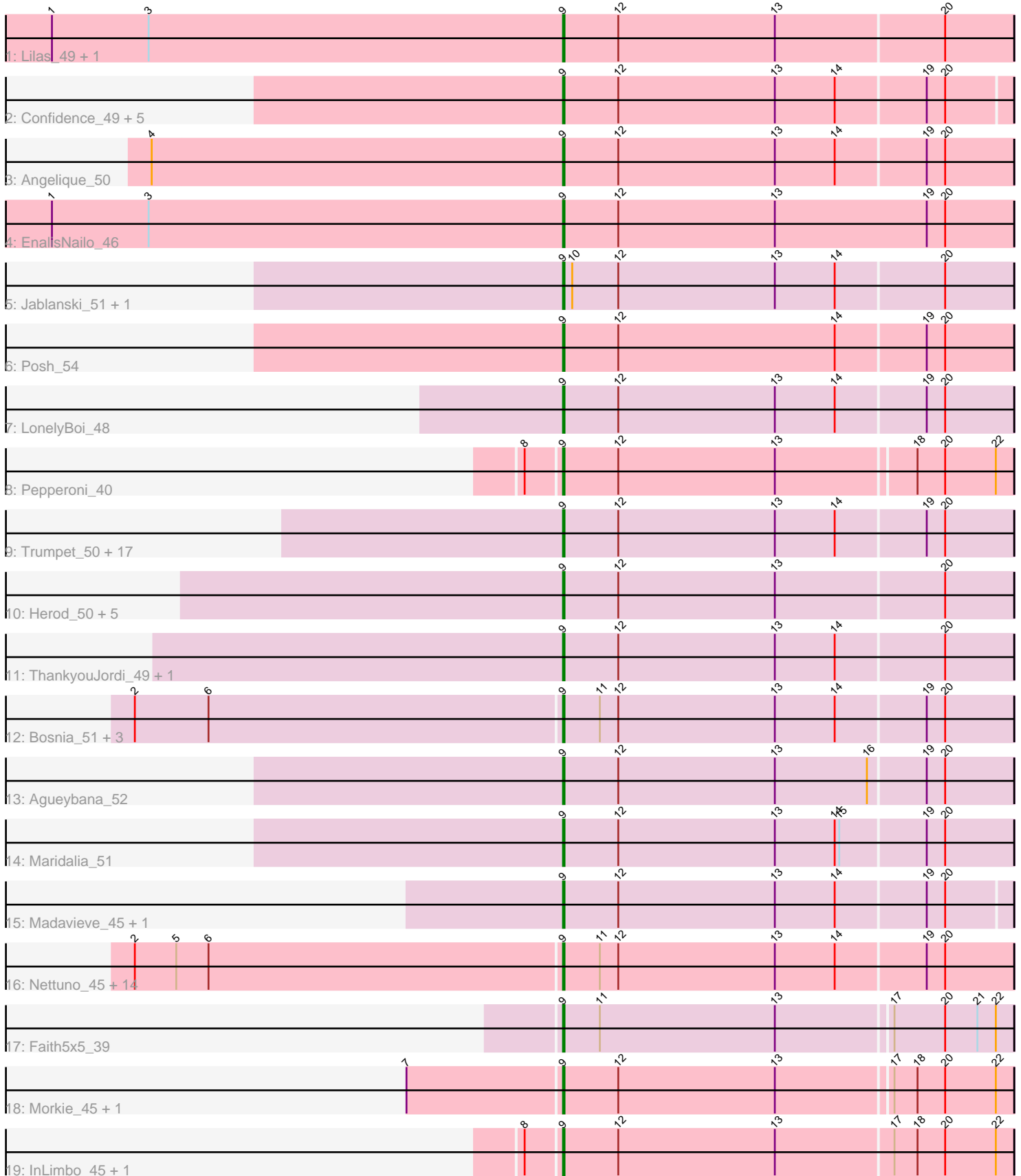


Pham 301359



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 301359 Report

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

Pham number 301359 has 69 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Lilas\_49, Bradissa\_47
- Track 2 : Confidence\_49, BoyNamedSue\_50, Hyzer\_55, SushiChef\_47, AlumE\_50, Bunnybear\_43
- Track 3 : Angelique\_50
- Track 4 : EnalisNailo\_46
- Track 5 : Jablanski\_51, Pytheas\_51
- Track 6 : Posh\_54
- Track 7 : LonelyBoi\_48
- Track 8 : Pepperoni\_40
- Track 9 : Trumpet\_50, Polly\_47, Neobush\_50, EdnaMode\_44, Antonio\_50, Yeet412\_45, Zameen\_50, LordFarquaad\_47, Attis\_45, Kita\_51, Suscepit\_50, Eudoria\_50, Pickett\_43, Manasvini\_51, Zirinka\_47, Bialota\_48, SoilAssassin\_45, Tayonia\_50
- Track 10 : Herod\_50, BatStarr\_50, Eviarto\_51, TimTam\_51, Hugley\_47, Nymphadora\_51
- Track 11 : ThankyouJordi\_49, WelcomeAyanna\_49
- Track 12 : Bosnia\_51, Sahara\_48, Matteo\_42, Jalleen\_49
- Track 13 : Agueybana\_52
- Track 14 : Maridalia\_51
- Track 15 : Madavieve\_45, Wrigley\_55
- Track 16 : Nettuno\_45, Lamberg\_45, GemG\_49, Gizermo\_49, Savage\_49, Yinzer\_49, Clap\_49, Mocha12\_49, Bjanes7\_46, Sproutie\_49, TuertoX\_49, Whiteclaw\_49, Ebert\_51, Haley23\_49, Cynthia\_49
- Track 17 : Faith5x5\_39
- Track 18 : Morkie\_45, OneDirection\_40
