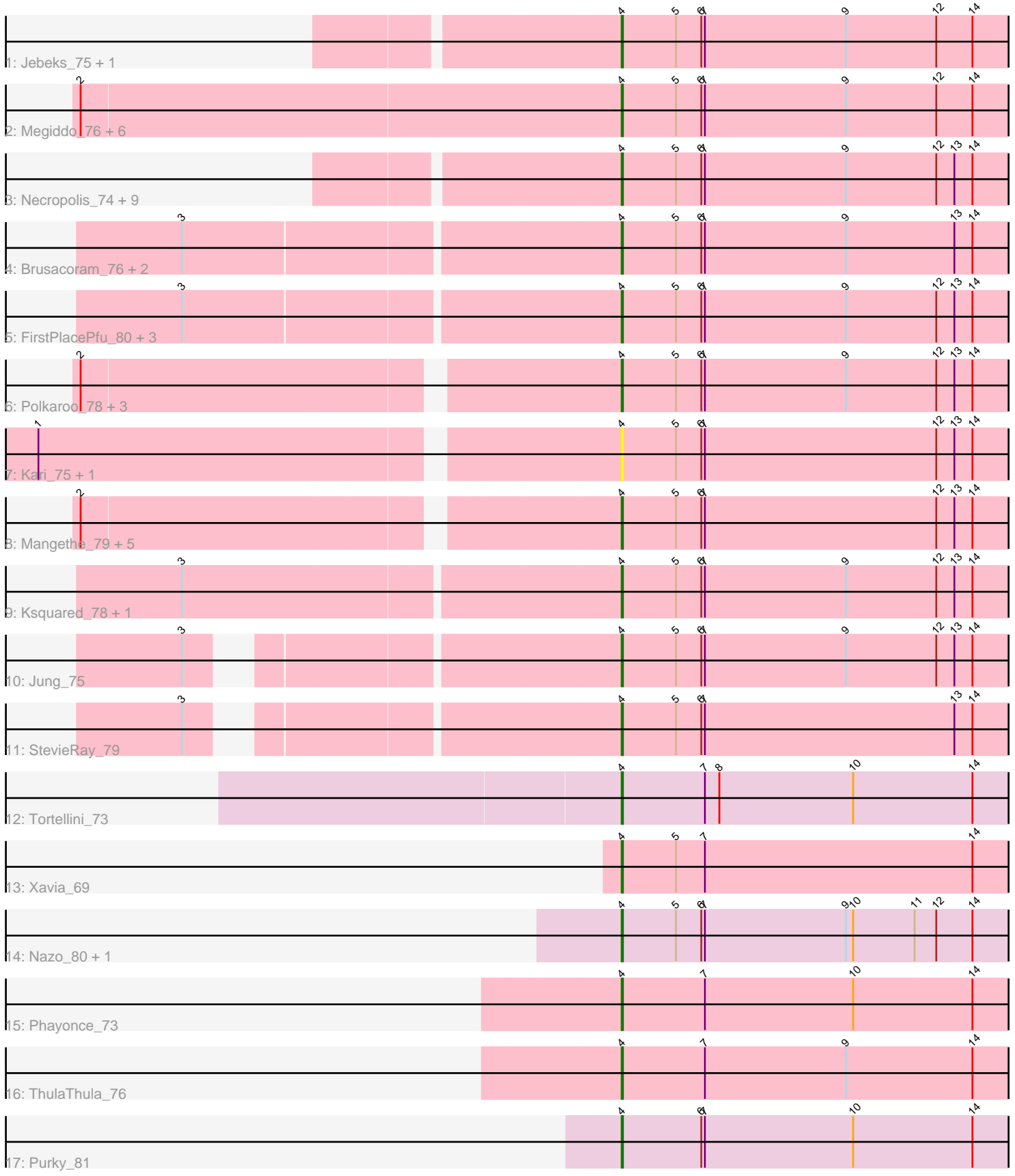


Pham 161928



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 161928 Report

This analysis was run 04/28/24 on database version 559.

