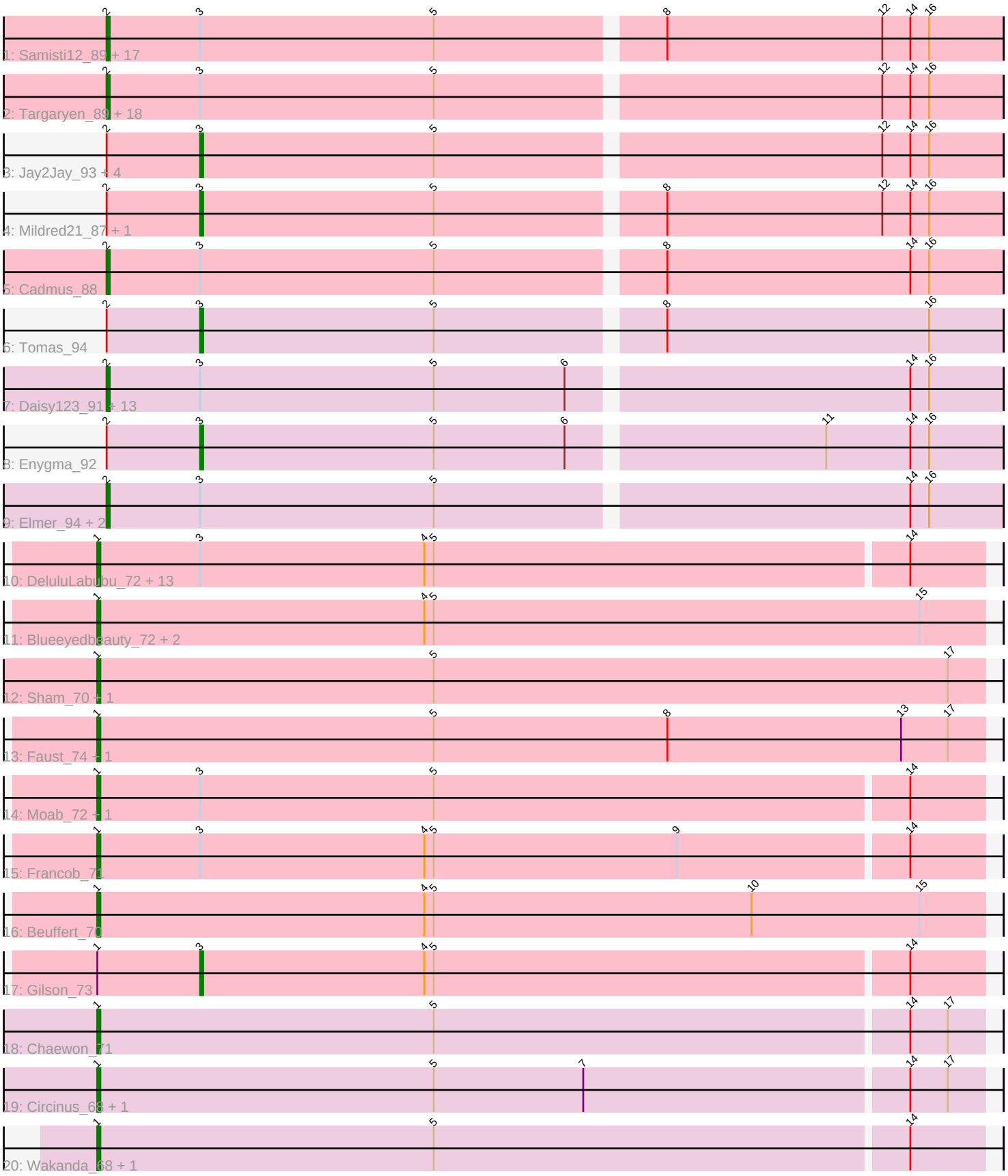
Pham 343853


1: Samisti12_89 + 17
2: Targaryen_89 + 18
3: Jay2Jay_93 + 4
4: Mildred21_87 + 1
5: Cadmus_88
6: Tomas_94
7: Daisy123_91 + 13
8: Enygma_92
9: Elmer_94 + 2
10: DeluluLabubu_72 + 13
11: Blueeyedbeauty_72 + 2
12: Sham_70 + 1
13: Faust_74 + 1
14: Moab_72 + 1
15: Francob_71
16: Beuffert_70
17: Gilson_73
18: Chaewon_71
19: Circinus_68 + 1
20: Wakanda_68 + 1

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 343853 Report

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

Pham number 343853 has 95 members, 3 are drafts.

