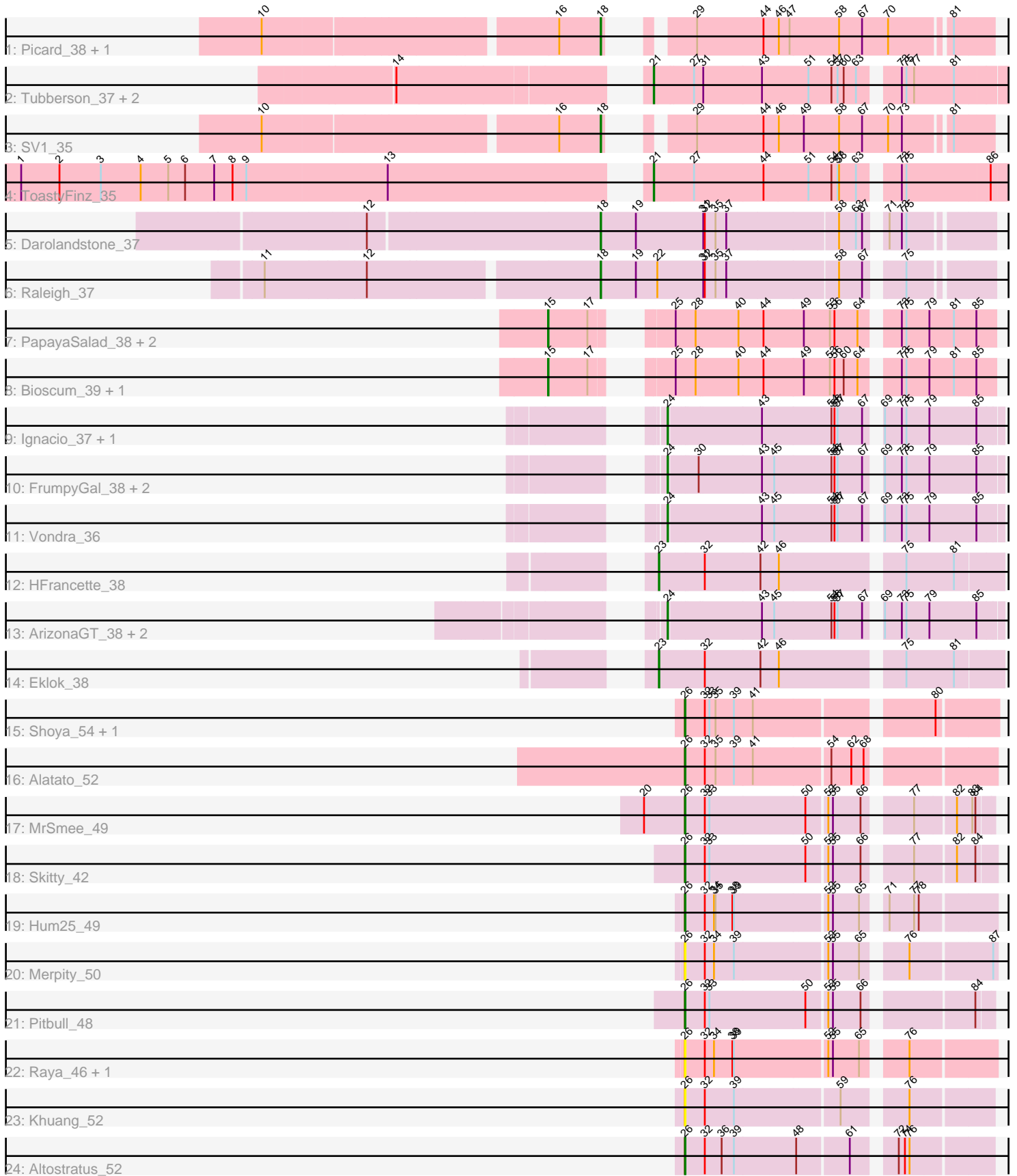


Pham 306640



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 306640 Report

This analysis was run 06/27/26 on database version 652.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 306640 has 37 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Picard\_38, Mojorita\_38
- Track 2 : Tubberson\_37, SoJo\_37, DaRealMyers\_37
- Track 3 : SV1\_35
- Track 4 : ToastyFinz\_35
- Track 5 : Darolandstone\_37
- Track 6 : Raleigh\_37
- Track 7 : PapayaSalad\_38, Lishka\_35, Austintatious\_35
- Track 8 : Bioscum\_39, Ididsumtinwong\_39
- Track 9 : Ignacio\_37, AxeJC\_37
- Track 10 : FrumpyGal\_38, Eastland\_37, Piccadilly\_37
- Track 11 : Vondra\_36
- Track 12 : HFrancette\_38
- Track 13 : ArizonaGT\_38, Schlegelian\_39, Cumberbatch\_38
- Track 14 : Eklok\_38
- Track 15 : Shoya\_54, Gibbzilla\_61
- Track 16 : Alatato\_52
- Track 17 : MrSmee\_49
- Track 18 : Skitty\_42
- Track 19 : Hum25\_49
- Track 20 : Merpity\_50
- Track 21 : Pitbull\_48
- Track 22 : Raya\_46, Skyerus\_41
- Track 23 : Khuang\_52
- Track 24 : Altostratus\_52

