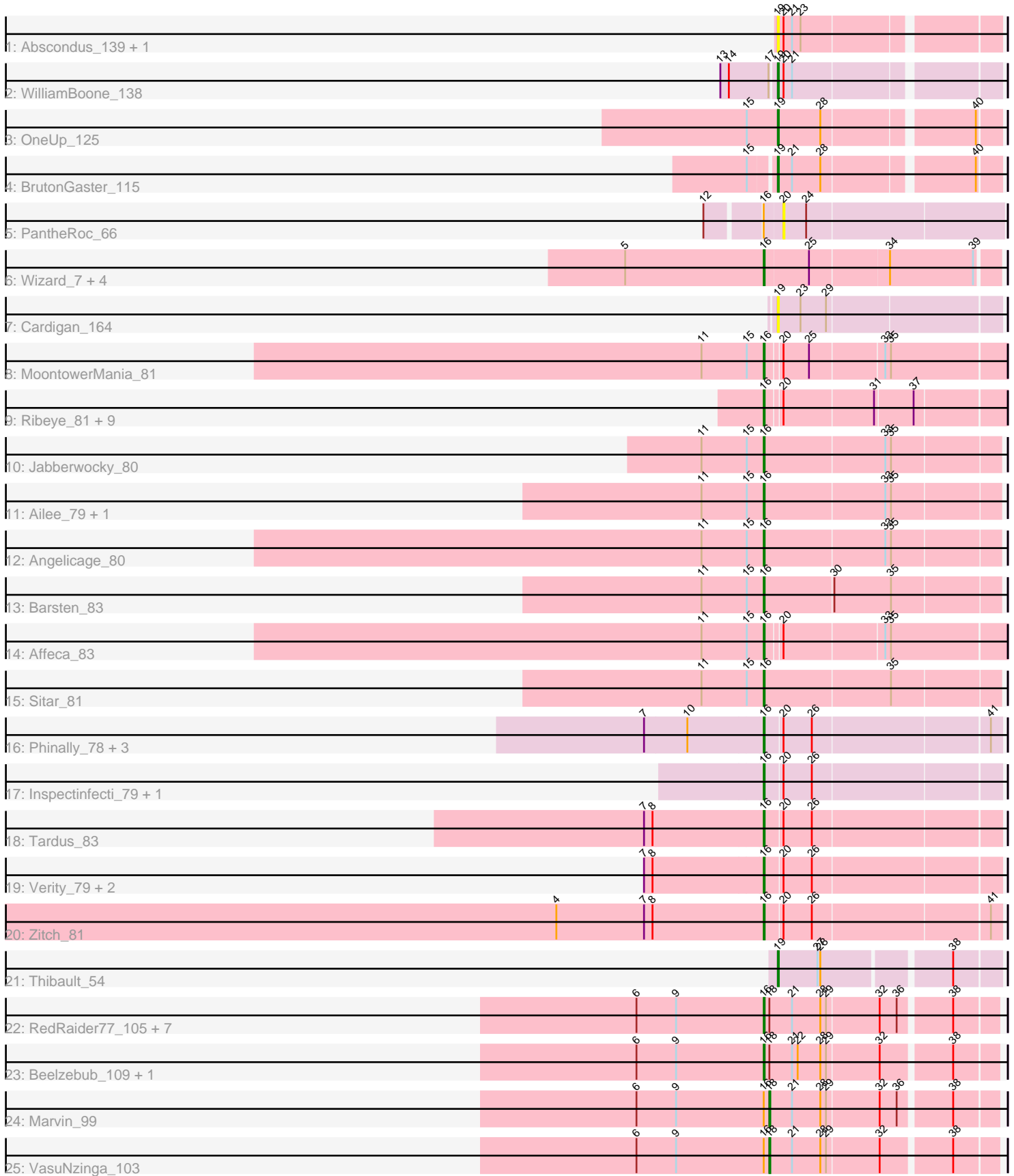


# Zoomed Pham 157909



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 157909 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157909 has 54 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Abscondus\_139, Dusty\_137
- Track 2 : WilliamBoone\_138
- Track 3 : OneUp\_125
- Track 4 : BrutonGaster\_115
- Track 5 : PantheRoc\_66
- Track 6 : Wizard\_7, Fireball\_7, Gezellig\_7, Phlop\_7, PullumCavea\_7
- Track 7 : Cardigan\_164
- Track 8 : MoontowerMania\_81
- Track 9 : Ribeye\_81, Bizzy\_82, Gustavo\_83, Flatwoods\_82, Tycho\_81, Tangerine\_82, Derg\_79, Kwobi\_83, Kroos\_82, Saronaya\_83
- Track 10 : Jabberwocky\_80
- Track 11 : Ailee\_79, Shivanishola\_83
- Track 12 : Angelicage\_80
- Track 13 : Barsten\_83
- Track 14 : Affeca\_83
- Track 15 : Sitar\_81
- Track 16 : Phinally\_78, Leonard\_78, Phauci\_70, Hans\_79
- Track 17 : Inspectinfecti\_79, Ali17\_75
- Track 18 : Tardus\_83
- Track 19 : Verity\_79, DoctorFroggo\_80, Delrey21\_80
- Track 20 : Zitch\_81
- Track 21 : Thibault\_54
- Track 22 : RedRaider77\_105, JoieB\_106, Blackbeetle\_106, Gattaca\_104, Raela\_107, Poise\_106, Tesla\_101, MosMoris\_101
- Track 23 : Beelzebub\_109, Pringar\_101
- Track 24 : Marvin\_99
- Track 25 : VasuNzinga\_103

### ***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 37 of the 43 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Affeca\_83, Ailee\_79, Ali17\_75, Angelicage\_80, Barsten\_83, Beelzebub\_109, Bizzy\_82, Blackbeetle\_106, Delrey21\_80, Derg\_79, DoctorFroggo\_80, Fireball\_7, Flatwoods\_82, Gattaca\_104, Gezellig\_7, Gustavo\_83, Hans\_79, Inspectinfecti\_79, Jabberwocky