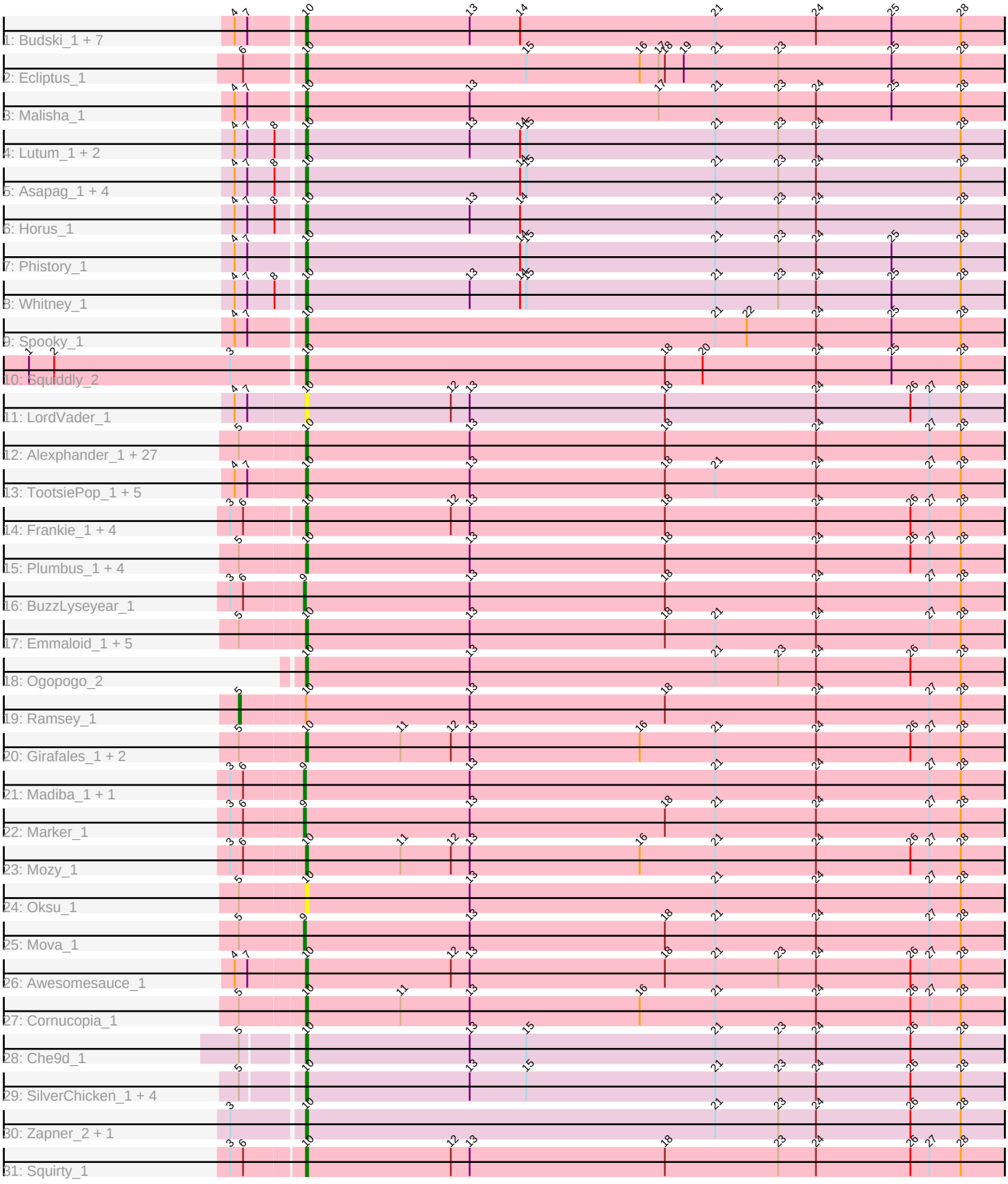
Pham 304890


1: Budski_1 + 7
2: Ecliptus_1
3: Malisha_1
4: Lutum_1 + 2
5: Asapag_1 + 4
6: Horus_1
7: Phistory_1
8: Whitney_1
9: Spooky_1
10: Squiddly_2
11: LordVader_1
12: Alexphander_1 + 27
13: TootsiePop_1 + 5
14: Frankie_1 + 4
15: Plumbus_1 + 4
16: BuzzLyseyear_1
17: Emmaloid_1 + 5
18: Ogopogo_2
19: Ramsey_1
20: Girafales_1 + 2
21: Madiba_1 + 1
22: Marker_1
23: Mozy_1
24: Oksu_1
25: Mova_1
26: Awesomesauce_1
27: Cornucopia_1
28: Che9d_1
29: SilverChicken_1 + 4
30: Zapner_2 + 1
31: Squirty_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 304890 Report

This analysis was run 06/08/26 on database version 649.

Pham number 304890 has 97 members, 8 are drafts.

Phages represented in each track:
• Track 1 : Budski_1, CheeseTouch_1, Phabuloso_1, ODay_1, Kamaru_1, BotCity_1, Holliday_1, LitninMcQueen_1
• Track 2 : Ecliptus_1
• Track 3 : Malisha_1
• Track 4 : Lutum_1, Periwinkle_1, Kenna_1
• Track 5 : Asapag_1, Leroy_1, Getalong_1, BENtherdunthat_1, Frickyeah_1
• Track 6 : Horus_1
• Track 7 : Phistory_1
• Track 8 : Whitney_1
• Track 9 : Spooky_1
• Track 10 : Squiddly_2
