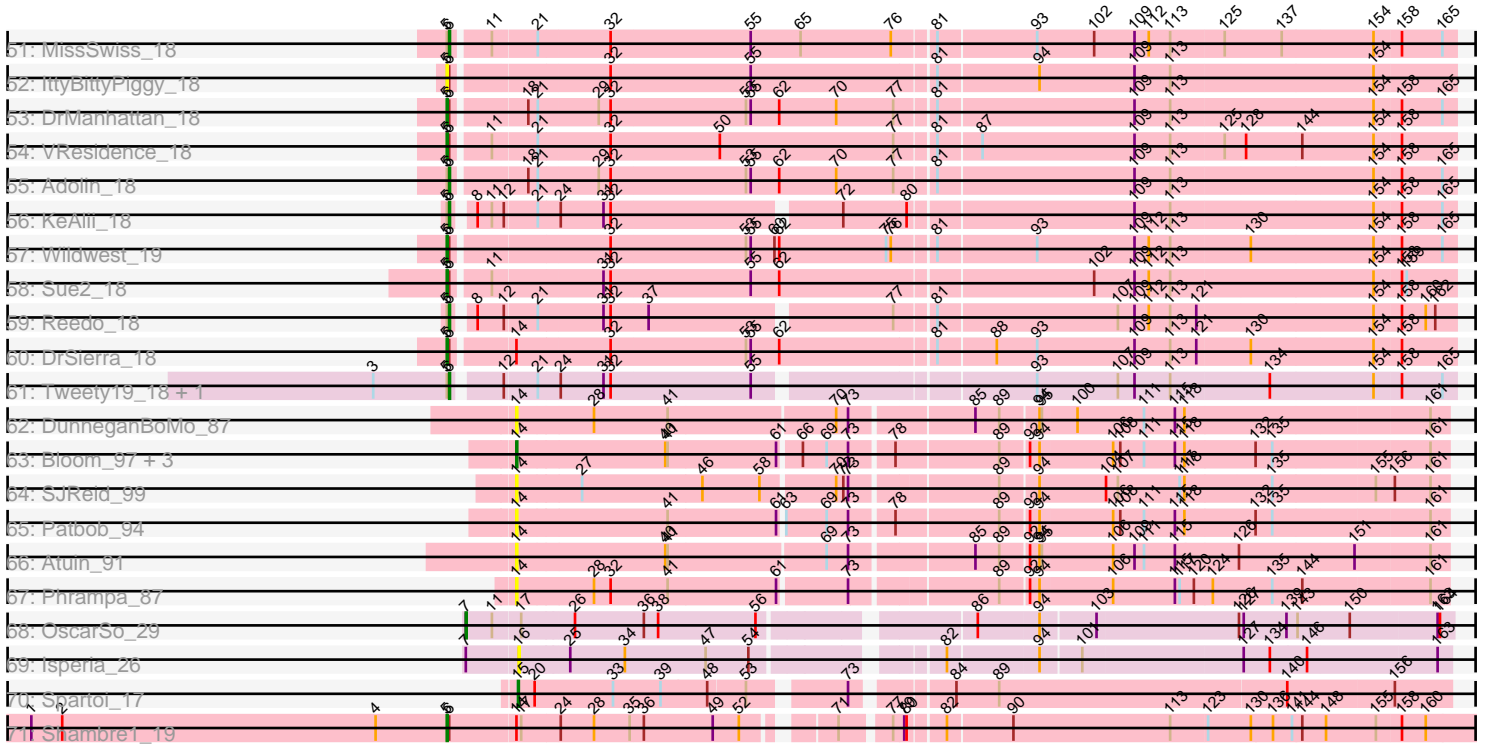


Pham 195494



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 195494 Report

This analysis was run 12/09/24 on database version 580.

Pham number 195494 has 113 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Albanese_20
- Track 2 : GreenHearts_20
- Track 3 : Immaculata_20, Potatoes_20, Cholula_20
- Track 4 : Makoto_16, ChewChew_16, Pterodactyl_16
- Track 5 : Kittykat_16
- Track 6 : EstebanJulior_16, MamaPearl_16
- Track 7 : Glenn_20, RAP15_20, MeganNoll_20, Savage2526_20, Jumboset_20, MrGloopy_20
- Track 8 : BigMack_16
- Track 9 : OMalley_16, Eunoia_16, Riovina_16, Supakev_16
- Track 10 : CristinaYang_16, Lasagna_16, LilStuart_16, Nancia_16, PitaDog_16, Bodacious_16, Lucy_16
- Track 11 : TattModd_20, Wawa_20
- Track 12 : AustinPowers_16
- Track 13 : Greenhouse_20
- Track 14 : KingBob_16, Herb_16, Sergei_16, Temper16_16, Daiboju_16
- Track 15 : Aledel_16, Chridison_16
- Track 16 : Lakshmi_20
- Track 17 : Litotes_20, Wayne_20
- Track 18 : HunterDalle_16, Vulture_16
- Track 19 : CallieOMalley_20, Suppi_20, Canowicakte_20, PartyCup_20
- Track 20 : Scuttle_20
- Track 21 : Fluke_20
- Track 22 : Urla_16
- Track 23 : AppleCider_20
- Track 24 : Nubia_20
- Track 25 : Huckleberry_16, Moki_16
- Track 26 : Kalizoi_20, Dino_20, Zorro_20
- Track 27 : Bennie_16
- Track 28 : HeadNerd_16
- Track 29 : Carpal_20
- Track 30 : Korra_21
- Track 31 : Riverdale_20
- Track 32 : Beethoven_20
- Track 33 : DrRobert_16, Christian_16
- Track 34 : Oxynfrius_20
- Track 35 : OurGirlNessie_16

- Track 36 : DreamTeam_16, Gisselle_16
- Track 37 : Pumancara_16
- Track 38 : Misaeng_20, RcigaStruga_20, Huntingdon_20
- Track 39 : PinkFriday_16
- Track 40 : Rozby_20
- Track 41 : Lennox_16
- Track 42 : Vallejo_20
- Track 43 : BrotherBLo_20
- Track 44 : Maria1952_16
- Track 45 : Preamble_16
- Track 46 : Joann_20
- Track 47 : WonderBoy_16
- Track 48 : Abidatro_18
- Track 49 : Galaxy_18
- Track 50 : ObiToo_18, Crewmate_19
- Track 51 : MissSwiss_18
- Track 52 : IttyBittyPiggy_18
- Track 53 : DrManhattan_18
- Track 54 : VResidence_18
- Track 55 : Adolin_18
- Track 56 : KeAlii_18
- Track 57 : Wildwest_19
- Track 58 : Sue2_18
- Track 59 : Reedo_18
- Track 60 : DrSierra_18
- Track 61 : Tweety19_18, Snek_18
- Track 62 : DunneganBoMo_87
- Track 63 : Bloom_97, Mimi_99, Racecar_94, Talia1610_93
- Track 64 : SJReid_99
- Track 65 : Patbob_94
- Track 66 : Atuin_91
- Track 67 : Phrampa_87
- Track 68 : OscarSo_29
- Track 69 : Isperia_26
- Track 70 : Spartoi_17
- Track 71 : Shambre1_19

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

The start number called the most often in the published annotations is 5, it was called in 82 of the 103 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Albanese_20, AppleCider_20, AustinPowers_16, Beethoven_20, BigMack_16, Bodacious_16, BrotherBLo_20, CallieOMalley_20, Canowicakte_20, Carpal_20, Cholula_20, Christian_16, Crewmate_19, CristinaYang_16, Daiboju_16, Dino_20, DrManhattan_18, DrRobert_16, DrSierra_18, DreamTeam_16, EstebanJulior_16, Eunoia_16, Fluke_20, Gisselle_16, Glenn_20, GreenHearts_20, Greenhouse_20, Herb_16, Huckleberry_16, HunterDalle_16, Huntingdon_20, Immaculata_20, IttyBittyPiggy_18, Joann_20, Jumboset_20, Kalizoi_20, KingBob_16, Kittykat_16,

Korra_21, Lakshmi_20, Lasagna_16, Lennox_16, LilStuart_16, Litotes_20, Lucy_16, MamaPearl_16, MeganNoll_20, Misaeng_20, Moki_16, MrGloopy_20, Nancia_16, OMalley_16, ObiToo_18, OurGirlNessie_16, Oxynfrius_20, PartyCup_20, PinkFriday_16, PitaDog_16, Potatoes_20, Preamble_16, Pumancara_16, RAP15_20, RcigaStruga_20, Riovina_16, Riverdale_20, Rozby_20, Savage2526_20, Scuttle_20, Sergei_16, Shambre1_19, Sue2_18, Supakev_16, Suppi_20, TattModd_20, Temper16_16, Urla_16, VResidence_18, Vallejo_20, Vulture_16, Wawa_20, Wayne_20, Wildwest_19, WonderBoy_16, Zorro_20,

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

- Adolin_18, Aledel_16, Bennie_16, ChewChew_16, Chridison_16, HeadNerd_16, KeAali_18, Makoto_16, Maria1952_16, MissSwiss_18, Nubia_20, Pterodactyl_16, Reedo_18, Snek_18, Tweety19_18,

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

- Abidatro_18, Atuin_91, Bloom_97, DunneganBoMo_87, Galaxy_18, Isperia_26, Mimi_99, OscarSo_29, Patbob_94, Phrampa_87, Racecar_94, SJReid_99, Spartoi_17, Talia1610_93,

Summary by start number:

Start 5:

