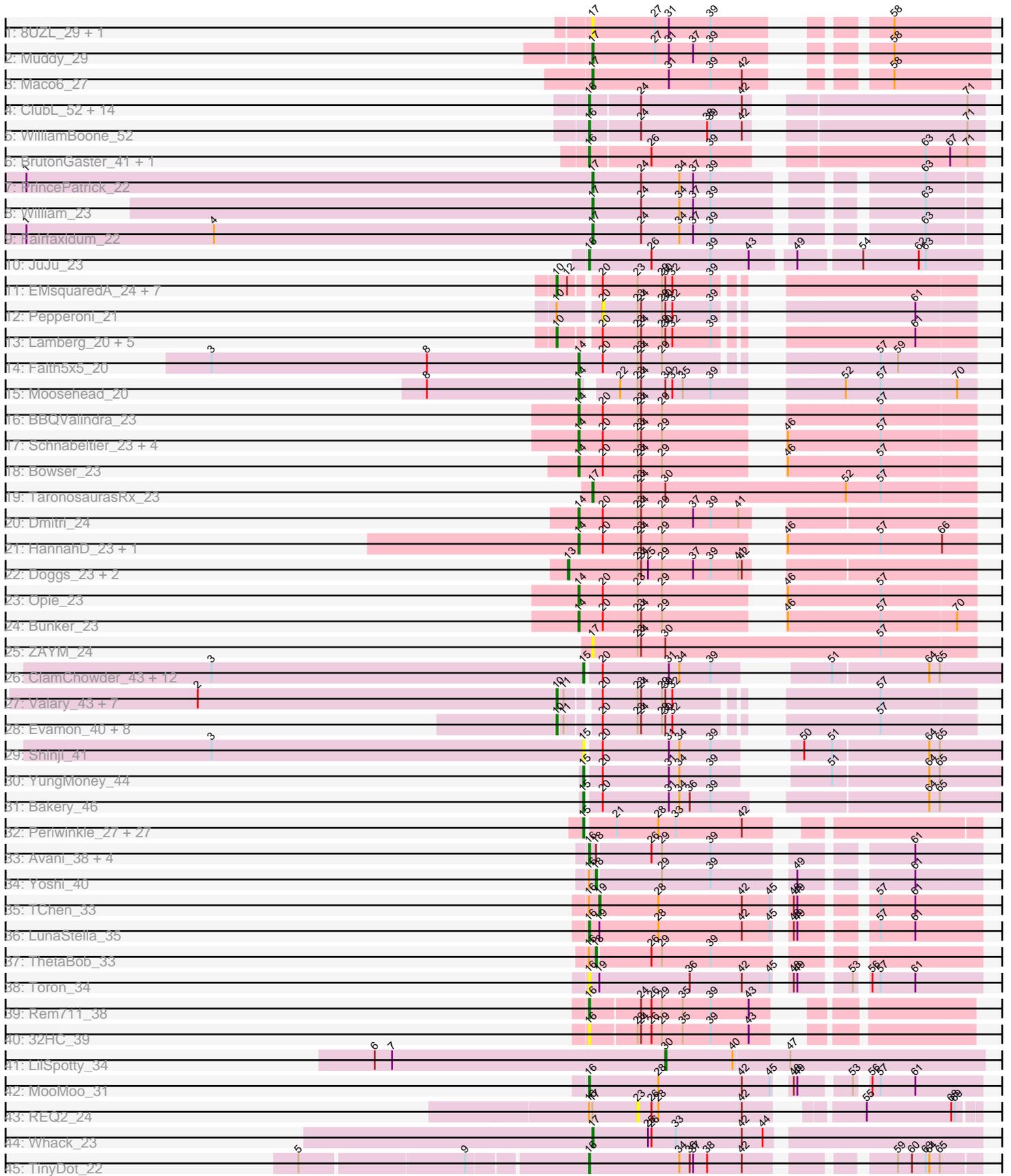# Pham 290939

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 290939 Report

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

Pham number 290939 has 138 members, 13 are drafts.

Phages represented in each track:
• Track 1 : 8UZL_29, FF47_29
• Track 2 : Muddy_29
• Track 3 : Maco6_27
• Track 4 : ClubL_52, Lozinak_53, Geeche_51, Engineer_54, Miskis_50, Bachita_54, Norvs_53, Dusty_51, PhinkBoden_52, Abscondus_51, Cucurbita_54, Culver_52, Smoothie_54, Toniann_52, Aphelion_52
• Track 5 : WilliamBoone_52
• Track 6 : BrutonGaster_41, OneUp_46
• Track 7 : PrincePatrick_22
• Track 8 : William_23
• Track 9 : Fairfaxidum_22
• Track 10 : JuJu_23
• Track 11 : EMsquaredA_24, Pollux_24, Marteena_24, BritBrat_24, Lilas_24, Bradissa_24, EnalisNailo_24, Floral_24
• Track 12 : Pepperoni_21
• Track 13 : Lamberg_20, Lton_20, EdnaMode_20, Nettuno_20, Matteo_20, Pickett_20
• Track 14 : Faith5x5_20
• Track 15 : Moosehead_20
• Track 16 : BBQValindra_23
• Track 17 : Schnabeltier_23, Angelique_25, BackstagePass_23, Eyes_23, MagicMan_23
• Track 18 : Bowser_23
• Track 19 : TaronosaurasRx_23
• Track 20 : Dmitri_24
• Track 21 : HannahD_23, GEazy_23
• Track 22 : Doggs_23, RayTheFireFly_24, Coriander_24
• Track 23 : Opie_23
• Track 24 : Bunker_23
• Track 25 : ZAYM_24
• Track 26 : ClamChowder_43, Phlop_40, Fugax_44, Egi03_41, Togo_40, Mutzi_40, Fireball_42, Barb_43, PullumCavea_40, PinkCoffee_43, SmokingBunny_41, Nubi_41, TillyBobJoe_41
• Track 27 : Valary_43, KimmyK_42, Wizard_40, Arri_44, Gezellig_40, VanDeWege_44, RogerDodger_44, CherryCola_44
• Track 28 : Evamon_40, Portcullis_42, Halo3_41, Twister6_43, Salvador_40, Danyall_43, Savbucketdawg_41, Jambalaya_41, CoveyB_44

• Track 29 : Shinji_41
• Track 30 : YungMoney_44
• Track 31 : Bakery_46
• Track 32 : Periwinkle_27, ShawBrad_25, Phistory_26, Kamaru_25, Malisha_26, Horus_25, Phabuloso_24, Getalong_26, Lutum_25, CheeseTouch_25, Frickyeah_24, BearBQ_24, Kenna_24, Crater_23, Birdsong_24, Holliday_25, Apricot_24, Budski_25, BENtherdunthat_25, LitninMcQueen_24, Asapag_25, Leroy_25, Squiddly_27, MortyNRick_24, Kuwabara_24, BotCity_25, Spooky_25, Whitney_26
• Track 33 : Avani_38, Jabbawokkie_41, Che9d_38, Zapner_40, Demsculpinboyz_39
• Track 34 : Yoshi_40
• Track 35 : TChen_33
• Track 36 : LunaStella_35
• Track 37 : ThetaBob_33
• Track 38 : Toron_34
• Track 39 : Rem711_38
• Track 40 : 32HC_39
• Track 41 : LilSpotty_34
• Track 42 : MooMoo_31
• Track 43 : REQ2_24
• Track 44 : Whack_23
• Track 45 : TinyDot_22

