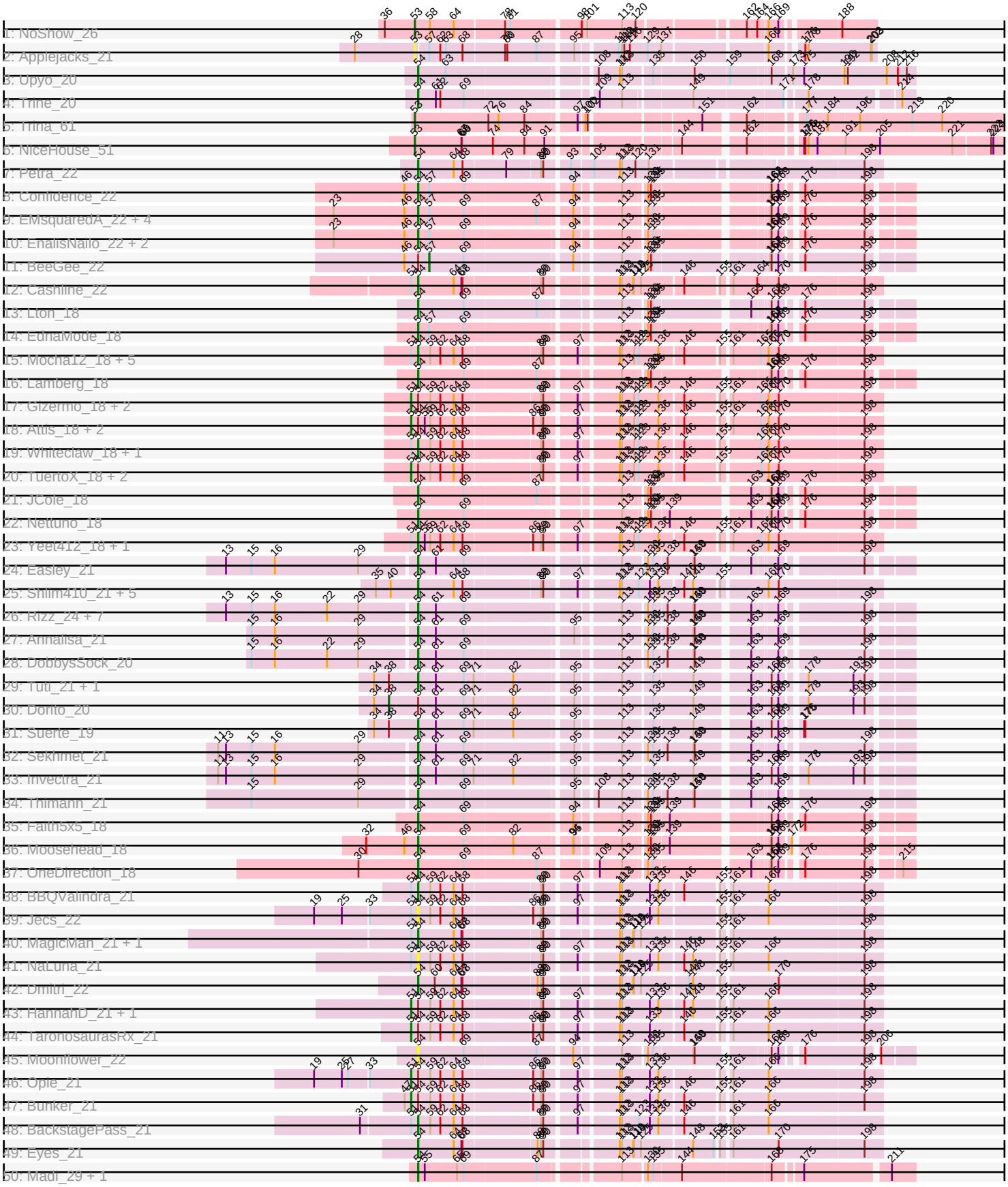
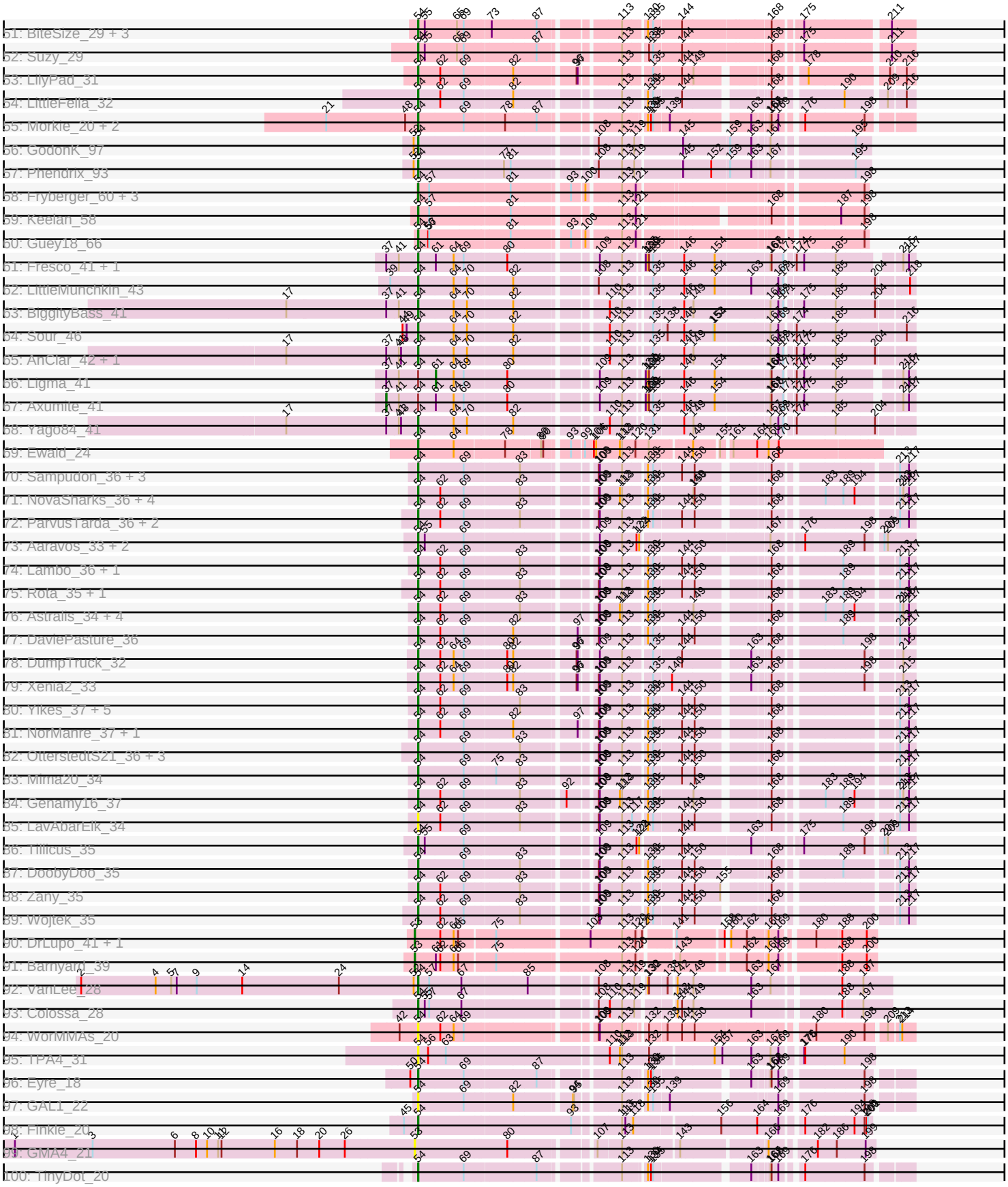
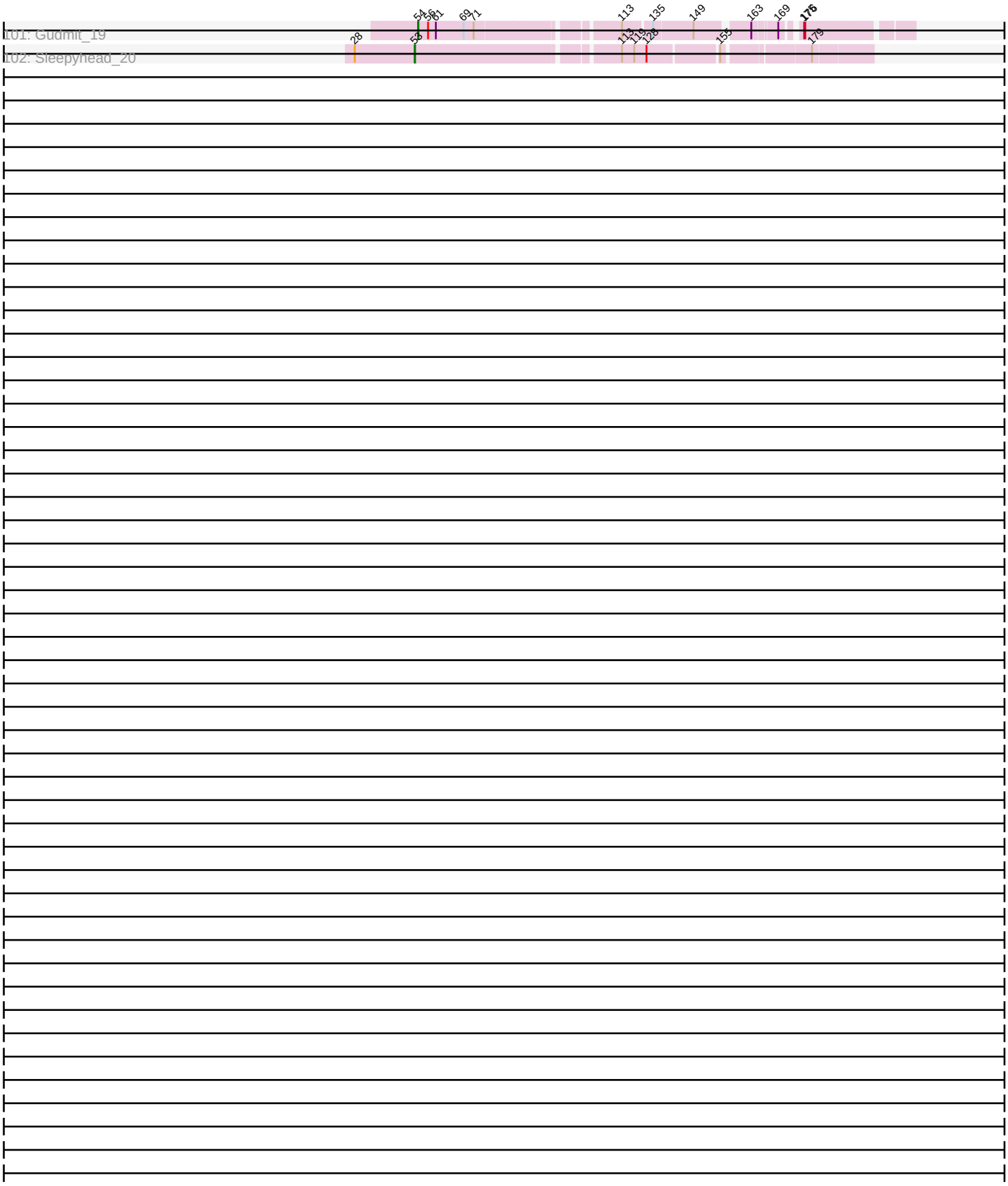
Pham 347306


