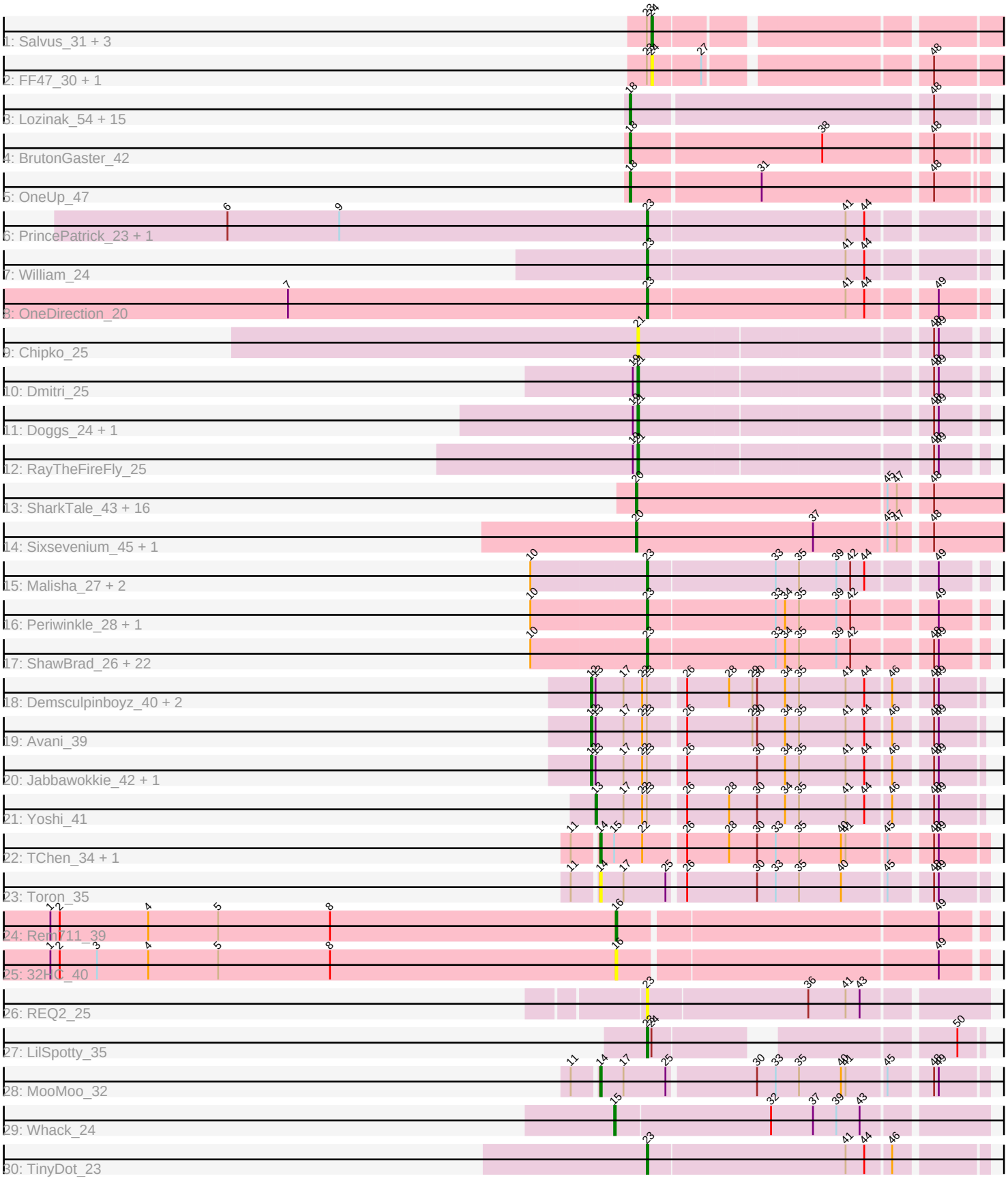
Pham 341996


1: Salvus_31 + 3
2: FF47_30 + 1
3: Lozinak_54 + 15
4: BrutonGaster_42
5: OneUp_47
6: PrincePatrick_23 + 1
7: William_24
8: OneDirection_20
9: Chipko_25
10: Dmitri_25
11: Doggs_24 + 1
12: RayTheFireFly_25
13: SharkTale_43 + 16
14: Sixsevenium_45 + 1
15: Malisha_27 + 2
16: Periwinkle_28 + 1
17: ShawBrad_26 + 22
18: Demsculpinboyz_40 + 2
19: Avani_39
20: Jabbawokkie_42 + 1
21: Yoshi_41
22: TChen_34 + 1
23: Toron_35
24: Ren711_39
25: 32HC_40
26: REQ2_25
27: LilSpotty_35
28: MooMoo_32
29: Whack_24
30: TinyDot_23

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 341996 Report

This analysis was run 11/14/26 on database version 672.

Pham number 341996 has 97 members, 14 are drafts.

