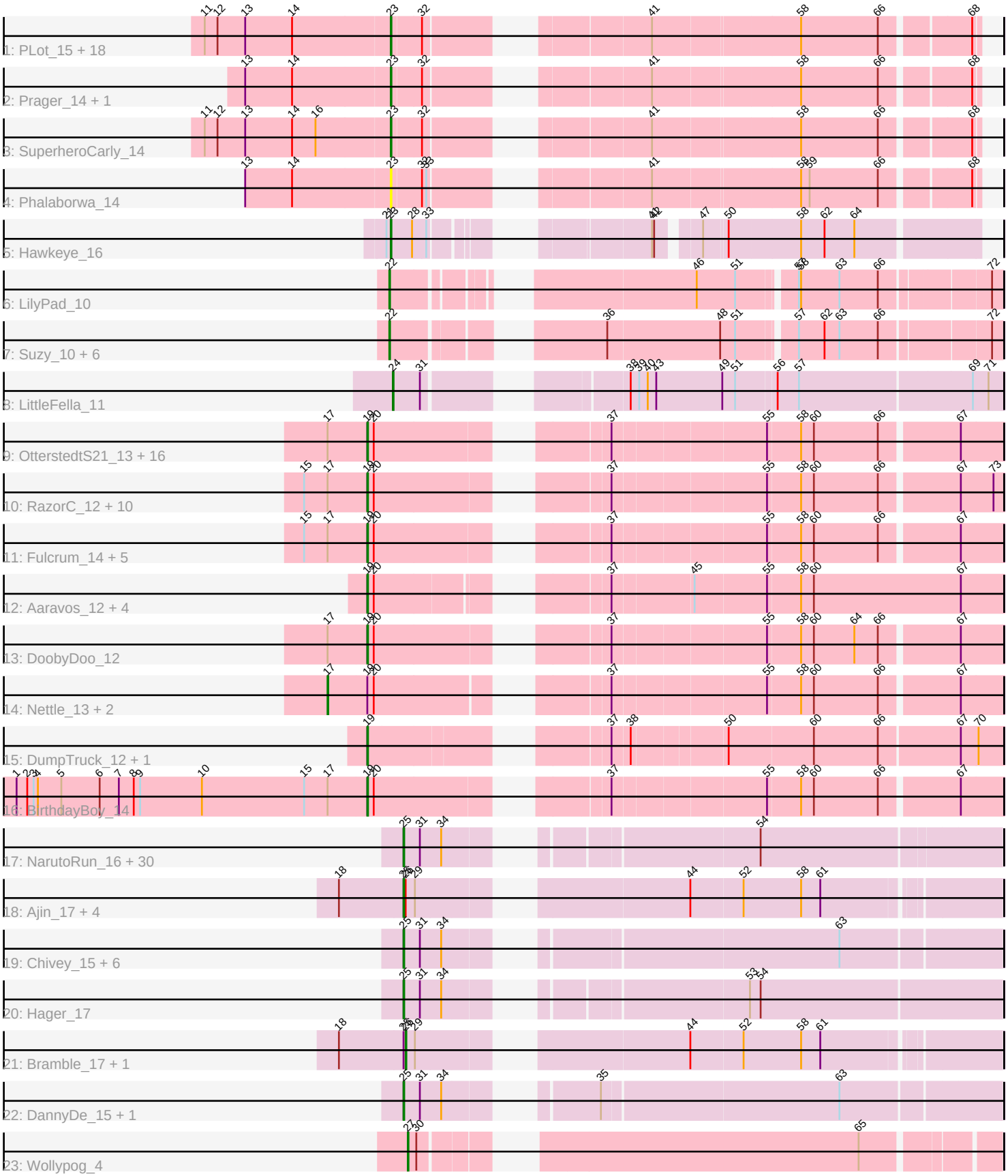
Pham 338099


1: PLot_15 + 18
2: Prager_14 + 1
3: SuperheroCarly_14
4: Phalaborwa_14
5: Hawkeye_16
6: LilyPad_10
7: Suzy_10 + 6
8: LittleFella_11
9: OtterstedtS21_13 + 16
10: RazorC_12 + 10
11: Fulcrum_14 + 5
12: Aaravos_12 + 4
13: DoobyDoo_12
14: Nettle_13 + 2
15: DumpTruck_12 + 1
16: BirthdayBoy_14
17: NarutoRun_16 + 30
18: Ajin_17 + 4
19: Chivey_15 + 6
20: Hager_17
21: Bramble_17 + 1
22: DannyDe_15 + 1
23: Wollypog_4

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 338099 Report

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

Pham number 338099 has 128 members, 11 are drafts.

Phages represented in each track:
• Track 1 : PLot_15, KandZ_14, Helpful_15, SirHarley_13, Delton_14, Thoth_14, Nova_14, Erk16_14, BigMama_12, Chill_15, Penelope2018_14, Visconti_14, Troll4_14, Giuseppe_14, Adjutor_15, Mopey_14, Gumball_13, PBI1_15, WaldoWhy_15
• Track 2 : Prager_14, Butterscotch_14
• Track 3 : SuperheroCarly_14
• Track 4 : Phalaborwa_14
• Track 5 : Hawkeye_16
• Track 6 : LilyPad_10
• Track 7 : Suzy_10, Beyoncage_9, Djokovic_9, BiteSize_9, Madi_9, Terapin_9, Sienna_9
• Track 8 : LittleFella_11
• Track 9 : OtterstedtS21_13, Lila22_14, Sampudon_14, Patos_14, Lambo_13, ParvusTarda_13, DaviePasture_13, Jalebi_14, Alephilan_12, Zany_13, NorManre_14, Ranch_13, Rota_13, Erutan_13, Rukungu_14, Mima20_13, Gibbin_14
• Track 10 : RazorC_12, Charminar_12, Alyssamiracle_12, Stormer_12, Genamy16_12, Rumi_12, Riduram_12, Avian_12, NovaSharks_12, Jamemuya19_12, Astralis_12
• Track 11 : Fulcrum_14, GOATification_14, GretelLyn_13, Sadboi_13, MoiGyank_15, Pywacket_13
• Track 12 : Aaravos_12, LuckyLeo_13, Apeppi_12, Wojtek_12, Tillicus_14
• Track 13 : DoobyDoo_12
• Track 14 : Nettle_13, LavAbarElk_12, Yikes_14
• Track 15 : DumpTruck_12, Xenia2_13
• Track 16 : BirthdayBoy_14
• Track 17 : NarutoRun_16, Cybele_16, Kate_16, Tedro_16, Neptune_16, OhDear_16, Anakin_16, SafetyGuy_16, OverHedge_16, Dauntless_15, Rachella_16, PhunaPhoke_16, Erudite_15, FreddieHg_15, CoolCookie_16, Potty_16, Aesir_15, Rie18_16, Artiphact_16, MortySmith_14, Pharpay_16, JDawG_15, FountainFog_15, Tiggy93_16, Haunter_16, Krampus_16, Gilda_16, AnnaSerena_16, Karate_15, WinnieLou_17, Poultress_15
• Track 18 : Ajin_17, RikSengupta_17, Sparcetus_17, Kors_17, TinyMiny_17
• Track 19 : Chivey_15, Annapurna_15, Snakehole_17, JingleBells_15, Tongui_15, Hiddenleaf_15, Crestdrop_15
• Track 20 : Hager_17
• Track 21 : Bramble_17, LordBart_17
• Track 22 : DannyDe_15, SilentWarrior_15