1: NoShow_26
2: Applejacks_21
3: Opyo_20
4: Trine_20
5: Trina_61
6: NiceHouse_51
7: Petra_22
8: Confidence_22
9: EMsquaredA_22 + 4
10: EnalisNallo_22 + 2
11: BeeGee_22
12: Cashline_22
13: Lton_18
14: EdnaMode_18
15: Mocha12_18 + 5
16: Lamberg_18
17: Gizermo_18 + 2
18: Attis_18 + 2
19: Whiteclaw_18 + 1
20: TuertoX_18 + 2
21: JCole_18
22: Nettuno_18
23: Yeet412_18 + 1
24: Easley_21
25: Shilm410_21 + 5
26: Rizz_24 + 7
27: Annalisa_21
28: DobbysSock_20
29: Tuti_21 + 1
30: Donto_20
31: Suerte_19
32: Sekhmet_21
33: Invectra_21
34: Thimann_21
35: Faith5x5_18
36: Moosehead_18
37: OneDirection_18
38: BBQValindra_21
39: Jecs_22
40: MagicMan_21 + 1
41: NaLuna_21
42: Dmitri_22
43: HannahD_21 + 1
44: TaronosaurasRx_21
45: Moonflower_22
46: Opie_21
47: Bunker_21
48: BackstagePass_21
49: Eyes_21
50: Madi_29 + 1

Pham 347306


51: BiteSize_29 + 3
52: Suzy_29
53: LilyPad_31
54: LittleFella_32
55: Morkie_20 + 2
56: GodonK_97
57: Phendrix_93
58: Fryberger_60 + 3
59: Keelan_58
60: Guey18_66
61: Fresco_41 + 1
62: LittleMunchkin_43
63: BiggityBass_41
64: Sour_46
65: AnClar_42 + 1
66: Ligma_41
67: Axumite_41
68: Yago84_41
69: Ewald_24
70: Sampudon_36 + 3
71: NovaSharks_36 + 4
72: ParvusTarda_36 + 2
73: Aaravos_33 + 2
74: Lambo_36 + 1
75: Rota_35 + 1
76: Astralis_34 + 4
77: DaviePasture_36
78: DumpTruck_32
79: Xenia2_33
80: Yikes_37 + 5
81: NorManre_37 + 1
82: OtterstedtS21_36 + 3
83: Mima20_34
84: Genamy16_37
85: LavAbarElk_34
86: Tillicus_35
87: DoobyDoo_35
88: Zany_35
89: Wojtek_35
90: DrLupo_41 + 1
91: Barnyard_39
92: VanLeet28
93: Colossa_28
94: WorMMAs_20
95: TPA4_31
96: Eyre_18
97: GAL1_22
98: Finkle_20
99: GMA4_21
100: TinyDot_20

Pham 347306


101: Gudmit_19
102: Sleepyhead_20
54
56
61
69
71
113
135
149
163
169
176
28
58
113
119
128
155
179

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 347306 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347306 has 174 members, 19 are drafts.

Phages represented in each track:
- Track 1 : NoShow_26
- Track 2 : Applejacks_21
- Track 3 : Upyo_20
- Track 4 : Trine_20
- Track 5 : Trina_61
- Track 6 : NiceHouse_51
- Track 7 : Petra_22
- Track 8 : Confidence_22
- Track 9 : EMsquaredA_22, Pollux_22, Marteena_22, BritBrat_22, Floral_22
- Track 10 : EnalisNailo_22, Lilas_22, Bradissa_22
- Track 11 : BeeGee_22
- Track 12 : Cashline_22
- Track 13 : Lton_18
- Track 14 : EdnaMode_18
- Track 15 : Mocha12_18, Clap_18, Haley23_18, GemG_18, Jalleen_19, Yinzer_18
- Track 16 : Lamberg_18
- Track 17 : Gizermo_18, Ebert_18, Sahara_18
- Track 18 : Attis_18, SoilAssassin_18, Bjanes7_18
- Track 19 : Whiteclaw_18, Sproutie_18
- Track 20 : TuertoX_18, Savage_18, Cynthia_18
- Track 21 : JCole_18
- Track 22 : Nettuno_18
- Track 23 : Yeet412_18, LordFarquaad_18
- Track 24 : Easley_21
- Track 25 : Shlim410_21, Adora_21, Howe_21, Hortense_21, Twinkle_21, Mcklovin_21
- Track 26 : Rizz_24, MichaelScott_21, Dolores_21, Beenie_21, WinkNick_21, Samman98_21, Clark_21, Oregano_21
- Track 27 : Annalisa_21
- Track 28 : DobbysSock_20
- Track 29 : Tuti_21, PhriskyACE_20
- Track 30 : Dorito_20
- Track 31 : Suerte_19
- Track 32 : Sekhmet_21
- Track 33 : Invectra_21
- Track 34 : Thimann_21
- Track 35 : Faith5x5_18

• Track 36 : Moosehead_18
• Track 37 : OneDirection_18
• Track 38 : BBQValindra_21
• Track 39 : Jecs_22
• Track 40 : MagicMan_21, Schnabeltier_21
• Track 41 : NaLuna_21
• Track 42 : Dmitri_22
• Track 43 : HannahD_21, GEazy_21
• Track 44 : TaronosaurasRx_21
• Track 45 : Moonflower_22
• Track 46 : Opie_21
• Track 47 : Bunker_21
• Track 48 : BackstagePass_21
• Track 49 : Eyes_21
• Track 50 : Madi_29, Sienna_29
• Track 51 : BiteSize_29, Terapin_30, Beyoncage_29, Djokovic_29
• Track 52 : Suzy_29
• Track 53 : LilyPad_31
• Track 54 : LittleFella_32
• Track 55 : Morkie_20, PhorbesPhlower_20, InLimbo_21
• Track 56 : GodonK_97
• Track 57 : Phendrix_93
• Track 58 : Fryberger_60, Ronaldo_63, Volt_63, Ziko_63
• Track 59 : Keelan_58
• Track 60 : Guey18_66
• Track 61 : Fresco_41, Shatter_41
• Track 62 : LittleMunchkin_43
• Track 63 : BiggityBass_41
• Track 64 : Sour_46
• Track 65 : AnClar_42, Sisko_41
• Track 66 : Ligma_41
• Track 67 : Axumite_41
• Track 68 : Yago84_41
• Track 69 : Ewald_24
• Track 70 : Sampudon_36, Nettle_37, MoiGyank_38, Jalebi_35
• Track 71 : NovaSharks_36, Jamemuya19_34, Rumi_36, Alyssamiracle_37, Stormer_35
• Track 72 : ParvusTarda_36, Fulcrum_37, GOATification_37
• Track 73 : Aaravos_33, LuckyLeo_35, Apeppi_33
• Track 74 : Lambo_36, Pywacket_35
• Track 75 : Rota_35, Alephilan_33
• Track 76 : Astralis_34, Riduram_34, Avian_34, Charminar_34, RazorC_35
• Track 77 : DaviePasture_36
• Track 78 : DumpTruck_32
• Track 79 : Xenia2_33
• Track 80 : Yikes_37, Gibbin_37, Lila22_35, BirthdayBoy_37, Erutan_36, Rukungu_36
• Track 81 : NorManre_37, Patos_37
• Track 82 : OtterstedtS21_36, Sadboi_37, GretelLyn_36, Ranch_36
• Track 83 : Mima20_34
• Track 84 : Genamy16_37
• Track 85 : LavAbarElk_34
• Track 86 : Tillicus_35