\_80, JoieB\_106, Kroos\_82, Kwobi\_83, Leonard\_78, MoontowerMania\_81, MosMoris\_101, Phauci\_70, Phinally\_78, Phlop\_7, Poise\_106, Pringar\_101, PullumCavea\_7, Raela\_107, RedRaider77\_105, Ribeye\_81, Saronaya\_83, Shivanishola\_83, Sitar\_81, Tangerine\_82, Tardus\_83, Tesla\_101, Tycho\_81, Verity\_79, Wizard\_7, Zitch\_81,

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

- Marvin\_99, PantheRoc\_66, VasuNzinga\_103,

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

- Abscondus\_139, BrutonGaster\_115, Cardigan\_164, Dusty\_137, OneUp\_125, Thibault\_54, WilliamBoone\_138,

### Summary by start number:

Start 16:

- Found in 47 of 54 ( 87.0% ) of genes in pham
- Manual Annotations of this start: 37 of 43
- Called 93.6% of time when present
- Phage (with cluster) where this start called: Affeca\_83 (DE1), Ailee\_79 (DE1), Ali17\_75 (DE2), Angelicage\_80 (DE1), Barsten\_83 (DE1), Beelzebub\_109 (S), Bizzy\_82 (DE1), Blackbeetle\_106 (S), Delrey21\_80 (DE4), Derg\_79 (DE1), DoctorFroggo\_80 (DE4), Fireball\_7 (DC1), Flatwoods\_82 (DE1), Gattaca\_104 (S), Gezellig\_7 (DC1), Gustavo\_83 (DE1), Hans\_79 (DE2), Inspectinfecti\_79 (DE2), Jabberwocky\_80 (DE1), JoieB\_106 (S), Kroos\_82 (DE1), Kwobi\_83 (DE1), Leonard\_78 (DE2), MoontowerMania\_81 (DE1), MosMoris\_101 (S), Phauci\_70 (DE2), Phinally\_78 (DE2), Phlop\_7 (DC1), Poise\_106 (S), Pringar\_101 (S), PullumCavea\_7 (DC1), Raela\_107 (S), RedRaider77\_105 (S), Ribeye\_81 (DE1), Saronaya\_83 (DE1), Shivanishola\_83 (DE1), Sitar\_81 (DE1), Tangerine\_82 (DE1), Tardus\_83 (DE4), Tesla\_101 (S), Tycho\_81 (DE1), Verity\_79 (DE4), Wizard\_7 (DC1), Zitch\_81 (DE4),

