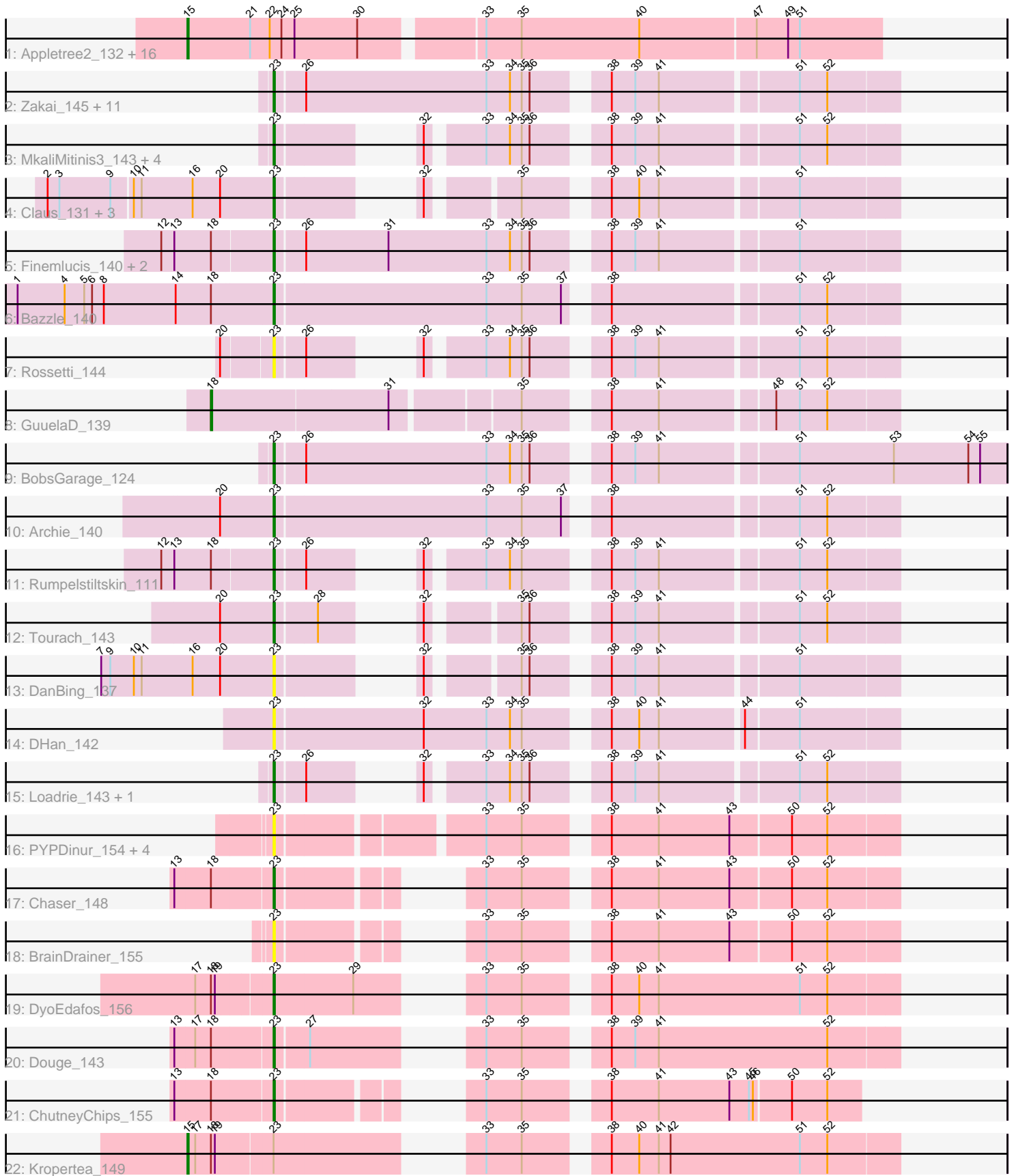


# Pham 311603



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 311603 Report

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

Pham number 311603 has 63 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Appletree2\_132, AvadaKedavra\_132, LeBron\_131, JoeDirt\_133, CicholasNage\_122, Calm\_138, UPIE\_130, Poochiewood\_124, Wyatt2\_131, Tyson\_133, Halena\_131, Zaria\_136, OhShagHennessy\_124, MAckerman\_132, Rose5\_132, Wamburgxpress\_135, Acquire49\_131
- Track 2 : Zakai\_145, Netyap\_142, Lewan\_143, Sarshaun\_134, Soap141\_142, Breezona\_143, DrSeegs\_140, BigCheese\_138, Itos\_144, Faith1\_140, Miley16\_143, Winky\_143
- Track 3 : MkaliMitinis3\_143, Crossroads\_144, Vetric\_140, Lynnae\_142, Wigglewiggler\_144
- Track 4 : Claus\_131, Baoshan\_130, ZhongYanYuan\_140, Hafay\_110
- Track 5 : Finemlucis\_140, SoJulia\_147, Gabriela\_142
- Track 6 : Bazzle\_140
- Track 7 : Rossetti\_144
- Track 8 : GuuelaD\_139
- Track 9 : BobsGarage\_124
- Track 10 : Archie\_140
- Track 11 : Rumpelstiltskin\_111
- Track 12 : Tourach\_143
- Track 13 : DanBing\_137
- Track 14 : DHan\_142
- Track 15 : Loadrie\_143, OverPar\_127
- Track 16 : PYPDinur\_154, Quby\_155, Douzhi\_155, FarmResident\_154, Sheng711\_154
- Track 17 : Chaser\_148
- Track 18 : BrainDrainer\_155
- Track 19 : DyoEdafos\_156
- Track 20 : Douge\_143
- Track 21 : ChutneyChips\_155
- Track 22 : Kropertea\_149

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

