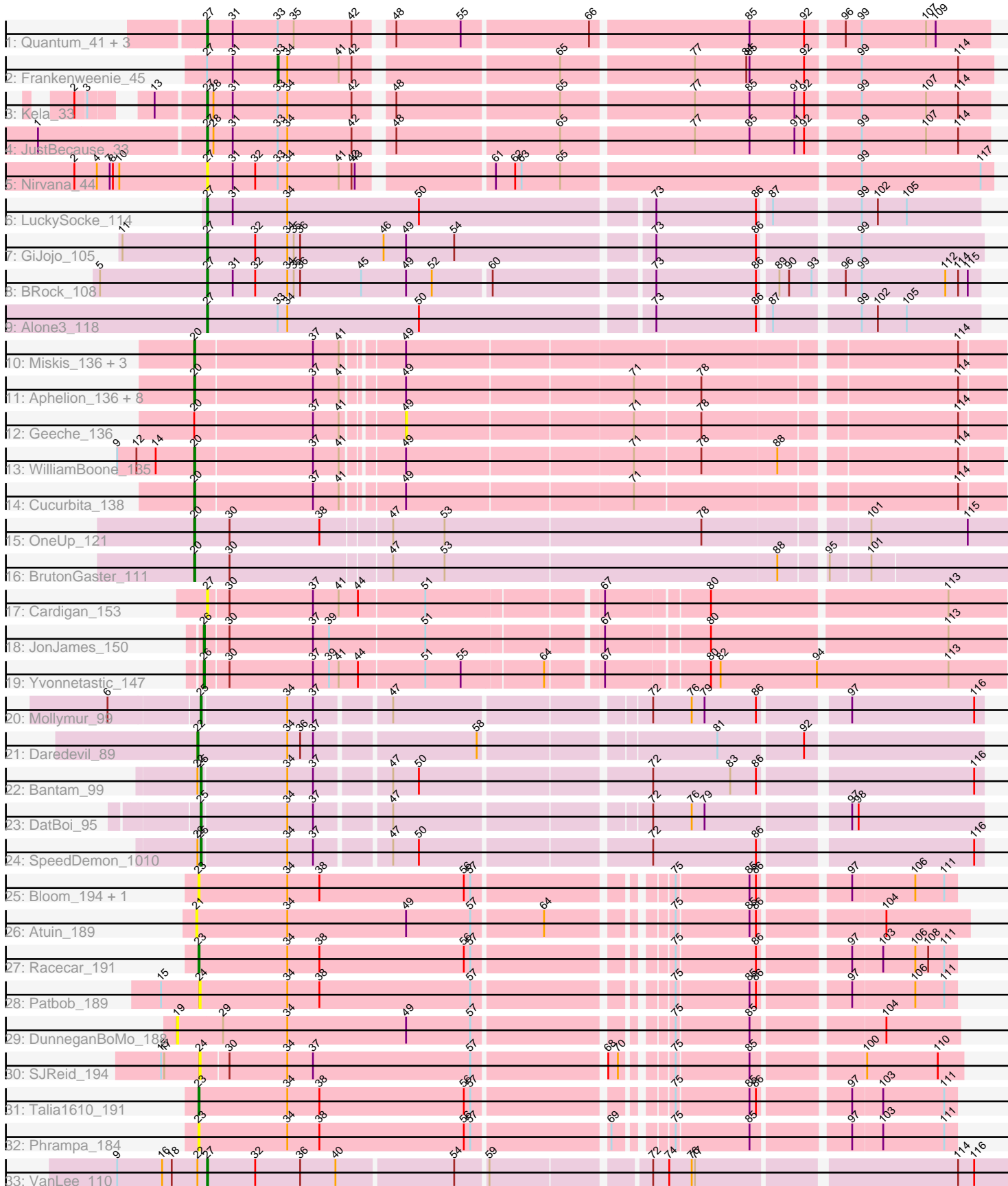


Pham 196615



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 196615 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196615 has 48 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Quantum\_41, Kradal\_42, EhyElimayoE\_42, Satis\_42
- Track 2 : Frankenweenie\_45
- Track 3 : Kela\_33
- Track 4 : JustBecause\_33
- Track 5 : Nirvana\_44
- Track 6 : LuckySocke\_114
- Track 7 : GiJojo\_105
- Track 8 : BRock\_108
- Track 9 : Alone3\_118
- Track 10 : Miskis\_136, Toniann\_137, PhinkBoden\_136, ClubL\_137
- Track 11 : Aphelion\_136, Abscondus\_136, Culver\_136, Engineer\_139, Bachita\_140, Norvs\_135, Smoothie\_138, Lozinak\_137, Dusty\_133
- Track 12 : Geeche\_136
- Track 13 : WilliamBoone\_135
- Track 14 : Cucurbita\_138
- Track 15 : OneUp\_121
- Track 16 : BrutonGaster\_111
- Track 17 : Cardigan\_153
- Track 18 : JonJames\_150
- Track 19 : Yvonnetastic\_147
- Track 20 : Mollymur\_99
- Track 21 : Daredevil\_89
- Track 22 : Bantam\_99
- Track 23 : DatBoi\_95
- Track 24 : SpeedDemon\_1010
- Track 25 : Bloom\_194, Mimi\_196
- Track 26 : Atuin\_189
- Track 27 : Racecar\_191
- Track 28 : Patbob\_189
- Track 29 : DunneganBoMo\_188
- Track 30 : SJReid\_194
- Track 31 : Talia1610\_191
- Track 32 : Phrampa\_184
- Track 33 : VanLee\_110

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