- Found in 99 of 113 (87.6%) of genes in pham
- Manual Annotations of this start: 82 of 103
- Called 84.8% of time when present
- Phage (with cluster) where this start called: Albanese_20 (AK), AppleCider_20 (AK), AustinPowers_16 (AK), Beethoven_20 (AK), BigMack_16 (AK), Bodacious_16 (AK), BrotherBLo_20 (AK), CallieOMalley_20 (AK), Canowicakte_20 (AK), Carpal_20 (AK), Cholula_20 (AK), Christian_16 (AK), Crewmate_19 (AZ1), CristinaYang_16 (AK), Daiboju_16 (AK), Dino_20 (AK), DrManhattan_18 (AZ1), DrRobert_16 (AK), DrSierra_18 (AZ1), DreamTeam_16 (AK), EstebanJulior_16 (AK), Eunoia_16 (AK), Fluke_20 (AK), Gisselle_16 (AK), Glenn_20 (AK), GreenHearts_20 (AK), Greenhouse_20 (AK), Herb_16 (AK), Huckleberry_16 (AK), HunterDalle_16 (AK), Huntingdon_20 (AK), Immaculata_20 (AK), IttyBittyPiggy_18 (AZ1), Joann_20 (AK), Jumboset_20 (AK), Kalizoi_20 (AK), KingBob_16 (AK), Kittykat_16 (AK), Korra_21 (AK), Lakshmi_20 (AK), Lasagna_16 (AK), Lennox_16 (AK), LilStuart_16 (AK), Litotes_20 (AK), Lucy_16 (AK), MamaPearl_16 (AK), MeganNoll_20 (AK), Misaeng_20 (AK), Moki_16 (AK), MrGloopy_20 (AK), Nancia_16 (AK), OMalley_16 (AK), ObiToo_18 (AZ1), OurGirlNessie_16 (AK), Oxynfrius_20 (AK), PartyCup_20 (AK), PinkFriday_16 (AK), PitaDog_16 (AK), Potatoes_20 (AK), Preamble_16 (AK), Pumancara_16 (AK), RAP15_20 (AK), RcigaStruga_20 (AK), Riovina_16 (AK), Riverdale_20 (AK), Rozby_20 (AK), Savage2526_20 (AK), Scuttle_20 (AK), Sergei_16 (AK), Shambre1_19 (singleton), Sue2_18 (AZ1), Supakev_16 (AK), Suppi_20 (AK), TattModd_20 (AK), Temper16_16 (AK), Urla_16 (AK), VResidence_18 (AZ1), Vallejo_20 (AK), Vulture_16 (AK), Wawa_20 (AK), Wayne_20 (AK), Wildwest_19 (AZ1), WonderBoy_16 (AK), Zorro_20 (AK),

Start 6:

- Found in 99 of 113 (87.6%) of genes in pham
- Manual Annotations of this start: 14 of 103
- Called 14.1% of time when present
- Phage (with cluster) where this start called: Adolin_18 (AZ1), Aledel_16 (AK), Bennie_16 (AK), ChewChew_16 (AK), Chridison_16 (AK), HeadNerd_16 (AK),

KeAlii_18 (AZ1), Makoto_16 (AK), Maria1952_16 (AK), MissSwiss_18 (AZ1), Pterodactyl_16 (AK), Reedo_18 (AZ1), Snek_18 (AZ3), Tweety19_18 (AZ3),

Start 7:

- Found in 2 of 113 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 103
- Called 50.0% of time when present
- Phage (with cluster) where this start called: OscarSo_29 (GJ),

Start 10:

- Found in 27 of 113 (23.9%) of genes in pham
- Manual Annotations of this start: 1 of 103
- Called 3.7% of time when present
- Phage (with cluster) where this start called: Nubia_20 (AK),

Start 13:

- Found in 2 of 113 (1.8%) of genes in pham
- Manual Annotations of this start: 2 of 103
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abidatro_18 (AS1), Galaxy_18 (AS1),

Start 14:

- Found in 40 of 113 (35.4%) of genes in pham
- Manual Annotations of this start: 2 of 103
- Called 22.5% of time when present
- Phage (with cluster) where this start called: Atuin_91 (FC), Bloom_97 (FC), DunneganBoMo_87 (FC), Mimi_99 (FC), Patbob_94 (FC), Phrampa_87 (FC), Racecar_94 (FC), SJReid_99 (FC), Talia1610_93 (FC),

Start 15:

- Found in 1 of 113 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 103
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Spartoi_17 (singleton),

Start 16:

- Found in 1 of 113 (0.9%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Iperia_26 (GJ),

Summary by clusters:

There are 7 clusters represented in this pham: singleton, AK, AS1, FC, AZ1, AZ3, GJ,

Info for manual annotations of cluster AK:

- Start number 5 was manually annotated 74 times for cluster AK.
- Start number 6 was manually annotated 8 times for cluster AK.
- Start number 10 was manually annotated 1 time for cluster AK.

Info for manual annotations of cluster AS1:

- Start number 13 was manually annotated 2 times for cluster AS1.

Info for manual annotations of cluster AZ1:

- Start number 5 was manually annotated 7 times for cluster AZ1.
- Start number 6 was manually annotated 4 times for cluster AZ1.

Info for manual annotations of cluster AZ3:

- Start number 6 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster FC:

- Start number 14 was manually annotated 2 times for cluster FC.

Info for manual annotations of cluster GJ:

- Start number 7 was manually annotated 1 time for cluster GJ.

Gene Information:

Gene: Abidatro_18 Start: 13671, Stop: 14783, Start Num: 13

Candidate Starts for Abidatro_18:

(Start: 13 @13671 has 2 MA's), (19, 13698), (38, 13854), (42, 13869), (45, 13905), (53, 13965), (71, 14082), (74, 14094), (77, 14124), (78, 14127), (99, 14313), (109, 14397), (114, 14442), (116, 14448), (122, 14472), (142, 14586), (146, 14604), (147, 14619), (149, 14643), (151, 14661), (160, 14745),

Gene: Adolin_18 Start: 14366, Stop: 15577, Start Num: 6

Candidate Starts for Adolin_18:

(Start: 5 @14363 has 82 MA's), (Start: 6 @14366 has 14 MA's), (18, 14447), (21, 14459), (29, 14531), (32, 14546), (53, 14714), (55, 14720), (62, 14756), (70, 14828), (77, 14900), (81, 14942), (109, 15185), (113, 15230), (154, 15476), (158, 15509), (165, 15560),

Gene: Albanese_20 Start: 16081, Stop: 17238, Start Num: 5

Candidate Starts for Albanese_20:

(Start: 5 @16081 has 82 MA's), (Start: 6 @16084 has 14 MA's), (8, 16105), (9, 16111), (Start: 10 @16120 has 1 MA's), (35, 16285), (37, 16306), (76, 16561), (93, 16726), (104, 16807), (109, 16843), (113, 16888), (119, 16912), (129, 16981), (137, 17023), (144, 17047), (156, 17161), (160, 17200), (161, 17206), (162, 17212), (167, 17233),

Gene: Aledel_16 Start: 14404, Stop: 15558, Start Num: 6

Candidate Starts for Aledel_16:

(Start: 5 @14401 has 82 MA's), (Start: 6 @14404 has 14 MA's), (9, 14431), (Start: 10 @14440 has 1 MA's), (Start: 14 @14467 has 2 MA's), (25, 14530), (43, 14677), (76, 14881), (102, 15112), (104, 15127), (113, 15208), (135, 15331), (144, 15367), (145, 15370), (153, 15442), (157, 15487), (167, 15553),

Gene: AppleCider_20 Start: 16039, Stop: 17196, Start Num: 5

Candidate Starts for AppleCider_20:

(Start: 5 @16039 has 82 MA's), (Start: 6 @16042 has 14 MA's), (Start: 14 @16105 has 2 MA's), (35, 16243), (59, 16408), (91, 16672), (92, 16675), (93, 16684), (104, 16765), (113, 16846), (117, 16858), (128, 16936), (129, 16939), (135, 16969), (144, 17005), (145, 17008), (161, 17164),

Gene: Atuin_91 Start: 61731, Stop: 62849, Start Num: 14

Candidate Starts for Atuin_91:

(Start: 14 @61731 has 2 MA's), (40, 61914), (41, 61917), (69, 62109), (73, 62136), (85, 62274), (89, 62304), (92, 62337), (94, 62349), (95, 62352), (106, 62439), (109, 62466), (111, 62478), (115, 62517),

(126, 62595), (151, 62736), (161, 62826),

Gene: AustinPowers_16 Start: 14402, Stop: 15559, Start Num: 5

Candidate Starts for AustinPowers_16:

(Start: 5 @14402 has 82 MA's), (Start: 6 @14405 has 14 MA's), (9, 14432), (Start: 10 @14441 has 1 MA's), (Start: 14 @14468 has 2 MA's), (22, 14501), (25, 14531), (43, 14678), (76, 14882), (102, 15113), (104, 15128), (113, 15209), (135, 15332), (144, 15368), (145, 15371), (153, 15443), (157, 15488), (167, 15554),

Gene: Beethoven_20 Start: 15985, Stop: 17142, Start Num: 5

Candidate Starts for Beethoven_20:

(Start: 5 @15985 has 82 MA's), (Start: 6 @15988 has 14 MA's), (8, 16009), (22, 16084), (35, 16189), (51, 16312), (71, 16420), (76, 16465), (91, 16618), (96, 16648), (102, 16696), (104, 16711), (109, 16747), (113, 16792), (137, 16927), (144, 16951), (146, 16957), (160, 17104), (161, 17110), (167, 17137),

Gene: Bennie_16 Start: 14410, Stop: 15564, Start Num: 6

Candidate Starts for Bennie_16:

(Start: 5 @14407 has 82 MA's), (Start: 6 @14410 has 14 MA's), (9, 14440), (Start: 14 @14476 has 2 MA's), (21, 14503), (35, 14614), (37, 14635), (67, 14806), (71, 14845), (75, 14884), (78, 14896), (88, 15004), (97, 15079), (107, 15148), (110, 15178), (113, 15214), (117, 15226), (144, 15373), (153, 15448), (155, 15463), (157, 15493), (160, 15526),

Gene: BigMack_16 Start: 14394, Stop: 15551, Start Num: 5

Candidate Starts for BigMack_16:

(Start: 5 @14394 has 82 MA's), (Start: 6 @14397 has 14 MA's), (9, 14427), (Start: 14 @14463 has 2 MA's), (21, 14490), (35, 14601), (37, 14622), (64, 14775), (67, 14793), (71, 14832), (75, 14871), (78, 14883), (88, 14991), (97, 15066), (104, 15120), (107, 15135), (109, 15156), (110, 15165), (113, 15201), (117, 15213), (144, 15360), (153, 15435), (155, 15450), (157, 15480), (160, 15513), (166, 15543),

Gene: Bloom_97 Start: 62603, Stop: 63721, Start Num: 14

Candidate Starts for Bloom_97:

(Start: 14 @62603 has 2 MA's), (40, 62786), (41, 62789), (61, 62924), (66, 62948), (69, 62978), (73, 63005), (78, 63053), (89, 63176), (92, 63209), (94, 63221), (106, 63311), (108, 63320), (111, 63350), (115, 63389), (118, 63401), (132, 63488), (135, 63509), (161, 63698),

Gene: Bodacious_16 Start: 14407, Stop: 15561, Start Num: 5

Candidate Starts for Bodacious_16:

(Start: 5 @14407 has 82 MA's), (Start: 6 @14410 has 14 MA's), (9, 14437), (21, 14500), (26, 14542), (28, 14566), (35, 14611), (71, 14842), (75, 14881), (78, 14893), (88, 15001), (92, 15043), (97, 15076), (104, 15130), (110, 15175), (113, 15211), (117, 15223), (128, 15301), (144, 15370), (153, 15445), (155, 15460), (157, 15490), (160, 15523), (166, 15553),

Gene: BrotherBLo_20 Start: 15991, Stop: 17148, Start Num: 5

Candidate Starts for BrotherBLo_20:

(Start: 5 @15991 has 82 MA's), (Start: 6 @15994 has 14 MA's), (8, 16015), (22, 16090), (28, 16150), (35, 16195), (37, 16216), (44, 16273), (51, 16318), (71, 16426), (76, 16471), (91, 16624), (96, 16654), (102, 16702), (104, 16717), (109, 16753), (113, 16798), (137, 16933), (144, 16957), (146, 16963), (160, 17110), (161, 17116), (167, 17143),

Gene: CallieOMalley_20 Start: 16039, Stop: 17196, Start Num: 5

Candidate Starts for CallieOMalley_20:

(Start: 5 @16039 has 82 MA's), (Start: 6 @16042 has 14 MA's), (Start: 14 @16105 has 2 MA's), (35, 16243), (59, 16408), (91, 16672), (92, 16675), (93, 16684), (104, 16765), (113, 16846), (117, 16858), (128, 16936), (129, 16939), (135, 16969), (144, 17005), (161, 17164),

Gene: Canowicakte_20 Start: 16074, Stop: 17231, Start Num: 5

Candidate Starts for Canowicakte_20:

(Start: 5 @16074 has 82 MA's), (Start: 6 @16077 has 14 MA's), (Start: 14 @16140 has 2 MA's), (35, 16278), (59, 16443), (91, 16707), (92, 16710), (93, 16719), (104, 16800), (113, 16881), (117, 16893), (128, 16971), (129, 16974), (135, 17004), (144, 17040), (161, 17199),

Gene: Carpal_20 Start: 15992, Stop: 17149, Start Num: 5

Candidate Starts for Carpal_20:

(Start: 5 @15992 has 82 MA's), (Start: 6 @15995 has 14 MA's), (8, 16016), (22, 16091), (28, 16151), (35, 16196), (37, 16217), (47, 16289), (51, 16319), (59, 16361), (71, 16427), (76, 16472), (91, 16625), (96, 16655), (102, 16703), (104, 16718), (109, 16754), (113, 16799), (137, 16934), (144, 16958), (146, 16964), (160, 17111), (161, 17117), (167, 17144),

Gene: ChewChew_16 Start: 14409, Stop: 15560, Start Num: 6

Candidate Starts for ChewChew_16:

(Start: 5 @14406 has 82 MA's), (Start: 6 @14409 has 14 MA's), (9, 14436), (21, 14499), (26, 14541), (28, 14565), (35, 14610), (71, 14841), (75, 14880), (78, 14892), (88, 15000), (92, 15042), (97, 15075), (104, 15129), (110, 15174), (113, 15210), (117, 15222), (128, 15300), (144, 15369), (153, 15444), (155, 15459), (157, 15489), (160, 15522), (166, 15552),

Gene: Cholula_20 Start: 16037, Stop: 17194, Start Num: 5

Candidate Starts for Cholula_20:

(Start: 5 @16037 has 82 MA's), (Start: 6 @16040 has 14 MA's), (8, 16061), (9, 16067), (22, 16136), (35, 16241), (47, 16334), (51, 16364), (71, 16472), (76, 16517), (91, 16670), (96, 16700), (102, 16748), (104, 16763), (109, 16799), (113, 16844), (137, 16979), (144, 17003), (154, 17090), (160, 17156), (161, 17162), (167, 17189),

Gene: Chridison_16 Start: 14405, Stop: 15559, Start Num: 6

Candidate Starts for Chridison_16:

(Start: 5 @14402 has 82 MA's), (Start: 6 @14405 has 14 MA's), (9, 14432), (Start: 10 @14441 has 1 MA's), (Start: 14 @14468 has 2 MA's), (25, 14531), (43, 14678), (76, 14882), (102, 15113), (104, 15128), (113, 15209), (135, 15332), (144, 15368), (145, 15371), (153, 15443), (157, 15488), (167, 15554),

Gene: Christian_16 Start: 14407, Stop: 15561, Start Num: 5

Candidate Starts for Christian_16:

(Start: 5 @14407 has 82 MA's), (Start: 6 @14410 has 14 MA's), (9, 14437), (21, 14500), (26, 14542), (28, 14566), (35, 14611), (71, 14842), (75, 14881), (78, 14893), (88, 15001), (92, 15043), (97, 15076), (104, 15130), (110, 15175), (113, 15211), (117, 15223), (128, 15301), (131, 15310), (144, 15370), (153, 15445), (155, 15460), (157, 15490), (160, 15523), (166, 15553),

Gene: Crewmate_19 Start: 14349, Stop: 15560, Start Num: 5

Candidate Starts for Crewmate_19:

(Start: 5 @14349 has 82 MA's), (Start: 6 @14352 has 14 MA's), (29, 14514), (32, 14529), (35, 14553), (60, 14733), (65, 14766), (91, 15033), (105, 15135), (109, 15168), (113, 15213), (154, 15459), (158, 15492), (159, 15498), (162, 15534), (165, 15543),

Gene: CristinaYang_16 Start: 14407, Stop: 15561, Start Num: 5

Candidate Starts for CristinaYang_16:

(Start: 5 @14407 has 82 MA's), (Start: 6 @14410 has 14 MA's), (9, 14437), (21, 14500), (26, 14542), (28, 14566), (35, 14611), (71, 14842), (75, 14881), (78, 14893), (88, 15001), (92, 15043), (97, 15076), (104, 15130), (110, 15175), (113, 15211), (117, 15223), (128, 15301), (144, 15370), (153, 15445), (155, 15460), (157, 15490), (160, 15523), (166, 15553),

Gene: Daiboju_16 Start: 14410, Stop: 15567, Start Num: 5

Candidate Starts for Daiboju_16:

(Start: 5 @14410 has 82 MA's), (Start: 6 @14413 has 14 MA's), (8, 14434), (9, 14440), (Start: 10 @14449 has 1 MA's), (Start: 14 @14476 has 2 MA's), (35, 14614), (43, 14686), (76, 14890), (93, 15055), (102, 15121), (113, 15217), (133, 15325), (135, 15340), (138, 15355), (144, 15376), (146, 15382), (153, 15451), (157, 15496), (167, 15562),

Gene: Dino_20 Start: 15990, Stop: 17147, Start Num: 5

Candidate Starts for Dino_20:

(Start: 5 @15990 has 82 MA's), (Start: 6 @15993 has 14 MA's), (8, 16014), (22, 16089), (28, 16149), (35, 16194), (37, 16215), (47, 16287), (51, 16317), (59, 16359), (71, 16425), (76, 16470), (91, 16623), (96, 16653), (102, 16701), (104, 16716), (109, 16752), (113, 16797), (137, 16932), (144, 16956), (154, 17043), (160, 17109), (161, 17115), (167, 17142),

Gene: DrManhattan_18 Start: 14353, Stop: 15567, Start Num: 5

Candidate Starts for DrManhattan_18:

(Start: 5 @14353 has 82 MA's), (Start: 6 @14356 has 14 MA's), (18, 14437), (21, 14449), (29, 14521), (32, 14536), (53, 14704), (55, 14710), (62, 14746), (70, 14818), (77, 14890), (81, 14932), (109, 15175), (113, 15220), (154, 15466), (158, 15499), (165, 15550),