• Track 11 : LordVader_1
• Track 12 : Alexphander_1, Leozinho_1, Brookers_1, Spikelee_1, Coco12_1, BigPhil_1, Bobi_1, Kingsley_1, RockyHorror_1, Lorde_1, OwlsT2W_1, Boomer_1, Enby_1, JalFarm20_1, DirtMcgirt_1, Stap_1, Cerasum_1, Beanstalk_1, Beakin_1, Lucia_1, Sarma624_1, DosHalletts_1, UncleRicky_1, DaWorst_1, Peridot_1, Drago_1, Velveteen_1, Tootsieroll_1
• Track 13 : TootsiePop_1, Aloeri_1, ChickenDinner_1, Piper2020_1, DocMcStuffins_1, Misha28_1
• Track 14 : Frankie_1, Doomslug_1, Flathead_1, Brushbloom_1, Hegedechwinu_1
• Track 15 : Plumbus_1, MulchExplorer_1, Job42_1, Kimberlium_1, Juice456_1
• Track 16 : BuzzLyseyear_1
• Track 17 : Emmaloid_1, Rialto_1, Starcevich_1, Slim_1, LittleShirley_1, Totinger_1
• Track 18 : Ogopogo_2
• Track 19 : Ramsey_1
• Track 20 : Girafales_1, Tchotchke_1, Quico_1
• Track 21 : Madiba_1, Pollywog_1
• Track 22 : Marker_1
• Track 23 : Mozy_1
• Track 24 : Oksu_1
• Track 25 : Mova_1
• Track 26 : Awesomesauce_1
• Track 27 : Cornucopia_1
• Track 28 : Che9d_1
• Track 29 : SilverChicken_1, Yoshi_1, Soul22_1, Avani_1, Demsculpinboyz_1
• Track 30 : Zapner_2, Jabbawokkie_2
• Track 31 : Squirty_1

