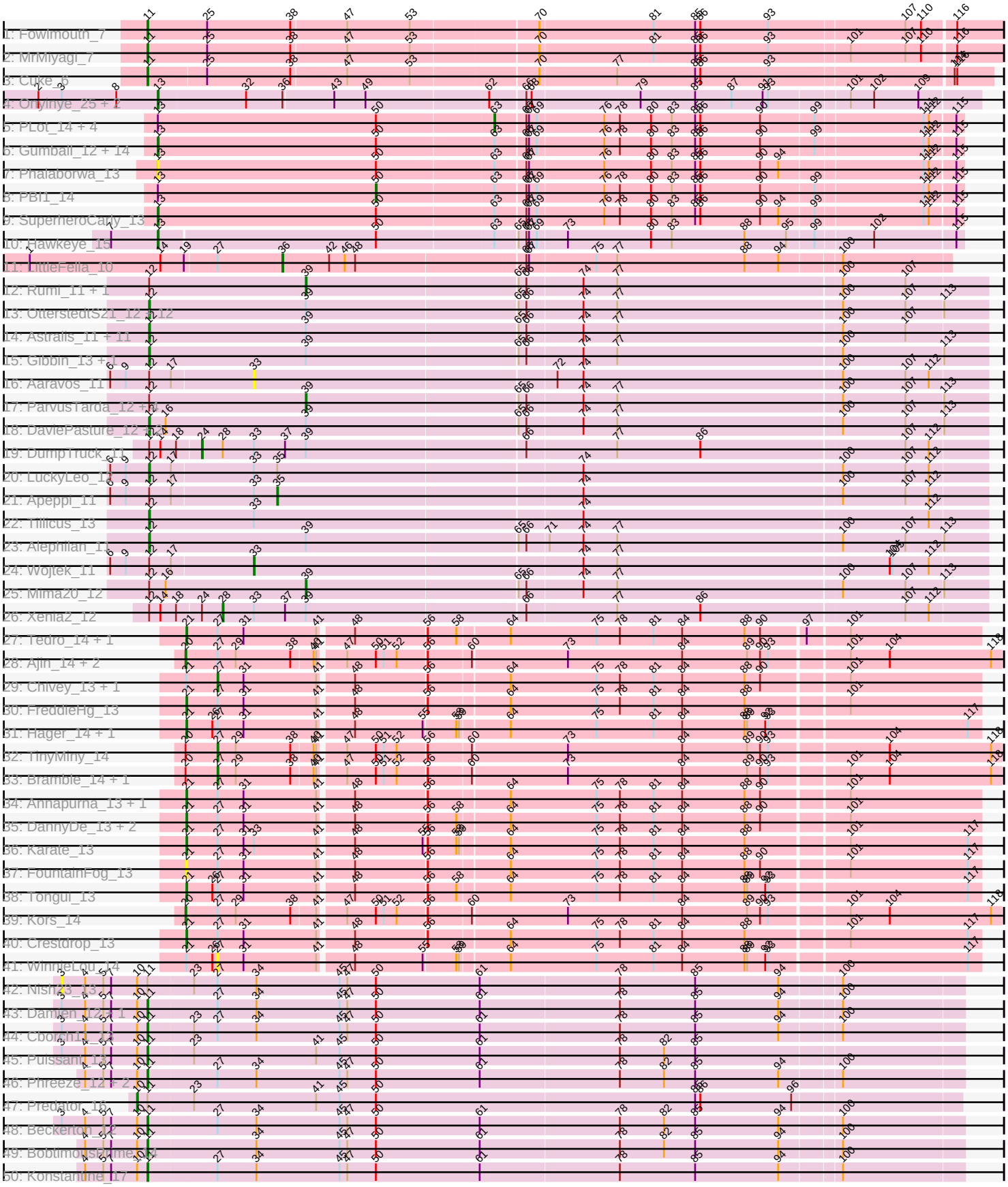
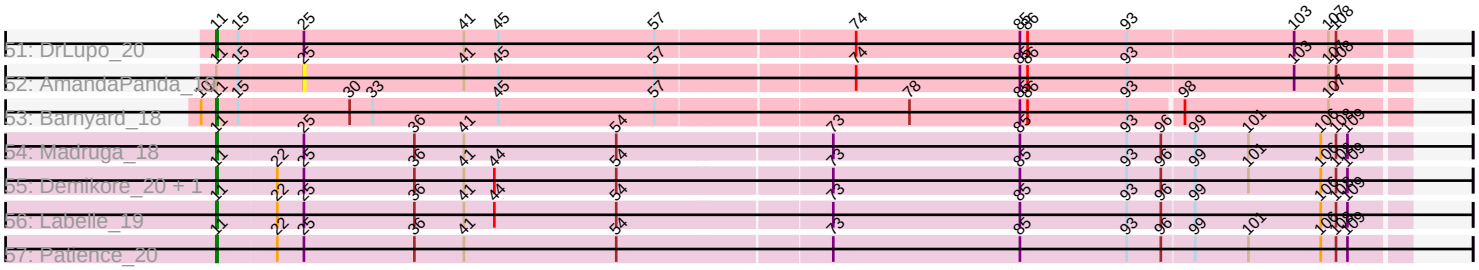
Pham 345525



Pham 345525


51: DrLupo_20
52: AmandaPanda_20
53: Barnyard_18
54: Madruga_18
55: Demikore_20 + 1
56: Labelle_19
57: Patience_20

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 345525 Report

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

Pham number 345525 has 121 members, 13 are drafts.

Phages represented in each track:
- Track 1 : Fowlmouth_7
- Track 2 : MrMiyagi_7
- Track 3 : Cuke_6
- Track 4 : Onyinye_25, Leopard_24, Aikoy_24
- Track 5 : PLot_14, Helpful_14, Chill_14, Adjutor_14, WaldoWhy_14
- Track 6 : Gumball_12, KandZ_13, SirHarley_12, Delton_13, Thoth_13, Nova_13, Erk16_13, BigMama_11, Prager_13, Penelope2018_13, Butterscotch_13, Troll4_13, Visconti_13, Giuseppe_13, Mopey_13
- Track 7 : Phalaborwa_13
- Track 8 : PBI1_14
- Track 9 : SuperheroCarly_13
- Track 10 : Hawkeye_15
- Track 11 : LittleFella_10
- Track 12 : Rumi_11, Jamemuya19_11
- Track 13 : OtterstedtS21_12, Fulcrum_13, Ranch_12, Lila22_13, Sampudon_13, Patos_13, DoobyDoo_11, Sadboi_12, MoiGyank_14, Yikes_13, NorManre_13, GOATification_13, Rukungu_13
- Track 14 : Astralis_11, Charminar_11, Alyssamiracle_11, Stormer_11, Genamy16_11, Lambo_12, Riduram_11, LavAbarElk_11, Avian_11, NovaSharks_11, RazorC_11, Erutan_12
- Track 15 : Gibbin_13, BirthdayBoy_13
- Track 16 : Aaravos_11
- Track 17 : ParvusTarda_12, GretelLyn_12, Jalebi_13, Pywacket_12, Rota_12
- Track 18 : DaviePasture_12, Nettle_12, Zany_12
- Track 19 : DumpTruck_11
- Track 20 : LuckyLeo_12
- Track 21 : Apeppi_11
- Track 22 : Tillicus_13
- Track 23 : Alephilan_11
- Track 24 : Wojtek_11
- Track 25 : Mima20_12
- Track 26 : Xenia2_12
- Track 27 : Tedro_14, Haunter_14
- Track 28 : Ajin_14, RikSengupta_14, Sparcetus_14
- Track 29 : Chivey_13, Hiddenleaf_13
- Track 30 : FreddieHg_13
- Track 31 : Hager_14, Rie18_14

• Track 32 : TinyMiny_14
• Track 33 : Bramble_14, LordBart_14
• Track 34 : Annapurna_13, JingleBells_13
• Track 35 : DannyDe_13, Snakehole_15, SilentWarrior_13
• Track 36 : Karate_13
• Track 37 : FountainFog_13
• Track 38 : Tongui_13
• Track 39 : Kors_14
• Track 40 : Crestdrop_13
• Track 41 : WinnieLou_14
• Track 42 : Nish23_13
• Track 43 : Damien_12, Megatron06_14
• Track 44 : Cborch11_13
• Track 45 : Puissant_13
• Track 46 : Phreeze_12, Thumb_12, Oaker_12
• Track 47 : Predator_16
• Track 48 : Beckerton_12
• Track 49 : BobtimousPrime_14
• Track 50 : Konstantine_17
• Track 51 : DrLupo_20
• Track 52 : AmandaPanda_19
• Track 53 : Barnyard_18
• Track 54 : Madruga_18
• Track 55 : Demikore_20, SuperSonics_19
• Track 56 : Labelle_19
• Track 57 : Patience_20

