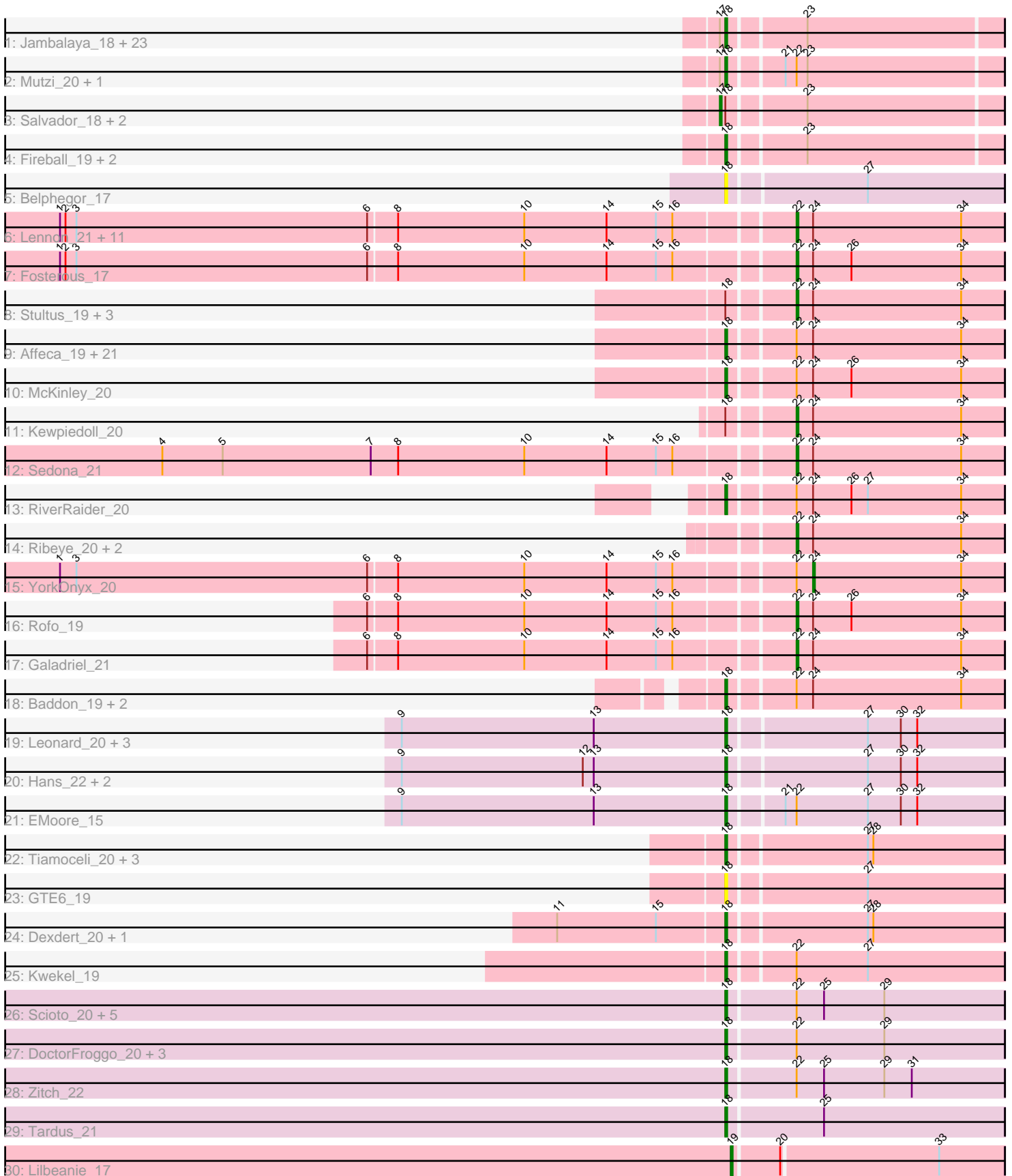


Pham 188011



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 188011 Report

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

Pham number 188011 has 114 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Jambalaya_18, Togo_18, Danyall_20, KimmyK_20, TillyBobJoe_18, Savbucketdawg_18, SmokingBunny_18, PinkCoffee_20, ClamChowder_20, Phlop_18, YungMoney_20, RogerDodger_21, Nubi_18, Fugax_20, Evamon_18, Twister6_20, Arri_21, Shinji_18, Portcullis_18, Barb_20, VanDeWege_21, Halo3_19, CoveyB_20, PullumCavea_18
- Track 2 : Mutzi_20, Clown_22
- Track 3 : Salvador_18, Bakery_19, Valary_21
- Track 4 : Fireball_19, Gezellig_19, Wizard_18
- Track 5 : Belphegor_17
- Track 6 : Lennon_21, Bibwit_20, Love_21, BobBob_17, Barsten_20, Tangent_17, Keitabear_21, Charming_17, Paries_20, Vivi2_19, Sitar_21, Nordenberg_14
- Track 7 : Fosterous_17
- Track 8 : Stultus_19, Sanjuju_17, Geodirt_18, Jabberwocky_17
- Track 9 : Affeca_19, Saronaya_19, Tycho_19, Gustavo_19, Brandonk123_21, StorminNorm_19, Tangerine_19, ChadMasterC_19, LilHam_17, Ashertheman_20, Gaea_19, Kamashten_20, Shivanishola_19, Angelicage_19, Flatwoods_20, MoontowerMania_18, Ailee_19, Fitzgerald_17, Baumdotcom_19, Thing3_20, SchottB_18, Bizzy_20
- Track 10 : McKinley_20
- Track 11 : Kewpiedoll_20
- Track 12 : Sedona_21
- Track 13 : RiverRaider_20
- Track 14 : Ribeye_20, Kroos_20, Kwobi_20
- Track 15 : YorkOnyx_20
- Track 16 : Rofo_19
- Track 17 : Galadriel_21
- Track 18 : Baddon_19, Derg_17, JKSyngboy_18
- Track 19 : Leonard_20, Ali17_18, Phinally_20, Inspectinfecti_21
- Track 20 : Hans_22, MelBins_21, Phauci_13
- Track 21 : EMoore_15
- Track 22 : Tiamoceli_20, Twonlo_17, Chickadee_19, RoadKill_17
- Track 23 : GTE6_19
- Track 24 : Dextert_20, EdmundFerry_18
- Track 25 : Kwekel_19
- Track 26 : Scioto_20, ViaConlectus_21, Natkenzie_20, Sampson_20, APunk_22, Abblin_20
- Track 27 : DoctorFroggo_20, Zipp_20, Delrey21_20, Verity_20