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

The start number called the most often in the published annotations is 10, it was called in 83 of the 89 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alexphander_1, Aloeri_1, Asapag_1, Avani_1, Awesomesauce_1, BENtherdunthat_1, Beakin_1, Beanstalk_1, BigPhil_1, Bobi_1, Boomer_1, BotCity_1, Brookers_1, Brushbloom_1, Budski_1, Cerasum_1, Che9d_1, CheeseTouch_1, ChickenDinner_1, Coco12_1, Cornucopia_1, DaWorst_1, Demsculpinboyz_1, DirtMcgirt_1, DocMcStuffins_1, Doomslug_1, DosHalletts_1, Drago_1, Ecliptus_1, Emmaloid_1, Enby_1, Flathead_1, Frankie_1, Frickyeah_1, Getalong_1, Girafales_1, Hegedechwinu_1, Holliday_1, Horus_1, Jabbawokkie_2, JalFarm20_1, Job42_1, Juice456_1, Kamaru_1, Kenna_1, Kimberlium_1, Kingsley_1, Leozinho_1, Leroy_1, LitninMcQueen_1, LittleShirley_1, LordVader_1, Lorde_1, Lucia_1, Lutum_1, Malisha_1, Misha28_1, Mozy_1, MulchExplorer_1, ODay_1, Ogopogo_2, Oksu_1, OwlsT2W_1, Peridot_1, Periwinkle_1, Phabuloso_1, Phistory_1, Piper2020_1, Plumbus_1, Quico_1, Rialto_1, RockyHorror_1, Sarma624_1, SilverChicken_1, Slim_1, Soul22_1, Spikelee_1, Spooky_1, Squiddly_2, Squirty_1, Stap_1, Starcevich_1, Tchotchke_1, TootsiePop_1, Tootsieroll_1, Totinger_1, UncleRicky_1, Velveteen_1, Whitney_1, Yoshi_1, Zapner_2,

Genes that have the "Most Annotated" start but do not call it:
• Ramsey_1,

Genes that do not have the "Most Annotated" start:
• BuzzLyseyear_1, Madiba_1, Marker_1, Mova_1, Pollywog_1,

Summary by start number:

Start 5:
• Found in 52 of 97 (53.6%) of genes in pham
• Manual Annotations of this start: 1 of 89
• Called 1.9% of time when present
• Phage (with cluster) where this start called: Ramsey_1 (F1),

Start 9:
• Found in 5 of 97 (5.2%) of genes in pham
• Manual Annotations of this start: 5 of 89
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BuzzLyseyear_1 (F1), Madiba_1 (F1), Marker_1 (F1), Mova_1 (F1), Pollywog_1 (F1),

Start 10:
• Found in 92 of 97 (94.8%) of genes in pham
• Manual Annotations of this start: 83 of 89
• Called 98.9% of time when present
• Phage (with cluster) where this start called: Alexphander_1 (F1), Aloeri_1 (F1), Asapag_1 (DN1), Avani_1 (F2), Awesomesauce_1 (F1), BENtherdunthat_1 (DN1),

