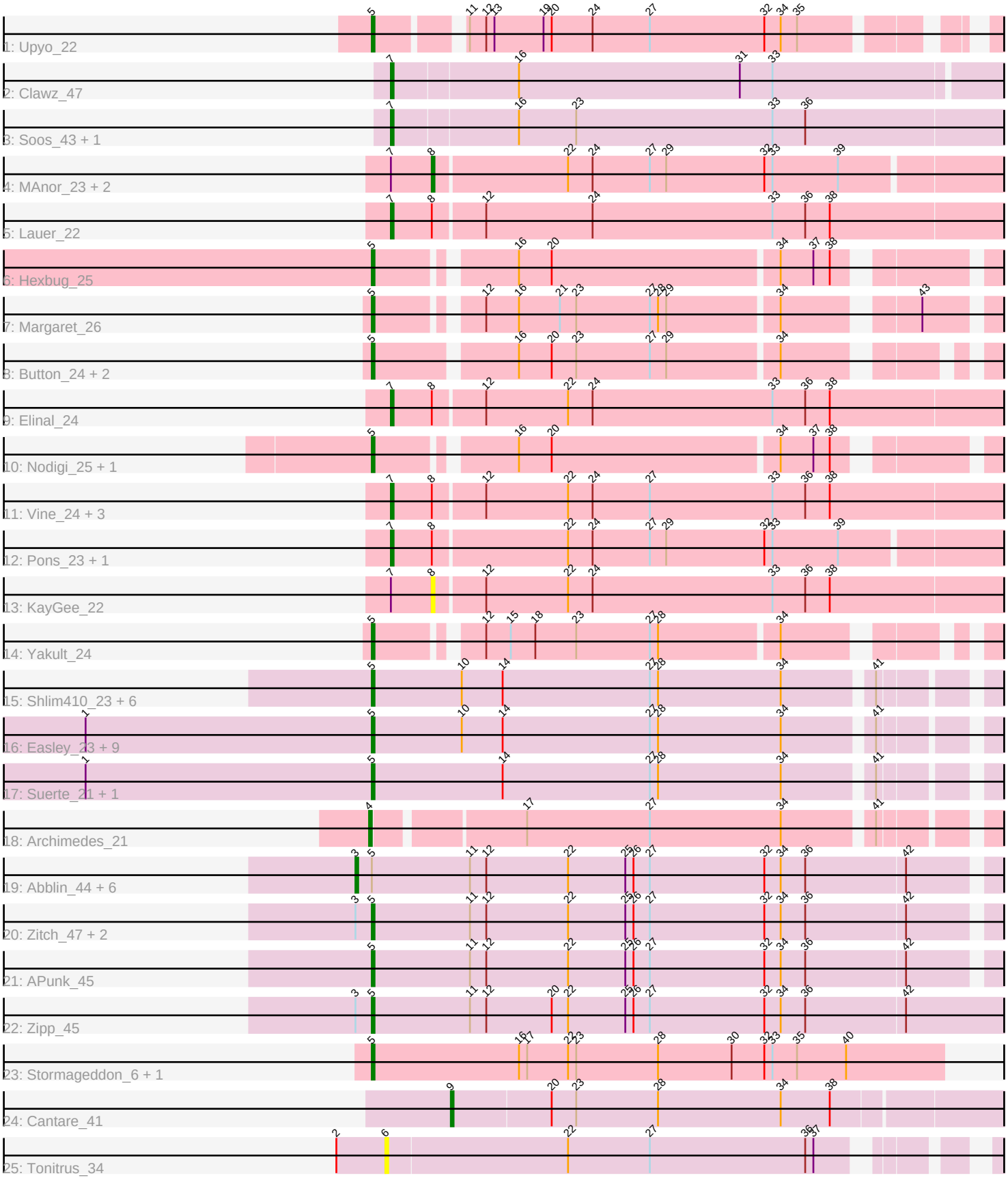
Pham 157879


1: Upyo_22
2: Clawz_47
3: Soos_43 + 1
4: MAnor_23 + 2
5: Lauer_22
6: Hexbug_25
7: Margaret_26
8: Button_24 + 2
9: Elinal_24
10: Nodigi_25 + 1
11: Vine_24 + 3
12: Pons_23 + 1
13: KayGee_22
14: Yakult_24
15: Shlim410_23 + 6
16: Easley_23 + 9
17: Suerte_21 + 1
18: Archimedes_21
19: Abblin_44 + 6
20: Zitch_47 + 2
21: APunk_45
22: Zipp_45
23: Stormageddon_6 + 1
24: Cantare_41
25: Tonitrus_34

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 157879 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157879 has 60 members, 8 are drafts.