- Track 19 : InLimbo\_45, PhorbesPhlower\_45

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

The start number called the most often in the published annotations is 9, it was called in 62 of the 62 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agueybana\_52, AlumE\_50, Angelique\_50, Antonio\_50, Attis\_45, BatStarr\_50, Bialota\_48, Bjanes7\_46, Bosnia\_51, BoyNamedSue\_50, Bradissa\_47, Bunnybear\_43, Clap\_49, Confidence\_49, Cynthia\_49, Ebert\_51, EdnaMode\_44, EnalisNailo\_46, Eudoria\_50, Eviarto\_51, Faith5x5\_39, GemG\_49, Gizermo\_49, Haley23\_49, Herod\_50, Hugley\_47, Hyzer\_55, InLimbo\_45, Jablanski\_51, Jalleen\_49, Kita\_51, Lamberg\_45, Lilas\_49, LonelyBoi\_48, LordFarquaad\_47, Madavieve\_45, Manasvini\_51, Maridalia\_51, Matteo\_42, Mocha12\_49, Morkie\_45, Neobush\_50, Nettuno\_45, Nymphadora\_51, OneDirection\_40, Pepperoni\_40, PhorbesPhlower\_45, Pickett\_43, Polly\_47, Posh\_54, Pytheas\_51, Sahara\_48, Savage\_49, SoilAssassin\_45, Sproutie\_49, Suscepit\_50, SushiChef\_47, Tayonia\_50, ThankyouJordi\_49, TimTam\_51, Trumpet\_50, TuertoX\_49, WelcomeAyanna\_49, Whiteclaw\_49, Wrigley\_55, Yeet412\_45, Yinzer\_49, Zameen\_50, Zirinka\_47,

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

- 

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

- 

### Summary by start number:

Start 9:

- Found in 69 of 69 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 62 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agueybana\_52 (CZ1), AlumE\_50 (CZ1), Angelique\_50 (CY1), Antonio\_50 (CZ1), Attis\_45 (CZ2), BatStarr\_50 (CZ1), Bialota\_48 (CZ1), Bjanes7\_46 (CZ2), Bosnia\_51 (CZ1), BoyNamedSue\_50 (CZ1), Bradissa\_47 (CY1), Bunnybear\_43 (CZ), Clap\_49 (CZ2), Confidence\_49 (CY1), Cynthia\_49 (CZ2), Ebert\_51 (CZ2), EdnaMode\_44 (CZ2), EnalisNailo\_46 (CY1), Eudoria\_50 (CZ1), Eviarto\_51 (CZ1), Faith5x5\_39 (CZ6), GemG\_49 (CZ2), Gizermo\_49 (CZ2), Haley23\_49 (CZ2), Herod\_50 (CZ1), Hugley\_47 (CZ1), Hyzer\_55 (CZ1), InLimbo\_45 (DH), Jablanski\_51 (CY3), Jalleen\_49 (CZ2), Kita\_51 (CZ1), Lamberg\_45 (CZ2), Lilas\_49 (CY1), LonelyBoi\_48 (CY7), LordFarquaad\_47 (CZ2), Madavieve\_45 (CZ1), Manasvini\_51 (CZ1), Maridalia\_51 (CZ1), Matteo\_42 (CZ2), Mocha12\_49 (CZ2), Morkie\_45 (DH), Neobush\_50 (CZ1), Nettuno\_45 (CZ2), Nymphadora\_51 (CZ1), OneDirection\_40 (CZ6), Pepperoni\_40 (CZ), PhorbesPhlower\_45 (DH), Pickett\_43 (CZ2), Polly\_47 (CZ1), Posh\_54 (CY4), Pytheas\_51 (CY3), Sahara\_48 (CZ2), Savage\_49 (CZ2), SoilAssassin\_45 (CZ2), Sproutie\_49 (CZ2), Suscepit\_50 (CZ1), SushiChef\_47 (CZ), Tayonia\_50 (CZ1), ThankyouJordi\_49 (CZ1), TimTam\_51 (CZ1), Trumpet\_50 (CZ1), TuertoX\_49 (CZ2), WelcomeAyanna\_49 (CZ1), Whiteclaw\_49 (CZ2), Wrigley\_55 (CY4), Yeet412\_45 (CZ2), Yinzer\_49 (CZ2), Zameen\_50 (CZ1), Zirinka\_47 (CZ1),

### Summary by clusters:

There are 9 clusters represented in this pham: CY3, CY1, CY7, DH, CY4, CZ2, CZ1, CZ6, CZ,

Info for manual annotations of cluster CY1:

- Start number 9 was manually annotated 5 times for cluster CY1.

Info for manual annotations of cluster CY3:

- Start number 9 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:

- Start number 9 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CY7:

- Start number 9 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster CZ:

- Start number 9 was manually annotated 2 times for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 9 was manually annotated 24 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 9 was manually annotated 22 times for cluster CZ2.

Info for manual annotations of cluster CZ6:

- Start number 9 was manually annotated 2 times for cluster CZ6.

Info for manual annotations of cluster DH:

- Start number 9 was manually annotated 2 times for cluster DH.

### ***Gene Information:***

Gene: Agueybana\_52 Start: 38634, Stop: 38924, Start Num: 9

Candidate Starts for Agueybana\_52:

(Start: 9 @38634 has 62 MA's), (12, 38670), (13, 38772), (16, 38832), (19, 38868), (20, 38880),

Gene: AlumE\_50 Start: 37134, Stop: 37424, Start Num: 9

Candidate Starts for AlumE\_50:

(Start: 9 @37134 has 62 MA's), (12, 37170), (13, 37272), (14, 37311), (19, 37368), (20, 37380),

Gene: Angelique\_50 Start: 38349, Stop: 38639, Start Num: 9

Candidate Starts for Angelique\_50:

(4, 38082), (Start: 9 @38349 has 62 MA's), (12, 38385), (13, 38487), (14, 38526), (19, 38583), (20, 38595),

Gene: Antonio\_50 Start: 36407, Stop: 36697, Start Num: 9

Candidate Starts for Antonio\_50:

(Start: 9 @36407 has 62 MA's), (12, 36443), (13, 36545), (14, 36584), (19, 36641), (20, 36653),

Gene: Attis\_45 Start: 33540, Stop: 33830, Start Num: 9

Candidate Starts for Attis\_45:

(Start: 9 @33540 has 62 MA's), (12, 33576), (13, 33678), (14, 33717), (19, 33774), (20, 33786),

Gene: BatStarr\_50 Start: 38377, Stop: 38667, Start Num: 9

Candidate Starts for BatStarr\_50:

(Start: 9 @38377 has 62 MA's), (12, 38413), (13, 38515), (20, 38623),

Gene: Bialota\_48 Start: 37039, Stop: 37329, Start Num: 9

Candidate Starts for Bialota\_48:

(Start: 9 @37039 has 62 MA's), (12, 37075), (13, 37177), (14, 37216), (19, 37273), (20, 37285),

Gene: Bjaner7\_46 Start: 33715, Stop: 34005, Start Num: 9

Candidate Starts for Bjaner7\_46:

(2, 33439), (5, 33466), (6, 33487), (Start: 9 @33715 has 62 MA's), (11, 33739), (12, 33751), (13, 33853), (14, 33892), (19, 33949), (20, 33961),

Gene: Bosnia\_51 Start: 40079, Stop: 40369, Start Num: 9

Candidate Starts for Bosnia\_51:

(2, 39803), (6, 39851), (Start: 9 @40079 has 62 MA's), (11, 40103), (12, 40115), (13, 40217), (14, 40256), (19, 40313), (20, 40325),

Gene: BoyNamedSue\_50 Start: 37134, Stop: 37424, Start Num: 9

Candidate Starts for BoyNamedSue\_50:

(Start: 9 @37134 has 62 MA's), (12, 37170), (13, 37272), (14, 37311), (19, 37368), (20, 37380),

Gene: Bradissa\_47 Start: 37475, Stop: 37765, Start Num: 9

Candidate Starts for Bradissa\_47:

(1, 37142), (3, 37205), (Start: 9 @37475 has 62 MA's), (12, 37511), (13, 37613), (20, 37721),

Gene: Bunnybear\_43 Start: 34807, Stop: 35097, Start Num: 9

Candidate Starts for Bunnybear\_43:

(Start: 9 @34807 has 62 MA's), (12, 34843), (13, 34945), (14, 34984), (19, 35041), (20, 35053),

Gene: Clap\_49 Start: 33894, Stop: 34184, Start Num: 9

Candidate Starts for Clap\_49:

(2, 33618), (5, 33645), (6, 33666), (Start: 9 @33894 has 62 MA's), (11, 33918), (12, 33930), (13, 34032), (14, 34071), (19, 34128), (20, 34140),

Gene: Confidence\_49 Start: 35366, Stop: 35653, Start Num: 9

Candidate Starts for Confidence\_49:

(Start: 9 @35366 has 62 MA's), (12, 35402), (13, 35504), (14, 35543), (19, 35600), (20, 35612),

Gene: Cynthia\_49 Start: 33892, Stop: 34182, Start Num: 9

Candidate Starts for Cynthia\_49:

(2, 33616), (5, 33643), (6, 33664), (Start: 9 @33892 has 62 MA's), (11, 33916), (12, 33928), (13, 34030), (14, 34069), (19, 34126), (20, 34138),

Gene: Ebert\_51 Start: 33818, Stop: 34108, Start Num: 9

Candidate Starts for Ebert\_51:

(2, 33542), (5, 33569), (6, 33590), (Start: 9 @33818 has 62 MA's), (11, 33842), (12, 33854), (13, 33956), (14, 33995), (19, 34052), (20, 34064),