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

The start number called the most often in the published annotations is 12, it was called in 30 of the 108 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alephilan_11, Alyssamiracle_11, Astralis_11, Avian_11, BirthdayBoy_13, Charminar_11, DaviePasture_12, DoobyDoo_11, Erutan_12, Fulcrum_13, GOATification_13, Genamy16_11, Gibbin_13, Lambo_12, LavAbarElk_11, Lila22_13, LuckyLeo_12, MoiGyank_14, Nettle_12, NorManre_13, NovaSharks_11, OtterstedtS21_12, Patos_13, Ranch_12, RazorC_11, Riduram_11, Rukungu_13, Sadboi_12, Sampudon_13, Stormer_11, Tillicus_13, Yikes_13, Zany_12,

Genes that have the "Most Annotated" start but do not call it:
• Aaravos_11, Apeppi_11, DumpTruck_11, GretelLyn_12, Jalebi_13, Jamemuya19_11, Mima20_12, ParvusTarda_12, Pywacket_12, Rota_12, Rumi_11, Wojtek_11, Xenia2_12,

Genes that do not have the "Most Annotated" start:
• Adjutor_14, Aikoy_24, Ajin_14, AmandaPanda_19, Annapurna_13, Barnyard_18, Beckerton_12, BigMama_11, BobtimousPrime_14, Bramble_14, Butterscotch_13, Cborch11_13, Chill_14, Chivey_13, Crestdrop_13, Cuke_6, Damien_12, DannyDe_13, Delton_13, Demikore_20, DrLupo_20, Erk16_13, FountainFog_13,

Fowlmouth_7, FreddieHg_13, Giuseppe_13, Gumball_12, Hager_14, Haunter_14, Hawkeye_15, Helpful_14, Hiddenleaf_13, JingleBells_13, KandZ_13, Karate_13, Konstantine_17, Kors_14, Labelle_19, Leopard_24, LittleFella_10, LordBart_14, Madruga_18, Megatron06_14, Mopey_13, MrMiyagi_7, Nish23_13, Nova_13, Oaker_12, Onyinye_25, PBI1_14, PLot_14, Patience_20, Penelope2018_13, Phalaborwa_13, Phreeze_12, Prager_13, Predator_16, Puissant_13, Rie18_14, RikSengupta_14, SilentWarrior_13, SirHarley_12, Snakehole_15, Sparcetus_14, SuperSonics_19, SuperheroCarly_13, Tedro_14, Thoth_13, Thumb_12, TinyMiny_14, Tongui_13, Troll4_13, Visconti_13, WaldoWhy_14, WinnieLou_14,

Summary by start number:

Start 3:
• Found in 9 of 121 (7.4%) of genes in pham
• No Manual Annotations of this start.
• Called 11.1% of time when present
• Phage (with cluster) where this start called: Nish23_13 (H1),

Start 10:
• Found in 13 of 121 (10.7%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 7.7% of time when present
• Phage (with cluster) where this start called: Predator_16 (H1),

Start 11:
• Found in 23 of 121 (19.0%) of genes in pham
• Manual Annotations of this start: 19 of 108
• Called 87.0% of time when present
• Phage (with cluster) where this start called: Barnyard_18 (H2), Beckerton_12 (H1), BobtimousPrime_14 (H1), Cborch11_13 (H1), Cuke_6 (AC), Damien_12 (H1), Demikore_20 (U), DrLupo_20 (H2), Fowlmouth_7 (AC), Konstantine_17 (H1), Labelle_19 (U), Madruga_18 (U), Megatron06_14 (H1), MrMiyagi_7 (AC), Oaker_12 (H1), Patience_20 (U), Phreeze_12 (H1), Puissant_13 (H1), SuperSonics_19 (U), Thumb_12 (H1),

Start 12:
• Found in 46 of 121 (38.0%) of genes in pham
• Manual Annotations of this start: 30 of 108
• Called 71.7% of time when present
• Phage (with cluster) where this start called: Alephilan_11 (DV), Alyssamiracle_11 (DV), Astralis_11 (DV), Avian_11 (DV), BirthdayBoy_13 (DV), Charminar_11 (DV), DaviePasture_12 (DV), DoobyDoo_11 (DV), Erutan_12 (DV), Fulcrum_13 (DV), GOATification_13 (DV), Genamy16_11 (DV), Gibbin_13 (DV), Lambo_12 (DV), LavAbarElk_11 (DV), Lila22_13 (DV), LuckyLeo_12 (DV), MoiGyank_14 (DV), Nettle_12 (DV), NorManre_13 (DV), NovaSharks_11 (DV), OtterstedtS21_12 (DV), Patos_13 (DV), Ranch_12 (DV), RazorC_11 (DV), Riduram_11 (DV), Rukungu_13 (DV), Sadboi_12 (DV), Sampudon_13 (DV), Stormer_11 (DV), Tillicus_13 (DV), Yikes_13 (DV), Zany_12 (DV),

Start 13:
• Found in 27 of 121 (22.3%) of genes in pham
• Manual Annotations of this start: 20 of 108
• Called 77.8% of time when present

• Phage (with cluster) where this start called: Aikoy_24 (AE), BigMama_11 (D1), Butterscotch_13 (D1), Delton_13 (D1), Erk16_13 (D1), Giuseppe_13 (D1), Gumball_12 (D1), Hawkeye_15 (D2), KandZ_13 (D1), Leopard_24 (AE), Mopey_13 (D1), Nova_13 (D1), Onyinye_25 (AE), Penelope2018_13 (D1), Phalaborwa_13 (D1), Prager_13 (D1), SirHarley_12 (D1), SuperheroCarly_13 (D1), Thoth_13 (D1), Troll4_13 (D1), Visconti_13 (D1),

Start 20:
• Found in 7 of 121 (5.8%) of genes in pham
• Manual Annotations of this start: 4 of 108
• Called 57.1% of time when present
• Phage (with cluster) where this start called: Ajin_14 (EF), Kors_14 (EF), RikSengupta_14 (EF), Sparcetus_14 (EF),

Start 21:
• Found in 17 of 121 (14.0%) of genes in pham
• Manual Annotations of this start: 12 of 108
• Called 82.4% of time when present
• Phage (with cluster) where this start called: Annapurna_13 (EF), Crestdrop_13 (EF), DannyDe_13 (EF), FountainFog_13 (EF), FreddieHg_13 (EF), Hager_14 (EF), Haunter_14 (EF), JingleBells_13 (EF), Karate_13 (EF), Rie18_14 (EF), SilentWarrior_13 (EF), Snakehole_15 (EF), Tedro_14 (EF), Tongui_13 (EF),

Start 24:
• Found in 2 of 121 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 50.0% of time when present
• Phage (with cluster) where this start called: DumpTruck_11 (DV),

Start 25:
• Found in 10 of 121 (8.3%) of genes in pham
• No Manual Annotations of this start.
• Called 10.0% of time when present
• Phage (with cluster) where this start called: AmandaPanda_19 (H2),

Start 27:
• Found in 34 of 121 (28.1%) of genes in pham
• Manual Annotations of this start: 5 of 108
• Called 17.6% of time when present
• Phage (with cluster) where this start called: Bramble_14 (EF), Chivey_13 (EF), Hiddenleaf_13 (EF), LordBart_14 (EF), TinyMiny_14 (EF), WinnieLou_14 (EF),

Start 28:
• Found in 2 of 121 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Xenia2_12 (DV),

Start 33:
• Found in 9 of 121 (7.4%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 22.2% of time when present
• Phage (with cluster) where this start called: Aaravos_11 (DV), Wojtek_11 (DV),

Start 35:
• Found in 2 of 121 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Apeppi_11 (DV),

Start 36:
• Found in 9 of 121 (7.4%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 11.1% of time when present
• Phage (with cluster) where this start called: LittleFella_10 (DG2),

Start 39:
• Found in 41 of 121 (33.9%) of genes in pham
• Manual Annotations of this start: 6 of 108
• Called 19.5% of time when present
• Phage (with cluster) where this start called: GretelLyn_12 (DV), Jalebi_13 (DV), Jamemuya19_11 (DV), Mima20_12 (DV), ParvusTarda_12 (DV), Pywacket_12 (DV), Rota_12 (DV), Rumi_11 (DV),

Start 50:
• Found in 43 of 121 (35.5%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 2.3% of time when present
• Phage (with cluster) where this start called: PBI1_14 (D1),

Start 63:
• Found in 24 of 121 (19.8%) of genes in pham
• Manual Annotations of this start: 5 of 108
• Called 20.8% of time when present
• Phage (with cluster) where this start called: Adjutor_14 (D1), Chill_14 (D1), Helpful_14 (D1), PLot_14 (D1), WaldoWhy_14 (D1),

Summary by clusters:

There are 10 clusters represented in this pham: AC, H1, AE, H2, EF, DG2, U, DV, D2, D1,

Info for manual annotations of cluster AC:
•Start number 11 was manually annotated 3 times for cluster AC.

Info for manual annotations of cluster AE:
•Start number 13 was manually annotated 3 times for cluster AE.

Info for manual annotations of cluster D1:
•Start number 13 was manually annotated 16 times for cluster D1.
•Start number 50 was manually annotated 1 time for cluster D1.
•Start number 63 was manually annotated 5 times for cluster D1.

