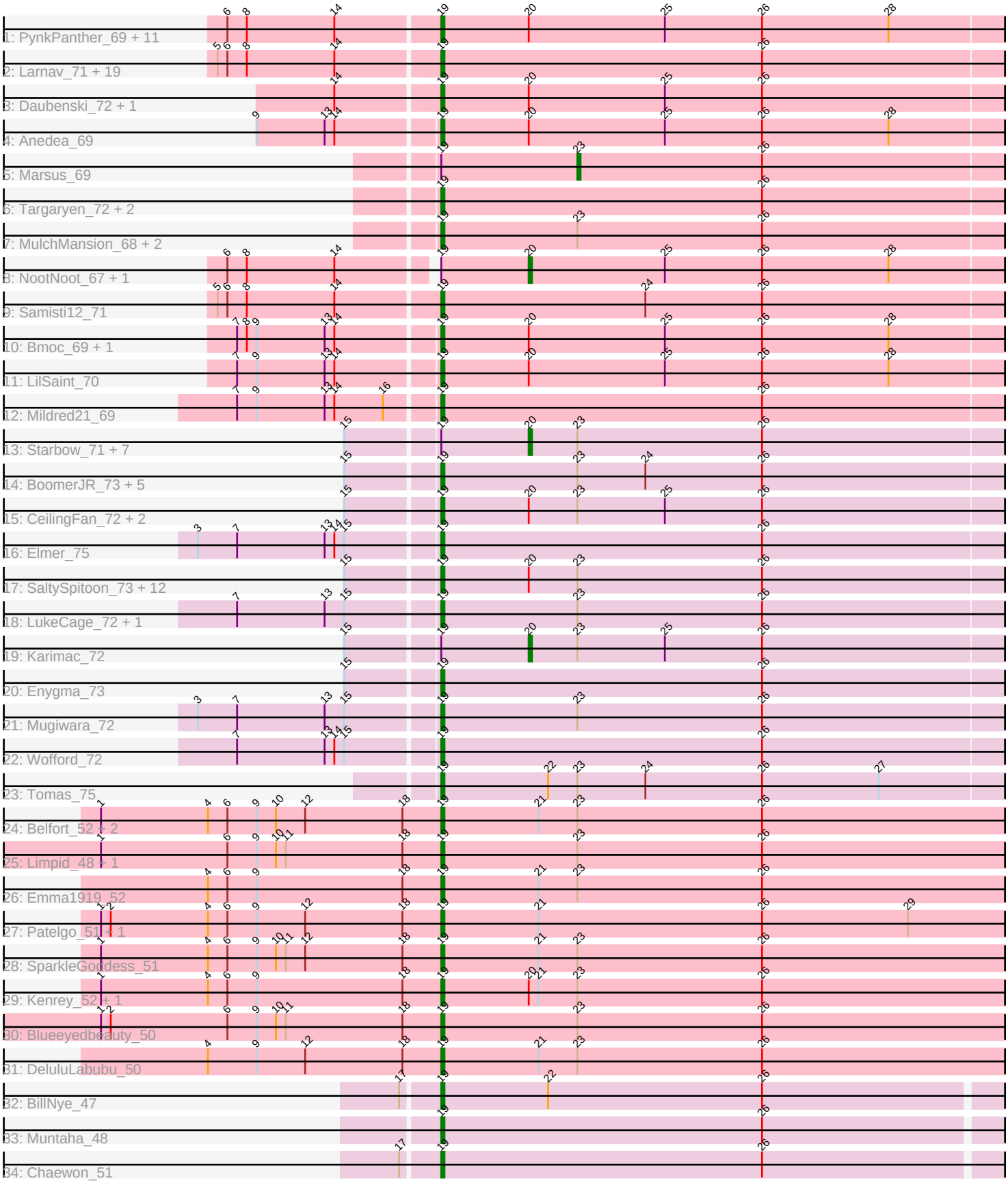
Pham 347448


1: PynkPanther_69 + 11
2: Larnav_71 + 19
3: Daubenski_72 + 1
4: Anedea_69
5: Marsus_69
6: Targaryen_72 + 2
7: MulchMansion_68 + 2
8: NootNoot_67 + 1
9: Samisti12_71
10: Bmoc_69 + 1
11: LilSaint_70
12: Mildred21_69
13: Starbow_71 + 7
14: BoomerJR_73 + 5
15: CeilingFan_72 + 2
16: Elmer_75
17: SaltySpitoon_73 + 12
18: LukeCage_72 + 1
19: Karimac_72
20: Enygma_73
21: Mugiwara_72
22: Wofford_72
23: Tomas_75
24: Belfort_52 + 2
25: Limpid_48 + 1
26: Emma1919_52
27: Patelgo_51 + 1
28: SparkleGoddess_51
29: Kenrey_52 + 1
30: Blueeyedbeauty_50
31: DeluluLababu_50
32: BillNye_47
33: Muntaha_48
34: Chaewon_51

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 347448 Report

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

Pham number 347448 has 103 members, 4 are drafts.

