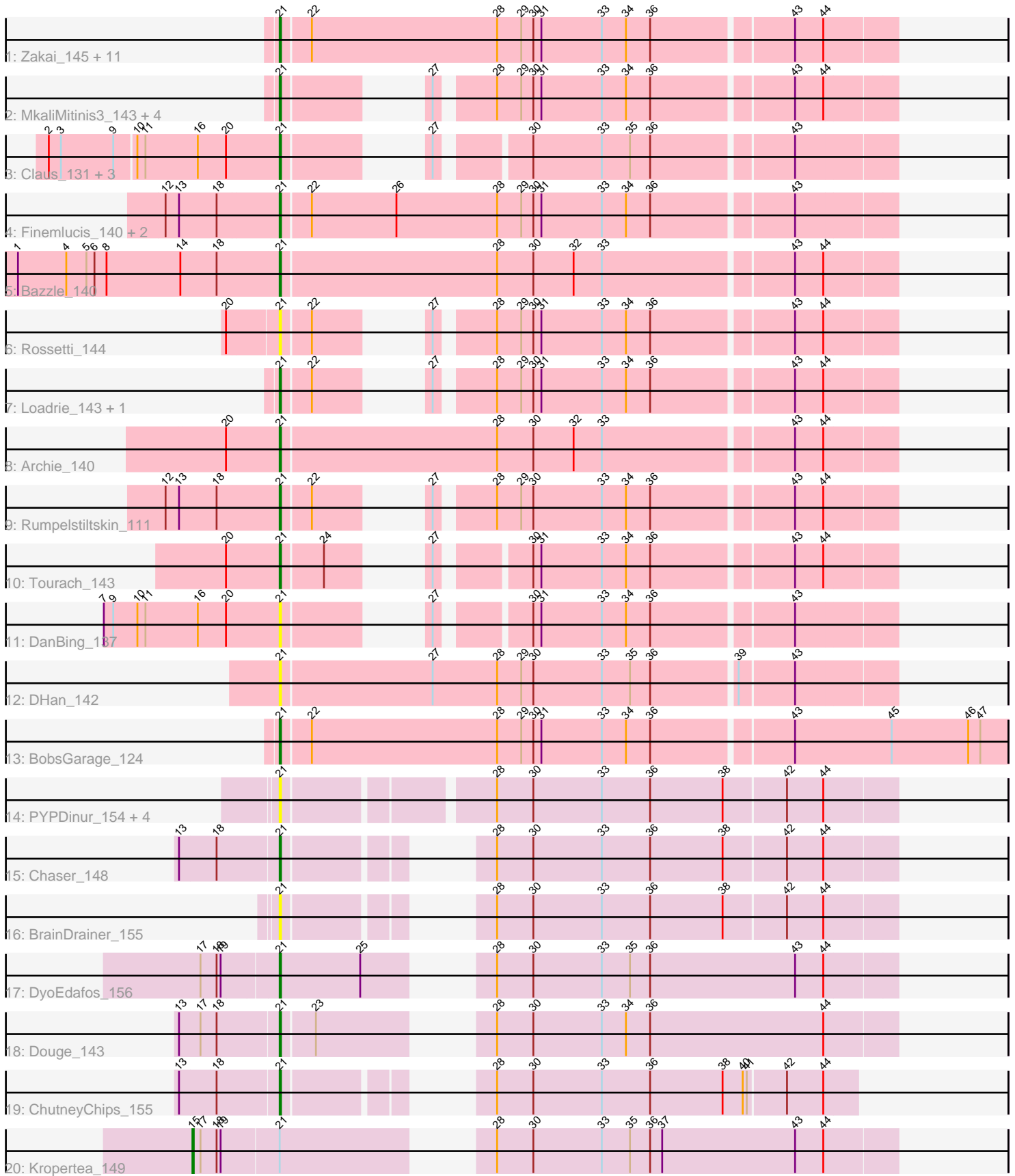


Pham 301497



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 301497 Report

This analysis was run 06/08/26 on database version 649.

Pham number 301497 has 45 members, 16 are drafts.