- Track 28 : Zitch_22
- Track 29 : Tardus_21
- Track 30 : Lilbeanie_17

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 70 of the 98 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- APunk_22, Abblin_20, Affeca_19, Ailee_19, Ali17_18, Angelicage_19, Arri_21, Ashertheman_20, Baddon_19, Barb_20, Baumdotcom_19, Belphegor_17, Bizzy_20, Brandonk123_21, ChadMasterC_19, Chickadee_19, ClamChowder_20, Clown_22, CoveyB_20, Danyall_20, Delrey21_20, Derg_17, Dexdert_20, DoctorFroggo_20, EMOore_15, EdmundFerry_18, Evamon_18, Fireball_19, Fitzgerald_17, Flatwoods_20, Fugax_20, GTE6_19, Gaea_19, Gezellig_19, Gustavo_19, Halo3_19, Hans_22, Inspectinfecti_21, JKSyngboy_18, Jambalaya_18, Kamashten_20, KimmyK_20, Kwekel_19, Leonard_20, LilHam_17, McKinley_20, MelBins_21, MoontowerMania_18, Mutzi_20, Natkenzie_20, Nubi_18, Phauci_13, Phinally_20, Phlop_18, PinkCoffee_20, Portcullis_18, PullumCavea_18, RiverRaider_20, RoadKill_17, RogerDodger_21, Sampson_20, Saronaya_19, Savbucketdawg_18, SchottB_18, Scioto_20, Shinji_18, Shivanishola_19, SmokingBunny_18, StorminNorm_19, Tangerine_19, Tardus_21, Thing3_20, Tiamoceli_20, TillyBobJoe_18, Togo_18, Twister6_20, Twonlo_17, Tycho_19, VanDeWege_21, Verity_20, ViaConlectus_21, Wizard_18, YungMoney_20, Zipp_20, Zitch_22,

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

- Bakery_19, Geodirt_18, Jabberwocky_17, Kewpiedoll_20, Salvador_18, Sanjuju_17, Stultus_19, Valary_21,

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

- Barsten_20, Bibwit_20, BobBob_17, Charming_17, Fosterous_17, Galadriel_21, Keitabear_21, Kroos_20, Kwobi_20, Lennon_21, Lilbeanie_17, Love_21, Nordenberg_14, Paries_20, Ribeye_20, Rofo_19, Sedona_21, Sitar_21, Tangent_17, Vivi2_19, YorkOnyx_20,

Summary by start number:

Start 17:

- Found in 29 of 114 (25.4%) of genes in pham
- Manual Annotations of this start: 3 of 98
- Called 10.3% of time when present
- Phage (with cluster) where this start called: Bakery_19 (DC1), Salvador_18 (DC1), Valary_21 (DC1),

Start 18:

- Found in 93 of 114 (81.6%) of genes in pham
- Manual Annotations of this start: 70 of 98
- Called 91.4% of time when present

- Phage (with cluster) where this start called: APunk_22 (DE4), Abblin_20 (DE4), Affeca_19 (DE1), Ailee_19 (DE1), Ali17_18 (DE2), Angelicage_19 (DE1), Arri_21 (DC1), Ashertheman_20 (DE1), Baddon_19 (DE1), Barb_20 (DC1), Baumdotcom_19 (DE1), Belphegor_17 (DE), Bizzy_20 (DE1), Brandonk123_21 (DE1), ChadMasterC_19 (DE1), Chickadee_19 (DE3), ClamChowder_20 (DC1), Clown_22 (DC2), CoveyB_20 (DC1), Danyall_20 (DC1), Delrey21_20 (DE4), Derg_17 (DE1), Dextert_20 (DE3), DoctorFroggo_20 (DE4), EMOore_15 (DE2), EdmundFerry_18 (DE3), Evamon_18 (DC1), Fireball_19 (DC1), Fitzgerald_17 (DE1), Flatwoods_20 (DE1), Fugax_20 (DC1), GTE6_19 (DE3), Gaea_19 (DE1), Gezellig_19 (DC1), Gustavo_19 (DE1), Halo3_19 (DC1), Hans_22 (DE2), Inspectinfecti_21 (DE2), JKSyngboy_18 (DE1), Jambalaya_18 (DC1), Kamashten_20 (DE1), KimmyK_20 (DC1), Kwekel_19 (DE3), Leonard_20 (DE2), LilHam_17 (DE1), McKinley_20 (DE1), MelBins_21 (DE2), MoontowerMania_18 (DE1), Mutzi_20 (DC1), Natkenzie_20 (DE4), Nubi_18 (DC1), Phauci_13 (DE2), Phinally_20 (DE2), Phlop_18 (DC1), PinkCoffee_20 (DC1), Portcullis_18 (DC1), PullumCavea_18 (DC1), RiverRaider_20 (DE1), RoadKill_17 (DE3), RogerDodger_21 (DC1), Sampson_20 (DE4), Saronaya_19 (DE1), Savbucketdawg_18 (DC1), SchottB_18 (DE1), Scioto_20 (DE4), Shinji_18 (DC1), Shivanishola_19 (DE1), SmokingBunny_18 (DC1), StorminNorm_19 (DE1), Tangerine_19 (DE1), Tardus_21 (DE4), Thing3_20 (DE1), Tiamoceli_20 (DE3), TillyBobJoe_18 (DC1), Togo_18 (DC1), Twister6_20 (DC1), Twonlo_17 (DE3), Tycho_19 (DE1), VanDeWege_21 (DC1), Verity_20 (DE4), ViaConlectus_21 (DE4), Wizard_18 (DC1), YungMoney_20 (DC1), Zipp_20 (DE4), Zitch_22 (DE4),