Phages represented in each track:
• Track 1 : PynkPanther_69, Paradiddles_67, FreddyDRoo_69, Braelyn_70, Persimmon_67, Squillium_70, Navo_69, Bartholomune_69, Davielle_68, PinkiePie_69, Liandry_70, WhereRU_68
• Track 2 : Larnav_71, WashU_71, EGole_72, Cursive_69, HangryHippo_71, Coogler_71, Watermoore_71, BlueOtter_71, Tribute_69, PacManQ_70, Leo04_72, Teutsch_71, ArianaSWT_71, Scheme_72, Cross_71, Pepperwood_71, Sushi23_71, Lululemon_70, Peebs_70, Shuckle_69
• Track 3 : Daubenski_72, Cadmus_69
• Track 4 : Anedea_69
• Track 5 : Marsus_69
• Track 6 : Targaryen_72, Evy_72, Warpy_75
• Track 7 : MulchMansion_68, LilMartin_68, Angela_68
• Track 8 : NootNoot_67, Eliot67_69
• Track 9 : Samisti12_71
• Track 10 : Bmoc_69, Riptide_68
• Track 11 : LilSaint_70
• Track 12 : Mildred21_69
• Track 13 : Starbow_71, Tuesday_77, Battuta_71, Quaran19_73, Birchlyn_70, Bordeaux_71, Gibbi_77, Amabiko_73
• Track 14 : BoomerJR_73, AngryGiraffe_72, Stanimal_73, Sollertia_73, Genie2_73, Yaboi_73
• Track 15 : CeilingFan_72, IchabodCrane_70, Brizzy_72
• Track 16 : Elmer_75
• Track 17 : SaltySpitoon_73, Spelly_73, TomSawyer_71, Spilled_74, Daisy123_72, KentuckyRacer_73, JimJam_73, PumpkinSpice_72, AcciDwight_77, Rikishi_73, Jollison_72, MindFlayer_71, Wipeout_71
• Track 18 : LukeCage_72, StarPlatinum_73
• Track 19 : Karimac_72
• Track 20 : Enygma_73
• Track 21 : Mugiwara_72
• Track 22 : Wofford_72
• Track 23 : Tomas_75
• Track 24 : Belfort_52, Westy_51, Comrade_51
• Track 25 : Limpid_48, Annadreamy_48
• Track 26 : Emma1919_52
• Track 27 : Patelgo_51, Moab_51
• Track 28 : SparkleGoddess_51

• Track 29 : Kenrey_52, Phredrick_50
• Track 30 : Blueeyedbeauty_50
• Track 31 : DeluluLabubu_50
• Track 32 : BillNye_47
• Track 33 : Muntaha_48
• Track 34 : Chaewon_51

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

The start number called the most often in the published annotations is 19, it was called in 90 of the 99 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AcciDwight_77, Anedea_69, Angela_68, AngryGiraffe_72, Annadreamy_48, ArianaSWT_71, Bartholomune_69, Belfort_52, BillNye_47, BlueOtter_71, Blueeyedbeauty_50, Bmoc_69, BoomerJR_73, Braelyn_70, Brizzy_72, Cadmus_69, CeilingFan_72, Chaewon_51, Comrade_51, Coogler_71, Cross_71, Cursive_69, Daisy123_72, Daubenski_72, Davielle_68, DeluluLabubu_50, EGole_72, Elmer_75, Emma1919_52, Enygma_73, Evy_72, FreddyDRoo_69, Genie2_73, HangryHippo_71, IchabodCrane_70, JimJam_73, Jollison_72, Kenrey_52, KentuckyRacer_73, Larnav_71, Leo04_72, Liandry_70, LilMartin_68, LilSaint_70, Limpid_48, LukeCage_72, Lululemon_70, Mildred21_69, MindFlayer_71, Moab_51, Mugiwara_72, MulchMansion_68, Muntaha_48, Navo_69, PacManQ_70, Paradiddles_67, Patelgo_51, Peebs_70, Pepperwood_71, Persimmon_67, Phredrick_50, PinkiePie_69, PumpkinSpice_72, PynkPanther_69, Rikishi_73, Riptide_68, SaltySpitoon_73, Samisti12_71, Scheme_72, Shuckle_69, Sollertia_73, SparkleGoddess_51, Spelly_73, Spilled_74, Squillium_70, Stanimal_73, StarPlatinum_73, Sushi23_71, Targaryen_72, Teutsch_71, TomSawyer_71, Tomas_75, Tribute_69, Warpy_75, WashU_71, Watermoore_71, Westy_51, WhereRU_68, Wipeout_71, Wofford_72, Yaboi_73,

Genes that have the "Most Annotated" start but do not call it:
• Amabiko_73, Battuta_71, Birchlyn_70, Bordeaux_71, Eliot67_69, Gibbi_77, Karimac_72, Marsus_69, NootNoot_67, Quaran19_73, Starbow_71, Tuesday_77,

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

Summary by start number:

Start 19:
• Found in 103 of 103 (100.0%) of genes in pham
• Manual Annotations of this start: 90 of 99
• Called 88.3% of time when present
• Phage (with cluster) where this start called: AcciDwight_77 (BE2), Anedea_69 (BE1), Angela_68 (BE1), AngryGiraffe_72 (BE2), Annadreamy_48 (BK1), ArianaSWT_71 (BE1), Bartholomune_69 (BE1), Belfort_52 (BK1), BillNye_47 (BK2), BlueOtter_71 (BE1), Blueeyedbeauty_50 (BK1), Bmoc_69 (BE1), BoomerJR_73 (BE2), Braelyn_70 (BE1), Brizzy_72 (BE2), Cadmus_69 (BE1), CeilingFan_72 (BE2), Chaewon_51 (BK2), Comrade_51 (BK1), Coogler_71 (BE1), Cross_71 (BE1),