• Track 87 : DoobyDoo_35
• Track 88 : Zany_35
• Track 89 : Wojtek_35
• Track 90 : DrLupo_41, AmandaPanda_40
• Track 91 : Barnyard_39
• Track 92 : VanLee_28
• Track 93 : Colossa_28
• Track 94 : WorMMAs_20
• Track 95 : TPA4_31
• Track 96 : Eyre_18
• Track 97 : GAL1_22
• Track 98 : Finkle_20
• Track 99 : GMA4_21
• Track 100 : TinyDot_20
• Track 101 : Gudmit_19
• Track 102 : Sleepyhead_20

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

The start number called the most often in the published annotations is 54, it was called in 131 of the 155 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aaravos_33, Adora_21, Alephilan_33, Alyssamiracle_37, AnClar_42, Annalisa_21, Apeppi_33, Astralis_34, Avian_34, BBQValindra_21, BackstagePass_21, Beenie_21, Beyoncage_29, BiggityBass_41, BirthdayBoy_37, BiteSize_29, Bradissa_22, BritBrat_22, Cashline_22, Charminar_34, Clap_18, Clark_21, Colossa_28, Confidence_22, DaviePasture_36, Djokovic_29, Dmitri_22, DobbysSock_20, Dolores_21, DoobyDoo_35, DumpTruck_32, EMsquaredA_22, Easley_21, EdnaMode_18, EnalisNailo_22, Erutan_36, Ewald_24, Eyes_21, Eyre_18, Faith5x5_18, Finkle_20, Floral_22, Fresco_41, Fryberger_60, Fulcrum_37, GAL1_22, GOATification_37, GemG_18, Genamy16_37, Gibbin_37, GodonK_97, GretelLyn_36, Gudmit_19, Guey18_66, Haley23_18, Hortense_21, Howe_21, InLimbo_21, Invectra_21, JCole_18, Jalebi_35, Jalleen_19, Jamemuya19_34, Jecs_22, Keelan_58, Lamberg_18, Lambo_36, LavAbarElk_34, Lila22_35, Lilas_22, LilyPad_31, LittleFella_32, LittleMunchkin_43, LordFarquaad_18, Lton_18, LuckyLeo_35, Madi_29, MagicMan_21, Marteena_22, Mcklovin_21, MichaelScott_21, Mima20_34, Mocha12_18, MoiGyank_38, Moonflower_22, Moosehead_18, Morkie_20, NaLuna_21, Nettle_37, Nettuno_18, NorManre_37, NovaSharks_36, OneDirection_18, Oregano_21, OtterstedtS21_36, ParvusTarda_36, Patos_37, Petra_22, Phendrix_93, PhorbesPhlower_20, PhriskyACE_20, Pollux_22, Pywacket_35, Ranch_36, RazorC_35, Riduram_34, Rizz_24, Ronaldo_63, Rota_35, Rukungu_36, Rumi_36, Sadboi_37, Samman98_21, Sampudon_36, Schnabeltier_21, Sekhmet_21, Shatter_41, Shlim410_21, Sienna_29, Sisko_41, Sour_46, Sproutie_18, Stormer_35, Suerte_19, Suzy_29, TPA4_31, Terapin_30, Thimann_21, Tillicus_35, TinyDot_20, Trine_20, Tuti_21, Twinkle_21, Upyo_20, VanLee_28, Volt_63, Whiteclaw_18, WinkNick_21, Wojtek_35, WorMMAs_20, Xenia2_33, Yago84_41, Yeet412_18, Yikes_37, Yinzer_18, Zany_35, Ziko_63,

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

• Attis_18, Axumite_41, BeeGee_22, Bjanes7_18, Bunker_21, Cynthia_18, Dorito_20, Ebert_18, GEazy_21, Gizermo_18, HannahD_21, Ligma_41, Opie_21, Sahara_18, Savage_18, SoilAssassin_18, TaronosaurasRx_21, TuertoX_18,

Genes that do not have the "Most Annotated" start:
• AmandaPanda_40, Applejacks_21, Barnyard_39, DrLupo_41, GMA4_21, NiceHouse_51, NoShow_26, Sleepyhead_20, Trina_61,

Summary by start number:

Start 37:
• Found in 8 of 174 (4.6%) of genes in pham
• Manual Annotations of this start: 1 of 155
• Called 12.5% of time when present
• Phage (with cluster) where this start called: Axumite_41 (DR),

Start 38:
• Found in 4 of 174 (2.3%) of genes in pham
• Manual Annotations of this start: 1 of 155
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Dorito_20 (CZ4),

Start 51:
• Found in 31 of 174 (17.8%) of genes in pham
• Manual Annotations of this start: 14 of 155
• Called 45.2% of time when present
• Phage (with cluster) where this start called: Attis_18 (CZ2), Bjanes7_18 (CZ2), Bunker_21 (DB), Cynthia_18 (CZ2), Ebert_18 (CZ2), GEazy_21 (DB), Gizermo_18 (CZ2), HannahD_21 (DB), Opie_21 (DB), Sahara_18 (CZ2), Savage_18 (CZ2), SoilAssassin_18 (CZ2), TaronosaurasRx_21 (DB), TuertoX_18 (CZ2),

Start 53:
• Found in 9 of 174 (5.2%) of genes in pham
• Manual Annotations of this start: 6 of 155
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AmandaPanda_40 (H2), Applejacks_21 (CD), Barnyard_39 (H2), DrLupo_41 (H2), GMA4_21 (singleton), NiceHouse_51 (CE), NoShow_26 (AB), Sleepyhead_20 (singleton), Trina_61 (CE),

Start 54:
• Found in 165 of 174 (94.8%) of genes in pham
• Manual Annotations of this start: 131 of 155
• Called 89.1% of time when present
• Phage (with cluster) where this start called: Aaravos_33 (DV), Adora_21 (CZ4), Alephilan_33 (DV), Alyssamiracle_37 (DV), AnClar_42 (DR), Annalisa_21 (CZ4), Apeppi_33 (DV), Astralis_34 (DV), Avian_34 (DV), BBQValindra_21 (DB), BackstagePass_21 (DB), Beenie_21 (CZ4), Beyoncage_29 (DG1), BiggityBass_41 (DR), BirthdayBoy_37 (DV), BiteSize_29 (DG1), Bradissa_22 (CY1), BritBrat_22 (CY2), Cashline_22 (CY6), Charminar_34 (DV), Clap_18 (CZ2), Clark_21 (CZ4), Colossa_28 (KA), Confidence_22 (CY1), DaviePasture_36 (DV), Djokovic_29 (DG1), Dmitri_22 (DB), DobbysSock_20 (CZ4), Dolores_21 (CZ4), DoobyDoo_35 (DV), DumpTruck_32 (DV), EMsquaredA_22 (CY1), Easley_21 (CZ4), EdnaMode_18 (CZ2), EnalisNailo_22 (CY1), Erutan_36 (DV), Ewald_24 (DT), Eyes_21 (DB),

Eyre_18 (singleton), Faith5x5_18 (CZ6), Finkle_20 (singleton), Floral_22 (CY1), Fresco_41 (DR), Fryberger_60 (DP), Fulcrum_37 (DV), GAL1_22 (singleton), GOATification_37 (DV), GemG_18 (CZ2), Genamy16_37 (DV), Gibbin_37 (DV), GodonK_97 (DK), GretelLyn_36 (DV), Gudmit_19 (singleton), Guey18_66 (DP), Haley23_18 (CZ2), Hortense_21 (CZ4), Howe_21 (CZ4), InLimbo_21 (DH), Invectra_21 (CZ4), JCole_18 (CZ2), Jalebi_35 (DV), Jalleen_19 (CZ2), Jamemuya19_34 (DV), Jecs_22 (DB), Keelan_58 (DP), Lamberg_18 (CZ2), Lambo_36 (DV), LavAbarElk_34 (DV), Lila22_35 (DV), Lilas_22 (CY1), LilyPad_31 (DG1), LittleFella_32 (DG2), LittleMunchkin_43 (DR), LordFarquaad_18 (CZ2), Lton_18 (CZ), LuckyLeo_35 (DV), Madi_29 (DG1), MagicMan_21 (DB), Marteena_22 (CY1), Mcklovin_21 (CZ4), MichaelScott_21 (CZ4), Mima20_34 (DV), Mocha12_18 (CZ2), MoiGyank_38 (DV), Moonflower_22 (DB), Moosehead_18 (CZ6), Morkie_20 (DH), NaLuna_21 (DB), Nettle_37 (DV), Nettuno_18 (CZ2), NorManre_37 (DV), NovaSharks_36 (DV), OneDirection_18 (CZ6), Oregano_21 (CZ4), OtterstedtS21_36 (DV), ParvusTarda_36 (DV), Patos_37 (DV), Petra_22 (CV), Phendrix_93 (DK), PhorbesPhlower_20 (DH), PhriskyACE_20 (CZ4), Pollux_22 (CY1), Pywacket_35 (DV), Ranch_36 (DV), RazorC_35 (DV), Riduram_34 (DV), Rizz_24 (CZ4), Ronaldo_63 (DP), Rota_35 (DV), Rukungu_36 (DV), Rumi_36 (DV), Sadboi_37 (DV), Samman98_21 (CZ4), Sampudon_36 (DV), Schnabeltier_21 (DB), Sekhmet_21 (CZ4), Shatter_41 (DR), Shlim410_21 (CZ4), Sienna_29 (DG1), Sisko_41 (DR), Sour_46 (DR), Sproutie_18 (CZ2), Stormer_35 (DV), Suerte_19 (CZ4), Suzy_29 (DG1), TPA4_31 (singleton), Terapin_30 (DG1), Thimann_21 (CZ4), Tillicus_35 (DV), TinyDot_20 (singleton), Trine_20 (CD), Tuti_21 (CZ4), Twinkle_21 (CZ4), Upyo_20 (CD), VanLee_28 (KA), Volt_63 (DP), Whiteclaw_18 (CZ2), WinkNick_21 (CZ4), Wojtek_35 (DV), WorMMAs_20 (UNK), Xenia2_33 (DV), Yago84_41 (DR), Yeet412_18 (CZ2), Yikes_37 (DV), Yinzer_18 (CZ2), Zany_35 (DV), Ziko_63 (DP),