Pham number 161928 has 49 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Jebeks\_75, Langerak\_75
- Track 2 : Megiddo\_76, KilKor\_77, Phalm\_77, StressBall\_76, CactusJack\_77, Willsammy\_78, Glaske\_76
- Track 3 : Necropolis\_74, Fishburne\_75, Dynamo\_76, Bogie\_79, HUHilltop\_79, GreaseLightnin\_78, Phineas\_76, Shipwreck\_79, Zilizebeth\_81, Pygmy\_78
- Track 4 : Brusacoram\_76, Thespis\_76, Atcoo\_76
- Track 5 : FirstPlacePfu\_80, Camster\_78, Malithi\_77, Sonah\_79
- Track 6 : Polkaroo\_78, Bartholomew\_75, Donovan\_76, Venti\_77
- Track 7 : Kari\_75, Vidya\_74
- Track 8 : Mangethe\_79, Juniormint\_72, Techage\_77, Phegasus\_79, Majeke\_79, Arib1\_76
- Track 9 : Ksquared\_78, Bunnies\_79
- Track 10 : Jung\_75
- Track 11 : StevieRay\_79
- Track 12 : Tortellini\_73
- Track 13 : Xavia\_69
- Track 14 : Nazo\_80, BigNuz\_79
- Track 15 : Phayonce\_73
- Track 16 : ThulaThula\_76
- Track 17 : Purky\_81

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

The start number called the most often in the published annotations is 4, it was called in 45 of the 45 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arib1\_76, Atcoo\_76, Bartholomew\_75, BigNuz\_79, Bogie\_79, Brusacoram\_76, Bunnies\_79, CactusJack\_77, Camster\_78, Donovan\_76, Dynamo\_76, FirstPlacePfu\_80, Fishburne\_75, Glaske\_76, GreaseLightnin\_78, HUHilltop\_79, Jebeks\_75, Jung\_75, Juniormint\_72, Kari\_75, KilKor\_77, Ksquared\_78, Langerak\_75, Majeke\_79, Malithi\_77, Mangethe\_79, Megiddo\_76, Nazo\_80, Necropolis\_74, Phalm\_77, Phayonce\_73, Phegasus\_79, Phineas\_76, Polkaroo\_78, Purky\_81, Pygmy\_78, Shipwreck\_79, Sonah\_79, StevieRay\_79, StressBall\_76,

Techage\_77, Thespis\_76, ThulaThula\_76, Tortellini\_73, Venti\_77, Vidya\_74, Willsammy\_78, Xavia\_69, Zilizebeth\_81,

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 4:

- Found in 49 of 49 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 45 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arib1\_76 (P1), Atcoo\_76 (P1), Bartholomew\_75 (P1), BigNuz\_79 (P4), Bogie\_79 (P1), Brusacoram\_76 (P1), Bunnies\_79 (P1), CactusJack\_77 (P1), Camster\_78 (P1), Donovan\_76 (P1), Dynamo\_76 (P1), FirstPlacePfu\_80 (P1), Fishburne\_75 (P1), Glaske\_76 (P1), GreaseLightnin\_78 (P1), HUHilltop\_79 (P1), Jebeks\_75 (P1), Jung\_75 (P1), Juniormint\_72 (P1), Kari\_75 (P1), KilKor\_77 (P1), Ksquared\_78 (P1), Langerak\_75 (P1), Majeke\_79 (P1), Malithi\_77 (P1), Mangethe\_79 (P1), Megiddo\_76 (P1), Nazo\_80 (P4), Necropolis\_74 (P1), Phalm\_77 (P1), Phayonce\_73 (P5), Phegasus\_79 (P1), Phineas\_76 (P1), Polkaroo\_78 (P1), Purky\_81 (P6), Pygmy\_78 (P1), Shipwreck\_79 (P1), Sonah\_79 (P1), StevieRay\_79 (P1), StressBall\_76 (P1), Techage\_77 (P1), Thespis\_76 (P1), ThulaThula\_76 (P5), Tortellini\_73 (P2), Venti\_77 (P1), Vidya\_74 (P1), Willsammy\_78 (P1), Xavia\_69 (P3), Zilizebeth\_81 (P1),

### **Summary by clusters:**

There are 6 clusters represented in this pham: P2, P3, P1, P6, P4, P5,

Info for manual annotations of cluster P1:

- Start number 4 was manually annotated 38 times for cluster P1.