Phages represented in each track:
• Track 1 : Upyo_22
• Track 2 : Clawz_47
• Track 3 : Soos_43, DonTron_47
• Track 4 : MAnor_23, SheckWes_22, CherryonLim_24
• Track 5 : Lauer_22
• Track 6 : Hexbug_25
• Track 7 : Margaret_26
• Track 8 : Button_24, Jamzy_26, GiKK_26
• Track 9 : Elinal_24
• Track 10 : Nodigi_25, Orla_25
• Track 11 : Vine_24, Feastonyeet_22, BigChungus_22, SummitAcademy_22
• Track 12 : Pons_23, Mayweather_24
• Track 13 : KayGee_22
• Track 14 : Yakult_24
• Track 15 : Shlim410_23, Howe_23, Beenie_23, Twinkle_23, Mcklovin_23, Hortense_23, Adora_23
• Track 16 : Easley_23, MichaelScott_23, Dolores_23, Samman98_23, Sekhmet_23, DobbysSock_22, WinkNick_23, Clark_23, Oregano_23, Annalisa_23
• Track 17 : Suerte_21, Thimann_23
• Track 18 : Archimedes_21
• Track 19 : Abblin_44, Delrey21_44, Natkenzie_44, Tardus_45, Scioto_45, DoctorFroggo_44, Verity_44
• Track 20 : Zitch_47, ViaConlectus_44, Sampson_44
• Track 21 : APunk_45
• Track 22 : Zipp_45
• Track 23 : Stormageddon_6, RedWattleHog_6
• Track 24 : Cantare_41
• Track 25 : Tonitrus_34

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

The start number called the most often in the published annotations is 5, it was called in 34 of the 52 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• APunk_45, Adora_23, Annalisa_23, Beenie_23, Button_24, Clark_23, DobbysSock_22, Dolores_23, Easley_23, GiKK_26, Hexbug_25, Hortense_23, Howe_23, Jamzy_26, Margaret_26, Mcklovin_23, MichaelScott_23, Nodigi_25, Oregano_23, Orla_25, RedWattleHog_6, Samman98_23, Sampson_44, Sekhmet_23, Shlim410_23, Stormageddon_6, Suerte_21, Thimann_23, Twinkle_23, Upyo_22, ViaConlectus_44, WinkNick_23, Yakult_24, Zipp_45, Zitch_47,

Genes that have the "Most Annotated" start but do not call it:
• Abblin_44, Delrey21_44, DoctorFroggo_44, Natkenzie_44, Scioto_45, Tardus_45, Verity_44,

Genes that do not have the "Most Annotated" start:
• Archimedes_21, BigChungus_22, Cantare_41, CherryonLim_24, Clawz_47, DonTron_47, Elinal_24, Feastonyeet_22, KayGee_22, Lauer_22, MAnor_23, Mayweather_24, Pons_23, SheckWes_22, Soos_43, SummitAcademy_22, Tonitrus_34, Vine_24,

Summary by start number:

Start 3:
• Found in 11 of 60 (18.3%) of genes in pham
• Manual Annotations of this start: 4 of 52
• Called 63.6% of time when present
• Phage (with cluster) where this start called: Abblin_44 (DE4), Delrey21_44 (DE4), DoctorFroggo_44 (DE4), Natkenzie_44 (DE4), Scioto_45 (DE4), Tardus_45 (DE4), Verity_44 (DE4),

Start 4:
• Found in 1 of 60 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 52
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Archimedes_21 (DA),

Start 5:
• Found in 42 of 60 (70.0%) of genes in pham
• Manual Annotations of this start: 34 of 52
• Called 83.3% of time when present
• Phage (with cluster) where this start called: APunk_45 (DE4), Adora_23 (CZ4), Annalisa_23 (CZ4), Beenie_23 (CZ4), Button_24 (CT), Clark_23 (CZ4), DobbysSock_22 (CZ4), Dolores_23 (CZ4), Easley_23 (CZ4), GiKK_26 (CT), Hexbug_25 (CT), Hortense_23 (CZ4), Howe_23 (CZ4), Jamzy_26 (CT), Margaret_26 (CT), Mcklovin_23 (CZ4), MichaelScott_23 (CZ4), Nodigi_25 (CT), Oregano_23 (CZ4), Orla_25 (CT), RedWattleHog_6 (DX), Samman98_23 (CZ4), Sampson_44 (DE4), Sekhmet_23 (CZ4), Shlim410_23 (CZ4), Stormageddon_6 (DX), Suerte_21 (CZ4), Thimann_23 (CZ4), Twinkle_23 (CZ4), Upyo_22 (CD), ViaConlectus_44 (DE4), WinkNick_23 (CZ4), Yakult_24 (CT), Zipp_45 (DE4), Zitch_47 (DE4),