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

The start number called the most often in the published annotations is 15, it was called in 41 of the 125 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Apricot_24, Asapag_25, BENtherdunthat_25, Bakery_46, Barb_43, BearBQ_24, Birdsong_24, BotCity_25, Budski_25, CheeseTouch_25, ClamChowder_43, Crater_23, Egi03_41, Fireball_42, Frickyeah_24, Fugax_44, Getalong_26, Holliday_25, Horus_25, Kamaru_25, Kenna_24, Kuwabara_24, Leroy_25, LitninMcQueen_24, Lutum_25, Malisha_26, MortyNRick_24, Mutzi_40, Nubi_41, Periwinkle_27, Phabuloso_24, Phistory_26, Phlop_40, PinkCoffee_43, PullumCavea_40, ShawBrad_25, Shinji_41, SmokingBunny_41, Spooky_25, Squiddly_27, TillyBobJoe_41, Togo_40, Whitney_26, YungMoney_44,

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

Genes that do not have the "Most Annotated" start:
• 32HC_39, 8UZL_29, Abscondus_51, Angelique_25, Aphelion_52, Arri_44, Avani_38, BBQValindra_23, Bachita_54, BackstagePass_23, Bowser_23, Bradissa_24, BritBrat_24, BrutonGaster_41, Bunker_23, Che9d_38, CherryCola_44, ClubL_52, Coriander_24, CoveyB_44, Cucurbita_54, Culver_52, Danyall_43, Demsculpinboyz_39, Dmitri_24, Doggs_23, Dusty_51, EMsquaredA_24, EdnaMode_20, EnalisNailo_24, Engineer_54, Evamon_40, Eyes_23, FF47_29, Fairfaxidum_22, Faith5x5_20, Floral_24, GEazy_23, Geeche_51, Gezellig_40, Halo3_41, HannahD_23, Jabbawokkie_41, Jambalaya_41, JuJu_23, KimmyK_42, Lamberg_20, LilSpotty_34, Lilas_24, Lozinak_53, Lton_20, LunaStella_35,

Maco6_27, MagicMan_23, Marteena_24, Matteo_20, Miskis_50, MooMoo_31, Moosehead_20, Muddy_29, Nettuno_20, Norvs_53, OneUp_46, Opie_23, Pepperoni_21, PhinkBoden_52, Pickett_20, Pollux_24, Portcullis_42, PrincePatrick_22, REQ2_24, RayTheFireFly_24, Rem711_38, RogerDodger_44, Salvador_40, Savbucketdawg_41, Schnabeltier_23, Smoothie_54, TChen_33, TaronosaurasRx_23, ThetaBob_33, TinyDot_22, Toniann_52, Toron_34, Twister6_43, Valary_43, VanDeWege_44, Whack_23, WilliamBoone_52, William_23, Wizard_40, Yoshi_40, ZAYM_24, Zapner_40,

Summary by start number:

Start 10:
• Found in 32 of 138 (23.2%) of genes in pham
• Manual Annotations of this start: 30 of 125
• Called 96.9% of time when present
• Phage (with cluster) where this start called: Arri_44 (DC1), Bradissa_24 (CY1), BritBrat_24 (CY2), CherryCola_44 (DC1), CoveyB_44 (DC1), Danyall_43 (DC1), EMsquaredA_24 (CY1), EdnaMode_20 (CZ2), EnalisNailo_24 (CY1), Evamon_40 (DC1), Floral_24 (CY1), Gezellig_40 (DC1), Halo3_41 (DC1), Jambalaya_41 (DC1), KimmyK_42 (DC1), Lamberg_20 (CZ2), Lilas_24 (CY1), Lton_20 (CZ), Marteena_24 (CY1), Matteo_20 (CZ2), Nettuno_20 (CZ2), Pickett_20 (CZ2), Pollux_24 (CY1), Portcullis_42 (DC1), RogerDodger_44 (DC1), Salvador_40 (DC1), Savbucketdawg_41 (DC1), Twister6_43 (DC1), Valary_43 (DC1), VanDeWege_44 (DC1), Wizard_40 (DC1),

Start 13:
• Found in 3 of 138 (2.2%) of genes in pham
• Manual Annotations of this start: 3 of 125
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Coriander_24 (DB), Doggs_23 (DB), RayTheFireFly_24 (DB),

Start 14:
• Found in 14 of 138 (10.1%) of genes in pham
• Manual Annotations of this start: 13 of 125
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Angelique_25 (CY1), BBQValindra_23 (DB), BackstagePass_23 (DB), Bowser_23 (DB), Bunker_23 (DB), Dmitri_24 (DB), Eyes_23 (DB), Faith5x5_20 (CZ6), GEazy_23 (DB), HannahD_23 (DB), MagicMan_23 (DB), Moosehead_20 (CZ6), Opie_23 (DB), Schnabeltier_23 (DB),

Start 15:
• Found in 44 of 138 (31.9%) of genes in pham
• Manual Annotations of this start: 41 of 125
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Apricot_24 (DN3), Asapag_25 (DN1), BENtherdunthat_25 (DN1), Bakery_46 (DC1), Barb_43 (DC1), BearBQ_24 (DN), Birdsong_24 (DN), BotCity_25 (DN), Budski_25 (DN), CheeseTouch_25 (DN1), ClamChowder_43 (DC1), Crater_23 (DN3), Egi03_41 (DC1), Fireball_42 (DC1), Frickyeah_24 (DN1), Fugax_44 (DC1), Getalong_26 (DN1), Holliday_25 (DN1), Horus_25 (DN1), Kamaru_25 (DN1), Kenna_24 (DN1), Kuwabara_24 (DN4), Leroy_25 (DN1), LitninMcQueen_24 (DN1), Lutum_25 (DN1), Malisha_26 (DN), MortyNRick_24 (DN), Mutzi_40 (DC1), Nubi_41 (DC1), Periwinkle_27 (DN1),

Phabuloso_24 (DN1), Phistory_26 (DN1), Phlop_40 (DC1), PinkCoffee_43 (DC1), PullumCavea_40 (DC1), ShawBrad_25 (DN1), Shinji_41 (DC1), SmokingBunny_41 (DC1), Spooky_25 (DN2), Squiddly_27 (DN2), TillyBobJoe_41 (DC1), Togo_40 (DC1), Whitney_26 (DN1), YungMoney_44 (DC1),

Start 16:
• Found in 34 of 138 (24.6%) of genes in pham
• Manual Annotations of this start: 27 of 125
• Called 88.2% of time when present
• Phage (with cluster) where this start called: 32HC_39 (Z), Abscondus_51 (CQ1), Aphelion_52 (CQ1), Avani_38 (F2), Bachita_54 (CQ1), BrutonGaster_41 (CQ2), Che9d_38 (F2), ClubL_52 (CQ1), Cucurbita_54 (CQ1), Culver_52 (CQ1), Demsculpinboyz_39 (F2), Dusty_51 (CQ1), Engineer_54 (CQ1), Geeche_51 (CQ1), Jabbawokkie_41 (F2), JuJu_23 (CV), Lozinak_53 (CQ1), LunaStella_35 (F4), Miskis_50 (CQ1), MooMoo_31 (singleton), Norvs_53 (CQ1), OneUp_46 (CQ2), PhinkBoden_52 (CQ1), Rem711_38 (Z), Smoothie_54 (CQ1), TinyDot_22 (singleton), Toniann_52 (CQ1), Toron_34 (F6), WilliamBoone_52 (CQ1), Zapner_40 (F2),

