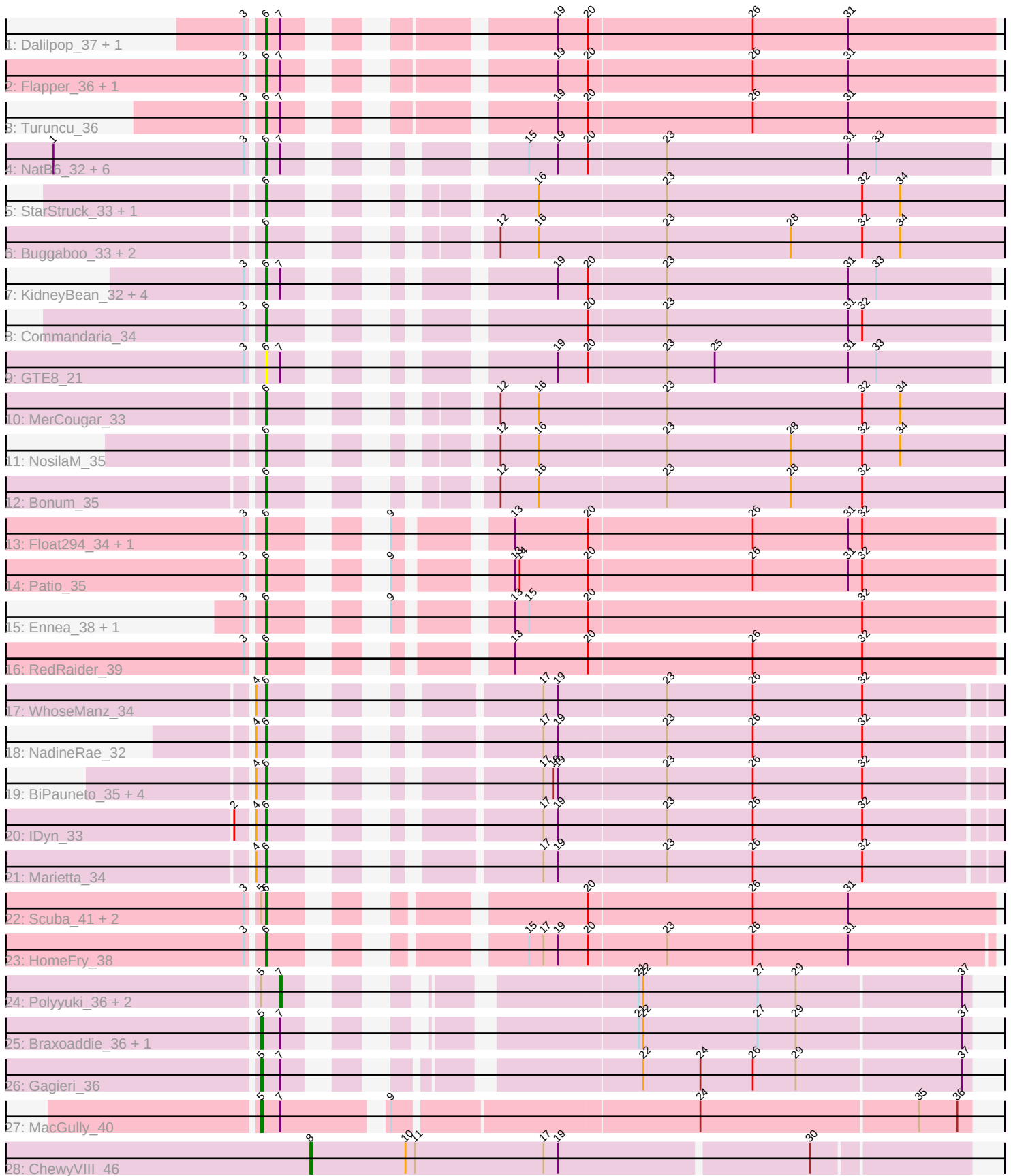


# Pham 327120



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 327120 Report

This analysis was run 09/05/26 on database version 662.