Cursive_69 (BE1), Daisy123_72 (BE2), Daubenski_72 (BE1), Davielle_68 (BE1), DeluluLabubu_50 (BK1), EGole_72 (BE1), Elmer_75 (BE2), Emma1919_52 (BK1), Enygma_73 (BE2), Evy_72 (BE1), FreddyDRoo_69 (BE1), Genie2_73 (BE2), HangryHippo_71 (BE1), IchabodCrane_70 (BE2), JimJam_73 (BE2), Jollison_72 (BE2), Kenrey_52 (BK1), KentuckyRacer_73 (BE2), Larnav_71 (BE1), Leo04_72 (BE1), Liandry_70 (BE1), LilMartin_68 (BE1), LilSaint_70 (BE1), Limpid_48 (BK1), LukeCage_72 (BE2), Lululemon_70 (BE1), Mildred21_69 (BE1), MindFlayer_71 (BE2), Moab_51 (BK1), Mugiwara_72 (BE2), MulchMansion_68 (BE1), Muntaha_48 (BK2), Navo_69 (BE1), PacManQ_70 (BE1), Paradiddles_67 (BE1), Patelgo_51 (BK1), Peebs_70 (BE1), Pepperwood_71 (BE1), Persimmon_67 (BE1), Phredrick_50 (BK1), PinkiePie_69 (BE1), PumpkinSpice_72 (BE2), PynkPanther_69 (BE1), Rikishi_73 (BE2), Riptide_68 (BE1), SaltySpitoon_73 (BE2), Samisti12_71 (BE1), Scheme_72 (BE1), Shuckle_69 (BE1), Sollertia_73 (BE2), SparkleGoddess_51 (BK1), Spelly_73 (BE2), Spilled_74 (BE2), Squillium_70 (BE1), Stanimal_73 (BE2), StarPlatinum_73 (BE2), Sushi23_71 (BE1), Targaryen_72 (BE1), Teutsch_71 (BE1), TomSawyer_71 (BE2), Tomas_75 (BE2), Tribute_69 (BE1), Warpy_75 (BE1), WashU_71 (BE1), Watermoore_71 (BE1), Westy_51 (BK1), WhereRU_68 (BE1), Wipeout_71 (BE2), Wofford_72 (BE2), Yaboi_73 (BE2),

Start 20:
• Found in 47 of 103 (45.6%) of genes in pham
• Manual Annotations of this start: 8 of 99
• Called 23.4% of time when present
• Phage (with cluster) where this start called: Amabiko_73 (BE2), Battuta_71 (BE2), Birchlyn_70 (BE2), Bordeaux_71 (BE2), Eliot67_69 (BE1), Gibbi_77 (BE2), Karimac_72 (BE2), NootNoot_67 (BE1), Quaran19_73 (BE2), Starbow_71 (BE2), Tuesday_77 (BE2),

Start 23:
• Found in 50 of 103 (48.5%) of genes in pham
• Manual Annotations of this start: 1 of 99
• Called 2.0% of time when present
• Phage (with cluster) where this start called: Marsus_69 (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 19 was manually annotated 46 times for cluster BE1.
•Start number 20 was manually annotated 1 time for cluster BE1.
•Start number 23 was manually annotated 1 time for cluster BE1.

Info for manual annotations of cluster BE2:
•Start number 19 was manually annotated 28 times for cluster BE2.
•Start number 20 was manually annotated 7 times for cluster BE2.

Info for manual annotations of cluster BK1:
•Start number 19 was manually annotated 13 times for cluster BK1.

Info for manual annotations of cluster BK2:
•Start number 19 was manually annotated 3 times for cluster BK2.

Gene Information:

Gene: AcciDwight_77 Start: 53322, Stop: 53501, Start Num: 19
Candidate Starts for AcciDwight_77:
(15, 53295), (Start: 19 @53322 has 90 MA's), (Start: 20 @53349 has 8 MA's), (Start: 23 @53364 has 1 MA's), (26, 53421),

Gene: Amabiko_73 Start: 53394, Stop: 53546, Start Num: 20
Candidate Starts for Amabiko_73:
(15, 53340), (Start: 19 @53367 has 90 MA's), (Start: 20 @53394 has 8 MA's), (Start: 23 @53409 has 1 MA's), (26, 53466),

Gene: Anedea_69 Start: 52939, Stop: 53118, Start Num: 19
Candidate Starts for Anedea_69:
(9, 52885), (13, 52906), (14, 52909), (Start: 19 @52939 has 90 MA's), (Start: 20 @52966 has 8 MA's), (25, 53008), (26, 53038), (28, 53077),

Gene: Angela_68 Start: 52399, Stop: 52578, Start Num: 19
Candidate Starts for Angela_68:
(Start: 19 @52399 has 90 MA's), (Start: 23 @52441 has 1 MA's), (26, 52498),

Gene: AngryGiraffe_72 Start: 53330, Stop: 53509, Start Num: 19
Candidate Starts for AngryGiraffe_72:
(15, 53303), (Start: 19 @53330 has 90 MA's), (Start: 23 @53372 has 1 MA's), (24, 53393), (26, 53429),

Gene: Annadreamy_48 Start: 42410, Stop: 42601, Start Num: 19
Candidate Starts for Annadreamy_48:
(1, 42305), (6, 42344), (9, 42353), (10, 42359), (11, 42362), (18, 42398), (Start: 19 @42410 has 90 MA's), (Start: 23 @42452 has 1 MA's), (26, 42509),

Gene: ArianaSWT_71 Start: 54102, Stop: 54281, Start Num: 19
Candidate Starts for ArianaSWT_71:
(5, 54039), (6, 54042), (8, 54048), (14, 54075), (Start: 19 @54102 has 90 MA's), (26, 54201),

Gene: Bartholomune_69 Start: 52765, Stop: 52944, Start Num: 19
Candidate Starts for Bartholomune_69:
(6, 52705), (8, 52711), (14, 52738), (Start: 19 @52765 has 90 MA's), (Start: 20 @52792 has 8 MA's), (25, 52834), (26, 52864), (28, 52903),

Gene: Battuta_71 Start: 53368, Stop: 53520, Start Num: 20
Candidate Starts for Battuta_71:
(15, 53314), (Start: 19 @53341 has 90 MA's), (Start: 20 @53368 has 8 MA's), (Start: 23 @53383 has 1 MA's), (26, 53440),