Start 57:
• Found in 20 of 174 (11.5%) of genes in pham
• Manual Annotations of this start: 1 of 155
• Called 5.0% of time when present
• Phage (with cluster) where this start called: BeeGee_22 (CY5),

Start 61:
• Found in 24 of 174 (13.8%) of genes in pham
• Manual Annotations of this start: 1 of 155
• Called 4.2% of time when present
• Phage (with cluster) where this start called: Ligma_41 (DR),

Summary by clusters:

There are 25 clusters represented in this pham: singleton, DK, DH, CZ2, CZ6, CZ4, DV, DT, DR, DP, CY2, CY1, AB, CY6, CY5, DB, CE, CD, DG2, CZ, DG1, UNK, CV, KA, H2,

Info for manual annotations of cluster AB:
•Start number 53 was manually annotated 1 time for cluster AB.

Info for manual annotations of cluster CD:
•Start number 54 was manually annotated 2 times for cluster CD.

Info for manual annotations of cluster CE:
•Start number 53 was manually annotated 2 times for cluster CE.

Info for manual annotations of cluster CV:
•Start number 54 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CY1:
•Start number 54 was manually annotated 8 times for cluster CY1.

Info for manual annotations of cluster CY2:
•Start number 54 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CY5:
•Start number 57 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CY6:
•Start number 54 was manually annotated 1 time for cluster CY6.

Info for manual annotations of cluster CZ:
•Start number 54 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ2:
•Start number 51 was manually annotated 9 times for cluster CZ2.
•Start number 54 was manually annotated 12 times for cluster CZ2.

Info for manual annotations of cluster CZ4:
•Start number 38 was manually annotated 1 time for cluster CZ4.
•Start number 54 was manually annotated 22 times for cluster CZ4.

Info for manual annotations of cluster CZ6:
•Start number 54 was manually annotated 3 times for cluster CZ6.

Info for manual annotations of cluster DB:
•Start number 51 was manually annotated 5 times for cluster DB.
•Start number 54 was manually annotated 6 times for cluster DB.

Info for manual annotations of cluster DG1:
•Start number 54 was manually annotated 8 times for cluster DG1.

Info for manual annotations of cluster DG2:
•Start number 54 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DH:
•Start number 54 was manually annotated 2 times for cluster DH.

Info for manual annotations of cluster DK:
•Start number 54 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster DP:
•Start number 54 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster DR:
•Start number 37 was manually annotated 1 time for cluster DR.
•Start number 54 was manually annotated 8 times for cluster DR.
•Start number 61 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster DT:
•Start number 54 was manually annotated 1 time for cluster DT.

Info for manual annotations of cluster DV:
•Start number 54 was manually annotated 40 times for cluster DV.

Info for manual annotations of cluster H2:
•Start number 53 was manually annotated 2 times for cluster H2.

Info for manual annotations of cluster KA:
•Start number 54 was manually annotated 2 times for cluster KA.

Gene Information:

Gene: Aaravos_33 Start: 30505, Stop: 31659, Start Num: 54
Candidate Starts for Aaravos_33:
(Start: 54 @30505 has 131 MA's), (55, 30523), (69, 30622), (109, 30925), (113, 30982), (122, 31018), (124, 31021), (167, 31336), (176, 31399), (198, 31549), (207, 31579), (209, 31588),

Gene: Adora_21 Start: 19477, Stop: 20586, Start Num: 54
Candidate Starts for Adora_21:
(35, 19366), (40, 19405), (Start: 54 @19477 has 131 MA's), (64, 19573), (68, 19597), (89, 19789), (90, 19795), (97, 19864), (112, 19954), (113, 19960), (123, 20002), (133, 20026), (136, 20047), (146, 20098), (148, 20122), (155, 20182), (166, 20293), (170, 20320),

Gene: Alephilan_33 Start: 30423, Stop: 31529, Start Num: 54
Candidate Starts for Alephilan_33:
(Start: 54 @30423 has 131 MA's), (62, 30480), (69, 30537), (83, 30672), (108, 30834), (109, 30837), (113, 30894), (130, 30945), (135, 30957), (144, 31029), (150, 31062), (168, 31221), (189, 31374), (213, 31491), (217, 31512),

Gene: Alyssamiracle_37 Start: 29523, Stop: 30629, Start Num: 54
Candidate Starts for Alyssamiracle_37:
(Start: 54 @29523 has 131 MA's), (62, 29580), (69, 29637), (83, 29772), (108, 29934), (109, 29937), (112, 29988), (113, 29994), (130, 30045), (135, 30057), (149, 30159), (150, 30162), (168, 30321), (183, 30429), (189, 30474), (194, 30501), (213, 30591), (215, 30597), (217, 30612),

Gene: AmandaPanda_40 Start: 31730, Stop: 32785, Start Num: 53
Candidate Starts for AmandaPanda_40:
(Start: 53 @31730 has 6 MA's), (62, 31796), (64, 31832), (66, 31841), (75, 31931), (103, 32159), (113, 32243), (120, 32276), (126, 32288), (141, 32348), (158, 32459), (160, 32462), (162, 32501), (166, 32549), (169, 32570), (180, 32636), (188, 32699), (200, 32759),

Gene: AnClar_42 Start: 36918, Stop: 38072, Start Num: 54
Candidate Starts for AnClar_42:
(17, 36564), (Start: 37 @36834 has 1 MA's), (41, 36867), (43, 36873), (Start: 54 @36918 has 131 MA's), (64, 37011), (70, 37047), (82, 37161), (110, 37368), (113, 37401), (135, 37452), (146, 37530), (149, 37554), (167, 37746), (169, 37767), (171, 37776), (174, 37794), (175, 37809), (185, 37890), (204, 37986),

Gene: Annalisa_21 Start: 18955, Stop: 20055, Start Num: 54
Candidate Starts for Annalisa_21:
(15, 18526), (16, 18589), (29, 18814), (Start: 54 @18955 has 131 MA's), (Start: 61 @19000 has 1 MA's), (69, 19072), (95, 19330), (113, 19432), (130, 19480), (135, 19492), (138, 19525), (149, 19594), (150, 19597), (163, 19720), (169, 19774), (198, 19960),

Gene: Apeppi_33 Start: 30567, Stop: 31721, Start Num: 54
Candidate Starts for Apeppi_33:
(Start: 54 @30567 has 131 MA's), (55, 30585), (69, 30684), (109, 30987), (113, 31044), (122, 31080), (124, 31083), (167, 31398), (176, 31461), (198, 31611), (207, 31641), (209, 31650),

Gene: Applejacks_21 Start: 17413, Stop: 18471, Start Num: 53
Candidate Starts for Applejacks_21:
(28, 17257), (Start: 53 @17413 has 6 MA's), (Start: 57 @17440 has 1 MA's), (62, 17470), (63, 17485), (68, 17527), (78, 17629), (80, 17635), (87, 17710), (95, 17788), (111, 17884), (113, 17893), (114, 17899), (116, 17914), (129, 17959), (137, 17995), (166, 18235), (176, 18292), (178, 18301), (202, 18457), (203, 18460),

Gene: Astralis_34 Start: 29113, Stop: 30219, Start Num: 54
Candidate Starts for Astralis_34:
(Start: 54 @29113 has 131 MA's), (62, 29170), (69, 29227), (83, 29362), (108, 29524), (109, 29527), (112, 29578), (113, 29584), (130, 29635), (135, 29647), (149, 29749), (168, 29911), (183, 30019), (189, 30064), (194, 30091), (213, 30181), (215, 30187), (217, 30202),

Gene: Attis_18 Start: 16527, Stop: 17654, Start Num: 51
Candidate Starts for Attis_18:
(Start: 51 @16527 has 14 MA's), (Start: 54 @16545 has 131 MA's), (55, 16563), (59, 16578), (62, 16605), (64, 16641), (68, 16665), (86, 16836), (89, 16857), (90, 16863), (97, 16932), (112, 17022), (113, 17028), (119, 17058), (123, 17070), (136, 17115), (146, 17166), (155, 17250), (161, 17271), (165, 17340), (166, 17361), (170, 17388), (198, 17607),