Pham number 327120 has 54 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Dalilpop\_37, GRU1\_22
- Track 2 : Flapper\_36, GTE5\_23
- Track 3 : Turuncu\_36
- Track 4 : NatB6\_32, Foxboro\_33, Kurt\_32, Jifall16\_31, Tracker\_32, Phomeo\_31, Emianna\_32
- Track 5 : StarStruck\_33, Outis\_33
- Track 6 : Buggaboo\_33, Kabluna\_35, SuperSulley\_33
- Track 7 : KidneyBean\_32, Wheezy\_32, NovumRegina\_32, Arti\_32, GrootJr\_34
- Track 8 : Commandaria\_34
- Track 9 : GTE8\_21
- Track 10 : MerCougar\_33
- Track 11 : NosilaM\_35
- Track 12 : Bonum\_35
- Track 13 : Float294\_34, Skysand\_34
- Track 14 : Patio\_35
- Track 15 : Ennea\_38, Lollipop1437\_37
- Track 16 : RedRaider\_39
- Track 17 : WhoseManz\_34
- Track 18 : NadineRae\_32
- Track 19 : BiPauneto\_35, Pemberton\_35, Sukkupi\_34, HubbaBubba\_30, Yndexa\_34
- Track 20 : IDyn\_33
- Track 21 : Marietta\_34
- Track 22 : Scuba\_41, Fury\_41, Pleakley\_41
- Track 23 : HomeFry\_38
- Track 24 : Polyyuki\_36, Maselop\_36, Apiary\_36
- Track 25 : Braxoaddie\_36, CoffeeBean\_36
- Track 26 : Gagieri\_36
- Track 27 : MacGully\_40
- Track 28 : ChewyVIII\_46

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

The start number called the most often in the published annotations is 6, it was called in 43 of the 51 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arti\_32, BiPauneto\_35, Bonum\_35, Buggaboo\_33, Commandaria\_34, Dalilpop\_37, Emianna\_32, Ennea\_38, Flapper\_36, Float294\_34, Foxboro\_33, Fury\_41, GRU1\_22, GTE5\_23, GTE8\_21, GrootJr\_34, HomeFry\_38, HubbaBubba\_30, IDyn\_33, Jifall16\_31, Kabluna\_35, KidneyBean\_32, Kurt\_32, Lollipop1437\_37, Marietta\_34, MerCougar\_33, NadineRae\_32, NatB6\_32, NosilaM\_35, NovumRegina\_32, Outis\_33, Patio\_35, Pemberton\_35, Phomeo\_31, Pleakley\_41, RedRaider\_39, Scuba\_41, Skysand\_34, StarStruck\_33, Sukkupi\_34, SuperSulley\_33, Tracker\_32, Turuncu\_36, Wheezy\_32, WhoseManz\_34, Yndexa\_34,

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

- 

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

- Apiary\_36, Braxoaddie\_36, ChewyVIII\_46, CoffeeBean\_36, Gagieri\_36, MacGully\_40, Maselop\_36, Polyyuki\_36,

### Summary by start number:

Start 5:

- Found in 10 of 54 ( 18.5% ) of genes in pham
- Manual Annotations of this start: 4 of 51
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Braxoaddie\_36 (CR6), CoffeeBean\_36 (CR6), Gagieri\_36 (CR6), MacGully\_40 (CR7),

Start 6:

- Found in 46 of 54 ( 85.2% ) of genes in pham
- Manual Annotations of this start: 43 of 51
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arti\_32 (CR2), BiPauneto\_35 (CR4), Bonum\_35 (CR2), Buggaboo\_33 (CR2), Commandaria\_34 (CR2), Dalilpop\_37 (CR1), Emianna\_32 (CR2), Ennea\_38 (CR3), Flapper\_36 (CR1), Float294\_34 (CR3), Foxboro\_33 (CR2), Fury\_41 (CR5), GRU1\_22 (CR1), GTE5\_23 (CR1), GTE8\_21 (CR2), GrootJr\_34 (CR2), HomeFry\_38 (CR5), HubbaBubba\_30 (CR4), IDyn\_33 (CR4), Jifall16\_31 (CR2), Kabluna\_35 (CR2), KidneyBean\_32 (CR2), Kurt\_32 (CR2), Lollipop1437\_37 (CR3), Marietta\_34 (CR4), MerCougar\_33 (CR2), NadineRae\_32 (CR4), NatB6\_32 (CR2), NosilaM\_35 (CR2), NovumRegina\_32 (CR2), Outis\_33 (CR2), Patio\_35 (CR3), Pemberton\_35 (CR4), Phomeo\_31 (CR2), Pleakley\_41 (CR5), RedRaider\_39 (CR3), Scuba\_41 (CR5), Skysand\_34 (CR3), StarStruck\_33 (CR2), Sukkupi\_34 (CR4), SuperSulley\_33 (CR2), Tracker\_32 (CR2), Turuncu\_36 (CR1), Wheezy\_32 (CR2), WhoseManz\_34 (CR4), Yndexa\_34 (CR4),

Start 7:

- Found in 25 of 54 ( 46.3% ) of genes in pham
- Manual Annotations of this start: 3 of 51
- Called 12.0% of time when present
- Phage (with cluster) where this start called: Apiary\_36 (CR6), Maselop\_36 (CR6), Polyyuki\_36 (CR6),

Start 8:

- Found in 1 of 54 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ChewyVIII\_46 (singleton),

### **Summary by clusters:**

There are 8 clusters represented in this pham: CR2, CR3, singleton, CR1, CR6, CR7, CR4, CR5,

Info for manual annotations of cluster CR1:

- Start number 6 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 6 was manually annotated 21 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 6 was manually annotated 6 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 6 was manually annotated 9 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 6 was manually annotated 4 times for cluster CR5.

Info for manual annotations of cluster CR6:

- Start number 5 was manually annotated 3 times for cluster CR6.
- Start number 7 was manually annotated 3 times for cluster CR6.

Info for manual annotations of cluster CR7:

- Start number 5 was manually annotated 1 time for cluster CR7.

### **Gene Information:**

Gene: Apiary\_36 Start: 21985, Stop: 22347, Start Num: 7

Candidate Starts for Apiary\_36:

(Start: 5 @21973 has 4 MA's), (Start: 7 @21985 has 3 MA's), (21, 22141), (22, 22144), (27, 22216), (29, 22240), (37, 22342),

Gene: Arti\_32 Start: 20091, Stop: 20483, Start Num: 6

Candidate Starts for Arti\_32:

(3, 20082), (Start: 6 @20091 has 43 MA's), (Start: 7 @20100 has 3 MA's), (19, 20214), (20, 20232), (23, 20280), (31, 20394), (33, 20412),

Gene: BiPauneto\_35 Start: 19943, Stop: 20344, Start Num: 6

Candidate Starts for BiPauneto\_35:

(4, 19937), (Start: 6 @19943 has 43 MA's), (17, 20063), (18, 20069), (19, 20072), (23, 20138), (26, 20192), (32, 20261),

Gene: Bonum\_35 Start: 20419, Stop: 20820, Start Num: 6

Candidate Starts for Bonum\_35:

(Start: 6 @20419 has 43 MA's), (12, 20506), (16, 20530), (23, 20608), (28, 20686), (32, 20731),

Gene: Braxoaddie\_36 Start: 21962, Stop: 22336, Start Num: 5

Candidate Starts for Braxoaddie\_36:

(Start: 5 @21962 has 4 MA's), (Start: 7 @21974 has 3 MA's), (21, 22130), (22, 22133), (27, 22205), (29, 22229), (37, 22331),