Phages represented in each track:

- Track 1 : 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 2 : MkaliMitinis3\_143, Crossroads\_144, Wigglewiggle\_144, Vetrix\_140, Lynnae\_142
- Track 3 : Claus\_131, Baoshan\_130, ZhongYanYuan\_140, Hafay\_110
- Track 4 : Finemlucis\_140, SoJulia\_147, Gabriela\_142
- Track 5 : Bazzle\_140
- Track 6 : Rossetti\_144
- Track 7 : Loadrie\_143, OverPar\_126
- Track 8 : Archie\_140
- Track 9 : Rumpelstiltskin\_111
- Track 10 : Tourach\_143
- Track 11 : DanBing\_137
- Track 12 : DHan\_142
- Track 13 : BobsGarage\_124
- Track 14 : PYPDinur\_154, Quby\_155, Douzhi\_155, FarmResident\_154, Sheng711\_154
- Track 15 : Chaser\_148
- Track 16 : BrainDrainer\_155
- Track 17 : DyoEdafos\_156
- Track 18 : Douge\_143
- Track 19 : ChutneyChips\_155
- Track 20 : 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 21, it was called in 28 of the 29 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\_126, PYPDinur\_154, Quby\_155, Rossetti\_144, Rumpelstiltskin\_111, Sarshaun\_134, Sheng711\_154, SoJulia\_147, Soap141\_142, Tourach\_143, Vetrix\_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:

- 

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

Start 15:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kropertea\_149 (L4),

Start 21:

- Found in 45 of 45 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 28 of 29
- 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\_126 (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), Wigglewiggles\_144 (L2), Winky\_143 (L2), Zakai\_145 (L2), ZhongYanYuan\_140 (L2),

### **Summary by clusters:**

There are 2 clusters represented in this pham: L4, L2,

Info for manual annotations of cluster L2:

- Start number 21 was manually annotated 24 times for cluster L2.

Info for manual annotations of cluster L4:

- Start number 15 was manually annotated 1 time for cluster L4.
- Start number 21 was manually annotated 4 times for cluster L4.

### **Gene Information:**

Gene: Archie\_140 Start: 75399, Stop: 74956, Start Num: 21

Candidate Starts for Archie\_140:

(20, 75438), (Start: 21 @75399 has 28 MA's), (28, 75240), (30, 75213), (32, 75183), (33, 75162), (43, 75027), (44, 75006),

Gene: Baoshan\_130 Start: 70471, Stop: 70094, Start Num: 21

Candidate Starts for Baoshan\_130:

(2, 70639), (3, 70630), (9, 70591), (10, 70576), (11, 70570), (16, 70531), (20, 70510), (Start: 21 @70471 has 28 MA's), (27, 70408), (30, 70351), (33, 70300), (35, 70279), (36, 70264), (43, 70165),

Gene: Bazzle\_140 Start: 75896, Stop: 75453, Start Num: 21

Candidate Starts for Bazzle\_140:

(1, 76088), (4, 76052), (5, 76037), (6, 76031), (8, 76022), (14, 75968), (18, 75941), (Start: 21 @75896 has 28 MA's), (28, 75737), (30, 75710), (32, 75680), (33, 75659), (43, 75524), (44, 75503),

Gene: BigCheese\_138 Start: 71942, Stop: 71499, Start Num: 21

Candidate Starts for BigCheese\_138:

(Start: 21 @71942 has 28 MA's), (22, 71921), (28, 71783), (29, 71765), (30, 71756), (31, 71750), (33, 71705), (34, 71687), (36, 71669), (43, 71570), (44, 71549),

Gene: BobsGarage\_124 Start: 67234, Stop: 66704, Start Num: 21

Candidate Starts for BobsGarage\_124:

(Start: 21 @67234 has 28 MA's), (22, 67213), (28, 67075), (29, 67057), (30, 67048), (31, 67042), (33, 66997), (34, 66979), (36, 66961), (43, 66862), (45, 66790), (46, 66733), (47, 66724),

Gene: BrainDrainer\_155 Start: 76837, Stop: 76448, Start Num: 21

Candidate Starts for BrainDrainer\_155:

(Start: 21 @76837 has 28 MA's), (28, 76738), (30, 76711), (33, 76660), (36, 76624), (38, 76570), (42, 76525), (44, 76498),

Gene: Breezona\_143 Start: 75784, Stop: 75341, Start Num: 21

Candidate Starts for Breezona\_143:

(Start: 21 @75784 has 28 MA's), (22, 75763), (28, 75625), (29, 75607), (30, 75598), (31, 75592), (33, 75547), (34, 75529), (36, 75511), (43, 75412), (44, 75391),

Gene: Chaser\_148 Start: 75823, Stop: 75434, Start Num: 21

Candidate Starts for Chaser\_148:

(13, 75895), (18, 75868), (Start: 21 @75823 has 28 MA's), (28, 75724), (30, 75697), (33, 75646), (36, 75610), (38, 75556), (42, 75511), (44, 75484),

