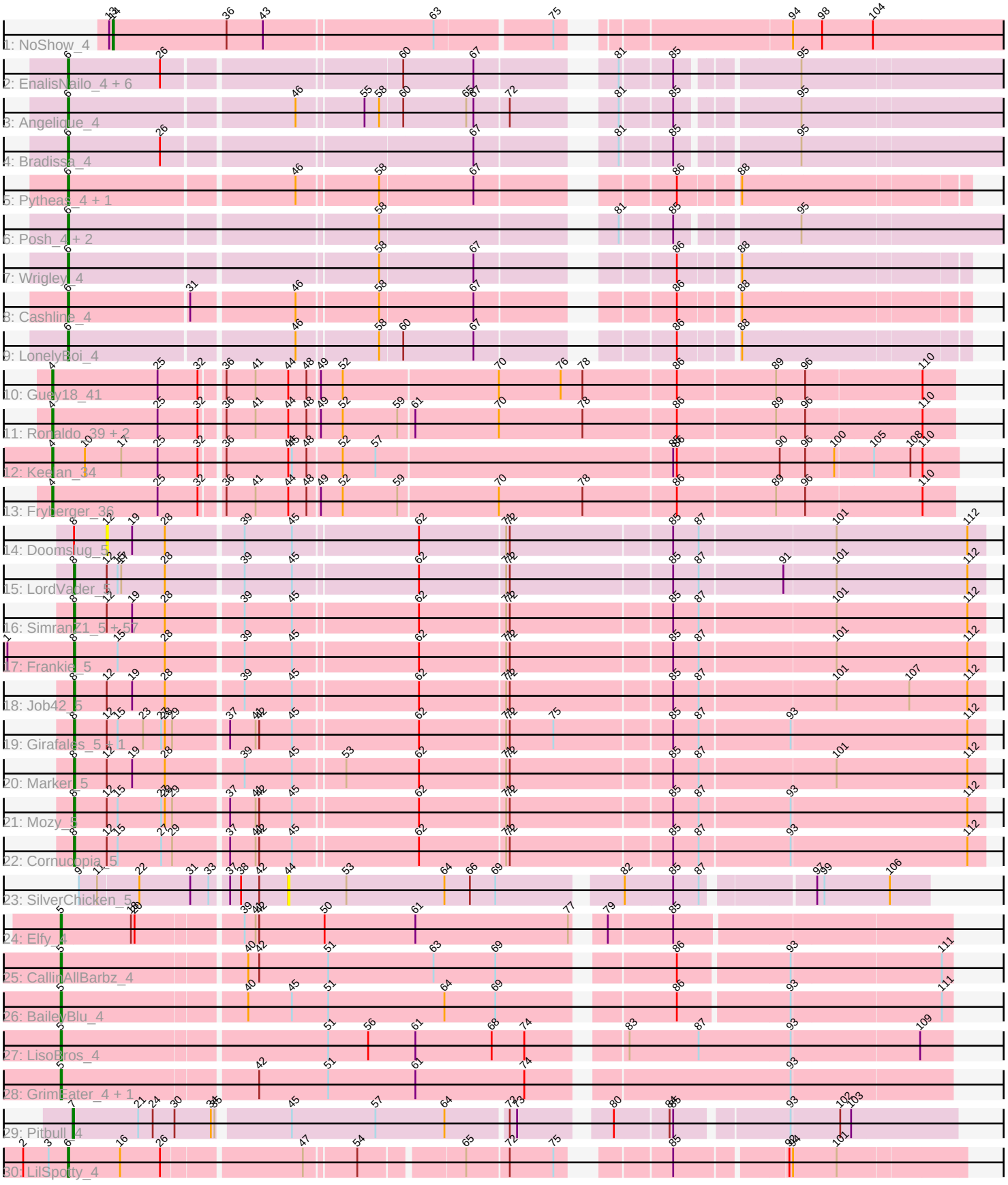
Pham 347456


1: NoShow_4
2: EnalisNailo_4 + 6
3: Angelique_4
4: Bradissa_4
5: Pytheas_4 + 1
6: Posh_4 + 2
7: Wrigley_4
8: Cashline_4
9: LonelyBoi_4
10: Gudy18_41
11: Ronaldo_39 + 2
12: Keelan_34
13: Frydberger_36
14: Doomslug_5
15: LordVader_5
16: SimranZ1_5 + 57
17: Frankie_5
18: Job42_5
19: Girafales_5 + 1
20: Marker_5
21: Mozy_5
22: Cornucopia_5
23: SilverChicken_5
24: Elfy_4
25: CallinAllBarbz_4
26: BaileyBlu_4
27: LisoBros_4
28: GrimEater_4 + 1
29: Pitbull_4
30: LilSpotty_4

Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 347456 Report

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

Pham number 347456 has 100 members, 2 are drafts.