The start number called the most often in the published annotations is 20, it was called in 14 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abscondus\_136, Aphelion\_136, Bachita\_140, BrutonGaster\_111, ClubL\_137, Cucurbita\_138, Culver\_136, Dusty\_133, Engineer\_139, Lozinak\_137, Miskis\_136, Norvs\_135, OneUp\_121, PhinkBoden\_136, Smoothie\_138, Toniann\_137, WilliamBoone\_135,

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

- Geeche\_136,

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

- Alone3\_118, Atuin\_189, BRock\_108, Bantam\_99, Bloom\_194, Cardigan\_153, Daredevil\_89, DatBoi\_95, DunneganBoMo\_188, EhyElimayoE\_42, Frankenweenie\_45, GiJojo\_105, JonJames\_150, JustBecause\_33, Kela\_33, Kradal\_42, LuckySocke\_114, Mimi\_196, Mollymur\_99, Nirvana\_44, Patbob\_189, Phrampa\_184, Quantum\_41, Racecar\_191, SJReid\_194, Satis\_42, SpeedDemon\_1010, Talia1610\_191, VanLee\_110, Yvonnestic\_147,

## **Summary by start number:**

Start 19:

- Found in 1 of 48 ( 2.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DunneganBoMo\_188 (FC),

Start 20:

- Found in 18 of 48 ( 37.5% ) of genes in pham
- Manual Annotations of this start: 14 of 35
- Called 94.4% of time when present
- Phage (with cluster) where this start called: Abscondus\_136 (CQ1), Aphelion\_136 (CQ1), Bachita\_140 (CQ1), BrutonGaster\_111 (CQ2), ClubL\_137 (CQ1), Cucurbita\_138 (CQ1), Culver\_136 (CQ1), Dusty\_133 (CQ1), Engineer\_139 (CQ1), Lozinak\_137 (CQ1), Miskis\_136 (CQ1), Norvs\_135 (CQ1), OneUp\_121 (CQ2), PhinkBoden\_136 (CQ1), Smoothie\_138 (CQ1), Toniann\_137 (CQ1), WilliamBoone\_135 (CQ1),

Start 21:

- Found in 1 of 48 ( 2.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin\_189 (FC),