Gene: ChutneyChips\_155 Start: 76947, Stop: 76585, Start Num: 21

Candidate Starts for ChutneyChips\_155:

(13, 77019), (18, 76992), (Start: 21 @76947 has 28 MA's), (28, 76848), (30, 76821), (33, 76770), (36, 76734), (38, 76680), (40, 76665), (41, 76662), (42, 76635), (44, 76608),

Gene: Claus\_131 Start: 71384, Stop: 71007, Start Num: 21

Candidate Starts for Claus\_131:

(2, 71552), (3, 71543), (9, 71504), (10, 71489), (11, 71483), (16, 71444), (20, 71423), (Start: 21 @71384 has 28 MA's), (27, 71321), (30, 71264), (33, 71213), (35, 71192), (36, 71177), (43, 71078),

Gene: Crossroads\_144 Start: 75286, Stop: 74903, Start Num: 21

Candidate Starts for Crossroads\_144:

(Start: 21 @75286 has 28 MA's), (27, 75223), (28, 75187), (29, 75169), (30, 75160), (31, 75154), (33, 75109), (34, 75091), (36, 75073), (43, 74974), (44, 74953),

Gene: DHan\_142 Start: 75640, Stop: 75197, Start Num: 21

Candidate Starts for DHan\_142:

(Start: 21 @75640 has 28 MA's), (27, 75529), (28, 75481), (29, 75463), (30, 75454), (33, 75403), (35, 75382), (36, 75367), (39, 75307), (43, 75268),

Gene: DanBing\_137 Start: 71647, Stop: 71270, Start Num: 21

Candidate Starts for DanBing\_137:

(7, 71776), (9, 71770), (10, 71752), (11, 71746), (16, 71707), (20, 71686), (Start: 21 @71647 has 28 MA's), (27, 71584), (30, 71527), (31, 71521), (33, 71476), (34, 71458), (36, 71440), (43, 71341),

Gene: Douge\_143 Start: 73698, Stop: 73297, Start Num: 21

Candidate Starts for Douge\_143:

(13, 73770), (17, 73755), (18, 73743), (Start: 21 @73698 has 28 MA's), (23, 73674), (28, 73590), (30, 73563), (33, 73512), (34, 73494), (36, 73476), (44, 73347),

Gene: Douzhi\_155 Start: 77003, Stop: 76614, Start Num: 21

Candidate Starts for Douzhi\_155:

(Start: 21 @77003 has 28 MA's), (28, 76904), (30, 76877), (33, 76826), (36, 76790), (38, 76736), (42, 76691), (44, 76664),

Gene: DrSeegs\_140 Start: 75784, Stop: 75341, Start Num: 21

Candidate Starts for DrSeegs\_140:

(Start: 21 @75784 has 28 MA's), (22, 75763), (28, 75625), (29, 75607), (30, 75598), (31, 75592), (33, 75547), (34, 75529), (36, 75511), (43, 75412), (44, 75391),

Gene: DyoEdafos\_156 Start: 76685, Stop: 76281, Start Num: 21

Candidate Starts for DyoEdafos\_156:

(17, 76739), (18, 76727), (19, 76724), (Start: 21 @76685 has 28 MA's), (25, 76625), (28, 76574), (30, 76547), (33, 76496), (35, 76475), (36, 76460), (43, 76352), (44, 76331),

Gene: Faith1\_140 Start: 75092, Stop: 74649, Start Num: 21

Candidate Starts for Faith1\_140:

(Start: 21 @75092 has 28 MA's), (22, 75071), (28, 74933), (29, 74915), (30, 74906), (31, 74900), (33, 74855), (34, 74837), (36, 74819), (43, 74720), (44, 74699),

Gene: FarmResident\_154 Start: 76652, Stop: 76263, Start Num: 21

Candidate Starts for FarmResident\_154:

(Start: 21 @76652 has 28 MA's), (28, 76553), (30, 76526), (33, 76475), (36, 76439), (38, 76385), (42, 76340), (44, 76313),

Gene: Finemlucis\_140 Start: 76184, Stop: 75741, Start Num: 21

Candidate Starts for Finemlucis\_140:

(12, 76265), (13, 76256), (18, 76229), (Start: 21 @76184 has 28 MA's), (22, 76163), (26, 76100), (28, 76025), (29, 76007), (30, 75998), (31, 75992), (33, 75947), (34, 75929), (36, 75911), (43, 75812),

Gene: Gabriela\_142 Start: 74527, Stop: 74084, Start Num: 21

Candidate Starts for Gabriela\_142:

(12, 74608), (13, 74599), (18, 74572), (Start: 21 @74527 has 28 MA's), (22, 74506), (26, 74443), (28, 74368), (29, 74350), (30, 74341), (31, 74335), (33, 74290), (34, 74272), (36, 74254), (43, 74155),

Gene: Hafay\_110 Start: 67215, Stop: 66838, Start Num: 21

Candidate Starts for Hafay\_110:

(2, 67383), (3, 67374), (9, 67335), (10, 67320), (11, 67314), (16, 67275), (20, 67254), (Start: 21 @67215 has 28 MA's), (27, 67152), (30, 67095), (33, 67044), (35, 67023), (36, 67008), (43, 66909),

Gene: Itos\_144 Start: 74069, Stop: 73626, Start Num: 21

Candidate Starts for Itos\_144:

(Start: 21 @74069 has 28 MA's), (22, 74048), (28, 73910), (29, 73892), (30, 73883), (31, 73877), (33, 73832), (34, 73814), (36, 73796), (43, 73697), (44, 73676),

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

Candidate Starts for Kropertea\_149:

(Start: 15 @76165 has 1 MA's), (17, 76159), (18, 76147), (19, 76144), (Start: 21 @76105 has 28 MA's), (28, 75994), (30, 75967), (33, 75916), (35, 75895), (36, 75880), (37, 75871), (43, 75772), (44, 75751),

Gene: Lewan\_143 Start: 75891, Stop: 75448, Start Num: 21

Candidate Starts for Lewan\_143:

(Start: 21 @75891 has 28 MA's), (22, 75870), (28, 75732), (29, 75714), (30, 75705), (31, 75699), (33, 75654), (34, 75636), (36, 75618), (43, 75519), (44, 75498),

Gene: Loadrie\_143 Start: 75624, Stop: 75241, Start Num: 21

Candidate Starts for Loadrie\_143:

(Start: 21 @75624 has 28 MA's), (22, 75603), (27, 75561), (28, 75525), (29, 75507), (30, 75498), (31, 75492), (33, 75447), (34, 75429), (36, 75411), (43, 75312), (44, 75291),

Gene: Lynnae\_142 Start: 74761, Stop: 74378, Start Num: 21

Candidate Starts for Lynnae\_142:

(Start: 21 @74761 has 28 MA's), (27, 74698), (28, 74662), (29, 74644), (30, 74635), (31, 74629), (33, 74584), (34, 74566), (36, 74548), (43, 74449), (44, 74428),

Gene: Miley16\_143 Start: 75785, Stop: 75342, Start Num: 21

Candidate Starts for Miley16\_143:

(Start: 21 @75785 has 28 MA's), (22, 75764), (28, 75626), (29, 75608), (30, 75599), (31, 75593), (33, 75548), (34, 75530), (36, 75512), (43, 75413), (44, 75392),

Gene: MkaliMitinis3\_143 Start: 75001, Stop: 74618, Start Num: 21

Candidate Starts for MkaliMitinis3\_143:

(Start: 21 @75001 has 28 MA's), (27, 74938), (28, 74902), (29, 74884), (30, 74875), (31, 74869), (33, 74824), (34, 74806), (36, 74788), (43, 74689), (44, 74668),

Gene: Netyap\_142 Start: 75498, Stop: 75055, Start Num: 21

Candidate Starts for Netyap\_142:

(Start: 21 @75498 has 28 MA's), (22, 75477), (28, 75339), (29, 75321), (30, 75312), (31, 75306), (33, 75261), (34, 75243), (36, 75225), (43, 75126), (44, 75105),

Gene: OverPar\_126 Start: 69125, Stop: 68742, Start Num: 21

Candidate Starts for OverPar\_126:

(Start: 21 @69125 has 28 MA's), (22, 69104), (27, 69062), (28, 69026), (29, 69008), (30, 68999), (31, 68993), (33, 68948), (34, 68930), (36, 68912), (43, 68813), (44, 68792),

Gene: PYPDinur\_154 Start: 76886, Stop: 76455, Start Num: 21

Candidate Starts for PYPDinur\_154:

(Start: 21 @76886 has 28 MA's), (28, 76745), (30, 76718), (33, 76667), (36, 76631), (38, 76577), (42, 76532), (44, 76505),

Gene: Quby\_155 Start: 76706, Stop: 76317, Start Num: 21

Candidate Starts for Quby\_155:

(Start: 21 @76706 has 28 MA's), (28, 76607), (30, 76580), (33, 76529), (36, 76493), (38, 76439), (42, 76394), (44, 76367),