Gene: Buggaboo\_33 Start: 20904, Stop: 21305, Start Num: 6

Candidate Starts for Buggaboo\_33:

(Start: 6 @20904 has 43 MA's), (12, 20991), (16, 21015), (23, 21093), (28, 21171), (32, 21216), (34, 21240),

Gene: ChewyVIII\_46 Start: 27590, Stop: 27994, Start Num: 8

Candidate Starts for ChewyVIII\_46:

(Start: 8 @27590 has 1 MA's), (10, 27650), (11, 27656), (17, 27737), (19, 27746), (30, 27899),

Gene: CoffeeBean\_36 Start: 21917, Stop: 22291, Start Num: 5

Candidate Starts for CoffeeBean\_36:

(Start: 5 @21917 has 4 MA's), (Start: 7 @21929 has 3 MA's), (21, 22085), (22, 22088), (27, 22160), (29, 22184), (37, 22286),

Gene: Commandaria\_34 Start: 21412, Stop: 21804, Start Num: 6

Candidate Starts for Commandaria\_34:

(3, 21403), (Start: 6 @21412 has 43 MA's), (20, 21553), (23, 21601), (31, 21715), (32, 21724),

Gene: Dalilpop\_37 Start: 22406, Stop: 22810, Start Num: 6

Candidate Starts for Dalilpop\_37:

(3, 22397), (Start: 6 @22406 has 43 MA's), (Start: 7 @22415 has 3 MA's), (19, 22538), (20, 22556), (26, 22658), (31, 22718),

Gene: Emianna\_32 Start: 21128, Stop: 21520, Start Num: 6

Candidate Starts for Emianna\_32:

(1, 20999), (3, 21119), (Start: 6 @21128 has 43 MA's), (Start: 7 @21137 has 3 MA's), (15, 21233), (19, 21251), (20, 21269), (23, 21317), (31, 21431), (33, 21449),

Gene: Ennea\_38 Start: 21739, Stop: 22137, Start Num: 6

Candidate Starts for Ennea\_38:

(3, 21730), (Start: 6 @21739 has 43 MA's), (9, 21781), (13, 21838), (15, 21847), (20, 21883), (32, 22054),

Gene: Flapper\_36 Start: 21488, Stop: 21892, Start Num: 6

Candidate Starts for Flapper\_36:

(3, 21479), (Start: 6 @21488 has 43 MA's), (Start: 7 @21497 has 3 MA's), (19, 21620), (20, 21638), (26, 21740), (31, 21800),

Gene: Float294\_34 Start: 21178, Stop: 21576, Start Num: 6

Candidate Starts for Float294\_34:

(3, 21169), (Start: 6 @21178 has 43 MA's), (9, 21220), (13, 21277), (20, 21322), (26, 21424), (31, 21484), (32, 21493),

Gene: Foxboro\_33 Start: 21634, Stop: 22026, Start Num: 6

Candidate Starts for Foxboro\_33:

(1, 21505), (3, 21625), (Start: 6 @21634 has 43 MA's), (Start: 7 @21643 has 3 MA's), (15, 21739), (19, 21757), (20, 21775), (23, 21823), (31, 21937), (33, 21955),

Gene: Fury\_41 Start: 20785, Stop: 21186, Start Num: 6

Candidate Starts for Fury\_41:

(3, 20776), (Start: 5 @20782 has 4 MA's), (Start: 6 @20785 has 43 MA's), (20, 20932), (26, 21034), (31, 21094),

Gene: GRU1\_22 Start: 13373, Stop: 13777, Start Num: 6

Candidate Starts for GRU1\_22:

(3, 13364), (Start: 6 @13373 has 43 MA's), (Start: 7 @13382 has 3 MA's), (19, 13505), (20, 13523), (26, 13625), (31, 13685),

Gene: GTE5\_23 Start: 14376, Stop: 14780, Start Num: 6

Candidate Starts for GTE5\_23:

(3, 14367), (Start: 6 @14376 has 43 MA's), (Start: 7 @14385 has 3 MA's), (19, 14508), (20, 14526), (26, 14628), (31, 14688),

Gene: GTE8\_21 Start: 14387, Stop: 14779, Start Num: 6

Candidate Starts for GTE8\_21:

(3, 14378), (Start: 6 @14387 has 43 MA's), (Start: 7 @14396 has 3 MA's), (19, 14510), (20, 14528), (23, 14576), (25, 14606), (31, 14690), (33, 14708),

Gene: Gagieri\_36 Start: 21792, Stop: 22172, Start Num: 5

Candidate Starts for Gagieri\_36:

(Start: 5 @21792 has 4 MA's), (Start: 7 @21804 has 3 MA's), (22, 21969), (24, 22005), (26, 22038), (29, 22065), (37, 22167),

Gene: GrootJr\_34 Start: 20486, Stop: 20878, Start Num: 6

Candidate Starts for GrootJr\_34:

(3, 20477), (Start: 6 @20486 has 43 MA's), (Start: 7 @20495 has 3 MA's), (19, 20609), (20, 20627), (23, 20675), (31, 20789), (33, 20807),

Gene: HomeFry\_38 Start: 19442, Stop: 19840, Start Num: 6

Candidate Starts for HomeFry\_38:

(3, 19433), (Start: 6 @19442 has 43 MA's), (15, 19553), (17, 19562), (19, 19571), (20, 19589), (23, 19637), (26, 19691), (31, 19751),

Gene: HubbaBubba\_30 Start: 16961, Stop: 17362, Start Num: 6

Candidate Starts for HubbaBubba\_30:

(4, 16955), (Start: 6 @16961 has 43 MA's), (17, 17081), (18, 17087), (19, 17090), (23, 17156), (26, 17210), (32, 17279),

Gene: IDyn\_33 Start: 18357, Stop: 18758, Start Num: 6

Candidate Starts for IDyn\_33:

(2, 18342), (4, 18351), (Start: 6 @18357 has 43 MA's), (17, 18477), (19, 18486), (23, 18552), (26, 18606), (32, 18675),

Gene: Jifall16\_31 Start: 20755, Stop: 21147, Start Num: 6

Candidate Starts for Jifall16\_31:

(1, 20626), (3, 20746), (Start: 6 @20755 has 43 MA's), (Start: 7 @20764 has 3 MA's), (15, 20860), (19, 20878), (20, 20896), (23, 20944), (31, 21058), (33, 21076),

Gene: Kabluna\_35 Start: 19819, Stop: 20220, Start Num: 6

Candidate Starts for Kabluna\_35:

(Start: 6 @19819 has 43 MA's), (12, 19906), (16, 19930), (23, 20008), (28, 20086), (32, 20131), (34, 20155),

Gene: KidneyBean\_32 Start: 20903, Stop: 21295, Start Num: 6

Candidate Starts for KidneyBean\_32:

(3, 20894), (Start: 6 @20903 has 43 MA's), (Start: 7 @20912 has 3 MA's), (19, 21026), (20, 21044), (23, 21092), (31, 21206), (33, 21224),

Gene: Kurt\_32 Start: 21143, Stop: 21535, Start Num: 6

Candidate Starts for Kurt\_32:

(1, 21014), (3, 21134), (Start: 6 @21143 has 43 MA's), (Start: 7 @21152 has 3 MA's), (15, 21248), (19, 21266), (20, 21284), (23, 21332), (31, 21446), (33, 21464),

Gene: Lollipop1437\_37 Start: 21727, Stop: 22125, Start Num: 6

Candidate Starts for Lollipop1437\_37:

(3, 21718), (Start: 6 @21727 has 43 MA's), (9, 21769), (13, 21826), (15, 21835), (20, 21871), (32, 22042),