Start 18:

- Found in 12 of 54 ( 22.2% ) of genes in pham
- Manual Annotations of this start: 2 of 43
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Marvin\_99 (S), VasuNzinga\_103 (S),

Start 19:

- Found in 7 of 54 ( 13.0% ) of genes in pham
- Manual Annotations of this start: 4 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abscondus\_139 (CQ), BrutonGaster\_115 (CQ2), Cardigan\_164 (DD), Dusty\_137 (CQ), OneUp\_125 (CQ2), Thibault\_54 (J), WilliamBoone\_138 (CQ1),

Start 20:

- Found in 27 of 54 ( 50.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 3.7% of time when present

- Phage (with cluster) where this start called: PantheRoc\_66 (CZ3),

### **Summary by clusters:**

There are 11 clusters represented in this pham: DE1, DE2, J, DE4, DD, S, CZ3, CQ2, CQ1, CQ, DC1,

Info for manual annotations of cluster CQ1:

- Start number 19 was manually annotated 1 time for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 19 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster DC1:

- Start number 16 was manually annotated 4 times for cluster DC1.

Info for manual annotations of cluster DE1:

- Start number 16 was manually annotated 13 times for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 16 was manually annotated 5 times for cluster DE2.

Info for manual annotations of cluster DE4:

- Start number 16 was manually annotated 5 times for cluster DE4.

Info for manual annotations of cluster J:

- Start number 19 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster S:

- Start number 16 was manually annotated 10 times for cluster S.
- Start number 18 was manually annotated 2 times for cluster S.

### **Gene Information:**

Gene: Abscondus\_139 Start: 76350, Stop: 76565, Start Num: 19

Candidate Starts for Abscondus\_139:

(Start: 19 @76350 has 4 MA's), (20, 76356), (21, 76365), (23, 76374),

Gene: Affeca\_83 Start: 57314, Stop: 57556, Start Num: 16

Candidate Starts for Affeca\_83:

(11, 57248), (15, 57296), (Start: 16 @57314 has 37 MA's), (20, 57329), (33, 57431), (35, 57437),

Gene: Ailee\_79 Start: 56341, Stop: 56583, Start Num: 16

Candidate Starts for Ailee\_79:

(11, 56275), (15, 56323), (Start: 16 @56341 has 37 MA's), (33, 56467), (35, 56473),

Gene: Ali17\_75 Start: 54408, Stop: 54647, Start Num: 16

Candidate Starts for Ali17\_75:

(Start: 16 @54408 has 37 MA's), (20, 54426), (26, 54456),

Gene: Angelicage\_80 Start: 57282, Stop: 57524, Start Num: 16

Candidate Starts for Angelicage\_80:

(11, 57216), (15, 57264), (Start: 16 @57282 has 37 MA's), (33, 57408), (35, 57414),

Gene: Barsten\_83 Start: 57245, Stop: 57487, Start Num: 16

Candidate Starts for Barsten\_83:

(11, 57179), (15, 57227), (Start: 16 @57245 has 37 MA's), (30, 57317), (35, 57377),

Gene: Beelzebub\_109 Start: 59235, Stop: 59002, Start Num: 16

Candidate Starts for Beelzebub\_109:

(6, 59370), (9, 59328), (Start: 16 @59235 has 37 MA's), (Start: 18 @59229 has 2 MA's), (21, 59205), (22, 59199), (28, 59175), (29, 59169), (32, 59115), (38, 59046),

Gene: Bizzy\_82 Start: 55643, Stop: 55882, Start Num: 16

Candidate Starts for Bizzy\_82:

(Start: 16 @55643 has 37 MA's), (20, 55658), (31, 55751), (37, 55790),

Gene: Blackbeetle\_106 Start: 58732, Stop: 58499, Start Num: 16

Candidate Starts for Blackbeetle\_106:

(6, 58867), (9, 58825), (Start: 16 @58732 has 37 MA's), (Start: 18 @58726 has 2 MA's), (21, 58702), (28, 58672), (29, 58666), (32, 58612), (36, 58594), (38, 58543),