Beakin_1 (F1), Beanstalk_1 (F1), BigPhil_1 (F1), Bobi_1 (F1), Boomer_1 (F1), BotCity_1 (DN), Brookers_1 (F1), Brushbloom_1 (F1), Budski_1 (DN), Cerasum_1 (F1), Che9d_1 (F2), CheeseTouch_1 (DN1), ChickenDinner_1 (F1), Coco12_1 (F1), Cornucopia_1 (F1), DaWorst_1 (F1), Demsculpinboyz_1 (F2), DirtMcgirt_1 (F1), DocMcStuffins_1 (F1), Doomslug_1 (F), DosHalletts_1 (F1), Drago_1 (F1), Ecliptus_1 (DN), Emmaloid_1 (F1), Enby_1 (F1), Flathead_1 (F1), Frankie_1 (F1), Frickyeah_1 (DN1), Getalong_1 (DN1), Girafales_1 (F1), Hegedechwinu_1 (F1), Holliday_1 (DN1), Horus_1 (DN1), Jabbawokkie_2 (F2), JalFarm20_1 (F1), Job42_1 (F1), Juice456_1 (F1), Kamaru_1 (DN1), Kenna_1 (DN1), Kimberlium_1 (F1), Kingsley_1 (F1), Leozinho_1 (F1), Leroy_1 (DN1), LitninMcQueen_1 (DN1), LittleShirley_1 (F1), LordVader_1 (F), Lorde_1 (F1), Lucia_1 (F1), Lutum_1 (DN1), Malisha_1 (DN), Misha28_1 (F1), Mozy_1 (F1), MulchExplorer_1 (F1), ODay_1 (DN), Ogopogo_2 (F1), Oksu_1 (F1), OwlsT2W_1 (F1), Peridot_1 (F1), Periwinkle_1 (DN1), Phabuloso_1 (DN1), Phistory_1 (DN1), Piper2020_1 (F1), Plumbus_1 (F1), Quico_1 (F1), Rialto_1 (F1), RockyHorror_1 (F1), Sarma624_1 (F1), SilverChicken_1 (F2), Slim_1 (F1), Soul22_1 (F2), Spikelee_1 (F1), Spooky_1 (DN2), Squiddly_2 (DN2), Squirty_1 (F3), Stap_1 (F1), Starcevich_1 (F1), Tchotchke_1 (F1), TootsiePop_1 (F1), Tootsieroll_1 (F1), Totinger_1 (F1), UncleRicky_1 (F1), Velveteen_1 (F1), Whitney_1 (DN1), Yoshi_1 (F2), Zapner_2 (F2),

Summary by clusters:

There are 7 clusters represented in this pham: DN, F1, F2, F3, F, DN1, DN2,

Info for manual annotations of cluster DN:
•Start number 10 was manually annotated 5 times for cluster DN.

Info for manual annotations of cluster DN1:
•Start number 10 was manually annotated 15 times for cluster DN1.

Info for manual annotations of cluster DN2:
•Start number 10 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster F1:
•Start number 5 was manually annotated 1 time for cluster F1.
•Start number 9 was manually annotated 5 times for cluster F1.
•Start number 10 was manually annotated 53 times for cluster F1.

Info for manual annotations of cluster F2:
•Start number 10 was manually annotated 7 times for cluster F2.

Info for manual annotations of cluster F3:
•Start number 10 was manually annotated 1 time for cluster F3.

Gene Information:

Gene: Alexphander_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Alexphander_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Aloeri_1 Start: 42, Stop: 374, Start Num: 10
Candidate Starts for Aloeri_1:
(4, 9), (7, 15), (Start: 10 @42 has 83 MA's), (13, 120), (18, 213), (21, 237), (24, 285), (27, 339), (28, 354),

Gene: Asapag_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Asapag_1:
(4, 9), (7, 15), (8, 27), (Start: 10 @39 has 83 MA's), (14, 141), (15, 144), (21, 234), (23, 264), (24, 282), (28, 351),

Gene: Avani_1 Start: 38, Stop: 370, Start Num: 10
Candidate Starts for Avani_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @38 has 83 MA's), (13, 116), (15, 143), (21, 233), (23, 263), (24, 281), (26, 326), (28, 350),

Gene: Awesomesauce_1 Start: 42, Stop: 374, Start Num: 10
Candidate Starts for Awesomesauce_1:
(4, 9), (7, 15), (Start: 10 @42 has 83 MA's), (12, 111), (13, 120), (18, 213), (21, 237), (23, 267), (24, 285), (26, 330), (27, 339), (28, 354),

Gene: BENtherdunthat_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for BENtherdunthat_1:
(4, 9), (7, 15), (8, 27), (Start: 10 @39 has 83 MA's), (14, 141), (15, 144), (21, 234), (23, 264), (24, 282), (28, 351),

Gene: Beakin_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Beakin_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Beanstalk_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Beanstalk_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: BigPhil_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for BigPhil_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Bobi_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Bobi_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Boomer_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Boomer_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: BotCity_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for BotCity_1:

(4, 9), (7, 15), (Start: 10 @39 has 83 MA's), (13, 117), (14, 141), (21, 234), (24, 282), (25, 318), (28, 351),