Phages represented in each track:
• Track 1 : NoShow_4
• Track 2 : EnalisNailo_4, EMsquaredA_4, Floral_4, Marteena_4, BritBrat_4, Lilas_4, Pollux_4
• Track 3 : Angelique_4
• Track 4 : Bradissa_4
• Track 5 : Pytheas_4, Jablanski_4
• Track 6 : Posh_4, BeeGee_4, Confidence_4
• Track 7 : Wrigley_4
• Track 8 : Cashline_4
• Track 9 : LonelyBoi_4
• Track 10 : Guey18_41
• Track 11 : Ronaldo_39, Ziko_39, Volt_38
• Track 12 : Keelan_34
• Track 13 : Fryberger_36
• Track 14 : Doomslug_5
• Track 15 : LordVader_5
• Track 16 : SimranZ1_5, TootsiePop_5, Leozinho_5, Spikelee_5, Brookers_5, Plumbus_5, Alexphander_5, Coco12_5, BigPhil_5, Bobi_5, Beakin_5, Kingsley_5, Lorde_5, RockyHorror_5, OwlsT2W_5, Boomer_5, Seagreen_5, Enby_5, BuzzLyseyear_5, Emmaloid_5, Aloeri_5, Rialto_5, Flathead_5, JalFarm20_5, Starcevich_5, MulchExplorer_5, ChickenDinner_5, Slim_5, DirtMcgirt_5, Stap_5, Piper2020_5, Cerasum_5, Ramsey_5, Hegedechwinu_5, LittleShirley_5, DocMcStuffins_5, Pollywog_5, Madiba_5, Tchotchke_5, Lucia_5, Sarma624_5, DosHalletts_5, Brushbloom_5, Oksu_5, Mova_5, Beanstalk_5, UncleRicky_5, DaWorst_5, Awesomesauce_5, Kimberlium_5, Peridot_5, Juice456_5, Squirty_5, Drago_5, Misha28_5, Totinger_5, Velveteen_5, Tootsieroll_5
• Track 17 : Frankie_5
• Track 18 : Job42_5
• Track 19 : Girafales_5, Quico_5
• Track 20 : Marker_5
• Track 21 : Mozy_5
• Track 22 : Cornucopia_5
• Track 23 : SilverChicken_5
• Track 24 : Elfy_4
• Track 25 : CallinAllBarbz_4
• Track 26 : BaileyBlu_4
• Track 27 : LisoBros_4

• Track 28 : GrimEater_4, Jankie_4
• Track 29 : Pitbull_4
• Track 30 : LilSpotty_4

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

The start number called the most often in the published annotations is 8, it was called in 66 of the 98 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alexphander_5, Aloeri_5, Awesomesauce_5, Beakin_5, Beanstalk_5, BigPhil_5, Bobi_5, Boomer_5, Brookers_5, Brushbloom_5, BuzzLyseyear_5, Cerasum_5, ChickenDinner_5, Coco12_5, Cornucopia_5, DaWorst_5, DirtMcgirt_5, DocMcStuffins_5, DosHalletts_5, Drago_5, Emmaloid_5, Enby_5, Flathead_5, Frankie_5, Girafales_5, Hegedechwinu_5, JalFarm20_5, Job42_5, Juice456_5, Kimberlium_5, Kingsley_5, Leozinho_5, LittleShirley_5, LordVader_5, Lorde_5, Lucia_5, Madiba_5, Marker_5, Misha28_5, Mova_5, Mozy_5, MulchExplorer_5, Oksu_5, OwlsT2W_5, Peridot_5, Piper2020_5, Plumbus_5, Pollywog_5, Quico_5, Ramsey_5, Rialto_5, RockyHorror_5, Sarma624_5, Seagreen_5, SimranZ1_5, Slim_5, Spikelee_5, Squirty_5, Stap_5, Starcevich_5, Tchotchke_5, TootsiePop_5, Tootsieroll_5, Totinger_5, UncleRicky_5, Velveteen_5,

Genes that have the "Most Annotated" start but do not call it:
• Doomslug_5,

Genes that do not have the "Most Annotated" start:
• Angelique_4, BaileyBlu_4, BeeGee_4, Bradissa_4, BritBrat_4, CallinAllBarbz_4, Cashline_4, Confidence_4, EMsquaredA_4, Elfy_4, EnalisNailo_4, Floral_4, Fryberger_36, GrimEater_4, Guey18_41, Jablanski_4, Jankie_4, Keelan_34, LilSpotty_4, Lilas_4, LisoBros_4, LonelyBoi_4, Marteena_4, NoShow_4, Pitbull_4, Pollux_4, Posh_4, Pytheas_4, Ronaldo_39, SilverChicken_5, Volt_38, Wrigley_4, Ziko_39,