• Track 23 : Wollypog_4

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

The start number called the most often in the published annotations is 25, it was called in 42 of the 117 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aesir_15, Ajin_17, Anakin_16, AnnaSerena_16, Annapurna_15, Artiphact_16, Chivey_15, CoolCookie_16, Crestdrop_15, Cybele_16, DannyDe_15, Dauntless_15, Erudite_15, FountainFog_15, FreddieHg_15, Gilda_16, Hager_17, Haunter_16, Hiddenleaf_15, JDawG_15, JingleBells_15, Karate_15, Kate_16, Kors_17, Krampus_16, MortySmith_14, NarutoRun_16, Neptune_16, OhDear_16, OverHedge_16, Pharpay_16, PhunaPhoke_16, Potty_16, Poultress_15, Rachella_16, Rie18_16, RikSengupta_17, SafetyGuy_16, SilentWarrior_15, Snakehole_17, Sparcetus_17, Tedro_16, Tiggy93_16, TinyMiny_17, Tongui_15, WinnieLou_17,

Genes that have the "Most Annotated" start but do not call it:
• Bramble_17, LordBart_17,

Genes that do not have the "Most Annotated" start:
• Aaravos_12, Adjutor_15, Alephilan_12, Alyssamiracle_12, Apeppi_12, Astralis_12, Avian_12, Beyoncage_9, BigMama_12, BirthdayBoy_14, BiteSize_9, Butterscotch_14, Charminar_12, Chill_15, DaviePasture_13, Delton_14, Djokovic_9, DoobyDoo_12, DumpTruck_12, Erk16_14, Erutan_13, Fulcrum_14, GOATification_14, Genamy16_12, Gibbin_14, Giuseppe_14, GretelLyn_13, Gumball_13, Hawkeye_16, Helpful_15, Jalebi_14, Jamemuya19_12, KandZ_14, Lambo_13, LavAbarElk_12, Lila22_14, LilyPad_10, LittleFella_11, LuckyLeo_13, Madi_9, Mima20_13, MoiGyank_15, Mopey_14, Nettle_13, NorManre_14, NovaSharks_12, Nova_14, OtterstedtS21_13, PBI1_15, PLot_15, ParvusTarda_13, Patos_14, Penelope2018_14, Phalaborwa_14, Prager_14, Pywacket_13, Ranch_13, RazorC_12, Riduram_12, Rota_13, Rukungu_14, Rumi_12, Sadboi_13, Sampudon_14, Sienna_9, SirHarley_13, Stormer_12, SuperheroCarly_14, Suzy_10, Terapin_9, Thoth_14, Tillicus_14, Troll4_14, Visconti_14, WaldoWhy_15, Wojtek_12, Wollypog_4, Xenia2_13, Yikes_14, Zany_13,

Summary by start number:

Start 17:
• Found in 39 of 128 (30.5%) of genes in pham
• Manual Annotations of this start: 1 of 117
• Called 7.7% of time when present
• Phage (with cluster) where this start called: LavAbarElk_12 (DV), Nettle_13 (DV), Yikes_14 (DV),

Start 19:
• Found in 46 of 128 (35.9%) of genes in pham
• Manual Annotations of this start: 39 of 117
• Called 93.5% of time when present

• Phage (with cluster) where this start called: Aaravos_12 (DV), Alephilan_12 (DV), Alyssamiracle_12 (DV), Apeppi_12 (DV), Astralis_12 (DV), Avian_12 (DV), BirthdayBoy_14 (DV), Charminar_12 (DV), DaviePasture_13 (DV), DoobyDoo_12 (DV), DumpTruck_12 (DV), Erutan_13 (DV), Fulcrum_14 (DV), GOATification_14 (DV), Genamy16_12 (DV), Gibbin_14 (DV), GretelLyn_13 (DV), Jalebi_14 (DV), Jamemuya19_12 (DV), Lambo_13 (DV), Lila22_14 (DV), LuckyLeo_13 (DV), Mima20_13 (DV), MoiGyank_15 (DV), NorManre_14 (DV), NovaSharks_12 (DV), OtterstedtS21_13 (DV), ParvusTarda_13 (DV), Patos_14 (DV), Pywacket_13 (DV), Ranch_13 (DV), RazorC_12 (DV), Riduram_12 (DV), Rota_13 (DV), Rukungu_14 (DV), Rumi_12 (DV), Sadboi_13 (DV), Sampudon_14 (DV), Stormer_12 (DV), Tillicus_14 (DV), Wojtek_12 (DV), Xenia2_13 (DV), Zany_13 (DV),

Start 22:
• Found in 8 of 128 (6.2%) of genes in pham
• Manual Annotations of this start: 8 of 117
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Beyoncage_9 (DG1), BiteSize_9 (DG1), Djokovic_9 (DG1), LilyPad_10 (DG1), Madi_9 (DG1), Sienna_9 (DG1), Suzy_10 (DG1), Terapin_9 (DG1),

Start 23:
• Found in 24 of 128 (18.8%) of genes in pham
• Manual Annotations of this start: 23 of 117
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Adjutor_15 (D1), BigMama_12 (D1), Butterscotch_14 (D1), Chill_15 (D1), Delton_14 (D1), Erk16_14 (D1), Giuseppe_14 (D1), Gumball_13 (D1), Hawkeye_16 (D2), Helpful_15 (D1), KandZ_14 (D1), Mopey_14 (D1), Nova_14 (D1), PBI1_15 (D1), PLot_15 (D1), Penelope2018_14 (D1), Phalaborwa_14 (D1), Prager_14 (D1), SirHarley_13 (D1), SuperheroCarly_14 (D1), Thoth_14 (D1), Troll4_14 (D1), Visconti_14 (D1), WaldoWhy_15 (D1),

Start 24:
• Found in 1 of 128 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 117
• Called 100.0% of time when present
• Phage (with cluster) where this start called: LittleFella_11 (DG2),

