurbita_55, Engineer_55, Miskis_55, Lozinak_54, Abscondus_52, PhinkBoden_53, Toniann_53, Aphelion_53, Bachita_55
- Track 4 : OneUp_47
- Track 5 : BrutonGaster_42
- Track 6 : Mutzi_41, Fireball_43, Fugax_45, PullumCavea_41, YungMoney_45, ClamChowder_44, PinkCoffee_44, Nubi_42, TillyBobJoe_42, Togo_41, Shinji_42, Phlop_41, SmokingBunny_42, Barb_44
- Track 7 : Bakery_47
- Track 8 : Malisha_27, Spooky_26, Squiddly_28
- Track 9 : Leroy_26, Apricot_25, Budski_26, Lutum_26, MortyNRick_25, Kuwabara_25, Phabuloso_25, Phistory_27, Getalong_27, BENtherdunthat_26, Holliday_26, CheeseTouch_26, Kamaru_26, Frickyeah_25, Birdsong_25, Kenna_25, Horus_26, Asapag_26, Crater_24, Whitney_27, BearBQ_25
- Track 10 : LitninMcQueen_25, Periwinkle_28
- Track 11 : Che9d_39, ThetaBob_34, Demsculpinboyz_40
- Track 12 : Jabbawokkie_42, Zapner_41
- Track 13 : Avani_39
- Track 14 : Yoshi_41
- Track 15 : TChen_34, LunaStella_36
- Track 16 : Toron_35
- Track 17 : Rem711_39
- Track 18 : 32HC_40
- Track 19 : MooMoo_32
- Track 20 : REQ2_25
- Track 21 : Whack_24
- Track 22 : LilSpotty_35

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

The start number called the most often in the published annotations is 18, it was called in 24 of the 67 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Apricot_25, Asapag_26, BENtherdunthat_26, BearBQ_25, Birdsong_25, Budski_26, CheeseTouch_26, Crater_24, Frickyeah_25, Getalong_27, Holliday_26, Horus_26, Kamaru_26, Kenna_25, Kuwabara_25, Leroy_26, LitninMcQueen_25, Lutum_26, Malisha_27, MortyNRick_25, Periwinkle_28, Phabuloso_25, Phistory_27, REQ2_25, Spooky_26, Squiddly_28, Whitney_27,

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

-

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

- 32HC_40, 8UZL_30, Abscondus_52, Aphelion_53, Avani_39, Bachita_55, Bakery_47, Barb_44, BrutonGaster_42, Che9d_39, ClamChowder_44, ClubL_53, Cucurbita_55, Culver_53, Demsculpinboyz_40, Dusty_51, Engineer_55, FF47_30, Fireball_43, Fugax_45, Geeche_52, Jabbawokkie_42, LilSpotty_35, Lozinak_54, LunaStella_36, Maco6_28, Miskis_55, MooMoo_32, Muddy_30, Mutzi_41, Norvs_54, Nubi_42, OneUp_47, PhinkBoden_53, Phlop_41, PinkCoffee_44, PullumCavea_41, Rem711_39, Shinji_42, SmokingBunny_42, Smoothie_55, TChen_34, ThetaBob_34, TillyBobJoe_42, Togo_41, Toniann_53, Toron_35, Whack_24, WilliamBoone_53, Yoshi_41, YungMoney_45, Zapner_41,

Summary by start number:

Start 9:

- Found in 6 of 79 (7.6%) of genes in pham
- Manual Annotations of this start: 6 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Avani_39 (F2), Che9d_39 (F2), Demsculpinboyz_40 (F2), Jabbawokkie_42 (F2), ThetaBob_34 (F4), Zapner_41 (F2),

Start 10:

- Found in 7 of 79 (8.9%) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Yoshi_41 (F2),

Start 11:

- Found in 4 of 79 (5.1%) of genes in pham
- Manual Annotations of this start: 3 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LunaStella_36 (F4), MooMoo_32 (singleton), TChen_34 (F4), Toron_35 (F6),

Start 12:

- Found in 1 of 79 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Whack_24 (singleton),

Start 14:

- Found in 11 of 79 (13.9%) of genes in pham
- Manual Annotations of this start: 1 of 67

- Called 18.2% of time when present
- Phage (with cluster) where this start called: 32HC_40 (Z), Rem711_39 (Z),

Start 15:

- Found in 18 of 79 (22.8%) of genes in pham
- Manual Annotations of this start: 14 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abscondus_52 (CQ1), Aphelion_53 (CQ1), Bachita_55 (CQ1), BrutonGaster_42 (CQ2), ClubL_53 (CQ1), Cucurbita_55 (CQ1), Culver_53 (CQ1), Dusty_51 (CQ1), Engineer_55 (CQ1), Geeche_52 (CQ1), Lozinak_54 (CQ1), Miskis_55 (CQ1), Norvs_54 (CQ1), OneUp_47 (CQ2), PhinkBoden_53 (CQ1), Smoothie_55 (CQ1), Toniann_53 (CQ1), WilliamBoone_53 (CQ1),

Start 16:

- Found in 15 of 79 (19.0%) of genes in pham
- Manual Annotations of this start: 14 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bakery_47 (DC1), Barb_44 (DC1), ClamChowder_44 (DC1), Fireball_43 (DC1), Fugax_45 (DC1), Mutzi_41 (DC1), Nubi_42 (DC1), Phlop_41 (DC1), PinkCoffee_44 (DC1), PullumCavea_41 (DC1), Shinji_42 (DC1), SmokingBunny_42 (DC1), TillyBobJoe_42 (DC1), Togo_41 (DC1), YungMoney_45 (DC1),

Start 18:

- Found in 27 of 79 (34.2%) of genes in pham
- Manual Annotations of this start: 24 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apricot_25 (DN3), Asapag_26 (DN1), BENTherdunthat_26 (DN1), BearBQ_25 (DN), Birdsong_25 (DN), Budski_26 (DN), CheeseTouch_26 (DN1), Crater_24 (DN3), Frickyeah_25 (DN1), Getalong_27 (DN1), Holliday_26 (DN1), Horus_26 (DN1), Kamaru_26 (DN1), Kenna_25 (DN1), Kuwabara_25 (DN4), Leroy_26 (DN1), LitninMcQueen_25 (DN1), Lutum_26 (DN1), Malisha_27 (DN), MortyNRick_25 (DN), Periwinkle_28 (DN1), Phabuloso_25 (DN1), Phistory_27 (DN1), REQ2_25 (singleton), Spooky_26 (DN2), Squiddly_28 (DN2), Whitney_27 (DN1),

Start 21:

- Found in 5 of 79 (6.3%) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 20.0% of time when present
- Phage (with cluster) where this start called: LilSpotty_35 (singleton),

Start 22:

- Found in 5 of 79 (6.3%) of genes in pham
- Manual Annotations of this start: 2 of 67
- Called 80.0% of time when present
- Phage (with cluster) where this start called: 8UZL_30 (AB), FF47_30 (AB), Maco6_28 (AB), Muddy_30 (AB),

Summary by clusters:

There are 14 clusters represented in this pham: DN, F2, AB, F4, F6, singleton, DN4, DN1, DN3, DN2, CQ2, CQ1, Z, DC1,

Info for manual annotations of cluster AB:

- Start number 22 was manually annotated 2 times for cluster AB.

Info for manual annotations of cluster CQ1:

- Start number 15 was manually annotated 12 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 DC1:

- Start number 16 was manually annotated 14 times for cluster DC1.

Info for manual annotations of cluster DN:

- Start number 18 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 18 was manually annotated 15 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 18 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 18 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 18 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster F2:

- Start number 9 was manually annotated 5 times for cluster F2.
- Start number 10 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F4:

- Start number 9 was manually annotated 1 time for cluster F4.
- Start number 11 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster Z:

- Start number 14 was manually annotated 1 time for cluster Z.

Gene Information:

Gene: 32HC_40 Start: 30479, Stop: 30703, Start Num: 14

Candidate Starts for 32HC_40:

(1, 30116), (2, 30122), (3, 30146), (4, 30179), (5, 30224), (6, 30296), (Start: 14 @30479 has 1 MA's), (47, 30677),

Gene: 8UZL_30 Start: 24582, Stop: 24782, Start Num: 22

Candidate Starts for 8UZL_30:

(Start: 21 @24579 has 1 MA's), (Start: 22 @24582 has 2 MA's), (24, 24612), (46, 24741),

Gene: Abscondus_52 Start: 33342, Stop: 33560, Start Num: 15

Candidate Starts for Abscondus_52:

(Start: 15 @33342 has 14 MA's), (46, 33528),

Gene: Aphelion_53 Start: 33611, Stop: 33829, Start Num: 15

Candidate Starts for Aphelion_53:

(Start: 15 @33611 has 14 MA's), (46, 33797),

Gene: Apricot_25 Start: 20422, Stop: 20625, Start Num: 18

Candidate Starts for Apricot_25:

(7, 20350), (Start: 18 @20422 has 24 MA's), (30, 20503), (31, 20509), (32, 20518), (36, 20542), (39, 20551), (46, 20596), (47, 20599),

Gene: Asapag_26 Start: 20864, Stop: 21067, Start Num: 18

Candidate Starts for Asapag_26:

(7, 20792), (Start: 18 @20864 has 24 MA's), (30, 20945), (31, 20951), (32, 20960), (36, 20984), (39, 20993), (46, 21038), (47, 21041),

Gene: Avani_39 Start: 28553, Stop: 28789, Start Num: 9

Candidate Starts for Avani_39:

(Start: 9 @28553 has 6 MA's), (Start: 10 @28556 has 1 MA's), (Start: 14 @28574 has 1 MA's), (17, 28586), (19, 28589), (23, 28610), (26, 28652), (27, 28655), (31, 28673), (32, 28682), (38, 28712), (41, 28724), (44, 28739), (46, 28760), (47, 28763),

Gene: BENtherdunthat_26 Start: 20861, Stop: 21064, Start Num: 18

Candidate Starts for BENtherdunthat_26:

(7, 20789), (Start: 18 @20861 has 24 MA's), (30, 20942), (31, 20948), (32, 20957), (36, 20981), (39, 20990), (46, 21035), (47, 21038),

Gene: Bachita_55 Start: 34044, Stop: 34262, Start Num: 15

Candidate Starts for Bachita_55:

(Start: 15 @34044 has 14 MA's), (46, 34230),

Gene: Bakery_47 Start: 36845, Stop: 37081, Start Num: 16

Candidate Starts for Bakery_47:

(Start: 16 @36845 has 14 MA's), (34, 36959), (43, 37004), (45, 37010), (46, 37028),

Gene: Barb_44 Start: 35817, Stop: 36053, Start Num: 16

Candidate Starts for Barb_44:

(Start: 16 @35817 has 14 MA's), (43, 35976), (45, 35982), (46, 36000),

Gene: BearBQ_25 Start: 21701, Stop: 21904, Start Num: 18

Candidate Starts for BearBQ_25:

(7, 21629), (Start: 18 @21701 has 24 MA's), (30, 21782), (31, 21788), (32, 21797), (36, 21821), (39, 21830), (46, 21875), (47, 21878),

Gene: Birdsong_25 Start: 20594, Stop: 20797, Start Num: 18

Candidate Starts for Birdsong_25:

(7, 20522), (Start: 18 @20594 has 24 MA's), (30, 20675), (31, 20681), (32, 20690), (36, 20714), (39, 20723), (46, 20768), (47, 20771),

Gene: BrutonGaster_42 Start: 30728, Stop: 30943, Start Num: 15

Candidate Starts for BrutonGaster_42:

(Start: 15 @30728 has 14 MA's), (35, 30848), (46, 30914),

Gene: Budski_26 Start: 20969, Stop: 21172, Start Num: 18

Candidate Starts for Budski_26:

(7, 20897), (Start: 18 @20969 has 24 MA's), (30, 21050), (31, 21056), (32, 21065), (36, 21089), (39, 21098), (46, 21143), (47, 21146),

Gene: Che9d_39 Start: 28562, Stop: 28798, Start Num: 9

Candidate Starts for Che9d_39:

(Start: 9 @28562 has 6 MA's), (Start: 10 @28565 has 1 MA's), (Start: 14 @28583 has 1 MA's), (17, 28595), (19, 28598), (23, 28619), (25, 28646), (26, 28661), (27, 28664), (31, 28682), (32, 28691), (38, 28721), (41, 28733), (44, 28748), (46, 28769), (47, 28772),

Gene: CheeseTouch_26 Start: 20855, Stop: 21058, Start Num: 18

Candidate Starts for CheeseTouch_26:

(7, 20783), (Start: 18 @20855 has 24 MA's), (30, 20936), (31, 20942), (32, 20951), (36, 20975), (39, 20984), (46, 21029), (47, 21032),

Gene: ClamChowder_44 Start: 35817, Stop: 36053, Start Num: 16

Candidate Starts for ClamChowder_44:

(Start: 16 @35817 has 14 MA's), (43, 35976), (45, 35982), (46, 36000),

Gene: ClubL_53 Start: 33533, Stop: 33751, Start Num: 15

Candidate Starts for ClubL_53:

(Start: 15 @33533 has 14 MA's), (46, 33719),

Gene: Crater_24 Start: 20422, Stop: 20625, Start Num: 18

Candidate Starts for Crater_24:

(7, 20350), (Start: 18 @20422 has 24 MA's), (30, 20503), (31, 20509), (32, 20518), (36, 20542), (39, 20551), (46, 20596), (47, 20599),

Gene: Cucurbita_55 Start: 34903, Stop: 35121, Start Num: 15

Candidate Starts for Cucurbita_55:

(Start: 15 @34903 has 14 MA's), (46, 35089),

Gene: Culver_53 Start: 33342, Stop: 33560, Start Num: 15

Candidate Starts for Culver_53:

(Start: 15 @33342 has 14 MA's), (46, 33528),

Gene: Demsculpinboyz_40 Start: 28495, Stop: 28731, Start Num: 9

Candidate Starts for Demsculpinboyz_40:

(Start: 9 @28495 has 6 MA's), (Start: 10 @28498 has 1 MA's), (Start: 14 @28516 has 1 MA's), (17, 28528), (19, 28531), (23, 28552), (25, 28579), (26, 28594), (27, 28597), (31, 28615), (32, 28624), (38, 28654), (41, 28666), (44, 28681), (46, 28702), (47, 28705),

Gene: Dusty_51 Start: 33342, Stop: 33560, Start Num: 15

Candidate Starts for Dusty_51:

(Start: 15 @33342 has 14 MA's), (46, 33528),

Gene: Engineer_55 Start: 34017, Stop: 34235, Start Num: 15

Candidate Starts for Engineer_55:

(Start: 15 @34017 has 14 MA's), (46, 34203),

Gene: FF47_30 Start: 24509, Stop: 24709, Start Num: 22

Candidate Starts for FF47_30:

(Start: 21 @24506 has 1 MA's), (Start: 22 @24509 has 2 MA's), (24, 24539), (46, 24668),

Gene: Fireball_43 Start: 35762, Stop: 35998, Start Num: 16

Candidate Starts for Fireball_43:

(Start: 16 @35762 has 14 MA's), (43, 35921), (45, 35927), (46, 35945),

Gene: Frickyeah_25 Start: 20627, Stop: 20830, Start Num: 18

Candidate Starts for Frickyeah_25:

(7, 20555), (Start: 18 @20627 has 24 MA's), (30, 20708), (31, 20714), (32, 20723), (36, 20747), (39, 20756), (46, 20801), (47, 20804),

Gene: Fugax_45 Start: 35809, Stop: 36045, Start Num: 16

Candidate Starts for Fugax_45:

(Start: 16 @35809 has 14 MA's), (43, 35968), (45, 35974), (46, 35992),

Gene: Geeche_52 Start: 33433, Stop: 33651, Start Num: 15

Candidate Starts for Geeche_52:

(Start: 15 @33433 has 14 MA's), (46, 33619),

Gene: Getalong_27 Start: 21664, Stop: 21867, Start Num: 18

Candidate Starts for Getalong_27:

(7, 21592), (Start: 18 @21664 has 24 MA's), (30, 21745), (31, 21751), (32, 21760), (36, 21784), (39, 21793), (46, 21838), (47, 21841),

Gene: Holliday_26 Start: 20969, Stop: 21172, Start Num: 18

Candidate Starts for Holliday_26:

(7, 20897), (Start: 18 @20969 has 24 MA's), (30, 21050), (31, 21056), (32, 21065), (36, 21089), (39, 21098), (46, 21143), (47, 21146),

Gene: Horus_26 Start: 20886, Stop: 21089, Start Num: 18

Candidate Starts for Horus_26:

(7, 20814), (Start: 18 @20886 has 24 MA's), (30, 20967), (31, 20973), (32, 20982), (36, 21006), (39, 21015), (46, 21060), (47, 21063),

Gene: Jabbawokkie_42 Start: 29943, Stop: 30179, Start Num: 9

Candidate Starts for Jabbawokkie_42:

(Start: 9 @29943 has 6 MA's), (Start: 10 @29946 has 1 MA's), (Start: 14 @29964 has 1 MA's), (17, 29976), (19, 29979), (23, 30000), (27, 30045), (31, 30063), (32, 30072), (38, 30102), (41, 30114), (44, 30129), (46, 30150), (47, 30153),

Gene: Kamaru_26 Start: 20969, Stop: 21172, Start Num: 18

Candidate Starts for Kamaru_26:

(7, 20897), (Start: 18 @20969 has 24 MA's), (30, 21050), (31, 21056), (32, 21065), (36, 21089), (39, 21098), (46, 21143), (47, 21146),

Gene: Kenna_25 Start: 20862, Stop: 21065, Start Num: 18

Candidate Starts for Kenna_25:

(7, 20790), (Start: 18 @20862 has 24 MA's), (30, 20943), (31, 20949), (32, 20958), (36, 20982), (39, 20991), (46, 21036), (47, 21039),

Gene: Kuwabara_25 Start: 20288, Stop: 20491, Start Num: 18

Candidate Starts for Kuwabara_25:

(7, 20216), (Start: 18 @20288 has 24 MA's), (30, 20369), (31, 20375), (32, 20384), (36, 20408), (39, 20417), (46, 20462), (47, 20465),

Gene: Leroy_26 Start: 20887, Stop: 21090, Start Num: 18

Candidate Starts for Leroy_26:

(7, 20815), (Start: 18 @20887 has 24 MA's), (30, 20968), (31, 20974), (32, 20983), (36, 21007), (39, 21016), (46, 21061), (47, 21064),

Gene: LilSpotty_35 Start: 26596, Stop: 26778, Start Num: 21

Candidate Starts for LilSpotty_35:

(Start: 21 @26596 has 1 MA's), (Start: 22 @26599 has 2 MA's), (48, 26764),

Gene: LitninMcQueen_25 Start: 20618, Stop: 20821, Start Num: 18

Candidate Starts for LitninMcQueen_25:

(7, 20546), (Start: 18 @20618 has 24 MA's), (30, 20699), (31, 20705), (32, 20714), (36, 20738), (39, 20747), (47, 20795),

Gene: Lozinak_54 Start: 34072, Stop: 34290, Start Num: 15

Candidate Starts for Lozinak_54:

(Start: 15 @34072 has 14 MA's), (46, 34258),

Gene: LunaStella_36 Start: 29841, Stop: 30074, Start Num: 11

Candidate Starts for LunaStella_36:

(8, 29826), (Start: 11 @29841 has 3 MA's), (13, 29850), (17, 29868), (23, 29892), (25, 29919), (27, 29937), (30, 29949), (32, 29964), (37, 29991), (38, 29994), (43, 30018), (46, 30042), (47, 30045),

Gene: Lutum_26 Start: 20862, Stop: 21065, Start Num: 18

Candidate Starts for Lutum_26:

(7, 20790), (Start: 18 @20862 has 24 MA's), (30, 20943), (31, 20949), (32, 20958), (36, 20982), (39, 20991), (46, 21036), (47, 21039),

Gene: Maco6_28 Start: 23846, Stop: 24046, Start Num: 22

Candidate Starts for Maco6_28:

(Start: 21 @23843 has 1 MA's), (Start: 22 @23846 has 2 MA's),

Gene: Malisha_27 Start: 22747, Stop: 22950, Start Num: 18

Candidate Starts for Malisha_27:

(7, 22675), (Start: 18 @22747 has 24 MA's), (30, 22828), (32, 22843), (36, 22867), (39, 22876), (42, 22885), (47, 22924),

Gene: Miskis_55 Start: 33377, Stop: 33595, Start Num: 15

Candidate Starts for Miskis_55:

(Start: 15 @33377 has 14 MA's), (46, 33563),

Gene: MooMoo_32 Start: 28388, Stop: 28621, Start Num: 11

Candidate Starts for MooMoo_32:

(8, 28373), (Start: 11 @28388 has 3 MA's), (Start: 14 @28403 has 1 MA's), (20, 28430), (27, 28484), (30, 28496), (32, 28511), (37, 28538), (38, 28541), (43, 28565), (46, 28589), (47, 28592),

Gene: MortyNRick_25 Start: 20594, Stop: 20797, Start Num: 18

Candidate Starts for MortyNRick_25:

(7, 20522), (Start: 18 @20594 has 24 MA's), (30, 20675), (31, 20681), (32, 20690), (36, 20714), (39, 20723), (46, 20768), (47, 20771),

Gene: Muddy_30 Start: 24790, Stop: 24990, Start Num: 22

Candidate Starts for Muddy_30:

(Start: 21 @24787 has 1 MA's), (Start: 22 @24790 has 2 MA's),

Gene: Mutzi_41 Start: 36497, Stop: 36733, Start Num: 16

Candidate Starts for Mutzi_41:

(Start: 16 @36497 has 14 MA's), (43, 36656), (45, 36662), (46, 36680),

Gene: Norvs_54 Start: 33616, Stop: 33834, Start Num: 15

Candidate Starts for Norvs_54:

(Start: 15 @33616 has 14 MA's), (46, 33802),

Gene: Nubi_42 Start: 35642, Stop: 35878, Start Num: 16

Candidate Starts for Nubi_42:

(Start: 16 @35642 has 14 MA's), (43, 35801), (45, 35807), (46, 35825),

Gene: OneUp_47 Start: 31052, Stop: 31267, Start Num: 15

Candidate Starts for OneUp_47:

(Start: 15 @31052 has 14 MA's), (28, 31133), (46, 31238),

Gene: Periwinkle_28 Start: 21331, Stop: 21534, Start Num: 18

Candidate Starts for Periwinkle_28:

(7, 21259), (Start: 18 @21331 has 24 MA's), (30, 21412), (31, 21418), (32, 21427), (36, 21451), (39, 21460), (47, 21508),

Gene: Phabuloso_25 Start: 20618, Stop: 20821, Start Num: 18

Candidate Starts for Phabuloso_25:

(7, 20546), (Start: 18 @20618 has 24 MA's), (30, 20699), (31, 20705), (32, 20714), (36, 20738), (39, 20747), (46, 20792), (47, 20795),

Gene: PhinkBoden_53 Start: 33997, Stop: 34215, Start Num: 15

Candidate Starts for PhinkBoden_53:

(Start: 15 @33997 has 14 MA's), (46, 34183),

Gene: Phistory_27 Start: 21652, Stop: 21855, Start Num: 18

Candidate Starts for Phistory_27:

(7, 21580), (Start: 18 @21652 has 24 MA's), (30, 21733), (31, 21739), (32, 21748), (36, 21772), (39, 21781), (46, 21826), (47, 21829),

Gene: Phlop_41 Start: 35723, Stop: 35959, Start Num: 16

Candidate Starts for Phlop_41:

(Start: 16 @35723 has 14 MA's), (43, 35882), (45, 35888), (46, 35906),

Gene: PinkCoffee_44 Start: 35826, Stop: 36062, Start Num: 16

Candidate Starts for PinkCoffee_44:

(Start: 16 @35826 has 14 MA's), (43, 35985), (45, 35991), (46, 36009),

Gene: PullumCavea_41 Start: 35723, Stop: 35959, Start Num: 16

Candidate Starts for PullumCavea_41:

(Start: 16 @35723 has 14 MA's), (43, 35882), (45, 35888), (46, 35906),

Gene: REQ2_25 Start: 22322, Stop: 22531, Start Num: 18

Candidate Starts for REQ2_25:

(Start: 18 @22322 has 24 MA's), (33, 22424), (38, 22448), (40, 22457),

Gene: Rem711_39 Start: 30460, Stop: 30684, Start Num: 14

Candidate Starts for Rem711_39:

(1, 30097), (2, 30103), (4, 30160), (5, 30205), (6, 30277), (Start: 14 @30460 has 1 MA's), (47, 30658),

Gene: Shinji_42 Start: 35079, Stop: 35315, Start Num: 16

Candidate Starts for Shinji_42:

(Start: 16 @35079 has 14 MA's), (43, 35238), (45, 35244), (46, 35262),

Gene: SmokingBunny_42 Start: 35628, Stop: 35864, Start Num: 16

Candidate Starts for SmokingBunny_42:

(Start: 16 @35628 has 14 MA's), (43, 35787), (45, 35793), (46, 35811),

Gene: Smoothie_55 Start: 34072, Stop: 34290, Start Num: 15

Candidate Starts for Smoothie_55:

(Start: 15 @34072 has 14 MA's), (46, 34258),

Gene: Spooky_26 Start: 20956, Stop: 21159, Start Num: 18

Candidate Starts for Spooky_26:

(7, 20884), (Start: 18 @20956 has 24 MA's), (30, 21037), (32, 21052), (36, 21076), (39, 21085), (42, 21094), (47, 21133),

Gene: Squiddly_28 Start: 22368, Stop: 22571, Start Num: 18

Candidate Starts for Squiddly_28:

(7, 22296), (Start: 18 @22368 has 24 MA's), (30, 22449), (32, 22464), (36, 22488), (39, 22497), (42, 22506), (47, 22545),

Gene: TChen_34 Start: 29842, Stop: 30075, Start Num: 11

Candidate Starts for TChen_34:

(8, 29827), (Start: 11 @29842 has 3 MA's), (13, 29851), (17, 29869), (23, 29893), (25, 29920), (27, 29938), (30, 29950), (32, 29965), (37, 29992), (38, 29995), (43, 30019), (46, 30043), (47, 30046),

Gene: ThetaBob_34 Start: 28787, Stop: 29023, Start Num: 9

Candidate Starts for ThetaBob_34:

(Start: 9 @28787 has 6 MA's), (Start: 10 @28790 has 1 MA's), (Start: 14 @28808 has 1 MA's), (17, 28820), (19, 28823), (23, 28844), (25, 28871), (26, 28886), (27, 28889), (31, 28907), (32, 28916), (38, 28946), (41, 28958), (44, 28973), (46, 28994), (47, 28997),

Gene: TillyBobJoe_42 Start: 35432, Stop: 35668, Start Num: 16

Candidate Starts for TillyBobJoe_42:

(Start: 16 @35432 has 14 MA's), (43, 35591), (45, 35597), (46, 35615),

Gene: Togo_41 Start: 35628, Stop: 35864, Start Num: 16

Candidate Starts for Togo_41:

(Start: 16 @35628 has 14 MA's), (43, 35787), (45, 35793), (46, 35811),

Gene: Toniann_53 Start: 33559, Stop: 33777, Start Num: 15

Candidate Starts for Toniann_53:

(Start: 15 @33559 has 14 MA's), (46, 33745),

Gene: Toron_35 Start: 29685, Stop: 29918, Start Num: 11

Candidate Starts for Toron_35:

(8, 29670), (Start: 11 @29685 has 3 MA's), (Start: 14 @29700 has 1 MA's), (20, 29727), (23, 29736), (27, 29781), (30, 29793), (32, 29808), (37, 29835), (43, 29862), (46, 29886), (47, 29889),

Gene: Whack_24 Start: 21206, Stop: 21436, Start Num: 12

Candidate Starts for Whack_24:

(Start: 12 @21206 has 1 MA's), (29, 21305), (34, 21332), (36, 21347), (40, 21362),

Gene: Whitney_27 Start: 21773, Stop: 21976, Start Num: 18

Candidate Starts for Whitney_27:

(7, 21701), (Start: 18 @21773 has 24 MA's), (30, 21854), (31, 21860), (32, 21869), (36, 21893), (39, 21902), (46, 21947), (47, 21950),

Gene: WilliamBoone_53 Start: 32911, Stop: 33129, Start Num: 15

Candidate Starts for WilliamBoone_53:

(Start: 15 @32911 has 14 MA's), (46, 33097),

Gene: Yoshi_41 Start: 28866, Stop: 29099, Start Num: 10

Candidate Starts for Yoshi_41:

(Start: 10 @28866 has 1 MA's), (Start: 14 @28884 has 1 MA's), (17, 28896), (19, 28899), (23, 28920), (25, 28947), (27, 28965), (31, 28983), (32, 28992), (38, 29022), (41, 29034), (44, 29049), (46, 29070), (47, 29073),

Gene: YungMoney_45 Start: 38071, Stop: 38307, Start Num: 16

Candidate Starts for YungMoney_45:

(Start: 16 @38071 has 14 MA's), (43, 38230), (45, 38236), (46, 38254),

Gene: Zapner_41 Start: 29944, Stop: 30180, Start Num: 9

Candidate Starts for Zapner_41:

(Start: 9 @29944 has 6 MA's), (Start: 10 @29947 has 1 MA's), (Start: 14 @29965 has 1 MA's), (17, 29977), (19, 29980), (23, 30001), (27, 30046), (31, 30064), (32, 30073), (38, 30103), (41, 30115), (44, 30130), (46, 30151), (47, 30154),