Start 17:
• Found in 11 of 138 (8.0%) of genes in pham
• Manual Annotations of this start: 7 of 125
• Called 90.9% of time when present
• Phage (with cluster) where this start called: 8UZL_29 (AB), FF47_29 (AB), Fairfaxidum_22 (CV), Maco6_27 (AB), Muddy_29 (AB), PrincePatrick_22 (CV), TaronosaurasRx_23 (DB), Whack_23 (singleton), William_23 (CV), ZAYM_24 (DB),

Start 18:
• Found in 7 of 138 (5.1%) of genes in pham
• Manual Annotations of this start: 2 of 125
• Called 28.6% of time when present
• Phage (with cluster) where this start called: ThetaBob_33 (F4), Yoshi_40 (F2),

Start 19:
• Found in 3 of 138 (2.2%) of genes in pham
• Manual Annotations of this start: 1 of 125
• Called 33.3% of time when present
• Phage (with cluster) where this start called: TChen_33 (F4),

Start 20:
• Found in 61 of 138 (44.2%) of genes in pham
• No Manual Annotations of this start.
• Called 1.6% of time when present
• Phage (with cluster) where this start called: Pepperoni_21 (CZ),

Start 23:
• Found in 53 of 138 (38.4%) of genes in pham
• No Manual Annotations of this start.
• Called 1.9% of time when present
• Phage (with cluster) where this start called: REQ2_24 (singleton),

Start 30:
• Found in 36 of 138 (26.1%) of genes in pham
• Manual Annotations of this start: 1 of 125

• Called 2.8% of time when present
• Phage (with cluster) where this start called: LilSpotty_34 (singleton),

Summary by clusters:

There are 21 clusters represented in this pham: DN, CY2, CY1, AB, F4, F6, DN4, CZ2, CZ6, DB, F2, singleton, CZ, DN1, DN3, DN2, CQ2, CQ1, Z, CV, DC1,

Info for manual annotations of cluster AB:
•Start number 17 was manually annotated 2 times for cluster AB.

Info for manual annotations of cluster CQ1:
•Start number 16 was manually annotated 15 times for cluster CQ1.

Info for manual annotations of cluster CQ2:
•Start number 16 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster CV:
•Start number 16 was manually annotated 1 time for cluster CV.
•Start number 17 was manually annotated 3 times for cluster CV.

Info for manual annotations of cluster CY1:
•Start number 10 was manually annotated 7 times for cluster CY1.
•Start number 14 was manually annotated 1 time for cluster CY1.

Info for manual annotations of cluster CY2:
•Start number 10 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CZ:
•Start number 10 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ2:
•Start number 10 was manually annotated 5 times for cluster CZ2.

Info for manual annotations of cluster CZ6:
•Start number 14 was manually annotated 2 times for cluster CZ6.

Info for manual annotations of cluster DB:
•Start number 13 was manually annotated 3 times for cluster DB.
•Start number 14 was manually annotated 10 times for cluster DB.
•Start number 17 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DC1:
•Start number 10 was manually annotated 16 times for cluster DC1.
•Start number 15 was manually annotated 15 times for cluster DC1.

Info for manual annotations of cluster DN:
•Start number 15 was manually annotated 6 times for cluster DN.

Info for manual annotations of cluster DN1:
•Start number 15 was manually annotated 15 times for cluster DN1.

Info for manual annotations of cluster DN2:

•Start number 15 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:
•Start number 15 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:
•Start number 15 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster F2:
•Start number 16 was manually annotated 5 times for cluster F2.
•Start number 18 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F4:
•Start number 16 was manually annotated 1 time for cluster F4.
•Start number 18 was manually annotated 1 time for cluster F4.
•Start number 19 was manually annotated 1 time 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_39 Start: 30201, Stop: 30482, Start Num: 16
Candidate Starts for 32HC_39:
(Start: 16 @30201 has 27 MA's), (23, 30240), (24, 30243), (26, 30252), (29, 30261), (35, 30279), (39, 30303), (43, 30336),

Gene: 8UZL_29 Start: 24298, Stop: 24582, Start Num: 17
Candidate Starts for 8UZL_29:
(Start: 17 @24298 has 7 MA's), (27, 24352), (31, 24364), (39, 24400), (58, 24502),

Gene: Abscondus_51 Start: 33043, Stop: 33345, Start Num: 16
Candidate Starts for Abscondus_51:
(Start: 16 @33043 has 27 MA's), (24, 33085), (42, 33172), (71, 33331),

Gene: Angelique_25 Start: 21914, Stop: 22216, Start Num: 14
Candidate Starts for Angelique_25:
(Start: 14 @21914 has 13 MA's), (20, 21935), (23, 21965), (24, 21968), (29, 21986), (46, 22061), (57, 22139),

Gene: Aphelion_52 Start: 33312, Stop: 33614, Start Num: 16
Candidate Starts for Aphelion_52:
(Start: 16 @33312 has 27 MA's), (24, 33354), (42, 33441), (71, 33600),

Gene: Apricot_24 Start: 20126, Stop: 20425, Start Num: 15
Candidate Starts for Apricot_24:
(Start: 15 @20126 has 41 MA's), (21, 20150), (28, 20186), (33, 20201), (42, 20258),

Gene: Arri_44 Start: 35477, Stop: 35776, Start Num: 10
Candidate Starts for Arri_44:

(2, 35168), (Start: 10 @35477 has 30 MA's), (11, 35483), (20, 35507), (23, 35537), (24, 35540), (29, 35558), (Start: 30 @35561 has 1 MA's), (32, 35567), (57, 35699),

Gene: Asapag_25 Start: 20568, Stop: 20867, Start Num: 15
Candidate Starts for Asapag_25:
(Start: 15 @20568 has 41 MA's), (21, 20592), (28, 20628), (33, 20643), (42, 20700),

Gene: Avani_38 Start: 28254, Stop: 28553, Start Num: 16
Candidate Starts for Avani_38:
(Start: 16 @28254 has 27 MA's), (Start: 18 @28260 has 2 MA's), (26, 28305), (29, 28314), (39, 28356), (61, 28497),

Gene: BBQValindra_23 Start: 20531, Stop: 20833, Start Num: 14
Candidate Starts for BBQValindra_23:
(Start: 14 @20531 has 13 MA's), (20, 20552), (23, 20582), (24, 20585), (29, 20603), (57, 20756),

Gene: BENtherdunthat_25 Start: 20565, Stop: 20864, Start Num: 15
Candidate Starts for BENtherdunthat_25:
(Start: 15 @20565 has 41 MA's), (21, 20589), (28, 20625), (33, 20640), (42, 20697),

Gene: Bachita_54 Start: 33745, Stop: 34047, Start Num: 16
Candidate Starts for Bachita_54:
(Start: 16 @33745 has 27 MA's), (24, 33787), (42, 33874), (71, 34033),

Gene: BackstagePass_23 Start: 20663, Stop: 20965, Start Num: 14
Candidate Starts for BackstagePass_23:
(Start: 14 @20663 has 13 MA's), (20, 20684), (23, 20714), (24, 20717), (29, 20735), (46, 20810), (57, 20888),

