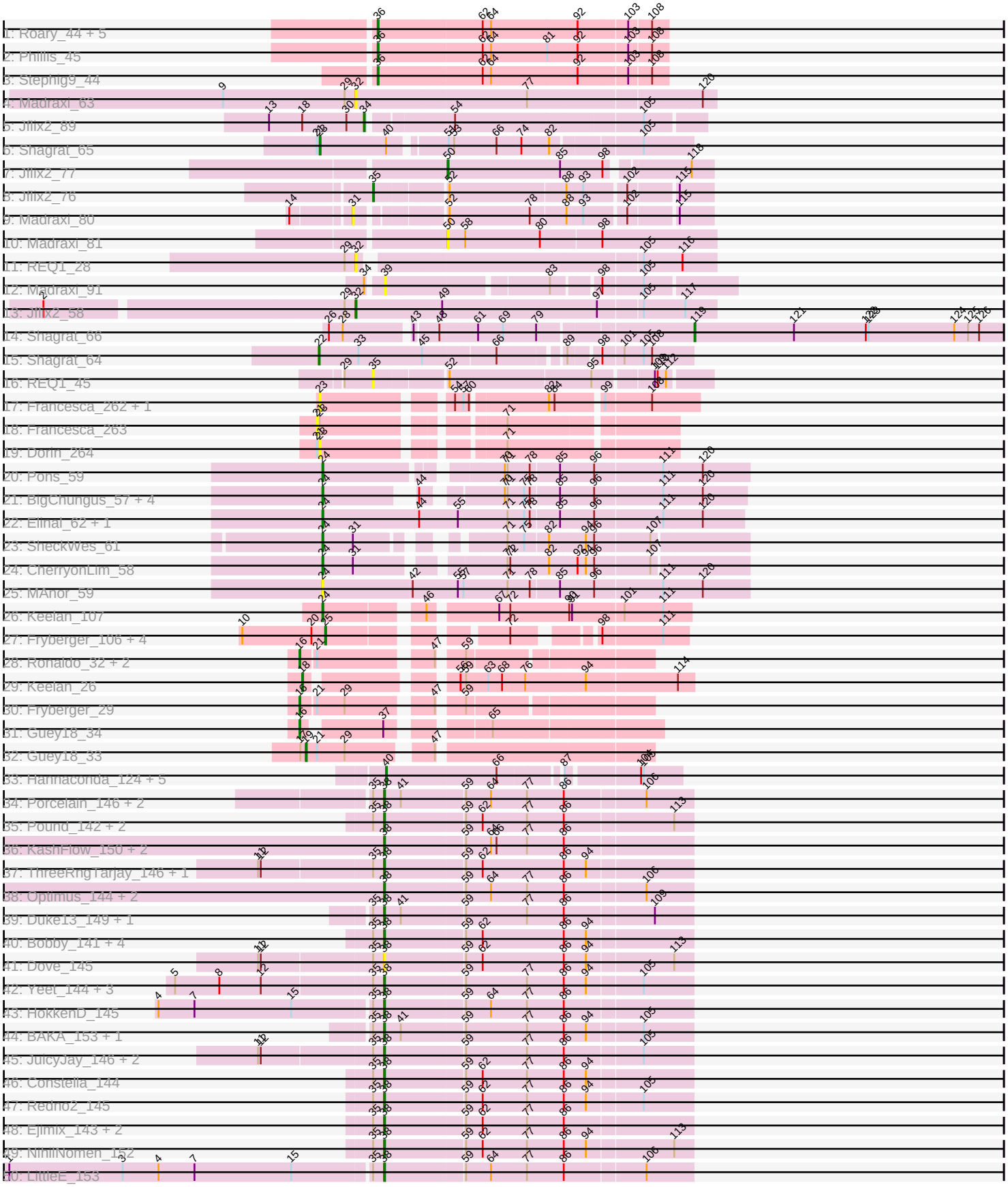
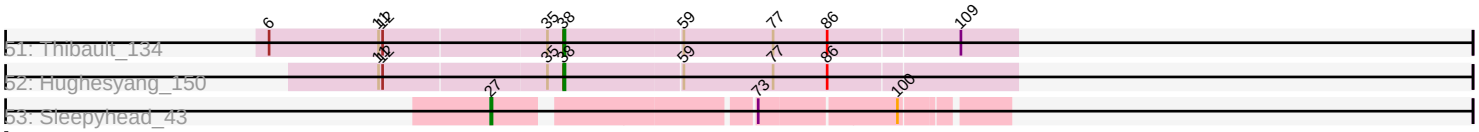
Pham 154625


1: Roary_44 + 5
2: Phills_45
3: Stephig9_44
4: Madraxi_63
5: Jflix2_89
6: Shagrat_65
7: Jflix2_77
8: Jflix2_76
9: Madraxi_80
10: Madraxi_81
11: REQ1_28
12: Madraxi_91
13: Jflix2_58
14: Shagrat_66
15: Shagrat_64
16: REQ1_45
17: Francesca_262 + 1
18: Francesca_263
19: Dorin_264
20: Pons_59
21: BigChungus_57 + 4
22: Elinat_62 + 1
23: SneckWes_61
24: CherryonLim_58
25: MAnor_59
26: Keelan_107
27: Fryberger_106 + 4
28: Ronaldo_32 + 2
29: Keelan_26
30: Fryberger_29
31: Guey18_34
32: Guey18_33
33: Hannaconda_124 + 5
34: Porcelain_146 + 2
35: Pound_142 + 2
36: KashFlow_150 + 2
37: ThreeRingTarjay_146 + 1
38: Optimus_144 + 2
39: Duke13_149 + 1
40: Bobby_141 + 4
41: Dove_145
42: Yeet_144 + 3
43: HokkenD_145
44: BAKA_153 + 1
45: JuicyJay_146 + 2
46: Constella_144
47: Redno2_145
48: Ejimix_143 + 2
49: NihilNomen_152
50: LittleE_153

Pham 154625


6
12
35
38
59
77
86
109
51: Thibault_134
12
35
38
59
77
86
52: Hughesyang_150
27
73
100
53: Sleepyhead_43

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 154625 Report

This analysis was run 04/12/24 on database version 558.

