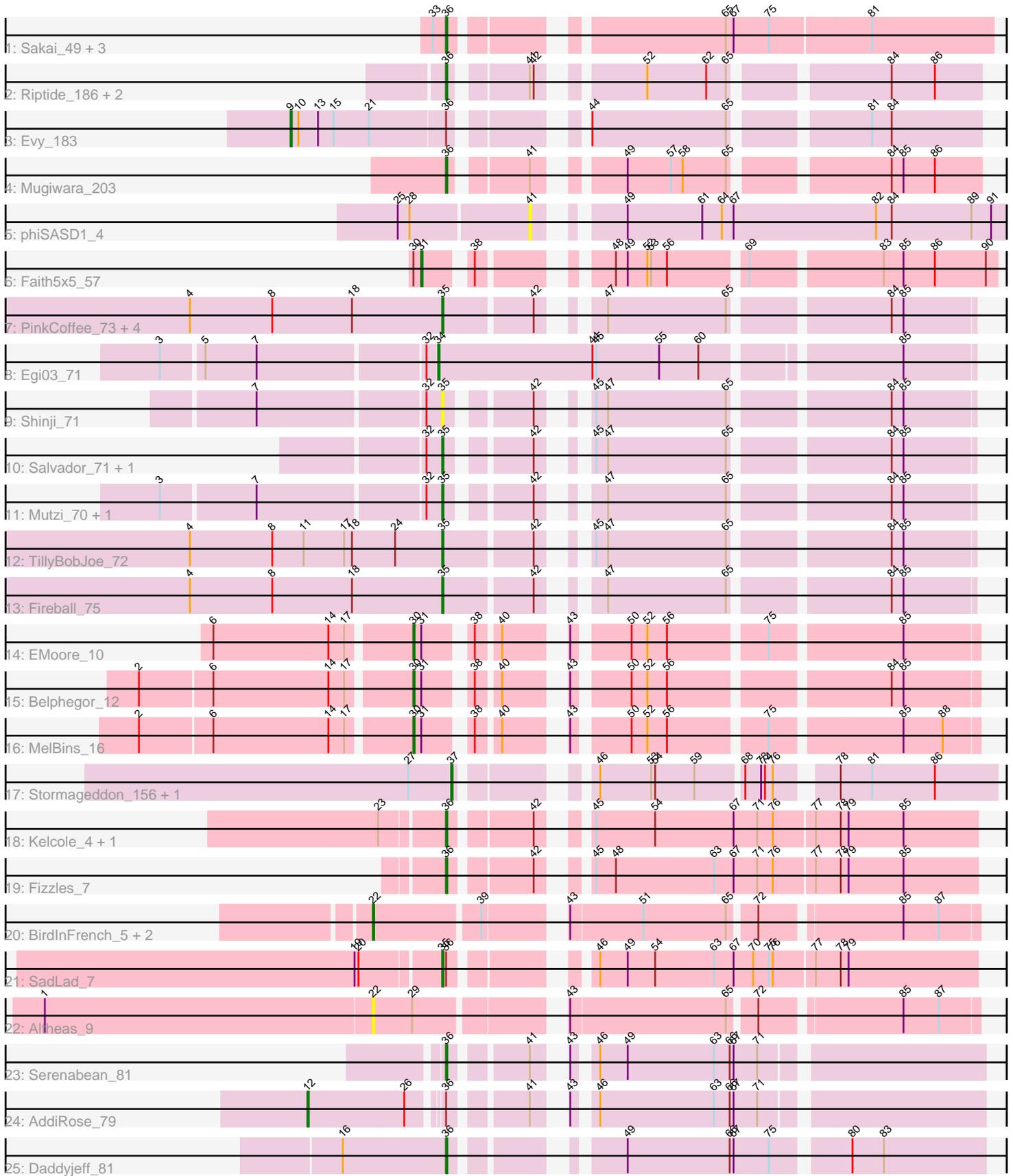


Pham 291326



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 291326 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291326 has 40 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Sakai\_49, BlueShadow\_49, Richie\_52, Gorpy\_50
- Track 2 : Riptide\_186, Anedea\_194, LilSaint\_186
- Track 3 : Evy\_183
- Track 4 : Mugiwara\_203
- Track 5 : phiSASD1\_4
- Track 6 : Faith5x5\_57
- Track 7 : PinkCoffee\_73, ClamChowder\_73, Barb\_73, Danyall\_72, Fugax\_74
- Track 8 : Egi03\_71
- Track 9 : Shinji\_71
- Track 10 : Salvador\_71, Evamon\_71
- Track 11 : Mutzi\_70, YungMoney\_71
- Track 12 : TillyBobJoe\_72
- Track 13 : Fireball\_75
- Track 14 : EMoore\_10
- Track 15 : Belphegor\_12
- Track 16 : MelBins\_16
- Track 17 : Stormageddon\_156, RedWattleHog\_155
- Track 18 : Kelcole\_4, Tempo\_5
- Track 19 : Fizzles\_7
- Track 20 : BirdInFrench\_5, Wilca\_5, Pepe25\_4
- Track 21 : SadLad\_7
- Track 22 : Altheas\_9
- Track 23 : Serenabean\_81
- Track 24 : AddiRose\_79
- Track 25 : Daddyjeff\_81

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

The start number called the most often in the published annotations is 36, it was called in 13 of the 37 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anedea\_194, BlueShadow\_49, Daddyjeff\_81, Fizzles\_7, Gorpy\_50, Kelcole\_4, LilSaint\_186, Mugiwara\_203, Richie\_52, Riptide\_186, Sakai\_49, Serenabean\_81,

Tempo\_5,

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

- AddiRose\_79, Evy\_183, SadLad\_7,

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