Phages represented in each track:
• Track 1 : Salvus_31, Maco6_28, LongHai_31, Muddy_30
• Track 2 : FF47_30, 8UZL_30
• Track 3 : Lozinak_54, ClubL_53, Bachita_55, Geeche_52, Engineer_55, Miskis_51, Norvs_54, Dusty_52, PhinkBoden_53, Abscondus_52, Cucurbita_55, Culver_53, Smoothie_55, WilliamBoone_53, Aphelion_53, Toniann_53
• Track 4 : BrutonGaster_42
• Track 5 : OneUp_47
• Track 6 : PrincePatrick_23, Fairfaxidum_23
• Track 7 : William_24
• Track 8 : OneDirection_20
• Track 9 : Chipko_25
• Track 10 : Dmitri_25
• Track 11 : Doggs_24, Coriander_25
• Track 12 : RayTheFireFly_25
• Track 13 : SharkTale_43, Phlop_41, Egi03_42, Sendy_43, Togo_41, Mutzi_41, Shinji_42, Fireball_43, Barb_44, PullumCavea_41, PinkCoffee_44, ClamChowder_44, SmokingBunny_42, Fugax_45, YungMoney_45, Nubi_42, TillyBobJoe_42
• Track 14 : Sixsevenium_45, Bakery_47
• Track 15 : Malisha_27, Squiddly_28, Spooky_26
• Track 16 : Periwinkle_28, LitninMcQueen_25
• Track 17 : ShawBrad_26, Phistory_27, Kamaru_26, Horus_26, Phabuloso_25, Getalong_27, Lutum_26, CheeseTouch_26, Frickyeah_25, Kenna_25, Crater_24, Holliday_26, Apricot_25, Budski_26, BENtherdunthat_26, Asapag_26, BearBQ_25, Leroy_26, MortyNRick_25, Kuwabara_25, BotCity_26, Birdsong_25, Whitney_27
• Track 18 : Demsculpinboyz_40, ThetaBob_34, Che9d_39
• Track 19 : Avani_39
• Track 20 : Jabbawokkie_42, Zapner_41
• Track 21 : Yoshi_41
• Track 22 : TChen_34, LunaStella_36
• Track 23 : Toron_35
• Track 24 : Rem711_39
• Track 25 : 32HC_40
• Track 26 : REQ2_25
• Track 27 : LilSpotty_35
• Track 28 : MooMoo_32
• Track 29 : Whack_24

• Track 30 : TinyDot_23

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

The start number called the most often in the published annotations is 23, it was called in 33 of the 83 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Apricot_25, Asapag_26, BENtherdunthat_26, BearBQ_25, Birdsong_25, BotCity_26, Budski_26, CheeseTouch_26, Crater_24, Fairfaxidum_23, Frickyeah_25, Getalong_27, Holliday_26, Horus_26, Kamaru_26, Kenna_25, Kuwabara_25, Leroy_26, LilSpotty_35, LitninMcQueen_25, Lutum_26, Malisha_27, MortyNRick_25, OneDirection_20, Periwinkle_28, Phabuloso_25, Phistory_27, PrincePatrick_23, REQ2_25, ShawBrad_26, Spooky_26, Squiddly_28, TinyDot_23, Whitney_27, William_24,

Genes that have the "Most Annotated" start but do not call it:
• 8UZL_30, Avani_39, Che9d_39, Demsculpinboyz_40, FF47_30, Jabbawokkie_42, LongHai_31, Maco6_28, Muddy_30, Salvus_31, ThetaBob_34, Yoshi_41, Zapner_41,

Genes that do not have the "Most Annotated" start:
• 32HC_40, Abscondus_52, Aphelion_53, Bachita_55, Bakery_47, Barb_44, BrutonGaster_42, Chipko_25, ClamChowder_44, ClubL_53, Coriander_25, Cucurbita_55, Culver_53, Dmitri_25, Doggs_24, Dusty_52, Egi03_42, Engineer_55, Fireball_43, Fugax_45, Geeche_52, Lozinak_54, LunaStella_36, Miskis_51, MooMoo_32, Mutzi_41, Norvs_54, Nubi_42, OneUp_47, PhinkBoden_53, Phlop_41, PinkCoffee_44, PullumCavea_41, RayTheFireFly_25, Rem711_39, Sendy_43, SharkTale_43, Shinji_42, Sixsevenium_45, SmokingBunny_42, Smoothie_55, TChen_34, TillyBobJoe_42, Togo_41, Toniann_53, Toron_35, Whack_24, WilliamBoone_53, YungMoney_45,

Summary by start number:

Start 12:
• Found in 6 of 97 (6.2%) of genes in pham
• Manual Annotations of this start: 6 of 83
• 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 13:
• Found in 7 of 97 (7.2%) of genes in pham
• Manual Annotations of this start: 1 of 83
• Called 14.3% of time when present
• Phage (with cluster) where this start called: Yoshi_41 (F2),

Start 14:
• Found in 4 of 97 (4.1%) of genes in pham
• Manual Annotations of this start: 3 of 83
• 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 15:
• Found in 3 of 97 (3.1%) of genes in pham
• Manual Annotations of this start: 1 of 83
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Whack_24 (singleton),

Start 16:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 83
• Called 100.0% of time when present
• Phage (with cluster) where this start called: 32HC_40 (Z), Rem711_39 (Z),