Start 6:
• Found in 1 of 60 (1.7%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Tonitrus_34 (singleton),

Start 7:
• Found in 15 of 60 (25.0%) of genes in pham
• Manual Annotations of this start: 10 of 52
• Called 73.3% of time when present
• Phage (with cluster) where this start called: BigChungus_22 (CT), Clawz_47 (CP), DonTron_47 (CP), Elinal_24 (CT), Feastonyeet_22 (CT), Lauer_22 (CT), Mayweather_24 (CT), Pons_23 (CT), Soos_43 (CP), SummitAcademy_22 (CT), Vine_24 (CT),

Start 8:
• Found in 12 of 60 (20.0%) of genes in pham
• Manual Annotations of this start: 2 of 52
• Called 33.3% of time when present
• Phage (with cluster) where this start called: CherryonLim_24 (CT), KayGee_22 (CT), MAnor_23 (CT), SheckWes_22 (CT),

Start 9:
• Found in 1 of 60 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 52
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Cantare_41 (singleton),

Summary by clusters:

There are 8 clusters represented in this pham: singleton, DE4, CZ4, DA, CD, DX, CP, CT,

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

Info for manual annotations of cluster CP:
•Start number 7 was manually annotated 2 times for cluster CP.

Info for manual annotations of cluster CT:
•Start number 5 was manually annotated 8 times for cluster CT.
•Start number 7 was manually annotated 8 times for cluster CT.
•Start number 8 was manually annotated 2 times for cluster CT.

Info for manual annotations of cluster CZ4:
•Start number 5 was manually annotated 18 times for cluster CZ4.

Info for manual annotations of cluster DA:
•Start number 4 was manually annotated 1 time for cluster DA.

Info for manual annotations of cluster DE4:
•Start number 3 was manually annotated 4 times for cluster DE4.
•Start number 5 was manually annotated 5 times for cluster DE4.

Info for manual annotations of cluster DX:
•Start number 5 was manually annotated 2 times for cluster DX.

Gene Information:

Gene: APunk_45 Start: 39354, Stop: 39626, Start Num: 5
Candidate Starts for APunk_45:
(Start: 5 @39354 has 34 MA's), (11, 39390), (12, 39396), (22, 39426), (25, 39447), (26, 39450), (27, 39456), (32, 39498), (34, 39504), (36, 39513), (42, 39549),

Gene: Abblin_44 Start: 39885, Stop: 40163, Start Num: 3
Candidate Starts for Abblin_44:
(Start: 3 @39885 has 4 MA's), (Start: 5 @39891 has 34 MA's), (11, 39927), (12, 39933), (22, 39963), (25, 39984), (26, 39987), (27, 39993), (32, 40035), (34, 40041), (36, 40050), (42, 40086),

Gene: Adora_23 Start: 21051, Stop: 21284, Start Num: 5
Candidate Starts for Adora_23:
(Start: 5 @21051 has 34 MA's), (10, 21084), (14, 21099), (27, 21153), (28, 21156), (34, 21201), (41, 21231),

Gene: Annalisa_23 Start: 20513, Stop: 20746, Start Num: 5
Candidate Starts for Annalisa_23:
(1, 20408), (Start: 5 @20513 has 34 MA's), (10, 20546), (14, 20561), (27, 20615), (28, 20618), (34, 20663), (41, 20693),

Gene: Archimedes_21 Start: 19115, Stop: 19348, Start Num: 4
Candidate Starts for Archimedes_21:
(Start: 4 @19115 has 1 MA's), (17, 19166), (27, 19211), (34, 19259), (41, 19289),

Gene: Beenie_23 Start: 20870, Stop: 21103, Start Num: 5
Candidate Starts for Beenie_23:
(Start: 5 @20870 has 34 MA's), (10, 20903), (14, 20918), (27, 20972), (28, 20975), (34, 21020), (41, 21050),