Pham number 154625 has 97 members, 16 are drafts.

Phages represented in each track:
- Track 1 : Roary_44, Smeadley_44, Astro_43, Danforth_43, Groundhog_42, Expelliarmus_43
- Track 2 : Phillis_45
- Track 3 : Stephig9_44
- Track 4 : Madraxi_63
- Track 5 : Jflix2_89
- Track 6 : Shagrat_65
- Track 7 : Jflix2_77
- Track 8 : Jflix2_76
- Track 9 : Madraxi_80
- Track 10 : Madraxi_81
- Track 11 : REQ1_28
- Track 12 : Madraxi_91
- Track 13 : Jflix2_58
- Track 14 : Shagrat_66
- Track 15 : Shagrat_64
- Track 16 : REQ1_45
- Track 17 : Francesca_262, Dorin_263
- Track 18 : Francesca_263
- Track 19 : Dorin_264
- Track 20 : Pons_59
- Track 21 : BigChungus_57, SummitAcademy_57, Feastonyeet_57, Vine_60, PotPie_56
- Track 22 : Elinal_62, KayGee_59
- Track 23 : SheckWes_61
- Track 24 : CherryonLim_58
- Track 25 : MAnor_59
- Track 26 : Keelan_107
- Track 27 : Fryberger_106, Ziko_109, Guey18_111, Volt_110, Ronaldo_108
- Track 28 : Ronaldo_32, Ziko_32, Volt_31
- Track 29 : Keelan_26
- Track 30 : Fryberger_29
- Track 31 : Guey18_34
- Track 32 : Guey18_33
- Track 33 : Hannaconda_124, Odette_135, Yeet_125, Superphikiman_128, HokkenD_123, Courthouse_126
- Track 34 : Porcelain_146, MiaZeal_149, Lucky2013_142

• Track 35 : Pound_142, Schatzie_146, DmpstrDiver_151
• Track 36 : KashFlow_150, Squint_142, Hannaconda_144
• Track 37 : ThreeRngTarjay_146, Phoebus_151
• Track 38 : Optimus_144, Omega_157, Odette_156
• Track 39 : Duke13_149, EricMillard_145
• Track 40 : Bobby_141, Wanda_150, Kalah2_142, Zelink_145, Minerva_150
• Track 41 : Dove_145
• Track 42 : Yeet_144, Superphikiman_147, Ariel_149, Courthouse_145
• Track 43 : HokkenD_145
• Track 44 : BAKA_153, Klein_150
• Track 45 : JuicyJay_146, Beem_153, Bombitas_138
• Track 46 : Constella_144
• Track 47 : Redno2_145
• Track 48 : Ejimix_143, Halley_152, Dallas_151
• Track 49 : NihilNomen_152
• Track 50 : LittleE_153
• Track 51 : Thibault_134
• Track 52 : Hughesyang_150
• Track 53 : Sleepyhead_43

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

The start number called the most often in the published annotations is 38, it was called in 39 of the 81 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Ariel_149, BAKA_153, Beem_153, Bobby_141, Bombitas_138, Constella_144, Courthouse_145, Dallas_151, DmpstrDiver_151, Dove_145, Duke13_149, Ejimix_143, EricMillard_145, Halley_152, Hannaconda_144, HokkenD_145, Hughesyang_150, JuicyJay_146, Kalah2_142, KashFlow_150, Klein_150, LittleE_153, Lucky2013_142, MiaZeal_149, Minerva_150, NihilNomen_152, Odette_156, Omega_157, Optimus_144, Phoebus_151, Porcelain_146, Pound_142, Redno2_145, Schatzie_146, Squint_142, Superphikiman_147, Thibault_134, ThreeRngTarjay_146, Wanda_150, Yeet_144, Zelink_145,

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

Genes that do not have the "Most Annotated" start:
• Astro_43, BigChungus_57, CherryonLim_58, Courthouse_126, Danforth_43, Dorin_263, Dorin_264, Elinal_62, Expelliarmus_43, Feastonyeet_57, Francesca_262, Francesca_263, Fryberger_106, Fryberger_29, Groundhog_42, Guey18_111, Guey18_33, Guey18_34, Hannaconda_124, HokkenD_123, Jflix2_58, Jflix2_76, Jflix2_77, Jflix2_89, KayGee_59, Keelan_107, Keelan_26, MAnor_59, Madraxi_63, Madraxi_80, Madraxi_81, Madraxi_91, Odette_135, Phillis_45, Pons_59, PotPie_56, REQ1_28, REQ1_45, Roary_44, Ronaldo_108, Ronaldo_32, Shagrat_64, Shagrat_65, Shagrat_66, SheckWes_61, Sleepyhead_43, Smeadley_44, Stephig9_44, SummitAcademy_57, Superphikiman_128, Vine_60, Volt_110, Volt_31, Yeet_125, Ziko_109, Ziko_32,

Summary by start number:

Start 16:
• Found in 5 of 97 (5.2%) of genes in pham
• Manual Annotations of this start: 5 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Fryberger_29 (DP), Guey18_34 (DP), Ronaldo_32 (DP), Volt_31 (DP), Ziko_32 (DP),