Start 18:
• Found in 18 of 97 (18.6%) of genes in pham
• Manual Annotations of this start: 17 of 83
• 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_52 (CQ1), Engineer_55 (CQ1), Geeche_52 (CQ1), Lozinak_54 (CQ1), Miskis_51 (CQ1), Norvs_54 (CQ1), OneUp_47 (CQ2), PhinkBoden_53 (CQ1), Smoothie_55 (CQ1), Toniann_53 (CQ1), WilliamBoone_53 (CQ1),

Start 20:
• Found in 19 of 97 (19.6%) of genes in pham
• Manual Annotations of this start: 15 of 83
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bakery_47 (DC1), Barb_44 (DC1), ClamChowder_44 (DC1), Egi03_42 (DC1), Fireball_43 (DC1), Fugax_45 (DC1), Mutzi_41 (DC1), Nubi_42 (DC1), Phlop_41 (DC1), PinkCoffee_44 (DC1), PullumCavea_41 (DC1), Sendy_43 (DC1), SharkTale_43 (DC1), Shinji_42 (DC1), Sixsevenium_45 (DC1), SmokingBunny_42 (DC1), TillyBobJoe_42 (DC1), Togo_41 (DC1), YungMoney_45 (DC1),

Start 21:
• Found in 5 of 97 (5.2%) of genes in pham
• Manual Annotations of this start: 4 of 83
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Chipko_25 (DB), Coriander_25 (DB), Dmitri_25 (DB), Doggs_24 (DB), RayTheFireFly_25 (DB),

Start 23:
• Found in 48 of 97 (49.5%) of genes in pham
• Manual Annotations of this start: 33 of 83
• Called 72.9% 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), BotCity_26 (DN), Budski_26 (DN), CheeseTouch_26 (DN1), Crater_24 (DN3), Fairfaxidum_23 (CV), Frickyeah_25 (DN1), Getalong_27 (DN1), Holliday_26 (DN1), Horus_26 (DN1), Kamaru_26 (DN1), Kenna_25 (DN1), Kuwabara_25 (DN4), Leroy_26 (DN1),

LilSpotty_35 (singleton), LitninMcQueen_25 (DN1), Lutum_26 (DN1), Malisha_27 (DN), MortyNRick_25 (DN), OneDirection_20 (CZ6), Periwinkle_28 (DN1), Phabuloso_25 (DN1), Phistory_27 (DN1), PrincePatrick_23 (CV), REQ2_25 (singleton), ShawBrad_26 (DN1), Spooky_26 (DN2), Squiddly_28 (DN2), TinyDot_23 (singleton), Whitney_27 (DN1), William_24 (CV),

Start 24:
• Found in 7 of 97 (7.2%) of genes in pham
• Manual Annotations of this start: 2 of 83
• Called 85.7% of time when present
• Phage (with cluster) where this start called: 8UZL_30 (AB), FF47_30 (AB), LongHai_31 (AB), Maco6_28 (AB), Muddy_30 (AB), Salvus_31 (AB),

Summary by clusters:

There are 17 clusters represented in this pham: DN, F2, AB, F4, F6, CZ6, DB, singleton, DN4, DN1, DN3, DN2, CQ2, CQ1, Z, CV, DC1,

Info for manual annotations of cluster AB:
•Start number 24 was manually annotated 2 times for cluster AB.

Info for manual annotations of cluster CQ1:
•Start number 18 was manually annotated 15 times for cluster CQ1.

Info for manual annotations of cluster CQ2:
•Start number 18 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster CV:
•Start number 23 was manually annotated 3 times for cluster CV.

Info for manual annotations of cluster CZ6:
•Start number 23 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster DB:
•Start number 21 was manually annotated 4 times for cluster DB.

Info for manual annotations of cluster DC1:
•Start number 20 was manually annotated 15 times for cluster DC1.

Info for manual annotations of cluster DN:
•Start number 23 was manually annotated 6 times for cluster DN.

Info for manual annotations of cluster DN1:
•Start number 23 was manually annotated 16 times for cluster DN1.

Info for manual annotations of cluster DN2:
•Start number 23 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:
•Start number 23 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:
•Start number 23 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster F2:
•Start number 12 was manually annotated 5 times for cluster F2.
•Start number 13 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F4:
•Start number 12 was manually annotated 1 time for cluster F4.
•Start number 14 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster Z:
•Start number 16 was manually annotated 1 time for cluster Z.

Gene Information:

Gene: 32HC_40 Start: 30479, Stop: 30703, Start Num: 16
Candidate Starts for 32HC_40:
(1, 30116), (2, 30122), (3, 30146), (4, 30179), (5, 30224), (8, 30296), (Start: 16 @30479 has 1 MA's), (49, 30677),

Gene: 8UZL_30 Start: 24582, Stop: 24782, Start Num: 24
Candidate Starts for 8UZL_30:
(Start: 23 @24579 has 33 MA's), (Start: 24 @24582 has 2 MA's), (27, 24612), (48, 24741),

Gene: Abscondus_52 Start: 33342, Stop: 33560, Start Num: 18
Candidate Starts for Abscondus_52:
(Start: 18 @33342 has 17 MA's), (48, 33528),

Gene: Aphelion_53 Start: 33611, Stop: 33829, Start Num: 18
Candidate Starts for Aphelion_53:
(Start: 18 @33611 has 17 MA's), (48, 33797),

