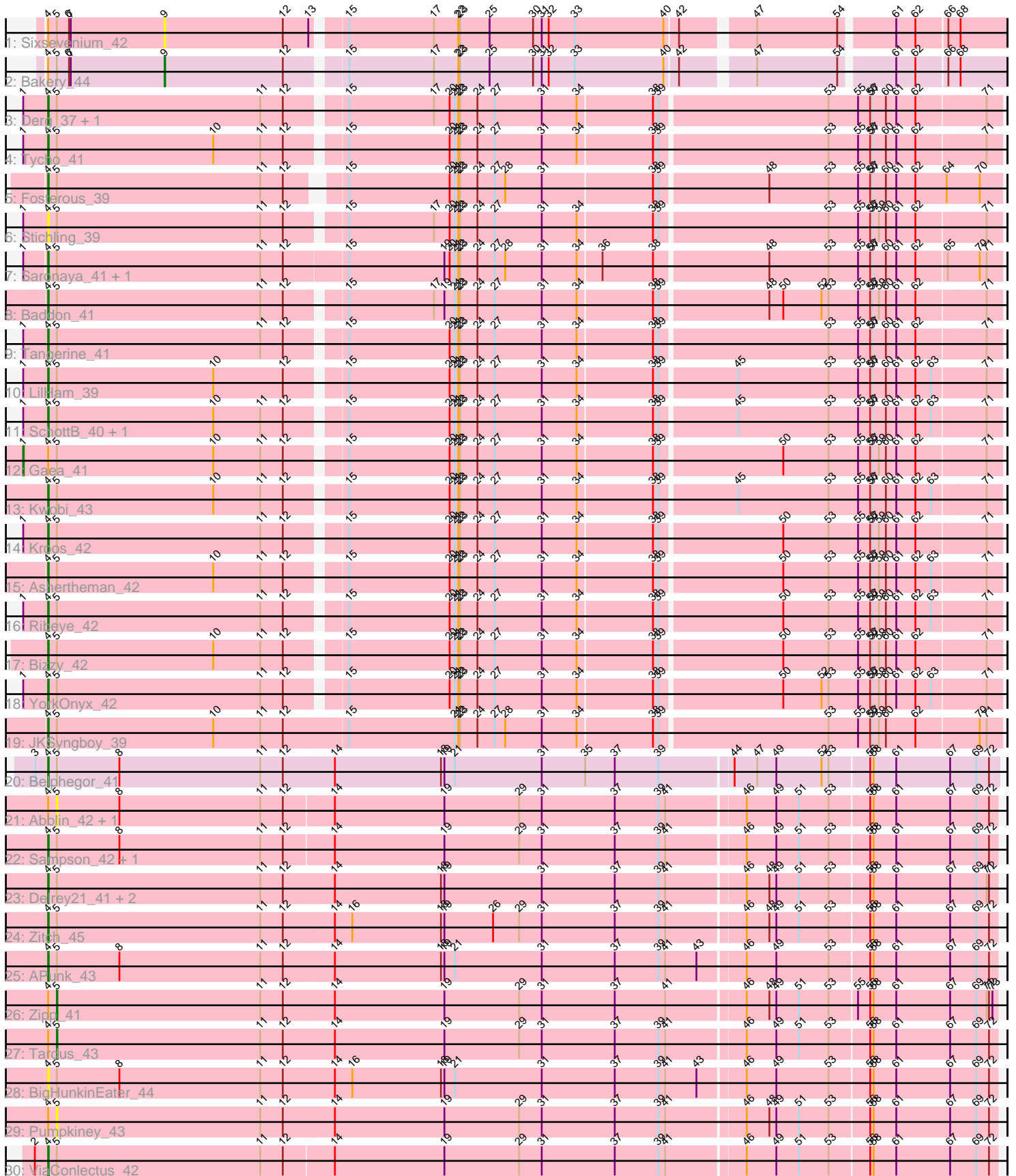


Pham 296748



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 296748 Report

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

Pham number 296748 has 37 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Sixsevenium\_42
- Track 2 : Bakery\_44
- Track 3 : Derg\_37, Flatwoods\_42
- Track 4 : Tycho\_41
- Track 5 : Fosterous\_39
- Track 6 : Stichling\_39
- Track 7 : Saronaya\_41, Gustavo\_41
- Track 8 : Baddon\_41
- Track 9 : Tangerine\_41
- Track 10 : LilHam\_39
- Track 11 : SchottB\_40, Baumdotcom\_40
- Track 12 : Gaea\_41
- Track 13 : Kwobi\_43
- Track 14 : Kroos\_42
- Track 15 : Ashertheman\_42
- Track 16 : Ribeye\_42
- Track 17 : Bizzy\_42
- Track 18 : YorkOnyx\_42
- Track 19 : JKSyngboy\_39
- Track 20 : Belphegor\_41
- Track 21 : Abblin\_42, Natkenzie\_42
- Track 22 : Sampson\_42, Scioto\_43
- Track 23 : Delrey21\_41, Verity\_41, DoctorFroggo\_41
- Track 24 : Zitch\_45
- Track 25 : APunk\_43
- Track 26 : Zipp\_41
- Track 27 : Tardus\_43
- Track 28 : BigHunkinEater\_44
- Track 29 : Pumpkiney\_43
- Track 30 : ViaConlectus\_42

***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 26 of the 30 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- APunk\_43, Ashertheman\_42, Baddon\_41, Baumdotcom\_40, Belphegor\_41, BigHunkinEater\_44, Bizzy\_42, Delrey21\_41, Derg\_37, DoctorFroggo\_41, Flatwoods\_42, Fosterous\_39, Gustavo\_41, JKSyngboy\_39, Kroos\_42, Kwobi\_43, LilHam\_39, Ribeye\_42, Sampson\_42, Saronaya\_41, SchottB\_40, Scioto\_43, Stichling\_39, Tangerine\_41, Tycho\_41, Verity\_41, ViaConlectus\_42, YorkOnyx\_42, Zitch\_45,

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

- Abblin\_42, Bakery\_44, Gaea\_41, Natkenzie\_42, Pumpkiney\_43, Sixsevenium\_42, Tardus\_43, Zipp\_41,