Gene: BrutonGaster\_115 Start: 71154, Stop: 71369, Start Num: 19

Candidate Starts for BrutonGaster\_115:

(15, 71130), (Start: 19 @71154 has 4 MA's), (21, 71169), (28, 71199), (40, 71346),

Gene: Cardigan\_164 Start: 86618, Stop: 86845, Start Num: 19

Candidate Starts for Cardigan\_164:

(Start: 19 @86618 has 4 MA's), (23, 86642), (29, 86669),

Gene: Delrey21\_80 Start: 57154, Stop: 57393, Start Num: 16

Candidate Starts for Delrey21\_80:

(7, 57031), (8, 57040), (Start: 16 @57154 has 37 MA's), (20, 57172), (26, 57202),

Gene: Derg\_79 Start: 54265, Stop: 54504, Start Num: 16

Candidate Starts for Derg\_79:

(Start: 16 @54265 has 37 MA's), (20, 54280), (31, 54373), (37, 54412),

Gene: DoctorFroggo\_80 Start: 57154, Stop: 57393, Start Num: 16

Candidate Starts for DoctorFroggo\_80:

(7, 57031), (8, 57040), (Start: 16 @57154 has 37 MA's), (20, 57172), (26, 57202),

Gene: Dusty\_137 Start: 76177, Stop: 76392, Start Num: 19

Candidate Starts for Dusty\_137:

(Start: 19 @76177 has 4 MA's), (20, 76183), (21, 76192), (23, 76201),

Gene: Fireball\_7 Start: 3557, Stop: 3793, Start Num: 16

Candidate Starts for Fireball\_7:

(5, 3416), (Start: 16 @3557 has 37 MA's), (25, 3602), (34, 3683), (39, 3770),

Gene: Flatwoods\_82 Start: 55178, Stop: 55417, Start Num: 16

Candidate Starts for Flatwoods\_82:

(Start: 16 @55178 has 37 MA's), (20, 55193), (31, 55286), (37, 55325),

Gene: Gattaca\_104 Start: 59145, Stop: 58912, Start Num: 16

Candidate Starts for Gattaca\_104:

(6, 59280), (9, 59238), (Start: 16 @59145 has 37 MA's), (Start: 18 @59139 has 2 MA's), (21, 59115), (28, 59085), (29, 59079), (32, 59025), (36, 59007), (38, 58956),

Gene: Gezellig\_7 Start: 3557, Stop: 3793, Start Num: 16

Candidate Starts for Gezellig\_7:

(5, 3416), (Start: 16 @3557 has 37 MA's), (25, 3602), (34, 3683), (39, 3770),

Gene: Gustavo\_83 Start: 56361, Stop: 56600, Start Num: 16

Candidate Starts for Gustavo\_83:

(Start: 16 @56361 has 37 MA's), (20, 56376), (31, 56469), (37, 56508),

Gene: Hans\_79 Start: 55335, Stop: 55574, Start Num: 16

Candidate Starts for Hans\_79:

(7, 55212), (10, 55257), (Start: 16 @55335 has 37 MA's), (20, 55353), (26, 55383), (41, 55563),

Gene: Inspectinfecti\_79 Start: 55312, Stop: 55551, Start Num: 16

Candidate Starts for Inspectinfecti\_79:

(Start: 16 @55312 has 37 MA's), (20, 55330), (26, 55360),

Gene: Jabberwocky\_80 Start: 57354, Stop: 57596, Start Num: 16

Candidate Starts for Jabberwocky\_80:

(11, 57288), (15, 57336), (Start: 16 @57354 has 37 MA's), (33, 57480), (35, 57486),

Gene: JoieB\_106 Start: 59319, Stop: 59086, Start Num: 16

Candidate Starts for JoieB\_106:

(6, 59454), (9, 59412), (Start: 16 @59319 has 37 MA's), (Start: 18 @59313 has 2 MA's), (21, 59289), (28, 59259), (29, 59253), (32, 59199), (36, 59181), (38, 59130),

Gene: Kroos\_82 Start: 56304, Stop: 56543, Start Num: 16

Candidate Starts for Kroos\_82:

(Start: 16 @56304 has 37 MA's), (20, 56319), (31, 56412), (37, 56451),

Gene: Kwobi\_83 Start: 56813, Stop: 57052, Start Num: 16

Candidate Starts for Kwobi\_83:

(Start: 16 @56813 has 37 MA's), (20, 56828), (31, 56921), (37, 56960),

Gene: Leonard\_78 Start: 55375, Stop: 55614, Start Num: 16

Candidate Starts for Leonard\_78:

(7, 55252), (10, 55297), (Start: 16 @55375 has 37 MA's), (20, 55393), (26, 55423), (41, 55603),

Gene: Marvin\_99 Start: 58798, Stop: 58571, Start Num: 18

Candidate Starts for Marvin\_99:

(6, 58939), (9, 58897), (Start: 16 @58804 has 37 MA's), (Start: 18 @58798 has 2 MA's), (21, 58774), (28, 58744), (29, 58738), (32, 58684), (36, 58666), (38, 58615),

Gene: MoontowerMania\_81 Start: 57695, Stop: 57937, Start Num: 16

Candidate Starts for MoontowerMania\_81:

(11, 57629), (15, 57677), (Start: 16 @57695 has 37 MA's), (20, 57710), (25, 57737), (33, 57812), (35, 57818),

Gene: MosMoris\_101 Start: 59151, Stop: 58918, Start Num: 16

Candidate Starts for MosMoris\_101:

(6, 59286), (9, 59244), (Start: 16 @59151 has 37 MA's), (Start: 18 @59145 has 2 MA's), (21, 59121), (28, 59091), (29, 59085), (32, 59031), (36, 59013), (38, 58962),

Gene: OneUp\_125 Start: 75136, Stop: 75351, Start Num: 19

Candidate Starts for OneUp\_125:

(15, 75103), (Start: 19 @75136 has 4 MA's), (28, 75181), (40, 75328),

Gene: PantheRoc\_66 Start: 44042, Stop: 44269, Start Num: 20

Candidate Starts for PantheRoc\_66:

(12, 43970), (Start: 16 @44024 has 37 MA's), (20, 44042), (24, 44066),

Gene: Phauci\_70 Start: 52412, Stop: 52651, Start Num: 16

Candidate Starts for Phauci\_70:

(7, 52289), (10, 52334), (Start: 16 @52412 has 37 MA's), (20, 52430), (26, 52460), (41, 52640),

Gene: Phinally\_78 Start: 55372, Stop: 55611, Start Num: 16

Candidate Starts for Phinally\_78:

(7, 55249), (10, 55294), (Start: 16 @55372 has 37 MA's), (20, 55390), (26, 55420), (41, 55600),

Gene: Phlop\_7 Start: 3557, Stop: 3793, Start Num: 16

Candidate Starts for Phlop\_7:

(5, 3416), (Start: 16 @3557 has 37 MA's), (25, 3602), (34, 3683), (39, 3770),

Gene: Poise\_106 Start: 58732, Stop: 58499, Start Num: 16

Candidate Starts for Poise\_106:

(6, 58867), (9, 58825), (Start: 16 @58732 has 37 MA's), (Start: 18 @58726 has 2 MA's), (21, 58702), (28, 58672), (29, 58666), (32, 58612), (36, 58594), (38, 58543),

Gene: Pringar\_101 Start: 58522, Stop: 58289, Start Num: 16

Candidate Starts for Pringar\_101:

(6, 58657), (9, 58615), (Start: 16 @58522 has 37 MA's), (Start: 18 @58516 has 2 MA's), (21, 58492), (22, 58486), (28, 58462), (29, 58456), (32, 58402), (38, 58333),

Gene: PullumCavea\_7 Start: 3557, Stop: 3793, Start Num: 16

Candidate Starts for PullumCavea\_7:

(5, 3416), (Start: 16 @3557 has 37 MA's), (25, 3602), (34, 3683), (39, 3770),

Gene: Raela\_107 Start: 59287, Stop: 59054, Start Num: 16

Candidate Starts for Raela\_107:

(6, 59422), (9, 59380), (Start: 16 @59287 has 37 MA's), (Start: 18 @59281 has 2 MA's), (21, 59257), (28, 59227), (29, 59221), (32, 59167), (36, 59149), (38, 59098),