Gene: Avian_34 Start: 29505, Stop: 30611, Start Num: 54
Candidate Starts for Avian_34:
(Start: 54 @29505 has 131 MA's), (62, 29562), (69, 29619), (83, 29754), (108, 29916), (109, 29919), (112, 29970), (113, 29976), (130, 30027), (135, 30039), (149, 30141), (168, 30303), (183, 30411), (189, 30456), (194, 30483), (213, 30573), (215, 30579), (217, 30594),

Gene: Axumite_41 Start: 34059, Stop: 35276, Start Num: 37
Candidate Starts for Axumite_41:
(Start: 37 @34059 has 1 MA's), (41, 34092), (Start: 54 @34143 has 131 MA's), (Start: 61 @34188 has 1 MA's), (64, 34236), (69, 34263), (80, 34368), (109, 34566), (113, 34623), (127, 34662), (130, 34668), (132, 34671), (135, 34677), (146, 34755), (154, 34836), (167, 34971), (168, 34974), (171, 35001), (174, 35019), (175, 35034), (185, 35115), (215, 35244), (217, 35259),

Gene: BBQValindra_21 Start: 18913, Stop: 20022, Start Num: 54
Candidate Starts for BBQValindra_21:
(Start: 51 @18895 has 14 MA's), (Start: 54 @18913 has 131 MA's), (59, 18946), (62, 18973), (64, 19009), (68, 19033), (89, 19225), (90, 19231), (97, 19300), (112, 19390), (113, 19396), (133, 19462), (136, 19483), (146, 19534), (155, 19618), (161, 19639), (166, 19729), (198, 19975),

Gene: BackstagePass_21 Start: 19045, Stop: 20154, Start Num: 54
Candidate Starts for BackstagePass_21:

(31, 18907), (Start: 51 @19027 has 14 MA's), (Start: 54 @19045 has 131 MA's), (59, 19078), (62, 19105), (64, 19141), (68, 19165), (89, 19357), (90, 19363), (97, 19432), (112, 19522), (113, 19528), (123, 19570), (133, 19594), (136, 19615), (146, 19666), (161, 19771), (166, 19861),

Gene: Barnyard_39 Start: 31341, Stop: 32396, Start Num: 53
Candidate Starts for Barnyard_39:
(Start: 53 @31341 has 6 MA's), (Start: 61 @31395 has 1 MA's), (62, 31407), (64, 31443), (66, 31452), (75, 31542), (113, 31854), (120, 31887), (143, 31965), (162, 32112), (166, 32160), (169, 32181), (188, 32310), (200, 32370),

Gene: BeeGee_22 Start: 19669, Stop: 20739, Start Num: 57
Candidate Starts for BeeGee_22:
(46, 19606), (Start: 54 @19639 has 131 MA's), (Start: 57 @19669 has 1 MA's), (69, 19756), (94, 20011), (113, 20116), (130, 20164), (134, 20170), (135, 20176), (167, 20437), (168, 20440), (169, 20458), (176, 20494), (198, 20644),

Gene: Beenie_21 Start: 19312, Stop: 20412, Start Num: 54
Candidate Starts for Beenie_21:
(13, 18814), (15, 18883), (16, 18946), (22, 19087), (29, 19171), (Start: 54 @19312 has 131 MA's), (Start: 61 @19357 has 1 MA's), (69, 19429), (113, 19789), (130, 19837), (135, 19849), (138, 19882), (149, 19951), (150, 19954), (163, 20077), (169, 20131), (198, 20317),

Gene: Beyoncage_29 Start: 25970, Stop: 27115, Start Num: 54
Candidate Starts for Beyoncage_29:
(Start: 54 @25970 has 131 MA's), (55, 25988), (65, 26072), (69, 26087), (73, 26150), (87, 26267), (113, 26447), (130, 26498), (135, 26507), (144, 26579), (168, 26804), (175, 26861), (211, 27056),

Gene: BiggityBass_41 Start: 36386, Stop: 37540, Start Num: 54
Candidate Starts for BiggityBass_41:
(17, 36035), (Start: 37 @36302 has 1 MA's), (41, 36335), (Start: 54 @36386 has 131 MA's), (64, 36479), (70, 36515), (82, 36629), (110, 36836), (113, 36869), (135, 36920), (146, 36998), (149, 37022), (167, 37214), (169, 37235), (171, 37244), (175, 37277), (185, 37358), (204, 37454),

Gene: BirthdayBoy_37 Start: 31246, Stop: 32352, Start Num: 54
Candidate Starts for BirthdayBoy_37:
(Start: 54 @31246 has 131 MA's), (62, 31303), (69, 31360), (83, 31495), (108, 31657), (109, 31660), (113, 31717), (130, 31768), (135, 31780), (144, 31852), (150, 31885), (168, 32044), (213, 32314), (217, 32335),

Gene: BiteSize_29 Start: 25970, Stop: 27115, Start Num: 54
Candidate Starts for BiteSize_29:
(Start: 54 @25970 has 131 MA's), (55, 25988), (65, 26072), (69, 26087), (73, 26150), (87, 26267), (113, 26447), (130, 26498), (135, 26507), (144, 26579), (168, 26804), (175, 26861), (211, 27056),

Gene: Bjanes7_18 Start: 16527, Stop: 17654, Start Num: 51
Candidate Starts for Bjanes7_18:
(Start: 51 @16527 has 14 MA's), (Start: 54 @16545 has 131 MA's), (55, 16563), (59, 16578), (62, 16605), (64, 16641), (68, 16665), (86, 16836), (89, 16857), (90, 16863), (97, 16932), (112, 17022), (113, 17028), (119, 17058), (123, 17070), (136, 17115), (146, 17166), (155, 17250), (161, 17271), (165, 17340), (166, 17361), (170, 17388), (198, 17607),

Gene: Bradissa_22 Start: 19825, Stop: 20925, Start Num: 54
Candidate Starts for Bradissa_22:

(23, 19603), (46, 19792), (Start: 54 @19825 has 131 MA's), (Start: 57 @19855 has 1 MA's), (69, 19942), (94, 20197), (113, 20302), (130, 20350), (135, 20362), (167, 20623), (168, 20626), (169, 20644), (176, 20680), (198, 20830),

Gene: BritBrat_22 Start: 19678, Stop: 20778, Start Num: 54
Candidate Starts for BritBrat_22:
(23, 19456), (46, 19645), (Start: 54 @19678 has 131 MA's), (Start: 57 @19708 has 1 MA's), (69, 19795), (87, 19975), (94, 20050), (113, 20155), (130, 20203), (135, 20215), (167, 20476), (168, 20479), (169, 20497), (176, 20533), (198, 20683),

Gene: Bunker_21 Start: 19006, Stop: 20133, Start Num: 51
Candidate Starts for Bunker_21:
(47, 18991), (Start: 51 @19006 has 14 MA's), (Start: 54 @19024 has 131 MA's), (59, 19057), (62, 19084), (64, 19120), (68, 19144), (86, 19315), (89, 19336), (90, 19342), (97, 19411), (112, 19501), (113, 19507), (133, 19573), (136, 19594), (146, 19645), (155, 19729), (161, 19750), (166, 19840), (198, 20086),

Gene: Cashline_22 Start: 19502, Stop: 20608, Start Num: 54
Candidate Starts for Cashline_22:
(Start: 51 @19484 has 14 MA's), (Start: 54 @19502 has 131 MA's), (64, 19598), (67, 19619), (68, 19622), (89, 19814), (90, 19820), (112, 19979), (113, 19985), (118, 20012), (119, 20015), (125, 20033), (146, 20123), (155, 20207), (161, 20228), (164, 20288), (170, 20342), (198, 20561),

Gene: Charminar_34 Start: 29116, Stop: 30222, Start Num: 54
Candidate Starts for Charminar_34:
(Start: 54 @29116 has 131 MA's), (62, 29173), (69, 29230), (83, 29365), (108, 29527), (109, 29530), (112, 29581), (113, 29587), (130, 29638), (135, 29650), (149, 29752), (168, 29914), (183, 30022), (189, 30067), (194, 30094), (213, 30184), (215, 30190), (217, 30205),

Gene: Clap_18 Start: 16552, Stop: 17661, Start Num: 54
Candidate Starts for Clap_18:
(Start: 51 @16534 has 14 MA's), (Start: 54 @16552 has 131 MA's), (59, 16585), (62, 16612), (64, 16648), (68, 16672), (89, 16864), (90, 16870), (97, 16939), (112, 17029), (113, 17035), (119, 17065), (123, 17077), (136, 17122), (146, 17173), (155, 17257), (161, 17278), (165, 17347), (166, 17368), (170, 17395), (198, 17614),

Gene: Clark_21 Start: 18955, Stop: 20055, Start Num: 54
Candidate Starts for Clark_21:
(13, 18457), (15, 18526), (16, 18589), (22, 18730), (29, 18814), (Start: 54 @18955 has 131 MA's), (Start: 61 @19000 has 1 MA's), (69, 19072), (113, 19432), (130, 19480), (135, 19492), (138, 19525), (149, 19594), (150, 19597), (163, 19720), (169, 19774), (198, 19960),

Gene: Colossa_28 Start: 24042, Stop: 25151, Start Num: 54
Candidate Starts for Colossa_28:
(Start: 54 @24042 has 131 MA's), (55, 24060), (Start: 57 @24072 has 1 MA's), (67, 24153), (108, 24459), (110, 24486), (113, 24519), (119, 24552), (142, 24633), (144, 24645), (149, 24675), (163, 24828), (188, 25026), (197, 25074),