- Altheas\_9, Barb\_73, Belphegor\_12, BirdInFrench\_5, ClamChowder\_73, Danyall\_72, EMOore\_10, Egi03\_71, Evamon\_71, Faith5x5\_57, Fireball\_75, Fugax\_74, MelBins\_16, Mutzi\_70, Pepe25\_4, PinkCoffee\_73, RedWattleHog\_155, Salvador\_71, Shinji\_71, Stormageddon\_156, TillyBobJoe\_72, Wilca\_5, YungMoney\_71, phiSASD1\_4,

### **Summary by start number:**

Start 9:

- Found in 1 of 40 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Evy\_183 (BE1),

Start 12:

- Found in 1 of 40 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AddiRose\_79 (JA),

Start 22:

- Found in 4 of 40 ( 10.0% ) of genes in pham
- Manual Annotations of this start: 3 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altheas\_9 (EG), BirdInFrench\_5 (EG), Pepe25\_4 (EG), Wilca\_5 (EG),

Start 30:

- Found in 4 of 40 ( 10.0% ) of genes in pham
- Manual Annotations of this start: 3 of 37
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Belphegor\_12 (DE2), EMOore\_10 (DE2), MelBins\_16 (DE2),

Start 31:

- Found in 4 of 40 ( 10.0% ) of genes in pham
- Manual Annotations of this start: 1 of 37
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Faith5x5\_57 (CZ6),

Start 34:

- Found in 1 of 40 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Egi03\_71 (DC1),

Start 35:

- Found in 13 of 40 ( 32.5% ) of genes in pham
- Manual Annotations of this start: 12 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barb\_73 (DC1), ClamChowder\_73 (DC1), Danyall\_72 (DC1), Evamon\_71 (DC1), Fireball\_75 (DC1), Fugax\_74 (DC1), Mutzi\_70 (DC1), PinkCoffee\_73 (DC1), SadLad\_7 (EG), Salvador\_71 (DC1), Shinji\_71 (DC1), TillyBobJoe\_72 (DC1), YungMoney\_71 (DC1),

Start 36:

- Found in 16 of 40 ( 40.0% ) of genes in pham
- Manual Annotations of this start: 13 of 37
- Called 81.2% of time when present
- Phage (with cluster) where this start called: Anedea\_194 (BE1), BlueShadow\_49 (AY), Daddyjeff\_81 (JA), Fizzles\_7 (EG), Gorpy\_50 (AY), Kelcole\_4 (EG), LilSaint\_186 (BE1), Mugiwara\_203 (BE2), Richie\_52 (AY), Riptide\_186 (BE1), Sakai\_49 (AY), Serenabean\_81 (JA), Tempo\_5 (EG),

Start 37:

- Found in 2 of 40 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 2 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RedWattleHog\_155 (DX), Stormageddon\_156 (DX),

Start 41:

- Found in 7 of 40 ( 17.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 14.3% of time when present
- Phage (with cluster) where this start called: phiSASD1\_4 (BJ),

### **Summary by clusters:**

There are 10 clusters represented in this pham: DE2, EG, CZ6, BJ, AY, DX, BE2, BE1, JA, DC1,

Info for manual annotations of cluster AY:

- Start number 36 was manually annotated 4 times for cluster AY.

Info for manual annotations of cluster BE1:

- Start number 9 was manually annotated 1 time for cluster BE1.
- Start number 36 was manually annotated 3 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 36 was manually annotated 1 time for cluster BE2.

Info for manual annotations of cluster CZ6:

- Start number 31 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster DC1:

- Start number 34 was manually annotated 1 time for cluster DC1.
- Start number 35 was manually annotated 11 times for cluster DC1.

Info for manual annotations of cluster DE2:

- Start number 30 was manually annotated 3 times for cluster DE2.

Info for manual annotations of cluster DX:

- Start number 37 was manually annotated 2 times for cluster DX.

Info for manual annotations of cluster EG:

- Start number 22 was manually annotated 3 times for cluster EG.
- Start number 35 was manually annotated 1 time for cluster EG.
- Start number 36 was manually annotated 3 times for cluster EG.

Info for manual annotations of cluster JA:

- Start number 12 was manually annotated 1 time for cluster JA.
- Start number 36 was manually annotated 2 times for cluster JA.

### **Gene Information:**

Gene: AddiRose\_79 Start: 48807, Stop: 49250, Start Num: 12

Candidate Starts for AddiRose\_79:

(Start: 12 @48807 has 1 MA's), (26, 48879), (Start: 36 @48900 has 13 MA's), (41, 48948), (43, 48960), (46, 48972), (63, 49059), (66, 49071), (67, 49074), (71, 49092),

Gene: Altheas\_9 Start: 2820, Stop: 2407, Start Num: 22

Candidate Starts for Altheas\_9:

(1, 3069), (Start: 22 @2820 has 3 MA's), (29, 2790), (43, 2697), (65, 2580), (72, 2562), (85, 2463), (87, 2436),

Gene: Anedea\_194 Start: 99583, Stop: 99927, Start Num: 36

Candidate Starts for Anedea\_194:

(Start: 36 @99583 has 13 MA's), (41, 99631), (42, 99634), (52, 99694), (62, 99739), (65, 99754), (84, 99859), (86, 99892),

Gene: Barb\_73 Start: 50062, Stop: 50412, Start Num: 35

Candidate Starts for Barb\_73:

(4, 49870), (8, 49933), (18, 49993), (Start: 35 @50062 has 12 MA's), (42, 50125), (47, 50152), (65, 50242), (84, 50350), (85, 50359),

Gene: Belphegor\_12 Start: 9683, Stop: 10045, Start Num: 30

Candidate Starts for Belphegor\_12:

(2, 9485), (6, 9539), (14, 9626), (17, 9638), (Start: 30 @9683 has 3 MA's), (Start: 31 @9689 has 1 MA's), (38, 9716), (40, 9731), (43, 9764), (50, 9800), (52, 9812), (56, 9827), (84, 9980), (85, 9989),

Gene: BirdInFrench\_5 Start: 1900, Stop: 1487, Start Num: 22

Candidate Starts for BirdInFrench\_5:

(Start: 22 @1900 has 3 MA's), (39, 1825), (43, 1777), (51, 1723), (65, 1660), (72, 1642), (85, 1543), (87, 1516),

Gene: BlueShadow\_49 Start: 30672, Stop: 31046, Start Num: 36

Candidate Starts for BlueShadow\_49:

(33, 30663), (Start: 36 @30672 has 13 MA's), (65, 30846), (67, 30852), (75, 30879), (81, 30954),

Gene: ClamChowder\_73 Start: 50062, Stop: 50412, Start Num: 35

Candidate Starts for ClamChowder\_73:

(4, 49870), (8, 49933), (18, 49993), (Start: 35 @50062 has 12 MA's), (42, 50125), (47, 50152), (65, 50242), (84, 50350), (85, 50359),

Gene: Daddyjeff\_81 Start: 49245, Stop: 49598, Start Num: 36

Candidate Starts for Daddyjeff\_81:

(16, 49167), (Start: 36 @49245 has 13 MA's), (49, 49338), (66, 49416), (67, 49419), (75, 49446), (80, 49497), (83, 49521),

Gene: Danyall\_72 Start: 50043, Stop: 50393, Start Num: 35

Candidate Starts for Danyall\_72:

(4, 49851), (8, 49914), (18, 49974), (Start: 35 @50043 has 12 MA's), (42, 50106), (47, 50133), (65, 50223), (84, 50331), (85, 50340),

Gene: EMoore\_10 Start: 8765, Stop: 9127, Start Num: 30

Candidate Starts for EMoore\_10:

(6, 8621), (14, 8708), (17, 8720), (Start: 30 @8765 has 3 MA's), (Start: 31 @8771 has 1 MA's), (38, 8798), (40, 8813), (43, 8846), (50, 8882), (52, 8894), (56, 8909), (75, 8978), (85, 9071),

Gene: Egi03\_71 Start: 49655, Stop: 50041, Start Num: 34

Candidate Starts for Egi03\_71:

(3, 49457), (5, 49487), (7, 49526), (32, 49646), (Start: 34 @49655 has 1 MA's), (44, 49772), (45, 49775), (55, 49823), (60, 49853), (85, 49988),

Gene: Evamon\_71 Start: 49838, Stop: 50176, Start Num: 35

Candidate Starts for Evamon\_71:

(32, 49826), (Start: 35 @49838 has 12 MA's), (42, 49889), (45, 49907), (47, 49916), (65, 50006), (84, 50114), (85, 50123),

Gene: Evy\_183 Start: 100459, Stop: 100920, Start Num: 9

Candidate Starts for Evy\_183:

(Start: 9 @100459 has 1 MA's), (10, 100465), (13, 100480), (15, 100492), (21, 100519), (Start: 36 @100576 has 13 MA's), (44, 100645), (65, 100747), (81, 100837), (84, 100852),

Gene: Faith5x5\_57 Start: 35656, Stop: 36027, Start Num: 31

Candidate Starts for Faith5x5\_57:

(Start: 30 @35650 has 3 MA's), (Start: 31 @35656 has 1 MA's), (38, 35683), (48, 35755), (49, 35764), (52, 35779), (53, 35782), (56, 35794), (69, 35848), (83, 35941), (85, 35956), (86, 35980), (90, 36019),

Gene: Fireball\_75 Start: 50740, Stop: 51090, Start Num: 35

Candidate Starts for Fireball\_75:

(4, 50548), (8, 50611), (18, 50671), (Start: 35 @50740 has 12 MA's), (42, 50803), (47, 50830), (65, 50920), (84, 51028), (85, 51037),

Gene: Fizzles\_7 Start: 2470, Stop: 2108, Start Num: 36

Candidate Starts for Fizzles\_7:

(Start: 36 @2470 has 13 MA's), (42, 2416), (45, 2395), (48, 2380), (63, 2305), (67, 2290), (71, 2272), (76, 2260), (77, 2230), (78, 2212), (79, 2206), (85, 2164),