Gene: RedRaider77\_105 Start: 58680, Stop: 58447, Start Num: 16

Candidate Starts for RedRaider77\_105:

(6, 58815), (9, 58773), (Start: 16 @58680 has 37 MA's), (Start: 18 @58674 has 2 MA's), (21, 58650), (28, 58620), (29, 58614), (32, 58560), (36, 58542), (38, 58491),

Gene: Ribeye\_81 Start: 55504, Stop: 55743, Start Num: 16

Candidate Starts for Ribeye\_81:  
(Start: 16 @55504 has 37 MA's), (20, 55519), (31, 55612), (37, 55651),

Gene: Saronaya\_83 Start: 56361, Stop: 56600, Start Num: 16  
Candidate Starts for Saronaya\_83:  
(Start: 16 @56361 has 37 MA's), (20, 56376), (31, 56469), (37, 56508),

Gene: Shivanishola\_83 Start: 55640, Stop: 55882, Start Num: 16  
Candidate Starts for Shivanishola\_83:  
(11, 55574), (15, 55622), (Start: 16 @55640 has 37 MA's), (33, 55766), (35, 55772),

Gene: Sitar\_81 Start: 57762, Stop: 58004, Start Num: 16  
Candidate Starts for Sitar\_81:  
(11, 57696), (15, 57744), (Start: 16 @57762 has 37 MA's), (35, 57894),

Gene: Tangerine\_82 Start: 55637, Stop: 55876, Start Num: 16  
Candidate Starts for Tangerine\_82:  
(Start: 16 @55637 has 37 MA's), (20, 55652), (31, 55745), (37, 55784),

Gene: Tardus\_83 Start: 56466, Stop: 56705, Start Num: 16  
Candidate Starts for Tardus\_83:  
(7, 56343), (8, 56352), (Start: 16 @56466 has 37 MA's), (20, 56484), (26, 56514),

Gene: Tesla\_101 Start: 58527, Stop: 58294, Start Num: 16  
Candidate Starts for Tesla\_101:  
(6, 58662), (9, 58620), (Start: 16 @58527 has 37 MA's), (Start: 18 @58521 has 2 MA's), (21, 58497),  
(28, 58467), (29, 58461), (32, 58407), (36, 58389), (38, 58338),

Gene: Thibault\_54 Start: 44229, Stop: 44011, Start Num: 19  
Candidate Starts for Thibault\_54:  
(Start: 19 @44229 has 4 MA's), (27, 44187), (28, 44184), (38, 44058),

Gene: Tycho\_81 Start: 55839, Stop: 56078, Start Num: 16  
Candidate Starts for Tycho\_81:  
(Start: 16 @55839 has 37 MA's), (20, 55854), (31, 55947), (37, 55986),

Gene: VasuNzinga\_103 Start: 58610, Stop: 58383, Start Num: 18  
Candidate Starts for VasuNzinga\_103:  
(6, 58751), (9, 58709), (Start: 16 @58616 has 37 MA's), (Start: 18 @58610 has 2 MA's), (21, 58586),  
(28, 58556), (29, 58550), (32, 58496), (38, 58427),

Gene: Verity\_79 Start: 57016, Stop: 57255, Start Num: 16  
Candidate Starts for Verity\_79:  
(7, 56893), (8, 56902), (Start: 16 @57016 has 37 MA's), (20, 57034), (26, 57064),

Gene: WilliamBoone\_138 Start: 74263, Stop: 74478, Start Num: 19  
Candidate Starts for WilliamBoone\_138:  
(13, 74206), (14, 74215), (17, 74257), (Start: 19 @74263 has 4 MA's), (20, 74269), (21, 74278),

Gene: Wizard\_7 Start: 3557, Stop: 3793, Start Num: 16  
Candidate Starts for Wizard\_7:  
(5, 3416), (Start: 16 @3557 has 37 MA's), (25, 3602), (34, 3683), (39, 3770),



Gene: Zitch\_81 Start: 55195, Stop: 55434, Start Num: 16

Candidate Starts for Zitch\_81:

(1, 54091), (2, 54109), (3, 54190), (4, 54979), (7, 55072), (8, 55081), (Start: 16 @55195 has 37 MA's),  
(20, 55213), (26, 55243), (41, 55423),