Start 18:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Keelan_26 (DP),

Start 19:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Guey18_33 (DP),

Start 21:
• Found in 8 of 97 (8.2%) of genes in pham
• No Manual Annotations of this start.
• Called 12.5% of time when present
• Phage (with cluster) where this start called: Francesca_263 (CG),

Start 22:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Shagrat_64 (CF),

Start 23:
• Found in 5 of 97 (5.2%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 80.0% of time when present
• Phage (with cluster) where this start called: Dorin_263 (CG), Dorin_264 (CG), Francesca_262 (CG), Shagrat_65 (CF),

Start 24:
• Found in 12 of 97 (12.4%) of genes in pham
• Manual Annotations of this start: 9 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BigChungus_57 (CT), CherryonLim_58 (CT), Elinal_62 (CT), Feastonyeet_57 (CT), KayGee_59 (CT), Keelan_107 (DP), MAnor_59 (CT), Pons_59 (CT), PotPie_56 (CT), SheckWes_61 (CT), SummitAcademy_57 (CT), Vine_60 (CT),

Start 25:
• Found in 5 of 97 (5.2%) of genes in pham
• Manual Annotations of this start: 5 of 81
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Fryberger_106 (DP), Guey18_111 (DP), Ronaldo_108 (DP), Volt_110 (DP), Ziko_109 (DP),

Start 27:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sleepyhead_43 (singleton),

Start 31:
• Found in 3 of 97 (3.1%) of genes in pham
• No Manual Annotations of this start.
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Madraxi_80 (CF),

Start 32:
• Found in 3 of 97 (3.1%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Jflix2_58 (CF), Madraxi_63 (CF), REQ1_28 (CF),

Start 34:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Jflix2_89 (CF),

Start 35:
• Found in 37 of 97 (38.1%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 5.4% of time when present
• Phage (with cluster) where this start called: Jflix2_76 (CF), REQ1_45 (CF),

Start 36:
• Found in 8 of 97 (8.2%) of genes in pham
• Manual Annotations of this start: 8 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Astro_43 (A8), Danforth_43 (A8), Expelliarmus_43 (A8), Groundhog_42 (A8), Phillis_45 (A8), Roary_44 (A8), Smeadley_44 (A8), Stephig9_44 (A8),

Start 38:
• Found in 41 of 97 (42.3%) of genes in pham
• Manual Annotations of this start: 39 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ariel_149 (J), BAKA_153 (J), Beem_153 (J), Bobby_141 (J), Bombitas_138 (J), Constella_144 (J), Courthouse_145 (J), Dallas_151 (J), DmpstrDiver_151 (J), Dove_145 (J), Duke13_149 (J), Ejimix_143 (J), EricMillard_145 (J), Halley_152 (J), Hannaconda_144 (J), HokkenD_145 (J), Hughesyang_150 (J), JuicyJay_146 (J), Kalah2_142 (J), KashFlow_150 (J), Klein_150 (J), LittleE_153 (J), Lucky2013_142 (J), MiaZeal_149 (J), Minerva_150 (J), NihilNomen_152 (J), Odette_156 (J), Omega_157 (J), Optimus_144 (J),

Phoebus_151 (J), Porcelain_146 (J), Pound_142 (J), Redno2_145 (J), Schatzie_146 (J), Squint_142 (J), Superphikiman_147 (J), Thibault_134 (J), ThreeRngTarjay_146 (J), Wanda_150 (J), Yeet_144 (J), Zelink_145 (J),

Start 39:
• Found in 1 of 97 (1.0%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Madraxi_91 (CF),

Start 40:
• Found in 7 of 97 (7.2%) of genes in pham
• Manual Annotations of this start: 5 of 81
• Called 85.7% of time when present
• Phage (with cluster) where this start called: Courthouse_126 (J), Hannaconda_124 (J), HokkenD_123 (J), Odette_135 (J), Superphikiman_128 (J), Yeet_125 (J),

Start 50:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Jflix2_77 (CF), Madraxi_81 (CF),

Start 119:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Shagrat_66 (CF),

Summary by clusters:

There are 7 clusters represented in this pham: singleton, J, CG, CF, A8, DP, CT,

Info for manual annotations of cluster A8:
•Start number 36 was manually annotated 8 times for cluster A8.

Info for manual annotations of cluster CF:
•Start number 22 was manually annotated 1 time for cluster CF.
•Start number 23 was manually annotated 1 time for cluster CF.
•Start number 32 was manually annotated 1 time for cluster CF.
•Start number 34 was manually annotated 1 time for cluster CF.
•Start number 35 was manually annotated 1 time for cluster CF.
•Start number 50 was manually annotated 1 time for cluster CF.
•Start number 119 was manually annotated 1 time for cluster CF.

Info for manual annotations of cluster CT:
•Start number 24 was manually annotated 8 times for cluster CT.

Info for manual annotations of cluster DP:
•Start number 16 was manually annotated 5 times for cluster DP.
•Start number 18 was manually annotated 1 time for cluster DP.
•Start number 19 was manually annotated 1 time for cluster DP.

•Start number 24 was manually annotated 1 time for cluster DP.
•Start number 25 was manually annotated 5 times for cluster DP.

Info for manual annotations of cluster J:
•Start number 38 was manually annotated 39 times for cluster J.
•Start number 40 was manually annotated 5 times for cluster J.