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

- 

### Summary by start number:

Start 1:

- Found in 14 of 37 ( 37.8% ) of genes in pham
- Manual Annotations of this start: 1 of 30
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Gaea\_41 (DE1),

Start 4:

- Found in 37 of 37 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 26 of 30
- Called 78.4% of time when present
- Phage (with cluster) where this start called: APunk\_43 (DE4), Ashertheman\_42 (DE1), Baddon\_41 (DE1), Baumdotcom\_40 (DE1), Belphegor\_41 (DE2), BigHunkinEater\_44 (DE4), Bizzy\_42 (DE1), Delrey21\_41 (DE4), Derg\_37 (DE1), DoctorFroggo\_41 (DE4), Flatwoods\_42 (DE1), Fosterous\_39 (DE1), Gustavo\_41 (DE1), JKSyngboy\_39 (DE1), Kroos\_42 (DE1), Kwobi\_43 (DE1), LilHam\_39 (DE1), Ribeye\_42 (DE1), Sampson\_42 (DE4), Saronaya\_41 (DE1), SchottB\_40 (DE1), Scioto\_43 (DE4), Stichling\_39 (DE1), Tangerine\_41 (DE1), Tycho\_41 (DE1), Verity\_41 (DE4), ViaConlectus\_42 (DE4), YorkOnyx\_42 (DE1), Zitch\_45 (DE4),

Start 5:

- Found in 37 of 37 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 2 of 30
- Called 13.5% of time when present
- Phage (with cluster) where this start called: Abblin\_42 (DE4), Natkenzie\_42 (DE4), Pumpkiney\_43 (DE4), Tardus\_43 (DE4), Zipp\_41 (DE4),

Start 9:

- Found in 2 of 37 ( 5.4% ) of genes in pham
- Manual Annotations of this start: 1 of 30
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bakery\_44 (DC1), Sixsevenium\_42 (DC),

## Summary by clusters:

There are 5 clusters represented in this pham: DE1, DE2, DE4, DC, DC1,

Info for manual annotations of cluster DC1:

- Start number 9 was manually annotated 1 time for cluster DC1.