Start 19:

- Found in 1 of 114 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 98
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lilbeanie_17 (DE5),

Start 22:

- Found in 67 of 114 (58.8%) of genes in pham
- Manual Annotations of this start: 23 of 98
- Called 35.8% of time when present
- Phage (with cluster) where this start called: Barsten_20 (DE1), Bibwit_20 (DE1), BobBob_17 (DE1), Charming_17 (DE1), Fosterous_17 (DE1), Galadriel_21 (DE1), Geodirt_18 (DE1), Jabberwocky_17 (DE1), Keitabear_21 (DE1), Kewpiedoll_20 (DE1), Kroos_20 (DE1), Kwobi_20 (DE1), Lennon_21 (DE1), Love_21 (DE1), Nordenberg_14 (DE1), Paries_20 (DE1), Ribeye_20 (DE1), Rofo_19 (DE1), Sanjuju_17 (DE1), Sedona_21 (DE1), Sitar_21 (DE1), Stultus_19 (DE1), Tangent_17 (DE1), Vivi2_19 (DE1),

Start 24:

- Found in 52 of 114 (45.6%) of genes in pham
- Manual Annotations of this start: 1 of 98
- Called 1.9% of time when present
- Phage (with cluster) where this start called: YorkOnyx_20 (DE1),

Summary by clusters:

There are 8 clusters represented in this pham: DE, DE1, DE2, DE3, DE4, DE5, DC2, DC1,

Info for manual annotations of cluster DC1:

- Start number 17 was manually annotated 3 times for cluster DC1.
- Start number 18 was manually annotated 25 times for cluster DC1.

Info for manual annotations of cluster DC2:

- Start number 18 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DE1:

- Start number 18 was manually annotated 20 times for cluster DE1.
- Start number 22 was manually annotated 23 times for cluster DE1.
- Start number 24 was manually annotated 1 time for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 18 was manually annotated 8 times for cluster DE2.

Info for manual annotations of cluster DE3:

- Start number 18 was manually annotated 7 times for cluster DE3.

Info for manual annotations of cluster DE4:

- Start number 18 was manually annotated 9 times for cluster DE4.

Info for manual annotations of cluster DE5:

- Start number 19 was manually annotated 1 time for cluster DE5.

Gene Information:

Gene: APunk_22 Start: 16064, Stop: 16213, Start Num: 18

Candidate Starts for APunk_22:

(Start: 18 @16064 has 70 MA's), (Start: 22 @16100 has 23 MA's), (25, 16115), (29, 16148),

Gene: Abblin_20 Start: 15277, Stop: 15426, Start Num: 18

Candidate Starts for Abblin_20:

(Start: 18 @15277 has 70 MA's), (Start: 22 @15313 has 23 MA's), (25, 15328), (29, 15361),

Gene: Affeca_19 Start: 15092, Stop: 15238, Start Num: 18

Candidate Starts for Affeca_19:

(Start: 18 @15092 has 70 MA's), (Start: 22 @15125 has 23 MA's), (Start: 24 @15134 has 1 MA's), (34, 15215),

Gene: Ailee_19 Start: 15000, Stop: 15146, Start Num: 18

Candidate Starts for Ailee_19:

(Start: 18 @15000 has 70 MA's), (Start: 22 @15033 has 23 MA's), (Start: 24 @15042 has 1 MA's), (34, 15123),

Gene: Ali17_18 Start: 14404, Stop: 14550, Start Num: 18

Candidate Starts for Ali17_18:

(9, 14227), (13, 14332), (Start: 18 @14404 has 70 MA's), (27, 14476), (30, 14494), (32, 14503),

Gene: Angelicage_19 Start: 15515, Stop: 15661, Start Num: 18

Candidate Starts for Angelicage_19:

(Start: 18 @15515 has 70 MA's), (Start: 22 @15548 has 23 MA's), (Start: 24 @15557 has 1 MA's), (34, 15638),

Gene: Arri_21 Start: 12300, Stop: 12446, Start Num: 18

Candidate Starts for Arri_21:

(Start: 17 @12297 has 3 MA's), (Start: 18 @12300 has 70 MA's), (23, 12342),

Gene: Ashertheman_20 Start: 14598, Stop: 14744, Start Num: 18

Candidate Starts for Ashertheman_20:

(Start: 18 @14598 has 70 MA's), (Start: 22 @14631 has 23 MA's), (Start: 24 @14640 has 1 MA's), (34, 14721),

Gene: Baddon_19 Start: 15445, Stop: 15591, Start Num: 18

Candidate Starts for Baddon_19:

(Start: 18 @15445 has 70 MA's), (Start: 22 @15478 has 23 MA's), (Start: 24 @15487 has 1 MA's), (34, 15568),

Gene: Bakery_19 Start: 11498, Stop: 11644, Start Num: 17

Candidate Starts for Bakery_19:

(Start: 17 @11498 has 3 MA's), (Start: 18 @11501 has 70 MA's), (23, 11540),

Gene: Barb_20 Start: 12278, Stop: 12421, Start Num: 18

Candidate Starts for Barb_20:

(Start: 17 @12275 has 3 MA's), (Start: 18 @12278 has 70 MA's), (23, 12317),

Gene: Barsten_20 Start: 15061, Stop: 15174, Start Num: 22

Candidate Starts for Barsten_20:

(1, 14668), (2, 14671), (3, 14677), (6, 14836), (8, 14851), (10, 14920), (14, 14965), (15, 14992), (16, 15001), (Start: 22 @15061 has 23 MA's), (Start: 24 @15070 has 1 MA's), (34, 15151),

Gene: Baumdotcom_19 Start: 14214, Stop: 14360, Start Num: 18

Candidate Starts for Baumdotcom_19:

(Start: 18 @14214 has 70 MA's), (Start: 22 @14247 has 23 MA's), (Start: 24 @14256 has 1 MA's), (34, 14337),

Gene: Belphegor_17 Start: 13509, Stop: 13655, Start Num: 18

Candidate Starts for Belphegor_17:

(Start: 18 @13509 has 70 MA's), (27, 13581),

Gene: Bibwit_20 Start: 15305, Stop: 15418, Start Num: 22

Candidate Starts for Bibwit_20:

(1, 14912), (2, 14915), (3, 14921), (6, 15080), (8, 15095), (10, 15164), (14, 15209), (15, 15236), (16, 15245), (Start: 22 @15305 has 23 MA's), (Start: 24 @15314 has 1 MA's), (34, 15395),

Gene: Bizzy_20 Start: 14493, Stop: 14639, Start Num: 18

Candidate Starts for Bizzy_20:

(Start: 18 @14493 has 70 MA's), (Start: 22 @14526 has 23 MA's), (Start: 24 @14535 has 1 MA's), (34, 14616),

Gene: BobBob_17 Start: 13915, Stop: 14028, Start Num: 22

Candidate Starts for BobBob_17:

(1, 13522), (2, 13525), (3, 13531), (6, 13690), (8, 13705), (10, 13774), (14, 13819), (15, 13846), (16, 13855), (Start: 22 @13915 has 23 MA's), (Start: 24 @13924 has 1 MA's), (34, 14005),

Gene: Brandonk123_21 Start: 14574, Stop: 14720, Start Num: 18
Candidate Starts for Brandonk123_21:
(Start: 18 @14574 has 70 MA's), (Start: 22 @14607 has 23 MA's), (Start: 24 @14616 has 1 MA's),
(34, 14697),

Gene: ChadMasterC_19 Start: 14992, Stop: 15138, Start Num: 18
Candidate Starts for ChadMasterC_19:
(Start: 18 @14992 has 70 MA's), (Start: 22 @15025 has 23 MA's), (Start: 24 @15034 has 1 MA's),
(34, 15115),

Gene: Charming_17 Start: 13917, Stop: 14030, Start Num: 22
Candidate Starts for Charming_17:
(1, 13524), (2, 13527), (3, 13533), (6, 13692), (8, 13707), (10, 13776), (14, 13821), (15, 13848), (16,
13857), (Start: 22 @13917 has 23 MA's), (Start: 24 @13926 has 1 MA's), (34, 14007),

Gene: Chickadee_19 Start: 13493, Stop: 13639, Start Num: 18
Candidate Starts for Chickadee_19:
(Start: 18 @13493 has 70 MA's), (27, 13565), (28, 13568),

Gene: ClamChowder_20 Start: 12278, Stop: 12421, Start Num: 18
Candidate Starts for ClamChowder_20:
(Start: 17 @12275 has 3 MA's), (Start: 18 @12278 has 70 MA's), (23, 12317),

Gene: Clown_22 Start: 14288, Stop: 14431, Start Num: 18
Candidate Starts for Clown_22:
(Start: 17 @14285 has 3 MA's), (Start: 18 @14288 has 70 MA's), (21, 14315), (Start: 22 @14321 has
23 MA's), (23, 14327),

Gene: CoveyB_20 Start: 12135, Stop: 12278, Start Num: 18
Candidate Starts for CoveyB_20:
(Start: 17 @12132 has 3 MA's), (Start: 18 @12135 has 70 MA's), (23, 12174),

Gene: Danyall_20 Start: 12135, Stop: 12278, Start Num: 18
Candidate Starts for Danyall_20:
(Start: 17 @12132 has 3 MA's), (Start: 18 @12135 has 70 MA's), (23, 12174),

Gene: Delrey21_20 Start: 14740, Stop: 14889, Start Num: 18
Candidate Starts for Delrey21_20:
(Start: 18 @14740 has 70 MA's), (Start: 22 @14776 has 23 MA's), (29, 14824),

Gene: Derg_17 Start: 14088, Stop: 14234, Start Num: 18
Candidate Starts for Derg_17:
(Start: 18 @14088 has 70 MA's), (Start: 22 @14121 has 23 MA's), (Start: 24 @14130 has 1 MA's),
(34, 14211),

Gene: Dxdert_20 Start: 13940, Stop: 14086, Start Num: 18
Candidate Starts for Dxdert_20:
(11, 13850), (15, 13904), (Start: 18 @13940 has 70 MA's), (27, 14012), (28, 14015),

Gene: DoctorFroggo_20 Start: 14740, Stop: 14889, Start Num: 18
Candidate Starts for DoctorFroggo_20:
(Start: 18 @14740 has 70 MA's), (Start: 22 @14776 has 23 MA's), (29, 14824),

Gene: EMoore_15 Start: 12766, Stop: 12912, Start Num: 18

Candidate Starts for EMoore_15:

(9, 12589), (13, 12694), (Start: 18 @12766 has 70 MA's), (21, 12793), (Start: 22 @12799 has 23 MA's), (27, 12838), (30, 12856), (32, 12865),

Gene: EdmundFerry_18 Start: 13524, Stop: 13670, Start Num: 18

Candidate Starts for EdmundFerry_18:

(11, 13434), (15, 13488), (Start: 18 @13524 has 70 MA's), (27, 13596), (28, 13599),