The start number called the most often in the published annotations is 23, it was called in 29 of the 47 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Archie\_140, Baoshan\_130, Bazzle\_140, BigCheese\_138, BobsGarage\_124, BrainDrainer\_155, Breezona\_143, Chaser\_148, ChutneyChips\_155, Claus\_131, Crossroads\_144, DHan\_142, DanBing\_137, Douge\_143, Douzhi\_155, DrSeegs\_140, DyoEdafos\_156, Faith1\_140, FarmResident\_154, Finemlucis\_140, Gabriela\_142, Hafay\_110, Itos\_144, Lewan\_143, Loadrie\_143, Lynnae\_142, Miley16\_143, MkaliMitinis3\_143, Netyap\_142, OverPar\_127, PYPDinur\_154, Quby\_155, Rossetti\_144, Rumpelstiltskin\_111, Sarshaun\_134, Sheng711\_154, SoJulia\_147, Soap141\_142, Tourach\_143, Vetric\_140, Wigglewiggles\_144, Winky\_143, Zakai\_145, ZhongYanYuan\_140,

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

- Kropertea\_149,

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

- Acquire49\_131, Appletree2\_132, AvadaKedavra\_132, Calm\_138, CicholasNage\_122, GuuelaD\_139, Halena\_131, JoeDirt\_133, LeBron\_131, MAckerman\_132, OhShagHennessy\_124, Poochiewood\_124, Rose5\_132, Tyson\_133, UPIE\_130, Wamburgxpress\_135, Wyatt2\_131, Zaria\_136,

### Summary by start number:

Start 15:

- Found in 18 of 63 ( 28.6% ) of genes in pham
- Manual Annotations of this start: 17 of 47
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acquire49\_131 (L1), Appletree2\_132 (L1), AvadaKedavra\_132 (L1), Calm\_138 (L1), CicholasNage\_122 (L1), Halena\_131 (L1), JoeDirt\_133 (L1), Kropertea\_149 (L4), LeBron\_131 (L1), MAckerman\_132 (L1), OhShagHennessy\_124 (L1), Poochiewood\_124 (L1), Rose5\_132 (L1), Tyson\_133 (L1), UPIE\_130 (L1), Wamburgxpress\_135 (L1), Wyatt2\_131 (L1), Zaria\_136 (L1),

Start 18:

- Found in 11 of 63 ( 17.5% ) of genes in pham
- Manual Annotations of this start: 1 of 47
- Called 9.1% of time when present
- Phage (with cluster) where this start called: GuuelaD\_139 (L2),

Start 23:

- Found in 45 of 63 ( 71.4% ) of genes in pham
- Manual Annotations of this start: 29 of 47
- Called 97.8% of time when present
- Phage (with cluster) where this start called: Archie\_140 (L2), Baoshan\_130 (L2), Bazzle\_140 (L2), BigCheese\_138 (L2), BobsGarage\_124 (L2), BrainDrainer\_155 (L4), Breezona\_143 (L2), Chaser\_148 (L4), ChutneyChips\_155 (L4), Claus\_131 (L2), Crossroads\_144 (L2), DHan\_142 (L2), DanBing\_137 (L2), Douge\_143 (L4), Douzhi\_155 (L4), DrSeegs\_140 (L2), DyoEdafos\_156 (L4), Faith1\_140 (L2), FarmResident\_154 (L4), Finemlucis\_140 (L2), Gabriela\_142 (L2), Hafay\_110 (L2), Itos\_144 (L2), Lewan\_143 (L2), Loadrie\_143 (L2), Lynnae\_142 (L2), Miley16\_143 (L2), MkaliMitinis3\_143 (L2), Netyap\_142 (L2), OverPar\_127 (L2), PYPDinur\_154 (L4), Quby\_155 (L4), Rossetti\_144 (L2), Rumpelstiltskin\_111 (L2), Sarshaun\_134 (L2), Sheng711\_154 (L4), SoJulia\_147 (L2), Soap141\_142 (L2), Tourach\_143 (L2),

Vetrix\_140 (L2), Wigglewobble\_144 (L2), Winky\_143 (L2), Zakai\_145 (L2),  
ZhongYanYuan\_140 (L2),

### **Summary by clusters:**

There are 3 clusters represented in this pham: L4, L2, L1,

Info for manual annotations of cluster L1:

- Start number 15 was manually annotated 16 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 18 was manually annotated 1 time for cluster L2.
- Start number 23 was manually annotated 25 times for cluster L2.

Info for manual annotations of cluster L4:

- Start number 15 was manually annotated 1 time for cluster L4.
- Start number 23 was manually annotated 4 times for cluster L4.

### **Gene Information:**

Gene: Acquire49\_131 Start: 72845, Stop: 72333, Start Num: 15

Candidate Starts for Acquire49\_131:

(Start: 15 @72845 has 17 MA's), (21, 72797), (22, 72782), (24, 72773), (25, 72764), (30, 72716), (33, 72632), (35, 72605), (40, 72515), (47, 72428), (49, 72404), (51, 72395),

Gene: Appletree2\_132 Start: 73023, Stop: 72511, Start Num: 15

Candidate Starts for Appletree2\_132:

(Start: 15 @73023 has 17 MA's), (21, 72975), (22, 72960), (24, 72951), (25, 72942), (30, 72894), (33, 72810), (35, 72783), (40, 72693), (47, 72606), (49, 72582), (51, 72573),

Gene: Archie\_140 Start: 75399, Stop: 74956, Start Num: 23

Candidate Starts for Archie\_140:

(20, 75438), (Start: 23 @75399 has 29 MA's), (33, 75240), (35, 75213), (37, 75183), (38, 75162), (51, 75027), (52, 75006),

Gene: AvadaKedavra\_132 Start: 72888, Stop: 72376, Start Num: 15

Candidate Starts for AvadaKedavra\_132:

(Start: 15 @72888 has 17 MA's), (21, 72840), (22, 72825), (24, 72816), (25, 72807), (30, 72759), (33, 72675), (35, 72648), (40, 72558), (47, 72471), (49, 72447), (51, 72438),

Gene: Baoshan\_130 Start: 70471, Stop: 70094, Start Num: 23

Candidate Starts for Baoshan\_130:

(2, 70639), (3, 70630), (9, 70591), (10, 70576), (11, 70570), (16, 70531), (20, 70510), (Start: 23 @70471 has 29 MA's), (32, 70408), (35, 70351), (38, 70300), (40, 70279), (41, 70264), (51, 70165),

Gene: Bazzle\_140 Start: 75896, Stop: 75453, Start Num: 23

Candidate Starts for Bazzle\_140:

(1, 76088), (4, 76052), (5, 76037), (6, 76031), (8, 76022), (14, 75968), (Start: 18 @75941 has 1 MA's), (Start: 23 @75896 has 29 MA's), (33, 75737), (35, 75710), (37, 75680), (38, 75659), (51, 75524), (52, 75503),

