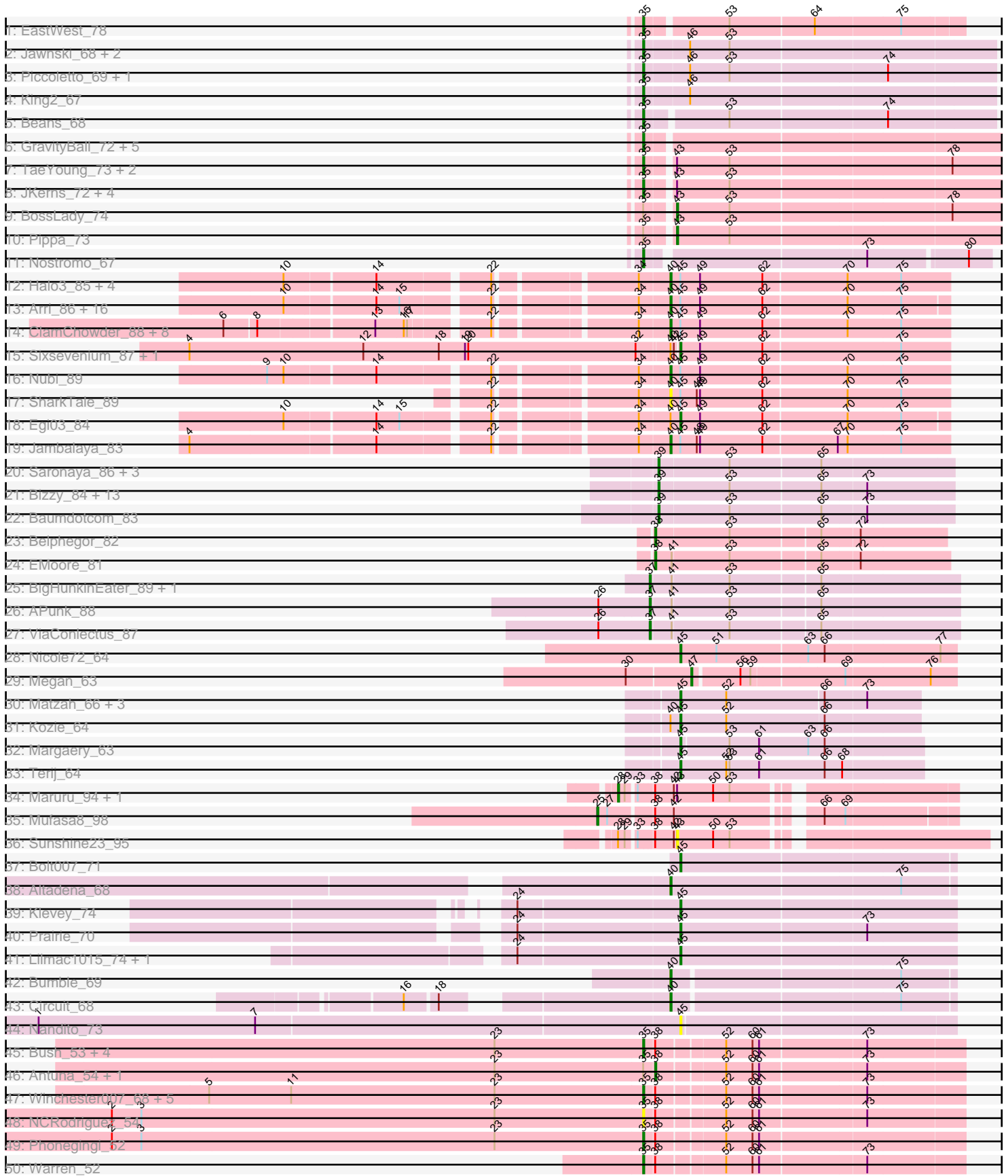
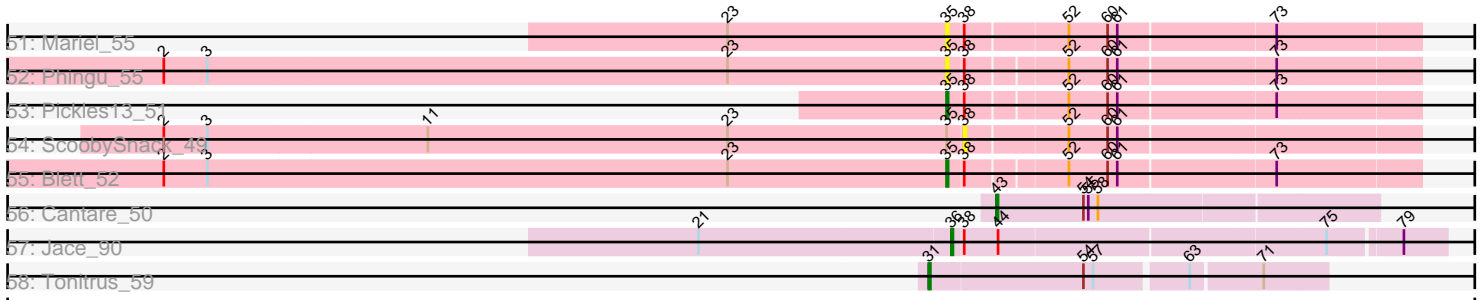


Pham 304801



Pham 304801



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 304801 Report

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

Pham number 304801 has 133 members, 20 are drafts.

Phages represented in each track:

- Track 1 : EastWest\_78
- Track 2 : Jawnski\_68, Brent\_69, Franzy\_67
- Track 3 : Piccoletto\_69, NathanVaag\_68
- Track 4 : King2\_67
- Track 5 : Beans\_68
- Track 6 : GravityBall\_72, Timinator\_73, LeeroyJ\_73, BigDome\_72, StevieBAY\_73, BarretLemon\_72
- Track 7 : TaeYoung\_73, Grekaycon\_73, Martha\_72
- Track 8 : JKerns\_72, Shade\_72, Sonny\_72, Jordan\_73, Zartrosa\_74
- Track 9 : BossLady\_74
- Track 10 : Pippa\_73
- Track 11 : Nostromo\_67
- Track 12 : Halo3\_85, SmokingBunny\_87, Salvador\_86, Evamon\_86, Togo\_86
- Track 13 : Arri\_86, PullumCavea\_84, Twister6\_85, Wizard\_81, VanDeWege\_88, Fireball\_89, Gezellig\_82, CherryCola\_85, RogerDodger\_89, Savbucketdawg\_81, Phlop\_83, KimmyK\_84, Sendy\_88, Valary\_87, JohnPork\_87, Portcullis\_86, Shinji\_85
- Track 14 : ClamChowder\_88, Barb\_89, PinkCoffee\_87, Danyall\_86, TillyBobJoe\_84, YungMoney\_85, Fugax\_89, CoveyB\_87, Mutzi\_85
- Track 15 : Sixsevenium\_87, Bakery\_90
- Track 16 : Nubi\_89
- Track 17 : SharkTale\_89
- Track 18 : Egi03\_84
- Track 19 : Jambalaya\_83
- Track 20 : Saronaya\_86, StorminNorm\_85, Gustavo\_86, Gaea\_85
- Track 21 : Bizzy\_84, Stichling\_80, Kroos\_84, YorkOnyx\_83, Derg\_77, Ribeye\_84, Tycho\_84, Tangerine\_84, Ashertheman\_84, Flatwoods\_84, LilHam\_78, JKSyngboy\_81, SchottB\_83, Kwobi\_86
- Track 22 : Baumdotcom\_83
- Track 23 : Belphegor\_82
- Track 24 : EMoore\_81
- Track 25 : BigHunkinEater\_89, Zitch\_90
- Track 26 : APunk\_88
- Track 27 : ViaConlectus\_87
- Track 28 : Nicole72\_64
- Track 29 : Megan\_63
- Track 30 : Matzah\_66, MementoMori\_65, Cressida\_67, Cinna\_64
- Track 31 : Kozie\_64