Gene: Evamon_18 Start: 11610, Stop: 11753, Start Num: 18

Candidate Starts for Evamon_18:

(Start: 17 @11607 has 3 MA's), (Start: 18 @11610 has 70 MA's), (23, 11649),

Gene: Fireball_19 Start: 11748, Stop: 11891, Start Num: 18

Candidate Starts for Fireball_19:

(Start: 18 @11748 has 70 MA's), (23, 11787),

Gene: Fitzgerald_17 Start: 14310, Stop: 14456, Start Num: 18

Candidate Starts for Fitzgerald_17:

(Start: 18 @14310 has 70 MA's), (Start: 22 @14343 has 23 MA's), (Start: 24 @14352 has 1 MA's), (34, 14433),

Gene: Flatwoods_20 Start: 14500, Stop: 14646, Start Num: 18

Candidate Starts for Flatwoods_20:

(Start: 18 @14500 has 70 MA's), (Start: 22 @14533 has 23 MA's), (Start: 24 @14542 has 1 MA's), (34, 14623),

Gene: Fosterous_17 Start: 14806, Stop: 14919, Start Num: 22

Candidate Starts for Fosterous_17:

(1, 14413), (2, 14416), (3, 14422), (6, 14581), (8, 14596), (10, 14665), (14, 14710), (15, 14737), (16, 14746), (Start: 22 @14806 has 23 MA's), (Start: 24 @14815 has 1 MA's), (26, 14836), (34, 14896),

Gene: Fugax_20 Start: 12278, Stop: 12421, Start Num: 18

Candidate Starts for Fugax_20:

(Start: 17 @12275 has 3 MA's), (Start: 18 @12278 has 70 MA's), (23, 12317),

Gene: GTE6_19 Start: 14009, Stop: 14155, Start Num: 18

Candidate Starts for GTE6_19:

(Start: 18 @14009 has 70 MA's), (27, 14081),

Gene: Gaea_19 Start: 14194, Stop: 14340, Start Num: 18

Candidate Starts for Gaea_19:

(Start: 18 @14194 has 70 MA's), (Start: 22 @14227 has 23 MA's), (Start: 24 @14236 has 1 MA's), (34, 14317),

Gene: Galadriel_21 Start: 14665, Stop: 14778, Start Num: 22

Candidate Starts for Galadriel_21:

(6, 14440), (8, 14455), (10, 14524), (14, 14569), (15, 14596), (16, 14605), (Start: 22 @14665 has 23 MA's), (Start: 24 @14674 has 1 MA's), (34, 14755),

Gene: Geodirt_18 Start: 14870, Stop: 14983, Start Num: 22

Candidate Starts for Geodirt_18:

(Start: 18 @14837 has 70 MA's), (Start: 22 @14870 has 23 MA's), (Start: 24 @14879 has 1 MA's), (34, 14960),

Gene: Gezellig_19 Start: 11748, Stop: 11891, Start Num: 18
Candidate Starts for Gezellig_19:
(Start: 18 @11748 has 70 MA's), (23, 11787),

Gene: Gustavo_19 Start: 14305, Stop: 14451, Start Num: 18
Candidate Starts for Gustavo_19:
(Start: 18 @14305 has 70 MA's), (Start: 22 @14338 has 23 MA's), (Start: 24 @14347 has 1 MA's), (34, 14428),

Gene: Halo3_19 Start: 12063, Stop: 12206, Start Num: 18
Candidate Starts for Halo3_19:
(Start: 17 @12060 has 3 MA's), (Start: 18 @12063 has 70 MA's), (23, 12102),

Gene: Hans_22 Start: 15065, Stop: 15211, Start Num: 18
Candidate Starts for Hans_22:
(9, 14888), (12, 14987), (13, 14993), (Start: 18 @15065 has 70 MA's), (27, 15137), (30, 15155), (32, 15164),

Gene: Inspectinfecti_21 Start: 15487, Stop: 15633, Start Num: 18
Candidate Starts for Inspectinfecti_21:
(9, 15310), (13, 15415), (Start: 18 @15487 has 70 MA's), (27, 15559), (30, 15577), (32, 15586),

Gene: JKSyngboy_18 Start: 14964, Stop: 15110, Start Num: 18
Candidate Starts for JKSyngboy_18:
(Start: 18 @14964 has 70 MA's), (Start: 22 @14997 has 23 MA's), (Start: 24 @15006 has 1 MA's), (34, 15087),

Gene: Jabberwocky_17 Start: 14777, Stop: 14890, Start Num: 22
Candidate Starts for Jabberwocky_17:
(Start: 18 @14744 has 70 MA's), (Start: 22 @14777 has 23 MA's), (Start: 24 @14786 has 1 MA's), (34, 14867),

Gene: Jambalaya_18 Start: 11401, Stop: 11544, Start Num: 18
Candidate Starts for Jambalaya_18:
(Start: 17 @11398 has 3 MA's), (Start: 18 @11401 has 70 MA's), (23, 11440),

Gene: Kamashten_20 Start: 15427, Stop: 15573, Start Num: 18
Candidate Starts for Kamashten_20:
(Start: 18 @15427 has 70 MA's), (Start: 22 @15460 has 23 MA's), (Start: 24 @15469 has 1 MA's), (34, 15550),

Gene: Keitabear_21 Start: 17009, Stop: 17122, Start Num: 22
Candidate Starts for Keitabear_21:
(1, 16616), (2, 16619), (3, 16625), (6, 16784), (8, 16799), (10, 16868), (14, 16913), (15, 16940), (16, 16949), (Start: 22 @17009 has 23 MA's), (Start: 24 @17018 has 1 MA's), (34, 17099),

Gene: Kewpiedoll_20 Start: 14846, Stop: 14959, Start Num: 22
Candidate Starts for Kewpiedoll_20:
(Start: 18 @14813 has 70 MA's), (Start: 22 @14846 has 23 MA's), (Start: 24 @14855 has 1 MA's), (34, 14936),