Info for manual annotations of cluster DE1:

- Start number 1 was manually annotated 1 time for cluster DE1.
- Start number 4 was manually annotated 18 times for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 4 was manually annotated 1 time for cluster DE2.

Info for manual annotations of cluster DE4:

- Start number 4 was manually annotated 7 times for cluster DE4.
- Start number 5 was manually annotated 2 times for cluster DE4.

## Gene Information:

Gene: APunk\_43 Start: 37152, Stop: 38765, Start Num: 4

Candidate Starts for APunk\_43:

(Start: 4 @37152 has 26 MA's), (Start: 5 @37167 has 2 MA's), (8, 37275), (11, 37518), (12, 37557), (14, 37644), (18, 37827), (19, 37833), (21, 37851), (31, 38001), (37, 38127), (39, 38202), (41, 38214), (43, 38268), (46, 38343), (49, 38394), (53, 38484), (56, 38550), (58, 38556), (61, 38592), (67, 38685), (69, 38730), (72, 38751),

Gene: Abblin\_42 Start: 37710, Stop: 39302, Start Num: 5

Candidate Starts for Abblin\_42:

(Start: 4 @37695 has 26 MA's), (Start: 5 @37710 has 2 MA's), (8, 37818), (11, 38061), (12, 38100), (14, 38181), (19, 38370), (29, 38499), (31, 38538), (37, 38664), (39, 38739), (41, 38751), (46, 38880), (49, 38931), (51, 38970), (53, 39021), (56, 39087), (58, 39093), (61, 39129), (67, 39222), (69, 39267), (72, 39288),

Gene: Ashertheman\_42 Start: 36687, Stop: 38270, Start Num: 4

Candidate Starts for Ashertheman\_42:

(Start: 4 @36687 has 26 MA's), (Start: 5 @36702 has 2 MA's), (10, 36972), (11, 37053), (12, 37092), (15, 37176), (20, 37347), (21, 37356), (22, 37362), (23, 37365), (24, 37395), (27, 37425), (31, 37506), (34, 37566), (38, 37692), (39, 37701), (50, 37905), (53, 37983), (55, 38031), (56, 38052), (57, 38055), (59, 38067), (60, 38079), (61, 38094), (62, 38127), (63, 38154), (71, 38244),

Gene: Baddon\_41 Start: 37222, Stop: 38805, Start Num: 4

Candidate Starts for Baddon\_41:

(Start: 4 @37222 has 26 MA's), (Start: 5 @37237 has 2 MA's), (11, 37588), (12, 37627), (15, 37711), (17, 37855), (19, 37873), (21, 37891), (22, 37897), (23, 37900), (24, 37930), (27, 37960), (31, 38041), (34, 38101), (38, 38227), (39, 38236), (48, 38416), (50, 38440), (52, 38506), (53, 38518), (55, 38566), (56, 38587), (57, 38590), (59, 38602), (60, 38614), (61, 38629), (62, 38662), (71, 38779),

Gene: Bakery\_44 Start: 34687, Stop: 36054, Start Num: 9

Candidate Starts for Bakery\_44:

(Start: 4 @34486 has 26 MA's), (Start: 5 @34501 has 2 MA's), (6, 34522), (7, 34525), (Start: 9 @34687 has 1 MA's), (12, 34891), (15, 34975), (17, 35119), (22, 35161), (23, 35164), (25, 35215), (30, 35290), (31, 35305), (32, 35317), (33, 35362), (40, 35515), (42, 35536), (47, 35647), (54, 35785), (61, 35869), (62, 35902), (66, 35953), (68, 35974),

Gene: Baumdotcom\_40 Start: 36074, Stop: 37657, Start Num: 4

Candidate Starts for Baumdotcom\_40:

(Start: 1 @36035 has 1 MA's), (Start: 4 @36074 has 26 MA's), (Start: 5 @36089 has 2 MA's), (10, 36359), (11, 36440), (12, 36479), (15, 36563), (20, 36734), (21, 36743), (22, 36749), (23, 36752), (24, 36782), (27, 36812), (31, 36893), (34, 36953), (38, 37079), (39, 37088), (45, 37214), (53, 37370), (55, 37418), (56, 37439), (57, 37442), (60, 37466), (61, 37481), (62, 37514), (63, 37541), (71, 37631),

Gene: Belphegor\_41 Start: 37453, Stop: 39072, Start Num: 4

Candidate Starts for Belphegor\_41:

(3, 37432), (Start: 4 @37453 has 26 MA's), (Start: 5 @37468 has 2 MA's), (8, 37576), (11, 37819), (12, 37858), (14, 37948), (18, 38131), (19, 38137), (21, 38155), (31, 38305), (35, 38380), (37, 38431), (39, 38506), (44, 38626), (47, 38665), (49, 38698), (52, 38776), (53, 38788), (56, 38854), (58, 38860), (61, 38896), (67, 38989), (69, 39034), (72, 39055),

Gene: BigHunkinEater\_44 Start: 36933, Stop: 38546, Start Num: 4

Candidate Starts for BigHunkinEater\_44:

(Start: 4 @36933 has 26 MA's), (Start: 5 @36948 has 2 MA's), (8, 37056), (11, 37299), (12, 37338), (14, 37425), (16, 37455), (18, 37608), (19, 37614), (21, 37632), (31, 37782), (37, 37908), (39, 37983), (41, 37995), (43, 38049), (46, 38124), (49, 38175), (53, 38265), (56, 38331), (58, 38337), (61, 38373), (67, 38466), (69, 38511), (72, 38532),

Gene: Bizzy\_42 Start: 36382, Stop: 37965, Start Num: 4

Candidate Starts for Bizzy\_42:

(Start: 4 @36382 has 26 MA's), (Start: 5 @36397 has 2 MA's), (10, 36667), (11, 36748), (12, 36787), (15, 36871), (20, 37042), (21, 37051), (22, 37057), (23, 37060), (24, 37090), (27, 37120), (31, 37201), (34, 37261), (38, 37387), (39, 37396), (50, 37600), (53, 37678), (55, 37726), (56, 37747), (57, 37750), (59, 37762), (60, 37774), (61, 37789), (62, 37822), (71, 37939),

Gene: Delrey21\_41 Start: 37882, Stop: 39492, Start Num: 4

Candidate Starts for Delrey21\_41:

(Start: 4 @37882 has 26 MA's), (Start: 5 @37897 has 2 MA's), (11, 38248), (12, 38287), (14, 38371), (18, 38554), (19, 38560), (31, 38728), (37, 38854), (39, 38929), (41, 38941), (46, 39070), (48, 39109), (49, 39121), (51, 39160), (53, 39211), (56, 39277), (58, 39283), (61, 39319), (67, 39412), (69, 39457), (71, 39475), (72, 39478),

Gene: Derg\_37 Start: 35972, Stop: 37555, Start Num: 4

Candidate Starts for Derg\_37:

(Start: 1 @35933 has 1 MA's), (Start: 4 @35972 has 26 MA's), (Start: 5 @35987 has 2 MA's), (11, 36338), (12, 36377), (15, 36461), (17, 36605), (20, 36632), (21, 36641), (22, 36647), (23, 36650), (24, 36680), (27, 36710), (31, 36791), (34, 36851), (38, 36977), (39, 36986), (53, 37268), (55, 37316), (56, 37337), (57, 37340), (60, 37364), (61, 37379), (62, 37412), (71, 37529),

Gene: DoctorFroggo\_41 Start: 37882, Stop: 39492, Start Num: 4

Candidate Starts for DoctorFroggo\_41:

(Start: 4 @37882 has 26 MA's), (Start: 5 @37897 has 2 MA's), (11, 38248), (12, 38287), (14, 38371), (18, 38554), (19, 38560), (31, 38728), (37, 38854), (39, 38929), (41, 38941), (46, 39070), (48, 39109), (49, 39121), (51, 39160), (53, 39211), (56, 39277), (58, 39283), (61, 39319), (67, 39412), (69, 39457), (71, 39475), (72, 39478),