Info for manual annotations of cluster P2:

- Start number 4 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

- Start number 4 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:

- Start number 4 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 4 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:

- Start number 4 was manually annotated 1 time for cluster P6.

### **Gene Information:**

Gene: Arib1\_76 Start: 45533, Stop: 45901, Start Num: 4  
Candidate Starts for Arib1\_76:  
(2, 45116), (Start: 4 @45533 has 45 MA's), (5, 45578), (6, 45599), (7, 45602), (12, 45794), (13, 45809), (14, 45824),

Gene: Atcoo\_76 Start: 47875, Stop: 48243, Start Num: 4  
Candidate Starts for Atcoo\_76:  
(3, 47527), (Start: 4 @47875 has 45 MA's), (5, 47920), (6, 47941), (7, 47944), (9, 48061), (13, 48151), (14, 48166),

Gene: Bartholomew\_75 Start: 45285, Stop: 45653, Start Num: 4  
Candidate Starts for Bartholomew\_75:  
(2, 44868), (Start: 4 @45285 has 45 MA's), (5, 45330), (6, 45351), (7, 45354), (9, 45471), (12, 45546), (13, 45561), (14, 45576),

Gene: BigNuz\_79 Start: 47415, Stop: 47783, Start Num: 4  
Candidate Starts for BigNuz\_79:  
(Start: 4 @47415 has 45 MA's), (5, 47460), (6, 47481), (7, 47484), (9, 47601), (10, 47607), (11, 47658), (12, 47676), (14, 47706),

Gene: Bogie\_79 Start: 47440, Stop: 47808, Start Num: 4  
Candidate Starts for Bogie\_79:  
(Start: 4 @47440 has 45 MA's), (5, 47485), (6, 47506), (7, 47509), (9, 47626), (12, 47701), (13, 47716), (14, 47731),

Gene: Brusacoram\_76 Start: 46418, Stop: 46786, Start Num: 4  
Candidate Starts for Brusacoram\_76:  
(3, 46070), (Start: 4 @46418 has 45 MA's), (5, 46463), (6, 46484), (7, 46487), (9, 46604), (13, 46694), (14, 46709),

Gene: Bunnies\_79 Start: 47623, Stop: 47991, Start Num: 4  
Candidate Starts for Bunnies\_79:  
(3, 47272), (Start: 4 @47623 has 45 MA's), (5, 47668), (6, 47689), (7, 47692), (9, 47809), (12, 47884), (13, 47899), (14, 47914),

Gene: CactusJack\_77 Start: 47022, Stop: 47390, Start Num: 4  
Candidate Starts for CactusJack\_77:  
(2, 46584), (Start: 4 @47022 has 45 MA's), (5, 47067), (6, 47088), (7, 47091), (9, 47208), (12, 47283), (14, 47313),

Gene: Camster\_78 Start: 45950, Stop: 46318, Start Num: 4  
Candidate Starts for Camster\_78:  
(3, 45602), (Start: 4 @45950 has 45 MA's), (5, 45995), (6, 46016), (7, 46019), (9, 46136), (12, 46211), (13, 46226), (14, 46241),

Gene: Donovan\_76 Start: 45963, Stop: 46331, Start Num: 4  
Candidate Starts for Donovan\_76:  
(2, 45546), (Start: 4 @45963 has 45 MA's), (5, 46008), (6, 46029), (7, 46032), (9, 46149), (12, 46224), (13, 46239), (14, 46254),