Summary by start number:

Start 4:
• Found in 6 of 100 (6.0%) of genes in pham
• Manual Annotations of this start: 6 of 98
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Fryberger_36 (DP), Guey18_41 (DP), Keelan_34 (DP), Ronaldo_39 (DP), Volt_38 (DP), Ziko_39 (DP),

Start 5:
• Found in 6 of 100 (6.0%) of genes in pham
• Manual Annotations of this start: 6 of 98
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BaileyBlu_4 (FP), CallinAllBarbz_4 (FP), Elfy_4 (FP), GrimEater_4 (FP), Jankie_4 (FP), LisoBros_4 (FP),

Start 6:

• Found in 18 of 100 (18.0%) of genes in pham
• Manual Annotations of this start: 18 of 98
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Angelique_4 (CY1), BeeGee_4 (CY5), Bradissa_4 (CY1), BritBrat_4 (CY2), Cashline_4 (CY6), Confidence_4 (CY1), EMsquaredA_4 (CY1), EnalisNailo_4 (CY1), Floral_4 (CY1), Jablanski_4 (CY3), LilSpotty_4 (singleton), Lilas_4 (CY1), LonelyBoi_4 (CY7), Marteena_4 (CY1), Pollux_4 (CY1), Posh_4 (CY4), Pytheas_4 (CY3), Wrigley_4 (CY4),

Start 7:
• Found in 1 of 100 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 98
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Pitbull_4 (FQ1),

Start 8:
• Found in 67 of 100 (67.0%) of genes in pham
• Manual Annotations of this start: 66 of 98
• Called 98.5% of time when present
• Phage (with cluster) where this start called: Alexphander_5 (F1), Aloeri_5 (F1), Awesomesauce_5 (F1), Beakin_5 (F1), Beanstalk_5 (F1), BigPhil_5 (F1), Bobi_5 (F1), Boomer_5 (F1), Brookers_5 (F1), Brushbloom_5 (F1), BuzzLyseyear_5 (F1), Cerasum_5 (F1), ChickenDinner_5 (F1), Coco12_5 (F1), Cornucopia_5 (F1), DaWorst_5 (F1), DirtMcgirt_5 (F1), DocMcStuffins_5 (F1), DosHalletts_5 (F1), Drago_5 (F1), Emmaloid_5 (F1), Enby_5 (F1), Flathead_5 (F1), Frankie_5 (F1), Girafales_5 (F1), Hegedechwinu_5 (F1), JalFarm20_5 (F1), Job42_5 (F1), Juice456_5 (F1), Kimberlium_5 (F1), Kingsley_5 (F1), Leozinho_5 (F1), LittleShirley_5 (F1), LordVader_5 (F), Lorde_5 (F1), Lucia_5 (F1), Madiba_5 (F1), Marker_5 (F1), Misha28_5 (F1), Mova_5 (F1), Mozy_5 (F1), MulchExplorer_5 (F1), Oksu_5 (F1), OwlsT2W_5 (F1), Peridot_5 (F1), Piper2020_5 (F1), Plumbus_5 (F1), Pollywog_5 (F1), Quico_5 (F1), Ramsey_5 (F1), Rialto_5 (F1), RockyHorror_5 (F1), Sarma624_5 (F1), Seagreen_5 (F1), SimranZ1_5 (F1), Slim_5 (F1), Spikelee_5 (F1), Squirty_5 (F3), Stap_5 (F1), Starcevich_5 (F1), Tchotchke_5 (F1), TootsiePop_5 (F1), Tootsieroll_5 (F1), Totinger_5 (F1), UncleRicky_5 (F1), Velveteen_5 (F1),

Start 12:
• Found in 66 of 100 (66.0%) of genes in pham
• No Manual Annotations of this start.
• Called 1.5% of time when present
• Phage (with cluster) where this start called: Doomslug_5 (F),

Start 14:
• Found in 1 of 100 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 98
• Called 100.0% of time when present
• Phage (with cluster) where this start called: NoShow_4 (AB),

Start 44:
• Found in 7 of 100 (7.0%) of genes in pham
• No Manual Annotations of this start.
• Called 14.3% of time when present
• Phage (with cluster) where this start called: SilverChicken_5 (F2),

Summary by clusters:

There are 16 clusters represented in this pham: CY3, F1, singleton, AB, CY7, CY6, CY5, F, CY4, CY1, FP, F3, F2, FQ1, CY2, DP,

Info for manual annotations of cluster AB:
•Start number 14 was manually annotated 1 time for cluster AB.