Gene: Bakery_46 Start: 36522, Stop: 36848, Start Num: 15
Candidate Starts for Bakery_46:
(Start: 15 @36522 has 41 MA's), (20, 36534), (31, 36591), (34, 36600), (36, 36609), (39, 36627), (64, 36780), (65, 36789),

Gene: Barb_43 Start: 35506, Stop: 35820, Start Num: 15
Candidate Starts for Barb_43:
(3, 35185), (Start: 15 @35506 has 41 MA's), (20, 35518), (31, 35575), (34, 35584), (39, 35611), (51, 35671), (64, 35752), (65, 35761),

Gene: BearBQ_24 Start: 21405, Stop: 21704, Start Num: 15
Candidate Starts for BearBQ_24:
(Start: 15 @21405 has 41 MA's), (21, 21429), (28, 21465), (33, 21480), (42, 21537),

Gene: Birdsong_24 Start: 20298, Stop: 20597, Start Num: 15
Candidate Starts for Birdsong_24:
(Start: 15 @20298 has 41 MA's), (21, 20322), (28, 20358), (33, 20373), (42, 20430),

Gene: BotCity_25 Start: 20566, Stop: 20865, Start Num: 15
Candidate Starts for BotCity_25:
(Start: 15 @20566 has 41 MA's), (21, 20590), (28, 20626), (33, 20641), (42, 20698),

Gene: Bowser_23 Start: 20442, Stop: 20744, Start Num: 14
Candidate Starts for Bowser_23:

(Start: 14 @20442 has 13 MA's), (20, 20463), (23, 20493), (24, 20496), (29, 20514), (46, 20589), (57, 20667),

Gene: Bradissa_24 Start: 21187, Stop: 21486, Start Num: 10
Candidate Starts for Bradissa_24:
(Start: 10 @21187 has 30 MA's), (12, 21196), (20, 21217), (23, 21247), (29, 21268), (Start: 30 @21271 has 1 MA's), (32, 21277), (39, 21310),

Gene: BritBrat_24 Start: 21040, Stop: 21339, Start Num: 10
Candidate Starts for BritBrat_24:
(Start: 10 @21040 has 30 MA's), (12, 21049), (20, 21070), (23, 21100), (29, 21121), (Start: 30 @21124 has 1 MA's), (32, 21130), (39, 21163),

Gene: BrutonGaster_41 Start: 30429, Stop: 30731, Start Num: 16
Candidate Starts for BrutonGaster_41:
(Start: 16 @30429 has 27 MA's), (26, 30480), (39, 30531), (63, 30681), (67, 30702), (71, 30717),

Gene: Budski_25 Start: 20673, Stop: 20972, Start Num: 15
Candidate Starts for Budski_25:
(Start: 15 @20673 has 41 MA's), (21, 20697), (28, 20733), (33, 20748), (42, 20805),

Gene: Bunker_23 Start: 20642, Stop: 20944, Start Num: 14
Candidate Starts for Bunker_23:
(Start: 14 @20642 has 13 MA's), (20, 20663), (23, 20693), (24, 20696), (29, 20714), (46, 20789), (57, 20867), (70, 20930),

Gene: Che9d_38 Start: 28263, Stop: 28562, Start Num: 16
Candidate Starts for Che9d_38:
(Start: 16 @28263 has 27 MA's), (Start: 18 @28269 has 2 MA's), (26, 28314), (29, 28323), (39, 28365), (61, 28506),

Gene: CheeseTouch_25 Start: 20559, Stop: 20858, Start Num: 15
Candidate Starts for CheeseTouch_25:
(Start: 15 @20559 has 41 MA's), (21, 20583), (28, 20619), (33, 20634), (42, 20691),

Gene: CherryCola_44 Start: 36250, Stop: 36549, Start Num: 10
Candidate Starts for CherryCola_44:
(2, 35941), (Start: 10 @36250 has 30 MA's), (11, 36256), (20, 36280), (23, 36310), (24, 36313), (29, 36331), (Start: 30 @36334 has 1 MA's), (32, 36340), (57, 36472),

Gene: ClamChowder_43 Start: 35506, Stop: 35820, Start Num: 15
Candidate Starts for ClamChowder_43:
(3, 35185), (Start: 15 @35506 has 41 MA's), (20, 35518), (31, 35575), (34, 35584), (39, 35611), (51, 35671), (64, 35752), (65, 35761),

Gene: ClubL_52 Start: 33234, Stop: 33536, Start Num: 16
Candidate Starts for ClubL_52:
(Start: 16 @33234 has 27 MA's), (24, 33276), (42, 33363), (71, 33522),

Gene: Coriander_24 Start: 21581, Stop: 21895, Start Num: 13
Candidate Starts for Coriander_24:
(Start: 13 @21581 has 3 MA's), (23, 21641), (24, 21644), (25, 21650), (29, 21662), (37, 21689), (39, 21704), (41, 21728), (42, 21731),

Gene: CoveyB_44 Start: 35295, Stop: 35594, Start Num: 10
Candidate Starts for CoveyB_44:
(Start: 10 @35295 has 30 MA's), (11, 35301), (20, 35325), (23, 35355), (24, 35358), (29, 35376),
(Start: 30 @35379 has 1 MA's), (32, 35385), (57, 35517),

Gene: Crater_23 Start: 20126, Stop: 20425, Start Num: 15
Candidate Starts for Crater_23:
(Start: 15 @20126 has 41 MA's), (21, 20150), (28, 20186), (33, 20201), (42, 20258),

Gene: Cucurbita_54 Start: 34604, Stop: 34906, Start Num: 16
Candidate Starts for Cucurbita_54:
(Start: 16 @34604 has 27 MA's), (24, 34646), (42, 34733), (71, 34892),

Gene: Culver_52 Start: 33043, Stop: 33345, Start Num: 16
Candidate Starts for Culver_52:
(Start: 16 @33043 has 27 MA's), (24, 33085), (42, 33172), (71, 33331),

Gene: Danyall_43 Start: 35297, Stop: 35596, Start Num: 10
Candidate Starts for Danyall_43:
(Start: 10 @35297 has 30 MA's), (11, 35303), (20, 35327), (23, 35357), (24, 35360), (29, 35378),
(Start: 30 @35381 has 1 MA's), (32, 35387), (57, 35519),

Gene: Demsculpinboyz_39 Start: 28196, Stop: 28495, Start Num: 16
Candidate Starts for Demsculpinboyz_39:
(Start: 16 @28196 has 27 MA's), (Start: 18 @28202 has 2 MA's), (26, 28247), (29, 28256), (39, 28298),
(61, 28439),

Gene: Dmitri_24 Start: 21645, Stop: 21950, Start Num: 14
Candidate Starts for Dmitri_24:
(Start: 14 @21645 has 13 MA's), (20, 21666), (23, 21696), (24, 21699), (29, 21717), (37, 21744), (39,
21759), (41, 21783),

Gene: Doggs_23 Start: 21280, Stop: 21594, Start Num: 13
Candidate Starts for Doggs_23:
(Start: 13 @21280 has 3 MA's), (23, 21340), (24, 21343), (25, 21349), (29, 21361), (37, 21388), (39,
21403), (41, 21427), (42, 21430),

Gene: Dusty_51 Start: 33043, Stop: 33345, Start Num: 16
Candidate Starts for Dusty_51:
(Start: 16 @33043 has 27 MA's), (24, 33085), (42, 33172), (71, 33331),