Gene: Rossetti\_144 Start: 75764, Stop: 75381, Start Num: 21

Candidate Starts for Rossetti\_144:

(20, 75800), (Start: 21 @75764 has 28 MA's), (22, 75743), (27, 75701), (28, 75665), (29, 75647), (30, 75638), (31, 75632), (33, 75587), (34, 75569), (36, 75551), (43, 75452), (44, 75431),

Gene: Rumpelstiltskin\_111 Start: 68448, Stop: 68065, Start Num: 21

Candidate Starts for Rumpelstiltskin\_111:

(12, 68529), (13, 68520), (18, 68493), (Start: 21 @68448 has 28 MA's), (22, 68427), (27, 68385), (28, 68349), (29, 68331), (30, 68322), (33, 68271), (34, 68253), (36, 68235), (43, 68136), (44, 68115),

Gene: Sarshaun\_134 Start: 72297, Stop: 71854, Start Num: 21

Candidate Starts for Sarshaun\_134:

(Start: 21 @72297 has 28 MA's), (22, 72276), (28, 72138), (29, 72120), (30, 72111), (31, 72105), (33, 72060), (34, 72042), (36, 72024), (43, 71925), (44, 71904),

Gene: Sheng711\_154 Start: 76211, Stop: 75822, Start Num: 21

Candidate Starts for Sheng711\_154:

(Start: 21 @76211 has 28 MA's), (28, 76112), (30, 76085), (33, 76034), (36, 75998), (38, 75944), (42, 75899), (44, 75872),

Gene: SoJulia\_147 Start: 77202, Stop: 76759, Start Num: 21

Candidate Starts for SoJulia\_147:

(12, 77283), (13, 77274), (18, 77247), (Start: 21 @77202 has 28 MA's), (22, 77181), (26, 77118), (28, 77043), (29, 77025), (30, 77016), (31, 77010), (33, 76965), (34, 76947), (36, 76929), (43, 76830),

Gene: Soap141\_142 Start: 76003, Stop: 75560, Start Num: 21

Candidate Starts for Soap141\_142:

(Start: 21 @76003 has 28 MA's), (22, 75982), (28, 75844), (29, 75826), (30, 75817), (31, 75811), (33, 75766), (34, 75748), (36, 75730), (43, 75631), (44, 75610),

Gene: Tourach\_143 Start: 77029, Stop: 76652, Start Num: 21

Candidate Starts for Tourach\_143:

(20, 77068), (Start: 21 @77029 has 28 MA's), (24, 76999), (27, 76966), (30, 76909), (31, 76903), (33, 76858), (34, 76840), (36, 76822), (43, 76723), (44, 76702),

Gene: Vetrix\_140 Start: 75660, Stop: 75277, Start Num: 21

Candidate Starts for Vetrix\_140:

(Start: 21 @75660 has 28 MA's), (27, 75597), (28, 75561), (29, 75543), (30, 75534), (31, 75528), (33, 75483), (34, 75465), (36, 75447), (43, 75348), (44, 75327),

Gene: Wigglewigggle\_144 Start: 75586, Stop: 75203, Start Num: 21

Candidate Starts for Wigglewigggle\_144:

(Start: 21 @75586 has 28 MA's), (27, 75523), (28, 75487), (29, 75469), (30, 75460), (31, 75454), (33, 75409), (34, 75391), (36, 75373), (43, 75274), (44, 75253),

Gene: Winky\_143 Start: 75785, Stop: 75342, Start Num: 21

Candidate Starts for Winky\_143:

(Start: 21 @75785 has 28 MA's), (22, 75764), (28, 75626), (29, 75608), (30, 75599), (31, 75593), (33, 75548), (34, 75530), (36, 75512), (43, 75413), (44, 75392),

Gene: Zakai\_145 Start: 75495, Stop: 75052, Start Num: 21

Candidate Starts for Zakai\_145:

(Start: 21 @75495 has 28 MA's), (22, 75474), (28, 75336), (29, 75318), (30, 75309), (31, 75303), (33, 75258), (34, 75240), (36, 75222), (43, 75123), (44, 75102),

Gene: ZhongYanYuan\_140 Start: 75351, Stop: 74974, Start Num: 21

Candidate Starts for ZhongYanYuan\_140:

(2, 75519), (3, 75510), (9, 75471), (10, 75456), (11, 75450), (16, 75411), (20, 75390), (Start: 21 @75351 has 28 MA's), (27, 75288), (30, 75231), (33, 75180), (35, 75159), (36, 75144), (43, 75045),