Phages represented in each track:
• Track 1 : Samisti12_89, Scheme_90, Lululemon_88, ArianaSWT_90, Larnav_89, Shuckle_87, Cursive_87, PacManQ_88, Leo04_90, Coogler_89, Tribute_87, HangryHippo_89, Teutsch_89, Pepperwood_89, BlueOtter_89, EGole_90, Sushi23_88, Cross_89
• Track 2 : Targaryen_89, MulchMansion_86, Squillium_88, Bartholomune_87, FreddyDRoo_87, Marsus_87, PinkiePie_87, LilMartin_86, Riptide_85, Braelyn_89, Bmoc_87, PynkPanther_87, Paradiddles_84, Navo_86, Anedea_88, Liandry_87, LilSaint_87, Persimmon_87, Angela_86
• Track 3 : Jay2Jay_93, Eliot67_86, Warpy_92, NootNoot_84, Evy_89
• Track 4 : Mildred21_87, Peebs_88
• Track 5 : Cadmus_88
• Track 6 : Tomas_94
• Track 7 : Daisy123_91, Genie2_92, Brizzy_91, BoomerJR_92, Stanimal_92, StarPlatinum_92, Sollertia_92, Wipeout_89, TomSawyer_90, Mugiwara_91, Yaboi_92, Bordeaux_90, KentuckyRacer_92, Birchlyn_89
• Track 8 : Enygma_92
• Track 9 : Elmer_94, Wofford_91, LukeCage_91
• Track 10 : DeluluLabubu_72, Comrade_72, Phredrick_72, Forrest_75, Emma1919_74, Karp_70, MeganTheeKilla_71, Kenrey_74, Jada_73, Maupel_72, SparkleGoddess_72, Stigma_71, Belfort_74, Westy_73
• Track 11 : Blueeyedbeauty_72, Annadreamy_70, Limpid_69
• Track 12 : Sham_70, TunaTartare_73
• Track 13 : Faust_74, SeresaTree_74
• Track 14 : Moab_72, Patelgo_72
• Track 15 : Francob_71
• Track 16 : Beuffert_70
• Track 17 : Gilson_73
• Track 18 : Chaewon_71
• Track 19 : Circinus_68, BillNye_67
• Track 20 : Wakanda_68, Muntaha_69

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

The start number called the most often in the published annotations is 2, it was called in 55 of the 92 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Anedea_88, Angela_86, ArianaSWT_90, Bartholomune_87, Birchlyn_89, BlueOtter_89, Bmoc_87, BoomerJR_92, Bordeaux_90, Braelyn_89, Brizzy_91, Cadmus_88, Coogler_89, Cross_89, Cursive_87, Daisy123_91, EGole_90, Elmer_94, FreddyDRoo_87, Genie2_92, HangryHippo_89, KentuckyRacer_92, Larnav_89, Leo04_90, Liandry_87, LilMartin_86, LilSaint_87, LukeCage_91, Lululemon_88, Marsus_87, Mugiwara_91, MulchMansion_86, Navo_86, PacManQ_88, Paradiddles_84, Pepperwood_89, Persimmon_87, PinkiePie_87, PynkPanther_87, Riptide_85, Samisti12_89, Scheme_90, Shuckle_87, Sollertia_92, Squillium_88, Stanimal_92, StarPlatinum_92, Sushi23_88, Targaryen_89, Teutsch_89, TomSawyer_90, Tribute_87, Wipeout_89, Wofford_91, Yaboi_92,

Genes that have the "Most Annotated" start but do not call it:
• Eliot67_86, Enygma_92, Evy_89, Jay2Jay_93, Mildred21_87, NootNoot_84, Peebs_88, Tomas_94, Warpy_92,

Genes that do not have the "Most Annotated" start:
• Annadreamy_70, Belfort_74, Beuffert_70, BillNye_67, Blueeyedbeauty_72, Chaewon_71, Circinus_68, Comrade_72, DeluluLabubu_72, Emma1919_74, Faust_74, Forrest_75, Francob_71, Gilson_73, Jada_73, Karp_70, Kenrey_74, Limpid_69, Maupel_72, MeganTheeKilla_71, Moab_72, Muntaha_69, Patelgo_72, Phredrick_72, SeresaTree_74, Sham_70, SparkleGoddess_72, Stigma_71, TunaTartare_73, Wakanda_68, Westy_73,

Summary by start number:

Start 1:
• Found in 31 of 95 (32.6%) of genes in pham
• Manual Annotations of this start: 28 of 92
• Called 96.8% of time when present
• Phage (with cluster) where this start called: Annadreamy_70 (BK1), Belfort_74 (BK1), Beuffert_70 (BK1), BillNye_67 (BK2), Blueeyedbeauty_72 (BK1), Chaewon_71 (BK2), Circinus_68 (BK2), Comrade_72 (BK1), DeluluLabubu_72 (BK1), Emma1919_74 (BK1), Faust_74 (BK1), Forrest_75 (BK1), Francob_71 (BK1), Jada_73 (BK1), Karp_70 (BK1), Kenrey_74 (BK1), Limpid_69 (BK1), Maupel_72 (BK1), MeganTheeKilla_71 (BK1), Moab_72 (BK1), Muntaha_69 (BK2), Patelgo_72 (BK1), Phredrick_72 (BK1), SeresaTree_74 (BK1), Sham_70 (BK1), SparkleGoddess_72 (BK1), Stigma_71 (BK1), TunaTartare_73 (BK1), Wakanda_68 (BK2), Westy_73 (BK1),