Gene: BigChungus_22 Start: 19520, Stop: 19759, Start Num: 7
Candidate Starts for BigChungus_22:
(Start: 7 @19520 has 10 MA's), (Start: 8 @19535 has 2 MA's), (12, 19553), (22, 19583), (24, 19592), (27, 19613), (33, 19658), (36, 19670), (38, 19679),

Gene: Button_24 Start: 18830, Stop: 19045, Start Num: 5
Candidate Starts for Button_24:
(Start: 5 @18830 has 34 MA's), (16, 18878), (20, 18890), (23, 18899), (27, 18926), (29, 18932), (34, 18971),

Gene: Cantare_41 Start: 39115, Stop: 39327, Start Num: 9
Candidate Starts for Cantare_41:
(Start: 9 @39115 has 1 MA's), (20, 39151), (23, 39160), (28, 39190), (34, 39235), (38, 39253),

Gene: CherryonLim_24 Start: 20248, Stop: 20469, Start Num: 8
Candidate Starts for CherryonLim_24:
(Start: 7 @20233 has 10 MA's), (Start: 8 @20248 has 2 MA's), (22, 20296), (24, 20305), (27, 20326), (29, 20332), (32, 20368), (33, 20371), (39, 20395),

Gene: Clark_23 Start: 20513, Stop: 20746, Start Num: 5
Candidate Starts for Clark_23:

(1, 20408), (Start: 5 @20513 has 34 MA's), (10, 20546), (14, 20561), (27, 20615), (28, 20618), (34, 20663), (41, 20693),

Gene: Clawz_47 Start: 26167, Stop: 26412, Start Num: 7
Candidate Starts for Clawz_47:
(Start: 7 @26167 has 10 MA's), (16, 26212), (31, 26293), (33, 26305),

Gene: Delrey21_44 Start: 40650, Stop: 40928, Start Num: 3
Candidate Starts for Delrey21_44:
(Start: 3 @40650 has 4 MA's), (Start: 5 @40656 has 34 MA's), (11, 40692), (12, 40698), (22, 40728), (25, 40749), (26, 40752), (27, 40758), (32, 40800), (34, 40806), (36, 40815), (42, 40851),

Gene: DobbysSock_22 Start: 19987, Stop: 20220, Start Num: 5
Candidate Starts for DobbysSock_22:
(1, 19882), (Start: 5 @19987 has 34 MA's), (10, 20020), (14, 20035), (27, 20089), (28, 20092), (34, 20137), (41, 20167),

Gene: DoctorFroggo_44 Start: 40650, Stop: 40928, Start Num: 3
Candidate Starts for DoctorFroggo_44:
(Start: 3 @40650 has 4 MA's), (Start: 5 @40656 has 34 MA's), (11, 40692), (12, 40698), (22, 40728), (25, 40749), (26, 40752), (27, 40758), (32, 40800), (34, 40806), (36, 40815), (42, 40851),

Gene: Dolores_23 Start: 20489, Stop: 20722, Start Num: 5
Candidate Starts for Dolores_23:
(1, 20384), (Start: 5 @20489 has 34 MA's), (10, 20522), (14, 20537), (27, 20591), (28, 20594), (34, 20639), (41, 20669),

Gene: DonTron_47 Start: 26295, Stop: 26546, Start Num: 7
Candidate Starts for DonTron_47:
(Start: 7 @26295 has 10 MA's), (16, 26340), (23, 26361), (33, 26433), (36, 26445),

Gene: Easley_23 Start: 20499, Stop: 20732, Start Num: 5
Candidate Starts for Easley_23:
(1, 20394), (Start: 5 @20499 has 34 MA's), (10, 20532), (14, 20547), (27, 20601), (28, 20604), (34, 20649), (41, 20679),

Gene: Elinal_24 Start: 19473, Stop: 19712, Start Num: 7
Candidate Starts for Elinal_24:
(Start: 7 @19473 has 10 MA's), (Start: 8 @19488 has 2 MA's), (12, 19506), (22, 19536), (24, 19545), (33, 19611), (36, 19623), (38, 19632),

Gene: Feastonyeet_22 Start: 19520, Stop: 19759, Start Num: 7
Candidate Starts for Feastonyeet_22:
(Start: 7 @19520 has 10 MA's), (Start: 8 @19535 has 2 MA's), (12, 19553), (22, 19583), (24, 19592), (27, 19613), (33, 19658), (36, 19670), (38, 19679),