Gene: Belfort_52 Start: 44931, Stop: 45122, Start Num: 19
Candidate Starts for Belfort_52:
(1, 44826), (4, 44859), (6, 44865), (9, 44874), (10, 44880), (12, 44889), (18, 44919), (Start: 19 @44931 has 90 MA's), (21, 44961), (Start: 23 @44973 has 1 MA's), (26, 45030),

Gene: BillNye_47 Start: 46338, Stop: 46523, Start Num: 19
Candidate Starts for BillNye_47:

(17, 46329), (Start: 19 @46338 has 90 MA's), (22, 46371), (26, 46437),

Gene: Birchlyn_70 Start: 51251, Stop: 51403, Start Num: 20
Candidate Starts for Birchlyn_70:
(15, 51197), (Start: 19 @51224 has 90 MA's), (Start: 20 @51251 has 8 MA's), (Start: 23 @51266 has 1 MA's), (26, 51323),

Gene: BlueOtter_71 Start: 54139, Stop: 54318, Start Num: 19
Candidate Starts for BlueOtter_71:
(5, 54076), (6, 54079), (8, 54085), (14, 54112), (Start: 19 @54139 has 90 MA's), (26, 54238),

Gene: Blueeyedbeauty_50 Start: 42922, Stop: 43113, Start Num: 19
Candidate Starts for Blueeyedbeauty_50:
(1, 42817), (2, 42820), (6, 42856), (9, 42865), (10, 42871), (11, 42874), (18, 42910), (Start: 19 @42922 has 90 MA's), (Start: 23 @42964 has 1 MA's), (26, 43021),

Gene: Bmoc_69 Start: 52743, Stop: 52922, Start Num: 19
Candidate Starts for Bmoc_69:
(7, 52683), (8, 52686), (9, 52689), (13, 52710), (14, 52713), (Start: 19 @52743 has 90 MA's), (Start: 20 @52770 has 8 MA's), (25, 52812), (26, 52842), (28, 52881),

Gene: BoomerJR_73 Start: 53219, Stop: 53398, Start Num: 19
Candidate Starts for BoomerJR_73:
(15, 53192), (Start: 19 @53219 has 90 MA's), (Start: 23 @53261 has 1 MA's), (24, 53282), (26, 53318),

Gene: Bordeaux_71 Start: 53523, Stop: 53675, Start Num: 20
Candidate Starts for Bordeaux_71:
(15, 53469), (Start: 19 @53496 has 90 MA's), (Start: 20 @53523 has 8 MA's), (Start: 23 @53538 has 1 MA's), (26, 53595),

Gene: Braelyn_70 Start: 53532, Stop: 53711, Start Num: 19
Candidate Starts for Braelyn_70:
(6, 53472), (8, 53478), (14, 53505), (Start: 19 @53532 has 90 MA's), (Start: 20 @53559 has 8 MA's), (25, 53601), (26, 53631), (28, 53670),

Gene: Brizzy_72 Start: 53015, Stop: 53194, Start Num: 19
Candidate Starts for Brizzy_72:
(15, 52988), (Start: 19 @53015 has 90 MA's), (Start: 20 @53042 has 8 MA's), (Start: 23 @53057 has 1 MA's), (25, 53084), (26, 53114),

Gene: Cadmus_69 Start: 53149, Stop: 53328, Start Num: 19
Candidate Starts for Cadmus_69:
(14, 53122), (Start: 19 @53149 has 90 MA's), (Start: 20 @53176 has 8 MA's), (25, 53218), (26, 53248),

Gene: CeilingFan_72 Start: 53256, Stop: 53435, Start Num: 19
Candidate Starts for CeilingFan_72:
(15, 53229), (Start: 19 @53256 has 90 MA's), (Start: 20 @53283 has 8 MA's), (Start: 23 @53298 has 1 MA's), (25, 53325), (26, 53355),

Gene: Chaewon_51 Start: 46478, Stop: 46663, Start Num: 19
Candidate Starts for Chaewon_51:
(17, 46469), (Start: 19 @46478 has 90 MA's), (26, 46577),

Gene: Comrade_51 Start: 44547, Stop: 44738, Start Num: 19
Candidate Starts for Comrade_51:
(1, 44442), (4, 44475), (6, 44481), (9, 44490), (10, 44496), (12, 44505), (18, 44535), (Start: 19 @44547 has 90 MA's), (21, 44577), (Start: 23 @44589 has 1 MA's), (26, 44646),

Gene: Coogler_71 Start: 54165, Stop: 54344, Start Num: 19
Candidate Starts for Coogler_71:
(5, 54102), (6, 54105), (8, 54111), (14, 54138), (Start: 19 @54165 has 90 MA's), (26, 54264),

Gene: Cross_71 Start: 54140, Stop: 54319, Start Num: 19
Candidate Starts for Cross_71:
(5, 54077), (6, 54080), (8, 54086), (14, 54113), (Start: 19 @54140 has 90 MA's), (26, 54239),

Gene: Cursive_69 Start: 53665, Stop: 53844, Start Num: 19
Candidate Starts for Cursive_69:
(5, 53602), (6, 53605), (8, 53611), (14, 53638), (Start: 19 @53665 has 90 MA's), (26, 53764),

Gene: Daisy123_72 Start: 53115, Stop: 53294, Start Num: 19
Candidate Starts for Daisy123_72:
(15, 53088), (Start: 19 @53115 has 90 MA's), (Start: 20 @53142 has 8 MA's), (Start: 23 @53157 has 1 MA's), (26, 53214),