- Track 32 : Margaery\_63
- Track 33 : Terij\_64
- Track 34 : Maruru\_94, Sonali\_93
- Track 35 : Mufasa8\_98
- Track 36 : Sunshine23\_95
- Track 37 : Bolt007\_71
- Track 38 : Altadena\_68
- Track 39 : Klevey\_74
- Track 40 : Prairie\_70
- Track 41 : Lilmac1015\_74, CalWood4100\_74
- Track 42 : Bumble\_69
- Track 43 : Circuit\_68
- Track 44 : Nandito\_73
- Track 45 : Bush\_53, Violeta\_54, Carrillo\_54, Jakelyne\_55, MenE\_54
- Track 46 : Antuna\_54, Losacky\_54
- Track 47 : Winchester007\_68, Guzman\_52, CookieDog\_52, Dropshot\_52, Appa\_52, PhillyJawn\_53
- Track 48 : NCRodriguez\_54
- Track 49 : Phonegingi\_52
- Track 50 : Warren\_52
- Track 51 : Mariel\_55
- Track 52 : Phingu\_55
- Track 53 : Pickles13\_51
- Track 54 : ScoobySnack\_49
- Track 55 : Blett\_52
- Track 56 : Cantare\_50
- Track 57 : Jace\_90
- Track 58 : Tonitrus\_59

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

The start number called the most often in the published annotations is 40, it was called in 33 of the 113 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Altadena\_68, Arri\_86, Barb\_89, Bumble\_69, CherryCola\_85, Circuit\_68, ClamChowder\_88, CoveyB\_87, Danyall\_86, Evamon\_86, Fireball\_89, Fugax\_89, Gezellig\_82, Halo3\_85, Jambalaya\_83, JohnPork\_87, KimmyK\_84, Mutzi\_85, Nubi\_89, Phlop\_83, PinkCoffee\_87, Portcullis\_86, PullumCavea\_84, RogerDodger\_89, Salvador\_86, Savbucketdawg\_81, Sendy\_88, SharkTale\_89, Shinji\_85, SmokingBunny\_87, TillyBobJoe\_84, Togo\_86, Twister6\_85, Valary\_87, VanDeWege\_88, Wizard\_81, YungMoney\_85,

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

- Bakery\_90, Egi03\_84, Kozie\_64, Sixsevenium\_87,

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

- APunk\_88, Antuna\_54, Appa\_52, Ashertheman\_84, BarretLemon\_72, Baumdotcom\_83, Beans\_68, Belphegor\_82, BigDome\_72, BigHunkinEater\_89, Bizzy\_84, Blett\_52, Bolt007\_71, BossLady\_74, Brent\_69, Bush\_53,

CalWood4100\_74, Cantare\_50, Carrillo\_54, Cinna\_64, CookieDog\_52, Cressida\_67, Derg\_77, Dropshot\_52, EMoore\_81, EastWest\_78, Flatwoods\_84, Franzy\_67, Gaea\_85, GravityBall\_72, Grekaycon\_73, Gustavo\_86, Guzman\_52, JKSyngboy\_81, JKerns\_72, Jace\_90, Jakelyne\_55, Jawnski\_68, Jordan\_73, King2\_67, Klevey\_74, Kroos\_84, Kwobi\_86, LeeroyJ\_73, LilHam\_78, Lilmac1015\_74, Losacky\_54, Margaery\_63, Mariel\_55, Martha\_72, Maruru\_94, Matzah\_66, Megan\_63, MementoMori\_65, MenE\_54, Mufasa8\_98, NCRodriguez\_54, Nandito\_73, NathanVaag\_68, Nicole72\_64, Nostromo\_67, PhillyJawn\_53, Phingu\_55, Phonegingi\_52, Piccoletto\_69, Pickles13\_51, Pippa\_73, Prairie\_70, Ribeye\_84, Saronaya\_86, SchottB\_83, ScoobySnack\_49, Shade\_72, Sonali\_93, Sonny\_72, StevieBAY\_73, Stichling\_80, StorminNorm\_85, Sunshine23\_95, TaeYoung\_73, Tangerine\_84, Terij\_64, Timinator\_73, Tonitrus\_59, Tycho\_84, ViaConlectus\_87, Violeta\_54, Warren\_52, Winchester007\_68, YorkOnyx\_83, Zartrosa\_74, Zitch\_90,

### Summary by start number:

#### Start 25:

- Found in 1 of 133 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mufasa8\_98 (FG),

#### Start 28:

- Found in 3 of 133 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 2 of 113
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Maruru\_94 (FG), Sonali\_93 (FG),

#### Start 31:

- Found in 1 of 133 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tonitrus\_59 (singleton),

#### Start 35:

- Found in 46 of 133 ( 34.6% ) of genes in pham
- Manual Annotations of this start: 31 of 113
- Called 89.1% of time when present
- Phage (with cluster) where this start called: Appa\_52 (GA), BarretLemon\_72 (AO2), Beans\_68 (AO1), BigDome\_72 (AO2), Blett\_52 (GA), Brent\_69 (AO1), Bush\_53 (GA), Carrillo\_54 (GA), CookieDog\_52 (GA), Dropshot\_52 (GA), EastWest\_78 (AO), Franzy\_67 (AO1), GravityBall\_72 (AO2), Grekaycon\_73 (AO2), Guzman\_52 (GA), JKerns\_72 (AO2), Jakelyne\_55 (GA), Jawnski\_68 (AO1), Jordan\_73 (AO2), King2\_67 (AO1), LeeroyJ\_73 (AO2), Mariel\_55 (GA), Martha\_72 (AO2), MenE\_54 (GA), NCRodriguez\_54 (GA), NathanVaag\_68 (AO1), Nostromo\_67 (AO3), PhillyJawn\_53 (GA), Phingu\_55 (GA), Phonegingi\_52 (GA), Piccoletto\_69 (AO1), Pickles13\_51 (GA), Shade\_72 (AO2), Sonny\_72 (AO2), StevieBAY\_73 (AO2), TaeYoung\_73 (AO2), Timinator\_73 (AO2), Violeta\_54 (GA), Warren\_52 (GA), Winchester007\_68 (GA), Zartrosa\_74 (AO2),

#### Start 36:

- Found in 1 of 133 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 113

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jace\_90 (singleton),

#### Start 37:

- Found in 4 of 133 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 4 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: APunk\_88 (DE4), BigHunkinEater\_89 (DE4), ViaConlectus\_87 (DE4), Zitch\_90 (DE4),

#### Start 38:

- Found in 28 of 133 ( 21.1% ) of genes in pham
- Manual Annotations of this start: 4 of 113
- Called 17.9% of time when present
- Phage (with cluster) where this start called: Antuna\_54 (GA), Belphegor\_82 (DE2), EMOore\_81 (DE2), Losacky\_54 (GA), ScoobySnack\_49 (GA),