Gene: MacGully\_40 Start: 21936, Stop: 22355, Start Num: 5

Candidate Starts for MacGully\_40:

(Start: 5 @21936 has 4 MA's), (Start: 7 @21948 has 3 MA's), (9, 22005), (24, 22188), (35, 22323), (36, 22347),

Gene: Marietta\_34 Start: 18274, Stop: 18675, Start Num: 6

Candidate Starts for Marietta\_34:

(4, 18268), (Start: 6 @18274 has 43 MA's), (17, 18394), (19, 18403), (23, 18469), (26, 18523), (32, 18592),

Gene: Maselop\_36 Start: 22005, Stop: 22367, Start Num: 7

Candidate Starts for Maselop\_36:

(Start: 5 @21993 has 4 MA's), (Start: 7 @22005 has 3 MA's), (21, 22161), (22, 22164), (27, 22236), (29, 22260), (37, 22362),

Gene: MerCougar\_33 Start: 21026, Stop: 21427, Start Num: 6

Candidate Starts for MerCougar\_33:

(Start: 6 @21026 has 43 MA's), (12, 21113), (16, 21137), (23, 21215), (32, 21338), (34, 21362),

Gene: NadineRae\_32 Start: 17520, Stop: 17921, Start Num: 6

Candidate Starts for NadineRae\_32:

(4, 17514), (Start: 6 @17520 has 43 MA's), (17, 17640), (19, 17649), (23, 17715), (26, 17769), (32, 17838),

Gene: NatB6\_32 Start: 20152, Stop: 20544, Start Num: 6

Candidate Starts for NatB6\_32:

(1, 20023), (3, 20143), (Start: 6 @20152 has 43 MA's), (Start: 7 @20161 has 3 MA's), (15, 20257), (19, 20275), (20, 20293), (23, 20341), (31, 20455), (33, 20473),

Gene: NosilaM\_35 Start: 20716, Stop: 21117, Start Num: 6

Candidate Starts for NosilaM\_35:

(Start: 6 @20716 has 43 MA's), (12, 20803), (16, 20827), (23, 20905), (28, 20983), (32, 21028), (34, 21052),

Gene: NovumRegina\_32 Start: 20485, Stop: 20877, Start Num: 6  
Candidate Starts for NovumRegina\_32:  
(3, 20476), (Start: 6 @20485 has 43 MA's), (Start: 7 @20494 has 3 MA's), (19, 20608), (20, 20626),  
(23, 20674), (31, 20788), (33, 20806),

Gene: Outis\_33 Start: 20720, Stop: 21121, Start Num: 6  
Candidate Starts for Outis\_33:  
(Start: 6 @20720 has 43 MA's), (16, 20831), (23, 20909), (32, 21032), (34, 21056),

Gene: Patio\_35 Start: 20963, Stop: 21361, Start Num: 6  
Candidate Starts for Patio\_35:  
(3, 20954), (Start: 6 @20963 has 43 MA's), (9, 21005), (13, 21062), (14, 21065), (20, 21107), (26,  
21209), (31, 21269), (32, 21278),

Gene: Pemberton\_35 Start: 18260, Stop: 18661, Start Num: 6  
Candidate Starts for Pemberton\_35:  
(4, 18254), (Start: 6 @18260 has 43 MA's), (17, 18380), (18, 18386), (19, 18389), (23, 18455), (26,  
18509), (32, 18578),

Gene: Phomeo\_31 Start: 20778, Stop: 21170, Start Num: 6  
Candidate Starts for Phomeo\_31:  
(1, 20649), (3, 20769), (Start: 6 @20778 has 43 MA's), (Start: 7 @20787 has 3 MA's), (15, 20883), (19,  
20901), (20, 20919), (23, 20967), (31, 21081), (33, 21099),

Gene: Pleakley\_41 Start: 20786, Stop: 21187, Start Num: 6  
Candidate Starts for Pleakley\_41:  
(3, 20777), (Start: 5 @20783 has 4 MA's), (Start: 6 @20786 has 43 MA's), (20, 20933), (26, 21035),  
(31, 21095),