Gene: Brookers_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Brookers_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Brushbloom_1 Start: 40, Stop: 372, Start Num: 10
Candidate Starts for Brushbloom_1:
(3, 7), (6, 13), (Start: 10 @40 has 83 MA's), (12, 109), (13, 118), (18, 211), (24, 283), (26, 328), (27, 337), (28, 352),

Gene: Budski_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Budski_1:
(4, 9), (7, 15), (Start: 10 @39 has 83 MA's), (13, 117), (14, 141), (21, 234), (24, 282), (25, 318), (28, 351),

Gene: BuzzLyseyear_1 Start: 40, Stop: 372, Start Num: 9
Candidate Starts for BuzzLyseyear_1:
(3, 7), (6, 13), (Start: 9 @40 has 5 MA's), (13, 118), (18, 211), (24, 283), (27, 337), (28, 352),

Gene: Cerasum_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Cerasum_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Che9d_1 Start: 48, Stop: 380, Start Num: 10
Candidate Starts for Che9d_1:
(Start: 5 @21 has 1 MA's), (Start: 10 @48 has 83 MA's), (13, 126), (15, 153), (21, 243), (23, 273), (24, 291), (26, 336), (28, 360),

Gene: CheeseTouch_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for CheeseTouch_1:
(4, 9), (7, 15), (Start: 10 @39 has 83 MA's), (13, 117), (14, 141), (21, 234), (24, 282), (25, 318), (28, 351),

Gene: ChickenDinner_1 Start: 42, Stop: 374, Start Num: 10
Candidate Starts for ChickenDinner_1:
(4, 9), (7, 15), (Start: 10 @42 has 83 MA's), (13, 120), (18, 213), (21, 237), (24, 285), (27, 339), (28, 354),

Gene: Coco12_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Coco12_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Cornucopia_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Cornucopia_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (11, 86), (13, 119), (16, 200), (21, 236), (24, 284), (26, 329), (27, 338), (28, 353),

Gene: DaWorst_1 Start: 41, Stop: 373, Start Num: 10

Candidate Starts for DaWorst_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Demsculpinboyz_1 Start: 38, Stop: 370, Start Num: 10
Candidate Starts for Demsculpinboyz_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @38 has 83 MA's), (13, 116), (15, 143), (21, 233), (23, 263), (24, 281), (26, 326), (28, 350),

Gene: DirtMcgirt_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for DirtMcgirt_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: DocMcStuffins_1 Start: 42, Stop: 374, Start Num: 10
Candidate Starts for DocMcStuffins_1:
(4, 9), (7, 15), (Start: 10 @42 has 83 MA's), (13, 120), (18, 213), (21, 237), (24, 285), (27, 339), (28, 354),

Gene: Doomslug_1 Start: 40, Stop: 372, Start Num: 10
Candidate Starts for Doomslug_1:
(3, 7), (6, 13), (Start: 10 @40 has 83 MA's), (12, 109), (13, 118), (18, 211), (24, 283), (26, 328), (27, 337), (28, 352),

Gene: DosHalletts_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for DosHalletts_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Drago_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Drago_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Ecliptus_1 Start: 40, Stop: 372, Start Num: 10
Candidate Starts for Ecliptus_1:
(6, 13), (Start: 10 @40 has 83 MA's), (15, 145), (16, 199), (17, 208), (18, 211), (19, 220), (21, 235), (23, 265), (25, 319), (28, 352),

Gene: Emmaloid_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Emmaloid_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (21, 236), (24, 284), (27, 338), (28, 353),

Gene: Enby_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Enby_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Flathead_1 Start: 40, Stop: 372, Start Num: 10
Candidate Starts for Flathead_1:
(3, 7), (6, 13), (Start: 10 @40 has 83 MA's), (12, 109), (13, 118), (18, 211), (24, 283), (26, 328), (27, 337), (28, 352),