Gene: Daubenski_72 Start: 53913, Stop: 54092, Start Num: 19
Candidate Starts for Daubenski_72:
(14, 53886), (Start: 19 @53913 has 90 MA's), (Start: 20 @53940 has 8 MA's), (25, 53982), (26, 54012),

Gene: Davielle_68 Start: 52952, Stop: 53131, Start Num: 19
Candidate Starts for Davielle_68:
(6, 52892), (8, 52898), (14, 52925), (Start: 19 @52952 has 90 MA's), (Start: 20 @52979 has 8 MA's), (25, 53021), (26, 53051), (28, 53090),

Gene: DeluluLabubu_50 Start: 42661, Stop: 42852, Start Num: 19
Candidate Starts for DeluluLabubu_50:
(4, 42589), (9, 42604), (12, 42619), (18, 42649), (Start: 19 @42661 has 90 MA's), (21, 42691), (Start: 23 @42703 has 1 MA's), (26, 42760),

Gene: EGole_72 Start: 55086, Stop: 55265, Start Num: 19
Candidate Starts for EGole_72:
(5, 55023), (6, 55026), (8, 55032), (14, 55059), (Start: 19 @55086 has 90 MA's), (26, 55185),

Gene: Eliot67_69 Start: 52834, Stop: 52986, Start Num: 20
Candidate Starts for Eliot67_69:
(6, 52747), (8, 52753), (14, 52780), (Start: 19 @52807 has 90 MA's), (Start: 20 @52834 has 8 MA's), (25, 52876), (26, 52906), (28, 52945),

Gene: Elmer_75 Start: 54434, Stop: 54613, Start Num: 19
Candidate Starts for Elmer_75:
(3, 54362), (7, 54374), (13, 54401), (14, 54404), (15, 54407), (Start: 19 @54434 has 90 MA's), (26, 54533),

Gene: Emma1919_52 Start: 43344, Stop: 43535, Start Num: 19
Candidate Starts for Emma1919_52:

(4, 43272), (6, 43278), (9, 43287), (18, 43332), (Start: 19 @43344 has 90 MA's), (21, 43374), (Start: 23 @43386 has 1 MA's), (26, 43443),

Gene: Enygma_73 Start: 55159, Stop: 55338, Start Num: 19
Candidate Starts for Enygma_73:
(15, 55132), (Start: 19 @55159 has 90 MA's), (26, 55258),

Gene: Evy_72 Start: 54034, Stop: 54213, Start Num: 19
Candidate Starts for Evy_72:
(Start: 19 @54034 has 90 MA's), (26, 54133),

Gene: FreddyDRoo_69 Start: 52807, Stop: 52986, Start Num: 19
Candidate Starts for FreddyDRoo_69:
(6, 52747), (8, 52753), (14, 52780), (Start: 19 @52807 has 90 MA's), (Start: 20 @52834 has 8 MA's), (25, 52876), (26, 52906), (28, 52945),

Gene: Genie2_73 Start: 53333, Stop: 53512, Start Num: 19
Candidate Starts for Genie2_73:
(15, 53306), (Start: 19 @53333 has 90 MA's), (Start: 23 @53375 has 1 MA's), (24, 53396), (26, 53432),

Gene: Gibbi_77 Start: 53506, Stop: 53658, Start Num: 20
Candidate Starts for Gibbi_77:
(15, 53452), (Start: 19 @53479 has 90 MA's), (Start: 20 @53506 has 8 MA's), (Start: 23 @53521 has 1 MA's), (26, 53578),

Gene: HangryHippo_71 Start: 54139, Stop: 54318, Start Num: 19
Candidate Starts for HangryHippo_71:
(5, 54076), (6, 54079), (8, 54085), (14, 54112), (Start: 19 @54139 has 90 MA's), (26, 54238),

Gene: IchabodCrane_70 Start: 53068, Stop: 53247, Start Num: 19
Candidate Starts for IchabodCrane_70:
(15, 53041), (Start: 19 @53068 has 90 MA's), (Start: 20 @53095 has 8 MA's), (Start: 23 @53110 has 1 MA's), (25, 53137), (26, 53167),

Gene: JimJam_73 Start: 53442, Stop: 53621, Start Num: 19
Candidate Starts for JimJam_73:
(15, 53415), (Start: 19 @53442 has 90 MA's), (Start: 20 @53469 has 8 MA's), (Start: 23 @53484 has 1 MA's), (26, 53541),

Gene: Jollison_72 Start: 53324, Stop: 53503, Start Num: 19
Candidate Starts for Jollison_72:
(15, 53297), (Start: 19 @53324 has 90 MA's), (Start: 20 @53351 has 8 MA's), (Start: 23 @53366 has 1 MA's), (26, 53423),

Gene: Karimac_72 Start: 53500, Stop: 53652, Start Num: 20
Candidate Starts for Karimac_72:
(15, 53446), (Start: 19 @53473 has 90 MA's), (Start: 20 @53500 has 8 MA's), (Start: 23 @53515 has 1 MA's), (25, 53542), (26, 53572),

Gene: Kenrey_52 Start: 43492, Stop: 43683, Start Num: 19
Candidate Starts for Kenrey_52:
(1, 43387), (4, 43420), (6, 43426), (9, 43435), (18, 43480), (Start: 19 @43492 has 90 MA's), (Start: 20 @43519 has 8 MA's), (21, 43522), (Start: 23 @43534 has 1 MA's), (26, 43591),

Gene: KentuckyRacer_73 Start: 53257, Stop: 53436, Start Num: 19
Candidate Starts for KentuckyRacer_73:
(15, 53230), (Start: 19 @53257 has 90 MA's), (Start: 20 @53284 has 8 MA's), (Start: 23 @53299 has 1 MA's), (26, 53356),