Start 25:
• Found in 48 of 128 (37.5%) of genes in pham
• Manual Annotations of this start: 42 of 117
• Called 95.8% of time when present
• Phage (with cluster) where this start called: Aesir_15 (EF), Ajin_17 (EF), Anakin_16 (EF), AnnaSerena_16 (EF), Annapurna_15 (EF), Artiphact_16 (EF), Chivey_15 (EF), CoolCookie_16 (EF), Crestdrop_15 (EF), Cybele_16 (EF), DannyDe_15 (EF), Dauntless_15 (EF), Erudite_15 (EF), FountainFog_15 (EF), FreddieHg_15 (EF), Gilda_16 (EF), Hager_17 (EF), Haunter_16 (EF), Hiddenleaf_15 (EF), JDawG_15 (EF), JingleBells_15 (EF), Karate_15 (EF), Kate_16 (EF), Kors_17 (EF), Krampus_16 (EF), MortySmith_14 (EF), NarutoRun_16 (EF), Neptune_16 (EF), OhDear_16 (EF), OverHedge_16 (EF), Pharpay_16 (EF), PhunaPhoke_16 (EF), Potty_16 (EF), Poultress_15 (EF), Rachella_16 (EF), Rie18_16 (EF), RikSengupta_17 (EF), SafetyGuy_16 (EF), SilentWarrior_15 (EF), Snakehole_17 (EF), Sparcetus_17 (EF), Tedro_16 (EF), Tiggy93_16 (EF), TinyMiny_17 (EF), Tongui_15 (EF), WinnieLou_17 (EF),

Start 26:
• Found in 7 of 128 (5.5%) of genes in pham
• Manual Annotations of this start: 2 of 117
• Called 28.6% of time when present
• Phage (with cluster) where this start called: Bramble_17 (EF), LordBart_17 (EF),

Start 27:
• Found in 1 of 128 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 117
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Wollypog_4 (singleton),

Summary by clusters:

There are 7 clusters represented in this pham: singleton, EF, DG2, DG1, DV, D2, D1,

Info for manual annotations of cluster D1:
•Start number 23 was manually annotated 22 times for cluster D1.

Info for manual annotations of cluster D2:
•Start number 23 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster DG1:
•Start number 22 was manually annotated 8 times for cluster DG1.

Info for manual annotations of cluster DG2:
•Start number 24 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DV:
•Start number 17 was manually annotated 1 time for cluster DV.
•Start number 19 was manually annotated 39 times for cluster DV.

Info for manual annotations of cluster EF:
•Start number 25 was manually annotated 42 times for cluster EF.
•Start number 26 was manually annotated 2 times for cluster EF.

Gene Information:

Gene: Aaravos_12 Start: 10068, Stop: 10862, Start Num: 19
Candidate Starts for Aaravos_12:
(Start: 19 @10068 has 39 MA's), (20, 10077), (37, 10326), (45, 10434), (55, 10533), (58, 10578), (60, 10596), (67, 10803),

Gene: Adjutor_15 Start: 9669, Stop: 10376, Start Num: 23
Candidate Starts for Adjutor_15:
(11, 9411), (12, 9429), (13, 9468), (14, 9534), (Start: 23 @9669 has 23 MA's), (32, 9708), (41, 9948), (58, 10146), (66, 10254), (68, 10368),

Gene: Aesir_15 Start: 8306, Stop: 9034, Start Num: 25
Candidate Starts for Aesir_15:

(Start: 25 @8306 has 42 MA's), (31, 8327), (34, 8357), (54, 8711),

Gene: Ajin_17 Start: 8356, Stop: 9093, Start Num: 25
Candidate Starts for Ajin_17:
(18, 8266), (Start: 25 @8356 has 42 MA's), (Start: 26 @8359 has 2 MA's), (29, 8371), (44, 8683), (52, 8755), (58, 8836), (61, 8863),

Gene: Alephilan_12 Start: 9942, Stop: 10796, Start Num: 19
Candidate Starts for Alephilan_12:
(Start: 17 @9888 has 1 MA's), (Start: 19 @9942 has 39 MA's), (20, 9951), (37, 10275), (55, 10479), (58, 10524), (60, 10542), (66, 10632), (67, 10737),

Gene: Alyssamiracle_12 Start: 8415, Stop: 9203, Start Num: 19
Candidate Starts for Alyssamiracle_12:
(15, 8328), (Start: 17 @8361 has 1 MA's), (Start: 19 @8415 has 39 MA's), (20, 8424), (37, 8682), (55, 8886), (58, 8931), (60, 8949), (66, 9039), (67, 9144), (73, 9189),

Gene: Anakin_16 Start: 8521, Stop: 9249, Start Num: 25
Candidate Starts for Anakin_16:
(Start: 25 @8521 has 42 MA's), (31, 8542), (34, 8572), (54, 8926),

Gene: AnnaSerena_16 Start: 8518, Stop: 9252, Start Num: 25
Candidate Starts for AnnaSerena_16:
(Start: 25 @8518 has 42 MA's), (31, 8539), (34, 8569), (54, 8923),

Gene: Annapurna_15 Start: 7719, Stop: 8453, Start Num: 25
Candidate Starts for Annapurna_15:
(Start: 25 @7719 has 42 MA's), (31, 7740), (34, 7770), (63, 8241),

Gene: Apeppi_12 Start: 10121, Stop: 10912, Start Num: 19
Candidate Starts for Apeppi_12:
(Start: 19 @10121 has 39 MA's), (20, 10130), (37, 10376), (45, 10484), (55, 10583), (58, 10628), (60, 10646), (67, 10853),

Gene: Artiphact_16 Start: 8510, Stop: 9244, Start Num: 25
Candidate Starts for Artiphact_16:
(Start: 25 @8510 has 42 MA's), (31, 8531), (34, 8561), (54, 8915),

Gene: Astralis_12 Start: 8415, Stop: 9203, Start Num: 19
Candidate Starts for Astralis_12:
(15, 8328), (Start: 17 @8361 has 1 MA's), (Start: 19 @8415 has 39 MA's), (20, 8424), (37, 8682), (55, 8886), (58, 8931), (60, 8949), (66, 9039), (67, 9144), (73, 9189),

Gene: Avian_12 Start: 8415, Stop: 9203, Start Num: 19
Candidate Starts for Avian_12:
(15, 8328), (Start: 17 @8361 has 1 MA's), (Start: 19 @8415 has 39 MA's), (20, 8424), (37, 8682), (55, 8886), (58, 8931), (60, 8949), (66, 9039), (67, 9144), (73, 9189),

Gene: Beyoncage_9 Start: 5939, Stop: 6685, Start Num: 22
Candidate Starts for Beyoncage_9:
(Start: 22 @5939 has 8 MA's), (36, 6167), (48, 6323), (51, 6344), (57, 6416), (62, 6452), (63, 6473), (66, 6527), (72, 6671),

Gene: BigMama_12 Start: 9742, Stop: 10449, Start Num: 23
Candidate Starts for BigMama_12:
(11, 9484), (12, 9502), (13, 9541), (14, 9607), (Start: 23 @9742 has 23 MA's), (32, 9781), (41, 10021), (58, 10219), (66, 10327), (68, 10441),