Info for manual annotations of cluster D2:
•Start number 13 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster DG2:
•Start number 36 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DV:
•Start number 12 was manually annotated 30 times for cluster DV.
•Start number 24 was manually annotated 1 time for cluster DV.
•Start number 28 was manually annotated 1 time for cluster DV.
•Start number 33 was manually annotated 1 time for cluster DV.
•Start number 35 was manually annotated 1 time for cluster DV.
•Start number 39 was manually annotated 6 times for cluster DV.

Info for manual annotations of cluster EF:
•Start number 20 was manually annotated 4 times for cluster EF.
•Start number 21 was manually annotated 12 times for cluster EF.
•Start number 27 was manually annotated 5 times for cluster EF.

Info for manual annotations of cluster H1:
•Start number 10 was manually annotated 1 time for cluster H1.
•Start number 11 was manually annotated 10 times for cluster H1.

Info for manual annotations of cluster H2:
•Start number 11 was manually annotated 2 times for cluster H2.

Info for manual annotations of cluster U:
•Start number 11 was manually annotated 4 times for cluster U.

Gene Information:

Gene: Aaravos_11 Start: 9216, Stop: 10043, Start Num: 33
Candidate Starts for Aaravos_11:
(6, 9054), (9, 9072), (Start: 12 @9099 has 30 MA's), (17, 9123), (Start: 33 @9216 has 1 MA's), (72, 9555), (74, 9585), (100, 9879), (107, 9951), (112, 9978),

Gene: Adjutor_14 Start: 9115, Stop: 9636, Start Num: 63
Candidate Starts for Adjutor_14:
(Start: 13 @8731 has 20 MA's), (Start: 50 @8983 has 1 MA's), (Start: 63 @9115 has 5 MA's), (66, 9148), (67, 9151), (69, 9160), (76, 9235), (78, 9253), (80, 9289), (83, 9313), (85, 9340), (86, 9346), (90, 9415), (99, 9475), (111, 9595), (112, 9601), (115, 9628),

Gene: Aikoy_24 Start: 14575, Stop: 15495, Start Num: 13
Candidate Starts for Aikoy_24:
(2, 14437), (3, 14464), (8, 14527), (Start: 13 @14575 has 20 MA's), (32, 14674), (Start: 36 @14716 has 1 MA's), (43, 14773), (49, 14809), (62, 14947), (66, 14986), (68, 14992), (79, 15115), (85, 15178), (87, 15220), (91, 15256), (93, 15262), (101, 15349), (102, 15376), (109, 15427),

Gene: Ajin_14 Start: 6294, Stop: 7199, Start Num: 20
Candidate Starts for Ajin_14:
(Start: 20 @6294 has 4 MA's), (Start: 27 @6330 has 5 MA's), (29, 6351), (38, 6414), (40, 6438), (41, 6441), (47, 6468), (Start: 50 @6501 has 1 MA's), (51, 6510), (52, 6525), (56, 6558), (60, 6606), (73, 6711), (84, 6843), (89, 6918), (90, 6933), (93, 6942), (101, 7026), (104, 7071), (118, 7188),

Gene: Alephilan_11 Start: 8969, Stop: 9916, Start Num: 12
Candidate Starts for Alephilan_11:
(Start: 12 @8969 has 30 MA's), (Start: 39 @9149 has 6 MA's), (65, 9386), (66, 9395), (71, 9419), (74, 9458), (77, 9497), (100, 9752), (107, 9824), (113, 9866),

Gene: Alyssamiracle_11 Start: 7442, Stop: 8389, Start Num: 12
Candidate Starts for Alyssamiracle_11:
(Start: 12 @7442 has 30 MA's), (Start: 39 @7622 has 6 MA's), (65, 7859), (66, 7868), (74, 7931), (77, 7970), (100, 8225), (107, 8297),

Gene: AmandaPanda_19 Start: 9905, Stop: 10753, Start Num: 25
Candidate Starts for AmandaPanda_19:
(Start: 11 @9845 has 19 MA's), (15, 9857), (25, 9905), (41, 10031), (45, 10058), (57, 10181), (74, 10328), (85, 10457), (86, 10463), (93, 10541), (103, 10667), (107, 10694), (108, 10700),

Gene: Annapurna_13 Start: 6189, Stop: 7073, Start Num: 21
Candidate Starts for Annapurna_13:
(Start: 21 @6189 has 12 MA's), (Start: 27 @6225 has 5 MA's), (31, 6255), (41, 6339), (48, 6375), (56, 6456), (64, 6543), (75, 6642), (78, 6669), (81, 6708), (84, 6741), (88, 6813), (90, 6831), (101, 6924),

Gene: Apeppi_11 Start: 9296, Stop: 10096, Start Num: 35
Candidate Starts for Apeppi_11:
(6, 9107), (9, 9125), (Start: 12 @9152 has 30 MA's), (17, 9176), (Start: 33 @9269 has 1 MA's), (Start: 35 @9296 has 1 MA's), (74, 9638), (100, 9932), (107, 10004), (112, 10031),

Gene: Astralis_11 Start: 7442, Stop: 8389, Start Num: 12
Candidate Starts for Astralis_11:
(Start: 12 @7442 has 30 MA's), (Start: 39 @7622 has 6 MA's), (65, 7859), (66, 7868), (74, 7931), (77, 7970), (100, 8225), (107, 8297),

Gene: Avian_11 Start: 7442, Stop: 8389, Start Num: 12
Candidate Starts for Avian_11:
(Start: 12 @7442 has 30 MA's), (Start: 39 @7622 has 6 MA's), (65, 7859), (66, 7868), (74, 7931), (77, 7970), (100, 8225), (107, 8297),

Gene: Barnyard_18 Start: 9413, Stop: 10318, Start Num: 11
Candidate Starts for Barnyard_18:
(Start: 10 @9401 has 1 MA's), (Start: 11 @9413 has 19 MA's), (15, 9425), (30, 9509), (Start: 33 @9527 has 1 MA's), (45, 9626), (57, 9749), (78, 9938), (85, 10025), (86, 10031), (93, 10109), (98, 10148), (107, 10259),

Gene: Beckerton_12 Start: 8502, Stop: 9422, Start Num: 11
Candidate Starts for Beckerton_12:
(3, 8403), (4, 8430), (5, 8451), (7, 8460), (Start: 10 @8490 has 1 MA's), (Start: 11 @8502 has 19 MA's), (Start: 27 @8574 has 5 MA's), (34, 8619), (45, 8715), (47, 8724), (Start: 50 @8757 has 1 MA's), (61, 8877), (78, 9036), (82, 9087), (85, 9123), (94, 9219), (100, 9285),

Gene: BigMama_11 Start: 8804, Stop: 9709, Start Num: 13
Candidate Starts for BigMama_11:
(Start: 13 @8804 has 20 MA's), (Start: 50 @9056 has 1 MA's), (Start: 63 @9188 has 5 MA's), (66, 9221), (67, 9224), (69, 9233), (76, 9308), (78, 9326), (80, 9362), (83, 9386), (85, 9413), (86, 9419), (90, 9488), (99, 9548), (111, 9668), (112, 9674), (115, 9701),

Gene: BirthdayBoy_13 Start: 9888, Stop: 10835, Start Num: 12
Candidate Starts for BirthdayBoy_13:
(Start: 12 @9888 has 30 MA's), (Start: 39 @10068 has 6 MA's), (65, 10305), (66, 10314), (74, 10377), (77, 10416), (100, 10671), (113, 10785),

Gene: BobtimousPrime_14 Start: 8422, Stop: 9342, Start Num: 11
Candidate Starts for BobtimousPrime_14:
(4, 8350), (5, 8371), (7, 8380), (Start: 10 @8410 has 1 MA's), (Start: 11 @8422 has 19 MA's), (34, 8539), (45, 8635), (47, 8644), (Start: 50 @8677 has 1 MA's), (61, 8797), (78, 8956), (82, 9007), (85, 9043), (94, 9139), (100, 9205),

Gene: Bramble_14 Start: 6297, Stop: 7166, Start Num: 27
Candidate Starts for Bramble_14:
(Start: 20 @6261 has 4 MA's), (Start: 27 @6297 has 5 MA's), (29, 6318), (38, 6381), (40, 6405), (41, 6408), (47, 6435), (Start: 50 @6468 has 1 MA's), (51, 6477), (52, 6492), (56, 6525), (60, 6573), (73, 6678), (84, 6810), (89, 6885), (90, 6900), (93, 6909), (101, 6993), (104, 7038), (118, 7155),

Gene: Butterscotch_13 Start: 8791, Stop: 9696, Start Num: 13
Candidate Starts for Butterscotch_13:
(Start: 13 @8791 has 20 MA's), (Start: 50 @9043 has 1 MA's), (Start: 63 @9175 has 5 MA's), (66, 9208), (67, 9211), (69, 9220), (76, 9295), (78, 9313), (80, 9349), (83, 9373), (85, 9400), (86, 9406), (90, 9475), (99, 9535), (111, 9655), (112, 9661), (115, 9688),