Gene: Larnav_71 Start: 54124, Stop: 54303, Start Num: 19
Candidate Starts for Larnav_71:
(5, 54061), (6, 54064), (8, 54070), (14, 54097), (Start: 19 @54124 has 90 MA's), (26, 54223),

Gene: Leo04_72 Start: 54639, Stop: 54818, Start Num: 19
Candidate Starts for Leo04_72:
(5, 54576), (6, 54579), (8, 54585), (14, 54612), (Start: 19 @54639 has 90 MA's), (26, 54738),

Gene: Liandry_70 Start: 53514, Stop: 53693, Start Num: 19
Candidate Starts for Liandry_70:
(6, 53454), (8, 53460), (14, 53487), (Start: 19 @53514 has 90 MA's), (Start: 20 @53541 has 8 MA's), (25, 53583), (26, 53613), (28, 53652),

Gene: LilMartin_68 Start: 52347, Stop: 52526, Start Num: 19
Candidate Starts for LilMartin_68:
(Start: 19 @52347 has 90 MA's), (Start: 23 @52389 has 1 MA's), (26, 52446),

Gene: LilSaint_70 Start: 52611, Stop: 52790, Start Num: 19
Candidate Starts for LilSaint_70:
(7, 52551), (9, 52557), (13, 52578), (14, 52581), (Start: 19 @52611 has 90 MA's), (Start: 20 @52638 has 8 MA's), (25, 52680), (26, 52710), (28, 52749),

Gene: Limpid_48 Start: 42409, Stop: 42600, Start Num: 19
Candidate Starts for Limpid_48:
(1, 42304), (6, 42343), (9, 42352), (10, 42358), (11, 42361), (18, 42397), (Start: 19 @42409 has 90 MA's), (Start: 23 @42451 has 1 MA's), (26, 42508),

Gene: LukeCage_72 Start: 53227, Stop: 53406, Start Num: 19
Candidate Starts for LukeCage_72:
(7, 53167), (13, 53194), (15, 53200), (Start: 19 @53227 has 90 MA's), (Start: 23 @53269 has 1 MA's), (26, 53326),

Gene: Lululemon_70 Start: 53520, Stop: 53699, Start Num: 19
Candidate Starts for Lululemon_70:
(5, 53457), (6, 53460), (8, 53466), (14, 53493), (Start: 19 @53520 has 90 MA's), (26, 53619),

Gene: Marsus_69 Start: 52661, Stop: 52798, Start Num: 23
Candidate Starts for Marsus_69:
(Start: 19 @52619 has 90 MA's), (Start: 23 @52661 has 1 MA's), (26, 52718),

Gene: Mildred21_69 Start: 52544, Stop: 52723, Start Num: 19
Candidate Starts for Mildred21_69:
(7, 52484), (9, 52490), (13, 52511), (14, 52514), (16, 52529), (Start: 19 @52544 has 90 MA's), (26, 52643),

Gene: MindFlayer_71 Start: 52975, Stop: 53154, Start Num: 19
Candidate Starts for MindFlayer_71:

(15, 52948), (Start: 19 @52975 has 90 MA's), (Start: 20 @53002 has 8 MA's), (Start: 23 @53017 has 1 MA's), (26, 53074),

Gene: Moab_51 Start: 44517, Stop: 44708, Start Num: 19
Candidate Starts for Moab_51:
(1, 44412), (2, 44415), (4, 44445), (6, 44451), (9, 44460), (12, 44475), (18, 44505), (Start: 19 @44517 has 90 MA's), (21, 44547), (26, 44616), (29, 44661),

Gene: Mugiwara_72 Start: 53726, Stop: 53905, Start Num: 19
Candidate Starts for Mugiwara_72:
(3, 53654), (7, 53666), (13, 53693), (15, 53699), (Start: 19 @53726 has 90 MA's), (Start: 23 @53768 has 1 MA's), (26, 53825),

Gene: MulchMansion_68 Start: 52347, Stop: 52526, Start Num: 19
Candidate Starts for MulchMansion_68:
(Start: 19 @52347 has 90 MA's), (Start: 23 @52389 has 1 MA's), (26, 52446),

Gene: Muntaha_48 Start: 44734, Stop: 44919, Start Num: 19
Candidate Starts for Muntaha_48:
(Start: 19 @44734 has 90 MA's), (26, 44833),

Gene: Navo_69 Start: 53436, Stop: 53615, Start Num: 19
Candidate Starts for Navo_69:
(6, 53376), (8, 53382), (14, 53409), (Start: 19 @53436 has 90 MA's), (Start: 20 @53463 has 8 MA's), (25, 53505), (26, 53535), (28, 53574),

Gene: NootNoot_67 Start: 52455, Stop: 52607, Start Num: 20
Candidate Starts for NootNoot_67:
(6, 52368), (8, 52374), (14, 52401), (Start: 19 @52428 has 90 MA's), (Start: 20 @52455 has 8 MA's), (25, 52497), (26, 52527), (28, 52566),

Gene: PacManQ_70 Start: 53520, Stop: 53699, Start Num: 19
Candidate Starts for PacManQ_70:
(5, 53457), (6, 53460), (8, 53466), (14, 53493), (Start: 19 @53520 has 90 MA's), (26, 53619),

Gene: Paradiddles_67 Start: 52692, Stop: 52871, Start Num: 19
Candidate Starts for Paradiddles_67:
(6, 52632), (8, 52638), (14, 52665), (Start: 19 @52692 has 90 MA's), (Start: 20 @52719 has 8 MA's), (25, 52761), (26, 52791), (28, 52830),