Gene: BigCheese\_138 Start: 71942, Stop: 71499, Start Num: 23

Candidate Starts for BigCheese\_138:

(Start: 23 @71942 has 29 MA's), (26, 71921), (33, 71783), (34, 71765), (35, 71756), (36, 71750), (38, 71705), (39, 71687), (41, 71669), (51, 71570), (52, 71549),

Gene: BobsGarage\_124 Start: 67234, Stop: 66704, Start Num: 23

Candidate Starts for BobsGarage\_124:

(Start: 23 @67234 has 29 MA's), (26, 67213), (33, 67075), (34, 67057), (35, 67048), (36, 67042), (38, 66997), (39, 66979), (41, 66961), (51, 66862), (53, 66790), (54, 66733), (55, 66724),

Gene: BrainDrainer\_155 Start: 76837, Stop: 76448, Start Num: 23

Candidate Starts for BrainDrainer\_155:

(Start: 23 @76837 has 29 MA's), (33, 76738), (35, 76711), (38, 76660), (41, 76624), (43, 76570), (50, 76525), (52, 76498),

Gene: Breezona\_143 Start: 75784, Stop: 75341, Start Num: 23

Candidate Starts for Breezona\_143:

(Start: 23 @75784 has 29 MA's), (26, 75763), (33, 75625), (34, 75607), (35, 75598), (36, 75592), (38, 75547), (39, 75529), (41, 75511), (51, 75412), (52, 75391),

Gene: Calm\_138 Start: 74106, Stop: 73594, Start Num: 15

Candidate Starts for Calm\_138:

(Start: 15 @74106 has 17 MA's), (21, 74058), (22, 74043), (24, 74034), (25, 74025), (30, 73977), (33, 73893), (35, 73866), (40, 73776), (47, 73689), (49, 73665), (51, 73656),

Gene: Chaser\_148 Start: 75823, Stop: 75434, Start Num: 23

Candidate Starts for Chaser\_148:

(13, 75895), (Start: 18 @75868 has 1 MA's), (Start: 23 @75823 has 29 MA's), (33, 75724), (35, 75697), (38, 75646), (41, 75610), (43, 75556), (50, 75511), (52, 75484),

Gene: ChutneyChips\_155 Start: 76947, Stop: 76585, Start Num: 23

Candidate Starts for ChutneyChips\_155:

(13, 77019), (Start: 18 @76992 has 1 MA's), (Start: 23 @76947 has 29 MA's), (33, 76848), (35, 76821), (38, 76770), (41, 76734), (43, 76680), (45, 76665), (46, 76662), (50, 76635), (52, 76608),

Gene: CicholasNage\_122 Start: 70202, Stop: 69690, Start Num: 15

Candidate Starts for CicholasNage\_122:

(Start: 15 @70202 has 17 MA's), (21, 70154), (22, 70139), (24, 70130), (25, 70121), (30, 70073), (33, 69989), (35, 69962), (40, 69872), (47, 69785), (49, 69761), (51, 69752),

Gene: Claus\_131 Start: 71384, Stop: 71007, Start Num: 23

Candidate Starts for Claus\_131:

(2, 71552), (3, 71543), (9, 71504), (10, 71489), (11, 71483), (16, 71444), (20, 71423), (Start: 23 @71384 has 29 MA's), (32, 71321), (35, 71264), (38, 71213), (40, 71192), (41, 71177), (51, 71078),

Gene: Crossroads\_144 Start: 75286, Stop: 74903, Start Num: 23

Candidate Starts for Crossroads\_144:

(Start: 23 @75286 has 29 MA's), (32, 75223), (33, 75187), (34, 75169), (35, 75160), (36, 75154), (38, 75109), (39, 75091), (41, 75073), (51, 74974), (52, 74953),

Gene: DHan\_142 Start: 75640, Stop: 75197, Start Num: 23

Candidate Starts for DHan\_142:

(Start: 23 @75640 has 29 MA's), (32, 75529), (33, 75481), (34, 75463), (35, 75454), (38, 75403), (40, 75382), (41, 75367), (44, 75307), (51, 75268),

Gene: DanBing\_137 Start: 71647, Stop: 71270, Start Num: 23

Candidate Starts for DanBing\_137:

(7, 71776), (9, 71770), (10, 71752), (11, 71746), (16, 71707), (20, 71686), (Start: 23 @71647 has 29 MA's), (32, 71584), (35, 71527), (36, 71521), (38, 71476), (39, 71458), (41, 71440), (51, 71341),

Gene: Douge\_143 Start: 73698, Stop: 73297, Start Num: 23

Candidate Starts for Douge\_143:

(13, 73770), (17, 73755), (Start: 18 @73743 has 1 MA's), (Start: 23 @73698 has 29 MA's), (27, 73674), (33, 73590), (35, 73563), (38, 73512), (39, 73494), (41, 73476), (52, 73347),

Gene: Douzhi\_155 Start: 77003, Stop: 76614, Start Num: 23

Candidate Starts for Douzhi\_155:

(Start: 23 @77003 has 29 MA's), (33, 76904), (35, 76877), (38, 76826), (41, 76790), (43, 76736), (50, 76691), (52, 76664),

Gene: DrSeegs\_140 Start: 75784, Stop: 75341, Start Num: 23

Candidate Starts for DrSeegs\_140:

(Start: 23 @75784 has 29 MA's), (26, 75763), (33, 75625), (34, 75607), (35, 75598), (36, 75592), (38, 75547), (39, 75529), (41, 75511), (51, 75412), (52, 75391),

Gene: DyoEdafos\_156 Start: 76685, Stop: 76281, Start Num: 23

Candidate Starts for DyoEdafos\_156:

(17, 76739), (Start: 18 @76727 has 1 MA's), (19, 76724), (Start: 23 @76685 has 29 MA's), (29, 76625), (33, 76574), (35, 76547), (38, 76496), (40, 76475), (41, 76460), (51, 76352), (52, 76331),

Gene: Faith1\_140 Start: 75092, Stop: 74649, Start Num: 23

Candidate Starts for Faith1\_140:

(Start: 23 @75092 has 29 MA's), (26, 75071), (33, 74933), (34, 74915), (35, 74906), (36, 74900), (38, 74855), (39, 74837), (41, 74819), (51, 74720), (52, 74699),

Gene: FarmResident\_154 Start: 76652, Stop: 76263, Start Num: 23

Candidate Starts for FarmResident\_154:

(Start: 23 @76652 has 29 MA's), (33, 76553), (35, 76526), (38, 76475), (41, 76439), (43, 76385), (50, 76340), (52, 76313),

Gene: Finemlucis\_140 Start: 76184, Stop: 75741, Start Num: 23

Candidate Starts for Finemlucis\_140:

(12, 76265), (13, 76256), (Start: 18 @76229 has 1 MA's), (Start: 23 @76184 has 29 MA's), (26, 76163), (31, 76100), (33, 76025), (34, 76007), (35, 75998), (36, 75992), (38, 75947), (39, 75929), (41, 75911), (51, 75812),

Gene: Gabriela\_142 Start: 74527, Stop: 74084, Start Num: 23

Candidate Starts for Gabriela\_142:

(12, 74608), (13, 74599), (Start: 18 @74572 has 1 MA's), (Start: 23 @74527 has 29 MA's), (26, 74506), (31, 74443), (33, 74368), (34, 74350), (35, 74341), (36, 74335), (38, 74290), (39, 74272), (41, 74254), (51, 74155),

Gene: GuuelaD\_139 Start: 75467, Stop: 74988, Start Num: 18

Candidate Starts for GuuelaD\_139:

(Start: 18 @75467 has 1 MA's), (31, 75335), (35, 75245), (38, 75194), (41, 75158), (48, 75077), (51, 75059), (52, 75038),

Gene: Hafay\_110 Start: 67215, Stop: 66838, Start Num: 23

Candidate Starts for Hafay\_110:

(2, 67383), (3, 67374), (9, 67335), (10, 67320), (11, 67314), (16, 67275), (20, 67254), (Start: 23 @67215 has 29 MA's), (32, 67152), (35, 67095), (38, 67044), (40, 67023), (41, 67008), (51, 66909),

Gene: Halena\_131 Start: 73043, Stop: 72531, Start Num: 15

Candidate Starts for Halena\_131:

(Start: 15 @73043 has 17 MA's), (21, 72995), (22, 72980), (24, 72971), (25, 72962), (30, 72914), (33, 72830), (35, 72803), (40, 72713), (47, 72626), (49, 72602), (51, 72593),