Start 2:
• Found in 64 of 95 (67.4%) of genes in pham
• Manual Annotations of this start: 55 of 92
• Called 85.9% of time when present
• Phage (with cluster) where this start called: Anedea_88 (BE1), Angela_86 (BE1), ArianaSWT_90 (BE1), Bartholomune_87 (BE1), Birchlyn_89 (BE2), BlueOtter_89 (BE1), Bmoc_87 (BE1), BoomerJR_92 (BE2), Bordeaux_90 (BE2), Braelyn_89 (BE1), Brizzy_91 (BE2), Cadmus_88 (BE1), Coogler_89 (BE1), Cross_89 (BE1), Cursive_87 (BE1), Daisy123_91 (BE2), EGole_90 (BE1), Elmer_94 (BE2), FreddyDRoo_87 (BE1), Genie2_92 (BE2), HangryHippo_89 (BE1), KentuckyRacer_92 (BE2),

Larnav_89 (BE1), Leo04_90 (BE1), Liandry_87 (BE1), LilMartin_86 (BE1), LilSaint_87 (BE1), LukeCage_91 (BE2), Lululemon_88 (BE1), Marsus_87 (BE1), Mugiwara_91 (BE2), MulchMansion_86 (BE1), Navo_86 (BE1), PacManQ_88 (BE1), Paradiddles_84 (BE1), Pepperwood_89 (BE1), Persimmon_87 (BE1), PinkiePie_87 (BE1), PynkPanther_87 (BE1), Riptide_85 (BE1), Samisti12_89 (BE1), Scheme_90 (BE1), Shuckle_87 (BE1), Sollertia_92 (BE2), Squillium_88 (BE1), Stanimal_92 (BE2), StarPlatinum_92 (BE2), Sushi23_88 (BE1), Targaryen_89 (BE1), Teutsch_89 (BE1), TomSawyer_90 (BE2), Tribute_87 (BE1), Wipeout_89 (BE2), Wofford_91 (BE2), Yaboi_92 (BE2),

Start 3:
• Found in 82 of 95 (86.3%) of genes in pham
• Manual Annotations of this start: 9 of 92
• Called 12.2% of time when present
• Phage (with cluster) where this start called: Eliot67_86 (BE1), Enygma_92 (BE2), Evy_89 (BE1), Gilson_73 (BK1), Jay2Jay_93 (BE1), Mildred21_87 (BE1), NootNoot_84 (BE1), Peebs_88 (BE1), Tomas_94 (BE2), Warpy_92 (BE1),

Summary by clusters:

There are 4 clusters represented in this pham: BE2, BE1, BK1, BK2,

Info for manual annotations of cluster BE1:
•Start number 2 was manually annotated 38 times for cluster BE1.
•Start number 3 was manually annotated 6 times for cluster BE1.

Info for manual annotations of cluster BE2:
•Start number 2 was manually annotated 17 times for cluster BE2.
•Start number 3 was manually annotated 2 times for cluster BE2.

Info for manual annotations of cluster BK1:
•Start number 1 was manually annotated 23 times for cluster BK1.
•Start number 3 was manually annotated 1 time for cluster BK1.

Info for manual annotations of cluster BK2:
•Start number 1 was manually annotated 5 times for cluster BK2.

Gene Information:

Gene: Anedea_88 Start: 64790, Stop: 65071, Start Num: 2
Candidate Starts for Anedea_88:
(Start: 2 @64790 has 55 MA's), (Start: 3 @64820 has 9 MA's), (5, 64895), (12, 65033), (14, 65042), (16, 65048),

Gene: Angela_86 Start: 64262, Stop: 64543, Start Num: 2
Candidate Starts for Angela_86:
(Start: 2 @64262 has 55 MA's), (Start: 3 @64292 has 9 MA's), (5, 64367), (12, 64505), (14, 64514), (16, 64520),

Gene: Annadreamy_70 Start: 55449, Stop: 55733, Start Num: 1
Candidate Starts for Annadreamy_70:

(Start: 1 @55449 has 28 MA's), (4, 55554), (5, 55557), (15, 55713),

Gene: ArianaSWT_90 Start: 65996, Stop: 66277, Start Num: 2
Candidate Starts for ArianaSWT_90:
(Start: 2 @65996 has 55 MA's), (Start: 3 @66026 has 9 MA's), (5, 66101), (8, 66170), (12, 66239), (14, 66248), (16, 66254),

Gene: Bartholomune_87 Start: 64689, Stop: 64970, Start Num: 2
Candidate Starts for Bartholomune_87:
(Start: 2 @64689 has 55 MA's), (Start: 3 @64719 has 9 MA's), (5, 64794), (12, 64932), (14, 64941), (16, 64947),

Gene: Belfort_74 Start: 57605, Stop: 57886, Start Num: 1
Candidate Starts for Belfort_74:
(Start: 1 @57605 has 28 MA's), (Start: 3 @57638 has 9 MA's), (4, 57710), (5, 57713), (14, 57863),

Gene: Beuffert_70 Start: 56573, Stop: 56857, Start Num: 1
Candidate Starts for Beuffert_70:
(Start: 1 @56573 has 28 MA's), (4, 56678), (5, 56681), (10, 56783), (15, 56837),