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

The start number called the most often in the published annotations is 24, it was called in 9 of the 31 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ArizonaGT\_38, AxeJC\_37, Cumberbatch\_38, Eastland\_37, FrumpyGal\_38, Ignacio\_37, Piccadilly\_37, Schlegelian\_39, Vondra\_36,

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

- 

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

- Alatato\_52, Altostratus\_52, Austintatious\_35, Bioscum\_39, DaRealMyers\_37, Darolandstone\_37, Eklok\_38, Gibbzilla\_61, HFrancette\_38, Hum25\_49, Ididsumtinwong\_39, Khuang\_52, Lishka\_35, Merpity\_50, Mojorita\_38, MrSmee\_49, PapayaSalad\_38, Picard\_38, Pitbull\_48, Raleigh\_37, Raya\_46, SV1\_35, Shoya\_54, Skitty\_42, Skyerus\_41, SoJo\_37, ToastyFinz\_35, Tubberson\_37,

### Summary by start number:

Start 15:

- Found in 5 of 37 ( 13.5% ) of genes in pham
- Manual Annotations of this start: 5 of 31
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Austintatious\_35 (BC3), Bioscum\_39 (BC3), Ididsumtinwong\_39 (BC3), Lishka\_35 (BC3), PapayaSalad\_38 (BC3),

Start 18:

- Found in 5 of 37 ( 13.5% ) of genes in pham
- Manual Annotations of this start: 5 of 31
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Darolandstone\_37 (BC2), Mojorita\_38 (BC1), Picard\_38 (BC1), Raleigh\_37 (BC2), SV1\_35 (BC1),

Start 21:

- Found in 4 of 37 ( 10.8% ) of genes in pham
- Manual Annotations of this start: 3 of 31
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DaRealMyers\_37 (BC1), SoJo\_37 (BC1), ToastyFinz\_35 (BC1), Tubberson\_37 (BC1),

Start 23:

- Found in 2 of 37 ( 5.4% ) of genes in pham
- Manual Annotations of this start: 2 of 31
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Eklok\_38 (BP), HFrancette\_38 (BP),

Start 24:

- Found in 9 of 37 ( 24.3% ) of genes in pham
- Manual Annotations of this start: 9 of 31
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArizonaGT\_38 (BP), AxeJC\_37 (BP), Cumberbatch\_38 (BP), Eastland\_37 (BP), FrumpyGal\_38 (BP), Ignacio\_37 (BP), Piccadilly\_37 (BP), Schlegelian\_39 (BP), Vondra\_36 (BP),

Start 26:

- Found in 12 of 37 ( 32.4% ) of genes in pham

- Manual Annotations of this start: 7 of 31
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alatato\_52 (FB), Altostratus\_52 (FS), Gibbzilla\_61 (FB), Hum25\_49 (FQ1), Khuang\_52 (FS), Merpity\_50 (FQ1), MrSmee\_49 (FQ1), Pitbull\_48 (FQ1), Raya\_46 (FQ2), Shoya\_54 (FB), Skitty\_42 (FQ1), Skyerus\_41 (FQ2),

### **Summary by clusters:**

There are 8 clusters represented in this pham: FS, FB, BP, FQ2, FQ1, BC1, BC2, BC3,

Info for manual annotations of cluster BC1:

- Start number 18 was manually annotated 3 times for cluster BC1.
- Start number 21 was manually annotated 3 times for cluster BC1.

Info for manual annotations of cluster BC2:

- Start number 18 was manually annotated 2 times for cluster BC2.

Info for manual annotations of cluster BC3:

- Start number 15 was manually annotated 5 times for cluster BC3.

Info for manual annotations of cluster BP:

- Start number 23 was manually annotated 2 times for cluster BP.
- Start number 24 was manually annotated 9 times for cluster BP.

Info for manual annotations of cluster FB:

- Start number 26 was manually annotated 2 times for cluster FB.

Info for manual annotations of cluster FQ1:

- Start number 26 was manually annotated 4 times for cluster FQ1.