Gene: Patelgo_51 Start: 44704, Stop: 44895, Start Num: 19
Candidate Starts for Patelgo_51:
(1, 44599), (2, 44602), (4, 44632), (6, 44638), (9, 44647), (12, 44662), (18, 44692), (Start: 19 @44704 has 90 MA's), (21, 44734), (26, 44803), (29, 44848),

Gene: Peebs_70 Start: 53874, Stop: 54053, Start Num: 19
Candidate Starts for Peebs_70:
(5, 53811), (6, 53814), (8, 53820), (14, 53847), (Start: 19 @53874 has 90 MA's), (26, 53973),

Gene: Pepperwood_71 Start: 54007, Stop: 54186, Start Num: 19
Candidate Starts for Pepperwood_71:
(5, 53944), (6, 53947), (8, 53953), (14, 53980), (Start: 19 @54007 has 90 MA's), (26, 54106),

Gene: Persimmon_67 Start: 52361, Stop: 52540, Start Num: 19
Candidate Starts for Persimmon_67:
(6, 52301), (8, 52307), (14, 52334), (Start: 19 @52361 has 90 MA's), (Start: 20 @52388 has 8 MA's), (25, 52430), (26, 52460), (28, 52499),

Gene: Phredrick_50 Start: 42563, Stop: 42754, Start Num: 19
Candidate Starts for Phredrick_50:
(1, 42458), (4, 42491), (6, 42497), (9, 42506), (18, 42551), (Start: 19 @42563 has 90 MA's), (Start: 20 @42590 has 8 MA's), (21, 42593), (Start: 23 @42605 has 1 MA's), (26, 42662),

Gene: PinkiePie_69 Start: 53514, Stop: 53693, Start Num: 19
Candidate Starts for PinkiePie_69:
(6, 53454), (8, 53460), (14, 53487), (Start: 19 @53514 has 90 MA's), (Start: 20 @53541 has 8 MA's), (25, 53583), (26, 53613), (28, 53652),

Gene: PumpkinSpice_72 Start: 53367, Stop: 53546, Start Num: 19
Candidate Starts for PumpkinSpice_72:
(15, 53340), (Start: 19 @53367 has 90 MA's), (Start: 20 @53394 has 8 MA's), (Start: 23 @53409 has 1 MA's), (26, 53466),

Gene: PynkPanther_69 Start: 53494, Stop: 53673, Start Num: 19
Candidate Starts for PynkPanther_69:
(6, 53434), (8, 53440), (14, 53467), (Start: 19 @53494 has 90 MA's), (Start: 20 @53521 has 8 MA's), (25, 53563), (26, 53593), (28, 53632),

Gene: Quaran19_73 Start: 53385, Stop: 53537, Start Num: 20
Candidate Starts for Quaran19_73:
(15, 53331), (Start: 19 @53358 has 90 MA's), (Start: 20 @53385 has 8 MA's), (Start: 23 @53400 has 1 MA's), (26, 53457),

Gene: Rikishi_73 Start: 53273, Stop: 53452, Start Num: 19
Candidate Starts for Rikishi_73:
(15, 53246), (Start: 19 @53273 has 90 MA's), (Start: 20 @53300 has 8 MA's), (Start: 23 @53315 has 1 MA's), (26, 53372),

Gene: Riptide_68 Start: 52161, Stop: 52340, Start Num: 19
Candidate Starts for Riptide_68:
(7, 52101), (8, 52104), (9, 52107), (13, 52128), (14, 52131), (Start: 19 @52161 has 90 MA's), (Start: 20 @52188 has 8 MA's), (25, 52230), (26, 52260), (28, 52299),

Gene: SaltySpitoon_73 Start: 53367, Stop: 53546, Start Num: 19
Candidate Starts for SaltySpitoon_73:
(15, 53340), (Start: 19 @53367 has 90 MA's), (Start: 20 @53394 has 8 MA's), (Start: 23 @53409 has 1 MA's), (26, 53466),

Gene: Samisti12_71 Start: 55317, Stop: 55496, Start Num: 19
Candidate Starts for Samisti12_71:
(5, 55254), (6, 55257), (8, 55263), (14, 55290), (Start: 19 @55317 has 90 MA's), (24, 55380), (26, 55416),

Gene: Scheme_72 Start: 54721, Stop: 54900, Start Num: 19
Candidate Starts for Scheme_72:
(5, 54658), (6, 54661), (8, 54667), (14, 54694), (Start: 19 @54721 has 90 MA's), (26, 54820),

Gene: Shuckle_69 Start: 54331, Stop: 54510, Start Num: 19
Candidate Starts for Shuckle_69:
(5, 54268), (6, 54271), (8, 54277), (14, 54304), (Start: 19 @54331 has 90 MA's), (26, 54430),

Gene: Sollertia_73 Start: 53333, Stop: 53512, Start Num: 19
Candidate Starts for Sollertia_73:
(15, 53306), (Start: 19 @53333 has 90 MA's), (Start: 23 @53375 has 1 MA's), (24, 53396), (26, 53432),

Gene: SparkleGoddess_51 Start: 44548, Stop: 44739, Start Num: 19
Candidate Starts for SparkleGoddess_51:
(1, 44443), (4, 44476), (6, 44482), (9, 44491), (10, 44497), (11, 44500), (12, 44506), (18, 44536),
(Start: 19 @44548 has 90 MA's), (21, 44578), (Start: 23 @44590 has 1 MA's), (26, 44647),

Gene: Spelly_73 Start: 53322, Stop: 53501, Start Num: 19
Candidate Starts for Spelly_73:
(15, 53295), (Start: 19 @53322 has 90 MA's), (Start: 20 @53349 has 8 MA's), (Start: 23 @53364 has 1 MA's), (26, 53421),