Gene Information:

Gene: Ariel_149 Start: 76661, Stop: 76984, Start Num: 38
Candidate Starts for Ariel_149:
(5, 76439), (8, 76487), (12, 76532), (Start: 35 @76649 has 1 MA's), (Start: 38 @76661 has 39 MA's), (59, 76745), (77, 76811), (86, 76850), (94, 76874), (105, 76931),

Gene: Astro_43 Start: 30852, Stop: 30550, Start Num: 36
Candidate Starts for Astro_43:
(Start: 36 @30852 has 8 MA's), (62, 30741), (64, 30732), (92, 30639), (103, 30588), (108, 30567),

Gene: BAKA_153 Start: 81330, Stop: 81653, Start Num: 38
Candidate Starts for BAKA_153:
(Start: 35 @81318 has 1 MA's), (Start: 38 @81330 has 39 MA's), (41, 81348), (59, 81414), (77, 81480), (86, 81519), (94, 81543), (105, 81600),

Gene: Beem_153 Start: 81458, Stop: 81781, Start Num: 38
Candidate Starts for Beem_153:
(11, 81326), (12, 81329), (Start: 35 @81446 has 1 MA's), (Start: 38 @81458 has 39 MA's), (59, 81542), (77, 81608), (86, 81647), (105, 81728),

Gene: BigChungus_57 Start: 40681, Stop: 40280, Start Num: 24
Candidate Starts for BigChungus_57:
(Start: 24 @40681 has 9 MA's), (44, 40603), (70, 40531), (71, 40528), (75, 40510), (78, 40504), (85, 40474), (96, 40441), (111, 40369), (120, 40327),

Gene: Bobby_141 Start: 81455, Stop: 81778, Start Num: 38
Candidate Starts for Bobby_141:
(Start: 35 @81443 has 1 MA's), (Start: 38 @81455 has 39 MA's), (59, 81539), (62, 81557), (86, 81644), (94, 81668),

Gene: Bombitas_138 Start: 78311, Stop: 78634, Start Num: 38
Candidate Starts for Bombitas_138:
(11, 78179), (12, 78182), (Start: 35 @78299 has 1 MA's), (Start: 38 @78311 has 39 MA's), (59, 78395), (77, 78461), (86, 78500), (105, 78581),

Gene: CherryonLim_58 Start: 42157, Stop: 41738, Start Num: 24
Candidate Starts for CherryonLim_58:
(Start: 24 @42157 has 9 MA's), (31, 42124), (71, 41986), (72, 41983), (82, 41941), (92, 41914), (94, 41905), (96, 41896), (107, 41839),

Gene: Constella_144 Start: 79520, Stop: 79843, Start Num: 38
Candidate Starts for Constella_144:

(Start: 35 @79508 has 1 MA's), (Start: 38 @79520 has 39 MA's), (59, 79604), (62, 79622), (77, 79670), (86, 79709), (94, 79733),

Gene: Courthouse_145 Start: 76519, Stop: 76842, Start Num: 38
Candidate Starts for Courthouse_145:
(5, 76297), (8, 76345), (12, 76390), (Start: 35 @76507 has 1 MA's), (Start: 38 @76519 has 39 MA's), (59, 76603), (77, 76669), (86, 76708), (94, 76732), (105, 76789),

Gene: Courthouse_126 Start: 68736, Stop: 69029, Start Num: 40
Candidate Starts for Courthouse_126:
(Start: 40 @68736 has 5 MA's), (66, 68853), (87, 68913), (104, 68985), (105, 68988),

Gene: Dallas_151 Start: 80367, Stop: 80690, Start Num: 38
Candidate Starts for Dallas_151:
(Start: 35 @80355 has 1 MA's), (Start: 38 @80367 has 39 MA's), (59, 80451), (62, 80469), (77, 80517), (86, 80556),

Gene: Danforth_43 Start: 30881, Stop: 30579, Start Num: 36
Candidate Starts for Danforth_43:
(Start: 36 @30881 has 8 MA's), (62, 30770), (64, 30761), (92, 30668), (103, 30617), (108, 30596),

Gene: DmpstrDiver_151 Start: 80286, Stop: 80609, Start Num: 38
Candidate Starts for DmpstrDiver_151:
(Start: 35 @80274 has 1 MA's), (Start: 38 @80286 has 39 MA's), (59, 80370), (62, 80388), (77, 80436), (86, 80475), (113, 80589),

Gene: Dorin_263 Start: 128550, Stop: 128915, Start Num: 23
Candidate Starts for Dorin_263:
(Start: 23 @128550 has 1 MA's), (54, 128673), (57, 128682), (60, 128688), (82, 128766), (84, 128772), (99, 128817), (108, 128865),

Gene: Dorin_264 Start: 128893, Stop: 129231, Start Num: 23
Candidate Starts for Dorin_264:
(21, 128890), (Start: 23 @128893 has 1 MA's), (71, 129061),

Gene: Dove_145 Start: 76474, Stop: 76797, Start Num: 38
Candidate Starts for Dove_145:
(11, 76342), (12, 76345), (Start: 35 @76462 has 1 MA's), (Start: 38 @76474 has 39 MA's), (59, 76558), (62, 76576), (86, 76663), (94, 76687), (113, 76777),

Gene: Duke13_149 Start: 79615, Stop: 79938, Start Num: 38
Candidate Starts for Duke13_149:
(Start: 35 @79603 has 1 MA's), (Start: 38 @79615 has 39 MA's), (41, 79633), (59, 79699), (77, 79765), (86, 79804), (109, 79897),

Gene: Ejimix_143 Start: 80435, Stop: 80758, Start Num: 38
Candidate Starts for Ejimix_143:
(Start: 35 @80423 has 1 MA's), (Start: 38 @80435 has 39 MA's), (59, 80519), (62, 80537), (77, 80585), (86, 80624),

Gene: Elinal_62 Start: 41462, Stop: 41016, Start Num: 24
Candidate Starts for Elinal_62:

(Start: 24 @41462 has 9 MA's), (44, 41357), (55, 41315), (71, 41261), (75, 41243), (78, 41237), (85, 41207), (96, 41174), (111, 41102), (120, 41060),

Gene: EricMillard_145 Start: 80967, Stop: 81290, Start Num: 38
Candidate Starts for EricMillard_145:
(Start: 35 @80955 has 1 MA's), (Start: 38 @80967 has 39 MA's), (41, 80985), (59, 81051), (77, 81117), (86, 81156), (109, 81249),

Gene: Expelliarmus_43 Start: 30910, Stop: 30608, Start Num: 36
Candidate Starts for Expelliarmus_43:
(Start: 36 @30910 has 8 MA's), (62, 30799), (64, 30790), (92, 30697), (103, 30646), (108, 30625),

Gene: Feastonyeet_57 Start: 40681, Stop: 40280, Start Num: 24
Candidate Starts for Feastonyeet_57:
(Start: 24 @40681 has 9 MA's), (44, 40603), (70, 40531), (71, 40528), (75, 40510), (78, 40504), (85, 40474), (96, 40441), (111, 40369), (120, 40327),

Gene: Francesca_262 Start: 129192, Stop: 129557, Start Num: 23
Candidate Starts for Francesca_262:
(Start: 23 @129192 has 1 MA's), (54, 129315), (57, 129324), (60, 129330), (82, 129408), (84, 129414), (99, 129459), (108, 129507),

Gene: Francesca_263 Start: 129532, Stop: 129873, Start Num: 21
Candidate Starts for Francesca_263:
(21, 129532), (Start: 23 @129535 has 1 MA's), (71, 129703),

Gene: Fryberger_106 Start: 52384, Stop: 52698, Start Num: 25
Candidate Starts for Fryberger_106:
(10, 52294), (20, 52369), (Start: 25 @52384 has 5 MA's), (72, 52540), (98, 52609), (111, 52672),

Gene: Fryberger_29 Start: 8784, Stop: 8455, Start Num: 16
Candidate Starts for Fryberger_29:
(Start: 16 @8784 has 5 MA's), (21, 8769), (29, 8739), (47, 8658), (59, 8637),

Gene: Groundhog_42 Start: 30817, Stop: 30515, Start Num: 36
Candidate Starts for Groundhog_42:
(Start: 36 @30817 has 8 MA's), (62, 30706), (64, 30697), (92, 30604), (103, 30553), (108, 30532),

Gene: Guey18_34 Start: 9973, Stop: 9644, Start Num: 16
Candidate Starts for Guey18_34:
(Start: 16 @9973 has 5 MA's), (37, 9898), (65, 9814),

Gene: Guey18_33 Start: 9651, Stop: 9316, Start Num: 19
Candidate Starts for Guey18_33:
(17, 9657), (Start: 19 @9651 has 1 MA's), (21, 9639), (29, 9609), (47, 9531),

Gene: Guey18_111 Start: 53707, Stop: 54021, Start Num: 25
Candidate Starts for Guey18_111:
(10, 53617), (20, 53692), (Start: 25 @53707 has 5 MA's), (72, 53863), (98, 53932), (111, 53995),

Gene: Halley_152 Start: 80751, Stop: 81074, Start Num: 38
Candidate Starts for Halley_152:

(Start: 35 @80739 has 1 MA's), (Start: 38 @80751 has 39 MA's), (59, 80835), (62, 80853), (77, 80901), (86, 80940),

Gene: Hannaconda_124 Start: 69032, Stop: 69325, Start Num: 40
Candidate Starts for Hannaconda_124:
(Start: 40 @69032 has 5 MA's), (66, 69149), (87, 69209), (104, 69281), (105, 69284),

Gene: Hannaconda_144 Start: 79540, Stop: 79863, Start Num: 38
Candidate Starts for Hannaconda_144:
(Start: 38 @79540 has 39 MA's), (59, 79624), (64, 79651), (66, 79657), (77, 79690), (86, 79729),

Gene: HokkenD_145 Start: 81876, Stop: 82199, Start Num: 38
Candidate Starts for HokkenD_145:
(4, 81639), (7, 81678), (15, 81783), (Start: 35 @81864 has 1 MA's), (Start: 38 @81876 has 39 MA's), (59, 81960), (64, 81987), (77, 82026), (86, 82065),

Gene: HokkenD_123 Start: 71913, Stop: 72206, Start Num: 40
Candidate Starts for HokkenD_123:
(Start: 40 @71913 has 5 MA's), (66, 72030), (87, 72090), (104, 72162), (105, 72165),

Gene: Hughesyang_150 Start: 81110, Stop: 81433, Start Num: 38
Candidate Starts for Hughesyang_150:
(11, 80978), (12, 80981), (Start: 35 @81098 has 1 MA's), (Start: 38 @81110 has 39 MA's), (59, 81194), (77, 81260), (86, 81299),

Gene: Jflix2_89 Start: 50660, Stop: 51001, Start Num: 34
Candidate Starts for Jflix2_89:
(13, 50558), (Start: 18 @50594 has 1 MA's), (30, 50642), (Start: 34 @50660 has 1 MA's), (54, 50741), (105, 50939),

Gene: Jflix2_77 Start: 46906, Stop: 47172, Start Num: 50
Candidate Starts for Jflix2_77:
(Start: 50 @46906 has 1 MA's), (85, 47026), (98, 47071), (118, 47149),

Gene: Jflix2_76 Start: 46571, Stop: 46909, Start Num: 35
Candidate Starts for Jflix2_76:
(Start: 35 @46571 has 1 MA's), (52, 46643), (88, 46766), (93, 46784), (102, 46826), (115, 46874),