Gene: Apricot_25 Start: 20422, Stop: 20625, Start Num: 23
Candidate Starts for Apricot_25:
(10, 20350), (Start: 23 @20422 has 33 MA's), (33, 20503), (34, 20509), (35, 20518), (39, 20542), (42, 20551), (48, 20596), (49, 20599),

Gene: Asapag_26 Start: 20864, Stop: 21067, Start Num: 23
Candidate Starts for Asapag_26:
(10, 20792), (Start: 23 @20864 has 33 MA's), (33, 20945), (34, 20951), (35, 20960), (39, 20984), (42, 20993), (48, 21038), (49, 21041),

Gene: Avani_39 Start: 28553, Stop: 28789, Start Num: 12
Candidate Starts for Avani_39:
(Start: 12 @28553 has 6 MA's), (Start: 13 @28556 has 1 MA's), (17, 28574), (22, 28586), (Start: 23 @28589 has 33 MA's), (26, 28610), (29, 28652), (30, 28655), (34, 28673), (35, 28682), (41, 28712), (44, 28724), (46, 28739), (48, 28760), (49, 28763),

Gene: BENtherdunthat_26 Start: 20861, Stop: 21064, Start Num: 23
Candidate Starts for BENtherdunthat_26:

(10, 20789), (Start: 23 @20861 has 33 MA's), (33, 20942), (34, 20948), (35, 20957), (39, 20981), (42, 20990), (48, 21035), (49, 21038),

Gene: Bachita_55 Start: 34044, Stop: 34262, Start Num: 18
Candidate Starts for Bachita_55:
(Start: 18 @34044 has 17 MA's), (48, 34230),

Gene: Bakery_47 Start: 36845, Stop: 37081, Start Num: 20
Candidate Starts for Bakery_47:
(Start: 20 @36845 has 15 MA's), (37, 36959), (45, 37004), (47, 37010), (48, 37028),

Gene: Barb_44 Start: 35817, Stop: 36053, Start Num: 20
Candidate Starts for Barb_44:
(Start: 20 @35817 has 15 MA's), (45, 35976), (47, 35982), (48, 36000),

Gene: BearBQ_25 Start: 21701, Stop: 21904, Start Num: 23
Candidate Starts for BearBQ_25:
(10, 21629), (Start: 23 @21701 has 33 MA's), (33, 21782), (34, 21788), (35, 21797), (39, 21821), (42, 21830), (48, 21875), (49, 21878),

Gene: Birdsong_25 Start: 20594, Stop: 20797, Start Num: 23
Candidate Starts for Birdsong_25:
(10, 20522), (Start: 23 @20594 has 33 MA's), (33, 20675), (34, 20681), (35, 20690), (39, 20714), (42, 20723), (48, 20768), (49, 20771),

Gene: BotCity_26 Start: 20862, Stop: 21065, Start Num: 23
Candidate Starts for BotCity_26:
(10, 20790), (Start: 23 @20862 has 33 MA's), (33, 20943), (34, 20949), (35, 20958), (39, 20982), (42, 20991), (48, 21036), (49, 21039),

Gene: BrutonGaster_42 Start: 30728, Stop: 30943, Start Num: 18
Candidate Starts for BrutonGaster_42:
(Start: 18 @30728 has 17 MA's), (38, 30848), (48, 30914),

Gene: Budski_26 Start: 20969, Stop: 21172, Start Num: 23
Candidate Starts for Budski_26:
(10, 20897), (Start: 23 @20969 has 33 MA's), (33, 21050), (34, 21056), (35, 21065), (39, 21089), (42, 21098), (48, 21143), (49, 21146),

Gene: Che9d_39 Start: 28562, Stop: 28798, Start Num: 12
Candidate Starts for Che9d_39:
(Start: 12 @28562 has 6 MA's), (Start: 13 @28565 has 1 MA's), (17, 28583), (22, 28595), (Start: 23 @28598 has 33 MA's), (26, 28619), (28, 28646), (29, 28661), (30, 28664), (34, 28682), (35, 28691), (41, 28721), (44, 28733), (46, 28748), (48, 28769), (49, 28772),

Gene: CheeseTouch_26 Start: 20855, Stop: 21058, Start Num: 23
Candidate Starts for CheeseTouch_26:
(10, 20783), (Start: 23 @20855 has 33 MA's), (33, 20936), (34, 20942), (35, 20951), (39, 20975), (42, 20984), (48, 21029), (49, 21032),

Gene: Chipko_25 Start: 21910, Stop: 22116, Start Num: 21
Candidate Starts for Chipko_25:
(Start: 21 @21910 has 4 MA's), (48, 22087), (49, 22090),

Gene: ClamChowder_44 Start: 35817, Stop: 36053, Start Num: 20
Candidate Starts for ClamChowder_44:
(Start: 20 @35817 has 15 MA's), (45, 35976), (47, 35982), (48, 36000),

Gene: ClubL_53 Start: 33533, Stop: 33751, Start Num: 18
Candidate Starts for ClubL_53:
(Start: 18 @33533 has 17 MA's), (48, 33719),