Gene: EMsquaredA_24 Start: 21040, Stop: 21339, Start Num: 10
Candidate Starts for EMsquaredA_24:
(Start: 10 @21040 has 30 MA's), (12, 21049), (20, 21070), (23, 21100), (29, 21121), (Start: 30 @21124
has 1 MA's), (32, 21130), (39, 21163),

Gene: EdnaMode_20 Start: 17846, Stop: 18145, Start Num: 10
Candidate Starts for EdnaMode_20:
(Start: 10 @17846 has 30 MA's), (20, 17876), (23, 17906), (24, 17909), (29, 17927), (Start: 30 @17930
has 1 MA's), (32, 17936), (39, 17969), (61, 18098),

Gene: Egi03_41 Start: 34987, Stop: 35301, Start Num: 15

Candidate Starts for Egi03_41:
(3, 34666), (Start: 15 @34987 has 41 MA's), (20, 34999), (31, 35056), (34, 35065), (39, 35092), (51, 35152), (64, 35233), (65, 35242),

Gene: EnalisNailo_24 Start: 21189, Stop: 21488, Start Num: 10
Candidate Starts for EnalisNailo_24:
(Start: 10 @21189 has 30 MA's), (12, 21198), (20, 21219), (23, 21249), (29, 21270), (Start: 30 @21273 has 1 MA's), (32, 21279), (39, 21312),

Gene: Engineer_54 Start: 33718, Stop: 34020, Start Num: 16
Candidate Starts for Engineer_54:
(Start: 16 @33718 has 27 MA's), (24, 33760), (42, 33847), (71, 34006),

Gene: Evamon_40 Start: 35316, Stop: 35615, Start Num: 10
Candidate Starts for Evamon_40:
(Start: 10 @35316 has 30 MA's), (11, 35322), (20, 35346), (23, 35376), (24, 35379), (29, 35397), (Start: 30 @35400 has 1 MA's), (32, 35406), (57, 35538),

Gene: Eyes_23 Start: 20535, Stop: 20837, Start Num: 14
Candidate Starts for Eyes_23:
(Start: 14 @20535 has 13 MA's), (20, 20556), (23, 20586), (24, 20589), (29, 20607), (46, 20682), (57, 20760),

Gene: FF47_29 Start: 24225, Stop: 24509, Start Num: 17
Candidate Starts for FF47_29:
(Start: 17 @24225 has 7 MA's), (27, 24279), (31, 24291), (39, 24327), (58, 24429),

Gene: Fairfaxidum_22 Start: 20690, Stop: 20986, Start Num: 17
Candidate Starts for Fairfaxidum_22:
(1, 20201), (4, 20363), (Start: 17 @20690 has 7 MA's), (24, 20732), (34, 20765), (37, 20777), (39, 20792), (63, 20942),

Gene: Faith5x5_20 Start: 17794, Stop: 18084, Start Num: 14
Candidate Starts for Faith5x5_20:
(3, 17479), (8, 17665), (Start: 14 @17794 has 13 MA's), (20, 17815), (23, 17845), (24, 17848), (29, 17866), (57, 18007), (59, 18022),

Gene: Fireball_42 Start: 35451, Stop: 35765, Start Num: 15
Candidate Starts for Fireball_42:
(3, 35130), (Start: 15 @35451 has 41 MA's), (20, 35463), (31, 35520), (34, 35529), (39, 35556), (51, 35616), (64, 35697), (65, 35706),

Gene: Floral_24 Start: 21040, Stop: 21339, Start Num: 10
Candidate Starts for Floral_24:
(Start: 10 @21040 has 30 MA's), (12, 21049), (20, 21070), (23, 21100), (29, 21121), (Start: 30 @21124 has 1 MA's), (32, 21130), (39, 21163),

Gene: Frickyeah_24 Start: 20331, Stop: 20630, Start Num: 15
Candidate Starts for Frickyeah_24:
(Start: 15 @20331 has 41 MA's), (21, 20355), (28, 20391), (33, 20406), (42, 20463),

Gene: Fugax_44 Start: 35498, Stop: 35812, Start Num: 15
Candidate Starts for Fugax_44:

(3, 35177), (Start: 15 @35498 has 41 MA's), (20, 35510), (31, 35567), (34, 35576), (39, 35603), (51, 35663), (64, 35744), (65, 35753),

Gene: GEazy_23 Start: 20550, Stop: 20852, Start Num: 14
Candidate Starts for GEazy_23:
(Start: 14 @20550 has 13 MA's), (20, 20571), (23, 20601), (24, 20604), (29, 20622), (46, 20697), (57, 20775), (66, 20826),

Gene: Geeche_51 Start: 33134, Stop: 33436, Start Num: 16
Candidate Starts for Geeche_51:
(Start: 16 @33134 has 27 MA's), (24, 33176), (42, 33263), (71, 33422),

Gene: Getalong_26 Start: 21368, Stop: 21667, Start Num: 15
Candidate Starts for Getalong_26:
(Start: 15 @21368 has 41 MA's), (21, 21392), (28, 21428), (33, 21443), (42, 21500),

Gene: Gezellig_40 Start: 35448, Stop: 35747, Start Num: 10
Candidate Starts for Gezellig_40:
(2, 35139), (Start: 10 @35448 has 30 MA's), (11, 35454), (20, 35478), (23, 35508), (24, 35511), (29, 35529), (Start: 30 @35532 has 1 MA's), (32, 35538), (57, 35670),

Gene: Halo3_41 Start: 35741, Stop: 36040, Start Num: 10
Candidate Starts for Halo3_41:
(Start: 10 @35741 has 30 MA's), (11, 35747), (20, 35771), (23, 35801), (24, 35804), (29, 35822), (Start: 30 @35825 has 1 MA's), (32, 35831), (57, 35963),

Gene: HannahD_23 Start: 20550, Stop: 20852, Start Num: 14
Candidate Starts for HannahD_23:
(Start: 14 @20550 has 13 MA's), (20, 20571), (23, 20601), (24, 20604), (29, 20622), (46, 20697), (57, 20775), (66, 20826),

Gene: Holliday_25 Start: 20673, Stop: 20972, Start Num: 15
Candidate Starts for Holliday_25:
(Start: 15 @20673 has 41 MA's), (21, 20697), (28, 20733), (33, 20748), (42, 20805),

Gene: Horus_25 Start: 20590, Stop: 20889, Start Num: 15
Candidate Starts for Horus_25:
(Start: 15 @20590 has 41 MA's), (21, 20614), (28, 20650), (33, 20665), (42, 20722),

Gene: Jabbawokkie_41 Start: 29644, Stop: 29943, Start Num: 16
Candidate Starts for Jabbawokkie_41:
(Start: 16 @29644 has 27 MA's), (Start: 18 @29650 has 2 MA's), (26, 29695), (29, 29704), (39, 29746), (61, 29887),

Gene: Jambalaya_41 Start: 35095, Stop: 35394, Start Num: 10
Candidate Starts for Jambalaya_41:
(Start: 10 @35095 has 30 MA's), (11, 35101), (20, 35125), (23, 35155), (24, 35158), (29, 35176), (Start: 30 @35179 has 1 MA's), (32, 35185), (57, 35317),

Gene: JuJu_23 Start: 20326, Stop: 20649, Start Num: 16
Candidate Starts for JuJu_23:
(Start: 16 @20326 has 27 MA's), (26, 20380), (39, 20431), (43, 20464), (49, 20497), (54, 20548), (62, 20596), (63, 20602),