Gene: Jflix2_58 Start: 39721, Stop: 40101, Start Num: 32
Candidate Starts for Jflix2_58:
(2, 39397), (29, 39709), (Start: 32 @39721 has 1 MA's), (49, 39814), (97, 39979), (105, 40024), (117, 40069),

Gene: JuicyJay_146 Start: 82036, Stop: 82359, Start Num: 38
Candidate Starts for JuicyJay_146:
(11, 81904), (12, 81907), (Start: 35 @82024 has 1 MA's), (Start: 38 @82036 has 39 MA's), (59, 82120), (77, 82186), (86, 82225), (105, 82306),

Gene: Kalah2_142 Start: 80240, Stop: 80563, Start Num: 38
Candidate Starts for Kalah2_142:
(Start: 35 @80228 has 1 MA's), (Start: 38 @80240 has 39 MA's), (59, 80324), (62, 80342), (86, 80429), (94, 80453),

Gene: KashFlow_150 Start: 79539, Stop: 79862, Start Num: 38
Candidate Starts for KashFlow_150:
(Start: 38 @79539 has 39 MA's), (59, 79623), (64, 79650), (66, 79656), (77, 79689), (86, 79728),

Gene: KayGee_59 Start: 41462, Stop: 41016, Start Num: 24
Candidate Starts for KayGee_59:
(Start: 24 @41462 has 9 MA's), (44, 41357), (55, 41315), (71, 41261), (75, 41243), (78, 41237), (85, 41207), (96, 41174), (111, 41102), (120, 41060),

Gene: Keelan_107 Start: 53290, Stop: 53652, Start Num: 24
Candidate Starts for Keelan_107:
(Start: 24 @53290 has 9 MA's), (46, 53383), (67, 53449), (72, 53461), (90, 53524), (91, 53527), (101, 53581), (111, 53623),

Gene: Keelan_26 Start: 8252, Stop: 7875, Start Num: 18
Candidate Starts for Keelan_26:
(Start: 18 @8252 has 1 MA's), (56, 8120), (59, 8114), (63, 8090), (68, 8075), (76, 8051), (94, 7988), (114, 7892),

Gene: Klein_150 Start: 80105, Stop: 80428, Start Num: 38
Candidate Starts for Klein_150:
(Start: 35 @80093 has 1 MA's), (Start: 38 @80105 has 39 MA's), (41, 80123), (59, 80189), (77, 80255), (86, 80294), (94, 80318), (105, 80375),

Gene: LittleE_153 Start: 80985, Stop: 81308, Start Num: 38
Candidate Starts for LittleE_153:
(1, 80586), (3, 80709), (4, 80748), (7, 80787), (15, 80892), (Start: 35 @80973 has 1 MA's), (Start: 38 @80985 has 39 MA's), (59, 81069), (64, 81096), (77, 81135), (86, 81174), (106, 81258),

Gene: Lucky2013_142 Start: 75897, Stop: 76220, Start Num: 38
Candidate Starts for Lucky2013_142:
(Start: 35 @75885 has 1 MA's), (Start: 38 @75897 has 39 MA's), (41, 75915), (59, 75981), (64, 76008), (77, 76047), (86, 76086), (106, 76170),

Gene: MAnor_59 Start: 41593, Stop: 41144, Start Num: 24
Candidate Starts for MAnor_59:
(Start: 24 @41593 has 9 MA's), (42, 41497), (55, 41449), (57, 41443), (71, 41395), (78, 41371), (85, 41341), (96, 41308), (111, 41236), (120, 41194),

Gene: Madraxi_63 Start: 42224, Stop: 42604, Start Num: 32
Candidate Starts for Madraxi_63:
(9, 42083), (29, 42212), (Start: 32 @42224 has 1 MA's), (77, 42407), (120, 42590),

Gene: Madraxi_80 Start: 49350, Stop: 49697, Start Num: 31
Candidate Starts for Madraxi_80:
(14, 49296), (31, 49350), (52, 49431), (78, 49518), (88, 49554), (93, 49572), (102, 49614), (115, 49662),

Gene: Madraxi_81 Start: 49694, Stop: 49978, Start Num: 50
Candidate Starts for Madraxi_81:
(Start: 50 @49694 has 1 MA's), (58, 49712), (80, 49793), (98, 49856),

Gene: Madraxi_91 Start: 52826, Stop: 53170, Start Num: 39

Candidate Starts for Madraxi_91:
(Start: 34 @52811 has 1 MA's), (39, 52826), (83, 52988), (98, 53033), (105, 53075),

Gene: MiaZeal_149 Start: 77044, Stop: 77367, Start Num: 38
Candidate Starts for MiaZeal_149:
(Start: 35 @77032 has 1 MA's), (Start: 38 @77044 has 39 MA's), (41, 77062), (59, 77128), (64, 77155), (77, 77194), (86, 77233), (106, 77317),

Gene: Minerva_150 Start: 80059, Stop: 80382, Start Num: 38
Candidate Starts for Minerva_150:
(Start: 35 @80047 has 1 MA's), (Start: 38 @80059 has 39 MA's), (59, 80143), (62, 80161), (86, 80248), (94, 80272),

Gene: NihilNomen_152 Start: 79960, Stop: 80283, Start Num: 38
Candidate Starts for NihilNomen_152:
(Start: 35 @79948 has 1 MA's), (Start: 38 @79960 has 39 MA's), (59, 80044), (62, 80062), (77, 80110), (86, 80149), (94, 80173), (113, 80263),