#### Start 39:

- Found in 19 of 133 ( 14.3% ) of genes in pham
- Manual Annotations of this start: 18 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ashertheman\_84 (DE1), Baumdotcom\_83 (DE1), Bizzy\_84 (DE1), Derg\_77 (DE1), Flatwoods\_84 (DE1), Gaea\_85 (DE1), Gustavo\_86 (DE1), JKSyngboy\_81 (DE1), Kroos\_84 (DE1), Kwobi\_86 (DE1), LilHam\_78 (DE1), Ribeye\_84 (DE1), Saronaya\_86 (DE1), SchottB\_83 (DE1), Stichling\_80 (DE1), StorminNorm\_85 (DE1), Tangerine\_84 (DE1), Tycho\_84 (DE1), YorkOnyx\_83 (DE1),

#### Start 40:

- Found in 41 of 133 ( 30.8% ) of genes in pham
- Manual Annotations of this start: 33 of 113
- Called 90.2% of time when present
- Phage (with cluster) where this start called: Altadena\_68 (FH), Arri\_86 (DC1), Barb\_89 (DC1), Bumble\_69 (FH), CherryCola\_85 (DC1), Circuit\_68 (FH), ClamChowder\_88 (DC1), CoveyB\_87 (DC1), Danyall\_86 (DC1), Evamon\_86 (DC1), Fireball\_89 (DC1), Fugax\_89 (DC1), Gezellig\_82 (DC1), Halo3\_85 (DC1), Jambalaya\_83 (DC1), JohnPork\_87 (DC1), KimmyK\_84 (DC1), Mutzi\_85 (DC1), Nubi\_89 (DC1), Phlop\_83 (DC1), PinkCoffee\_87 (DC1), Portcullis\_86 (DC1), PullumCavea\_84 (DC1), RogerDodger\_89 (DC1), Salvador\_86 (DC1), Savbucketdawg\_81 (DC1), Sendy\_88 (DC1), SharkTale\_89 (DC1), Shinji\_85 (DC1), SmokingBunny\_87 (DC1), TillyBobJoe\_84 (DC1), Togo\_86 (DC1), Twister6\_85 (DC1), Valary\_87 (DC1), VanDeWege\_88 (DC1), Wizard\_81 (DC1), YungMoney\_85 (DC1),

#### Start 43:

- Found in 14 of 133 ( 10.5% ) of genes in pham
- Manual Annotations of this start: 3 of 113
- Called 28.6% of time when present
- Phage (with cluster) where this start called: BossLady\_74 (AO2), Cantare\_50 (singleton), Pippa\_73 (AO2), Sunshine23\_95 (FG),

#### Start 45:

- Found in 51 of 133 ( 38.3% ) of genes in pham

- Manual Annotations of this start: 14 of 113
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Bakery\_90 (DC1), Bolt007\_71 (FH), CalWood4100\_74 (FH), Cinna\_64 (EI), Cressida\_67 (EI), Egi03\_84 (DC1), Klevey\_74 (FH), Kozie\_64 (EI), Lilmac1015\_74 (FH), Margaery\_63 (EI), Matzah\_66 (EI), MementoMori\_65 (EI), Nandito\_73 (FH), Nicole72\_64 (EC), Prairie\_70 (FH), Sixsevenium\_87 (DC1), Terij\_64 (EI),

Start 47:

- Found in 1 of 133 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Megan\_63 (EC),

### Summary by clusters:

There are 14 clusters represented in this pham: singleton, EI, AO1, AO, DE1, DE2, DE4, EC, AO3, AO2, GA, FG, FH, DC1,

Info for manual annotations of cluster AO:

- Start number 35 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AO1:

- Start number 35 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:

- Start number 35 was manually annotated 13 times for cluster AO2.
- Start number 43 was manually annotated 2 times for cluster AO2.

Info for manual annotations of cluster AO3:

- Start number 35 was manually annotated 1 time for cluster AO3.

Info for manual annotations of cluster DC1:

- Start number 40 was manually annotated 30 times for cluster DC1.
- Start number 45 was manually annotated 2 times for cluster DC1.

Info for manual annotations of cluster DE1:

- Start number 39 was manually annotated 18 times for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 38 was manually annotated 2 times for cluster DE2.

Info for manual annotations of cluster DE4:

- Start number 37 was manually annotated 4 times for cluster DE4.

Info for manual annotations of cluster EC:

- Start number 45 was manually annotated 1 time for cluster EC.
- Start number 47 was manually annotated 1 time for cluster EC.

Info for manual annotations of cluster EI:

- Start number 45 was manually annotated 7 times for cluster EI.

Info for manual annotations of cluster FG:

- Start number 25 was manually annotated 1 time for cluster FG.
- Start number 28 was manually annotated 2 times for cluster FG.

Info for manual annotations of cluster FH:

- Start number 40 was manually annotated 3 times for cluster FH.
- Start number 45 was manually annotated 4 times for cluster FH.

Info for manual annotations of cluster GA:

- Start number 35 was manually annotated 9 times for cluster GA.
- Start number 38 was manually annotated 2 times for cluster GA.

### **Gene Information:**

Gene: APunk\_88 Start: 58714, Stop: 58983, Start Num: 37

Candidate Starts for APunk\_88:

(26, 58669), (Start: 37 @58714 has 4 MA's), (41, 58732), (53, 58783), (65, 58861),

Gene: Altadena\_68 Start: 43198, Stop: 42947, Start Num: 40

Candidate Starts for Altadena\_68:

(Start: 40 @43198 has 33 MA's), (75, 42994),

Gene: Antuna\_54 Start: 32652, Stop: 32918, Start Num: 38

Candidate Starts for Antuna\_54:

(23, 32508), (Start: 35 @32643 has 31 MA's), (Start: 38 @32652 has 4 MA's), (52, 32709), (60, 32733), (61, 32739), (73, 32832),

Gene: Appa\_52 Start: 32408, Stop: 32683, Start Num: 35

Candidate Starts for Appa\_52:

(5, 32012), (11, 32087), (23, 32273), (Start: 35 @32408 has 31 MA's), (Start: 38 @32417 has 4 MA's), (52, 32474), (60, 32498), (61, 32504), (73, 32597),

Gene: Arri\_86 Start: 56263, Stop: 56015, Start Num: 40

Candidate Starts for Arri\_86:

(10, 56575), (14, 56497), (15, 56476), (22, 56404), (34, 56290), (Start: 40 @56263 has 33 MA's), (Start: 45 @56254 has 14 MA's), (49, 56236), (62, 56179), (70, 56104), (75, 56056),

Gene: Ashertheman\_84 Start: 56563, Stop: 56823, Start Num: 39

Candidate Starts for Ashertheman\_84:

(Start: 39 @56563 has 18 MA's), (53, 56626), (65, 56707), (73, 56746),

Gene: Bakery\_90 Start: 58633, Stop: 58391, Start Num: 45

Candidate Starts for Bakery\_90:

(4, 59074), (12, 58915), (18, 58846), (19, 58822), (20, 58819), (32, 58666), (Start: 40 @58639 has 33 MA's), (42, 58636), (Start: 45 @58633 has 14 MA's), (49, 58615), (62, 58558), (75, 58435),

Gene: Barb\_89 Start: 56790, Stop: 56539, Start Num: 40

Candidate Starts for Barb\_89:

(6, 57147), (8, 57120), (13, 57021), (16, 56997), (17, 56994), (22, 56931), (34, 56817), (Start: 40 @56790 has 33 MA's), (Start: 45 @56781 has 14 MA's), (49, 56763), (62, 56706), (70, 56631), (75, 56583),