Info for manual annotations of cluster CY1:
•Start number 6 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CY2:
•Start number 6 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CY3:
•Start number 6 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:
•Start number 6 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CY5:
•Start number 6 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CY6:
•Start number 6 was manually annotated 1 time for cluster CY6.

Info for manual annotations of cluster CY7:
•Start number 6 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster DP:
•Start number 4 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster F:
•Start number 8 was manually annotated 1 time for cluster F.

Info for manual annotations of cluster F1:
•Start number 8 was manually annotated 64 times for cluster F1.

Info for manual annotations of cluster F3:
•Start number 8 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster FP:
•Start number 5 was manually annotated 6 times for cluster FP.

Info for manual annotations of cluster FQ1:
•Start number 7 was manually annotated 1 time for cluster FQ1.

Gene Information:

Gene: Alexphander_5 Start: 3604, Stop: 4329, Start Num: 8

Candidate Starts for Alexphander_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Aloeri_5 Start: 3607, Stop: 4332, Start Num: 8
Candidate Starts for Aloeri_5:
(Start: 8 @3607 has 66 MA's), (12, 3634), (19, 3655), (28, 3682), (39, 3742), (45, 3781), (62, 3880), (71, 3949), (72, 3952), (85, 4081), (87, 4102), (101, 4210), (112, 4318),

Gene: Angelique_4 Start: 3707, Stop: 4519, Start Num: 6
Candidate Starts for Angelique_4:
(Start: 6 @3707 has 18 MA's), (46, 3884), (55, 3935), (58, 3947), (60, 3965), (65, 4016), (67, 4022), (72, 4049), (81, 4112), (85, 4151), (95, 4238),

Gene: Awesomesauce_5 Start: 3607, Stop: 4332, Start Num: 8
Candidate Starts for Awesomesauce_5:
(Start: 8 @3607 has 66 MA's), (12, 3634), (19, 3655), (28, 3682), (39, 3742), (45, 3781), (62, 3880), (71, 3949), (72, 3952), (85, 4081), (87, 4102), (101, 4210), (112, 4318),

Gene: BaileyBlu_4 Start: 3397, Stop: 4089, Start Num: 5
Candidate Starts for BaileyBlu_4:
(Start: 5 @3397 has 6 MA's), (40, 3541), (45, 3577), (51, 3607), (64, 3703), (69, 3745), (86, 3874), (93, 3961), (111, 4081),

Gene: Beakin_5 Start: 3607, Stop: 4332, Start Num: 8
Candidate Starts for Beakin_5:
(Start: 8 @3607 has 66 MA's), (12, 3634), (19, 3655), (28, 3682), (39, 3742), (45, 3781), (62, 3880), (71, 3949), (72, 3952), (85, 4081), (87, 4102), (101, 4210), (112, 4318),

Gene: Beanstalk_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Beanstalk_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: BeeGee_4 Start: 3710, Stop: 4522, Start Num: 6
Candidate Starts for BeeGee_4:
(Start: 6 @3710 has 18 MA's), (58, 3950), (81, 4115), (85, 4154), (95, 4241),

Gene: BigPhil_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for BigPhil_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Bobi_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Bobi_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Boomer_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Boomer_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Bradissa_4 Start: 3716, Stop: 4528, Start Num: 6
Candidate Starts for Bradissa_4:
(Start: 6 @3716 has 18 MA's), (26, 3791), (67, 4031), (81, 4121), (85, 4160), (95, 4247),

Gene: BritBrat_4 Start: 3716, Stop: 4528, Start Num: 6
Candidate Starts for BritBrat_4:
(Start: 6 @3716 has 18 MA's), (26, 3791), (60, 3974), (67, 4031), (81, 4121), (85, 4160), (95, 4247),

Gene: Brookers_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Brookers_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Brushbloom_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Brushbloom_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: BuzzLyseyear_5 Start: 3603, Stop: 4328, Start Num: 8
Candidate Starts for BuzzLyseyear_5:
(Start: 8 @3603 has 66 MA's), (12, 3630), (19, 3651), (28, 3678), (39, 3738), (45, 3777), (62, 3876), (71, 3945), (72, 3948), (85, 4077), (87, 4098), (101, 4206), (112, 4314),

Gene: CallinAllBarbz_4 Start: 3399, Stop: 4091, Start Num: 5
Candidate Starts for CallinAllBarbz_4:
(Start: 5 @3399 has 6 MA's), (40, 3543), (42, 3552), (51, 3609), (63, 3696), (69, 3747), (86, 3876), (93, 3963), (111, 4083),

Gene: Cashline_4 Start: 3710, Stop: 4375, Start Num: 6
Candidate Starts for Cashline_4:
(Start: 6 @3710 has 18 MA's), (31, 3806), (46, 3887), (58, 3950), (67, 4025), (86, 4157), (88, 4199),