Gene: Odette_135 Start: 73830, Stop: 74123, Start Num: 40
Candidate Starts for Odette_135:
(Start: 40 @73830 has 5 MA's), (66, 73947), (87, 74007), (104, 74079), (105, 74082),

Gene: Odette_156 Start: 82653, Stop: 82976, Start Num: 38
Candidate Starts for Odette_156:
(Start: 38 @82653 has 39 MA's), (59, 82737), (64, 82764), (77, 82803), (86, 82842), (106, 82926),

Gene: Omega_157 Start: 82149, Stop: 82472, Start Num: 38
Candidate Starts for Omega_157:
(Start: 38 @82149 has 39 MA's), (59, 82233), (64, 82260), (77, 82299), (86, 82338), (106, 82422),

Gene: Optimus_144 Start: 79658, Stop: 79981, Start Num: 38
Candidate Starts for Optimus_144:
(Start: 38 @79658 has 39 MA's), (59, 79742), (64, 79769), (77, 79808), (86, 79847), (106, 79931),

Gene: Phillis_45 Start: 31235, Stop: 30933, Start Num: 36
Candidate Starts for Phillis_45:
(Start: 36 @31235 has 8 MA's), (62, 31124), (64, 31115), (81, 31055), (92, 31022), (103, 30971), (108, 30950),

Gene: Phoebus_151 Start: 82464, Stop: 82787, Start Num: 38
Candidate Starts for Phoebus_151:
(11, 82332), (12, 82335), (Start: 35 @82452 has 1 MA's), (Start: 38 @82464 has 39 MA's), (59, 82548), (62, 82566), (86, 82653), (94, 82677),

Gene: Pons_59 Start: 41198, Stop: 40776, Start Num: 24
Candidate Starts for Pons_59:
(Start: 24 @41198 has 9 MA's), (70, 41030), (71, 41027), (78, 41003), (85, 40973), (96, 40940), (111, 40868), (120, 40826),

Gene: Porcelain_146 Start: 76843, Stop: 77166, Start Num: 38
Candidate Starts for Porcelain_146:
(Start: 35 @76831 has 1 MA's), (Start: 38 @76843 has 39 MA's), (41, 76861), (59, 76927), (64, 76954), (77, 76993), (86, 77032), (106, 77116),

Gene: PotPie_56 Start: 41716, Stop: 41315, Start Num: 24
Candidate Starts for PotPie_56:
(Start: 24 @41716 has 9 MA's), (44, 41638), (70, 41566), (71, 41563), (75, 41545), (78, 41539), (85, 41509), (96, 41476), (111, 41404), (120, 41362),

Gene: Pound_142 Start: 79694, Stop: 80017, Start Num: 38
Candidate Starts for Pound_142:
(Start: 35 @79682 has 1 MA's), (Start: 38 @79694 has 39 MA's), (59, 79778), (62, 79796), (77, 79844), (86, 79883), (113, 79997),

Gene: REQ1_28 Start: 11269, Stop: 11631, Start Num: 32
Candidate Starts for REQ1_28:
(29, 11257), (Start: 32 @11269 has 1 MA's), (105, 11554), (116, 11596),

Gene: REQ1_45 Start: 18020, Stop: 18358, Start Num: 35
Candidate Starts for REQ1_45:
(29, 17999), (Start: 35 @18020 has 1 MA's), (52, 18092), (95, 18242), (109, 18302), (110, 18305), (112, 18314),

Gene: Redno2_145 Start: 77962, Stop: 78285, Start Num: 38
Candidate Starts for Redno2_145:
(Start: 35 @77950 has 1 MA's), (Start: 38 @77962 has 39 MA's), (59, 78046), (62, 78064), (77, 78112), (86, 78151), (94, 78175), (105, 78232),

Gene: Roary_44 Start: 30866, Stop: 30564, Start Num: 36
Candidate Starts for Roary_44:
(Start: 36 @30866 has 8 MA's), (62, 30755), (64, 30746), (92, 30653), (103, 30602), (108, 30581),

Gene: Ronaldo_32 Start: 9713, Stop: 9384, Start Num: 16
Candidate Starts for Ronaldo_32:
(Start: 16 @9713 has 5 MA's), (21, 9698), (47, 9587), (59, 9566),

Gene: Ronaldo_108 Start: 53289, Stop: 53603, Start Num: 25
Candidate Starts for Ronaldo_108:
(10, 53199), (20, 53274), (Start: 25 @53289 has 5 MA's), (72, 53445), (98, 53514), (111, 53577),

Gene: Schatzie_146 Start: 80543, Stop: 80866, Start Num: 38
Candidate Starts for Schatzie_146:
(Start: 35 @80531 has 1 MA's), (Start: 38 @80543 has 39 MA's), (59, 80627), (62, 80645), (77, 80693), (86, 80732), (113, 80846),

Gene: Shagrat_65 Start: 40539, Stop: 40913, Start Num: 23
Candidate Starts for Shagrat_65:
(21, 40536), (Start: 23 @40539 has 1 MA's), (Start: 40 @40611 has 5 MA's), (51, 40662), (53, 40668), (66, 40713), (74, 40740), (82, 40770), (105, 40860),

Gene: Shagrat_66 Start: 40915, Stop: 41250, Start Num: 119
Candidate Starts for Shagrat_66:
(26, 40549), (28, 40564), (43, 40630), (48, 40654), (61, 40693), (69, 40720), (79, 40756), (Start: 119 @40915 has 1 MA's), (121, 41023), (122, 41101), (123, 41104), (124, 41197), (125, 41212), (126, 41224),

Gene: Shagrat_64 Start: 40165, Stop: 40536, Start Num: 22
Candidate Starts for Shagrat_64:
(Start: 22 @40165 has 1 MA's), (33, 40207), (45, 40276), (66, 40351), (89, 40414), (98, 40441), (101, 40462), (105, 40483), (108, 40492),