Gene: Coriander_25 Start: 21895, Stop: 22101, Start Num: 21
Candidate Starts for Coriander_25:
(19, 21892), (Start: 21 @21895 has 4 MA's), (48, 22072), (49, 22075),

Gene: Crater_24 Start: 20422, Stop: 20625, Start Num: 23
Candidate Starts for Crater_24:
(10, 20350), (Start: 23 @20422 has 33 MA's), (33, 20503), (34, 20509), (35, 20518), (39, 20542), (42, 20551), (48, 20596), (49, 20599),

Gene: Cucurbita_55 Start: 34903, Stop: 35121, Start Num: 18
Candidate Starts for Cucurbita_55:
(Start: 18 @34903 has 17 MA's), (48, 35089),

Gene: Culver_53 Start: 33342, Stop: 33560, Start Num: 18
Candidate Starts for Culver_53:
(Start: 18 @33342 has 17 MA's), (48, 33528),

Gene: Demsculpinboyz_40 Start: 28495, Stop: 28731, Start Num: 12
Candidate Starts for Demsculpinboyz_40:
(Start: 12 @28495 has 6 MA's), (Start: 13 @28498 has 1 MA's), (17, 28516), (22, 28528), (Start: 23 @28531 has 33 MA's), (26, 28552), (28, 28579), (29, 28594), (30, 28597), (34, 28615), (35, 28624), (41, 28654), (44, 28666), (46, 28681), (48, 28702), (49, 28705),

Gene: Dmitri_25 Start: 21950, Stop: 22156, Start Num: 21
Candidate Starts for Dmitri_25:
(19, 21947), (Start: 21 @21950 has 4 MA's), (48, 22127), (49, 22130),

Gene: Doggs_24 Start: 21594, Stop: 21800, Start Num: 21
Candidate Starts for Doggs_24:
(19, 21591), (Start: 21 @21594 has 4 MA's), (48, 21771), (49, 21774),

Gene: Dusty_52 Start: 33342, Stop: 33560, Start Num: 18
Candidate Starts for Dusty_52:
(Start: 18 @33342 has 17 MA's), (48, 33528),

Gene: Egi03_42 Start: 35298, Stop: 35534, Start Num: 20
Candidate Starts for Egi03_42:
(Start: 20 @35298 has 15 MA's), (45, 35457), (47, 35463), (48, 35481),

Gene: Engineer_55 Start: 34017, Stop: 34235, Start Num: 18
Candidate Starts for Engineer_55:
(Start: 18 @34017 has 17 MA's), (48, 34203),

Gene: FF47_30 Start: 24509, Stop: 24709, Start Num: 24

Candidate Starts for FF47_30:
(Start: 23 @24506 has 33 MA's), (Start: 24 @24509 has 2 MA's), (27, 24539), (48, 24668),

Gene: Fairfaxidum_23 Start: 20983, Stop: 21189, Start Num: 23
Candidate Starts for Fairfaxidum_23:
(6, 20713), (9, 20785), (Start: 23 @20983 has 33 MA's), (41, 21109), (44, 21121),

Gene: Fireball_43 Start: 35762, Stop: 35998, Start Num: 20
Candidate Starts for Fireball_43:
(Start: 20 @35762 has 15 MA's), (45, 35921), (47, 35927), (48, 35945),

Gene: Frickyeah_25 Start: 20627, Stop: 20830, Start Num: 23
Candidate Starts for Frickyeah_25:
(10, 20555), (Start: 23 @20627 has 33 MA's), (33, 20708), (34, 20714), (35, 20723), (39, 20747), (42, 20756), (48, 20801), (49, 20804),

Gene: Fugax_45 Start: 35809, Stop: 36045, Start Num: 20
Candidate Starts for Fugax_45:
(Start: 20 @35809 has 15 MA's), (45, 35968), (47, 35974), (48, 35992),

Gene: Geeche_52 Start: 33433, Stop: 33651, Start Num: 18
Candidate Starts for Geeche_52:
(Start: 18 @33433 has 17 MA's), (48, 33619),

Gene: Getalong_27 Start: 21664, Stop: 21867, Start Num: 23
Candidate Starts for Getalong_27:
(10, 21592), (Start: 23 @21664 has 33 MA's), (33, 21745), (34, 21751), (35, 21760), (39, 21784), (42, 21793), (48, 21838), (49, 21841),

Gene: Holliday_26 Start: 20969, Stop: 21172, Start Num: 23
Candidate Starts for Holliday_26:
(10, 20897), (Start: 23 @20969 has 33 MA's), (33, 21050), (34, 21056), (35, 21065), (39, 21089), (42, 21098), (48, 21143), (49, 21146),

Gene: Horus_26 Start: 20886, Stop: 21089, Start Num: 23
Candidate Starts for Horus_26:
(10, 20814), (Start: 23 @20886 has 33 MA's), (33, 20967), (34, 20973), (35, 20982), (39, 21006), (42, 21015), (48, 21060), (49, 21063),

Gene: Jabbawokkie_42 Start: 29943, Stop: 30179, Start Num: 12
Candidate Starts for Jabbawokkie_42:
(Start: 12 @29943 has 6 MA's), (Start: 13 @29946 has 1 MA's), (17, 29964), (22, 29976), (Start: 23 @29979 has 33 MA's), (26, 30000), (30, 30045), (34, 30063), (35, 30072), (41, 30102), (44, 30114), (46, 30129), (48, 30150), (49, 30153),