Gene: Dynamo\_76 Start: 45474, Stop: 45842, Start Num: 4  
Candidate Starts for Dynamo\_76:

(Start: 4 @45474 has 45 MA's), (5, 45519), (6, 45540), (7, 45543), (9, 45660), (12, 45735), (13, 45750), (14, 45765),

Gene: FirstPlacePfu\_80 Start: 44481, Stop: 44849, Start Num: 4

Candidate Starts for FirstPlacePfu\_80:

(3, 44133), (Start: 4 @44481 has 45 MA's), (5, 44526), (6, 44547), (7, 44550), (9, 44667), (12, 44742), (13, 44757), (14, 44772),

Gene: Fishburne\_75 Start: 45910, Stop: 46278, Start Num: 4

Candidate Starts for Fishburne\_75:

(Start: 4 @45910 has 45 MA's), (5, 45955), (6, 45976), (7, 45979), (9, 46096), (12, 46171), (13, 46186), (14, 46201),

Gene: Glaske\_76 Start: 47022, Stop: 47390, Start Num: 4

Candidate Starts for Glaske\_76:

(2, 46584), (Start: 4 @47022 has 45 MA's), (5, 47067), (6, 47088), (7, 47091), (9, 47208), (12, 47283), (14, 47313),

Gene: GreaseLightnin\_78 Start: 47225, Stop: 47593, Start Num: 4

Candidate Starts for GreaseLightnin\_78:

(Start: 4 @47225 has 45 MA's), (5, 47270), (6, 47291), (7, 47294), (9, 47411), (12, 47486), (13, 47501), (14, 47516),

Gene: HUHilltop\_79 Start: 45697, Stop: 46065, Start Num: 4

Candidate Starts for HUHilltop\_79:

(Start: 4 @45697 has 45 MA's), (5, 45742), (6, 45763), (7, 45766), (9, 45883), (12, 45958), (13, 45973), (14, 45988),

Gene: Jebeks\_75 Start: 44381, Stop: 44749, Start Num: 4

Candidate Starts for Jebeks\_75:

(Start: 4 @44381 has 45 MA's), (5, 44426), (6, 44447), (7, 44450), (9, 44567), (12, 44642), (14, 44672),

Gene: Jung\_75 Start: 45360, Stop: 45728, Start Num: 4

Candidate Starts for Jung\_75:

(3, 45048), (Start: 4 @45360 has 45 MA's), (5, 45405), (6, 45426), (7, 45429), (9, 45546), (12, 45621), (13, 45636), (14, 45651),

Gene: Juniormint\_72 Start: 44376, Stop: 44744, Start Num: 4

Candidate Starts for Juniormint\_72:

(2, 43959), (Start: 4 @44376 has 45 MA's), (5, 44421), (6, 44442), (7, 44445), (12, 44637), (13, 44652), (14, 44667),

Gene: Kari\_75 Start: 46324, Stop: 46692, Start Num: 4

Candidate Starts for Kari\_75:

(1, 45871), (Start: 4 @46324 has 45 MA's), (5, 46369), (6, 46390), (7, 46393), (12, 46585), (13, 46600), (14, 46615),

Gene: KilKor\_77 Start: 47715, Stop: 48083, Start Num: 4

Candidate Starts for KilKor\_77:

(2, 47277), (Start: 4 @47715 has 45 MA's), (5, 47760), (6, 47781), (7, 47784), (9, 47901), (12, 47976), (14, 48006),

Gene: Ksquared\_78 Start: 47500, Stop: 47868, Start Num: 4  
Candidate Starts for Ksquared\_78:  
(3, 47149), (Start: 4 @47500 has 45 MA's), (5, 47545), (6, 47566), (7, 47569), (9, 47686), (12, 47761),  
(13, 47776), (14, 47791),

Gene: Langerak\_75 Start: 45888, Stop: 46256, Start Num: 4  
Candidate Starts for Langerak\_75:  
(Start: 4 @45888 has 45 MA's), (5, 45933), (6, 45954), (7, 45957), (9, 46074), (12, 46149), (14,  
46179),