Gene: GiKK_26 Start: 19129, Stop: 19344, Start Num: 5
Candidate Starts for GiKK_26:
(Start: 5 @19129 has 34 MA's), (16, 19177), (20, 19189), (23, 19198), (27, 19225), (29, 19231), (34, 19270),

Gene: Hexbug_25 Start: 19814, Stop: 20032, Start Num: 5
Candidate Starts for Hexbug_25:

(Start: 5 @19814 has 34 MA's), (16, 19859), (20, 19871), (34, 19952), (37, 19964), (38, 19970),

Gene: Hortense_23 Start: 21098, Stop: 21331, Start Num: 5
Candidate Starts for Hortense_23:
(Start: 5 @21098 has 34 MA's), (10, 21131), (14, 21146), (27, 21200), (28, 21203), (34, 21248), (41, 21278),

Gene: Howe_23 Start: 21098, Stop: 21331, Start Num: 5
Candidate Starts for Howe_23:
(Start: 5 @21098 has 34 MA's), (10, 21131), (14, 21146), (27, 21200), (28, 21203), (34, 21248), (41, 21278),

Gene: Jamzy_26 Start: 19143, Stop: 19358, Start Num: 5
Candidate Starts for Jamzy_26:
(Start: 5 @19143 has 34 MA's), (16, 19191), (20, 19203), (23, 19212), (27, 19239), (29, 19245), (34, 19284),

Gene: KayGee_22 Start: 19488, Stop: 19712, Start Num: 8
Candidate Starts for KayGee_22:
(Start: 7 @19473 has 10 MA's), (Start: 8 @19488 has 2 MA's), (12, 19506), (22, 19536), (24, 19545), (33, 19611), (36, 19623), (38, 19632),

Gene: Lauer_22 Start: 19523, Stop: 19762, Start Num: 7
Candidate Starts for Lauer_22:
(Start: 7 @19523 has 10 MA's), (Start: 8 @19538 has 2 MA's), (12, 19556), (24, 19595), (33, 19661), (36, 19673), (38, 19682),

Gene: MAnor_23 Start: 19508, Stop: 19729, Start Num: 8
Candidate Starts for MAnor_23:
(Start: 7 @19493 has 10 MA's), (Start: 8 @19508 has 2 MA's), (22, 19556), (24, 19565), (27, 19586), (29, 19592), (32, 19628), (33, 19631), (39, 19655),

Gene: Margaret_26 Start: 19510, Stop: 19728, Start Num: 5
Candidate Starts for Margaret_26:
(Start: 5 @19510 has 34 MA's), (12, 19543), (16, 19555), (21, 19570), (23, 19576), (27, 19603), (28, 19606), (29, 19609), (34, 19648), (43, 19690),

Gene: Mayweather_24 Start: 20109, Stop: 20345, Start Num: 7
Candidate Starts for Mayweather_24:
(Start: 7 @20109 has 10 MA's), (Start: 8 @20124 has 2 MA's), (22, 20172), (24, 20181), (27, 20202), (29, 20208), (32, 20244), (33, 20247), (39, 20271),

Gene: Mcklovin_23 Start: 23267, Stop: 23500, Start Num: 5
Candidate Starts for Mcklovin_23:
(Start: 5 @23267 has 34 MA's), (10, 23300), (14, 23315), (27, 23369), (28, 23372), (34, 23417), (41, 23447),

Gene: MichaelScott_23 Start: 20870, Stop: 21103, Start Num: 5
Candidate Starts for MichaelScott_23:
(1, 20765), (Start: 5 @20870 has 34 MA's), (10, 20903), (14, 20918), (27, 20972), (28, 20975), (34, 21020), (41, 21050),

Gene: Natkenzie_44 Start: 39885, Stop: 40163, Start Num: 3

Candidate Starts for Natkenzie_44:
(Start: 3 @39885 has 4 MA's), (Start: 5 @39891 has 34 MA's), (11, 39927), (12, 39933), (22, 39963), (25, 39984), (26, 39987), (27, 39993), (32, 40035), (34, 40041), (36, 40050), (42, 40086),

Gene: Nodigi_25 Start: 19783, Stop: 20001, Start Num: 5
Candidate Starts for Nodigi_25:
(Start: 5 @19783 has 34 MA's), (16, 19828), (20, 19840), (34, 19921), (37, 19933), (38, 19939),