Gene: Kamaru_26 Start: 20969, Stop: 21172, Start Num: 23
Candidate Starts for Kamaru_26:
(10, 20897), (Start: 23 @20969 has 33 MA's), (33, 21050), (34, 21056), (35, 21065), (39, 21089), (42, 21098), (48, 21143), (49, 21146),

Gene: Kenna_25 Start: 20862, Stop: 21065, Start Num: 23
Candidate Starts for Kenna_25:

(10, 20790), (Start: 23 @20862 has 33 MA's), (33, 20943), (34, 20949), (35, 20958), (39, 20982), (42, 20991), (48, 21036), (49, 21039),

Gene: Kuwabara_25 Start: 20288, Stop: 20491, Start Num: 23
Candidate Starts for Kuwabara_25:
(10, 20216), (Start: 23 @20288 has 33 MA's), (33, 20369), (34, 20375), (35, 20384), (39, 20408), (42, 20417), (48, 20462), (49, 20465),

Gene: Leroy_26 Start: 20887, Stop: 21090, Start Num: 23
Candidate Starts for Leroy_26:
(10, 20815), (Start: 23 @20887 has 33 MA's), (33, 20968), (34, 20974), (35, 20983), (39, 21007), (42, 21016), (48, 21061), (49, 21064),

Gene: LilSpotty_35 Start: 26596, Stop: 26778, Start Num: 23
Candidate Starts for LilSpotty_35:
(Start: 23 @26596 has 33 MA's), (Start: 24 @26599 has 2 MA's), (50, 26764),

Gene: LitninMcQueen_25 Start: 20618, Stop: 20821, Start Num: 23
Candidate Starts for LitninMcQueen_25:
(10, 20546), (Start: 23 @20618 has 33 MA's), (33, 20699), (34, 20705), (35, 20714), (39, 20738), (42, 20747), (49, 20795),

Gene: LongHai_31 Start: 24884, Stop: 25084, Start Num: 24
Candidate Starts for LongHai_31:
(Start: 23 @24881 has 33 MA's), (Start: 24 @24884 has 2 MA's),

Gene: Lozinak_54 Start: 34072, Stop: 34290, Start Num: 18
Candidate Starts for Lozinak_54:
(Start: 18 @34072 has 17 MA's), (48, 34258),

Gene: LunaStella_36 Start: 29841, Stop: 30074, Start Num: 14
Candidate Starts for LunaStella_36:
(11, 29826), (Start: 14 @29841 has 3 MA's), (Start: 15 @29850 has 1 MA's), (22, 29868), (26, 29892), (28, 29919), (30, 29937), (33, 29949), (35, 29964), (40, 29991), (41, 29994), (45, 30018), (48, 30042), (49, 30045),

Gene: Lutum_26 Start: 20862, Stop: 21065, Start Num: 23
Candidate Starts for Lutum_26:
(10, 20790), (Start: 23 @20862 has 33 MA's), (33, 20943), (34, 20949), (35, 20958), (39, 20982), (42, 20991), (48, 21036), (49, 21039),

Gene: Maco6_28 Start: 23846, Stop: 24046, Start Num: 24
Candidate Starts for Maco6_28:
(Start: 23 @23843 has 33 MA's), (Start: 24 @23846 has 2 MA's),

Gene: Malisha_27 Start: 22747, Stop: 22950, Start Num: 23
Candidate Starts for Malisha_27:
(10, 22675), (Start: 23 @22747 has 33 MA's), (33, 22828), (35, 22843), (39, 22867), (42, 22876), (44, 22885), (49, 22924),

Gene: Miskis_51 Start: 33377, Stop: 33595, Start Num: 18
Candidate Starts for Miskis_51:
(Start: 18 @33377 has 17 MA's), (48, 33563),

Gene: MooMoo_32 Start: 28388, Stop: 28621, Start Num: 14
Candidate Starts for MooMoo_32:
(11, 28373), (Start: 14 @28388 has 3 MA's), (17, 28403), (25, 28430), (30, 28484), (33, 28496), (35, 28511), (40, 28538), (41, 28541), (45, 28565), (48, 28589), (49, 28592),

Gene: MortyNRick_25 Start: 20594, Stop: 20797, Start Num: 23
Candidate Starts for MortyNRick_25:
(10, 20522), (Start: 23 @20594 has 33 MA's), (33, 20675), (34, 20681), (35, 20690), (39, 20714), (42, 20723), (48, 20768), (49, 20771),

Gene: Muddy_30 Start: 24790, Stop: 24990, Start Num: 24
Candidate Starts for Muddy_30:
(Start: 23 @24787 has 33 MA's), (Start: 24 @24790 has 2 MA's),

Gene: Mutzi_41 Start: 36497, Stop: 36733, Start Num: 20
Candidate Starts for Mutzi_41:
(Start: 20 @36497 has 15 MA's), (45, 36656), (47, 36662), (48, 36680),

Gene: Norvs_54 Start: 33616, Stop: 33834, Start Num: 18
Candidate Starts for Norvs_54:
(Start: 18 @33616 has 17 MA's), (48, 33802),