Gene: Majeke\_79 Start: 46412, Stop: 46780, Start Num: 4  
Candidate Starts for Majeke\_79:  
(2, 45995), (Start: 4 @46412 has 45 MA's), (5, 46457), (6, 46478), (7, 46481), (12, 46673), (13,  
46688), (14, 46703),

Gene: Malithi\_77 Start: 45670, Stop: 46038, Start Num: 4  
Candidate Starts for Malithi\_77:  
(3, 45322), (Start: 4 @45670 has 45 MA's), (5, 45715), (6, 45736), (7, 45739), (9, 45856), (12, 45931),  
(13, 45946), (14, 45961),

Gene: Mangethe\_79 Start: 46412, Stop: 46780, Start Num: 4  
Candidate Starts for Mangethe\_79:  
(2, 45995), (Start: 4 @46412 has 45 MA's), (5, 46457), (6, 46478), (7, 46481), (12, 46673), (13,  
46688), (14, 46703),

Gene: Megiddo\_76 Start: 47583, Stop: 47951, Start Num: 4  
Candidate Starts for Megiddo\_76:  
(2, 47145), (Start: 4 @47583 has 45 MA's), (5, 47628), (6, 47649), (7, 47652), (9, 47769), (12, 47844),  
(14, 47874),

Gene: Nazo\_80 Start: 47301, Stop: 47669, Start Num: 4  
Candidate Starts for Nazo\_80:  
(Start: 4 @47301 has 45 MA's), (5, 47346), (6, 47367), (7, 47370), (9, 47487), (10, 47493), (11,  
47544), (12, 47562), (14, 47592),

Gene: Necropolis\_74 Start: 45064, Stop: 45432, Start Num: 4  
Candidate Starts for Necropolis\_74:  
(Start: 4 @45064 has 45 MA's), (5, 45109), (6, 45130), (7, 45133), (9, 45250), (12, 45325), (13,  
45340), (14, 45355),

Gene: Phalm\_77 Start: 47013, Stop: 47381, Start Num: 4  
Candidate Starts for Phalm\_77:  
(2, 46575), (Start: 4 @47013 has 45 MA's), (5, 47058), (6, 47079), (7, 47082), (9, 47199), (12, 47274),  
(14, 47304),

Gene: Phayonce\_73 Start: 47394, Stop: 47762, Start Num: 4  
Candidate Starts for Phayonce\_73:  
(Start: 4 @47394 has 45 MA's), (7, 47463), (10, 47586), (14, 47685),

Gene: Phegasus\_79 Start: 46379, Stop: 46747, Start Num: 4  
Candidate Starts for Phegasus\_79:  
(2, 45962), (Start: 4 @46379 has 45 MA's), (5, 46424), (6, 46445), (7, 46448), (12, 46640), (13,  
46655), (14, 46670),

Gene: Phineas\_76 Start: 46031, Stop: 46399, Start Num: 4

Candidate Starts for Phineas\_76:

(Start: 4 @46031 has 45 MA's), (5, 46076), (6, 46097), (7, 46100), (9, 46217), (12, 46292), (13, 46307), (14, 46322),

Gene: Polkaroo\_78 Start: 47885, Stop: 48253, Start Num: 4

Candidate Starts for Polkaroo\_78:

(2, 47468), (Start: 4 @47885 has 45 MA's), (5, 47930), (6, 47951), (7, 47954), (9, 48071), (12, 48146), (13, 48161), (14, 48176),

Gene: Purky\_81 Start: 49153, Stop: 49521, Start Num: 4

Candidate Starts for Purky\_81:

(Start: 4 @49153 has 45 MA's), (6, 49219), (7, 49222), (10, 49345), (14, 49444),

Gene: Pygmy\_78 Start: 47413, Stop: 47781, Start Num: 4

Candidate Starts for Pygmy\_78:

(Start: 4 @47413 has 45 MA's), (5, 47458), (6, 47479), (7, 47482), (9, 47599), (12, 47674), (13, 47689), (14, 47704),

Gene: Shipwreck\_79 Start: 47471, Stop: 47839, Start Num: 4

Candidate Starts for Shipwreck\_79:

(Start: 4 @47471 has 45 MA's), (5, 47516), (6, 47537), (7, 47540), (9, 47657), (12, 47732), (13, 47747), (14, 47762),

Gene: Sonah\_79 Start: 45215, Stop: 45583, Start Num: 4

Candidate Starts for Sonah\_79:

(3, 44867), (Start: 4 @45215 has 45 MA's), (5, 45260), (6, 45281), (7, 45284), (9, 45401), (12, 45476), (13, 45491), (14, 45506),

Gene: StevieRay\_79 Start: 47616, Stop: 47984, Start Num: 4

Candidate Starts for StevieRay\_79:

(3, 47304), (Start: 4 @47616 has 45 MA's), (5, 47661), (6, 47682), (7, 47685), (13, 47892), (14, 47907),

Gene: StressBall\_76 Start: 46715, Stop: 47083, Start Num: 4

Candidate Starts for StressBall\_76:

(2, 46277), (Start: 4 @46715 has 45 MA's), (5, 46760), (6, 46781), (7, 46784), (9, 46901), (12, 46976), (14, 47006),

Gene: Techage\_77 Start: 45895, Stop: 46263, Start Num: 4

Candidate Starts for Techage\_77:

(2, 45478), (Start: 4 @45895 has 45 MA's), (5, 45940), (6, 45961), (7, 45964), (12, 46156), (13, 46171), (14, 46186),

Gene: Thespis\_76 Start: 46418, Stop: 46786, Start Num: 4

Candidate Starts for Thespis\_76:

(3, 46070), (Start: 4 @46418 has 45 MA's), (5, 46463), (6, 46484), (7, 46487), (9, 46604), (13, 46694), (14, 46709),

Gene: ThulaThula\_76 Start: 48603, Stop: 48971, Start Num: 4

Candidate Starts for ThulaThula\_76:

(Start: 4 @48603 has 45 MA's), (7, 48672), (9, 48789), (14, 48894),

Gene: Tortellini\_73 Start: 48113, Stop: 48484, Start Num: 4

Candidate Starts for Tortellini\_73:

(Start: 4 @48113 has 45 MA's), (7, 48182), (8, 48194), (10, 48305), (14, 48404),

Gene: Venti\_77 Start: 45285, Stop: 45653, Start Num: 4

Candidate Starts for Venti\_77:

(2, 44868), (Start: 4 @45285 has 45 MA's), (5, 45330), (6, 45351), (7, 45354), (9, 45471), (12, 45546), (13, 45561), (14, 45576),

Gene: Vidya\_74 Start: 45303, Stop: 45671, Start Num: 4

Candidate Starts for Vidya\_74:

(1, 44850), (Start: 4 @45303 has 45 MA's), (5, 45348), (6, 45369), (7, 45372), (12, 45564), (13, 45579), (14, 45594),

Gene: Willsammy\_78 Start: 47199, Stop: 47567, Start Num: 4

Candidate Starts for Willsammy\_78:

(2, 46761), (Start: 4 @47199 has 45 MA's), (5, 47244), (6, 47265), (7, 47268), (9, 47385), (12, 47460), (14, 47490),

Gene: Xavia\_69 Start: 48623, Stop: 48991, Start Num: 4

Candidate Starts for Xavia\_69:

(Start: 4 @48623 has 45 MA's), (5, 48668), (7, 48692), (14, 48914),

Gene: Zilizebeth\_81 Start: 46857, Stop: 47225, Start Num: 4

Candidate Starts for Zilizebeth\_81:

(Start: 4 @46857 has 45 MA's), (5, 46902), (6, 46923), (7, 46926), (9, 47043), (12, 47118), (13, 47133), (14, 47148),