Gene: Cerasum_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Cerasum_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: ChickenDinner_5 Start: 3607, Stop: 4332, Start Num: 8
Candidate Starts for ChickenDinner_5:
(Start: 8 @3607 has 66 MA's), (12, 3634), (19, 3655), (28, 3682), (39, 3742), (45, 3781), (62, 3880), (71, 3949), (72, 3952), (85, 4081), (87, 4102), (101, 4210), (112, 4318),

Gene: Coco12_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Coco12_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Confidence_4 Start: 3710, Stop: 4522, Start Num: 6
Candidate Starts for Confidence_4:
(Start: 6 @3710 has 18 MA's), (58, 3950), (81, 4115), (85, 4154), (95, 4241),

Gene: Cornucopia_5 Start: 3606, Stop: 4331, Start Num: 8
Candidate Starts for Cornucopia_5:

(Start: 8 @3606 has 66 MA's), (12, 3633), (15, 3642), (27, 3678), (29, 3687), (37, 3729), (41, 3750), (42, 3753), (45, 3780), (62, 3879), (71, 3948), (72, 3951), (85, 4080), (87, 4101), (93, 4173), (112, 4317),

Gene: DaWorst_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for DaWorst_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: DirtMcgirt_5 Start: 3605, Stop: 4330, Start Num: 8
Candidate Starts for DirtMcgirt_5:
(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: DocMcStuffins_5 Start: 3607, Stop: 4332, Start Num: 8
Candidate Starts for DocMcStuffins_5:
(Start: 8 @3607 has 66 MA's), (12, 3634), (19, 3655), (28, 3682), (39, 3742), (45, 3781), (62, 3880), (71, 3949), (72, 3952), (85, 4081), (87, 4102), (101, 4210), (112, 4318),

Gene: Doomslug_5 Start: 3631, Stop: 4329, Start Num: 12
Candidate Starts for Doomslug_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: DosHalletts_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for DosHalletts_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Drago_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Drago_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: EMsquaredA_4 Start: 3716, Stop: 4528, Start Num: 6
Candidate Starts for EMsquaredA_4:
(Start: 6 @3716 has 18 MA's), (26, 3791), (60, 3974), (67, 4031), (81, 4121), (85, 4160), (95, 4247),

Gene: Elfy_4 Start: 3431, Stop: 4123, Start Num: 5
Candidate Starts for Elfy_4:
(Start: 5 @3431 has 6 MA's), (18, 3488), (20, 3491), (39, 3572), (41, 3581), (42, 3584), (50, 3638), (61, 3713), (77, 3839), (79, 3854), (85, 3905),

Gene: Emmaloid_5 Start: 3605, Stop: 4330, Start Num: 8
Candidate Starts for Emmaloid_5:
(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: EnalisNailo_4 Start: 3716, Stop: 4528, Start Num: 6
Candidate Starts for EnalisNailo_4:
(Start: 6 @3716 has 18 MA's), (26, 3791), (60, 3974), (67, 4031), (81, 4121), (85, 4160), (95, 4247),

Gene: Enby_5 Start: 3604, Stop: 4329, Start Num: 8

Candidate Starts for Enby_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Flathead_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Flathead_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Floral_4 Start: 3716, Stop: 4528, Start Num: 6
Candidate Starts for Floral_4:
(Start: 6 @3716 has 18 MA's), (26, 3791), (60, 3974), (67, 4031), (81, 4121), (85, 4160), (95, 4247),

Gene: Frankie_5 Start: 3798, Stop: 4523, Start Num: 8
Candidate Starts for Frankie_5:
(1, 3744), (Start: 8 @3798 has 66 MA's), (15, 3834), (28, 3873), (39, 3933), (45, 3972), (62, 4071), (71, 4140), (72, 4143), (85, 4272), (87, 4293), (101, 4401), (112, 4509),

Gene: Fryberger_36 Start: 12669, Stop: 13388, Start Num: 4
Candidate Starts for Fryberger_36:
(Start: 4 @12669 has 6 MA's), (25, 12756), (32, 12789), (36, 12804), (41, 12828), (44, 12855), (48, 12870), (49, 12879), (52, 12897), (59, 12942), (70, 13023), (78, 13092), (86, 13167), (89, 13245), (96, 13269), (110, 13362),

Gene: Girafales_5 Start: 3602, Stop: 4327, Start Num: 8
Candidate Starts for Girafales_5:
(Start: 8 @3602 has 66 MA's), (12, 3629), (15, 3638), (23, 3659), (27, 3674), (28, 3677), (29, 3683), (37, 3725), (41, 3746), (42, 3749), (45, 3776), (62, 3875), (71, 3944), (72, 3947), (75, 3983), (85, 4076), (87, 4097), (93, 4169), (112, 4313),