Gene: Nubi_42 Start: 35642, Stop: 35878, Start Num: 20
Candidate Starts for Nubi_42:
(Start: 20 @35642 has 15 MA's), (45, 35801), (47, 35807), (48, 35825),

Gene: OneDirection_20 Start: 18105, Stop: 18311, Start Num: 23
Candidate Starts for OneDirection_20:
(7, 17874), (Start: 23 @18105 has 33 MA's), (41, 18231), (44, 18243), (49, 18282),

Gene: OneUp_47 Start: 31052, Stop: 31267, Start Num: 18
Candidate Starts for OneUp_47:
(Start: 18 @31052 has 17 MA's), (31, 31133), (48, 31238),

Gene: Periwinkle_28 Start: 21331, Stop: 21534, Start Num: 23
Candidate Starts for Periwinkle_28:
(10, 21259), (Start: 23 @21331 has 33 MA's), (33, 21412), (34, 21418), (35, 21427), (39, 21451), (42, 21460), (49, 21508),

Gene: Phabuloso_25 Start: 20618, Stop: 20821, Start Num: 23
Candidate Starts for Phabuloso_25:
(10, 20546), (Start: 23 @20618 has 33 MA's), (33, 20699), (34, 20705), (35, 20714), (39, 20738), (42, 20747), (48, 20792), (49, 20795),

Gene: PhinkBoden_53 Start: 33997, Stop: 34215, Start Num: 18
Candidate Starts for PhinkBoden_53:
(Start: 18 @33997 has 17 MA's), (48, 34183),

Gene: Phistory_27 Start: 21652, Stop: 21855, Start Num: 23
Candidate Starts for Phistory_27:
(10, 21580), (Start: 23 @21652 has 33 MA's), (33, 21733), (34, 21739), (35, 21748), (39, 21772), (42, 21781), (48, 21826), (49, 21829),

Gene: Phlop_41 Start: 35723, Stop: 35959, Start Num: 20
Candidate Starts for Phlop_41:
(Start: 20 @35723 has 15 MA's), (45, 35882), (47, 35888), (48, 35906),

Gene: PinkCoffee_44 Start: 35826, Stop: 36062, Start Num: 20
Candidate Starts for PinkCoffee_44:
(Start: 20 @35826 has 15 MA's), (45, 35985), (47, 35991), (48, 36009),

Gene: PrincePatrick_23 Start: 20979, Stop: 21185, Start Num: 23
Candidate Starts for PrincePatrick_23:
(6, 20709), (9, 20781), (Start: 23 @20979 has 33 MA's), (41, 21105), (44, 21117),

Gene: PullumCavea_41 Start: 35723, Stop: 35959, Start Num: 20
Candidate Starts for PullumCavea_41:
(Start: 20 @35723 has 15 MA's), (45, 35882), (47, 35888), (48, 35906),

Gene: REQ2_25 Start: 22322, Stop: 22531, Start Num: 23
Candidate Starts for REQ2_25:
(Start: 23 @22322 has 33 MA's), (36, 22424), (41, 22448), (43, 22457),

Gene: RayTheFireFly_25 Start: 21927, Stop: 22133, Start Num: 21
Candidate Starts for RayTheFireFly_25:
(19, 21924), (Start: 21 @21927 has 4 MA's), (48, 22104), (49, 22107),

Gene: Rem711_39 Start: 30460, Stop: 30684, Start Num: 16
Candidate Starts for Rem711_39:
(1, 30097), (2, 30103), (4, 30160), (5, 30205), (8, 30277), (Start: 16 @30460 has 1 MA's), (49, 30658),

Gene: Salvus_31 Start: 24884, Stop: 25084, Start Num: 24
Candidate Starts for Salvus_31:
(Start: 23 @24881 has 33 MA's), (Start: 24 @24884 has 2 MA's),

Gene: Sendy_43 Start: 35843, Stop: 36079, Start Num: 20
Candidate Starts for Sendy_43:
(Start: 20 @35843 has 15 MA's), (45, 36002), (47, 36008), (48, 36026),

Gene: SharkTale_43 Start: 36524, Stop: 36760, Start Num: 20
Candidate Starts for SharkTale_43:
(Start: 20 @36524 has 15 MA's), (45, 36683), (47, 36689), (48, 36707),

Gene: ShawBrad_26 Start: 20874, Stop: 21077, Start Num: 23
Candidate Starts for ShawBrad_26:
(10, 20802), (Start: 23 @20874 has 33 MA's), (33, 20955), (34, 20961), (35, 20970), (39, 20994), (42, 21003), (48, 21048), (49, 21051),

Gene: Shinji_42 Start: 35079, Stop: 35315, Start Num: 20
Candidate Starts for Shinji_42:
(Start: 20 @35079 has 15 MA's), (45, 35238), (47, 35244), (48, 35262),

Gene: Sixsevenium_45 Start: 36074, Stop: 36310, Start Num: 20
Candidate Starts for Sixsevenium_45:
(Start: 20 @36074 has 15 MA's), (37, 36188), (45, 36233), (47, 36239), (48, 36257),

Gene: SmokingBunny_42 Start: 35628, Stop: 35864, Start Num: 20
Candidate Starts for SmokingBunny_42:
(Start: 20 @35628 has 15 MA's), (45, 35787), (47, 35793), (48, 35811),