Gene: BillNye_67 Start: 58884, Stop: 59165, Start Num: 1
Candidate Starts for BillNye_67:
(Start: 1 @58884 has 28 MA's), (5, 58992), (7, 59040), (14, 59142), (17, 59154),

Gene: Birchlyn_89 Start: 63344, Stop: 63625, Start Num: 2
Candidate Starts for Birchlyn_89:
(Start: 2 @63344 has 55 MA's), (Start: 3 @63374 has 9 MA's), (5, 63449), (6, 63491), (14, 63596), (16, 63602),

Gene: BlueOtter_89 Start: 66033, Stop: 66314, Start Num: 2
Candidate Starts for BlueOtter_89:
(Start: 2 @66033 has 55 MA's), (Start: 3 @66063 has 9 MA's), (5, 66138), (8, 66207), (12, 66276), (14, 66285), (16, 66291),

Gene: Blueeyedbeauty_72 Start: 55966, Stop: 56250, Start Num: 1
Candidate Starts for Blueeyedbeauty_72:
(Start: 1 @55966 has 28 MA's), (4, 56071), (5, 56074), (15, 56230),

Gene: Bmoc_87 Start: 64628, Stop: 64909, Start Num: 2
Candidate Starts for Bmoc_87:
(Start: 2 @64628 has 55 MA's), (Start: 3 @64658 has 9 MA's), (5, 64733), (12, 64871), (14, 64880), (16, 64886),

Gene: BoomerJR_92 Start: 65329, Stop: 65610, Start Num: 2
Candidate Starts for BoomerJR_92:
(Start: 2 @65329 has 55 MA's), (Start: 3 @65359 has 9 MA's), (5, 65434), (6, 65476), (14, 65581), (16, 65587),

Gene: Bordeaux_90 Start: 65616, Stop: 65897, Start Num: 2
Candidate Starts for Bordeaux_90:
(Start: 2 @65616 has 55 MA's), (Start: 3 @65646 has 9 MA's), (5, 65721), (6, 65763), (14, 65868), (16, 65874),

Gene: Braelyn_89 Start: 65453, Stop: 65734, Start Num: 2
Candidate Starts for Braelyn_89:
(Start: 2 @65453 has 55 MA's), (Start: 3 @65483 has 9 MA's), (5, 65558), (12, 65696), (14, 65705), (16, 65711),

Gene: Brizzy_91 Start: 65135, Stop: 65416, Start Num: 2
Candidate Starts for Brizzy_91:
(Start: 2 @65135 has 55 MA's), (Start: 3 @65165 has 9 MA's), (5, 65240), (6, 65282), (14, 65387), (16, 65393),

Gene: Cadmus_88 Start: 64982, Stop: 65263, Start Num: 2
Candidate Starts for Cadmus_88:
(Start: 2 @64982 has 55 MA's), (Start: 3 @65012 has 9 MA's), (5, 65087), (8, 65156), (14, 65234), (16, 65240),

Gene: Chaewon_71 Start: 58823, Stop: 59104, Start Num: 1
Candidate Starts for Chaewon_71:
(Start: 1 @58823 has 28 MA's), (5, 58931), (14, 59081), (17, 59093),

Gene: Circinus_68 Start: 58871, Stop: 59152, Start Num: 1
Candidate Starts for Circinus_68:
(Start: 1 @58871 has 28 MA's), (5, 58979), (7, 59027), (14, 59129), (17, 59141),

Gene: Comrade_72 Start: 57221, Stop: 57502, Start Num: 1
Candidate Starts for Comrade_72:
(Start: 1 @57221 has 28 MA's), (Start: 3 @57254 has 9 MA's), (4, 57326), (5, 57329), (14, 57479),

Gene: Coogler_89 Start: 66059, Stop: 66340, Start Num: 2
Candidate Starts for Coogler_89:
(Start: 2 @66059 has 55 MA's), (Start: 3 @66089 has 9 MA's), (5, 66164), (8, 66233), (12, 66302), (14, 66311), (16, 66317),

Gene: Cross_89 Start: 66034, Stop: 66315, Start Num: 2
Candidate Starts for Cross_89:
(Start: 2 @66034 has 55 MA's), (Start: 3 @66064 has 9 MA's), (5, 66139), (8, 66208), (12, 66277), (14, 66286), (16, 66292),

Gene: Cursive_87 Start: 65559, Stop: 65840, Start Num: 2
Candidate Starts for Cursive_87:
(Start: 2 @65559 has 55 MA's), (Start: 3 @65589 has 9 MA's), (5, 65664), (8, 65733), (12, 65802), (14, 65811), (16, 65817),

Gene: Daisy123_91 Start: 65235, Stop: 65516, Start Num: 2
Candidate Starts for Daisy123_91:
(Start: 2 @65235 has 55 MA's), (Start: 3 @65265 has 9 MA's), (5, 65340), (6, 65382), (14, 65487), (16, 65493),

Gene: DeluluLabubu_72 Start: 55244, Stop: 55525, Start Num: 1
Candidate Starts for DeluluLabubu_72:
(Start: 1 @55244 has 28 MA's), (Start: 3 @55277 has 9 MA's), (4, 55349), (5, 55352), (14, 55502),