Gene: SheckWes_61 Start: 40759, Stop: 40364, Start Num: 24
Candidate Starts for SheckWes_61:
(Start: 24 @40759 has 9 MA's), (31, 40726), (71, 40609), (75, 40591), (82, 40567), (94, 40531), (96, 40522), (107, 40465),

Gene: Sleepyhead_43 Start: 31028, Stop: 31363, Start Num: 27
Candidate Starts for Sleepyhead_43:
(Start: 27 @31028 has 1 MA's), (73, 31199), (100, 31295),

Gene: Smeadley_44 Start: 31032, Stop: 30730, Start Num: 36
Candidate Starts for Smeadley_44:
(Start: 36 @31032 has 8 MA's), (62, 30921), (64, 30912), (92, 30819), (103, 30768), (108, 30747),

Gene: Squint_142 Start: 76328, Stop: 76651, Start Num: 38
Candidate Starts for Squint_142:
(Start: 38 @76328 has 39 MA's), (59, 76412), (64, 76439), (66, 76445), (77, 76478), (86, 76517),

Gene: Stephig9_44 Start: 30891, Stop: 30589, Start Num: 36
Candidate Starts for Stephig9_44:
(Start: 36 @30891 has 8 MA's), (62, 30780), (64, 30771), (92, 30678), (103, 30627), (108, 30606),

Gene: SummitAcademy_57 Start: 40859, Stop: 40458, Start Num: 24
Candidate Starts for SummitAcademy_57:
(Start: 24 @40859 has 9 MA's), (44, 40781), (70, 40709), (71, 40706), (75, 40688), (78, 40682), (85, 40652), (96, 40619), (111, 40547), (120, 40505),

Gene: Superphikiman_147 Start: 76801, Stop: 77124, Start Num: 38
Candidate Starts for Superphikiman_147:
(5, 76579), (8, 76627), (12, 76672), (Start: 35 @76789 has 1 MA's), (Start: 38 @76801 has 39 MA's), (59, 76885), (77, 76951), (86, 76990), (94, 77014), (105, 77071),

Gene: Superphikiman_128 Start: 69018, Stop: 69311, Start Num: 40
Candidate Starts for Superphikiman_128:
(Start: 40 @69018 has 5 MA's), (66, 69135), (87, 69195), (104, 69267), (105, 69270),

Gene: Thibault_134 Start: 77417, Stop: 77740, Start Num: 38
Candidate Starts for Thibault_134:
(6, 77204), (11, 77285), (12, 77288), (Start: 35 @77405 has 1 MA's), (Start: 38 @77417 has 39 MA's), (59, 77501), (77, 77567), (86, 77606), (109, 77699),

Gene: ThreeRngTarjay_146 Start: 81055, Stop: 81378, Start Num: 38
Candidate Starts for ThreeRngTarjay_146:
(11, 80923), (12, 80926), (Start: 35 @81043 has 1 MA's), (Start: 38 @81055 has 39 MA's), (59, 81139), (62, 81157), (86, 81244), (94, 81268),

Gene: Vine_60 Start: 41482, Stop: 41081, Start Num: 24
Candidate Starts for Vine_60:

(Start: 24 @41482 has 9 MA's), (44, 41404), (70, 41332), (71, 41329), (75, 41311), (78, 41305), (85, 41275), (96, 41242), (111, 41170), (120, 41128),

Gene: Volt_31 Start: 9713, Stop: 9384, Start Num: 16
Candidate Starts for Volt_31:
(Start: 16 @9713 has 5 MA's), (21, 9698), (47, 9587), (59, 9566),

Gene: Volt_110 Start: 53453, Stop: 53767, Start Num: 25
Candidate Starts for Volt_110:
(10, 53363), (20, 53438), (Start: 25 @53453 has 5 MA's), (72, 53609), (98, 53678), (111, 53741),

Gene: Wanda_150 Start: 78530, Stop: 78853, Start Num: 38
Candidate Starts for Wanda_150:
(Start: 35 @78518 has 1 MA's), (Start: 38 @78530 has 39 MA's), (59, 78614), (62, 78632), (86, 78719), (94, 78743),

Gene: Yeet_125 Start: 71942, Stop: 72235, Start Num: 40
Candidate Starts for Yeet_125:
(Start: 40 @71942 has 5 MA's), (66, 72059), (87, 72119), (104, 72191), (105, 72194),

Gene: Yeet_144 Start: 79906, Stop: 80229, Start Num: 38
Candidate Starts for Yeet_144:
(5, 79684), (8, 79732), (12, 79777), (Start: 35 @79894 has 1 MA's), (Start: 38 @79906 has 39 MA's), (59, 79990), (77, 80056), (86, 80095), (94, 80119), (105, 80176),

Gene: Zelink_145 Start: 81372, Stop: 81695, Start Num: 38
Candidate Starts for Zelink_145:
(Start: 35 @81360 has 1 MA's), (Start: 38 @81372 has 39 MA's), (59, 81456), (62, 81474), (86, 81561), (94, 81585),

Gene: Ziko_32 Start: 9653, Stop: 9324, Start Num: 16
Candidate Starts for Ziko_32:
(Start: 16 @9653 has 5 MA's), (21, 9638), (47, 9527), (59, 9506),

Gene: Ziko_109 Start: 53295, Stop: 53609, Start Num: 25
Candidate Starts for Ziko_109:
(10, 53205), (20, 53280), (Start: 25 @53295 has 5 MA's), (72, 53451), (98, 53520), (111, 53583),