Gene: BirthdayBoy_14 Start: 10861, Stop: 11649, Start Num: 19
Candidate Starts for BirthdayBoy_14:
(1, 10369), (2, 10384), (3, 10393), (4, 10399), (5, 10432), (6, 10486), (7, 10513), (8, 10534), (9, 10543), (10, 10630), (15, 10774), (Start: 17 @10807 has 1 MA's), (Start: 19 @10861 has 39 MA's), (20, 10870), (37, 11128), (55, 11332), (58, 11377), (60, 11395), (66, 11485), (67, 11590),

Gene: BiteSize_9 Start: 5939, Stop: 6685, Start Num: 22
Candidate Starts for BiteSize_9:
(Start: 22 @5939 has 8 MA's), (36, 6167), (48, 6323), (51, 6344), (57, 6416), (62, 6452), (63, 6473), (66, 6527), (72, 6671),

Gene: Bramble_17 Start: 8326, Stop: 9060, Start Num: 26
Candidate Starts for Bramble_17:
(18, 8233), (Start: 25 @8323 has 42 MA's), (Start: 26 @8326 has 2 MA's), (29, 8338), (44, 8650), (52, 8722), (58, 8803), (61, 8830),

Gene: Butterscotch_14 Start: 9729, Stop: 10436, Start Num: 23
Candidate Starts for Butterscotch_14:
(13, 9528), (14, 9594), (Start: 23 @9729 has 23 MA's), (32, 9768), (41, 10008), (58, 10206), (66, 10314), (68, 10428),

Gene: Charminar_12 Start: 8415, Stop: 9203, Start Num: 19
Candidate Starts for Charminar_12:
(15, 8328), (Start: 17 @8361 has 1 MA's), (Start: 19 @8415 has 39 MA's), (20, 8424), (37, 8682), (55, 8886), (58, 8931), (60, 8949), (66, 9039), (67, 9144), (73, 9189),

Gene: Chill_15 Start: 9732, Stop: 10439, Start Num: 23
Candidate Starts for Chill_15:
(11, 9474), (12, 9492), (13, 9531), (14, 9597), (Start: 23 @9732 has 23 MA's), (32, 9771), (41, 10011), (58, 10209), (66, 10317), (68, 10431),

Gene: Chivey_15 Start: 7712, Stop: 8446, Start Num: 25
Candidate Starts for Chivey_15:
(Start: 25 @7712 has 42 MA's), (31, 7733), (34, 7763), (63, 8234),

Gene: CoolCookie_16 Start: 8513, Stop: 9250, Start Num: 25
Candidate Starts for CoolCookie_16:
(Start: 25 @8513 has 42 MA's), (31, 8534), (34, 8564), (54, 8918),

Gene: Crestdrop_15 Start: 7586, Stop: 8320, Start Num: 25
Candidate Starts for Crestdrop_15:
(Start: 25 @7586 has 42 MA's), (31, 7607), (34, 7637), (63, 8108),

Gene: Cybele_16 Start: 8486, Stop: 9220, Start Num: 25
Candidate Starts for Cybele_16:
(Start: 25 @8486 has 42 MA's), (31, 8507), (34, 8537), (54, 8891),

Gene: DannyDe_15 Start: 7704, Stop: 8438, Start Num: 25

Candidate Starts for DannyDe_15:
(Start: 25 @7704 has 42 MA's), (31, 7725), (34, 7755), (35, 7902), (63, 8226),

Gene: Dauntless_15 Start: 8235, Stop: 8963, Start Num: 25
Candidate Starts for Dauntless_15:
(Start: 25 @8235 has 42 MA's), (31, 8256), (34, 8286), (54, 8640),

Gene: DaviePasture_13 Start: 10618, Stop: 11406, Start Num: 19
Candidate Starts for DaviePasture_13:
(Start: 17 @10564 has 1 MA's), (Start: 19 @10618 has 39 MA's), (20, 10627), (37, 10885), (55, 11089), (58, 11134), (60, 11152), (66, 11242), (67, 11347),

Gene: Delton_14 Start: 9738, Stop: 10445, Start Num: 23
Candidate Starts for Delton_14:
(11, 9480), (12, 9498), (13, 9537), (14, 9603), (Start: 23 @9738 has 23 MA's), (32, 9777), (41, 10017), (58, 10215), (66, 10323), (68, 10437),

Gene: Djokovic_9 Start: 5939, Stop: 6685, Start Num: 22
Candidate Starts for Djokovic_9:
(Start: 22 @5939 has 8 MA's), (36, 6167), (48, 6323), (51, 6344), (57, 6416), (62, 6452), (63, 6473), (66, 6527), (72, 6671),

Gene: DoobyDoo_12 Start: 9795, Stop: 10583, Start Num: 19
Candidate Starts for DoobyDoo_12:
(Start: 17 @9741 has 1 MA's), (Start: 19 @9795 has 39 MA's), (20, 9804), (37, 10062), (55, 10266), (58, 10311), (60, 10329), (64, 10386), (66, 10419), (67, 10524),

Gene: DumpTruck_12 Start: 10057, Stop: 10842, Start Num: 19
Candidate Starts for DumpTruck_12:
(Start: 19 @10057 has 39 MA's), (37, 10318), (38, 10342), (50, 10465), (60, 10582), (66, 10672), (67, 10783), (70, 10807),

Gene: Erk16_14 Start: 9732, Stop: 10439, Start Num: 23
Candidate Starts for Erk16_14:
(11, 9474), (12, 9492), (13, 9531), (14, 9597), (Start: 23 @9732 has 23 MA's), (32, 9771), (41, 10011), (58, 10209), (66, 10317), (68, 10431),

Gene: Erudite_15 Start: 8235, Stop: 8963, Start Num: 25
Candidate Starts for Erudite_15:
(Start: 25 @8235 has 42 MA's), (31, 8256), (34, 8286), (54, 8640),

Gene: Erutan_13 Start: 10308, Stop: 11096, Start Num: 19
Candidate Starts for Erutan_13:
(Start: 17 @10254 has 1 MA's), (Start: 19 @10308 has 39 MA's), (20, 10317), (37, 10575), (55, 10779), (58, 10824), (60, 10842), (66, 10932), (67, 11037),

Gene: FountainFog_15 Start: 7846, Stop: 8580, Start Num: 25
Candidate Starts for FountainFog_15:
(Start: 25 @7846 has 42 MA's), (31, 7867), (34, 7897), (54, 8251),

Gene: FreddieHg_15 Start: 7725, Stop: 8462, Start Num: 25
Candidate Starts for FreddieHg_15:
(Start: 25 @7725 has 42 MA's), (31, 7746), (34, 7776), (54, 8130),

Gene: Fulcrum_14 Start: 10841, Stop: 11629, Start Num: 19
Candidate Starts for Fulcrum_14:
(15, 10754), (Start: 17 @10787 has 1 MA's), (Start: 19 @10841 has 39 MA's), (20, 10850), (37, 11108), (55, 11312), (58, 11357), (60, 11375), (66, 11465), (67, 11570),