Gene: Polyyuki\_36 Start: 21997, Stop: 22359, Start Num: 7  
Candidate Starts for Polyyuki\_36:  
(Start: 5 @21985 has 4 MA's), (Start: 7 @21997 has 3 MA's), (21, 22153), (22, 22156), (27, 22228),  
(29, 22252), (37, 22354),

Gene: RedRaider\_39 Start: 22967, Stop: 23365, Start Num: 6  
Candidate Starts for RedRaider\_39:  
(3, 22958), (Start: 6 @22967 has 43 MA's), (13, 23066), (20, 23111), (26, 23213), (32, 23282),

Gene: Scuba\_41 Start: 20879, Stop: 21280, Start Num: 6  
Candidate Starts for Scuba\_41:  
(3, 20870), (Start: 5 @20876 has 4 MA's), (Start: 6 @20879 has 43 MA's), (20, 21026), (26, 21128),  
(31, 21188),

Gene: Skysand\_34 Start: 21180, Stop: 21578, Start Num: 6  
Candidate Starts for Skysand\_34:  
(3, 21171), (Start: 6 @21180 has 43 MA's), (9, 21222), (13, 21279), (20, 21324), (26, 21426), (31,  
21486), (32, 21495),

Gene: StarStruck\_33 Start: 20720, Stop: 21121, Start Num: 6  
Candidate Starts for StarStruck\_33:  
(Start: 6 @20720 has 43 MA's), (16, 20831), (23, 20909), (32, 21032), (34, 21056),



Gene: Sukkupi\_34 Start: 19834, Stop: 20235, Start Num: 6

Candidate Starts for Sukkupi\_34:

(4, 19828), (Start: 6 @19834 has 43 MA's), (17, 19954), (18, 19960), (19, 19963), (23, 20029), (26, 20083), (32, 20152),

Gene: SuperSulley\_33 Start: 20904, Stop: 21305, Start Num: 6

Candidate Starts for SuperSulley\_33:

(Start: 6 @20904 has 43 MA's), (12, 20991), (16, 21015), (23, 21093), (28, 21171), (32, 21216), (34, 21240),

Gene: Tracker\_32 Start: 19906, Stop: 20298, Start Num: 6

Candidate Starts for Tracker\_32:

(1, 19777), (3, 19897), (Start: 6 @19906 has 43 MA's), (Start: 7 @19915 has 3 MA's), (15, 20011), (19, 20029), (20, 20047), (23, 20095), (31, 20209), (33, 20227),

Gene: Turuncu\_36 Start: 21181, Stop: 21585, Start Num: 6

Candidate Starts for Turuncu\_36:

(3, 21172), (Start: 6 @21181 has 43 MA's), (Start: 7 @21190 has 3 MA's), (19, 21313), (20, 21331), (26, 21433), (31, 21493),

Gene: Wheezy\_32 Start: 20111, Stop: 20503, Start Num: 6

Candidate Starts for Wheezy\_32:

(3, 20102), (Start: 6 @20111 has 43 MA's), (Start: 7 @20120 has 3 MA's), (19, 20234), (20, 20252), (23, 20300), (31, 20414), (33, 20432),

Gene: WhoseManz\_34 Start: 17886, Stop: 18287, Start Num: 6

Candidate Starts for WhoseManz\_34:

(4, 17880), (Start: 6 @17886 has 43 MA's), (17, 18006), (19, 18015), (23, 18081), (26, 18135), (32, 18204),

Gene: Yndexa\_34 Start: 19834, Stop: 20235, Start Num: 6

Candidate Starts for Yndexa\_34:

(4, 19828), (Start: 6 @19834 has 43 MA's), (17, 19954), (18, 19960), (19, 19963), (23, 20029), (26, 20083), (32, 20152),