Gene: Flatwoods\_42 Start: 36324, Stop: 37907, Start Num: 4

Candidate Starts for Flatwoods\_42:

(Start: 1 @36285 has 1 MA's), (Start: 4 @36324 has 26 MA's), (Start: 5 @36339 has 2 MA's), (11, 36690), (12, 36729), (15, 36813), (17, 36957), (20, 36984), (21, 36993), (22, 36999), (23, 37002), (24, 37032), (27, 37062), (31, 37143), (34, 37203), (38, 37329), (39, 37338), (53, 37620), (55, 37668), (56, 37689), (57, 37692), (60, 37716), (61, 37731), (62, 37764), (71, 37881),

Gene: Fosterous\_39 Start: 36067, Stop: 37644, Start Num: 4

Candidate Starts for Fosterous\_39:

(Start: 4 @36067 has 26 MA's), (Start: 5 @36082 has 2 MA's), (11, 36433), (12, 36472), (15, 36547), (20, 36718), (21, 36727), (22, 36733), (23, 36736), (24, 36766), (27, 36796), (28, 36814), (31, 36877), (38, 37063), (39, 37072), (48, 37252), (53, 37354), (55, 37405), (56, 37426), (57, 37429), (60, 37453), (61, 37468), (62, 37501), (64, 37552), (70, 37606),

Gene: Gaea\_41 Start: 35931, Stop: 37553, Start Num: 1

Candidate Starts for Gaea\_41:

(Start: 1 @35931 has 1 MA's), (Start: 4 @35970 has 26 MA's), (Start: 5 @35985 has 2 MA's), (10, 36255), (11, 36336), (12, 36375), (15, 36459), (20, 36630), (21, 36639), (22, 36645), (23, 36648), (24, 36678), (27, 36708), (31, 36789), (34, 36849), (38, 36975), (39, 36984), (50, 37188), (53, 37266), (55, 37314), (56, 37335), (57, 37338), (59, 37350), (60, 37362), (61, 37377), (62, 37410), (71, 37527),

Gene: Gustavo\_41 Start: 36119, Stop: 37723, Start Num: 4

Candidate Starts for Gustavo\_41:

(Start: 1 @36083 has 1 MA's), (Start: 4 @36119 has 26 MA's), (Start: 5 @36134 has 2 MA's), (11, 36485), (12, 36524), (15, 36626), (19, 36788), (20, 36797), (21, 36806), (22, 36812), (23, 36815), (24, 36845), (27, 36875), (28, 36893), (31, 36956), (34, 37016), (36, 37055), (38, 37142), (48, 37331), (53, 37433), (55, 37484), (56, 37505), (57, 37508), (60, 37532), (61, 37547), (62, 37580), (65, 37631), (70, 37685), (71, 37697),

Gene: JKSyngboy\_39 Start: 36715, Stop: 38322, Start Num: 4

Candidate Starts for JKSyngboy\_39:

(Start: 4 @36715 has 26 MA's), (Start: 5 @36730 has 2 MA's), (10, 37000), (11, 37081), (12, 37120), (15, 37228), (21, 37408), (22, 37414), (23, 37417), (24, 37447), (27, 37477), (28, 37495), (31, 37558), (34, 37618), (38, 37744), (39, 37753), (53, 38035), (55, 38083), (56, 38104), (57, 38107), (59, 38119), (60, 38131), (62, 38179), (70, 38284), (71, 38296),

Gene: Kroos\_42 Start: 36880, Stop: 38463, Start Num: 4

Candidate Starts for Kroos\_42:

(Start: 1 @36841 has 1 MA's), (Start: 4 @36880 has 26 MA's), (Start: 5 @36895 has 2 MA's), (11, 37246), (12, 37285), (15, 37369), (20, 37540), (21, 37549), (22, 37555), (23, 37558), (24, 37588), (27, 37618), (31, 37699), (34, 37759), (38, 37885), (39, 37894), (50, 38098), (53, 38176), (55, 38224), (56, 38245), (57, 38248), (59, 38260), (60, 38272), (61, 38287), (62, 38320), (71, 38437),