Gene: BarretLemon\_72 Start: 46543, Stop: 46214, Start Num: 35  
Candidate Starts for BarretLemon\_72:  
(Start: 35 @46543 has 31 MA's),

Gene: Baumdotcom\_83 Start: 56963, Stop: 57223, Start Num: 39  
Candidate Starts for Baumdotcom\_83:  
(Start: 39 @56963 has 18 MA's), (53, 57026), (65, 57107), (73, 57146),

Gene: Beans\_68 Start: 45863, Stop: 45561, Start Num: 35  
Candidate Starts for Beans\_68:  
(Start: 35 @45863 has 31 MA's), (53, 45794), (74, 45656),

Gene: Belphegor\_82 Start: 58991, Stop: 59245, Start Num: 38  
Candidate Starts for Belphegor\_82:  
(Start: 38 @58991 has 4 MA's), (53, 59057), (65, 59135), (72, 59168),

Gene: BigDome\_72 Start: 46718, Stop: 46389, Start Num: 35  
Candidate Starts for BigDome\_72:  
(Start: 35 @46718 has 31 MA's),

Gene: BigHunkinEater\_89 Start: 58349, Stop: 58618, Start Num: 37  
Candidate Starts for BigHunkinEater\_89:  
(Start: 37 @58349 has 4 MA's), (41, 58367), (53, 58418), (65, 58496),

Gene: Bizzy\_84 Start: 56320, Stop: 56580, Start Num: 39  
Candidate Starts for Bizzy\_84:  
(Start: 39 @56320 has 18 MA's), (53, 56383), (65, 56464), (73, 56503),

Gene: Blett\_52 Start: 32593, Stop: 32868, Start Num: 35  
Candidate Starts for Blett\_52:  
(2, 32110), (3, 32137), (23, 32458), (Start: 35 @32593 has 31 MA's), (Start: 38 @32602 has 4 MA's),  
(52, 32659), (60, 32683), (61, 32689), (73, 32782),

Gene: Bolt007\_71 Start: 45075, Stop: 44833, Start Num: 45  
Candidate Starts for Bolt007\_71:  
(Start: 45 @45075 has 14 MA's),

Gene: BossLady\_74 Start: 47057, Stop: 46746, Start Num: 43  
Candidate Starts for BossLady\_74:  
(Start: 35 @47078 has 31 MA's), (Start: 43 @47057 has 3 MA's), (53, 47009), (78, 46814),

Gene: Brent\_69 Start: 46039, Stop: 45731, Start Num: 35  
Candidate Starts for Brent\_69:  
(Start: 35 @46039 has 31 MA's), (46, 46000), (53, 45964),

Gene: Bumble\_69 Start: 44314, Stop: 44069, Start Num: 40  
Candidate Starts for Bumble\_69:  
(Start: 40 @44314 has 33 MA's), (75, 44116),

Gene: Bush\_53 Start: 32542, Stop: 32817, Start Num: 35  
Candidate Starts for Bush\_53:  
(23, 32407), (Start: 35 @32542 has 31 MA's), (Start: 38 @32551 has 4 MA's), (52, 32608), (60, 32632),  
(61, 32638), (73, 32731),

Gene: CalWood4100\_74 Start: 45377, Stop: 45132, Start Num: 45  
Candidate Starts for CalWood4100\_74:  
(24, 45521), (Start: 45 @45377 has 14 MA's),

Gene: Cantare\_50 Start: 45879, Stop: 46109, Start Num: 43  
Candidate Starts for Cantare\_50:  
(Start: 43 @45879 has 3 MA's), (54, 45933), (55, 45936), (58, 45942),

Gene: Carrillo\_54 Start: 32516, Stop: 32791, Start Num: 35  
Candidate Starts for Carrillo\_54:  
(23, 32381), (Start: 35 @32516 has 31 MA's), (Start: 38 @32525 has 4 MA's), (52, 32582), (60, 32606),  
(61, 32612), (73, 32705),

Gene: CherryCola\_85 Start: 56676, Stop: 56428, Start Num: 40  
Candidate Starts for CherryCola\_85:  
(10, 56988), (14, 56910), (15, 56889), (22, 56817), (34, 56703), (Start: 40 @56676 has 33 MA's),  
(Start: 45 @56667 has 14 MA's), (49, 56649), (62, 56592), (70, 56517), (75, 56469),

Gene: Cinna\_64 Start: 43061, Stop: 43273, Start Num: 45  
Candidate Starts for Cinna\_64:  
(Start: 45 @43061 has 14 MA's), (52, 43103), (66, 43190), (73, 43226),

Gene: Circuit\_68 Start: 44623, Stop: 44378, Start Num: 40  
Candidate Starts for Circuit\_68:  
(16, 44824), (18, 44797), (Start: 40 @44623 has 33 MA's), (75, 44425),

Gene: ClamChowder\_88 Start: 56790, Stop: 56539, Start Num: 40  
Candidate Starts for ClamChowder\_88:  
(6, 57147), (8, 57120), (13, 57021), (16, 56997), (17, 56994), (22, 56931), (34, 56817), (Start: 40  
@56790 has 33 MA's), (Start: 45 @56781 has 14 MA's), (49, 56763), (62, 56706), (70, 56631), (75,  
56583),

Gene: CookieDog\_52 Start: 32516, Stop: 32791, Start Num: 35  
Candidate Starts for CookieDog\_52:  
(5, 32120), (11, 32195), (23, 32381), (Start: 35 @32516 has 31 MA's), (Start: 38 @32525 has 4 MA's),  
(52, 32582), (60, 32606), (61, 32612), (73, 32705),

Gene: CoveyB\_87 Start: 56277, Stop: 56026, Start Num: 40  
Candidate Starts for CoveyB\_87:  
(6, 56634), (8, 56607), (13, 56508), (16, 56484), (17, 56481), (22, 56418), (34, 56304), (Start: 40  
@56277 has 33 MA's), (Start: 45 @56268 has 14 MA's), (49, 56250), (62, 56193), (70, 56118), (75,  
56070),

Gene: Cressida\_67 Start: 42667, Stop: 42879, Start Num: 45  
Candidate Starts for Cressida\_67:  
(Start: 45 @42667 has 14 MA's), (52, 42709), (66, 42796), (73, 42832),

Gene: Danyall\_86 Start: 55971, Stop: 55720, Start Num: 40  
Candidate Starts for Danyall\_86:  
(6, 56328), (8, 56301), (13, 56202), (16, 56178), (17, 56175), (22, 56112), (34, 55998), (Start: 40  
@55971 has 33 MA's), (Start: 45 @55962 has 14 MA's), (49, 55944), (62, 55887), (70, 55812), (75,  
55764),

Gene: Derg\_77 Start: 55217, Stop: 55477, Start Num: 39  
Candidate Starts for Derg\_77:  
(Start: 39 @55217 has 18 MA's), (53, 55280), (65, 55361), (73, 55400),

Gene: Dropshot\_52 Start: 32243, Stop: 32518, Start Num: 35  
Candidate Starts for Dropshot\_52:  
(5, 31847), (11, 31922), (23, 32108), (Start: 35 @32243 has 31 MA's), (Start: 38 @32252 has 4 MA's),  
(52, 32309), (60, 32333), (61, 32339), (73, 32432),

Gene: EMoore\_81 Start: 58164, Stop: 58421, Start Num: 38  
Candidate Starts for EMoore\_81:  
(Start: 38 @58164 has 4 MA's), (41, 58179), (53, 58230), (65, 58308), (72, 58341),