Gene: GOATification_14 Start: 10841, Stop: 11629, Start Num: 19
Candidate Starts for GOATification_14:
(15, 10754), (Start: 17 @10787 has 1 MA's), (Start: 19 @10841 has 39 MA's), (20, 10850), (37, 11108), (55, 11312), (58, 11357), (60, 11375), (66, 11465), (67, 11570),

Gene: Genamy16_12 Start: 8415, Stop: 9203, Start Num: 19
Candidate Starts for Genamy16_12:
(15, 8328), (Start: 17 @8361 has 1 MA's), (Start: 19 @8415 has 39 MA's), (20, 8424), (37, 8682), (55, 8886), (58, 8931), (60, 8949), (66, 9039), (67, 9144), (73, 9189),

Gene: Gibbin_14 Start: 10901, Stop: 11689, Start Num: 19
Candidate Starts for Gibbin_14:
(Start: 17 @10847 has 1 MA's), (Start: 19 @10901 has 39 MA's), (20, 10910), (37, 11168), (55, 11372), (58, 11417), (60, 11435), (66, 11525), (67, 11630),

Gene: Gilda_16 Start: 8510, Stop: 9244, Start Num: 25
Candidate Starts for Gilda_16:
(Start: 25 @8510 has 42 MA's), (31, 8531), (34, 8561), (54, 8915),

Gene: Giuseppe_14 Start: 9721, Stop: 10428, Start Num: 23
Candidate Starts for Giuseppe_14:
(11, 9463), (12, 9481), (13, 9520), (14, 9586), (Start: 23 @9721 has 23 MA's), (32, 9760), (41, 10000), (58, 10198), (66, 10306), (68, 10420),

Gene: GretelLyn_13 Start: 11175, Stop: 11963, Start Num: 19
Candidate Starts for GretelLyn_13:
(15, 11088), (Start: 17 @11121 has 1 MA's), (Start: 19 @11175 has 39 MA's), (20, 11184), (37, 11442), (55, 11646), (58, 11691), (60, 11709), (66, 11799), (67, 11904),

Gene: Gumball_13 Start: 9676, Stop: 10383, Start Num: 23
Candidate Starts for Gumball_13:
(11, 9418), (12, 9436), (13, 9475), (14, 9541), (Start: 23 @9676 has 23 MA's), (32, 9715), (41, 9955), (58, 10153), (66, 10261), (68, 10375),

Gene: Hager_17 Start: 8085, Stop: 8819, Start Num: 25
Candidate Starts for Hager_17:
(Start: 25 @8085 has 42 MA's), (31, 8106), (34, 8136), (53, 8475), (54, 8490),

Gene: Haunter_16 Start: 7929, Stop: 8663, Start Num: 25
Candidate Starts for Haunter_16:
(Start: 25 @7929 has 42 MA's), (31, 7950), (34, 7980), (54, 8334),

Gene: Hawkeye_16 Start: 9664, Stop: 10347, Start Num: 23
Candidate Starts for Hawkeye_16:
(21, 9658), (Start: 23 @9664 has 23 MA's), (28, 9694), (33, 9712), (41, 9928), (42, 9931), (47, 9979), (50, 10009), (58, 10108), (62, 10141), (64, 10183),

Gene: Helpful_15 Start: 9729, Stop: 10436, Start Num: 23
Candidate Starts for Helpful_15:
(11, 9471), (12, 9489), (13, 9528), (14, 9594), (Start: 23 @9729 has 23 MA's), (32, 9768), (41, 10008), (58, 10206), (66, 10314), (68, 10428),

Gene: Hiddenleaf_15 Start: 7712, Stop: 8446, Start Num: 25
Candidate Starts for Hiddenleaf_15:
(Start: 25 @7712 has 42 MA's), (31, 7733), (34, 7763), (63, 8234),

Gene: JDawG_15 Start: 8300, Stop: 9028, Start Num: 25
Candidate Starts for JDawG_15:
(Start: 25 @8300 has 42 MA's), (31, 8321), (34, 8351), (54, 8705),

Gene: Jalebi_14 Start: 11351, Stop: 12139, Start Num: 19
Candidate Starts for Jalebi_14:
(Start: 17 @11297 has 1 MA's), (Start: 19 @11351 has 39 MA's), (20, 11360), (37, 11618), (55, 11822), (58, 11867), (60, 11885), (66, 11975), (67, 12080),

Gene: Jamemuya19_12 Start: 8415, Stop: 9203, Start Num: 19
Candidate Starts for Jamemuya19_12:
(15, 8328), (Start: 17 @8361 has 1 MA's), (Start: 19 @8415 has 39 MA's), (20, 8424), (37, 8682), (55, 8886), (58, 8931), (60, 8949), (66, 9039), (67, 9144), (73, 9189),

Gene: JingleBells_15 Start: 7783, Stop: 8523, Start Num: 25
Candidate Starts for JingleBells_15:
(Start: 25 @7783 has 42 MA's), (31, 7804), (34, 7834), (63, 8305),

Gene: KandZ_14 Start: 9826, Stop: 10533, Start Num: 23
Candidate Starts for KandZ_14:
(11, 9568), (12, 9586), (13, 9625), (14, 9691), (Start: 23 @9826 has 23 MA's), (32, 9865), (41, 10105), (58, 10303), (66, 10411), (68, 10525),

Gene: Karate_15 Start: 7934, Stop: 8668, Start Num: 25
Candidate Starts for Karate_15:
(Start: 25 @7934 has 42 MA's), (31, 7955), (34, 7985), (54, 8339),

Gene: Kate_16 Start: 8518, Stop: 9252, Start Num: 25
Candidate Starts for Kate_16:
(Start: 25 @8518 has 42 MA's), (31, 8539), (34, 8569), (54, 8923),

Gene: Kors_17 Start: 8386, Stop: 9123, Start Num: 25
Candidate Starts for Kors_17:
(18, 8296), (Start: 25 @8386 has 42 MA's), (Start: 26 @8389 has 2 MA's), (29, 8401), (44, 8713), (52, 8785), (58, 8866), (61, 8893),

Gene: Krampus_16 Start: 8516, Stop: 9250, Start Num: 25
Candidate Starts for Krampus_16:
(Start: 25 @8516 has 42 MA's), (31, 8537), (34, 8567), (54, 8921),

Gene: Lambo_13 Start: 10845, Stop: 11633, Start Num: 19
Candidate Starts for Lambo_13:
(Start: 17 @10791 has 1 MA's), (Start: 19 @10845 has 39 MA's), (20, 10854), (37, 11112), (55, 11316), (58, 11361), (60, 11379), (66, 11469), (67, 11574),

Gene: LavAbarElk_12 Start: 9224, Stop: 10066, Start Num: 17
Candidate Starts for LavAbarElk_12:
(Start: 17 @9224 has 1 MA's), (Start: 19 @9278 has 39 MA's), (20, 9287), (37, 9545), (55, 9749), (58, 9794), (60, 9812), (66, 9902), (67, 10007),