Gene: Kwobi\_43 Start: 36866, Stop: 38449, Start Num: 4

Candidate Starts for Kwobi\_43:

(Start: 4 @36866 has 26 MA's), (Start: 5 @36881 has 2 MA's), (10, 37151), (11, 37232), (12, 37271), (15, 37355), (20, 37526), (21, 37535), (22, 37541), (23, 37544), (24, 37574), (27, 37604), (31, 37685), (34, 37745), (38, 37871), (39, 37880), (45, 38006), (53, 38162), (55, 38210), (56, 38231), (57, 38234), (60, 38258), (61, 38273), (62, 38306), (63, 38333), (71, 38423),

Gene: LilHam\_39 Start: 35467, Stop: 37050, Start Num: 4

Candidate Starts for LilHam\_39:

(Start: 1 @35428 has 1 MA's), (Start: 4 @35467 has 26 MA's), (Start: 5 @35482 has 2 MA's), (10, 35752), (12, 35872), (15, 35956), (20, 36127), (21, 36136), (22, 36142), (23, 36145), (24, 36175), (27, 36205), (31, 36286), (34, 36346), (38, 36472), (39, 36481), (45, 36607), (53, 36763), (55, 36811), (56, 36832), (57, 36835), (60, 36859), (61, 36874), (62, 36907), (63, 36934), (71, 37024),

Gene: Natkenzie\_42 Start: 37710, Stop: 39302, Start Num: 5

Candidate Starts for Natkenzie\_42:

(Start: 4 @37695 has 26 MA's), (Start: 5 @37710 has 2 MA's), (8, 37818), (11, 38061), (12, 38100), (14, 38181), (19, 38370), (29, 38499), (31, 38538), (37, 38664), (39, 38739), (41, 38751), (46, 38880), (49, 38931), (51, 38970), (53, 39021), (56, 39087), (58, 39093), (61, 39129), (67, 39222), (69, 39267), (72, 39288),

Gene: Pumpkiney\_43 Start: 35025, Stop: 36620, Start Num: 5

Candidate Starts for Pumpkiney\_43:

(Start: 4 @35010 has 26 MA's), (Start: 5 @35025 has 2 MA's), (11, 35376), (12, 35415), (14, 35499), (19, 35688), (29, 35817), (31, 35856), (37, 35982), (39, 36057), (41, 36069), (46, 36198), (48, 36237), (49, 36249), (51, 36288), (53, 36339), (56, 36405), (58, 36411), (61, 36447), (67, 36540), (69, 36585), (72, 36606),

Gene: Ribeye\_42 Start: 37298, Stop: 38881, Start Num: 4

Candidate Starts for Ribeye\_42:

(Start: 1 @37259 has 1 MA's), (Start: 4 @37298 has 26 MA's), (Start: 5 @37313 has 2 MA's), (11, 37664), (12, 37703), (15, 37787), (20, 37958), (21, 37967), (22, 37973), (23, 37976), (24, 38006), (27, 38036), (31, 38117), (34, 38177), (38, 38303), (39, 38312), (50, 38516), (53, 38594), (55, 38642), (56, 38663), (57, 38666), (59, 38678), (60, 38690), (61, 38705), (62, 38738), (63, 38765), (71, 38855),

Gene: Sampson\_42 Start: 37640, Stop: 39247, Start Num: 4

Candidate Starts for Sampson\_42:

(Start: 4 @37640 has 26 MA's), (Start: 5 @37655 has 2 MA's), (8, 37763), (11, 38006), (12, 38045), (14, 38126), (19, 38315), (29, 38444), (31, 38483), (37, 38609), (39, 38684), (41, 38696), (46, 38825), (49, 38876), (51, 38915), (53, 38966), (56, 39032), (58, 39038), (61, 39074), (67, 39167), (69, 39212), (72, 39233),

Gene: Saronaya\_41 Start: 36119, Stop: 37723, Start Num: 4

Candidate Starts for Saronaya\_41:

(Start: 1 @36083 has 1 MA's), (Start: 4 @36119 has 26 MA's), (Start: 5 @36134 has 2 MA's), (11, 36485), (12, 36524), (15, 36626), (19, 36788), (20, 36797), (21, 36806), (22, 36812), (23, 36815), (24, 36845), (27, 36875), (28, 36893), (31, 36956), (34, 37016), (36, 37055), (38, 37142), (48, 37331), (53, 37433), (55, 37484), (56, 37505), (57, 37508), (60, 37532), (61, 37547), (62, 37580), (65, 37631), (70, 37685), (71, 37697),

Gene: SchottB\_40 Start: 37140, Stop: 38723, Start Num: 4

Candidate Starts for SchottB\_40:

(Start: 1 @37101 has 1 MA's), (Start: 4 @37140 has 26 MA's), (Start: 5 @37155 has 2 MA's), (10, 37425), (11, 37506), (12, 37545), (15, 37629), (20, 37800), (21, 37809), (22, 37815), (23, 37818), (24, 37848), (27, 37878), (31, 37959), (34, 38019), (38, 38145), (39, 38154), (45, 38280), (53, 38436), (55, 38484), (56, 38505), (57, 38508), (60, 38532), (61, 38547), (62, 38580), (63, 38607), (71, 38697),

Gene: Scioto\_43 Start: 37696, Stop: 39303, Start Num: 4

Candidate Starts for Scioto\_43:

(Start: 4 @37696 has 26 MA's), (Start: 5 @37711 has 2 MA's), (8, 37819), (11, 38062), (12, 38101), (14, 38182), (19, 38371), (29, 38500), (31, 38539), (37, 38665), (39, 38740), (41, 38752), (46, 38881), (49, 38932), (51, 38971), (53, 39022), (56, 39088), (58, 39094), (61, 39130), (67, 39223), (69, 39268),

(72, 39289),

Gene: Sixsevenium\_42 Start: 33916, Stop: 35283, Start Num: 9

Candidate Starts for Sixsevenium\_42:

(Start: 4 @33715 has 26 MA's), (Start: 5 @33730 has 2 MA's), (6, 33751), (7, 33754), (Start: 9 @33916 has 1 MA's), (12, 34120), (13, 34162), (15, 34204), (17, 34348), (22, 34390), (23, 34393), (25, 34444), (30, 34519), (31, 34534), (32, 34546), (33, 34591), (40, 34744), (42, 34765), (47, 34876), (54, 35014), (61, 35098), (62, 35131), (66, 35182), (68, 35203),

Gene: Stichling\_39 Start: 35662, Stop: 37245, Start Num: 4

Candidate Starts for Stichling\_39:

(Start: 1 @35623 has 1 MA's), (Start: 4 @35662 has 26 MA's), (Start: 5 @35677 has 2 MA's), (11, 36028), (12, 36067), (15, 36151), (17, 36295), (20, 36322), (21, 36331), (22, 36337), (23, 36340), (24, 36370), (27, 36400), (31, 36481), (34, 36541), (38, 36667), (39, 36676), (53, 36958), (55, 37006), (56, 37027), (57, 37030), (59, 37042), (60, 37054), (61, 37069), (62, 37102), (71, 37219),

Gene: Tangerine\_41 Start: 36012, Stop: 37595, Start Num: 4

Candidate Starts for Tangerine\_41:

(Start: 1 @35973 has 1 MA's), (Start: 4 @36012 has 26 MA's), (Start: 5 @36027 has 2 MA's), (11, 36378), (12, 36417), (15, 36501), (20, 36672), (21, 36681), (22, 36687), (23, 36690), (24, 36720), (27, 36750), (31, 36831), (34, 36891), (38, 37017), (39, 37026), (53, 37308), (55, 37356), (56, 37377), (57, 37380), (60, 37404), (61, 37419), (62, 37452), (71, 37569),

Gene: Tardus\_43 Start: 37065, Stop: 38660, Start Num: 5

Candidate Starts for Tardus\_43:

(Start: 4 @37050 has 26 MA's), (Start: 5 @37065 has 2 MA's), (11, 37416), (12, 37455), (14, 37539), (19, 37728), (29, 37857), (31, 37896), (37, 38022), (39, 38097), (41, 38109), (46, 38238), (49, 38289), (51, 38328), (53, 38379), (56, 38445), (58, 38451), (61, 38487), (67, 38580), (69, 38625), (72, 38646),

Gene: Tycho\_41 Start: 36099, Stop: 37682, Start Num: 4

Candidate Starts for Tycho\_41:

(Start: 1 @36060 has 1 MA's), (Start: 4 @36099 has 26 MA's), (Start: 5 @36114 has 2 MA's), (10, 36384), (11, 36465), (12, 36504), (15, 36588), (20, 36759), (21, 36768), (22, 36774), (23, 36777), (24, 36807), (27, 36837), (31, 36918), (34, 36978), (38, 37104), (39, 37113), (53, 37395), (55, 37443), (56, 37464), (57, 37467), (60, 37491), (61, 37506), (62, 37539), (71, 37656),

Gene: Verity\_41 Start: 37882, Stop: 39492, Start Num: 4

Candidate Starts for Verity\_41:

(Start: 4 @37882 has 26 MA's), (Start: 5 @37897 has 2 MA's), (11, 38248), (12, 38287), (14, 38371), (18, 38554), (19, 38560), (31, 38728), (37, 38854), (39, 38929), (41, 38941), (46, 39070), (48, 39109), (49, 39121), (51, 39160), (53, 39211), (56, 39277), (58, 39283), (61, 39319), (67, 39412), (69, 39457), (71, 39475), (72, 39478),

Gene: ViaConlectus\_42 Start: 36330, Stop: 37937, Start Num: 4

Candidate Starts for ViaConlectus\_42:

(2, 36312), (Start: 4 @36330 has 26 MA's), (Start: 5 @36345 has 2 MA's), (11, 36696), (12, 36735), (14, 36816), (19, 37005), (29, 37134), (31, 37173), (37, 37299), (39, 37374), (41, 37386), (46, 37515), (49, 37566), (51, 37605), (53, 37656), (56, 37722), (58, 37728), (61, 37764), (67, 37857), (69, 37902), (72, 37923),

Gene: YorkOnyx\_42 Start: 36358, Stop: 37941, Start Num: 4

Candidate Starts for YorkOnyx\_42:

(Start: 1 @36319 has 1 MA's), (Start: 4 @36358 has 26 MA's), (Start: 5 @36373 has 2 MA's), (11, 36724), (12, 36763), (15, 36847), (20, 37018), (21, 37027), (22, 37033), (23, 37036), (24, 37066), (27, 37096), (31, 37177), (34, 37237), (38, 37363), (39, 37372), (50, 37576), (52, 37642), (53, 37654), (55, 37702), (56, 37723), (57, 37726), (59, 37738), (60, 37750), (61, 37765), (62, 37798), (63, 37825), (71, 37915),

Gene: Zipp\_41 Start: 37800, Stop: 39395, Start Num: 5

Candidate Starts for Zipp\_41:

(Start: 4 @37785 has 26 MA's), (Start: 5 @37800 has 2 MA's), (11, 38151), (12, 38190), (14, 38274), (19, 38463), (29, 38592), (31, 38631), (37, 38757), (41, 38844), (46, 38973), (48, 39012), (49, 39024), (51, 39063), (53, 39114), (55, 39159), (56, 39180), (58, 39186), (61, 39222), (67, 39315), (69, 39360), (71, 39378), (72, 39381), (73, 39387),

Gene: Zitch\_45 Start: 36483, Stop: 38093, Start Num: 4

Candidate Starts for Zitch\_45:

(Start: 4 @36483 has 26 MA's), (Start: 5 @36498 has 2 MA's), (11, 36849), (12, 36888), (14, 36972), (16, 37002), (18, 37155), (19, 37161), (26, 37245), (29, 37290), (31, 37329), (37, 37455), (39, 37530), (41, 37542), (46, 37671), (48, 37710), (49, 37722), (51, 37761), (53, 37812), (56, 37878), (58, 37884), (61, 37920), (67, 38013), (69, 38058), (72, 38079),