Gene: Frankie_1 Start: 40, Stop: 372, Start Num: 10
Candidate Starts for Frankie_1:
(3, 7), (6, 13), (Start: 10 @40 has 83 MA's), (12, 109), (13, 118), (18, 211), (24, 283), (26, 328), (27, 337), (28, 352),

Gene: Frickyeah_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Frickyeah_1:
(4, 9), (7, 15), (8, 27), (Start: 10 @39 has 83 MA's), (14, 141), (15, 144), (21, 234), (23, 264), (24, 282), (28, 351),

Gene: Getalong_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Getalong_1:
(4, 9), (7, 15), (8, 27), (Start: 10 @39 has 83 MA's), (14, 141), (15, 144), (21, 234), (23, 264), (24, 282), (28, 351),

Gene: Girafales_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Girafales_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (11, 86), (12, 110), (13, 119), (16, 200), (21, 236), (24, 284), (26, 329), (27, 338), (28, 353),

Gene: Hegedechwinu_1 Start: 40, Stop: 372, Start Num: 10
Candidate Starts for Hegedechwinu_1:
(3, 7), (6, 13), (Start: 10 @40 has 83 MA's), (12, 109), (13, 118), (18, 211), (24, 283), (26, 328), (27, 337), (28, 352),

Gene: Holliday_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Holliday_1:
(4, 9), (7, 15), (Start: 10 @39 has 83 MA's), (13, 117), (14, 141), (21, 234), (24, 282), (25, 318), (28, 351),

Gene: Horus_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Horus_1:
(4, 9), (7, 15), (8, 27), (Start: 10 @39 has 83 MA's), (13, 117), (14, 141), (21, 234), (23, 264), (24, 282), (28, 351),

Gene: Jabbawokkie_2 Start: 561, Stop: 893, Start Num: 10
Candidate Starts for Jabbawokkie_2:
(3, 528), (Start: 10 @561 has 83 MA's), (21, 756), (23, 786), (24, 804), (26, 849), (28, 873),

Gene: JalFarm20_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for JalFarm20_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Job42_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Job42_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (26, 329), (27, 338), (28, 353),

Gene: Juice456_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Juice456_1:

(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (26, 329), (27, 338), (28, 353),

Gene: Kamaru_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Kamaru_1:
(4, 9), (7, 15), (Start: 10 @39 has 83 MA's), (13, 117), (14, 141), (21, 234), (24, 282), (25, 318), (28, 351),

Gene: Kenna_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Kenna_1:
(4, 9), (7, 15), (8, 27), (Start: 10 @39 has 83 MA's), (13, 117), (14, 141), (15, 144), (21, 234), (23, 264), (24, 282), (28, 351),

Gene: Kimberlium_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Kimberlium_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (26, 329), (27, 338), (28, 353),

Gene: Kingsley_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Kingsley_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Leozinho_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Leozinho_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Leroy_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Leroy_1:
(4, 9), (7, 15), (8, 27), (Start: 10 @39 has 83 MA's), (14, 141), (15, 144), (21, 234), (23, 264), (24, 282), (28, 351),

Gene: LitninMcQueen_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for LitninMcQueen_1:
(4, 9), (7, 15), (Start: 10 @39 has 83 MA's), (13, 117), (14, 141), (21, 234), (24, 282), (25, 318), (28, 351),

Gene: LittleShirley_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for LittleShirley_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (21, 236), (24, 284), (27, 338), (28, 353),

Gene: LordVader_1 Start: 42, Stop: 374, Start Num: 10
Candidate Starts for LordVader_1:
(4, 9), (7, 15), (Start: 10 @42 has 83 MA's), (12, 111), (13, 120), (18, 213), (24, 285), (26, 330), (27, 339), (28, 354),

Gene: Lorde_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Lorde_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Lucia_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Lucia_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Lutum_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Lutum_1:
(4, 9), (7, 15), (8, 27), (Start: 10 @39 has 83 MA's), (13, 117), (14, 141), (15, 144), (21, 234), (23, 264), (24, 282), (28, 351),