Gene: GrimEater_4 Start: 3409, Stop: 4107, Start Num: 5
Candidate Starts for GrimEater_4:
(Start: 5 @3409 has 6 MA's), (42, 3562), (51, 3619), (61, 3691), (74, 3781), (93, 3979),

Gene: Guey18_41 Start: 13862, Stop: 14581, Start Num: 4
Candidate Starts for Guey18_41:
(Start: 4 @13862 has 6 MA's), (25, 13949), (32, 13982), (36, 13997), (41, 14021), (44, 14048), (48, 14063), (49, 14072), (52, 14090), (70, 14216), (76, 14267), (78, 14285), (86, 14360), (89, 14438), (96, 14462), (110, 14555),

Gene: Hegedechwinu_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Hegedechwinu_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Jablanski_4 Start: 3710, Stop: 4375, Start Num: 6
Candidate Starts for Jablanski_4:
(Start: 6 @3710 has 18 MA's), (46, 3887), (58, 3950), (67, 4025), (86, 4157), (88, 4199),

Gene: JalFarm20_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for JalFarm20_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Jankie_4 Start: 3408, Stop: 4106, Start Num: 5
Candidate Starts for Jankie_4:
(Start: 5 @3408 has 6 MA's), (42, 3561), (51, 3618), (61, 3690), (74, 3780), (93, 3978),

Gene: Job42_5 Start: 3603, Stop: 4328, Start Num: 8
Candidate Starts for Job42_5:
(Start: 8 @3603 has 66 MA's), (12, 3630), (19, 3651), (28, 3678), (39, 3738), (45, 3777), (62, 3876), (71, 3945), (72, 3948), (85, 4077), (87, 4098), (101, 4206), (107, 4266), (112, 4314),

Gene: Juice456_5 Start: 3605, Stop: 4330, Start Num: 8
Candidate Starts for Juice456_5:
(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: Keelan_34 Start: 12625, Stop: 13347, Start Num: 4
Candidate Starts for Keelan_34:
(Start: 4 @12625 has 6 MA's), (10, 12652), (17, 12682), (25, 12712), (32, 12745), (36, 12760), (44, 12811), (45, 12814), (48, 12826), (52, 12853), (57, 12880), (85, 13120), (86, 13123), (90, 13204), (96, 13225), (100, 13249), (105, 13279), (108, 13309), (110, 13318),

Gene: Kimberlium_5 Start: 3605, Stop: 4330, Start Num: 8
Candidate Starts for Kimberlium_5:
(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: Kingsley_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Kingsley_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Leozinho_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Leozinho_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: LilSpotty_4 Start: 3229, Stop: 3888, Start Num: 6
Candidate Starts for LilSpotty_4:
(2, 3193), (3, 3214), (Start: 6 @3229 has 18 MA's), (16, 3271), (26, 3304), (47, 3412), (54, 3451), (65, 3529), (72, 3562), (75, 3598), (85, 3664), (92, 3748), (94, 3751), (101, 3787),

Gene: Lilas_4 Start: 3716, Stop: 4528, Start Num: 6
Candidate Starts for Lilas_4:
(Start: 6 @3716 has 18 MA's), (26, 3791), (60, 3974), (67, 4031), (81, 4121), (85, 4160), (95, 4247),

Gene: LisoBros_4 Start: 3605, Stop: 4303, Start Num: 5
Candidate Starts for LisoBros_4:
(Start: 5 @3605 has 6 MA's), (51, 3815), (56, 3848), (61, 3887), (68, 3950), (74, 3977), (83, 4043), (87, 4100), (93, 4175), (109, 4277),

Gene: LittleShirley_5 Start: 3605, Stop: 4330, Start Num: 8
Candidate Starts for LittleShirley_5:

(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: LonelyBoi_4 Start: 3710, Stop: 4375, Start Num: 6
Candidate Starts for LonelyBoi_4:
(Start: 6 @3710 has 18 MA's), (46, 3887), (58, 3950), (60, 3968), (67, 4025), (86, 4157), (88, 4199),

Gene: LordVader_5 Start: 3599, Stop: 4324, Start Num: 8
Candidate Starts for LordVader_5:
(Start: 8 @3599 has 66 MA's), (12, 3626), (15, 3635), (17, 3638), (28, 3674), (39, 3734), (45, 3773), (62, 3872), (71, 3941), (72, 3944), (85, 4073), (87, 4094), (91, 4160), (101, 4202), (112, 4310),