Gene: EastWest\_78 Start: 46071, Stop: 45799, Start Num: 35  
Candidate Starts for EastWest\_78:  
(Start: 35 @46071 has 31 MA's), (53, 46002), (64, 45927), (75, 45852),

Gene: Egi03\_84 Start: 55689, Stop: 55450, Start Num: 45  
Candidate Starts for Egi03\_84:  
(10, 56010), (14, 55932), (15, 55911), (22, 55839), (34, 55725), (Start: 40 @55698 has 33 MA's),  
(Start: 45 @55689 has 14 MA's), (49, 55671), (62, 55614), (70, 55539), (75, 55491),

Gene: Evamon\_86 Start: 56075, Stop: 55827, Start Num: 40  
Candidate Starts for Evamon\_86:  
(10, 56387), (14, 56309), (22, 56216), (34, 56102), (Start: 40 @56075 has 33 MA's), (Start: 45 @56066  
has 14 MA's), (49, 56048), (62, 55991), (70, 55916), (75, 55868),

Gene: Fireball\_89 Start: 56537, Stop: 56289, Start Num: 40  
Candidate Starts for Fireball\_89:  
(10, 56849), (14, 56771), (15, 56750), (22, 56678), (34, 56564), (Start: 40 @56537 has 33 MA's),  
(Start: 45 @56528 has 14 MA's), (49, 56510), (62, 56453), (70, 56378), (75, 56330),

Gene: Flatwoods\_84 Start: 56131, Stop: 56391, Start Num: 39  
Candidate Starts for Flatwoods\_84:  
(Start: 39 @56131 has 18 MA's), (53, 56194), (65, 56275), (73, 56314),

Gene: Franzy\_67 Start: 46121, Stop: 45813, Start Num: 35  
Candidate Starts for Franzy\_67:  
(Start: 35 @46121 has 31 MA's), (46, 46082), (53, 46046),

Gene: Fugax\_89 Start: 56782, Stop: 56531, Start Num: 40  
Candidate Starts for Fugax\_89:  
(6, 57139), (8, 57112), (13, 57013), (16, 56989), (17, 56986), (22, 56923), (34, 56809), (Start: 40  
@56782 has 33 MA's), (Start: 45 @56773 has 14 MA's), (49, 56755), (62, 56698), (70, 56623), (75,  
56575),

Gene: Gaea\_85 Start: 56481, Stop: 56741, Start Num: 39  
Candidate Starts for Gaea\_85:  
(Start: 39 @56481 has 18 MA's), (53, 56544), (65, 56625),

Gene: Gezellig\_82 Start: 55921, Stop: 55673, Start Num: 40  
Candidate Starts for Gezellig\_82:

(10, 56233), (14, 56155), (15, 56134), (22, 56062), (34, 55948), (Start: 40 @55921 has 33 MA's),  
(Start: 45 @55912 has 14 MA's), (49, 55894), (62, 55837), (70, 55762), (75, 55714),

Gene: GravityBall\_72 Start: 46734, Stop: 46405, Start Num: 35  
Candidate Starts for GravityBall\_72:  
(Start: 35 @46734 has 31 MA's),

Gene: Grekaycon\_73 Start: 46991, Stop: 46659, Start Num: 35  
Candidate Starts for Grekaycon\_73:  
(Start: 35 @46991 has 31 MA's), (Start: 43 @46970 has 3 MA's), (53, 46922), (78, 46727),

Gene: Gustavo\_86 Start: 57313, Stop: 57573, Start Num: 39  
Candidate Starts for Gustavo\_86:  
(Start: 39 @57313 has 18 MA's), (53, 57376), (65, 57457),

Gene: Guzman\_52 Start: 32499, Stop: 32774, Start Num: 35  
Candidate Starts for Guzman\_52:  
(5, 32103), (11, 32178), (23, 32364), (Start: 35 @32499 has 31 MA's), (Start: 38 @32508 has 4 MA's),  
(52, 32565), (60, 32589), (61, 32595), (73, 32688),

Gene: Halo3\_85 Start: 56796, Stop: 56545, Start Num: 40  
Candidate Starts for Halo3\_85:  
(10, 57108), (14, 57030), (22, 56937), (34, 56823), (Start: 40 @56796 has 33 MA's), (Start: 45 @56787  
has 14 MA's), (49, 56769), (62, 56712), (70, 56637), (75, 56589),

Gene: JKSyngboy\_81 Start: 56985, Stop: 57245, Start Num: 39  
Candidate Starts for JKSyngboy\_81:  
(Start: 39 @56985 has 18 MA's), (53, 57048), (65, 57129), (73, 57168),

Gene: JKerns\_72 Start: 46983, Stop: 46651, Start Num: 35  
Candidate Starts for JKerns\_72:  
(Start: 35 @46983 has 31 MA's), (Start: 43 @46962 has 3 MA's), (53, 46914),

Gene: Jace\_90 Start: 50456, Stop: 50166, Start Num: 36  
Candidate Starts for Jace\_90:  
(21, 50609), (Start: 36 @50456 has 1 MA's), (Start: 38 @50450 has 4 MA's), (44, 50429), (75, 50234),  
(79, 50192),

Gene: Jakelyne\_55 Start: 32609, Stop: 32884, Start Num: 35  
Candidate Starts for Jakelyne\_55:  
(23, 32474), (Start: 35 @32609 has 31 MA's), (Start: 38 @32618 has 4 MA's), (52, 32675), (60, 32699),  
(61, 32705), (73, 32798),

Gene: Jambalaya\_83 Start: 55378, Stop: 55127, Start Num: 40  
Candidate Starts for Jambalaya\_83:  
(4, 55774), (14, 55612), (22, 55519), (34, 55405), (Start: 40 @55378 has 33 MA's), (Start: 45 @55369  
has 14 MA's), (48, 55354), (49, 55351), (62, 55294), (67, 55228), (70, 55219), (75, 55171),

Gene: Jawnski\_68 Start: 45564, Stop: 45256, Start Num: 35  
Candidate Starts for Jawnski\_68:  
(Start: 35 @45564 has 31 MA's), (46, 45525), (53, 45489),

Gene: JohnPork\_87 Start: 55977, Stop: 55729, Start Num: 40

Candidate Starts for JohnPork\_87:

(10, 56289), (14, 56211), (15, 56190), (22, 56118), (34, 56004), (Start: 40 @55977 has 33 MA's),  
(Start: 45 @55968 has 14 MA's), (49, 55950), (62, 55893), (70, 55818), (75, 55770),

Gene: Jordan\_73 Start: 47141, Stop: 46809, Start Num: 35

Candidate Starts for Jordan\_73:

(Start: 35 @47141 has 31 MA's), (Start: 43 @47120 has 3 MA's), (53, 47072),

Gene: KimmyK\_84 Start: 56368, Stop: 56120, Start Num: 40

Candidate Starts for KimmyK\_84:

(10, 56680), (14, 56602), (15, 56581), (22, 56509), (34, 56395), (Start: 40 @56368 has 33 MA's),  
(Start: 45 @56359 has 14 MA's), (49, 56341), (62, 56284), (70, 56209), (75, 56161),

Gene: King2\_67 Start: 46100, Stop: 45792, Start Num: 35

Candidate Starts for King2\_67:

(Start: 35 @46100 has 31 MA's), (46, 46061),

Gene: Klevey\_74 Start: 45284, Stop: 45039, Start Num: 45

Candidate Starts for Klevey\_74:

(24, 45428), (Start: 45 @45284 has 14 MA's),

Gene: Kozie\_64 Start: 42302, Stop: 42514, Start Num: 45

Candidate Starts for Kozie\_64:

(Start: 40 @42293 has 33 MA's), (Start: 45 @42302 has 14 MA's), (52, 42344), (66, 42431),

Gene: Kroos\_84 Start: 56981, Stop: 57241, Start Num: 39

Candidate Starts for Kroos\_84:

(Start: 39 @56981 has 18 MA's), (53, 57044), (65, 57125), (73, 57164),

Gene: Kwobi\_86 Start: 57490, Stop: 57750, Start Num: 39

Candidate Starts for Kwobi\_86:

(Start: 39 @57490 has 18 MA's), (53, 57553), (65, 57634), (73, 57673),

Gene: LeeroyJ\_73 Start: 46660, Stop: 46331, Start Num: 35

Candidate Starts for LeeroyJ\_73:

(Start: 35 @46660 has 31 MA's),

Gene: LilHam\_78 Start: 54602, Stop: 54862, Start Num: 39

Candidate Starts for LilHam\_78:

(Start: 39 @54602 has 18 MA's), (53, 54665), (65, 54746), (73, 54785),

Gene: Lilmac1015\_74 Start: 45377, Stop: 45132, Start Num: 45

Candidate Starts for Lilmac1015\_74:

(24, 45521), (Start: 45 @45377 has 14 MA's),

Gene: Losacky\_54 Start: 32783, Stop: 33049, Start Num: 38

Candidate Starts for Losacky\_54:

(23, 32639), (Start: 35 @32774 has 31 MA's), (Start: 38 @32783 has 4 MA's), (52, 32840), (60, 32864),  
(61, 32870), (73, 32963),

Gene: Margaery\_63 Start: 42267, Stop: 42482, Start Num: 45

Candidate Starts for Margaery\_63:

(Start: 45 @42267 has 14 MA's), (53, 42309), (61, 42336), (63, 42381), (66, 42396),

Gene: Mariel\_55 Start: 32980, Stop: 33258, Start Num: 35

Candidate Starts for Mariel\_55:

(23, 32845), (Start: 35 @32980 has 31 MA's), (Start: 38 @32989 has 4 MA's), (52, 33049), (60, 33073), (61, 33079), (73, 33172),

Gene: Martha\_72 Start: 46927, Stop: 46595, Start Num: 35

Candidate Starts for Martha\_72:

(Start: 35 @46927 has 31 MA's), (Start: 43 @46906 has 3 MA's), (53, 46858), (78, 46663),

Gene: Maruru\_94 Start: 57349, Stop: 57080, Start Num: 28

Candidate Starts for Maruru\_94:

(Start: 28 @57349 has 2 MA's), (29, 57343), (33, 57337), (Start: 38 @57325 has 4 MA's), (42, 57310), (Start: 43 @57307 has 3 MA's), (50, 57274), (53, 57259),

Gene: Matzah\_66 Start: 43128, Stop: 43340, Start Num: 45

Candidate Starts for Matzah\_66:

(Start: 45 @43128 has 14 MA's), (52, 43170), (66, 43257), (73, 43293),

Gene: Megan\_63 Start: 45613, Stop: 45837, Start Num: 47

Candidate Starts for Megan\_63:

(30, 45556), (Start: 47 @45613 has 1 MA's), (56, 45652), (59, 45661), (69, 45739), (76, 45814),

Gene: MementoMori\_65 Start: 42723, Stop: 42935, Start Num: 45

Candidate Starts for MementoMori\_65:

(Start: 45 @42723 has 14 MA's), (52, 42765), (66, 42852), (73, 42888),

Gene: MenE\_54 Start: 32665, Stop: 32940, Start Num: 35

Candidate Starts for MenE\_54:

(23, 32530), (Start: 35 @32665 has 31 MA's), (Start: 38 @32674 has 4 MA's), (52, 32731), (60, 32755), (61, 32761), (73, 32854),

Gene: Mufasa8\_98 Start: 57231, Stop: 56944, Start Num: 25

Candidate Starts for Mufasa8\_98:

(Start: 25 @57231 has 1 MA's), (27, 57222), (Start: 38 @57186 has 4 MA's), (42, 57171), (66, 57057), (69, 57039),

Gene: Mutzi\_85 Start: 56931, Stop: 56680, Start Num: 40

Candidate Starts for Mutzi\_85:

(6, 57288), (8, 57261), (13, 57162), (16, 57138), (17, 57135), (22, 57072), (34, 56958), (Start: 40 @56931 has 33 MA's), (Start: 45 @56922 has 14 MA's), (49, 56904), (62, 56847), (70, 56772), (75, 56724),

Gene: NCRodriguez\_54 Start: 32734, Stop: 33009, Start Num: 35

Candidate Starts for NCRodriguez\_54:

(2, 32251), (3, 32278), (23, 32599), (Start: 35 @32734 has 31 MA's), (Start: 38 @32743 has 4 MA's), (52, 32800), (60, 32824), (61, 32830), (73, 32923),

Gene: Nandito\_73 Start: 45609, Stop: 45370, Start Num: 45

Candidate Starts for Nandito\_73:

(1, 46188), (7, 45990), (Start: 45 @45609 has 14 MA's),

Gene: NathanVaag\_68 Start: 45795, Stop: 45487, Start Num: 35

Candidate Starts for NathanVaag\_68:  
(Start: 35 @45795 has 31 MA's), (46, 45756), (53, 45720), (74, 45582),

Gene: Nicole72\_64 Start: 46099, Stop: 46344, Start Num: 45  
Candidate Starts for Nicole72\_64:  
(Start: 45 @46099 has 14 MA's), (51, 46132), (63, 46213), (66, 46228), (77, 46330),

Gene: Nostromo\_67 Start: 43577, Stop: 43287, Start Num: 35  
Candidate Starts for Nostromo\_67:  
(Start: 35 @43577 has 31 MA's), (73, 43391), (80, 43307),

Gene: Nubi\_89 Start: 56334, Stop: 56083, Start Num: 40  
Candidate Starts for Nubi\_89:  
(9, 56661), (10, 56646), (14, 56568), (22, 56475), (34, 56361), (Start: 40 @56334 has 33 MA's), (Start: 45 @56325 has 14 MA's), (49, 56307), (62, 56250), (70, 56175), (75, 56127),

Gene: PhillyJawn\_53 Start: 32405, Stop: 32680, Start Num: 35  
Candidate Starts for PhillyJawn\_53:  
(5, 32009), (11, 32084), (23, 32270), (Start: 35 @32405 has 31 MA's), (Start: 38 @32414 has 4 MA's), (52, 32471), (60, 32495), (61, 32501), (73, 32594),

Gene: Phingu\_55 Start: 32629, Stop: 32904, Start Num: 35  
Candidate Starts for Phingu\_55:  
(2, 32146), (3, 32173), (23, 32494), (Start: 35 @32629 has 31 MA's), (Start: 38 @32638 has 4 MA's), (52, 32695), (60, 32719), (61, 32725), (73, 32818),

Gene: Phlop\_83 Start: 55971, Stop: 55723, Start Num: 40  
Candidate Starts for Phlop\_83:  
(10, 56283), (14, 56205), (15, 56184), (22, 56112), (34, 55998), (Start: 40 @55971 has 33 MA's), (Start: 45 @55962 has 14 MA's), (49, 55944), (62, 55887), (70, 55812), (75, 55764),