Gene: Fugax\_74 Start: 50054, Stop: 50404, Start Num: 35

Candidate Starts for Fugax\_74:

(4, 49862), (8, 49925), (18, 49985), (Start: 35 @50054 has 12 MA's), (42, 50117), (47, 50144), (65, 50234), (84, 50342), (85, 50351),

Gene: Gorpy\_50 Start: 31667, Stop: 32041, Start Num: 36

Candidate Starts for Gorpy\_50:

(33, 31658), (Start: 36 @31667 has 13 MA's), (65, 31841), (67, 31847), (75, 31874), (81, 31949),

Gene: Kelcole\_4 Start: 1820, Stop: 1458, Start Num: 36

Candidate Starts for Kelcole\_4:

(23, 1865), (Start: 36 @1820 has 13 MA's), (42, 1766), (45, 1745), (54, 1700), (67, 1640), (71, 1622), (76, 1610), (77, 1580), (78, 1562), (79, 1556), (85, 1514),

Gene: LilSaint\_186 Start: 98745, Stop: 99089, Start Num: 36

Candidate Starts for LilSaint\_186:

(Start: 36 @98745 has 13 MA's), (41, 98793), (42, 98796), (52, 98856), (62, 98901), (65, 98916), (84, 99021), (86, 99054),

Gene: MelBins\_16 Start: 11228, Stop: 11590, Start Num: 30

Candidate Starts for MelBins\_16:

(2, 11030), (6, 11084), (14, 11171), (17, 11183), (Start: 30 @11228 has 3 MA's), (Start: 31 @11234 has 1 MA's), (38, 11261), (40, 11276), (43, 11309), (50, 11345), (52, 11357), (56, 11372), (75, 11441), (85, 11534), (88, 11564),

Gene: Mugiwara\_203 Start: 101653, Stop: 101997, Start Num: 36

Candidate Starts for Mugiwara\_203:

(Start: 36 @101653 has 13 MA's), (41, 101701), (49, 101749), (57, 101782), (58, 101791), (65, 101824), (84, 101929), (85, 101938), (86, 101962),

Gene: Mutzi\_70 Start: 50930, Stop: 51268, Start Num: 35

Candidate Starts for Mutzi\_70:

(3, 50729), (7, 50798), (32, 50918), (Start: 35 @50930 has 12 MA's), (42, 50981), (47, 51008), (65, 51098), (84, 51206), (85, 51215),

Gene: Pepe25\_4 Start: 1900, Stop: 1487, Start Num: 22

Candidate Starts for Pepe25\_4:

(Start: 22 @1900 has 3 MA's), (39, 1825), (43, 1777), (51, 1723), (65, 1660), (72, 1642), (85, 1543), (87, 1516),

Gene: PinkCoffee\_73 Start: 50084, Stop: 50434, Start Num: 35

Candidate Starts for PinkCoffee\_73:

(4, 49892), (8, 49955), (18, 50015), (Start: 35 @50084 has 12 MA's), (42, 50147), (47, 50174), (65, 50264), (84, 50372), (85, 50381),

Gene: RedWattleHog\_155 Start: 105039, Stop: 105395, Start Num: 37

Candidate Starts for RedWattleHog\_155:

(27, 105006), (Start: 37 @105039 has 2 MA's), (46, 105114), (53, 105153), (54, 105156), (59, 105186), (68, 105219), (73, 105231), (74, 105234), (76, 105240), (78, 105276), (81, 105300), (86, 105348),

Gene: Richie\_52 Start: 31345, Stop: 31719, Start Num: 36

Candidate Starts for Richie\_52:

(33, 31336), (Start: 36 @31345 has 13 MA's), (65, 31519), (67, 31525), (75, 31552), (81, 31627),

Gene: Riptide\_186 Start: 98222, Stop: 98566, Start Num: 36

Candidate Starts for Riptide\_186:

(Start: 36 @98222 has 13 MA's), (41, 98270), (42, 98273), (52, 98333), (62, 98378), (65, 98393), (84, 98498), (86, 98531),

Gene: SadLad\_7 Start: 2504, Stop: 2139, Start Num: 35

Candidate Starts for SadLad\_7:

(19, 2564), (20, 2561), (Start: 35 @2504 has 12 MA's), (Start: 36 @2501 has 13 MA's), (46, 2423), (49, 2402), (54, 2381), (63, 2336), (67, 2321), (70, 2306), (75, 2294), (76, 2291), (77, 2261), (78, 2243), (79, 2237),

Gene: Sakai\_49 Start: 30378, Stop: 30752, Start Num: 36

Candidate Starts for Sakai\_49:

(33, 30369), (Start: 36 @30378 has 13 MA's), (65, 30552), (67, 30558), (75, 30585), (81, 30660),

Gene: Salvador\_71 Start: 49836, Stop: 50174, Start Num: 35

Candidate Starts for Salvador\_71:

(32, 49824), (Start: 35 @49836 has 12 MA's), (42, 49887), (45, 49905), (47, 49914), (65, 50004), (84, 50112), (85, 50121),

Gene: Serenabean\_81 Start: 49415, Stop: 49765, Start Num: 36

Candidate Starts for Serenabean\_81:

(Start: 36 @49415 has 13 MA's), (41, 49463), (43, 49475), (46, 49487), (49, 49508), (63, 49574), (66, 49586), (67, 49589), (71, 49607),

Gene: Shinji\_71 Start: 49826, Stop: 50164, Start Num: 35

Candidate Starts for Shinji\_71:

(7, 49694), (32, 49814), (Start: 35 @49826 has 12 MA's), (42, 49877), (45, 49895), (47, 49904), (65, 49994), (84, 50102), (85, 50111),

Gene: Stormageddon\_156 Start: 106003, Stop: 106359, Start Num: 37

Candidate Starts for Stormageddon\_156:

(27, 105970), (Start: 37 @106003 has 2 MA's), (46, 106078), (53, 106117), (54, 106120), (59, 106150), (68, 106183), (73, 106195), (74, 106198), (76, 106204), (78, 106240), (81, 106264), (86, 106312),

Gene: Tempo\_5 Start: 1841, Stop: 1479, Start Num: 36

Candidate Starts for Tempo\_5:

(23, 1886), (Start: 36 @1841 has 13 MA's), (42, 1787), (45, 1766), (54, 1721), (67, 1661), (71, 1643), (76, 1631), (77, 1601), (78, 1583), (79, 1577), (85, 1535),

Gene: TillyBobJoe\_72 Start: 50340, Stop: 50690, Start Num: 35

Candidate Starts for TillyBobJoe\_72:

(4, 50148), (8, 50211), (11, 50235), (17, 50265), (18, 50271), (24, 50304), (Start: 35 @50340 has 12 MA's), (42, 50403), (45, 50421), (47, 50430), (65, 50520), (84, 50628), (85, 50637),

Gene: Wilca\_5 Start: 1900, Stop: 1487, Start Num: 22

Candidate Starts for Wilca\_5:

(Start: 22 @1900 has 3 MA's), (39, 1825), (43, 1777), (51, 1723), (65, 1660), (72, 1642), (85, 1543), (87, 1516),

Gene: YungMoney\_71 Start: 51770, Stop: 52108, Start Num: 35

Candidate Starts for YungMoney\_71:

(3, 51569), (7, 51638), (32, 51758), (Start: 35 @51770 has 12 MA's), (42, 51821), (47, 51848), (65, 51938), (84, 52046), (85, 52055),

Gene: phiSASD1\_4 Start: 21332, Stop: 21664, Start Num: 41

Candidate Starts for phiSASD1\_4:

(25, 21236), (28, 21245), (41, 21332), (49, 21377), (61, 21434), (64, 21449), (67, 21458), (82, 21566),  
(84, 21578), (89, 21638), (91, 21653),