Gene: Cborch11_13 Start: 7967, Stop: 8887, Start Num: 11
Candidate Starts for Cborch11_13:
(3, 7868), (4, 7895), (5, 7916), (7, 7925), (Start: 10 @7955 has 1 MA's), (Start: 11 @7967 has 19 MA's), (23, 8012), (Start: 27 @8039 has 5 MA's), (34, 8084), (45, 8180), (47, 8189), (Start: 50 @8222 has 1 MA's), (61, 8342), (78, 8501), (85, 8588), (94, 8684), (100, 8750),

Gene: Charminar_11 Start: 7442, Stop: 8389, Start Num: 12
Candidate Starts for Charminar_11:
(Start: 12 @7442 has 30 MA's), (Start: 39 @7622 has 6 MA's), (65, 7859), (66, 7868), (74, 7931), (77, 7970), (100, 8225), (107, 8297),

Gene: Chill_14 Start: 9178, Stop: 9699, Start Num: 63
Candidate Starts for Chill_14:
(Start: 13 @8794 has 20 MA's), (Start: 50 @9046 has 1 MA's), (Start: 63 @9178 has 5 MA's), (66, 9211), (67, 9214), (69, 9223), (76, 9298), (78, 9316), (80, 9352), (83, 9376), (85, 9403), (86, 9409), (90, 9478), (99, 9538), (111, 9658), (112, 9664), (115, 9691),

Gene: Chivey_13 Start: 6218, Stop: 7066, Start Num: 27
Candidate Starts for Chivey_13:
(Start: 21 @6182 has 12 MA's), (Start: 27 @6218 has 5 MA's), (31, 6248), (41, 6332), (48, 6368), (56, 6449), (64, 6536), (75, 6635), (78, 6662), (81, 6701), (84, 6734), (88, 6806), (90, 6824), (101, 6917),

Gene: Crestdrop_13 Start: 6055, Stop: 6939, Start Num: 21
Candidate Starts for Crestdrop_13:
(Start: 21 @6055 has 12 MA's), (Start: 27 @6091 has 5 MA's), (31, 6121), (41, 6205), (48, 6241), (56, 6322), (64, 6409), (75, 6508), (78, 6535), (81, 6574), (84, 6607), (88, 6679), (101, 6790), (117, 6925),

Gene: Cuke_6 Start: 4018, Stop: 4962, Start Num: 11
Candidate Starts for Cuke_6:

(Start: 11 @4018 has 19 MA's), (25, 4081), (38, 4177), (47, 4240), (53, 4312), (70, 4453), (77, 4540), (85, 4630), (86, 4636), (93, 4714), (114, 4918), (116, 4921),

Gene: Damien_12 Start: 7967, Stop: 8887, Start Num: 11
Candidate Starts for Damien_12:
(3, 7868), (4, 7895), (5, 7916), (7, 7925), (Start: 10 @7955 has 1 MA's), (Start: 11 @7967 has 19 MA's), (Start: 27 @8039 has 5 MA's), (34, 8084), (45, 8180), (47, 8189), (Start: 50 @8222 has 1 MA's), (61, 8342), (78, 8501), (85, 8588), (94, 8684), (100, 8750),

Gene: DannyDe_13 Start: 6173, Stop: 7057, Start Num: 21
Candidate Starts for DannyDe_13:
(Start: 21 @6173 has 12 MA's), (Start: 27 @6209 has 5 MA's), (31, 6239), (41, 6323), (48, 6359), (56, 6440), (58, 6473), (64, 6527), (75, 6626), (78, 6653), (81, 6692), (84, 6725), (88, 6797), (90, 6815), (101, 6908),

Gene: DaviePasture_12 Start: 9645, Stop: 10592, Start Num: 12
Candidate Starts for DaviePasture_12:
(Start: 12 @9645 has 30 MA's), (16, 9663), (Start: 39 @9825 has 6 MA's), (65, 10062), (66, 10071), (74, 10134), (77, 10173), (100, 10428), (107, 10500), (113, 10542),

Gene: Delton_13 Start: 8800, Stop: 9705, Start Num: 13
Candidate Starts for Delton_13:
(Start: 13 @8800 has 20 MA's), (Start: 50 @9052 has 1 MA's), (Start: 63 @9184 has 5 MA's), (66, 9217), (67, 9220), (69, 9229), (76, 9304), (78, 9322), (80, 9358), (83, 9382), (85, 9409), (86, 9415), (90, 9484), (99, 9544), (111, 9664), (112, 9670), (115, 9697),

Gene: Demikore_20 Start: 10951, Stop: 11865, Start Num: 11
Candidate Starts for Demikore_20:
(Start: 11 @10951 has 19 MA's), (22, 10990), (25, 11011), (Start: 36 @11098 has 1 MA's), (41, 11137), (44, 11161), (54, 11257), (73, 11419), (85, 11566), (93, 11650), (96, 11677), (99, 11701), (101, 11743), (106, 11800), (108, 11812), (109, 11821),

Gene: DoobyDoo_11 Start: 8822, Stop: 9769, Start Num: 12
Candidate Starts for DoobyDoo_11:
(Start: 12 @8822 has 30 MA's), (Start: 39 @9002 has 6 MA's), (65, 9239), (66, 9248), (74, 9311), (77, 9350), (100, 9605), (107, 9677), (113, 9719),

Gene: DrLupo_20 Start: 9845, Stop: 10753, Start Num: 11
Candidate Starts for DrLupo_20:
(Start: 11 @9845 has 19 MA's), (15, 9857), (25, 9905), (41, 10031), (45, 10058), (57, 10181), (74, 10328), (85, 10457), (86, 10463), (93, 10541), (103, 10667), (107, 10694), (108, 10700),

Gene: DumpTruck_11 Start: 9142, Stop: 10029, Start Num: 24
Candidate Starts for DumpTruck_11:
(Start: 12 @9085 has 30 MA's), (14, 9097), (18, 9115), (Start: 24 @9142 has 1 MA's), (Start: 28 @9166 has 1 MA's), (Start: 33 @9202 has 1 MA's), (37, 9238), (Start: 39 @9262 has 6 MA's), (66, 9508), (77, 9610), (86, 9706), (107, 9937), (112, 9964),

Gene: Erk16_13 Start: 8794, Stop: 9699, Start Num: 13
Candidate Starts for Erk16_13:
(Start: 13 @8794 has 20 MA's), (Start: 50 @9046 has 1 MA's), (Start: 63 @9178 has 5 MA's), (66, 9211), (67, 9214), (69, 9223), (76, 9298), (78, 9316), (80, 9352), (83, 9376), (85, 9403), (86, 9409), (90, 9478), (99, 9538), (111, 9658), (112, 9664), (115, 9691),

Gene: Erutan_12 Start: 9335, Stop: 10282, Start Num: 12
Candidate Starts for Erutan_12:
(Start: 12 @9335 has 30 MA's), (Start: 39 @9515 has 6 MA's), (65, 9752), (66, 9761), (74, 9824), (77, 9863), (100, 10118), (107, 10190),

Gene: FountainFog_13 Start: 6181, Stop: 7065, Start Num: 21
Candidate Starts for FountainFog_13:
(Start: 21 @6181 has 12 MA's), (Start: 27 @6217 has 5 MA's), (31, 6247), (41, 6331), (48, 6367), (56, 6448), (64, 6535), (75, 6634), (78, 6661), (81, 6700), (84, 6733), (88, 6805), (90, 6823), (101, 6916), (117, 7051),

Gene: Fowlmouth_7 Start: 4184, Stop: 5143, Start Num: 11
Candidate Starts for Fowlmouth_7:
(Start: 11 @4184 has 19 MA's), (25, 4250), (38, 4346), (47, 4409), (53, 4481), (70, 4622), (81, 4751), (85, 4799), (86, 4805), (93, 4883), (107, 5036), (110, 5054), (116, 5090),

Gene: FreddieHg_13 Start: 6195, Stop: 7079, Start Num: 21
Candidate Starts for FreddieHg_13:
(Start: 21 @6195 has 12 MA's), (Start: 27 @6231 has 5 MA's), (31, 6261), (41, 6345), (48, 6381), (56, 6462), (64, 6549), (75, 6648), (78, 6675), (81, 6714), (84, 6747), (88, 6819), (101, 6930),

Gene: Fulcrum_13 Start: 9868, Stop: 10815, Start Num: 12
Candidate Starts for Fulcrum_13:
(Start: 12 @9868 has 30 MA's), (Start: 39 @10048 has 6 MA's), (65, 10285), (66, 10294), (74, 10357), (77, 10396), (100, 10651), (107, 10723), (113, 10765),

Gene: GOATification_13 Start: 9868, Stop: 10815, Start Num: 12
Candidate Starts for GOATification_13:
(Start: 12 @9868 has 30 MA's), (Start: 39 @10048 has 6 MA's), (65, 10285), (66, 10294), (74, 10357), (77, 10396), (100, 10651), (107, 10723), (113, 10765),