Gene: Lila22_14 Start: 10796, Stop: 11587, Start Num: 19
Candidate Starts for Lila22_14:
(Start: 17 @10742 has 1 MA's), (Start: 19 @10796 has 39 MA's), (20, 10805), (37, 11066), (55, 11270), (58, 11315), (60, 11333), (66, 11423), (67, 11528),

Gene: LilyPad_10 Start: 6696, Stop: 7427, Start Num: 22
Candidate Starts for LilyPad_10:
(Start: 22 @6696 has 8 MA's), (46, 7035), (51, 7089), (57, 7161), (58, 7164), (63, 7218), (66, 7272), (72, 7413),

Gene: LittleFella_11 Start: 8501, Stop: 9259, Start Num: 24
Candidate Starts for LittleFella_11:
(Start: 24 @8501 has 1 MA's), (31, 8537), (38, 8753), (39, 8765), (40, 8777), (43, 8789), (49, 8882), (51, 8900), (56, 8954), (57, 8984), (69, 9221), (71, 9242),

Gene: LordBart_17 Start: 8362, Stop: 9096, Start Num: 26
Candidate Starts for LordBart_17:
(18, 8269), (Start: 25 @8359 has 42 MA's), (Start: 26 @8362 has 2 MA's), (29, 8374), (44, 8686), (52, 8758), (58, 8839), (61, 8866),

Gene: LuckyLeo_13 Start: 10121, Stop: 10912, Start Num: 19
Candidate Starts for LuckyLeo_13:
(Start: 19 @10121 has 39 MA's), (20, 10130), (37, 10376), (45, 10484), (55, 10583), (58, 10628), (60, 10646), (67, 10853),

Gene: Madi_9 Start: 5939, Stop: 6685, Start Num: 22
Candidate Starts for Madi_9:
(Start: 22 @5939 has 8 MA's), (36, 6167), (48, 6323), (51, 6344), (57, 6416), (62, 6452), (63, 6473), (66, 6527), (72, 6671),

Gene: Mima20_13 Start: 10525, Stop: 11316, Start Num: 19
Candidate Starts for Mima20_13:
(Start: 17 @10471 has 1 MA's), (Start: 19 @10525 has 39 MA's), (20, 10534), (37, 10795), (55, 10999), (58, 11044), (60, 11062), (66, 11152), (67, 11257),

Gene: MoiGyank_15 Start: 11212, Stop: 12000, Start Num: 19
Candidate Starts for MoiGyank_15:
(15, 11125), (Start: 17 @11158 has 1 MA's), (Start: 19 @11212 has 39 MA's), (20, 11221), (37, 11479), (55, 11683), (58, 11728), (60, 11746), (66, 11836), (67, 11941),

Gene: Mopey_14 Start: 9729, Stop: 10436, Start Num: 23
Candidate Starts for Mopey_14:
(11, 9471), (12, 9489), (13, 9528), (14, 9594), (Start: 23 @9729 has 23 MA's), (32, 9768), (41, 10008), (58, 10206), (66, 10314), (68, 10428),

Gene: MortySmith_14 Start: 7697, Stop: 8425, Start Num: 25
Candidate Starts for MortySmith_14:

(Start: 25 @7697 has 42 MA's), (31, 7718), (34, 7748), (54, 8102),

Gene: NarutoRun_16 Start: 8521, Stop: 9249, Start Num: 25
Candidate Starts for NarutoRun_16:
(Start: 25 @8521 has 42 MA's), (31, 8542), (34, 8572), (54, 8926),

Gene: Neptune_16 Start: 8486, Stop: 9220, Start Num: 25
Candidate Starts for Neptune_16:
(Start: 25 @8486 has 42 MA's), (31, 8507), (34, 8537), (54, 8891),

Gene: Nettle_13 Start: 11024, Stop: 11863, Start Num: 17
Candidate Starts for Nettle_13:
(Start: 17 @11024 has 1 MA's), (Start: 19 @11078 has 39 MA's), (20, 11087), (37, 11342), (55, 11546), (58, 11591), (60, 11609), (66, 11699), (67, 11804),

Gene: NorManre_14 Start: 10407, Stop: 11195, Start Num: 19
Candidate Starts for NorManre_14:
(Start: 17 @10353 has 1 MA's), (Start: 19 @10407 has 39 MA's), (20, 10416), (37, 10674), (55, 10878), (58, 10923), (60, 10941), (66, 11031), (67, 11136),

Gene: Nova_14 Start: 10153, Stop: 10860, Start Num: 23
Candidate Starts for Nova_14:
(11, 9895), (12, 9913), (13, 9952), (14, 10018), (Start: 23 @10153 has 23 MA's), (32, 10192), (41, 10432), (58, 10630), (66, 10738), (68, 10852),

Gene: NovaSharks_12 Start: 8415, Stop: 9203, Start Num: 19
Candidate Starts for NovaSharks_12:
(15, 8328), (Start: 17 @8361 has 1 MA's), (Start: 19 @8415 has 39 MA's), (20, 8424), (37, 8682), (55, 8886), (58, 8931), (60, 8949), (66, 9039), (67, 9144), (73, 9189),

Gene: OhDear_16 Start: 8515, Stop: 9249, Start Num: 25
Candidate Starts for OhDear_16:
(Start: 25 @8515 has 42 MA's), (31, 8536), (34, 8566), (54, 8920),

Gene: OtterstedtS21_13 Start: 10497, Stop: 11285, Start Num: 19
Candidate Starts for OtterstedtS21_13:
(Start: 17 @10443 has 1 MA's), (Start: 19 @10497 has 39 MA's), (20, 10506), (37, 10764), (55, 10968), (58, 11013), (60, 11031), (66, 11121), (67, 11226),

Gene: OverHedge_16 Start: 8483, Stop: 9217, Start Num: 25
Candidate Starts for OverHedge_16:
(Start: 25 @8483 has 42 MA's), (31, 8504), (34, 8534), (54, 8888),

Gene: PBI1_15 Start: 9660, Stop: 10367, Start Num: 23
Candidate Starts for PBI1_15:
(11, 9402), (12, 9420), (13, 9459), (14, 9525), (Start: 23 @9660 has 23 MA's), (32, 9699), (41, 9939), (58, 10137), (66, 10245), (68, 10359),

Gene: PLot_15 Start: 9732, Stop: 10439, Start Num: 23
Candidate Starts for PLot_15:
(11, 9474), (12, 9492), (13, 9531), (14, 9597), (Start: 23 @9732 has 23 MA's), (32, 9771), (41, 10011), (58, 10209), (66, 10317), (68, 10431),

Gene: ParvusTarda_13 Start: 9979, Stop: 10767, Start Num: 19
Candidate Starts for ParvusTarda_13:
(Start: 17 @9925 has 1 MA's), (Start: 19 @9979 has 39 MA's), (20, 9988), (37, 10246), (55, 10450), (58, 10495), (60, 10513), (66, 10603), (67, 10708),