Gene: EGole_90 Start: 66979, Stop: 67260, Start Num: 2
Candidate Starts for EGole_90:

(Start: 2 @66979 has 55 MA's), (Start: 3 @67009 has 9 MA's), (5, 67084), (8, 67153), (12, 67222), (14, 67231), (16, 67237),

Gene: Eliot67_86 Start: 64761, Stop: 65012, Start Num: 3
Candidate Starts for Eliot67_86:
(Start: 2 @64731 has 55 MA's), (Start: 3 @64761 has 9 MA's), (5, 64836), (12, 64974), (14, 64983), (16, 64989),

Gene: Elmer_94 Start: 66567, Stop: 66848, Start Num: 2
Candidate Starts for Elmer_94:
(Start: 2 @66567 has 55 MA's), (Start: 3 @66597 has 9 MA's), (5, 66672), (14, 66819), (16, 66825),

Gene: Emma1919_74 Start: 55918, Stop: 56199, Start Num: 1
Candidate Starts for Emma1919_74:
(Start: 1 @55918 has 28 MA's), (Start: 3 @55951 has 9 MA's), (4, 56023), (5, 56026), (14, 56176),

Gene: Enygma_92 Start: 67302, Stop: 67553, Start Num: 3
Candidate Starts for Enygma_92:
(Start: 2 @67272 has 55 MA's), (Start: 3 @67302 has 9 MA's), (5, 67377), (6, 67419), (11, 67497), (14, 67524), (16, 67530),

Gene: Evy_89 Start: 65963, Stop: 66214, Start Num: 3
Candidate Starts for Evy_89:
(Start: 2 @65933 has 55 MA's), (Start: 3 @65963 has 9 MA's), (5, 66038), (12, 66176), (14, 66185), (16, 66191),

Gene: Faust_74 Start: 57559, Stop: 57843, Start Num: 1
Candidate Starts for Faust_74:
(Start: 1 @57559 has 28 MA's), (5, 57667), (8, 57742), (13, 57817), (17, 57832),

Gene: Forrest_75 Start: 57211, Stop: 57492, Start Num: 1
Candidate Starts for Forrest_75:
(Start: 1 @57211 has 28 MA's), (Start: 3 @57244 has 9 MA's), (4, 57316), (5, 57319), (14, 57469),

Gene: Francob_71 Start: 55989, Stop: 56270, Start Num: 1
Candidate Starts for Francob_71:
(Start: 1 @55989 has 28 MA's), (Start: 3 @56022 has 9 MA's), (4, 56094), (5, 56097), (9, 56175), (14, 56247),

Gene: FreddyDRoo_87 Start: 64731, Stop: 65012, Start Num: 2
Candidate Starts for FreddyDRoo_87:
(Start: 2 @64731 has 55 MA's), (Start: 3 @64761 has 9 MA's), (5, 64836), (12, 64974), (14, 64983), (16, 64989),

Gene: Genie2_92 Start: 65443, Stop: 65724, Start Num: 2
Candidate Starts for Genie2_92:
(Start: 2 @65443 has 55 MA's), (Start: 3 @65473 has 9 MA's), (5, 65548), (6, 65590), (14, 65695), (16, 65701),

Gene: Gilson_73 Start: 55913, Stop: 56161, Start Num: 3
Candidate Starts for Gilson_73:
(Start: 1 @55880 has 28 MA's), (Start: 3 @55913 has 9 MA's), (4, 55985), (5, 55988), (14, 56138),

Gene: HangryHippo_89 Start: 66033, Stop: 66314, Start Num: 2
Candidate Starts for HangryHippo_89:
(Start: 2 @66033 has 55 MA's), (Start: 3 @66063 has 9 MA's), (5, 66138), (8, 66207), (12, 66276), (14, 66285), (16, 66291),

Gene: Jada_73 Start: 56393, Stop: 56674, Start Num: 1
Candidate Starts for Jada_73:
(Start: 1 @56393 has 28 MA's), (Start: 3 @56426 has 9 MA's), (4, 56498), (5, 56501), (14, 56651),

Gene: Jay2Jay_93 Start: 66815, Stop: 67066, Start Num: 3
Candidate Starts for Jay2Jay_93:
(Start: 2 @66785 has 55 MA's), (Start: 3 @66815 has 9 MA's), (5, 66890), (12, 67028), (14, 67037), (16, 67043),

Gene: Karp_70 Start: 56814, Stop: 57095, Start Num: 1
Candidate Starts for Karp_70:
(Start: 1 @56814 has 28 MA's), (Start: 3 @56847 has 9 MA's), (4, 56919), (5, 56922), (14, 57072),

Gene: Kenrey_74 Start: 56062, Stop: 56343, Start Num: 1
Candidate Starts for Kenrey_74:
(Start: 1 @56062 has 28 MA's), (Start: 3 @56095 has 9 MA's), (4, 56167), (5, 56170), (14, 56320),