Start 22:

- Found in 4 of 48 ( 8.3% ) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Daredevil\_89 (DL),

Start 23:

- Found in 5 of 48 ( 10.4% ) of genes in pham
- Manual Annotations of this start: 2 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bloom\_194 (FC), Mimi\_196 (FC), Phrampa\_184 (FC), Racecar\_191 (FC), Talia1610\_191 (FC),

Start 24:

- Found in 2 of 48 ( 4.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Patbob\_189 (FC), SJReid\_194 (FC),

Start 25:

- Found in 4 of 48 ( 8.3% ) of genes in pham
- Manual Annotations of this start: 4 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bantam\_99 (DL), DatBoi\_95 (DL), Mollymur\_99 (DL), SpeedDemon\_1010 (DL),

Start 26:

- Found in 2 of 48 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 2 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JonJames\_150 (DD), Yvonnetastic\_147 (DD),

Start 27:

- Found in 14 of 48 ( 29.2% ) of genes in pham
- Manual Annotations of this start: 11 of 35
- Called 92.9% of time when present
- Phage (with cluster) where this start called: Alone3\_118 (BS), BRock\_108 (BS), Cardigan\_153 (DD), EhyElimayoE\_42 (BM), GiJojo\_105 (BS), JustBecause\_33 (BM), Kela\_33 (BM), Kradal\_42 (BM), LuckySocke\_114 (BS), Nirvana\_44 (BM), Quantum\_41 (BM), Satis\_42 (BM), VanLee\_110 (singleton),

Start 33:

- Found in 9 of 48 ( 18.8% ) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Frankenweenie\_45 (BM),

Start 49:

- Found in 20 of 48 ( 41.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Geeche\_136 (CQ1),

**Summary by clusters:**

There are 8 clusters represented in this pham: DL, BM, DD, singleton, FC, BS, CQ2, CQ1,

Info for manual annotations of cluster BM:

- Start number 27 was manually annotated 6 times for cluster BM.
- Start number 33 was manually annotated 1 time for cluster BM.

Info for manual annotations of cluster BS:

- Start number 27 was manually annotated 4 times for cluster BS.

Info for manual annotations of cluster CQ1:

- Start number 20 was manually annotated 12 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 20 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster DD:

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

Info for manual annotations of cluster DL:

- Start number 22 was manually annotated 1 time for cluster DL.
- Start number 25 was manually annotated 4 times for cluster DL.

Info for manual annotations of cluster FC:

- Start number 23 was manually annotated 2 times for cluster FC.

### ***Gene Information:***

Gene: Abscondus\_136 Start: 75128, Stop: 75835, Start Num: 20

Candidate Starts for Abscondus\_136:

(Start: 20 @75128 has 14 MA's), (37, 75236), (41, 75260), (49, 75308), (71, 75512), (78, 75572), (114, 75794),

Gene: Alone3\_118 Start: 63397, Stop: 64086, Start Num: 27

Candidate Starts for Alone3\_118:

(Start: 27 @63397 has 11 MA's), (Start: 33 @63463 has 1 MA's), (34, 63472), (50, 63595), (73, 63802), (86, 63895), (87, 63904), (99, 63976), (102, 63991), (105, 64018),

Gene: Aphelion\_136 Start: 76000, Stop: 76707, Start Num: 20

Candidate Starts for Aphelion\_136:

(Start: 20 @76000 has 14 MA's), (37, 76108), (41, 76132), (49, 76180), (71, 76384), (78, 76444), (114, 76666),

Gene: Atuin\_189 Start: 129201, Stop: 129866, Start Num: 21

Candidate Starts for Atuin\_189:

(21, 129201), (34, 129285), (49, 129396), (57, 129456), (64, 129519), (75, 129612), (85, 129678), (86, 129684), (104, 129789),

Gene: BRock\_108 Start: 57585, Stop: 58268, Start Num: 27

Candidate Starts for BRock\_108:

(5, 57486), (Start: 27 @57585 has 11 MA's), (31, 57609), (32, 57630), (34, 57660), (35, 57666), (36, 57672), (45, 57729), (49, 57771), (52, 57795), (60, 57846), (73, 57984), (86, 58077), (89, 58092), (90, 58101), (93, 58122), (96, 58143), (99, 58158), (112, 58236), (114, 58248), (115, 58257),

Gene: Bachita\_140 Start: 76138, Stop: 76845, Start Num: 20

Candidate Starts for Bachita\_140:

(Start: 20 @76138 has 14 MA's), (37, 76246), (41, 76270), (49, 76318), (71, 76522), (78, 76582), (114, 76804),

Gene: Bantam\_99 Start: 65318, Stop: 65998, Start Num: 25

Candidate Starts for Bantam\_99:

(Start: 22 @65315 has 1 MA's), (Start: 25 @65318 has 4 MA's), (34, 65396), (37, 65420), (47, 65483), (50, 65507), (72, 65708), (83, 65780), (86, 65804), (116, 65990),

Gene: Bloom\_194 Start: 131939, Stop: 132589, Start Num: 23

Candidate Starts for Bloom\_194:

(Start: 23 @131939 has 2 MA's), (34, 132020), (38, 132050), (56, 132185), (57, 132191), (75, 132347), (85, 132413), (86, 132419), (97, 132494), (106, 132551), (111, 132578),

Gene: BrutonGaster\_111 Start: 69747, Stop: 70487, Start Num: 20

Candidate Starts for BrutonGaster\_111:

(Start: 20 @69747 has 14 MA's), (30, 69780), (47, 69924), (53, 69972), (88, 70278), (95, 70314), (101, 70350),

Gene: Cardigan\_153 Start: 82886, Stop: 83590, Start Num: 27

Candidate Starts for Cardigan\_153:

(Start: 27 @82886 has 11 MA's), (30, 82904), (37, 82982), (41, 83006), (44, 83024), (51, 83084), (67, 83234), (80, 83324), (113, 83537),

Gene: ClubL\_137 Start: 74712, Stop: 75419, Start Num: 20

Candidate Starts for ClubL\_137:

(Start: 20 @74712 has 14 MA's), (37, 74820), (41, 74844), (49, 74892), (114, 75378),

Gene: Cucurbita\_138 Start: 76451, Stop: 77158, Start Num: 20

Candidate Starts for Cucurbita\_138:

(Start: 20 @76451 has 14 MA's), (37, 76559), (41, 76583), (49, 76631), (71, 76835), (114, 77117),

Gene: Culver\_136 Start: 74454, Stop: 75161, Start Num: 20

Candidate Starts for Culver\_136:

(Start: 20 @74454 has 14 MA's), (37, 74562), (41, 74586), (49, 74634), (71, 74838), (78, 74898), (114, 75120),

Gene: Daredevil\_89 Start: 61004, Stop: 61684, Start Num: 22

Candidate Starts for Daredevil\_89:

(Start: 22 @61004 has 1 MA's), (34, 61088), (36, 61100), (37, 61112), (58, 61253), (81, 61454), (92, 61529),

Gene: DatBoi\_95 Start: 64460, Stop: 65134, Start Num: 25

Candidate Starts for DatBoi\_95:

(Start: 25 @64460 has 4 MA's), (34, 64538), (37, 64562), (47, 64625), (72, 64844), (76, 64880), (79, 64892), (97, 65012), (98, 65018),

Gene: DunneganBoMo\_188 Start: 133952, Stop: 134626, Start Num: 19

Candidate Starts for DunneganBoMo\_188:

(19, 133952), (29, 133994), (34, 134054), (49, 134165), (57, 134225), (75, 134381), (85, 134447), (104, 134558),

Gene: Dusty\_133 Start: 74690, Stop: 75397, Start Num: 20

Candidate Starts for Dusty\_133:

(Start: 20 @74690 has 14 MA's), (37, 74798), (41, 74822), (49, 74870), (71, 75074), (78, 75134), (114, 75356),

Gene: EhyElimayoE\_42 Start: 24210, Stop: 23518, Start Num: 27

Candidate Starts for EhyElimayoE\_42:

(Start: 27 @24210 has 11 MA's), (31, 24186), (Start: 33 @24144 has 1 MA's), (35, 24129), (42, 24075), (48, 24048), (55, 23988), (66, 23874), (85, 23733), (92, 23682), (96, 23652), (99, 23637), (107, 23577), (109, 23568),

Gene: Engineer\_139 Start: 76111, Stop: 76818, Start Num: 20

Candidate Starts for Engineer\_139:

(Start: 20 @76111 has 14 MA's), (37, 76219), (41, 76243), (49, 76291), (71, 76495), (78, 76555), (114, 76777),

Gene: Frankenweenie\_45 Start: 24877, Stop: 24248, Start Num: 33

Candidate Starts for Frankenweenie\_45:

(Start: 27 @24943 has 11 MA's), (31, 24919), (Start: 33 @24877 has 1 MA's), (34, 24868), (41, 24820), (42, 24808), (65, 24634), (77, 24517), (84, 24469), (85, 24466), (92, 24415), (99, 24370), (114, 24280),

Gene: Geeche\_136 Start: 75093, Stop: 75620, Start Num: 49

Candidate Starts for Geeche\_136:

(Start: 20 @74913 has 14 MA's), (37, 75021), (41, 75045), (49, 75093), (71, 75297), (78, 75357), (114, 75579),

Gene: GiJojo\_105 Start: 62109, Stop: 62801, Start Num: 27

Candidate Starts for GiJojo\_105:

(11, 62031), (Start: 27 @62109 has 11 MA's), (32, 62154), (34, 62184), (35, 62190), (36, 62196), (46, 62274), (49, 62295), (54, 62340), (73, 62514), (86, 62607), (99, 62688),

Gene: JonJames\_150 Start: 83739, Stop: 84446, Start Num: 26

Candidate Starts for JonJames\_150:

(Start: 26 @83739 has 2 MA's), (30, 83760), (37, 83838), (39, 83853), (51, 83940), (67, 84090), (80, 84180), (113, 84393),

Gene: JustBecause\_33 Start: 20081, Stop: 19389, Start Num: 27

Candidate Starts for JustBecause\_33:

(1, 20231), (Start: 27 @20081 has 11 MA's), (28, 20075), (31, 20057), (Start: 33 @20015 has 1 MA's), (34, 20006), (42, 19946), (48, 19919), (65, 19772), (77, 19655), (85, 19604), (91, 19562), (92, 19553), (99, 19508), (107, 19448), (114, 19418),

Gene: Kela\_33 Start: 20036, Stop: 19344, Start Num: 27

Candidate Starts for Kela\_33:

(2, 20126), (3, 20117), (13, 20078), (Start: 27 @20036 has 11 MA's), (28, 20030), (31, 20012), (Start: 33 @19970 has 1 MA's), (34, 19961), (42, 19901), (48, 19874), (65, 19727), (77, 19610), (85, 19559), (91, 19517), (92, 19508), (99, 19463), (107, 19403), (114, 19373),

Gene: Kradal\_42 Start: 24210, Stop: 23518, Start Num: 27

Candidate Starts for Kradal\_42:

(Start: 27 @24210 has 11 MA's), (31, 24186), (Start: 33 @24144 has 1 MA's), (35, 24129), (42, 24075), (48, 24048), (55, 23988), (66, 23874), (85, 23733), (92, 23682), (96, 23652), (99, 23637), (107, 23577), (109, 23568),

Gene: Lozinak\_137 Start: 75782, Stop: 76489, Start Num: 20

Candidate Starts for Lozinak\_137:

(Start: 20 @75782 has 14 MA's), (37, 75890), (41, 75914), (49, 75962), (71, 76166), (78, 76226), (114, 76448),

Gene: LuckySocke\_114 Start: 61556, Stop: 62245, Start Num: 27

Candidate Starts for LuckySocke\_114:

(Start: 27 @61556 has 11 MA's), (31, 61580), (34, 61631), (50, 61754), (73, 61961), (86, 62054), (87, 62063), (99, 62135), (102, 62150), (105, 62177),

Gene: Mimi\_196 Start: 131559, Stop: 132209, Start Num: 23

Candidate Starts for Mimi\_196:

(Start: 23 @131559 has 2 MA's), (34, 131640), (38, 131670), (56, 131805), (57, 131811), (75, 131967), (85, 132033), (86, 132039), (97, 132114), (106, 132171), (111, 132198),

Gene: Miskis\_136 Start: 75213, Stop: 75920, Start Num: 20

Candidate Starts for Miskis\_136:

(Start: 20 @75213 has 14 MA's), (37, 75321), (41, 75345), (49, 75393), (114, 75879),

Gene: Mollymur\_99 Start: 66160, Stop: 66834, Start Num: 25

Candidate Starts for Mollymur\_99:

(6, 66079), (Start: 25 @66160 has 4 MA's), (34, 66238), (37, 66262), (47, 66325), (72, 66544), (76, 66580), (79, 66592), (86, 66640), (97, 66712), (116, 66826),

Gene: Nirvana\_44 Start: 25143, Stop: 24448, Start Num: 27

Candidate Starts for Nirvana\_44:

(2, 25266), (4, 25245), (7, 25233), (8, 25230), (10, 25224), (Start: 27 @25143 has 11 MA's), (31, 25119), (32, 25098), (Start: 33 @25077 has 1 MA's), (34, 25068), (41, 25020), (42, 25008), (43, 25005), (61, 24894), (62, 24876), (63, 24870), (65, 24834), (99, 24570), (117, 24459),

Gene: Norvs\_135 Start: 75176, Stop: 75883, Start Num: 20

Candidate Starts for Norvs\_135:

(Start: 20 @75176 has 14 MA's), (37, 75284), (41, 75308), (49, 75356), (71, 75560), (78, 75620), (114, 75842),

Gene: OneUp\_121 Start: 73707, Stop: 74444, Start Num: 20

Candidate Starts for OneUp\_121:

(Start: 20 @73707 has 14 MA's), (30, 73740), (38, 73824), (47, 73884), (53, 73932), (78, 74169), (101, 74310), (115, 74400),

Gene: Patbob\_189 Start: 131947, Stop: 132597, Start Num: 24

Candidate Starts for Patbob\_189:

(15, 131911), (24, 131947), (34, 132028), (38, 132058), (57, 132199), (75, 132355), (85, 132421), (86, 132427), (97, 132502), (106, 132559), (111, 132586),

Gene: PhinkBoden\_136 Start: 76041, Stop: 76748, Start Num: 20

Candidate Starts for PhinkBoden\_136:

(Start: 20 @76041 has 14 MA's), (37, 76149), (41, 76173), (49, 76221), (114, 76707),



Gene: Phrampa\_184 Start: 131310, Stop: 131960, Start Num: 23

Candidate Starts for Phrampa\_184:

(Start: 23 @131310 has 2 MA's), (34, 131391), (38, 131421), (56, 131556), (57, 131562), (69, 131679), (75, 131718), (85, 131784), (97, 131865), (103, 131892), (111, 131949),

Gene: Quantum\_41 Start: 24210, Stop: 23518, Start Num: 27

Candidate Starts for Quantum\_41:

(Start: 27 @24210 has 11 MA's), (31, 24186), (Start: 33 @24144 has 1 MA's), (35, 24129), (42, 24075), (48, 24048), (55, 23988), (66, 23874), (85, 23733), (92, 23682), (96, 23652), (99, 23637), (107, 23577), (109, 23568),

Gene: Racecar\_191 Start: 131722, Stop: 132372, Start Num: 23

Candidate Starts for Racecar\_191:

(Start: 23 @131722 has 2 MA's), (34, 131803), (38, 131833), (56, 131968), (57, 131974), (75, 132130), (86, 132202), (97, 132277), (103, 132304), (106, 132334), (108, 132346), (111, 132361),

Gene: SJReid\_194 Start: 123863, Stop: 124516, Start Num: 24

Candidate Starts for SJReid\_194:

(15, 123827), (17, 123830), (24, 123863), (30, 123887), (34, 123941), (37, 123965), (57, 124112), (68, 124226), (70, 124235), (75, 124268), (85, 124334), (100, 124427), (110, 124493),

Gene: Satis\_42 Start: 24206, Stop: 23514, Start Num: 27

Candidate Starts for Satis\_42:

(Start: 27 @24206 has 11 MA's), (31, 24182), (Start: 33 @24140 has 1 MA's), (35, 24125), (42, 24071), (48, 24044), (55, 23984), (66, 23870), (85, 23729), (92, 23678), (96, 23648), (99, 23633), (107, 23573), (109, 23564),

Gene: Smoothie\_138 Start: 75782, Stop: 76489, Start Num: 20

Candidate Starts for Smoothie\_138:

(Start: 20 @75782 has 14 MA's), (37, 75890), (41, 75914), (49, 75962), (71, 76166), (78, 76226), (114, 76448),

Gene: SpeedDemon\_1010 Start: 67850, Stop: 68530, Start Num: 25

Candidate Starts for SpeedDemon\_1010:

(Start: 22 @67847 has 1 MA's), (Start: 25 @67850 has 4 MA's), (34, 67928), (37, 67952), (47, 68015), (50, 68039), (72, 68240), (86, 68336), (116, 68522),

Gene: Talia1610\_191 Start: 132018, Stop: 132668, Start Num: 23

Candidate Starts for Talia1610\_191:

(Start: 23 @132018 has 2 MA's), (34, 132099), (38, 132129), (56, 132264), (57, 132270), (75, 132426), (85, 132492), (86, 132498), (97, 132573), (103, 132600), (111, 132657),

Gene: Toniann\_137 Start: 75311, Stop: 76018, Start Num: 20

Candidate Starts for Toniann\_137:

(Start: 20 @75311 has 14 MA's), (37, 75419), (41, 75443), (49, 75491), (114, 75977),

Gene: VanLee\_110 Start: 57959, Stop: 58672, Start Num: 27

Candidate Starts for VanLee\_110:

(9, 57878), (16, 57920), (18, 57929), (Start: 22 @57953 has 1 MA's), (Start: 27 @57959 has 11 MA's), (32, 58004), (36, 58046), (40, 58079), (54, 58184), (59, 58211), (72, 58346), (74, 58361), (76, 58382), (77, 58385), (114, 58613), (116, 58628),

Gene: WilliamBoone\_135 Start: 72980, Stop: 73684, Start Num: 20

Candidate Starts for WilliamBoone\_135:

(9, 72908), (12, 72926), (14, 72944), (Start: 20 @72980 has 14 MA's), (37, 73088), (41, 73112), (49, 73160), (71, 73364), (78, 73424), (88, 73493), (114, 73646),

Gene: Yvonnetastic\_147 Start: 80424, Stop: 81140, Start Num: 26

Candidate Starts for Yvonnetastic\_147:

(Start: 26 @80424 has 2 MA's), (30, 80445), (37, 80523), (39, 80538), (41, 80547), (44, 80565), (51, 80625), (55, 80658), (64, 80730), (67, 80775), (80, 80865), (82, 80874), (94, 80964), (113, 81087),