Gene: DrRobert_16 Start: 14407, Stop: 15561, Start Num: 5

Candidate Starts for DrRobert_16:

(Start: 5 @14407 has 82 MA's), (Start: 6 @14410 has 14 MA's), (9, 14437), (21, 14500), (26, 14542), (28, 14566), (35, 14611), (71, 14842), (75, 14881), (78, 14893), (88, 15001), (92, 15043), (97, 15076), (104, 15130), (110, 15175), (113, 15211), (117, 15223), (128, 15301), (131, 15310), (144, 15370), (153, 15445), (155, 15460), (157, 15490), (160, 15523), (166, 15553),

Gene: DrSierra_18 Start: 14444, Stop: 15658, Start Num: 5

Candidate Starts for DrSierra_18:

(Start: 5 @14444 has 82 MA's), (Start: 6 @14447 has 14 MA's), (Start: 14 @14513 has 2 MA's), (32, 14627), (53, 14795), (55, 14801), (62, 14837), (81, 15023), (88, 15092), (93, 15143), (109, 15266), (113, 15311), (121, 15344), (130, 15407), (154, 15557), (158, 15590),

Gene: DreamTeam_16 Start: 14447, Stop: 15601, Start Num: 5

Candidate Starts for DreamTeam_16:

(Start: 5 @14447 has 82 MA's), (Start: 6 @14450 has 14 MA's), (8, 14471), (21, 14540), (35, 14651), (37, 14672), (64, 14825), (68, 14858), (71, 14882), (75, 14921), (78, 14933), (97, 15116), (102, 15155), (107, 15185), (110, 15215), (113, 15251), (144, 15410), (155, 15500), (157, 15530), (167, 15596),

Gene: DunneganBoMo_87 Start: 58597, Stop: 59715, Start Num: 14

Candidate Starts for DunneganBoMo_87:

(Start: 14 @58597 has 2 MA's), (28, 58690), (41, 58783), (70, 58987), (73, 59002), (85, 59140), (89, 59170), (94, 59215), (95, 59218), (100, 59260), (111, 59344), (115, 59383), (118, 59395), (161, 59692),

Gene: EstebanJulior_16 Start: 14415, Stop: 15572, Start Num: 5

Candidate Starts for EstebanJulior_16:

(Start: 5 @14415 has 82 MA's), (Start: 6 @14418 has 14 MA's), (9, 14445), (26, 14550), (35, 14619), (59, 14784), (64, 14793), (67, 14811), (68, 14826), (109, 15177), (110, 15186), (113, 15222), (130, 15318), (137, 15357), (144, 15381), (158, 15504), (161, 15540), (167, 15567),

Gene: Eunoia_16 Start: 14401, Stop: 15558, Start Num: 5

Candidate Starts for Eunoia_16:

(Start: 5 @14401 has 82 MA's), (Start: 6 @14404 has 14 MA's), (9, 14431), (Start: 10 @14440 has 1 MA's), (Start: 14 @14467 has 2 MA's), (25, 14530), (43, 14677), (76, 14881), (102, 15112), (104, 15127), (113, 15208), (135, 15331), (144, 15367), (145, 15370), (153, 15442), (157, 15487), (167, 15553),

Gene: Fluke_20 Start: 16033, Stop: 17190, Start Num: 5

Candidate Starts for Fluke_20:

(Start: 5 @16033 has 82 MA's), (Start: 6 @16036 has 14 MA's), (8, 16057), (22, 16132), (35, 16237), (37, 16258), (51, 16360), (71, 16468), (76, 16513), (91, 16666), (96, 16696), (102, 16744), (109, 16795), (113, 16840), (137, 16975), (144, 16999), (154, 17086), (160, 17152), (161, 17158), (167, 17185),

Gene: Galaxy_18 Start: 13677, Stop: 14789, Start Num: 13

Candidate Starts for Galaxy_18:

(Start: 13 @13677 has 2 MA's), (19, 13704), (23, 13734), (30, 13788), (42, 13875), (45, 13911), (53, 13971), (57, 13986), (71, 14088), (74, 14100), (77, 14130), (78, 14133), (80, 14145), (83, 14190), (93, 14286), (99, 14319), (109, 14403), (114, 14448), (116, 14454), (122, 14478), (142, 14592), (146, 14610), (147, 14625), (149, 14649), (151, 14667), (152, 14676),

Gene: Gisselle_16 Start: 14447, Stop: 15601, Start Num: 5

Candidate Starts for Gisselle_16:

(Start: 5 @14447 has 82 MA's), (Start: 6 @14450 has 14 MA's), (8, 14471), (21, 14540), (35, 14651), (37, 14672), (64, 14825), (68, 14858), (71, 14882), (75, 14921), (78, 14933), (97, 15116), (102, 15155), (107, 15185), (110, 15215), (113, 15251), (144, 15410), (155, 15500), (157, 15530), (167, 15596),

Gene: Glenn_20 Start: 16042, Stop: 17199, Start Num: 5

Candidate Starts for Glenn_20:

(Start: 5 @16042 has 82 MA's), (Start: 6 @16045 has 14 MA's), (8, 16066), (22, 16141), (28, 16201), (35, 16246), (37, 16267), (47, 16339), (51, 16369), (71, 16477), (76, 16522), (91, 16675), (96, 16705), (102, 16753), (109, 16804), (113, 16849), (137, 16984), (144, 17008), (154, 17095), (160, 17161), (161, 17167), (167, 17194),

Gene: GreenHearts_20 Start: 16128, Stop: 17285, Start Num: 5

Candidate Starts for GreenHearts_20:

(Start: 5 @16128 has 82 MA's), (Start: 6 @16131 has 14 MA's), (8, 16152), (9, 16158), (Start: 10 @16167 has 1 MA's), (35, 16332), (37, 16353), (76, 16608), (93, 16773), (94, 16776), (104, 16854), (109, 16890), (113, 16935), (119, 16959), (129, 17028), (137, 17070), (144, 17094), (156, 17208), (160, 17247), (161, 17253), (162, 17259), (167, 17280),

Gene: Greenhouse_20 Start: 16052, Stop: 17209, Start Num: 5

Candidate Starts for Greenhouse_20:

(Start: 5 @16052 has 82 MA's), (Start: 6 @16055 has 14 MA's), (8, 16076), (9, 16082), (Start: 10 @16091 has 1 MA's), (35, 16256), (37, 16277), (51, 16379), (76, 16532), (93, 16697), (104, 16778), (109, 16814), (113, 16859), (119, 16883), (129, 16952), (137, 16994), (144, 17018), (156, 17132), (160, 17171), (161, 17177), (162, 17183), (167, 17204),

Gene: HeadNerd_16 Start: 14410, Stop: 15564, Start Num: 6

Candidate Starts for HeadNerd_16:

(Start: 5 @14407 has 82 MA's), (Start: 6 @14410 has 14 MA's), (9, 14440), (Start: 14 @14476 has 2 MA's), (21, 14503), (34, 14608), (35, 14614), (37, 14635), (67, 14806), (71, 14845), (75, 14884), (78, 14896), (88, 15004), (97, 15079), (102, 15118), (107, 15148), (110, 15178), (113, 15214), (117, 15226), (144, 15373), (153, 15448), (155, 15463), (157, 15493), (160, 15526),

Gene: Herb_16 Start: 14410, Stop: 15567, Start Num: 5

Candidate Starts for Herb_16:

(Start: 5 @14410 has 82 MA's), (Start: 6 @14413 has 14 MA's), (8, 14434), (9, 14440), (Start: 10 @14449 has 1 MA's), (Start: 14 @14476 has 2 MA's), (35, 14614), (43, 14686), (76, 14890), (93, 15055), (102, 15121), (113, 15217), (133, 15325), (135, 15340), (138, 15355), (144, 15376), (146, 15382), (153, 15451), (157, 15496), (167, 15562),

Gene: Huckleberry_16 Start: 14407, Stop: 15564, Start Num: 5

Candidate Starts for Huckleberry_16:

(Start: 5 @14407 has 82 MA's), (Start: 6 @14410 has 14 MA's), (9, 14440), (Start: 14 @14476 has 2 MA's), (21, 14503), (34, 14608), (35, 14614), (37, 14635), (67, 14806), (71, 14845), (75, 14884), (78, 14896), (88, 15004), (97, 15079), (102, 15118), (107, 15148), (110, 15178), (113, 15214), (117, 15226), (144, 15373), (153, 15448), (155, 15463), (157, 15493), (160, 15526),

Gene: HunterDalle_16 Start: 14401, Stop: 15558, Start Num: 5

Candidate Starts for HunterDalle_16:

(Start: 5 @14401 has 82 MA's), (Start: 6 @14404 has 14 MA's), (9, 14431), (Start: 10 @14440 has 1 MA's), (Start: 14 @14467 has 2 MA's), (22, 14500), (43, 14677), (76, 14881), (102, 15112), (104, 15127), (113, 15208), (135, 15331), (144, 15367), (145, 15370), (153, 15442), (157, 15487), (167, 15553),

Gene: Huntingdon_20 Start: 16038, Stop: 17195, Start Num: 5

Candidate Starts for Huntingdon_20:

(Start: 5 @16038 has 82 MA's), (Start: 6 @16041 has 14 MA's), (8, 16062), (9, 16068), (Start: 10 @16077 has 1 MA's), (35, 16242), (37, 16263), (76, 16518), (91, 16671), (102, 16749), (104, 16764), (109, 16800), (113, 16845), (121, 16878), (137, 16980), (144, 17004), (156, 17118), (161, 17163),

Gene: Immaculata_20 Start: 16036, Stop: 17193, Start Num: 5

Candidate Starts for Immaculata_20:

(Start: 5 @16036 has 82 MA's), (Start: 6 @16039 has 14 MA's), (8, 16060), (9, 16066), (22, 16135), (35, 16240), (47, 16333), (51, 16363), (71, 16471), (76, 16516), (91, 16669), (96, 16699), (102, 16747), (104, 16762), (109, 16798), (113, 16843), (137, 16978), (144, 17002), (154, 17089), (160, 17155), (161, 17161), (167, 17188),

Gene: Isperia_26 Start: 17304, Stop: 18395, Start Num: 16

Candidate Starts for Isperia_26:

(Start: 7 @17241 has 1 MA's), (16, 17304), (25, 17364), (34, 17433), (47, 17535), (54, 17589), (82, 17787), (94, 17895), (101, 17943), (127, 18141), (134, 18174), (146, 18219), (163, 18378),

Gene: IttyBittyPiggy_18 Start: 14438, Stop: 15652, Start Num: 5

Candidate Starts for IttyBittyPiggy_18:

(Start: 5 @14438 has 82 MA's), (Start: 6 @14441 has 14 MA's), (32, 14621), (55, 14795), (81, 15017), (94, 15140), (109, 15260), (113, 15305), (154, 15551),

Gene: Joann_20 Start: 16032, Stop: 17189, Start Num: 5

Candidate Starts for Joann_20:

(Start: 5 @16032 has 82 MA's), (Start: 6 @16035 has 14 MA's), (8, 16056), (Start: 10 @16071 has 1 MA's), (35, 16236), (37, 16257), (76, 16512), (93, 16677), (104, 16758), (109, 16794), (113, 16839), (119, 16863), (129, 16932), (137, 16974), (144, 16998), (156, 17112), (160, 17151), (161, 17157), (162, 17163), (167, 17184),

Gene: Jumboset_20 Start: 15985, Stop: 17142, Start Num: 5

Candidate Starts for Jumboset_20:

(Start: 5 @15985 has 82 MA's), (Start: 6 @15988 has 14 MA's), (8, 16009), (22, 16084), (28, 16144), (35, 16189), (37, 16210), (47, 16282), (51, 16312), (71, 16420), (76, 16465), (91, 16618), (96, 16648), (102, 16696), (109, 16747), (113, 16792), (137, 16927), (144, 16951), (154, 17038), (160, 17104), (161, 17110), (167, 17137),

Gene: Kalizoi_20 Start: 15984, Stop: 17141, Start Num: 5

Candidate Starts for Kalizoi_20:

(Start: 5 @15984 has 82 MA's), (Start: 6 @15987 has 14 MA's), (8, 16008), (22, 16083), (28, 16143), (35, 16188), (37, 16209), (47, 16281), (51, 16311), (59, 16353), (71, 16419), (76, 16464), (91, 16617), (96, 16647), (102, 16695), (104, 16710), (109, 16746), (113, 16791), (137, 16926), (144, 16950), (154, 17037), (160, 17103), (161, 17109), (167, 17136),

Gene: KeAlii_18 Start: 13937, Stop: 15121, Start Num: 6

Candidate Starts for KeAlii_18:

(Start: 5 @13934 has 82 MA's), (Start: 6 @13937 has 14 MA's), (8, 13955), (11, 13973), (12, 13985), (21, 14024), (24, 14048), (31, 14102), (32, 14111), (72, 14381), (80, 14459), (109, 14729), (113, 14774), (154, 15020), (158, 15053), (165, 15104),

Gene: KingBob_16 Start: 14410, Stop: 15567, Start Num: 5

Candidate Starts for KingBob_16:

(Start: 5 @14410 has 82 MA's), (Start: 6 @14413 has 14 MA's), (8, 14434), (9, 14440), (Start: 10 @14449 has 1 MA's), (Start: 14 @14476 has 2 MA's), (35, 14614), (43, 14686), (76, 14890), (93, 15055), (102, 15121), (113, 15217), (133, 15325), (135, 15340), (138, 15355), (144, 15376), (146, 15382), (153, 15451), (157, 15496), (167, 15562),

Gene: Kittykat_16 Start: 14431, Stop: 15585, Start Num: 5

Candidate Starts for Kittykat_16:

(Start: 5 @14431 has 82 MA's), (Start: 6 @14434 has 14 MA's), (8, 14455), (21, 14524), (34, 14629), (35, 14635), (37, 14656), (51, 14758), (64, 14809), (68, 14842), (71, 14866), (75, 14905), (78, 14917), (97, 15100), (102, 15139), (107, 15169), (110, 15199), (113, 15235), (144, 15394), (157, 15514), (167, 15580),

Gene: Korra_21 Start: 15990, Stop: 17147, Start Num: 5

Candidate Starts for Korra_21:

(Start: 5 @15990 has 82 MA's), (Start: 6 @15993 has 14 MA's), (8, 16014), (22, 16089), (35, 16194), (37, 16215), (47, 16287), (51, 16317), (71, 16425), (76, 16470), (91, 16623), (96, 16653), (102, 16701), (104, 16716), (109, 16752), (113, 16797), (144, 16956), (146, 16962), (154, 17043), (160, 17109), (161, 17115), (167, 17142),

Gene: Lakshmi_20 Start: 16057, Stop: 17214, Start Num: 5

Candidate Starts for Lakshmi_20:

(Start: 5 @16057 has 82 MA's), (Start: 6 @16060 has 14 MA's), (8, 16081), (9, 16087), (Start: 10 @16096 has 1 MA's), (35, 16261), (37, 16282), (76, 16537), (93, 16702), (104, 16783), (109, 16819), (113, 16864), (119, 16888), (129, 16957), (137, 16999), (144, 17023), (155, 17113), (156, 17137), (160, 17176), (161, 17182), (162, 17188), (167, 17209),

Gene: Lasagna_16 Start: 14407, Stop: 15561, Start Num: 5

Candidate Starts for Lasagna_16:

(Start: 5 @14407 has 82 MA's), (Start: 6 @14410 has 14 MA's), (9, 14437), (21, 14500), (26, 14542), (28, 14566), (35, 14611), (71, 14842), (75, 14881), (78, 14893), (88, 15001), (92, 15043), (97, 15076), (104, 15130), (110, 15175), (113, 15211), (117, 15223), (128, 15301), (144, 15370), (153, 15445), (155, 15460), (157, 15490), (160, 15523), (166, 15553),

Gene: Lennox_16 Start: 14395, Stop: 15549, Start Num: 5

Candidate Starts for Lennox_16:

(Start: 5 @14395 has 82 MA's), (Start: 6 @14398 has 14 MA's), (9, 14425), (21, 14488), (26, 14530), (28, 14554), (35, 14599), (71, 14830), (75, 14869), (78, 14881), (88, 14989), (92, 15031), (97, 15064), (102, 15103), (104, 15118), (110, 15163), (113, 15199), (117, 15211), (128, 15289), (144, 15358), (153, 15433), (155, 15448), (157, 15478), (160, 15511), (166, 15541),

Gene: LilStuart_16 Start: 14395, Stop: 15549, Start Num: 5

Candidate Starts for LilStuart_16:

(Start: 5 @14395 has 82 MA's), (Start: 6 @14398 has 14 MA's), (9, 14425), (21, 14488), (26, 14530), (28, 14554), (35, 14599), (71, 14830), (75, 14869), (78, 14881), (88, 14989), (92, 15031), (97, 15064), (104, 15118), (110, 15163), (113, 15199), (117, 15211), (128, 15289), (144, 15358), (153, 15433), (155, 15448), (157, 15478), (160, 15511), (166, 15541),

Gene: Litotes_20 Start: 16024, Stop: 17181, Start Num: 5

Candidate Starts for Litotes_20:

(Start: 5 @16024 has 82 MA's), (Start: 6 @16027 has 14 MA's), (Start: 14 @16090 has 2 MA's), (35, 16228), (59, 16393), (91, 16657), (92, 16660), (93, 16669), (104, 16750), (113, 16831), (117, 16843), (128, 16921), (135, 16954), (144, 16990), (145, 16993), (161, 17149),

Gene: Lucy_16 Start: 14387, Stop: 15541, Start Num: 5

Candidate Starts for Lucy_16:

(Start: 5 @14387 has 82 MA's), (Start: 6 @14390 has 14 MA's), (9, 14417), (21, 14480), (26, 14522), (28, 14546), (35, 14591), (71, 14822), (75, 14861), (78, 14873), (88, 14981), (92, 15023), (97, 15056), (104, 15110), (110, 15155), (113, 15191), (117, 15203), (128, 15281), (144, 15350), (153, 15425), (155, 15440), (157, 15470), (160, 15503), (166, 15533),

Gene: Makoto_16 Start: 14411, Stop: 15562, Start Num: 6

Candidate Starts for Makoto_16:

(Start: 5 @14408 has 82 MA's), (Start: 6 @14411 has 14 MA's), (9, 14438), (21, 14501), (26, 14543), (28, 14567), (35, 14612), (71, 14843), (75, 14882), (78, 14894), (88, 15002), (92, 15044), (97, 15077), (104, 15131), (110, 15176), (113, 15212), (117, 15224), (128, 15302), (144, 15371), (153, 15446), (155, 15461), (157, 15491), (160, 15524), (166, 15554),

Gene: MamaPearl_16 Start: 14415, Stop: 15572, Start Num: 5

Candidate Starts for MamaPearl_16:

(Start: 5 @14415 has 82 MA's), (Start: 6 @14418 has 14 MA's), (9, 14445), (26, 14550), (35, 14619), (59, 14784), (64, 14793), (67, 14811), (68, 14826), (109, 15177), (110, 15186), (113, 15222), (130, 15318), (137, 15357), (144, 15381), (158, 15504), (161, 15540), (167, 15567),

Gene: Maria1952_16 Start: 14413, Stop: 15567, Start Num: 6

Candidate Starts for Maria1952_16:

(Start: 5 @14410 has 82 MA's), (Start: 6 @14413 has 14 MA's), (8, 14434), (9, 14440), (Start: 10 @14449 has 1 MA's), (Start: 14 @14476 has 2 MA's), (35, 14614), (43, 14686), (76, 14890), (93, 15055), (102, 15121), (113, 15217), (133, 15325), (135, 15340), (138, 15355), (144, 15376), (146, 15382), (153, 15451), (157, 15496), (167, 15562),

Gene: MeganNoll_20 Start: 16042, Stop: 17199, Start Num: 5

Candidate Starts for MeganNoll_20:

(Start: 5 @16042 has 82 MA's), (Start: 6 @16045 has 14 MA's), (8, 16066), (22, 16141), (28, 16201), (35, 16246), (37, 16267), (47, 16339), (51, 16369), (71, 16477), (76, 16522), (91, 16675), (96, 16705), (102, 16753), (109, 16804), (113, 16849), (137, 16984), (144, 17008), (154, 17095), (160, 17161), (161, 17167), (167, 17194),

Gene: Mimi_99 Start: 61950, Stop: 63068, Start Num: 14

Candidate Starts for Mimi_99:

(Start: 14 @61950 has 2 MA's), (40, 62133), (41, 62136), (61, 62271), (66, 62295), (69, 62325), (73, 62352), (78, 62400), (89, 62523), (92, 62556), (94, 62568), (106, 62658), (108, 62667), (111, 62697), (115, 62736), (118, 62748), (132, 62835), (135, 62856), (161, 63045),

Gene: Misaeng_20 Start: 16102, Stop: 17259, Start Num: 5

Candidate Starts for Misaeng_20:

(Start: 5 @16102 has 82 MA's), (Start: 6 @16105 has 14 MA's), (8, 16126), (9, 16132), (Start: 10 @16141 has 1 MA's), (35, 16306), (37, 16327), (76, 16582), (91, 16735), (102, 16813), (104, 16828), (109, 16864), (113, 16909), (121, 16942), (137, 17044), (144, 17068), (156, 17182), (161, 17227),

Gene: MissSwiss_18 Start: 14398, Stop: 15609, Start Num: 6

Candidate Starts for MissSwiss_18:

(Start: 5 @14395 has 82 MA's), (Start: 6 @14398 has 14 MA's), (11, 14440), (21, 14491), (32, 14578), (55, 14752), (65, 14815), (76, 14929), (81, 14974), (93, 15094), (102, 15166), (109, 15217), (112, 15235), (113, 15262), (125, 15328), (137, 15397), (154, 15508), (158, 15541), (165, 15592),

Gene: Moki_16 Start: 14407, Stop: 15564, Start Num: 5

Candidate Starts for Moki_16:

(Start: 5 @14407 has 82 MA's), (Start: 6 @14410 has 14 MA's), (9, 14440), (Start: 14 @14476 has 2 MA's), (21, 14503), (34, 14608), (35, 14614), (37, 14635), (67, 14806), (71, 14845), (75, 14884), (78, 14896), (88, 15004), (97, 15079), (102, 15118), (107, 15148), (110, 15178), (113, 15214), (117, 15226), (144, 15373), (153, 15448), (155, 15463), (157, 15493), (160, 15526),

Gene: MrGloopy_20 Start: 15976, Stop: 17133, Start Num: 5

Candidate Starts for MrGloopy_20:

(Start: 5 @15976 has 82 MA's), (Start: 6 @15979 has 14 MA's), (8, 16000), (22, 16075), (28, 16135), (35, 16180), (37, 16201), (47, 16273), (51, 16303), (71, 16411), (76, 16456), (91, 16609), (96, 16639), (102, 16687), (109, 16738), (113, 16783), (137, 16918), (144, 16942), (154, 17029), (160, 17095), (161, 17101), (167, 17128),

Gene: Nancia_16 Start: 14407, Stop: 15561, Start Num: 5

Candidate Starts for Nancia_16:

(Start: 5 @14407 has 82 MA's), (Start: 6 @14410 has 14 MA's), (9, 14437), (21, 14500), (26, 14542), (28, 14566), (35, 14611), (71, 14842), (75, 14881), (78, 14893), (88, 15001), (92, 15043), (97, 15076), (104, 15130), (110, 15175), (113, 15211), (117, 15223), (128, 15301), (144, 15370), (153, 15445), (155, 15460), (157, 15490), (160, 15523), (166, 15553),

Gene: Nubia_20 Start: 16056, Stop: 17174, Start Num: 10

Candidate Starts for Nubia_20:

(Start: 5 @16017 has 82 MA's), (Start: 6 @16020 has 14 MA's), (8, 16041), (9, 16047), (Start: 10 @16056 has 1 MA's), (35, 16221), (37, 16242), (76, 16497), (93, 16662), (104, 16743), (109, 16779), (113, 16824), (119, 16848), (129, 16917), (137, 16959), (144, 16983), (156, 17097), (160, 17136), (161, 17142), (162, 17148), (167, 17169),

Gene: OMalley_16 Start: 14401, Stop: 15558, Start Num: 5

Candidate Starts for OMalley_16:

(Start: 5 @14401 has 82 MA's), (Start: 6 @14404 has 14 MA's), (9, 14431), (Start: 10 @14440 has 1 MA's), (Start: 14 @14467 has 2 MA's), (25, 14530), (43, 14677), (76, 14881), (102, 15112), (104, 15127), (113, 15208), (135, 15331), (144, 15367), (145, 15370), (153, 15442), (157, 15487), (167, 15553),

Gene: ObiToo_18 Start: 14086, Stop: 15297, Start Num: 5

Candidate Starts for ObiToo_18:

(Start: 5 @14086 has 82 MA's), (Start: 6 @14089 has 14 MA's), (29, 14251), (32, 14266), (35, 14290), (60, 14470), (65, 14503), (91, 14770), (105, 14872), (109, 14905), (113, 14950), (154, 15196), (158, 15229), (159, 15235), (162, 15271), (165, 15280),

Gene: OscarSo_29 Start: 19754, Stop: 20926, Start Num: 7

Candidate Starts for OscarSo_29:

(Start: 7 @19754 has 1 MA's), (11, 19787), (17, 19820), (26, 19883), (36, 19970), (38, 19988), (56, 20111), (86, 20345), (94, 20420), (103, 20486), (126, 20663), (127, 20669), (139, 20723), (143, 20735), (150, 20798), (163, 20906), (164, 20909),

Gene: OurGirlNessie_16 Start: 14387, Stop: 15541, Start Num: 5

Candidate Starts for OurGirlNessie_16:

(Start: 5 @14387 has 82 MA's), (Start: 6 @14390 has 14 MA's), (9, 14417), (21, 14480), (26, 14522), (28, 14546), (35, 14591), (71, 14822), (75, 14861), (78, 14873), (88, 14981), (92, 15023), (97, 15056), (104, 15110), (110, 15155), (113, 15191), (117, 15203), (144, 15350), (153, 15425), (155, 15440), (157, 15470), (160, 15503), (166, 15533),

Gene: Oxynfrius_20 Start: 16030, Stop: 17187, Start Num: 5

Candidate Starts for Oxynfrius_20:

(Start: 5 @16030 has 82 MA's), (Start: 6 @16033 has 14 MA's), (8, 16054), (9, 16060), (Start: 10 @16069 has 1 MA's), (22, 16129), (28, 16189), (35, 16234), (37, 16255), (76, 16510), (93, 16675), (104, 16756), (109, 16792), (113, 16837), (119, 16861), (129, 16930), (137, 16972), (144, 16996), (156, 17110), (160, 17149), (161, 17155), (162, 17161), (167, 17182),

Gene: PartyCup_20 Start: 16071, Stop: 17228, Start Num: 5

Candidate Starts for PartyCup_20:

(Start: 5 @16071 has 82 MA's), (Start: 6 @16074 has 14 MA's), (Start: 14 @16137 has 2 MA's), (35, 16275), (59, 16440), (91, 16704), (92, 16707), (93, 16716), (104, 16797), (113, 16878), (117, 16890), (128, 16968), (129, 16971), (135, 17001), (144, 17037), (161, 17196),

Gene: Patbob_94 Start: 62822, Stop: 63940, Start Num: 14

Candidate Starts for Patbob_94:

(Start: 14 @62822 has 2 MA's), (41, 63008), (61, 63143), (63, 63146), (69, 63197), (73, 63224), (78, 63272), (89, 63395), (92, 63428), (94, 63440), (106, 63530), (108, 63539), (111, 63569), (115, 63608), (118, 63620), (132, 63707), (135, 63728), (161, 63917),

Gene: Phrampa_87 Start: 60127, Stop: 61239, Start Num: 14

Candidate Starts for Phrampa_87:

(Start: 14 @60127 has 2 MA's), (28, 60220), (32, 60241), (41, 60313), (61, 60448), (73, 60529), (89, 60694), (92, 60727), (94, 60739), (106, 60829), (115, 60907), (117, 60913), (120, 60931), (124, 60952), (135, 61027), (144, 61063), (161, 61216),

Gene: PinkFriday_16 Start: 14431, Stop: 15588, Start Num: 5

Candidate Starts for PinkFriday_16:

(Start: 5 @14431 has 82 MA's), (Start: 6 @14434 has 14 MA's), (9, 14461), (Start: 10 @14470 has 1 MA's), (Start: 14 @14497 has 2 MA's), (21, 14524), (28, 14590), (37, 14656), (59, 14800), (64, 14809), (76, 14911), (96, 15094), (98, 15106), (105, 15160), (110, 15202), (113, 15238), (133, 15346), (135, 15361), (144, 15397), (145, 15400), (157, 15517), (165, 15571), (167, 15583),

Gene: PitaDog_16 Start: 14398, Stop: 15552, Start Num: 5

Candidate Starts for PitaDog_16:

(Start: 5 @14398 has 82 MA's), (Start: 6 @14401 has 14 MA's), (9, 14428), (21, 14491), (26, 14533), (28, 14557), (35, 14602), (71, 14833), (75, 14872), (78, 14884), (88, 14992), (92, 15034), (97, 15067), (104, 15121), (110, 15166), (113, 15202), (117, 15214), (128, 15292), (144, 15361), (153, 15436), (155, 15451), (157, 15481), (160, 15514), (166, 15544),

Gene: Potatoes_20 Start: 16037, Stop: 17194, Start Num: 5

Candidate Starts for Potatoes_20:

(Start: 5 @16037 has 82 MA's), (Start: 6 @16040 has 14 MA's), (8, 16061), (9, 16067), (22, 16136), (35, 16241), (47, 16334), (51, 16364), (71, 16472), (76, 16517), (91, 16670), (96, 16700), (102, 16748), (104, 16763), (109, 16799), (113, 16844), (137, 16979), (144, 17003), (154, 17090), (160, 17156), (161, 17162), (167, 17189),

Gene: Preamble_16 Start: 14408, Stop: 15562, Start Num: 5

Candidate Starts for Preamble_16:

(Start: 5 @14408 has 82 MA's), (Start: 6 @14411 has 14 MA's), (8, 14432), (21, 14501), (34, 14606), (35, 14612), (37, 14633), (64, 14786), (68, 14819), (71, 14843), (75, 14882), (78, 14894), (97, 15077), (102, 15116), (107, 15146), (110, 15176), (113, 15212), (144, 15371), (155, 15461), (157, 15491), (167, 15557),

Gene: Pterodactyl_16 Start: 14391, Stop: 15542, Start Num: 6

Candidate Starts for Pterodactyl_16:

(Start: 5 @14388 has 82 MA's), (Start: 6 @14391 has 14 MA's), (9, 14418), (21, 14481), (26, 14523), (28, 14547), (35, 14592), (71, 14823), (75, 14862), (78, 14874), (88, 14982), (92, 15024), (97, 15057), (104, 15111), (110, 15156), (113, 15192), (117, 15204), (128, 15282), (144, 15351), (153, 15426), (155, 15441), (157, 15471), (160, 15504), (166, 15534),

Gene: Pumancara_16 Start: 14412, Stop: 15569, Start Num: 5

Candidate Starts for Pumancara_16:

(Start: 5 @14412 has 82 MA's), (Start: 6 @14415 has 14 MA's), (9, 14442), (Start: 10 @14451 has 1 MA's), (Start: 14 @14478 has 2 MA's), (35, 14616), (43, 14688), (76, 14892), (87, 14988), (93, 15057), (102, 15123), (113, 15219), (133, 15327), (135, 15342), (138, 15357), (144, 15378), (146, 15384), (153, 15453), (157, 15498), (160, 15531),

Gene: RAP15_20 Start: 16042, Stop: 17199, Start Num: 5

Candidate Starts for RAP15_20:

(Start: 5 @16042 has 82 MA's), (Start: 6 @16045 has 14 MA's), (8, 16066), (22, 16141), (28, 16201), (35, 16246), (37, 16267), (47, 16339), (51, 16369), (71, 16477), (76, 16522), (91, 16675), (96, 16705), (102, 16753), (109, 16804), (113, 16849), (137, 16984), (144, 17008), (154, 17095), (160, 17161), (161, 17167), (167, 17194),

Gene: Racecar_94 Start: 62603, Stop: 63721, Start Num: 14

Candidate Starts for Racecar_94:

(Start: 14 @62603 has 2 MA's), (40, 62786), (41, 62789), (61, 62924), (66, 62948), (69, 62978), (73, 63005), (78, 63053), (89, 63176), (92, 63209), (94, 63221), (106, 63311), (108, 63320), (111, 63350), (115, 63389), (118, 63401), (132, 63488), (135, 63509), (161, 63698),

Gene: RcigaStruga_20 Start: 16038, Stop: 17195, Start Num: 5

Candidate Starts for RcigaStruga_20:

(Start: 5 @16038 has 82 MA's), (Start: 6 @16041 has 14 MA's), (8, 16062), (9, 16068), (Start: 10 @16077 has 1 MA's), (35, 16242), (37, 16263), (76, 16518), (91, 16671), (102, 16749), (104, 16764), (109, 16800), (113, 16845), (121, 16878), (137, 16980), (144, 17004), (156, 17118), (161, 17163),

Gene: Reedo_18 Start: 13956, Stop: 15140, Start Num: 6

Candidate Starts for Reedo_18:

(Start: 5 @13953 has 82 MA's), (Start: 6 @13956 has 14 MA's), (8, 13974), (12, 14004), (21, 14043), (31, 14121), (32, 14130), (37, 14175), (77, 14463), (81, 14505), (107, 14727), (109, 14748), (112, 14766), (113, 14793), (121, 14826), (154, 15039), (158, 15072), (160, 15102), (162, 15114),

Gene: Riovina_16 Start: 14401, Stop: 15558, Start Num: 5

Candidate Starts for Riovina_16:

(Start: 5 @14401 has 82 MA's), (Start: 6 @14404 has 14 MA's), (9, 14431), (Start: 10 @14440 has 1 MA's), (Start: 14 @14467 has 2 MA's), (25, 14530), (43, 14677), (76, 14881), (102, 15112), (104, 15127), (113, 15208), (135, 15331), (144, 15367), (145, 15370), (153, 15442), (157, 15487), (167, 15553),

Gene: Riverdale_20 Start: 15972, Stop: 17129, Start Num: 5

Candidate Starts for Riverdale_20:

(Start: 5 @15972 has 82 MA's), (Start: 6 @15975 has 14 MA's), (8, 15996), (22, 16071), (37, 16197), (51, 16299), (71, 16407), (76, 16452), (91, 16605), (102, 16683), (109, 16734), (113, 16779), (137, 16914), (144, 16938), (146, 16944), (160, 17091), (161, 17097), (167, 17124),

Gene: Rozby_20 Start: 15973, Stop: 17130, Start Num: 5

Candidate Starts for Rozby_20:

(Start: 5 @15973 has 82 MA's), (Start: 6 @15976 has 14 MA's), (8, 15997), (22, 16072), (28, 16132), (35, 16177), (37, 16198), (51, 16300), (71, 16408), (76, 16453), (91, 16606), (96, 16636), (102, 16684), (104, 16699), (109, 16735), (113, 16780), (137, 16915), (144, 16939), (146, 16945), (160, 17092), (161, 17098), (167, 17125),

Gene: SJReid_99 Start: 62409, Stop: 63521, Start Num: 14

Candidate Starts for SJReid_99:

(Start: 14 @62409 has 2 MA's), (27, 62487), (46, 62637), (58, 62709), (70, 62796), (72, 62805), (73, 62811), (89, 62976), (94, 63021), (104, 63105), (107, 63120), (117, 63198), (118, 63204), (135, 63309), (155, 63432), (156, 63453), (161, 63498),

Gene: Savage2526_20 Start: 16036, Stop: 17193, Start Num: 5

Candidate Starts for Savage2526_20:

(Start: 5 @16036 has 82 MA's), (Start: 6 @16039 has 14 MA's), (8, 16060), (22, 16135), (28, 16195), (35, 16240), (37, 16261), (47, 16333), (51, 16363), (71, 16471), (76, 16516), (91, 16669), (96, 16699), (102, 16747), (109, 16798), (113, 16843), (137, 16978), (144, 17002), (154, 17089), (160, 17155), (161, 17161), (167, 17188),

Gene: Scuttle_20 Start: 16041, Stop: 17198, Start Num: 5

Candidate Starts for Scuttle_20:

(Start: 5 @16041 has 82 MA's), (Start: 6 @16044 has 14 MA's), (8, 16065), (22, 16140), (37, 16266), (51, 16368), (71, 16476), (76, 16521), (91, 16674), (96, 16704), (102, 16752), (104, 16767), (109, 16803), (113, 16848), (137, 16983), (144, 17007), (146, 17013), (160, 17160), (161, 17166), (167, 17193),

Gene: Sergei_16 Start: 14410, Stop: 15567, Start Num: 5

Candidate Starts for Sergei_16:

(Start: 5 @14410 has 82 MA's), (Start: 6 @14413 has 14 MA's), (8, 14434), (9, 14440), (Start: 10 @14449 has 1 MA's), (Start: 14 @14476 has 2 MA's), (35, 14614), (43, 14686), (76, 14890), (93, 15055), (102, 15121), (113, 15217), (133, 15325), (135, 15340), (138, 15355), (144, 15376), (146, 15382), (153, 15451), (157, 15496), (167, 15562),

Gene: Shambre1_19 Start: 15533, Stop: 16816, Start Num: 5

Candidate Starts for Shambre1_19:

(1, 15008), (2, 15047), (4, 15443), (Start: 5 @15533 has 82 MA's), (Start: 6 @15536 has 14 MA's), (Start: 14 @15617 has 2 MA's), (17, 15623), (24, 15668), (28, 15710), (35, 15755), (36, 15770), (49, 15857), (52, 15890), (71, 15977), (77, 16031), (79, 16043), (80, 16046), (82, 16085), (90, 16163), (113, 16361), (123, 16406), (130, 16457), (136, 16484), (141, 16508), (144, 16520), (148, 16550), (155, 16613), (158, 16643), (160, 16673),

Gene: Snek_18 Start: 12989, Stop: 14173, Start Num: 6

Candidate Starts for Snek_18:

(3, 12893), (Start: 5 @12986 has 82 MA's), (Start: 6 @12989 has 14 MA's), (12, 13037), (21, 13076), (24, 13100), (31, 13154), (32, 13163), (55, 13337), (93, 13658), (107, 13760), (109, 13781), (113, 13826), (134, 13946), (154, 14072), (158, 14105), (165, 14156),

Gene: Spartoi_17 Start: 13760, Stop: 14860, Start Num: 15

Candidate Starts for Spartoi_17:

(Start: 15 @13760 has 1 MA's), (20, 13781), (33, 13880), (39, 13940), (48, 13997), (53, 14042), (73, 14147), (84, 14249), (89, 14303), (140, 14660), (156, 14789),

Gene: Sue2_18 Start: 14593, Stop: 15807, Start Num: 5

Candidate Starts for Sue2_18:

(Start: 5 @14593 has 82 MA's), (Start: 6 @14596 has 14 MA's), (11, 14638), (31, 14767), (32, 14776), (55, 14950), (62, 14986), (102, 15364), (109, 15415), (112, 15433), (113, 15460), (154, 15706), (158, 15739), (159, 15745),

Gene: Supakev_16 Start: 14403, Stop: 15560, Start Num: 5

Candidate Starts for Supakev_16:

(Start: 5 @14403 has 82 MA's), (Start: 6 @14406 has 14 MA's), (9, 14433), (Start: 10 @14442 has 1 MA's), (Start: 14 @14469 has 2 MA's), (25, 14532), (43, 14679), (76, 14883), (102, 15114), (104, 15129), (113, 15210), (135, 15333), (144, 15369), (145, 15372), (153, 15444), (157, 15489), (167, 15555),

Gene: Suppi_20 Start: 16074, Stop: 17231, Start Num: 5

Candidate Starts for Suppi_20:

(Start: 5 @16074 has 82 MA's), (Start: 6 @16077 has 14 MA's), (Start: 14 @16140 has 2 MA's), (35, 16278), (59, 16443), (91, 16707), (92, 16710), (93, 16719), (104, 16800), (113, 16881), (117, 16893), (128, 16971), (129, 16974), (135, 17004), (144, 17040), (161, 17199),

Gene: Talia1610_93 Start: 61968, Stop: 63086, Start Num: 14

Candidate Starts for Talia1610_93:

(Start: 14 @61968 has 2 MA's), (40, 62151), (41, 62154), (61, 62289), (66, 62313), (69, 62343), (73, 62370), (78, 62418), (89, 62541), (92, 62574), (94, 62586), (106, 62676), (108, 62685), (111, 62715), (115, 62754), (118, 62766), (132, 62853), (135, 62874), (161, 63063),

Gene: TattModd_20 Start: 16035, Stop: 17192, Start Num: 5

Candidate Starts for TattModd_20:

(Start: 5 @16035 has 82 MA's), (Start: 6 @16038 has 14 MA's), (8, 16059), (22, 16134), (28, 16194), (35, 16239), (37, 16260), (51, 16362), (71, 16470), (76, 16515), (91, 16668), (96, 16698), (102, 16746), (109, 16797), (113, 16842), (137, 16977), (144, 17001), (154, 17088), (160, 17154), (161, 17160), (167, 17187),

Gene: Temper16_16 Start: 14410, Stop: 15567, Start Num: 5

Candidate Starts for Temper16_16:

(Start: 5 @14410 has 82 MA's), (Start: 6 @14413 has 14 MA's), (8, 14434), (9, 14440), (Start: 10 @14449 has 1 MA's), (Start: 14 @14476 has 2 MA's), (35, 14614), (43, 14686), (76, 14890), (93, 15055), (102, 15121), (113, 15217), (133, 15325), (135, 15340), (138, 15355), (144, 15376), (146, 15382), (153, 15451), (157, 15496), (167, 15562),

Gene: Tweety19_18 Start: 12988, Stop: 14172, Start Num: 6

Candidate Starts for Tweety19_18:

(3, 12892), (Start: 5 @12985 has 82 MA's), (Start: 6 @12988 has 14 MA's), (12, 13036), (21, 13075), (24, 13099), (31, 13153), (32, 13162), (55, 13336), (93, 13657), (107, 13759), (109, 13780), (113, 13825), (134, 13945), (154, 14071), (158, 14104), (165, 14155),

Gene: Urla_16 Start: 14417, Stop: 15574, Start Num: 5

Candidate Starts for Urla_16:

(Start: 5 @14417 has 82 MA's), (Start: 6 @14420 has 14 MA's), (9, 14447), (35, 14621), (59, 14786), (64, 14795), (67, 14813), (68, 14828), (102, 15128), (109, 15179), (110, 15188), (113, 15224), (130, 15320), (137, 15359), (144, 15383), (161, 15542), (167, 15569),

Gene: VResidence_18 Start: 14006, Stop: 15220, Start Num: 5

Candidate Starts for VResidence_18:

(Start: 5 @14006 has 82 MA's), (Start: 6 @14009 has 14 MA's), (11, 14051), (21, 14102), (32, 14189), (50, 14324), (77, 14543), (81, 14585), (87, 14636), (109, 14828), (113, 14873), (125, 14939), (128, 14963), (144, 15032), (154, 15119), (158, 15152),

Gene: Vallejo_20 Start: 15974, Stop: 17131, Start Num: 5

Candidate Starts for Vallejo_20:

(Start: 5 @15974 has 82 MA's), (Start: 6 @15977 has 14 MA's), (8, 15998), (22, 16073), (37, 16199), (51, 16301), (71, 16409), (76, 16454), (91, 16607), (96, 16637), (102, 16685), (104, 16700), (109, 16736), (113, 16781), (137, 16916), (144, 16940), (146, 16946), (158, 17063), (160, 17093), (161, 17099), (167, 17126),

Gene: Vulture_16 Start: 14401, Stop: 15558, Start Num: 5

Candidate Starts for Vulture_16:

(Start: 5 @14401 has 82 MA's), (Start: 6 @14404 has 14 MA's), (9, 14431), (Start: 10 @14440 has 1 MA's), (Start: 14 @14467 has 2 MA's), (22, 14500), (43, 14677), (76, 14881), (102, 15112), (104, 15127), (113, 15208), (135, 15331), (144, 15367), (145, 15370), (153, 15442), (157, 15487), (167, 15553),

Gene: Wawa_20 Start: 16011, Stop: 17168, Start Num: 5

Candidate Starts for Wawa_20:

(Start: 5 @16011 has 82 MA's), (Start: 6 @16014 has 14 MA's), (8, 16035), (22, 16110), (28, 16170), (35, 16215), (37, 16236), (51, 16338), (71, 16446), (76, 16491), (91, 16644), (96, 16674), (102, 16722), (109, 16773), (113, 16818), (137, 16953), (144, 16977), (154, 17064), (160, 17130), (161, 17136), (167, 17163),

Gene: Wayne_20 Start: 16120, Stop: 17277, Start Num: 5

Candidate Starts for Wayne_20:

(Start: 5 @16120 has 82 MA's), (Start: 6 @16123 has 14 MA's), (Start: 14 @16186 has 2 MA's), (35, 16324), (59, 16489), (91, 16753), (92, 16756), (93, 16765), (104, 16846), (113, 16927), (117, 16939), (128, 17017), (135, 17050), (144, 17086), (145, 17089), (161, 17245),

Gene: Wildwest_19 Start: 15358, Stop: 16572, Start Num: 5

Candidate Starts for Wildwest_19:

(Start: 5 @15358 has 82 MA's), (Start: 6 @15361 has 14 MA's), (32, 15541), (53, 15709), (55, 15715), (60, 15745), (62, 15751), (75, 15886), (76, 15892), (81, 15937), (93, 16057), (109, 16180), (112, 16198), (113, 16225), (130, 16321), (154, 16471), (158, 16504), (165, 16555),

Gene: WonderBoy_16 Start: 14388, Stop: 15542, Start Num: 5

Candidate Starts for WonderBoy_16:

(Start: 5 @14388 has 82 MA's), (Start: 6 @14391 has 14 MA's), (9, 14418), (21, 14481), (26, 14523), (28, 14547), (34, 14586), (35, 14592), (71, 14823), (75, 14862), (78, 14874), (92, 15024), (97, 15057), (102, 15096), (104, 15111), (110, 15156), (113, 15192), (117, 15204), (128, 15282), (144, 15351), (153, 15426), (155, 15441), (157, 15471), (160, 15504), (166, 15534),

Gene: Zorro_20 Start: 15990, Stop: 17147, Start Num: 5

Candidate Starts for Zorro_20:

(Start: 5 @15990 has 82 MA's), (Start: 6 @15993 has 14 MA's), (8, 16014), (22, 16089), (28, 16149), (35, 16194), (37, 16215), (47, 16287), (51, 16317), (59, 16359), (71, 16425), (76, 16470), (91, 16623), (96, 16653), (102, 16701), (104, 16716), (109, 16752), (113, 16797), (137, 16932), (144, 16956), (154, 17043), (160, 17109), (161, 17115), (167, 17142),