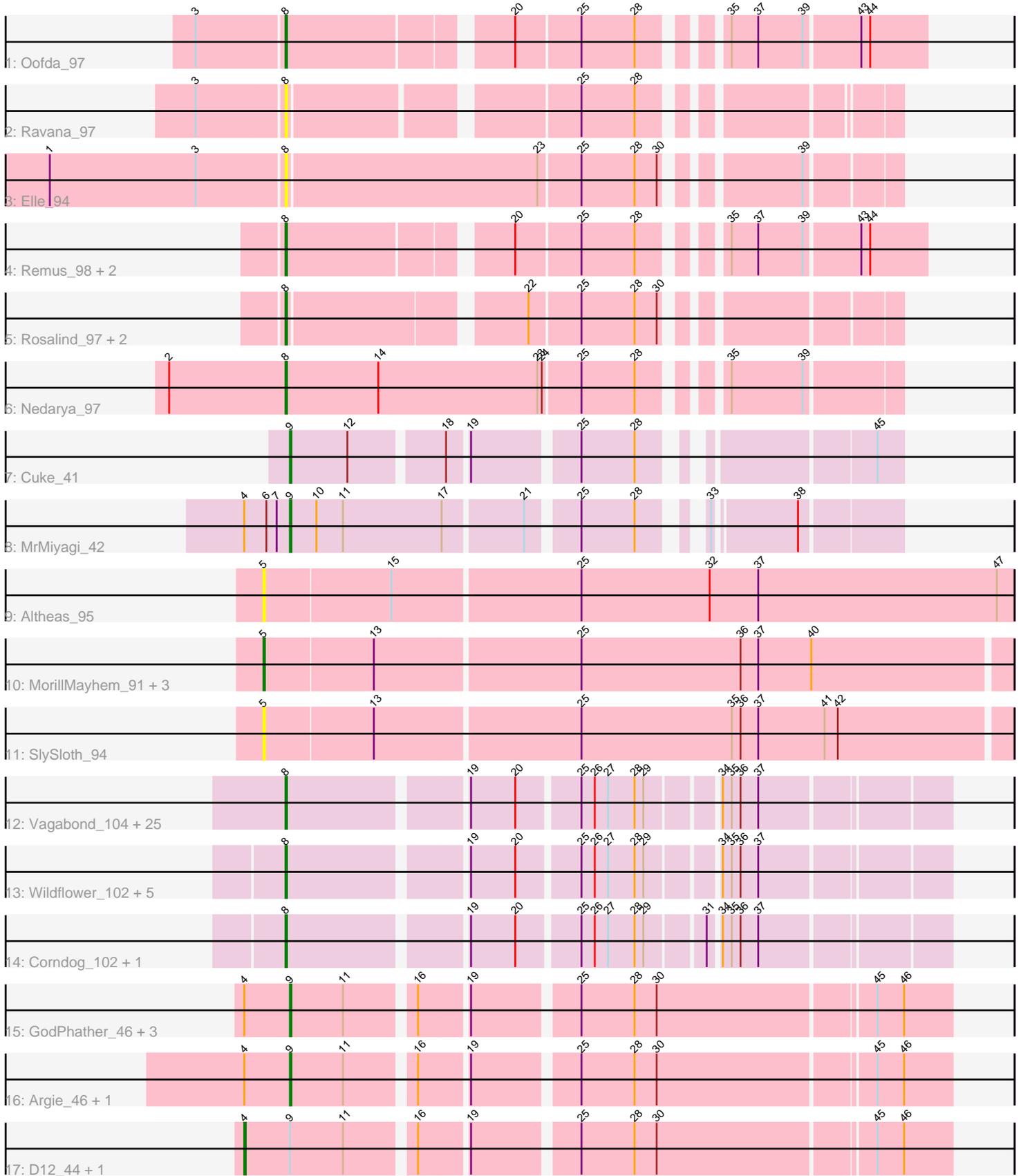


# Pham 283822



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 283822 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283822 has 60 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Oofda\_97
- Track 2 : Ravana\_97
- Track 3 : Elle\_94
- Track 4 : Remus\_98, Strosahl\_98, Waits\_96
- Track 5 : Rosalind\_97, Soups\_98, KatherineG\_97
- Track 6 : Nedarya\_97
- Track 7 : Cuke\_41
- Track 8 : MrMiyagi\_42
- Track 9 : Altheas\_95
- Track 10 : MorillMayhem\_91, BaconCheese\_95, Mila11\_93, Squash\_94
- Track 11 : SlySloth\_94
- Track 12 : Vagabond\_104, Murai\_105, JangDynasty\_101, KingPhillip3\_103, TelAviv\_102, Wogge42\_102, Ryadel\_109, KriLi\_107, Zebo\_104, Vorrps\_105, Alkhayr\_105, Winget\_105, Schuy\_105, Catdawg\_106, FoulBall\_104, Blessica\_103, Imara\_101, YoyoKar\_102, SchoolBus\_104, Familton\_106, Shida\_107, Mori\_105, Idergollasper\_107, NiebruSaylor\_105, Bora\_104, MadKillah\_108
- Track 13 : Wildflower\_102, YungJamal\_104, Firecracker\_105, Zakhe101\_100, Smooch\_104, Dylan\_100
- Track 14 : Corndog\_102, Ashwin\_102
- Track 15 : GodPhather\_46, Taptic\_45, Jeon\_45, Megabear\_45
- Track 16 : Argie\_46, Cepens\_45
- Track 17 : D12\_44, PR\_45