Info for manual annotations of cluster FS:

- Start number 26 was manually annotated 1 time for cluster FS.

### **Gene Information:**

Gene: Alatato\_52 Start: 30671, Stop: 31222, Start Num: 26

Candidate Starts for Alatato\_52:

(Start: 26 @30671 has 7 MA's), (32, 30710), (35, 30731), (39, 30767), (41, 30803), (54, 30941), (62, 30980), (68, 31004),

Gene: Altostratus\_52 Start: 30510, Stop: 31055, Start Num: 26

Candidate Starts for Altostratus\_52:

(Start: 26 @30510 has 7 MA's), (32, 30549), (36, 30582), (39, 30606), (48, 30723), (61, 30816), (72, 30882), (74, 30894), (76, 30903),

Gene: ArizonaGT\_38 Start: 26274, Stop: 26873, Start Num: 24

Candidate Starts for ArizonaGT\_38:

(Start: 24 @26274 has 9 MA's), (43, 26442), (45, 26463), (54, 26574), (56, 26580), (57, 26586), (67, 26634), (69, 26649), (73, 26682), (75, 26691), (79, 26736), (85, 26826),

Gene: Austintatious\_35 Start: 24116, Stop: 24850, Start Num: 15

Candidate Starts for Austintatious\_35:

(Start: 15 @24116 has 5 MA's), (17, 24185), (25, 24269), (28, 24302), (40, 24383), (44, 24431), (49, 24506), (53, 24557), (56, 24566), (64, 24611), (73, 24668), (75, 24677), (79, 24722), (81, 24770), (85, 24812),

Gene: AxeJC\_37 Start: 26248, Stop: 26847, Start Num: 24

Candidate Starts for AxeJC\_37:

(Start: 24 @26248 has 9 MA's), (43, 26416), (54, 26548), (56, 26554), (57, 26560), (67, 26608), (69, 26623), (73, 26656), (75, 26665), (79, 26710), (85, 26800),

Gene: Bioscum\_39 Start: 26417, Stop: 27151, Start Num: 15

Candidate Starts for Bioscum\_39:

(Start: 15 @26417 has 5 MA's), (17, 26486), (25, 26570), (28, 26603), (40, 26684), (44, 26732), (49, 26807), (53, 26858), (56, 26867), (60, 26885), (64, 26912), (73, 26969), (75, 26978), (79, 27023), (81, 27071), (85, 27113),

Gene: Cumberbatch\_38 Start: 26274, Stop: 26873, Start Num: 24

Candidate Starts for Cumberbatch\_38:

(Start: 24 @26274 has 9 MA's), (43, 26442), (45, 26463), (54, 26574), (56, 26580), (57, 26586), (67, 26634), (69, 26649), (73, 26682), (75, 26691), (79, 26736), (85, 26826),

Gene: DaRealMyers\_37 Start: 28133, Stop: 28774, Start Num: 21

Candidate Starts for DaRealMyers\_37:

(14, 27719), (Start: 21 @28133 has 3 MA's), (27, 28208), (31, 28223), (43, 28337), (51, 28424), (54, 28469), (57, 28481), (60, 28493), (63, 28517), (73, 28577), (75, 28586), (77, 28601), (81, 28679),

Gene: Darolandstone\_37 Start: 28052, Stop: 28756, Start Num: 18

Candidate Starts for Darolandstone\_37:

(12, 27611), (Start: 18 @28052 has 5 MA's), (19, 28121), (31, 28253), (32, 28256), (35, 28277), (37, 28298), (58, 28505), (63, 28538), (67, 28550), (71, 28574), (73, 28598), (75, 28607),

Gene: Eastland\_37 Start: 26233, Stop: 26832, Start Num: 24

Candidate Starts for Eastland\_37:

(Start: 24 @26233 has 9 MA's), (30, 26281), (43, 26401), (45, 26422), (54, 26533), (56, 26539), (57, 26545), (67, 26593), (69, 26608), (73, 26641), (75, 26650), (79, 26695), (85, 26785),

Gene: Eklok\_38 Start: 26293, Stop: 26928, Start Num: 23

Candidate Starts for Eklok\_38:

(Start: 23 @26293 has 2 MA's), (32, 26380), (42, 26488), (46, 26524), (75, 26743), (81, 26836),

Gene: FrumpyGal\_38 Start: 26233, Stop: 26832, Start Num: 24

Candidate Starts for FrumpyGal\_38:

(Start: 24 @26233 has 9 MA's), (30, 26281), (43, 26401), (45, 26422), (54, 26533), (56, 26539), (57, 26545), (67, 26593), (69, 26608), (73, 26641), (75, 26650), (79, 26695), (85, 26785),