Gene: Itos\_144 Start: 74069, Stop: 73626, Start Num: 23

Candidate Starts for Itos\_144:

(Start: 23 @74069 has 29 MA's), (26, 74048), (33, 73910), (34, 73892), (35, 73883), (36, 73877), (38, 73832), (39, 73814), (41, 73796), (51, 73697), (52, 73676),

Gene: JoeDirt\_133 Start: 74086, Stop: 73574, Start Num: 15

Candidate Starts for JoeDirt\_133:

(Start: 15 @74086 has 17 MA's), (21, 74038), (22, 74023), (24, 74014), (25, 74005), (30, 73957), (33, 73873), (35, 73846), (40, 73756), (47, 73669), (49, 73645), (51, 73636),

Gene: Kropertea\_149 Start: 76165, Stop: 75701, Start Num: 15

Candidate Starts for Kropertea\_149:

(Start: 15 @76165 has 17 MA's), (17, 76159), (Start: 18 @76147 has 1 MA's), (19, 76144), (Start: 23 @76105 has 29 MA's), (33, 75994), (35, 75967), (38, 75916), (40, 75895), (41, 75880), (42, 75871), (51, 75772), (52, 75751),

Gene: LeBron\_131 Start: 72608, Stop: 72096, Start Num: 15

Candidate Starts for LeBron\_131:

(Start: 15 @72608 has 17 MA's), (21, 72560), (22, 72545), (24, 72536), (25, 72527), (30, 72479), (33, 72395), (35, 72368), (40, 72278), (47, 72191), (49, 72167), (51, 72158),

Gene: Lewan\_143 Start: 75891, Stop: 75448, Start Num: 23

Candidate Starts for Lewan\_143:

(Start: 23 @75891 has 29 MA's), (26, 75870), (33, 75732), (34, 75714), (35, 75705), (36, 75699), (38, 75654), (39, 75636), (41, 75618), (51, 75519), (52, 75498),

Gene: Loadrie\_143 Start: 75624, Stop: 75241, Start Num: 23

Candidate Starts for Loadrie\_143:

(Start: 23 @75624 has 29 MA's), (26, 75603), (32, 75561), (33, 75525), (34, 75507), (35, 75498), (36, 75492), (38, 75447), (39, 75429), (41, 75411), (51, 75312), (52, 75291),

Gene: Lynnae\_142 Start: 74761, Stop: 74378, Start Num: 23

Candidate Starts for Lynnae\_142:

(Start: 23 @74761 has 29 MA's), (32, 74698), (33, 74662), (34, 74644), (35, 74635), (36, 74629), (38, 74584), (39, 74566), (41, 74548), (51, 74449), (52, 74428),

Gene: MAckerman\_132 Start: 73046, Stop: 72534, Start Num: 15

Candidate Starts for MAckerman\_132:

(Start: 15 @73046 has 17 MA's), (21, 72998), (22, 72983), (24, 72974), (25, 72965), (30, 72917), (33, 72833), (35, 72806), (40, 72716), (47, 72629), (49, 72605), (51, 72596),

Gene: Miley16\_143 Start: 75785, Stop: 75342, Start Num: 23

Candidate Starts for Miley16\_143:

(Start: 23 @75785 has 29 MA's), (26, 75764), (33, 75626), (34, 75608), (35, 75599), (36, 75593), (38, 75548), (39, 75530), (41, 75512), (51, 75413), (52, 75392),

Gene: MkaliMitinis3\_143 Start: 75001, Stop: 74618, Start Num: 23

Candidate Starts for MkaliMitinis3\_143:

(Start: 23 @75001 has 29 MA's), (32, 74938), (33, 74902), (34, 74884), (35, 74875), (36, 74869), (38, 74824), (39, 74806), (41, 74788), (51, 74689), (52, 74668),

Gene: Netyap\_142 Start: 75498, Stop: 75055, Start Num: 23

Candidate Starts for Netyap\_142:

(Start: 23 @75498 has 29 MA's), (26, 75477), (33, 75339), (34, 75321), (35, 75312), (36, 75306), (38, 75261), (39, 75243), (41, 75225), (51, 75126), (52, 75105),

Gene: OhShagHennessy\_124 Start: 71807, Stop: 71295, Start Num: 15

Candidate Starts for OhShagHennessy\_124:

(Start: 15 @71807 has 17 MA's), (21, 71759), (22, 71744), (24, 71735), (25, 71726), (30, 71678), (33, 71594), (35, 71567), (40, 71477), (47, 71390), (49, 71366), (51, 71357),

Gene: OverPar\_127 Start: 69125, Stop: 68742, Start Num: 23

Candidate Starts for OverPar\_127:

(Start: 23 @69125 has 29 MA's), (26, 69104), (32, 69062), (33, 69026), (34, 69008), (35, 68999), (36, 68993), (38, 68948), (39, 68930), (41, 68912), (51, 68813), (52, 68792),

Gene: PYPDinur\_154 Start: 76886, Stop: 76455, Start Num: 23

Candidate Starts for PYPDinur\_154:

(Start: 23 @76886 has 29 MA's), (33, 76745), (35, 76718), (38, 76667), (41, 76631), (43, 76577), (50, 76532), (52, 76505),

Gene: Poochiewood\_124 Start: 70632, Stop: 70120, Start Num: 15

Candidate Starts for Poochiewood\_124:

(Start: 15 @70632 has 17 MA's), (21, 70584), (22, 70569), (24, 70560), (25, 70551), (30, 70503), (33, 70419), (35, 70392), (40, 70302), (47, 70215), (49, 70191), (51, 70182),

Gene: Quby\_155 Start: 76706, Stop: 76317, Start Num: 23

Candidate Starts for Quby\_155:

(Start: 23 @76706 has 29 MA's), (33, 76607), (35, 76580), (38, 76529), (41, 76493), (43, 76439), (50, 76394), (52, 76367),

Gene: Rose5\_132 Start: 73116, Stop: 72604, Start Num: 15

Candidate Starts for Rose5\_132:

(Start: 15 @73116 has 17 MA's), (21, 73068), (22, 73053), (24, 73044), (25, 73035), (30, 72987), (33, 72903), (35, 72876), (40, 72786), (47, 72699), (49, 72675), (51, 72666),

Gene: Rossetti\_144 Start: 75764, Stop: 75381, Start Num: 23

Candidate Starts for Rossetti\_144:

(20, 75800), (Start: 23 @75764 has 29 MA's), (26, 75743), (32, 75701), (33, 75665), (34, 75647), (35, 75638), (36, 75632), (38, 75587), (39, 75569), (41, 75551), (51, 75452), (52, 75431),

Gene: Rumpelstiltskin\_111 Start: 68448, Stop: 68065, Start Num: 23

Candidate Starts for Rumpelstiltskin\_111:

(12, 68529), (13, 68520), (Start: 18 @68493 has 1 MA's), (Start: 23 @68448 has 29 MA's), (26, 68427), (32, 68385), (33, 68349), (34, 68331), (35, 68322), (38, 68271), (39, 68253), (41, 68235), (51, 68136), (52, 68115),

Gene: Sarshaun\_134 Start: 72297, Stop: 71854, Start Num: 23

Candidate Starts for Sarshaun\_134:

(Start: 23 @72297 has 29 MA's), (26, 72276), (33, 72138), (34, 72120), (35, 72111), (36, 72105), (38, 72060), (39, 72042), (41, 72024), (51, 71925), (52, 71904),

Gene: Sheng711\_154 Start: 76211, Stop: 75822, Start Num: 23

Candidate Starts for Sheng711\_154:

(Start: 23 @76211 has 29 MA's), (33, 76112), (35, 76085), (38, 76034), (41, 75998), (43, 75944), (50, 75899), (52, 75872),

Gene: SoJulia\_147 Start: 77202, Stop: 76759, Start Num: 23

Candidate Starts for SoJulia\_147:

(12, 77283), (13, 77274), (Start: 18 @77247 has 1 MA's), (Start: 23 @77202 has 29 MA's), (26, 77181), (31, 77118), (33, 77043), (34, 77025), (35, 77016), (36, 77010), (38, 76965), (39, 76947), (41, 76929), (51, 76830),

Gene: Soap141\_142 Start: 76003, Stop: 75560, Start Num: 23

Candidate Starts for Soap141\_142:

(Start: 23 @76003 has 29 MA's), (26, 75982), (33, 75844), (34, 75826), (35, 75817), (36, 75811), (38, 75766), (39, 75748), (41, 75730), (51, 75631), (52, 75610),

Gene: Tourach\_143 Start: 77029, Stop: 76652, Start Num: 23

Candidate Starts for Tourach\_143:

(20, 77068), (Start: 23 @77029 has 29 MA's), (28, 76999), (32, 76966), (35, 76909), (36, 76903), (38, 76858), (39, 76840), (41, 76822), (51, 76723), (52, 76702),

Gene: Tyson\_133 Start: 73596, Stop: 73084, Start Num: 15

Candidate Starts for Tyson\_133:

(Start: 15 @73596 has 17 MA's), (21, 73548), (22, 73533), (24, 73524), (25, 73515), (30, 73467), (33, 73383), (35, 73356), (40, 73266), (47, 73179), (49, 73155), (51, 73146),

Gene: UPIE\_130 Start: 72915, Stop: 72403, Start Num: 15

Candidate Starts for UPIE\_130:

(Start: 15 @72915 has 17 MA's), (21, 72867), (22, 72852), (24, 72843), (25, 72834), (30, 72786), (33, 72702), (35, 72675), (40, 72585), (47, 72498), (49, 72474), (51, 72465),

Gene: Vetrix\_140 Start: 75660, Stop: 75277, Start Num: 23

Candidate Starts for Vetrix\_140:

(Start: 23 @75660 has 29 MA's), (32, 75597), (33, 75561), (34, 75543), (35, 75534), (36, 75528), (38, 75483), (39, 75465), (41, 75447), (51, 75348), (52, 75327),

Gene: Wamburgrexpress\_135 Start: 73573, Stop: 73061, Start Num: 15

Candidate Starts for Wamburgrexpress\_135:

(Start: 15 @73573 has 17 MA's), (21, 73525), (22, 73510), (24, 73501), (25, 73492), (30, 73444), (33, 73360), (35, 73333), (40, 73243), (47, 73156), (49, 73132), (51, 73123),

Gene: Wigglewigggle\_144 Start: 75586, Stop: 75203, Start Num: 23

Candidate Starts for Wigglewigggle\_144:

(Start: 23 @75586 has 29 MA's), (32, 75523), (33, 75487), (34, 75469), (35, 75460), (36, 75454), (38, 75409), (39, 75391), (41, 75373), (51, 75274), (52, 75253),

Gene: Winky\_143 Start: 75785, Stop: 75342, Start Num: 23

Candidate Starts for Winky\_143:

(Start: 23 @75785 has 29 MA's), (26, 75764), (33, 75626), (34, 75608), (35, 75599), (36, 75593), (38, 75548), (39, 75530), (41, 75512), (51, 75413), (52, 75392),

Gene: Wyatt2\_131 Start: 73222, Stop: 72710, Start Num: 15

Candidate Starts for Wyatt2\_131:

(Start: 15 @73222 has 17 MA's), (21, 73174), (22, 73159), (24, 73150), (25, 73141), (30, 73093), (33, 73009), (35, 72982), (40, 72892), (47, 72805), (49, 72781), (51, 72772),

Gene: Zakai\_145 Start: 75495, Stop: 75052, Start Num: 23

Candidate Starts for Zakai\_145:

(Start: 23 @75495 has 29 MA's), (26, 75474), (33, 75336), (34, 75318), (35, 75309), (36, 75303), (38, 75258), (39, 75240), (41, 75222), (51, 75123), (52, 75102),

Gene: Zaria\_136 Start: 73571, Stop: 73059, Start Num: 15

Candidate Starts for Zaria\_136:

(Start: 15 @73571 has 17 MA's), (21, 73523), (22, 73508), (24, 73499), (25, 73490), (30, 73442), (33, 73358), (35, 73331), (40, 73241), (47, 73154), (49, 73130), (51, 73121),

Gene: ZhongYanYuan\_140 Start: 75351, Stop: 74974, Start Num: 23

Candidate Starts for ZhongYanYuan\_140:

(2, 75519), (3, 75510), (9, 75471), (10, 75456), (11, 75450), (16, 75411), (20, 75390), (Start: 23 @75351 has 29 MA's), (32, 75288), (35, 75231), (38, 75180), (40, 75159), (41, 75144), (51, 75045),