Gene: Phonegingi\_52 Start: 32447, Stop: 32722, Start Num: 35  
Candidate Starts for Phonegingi\_52:  
(2, 31964), (3, 31991), (23, 32312), (Start: 35 @32447 has 31 MA's), (Start: 38 @32456 has 4 MA's), (52, 32513), (60, 32537), (61, 32543),

Gene: Piccoletto\_69 Start: 45957, Stop: 45649, Start Num: 35  
Candidate Starts for Piccoletto\_69:  
(Start: 35 @45957 has 31 MA's), (46, 45918), (53, 45882), (74, 45744),

Gene: Pickles13\_51 Start: 32723, Stop: 32998, Start Num: 35  
Candidate Starts for Pickles13\_51:  
(Start: 35 @32723 has 31 MA's), (Start: 38 @32732 has 4 MA's), (52, 32789), (60, 32813), (61, 32819), (73, 32912),

Gene: PinkCoffee\_87 Start: 55835, Stop: 55587, Start Num: 40  
Candidate Starts for PinkCoffee\_87:  
(6, 56192), (8, 56165), (13, 56066), (16, 56042), (17, 56039), (22, 55976), (34, 55862), (Start: 40 @55835 has 33 MA's), (Start: 45 @55826 has 14 MA's), (49, 55808), (62, 55751), (70, 55676), (75, 55628),

Gene: Pippa\_73 Start: 46951, Stop: 46640, Start Num: 43  
Candidate Starts for Pippa\_73:

(Start: 35 @46972 has 31 MA's), (Start: 43 @46951 has 3 MA's), (53, 46903),

Gene: Portcullis\_86 Start: 55977, Stop: 55729, Start Num: 40

Candidate Starts for Portcullis\_86:

(10, 56289), (14, 56211), (15, 56190), (22, 56118), (34, 56004), (Start: 40 @55977 has 33 MA's), (Start: 45 @55968 has 14 MA's), (49, 55950), (62, 55893), (70, 55818), (75, 55770),

Gene: Prairie\_70 Start: 44683, Stop: 44438, Start Num: 45

Candidate Starts for Prairie\_70:

(24, 44827), (Start: 45 @44683 has 14 MA's), (73, 44518),

Gene: PullumCavea\_84 Start: 56148, Stop: 55900, Start Num: 40

Candidate Starts for PullumCavea\_84:

(10, 56460), (14, 56382), (15, 56361), (22, 56289), (34, 56175), (Start: 40 @56148 has 33 MA's), (Start: 45 @56139 has 14 MA's), (49, 56121), (62, 56064), (70, 55989), (75, 55941),

Gene: Ribeye\_84 Start: 56456, Stop: 56716, Start Num: 39

Candidate Starts for Ribeye\_84:

(Start: 39 @56456 has 18 MA's), (53, 56519), (65, 56600), (73, 56639),

Gene: RogerDodger\_89 Start: 56736, Stop: 56488, Start Num: 40

Candidate Starts for RogerDodger\_89:

(10, 57048), (14, 56970), (15, 56949), (22, 56877), (34, 56763), (Start: 40 @56736 has 33 MA's), (Start: 45 @56727 has 14 MA's), (49, 56709), (62, 56652), (70, 56577), (75, 56529),

Gene: Salvador\_86 Start: 56073, Stop: 55825, Start Num: 40

Candidate Starts for Salvador\_86:

(10, 56385), (14, 56307), (22, 56214), (34, 56100), (Start: 40 @56073 has 33 MA's), (Start: 45 @56064 has 14 MA's), (49, 56046), (62, 55989), (70, 55914), (75, 55866),

Gene: Saronaya\_86 Start: 57313, Stop: 57573, Start Num: 39

Candidate Starts for Saronaya\_86:

(Start: 39 @57313 has 18 MA's), (53, 57376), (65, 57457),

Gene: Savbucketdawg\_81 Start: 55415, Stop: 55167, Start Num: 40

Candidate Starts for Savbucketdawg\_81:

(10, 55727), (14, 55649), (15, 55628), (22, 55556), (34, 55442), (Start: 40 @55415 has 33 MA's), (Start: 45 @55406 has 14 MA's), (49, 55388), (62, 55331), (70, 55256), (75, 55208),

Gene: SchottB\_83 Start: 57376, Stop: 57636, Start Num: 39

Candidate Starts for SchottB\_83:

(Start: 39 @57376 has 18 MA's), (53, 57439), (65, 57520), (73, 57559),

Gene: ScoobySnack\_49 Start: 32220, Stop: 32489, Start Num: 38

Candidate Starts for ScoobySnack\_49:

(2, 31728), (3, 31755), (11, 31890), (23, 32076), (Start: 35 @32211 has 31 MA's), (Start: 38 @32220 has 4 MA's), (52, 32280), (60, 32304), (61, 32310),

Gene: Sendy\_88 Start: 56153, Stop: 55905, Start Num: 40

Candidate Starts for Sendy\_88:

(10, 56465), (14, 56387), (15, 56366), (22, 56294), (34, 56180), (Start: 40 @56153 has 33 MA's), (Start: 45 @56144 has 14 MA's), (49, 56126), (62, 56069), (70, 55994), (75, 55946),

Gene: Shade\_72 Start: 46747, Stop: 46415, Start Num: 35  
Candidate Starts for Shade\_72:  
(Start: 35 @46747 has 31 MA's), (Start: 43 @46726 has 3 MA's), (53, 46678),

Gene: SharkTale\_89 Start: 57477, Stop: 57226, Start Num: 40  
Candidate Starts for SharkTale\_89:  
(22, 57618), (34, 57504), (Start: 40 @57477 has 33 MA's), (Start: 45 @57468 has 14 MA's), (48, 57453), (49, 57450), (62, 57393), (70, 57318), (75, 57270),

Gene: Shinji\_85 Start: 56154, Stop: 55906, Start Num: 40  
Candidate Starts for Shinji\_85:  
(10, 56466), (14, 56388), (15, 56367), (22, 56295), (34, 56181), (Start: 40 @56154 has 33 MA's), (Start: 45 @56145 has 14 MA's), (49, 56127), (62, 56070), (70, 55995), (75, 55947),

Gene: Sixsevenium\_87 Start: 57614, Stop: 57372, Start Num: 45  
Candidate Starts for Sixsevenium\_87:  
(4, 58055), (12, 57896), (18, 57827), (19, 57803), (20, 57800), (32, 57647), (Start: 40 @57620 has 33 MA's), (42, 57617), (Start: 45 @57614 has 14 MA's), (49, 57596), (62, 57539), (75, 57416),

Gene: SmokingBunny\_87 Start: 57069, Stop: 56821, Start Num: 40  
Candidate Starts for SmokingBunny\_87:  
(10, 57381), (14, 57303), (22, 57210), (34, 57096), (Start: 40 @57069 has 33 MA's), (Start: 45 @57060 has 14 MA's), (49, 57042), (62, 56985), (70, 56910), (75, 56862),

Gene: Sonali\_93 Start: 57959, Stop: 57690, Start Num: 28  
Candidate Starts for Sonali\_93:  
(Start: 28 @57959 has 2 MA's), (29, 57953), (33, 57947), (Start: 38 @57935 has 4 MA's), (42, 57920), (Start: 43 @57917 has 3 MA's), (50, 57884), (53, 57869),