Gene: KimmyK_20 Start: 12278, Stop: 12421, Start Num: 18
Candidate Starts for KimmyK_20:
(Start: 17 @12275 has 3 MA's), (Start: 18 @12278 has 70 MA's), (23, 12317),

Gene: Kroos_20 Start: 15090, Stop: 15203, Start Num: 22
Candidate Starts for Kroos_20:
(Start: 22 @15090 has 23 MA's), (Start: 24 @15099 has 1 MA's), (34, 15180),

Gene: Kwekel_19 Start: 13460, Stop: 13606, Start Num: 18
Candidate Starts for Kwekel_19:
(Start: 18 @13460 has 70 MA's), (Start: 22 @13493 has 23 MA's), (27, 13532),

Gene: Kwobi_20 Start: 15066, Stop: 15179, Start Num: 22
Candidate Starts for Kwobi_20:
(Start: 22 @15066 has 23 MA's), (Start: 24 @15075 has 1 MA's), (34, 15156),

Gene: Lennon_21 Start: 16113, Stop: 16226, Start Num: 22
Candidate Starts for Lennon_21:
(1, 15720), (2, 15723), (3, 15729), (6, 15888), (8, 15903), (10, 15972), (14, 16017), (15, 16044), (16, 16053), (Start: 22 @16113 has 23 MA's), (Start: 24 @16122 has 1 MA's), (34, 16203),

Gene: Leonard_20 Start: 15082, Stop: 15228, Start Num: 18
Candidate Starts for Leonard_20:
(9, 14905), (13, 15010), (Start: 18 @15082 has 70 MA's), (27, 15154), (30, 15172), (32, 15181),

Gene: LilHam_17 Start: 13612, Stop: 13758, Start Num: 18
Candidate Starts for LilHam_17:
(Start: 18 @13612 has 70 MA's), (Start: 22 @13645 has 23 MA's), (Start: 24 @13654 has 1 MA's), (34, 13735),

Gene: Lilbeanie_17 Start: 10420, Stop: 10563, Start Num: 19
Candidate Starts for Lilbeanie_17:
(Start: 19 @10420 has 1 MA's), (20, 10444), (33, 10528),

Gene: Love_21 Start: 14976, Stop: 15089, Start Num: 22
Candidate Starts for Love_21:
(1, 14583), (2, 14586), (3, 14592), (6, 14751), (8, 14766), (10, 14835), (14, 14880), (15, 14907), (16, 14916), (Start: 22 @14976 has 23 MA's), (Start: 24 @14985 has 1 MA's), (34, 15066),

Gene: McKinley_20 Start: 14965, Stop: 15111, Start Num: 18
Candidate Starts for McKinley_20:
(Start: 18 @14965 has 70 MA's), (Start: 22 @14998 has 23 MA's), (Start: 24 @15007 has 1 MA's), (26, 15028), (34, 15088),

Gene: MelBins_21 Start: 15286, Stop: 15432, Start Num: 18
Candidate Starts for MelBins_21:
(9, 15109), (12, 15208), (13, 15214), (Start: 18 @15286 has 70 MA's), (27, 15358), (30, 15376), (32, 15385),

Gene: MoontowerMania_18 Start: 13949, Stop: 14095, Start Num: 18
Candidate Starts for MoontowerMania_18:

(Start: 18 @13949 has 70 MA's), (Start: 22 @13982 has 23 MA's), (Start: 24 @13991 has 1 MA's), (34, 14072),

Gene: Mutzi_20 Start: 12002, Stop: 12145, Start Num: 18

Candidate Starts for Mutzi_20:

(Start: 17 @11999 has 3 MA's), (Start: 18 @12002 has 70 MA's), (21, 12029), (Start: 22 @12035 has 23 MA's), (23, 12041),

Gene: Natkenzie_20 Start: 15277, Stop: 15426, Start Num: 18

Candidate Starts for Natkenzie_20:

(Start: 18 @15277 has 70 MA's), (Start: 22 @15313 has 23 MA's), (25, 15328), (29, 15361),

Gene: Nordenberg_14 Start: 13296, Stop: 13409, Start Num: 22

Candidate Starts for Nordenberg_14:

(1, 12903), (2, 12906), (3, 12912), (6, 13071), (8, 13086), (10, 13155), (14, 13200), (15, 13227), (16, 13236), (Start: 22 @13296 has 23 MA's), (Start: 24 @13305 has 1 MA's), (34, 13386),

Gene: Nubi_18 Start: 11630, Stop: 11773, Start Num: 18

Candidate Starts for Nubi_18:

(Start: 17 @11627 has 3 MA's), (Start: 18 @11630 has 70 MA's), (23, 11669),

Gene: Paries_20 Start: 14664, Stop: 14777, Start Num: 22

Candidate Starts for Paries_20:

(1, 14271), (2, 14274), (3, 14280), (6, 14439), (8, 14454), (10, 14523), (14, 14568), (15, 14595), (16, 14604), (Start: 22 @14664 has 23 MA's), (Start: 24 @14673 has 1 MA's), (34, 14754),

Gene: Phauci_13 Start: 11649, Stop: 11795, Start Num: 18

Candidate Starts for Phauci_13:

(9, 11472), (12, 11571), (13, 11577), (Start: 18 @11649 has 70 MA's), (27, 11721), (30, 11739), (32, 11748),

Gene: Phinally_20 Start: 15079, Stop: 15225, Start Num: 18

Candidate Starts for Phinally_20:

(9, 14902), (13, 15007), (Start: 18 @15079 has 70 MA's), (27, 15151), (30, 15169), (32, 15178),

Gene: Phlop_18 Start: 11703, Stop: 11846, Start Num: 18

Candidate Starts for Phlop_18:

(Start: 17 @11700 has 3 MA's), (Start: 18 @11703 has 70 MA's), (23, 11742),

Gene: PinkCoffee_20 Start: 12287, Stop: 12430, Start Num: 18

Candidate Starts for PinkCoffee_20:

(Start: 17 @12284 has 3 MA's), (Start: 18 @12287 has 70 MA's), (23, 12326),

Gene: Portcullis_18 Start: 11649, Stop: 11792, Start Num: 18

Candidate Starts for Portcullis_18:

(Start: 17 @11646 has 3 MA's), (Start: 18 @11649 has 70 MA's), (23, 11688),

Gene: PullumCavea_18 Start: 11703, Stop: 11846, Start Num: 18

Candidate Starts for PullumCavea_18:

(Start: 17 @11700 has 3 MA's), (Start: 18 @11703 has 70 MA's), (23, 11742),

Gene: Ribeye_20 Start: 15544, Stop: 15657, Start Num: 22

Candidate Starts for Ribeye_20:

(Start: 22 @15544 has 23 MA's), (Start: 24 @15553 has 1 MA's), (34, 15634),

Gene: RiverRaider_20 Start: 13915, Stop: 14061, Start Num: 18

Candidate Starts for RiverRaider_20:

(Start: 18 @13915 has 70 MA's), (Start: 22 @13948 has 23 MA's), (Start: 24 @13957 has 1 MA's), (26, 13978), (27, 13987), (34, 14038),

Gene: RoadKill_17 Start: 12997, Stop: 13143, Start Num: 18

Candidate Starts for RoadKill_17:

(Start: 18 @12997 has 70 MA's), (27, 13069), (28, 13072),

Gene: Rofo_19 Start: 14916, Stop: 15029, Start Num: 22

Candidate Starts for Rofo_19:

(6, 14691), (8, 14706), (10, 14775), (14, 14820), (15, 14847), (16, 14856), (Start: 22 @14916 has 23 MA's), (Start: 24 @14925 has 1 MA's), (26, 14946), (34, 15006),

Gene: RogerDodger_21 Start: 12499, Stop: 12642, Start Num: 18

Candidate Starts for RogerDodger_21:

(Start: 17 @12496 has 3 MA's), (Start: 18 @12499 has 70 MA's), (23, 12538),

Gene: Salvador_18 Start: 11605, Stop: 11751, Start Num: 17

Candidate Starts for Salvador_18:

(Start: 17 @11605 has 3 MA's), (Start: 18 @11608 has 70 MA's), (23, 11647),

Gene: Sampson_20 Start: 15222, Stop: 15371, Start Num: 18

Candidate Starts for Sampson_20:

(Start: 18 @15222 has 70 MA's), (Start: 22 @15258 has 23 MA's), (25, 15273), (29, 15306),

Gene: Sanjuju_17 Start: 14428, Stop: 14541, Start Num: 22

Candidate Starts for Sanjuju_17:

(Start: 18 @14395 has 70 MA's), (Start: 22 @14428 has 23 MA's), (Start: 24 @14437 has 1 MA's), (34, 14518),

Gene: Saronaya_19 Start: 14305, Stop: 14451, Start Num: 18

Candidate Starts for Saronaya_19:

(Start: 18 @14305 has 70 MA's), (Start: 22 @14338 has 23 MA's), (Start: 24 @14347 has 1 MA's), (34, 14428),

Gene: Savbucketdawg_18 Start: 11401, Stop: 11544, Start Num: 18

Candidate Starts for Savbucketdawg_18:

(Start: 17 @11398 has 3 MA's), (Start: 18 @11401 has 70 MA's), (23, 11440),

Gene: SchottB_18 Start: 15294, Stop: 15440, Start Num: 18

Candidate Starts for SchottB_18:

(Start: 18 @15294 has 70 MA's), (Start: 22 @15327 has 23 MA's), (Start: 24 @15336 has 1 MA's), (34, 15417),

Gene: Scioto_20 Start: 15277, Stop: 15426, Start Num: 18

Candidate Starts for Scioto_20:

(Start: 18 @15277 has 70 MA's), (Start: 22 @15313 has 23 MA's), (25, 15328), (29, 15361),

Gene: Sedona_21 Start: 16744, Stop: 16857, Start Num: 22

Candidate Starts for Sedona_21:

(4, 16405), (5, 16438), (7, 16519), (8, 16534), (10, 16603), (14, 16648), (15, 16675), (16, 16684),
(Start: 22 @16744 has 23 MA's), (Start: 24 @16753 has 1 MA's), (34, 16834),

Gene: Shinji_18 Start: 11590, Stop: 11733, Start Num: 18

Candidate Starts for Shinji_18:

(Start: 17 @11587 has 3 MA's), (Start: 18 @11590 has 70 MA's), (23, 11629),

Gene: Shivanishola_19 Start: 14688, Stop: 14834, Start Num: 18

Candidate Starts for Shivanishola_19:

(Start: 18 @14688 has 70 MA's), (Start: 22 @14721 has 23 MA's), (Start: 24 @14730 has 1 MA's),
(34, 14811),

Gene: Sitar_21 Start: 16113, Stop: 16226, Start Num: 22

Candidate Starts for Sitar_21:

(1, 15720), (2, 15723), (3, 15729), (6, 15888), (8, 15903), (10, 15972), (14, 16017), (15, 16044), (16,
16053), (Start: 22 @16113 has 23 MA's), (Start: 24 @16122 has 1 MA's), (34, 16203),

Gene: SmokingBunny_18 Start: 11608, Stop: 11751, Start Num: 18

Candidate Starts for SmokingBunny_18:

(Start: 17 @11605 has 3 MA's), (Start: 18 @11608 has 70 MA's), (23, 11647),

Gene: StorminNorm_19 Start: 14185, Stop: 14331, Start Num: 18

Candidate Starts for StorminNorm_19:

(Start: 18 @14185 has 70 MA's), (Start: 22 @14218 has 23 MA's), (Start: 24 @14227 has 1 MA's),
(34, 14308),

Gene: Stultus_19 Start: 14723, Stop: 14836, Start Num: 22

Candidate Starts for Stultus_19:

(Start: 18 @14690 has 70 MA's), (Start: 22 @14723 has 23 MA's), (Start: 24 @14732 has 1 MA's),
(34, 14813),

Gene: Tangent_17 Start: 13917, Stop: 14030, Start Num: 22

Candidate Starts for Tangent_17:

(1, 13524), (2, 13527), (3, 13533), (6, 13692), (8, 13707), (10, 13776), (14, 13821), (15, 13848), (16,
13857), (Start: 22 @13917 has 23 MA's), (Start: 24 @13926 has 1 MA's), (34, 14007),

Gene: Tangerine_19 Start: 14191, Stop: 14337, Start Num: 18

Candidate Starts for Tangerine_19:

(Start: 18 @14191 has 70 MA's), (Start: 22 @14224 has 23 MA's), (Start: 24 @14233 has 1 MA's),
(34, 14314),

Gene: Tardus_21 Start: 14557, Stop: 14706, Start Num: 18

Candidate Starts for Tardus_21:

(Start: 18 @14557 has 70 MA's), (25, 14608),

Gene: Thing3_20 Start: 15427, Stop: 15573, Start Num: 18

Candidate Starts for Thing3_20:

(Start: 18 @15427 has 70 MA's), (Start: 22 @15460 has 23 MA's), (Start: 24 @15469 has 1 MA's),
(34, 15550),

Gene: Tiamoceli_20 Start: 14350, Stop: 14496, Start Num: 18

Candidate Starts for Tiamoceli_20:

(Start: 18 @14350 has 70 MA's), (27, 14422), (28, 14425),

Gene: TillyBobJoe_18 Start: 11404, Stop: 11547, Start Num: 18
Candidate Starts for TillyBobJoe_18:
(Start: 17 @11401 has 3 MA's), (Start: 18 @11404 has 70 MA's), (23, 11443),

Gene: Togo_18 Start: 11608, Stop: 11751, Start Num: 18
Candidate Starts for Togo_18:
(Start: 17 @11605 has 3 MA's), (Start: 18 @11608 has 70 MA's), (23, 11647),

Gene: Twister6_20 Start: 12046, Stop: 12189, Start Num: 18
Candidate Starts for Twister6_20:
(Start: 17 @12043 has 3 MA's), (Start: 18 @12046 has 70 MA's), (23, 12085),

Gene: Twonlo_17 Start: 12967, Stop: 13113, Start Num: 18
Candidate Starts for Twonlo_17:
(Start: 18 @12967 has 70 MA's), (27, 13039), (28, 13042),

Gene: Tycho_19 Start: 14308, Stop: 14454, Start Num: 18
Candidate Starts for Tycho_19:
(Start: 18 @14308 has 70 MA's), (Start: 22 @14341 has 23 MA's), (Start: 24 @14350 has 1 MA's),
(34, 14431),

Gene: Valary_21 Start: 12496, Stop: 12642, Start Num: 17
Candidate Starts for Valary_21:
(Start: 17 @12496 has 3 MA's), (Start: 18 @12499 has 70 MA's), (23, 12538),

Gene: VanDeWege_21 Start: 12427, Stop: 12570, Start Num: 18
Candidate Starts for VanDeWege_21:
(Start: 17 @12424 has 3 MA's), (Start: 18 @12427 has 70 MA's), (23, 12466),

Gene: Verity_20 Start: 14740, Stop: 14889, Start Num: 18
Candidate Starts for Verity_20:
(Start: 18 @14740 has 70 MA's), (Start: 22 @14776 has 23 MA's), (29, 14824),

Gene: ViaConlectus_21 Start: 15292, Stop: 15441, Start Num: 18
Candidate Starts for ViaConlectus_21:
(Start: 18 @15292 has 70 MA's), (Start: 22 @15328 has 23 MA's), (25, 15343), (29, 15376),

Gene: Vivi2_19 Start: 15088, Stop: 15201, Start Num: 22
Candidate Starts for Vivi2_19:
(1, 14695), (2, 14698), (3, 14704), (6, 14863), (8, 14878), (10, 14947), (14, 14992), (15, 15019), (16,
15028), (Start: 22 @15088 has 23 MA's), (Start: 24 @15097 has 1 MA's), (34, 15178),

Gene: Wizard_18 Start: 11748, Stop: 11891, Start Num: 18
Candidate Starts for Wizard_18:
(Start: 18 @11748 has 70 MA's), (23, 11787),

Gene: YorkOnyx_20 Start: 14619, Stop: 14723, Start Num: 24
Candidate Starts for YorkOnyx_20:
(1, 14217), (3, 14226), (6, 14385), (8, 14400), (10, 14469), (14, 14514), (15, 14541), (16, 14550),
(Start: 22 @14610 has 23 MA's), (Start: 24 @14619 has 1 MA's), (34, 14700),

Gene: YungMoney_20 Start: 13058, Stop: 13201, Start Num: 18

Candidate Starts for YungMoney_20:

(Start: 17 @13055 has 3 MA's), (Start: 18 @13058 has 70 MA's), (23, 13097),

Gene: Zipp_20 Start: 15389, Stop: 15538, Start Num: 18

Candidate Starts for Zipp_20:

(Start: 18 @15389 has 70 MA's), (Start: 22 @15425 has 23 MA's), (29, 15473),

Gene: Zitch_22 Start: 14519, Stop: 14668, Start Num: 18

Candidate Starts for Zitch_22:

(Start: 18 @14519 has 70 MA's), (Start: 22 @14555 has 23 MA's), (25, 14570), (29, 14603), (31, 14618),