Gene: KentuckyRacer_92 Start: 65377, Stop: 65658, Start Num: 2
Candidate Starts for KentuckyRacer_92:
(Start: 2 @65377 has 55 MA's), (Start: 3 @65407 has 9 MA's), (5, 65482), (6, 65524), (14, 65629), (16, 65635),

Gene: Larnav_89 Start: 66018, Stop: 66299, Start Num: 2
Candidate Starts for Larnav_89:
(Start: 2 @66018 has 55 MA's), (Start: 3 @66048 has 9 MA's), (5, 66123), (8, 66192), (12, 66261), (14, 66270), (16, 66276),

Gene: Leo04_90 Start: 66533, Stop: 66814, Start Num: 2
Candidate Starts for Leo04_90:
(Start: 2 @66533 has 55 MA's), (Start: 3 @66563 has 9 MA's), (5, 66638), (8, 66707), (12, 66776), (14, 66785), (16, 66791),

Gene: Liandry_87 Start: 65438, Stop: 65719, Start Num: 2
Candidate Starts for Liandry_87:
(Start: 2 @65438 has 55 MA's), (Start: 3 @65468 has 9 MA's), (5, 65543), (12, 65681), (14, 65690), (16, 65696),

Gene: LilMartin_86 Start: 64210, Stop: 64491, Start Num: 2
Candidate Starts for LilMartin_86:
(Start: 2 @64210 has 55 MA's), (Start: 3 @64240 has 9 MA's), (5, 64315), (12, 64453), (14, 64462), (16, 64468),

Gene: LilSaint_87 Start: 64463, Stop: 64744, Start Num: 2
Candidate Starts for LilSaint_87:
(Start: 2 @64463 has 55 MA's), (Start: 3 @64493 has 9 MA's), (5, 64568), (12, 64706), (14, 64715), (16, 64721),

Gene: Limpid_69 Start: 55448, Stop: 55732, Start Num: 1

Candidate Starts for Limpid_69:
(Start: 1 @55448 has 28 MA's), (4, 55553), (5, 55556), (15, 55712),

Gene: LukeCage_91 Start: 65350, Stop: 65631, Start Num: 2
Candidate Starts for LukeCage_91:
(Start: 2 @65350 has 55 MA's), (Start: 3 @65380 has 9 MA's), (5, 65455), (14, 65602), (16, 65608),

Gene: Lululemon_88 Start: 65414, Stop: 65695, Start Num: 2
Candidate Starts for Lululemon_88:
(Start: 2 @65414 has 55 MA's), (Start: 3 @65444 has 9 MA's), (5, 65519), (8, 65588), (12, 65657), (14, 65666), (16, 65672),

Gene: Marsus_87 Start: 64459, Stop: 64740, Start Num: 2
Candidate Starts for Marsus_87:
(Start: 2 @64459 has 55 MA's), (Start: 3 @64489 has 9 MA's), (5, 64564), (12, 64702), (14, 64711), (16, 64717),

Gene: Maupel_72 Start: 55880, Stop: 56161, Start Num: 1
Candidate Starts for Maupel_72:
(Start: 1 @55880 has 28 MA's), (Start: 3 @55913 has 9 MA's), (4, 55985), (5, 55988), (14, 56138),

Gene: MeganTheeKilla_71 Start: 55241, Stop: 55522, Start Num: 1
Candidate Starts for MeganTheeKilla_71:
(Start: 1 @55241 has 28 MA's), (Start: 3 @55274 has 9 MA's), (4, 55346), (5, 55349), (14, 55499),

Gene: Mildred21_87 Start: 64463, Stop: 64714, Start Num: 3
Candidate Starts for Mildred21_87:
(Start: 2 @64433 has 55 MA's), (Start: 3 @64463 has 9 MA's), (5, 64538), (8, 64607), (12, 64676), (14, 64685), (16, 64691),

Gene: Moab_72 Start: 57112, Stop: 57393, Start Num: 1
Candidate Starts for Moab_72:
(Start: 1 @57112 has 28 MA's), (Start: 3 @57145 has 9 MA's), (5, 57220), (14, 57370),

Gene: Mugiwara_91 Start: 65849, Stop: 66130, Start Num: 2
Candidate Starts for Mugiwara_91:
(Start: 2 @65849 has 55 MA's), (Start: 3 @65879 has 9 MA's), (5, 65954), (6, 65996), (14, 66101), (16, 66107),

Gene: MulchMansion_86 Start: 64210, Stop: 64491, Start Num: 2
Candidate Starts for MulchMansion_86:
(Start: 2 @64210 has 55 MA's), (Start: 3 @64240 has 9 MA's), (5, 64315), (12, 64453), (14, 64462), (16, 64468),

Gene: Muntaha_69 Start: 57220, Stop: 57501, Start Num: 1
Candidate Starts for Muntaha_69:
(Start: 1 @57220 has 28 MA's), (5, 57328), (14, 57478),

Gene: Navo_86 Start: 65357, Stop: 65638, Start Num: 2
Candidate Starts for Navo_86:
(Start: 2 @65357 has 55 MA's), (Start: 3 @65387 has 9 MA's), (5, 65462), (12, 65600), (14, 65609), (16, 65615),