Gene: Confidence_22 Start: 19669, Stop: 20769, Start Num: 54
Candidate Starts for Confidence_22:
(46, 19636), (Start: 54 @19669 has 131 MA's), (Start: 57 @19699 has 1 MA's), (69, 19786), (94, 20041), (113, 20146), (130, 20194), (134, 20200), (135, 20206), (167, 20467), (168, 20470), (169, 20488), (176, 20524), (198, 20674),

Gene: Cynthia_18 Start: 16534, Stop: 17661, Start Num: 51
Candidate Starts for Cynthia_18:
(Start: 51 @16534 has 14 MA's), (Start: 54 @16552 has 131 MA's), (59, 16585), (62, 16612), (64, 16648), (68, 16672), (89, 16864), (90, 16870), (97, 16939), (112, 17029), (113, 17035), (119, 17065), (123, 17077), (136, 17122), (146, 17173), (155, 17257), (165, 17347), (166, 17368), (170, 17395), (198, 17614),

Gene: DaviePasture_36 Start: 31047, Stop: 32156, Start Num: 54
Candidate Starts for DaviePasture_36:
(Start: 54 @31047 has 131 MA's), (62, 31107), (69, 31164), (82, 31281), (97, 31428), (108, 31461), (109, 31464), (113, 31521), (130, 31572), (135, 31584), (144, 31656), (150, 31689), (168, 31848), (189, 32001), (213, 32118), (217, 32139),

Gene: Djokovic_29 Start: 25969, Stop: 27114, Start Num: 54
Candidate Starts for Djokovic_29:
(Start: 54 @25969 has 131 MA's), (55, 25987), (65, 26071), (69, 26086), (73, 26149), (87, 26266), (113, 26446), (130, 26497), (135, 26506), (144, 26578), (168, 26803), (175, 26860), (211, 27055),

Gene: Dmitri_22 Start: 20023, Stop: 21132, Start Num: 54
Candidate Starts for Dmitri_22:
(Start: 54 @20023 has 131 MA's), (60, 20068), (64, 20119), (67, 20140), (68, 20143), (88, 20326), (89, 20335), (90, 20341), (112, 20500), (113, 20506), (118, 20533), (119, 20536), (125, 20554), (147, 20656), (148, 20668), (155, 20728), (170, 20866), (198, 21085),

Gene: DobbysSock_20 Start: 18429, Stop: 19529, Start Num: 54
Candidate Starts for DobbysSock_20:
(15, 18000), (16, 18063), (22, 18204), (29, 18288), (Start: 54 @18429 has 131 MA's), (Start: 61 @18474 has 1 MA's), (69, 18546), (113, 18906), (130, 18954), (135, 18966), (138, 18999), (149, 19068), (150, 19071), (163, 19194), (169, 19248), (198, 19434),

Gene: Dolores_21 Start: 18931, Stop: 20031, Start Num: 54
Candidate Starts for Dolores_21:
(13, 18433), (15, 18502), (16, 18565), (22, 18706), (29, 18790), (Start: 54 @18931 has 131 MA's), (Start: 61 @18976 has 1 MA's), (69, 19048), (113, 19408), (130, 19456), (135, 19468), (138, 19501), (149, 19570), (150, 19573), (163, 19696), (169, 19750), (198, 19936),

Gene: DoobyDoo_35 Start: 30197, Stop: 31303, Start Num: 54
Candidate Starts for DoobyDoo_35:
(Start: 54 @30197 has 131 MA's), (69, 30311), (83, 30446), (108, 30608), (109, 30611), (113, 30668), (130, 30719), (135, 30731), (144, 30803), (150, 30836), (168, 30995), (189, 31148), (213, 31265), (217, 31286),

Gene: Dorito_20 Start: 18372, Stop: 19547, Start Num: 38
Candidate Starts for Dorito_20:
(34, 18333), (Start: 38 @18372 has 1 MA's), (Start: 54 @18447 has 131 MA's), (Start: 61 @18492 has 1 MA's), (69, 18564), (71, 18591), (82, 18684), (95, 18822), (113, 18924), (135, 18984), (149, 19086), (163, 19212), (168, 19248), (169, 19266), (178, 19311), (193, 19425), (198, 19452),

Gene: DrLupo_41 Start: 31730, Stop: 32785, Start Num: 53
Candidate Starts for DrLupo_41:
(Start: 53 @31730 has 6 MA's), (62, 31796), (64, 31832), (66, 31841), (75, 31931), (103, 32159), (113, 32243), (120, 32276), (126, 32288), (141, 32348), (158, 32459), (160, 32462), (162, 32501), (166,

32549), (169, 32570), (180, 32636), (188, 32699), (200, 32759),

Gene: DumpTruck_32 Start: 28578, Stop: 29678, Start Num: 54
Candidate Starts for DumpTruck_32:
(Start: 54 @28578 has 131 MA's), (62, 28635), (64, 28671), (69, 28692), (80, 28794), (82, 28809), (96, 28953), (97, 28956), (109, 28992), (113, 29049), (135, 29112), (144, 29184), (163, 29340), (168, 29376), (198, 29580), (215, 29649),

Gene: EMsquaredA_22 Start: 19678, Stop: 20778, Start Num: 54
Candidate Starts for EMsquaredA_22:
(23, 19456), (46, 19645), (Start: 54 @19678 has 131 MA's), (Start: 57 @19708 has 1 MA's), (69, 19795), (87, 19975), (94, 20050), (113, 20155), (130, 20203), (135, 20215), (167, 20476), (168, 20479), (169, 20497), (176, 20533), (198, 20683),

Gene: Easley_21 Start: 18941, Stop: 20041, Start Num: 54
Candidate Starts for Easley_21:
(13, 18443), (15, 18512), (16, 18575), (29, 18800), (Start: 54 @18941 has 131 MA's), (Start: 61 @18986 has 1 MA's), (69, 19058), (113, 19418), (130, 19466), (135, 19478), (138, 19511), (149, 19580), (150, 19583), (163, 19706), (169, 19760), (198, 19946),

Gene: Ebert_18 Start: 16534, Stop: 17661, Start Num: 51
Candidate Starts for Ebert_18:
(Start: 51 @16534 has 14 MA's), (Start: 54 @16552 has 131 MA's), (59, 16585), (62, 16612), (64, 16648), (68, 16672), (89, 16864), (90, 16870), (97, 16939), (112, 17029), (113, 17035), (119, 17065), (123, 17077), (136, 17122), (146, 17173), (155, 17257), (161, 17278), (165, 17347), (166, 17368), (170, 17395), (198, 17614),

Gene: EdnaMode_18 Start: 16489, Stop: 17589, Start Num: 54
Candidate Starts for EdnaMode_18:
(Start: 54 @16489 has 131 MA's), (Start: 57 @16519 has 1 MA's), (69, 16606), (113, 16966), (130, 17014), (134, 17020), (135, 17026), (167, 17287), (168, 17290), (169, 17308), (176, 17344), (198, 17494),

Gene: EnalisNailo_22 Start: 19827, Stop: 20927, Start Num: 54
Candidate Starts for EnalisNailo_22:
(23, 19605), (46, 19794), (Start: 54 @19827 has 131 MA's), (Start: 57 @19857 has 1 MA's), (69, 19944), (94, 20199), (113, 20304), (130, 20352), (135, 20364), (167, 20625), (168, 20628), (169, 20646), (176, 20682), (198, 20832),

Gene: Erutan_36 Start: 30705, Stop: 31811, Start Num: 54
Candidate Starts for Erutan_36:
(Start: 54 @30705 has 131 MA's), (62, 30762), (69, 30819), (83, 30954), (108, 31116), (109, 31119), (113, 31176), (130, 31227), (135, 31239), (144, 31311), (150, 31344), (168, 31503), (213, 31773), (217, 31794),

Gene: Ewald_24 Start: 20489, Stop: 21616, Start Num: 54
Candidate Starts for Ewald_24:
(Start: 54 @20489 has 131 MA's), (64, 20585), (78, 20714), (89, 20801), (90, 20807), (93, 20858), (99, 20888), (104, 20912), (106, 20918), (112, 20981), (113, 20987), (120, 21020), (131, 21053), (148, 21152), (155, 21212), (161, 21233), (164, 21293), (166, 21323), (170, 21350),

Gene: Eyes_21 Start: 18917, Stop: 20026, Start Num: 54
Candidate Starts for Eyes_21:

(Start: 54 @18917 has 131 MA's), (64, 19013), (67, 19034), (68, 19037), (88, 19220), (89, 19229), (90, 19235), (112, 19394), (113, 19400), (118, 19427), (119, 19430), (125, 19448), (148, 19562), (153, 19616), (155, 19622), (161, 19643), (170, 19760), (198, 19979),

Gene: Eyre_18 Start: 17160, Stop: 18260, Start Num: 54
Candidate Starts for Eyre_18:
(50, 17142), (Start: 54 @17160 has 131 MA's), (69, 17277), (87, 17457), (113, 17637), (130, 17685), (134, 17691), (135, 17697), (163, 17925), (167, 17958), (168, 17961), (169, 17979), (198, 18165),

Gene: Faith5x5_18 Start: 16431, Stop: 17531, Start Num: 54
Candidate Starts for Faith5x5_18:
(Start: 54 @16431 has 131 MA's), (69, 16548), (94, 16803), (113, 16908), (130, 16956), (134, 16962), (135, 16968), (139, 17007), (168, 17232), (169, 17250), (176, 17286), (198, 17436),