Gene: Oregano_23 Start: 20535, Stop: 20768, Start Num: 5
Candidate Starts for Oregano_23:
(1, 20430), (Start: 5 @20535 has 34 MA's), (10, 20568), (14, 20583), (27, 20637), (28, 20640), (34, 20685), (41, 20715),

Gene: Orla_25 Start: 19787, Stop: 20005, Start Num: 5
Candidate Starts for Orla_25:
(Start: 5 @19787 has 34 MA's), (16, 19832), (20, 19844), (34, 19925), (37, 19937), (38, 19943),

Gene: Pons_23 Start: 19481, Stop: 19717, Start Num: 7
Candidate Starts for Pons_23:
(Start: 7 @19481 has 10 MA's), (Start: 8 @19496 has 2 MA's), (22, 19544), (24, 19553), (27, 19574), (29, 19580), (32, 19616), (33, 19619), (39, 19643),

Gene: RedWattleHog_6 Start: 3833, Stop: 4042, Start Num: 5
Candidate Starts for RedWattleHog_6:
(Start: 5 @3833 has 34 MA's), (16, 3887), (17, 3890), (22, 3905), (23, 3908), (28, 3938), (30, 3965), (32, 3977), (33, 3980), (35, 3989), (40, 4007),

Gene: Samman98_23 Start: 20504, Stop: 20737, Start Num: 5
Candidate Starts for Samman98_23:
(1, 20399), (Start: 5 @20504 has 34 MA's), (10, 20537), (14, 20552), (27, 20606), (28, 20609), (34, 20654), (41, 20684),

Gene: Sampson_44 Start: 39836, Stop: 40108, Start Num: 5
Candidate Starts for Sampson_44:
(Start: 3 @39830 has 4 MA's), (Start: 5 @39836 has 34 MA's), (11, 39872), (12, 39878), (22, 39908), (25, 39929), (26, 39932), (27, 39938), (32, 39980), (34, 39986), (36, 39995), (42, 40031),

Gene: Scioto_45 Start: 39886, Stop: 40164, Start Num: 3
Candidate Starts for Scioto_45:
(Start: 3 @39886 has 4 MA's), (Start: 5 @39892 has 34 MA's), (11, 39928), (12, 39934), (22, 39964), (25, 39985), (26, 39988), (27, 39994), (32, 40036), (34, 40042), (36, 40051), (42, 40087),

Gene: Sekhmet_23 Start: 20864, Stop: 21097, Start Num: 5
Candidate Starts for Sekhmet_23:
(1, 20759), (Start: 5 @20864 has 34 MA's), (10, 20897), (14, 20912), (27, 20966), (28, 20969), (34, 21014), (41, 21044),

Gene: SheckWes_22 Start: 19493, Stop: 19714, Start Num: 8
Candidate Starts for SheckWes_22:
(Start: 7 @19478 has 10 MA's), (Start: 8 @19493 has 2 MA's), (22, 19541), (24, 19550), (27, 19571), (29, 19577), (32, 19613), (33, 19616), (39, 19640),

Gene: Shlim410_23 Start: 21098, Stop: 21331, Start Num: 5

Candidate Starts for Shlim410_23:
(Start: 5 @21098 has 34 MA's), (10, 21131), (14, 21146), (27, 21200), (28, 21203), (34, 21248), (41, 21278),

Gene: Soos_43 Start: 25462, Stop: 25713, Start Num: 7
Candidate Starts for Soos_43:
(Start: 7 @25462 has 10 MA's), (16, 25507), (23, 25528), (33, 25600), (36, 25612),

Gene: Stormageddon_6 Start: 3833, Stop: 4042, Start Num: 5
Candidate Starts for Stormageddon_6:
(Start: 5 @3833 has 34 MA's), (16, 3887), (17, 3890), (22, 3905), (23, 3908), (28, 3938), (30, 3965), (32, 3977), (33, 3980), (35, 3989), (40, 4007),

Gene: Suerte_21 Start: 19988, Stop: 20221, Start Num: 5
Candidate Starts for Suerte_21:
(1, 19883), (Start: 5 @19988 has 34 MA's), (14, 20036), (27, 20090), (28, 20093), (34, 20138), (41, 20168),