Gene: Sonny\_72 Start: 46702, Stop: 46370, Start Num: 35  
Candidate Starts for Sonny\_72:  
(Start: 35 @46702 has 31 MA's), (Start: 43 @46681 has 3 MA's), (53, 46633),

Gene: StevieBAY\_73 Start: 46953, Stop: 46624, Start Num: 35  
Candidate Starts for StevieBAY\_73:  
(Start: 35 @46953 has 31 MA's),

Gene: Stichling\_80 Start: 55984, Stop: 56244, Start Num: 39  
Candidate Starts for Stichling\_80:  
(Start: 39 @55984 has 18 MA's), (53, 56047), (65, 56128), (73, 56167),

Gene: StorminNorm\_85 Start: 57257, Stop: 57517, Start Num: 39  
Candidate Starts for StorminNorm\_85:  
(Start: 39 @57257 has 18 MA's), (53, 57320), (65, 57401),

Gene: Sunshine23\_95 Start: 57525, Stop: 57268, Start Num: 43  
Candidate Starts for Sunshine23\_95:  
(Start: 28 @57567 has 2 MA's), (29, 57561), (33, 57555), (Start: 38 @57543 has 4 MA's), (42, 57528), (Start: 43 @57525 has 3 MA's), (50, 57492), (53, 57477),

Gene: TaeYoung\_73 Start: 46899, Stop: 46567, Start Num: 35  
Candidate Starts for TaeYoung\_73:  
(Start: 35 @46899 has 31 MA's), (Start: 43 @46878 has 3 MA's), (53, 46830), (78, 46635),

Gene: Tangerine\_84 Start: 56314, Stop: 56574, Start Num: 39  
Candidate Starts for Tangerine\_84:  
(Start: 39 @56314 has 18 MA's), (53, 56377), (65, 56458), (73, 56497),

Gene: Terij\_64 Start: 41499, Stop: 41717, Start Num: 45  
Candidate Starts for Terij\_64:  
(Start: 45 @41499 has 14 MA's), (52, 41541), (53, 41544), (61, 41571), (66, 41631), (68, 41646),

Gene: TillyBobJoe\_84 Start: 55955, Stop: 55707, Start Num: 40  
Candidate Starts for TillyBobJoe\_84:  
(6, 56312), (8, 56285), (13, 56186), (16, 56162), (17, 56159), (22, 56096), (34, 55982), (Start: 40 @55955 has 33 MA's), (Start: 45 @55946 has 14 MA's), (49, 55928), (62, 55871), (70, 55796), (75, 55748),

Gene: Timinator\_73 Start: 46773, Stop: 46444, Start Num: 35  
Candidate Starts for Timinator\_73:  
(Start: 35 @46773 has 31 MA's),

Gene: Togo\_86 Start: 57069, Stop: 56821, Start Num: 40  
Candidate Starts for Togo\_86:  
(10, 57381), (14, 57303), (22, 57210), (34, 57096), (Start: 40 @57069 has 33 MA's), (Start: 45 @57060 has 14 MA's), (49, 57042), (62, 56985), (70, 56910), (75, 56862),

Gene: Tonitrus\_59 Start: 44270, Stop: 44503, Start Num: 31  
Candidate Starts for Tonitrus\_59:  
(Start: 31 @44270 has 1 MA's), (54, 44363), (57, 44369), (63, 44423), (71, 44465),

Gene: Twister6\_85 Start: 55418, Stop: 55170, Start Num: 40  
Candidate Starts for Twister6\_85:  
(10, 55730), (14, 55652), (15, 55631), (22, 55559), (34, 55445), (Start: 40 @55418 has 33 MA's), (Start: 45 @55409 has 14 MA's), (49, 55391), (62, 55334), (70, 55259), (75, 55211),

Gene: Tycho\_84 Start: 56791, Stop: 57051, Start Num: 39  
Candidate Starts for Tycho\_84:  
(Start: 39 @56791 has 18 MA's), (53, 56854), (65, 56935), (73, 56974),

Gene: Valary\_87 Start: 57061, Stop: 56813, Start Num: 40  
Candidate Starts for Valary\_87:  
(10, 57373), (14, 57295), (15, 57274), (22, 57202), (34, 57088), (Start: 40 @57061 has 33 MA's), (Start: 45 @57052 has 14 MA's), (49, 57034), (62, 56977), (70, 56902), (75, 56854),

Gene: VanDeWege\_88 Start: 56586, Stop: 56338, Start Num: 40  
Candidate Starts for VanDeWege\_88:  
(10, 56898), (14, 56820), (15, 56799), (22, 56727), (34, 56613), (Start: 40 @56586 has 33 MA's), (Start: 45 @56577 has 14 MA's), (49, 56559), (62, 56502), (70, 56427), (75, 56379),

Gene: ViaConlectus\_87 Start: 57801, Stop: 58070, Start Num: 37  
Candidate Starts for ViaConlectus\_87:  
(26, 57756), (Start: 37 @57801 has 4 MA's), (41, 57819), (53, 57870), (65, 57948),

Gene: Violeta\_54 Start: 32507, Stop: 32782, Start Num: 35  
Candidate Starts for Violeta\_54:

(23, 32372), (Start: 35 @32507 has 31 MA's), (Start: 38 @32516 has 4 MA's), (52, 32573), (60, 32597), (61, 32603), (73, 32696),

Gene: Warren\_52 Start: 32462, Stop: 32737, Start Num: 35

Candidate Starts for Warren\_52:

(Start: 35 @32462 has 31 MA's), (Start: 38 @32471 has 4 MA's), (52, 32528), (60, 32552), (61, 32558), (73, 32651),

Gene: Winchester007\_68 Start: 38187, Stop: 38462, Start Num: 35

Candidate Starts for Winchester007\_68:

(5, 37791), (11, 37866), (23, 38052), (Start: 35 @38187 has 31 MA's), (Start: 38 @38196 has 4 MA's), (52, 38253), (60, 38277), (61, 38283), (73, 38376),

Gene: Wizard\_81 Start: 55921, Stop: 55673, Start Num: 40

Candidate Starts for Wizard\_81:

(10, 56233), (14, 56155), (15, 56134), (22, 56062), (34, 55948), (Start: 40 @55921 has 33 MA's), (Start: 45 @55912 has 14 MA's), (49, 55894), (62, 55837), (70, 55762), (75, 55714),

Gene: YorkOnyx\_83 Start: 56426, Stop: 56686, Start Num: 39

Candidate Starts for YorkOnyx\_83:

(Start: 39 @56426 has 18 MA's), (53, 56489), (65, 56570), (73, 56609),

Gene: YungMoney\_85 Start: 57771, Stop: 57520, Start Num: 40

Candidate Starts for YungMoney\_85:

(6, 58128), (8, 58101), (13, 58002), (16, 57978), (17, 57975), (22, 57912), (34, 57798), (Start: 40 @57771 has 33 MA's), (Start: 45 @57762 has 14 MA's), (49, 57744), (62, 57687), (70, 57612), (75, 57564),

Gene: Zartrosa\_74 Start: 46999, Stop: 46667, Start Num: 35

Candidate Starts for Zartrosa\_74:

(Start: 35 @46999 has 31 MA's), (Start: 43 @46978 has 3 MA's), (53, 46930),

Gene: Zitch\_90 Start: 58345, Stop: 58614, Start Num: 37

Candidate Starts for Zitch\_90:

(Start: 37 @58345 has 4 MA's), (41, 58363), (53, 58414), (65, 58492),