Gene: EdnaMode\_44 Start: 32228, Stop: 32518, Start Num: 9

Candidate Starts for EdnaMode\_44:

(Start: 9 @32228 has 62 MA's), (12, 32264), (13, 32366), (14, 32405), (19, 32462), (20, 32474),

Gene: EnalisNailo\_46 Start: 37009, Stop: 37302, Start Num: 9

Candidate Starts for EnalisNailo\_46:

(1, 36676), (3, 36739), (Start: 9 @37009 has 62 MA's), (12, 37045), (13, 37147), (19, 37246), (20, 37258),

Gene: Eudoria\_50 Start: 36407, Stop: 36697, Start Num: 9  
Candidate Starts for Eudoria\_50:  
(Start: 9 @36407 has 62 MA's), (12, 36443), (13, 36545), (14, 36584), (19, 36641), (20, 36653),

Gene: Eviarto\_51 Start: 38352, Stop: 38642, Start Num: 9  
Candidate Starts for Eviarto\_51:  
(Start: 9 @38352 has 62 MA's), (12, 38388), (13, 38490), (20, 38598),

Gene: Faith5x5\_39 Start: 29672, Stop: 29959, Start Num: 9  
Candidate Starts for Faith5x5\_39:  
(Start: 9 @29672 has 62 MA's), (11, 29696), (13, 29810), (17, 29882), (20, 29915), (21, 29936), (22, 29948),

Gene: GemG\_49 Start: 33898, Stop: 34188, Start Num: 9  
Candidate Starts for GemG\_49:  
(2, 33622), (5, 33649), (6, 33670), (Start: 9 @33898 has 62 MA's), (11, 33922), (12, 33934), (13, 34036), (14, 34075), (19, 34132), (20, 34144),

Gene: Gizermo\_49 Start: 33894, Stop: 34184, Start Num: 9  
Candidate Starts for Gizermo\_49:  
(2, 33618), (5, 33645), (6, 33666), (Start: 9 @33894 has 62 MA's), (11, 33918), (12, 33930), (13, 34032), (14, 34071), (19, 34128), (20, 34140),

Gene: Haley23\_49 Start: 33894, Stop: 34184, Start Num: 9  
Candidate Starts for Haley23\_49:  
(2, 33618), (5, 33645), (6, 33666), (Start: 9 @33894 has 62 MA's), (11, 33918), (12, 33930), (13, 34032), (14, 34071), (19, 34128), (20, 34140),

Gene: Herod\_50 Start: 38377, Stop: 38667, Start Num: 9  
Candidate Starts for Herod\_50:  
(Start: 9 @38377 has 62 MA's), (12, 38413), (13, 38515), (20, 38623),

Gene: Hugley\_47 Start: 38376, Stop: 38666, Start Num: 9  
Candidate Starts for Hugley\_47:  
(Start: 9 @38376 has 62 MA's), (12, 38412), (13, 38514), (20, 38622),

Gene: Hyzer\_55 Start: 39323, Stop: 39613, Start Num: 9  
Candidate Starts for Hyzer\_55:  
(Start: 9 @39323 has 62 MA's), (12, 39359), (13, 39461), (14, 39500), (19, 39557), (20, 39569),

Gene: InLimbo\_45 Start: 31463, Stop: 31753, Start Num: 9  
Candidate Starts for InLimbo\_45:  
(8, 31442), (Start: 9 @31463 has 62 MA's), (12, 31499), (13, 31601), (17, 31676), (18, 31691), (20, 31709), (22, 31742),

Gene: Jablanski\_51 Start: 39368, Stop: 39658, Start Num: 9  
Candidate Starts for Jablanski\_51:  
(Start: 9 @39368 has 62 MA's), (10, 39374), (12, 39404), (13, 39506), (14, 39545), (20, 39614),