Gene: Patos_14 Start: 10407, Stop: 11195, Start Num: 19
Candidate Starts for Patos_14:
(Start: 17 @10353 has 1 MA's), (Start: 19 @10407 has 39 MA's), (20, 10416), (37, 10674), (55, 10878), (58, 10923), (60, 10941), (66, 11031), (67, 11136),

Gene: Penelope2018_14 Start: 9729, Stop: 10436, Start Num: 23
Candidate Starts for Penelope2018_14:
(11, 9471), (12, 9489), (13, 9528), (14, 9594), (Start: 23 @9729 has 23 MA's), (32, 9768), (41, 10008), (58, 10206), (66, 10314), (68, 10428),

Gene: Phalaborwa_14 Start: 9771, Stop: 10478, Start Num: 23
Candidate Starts for Phalaborwa_14:
(13, 9570), (14, 9636), (Start: 23 @9771 has 23 MA's), (32, 9810), (33, 9816), (41, 10050), (58, 10248), (59, 10260), (66, 10356), (68, 10470),

Gene: Pharpay_16 Start: 8531, Stop: 9265, Start Num: 25
Candidate Starts for Pharpay_16:
(Start: 25 @8531 has 42 MA's), (31, 8552), (34, 8582), (54, 8936),

Gene: PhunaPhoke_16 Start: 8504, Stop: 9238, Start Num: 25
Candidate Starts for PhunaPhoke_16:
(Start: 25 @8504 has 42 MA's), (31, 8525), (34, 8555), (54, 8909),

Gene: Potty_16 Start: 8509, Stop: 9243, Start Num: 25
Candidate Starts for Potty_16:
(Start: 25 @8509 has 42 MA's), (31, 8530), (34, 8560), (54, 8914),

Gene: Poultress_15 Start: 8283, Stop: 9017, Start Num: 25
Candidate Starts for Poultress_15:
(Start: 25 @8283 has 42 MA's), (31, 8304), (34, 8334), (54, 8688),

Gene: Prager_14 Start: 9738, Stop: 10445, Start Num: 23
Candidate Starts for Prager_14:
(13, 9537), (14, 9603), (Start: 23 @9738 has 23 MA's), (32, 9777), (41, 10017), (58, 10215), (66, 10323), (68, 10437),

Gene: Pywacket_13 Start: 11336, Stop: 12124, Start Num: 19
Candidate Starts for Pywacket_13:
(15, 11249), (Start: 17 @11282 has 1 MA's), (Start: 19 @11336 has 39 MA's), (20, 11345), (37, 11603), (55, 11807), (58, 11852), (60, 11870), (66, 11960), (67, 12065),

Gene: Rachella_16 Start: 8515, Stop: 9249, Start Num: 25
Candidate Starts for Rachella_16:
(Start: 25 @8515 has 42 MA's), (31, 8536), (34, 8566), (54, 8920),

Gene: Ranch_13 Start: 9348, Stop: 10133, Start Num: 19
Candidate Starts for Ranch_13:

(Start: 17 @9294 has 1 MA's), (Start: 19 @9348 has 39 MA's), (20, 9357), (37, 9612), (55, 9816), (58, 9861), (60, 9879), (66, 9969), (67, 10074),

Gene: RazorC_12 Start: 8415, Stop: 9203, Start Num: 19
Candidate Starts for RazorC_12:
(15, 8328), (Start: 17 @8361 has 1 MA's), (Start: 19 @8415 has 39 MA's), (20, 8424), (37, 8682), (55, 8886), (58, 8931), (60, 8949), (66, 9039), (67, 9144), (73, 9189),

Gene: Riduram_12 Start: 8385, Stop: 9173, Start Num: 19
Candidate Starts for Riduram_12:
(15, 8298), (Start: 17 @8331 has 1 MA's), (Start: 19 @8385 has 39 MA's), (20, 8394), (37, 8652), (55, 8856), (58, 8901), (60, 8919), (66, 9009), (67, 9114), (73, 9159),

Gene: Rie18_16 Start: 7869, Stop: 8603, Start Num: 25
Candidate Starts for Rie18_16:
(Start: 25 @7869 has 42 MA's), (31, 7890), (34, 7920), (54, 8274),

Gene: RikSengupta_17 Start: 8438, Stop: 9175, Start Num: 25
Candidate Starts for RikSengupta_17:
(18, 8348), (Start: 25 @8438 has 42 MA's), (Start: 26 @8441 has 2 MA's), (29, 8453), (44, 8765), (52, 8837), (58, 8918), (61, 8945),

Gene: Rota_13 Start: 10306, Stop: 11091, Start Num: 19
Candidate Starts for Rota_13:
(Start: 17 @10252 has 1 MA's), (Start: 19 @10306 has 39 MA's), (20, 10315), (37, 10570), (55, 10774), (58, 10819), (60, 10837), (66, 10927), (67, 11032),

Gene: Rukungu_14 Start: 11044, Stop: 11832, Start Num: 19
Candidate Starts for Rukungu_14:
(Start: 17 @10990 has 1 MA's), (Start: 19 @11044 has 39 MA's), (20, 11053), (37, 11311), (55, 11515), (58, 11560), (60, 11578), (66, 11668), (67, 11773),

Gene: Rumi_12 Start: 8415, Stop: 9203, Start Num: 19
Candidate Starts for Rumi_12:
(15, 8328), (Start: 17 @8361 has 1 MA's), (Start: 19 @8415 has 39 MA's), (20, 8424), (37, 8682), (55, 8886), (58, 8931), (60, 8949), (66, 9039), (67, 9144), (73, 9189),

Gene: Sadboi_13 Start: 11175, Stop: 11963, Start Num: 19
Candidate Starts for Sadboi_13:
(15, 11088), (Start: 17 @11121 has 1 MA's), (Start: 19 @11175 has 39 MA's), (20, 11184), (37, 11442), (55, 11646), (58, 11691), (60, 11709), (66, 11799), (67, 11904),

Gene: SafetyGuy_16 Start: 8515, Stop: 9249, Start Num: 25
Candidate Starts for SafetyGuy_16:
(Start: 25 @8515 has 42 MA's), (31, 8536), (34, 8566), (54, 8920),

Gene: Sampudon_14 Start: 11351, Stop: 12139, Start Num: 19
Candidate Starts for Sampudon_14:
(Start: 17 @11297 has 1 MA's), (Start: 19 @11351 has 39 MA's), (20, 11360), (37, 11618), (55, 11822), (58, 11867), (60, 11885), (66, 11975), (67, 12080),

Gene: Sienna_9 Start: 5939, Stop: 6685, Start Num: 22
Candidate Starts for Sienna_9:

(Start: 22 @5939 has 8 MA's), (36, 6167), (48, 6323), (51, 6344), (57, 6416), (62, 6452), (63, 6473), (66, 6527), (72, 6671),