Gene: Smoothie_55 Start: 34072, Stop: 34290, Start Num: 18
Candidate Starts for Smoothie_55:
(Start: 18 @34072 has 17 MA's), (48, 34258),

Gene: Spooky_26 Start: 20956, Stop: 21159, Start Num: 23
Candidate Starts for Spooky_26:
(10, 20884), (Start: 23 @20956 has 33 MA's), (33, 21037), (35, 21052), (39, 21076), (42, 21085), (44, 21094), (49, 21133),

Gene: Squiddly_28 Start: 22368, Stop: 22571, Start Num: 23
Candidate Starts for Squiddly_28:
(10, 22296), (Start: 23 @22368 has 33 MA's), (33, 22449), (35, 22464), (39, 22488), (42, 22497), (44, 22506), (49, 22545),

Gene: TChen_34 Start: 29842, Stop: 30075, Start Num: 14
Candidate Starts for TChen_34:
(11, 29827), (Start: 14 @29842 has 3 MA's), (Start: 15 @29851 has 1 MA's), (22, 29869), (26, 29893), (28, 29920), (30, 29938), (33, 29950), (35, 29965), (40, 29992), (41, 29995), (45, 30019), (48, 30043), (49, 30046),

Gene: ThetaBob_34 Start: 28787, Stop: 29023, Start Num: 12
Candidate Starts for ThetaBob_34:
(Start: 12 @28787 has 6 MA's), (Start: 13 @28790 has 1 MA's), (17, 28808), (22, 28820), (Start: 23 @28823 has 33 MA's), (26, 28844), (28, 28871), (29, 28886), (30, 28889), (34, 28907), (35, 28916), (41, 28946), (44, 28958), (46, 28973), (48, 28994), (49, 28997),

Gene: TillyBobJoe_42 Start: 35432, Stop: 35668, Start Num: 20
Candidate Starts for TillyBobJoe_42:
(Start: 20 @35432 has 15 MA's), (45, 35591), (47, 35597), (48, 35615),

Gene: TinyDot_23 Start: 18584, Stop: 18790, Start Num: 23
Candidate Starts for TinyDot_23:
(Start: 23 @18584 has 33 MA's), (41, 18710), (44, 18722), (46, 18737),

Gene: Togo_41 Start: 35628, Stop: 35864, Start Num: 20
Candidate Starts for Togo_41:
(Start: 20 @35628 has 15 MA's), (45, 35787), (47, 35793), (48, 35811),

Gene: Toniann_53 Start: 33559, Stop: 33777, Start Num: 18
Candidate Starts for Toniann_53:
(Start: 18 @33559 has 17 MA's), (48, 33745),

Gene: Toron_35 Start: 29685, Stop: 29918, Start Num: 14
Candidate Starts for Toron_35:
(11, 29670), (Start: 14 @29685 has 3 MA's), (17, 29700), (25, 29727), (26, 29736), (30, 29781), (33, 29793), (35, 29808), (40, 29835), (45, 29862), (48, 29886), (49, 29889),

Gene: Whack_24 Start: 21206, Stop: 21436, Start Num: 15

Candidate Starts for Whack_24:
(Start: 15 @21206 has 1 MA's), (32, 21305), (37, 21332), (39, 21347), (43, 21362),

Gene: Whitney_27 Start: 21773, Stop: 21976, Start Num: 23
Candidate Starts for Whitney_27:
(10, 21701), (Start: 23 @21773 has 33 MA's), (33, 21854), (34, 21860), (35, 21869), (39, 21893), (42, 21902), (48, 21947), (49, 21950),

Gene: William_24 Start: 20726, Stop: 20932, Start Num: 23
Candidate Starts for William_24:
(Start: 23 @20726 has 33 MA's), (41, 20852), (44, 20864),

Gene: WilliamBoone_53 Start: 32911, Stop: 33129, Start Num: 18
Candidate Starts for WilliamBoone_53:
(Start: 18 @32911 has 17 MA's), (48, 33097),

Gene: Yoshi_41 Start: 28866, Stop: 29099, Start Num: 13
Candidate Starts for Yoshi_41:
(Start: 13 @28866 has 1 MA's), (17, 28884), (22, 28896), (Start: 23 @28899 has 33 MA's), (26, 28920), (28, 28947), (30, 28965), (34, 28983), (35, 28992), (41, 29022), (44, 29034), (46, 29049), (48, 29070), (49, 29073),

Gene: YungMoney_45 Start: 38071, Stop: 38307, Start Num: 20
Candidate Starts for YungMoney_45:
(Start: 20 @38071 has 15 MA's), (45, 38230), (47, 38236), (48, 38254),

Gene: Zapner_41 Start: 29944, Stop: 30180, Start Num: 12
Candidate Starts for Zapner_41:
(Start: 12 @29944 has 6 MA's), (Start: 13 @29947 has 1 MA's), (17, 29965), (22, 29977), (Start: 23 @29980 has 33 MA's), (26, 30001), (30, 30046), (34, 30064), (35, 30073), (41, 30103), (44, 30115), (46, 30130), (48, 30151), (49, 30154),