### ***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 38 of the 49 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alkhayr\_105, Ashwin\_102, Blessica\_103, Bora\_104, Catdawg\_106, Corndog\_102, Dylan\_100, Elle\_94, Familton\_106, Firecracker\_105, FoulBall\_104, Idergollasper\_107, Imara\_101, JangDynasty\_101, KatherineG\_97, KingPhillip3\_103, KriLi\_107, MadKillah\_108, Mori\_105, Murai\_105, Nedarya\_97, NiebruSaylor\_105, Oofda\_97, Ravana\_97, Remus\_98, Rosalind\_97, Ryadel\_109, SchoolBus\_104,

Schuy\_105, Shida\_107, Smooch\_104, Soups\_98, Strosahl\_98, TelAviv\_102, Vagabond\_104, Vorrps\_105, Waits\_96, Wildflower\_102, Winget\_105, Wogge42\_102, YoyoKar\_102, YungJamal\_104, Zakhe101\_100, Zebo\_104,

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

- 

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

• Altheas\_95, Argie\_46, BaconCheese\_95, Cepens\_45, Cuke\_41, D12\_44, GodPhather\_46, Jeon\_45, Megabear\_45, Mila11\_93, MorillMayhem\_91, MrMiyagi\_42, PR\_45, SlySloth\_94, Squash\_94, Taptic\_45,

### Summary by start number:

Start 4:

- Found in 9 of 60 ( 15.0% ) of genes in pham
- Manual Annotations of this start: 2 of 49
- Called 22.2% of time when present
- Phage (with cluster) where this start called: D12\_44 (W), PR\_45 (W),

Start 5:

- Found in 6 of 60 ( 10.0% ) of genes in pham
- Manual Annotations of this start: 1 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altheas\_95 (EG), BaconCheese\_95 (EG), Mila11\_93 (EG), MorillMayhem\_91 (EG), SlySloth\_94 (EG), Squash\_94 (EG),

Start 8:

- Found in 44 of 60 ( 73.3% ) of genes in pham
- Manual Annotations of this start: 38 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alkhayr\_105 (O), Ashwin\_102 (O), Blessica\_103 (O), Bora\_104 (O), Catdawg\_106 (O), Corndog\_102 (O), Dylan\_100 (O), Elle\_94 (A15), Familton\_106 (O), Firecracker\_105 (O), FoulBall\_104 (O), Idergollasper\_107 (O), Imara\_101 (O), JangDynasty\_101 (O), KatherineG\_97 (A15), KingPhillip3\_103 (O), Krili\_107 (O), MadKillah\_108 (O), Mori\_105 (O), Murai\_105 (O), Nedarya\_97 (A15), NiebruSaylor\_105 (O), Oofda\_97 (A15), Ravana\_97 (A15), Remus\_98 (A15), Rosalind\_97 (A15), Ryadel\_109 (O), SchoolBus\_104 (O), Schuy\_105 (O), Shida\_107 (O), Smooch\_104 (O), Soups\_98 (A15), Strosahl\_98 (A15), TelAviv\_102 (O), Vagabond\_104 (O), Vorrps\_105 (O), Waits\_96 (A15), Wildflower\_102 (O), Winget\_105 (O), Wogge42\_102 (O), YoyoKar\_102 (O), YungJamal\_104 (O), Zakhe101\_100 (O), Zebo\_104 (O),

Start 9:

- Found in 10 of 60 ( 16.7% ) of genes in pham
- Manual Annotations of this start: 8 of 49
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Argie\_46 (W), Cepens\_45 (W), Cuke\_41 (AC), GodPhather\_46 (W), Jeon\_45 (W), Megabear\_45 (W), MrMiyagi\_42 (AC), Taptic\_45 (W),

### Summary by clusters:

There are 5 clusters represented in this pham: A15, EG, AC, W, O,

Info for manual annotations of cluster A15:

- Start number 8 was manually annotated 8 times for cluster A15.

Info for manual annotations of cluster AC:

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

Info for manual annotations of cluster EG:

- Start number 5 was manually annotated 1 time for cluster EG.

Info for manual annotations of cluster O:

- Start number 8 was manually annotated 30 times for cluster O.

Info for manual annotations of cluster W:

- Start number 4 was manually annotated 2 times for cluster W.

- Start number 9 was manually annotated 6 times for cluster W.

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

Gene: Alkhayr\_105 Start: 63347, Stop: 62940, Start Num: 8

Candidate Starts for Alkhayr\_105:

(Start: 8 @63347 has 38 MA's), (19, 63236), (20, 63206), (25, 63167), (26, 63158), (27, 63149), (28, 63131), (29, 63125), (34, 63083), (35, 63077), (36, 63071), (37, 63059),

Gene: Altheas\_95 Start: 58059, Stop: 57559, Start Num: 5

Candidate Starts for Altheas\_95:

(Start: 5 @58059 has 1 MA's), (15, 57975), (25, 57852), (32, 57765), (37, 57732), (47, 57570),

Gene: Argie\_46 Start: 40890, Stop: 41306, Start Num: 9

Candidate Starts for Argie\_46:

(Start: 4 @40860 has 2 MA's), (Start: 9 @40890 has 8 MA's), (11, 40926), (16, 40968), (19, 40998), (25, 41064), (28, 41100), (30, 41115), (45, 41256), (46, 41274),

Gene: Ashwin\_102 Start: 62583, Stop: 62176, Start Num: 8

Candidate Starts for Ashwin\_102:

(Start: 8 @62583 has 38 MA's), (19, 62472), (20, 62442), (25, 62403), (26, 62394), (27, 62385), (28, 62367), (29, 62361), (31, 62325), (34, 62319), (35, 62313), (36, 62307), (37, 62295),

Gene: BaconCheese\_95 Start: 58459, Stop: 57965, Start Num: 5

Candidate Starts for BaconCheese\_95:

(Start: 5 @58459 has 1 MA's), (13, 58387), (25, 58252), (36, 58144), (37, 58132), (40, 58096),

Gene: Blessica\_103 Start: 63555, Stop: 63148, Start Num: 8

Candidate Starts for Blessica\_103:

(Start: 8 @63555 has 38 MA's), (19, 63444), (20, 63414), (25, 63375), (26, 63366), (27, 63357), (28, 63339), (29, 63333), (34, 63291), (35, 63285), (36, 63279), (37, 63267),

Gene: Bora\_104 Start: 64397, Stop: 63990, Start Num: 8

Candidate Starts for Bora\_104:

(Start: 8 @64397 has 38 MA's), (19, 64286), (20, 64256), (25, 64217), (26, 64208), (27, 64199), (28, 64181), (29, 64175), (34, 64133), (35, 64127), (36, 64121), (37, 64109),

Gene: Catdawg\_106 Start: 64667, Stop: 64260, Start Num: 8

Candidate Starts for Catdawg\_106:

(Start: 8 @64667 has 38 MA's), (19, 64556), (20, 64526), (25, 64487), (26, 64478), (27, 64469), (28, 64451), (29, 64445), (34, 64403), (35, 64397), (36, 64391), (37, 64379),

Gene: Cepens\_45 Start: 40605, Stop: 41021, Start Num: 9

Candidate Starts for Cepens\_45:

(Start: 4 @40575 has 2 MA's), (Start: 9 @40605 has 8 MA's), (11, 40641), (16, 40683), (19, 40713), (25, 40779), (28, 40815), (30, 40830), (45, 40971), (46, 40989),

Gene: Corndog\_102 Start: 62493, Stop: 62086, Start Num: 8

Candidate Starts for Corndog\_102:

(Start: 8 @62493 has 38 MA's), (19, 62382), (20, 62352), (25, 62313), (26, 62304), (27, 62295), (28, 62277), (29, 62271), (31, 62235), (34, 62229), (35, 62223), (36, 62217), (37, 62205),

Gene: Cuke\_41 Start: 31681, Stop: 32037, Start Num: 9

Candidate Starts for Cuke\_41:

(Start: 9 @31681 has 8 MA's), (12, 31720), (18, 31777), (19, 31789), (25, 31855), (28, 31891), (45, 32020),

Gene: D12\_44 Start: 41123, Stop: 41569, Start Num: 4

Candidate Starts for D12\_44:

(Start: 4 @41123 has 2 MA's), (Start: 9 @41153 has 8 MA's), (11, 41189), (16, 41231), (19, 41261), (25, 41327), (28, 41363), (30, 41378), (45, 41519), (46, 41537),

Gene: Dylan\_100 Start: 62316, Stop: 61909, Start Num: 8

Candidate Starts for Dylan\_100:

(Start: 8 @62316 has 38 MA's), (19, 62205), (20, 62175), (25, 62136), (26, 62127), (27, 62118), (28, 62100), (29, 62094), (34, 62052), (35, 62046), (36, 62040), (37, 62028),

Gene: Elle\_94 Start: 49770, Stop: 49390, Start Num: 8

Candidate Starts for Elle\_94:

(1, 49926), (3, 49827), (Start: 8 @49770 has 38 MA's), (23, 49602), (25, 49575), (28, 49539), (30, 49524), (39, 49449),

Gene: Familton\_106 Start: 64079, Stop: 63672, Start Num: 8

Candidate Starts for Familton\_106:

(Start: 8 @64079 has 38 MA's), (19, 63968), (20, 63938), (25, 63899), (26, 63890), (27, 63881), (28, 63863), (29, 63857), (34, 63815), (35, 63809), (36, 63803), (37, 63791),

Gene: Firecracker\_105 Start: 63952, Stop: 63545, Start Num: 8

Candidate Starts for Firecracker\_105:

(Start: 8 @63952 has 38 MA's), (19, 63841), (20, 63811), (25, 63772), (26, 63763), (27, 63754), (28, 63736), (29, 63730), (34, 63688), (35, 63682), (36, 63676), (37, 63664),