Gene: Genamy16_11 Start: 7442, Stop: 8389, Start Num: 12
Candidate Starts for Genamy16_11:
(Start: 12 @7442 has 30 MA's), (Start: 39 @7622 has 6 MA's), (65, 7859), (66, 7868), (74, 7931), (77, 7970), (100, 8225), (107, 8297),

Gene: Gibbin_13 Start: 9928, Stop: 10875, Start Num: 12
Candidate Starts for Gibbin_13:
(Start: 12 @9928 has 30 MA's), (Start: 39 @10108 has 6 MA's), (65, 10345), (66, 10354), (74, 10417), (77, 10456), (100, 10711), (113, 10825),

Gene: Giuseppe_13 Start: 8783, Stop: 9688, Start Num: 13
Candidate Starts for Giuseppe_13:
(Start: 13 @8783 has 20 MA's), (Start: 50 @9035 has 1 MA's), (Start: 63 @9167 has 5 MA's), (66, 9200), (67, 9203), (69, 9212), (76, 9287), (78, 9305), (80, 9341), (83, 9365), (85, 9392), (86, 9398), (90, 9467), (99, 9527), (111, 9647), (112, 9653), (115, 9680),

Gene: GretelLyn_12 Start: 10382, Stop: 11149, Start Num: 39
Candidate Starts for GretelLyn_12:
(Start: 12 @10202 has 30 MA's), (Start: 39 @10382 has 6 MA's), (65, 10619), (66, 10628), (74, 10691), (77, 10730), (100, 10985), (107, 11057), (113, 11099),

Gene: Gumball_12 Start: 8738, Stop: 9643, Start Num: 13
Candidate Starts for Gumball_12:
(Start: 13 @8738 has 20 MA's), (Start: 50 @8990 has 1 MA's), (Start: 63 @9122 has 5 MA's), (66, 9155), (67, 9158), (69, 9167), (76, 9242), (78, 9260), (80, 9296), (83, 9320), (85, 9347), (86, 9353), (90, 9422), (99, 9482), (111, 9602), (112, 9608), (115, 9635),

Gene: Hager_14 Start: 6443, Stop: 7327, Start Num: 21
Candidate Starts for Hager_14:
(Start: 21 @6443 has 12 MA's), (26, 6473), (Start: 27 @6479 has 5 MA's), (31, 6509), (41, 6593), (48, 6629), (55, 6707), (58, 6743), (59, 6746), (64, 6797), (75, 6896), (81, 6962), (84, 6995), (88, 7067), (89, 7070), (92, 7091), (93, 7094), (117, 7313),

Gene: Haunter_14 Start: 6398, Stop: 7282, Start Num: 21
Candidate Starts for Haunter_14:
(Start: 21 @6398 has 12 MA's), (Start: 27 @6434 has 5 MA's), (31, 6464), (41, 6548), (48, 6584), (56, 6665), (58, 6698), (64, 6752), (75, 6851), (78, 6878), (81, 6917), (84, 6950), (88, 7022), (90, 7040), (97, 7088), (101, 7133),

Gene: Hawkeye_15 Start: 8736, Stop: 9635, Start Num: 13
Candidate Starts for Hawkeye_15:
(7, 8682), (Start: 13 @8736 has 20 MA's), (Start: 50 @8982 has 1 MA's), (Start: 63 @9114 has 5 MA's), (65, 9138), (66, 9147), (67, 9150), (69, 9159), (73, 9192), (80, 9288), (83, 9312), (88, 9396), (95, 9444), (99, 9474), (102, 9537), (115, 9627),

Gene: Helpful_14 Start: 9175, Stop: 9696, Start Num: 63
Candidate Starts for Helpful_14:
(Start: 13 @8791 has 20 MA's), (Start: 50 @9043 has 1 MA's), (Start: 63 @9175 has 5 MA's), (66, 9208), (67, 9211), (69, 9220), (76, 9295), (78, 9313), (80, 9349), (83, 9373), (85, 9400), (86, 9406), (90, 9475), (99, 9535), (111, 9655), (112, 9661), (115, 9688),

Gene: Hiddenleaf_13 Start: 6218, Stop: 7066, Start Num: 27
Candidate Starts for Hiddenleaf_13:
(Start: 21 @6182 has 12 MA's), (Start: 27 @6218 has 5 MA's), (31, 6248), (41, 6332), (48, 6368), (56, 6449), (64, 6536), (75, 6635), (78, 6662), (81, 6701), (84, 6734), (88, 6806), (90, 6824), (101, 6917),

Gene: Jalebi_13 Start: 10558, Stop: 11325, Start Num: 39
Candidate Starts for Jalebi_13:
(Start: 12 @10378 has 30 MA's), (Start: 39 @10558 has 6 MA's), (65, 10795), (66, 10804), (74, 10867), (77, 10906), (100, 11161), (107, 11233), (113, 11275),

Gene: Jamemuya19_11 Start: 7622, Stop: 8389, Start Num: 39
Candidate Starts for Jamemuya19_11:
(Start: 12 @7442 has 30 MA's), (Start: 39 @7622 has 6 MA's), (65, 7859), (66, 7868), (74, 7931), (77, 7970), (100, 8225), (107, 8297),

Gene: JingleBells_13 Start: 6251, Stop: 7135, Start Num: 21
Candidate Starts for JingleBells_13:
(Start: 21 @6251 has 12 MA's), (Start: 27 @6287 has 5 MA's), (31, 6317), (41, 6401), (48, 6437), (56, 6518), (64, 6605), (75, 6704), (78, 6731), (81, 6770), (84, 6803), (88, 6875), (90, 6893), (101, 6986),

Gene: KandZ_13 Start: 8888, Stop: 9793, Start Num: 13
Candidate Starts for KandZ_13:

(Start: 13 @8888 has 20 MA's), (Start: 50 @9140 has 1 MA's), (Start: 63 @9272 has 5 MA's), (66, 9305), (67, 9308), (69, 9317), (76, 9392), (78, 9410), (80, 9446), (83, 9470), (85, 9497), (86, 9503), (90, 9572), (99, 9632), (111, 9752), (112, 9758), (115, 9785),

Gene: Karate_13 Start: 6403, Stop: 7287, Start Num: 21
Candidate Starts for Karate_13:
(Start: 21 @6403 has 12 MA's), (Start: 27 @6439 has 5 MA's), (31, 6469), (Start: 33 @6481 has 1 MA's), (41, 6553), (48, 6589), (55, 6667), (56, 6670), (58, 6703), (59, 6706), (64, 6757), (75, 6856), (78, 6883), (81, 6922), (84, 6955), (88, 7027), (101, 7138), (117, 7273),

Gene: Konstantine_17 Start: 9166, Stop: 10086, Start Num: 11
Candidate Starts for Konstantine_17:
(4, 9094), (5, 9115), (7, 9124), (Start: 10 @9154 has 1 MA's), (Start: 11 @9166 has 19 MA's), (Start: 27 @9238 has 5 MA's), (34, 9283), (45, 9379), (47, 9388), (Start: 50 @9421 has 1 MA's), (61, 9541), (78, 9700), (85, 9787), (94, 9883), (100, 9949),

Gene: Kors_14 Start: 6327, Stop: 7232, Start Num: 20
Candidate Starts for Kors_14:
(Start: 20 @6327 has 4 MA's), (Start: 27 @6363 has 5 MA's), (29, 6384), (38, 6447), (41, 6474), (47, 6501), (Start: 50 @6534 has 1 MA's), (51, 6543), (52, 6558), (56, 6591), (60, 6639), (73, 6744), (84, 6876), (89, 6951), (90, 6966), (93, 6975), (101, 7059), (104, 7104), (118, 7221),

Gene: Labelle_19 Start: 10953, Stop: 11867, Start Num: 11
Candidate Starts for Labelle_19:
(Start: 11 @10953 has 19 MA's), (22, 10992), (25, 11013), (Start: 36 @11100 has 1 MA's), (41, 11139), (44, 11163), (54, 11259), (73, 11421), (85, 11568), (93, 11652), (96, 11679), (99, 11703), (106, 11802), (108, 11814), (109, 11823),

Gene: Lambo_12 Start: 9872, Stop: 10819, Start Num: 12
Candidate Starts for Lambo_12:
(Start: 12 @9872 has 30 MA's), (Start: 39 @10052 has 6 MA's), (65, 10289), (66, 10298), (74, 10361), (77, 10400), (100, 10655), (107, 10727),

Gene: LavAbarElk_11 Start: 8305, Stop: 9252, Start Num: 12
Candidate Starts for LavAbarElk_11:
(Start: 12 @8305 has 30 MA's), (Start: 39 @8485 has 6 MA's), (65, 8722), (66, 8731), (74, 8794), (77, 8833), (100, 9088), (107, 9160),