Gene: Jalleen\_49 Start: 33533, Stop: 33823, Start Num: 9  
Candidate Starts for Jalleen\_49:  
(2, 33257), (6, 33305), (Start: 9 @33533 has 62 MA's), (11, 33557), (12, 33569), (13, 33671), (14, 33710), (19, 33767), (20, 33779),

Gene: Kita\_51 Start: 36416, Stop: 36706, Start Num: 9

Candidate Starts for Kita\_51:

(Start: 9 @36416 has 62 MA's), (12, 36452), (13, 36554), (14, 36593), (19, 36650), (20, 36662),

Gene: Lamberg\_45 Start: 32403, Stop: 32693, Start Num: 9

Candidate Starts for Lamberg\_45:

(2, 32127), (5, 32154), (6, 32175), (Start: 9 @32403 has 62 MA's), (11, 32427), (12, 32439), (13, 32541), (14, 32580), (19, 32637), (20, 32649),

Gene: Lilas\_49 Start: 38720, Stop: 39010, Start Num: 9

Candidate Starts for Lilas\_49:

(1, 38387), (3, 38450), (Start: 9 @38720 has 62 MA's), (12, 38756), (13, 38858), (20, 38966),

Gene: LonelyBoi\_48 Start: 38880, Stop: 39170, Start Num: 9

Candidate Starts for LonelyBoi\_48:

(Start: 9 @38880 has 62 MA's), (12, 38916), (13, 39018), (14, 39057), (19, 39114), (20, 39126),

Gene: LordFarquaad\_47 Start: 33521, Stop: 33811, Start Num: 9

Candidate Starts for LordFarquaad\_47:

(Start: 9 @33521 has 62 MA's), (12, 33557), (13, 33659), (14, 33698), (19, 33755), (20, 33767),

Gene: Madavieve\_45 Start: 35724, Stop: 36011, Start Num: 9

Candidate Starts for Madavieve\_45:

(Start: 9 @35724 has 62 MA's), (12, 35760), (13, 35862), (14, 35901), (19, 35958), (20, 35970),

Gene: Manasvini\_51 Start: 36431, Stop: 36721, Start Num: 9

Candidate Starts for Manasvini\_51:

(Start: 9 @36431 has 62 MA's), (12, 36467), (13, 36569), (14, 36608), (19, 36665), (20, 36677),

Gene: Maridalia\_51 Start: 36553, Stop: 36843, Start Num: 9

Candidate Starts for Maridalia\_51:

(Start: 9 @36553 has 62 MA's), (12, 36589), (13, 36691), (14, 36730), (15, 36733), (19, 36787), (20, 36799),

Gene: Matteo\_42 Start: 31445, Stop: 31735, Start Num: 9

Candidate Starts for Matteo\_42:

(2, 31169), (6, 31217), (Start: 9 @31445 has 62 MA's), (11, 31469), (12, 31481), (13, 31583), (14, 31622), (19, 31679), (20, 31691),

Gene: Mocha12\_49 Start: 33894, Stop: 34184, Start Num: 9

Candidate Starts for Mocha12\_49:

(2, 33618), (5, 33645), (6, 33666), (Start: 9 @33894 has 62 MA's), (11, 33918), (12, 33930), (13, 34032), (14, 34071), (19, 34128), (20, 34140),

Gene: Morkie\_45 Start: 31549, Stop: 31836, Start Num: 9

Candidate Starts for Morkie\_45:

(7, 31450), (Start: 9 @31549 has 62 MA's), (12, 31585), (13, 31687), (17, 31759), (18, 31774), (20, 31792), (22, 31825),

Gene: Neobush\_50 Start: 36401, Stop: 36691, Start Num: 9

Candidate Starts for Neobush\_50:

(Start: 9 @36401 has 62 MA's), (12, 36437), (13, 36539), (14, 36578), (19, 36635), (20, 36647),

Gene: Nettuno\_45 Start: 32403, Stop: 32693, Start Num: 9

Candidate Starts for Nettuno\_45:

(2, 32127), (5, 32154), (6, 32175), (Start: 9 @32403 has 62 MA's), (11, 32427), (12, 32439), (13, 32541), (14, 32580), (19, 32637), (20, 32649),

Gene: Nymphadora\_51 Start: 38376, Stop: 38666, Start Num: 9

Candidate Starts for Nymphadora\_51:

(Start: 9 @38376 has 62 MA's), (12, 38412), (13, 38514), (20, 38622),

Gene: OneDirection\_40 Start: 29163, Stop: 29450, Start Num: 9

Candidate Starts for OneDirection\_40:

(7, 29064), (Start: 9 @29163 has 62 MA's), (12, 29199), (13, 29301), (17, 29373), (18, 29388), (20, 29406), (22, 29439),

Gene: Pepperoni\_40 Start: 30725, Stop: 31012, Start Num: 9

Candidate Starts for Pepperoni\_40:

(8, 30704), (Start: 9 @30725 has 62 MA's), (12, 30761), (13, 30863), (18, 30950), (20, 30968), (22, 31001),

Gene: PhorbPhlower\_45 Start: 30916, Stop: 31206, Start Num: 9

Candidate Starts for PhorbPhlower\_45:

(8, 30895), (Start: 9 @30916 has 62 MA's), (12, 30952), (13, 31054), (17, 31129), (18, 31144), (20, 31162), (22, 31195),

Gene: Pickett\_43 Start: 30704, Stop: 30994, Start Num: 9

Candidate Starts for Pickett\_43:

(Start: 9 @30704 has 62 MA's), (12, 30740), (13, 30842), (14, 30881), (19, 30938), (20, 30950),

Gene: Polly\_47 Start: 35850, Stop: 36140, Start Num: 9

Candidate Starts for Polly\_47:

(Start: 9 @35850 has 62 MA's), (12, 35886), (13, 35988), (14, 36027), (19, 36084), (20, 36096),

Gene: Posh\_54 Start: 39125, Stop: 39415, Start Num: 9

Candidate Starts for Posh\_54:

(Start: 9 @39125 has 62 MA's), (12, 39161), (14, 39302), (19, 39359), (20, 39371),

Gene: Pytheas\_51 Start: 39367, Stop: 39657, Start Num: 9

Candidate Starts for Pytheas\_51:

(Start: 9 @39367 has 62 MA's), (10, 39373), (12, 39403), (13, 39505), (14, 39544), (20, 39613),

Gene: Sahara\_48 Start: 33641, Stop: 33931, Start Num: 9

Candidate Starts for Sahara\_48:

(2, 33365), (6, 33413), (Start: 9 @33641 has 62 MA's), (11, 33665), (12, 33677), (13, 33779), (14, 33818), (19, 33875), (20, 33887),

Gene: Savage\_49 Start: 33894, Stop: 34184, Start Num: 9

Candidate Starts for Savage\_49:

(2, 33618), (5, 33645), (6, 33666), (Start: 9 @33894 has 62 MA's), (11, 33918), (12, 33930), (13, 34032), (14, 34071), (19, 34128), (20, 34140),

Gene: SoilAssassin\_45 Start: 33539, Stop: 33829, Start Num: 9

Candidate Starts for SoilAssassin\_45:

(Start: 9 @33539 has 62 MA's), (12, 33575), (13, 33677), (14, 33716), (19, 33773), (20, 33785),

Gene: Sproutie\_49 Start: 33894, Stop: 34184, Start Num: 9

Candidate Starts for Sproutie\_49:

(2, 33618), (5, 33645), (6, 33666), (Start: 9 @33894 has 62 MA's), (11, 33918), (12, 33930), (13, 34032), (14, 34071), (19, 34128), (20, 34140),

Gene: Susceptit\_50 Start: 36408, Stop: 36698, Start Num: 9

Candidate Starts for Susceptit\_50:

(Start: 9 @36408 has 62 MA's), (12, 36444), (13, 36546), (14, 36585), (19, 36642), (20, 36654),

Gene: SushiChef\_47 Start: 37321, Stop: 37611, Start Num: 9

Candidate Starts for SushiChef\_47:

(Start: 9 @37321 has 62 MA's), (12, 37357), (13, 37459), (14, 37498), (19, 37555), (20, 37567),

Gene: Tayonia\_50 Start: 36407, Stop: 36697, Start Num: 9

Candidate Starts for Tayonia\_50:

(Start: 9 @36407 has 62 MA's), (12, 36443), (13, 36545), (14, 36584), (19, 36641), (20, 36653),

Gene: ThankyouJordi\_49 Start: 38252, Stop: 38542, Start Num: 9

Candidate Starts for ThankyouJordi\_49:

(Start: 9 @38252 has 62 MA's), (12, 38288), (13, 38390), (14, 38429), (20, 38498),

Gene: TimTam\_51 Start: 38376, Stop: 38666, Start Num: 9

Candidate Starts for TimTam\_51:

(Start: 9 @38376 has 62 MA's), (12, 38412), (13, 38514), (20, 38622),

Gene: Trumpet\_50 Start: 36408, Stop: 36698, Start Num: 9

Candidate Starts for Trumpet\_50:

(Start: 9 @36408 has 62 MA's), (12, 36444), (13, 36546), (14, 36585), (19, 36642), (20, 36654),

Gene: TuertoX\_49 Start: 33894, Stop: 34184, Start Num: 9

Candidate Starts for TuertoX\_49:

(2, 33618), (5, 33645), (6, 33666), (Start: 9 @33894 has 62 MA's), (11, 33918), (12, 33930), (13, 34032), (14, 34071), (19, 34128), (20, 34140),

Gene: WelcomeAyanna\_49 Start: 38399, Stop: 38689, Start Num: 9

Candidate Starts for WelcomeAyanna\_49:

(Start: 9 @38399 has 62 MA's), (12, 38435), (13, 38537), (14, 38576), (20, 38645),

Gene: Whiteclaw\_49 Start: 33894, Stop: 34184, Start Num: 9

Candidate Starts for Whiteclaw\_49:

(2, 33618), (5, 33645), (6, 33666), (Start: 9 @33894 has 62 MA's), (11, 33918), (12, 33930), (13, 34032), (14, 34071), (19, 34128), (20, 34140),

Gene: Wrigley\_55 Start: 38285, Stop: 38572, Start Num: 9

Candidate Starts for Wrigley\_55:

(Start: 9 @38285 has 62 MA's), (12, 38321), (13, 38423), (14, 38462), (19, 38519), (20, 38531),

Gene: Yeet412\_45 Start: 33540, Stop: 33830, Start Num: 9

Candidate Starts for Yeet412\_45:

(Start: 9 @33540 has 62 MA's), (12, 33576), (13, 33678), (14, 33717), (19, 33774), (20, 33786),

Gene: Yinzer\_49 Start: 33894, Stop: 34184, Start Num: 9

Candidate Starts for Yinzer\_49:

(2, 33618), (5, 33645), (6, 33666), (Start: 9 @33894 has 62 MA's), (11, 33918), (12, 33930), (13, 34032), (14, 34071), (19, 34128), (20, 34140),

Gene: Zameen\_50 Start: 36407, Stop: 36697, Start Num: 9

Candidate Starts for Zameen\_50:

(Start: 9 @36407 has 62 MA's), (12, 36443), (13, 36545), (14, 36584), (19, 36641), (20, 36653),

Gene: Zirinka\_47 Start: 37027, Stop: 37317, Start Num: 9

Candidate Starts for Zirinka\_47:

(Start: 9 @37027 has 62 MA's), (12, 37063), (13, 37165), (14, 37204), (19, 37261), (20, 37273),