Gene: FoulBall\_104 Start: 63630, Stop: 63223, Start Num: 8

Candidate Starts for FoulBall\_104:

(Start: 8 @63630 has 38 MA's), (19, 63519), (20, 63489), (25, 63450), (26, 63441), (27, 63432), (28, 63414), (29, 63408), (34, 63366), (35, 63360), (36, 63354), (37, 63342),

Gene: GodPhather\_46 Start: 41369, Stop: 41785, Start Num: 9

Candidate Starts for GodPhather\_46:

(Start: 4 @41339 has 2 MA's), (Start: 9 @41369 has 8 MA's), (11, 41405), (16, 41447), (19, 41477), (25, 41543), (28, 41579), (30, 41594), (45, 41735), (46, 41753),

Gene: Idergollasper\_107 Start: 64630, Stop: 64223, Start Num: 8

Candidate Starts for Idergollasper\_107:

(Start: 8 @64630 has 38 MA's), (19, 64519), (20, 64489), (25, 64450), (26, 64441), (27, 64432), (28, 64414), (29, 64408), (34, 64366), (35, 64360), (36, 64354), (37, 64342),

Gene: Imara\_101 Start: 63433, Stop: 63026, Start Num: 8

Candidate Starts for Imara\_101:

(Start: 8 @63433 has 38 MA's), (19, 63322), (20, 63292), (25, 63253), (26, 63244), (27, 63235), (28, 63217), (29, 63211), (34, 63169), (35, 63163), (36, 63157), (37, 63145),

Gene: JangDynasty\_101 Start: 62980, Stop: 62573, Start Num: 8

Candidate Starts for JangDynasty\_101:

(Start: 8 @62980 has 38 MA's), (19, 62869), (20, 62839), (25, 62800), (26, 62791), (27, 62782), (28, 62764), (29, 62758), (34, 62716), (35, 62710), (36, 62704), (37, 62692),

Gene: Jeon\_45 Start: 41111, Stop: 41527, Start Num: 9

Candidate Starts for Jeon\_45:

(Start: 4 @41081 has 2 MA's), (Start: 9 @41111 has 8 MA's), (11, 41147), (16, 41189), (19, 41219), (25, 41285), (28, 41321), (30, 41336), (45, 41477), (46, 41495),

Gene: KatherineG\_97 Start: 50274, Stop: 49909, Start Num: 8

Candidate Starts for KatherineG\_97:

(Start: 8 @50274 has 38 MA's), (22, 50127), (25, 50094), (28, 50058), (30, 50043),

Gene: KingPhillip3\_103 Start: 64337, Stop: 63930, Start Num: 8

Candidate Starts for KingPhillip3\_103:

(Start: 8 @64337 has 38 MA's), (19, 64226), (20, 64196), (25, 64157), (26, 64148), (27, 64139), (28, 64121), (29, 64115), (34, 64073), (35, 64067), (36, 64061), (37, 64049),

Gene: Krili\_107 Start: 64179, Stop: 63772, Start Num: 8

Candidate Starts for Krili\_107:

(Start: 8 @64179 has 38 MA's), (19, 64068), (20, 64038), (25, 63999), (26, 63990), (27, 63981), (28, 63963), (29, 63957), (34, 63915), (35, 63909), (36, 63903), (37, 63891),

Gene: MadKillah\_108 Start: 63702, Stop: 63295, Start Num: 8

Candidate Starts for MadKillah\_108:

(Start: 8 @63702 has 38 MA's), (19, 63591), (20, 63561), (25, 63522), (26, 63513), (27, 63504), (28, 63486), (29, 63480), (34, 63438), (35, 63432), (36, 63426), (37, 63414),

Gene: Megabear\_45 Start: 40526, Stop: 40942, Start Num: 9

Candidate Starts for Megabear\_45:

(Start: 4 @40496 has 2 MA's), (Start: 9 @40526 has 8 MA's), (11, 40562), (16, 40604), (19, 40634), (25, 40700), (28, 40736), (30, 40751), (45, 40892), (46, 40910),

Gene: Mila11\_93 Start: 58510, Stop: 58016, Start Num: 5

Candidate Starts for Mila11\_93:

(Start: 5 @58510 has 1 MA's), (13, 58438), (25, 58303), (36, 58195), (37, 58183), (40, 58147),

Gene: Mori\_105 Start: 64205, Stop: 63798, Start Num: 8  
Candidate Starts for Mori\_105:  
(Start: 8 @64205 has 38 MA's), (19, 64094), (20, 64064), (25, 64025), (26, 64016), (27, 64007), (28, 63989), (29, 63983), (34, 63941), (35, 63935), (36, 63929), (37, 63917),

Gene: MorillMayhem\_91 Start: 57349, Stop: 56855, Start Num: 5  
Candidate Starts for MorillMayhem\_91:  
(Start: 5 @57349 has 1 MA's), (13, 57277), (25, 57142), (36, 57034), (37, 57022), (40, 56986),

Gene: MrMiyagi\_42 Start: 34996, Stop: 35358, Start Num: 9  
Candidate Starts for MrMiyagi\_42:  
(Start: 4 @34969 has 2 MA's), (6, 34984), (7, 34990), (Start: 9 @34996 has 8 MA's), (10, 35014), (11, 35032), (17, 35098), (21, 35149), (25, 35179), (28, 35215), (33, 35242), (38, 35293),

Gene: Murai\_105 Start: 64053, Stop: 63646, Start Num: 8  
Candidate Starts for Murai\_105:  
(Start: 8 @64053 has 38 MA's), (19, 63942), (20, 63912), (25, 63873), (26, 63864), (27, 63855), (28, 63837), (29, 63831), (34, 63789), (35, 63783), (36, 63777), (37, 63765),

Gene: Nedarya\_97 Start: 50930, Stop: 50544, Start Num: 8  
Candidate Starts for Nedarya\_97:  
(2, 51008), (Start: 8 @50930 has 38 MA's), (14, 50867), (23, 50759), (24, 50756), (25, 50732), (28, 50696), (35, 50654), (39, 50606),

Gene: NiebruSaylor\_105 Start: 63320, Stop: 62913, Start Num: 8  
Candidate Starts for NiebruSaylor\_105:  
(Start: 8 @63320 has 38 MA's), (19, 63209), (20, 63179), (25, 63140), (26, 63131), (27, 63122), (28, 63104), (29, 63098), (34, 63056), (35, 63050), (36, 63044), (37, 63032),

Gene: Oofda\_97 Start: 50564, Stop: 50178, Start Num: 8  
Candidate Starts for Oofda\_97:  
(3, 50621), (Start: 8 @50564 has 38 MA's), (20, 50426), (25, 50384), (28, 50348), (35, 50306), (37, 50288), (39, 50258), (43, 50222), (44, 50216),

Gene: PR\_45 Start: 41100, Stop: 41546, Start Num: 4  
Candidate Starts for PR\_45:  
(Start: 4 @41100 has 2 MA's), (Start: 9 @41130 has 8 MA's), (11, 41166), (16, 41208), (19, 41238), (25, 41304), (28, 41340), (30, 41355), (45, 41496), (46, 41514),

Gene: Ravana\_97 Start: 50673, Stop: 50314, Start Num: 8  
Candidate Starts for Ravana\_97:  
(3, 50730), (Start: 8 @50673 has 38 MA's), (25, 50496), (28, 50460),

Gene: Remus\_98 Start: 50599, Stop: 50213, Start Num: 8  
Candidate Starts for Remus\_98:  
(Start: 8 @50599 has 38 MA's), (20, 50461), (25, 50419), (28, 50383), (35, 50341), (37, 50323), (39, 50293), (43, 50257), (44, 50251),