Gene: Leopard_24 Start: 14860, Stop: 15780, Start Num: 13
Candidate Starts for Leopard_24:
(2, 14722), (3, 14749), (8, 14812), (Start: 13 @14860 has 20 MA's), (32, 14959), (Start: 36 @15001 has 1 MA's), (43, 15058), (49, 15094), (62, 15232), (66, 15271), (68, 15277), (79, 15400), (85, 15463), (87, 15505), (91, 15541), (93, 15547), (101, 15634), (102, 15661), (109, 15712),

Gene: Lila22_13 Start: 9823, Stop: 10770, Start Num: 12
Candidate Starts for Lila22_13:
(Start: 12 @9823 has 30 MA's), (Start: 39 @10003 has 6 MA's), (65, 10240), (66, 10249), (74, 10312), (77, 10351), (100, 10606), (107, 10678), (113, 10720),

Gene: LittleFella_10 Start: 7738, Stop: 8487, Start Num: 36
Candidate Starts for LittleFella_10:
(1, 7450), (14, 7600), (19, 7627), (Start: 27 @7663 has 5 MA's), (Start: 36 @7738 has 1 MA's), (42, 7792), (46, 7810), (48, 7822), (66, 8011), (67, 8014), (75, 8089), (77, 8113), (88, 8260), (94, 8299),

(100, 8365),

Gene: LordBart_14 Start: 6336, Stop: 7205, Start Num: 27
Candidate Starts for LordBart_14:
(Start: 20 @6300 has 4 MA's), (Start: 27 @6336 has 5 MA's), (29, 6357), (38, 6420), (40, 6444), (41, 6447), (47, 6474), (Start: 50 @6507 has 1 MA's), (51, 6516), (52, 6531), (56, 6564), (60, 6612), (73, 6717), (84, 6849), (89, 6924), (90, 6939), (93, 6948), (101, 7032), (104, 7077), (118, 7194),

Gene: LuckyLeo_12 Start: 9152, Stop: 10096, Start Num: 12
Candidate Starts for LuckyLeo_12:
(6, 9107), (9, 9125), (Start: 12 @9152 has 30 MA's), (17, 9176), (Start: 33 @9269 has 1 MA's), (Start: 35 @9296 has 1 MA's), (74, 9638), (100, 9932), (107, 10004), (112, 10031),

Gene: Madruga_18 Start: 10621, Stop: 11535, Start Num: 11
Candidate Starts for Madruga_18:
(Start: 11 @10621 has 19 MA's), (25, 10681), (Start: 36 @10768 has 1 MA's), (41, 10807), (54, 10927), (73, 11089), (85, 11236), (93, 11320), (96, 11347), (99, 11371), (101, 11413), (106, 11470), (108, 11482), (109, 11491),

Gene: Megatron06_14 Start: 8502, Stop: 9422, Start Num: 11
Candidate Starts for Megatron06_14:
(3, 8403), (4, 8430), (5, 8451), (7, 8460), (Start: 10 @8490 has 1 MA's), (Start: 11 @8502 has 19 MA's), (Start: 27 @8574 has 5 MA's), (34, 8619), (45, 8715), (47, 8724), (Start: 50 @8757 has 1 MA's), (61, 8877), (78, 9036), (85, 9123), (94, 9219), (100, 9285),

Gene: Mima20_12 Start: 9732, Stop: 10499, Start Num: 39
Candidate Starts for Mima20_12:
(Start: 12 @9552 has 30 MA's), (16, 9570), (Start: 39 @9732 has 6 MA's), (65, 9969), (66, 9978), (74, 10041), (77, 10080), (100, 10335), (107, 10407), (113, 10449),

Gene: MoiGyank_14 Start: 10239, Stop: 11186, Start Num: 12
Candidate Starts for MoiGyank_14:
(Start: 12 @10239 has 30 MA's), (Start: 39 @10419 has 6 MA's), (65, 10656), (66, 10665), (74, 10728), (77, 10767), (100, 11022), (107, 11094), (113, 11136),

Gene: Mopey_13 Start: 8791, Stop: 9696, Start Num: 13
Candidate Starts for Mopey_13:
(Start: 13 @8791 has 20 MA's), (Start: 50 @9043 has 1 MA's), (Start: 63 @9175 has 5 MA's), (66, 9208), (67, 9211), (69, 9220), (76, 9295), (78, 9313), (80, 9349), (83, 9373), (85, 9400), (86, 9406), (90, 9475), (99, 9535), (111, 9655), (112, 9661), (115, 9688),

Gene: MrMiyagi_7 Start: 4184, Stop: 5143, Start Num: 11
Candidate Starts for MrMiyagi_7:
(Start: 11 @4184 has 19 MA's), (25, 4250), (38, 4346), (47, 4409), (53, 4481), (70, 4622), (81, 4751), (85, 4799), (86, 4805), (93, 4883), (101, 4973), (107, 5036), (110, 5054), (116, 5090),

Gene: Nettle_12 Start: 10105, Stop: 11052, Start Num: 12
Candidate Starts for Nettle_12:
(Start: 12 @10105 has 30 MA's), (16, 10123), (Start: 39 @10285 has 6 MA's), (65, 10522), (66, 10531), (74, 10594), (77, 10633), (100, 10888), (107, 10960), (113, 11002),

Gene: Nish23_13 Start: 7868, Stop: 8887, Start Num: 3
Candidate Starts for Nish23_13:

(3, 7868), (4, 7895), (5, 7916), (7, 7925), (Start: 10 @7955 has 1 MA's), (Start: 11 @7967 has 19 MA's), (23, 8012), (Start: 27 @8039 has 5 MA's), (34, 8084), (45, 8180), (47, 8189), (Start: 50 @8222 has 1 MA's), (61, 8342), (78, 8501), (85, 8588), (94, 8684), (100, 8750),

Gene: NorManre_13 Start: 9434, Stop: 10381, Start Num: 12
Candidate Starts for NorManre_13:
(Start: 12 @9434 has 30 MA's), (Start: 39 @9614 has 6 MA's), (65, 9851), (66, 9860), (74, 9923), (77, 9962), (100, 10217), (107, 10289), (113, 10331),

Gene: Nova_13 Start: 9215, Stop: 10120, Start Num: 13
Candidate Starts for Nova_13:
(Start: 13 @9215 has 20 MA's), (Start: 50 @9467 has 1 MA's), (Start: 63 @9599 has 5 MA's), (66, 9632), (67, 9635), (69, 9644), (76, 9719), (78, 9737), (80, 9773), (83, 9797), (85, 9824), (86, 9830), (90, 9899), (99, 9959), (111, 10079), (112, 10085), (115, 10112),

Gene: NovaSharks_11 Start: 7442, Stop: 8389, Start Num: 12
Candidate Starts for NovaSharks_11:
(Start: 12 @7442 has 30 MA's), (Start: 39 @7622 has 6 MA's), (65, 7859), (66, 7868), (74, 7931), (77, 7970), (100, 8225), (107, 8297),

Gene: Oaker_12 Start: 8223, Stop: 9143, Start Num: 11
Candidate Starts for Oaker_12:
(4, 8151), (5, 8172), (7, 8181), (Start: 10 @8211 has 1 MA's), (Start: 11 @8223 has 19 MA's), (Start: 27 @8295 has 5 MA's), (34, 8340), (45, 8436), (47, 8445), (Start: 50 @8478 has 1 MA's), (61, 8598), (78, 8757), (82, 8808), (85, 8844), (94, 8940), (100, 9006),

Gene: Onyinye_25 Start: 14741, Stop: 15661, Start Num: 13
Candidate Starts for Onyinye_25:
(2, 14603), (3, 14630), (8, 14693), (Start: 13 @14741 has 20 MA's), (32, 14840), (Start: 36 @14882 has 1 MA's), (43, 14939), (49, 14975), (62, 15113), (66, 15152), (68, 15158), (79, 15281), (85, 15344), (87, 15386), (91, 15422), (93, 15428), (101, 15515), (102, 15542), (109, 15593),

Gene: OtterstedtS21_12 Start: 9524, Stop: 10471, Start Num: 12
Candidate Starts for OtterstedtS21_12:
(Start: 12 @9524 has 30 MA's), (Start: 39 @9704 has 6 MA's), (65, 9941), (66, 9950), (74, 10013), (77, 10052), (100, 10307), (107, 10379), (113, 10421),

Gene: PBI1_14 Start: 8974, Stop: 9627, Start Num: 50
Candidate Starts for PBI1_14:
(Start: 13 @8722 has 20 MA's), (Start: 50 @8974 has 1 MA's), (Start: 63 @9106 has 5 MA's), (66, 9139), (67, 9142), (69, 9151), (76, 9226), (78, 9244), (80, 9280), (83, 9304), (85, 9331), (86, 9337), (90, 9406), (99, 9466), (111, 9586), (112, 9592), (115, 9619),

Gene: PLot_14 Start: 9178, Stop: 9699, Start Num: 63
Candidate Starts for PLot_14:
(Start: 13 @8794 has 20 MA's), (Start: 50 @9046 has 1 MA's), (Start: 63 @9178 has 5 MA's), (66, 9211), (67, 9214), (69, 9223), (76, 9298), (78, 9316), (80, 9352), (83, 9376), (85, 9403), (86, 9409), (90, 9478), (99, 9538), (111, 9658), (112, 9664), (115, 9691),