Gene: Kamaru_25 Start: 20673, Stop: 20972, Start Num: 15
Candidate Starts for Kamaru_25:
(Start: 15 @20673 has 41 MA's), (21, 20697), (28, 20733), (33, 20748), (42, 20805),

Gene: Kenna_24 Start: 20566, Stop: 20865, Start Num: 15
Candidate Starts for Kenna_24:
(Start: 15 @20566 has 41 MA's), (21, 20590), (28, 20626), (33, 20641), (42, 20698),

Gene: KimmyK_42 Start: 36030, Stop: 36329, Start Num: 10
Candidate Starts for KimmyK_42:
(2, 35721), (Start: 10 @36030 has 30 MA's), (11, 36036), (20, 36060), (23, 36090), (24, 36093), (29, 36111), (Start: 30 @36114 has 1 MA's), (32, 36120), (57, 36252),

Gene: Kuwabara_24 Start: 19992, Stop: 20291, Start Num: 15
Candidate Starts for Kuwabara_24:
(Start: 15 @19992 has 41 MA's), (21, 20016), (28, 20052), (33, 20067), (42, 20124),

Gene: Lamberg_20 Start: 17846, Stop: 18145, Start Num: 10
Candidate Starts for Lamberg_20:
(Start: 10 @17846 has 30 MA's), (20, 17876), (23, 17906), (24, 17909), (29, 17927), (Start: 30 @17930 has 1 MA's), (32, 17936), (39, 17969), (61, 18098),

Gene: Leroy_25 Start: 20591, Stop: 20890, Start Num: 15
Candidate Starts for Leroy_25:
(Start: 15 @20591 has 41 MA's), (21, 20615), (28, 20651), (33, 20666), (42, 20723),

Gene: LilSpotty_34 Start: 26327, Stop: 26599, Start Num: 30
Candidate Starts for LilSpotty_34:
(6, 26078), (7, 26093), (Start: 30 @26327 has 1 MA's), (40, 26384), (47, 26432),

Gene: Lilas_24 Start: 21189, Stop: 21488, Start Num: 10
Candidate Starts for Lilas_24:
(Start: 10 @21189 has 30 MA's), (12, 21198), (20, 21219), (23, 21249), (29, 21270), (Start: 30 @21273 has 1 MA's), (32, 21279), (39, 21312),

Gene: LitninMcQueen_24 Start: 20322, Stop: 20621, Start Num: 15
Candidate Starts for LitninMcQueen_24:
(Start: 15 @20322 has 41 MA's), (21, 20346), (28, 20382), (33, 20397), (42, 20454),

Gene: Lozinak_53 Start: 33773, Stop: 34075, Start Num: 16
Candidate Starts for Lozinak_53:
(Start: 16 @33773 has 27 MA's), (24, 33815), (42, 33902), (71, 34061),

Gene: Lton_20 Start: 17875, Stop: 18174, Start Num: 10
Candidate Starts for Lton_20:
(Start: 10 @17875 has 30 MA's), (20, 17905), (23, 17935), (24, 17938), (29, 17956), (Start: 30 @17959 has 1 MA's), (32, 17965), (39, 17998), (61, 18127),

Gene: LunaStella_35 Start: 29537, Stop: 29839, Start Num: 16
Candidate Starts for LunaStella_35:
(Start: 16 @29537 has 27 MA's), (Start: 19 @29546 has 1 MA's), (28, 29597), (42, 29669), (45, 29693), (48, 29699), (49, 29702), (57, 29753), (61, 29783),

Gene: Lutum_25 Start: 20566, Stop: 20865, Start Num: 15
Candidate Starts for Lutum_25:
(Start: 15 @20566 has 41 MA's), (21, 20590), (28, 20626), (33, 20641), (42, 20698),

Gene: Maco6_27 Start: 23562, Stop: 23846, Start Num: 17
Candidate Starts for Maco6_27:
(Start: 17 @23562 has 7 MA's), (31, 23628), (39, 23664), (42, 23691), (58, 23766),

Gene: MagicMan_23 Start: 20856, Stop: 21158, Start Num: 14
Candidate Starts for MagicMan_23:
(Start: 14 @20856 has 13 MA's), (20, 20877), (23, 20907), (24, 20910), (29, 20928), (46, 21003), (57, 21081),

Gene: Malisha_26 Start: 22451, Stop: 22750, Start Num: 15
Candidate Starts for Malisha_26:
(Start: 15 @22451 has 41 MA's), (21, 22475), (28, 22511), (33, 22526), (42, 22583),

Gene: Marteena_24 Start: 21040, Stop: 21339, Start Num: 10
Candidate Starts for Marteena_24:
(Start: 10 @21040 has 30 MA's), (12, 21049), (20, 21070), (23, 21100), (29, 21121), (Start: 30 @21124 has 1 MA's), (32, 21130), (39, 21163),

Gene: Matteo_20 Start: 17783, Stop: 18082, Start Num: 10
Candidate Starts for Matteo_20:
(Start: 10 @17783 has 30 MA's), (20, 17813), (23, 17843), (24, 17846), (29, 17864), (Start: 30 @17867 has 1 MA's), (32, 17873), (39, 17906), (61, 18035),

Gene: Miskis_50 Start: 33078, Stop: 33380, Start Num: 16
Candidate Starts for Miskis_50:
(Start: 16 @33078 has 27 MA's), (24, 33120), (42, 33207), (71, 33366),

Gene: MooMoo_31 Start: 28084, Stop: 28386, Start Num: 16
Candidate Starts for MooMoo_31:
(Start: 16 @28084 has 27 MA's), (28, 28144), (42, 28216), (45, 28240), (48, 28246), (49, 28249), (53, 28288), (56, 28294), (57, 28300), (61, 28330),

Gene: Moosehead_20 Start: 17802, Stop: 18092, Start Num: 14
Candidate Starts for Moosehead_20:
(8, 17673), (Start: 14 @17802 has 13 MA's), (22, 17826), (23, 17841), (24, 17844), (Start: 30 @17865 has 1 MA's), (32, 17871), (35, 17880), (39, 17904), (52, 17985), (57, 18015), (70, 18078),

Gene: MortyNRick_24 Start: 20298, Stop: 20597, Start Num: 15
Candidate Starts for MortyNRick_24:
(Start: 15 @20298 has 41 MA's), (21, 20322), (28, 20358), (33, 20373), (42, 20430),

Gene: Muddy_29 Start: 24506, Stop: 24790, Start Num: 17
Candidate Starts for Muddy_29:
(Start: 17 @24506 has 7 MA's), (27, 24560), (31, 24572), (37, 24593), (39, 24608), (58, 24710),

Gene: Mutzi_40 Start: 36186, Stop: 36500, Start Num: 15
Candidate Starts for Mutzi_40:

(3, 35865), (Start: 15 @36186 has 41 MA's), (20, 36198), (31, 36255), (34, 36264), (39, 36291), (51, 36351), (64, 36432), (65, 36441),

Gene: Nettuno_20 Start: 17849, Stop: 18148, Start Num: 10
Candidate Starts for Nettuno_20:
(Start: 10 @17849 has 30 MA's), (20, 17879), (23, 17909), (24, 17912), (29, 17930), (Start: 30 @17933 has 1 MA's), (32, 17939), (39, 17972), (61, 18101),