Gene: NootNoot_84 Start: 64382, Stop: 64633, Start Num: 3
Candidate Starts for NootNoot_84:
(Start: 2 @64352 has 55 MA's), (Start: 3 @64382 has 9 MA's), (5, 64457), (12, 64595), (14, 64604), (16, 64610),

Gene: PacManQ_88 Start: 65414, Stop: 65695, Start Num: 2
Candidate Starts for PacManQ_88:
(Start: 2 @65414 has 55 MA's), (Start: 3 @65444 has 9 MA's), (5, 65519), (8, 65588), (12, 65657), (14, 65666), (16, 65672),

Gene: Paradiddles_84 Start: 64616, Stop: 64897, Start Num: 2
Candidate Starts for Paradiddles_84:
(Start: 2 @64616 has 55 MA's), (Start: 3 @64646 has 9 MA's), (5, 64721), (12, 64859), (14, 64868), (16, 64874),

Gene: Patelgo_72 Start: 57275, Stop: 57556, Start Num: 1
Candidate Starts for Patelgo_72:
(Start: 1 @57275 has 28 MA's), (Start: 3 @57308 has 9 MA's), (5, 57383), (14, 57533),

Gene: Peebs_88 Start: 65798, Stop: 66049, Start Num: 3
Candidate Starts for Peebs_88:
(Start: 2 @65768 has 55 MA's), (Start: 3 @65798 has 9 MA's), (5, 65873), (8, 65942), (12, 66011), (14, 66020), (16, 66026),

Gene: Pepperwood_89 Start: 65901, Stop: 66182, Start Num: 2
Candidate Starts for Pepperwood_89:
(Start: 2 @65901 has 55 MA's), (Start: 3 @65931 has 9 MA's), (5, 66006), (8, 66075), (12, 66144), (14, 66153), (16, 66159),

Gene: Persimmon_87 Start: 64285, Stop: 64566, Start Num: 2
Candidate Starts for Persimmon_87:
(Start: 2 @64285 has 55 MA's), (Start: 3 @64315 has 9 MA's), (5, 64390), (12, 64528), (14, 64537), (16, 64543),

Gene: Phredrick_72 Start: 55142, Stop: 55423, Start Num: 1
Candidate Starts for Phredrick_72:
(Start: 1 @55142 has 28 MA's), (Start: 3 @55175 has 9 MA's), (4, 55247), (5, 55250), (14, 55400),

Gene: PinkiePie_87 Start: 65438, Stop: 65719, Start Num: 2
Candidate Starts for PinkiePie_87:
(Start: 2 @65438 has 55 MA's), (Start: 3 @65468 has 9 MA's), (5, 65543), (12, 65681), (14, 65690), (16, 65696),

Gene: PynkPanther_87 Start: 65418, Stop: 65699, Start Num: 2
Candidate Starts for PynkPanther_87:
(Start: 2 @65418 has 55 MA's), (Start: 3 @65448 has 9 MA's), (5, 65523), (12, 65661), (14, 65670), (16, 65676),

Gene: Riptide_85 Start: 64007, Stop: 64288, Start Num: 2
Candidate Starts for Riptide_85:
(Start: 2 @64007 has 55 MA's), (Start: 3 @64037 has 9 MA's), (5, 64112), (12, 64250), (14, 64259), (16, 64265),

Gene: Samisti12_89 Start: 67210, Stop: 67491, Start Num: 2
Candidate Starts for Samisti12_89:
(Start: 2 @67210 has 55 MA's), (Start: 3 @67240 has 9 MA's), (5, 67315), (8, 67384), (12, 67453), (14, 67462), (16, 67468),

Gene: Scheme_90 Start: 66615, Stop: 66896, Start Num: 2
Candidate Starts for Scheme_90:
(Start: 2 @66615 has 55 MA's), (Start: 3 @66645 has 9 MA's), (5, 66720), (8, 66789), (12, 66858), (14, 66867), (16, 66873),

Gene: SeresaTree_74 Start: 56949, Stop: 57233, Start Num: 1
Candidate Starts for SeresaTree_74:
(Start: 1 @56949 has 28 MA's), (5, 57057), (8, 57132), (13, 57207), (17, 57222),

Gene: Sham_70 Start: 57627, Stop: 57911, Start Num: 1
Candidate Starts for Sham_70:
(Start: 1 @57627 has 28 MA's), (5, 57735), (17, 57900),

Gene: Shuckle_87 Start: 66223, Stop: 66504, Start Num: 2
Candidate Starts for Shuckle_87:
(Start: 2 @66223 has 55 MA's), (Start: 3 @66253 has 9 MA's), (5, 66328), (8, 66397), (12, 66466), (14, 66475), (16, 66481),

Gene: Sollertia_92 Start: 65443, Stop: 65724, Start Num: 2
Candidate Starts for Sollertia_92:
(Start: 2 @65443 has 55 MA's), (Start: 3 @65473 has 9 MA's), (5, 65548), (6, 65590), (14, 65695), (16, 65701),