Gene: Spilled_74 Start: 53439, Stop: 53618, Start Num: 19
Candidate Starts for Spilled_74:
(15, 53412), (Start: 19 @53439 has 90 MA's), (Start: 20 @53466 has 8 MA's), (Start: 23 @53481 has 1 MA's), (26, 53538),

Gene: Squillium_70 Start: 53515, Stop: 53694, Start Num: 19
Candidate Starts for Squillium_70:
(6, 53455), (8, 53461), (14, 53488), (Start: 19 @53515 has 90 MA's), (Start: 20 @53542 has 8 MA's), (25, 53584), (26, 53614), (28, 53653),

Gene: Stanimal_73 Start: 53222, Stop: 53401, Start Num: 19
Candidate Starts for Stanimal_73:
(15, 53195), (Start: 19 @53222 has 90 MA's), (Start: 23 @53264 has 1 MA's), (24, 53285), (26, 53321),

Gene: StarPlatinum_73 Start: 53867, Stop: 54046, Start Num: 19
Candidate Starts for StarPlatinum_73:
(7, 53807), (13, 53834), (15, 53840), (Start: 19 @53867 has 90 MA's), (Start: 23 @53909 has 1 MA's), (26, 53966),

Gene: Starbow_71 Start: 53370, Stop: 53522, Start Num: 20
Candidate Starts for Starbow_71:
(15, 53316), (Start: 19 @53343 has 90 MA's), (Start: 20 @53370 has 8 MA's), (Start: 23 @53385 has 1 MA's), (26, 53442),

Gene: Sushi23_71 Start: 54232, Stop: 54411, Start Num: 19
Candidate Starts for Sushi23_71:
(5, 54169), (6, 54172), (8, 54178), (14, 54205), (Start: 19 @54232 has 90 MA's), (26, 54331),

Gene: Targaryen_72 Start: 54936, Stop: 55115, Start Num: 19
Candidate Starts for Targaryen_72:
(Start: 19 @54936 has 90 MA's), (26, 55035),

Gene: Teutsch_71 Start: 54495, Stop: 54674, Start Num: 19
Candidate Starts for Teutsch_71:

(5, 54432), (6, 54435), (8, 54441), (14, 54468), (Start: 19 @54495 has 90 MA's), (26, 54594),

Gene: TomSawyer_71 Start: 52961, Stop: 53140, Start Num: 19
Candidate Starts for TomSawyer_71:
(15, 52934), (Start: 19 @52961 has 90 MA's), (Start: 20 @52988 has 8 MA's), (Start: 23 @53003 has 1 MA's), (26, 53060),

Gene: Tomas_75 Start: 55682, Stop: 55861, Start Num: 19
Candidate Starts for Tomas_75:
(Start: 19 @55682 has 90 MA's), (22, 55715), (Start: 23 @55724 has 1 MA's), (24, 55745), (26, 55781), (27, 55817),

Gene: Tribute_69 Start: 53701, Stop: 53880, Start Num: 19
Candidate Starts for Tribute_69:
(5, 53638), (6, 53641), (8, 53647), (14, 53674), (Start: 19 @53701 has 90 MA's), (26, 53800),

Gene: Tuesday_77 Start: 53532, Stop: 53684, Start Num: 20
Candidate Starts for Tuesday_77:
(15, 53478), (Start: 19 @53505 has 90 MA's), (Start: 20 @53532 has 8 MA's), (Start: 23 @53547 has 1 MA's), (26, 53604),

Gene: Warpy_75 Start: 54400, Stop: 54579, Start Num: 19
Candidate Starts for Warpy_75:
(Start: 19 @54400 has 90 MA's), (26, 54499),

Gene: WashU_71 Start: 54010, Stop: 54189, Start Num: 19
Candidate Starts for WashU_71:
(5, 53947), (6, 53950), (8, 53956), (14, 53983), (Start: 19 @54010 has 90 MA's), (26, 54109),

Gene: Watermoore_71 Start: 54711, Stop: 54890, Start Num: 19
Candidate Starts for Watermoore_71:
(5, 54648), (6, 54651), (8, 54657), (14, 54684), (Start: 19 @54711 has 90 MA's), (26, 54810),

Gene: Westy_51 Start: 44549, Stop: 44740, Start Num: 19
Candidate Starts for Westy_51:
(1, 44444), (4, 44477), (6, 44483), (9, 44492), (10, 44498), (12, 44507), (18, 44537), (Start: 19 @44549 has 90 MA's), (21, 44579), (Start: 23 @44591 has 1 MA's), (26, 44648),

Gene: WhereRU_68 Start: 52952, Stop: 53131, Start Num: 19
Candidate Starts for WhereRU_68:
(6, 52892), (8, 52898), (14, 52925), (Start: 19 @52952 has 90 MA's), (Start: 20 @52979 has 8 MA's), (25, 53021), (26, 53051), (28, 53090),

Gene: Wipeout_71 Start: 53712, Stop: 53891, Start Num: 19
Candidate Starts for Wipeout_71:
(15, 53685), (Start: 19 @53712 has 90 MA's), (Start: 20 @53739 has 8 MA's), (Start: 23 @53754 has 1 MA's), (26, 53811),

Gene: Wofford_72 Start: 54397, Stop: 54576, Start Num: 19
Candidate Starts for Wofford_72:
(7, 54337), (13, 54364), (14, 54367), (15, 54370), (Start: 19 @54397 has 90 MA's), (26, 54496),

Gene: Yaboi_73 Start: 53310, Stop: 53489, Start Num: 19

Candidate Starts for Yaboi_73:
(15, 53283), (Start: 19 @53310 has 90 MA's), (Start: 23 @53352 has 1 MA's), (24, 53373), (26, 53409),