Gene: Madiba_1 Start: 40, Stop: 372, Start Num: 9
Candidate Starts for Madiba_1:
(3, 7), (6, 13), (Start: 9 @40 has 5 MA's), (13, 118), (21, 235), (24, 283), (27, 337), (28, 352),

Gene: Malisha_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Malisha_1:
(4, 9), (7, 15), (Start: 10 @39 has 83 MA's), (13, 117), (17, 207), (21, 234), (23, 264), (24, 282), (25, 318), (28, 351),

Gene: Marker_1 Start: 40, Stop: 372, Start Num: 9
Candidate Starts for Marker_1:
(3, 7), (6, 13), (Start: 9 @40 has 5 MA's), (13, 118), (18, 211), (21, 235), (24, 283), (27, 337), (28, 352),

Gene: Misha28_1 Start: 42, Stop: 374, Start Num: 10
Candidate Starts for Misha28_1:
(4, 9), (7, 15), (Start: 10 @42 has 83 MA's), (13, 120), (18, 213), (21, 237), (24, 285), (27, 339), (28, 354),

Gene: Mova_1 Start: 41, Stop: 373, Start Num: 9
Candidate Starts for Mova_1:
(Start: 5 @11 has 1 MA's), (Start: 9 @41 has 5 MA's), (13, 119), (18, 212), (21, 236), (24, 284), (27, 338), (28, 353),

Gene: Mozy_1 Start: 40, Stop: 372, Start Num: 10
Candidate Starts for Mozy_1:
(3, 7), (6, 13), (Start: 10 @40 has 83 MA's), (11, 85), (12, 109), (13, 118), (16, 199), (21, 235), (24, 283), (26, 328), (27, 337), (28, 352),

Gene: MulchExplorer_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for MulchExplorer_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (26, 329), (27, 338), (28, 353),

Gene: ODay_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for ODay_1:
(4, 9), (7, 15), (Start: 10 @39 has 83 MA's), (13, 117), (14, 141), (21, 234), (24, 282), (25, 318), (28, 351),

Gene: Ogopogo_2 Start: 299, Stop: 631, Start Num: 10
Candidate Starts for Ogopogo_2:
(Start: 10 @299 has 83 MA's), (13, 377), (21, 494), (23, 524), (24, 542), (26, 587), (28, 611),

Gene: Oksu_1 Start: 41, Stop: 373, Start Num: 10

Candidate Starts for Oksu_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (21, 236), (24, 284), (27, 338), (28, 353),

Gene: OwlsT2W_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for OwlsT2W_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Peridot_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Peridot_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Periwinkle_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Periwinkle_1:
(4, 9), (7, 15), (8, 27), (Start: 10 @39 has 83 MA's), (13, 117), (14, 141), (15, 144), (21, 234), (23, 264), (24, 282), (28, 351),

Gene: Phabuloso_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Phabuloso_1:
(4, 9), (7, 15), (Start: 10 @39 has 83 MA's), (13, 117), (14, 141), (21, 234), (24, 282), (25, 318), (28, 351),

Gene: Phistory_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Phistory_1:
(4, 9), (7, 15), (Start: 10 @39 has 83 MA's), (14, 141), (15, 144), (21, 234), (23, 264), (24, 282), (25, 318), (28, 351),

Gene: Piper2020_1 Start: 42, Stop: 374, Start Num: 10
Candidate Starts for Piper2020_1:
(4, 9), (7, 15), (Start: 10 @42 has 83 MA's), (13, 120), (18, 213), (21, 237), (24, 285), (27, 339), (28, 354),

Gene: Plumbus_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Plumbus_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (26, 329), (27, 338), (28, 353),

Gene: Pollywog_1 Start: 40, Stop: 372, Start Num: 9
Candidate Starts for Pollywog_1:
(3, 7), (6, 13), (Start: 9 @40 has 5 MA's), (13, 118), (21, 235), (24, 283), (27, 337), (28, 352),

