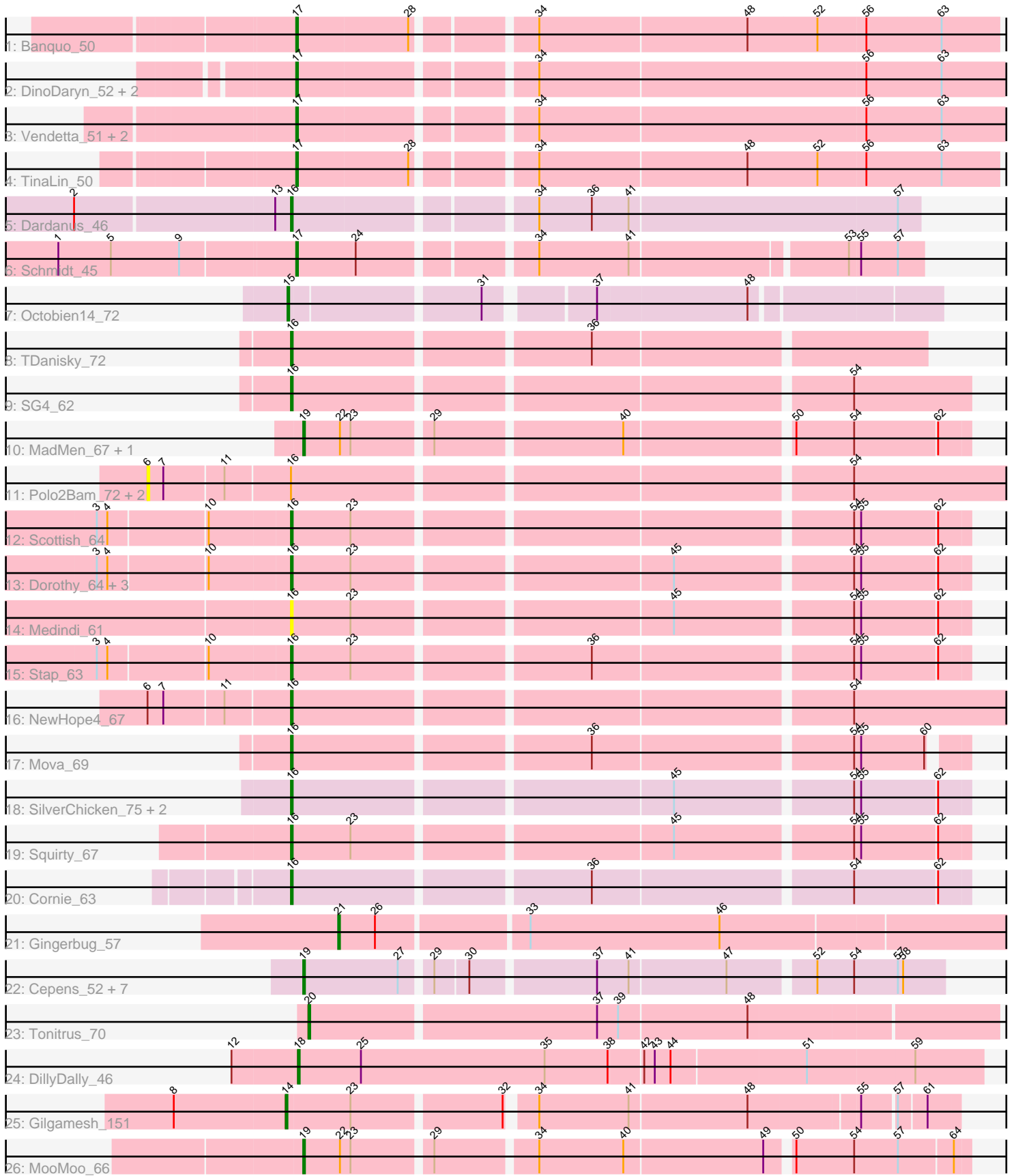


Pham 296689



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 296689 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296689 has 45 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Banquo\_50
- Track 2 : DinoDaryn\_52, Huffy\_52, TZGordon\_53
- Track 3 : Vendetta\_51, Goib\_52, Splinter\_51
- Track 4 : TinaLin\_50
- Track 5 : Dardanus\_46
- Track 6 : Schmidt\_45
- Track 7 : Octobien14\_72
- Track 8 : TDanisky\_72
- Track 9 : SG4\_62
- Track 10 : MadMen\_67, Leozinho\_66
- Track 11 : Polo2Bam\_72, Enzomatic\_73, SeaLumen\_70
- Track 12 : Scottish\_64
- Track 13 : Dorothy\_64, Sassafras\_64, KingMidas\_65, RedBird\_64
- Track 14 : Medindi\_61
- Track 15 : Stap\_63
- Track 16 : NewHope4\_67
- Track 17 : Mova\_69
- Track 18 : SilverChicken\_75, Veteran\_62, Cornucopia\_67
- Track 19 : Squirty\_67
- Track 20 : Cornie\_63
- Track 21 : Gingerbug\_57
- Track 22 : Cepens\_52, PR\_52, D12\_51, Megabear\_52, Jeon\_52, Argie\_53, GodPhather\_53, Taptic\_52
- Track 23 : Tonitrus\_70
- Track 24 : DillyDally\_46
- Track 25 : Gilgamesh\_151
- Track 26 : MooMoo\_66

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

The start number called the most often in the published annotations is 16, it was called in 15 of the 40 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Cornie\_63, Cornucopia\_67, Dardanus\_46, Dorothy\_64, KingMidas\_65, Medindi\_61, Mova\_69, NewHope4\_67, RedBird\_64, SG4\_62, Sassafras\_64, Scottish\_64, SilverChicken\_75, Squirty\_67, Stap\_63, TDanisky\_72, Veteran\_62,

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

- Enzomatic\_73, Polo2Bam\_72, SeaLumen\_70,

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

- Argie\_53, Banquo\_50, Cepens\_52, D12\_51, DillyDally\_46, DinoDaryn\_52, Gilgamesh\_151, Gingerbug\_57, GodPhather\_53, Goib\_52, Huffy\_52, Jeon\_52, Leozinho\_66, MadMen\_67, Megabear\_52, MooMoo\_66, Octobien14\_72, PR\_52, Schmidt\_45, Splinter\_51, TZGordon\_53, Taptic\_52, TinaLin\_50, Tonitrus\_70, Vendetta\_51,

### Summary by start number:

Start 6:

- Found in 4 of 45 ( 8.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Enzomatic\_73 (F1), Polo2Bam\_72 (F1), SeaLumen\_70 (F1),