Gene: Finkle_20 Start: 17870, Stop: 18973, Start Num: 54
Candidate Starts for Finkle_20:
(45, 17837), (Start: 54 @17870 has 131 MA's), (93, 18260), (113, 18371), (115, 18380), (118, 18401), (156, 18614), (164, 18707), (169, 18764), (176, 18803), (194, 18929), (198, 18953), (200, 18959), (201, 18962),

Gene: Floral_22 Start: 19678, Stop: 20778, Start Num: 54
Candidate Starts for Floral_22:
(23, 19456), (46, 19645), (Start: 54 @19678 has 131 MA's), (Start: 57 @19708 has 1 MA's), (69, 19795), (87, 19975), (94, 20050), (113, 20155), (130, 20203), (135, 20215), (167, 20476), (168, 20479), (169, 20497), (176, 20533), (198, 20683),

Gene: Fresco_41 Start: 34143, Stop: 35276, Start Num: 54
Candidate Starts for Fresco_41:
(Start: 37 @34059 has 1 MA's), (41, 34092), (Start: 54 @34143 has 131 MA's), (Start: 61 @34188 has 1 MA's), (64, 34236), (69, 34263), (80, 34368), (109, 34566), (113, 34623), (127, 34662), (130, 34668), (132, 34671), (135, 34677), (146, 34755), (154, 34836), (167, 34971), (168, 34974), (171, 35001), (174, 35019), (175, 35034), (185, 35115), (215, 35244), (217, 35259),

Gene: Fryberger_60 Start: 33704, Stop: 34738, Start Num: 54
Candidate Starts for Fryberger_60:
(Start: 54 @33704 has 131 MA's), (Start: 57 @33734 has 1 MA's), (81, 33935), (93, 34070), (100, 34100), (113, 34181), (121, 34214), (198, 34727),

Gene: Fulcrum_37 Start: 31226, Stop: 32332, Start Num: 54
Candidate Starts for Fulcrum_37:
(Start: 54 @31226 has 131 MA's), (62, 31283), (69, 31340), (83, 31475), (108, 31637), (109, 31640), (113, 31697), (130, 31748), (135, 31760), (144, 31832), (150, 31865), (168, 32024), (213, 32294), (217, 32315),

Gene: GAL1_22 Start: 19182, Stop: 20282, Start Num: 54
Candidate Starts for GAL1_22:
(Start: 54 @19182 has 131 MA's), (69, 19299), (82, 19419), (94, 19554), (95, 19557), (113, 19659), (130, 19707), (135, 19719), (139, 19758), (169, 20001), (198, 20187),

Gene: GEazy_21 Start: 18913, Stop: 20040, Start Num: 51
Candidate Starts for GEazy_21:
(Start: 51 @18913 has 14 MA's), (Start: 54 @18931 has 131 MA's), (59, 18964), (62, 18991), (64, 19027), (68, 19051), (89, 19243), (90, 19249), (97, 19318), (112, 19408), (113, 19414), (133, 19480),

(136, 19501), (146, 19552), (148, 19576), (155, 19636), (161, 19657), (166, 19747), (198, 19993),

Gene: GMA4_21 Start: 20328, Stop: 21401, Start Num: 53
Candidate Starts for GMA4_21:
(1, 19251), (3, 19461), (6, 19683), (8, 19740), (10, 19770), (11, 19800), (12, 19809), (16, 19953), (18, 20013), (20, 20073), (26, 20142), (Start: 53 @20328 has 6 MA's), (80, 20568), (107, 20763), (113, 20823), (143, 20961), (166, 21159), (182, 21255), (186, 21306), (199, 21378),

Gene: GOATification_37 Start: 31226, Stop: 32332, Start Num: 54
Candidate Starts for GOATification_37:
(Start: 54 @31226 has 131 MA's), (62, 31283), (69, 31340), (83, 31475), (108, 31637), (109, 31640), (113, 31697), (130, 31748), (135, 31760), (144, 31832), (150, 31865), (168, 32024), (213, 32294), (217, 32315),

Gene: GemG_18 Start: 16552, Stop: 17661, Start Num: 54
Candidate Starts for GemG_18:
(Start: 51 @16534 has 14 MA's), (Start: 54 @16552 has 131 MA's), (59, 16585), (62, 16612), (64, 16648), (68, 16672), (89, 16864), (90, 16870), (97, 16939), (112, 17029), (113, 17035), (119, 17065), (123, 17077), (136, 17122), (146, 17173), (155, 17257), (161, 17278), (165, 17347), (166, 17368), (170, 17395), (198, 17614),

Gene: Genamy16_37 Start: 29523, Stop: 30629, Start Num: 54
Candidate Starts for Genamy16_37:
(Start: 54 @29523 has 131 MA's), (62, 29580), (69, 29637), (83, 29772), (92, 29871), (108, 29934), (109, 29937), (112, 29988), (113, 29994), (130, 30045), (135, 30057), (149, 30159), (168, 30321), (183, 30429), (189, 30474), (194, 30501), (213, 30591), (215, 30597), (217, 30612),

Gene: Gibbin_37 Start: 31324, Stop: 32430, Start Num: 54
Candidate Starts for Gibbin_37:
(Start: 54 @31324 has 131 MA's), (62, 31381), (69, 31438), (83, 31573), (108, 31735), (109, 31738), (113, 31795), (130, 31846), (135, 31858), (144, 31930), (150, 31963), (168, 32122), (213, 32392), (217, 32413),

Gene: Gizermo_18 Start: 16534, Stop: 17661, Start Num: 51
Candidate Starts for Gizermo_18:
(Start: 51 @16534 has 14 MA's), (Start: 54 @16552 has 131 MA's), (59, 16585), (62, 16612), (64, 16648), (68, 16672), (89, 16864), (90, 16870), (97, 16939), (112, 17029), (113, 17035), (119, 17065), (123, 17077), (136, 17122), (146, 17173), (155, 17257), (161, 17278), (165, 17347), (166, 17368), (170, 17395), (198, 17614),

Gene: GodonK_97 Start: 58933, Stop: 59997, Start Num: 54
Candidate Starts for GodonK_97:
(52, 58921), (Start: 54 @58933 has 131 MA's), (108, 59350), (113, 59410), (119, 59443), (145, 59563), (159, 59680), (163, 59737), (167, 59770), (195, 59959),

Gene: GretelLyn_36 Start: 31590, Stop: 32696, Start Num: 54
Candidate Starts for GretelLyn_36:
(Start: 54 @31590 has 131 MA's), (69, 31704), (83, 31839), (108, 32001), (109, 32004), (113, 32061), (130, 32112), (135, 32124), (144, 32196), (150, 32229), (168, 32388), (213, 32658), (217, 32679),

Gene: Gudmit_19 Start: 17314, Stop: 18414, Start Num: 54
Candidate Starts for Gudmit_19:

(Start: 54 @17314 has 131 MA's), (56, 17341), (Start: 61 @17359 has 1 MA's), (69, 17431), (71, 17458), (113, 17791), (135, 17851), (149, 17953), (163, 18079), (169, 18133), (175, 18166), (176, 18169),

Gene: Guey18_66 Start: 35224, Stop: 36258, Start Num: 54
Candidate Starts for Guey18_66:
(Start: 54 @35224 has 131 MA's), (56, 35251), (Start: 57 @35254 has 1 MA's), (81, 35455), (93, 35590), (100, 35620), (113, 35701), (121, 35734), (198, 36247),

Gene: Haley23_18 Start: 16552, Stop: 17661, Start Num: 54
Candidate Starts for Haley23_18:
(Start: 51 @16534 has 14 MA's), (Start: 54 @16552 has 131 MA's), (59, 16585), (62, 16612), (64, 16648), (68, 16672), (89, 16864), (90, 16870), (97, 16939), (112, 17029), (113, 17035), (119, 17065), (123, 17077), (136, 17122), (146, 17173), (155, 17257), (161, 17278), (165, 17347), (166, 17368), (170, 17395), (198, 17614),

Gene: HannahD_21 Start: 18913, Stop: 20040, Start Num: 51
Candidate Starts for HannahD_21:
(Start: 51 @18913 has 14 MA's), (Start: 54 @18931 has 131 MA's), (59, 18964), (62, 18991), (64, 19027), (68, 19051), (89, 19243), (90, 19249), (97, 19318), (112, 19408), (113, 19414), (133, 19480), (136, 19501), (146, 19552), (148, 19576), (155, 19636), (161, 19657), (166, 19747), (198, 19993),

Gene: Hortense_21 Start: 19524, Stop: 20633, Start Num: 54
Candidate Starts for Hortense_21:
(35, 19413), (40, 19452), (Start: 54 @19524 has 131 MA's), (64, 19620), (68, 19644), (89, 19836), (90, 19842), (97, 19911), (112, 20001), (113, 20007), (123, 20049), (133, 20073), (136, 20094), (146, 20145), (148, 20169), (155, 20229), (166, 20340), (170, 20367),

Gene: Howe_21 Start: 19524, Stop: 20633, Start Num: 54
Candidate Starts for Howe_21:
(35, 19413), (40, 19452), (Start: 54 @19524 has 131 MA's), (64, 19620), (68, 19644), (89, 19836), (90, 19842), (97, 19911), (112, 20001), (113, 20007), (123, 20049), (133, 20073), (136, 20094), (146, 20145), (148, 20169), (155, 20229), (166, 20340), (170, 20367),