Gene: Lorde_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Lorde_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Lucia_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Lucia_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Madiba_5 Start: 3603, Stop: 4328, Start Num: 8
Candidate Starts for Madiba_5:
(Start: 8 @3603 has 66 MA's), (12, 3630), (19, 3651), (28, 3678), (39, 3738), (45, 3777), (62, 3876), (71, 3945), (72, 3948), (85, 4077), (87, 4098), (101, 4206), (112, 4314),

Gene: Marker_5 Start: 3603, Stop: 4328, Start Num: 8
Candidate Starts for Marker_5:
(Start: 8 @3603 has 66 MA's), (12, 3630), (19, 3651), (28, 3678), (39, 3738), (45, 3777), (53, 3816), (62, 3876), (71, 3945), (72, 3948), (85, 4077), (87, 4098), (101, 4206), (112, 4314),

Gene: Marteena_4 Start: 3716, Stop: 4528, Start Num: 6
Candidate Starts for Marteena_4:
(Start: 6 @3716 has 18 MA's), (26, 3791), (60, 3974), (67, 4031), (81, 4121), (85, 4160), (95, 4247),

Gene: Misha28_5 Start: 3607, Stop: 4332, Start Num: 8
Candidate Starts for Misha28_5:
(Start: 8 @3607 has 66 MA's), (12, 3634), (19, 3655), (28, 3682), (39, 3742), (45, 3781), (62, 3880), (71, 3949), (72, 3952), (85, 4081), (87, 4102), (101, 4210), (112, 4318),

Gene: Mova_5 Start: 3605, Stop: 4330, Start Num: 8
Candidate Starts for Mova_5:
(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: Mozy_5 Start: 3603, Stop: 4328, Start Num: 8
Candidate Starts for Mozy_5:
(Start: 8 @3603 has 66 MA's), (12, 3630), (15, 3639), (27, 3675), (28, 3678), (29, 3684), (37, 3726), (41, 3747), (42, 3750), (45, 3777), (62, 3876), (71, 3945), (72, 3948), (85, 4077), (87, 4098), (93, 4170), (112, 4314),

Gene: MulchExplorer_5 Start: 3605, Stop: 4330, Start Num: 8

Candidate Starts for MulchExplorer_5:
(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: NoShow_4 Start: 3865, Stop: 4563, Start Num: 14
Candidate Starts for NoShow_4:
(13, 3862), (Start: 14 @3865 has 1 MA's), (36, 3958), (43, 3988), (63, 4123), (75, 4213), (94, 4372), (98, 4396), (104, 4438),

Gene: Oksu_5 Start: 3605, Stop: 4330, Start Num: 8
Candidate Starts for Oksu_5:
(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: OwlsT2W_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for OwlsT2W_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Peridot_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Peridot_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Piper2020_5 Start: 3607, Stop: 4332, Start Num: 8
Candidate Starts for Piper2020_5:
(Start: 8 @3607 has 66 MA's), (12, 3634), (19, 3655), (28, 3682), (39, 3742), (45, 3781), (62, 3880), (71, 3949), (72, 3952), (85, 4081), (87, 4102), (101, 4210), (112, 4318),

Gene: Pitbull_4 Start: 3185, Stop: 3862, Start Num: 7
Candidate Starts for Pitbull_4:
(Start: 7 @3185 has 1 MA's), (21, 3239), (24, 3251), (30, 3269), (34, 3299), (35, 3302), (45, 3356), (57, 3425), (64, 3482), (72, 3530), (73, 3536), (80, 3599), (84, 3641), (85, 3644), (93, 3728), (102, 3767), (103, 3776),

Gene: Plumbus_5 Start: 3605, Stop: 4330, Start Num: 8
Candidate Starts for Plumbus_5:
(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: Pollux_4 Start: 3716, Stop: 4528, Start Num: 6
Candidate Starts for Pollux_4:
(Start: 6 @3716 has 18 MA's), (26, 3791), (60, 3974), (67, 4031), (81, 4121), (85, 4160), (95, 4247),

Gene: Pollywog_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Pollywog_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Posh_4 Start: 3710, Stop: 4522, Start Num: 6
Candidate Starts for Posh_4:
(Start: 6 @3710 has 18 MA's), (58, 3950), (81, 4115), (85, 4154), (95, 4241),

Gene: Pytheas_4 Start: 3710, Stop: 4375, Start Num: 6
Candidate Starts for Pytheas_4:
(Start: 6 @3710 has 18 MA's), (46, 3887), (58, 3950), (67, 4025), (86, 4157), (88, 4199),

Gene: Quico_5 Start: 3602, Stop: 4327, Start Num: 8
Candidate Starts for Quico_5:
(Start: 8 @3602 has 66 MA's), (12, 3629), (15, 3638), (23, 3659), (27, 3674), (28, 3677), (29, 3683), (37, 3725), (41, 3746), (42, 3749), (45, 3776), (62, 3875), (71, 3944), (72, 3947), (75, 3983), (85, 4076), (87, 4097), (93, 4169), (112, 4313),