Start 14:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gilgamesh\_151 (singleton),

Start 15:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Octobien14\_72 (DU1),

Start 16:

- Found in 20 of 45 ( 44.4% ) of genes in pham
- Manual Annotations of this start: 15 of 40
- Called 85.0% of time when present
- Phage (with cluster) where this start called: Cornie\_63 (F5), Cornucopia\_67 (F1), Dardanus\_46 (CU3), Dorothy\_64 (F1), KingMidas\_65 (F1), Medindi\_61 (F1), Mova\_69 (F1), NewHope4\_67 (F1), RedBird\_64 (F1), SG4\_62 (F1), Sassafras\_64 (F1), Scottish\_64 (F1), SilverChicken\_75 (F2), Squirty\_67 (F3), Stap\_63 (F1), TDanisky\_72 (F1), Veteran\_62 (F1),

Start 17:

- Found in 9 of 45 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 9 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Banquo\_50 (CU1), DinoDaryn\_52 (CU1), Goib\_52 (CU1), Huffy\_52 (CU1), Schmidt\_45 (CU4), Splinter\_51 (CU1), TZGordon\_53 (CU1), TinaLin\_50 (CU1), Vendetta\_51 (CU1),

Start 18:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DillyDally\_46 (singleton),

Start 19:

- Found in 11 of 45 ( 24.4% ) of genes in pham
- Manual Annotations of this start: 11 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Argie\_53 (W), Cepens\_52 (W), D12\_51 (W), GodPhather\_53 (W), Jeon\_52 (W), Leozinho\_66 (F1), MadMen\_67 (F1), Megabear\_52 (W), MooMoo\_66 (singleton), PR\_52 (W), Taptic\_52 (W),

Start 20:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tonitrus\_70 (singleton),

Start 21:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gingerbug\_57 (GF),

**Summary by clusters:**

There are 11 clusters represented in this pham: F1, F2, CU4, CU3, F5, CU1, singleton, GF, F3, W, DU1,

Info for manual annotations of cluster CU1:

- Start number 17 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 16 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 17 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster DU1:

- Start number 15 was manually annotated 1 time for cluster DU1.

Info for manual annotations of cluster F1:

- Start number 16 was manually annotated 12 times for cluster F1.
- Start number 19 was manually annotated 2 times for cluster F1.