Gene: Norvs_53 Start: 33317, Stop: 33619, Start Num: 16
Candidate Starts for Norvs_53:
(Start: 16 @33317 has 27 MA's), (24, 33359), (42, 33446), (71, 33605),

Gene: Nubi_41 Start: 35331, Stop: 35645, Start Num: 15
Candidate Starts for Nubi_41:
(3, 35010), (Start: 15 @35331 has 41 MA's), (20, 35343), (31, 35400), (34, 35409), (39, 35436), (51, 35496), (64, 35577), (65, 35586),

Gene: OneUp_46 Start: 30753, Stop: 31055, Start Num: 16
Candidate Starts for OneUp_46:
(Start: 16 @30753 has 27 MA's), (26, 30804), (39, 30855), (63, 31005), (67, 31026), (71, 31041),

Gene: Opie_23 Start: 20880, Stop: 21182, Start Num: 14
Candidate Starts for Opie_23:
(Start: 14 @20880 has 13 MA's), (20, 20901), (23, 20931), (29, 20952), (46, 21027), (57, 21105),

Gene: Pepperoni_21 Start: 18688, Stop: 18957, Start Num: 20
Candidate Starts for Pepperoni_21:
(Start: 10 @18655 has 30 MA's), (20, 18688), (23, 18718), (24, 18721), (29, 18739), (Start: 30 @18742 has 1 MA's), (32, 18748), (39, 18781), (61, 18910),

Gene: Periwinkle_27 Start: 21035, Stop: 21334, Start Num: 15
Candidate Starts for Periwinkle_27:
(Start: 15 @21035 has 41 MA's), (21, 21059), (28, 21095), (33, 21110), (42, 21167),

Gene: Phabuloso_24 Start: 20322, Stop: 20621, Start Num: 15
Candidate Starts for Phabuloso_24:
(Start: 15 @20322 has 41 MA's), (21, 20346), (28, 20382), (33, 20397), (42, 20454),

Gene: PhinkBoden_52 Start: 33698, Stop: 34000, Start Num: 16
Candidate Starts for PhinkBoden_52:
(Start: 16 @33698 has 27 MA's), (24, 33740), (42, 33827), (71, 33986),

Gene: Phistory_26 Start: 21356, Stop: 21655, Start Num: 15
Candidate Starts for Phistory_26:
(Start: 15 @21356 has 41 MA's), (21, 21380), (28, 21416), (33, 21431), (42, 21488),

Gene: Phlop_40 Start: 35412, Stop: 35726, Start Num: 15
Candidate Starts for Phlop_40:
(3, 35091), (Start: 15 @35412 has 41 MA's), (20, 35424), (31, 35481), (34, 35490), (39, 35517), (51, 35577), (64, 35658), (65, 35667),

Gene: Pickett_20 Start: 17776, Stop: 18072, Start Num: 10
Candidate Starts for Pickett_20:

(Start: 10 @17776 has 30 MA's), (20, 17803), (23, 17833), (24, 17836), (29, 17854), (Start: 30 @17857 has 1 MA's), (32, 17863), (39, 17896), (61, 18025),

Gene: PinkCoffee_43 Start: 35515, Stop: 35829, Start Num: 15
Candidate Starts for PinkCoffee_43:
(3, 35194), (Start: 15 @35515 has 41 MA's), (20, 35527), (31, 35584), (34, 35593), (39, 35620), (51, 35680), (64, 35761), (65, 35770),

Gene: Pollux_24 Start: 21040, Stop: 21339, Start Num: 10
Candidate Starts for Pollux_24:
(Start: 10 @21040 has 30 MA's), (12, 21049), (20, 21070), (23, 21100), (29, 21121), (Start: 30 @21124 has 1 MA's), (32, 21130), (39, 21163),

Gene: Portcullis_42 Start: 34816, Stop: 35115, Start Num: 10
Candidate Starts for Portcullis_42:
(Start: 10 @34816 has 30 MA's), (11, 34822), (20, 34846), (23, 34876), (24, 34879), (29, 34897), (Start: 30 @34900 has 1 MA's), (32, 34906), (57, 35038),

Gene: PrincePatrick_22 Start: 20686, Stop: 20982, Start Num: 17
Candidate Starts for PrincePatrick_22:
(1, 20197), (Start: 17 @20686 has 7 MA's), (24, 20728), (34, 20761), (37, 20773), (39, 20788), (63, 20938),

Gene: PullumCavea_40 Start: 35412, Stop: 35726, Start Num: 15
Candidate Starts for PullumCavea_40:
(3, 35091), (Start: 15 @35412 has 41 MA's), (20, 35424), (31, 35481), (34, 35490), (39, 35517), (51, 35577), (64, 35658), (65, 35667),

Gene: REQ2_24 Start: 22071, Stop: 22325, Start Num: 23
Candidate Starts for REQ2_24:
(Start: 16 @22029 has 27 MA's), (Start: 17 @22032 has 7 MA's), (23, 22071), (26, 22083), (28, 22089), (42, 22161), (55, 22233), (68, 22305), (69, 22308),

Gene: RayTheFireFly_24 Start: 21613, Stop: 21927, Start Num: 13
Candidate Starts for RayTheFireFly_24:
(Start: 13 @21613 has 3 MA's), (23, 21673), (24, 21676), (25, 21682), (29, 21694), (37, 21721), (39, 21736), (41, 21760), (42, 21763),

Gene: Rem711_38 Start: 30182, Stop: 30463, Start Num: 16
Candidate Starts for Rem711_38:
(Start: 16 @30182 has 27 MA's), (24, 30224), (26, 30233), (29, 30242), (35, 30260), (39, 30284), (43, 30317),

Gene: RogerDodger_44 Start: 35645, Stop: 35944, Start Num: 10
Candidate Starts for RogerDodger_44:
(2, 35336), (Start: 10 @35645 has 30 MA's), (11, 35651), (20, 35675), (23, 35705), (24, 35708), (29, 35726), (Start: 30 @35729 has 1 MA's), (32, 35735), (57, 35867),

Gene: Salvador_40 Start: 35314, Stop: 35613, Start Num: 10
Candidate Starts for Salvador_40:
(Start: 10 @35314 has 30 MA's), (11, 35320), (20, 35344), (23, 35374), (24, 35377), (29, 35395), (Start: 30 @35398 has 1 MA's), (32, 35404), (57, 35536),

Gene: Savbucketdawg_41 Start: 35095, Stop: 35394, Start Num: 10
Candidate Starts for Savbucketdawg_41:
(Start: 10 @35095 has 30 MA's), (11, 35101), (20, 35125), (23, 35155), (24, 35158), (29, 35176),
(Start: 30 @35179 has 1 MA's), (32, 35185), (57, 35317),

Gene: Schnabeltier_23 Start: 20857, Stop: 21159, Start Num: 14
Candidate Starts for Schnabeltier_23:
(Start: 14 @20857 has 13 MA's), (20, 20878), (23, 20908), (24, 20911), (29, 20929), (46, 21004), (57,
21082),

Gene: ShawBrad_25 Start: 20578, Stop: 20877, Start Num: 15
Candidate Starts for ShawBrad_25:
(Start: 15 @20578 has 41 MA's), (21, 20602), (28, 20638), (33, 20653), (42, 20710),

Gene: Shinji_41 Start: 34768, Stop: 35082, Start Num: 15
Candidate Starts for Shinji_41:
(3, 34447), (Start: 15 @34768 has 41 MA's), (20, 34780), (31, 34837), (34, 34846), (39, 34873), (50,
34909), (51, 34933), (64, 35014), (65, 35023),