Gene: ParvusTarda_12 Start: 9186, Stop: 9953, Start Num: 39
Candidate Starts for ParvusTarda_12:
(Start: 12 @9006 has 30 MA's), (Start: 39 @9186 has 6 MA's), (65, 9423), (66, 9432), (74, 9495), (77, 9534), (100, 9789), (107, 9861), (113, 9903),

Gene: Patience_20 Start: 11512, Stop: 12426, Start Num: 11
Candidate Starts for Patience_20:
(Start: 11 @11512 has 19 MA's), (22, 11551), (25, 11572), (Start: 36 @11659 has 1 MA's), (41, 11698), (54, 11818), (73, 11980), (85, 12127), (93, 12211), (96, 12238), (99, 12262), (101, 12304), (106, 12361), (108, 12373), (109, 12382),

Gene: Patos_13 Start: 9434, Stop: 10381, Start Num: 12
Candidate Starts for Patos_13:
(Start: 12 @9434 has 30 MA's), (Start: 39 @9614 has 6 MA's), (65, 9851), (66, 9860), (74, 9923), (77, 9962), (100, 10217), (107, 10289), (113, 10331),

Gene: Penelope2018_13 Start: 8791, Stop: 9696, Start Num: 13
Candidate Starts for Penelope2018_13:
(Start: 13 @8791 has 20 MA's), (Start: 50 @9043 has 1 MA's), (Start: 63 @9175 has 5 MA's), (66, 9208), (67, 9211), (69, 9220), (76, 9295), (78, 9313), (80, 9349), (83, 9373), (85, 9400), (86, 9406), (90, 9475), (99, 9535), (111, 9655), (112, 9661), (115, 9688),

Gene: Phalaborwa_13 Start: 8833, Stop: 9738, Start Num: 13
Candidate Starts for Phalaborwa_13:
(Start: 13 @8833 has 20 MA's), (Start: 50 @9085 has 1 MA's), (Start: 63 @9217 has 5 MA's), (66, 9250), (67, 9253), (76, 9337), (80, 9391), (83, 9415), (85, 9442), (86, 9448), (90, 9517), (94, 9538), (111, 9697), (112, 9703), (115, 9730),

Gene: Phreeze_12 Start: 7967, Stop: 8887, Start Num: 11
Candidate Starts for Phreeze_12:
(4, 7895), (5, 7916), (7, 7925), (Start: 10 @7955 has 1 MA's), (Start: 11 @7967 has 19 MA's), (Start: 27 @8039 has 5 MA's), (34, 8084), (45, 8180), (47, 8189), (Start: 50 @8222 has 1 MA's), (61, 8342), (78, 8501), (82, 8552), (85, 8588), (94, 8684), (100, 8750),

Gene: Prager_13 Start: 8800, Stop: 9705, Start Num: 13
Candidate Starts for Prager_13:
(Start: 13 @8800 has 20 MA's), (Start: 50 @9052 has 1 MA's), (Start: 63 @9184 has 5 MA's), (66, 9217), (67, 9220), (69, 9229), (76, 9304), (78, 9322), (80, 9358), (83, 9382), (85, 9409), (86, 9415), (90, 9484), (99, 9544), (111, 9664), (112, 9670), (115, 9697),

Gene: Predator_16 Start: 9457, Stop: 10386, Start Num: 10
Candidate Starts for Predator_16:
(Start: 10 @9457 has 1 MA's), (Start: 11 @9469 has 19 MA's), (23, 9514), (41, 9655), (45, 9682), (Start: 50 @9724 has 1 MA's), (85, 10090), (86, 10096), (96, 10201),

Gene: Puissant_13 Start: 8385, Stop: 9305, Start Num: 11
Candidate Starts for Puissant_13:
(3, 8286), (4, 8313), (5, 8334), (7, 8343), (Start: 10 @8373 has 1 MA's), (Start: 11 @8385 has 19 MA's), (23, 8430), (41, 8571), (45, 8598), (Start: 50 @8640 has 1 MA's), (61, 8760), (78, 8919), (82, 8970), (85, 9006),

Gene: Pywacket_12 Start: 10543, Stop: 11310, Start Num: 39
Candidate Starts for Pywacket_12:
(Start: 12 @10363 has 30 MA's), (Start: 39 @10543 has 6 MA's), (65, 10780), (66, 10789), (74, 10852), (77, 10891), (100, 11146), (107, 11218), (113, 11260),

Gene: Ranch_12 Start: 8375, Stop: 9322, Start Num: 12

Candidate Starts for Ranch_12:
(Start: 12 @8375 has 30 MA's), (Start: 39 @8555 has 6 MA's), (65, 8792), (66, 8801), (74, 8864), (77, 8903), (100, 9158), (107, 9230), (113, 9272),

Gene: RazorC_11 Start: 7442, Stop: 8389, Start Num: 12
Candidate Starts for RazorC_11:
(Start: 12 @7442 has 30 MA's), (Start: 39 @7622 has 6 MA's), (65, 7859), (66, 7868), (74, 7931), (77, 7970), (100, 8225), (107, 8297),

Gene: Riduram_11 Start: 7412, Stop: 8359, Start Num: 12
Candidate Starts for Riduram_11:
(Start: 12 @7412 has 30 MA's), (Start: 39 @7592 has 6 MA's), (65, 7829), (66, 7838), (74, 7901), (77, 7940), (100, 8195), (107, 8267),

Gene: Rie18_14 Start: 6338, Stop: 7222, Start Num: 21
Candidate Starts for Rie18_14:
(Start: 21 @6338 has 12 MA's), (26, 6368), (Start: 27 @6374 has 5 MA's), (31, 6404), (41, 6488), (48, 6524), (55, 6602), (58, 6638), (59, 6641), (64, 6692), (75, 6791), (81, 6857), (84, 6890), (88, 6962), (89, 6965), (92, 6986), (93, 6989), (117, 7208),

Gene: RikSengupta_14 Start: 6397, Stop: 7302, Start Num: 20
Candidate Starts for RikSengupta_14:
(Start: 20 @6397 has 4 MA's), (Start: 27 @6433 has 5 MA's), (29, 6454), (38, 6517), (40, 6541), (41, 6544), (47, 6571), (Start: 50 @6604 has 1 MA's), (51, 6613), (52, 6628), (56, 6661), (60, 6709), (73, 6814), (84, 6946), (89, 7021), (90, 7036), (93, 7045), (101, 7129), (104, 7174), (118, 7291),

Gene: Rota_12 Start: 9513, Stop: 10280, Start Num: 39
Candidate Starts for Rota_12:
(Start: 12 @9333 has 30 MA's), (Start: 39 @9513 has 6 MA's), (65, 9750), (66, 9759), (74, 9822), (77, 9861), (100, 10116), (107, 10188), (113, 10230),

Gene: Rukungu_13 Start: 10071, Stop: 11018, Start Num: 12
Candidate Starts for Rukungu_13:
(Start: 12 @10071 has 30 MA's), (Start: 39 @10251 has 6 MA's), (65, 10488), (66, 10497), (74, 10560), (77, 10599), (100, 10854), (107, 10926), (113, 10968),

Gene: Rumi_11 Start: 7622, Stop: 8389, Start Num: 39
Candidate Starts for Rumi_11:
(Start: 12 @7442 has 30 MA's), (Start: 39 @7622 has 6 MA's), (65, 7859), (66, 7868), (74, 7931), (77, 7970), (100, 8225), (107, 8297),

Gene: Sadboi_12 Start: 10202, Stop: 11149, Start Num: 12
Candidate Starts for Sadboi_12:
(Start: 12 @10202 has 30 MA's), (Start: 39 @10382 has 6 MA's), (65, 10619), (66, 10628), (74, 10691), (77, 10730), (100, 10985), (107, 11057), (113, 11099),

Gene: Sampudon_13 Start: 10378, Stop: 11325, Start Num: 12
Candidate Starts for Sampudon_13:
(Start: 12 @10378 has 30 MA's), (Start: 39 @10558 has 6 MA's), (65, 10795), (66, 10804), (74, 10867), (77, 10906), (100, 11161), (107, 11233), (113, 11275),

Gene: SilentWarrior_13 Start: 6189, Stop: 7073, Start Num: 21
Candidate Starts for SilentWarrior_13:

(Start: 21 @6189 has 12 MA's), (Start: 27 @6225 has 5 MA's), (31, 6255), (41, 6339), (48, 6375), (56, 6456), (58, 6489), (64, 6543), (75, 6642), (78, 6669), (81, 6708), (84, 6741), (88, 6813), (90, 6831), (101, 6924),

Gene: SirHarley_12 Start: 8720, Stop: 9625, Start Num: 13
Candidate Starts for SirHarley_12:
(Start: 13 @8720 has 20 MA's), (Start: 50 @8972 has 1 MA's), (Start: 63 @9104 has 5 MA's), (66, 9137), (67, 9140), (69, 9149), (76, 9224), (78, 9242), (80, 9278), (83, 9302), (85, 9329), (86, 9335), (90, 9404), (99, 9464), (111, 9584), (112, 9590), (115, 9617),