Gene: Quico_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Quico_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (11, 86), (12, 110), (13, 119), (16, 200), (21, 236), (24, 284), (26, 329), (27, 338), (28, 353),

Gene: Ramsey_1 Start: 11, Stop: 373, Start Num: 5
Candidate Starts for Ramsey_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Rialto_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Rialto_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (21, 236), (24, 284), (27, 338), (28, 353),

Gene: RockyHorror_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for RockyHorror_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Sarma624_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Sarma624_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: SilverChicken_1 Start: 38, Stop: 370, Start Num: 10
Candidate Starts for SilverChicken_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @38 has 83 MA's), (13, 116), (15, 143), (21, 233), (23, 263), (24, 281), (26, 326), (28, 350),

Gene: Slim_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Slim_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (21, 236), (24, 284), (27, 338), (28, 353),

Gene: Soul22_1 Start: 38, Stop: 370, Start Num: 10
Candidate Starts for Soul22_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @38 has 83 MA's), (13, 116), (15, 143), (21, 233), (23, 263), (24, 281), (26, 326), (28, 350),

Gene: Spikelee_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Spikelee_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Spooky_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Spooky_1:
(4, 9), (7, 15), (Start: 10 @39 has 83 MA's), (21, 234), (22, 249), (24, 282), (25, 318), (28, 351),

Gene: Squiddly_2 Start: 730, Stop: 1062, Start Num: 10
Candidate Starts for Squiddly_2:
(1, 601), (2, 613), (3, 697), (Start: 10 @730 has 83 MA's), (18, 901), (20, 919), (24, 973), (25, 1009), (28, 1042),

Gene: Squirty_1 Start: 40, Stop: 372, Start Num: 10
Candidate Starts for Squirty_1:
(3, 7), (6, 13), (Start: 10 @40 has 83 MA's), (12, 109), (13, 118), (18, 211), (23, 265), (24, 283), (26, 328), (27, 337), (28, 352),

Gene: Stap_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Stap_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Starcevich_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Starcevich_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (21, 236), (24, 284), (27, 338), (28, 353),

Gene: Tchotchke_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Tchotchke_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (11, 86), (12, 110), (13, 119), (16, 200), (21, 236), (24, 284), (26, 329), (27, 338), (28, 353),

Gene: TootsiePop_1 Start: 42, Stop: 374, Start Num: 10
Candidate Starts for TootsiePop_1:
(4, 9), (7, 15), (Start: 10 @42 has 83 MA's), (13, 120), (18, 213), (21, 237), (24, 285), (27, 339), (28, 354),

Gene: Tootsieroll_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Tootsieroll_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Totinger_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Totinger_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (21, 236), (24, 284), (27, 338), (28, 353),

Gene: UncleRicky_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for UncleRicky_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Velveteen_1 Start: 41, Stop: 373, Start Num: 10
Candidate Starts for Velveteen_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @41 has 83 MA's), (13, 119), (18, 212), (24, 284), (27, 338), (28, 353),

Gene: Whitney_1 Start: 39, Stop: 371, Start Num: 10
Candidate Starts for Whitney_1:
(4, 9), (7, 15), (8, 27), (Start: 10 @39 has 83 MA's), (13, 117), (14, 141), (15, 144), (21, 234), (23, 264), (24, 282), (25, 318), (28, 351),

Gene: Yoshi_1 Start: 38, Stop: 370, Start Num: 10
Candidate Starts for Yoshi_1:
(Start: 5 @11 has 1 MA's), (Start: 10 @38 has 83 MA's), (13, 116), (15, 143), (21, 233), (23, 263), (24, 281), (26, 326), (28, 350),

Gene: Zapner_2 Start: 562, Stop: 894, Start Num: 10
Candidate Starts for Zapner_2:
(3, 529), (Start: 10 @562 has 83 MA's), (21, 757), (23, 787), (24, 805), (26, 850), (28, 874),