Gene: SmokingBunny_41 Start: 35317, Stop: 35631, Start Num: 15
Candidate Starts for SmokingBunny_41:
(3, 34996), (Start: 15 @35317 has 41 MA's), (20, 35329), (31, 35386), (34, 35395), (39, 35422), (51,
35482), (64, 35563), (65, 35572),

Gene: Smoothie_54 Start: 33773, Stop: 34075, Start Num: 16
Candidate Starts for Smoothie_54:
(Start: 16 @33773 has 27 MA's), (24, 33815), (42, 33902), (71, 34061),

Gene: Spooky_25 Start: 20660, Stop: 20959, Start Num: 15
Candidate Starts for Spooky_25:
(Start: 15 @20660 has 41 MA's), (21, 20684), (28, 20720), (33, 20735), (42, 20792),

Gene: Squiddly_27 Start: 22072, Stop: 22371, Start Num: 15
Candidate Starts for Squiddly_27:
(Start: 15 @22072 has 41 MA's), (21, 22096), (28, 22132), (33, 22147), (42, 22204),

Gene: TChen_33 Start: 29547, Stop: 29840, Start Num: 19
Candidate Starts for TChen_33:
(Start: 16 @29538 has 27 MA's), (Start: 19 @29547 has 1 MA's), (28, 29598), (42, 29670), (45, 29694),
(48, 29700), (49, 29703), (57, 29754), (61, 29784),

Gene: TaronosaurasRx_23 Start: 20865, Stop: 21188, Start Num: 17
Candidate Starts for TaronosaurasRx_23:
(Start: 17 @20865 has 7 MA's), (23, 20904), (24, 20907), (Start: 30 @20928 has 1 MA's), (52, 21081),
(57, 21111),

Gene: ThetaBob_33 Start: 28494, Stop: 28787, Start Num: 18
Candidate Starts for ThetaBob_33:
(Start: 16 @28488 has 27 MA's), (Start: 18 @28494 has 2 MA's), (26, 28539), (29, 28548), (39, 28590),

Gene: TillyBobJoe_41 Start: 35121, Stop: 35435, Start Num: 15
Candidate Starts for TillyBobJoe_41:

(3, 34800), (Start: 15 @35121 has 41 MA's), (20, 35133), (31, 35190), (34, 35199), (39, 35226), (51, 35286), (64, 35367), (65, 35376),

Gene: TinyDot_22 Start: 18288, Stop: 18587, Start Num: 16
Candidate Starts for TinyDot_22:
(5, 18057), (9, 18192), (Start: 16 @18288 has 27 MA's), (34, 18366), (36, 18375), (37, 18378), (38, 18390), (42, 18420), (59, 18519), (60, 18531), (63, 18543), (64, 18546), (65, 18555),

Gene: Togo_40 Start: 35317, Stop: 35631, Start Num: 15
Candidate Starts for Togo_40:
(3, 34996), (Start: 15 @35317 has 41 MA's), (20, 35329), (31, 35386), (34, 35395), (39, 35422), (51, 35482), (64, 35563), (65, 35572),

Gene: Toniann_52 Start: 33260, Stop: 33562, Start Num: 16
Candidate Starts for Toniann_52:
(Start: 16 @33260 has 27 MA's), (24, 33302), (42, 33389), (71, 33548),

Gene: Toron_34 Start: 29381, Stop: 29683, Start Num: 16
Candidate Starts for Toron_34:
(Start: 16 @29381 has 27 MA's), (Start: 19 @29390 has 1 MA's), (36, 29468), (42, 29513), (45, 29537), (48, 29543), (49, 29546), (53, 29585), (56, 29591), (57, 29597), (61, 29627),

Gene: Twister6_43 Start: 35208, Stop: 35507, Start Num: 10
Candidate Starts for Twister6_43:
(Start: 10 @35208 has 30 MA's), (11, 35214), (20, 35238), (23, 35268), (24, 35271), (29, 35289), (Start: 30 @35292 has 1 MA's), (32, 35298), (57, 35430),

Gene: Valary_43 Start: 36250, Stop: 36549, Start Num: 10
Candidate Starts for Valary_43:
(2, 35941), (Start: 10 @36250 has 30 MA's), (11, 36256), (20, 36280), (23, 36310), (24, 36313), (29, 36331), (Start: 30 @36334 has 1 MA's), (32, 36340), (57, 36472),

Gene: VanDeWege_44 Start: 35542, Stop: 35841, Start Num: 10
Candidate Starts for VanDeWege_44:
(2, 35233), (Start: 10 @35542 has 30 MA's), (11, 35548), (20, 35572), (23, 35602), (24, 35605), (29, 35623), (Start: 30 @35626 has 1 MA's), (32, 35632), (57, 35764),

Gene: Whack_23 Start: 20889, Stop: 21209, Start Num: 17
Candidate Starts for Whack_23:
(Start: 17 @20889 has 7 MA's), (25, 20937), (26, 20940), (33, 20961), (42, 21018), (44, 21036),

Gene: Whitney_26 Start: 21477, Stop: 21776, Start Num: 15
Candidate Starts for Whitney_26:
(Start: 15 @21477 has 41 MA's), (21, 21501), (28, 21537), (33, 21552), (42, 21609),

Gene: William_23 Start: 20433, Stop: 20729, Start Num: 17
Candidate Starts for William_23:
(Start: 17 @20433 has 7 MA's), (24, 20475), (34, 20508), (37, 20520), (39, 20535), (63, 20685),

Gene: WilliamBoone_52 Start: 32612, Stop: 32914, Start Num: 16
Candidate Starts for WilliamBoone_52:
(Start: 16 @32612 has 27 MA's), (24, 32654), (38, 32711), (39, 32714), (42, 32741), (71, 32900),

Gene: Wizard_40 Start: 35448, Stop: 35747, Start Num: 10
Candidate Starts for Wizard_40:
(2, 35139), (Start: 10 @35448 has 30 MA's), (11, 35454), (20, 35478), (23, 35508), (24, 35511), (29, 35529), (Start: 30 @35532 has 1 MA's), (32, 35538), (57, 35670),

Gene: Yoshi_40 Start: 28571, Stop: 28864, Start Num: 18
Candidate Starts for Yoshi_40:
(Start: 16 @28565 has 27 MA's), (Start: 18 @28571 has 2 MA's), (29, 28625), (39, 28667), (49, 28727), (61, 28808),

Gene: YungMoney_44 Start: 37760, Stop: 38074, Start Num: 15
Candidate Starts for YungMoney_44:
(Start: 15 @37760 has 41 MA's), (20, 37772), (31, 37829), (34, 37838), (39, 37865), (51, 37925), (64, 38006), (65, 38015),

Gene: ZAYM_24 Start: 21334, Stop: 21657, Start Num: 17
Candidate Starts for ZAYM_24:
(Start: 17 @21334 has 7 MA's), (23, 21373), (24, 21376), (Start: 30 @21397 has 1 MA's), (57, 21580),

Gene: Zapner_40 Start: 29645, Stop: 29944, Start Num: 16
Candidate Starts for Zapner_40:
(Start: 16 @29645 has 27 MA's), (Start: 18 @29651 has 2 MA's), (26, 29696), (29, 29705), (39, 29747), (61, 29888),