Gene: Snakehole_15 Start: 6277, Stop: 7161, Start Num: 21
Candidate Starts for Snakehole_15:
(Start: 21 @6277 has 12 MA's), (Start: 27 @6313 has 5 MA's), (31, 6343), (41, 6427), (48, 6463), (56, 6544), (58, 6577), (64, 6631), (75, 6730), (78, 6757), (81, 6796), (84, 6829), (88, 6901), (90, 6919), (101, 7012),

Gene: Sparcetus_14 Start: 6276, Stop: 7181, Start Num: 20
Candidate Starts for Sparcetus_14:
(Start: 20 @6276 has 4 MA's), (Start: 27 @6312 has 5 MA's), (29, 6333), (38, 6396), (40, 6420), (41, 6423), (47, 6450), (Start: 50 @6483 has 1 MA's), (51, 6492), (52, 6507), (56, 6540), (60, 6588), (73, 6693), (84, 6825), (89, 6900), (90, 6915), (93, 6924), (101, 7008), (104, 7053), (118, 7170),

Gene: Stormer_11 Start: 7442, Stop: 8389, Start Num: 12
Candidate Starts for Stormer_11:
(Start: 12 @7442 has 30 MA's), (Start: 39 @7622 has 6 MA's), (65, 7859), (66, 7868), (74, 7931), (77, 7970), (100, 8225), (107, 8297),

Gene: SuperSonics_19 Start: 10679, Stop: 11593, Start Num: 11
Candidate Starts for SuperSonics_19:
(Start: 11 @10679 has 19 MA's), (22, 10718), (25, 10739), (Start: 36 @10826 has 1 MA's), (41, 10865), (44, 10889), (54, 10985), (73, 11147), (85, 11294), (93, 11378), (96, 11405), (99, 11429), (101, 11471), (106, 11528), (108, 11540), (109, 11549),

Gene: SuperheroCarly_13 Start: 8653, Stop: 9558, Start Num: 13
Candidate Starts for SuperheroCarly_13:
(Start: 13 @8653 has 20 MA's), (Start: 50 @8905 has 1 MA's), (Start: 63 @9037 has 5 MA's), (66, 9070), (67, 9073), (69, 9082), (76, 9157), (78, 9175), (80, 9211), (83, 9235), (85, 9262), (86, 9268), (90, 9337), (94, 9358), (99, 9397), (111, 9517), (112, 9523), (115, 9550),

Gene: Tedro_14 Start: 6454, Stop: 7338, Start Num: 21
Candidate Starts for Tedro_14:
(Start: 21 @6454 has 12 MA's), (Start: 27 @6490 has 5 MA's), (31, 6520), (41, 6604), (48, 6640), (56, 6721), (58, 6754), (64, 6808), (75, 6907), (78, 6934), (81, 6973), (84, 7006), (88, 7078), (90, 7096), (97, 7144), (101, 7189),

Gene: Thoth_13 Start: 8788, Stop: 9693, Start Num: 13
Candidate Starts for Thoth_13:
(Start: 13 @8788 has 20 MA's), (Start: 50 @9040 has 1 MA's), (Start: 63 @9172 has 5 MA's), (66, 9205), (67, 9208), (69, 9217), (76, 9292), (78, 9310), (80, 9346), (83, 9370), (85, 9397), (86, 9403), (90, 9472), (99, 9532), (111, 9652), (112, 9658), (115, 9685),

Gene: Thumb_12 Start: 7968, Stop: 8888, Start Num: 11
Candidate Starts for Thumb_12:

(4, 7896), (5, 7917), (7, 7926), (Start: 10 @7956 has 1 MA's), (Start: 11 @7968 has 19 MA's), (Start: 27 @8040 has 5 MA's), (34, 8085), (45, 8181), (47, 8190), (Start: 50 @8223 has 1 MA's), (61, 8343), (78, 8502), (82, 8553), (85, 8589), (94, 8685), (100, 8751),

Gene: Tillicus_13 Start: 8741, Stop: 9688, Start Num: 12
Candidate Starts for Tillicus_13:
(Start: 12 @8741 has 30 MA's), (Start: 33 @8861 has 1 MA's), (74, 9230), (112, 9623),

Gene: TinyMiny_14 Start: 6310, Stop: 7179, Start Num: 27
Candidate Starts for TinyMiny_14:
(Start: 20 @6274 has 4 MA's), (Start: 27 @6310 has 5 MA's), (29, 6331), (38, 6394), (40, 6418), (41, 6421), (47, 6448), (Start: 50 @6481 has 1 MA's), (51, 6490), (52, 6505), (56, 6538), (60, 6586), (73, 6691), (84, 6823), (89, 6898), (90, 6913), (93, 6922), (104, 7051), (118, 7168),

Gene: Tongui_13 Start: 6286, Stop: 7170, Start Num: 21
Candidate Starts for Tongui_13:
(Start: 21 @6286 has 12 MA's), (26, 6316), (Start: 27 @6322 has 5 MA's), (31, 6352), (41, 6436), (48, 6472), (56, 6553), (58, 6586), (64, 6640), (75, 6739), (78, 6766), (81, 6805), (84, 6838), (88, 6910), (89, 6913), (92, 6934), (93, 6937), (117, 7156),

Gene: Troll4_13 Start: 8792, Stop: 9697, Start Num: 13
Candidate Starts for Troll4_13:
(Start: 13 @8792 has 20 MA's), (Start: 50 @9044 has 1 MA's), (Start: 63 @9176 has 5 MA's), (66, 9209), (67, 9212), (69, 9221), (76, 9296), (78, 9314), (80, 9350), (83, 9374), (85, 9401), (86, 9407), (90, 9476), (99, 9536), (111, 9656), (112, 9662), (115, 9689),

Gene: Visconti_13 Start: 8801, Stop: 9706, Start Num: 13
Candidate Starts for Visconti_13:
(Start: 13 @8801 has 20 MA's), (Start: 50 @9053 has 1 MA's), (Start: 63 @9185 has 5 MA's), (66, 9218), (67, 9221), (69, 9230), (76, 9305), (78, 9323), (80, 9359), (83, 9383), (85, 9410), (86, 9416), (90, 9485), (99, 9545), (111, 9665), (112, 9671), (115, 9698),

Gene: WaldoWhy_14 Start: 9178, Stop: 9699, Start Num: 63
Candidate Starts for WaldoWhy_14:
(Start: 13 @8794 has 20 MA's), (Start: 50 @9046 has 1 MA's), (Start: 63 @9178 has 5 MA's), (66, 9211), (67, 9214), (69, 9223), (76, 9298), (78, 9316), (80, 9352), (83, 9376), (85, 9403), (86, 9409), (90, 9478), (99, 9538), (111, 9658), (112, 9664), (115, 9691),

Gene: WinnieLou_14 Start: 6548, Stop: 7396, Start Num: 27
Candidate Starts for WinnieLou_14:
(Start: 21 @6512 has 12 MA's), (26, 6542), (Start: 27 @6548 has 5 MA's), (31, 6578), (41, 6662), (48, 6698), (55, 6776), (58, 6812), (59, 6815), (64, 6866), (75, 6965), (81, 7031), (84, 7064), (88, 7136), (89, 7139), (92, 7160), (93, 7163), (117, 7382),

Gene: Wojtek_11 Start: 9185, Stop: 10012, Start Num: 33
Candidate Starts for Wojtek_11:
(6, 9023), (9, 9041), (Start: 12 @9068 has 30 MA's), (17, 9092), (Start: 33 @9185 has 1 MA's), (74, 9554), (77, 9593), (104, 9902), (105, 9905), (112, 9947),

Gene: Xenia2_12 Start: 9205, Stop: 10068, Start Num: 28
Candidate Starts for Xenia2_12:
(Start: 12 @9124 has 30 MA's), (14, 9136), (18, 9154), (Start: 24 @9181 has 1 MA's), (Start: 28 @9205 has 1 MA's), (Start: 33 @9241 has 1 MA's), (37, 9277), (Start: 39 @9301 has 6 MA's), (66, 9547), (77,

9649), (86, 9745), (107, 9976), (112, 10003),

Gene: Yikes_13 Start: 10466, Stop: 11413, Start Num: 12
Candidate Starts for Yikes_13:
(Start: 12 @10466 has 30 MA's), (Start: 39 @10646 has 6 MA's), (65, 10883), (66, 10892), (74, 10955), (77, 10994), (100, 11249), (107, 11321), (113, 11363),

Gene: Zany_12 Start: 9592, Stop: 10539, Start Num: 12
Candidate Starts for Zany_12:
(Start: 12 @9592 has 30 MA's), (16, 9610), (Start: 39 @9772 has 6 MA's), (65, 10009), (66, 10018), (74, 10081), (77, 10120), (100, 10375), (107, 10447), (113, 10489),