Gene: SparkleGoddess_72 Start: 57222, Stop: 57503, Start Num: 1
Candidate Starts for SparkleGoddess_72:
(Start: 1 @57222 has 28 MA's), (Start: 3 @57255 has 9 MA's), (4, 57327), (5, 57330), (14, 57480),

Gene: Squillium_88 Start: 65439, Stop: 65720, Start Num: 2
Candidate Starts for Squillium_88:
(Start: 2 @65439 has 55 MA's), (Start: 3 @65469 has 9 MA's), (5, 65544), (12, 65682), (14, 65691), (16, 65697),

Gene: Stanimal_92 Start: 65332, Stop: 65613, Start Num: 2
Candidate Starts for Stanimal_92:
(Start: 2 @65332 has 55 MA's), (Start: 3 @65362 has 9 MA's), (5, 65437), (6, 65479), (14, 65584), (16, 65590),

Gene: StarPlatinum_92 Start: 65995, Stop: 66276, Start Num: 2
Candidate Starts for StarPlatinum_92:
(Start: 2 @65995 has 55 MA's), (Start: 3 @66025 has 9 MA's), (5, 66100), (6, 66142), (14, 66247), (16, 66253),

Gene: Stigma_71 Start: 57230, Stop: 57511, Start Num: 1
Candidate Starts for Stigma_71:
(Start: 1 @57230 has 28 MA's), (Start: 3 @57263 has 9 MA's), (4, 57335), (5, 57338), (14, 57488),

Gene: Sushi23_88 Start: 66126, Stop: 66407, Start Num: 2
Candidate Starts for Sushi23_88:

(Start: 2 @66126 has 55 MA's), (Start: 3 @66156 has 9 MA's), (5, 66231), (8, 66300), (12, 66369), (14, 66378), (16, 66384),

Gene: Targaryen_89 Start: 66835, Stop: 67116, Start Num: 2
Candidate Starts for Targaryen_89:
(Start: 2 @66835 has 55 MA's), (Start: 3 @66865 has 9 MA's), (5, 66940), (12, 67078), (14, 67087), (16, 67093),

Gene: Teutsch_89 Start: 66389, Stop: 66670, Start Num: 2
Candidate Starts for Teutsch_89:
(Start: 2 @66389 has 55 MA's), (Start: 3 @66419 has 9 MA's), (5, 66494), (8, 66563), (12, 66632), (14, 66641), (16, 66647),

Gene: TomSawyer_90 Start: 65078, Stop: 65359, Start Num: 2
Candidate Starts for TomSawyer_90:
(Start: 2 @65078 has 55 MA's), (Start: 3 @65108 has 9 MA's), (5, 65183), (6, 65225), (14, 65330), (16, 65336),

Gene: Tomas_94 Start: 68273, Stop: 68524, Start Num: 3
Candidate Starts for Tomas_94:
(Start: 2 @68243 has 55 MA's), (Start: 3 @68273 has 9 MA's), (5, 68348), (8, 68417), (16, 68501),

Gene: Tribute_87 Start: 65595, Stop: 65876, Start Num: 2
Candidate Starts for Tribute_87:
(Start: 2 @65595 has 55 MA's), (Start: 3 @65625 has 9 MA's), (5, 65700), (8, 65769), (12, 65838), (14, 65847), (16, 65853),

Gene: TunaTartare_73 Start: 58127, Stop: 58411, Start Num: 1
Candidate Starts for TunaTartare_73:
(Start: 1 @58127 has 28 MA's), (5, 58235), (17, 58400),

Gene: Wakanda_68 Start: 57157, Stop: 57438, Start Num: 1
Candidate Starts for Wakanda_68:
(Start: 1 @57157 has 28 MA's), (5, 57265), (14, 57415),

Gene: Warpy_92 Start: 66328, Stop: 66579, Start Num: 3
Candidate Starts for Warpy_92:
(Start: 2 @66298 has 55 MA's), (Start: 3 @66328 has 9 MA's), (5, 66403), (12, 66541), (14, 66550), (16, 66556),

Gene: Westy_73 Start: 57222, Stop: 57503, Start Num: 1
Candidate Starts for Westy_73:
(Start: 1 @57222 has 28 MA's), (Start: 3 @57255 has 9 MA's), (4, 57327), (5, 57330), (14, 57480),

Gene: Wipeout_89 Start: 65829, Stop: 66110, Start Num: 2
Candidate Starts for Wipeout_89:
(Start: 2 @65829 has 55 MA's), (Start: 3 @65859 has 9 MA's), (5, 65934), (6, 65976), (14, 66081), (16, 66087),

Gene: Wofford_91 Start: 66530, Stop: 66811, Start Num: 2
Candidate Starts for Wofford_91:
(Start: 2 @66530 has 55 MA's), (Start: 3 @66560 has 9 MA's), (5, 66635), (14, 66782), (16, 66788),

Gene: Yaboi_92 Start: 65420, Stop: 65701, Start Num: 2
Candidate Starts for Yaboi_92:
(Start: 2 @65420 has 55 MA's), (Start: 3 @65450 has 9 MA's), (5, 65525), (6, 65567), (14, 65672), (16, 65678),