Gene: SummitAcademy_22 Start: 19551, Stop: 19790, Start Num: 7
Candidate Starts for SummitAcademy_22:
(Start: 7 @19551 has 10 MA's), (Start: 8 @19566 has 2 MA's), (12, 19584), (22, 19614), (24, 19623), (27, 19644), (33, 19689), (36, 19701), (38, 19710),

Gene: Tardus_45 Start: 39240, Stop: 39518, Start Num: 3
Candidate Starts for Tardus_45:
(Start: 3 @39240 has 4 MA's), (Start: 5 @39246 has 34 MA's), (11, 39282), (12, 39288), (22, 39318), (25, 39339), (26, 39342), (27, 39348), (32, 39390), (34, 39396), (36, 39405), (42, 39441),

Gene: Thimann_23 Start: 20456, Stop: 20689, Start Num: 5
Candidate Starts for Thimann_23:
(1, 20351), (Start: 5 @20456 has 34 MA's), (14, 20504), (27, 20558), (28, 20561), (34, 20606), (41, 20636),

Gene: Tonitrus_34 Start: 22454, Stop: 22666, Start Num: 6
Candidate Starts for Tonitrus_34:
(2, 22436), (6, 22454), (22, 22520), (27, 22550), (36, 22607), (37, 22610),

Gene: Twinkle_23 Start: 22157, Stop: 22390, Start Num: 5
Candidate Starts for Twinkle_23:
(Start: 5 @22157 has 34 MA's), (10, 22190), (14, 22205), (27, 22259), (28, 22262), (34, 22307), (41, 22337),

Gene: Upyo_22 Start: 18567, Stop: 18791, Start Num: 5
Candidate Starts for Upyo_22:
(Start: 5 @18567 has 34 MA's), (11, 18594), (12, 18600), (13, 18603), (19, 18621), (20, 18624), (24, 18639), (27, 18660), (32, 18702), (34, 18708), (35, 18714),

Gene: Verity_44 Start: 40650, Stop: 40928, Start Num: 3
Candidate Starts for Verity_44:
(Start: 3 @40650 has 4 MA's), (Start: 5 @40656 has 34 MA's), (11, 40692), (12, 40698), (22, 40728), (25, 40749), (26, 40752), (27, 40758), (32, 40800), (34, 40806), (36, 40815), (42, 40851),

Gene: ViaConlectus_44 Start: 38526, Stop: 38798, Start Num: 5

Candidate Starts for ViaConlectus_44:
(Start: 3 @38520 has 4 MA's), (Start: 5 @38526 has 34 MA's), (11, 38562), (12, 38568), (22, 38598), (25, 38619), (26, 38622), (27, 38628), (32, 38670), (34, 38676), (36, 38685), (42, 38721),

Gene: Vine_24 Start: 20486, Stop: 20725, Start Num: 7
Candidate Starts for Vine_24:
(Start: 7 @20486 has 10 MA's), (Start: 8 @20501 has 2 MA's), (12, 20519), (22, 20549), (24, 20558), (27, 20579), (33, 20624), (36, 20636), (38, 20645),

Gene: WinkNick_23 Start: 20489, Stop: 20722, Start Num: 5
Candidate Starts for WinkNick_23:
(1, 20384), (Start: 5 @20489 has 34 MA's), (10, 20522), (14, 20537), (27, 20591), (28, 20594), (34, 20639), (41, 20669),

Gene: Yakult_24 Start: 19364, Stop: 19576, Start Num: 5
Candidate Starts for Yakult_24:
(Start: 5 @19364 has 34 MA's), (12, 19397), (15, 19406), (18, 19415), (23, 19430), (27, 19457), (28, 19460), (34, 19502),

Gene: Zipp_45 Start: 40565, Stop: 40843, Start Num: 5
Candidate Starts for Zipp_45:
(Start: 3 @40559 has 4 MA's), (Start: 5 @40565 has 34 MA's), (11, 40601), (12, 40607), (20, 40631), (22, 40637), (25, 40658), (26, 40661), (27, 40667), (32, 40709), (34, 40715), (36, 40724), (42, 40760),

Gene: Zitch_47 Start: 38681, Stop: 38953, Start Num: 5
Candidate Starts for Zitch_47:
(Start: 3 @38675 has 4 MA's), (Start: 5 @38681 has 34 MA's), (11, 38717), (12, 38723), (22, 38753), (25, 38774), (26, 38777), (27, 38783), (32, 38825), (34, 38831), (36, 38840), (42, 38876),