Info for manual annotations of cluster F3:

- Start number 16 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F5:

- Start number 16 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster GF:

- Start number 21 was manually annotated 1 time for cluster GF.

Info for manual annotations of cluster W:

- Start number 19 was manually annotated 8 times for cluster W.

### **Gene Information:**

Gene: Argie\_53 Start: 44207, Stop: 44548, Start Num: 19

Candidate Starts for Argie\_53:

(Start: 19 @44207 has 11 MA's), (27, 44261), (29, 44276), (30, 44294), (37, 44360), (41, 44378), (47, 44432), (52, 44477), (54, 44498), (57, 44522), (58, 44525),

Gene: Banquo\_50 Start: 32516, Stop: 32896, Start Num: 17

Candidate Starts for Banquo\_50:

(Start: 17 @32516 has 9 MA's), (28, 32579), (34, 32639), (48, 32756), (52, 32795), (56, 32822), (63, 32864),

Gene: Cepens\_52 Start: 43922, Stop: 44263, Start Num: 19

Candidate Starts for Cepens\_52:

(Start: 19 @43922 has 11 MA's), (27, 43976), (29, 43991), (30, 44009), (37, 44075), (41, 44093), (47, 44147), (52, 44192), (54, 44213), (57, 44237), (58, 44240),

Gene: Cornie\_63 Start: 40942, Stop: 41304, Start Num: 16

Candidate Starts for Cornie\_63:

(Start: 16 @40942 has 15 MA's), (36, 41101), (54, 41242), (62, 41287),

Gene: Cornucopia\_67 Start: 42579, Stop: 42941, Start Num: 16

Candidate Starts for Cornucopia\_67:

(Start: 16 @42579 has 15 MA's), (45, 42783), (54, 42879), (55, 42882), (62, 42924),

Gene: D12\_51 Start: 44470, Stop: 44811, Start Num: 19

Candidate Starts for D12\_51:

(Start: 19 @44470 has 11 MA's), (27, 44524), (29, 44539), (30, 44557), (37, 44623), (41, 44641), (47, 44695), (52, 44740), (54, 44761), (57, 44785), (58, 44788),

Gene: Dardanus\_46 Start: 31283, Stop: 31621, Start Num: 16

Candidate Starts for Dardanus\_46:

(2, 31163), (13, 31274), (Start: 16 @31283 has 15 MA's), (34, 31409), (36, 31439), (41, 31460), (57, 31610),

Gene: DillyDally\_46 Start: 29839, Stop: 30222, Start Num: 18

Candidate Starts for DillyDally\_46:

(12, 29803), (Start: 18 @29839 has 1 MA's), (25, 29875), (35, 29980), (38, 30016), (42, 30034), (43, 30040), (44, 30049), (51, 30124), (59, 30184),

Gene: DinoDaryn\_52 Start: 33048, Stop: 33431, Start Num: 17

Candidate Starts for DinoDaryn\_52:

(Start: 17 @33048 has 9 MA's), (34, 33171), (56, 33354), (63, 33396),

Gene: Dorothy\_64 Start: 42261, Stop: 42623, Start Num: 16

Candidate Starts for Dorothy\_64:

(3, 42156), (4, 42162), (10, 42216), (Start: 16 @42261 has 15 MA's), (23, 42294), (45, 42465), (54, 42561), (55, 42564), (62, 42606),

Gene: Enzomatic\_73 Start: 42241, Stop: 42768, Start Num: 6

Candidate Starts for Enzomatic\_73:

(6, 42241), (7, 42250), (11, 42283), (Start: 16 @42319 has 15 MA's), (54, 42619),

Gene: Gilgamesh\_151 Start: 125936, Stop: 126292, Start Num: 14

Candidate Starts for Gilgamesh\_151:

(8, 125873), (Start: 14 @125936 has 1 MA's), (23, 125972), (32, 126053), (34, 126065), (41, 126116), (48, 126182), (55, 126242), (57, 126260), (61, 126275),

Gene: Gingerbug\_57 Start: 33770, Stop: 34138, Start Num: 21

Candidate Starts for Gingerbug\_57:

(Start: 21 @33770 has 1 MA's), (26, 33791), (33, 33872), (46, 33980),

Gene: GodPhather\_53 Start: 44710, Stop: 45051, Start Num: 19

Candidate Starts for GodPhather\_53:

(Start: 19 @44710 has 11 MA's), (27, 44764), (29, 44779), (30, 44797), (37, 44863), (41, 44881), (47, 44935), (52, 44980), (54, 45001), (57, 45025), (58, 45028),

Gene: Goib\_52 Start: 33585, Stop: 33968, Start Num: 17

Candidate Starts for Goib\_52:

(Start: 17 @33585 has 9 MA's), (34, 33708), (56, 33891), (63, 33933),

Gene: Huffy\_52 Start: 33048, Stop: 33431, Start Num: 17

Candidate Starts for Huffy\_52:

(Start: 17 @33048 has 9 MA's), (34, 33171), (56, 33354), (63, 33396),

Gene: Jeon\_52 Start: 44452, Stop: 44793, Start Num: 19

Candidate Starts for Jeon\_52:

(Start: 19 @44452 has 11 MA's), (27, 44506), (29, 44521), (30, 44539), (37, 44605), (41, 44623), (47, 44677), (52, 44722), (54, 44743), (57, 44767), (58, 44770),

Gene: KingMidas\_65 Start: 43159, Stop: 43521, Start Num: 16

Candidate Starts for KingMidas\_65:

(3, 43054), (4, 43060), (10, 43114), (Start: 16 @43159 has 15 MA's), (23, 43192), (45, 43363), (54, 43459), (55, 43462), (62, 43504),

Gene: Leozinho\_66 Start: 42196, Stop: 42552, Start Num: 19

Candidate Starts for Leozinho\_66:

(Start: 19 @42196 has 11 MA's), (22, 42217), (23, 42223), (29, 42265), (40, 42367), (50, 42457), (54, 42490), (62, 42535),

Gene: MadMen\_67 Start: 43664, Stop: 44020, Start Num: 19

Candidate Starts for MadMen\_67:

(Start: 19 @43664 has 11 MA's), (22, 43685), (23, 43691), (29, 43733), (40, 43835), (50, 43925), (54, 43958), (62, 44003),

Gene: Medindi\_61 Start: 39515, Stop: 39877, Start Num: 16

Candidate Starts for Medindi\_61:

(Start: 16 @39515 has 15 MA's), (23, 39548), (45, 39719), (54, 39815), (55, 39818), (62, 39860),

Gene: Megabear\_52 Start: 43843, Stop: 44184, Start Num: 19

Candidate Starts for Megabear\_52:

(Start: 19 @43843 has 11 MA's), (27, 43897), (29, 43912), (30, 43930), (37, 43996), (41, 44014), (47, 44068), (52, 44113), (54, 44134), (57, 44158), (58, 44161),

Gene: MooMoo\_66 Start: 43589, Stop: 43945, Start Num: 19

Candidate Starts for MooMoo\_66:

(Start: 19 @43589 has 11 MA's), (22, 43610), (23, 43616), (29, 43658), (34, 43712), (40, 43760), (49, 43838), (50, 43850), (54, 43883), (57, 43907), (64, 43937),

Gene: Mova\_69 Start: 42229, Stop: 42585, Start Num: 16

Candidate Starts for Mova\_69:

(Start: 16 @42229 has 15 MA's), (36, 42388), (54, 42529), (55, 42532), (60, 42568),

Gene: NewHope4\_67 Start: 42465, Stop: 42914, Start Num: 16

Candidate Starts for NewHope4\_67:

(6, 42387), (7, 42396), (11, 42429), (Start: 16 @42465 has 15 MA's), (54, 42765),

Gene: Octobien14\_72 Start: 45181, Stop: 45522, Start Num: 15

Candidate Starts for Octobien14\_72:

(Start: 15 @45181 has 1 MA's), (31, 45283), (37, 45337), (48, 45421),

Gene: PR\_52 Start: 44447, Stop: 44788, Start Num: 19

Candidate Starts for PR\_52:

(Start: 19 @44447 has 11 MA's), (27, 44501), (29, 44516), (30, 44534), (37, 44600), (41, 44618), (47, 44672), (52, 44717), (54, 44738), (57, 44762), (58, 44765),

Gene: Polo2Bam\_72 Start: 42241, Stop: 42768, Start Num: 6

Candidate Starts for Polo2Bam\_72:

(6, 42241), (7, 42250), (11, 42283), (Start: 16 @42319 has 15 MA's), (54, 42619),

Gene: RedBird\_64 Start: 42140, Stop: 42502, Start Num: 16

Candidate Starts for RedBird\_64:

(3, 42035), (4, 42041), (10, 42095), (Start: 16 @42140 has 15 MA's), (23, 42173), (45, 42344), (54, 42440), (55, 42443), (62, 42485),

Gene: SG4\_62 Start: 41300, Stop: 41665, Start Num: 16

Candidate Starts for SG4\_62:

(Start: 16 @41300 has 15 MA's), (54, 41600),

Gene: Sassafras\_64 Start: 42458, Stop: 42820, Start Num: 16

Candidate Starts for Sassafras\_64:

(3, 42353), (4, 42359), (10, 42413), (Start: 16 @42458 has 15 MA's), (23, 42491), (45, 42662), (54, 42758), (55, 42761), (62, 42803),

Gene: Schmidt\_45 Start: 30353, Stop: 30685, Start Num: 17

Candidate Starts for Schmidt\_45:

(1, 30221), (5, 30251), (9, 30290), (Start: 17 @30353 has 9 MA's), (24, 30386), (34, 30476), (41, 30527), (53, 30644), (55, 30650), (57, 30671),

Gene: Scottish\_64 Start: 42414, Stop: 42776, Start Num: 16

Candidate Starts for Scottish\_64:

(3, 42309), (4, 42315), (10, 42369), (Start: 16 @42414 has 15 MA's), (23, 42447), (54, 42714), (55, 42717), (62, 42759),

Gene: SeaLumen\_70 Start: 42241, Stop: 42768, Start Num: 6

Candidate Starts for SeaLumen\_70:

(6, 42241), (7, 42250), (11, 42283), (Start: 16 @42319 has 15 MA's), (54, 42619),

Gene: SilverChicken\_75 Start: 42112, Stop: 42474, Start Num: 16

Candidate Starts for SilverChicken\_75:

(Start: 16 @42112 has 15 MA's), (45, 42316), (54, 42412), (55, 42415), (62, 42457),

Gene: Splinter\_51 Start: 33608, Stop: 33991, Start Num: 17

Candidate Starts for Splinter\_51:

(Start: 17 @33608 has 9 MA's), (34, 33731), (56, 33914), (63, 33956),

Gene: Squirty\_67 Start: 43396, Stop: 43758, Start Num: 16

Candidate Starts for Squirty\_67:

(Start: 16 @43396 has 15 MA's), (23, 43429), (45, 43600), (54, 43696), (55, 43699), (62, 43741),

Gene: Stap\_63 Start: 42347, Stop: 42709, Start Num: 16

Candidate Starts for Stap\_63:

(3, 42242), (4, 42248), (10, 42302), (Start: 16 @42347 has 15 MA's), (23, 42380), (36, 42506), (54, 42647), (55, 42650), (62, 42692),

Gene: TDanisky\_72 Start: 43265, Stop: 43606, Start Num: 16

Candidate Starts for TDanisky\_72:

(Start: 16 @43265 has 15 MA's), (36, 43424),

Gene: TZGordon\_53 Start: 32954, Stop: 33337, Start Num: 17

Candidate Starts for TZGordon\_53:

(Start: 17 @32954 has 9 MA's), (34, 33077), (56, 33260), (63, 33302),

Gene: Taptic\_52 Start: 43843, Stop: 44184, Start Num: 19

Candidate Starts for Taptic\_52:

(Start: 19 @43843 has 11 MA's), (27, 43897), (29, 43912), (30, 43930), (37, 43996), (41, 44014), (47, 44068), (52, 44113), (54, 44134), (57, 44158), (58, 44161),

Gene: TinaLin\_50 Start: 32410, Stop: 32790, Start Num: 17

Candidate Starts for TinaLin\_50:

(Start: 17 @32410 has 9 MA's), (28, 32473), (34, 32533), (48, 32650), (52, 32689), (56, 32716), (63, 32758),

Gene: Tonitrus\_70 Start: 51892, Stop: 52272, Start Num: 20

Candidate Starts for Tonitrus\_70:

(Start: 20 @51892 has 1 MA's), (37, 52051), (39, 52063), (48, 52135),

Gene: Vendetta\_51 Start: 33608, Stop: 33991, Start Num: 17

Candidate Starts for Vendetta\_51:

(Start: 17 @33608 has 9 MA's), (34, 33731), (56, 33914), (63, 33956),

Gene: Veteran\_62 Start: 40798, Stop: 41154, Start Num: 16

Candidate Starts for Veteran\_62:

(Start: 16 @40798 has 15 MA's), (45, 41002), (54, 41098), (55, 41101), (62, 41137),