Gene: Rosalind\_97 Start: 50038, Stop: 49673, Start Num: 8  
Candidate Starts for Rosalind\_97:  
(Start: 8 @50038 has 38 MA's), (22, 49891), (25, 49858), (28, 49822), (30, 49807),

Gene: Ryadel\_109 Start: 65038, Stop: 64631, Start Num: 8

Candidate Starts for Ryadel\_109:

(Start: 8 @65038 has 38 MA's), (19, 64927), (20, 64897), (25, 64858), (26, 64849), (27, 64840), (28, 64822), (29, 64816), (34, 64774), (35, 64768), (36, 64762), (37, 64750),

Gene: SchoolBus\_104 Start: 63796, Stop: 63389, Start Num: 8

Candidate Starts for SchoolBus\_104:

(Start: 8 @63796 has 38 MA's), (19, 63685), (20, 63655), (25, 63616), (26, 63607), (27, 63598), (28, 63580), (29, 63574), (34, 63532), (35, 63526), (36, 63520), (37, 63508),

Gene: Schuy\_105 Start: 63415, Stop: 63008, Start Num: 8

Candidate Starts for Schuy\_105:

(Start: 8 @63415 has 38 MA's), (19, 63304), (20, 63274), (25, 63235), (26, 63226), (27, 63217), (28, 63199), (29, 63193), (34, 63151), (35, 63145), (36, 63139), (37, 63127),

Gene: Shida\_107 Start: 64307, Stop: 63900, Start Num: 8

Candidate Starts for Shida\_107:

(Start: 8 @64307 has 38 MA's), (19, 64196), (20, 64166), (25, 64127), (26, 64118), (27, 64109), (28, 64091), (29, 64085), (34, 64043), (35, 64037), (36, 64031), (37, 64019),

Gene: SlySloth\_94 Start: 56902, Stop: 56408, Start Num: 5

Candidate Starts for SlySloth\_94:

(Start: 5 @56902 has 1 MA's), (13, 56830), (25, 56695), (35, 56593), (36, 56587), (37, 56575), (41, 56530), (42, 56521),

Gene: Smooch\_104 Start: 64188, Stop: 63781, Start Num: 8

Candidate Starts for Smooch\_104:

(Start: 8 @64188 has 38 MA's), (19, 64077), (20, 64047), (25, 64008), (26, 63999), (27, 63990), (28, 63972), (29, 63966), (34, 63924), (35, 63918), (36, 63912), (37, 63900),

Gene: Soups\_98 Start: 50515, Stop: 50150, Start Num: 8

Candidate Starts for Soups\_98:

(Start: 8 @50515 has 38 MA's), (22, 50368), (25, 50335), (28, 50299), (30, 50284),

Gene: Squash\_94 Start: 57493, Stop: 56999, Start Num: 5

Candidate Starts for Squash\_94:

(Start: 5 @57493 has 1 MA's), (13, 57421), (25, 57286), (36, 57178), (37, 57166), (40, 57130),

Gene: Strosahl\_98 Start: 50599, Stop: 50213, Start Num: 8

Candidate Starts for Strosahl\_98:

(Start: 8 @50599 has 38 MA's), (20, 50461), (25, 50419), (28, 50383), (35, 50341), (37, 50323), (39, 50293), (43, 50257), (44, 50251),

Gene: Taptic\_45 Start: 40526, Stop: 40942, Start Num: 9

Candidate Starts for Taptic\_45:

(Start: 4 @40496 has 2 MA's), (Start: 9 @40526 has 8 MA's), (11, 40562), (16, 40604), (19, 40634), (25, 40700), (28, 40736), (30, 40751), (45, 40892), (46, 40910),

Gene: TelAviv\_102 Start: 64032, Stop: 63625, Start Num: 8

Candidate Starts for TelAviv\_102:

(Start: 8 @64032 has 38 MA's), (19, 63921), (20, 63891), (25, 63852), (26, 63843), (27, 63834), (28, 63816), (29, 63810), (34, 63768), (35, 63762), (36, 63756), (37, 63744),

Gene: Vagabond\_104 Start: 63463, Stop: 63056, Start Num: 8

Candidate Starts for Vagabond\_104:

(Start: 8 @63463 has 38 MA's), (19, 63352), (20, 63322), (25, 63283), (26, 63274), (27, 63265), (28, 63247), (29, 63241), (34, 63199), (35, 63193), (36, 63187), (37, 63175),

Gene: Vorrps\_105 Start: 64206, Stop: 63799, Start Num: 8

Candidate Starts for Vorrps\_105:

(Start: 8 @64206 has 38 MA's), (19, 64095), (20, 64065), (25, 64026), (26, 64017), (27, 64008), (28, 63990), (29, 63984), (34, 63942), (35, 63936), (36, 63930), (37, 63918),

Gene: Waits\_96 Start: 50212, Stop: 49826, Start Num: 8

Candidate Starts for Waits\_96:

(Start: 8 @50212 has 38 MA's), (20, 50074), (25, 50032), (28, 49996), (35, 49954), (37, 49936), (39, 49906), (43, 49870), (44, 49864),

Gene: Wildflower\_102 Start: 62215, Stop: 61808, Start Num: 8

Candidate Starts for Wildflower\_102:

(Start: 8 @62215 has 38 MA's), (19, 62104), (20, 62074), (25, 62035), (26, 62026), (27, 62017), (28, 61999), (29, 61993), (34, 61951), (35, 61945), (36, 61939), (37, 61927),

Gene: Winget\_105 Start: 64100, Stop: 63693, Start Num: 8

Candidate Starts for Winget\_105:

(Start: 8 @64100 has 38 MA's), (19, 63989), (20, 63959), (25, 63920), (26, 63911), (27, 63902), (28, 63884), (29, 63878), (34, 63836), (35, 63830), (36, 63824), (37, 63812),

Gene: Wogge42\_102 Start: 63387, Stop: 62980, Start Num: 8

Candidate Starts for Wogge42\_102:

(Start: 8 @63387 has 38 MA's), (19, 63276), (20, 63246), (25, 63207), (26, 63198), (27, 63189), (28, 63171), (29, 63165), (34, 63123), (35, 63117), (36, 63111), (37, 63099),

Gene: YoyoKar\_102 Start: 63368, Stop: 62961, Start Num: 8

Candidate Starts for YoyoKar\_102:

(Start: 8 @63368 has 38 MA's), (19, 63257), (20, 63227), (25, 63188), (26, 63179), (27, 63170), (28, 63152), (29, 63146), (34, 63104), (35, 63098), (36, 63092), (37, 63080),

Gene: YungJamal\_104 Start: 63263, Stop: 62856, Start Num: 8

Candidate Starts for YungJamal\_104:

(Start: 8 @63263 has 38 MA's), (19, 63152), (20, 63122), (25, 63083), (26, 63074), (27, 63065), (28, 63047), (29, 63041), (34, 62999), (35, 62993), (36, 62987), (37, 62975),

Gene: Zakhe101\_100 Start: 62320, Stop: 61913, Start Num: 8

Candidate Starts for Zakhe101\_100:

(Start: 8 @62320 has 38 MA's), (19, 62209), (20, 62179), (25, 62140), (26, 62131), (27, 62122), (28, 62104), (29, 62098), (34, 62056), (35, 62050), (36, 62044), (37, 62032),

Gene: Zebo\_104 Start: 63796, Stop: 63389, Start Num: 8

Candidate Starts for Zebo\_104:

(Start: 8 @63796 has 38 MA's), (19, 63685), (20, 63655), (25, 63616), (26, 63607), (27, 63598), (28, 63580), (29, 63574), (34, 63532), (35, 63526), (36, 63520), (37, 63508),