Gene: SilentWarrior_15 Start: 7720, Stop: 8454, Start Num: 25
Candidate Starts for SilentWarrior_15:
(Start: 25 @7720 has 42 MA's), (31, 7741), (34, 7771), (35, 7918), (63, 8242),

Gene: SirHarley_13 Start: 9658, Stop: 10365, Start Num: 23
Candidate Starts for SirHarley_13:
(11, 9400), (12, 9418), (13, 9457), (14, 9523), (Start: 23 @9658 has 23 MA's), (32, 9697), (41, 9937), (58, 10135), (66, 10243), (68, 10357),

Gene: Snakehole_17 Start: 7808, Stop: 8542, Start Num: 25
Candidate Starts for Snakehole_17:
(Start: 25 @7808 has 42 MA's), (31, 7829), (34, 7859), (63, 8330),

Gene: Sparcetus_17 Start: 8317, Stop: 9054, Start Num: 25
Candidate Starts for Sparcetus_17:
(18, 8227), (Start: 25 @8317 has 42 MA's), (Start: 26 @8320 has 2 MA's), (29, 8332), (44, 8644), (52, 8716), (58, 8797), (61, 8824),

Gene: Stormer_12 Start: 8415, Stop: 9203, Start Num: 19
Candidate Starts for Stormer_12:
(15, 8328), (Start: 17 @8361 has 1 MA's), (Start: 19 @8415 has 39 MA's), (20, 8424), (37, 8682), (55, 8886), (58, 8931), (60, 8949), (66, 9039), (67, 9144), (73, 9189),

Gene: SuperheroCarly_14 Start: 9591, Stop: 10298, Start Num: 23
Candidate Starts for SuperheroCarly_14:
(11, 9333), (12, 9351), (13, 9390), (14, 9456), (16, 9489), (Start: 23 @9591 has 23 MA's), (32, 9630), (41, 9870), (58, 10068), (66, 10176), (68, 10290),

Gene: Suzy_10 Start: 7182, Stop: 7928, Start Num: 22
Candidate Starts for Suzy_10:
(Start: 22 @7182 has 8 MA's), (36, 7410), (48, 7566), (51, 7587), (57, 7659), (62, 7695), (63, 7716), (66, 7770), (72, 7914),

Gene: Tedro_16 Start: 7985, Stop: 8719, Start Num: 25
Candidate Starts for Tedro_16:
(Start: 25 @7985 has 42 MA's), (31, 8006), (34, 8036), (54, 8390),

Gene: Terapin_9 Start: 5939, Stop: 6685, Start Num: 22
Candidate Starts for Terapin_9:
(Start: 22 @5939 has 8 MA's), (36, 6167), (48, 6323), (51, 6344), (57, 6416), (62, 6452), (63, 6473), (66, 6527), (72, 6671),

Gene: Thoth_14 Start: 9726, Stop: 10433, Start Num: 23
Candidate Starts for Thoth_14:
(11, 9468), (12, 9486), (13, 9525), (14, 9591), (Start: 23 @9726 has 23 MA's), (32, 9765), (41, 10005), (58, 10203), (66, 10311), (68, 10425),

Gene: Tiggy93_16 Start: 8515, Stop: 9249, Start Num: 25
Candidate Starts for Tiggy93_16:
(Start: 25 @8515 has 42 MA's), (31, 8536), (34, 8566), (54, 8920),

Gene: Tillicus_14 Start: 9713, Stop: 10513, Start Num: 19
Candidate Starts for Tillicus_14:
(Start: 19 @9713 has 39 MA's), (20, 9722), (37, 9977), (45, 10085), (55, 10184), (58, 10229), (60, 10247), (67, 10454),

Gene: TinyMiny_17 Start: 8336, Stop: 9073, Start Num: 25
Candidate Starts for TinyMiny_17:
(18, 8246), (Start: 25 @8336 has 42 MA's), (Start: 26 @8339 has 2 MA's), (29, 8351), (44, 8663), (52, 8735), (58, 8816), (61, 8843),

Gene: Tongui_15 Start: 7849, Stop: 8589, Start Num: 25
Candidate Starts for Tongui_15:
(Start: 25 @7849 has 42 MA's), (31, 7870), (34, 7900), (63, 8371),

Gene: Troll4_14 Start: 9730, Stop: 10437, Start Num: 23
Candidate Starts for Troll4_14:
(11, 9472), (12, 9490), (13, 9529), (14, 9595), (Start: 23 @9730 has 23 MA's), (32, 9769), (41, 10009), (58, 10207), (66, 10315), (68, 10429),

Gene: Visconti_14 Start: 9739, Stop: 10446, Start Num: 23
Candidate Starts for Visconti_14:
(11, 9481), (12, 9499), (13, 9538), (14, 9604), (Start: 23 @9739 has 23 MA's), (32, 9778), (41, 10018), (58, 10216), (66, 10324), (68, 10438),

Gene: WaldoWhy_15 Start: 9732, Stop: 10439, Start Num: 23
Candidate Starts for WaldoWhy_15:
(11, 9474), (12, 9492), (13, 9531), (14, 9597), (Start: 23 @9732 has 23 MA's), (32, 9771), (41, 10011), (58, 10209), (66, 10317), (68, 10431),

Gene: WinnieLou_17 Start: 8154, Stop: 8888, Start Num: 25
Candidate Starts for WinnieLou_17:
(Start: 25 @8154 has 42 MA's), (31, 8175), (34, 8205), (54, 8559),

Gene: Wojtek_12 Start: 10037, Stop: 10840, Start Num: 19
Candidate Starts for Wojtek_12:
(Start: 19 @10037 has 39 MA's), (20, 10046), (37, 10304), (45, 10412), (55, 10511), (58, 10556), (60, 10574), (67, 10781),

Gene: Wollypog_4 Start: 5058, Stop: 5780, Start Num: 27
Candidate Starts for Wollypog_4:
(Start: 27 @5058 has 1 MA's), (30, 5070), (65, 5607),

Gene: Xenia2_13 Start: 10096, Stop: 10884, Start Num: 19
Candidate Starts for Xenia2_13:
(Start: 19 @10096 has 39 MA's), (37, 10360), (38, 10384), (50, 10507), (60, 10624), (66, 10714), (67, 10825), (70, 10849),

Gene: Yikes_14 Start: 11385, Stop: 12224, Start Num: 17
Candidate Starts for Yikes_14:
(Start: 17 @11385 has 1 MA's), (Start: 19 @11439 has 39 MA's), (20, 11448), (37, 11703), (55, 11907), (58, 11952), (60, 11970), (66, 12060), (67, 12165),

Gene: Zany_13 Start: 10565, Stop: 11353, Start Num: 19
Candidate Starts for Zany_13:
(Start: 17 @10511 has 1 MA's), (Start: 19 @10565 has 39 MA's), (20, 10574), (37, 10832), (55, 11036), (58, 11081), (60, 11099), (66, 11189), (67, 11294),