Gene: Ramsey_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Ramsey_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Rialto_5 Start: 3605, Stop: 4330, Start Num: 8
Candidate Starts for Rialto_5:
(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: RockyHorror_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for RockyHorror_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Ronaldo_39 Start: 13599, Stop: 14318, Start Num: 4
Candidate Starts for Ronaldo_39:
(Start: 4 @13599 has 6 MA's), (25, 13686), (32, 13719), (36, 13734), (41, 13758), (44, 13785), (48, 13800), (49, 13809), (52, 13827), (59, 13872), (61, 13884), (70, 13953), (78, 14022), (86, 14097), (89, 14175), (96, 14199), (110, 14292),

Gene: Sarma624_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Sarma624_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Seagreen_5 Start: 3605, Stop: 4330, Start Num: 8
Candidate Starts for Seagreen_5:
(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: SilverChicken_5 Start: 3735, Stop: 4229, Start Num: 44
Candidate Starts for SilverChicken_5:
(9, 3570), (11, 3585), (22, 3618), (31, 3660), (33, 3675), (37, 3687), (38, 3696), (42, 3711), (44, 3735), (53, 3783), (64, 3864), (66, 3885), (69, 3906), (82, 3996), (85, 4035), (87, 4056), (97, 4137), (99, 4143), (106, 4197),

Gene: SimranZ1_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for SimranZ1_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Slim_5 Start: 3605, Stop: 4330, Start Num: 8

Candidate Starts for Slim_5:
(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: Spikelee_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Spikelee_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Squirty_5 Start: 3603, Stop: 4328, Start Num: 8
Candidate Starts for Squirty_5:
(Start: 8 @3603 has 66 MA's), (12, 3630), (19, 3651), (28, 3678), (39, 3738), (45, 3777), (62, 3876), (71, 3945), (72, 3948), (85, 4077), (87, 4098), (101, 4206), (112, 4314),

Gene: Stap_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Stap_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Starcevich_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Starcevich_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Tchotchke_5 Start: 3605, Stop: 4330, Start Num: 8
Candidate Starts for Tchotchke_5:
(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: TootsiePop_5 Start: 3607, Stop: 4332, Start Num: 8
Candidate Starts for TootsiePop_5:
(Start: 8 @3607 has 66 MA's), (12, 3634), (19, 3655), (28, 3682), (39, 3742), (45, 3781), (62, 3880), (71, 3949), (72, 3952), (85, 4081), (87, 4102), (101, 4210), (112, 4318),

Gene: Tootsieroll_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Tootsieroll_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Totinger_5 Start: 3605, Stop: 4330, Start Num: 8
Candidate Starts for Totinger_5:
(Start: 8 @3605 has 66 MA's), (12, 3632), (19, 3653), (28, 3680), (39, 3740), (45, 3779), (62, 3878), (71, 3947), (72, 3950), (85, 4079), (87, 4100), (101, 4208), (112, 4316),

Gene: UncleRicky_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for UncleRicky_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Velveteen_5 Start: 3604, Stop: 4329, Start Num: 8
Candidate Starts for Velveteen_5:
(Start: 8 @3604 has 66 MA's), (12, 3631), (19, 3652), (28, 3679), (39, 3739), (45, 3778), (62, 3877), (71, 3946), (72, 3949), (85, 4078), (87, 4099), (101, 4207), (112, 4315),

Gene: Volt_38 Start: 13599, Stop: 14318, Start Num: 4
Candidate Starts for Volt_38:
(Start: 4 @13599 has 6 MA's), (25, 13686), (32, 13719), (36, 13734), (41, 13758), (44, 13785), (48, 13800), (49, 13809), (52, 13827), (59, 13872), (61, 13884), (70, 13953), (78, 14022), (86, 14097), (89, 14175), (96, 14199), (110, 14292),

Gene: Wrigley_4 Start: 3707, Stop: 4372, Start Num: 6
Candidate Starts for Wrigley_4:
(Start: 6 @3707 has 18 MA's), (58, 3947), (67, 4022), (86, 4154), (88, 4196),

Gene: Ziko_39 Start: 13539, Stop: 14258, Start Num: 4
Candidate Starts for Ziko_39:
(Start: 4 @13539 has 6 MA's), (25, 13626), (32, 13659), (36, 13674), (41, 13698), (44, 13725), (48, 13740), (49, 13749), (52, 13767), (59, 13812), (61, 13824), (70, 13893), (78, 13962), (86, 14037), (89, 14115), (96, 14139), (110, 14232),