Gene: Gibbzilla\_61 Start: 32014, Stop: 32568, Start Num: 26

Candidate Starts for Gibbzilla\_61:

(Start: 26 @32014 has 7 MA's), (32, 32053), (33, 32062), (35, 32074), (39, 32110), (41, 32146), (80, 32455),

Gene: HFrancette\_38 Start: 26977, Stop: 27612, Start Num: 23

Candidate Starts for HFrancette\_38:

(Start: 23 @26977 has 2 MA's), (32, 27064), (42, 27172), (46, 27208), (75, 27427), (81, 27520),

Gene: Hum25\_49 Start: 28897, Stop: 29445, Start Num: 26

Candidate Starts for Hum25\_49:

(Start: 26 @28897 has 7 MA's), (32, 28933), (34, 28951), (35, 28954), (38, 28987), (39, 28990), (52, 29158), (55, 29167), (65, 29218), (71, 29248), (77, 29296), (78, 29305),

Gene: Ididsumtinwong\_39 Start: 26417, Stop: 27151, Start Num: 15

Candidate Starts for Ididsumtinwong\_39:

(Start: 15 @26417 has 5 MA's), (17, 26486), (25, 26570), (28, 26603), (40, 26684), (44, 26732), (49, 26807), (53, 26858), (56, 26867), (60, 26885), (64, 26912), (73, 26969), (75, 26978), (79, 27023), (81, 27071), (85, 27113),

Gene: Ignacio\_37 Start: 26926, Stop: 27525, Start Num: 24

Candidate Starts for Ignacio\_37:

(Start: 24 @26926 has 9 MA's), (43, 27094), (54, 27226), (56, 27232), (57, 27238), (67, 27286), (69, 27301), (73, 27334), (75, 27343), (79, 27388), (85, 27478),

Gene: Khuang\_52 Start: 30706, Stop: 31251, Start Num: 26

Candidate Starts for Khuang\_52:

(Start: 26 @30706 has 7 MA's), (32, 30745), (39, 30802), (59, 30994), (76, 31099),

Gene: Lishka\_35 Start: 24116, Stop: 24850, Start Num: 15

Candidate Starts for Lishka\_35:

(Start: 15 @24116 has 5 MA's), (17, 24185), (25, 24269), (28, 24302), (40, 24383), (44, 24431), (49, 24506), (53, 24557), (56, 24566), (64, 24611), (73, 24668), (75, 24677), (79, 24722), (81, 24770), (85, 24812),

Gene: Merpity\_50 Start: 29915, Stop: 30463, Start Num: 26

Candidate Starts for Merpity\_50:

(Start: 26 @29915 has 7 MA's), (32, 29951), (34, 29969), (39, 30008), (52, 30176), (55, 30185), (65, 30236), (76, 30305), (87, 30455),

Gene: Mojorita\_38 Start: 27040, Stop: 27669, Start Num: 18

Candidate Starts for Mojorita\_38:

(10, 26422), (16, 26959), (Start: 18 @27040 has 5 MA's), (29, 27121), (44, 27250), (46, 27277), (47, 27298), (58, 27391), (67, 27436), (70, 27487), (81, 27595),

Gene: MrSmee\_49 Start: 30095, Stop: 30640, Start Num: 26

Candidate Starts for MrSmee\_49:

(20, 30017), (Start: 26 @30095 has 7 MA's), (32, 30131), (33, 30140), (50, 30323), (52, 30359), (55, 30368), (66, 30422), (77, 30497), (82, 30572), (83, 30602), (84, 30608),

Gene: PapayaSalad\_38 Start: 26702, Stop: 27436, Start Num: 15

Candidate Starts for PapayaSalad\_38:

(Start: 15 @26702 has 5 MA's), (17, 26771), (25, 26855), (28, 26888), (40, 26969), (44, 27017), (49, 27092), (53, 27143), (56, 27152), (64, 27197), (73, 27254), (75, 27263), (79, 27308), (81, 27356), (85, 27398),

Gene: Picard\_38 Start: 27238, Stop: 27867, Start Num: 18

Candidate Starts for Picard\_38:

(10, 26620), (16, 27157), (Start: 18 @27238 has 5 MA's), (29, 27319), (44, 27448), (46, 27475), (47, 27496), (58, 27589), (67, 27634), (70, 27685), (81, 27793),

Gene: Piccadilly\_37 Start: 26232, Stop: 26831, Start Num: 24

Candidate Starts for Piccadilly\_37:

(Start: 24 @26232 has 9 MA's), (30, 26280), (43, 26400), (45, 26421), (54, 26532), (56, 26538), (57, 26544), (67, 26592), (69, 26607), (73, 26640), (75, 26649), (79, 26694), (85, 26784),

Gene: Pitbull\_48 Start: 28431, Stop: 28976, Start Num: 26

Candidate Starts for Pitbull\_48:

(Start: 26 @28431 has 7 MA's), (32, 28467), (33, 28476), (50, 28659), (52, 28695), (55, 28704), (66, 28758), (84, 28944),

Gene: Raleigh\_37 Start: 28558, Stop: 29259, Start Num: 18

Candidate Starts for Raleigh\_37:

(11, 27940), (12, 28132), (Start: 18 @28558 has 5 MA's), (19, 28627), (22, 28666), (31, 28756), (32, 28759), (35, 28780), (37, 28801), (58, 29008), (67, 29053), (75, 29110),

Gene: Raya\_46 Start: 28596, Stop: 29144, Start Num: 26

Candidate Starts for Raya\_46:

(Start: 26 @28596 has 7 MA's), (32, 28632), (34, 28650), (38, 28686), (39, 28689), (52, 28857), (55, 28866), (65, 28917), (76, 28986),

Gene: SV1\_35 Start: 25947, Stop: 26576, Start Num: 18

Candidate Starts for SV1\_35:

(10, 25329), (16, 25866), (Start: 18 @25947 has 5 MA's), (29, 26028), (44, 26157), (46, 26184), (49, 26232), (58, 26298), (67, 26343), (70, 26394), (73, 26421), (81, 26502),

Gene: Schlegelian\_39 Start: 26642, Stop: 27241, Start Num: 24

Candidate Starts for Schlegelian\_39:

(Start: 24 @26642 has 9 MA's), (43, 26810), (45, 26831), (54, 26942), (56, 26948), (57, 26954), (67, 27002), (69, 27017), (73, 27050), (75, 27059), (79, 27104), (85, 27194),

Gene: Shoya\_54 Start: 30638, Stop: 31192, Start Num: 26

Candidate Starts for Shoya\_54:

(Start: 26 @30638 has 7 MA's), (32, 30677), (33, 30686), (35, 30698), (39, 30734), (41, 30770), (80, 31079),

Gene: Skitty\_42 Start: 27777, Stop: 28328, Start Num: 26

Candidate Starts for Skitty\_42:

(Start: 26 @27777 has 7 MA's), (32, 27813), (33, 27822), (50, 28005), (52, 28041), (55, 28050), (66, 28104), (77, 28179), (82, 28254), (84, 28290),

Gene: Skyerus\_41 Start: 26714, Stop: 27262, Start Num: 26

Candidate Starts for Skyerus\_41:

(Start: 26 @26714 has 7 MA's), (32, 26750), (34, 26768), (38, 26804), (39, 26807), (52, 26975), (55, 26984), (65, 27035), (76, 27104),

Gene: SoJo\_37 Start: 28128, Stop: 28769, Start Num: 21

Candidate Starts for SoJo\_37:

(14, 27714), (Start: 21 @28128 has 3 MA's), (27, 28203), (31, 28218), (43, 28332), (51, 28419), (54, 28464), (57, 28476), (60, 28488), (63, 28512), (73, 28572), (75, 28581), (77, 28596), (81, 28674),

Gene: ToastyFinz\_35 Start: 28209, Stop: 28868, Start Num: 21

Candidate Starts for ToastyFinz\_35:

(1, 27051), (2, 27126), (3, 27207), (4, 27285), (5, 27339), (6, 27372), (7, 27429), (8, 27465), (9, 27492), (13, 27765), (Start: 21 @28209 has 3 MA's), (27, 28284), (44, 28416), (51, 28500), (54, 28545), (57, 28557), (58, 28560), (63, 28593), (73, 28653), (75, 28662), (86, 28821),

Gene: Tubberson\_37 Start: 28130, Stop: 28771, Start Num: 21

Candidate Starts for Tubberson\_37:

(14, 27716), (Start: 21 @28130 has 3 MA's), (27, 28205), (31, 28220), (43, 28334), (51, 28421), (54, 28466), (57, 28478), (60, 28490), (63, 28514), (73, 28574), (75, 28583), (77, 28598), (81, 28676),

Gene: Vondra\_36 Start: 26093, Stop: 26692, Start Num: 24

Candidate Starts for Vondra\_36:

(Start: 24 @26093 has 9 MA's), (43, 26261), (45, 26282), (54, 26393), (56, 26399), (57, 26405), (67, 26453), (69, 26468), (73, 26501), (75, 26510), (79, 26555), (85, 26645),