Gene: InLimbo_21 Start: 17311, Stop: 18411, Start Num: 54
Candidate Starts for InLimbo_21:
(21, 17068), (48, 17281), (Start: 54 @17311 has 131 MA's), (69, 17428), (78, 17527), (87, 17608), (113, 17788), (130, 17836), (134, 17842), (135, 17848), (139, 17887), (163, 18076), (167, 18109), (168, 18112), (169, 18130), (176, 18166), (198, 18316),

Gene: Invectra_21 Start: 19312, Stop: 20412, Start Num: 54
Candidate Starts for Invectra_21:
(11, 18793), (13, 18814), (15, 18883), (16, 18946), (29, 19171), (Start: 54 @19312 has 131 MA's), (Start: 61 @19357 has 1 MA's), (69, 19429), (71, 19456), (82, 19549), (95, 19687), (113, 19789), (135, 19849), (149, 19951), (163, 20077), (168, 20113), (169, 20131), (178, 20176), (193, 20290), (198, 20317),

Gene: JCole_18 Start: 16546, Stop: 17646, Start Num: 54
Candidate Starts for JCole_18:
(Start: 54 @16546 has 131 MA's), (69, 16663), (87, 16843), (113, 17023), (130, 17071), (134, 17077), (135, 17083), (163, 17311), (167, 17344), (168, 17347), (169, 17365), (176, 17401), (198, 17551),

Gene: Jalebi_35 Start: 31759, Stop: 32865, Start Num: 54

Candidate Starts for Jalebi_35:
(Start: 54 @31759 has 131 MA's), (69, 31873), (83, 32008), (108, 32170), (109, 32173), (113, 32230), (130, 32281), (135, 32293), (144, 32365), (150, 32398), (168, 32557), (213, 32827), (217, 32848),

Gene: Jalleen_19 Start: 16545, Stop: 17654, Start Num: 54
Candidate Starts for Jalleen_19:
(Start: 51 @16527 has 14 MA's), (Start: 54 @16545 has 131 MA's), (59, 16578), (62, 16605), (64, 16641), (68, 16665), (89, 16857), (90, 16863), (97, 16932), (112, 17022), (113, 17028), (119, 17058), (123, 17070), (136, 17115), (146, 17166), (155, 17250), (161, 17271), (165, 17340), (166, 17361), (170, 17388), (198, 17607),

Gene: Jamemuya19_34 Start: 29113, Stop: 30219, Start Num: 54
Candidate Starts for Jamemuya19_34:
(Start: 54 @29113 has 131 MA's), (62, 29170), (69, 29227), (83, 29362), (108, 29524), (109, 29527), (112, 29578), (113, 29584), (130, 29635), (135, 29647), (149, 29749), (150, 29752), (168, 29911), (183, 30019), (189, 30064), (194, 30091), (213, 30181), (215, 30187), (217, 30202),

Gene: Jecs_22 Start: 19230, Stop: 20339, Start Num: 54
Candidate Starts for Jecs_22:
(19, 18969), (25, 19044), (33, 19110), (Start: 51 @19212 has 14 MA's), (Start: 54 @19230 has 131 MA's), (59, 19263), (62, 19290), (64, 19326), (68, 19350), (86, 19521), (89, 19542), (90, 19548), (97, 19617), (112, 19707), (113, 19713), (133, 19779), (136, 19800), (155, 19935), (161, 19956), (166, 20046), (198, 20292),

Gene: Keelan_58 Start: 33969, Stop: 34979, Start Num: 54
Candidate Starts for Keelan_58:
(Start: 54 @33969 has 131 MA's), (Start: 57 @33999 has 1 MA's), (81, 34200), (113, 34446), (121, 34479), (168, 34761), (187, 34911), (198, 34968),

Gene: Lamberg_18 Start: 16489, Stop: 17589, Start Num: 54
Candidate Starts for Lamberg_18:
(Start: 54 @16489 has 131 MA's), (69, 16606), (87, 16786), (113, 16966), (130, 17014), (134, 17020), (135, 17026), (167, 17287), (168, 17290), (169, 17308), (176, 17344), (198, 17494),

Gene: Lambo_36 Start: 31244, Stop: 32350, Start Num: 54
Candidate Starts for Lambo_36:
(Start: 54 @31244 has 131 MA's), (62, 31301), (69, 31358), (83, 31493), (108, 31655), (109, 31658), (113, 31715), (130, 31766), (135, 31778), (144, 31850), (150, 31883), (168, 32042), (189, 32195), (213, 32312), (217, 32333),

Gene: LavAbarElk_34 Start: 29698, Stop: 30804, Start Num: 54
Candidate Starts for LavAbarElk_34:
(Start: 54 @29698 has 131 MA's), (62, 29755), (69, 29812), (83, 29947), (108, 30109), (109, 30112), (113, 30169), (117, 30193), (130, 30220), (135, 30232), (144, 30304), (150, 30337), (168, 30496), (189, 30649), (213, 30766), (217, 30787),

Gene: Ligma_41 Start: 34188, Stop: 35276, Start Num: 61
Candidate Starts for Ligma_41:
(Start: 37 @34059 has 1 MA's), (41, 34092), (Start: 54 @34143 has 131 MA's), (Start: 61 @34188 has 1 MA's), (64, 34236), (69, 34263), (80, 34368), (109, 34566), (113, 34623), (127, 34662), (130, 34668), (132, 34671), (135, 34677), (146, 34755), (154, 34836), (167, 34971), (168, 34974), (171, 35001), (174, 35019), (175, 35034), (185, 35115), (215, 35244), (217, 35259),

Gene: Lila22_35 Start: 31199, Stop: 32305, Start Num: 54
Candidate Starts for Lila22_35:
(Start: 54 @31199 has 131 MA's), (62, 31256), (69, 31313), (83, 31448), (108, 31610), (109, 31613), (113, 31670), (130, 31721), (135, 31733), (144, 31805), (150, 31838), (168, 31997), (213, 32267), (217, 32288),

Gene: Lilas_22 Start: 19827, Stop: 20927, Start Num: 54
Candidate Starts for Lilas_22:
(23, 19605), (46, 19794), (Start: 54 @19827 has 131 MA's), (Start: 57 @19857 has 1 MA's), (69, 19944), (94, 20199), (113, 20304), (130, 20352), (135, 20364), (167, 20625), (168, 20628), (169, 20646), (176, 20682), (198, 20832),

Gene: LilyPad_31 Start: 26814, Stop: 27920, Start Num: 54
Candidate Starts for LilyPad_31:
(Start: 54 @26814 has 131 MA's), (62, 26874), (69, 26931), (82, 27048), (96, 27192), (97, 27195), (113, 27288), (135, 27351), (144, 27423), (149, 27453), (168, 27615), (178, 27678), (210, 27864), (216, 27897),

Gene: LittleFella_32 Start: 28760, Stop: 29866, Start Num: 54
Candidate Starts for LittleFella_32:
(Start: 54 @28760 has 131 MA's), (62, 28817), (69, 28874), (82, 28994), (113, 29234), (130, 29285), (135, 29297), (144, 29369), (168, 29561), (190, 29717), (209, 29804), (216, 29843),

Gene: LittleMunchkin_43 Start: 37407, Stop: 38561, Start Num: 54
Candidate Starts for LittleMunchkin_43:
(39, 37335), (Start: 54 @37407 has 131 MA's), (64, 37500), (70, 37536), (82, 37650), (108, 37830), (113, 37890), (135, 37941), (146, 38019), (154, 38100), (163, 38190), (169, 38256), (171, 38265), (185, 38379), (204, 38475), (218, 38550),

Gene: LordFarquaad_18 Start: 16545, Stop: 17654, Start Num: 54
Candidate Starts for LordFarquaad_18:
(Start: 51 @16527 has 14 MA's), (Start: 54 @16545 has 131 MA's), (55, 16563), (59, 16578), (62, 16605), (64, 16641), (68, 16665), (86, 16836), (89, 16857), (90, 16863), (97, 16932), (112, 17022), (113, 17028), (119, 17058), (123, 17070), (136, 17115), (146, 17166), (155, 17250), (161, 17271), (165, 17340), (166, 17361), (170, 17388), (198, 17607),

Gene: Lton_18 Start: 16518, Stop: 17618, Start Num: 54
Candidate Starts for Lton_18:
(Start: 54 @16518 has 131 MA's), (69, 16635), (87, 16815), (113, 16995), (130, 17043), (134, 17049), (135, 17055), (163, 17283), (168, 17319), (169, 17337), (176, 17373), (198, 17523),

Gene: LuckyLeo_35 Start: 30567, Stop: 31721, Start Num: 54
Candidate Starts for LuckyLeo_35:
(Start: 54 @30567 has 131 MA's), (55, 30585), (69, 30684), (109, 30987), (113, 31044), (122, 31080), (124, 31083), (167, 31398), (176, 31461), (198, 31611), (207, 31641), (209, 31650),

Gene: Madi_29 Start: 25970, Stop: 27115, Start Num: 54
Candidate Starts for Madi_29:
(Start: 54 @25970 has 131 MA's), (55, 25988), (65, 26072), (69, 26087), (87, 26267), (113, 26447), (130, 26498), (135, 26507), (144, 26579), (168, 26804), (175, 26861), (211, 27056),

Gene: MagicMan_21 Start: 19237, Stop: 20346, Start Num: 54
Candidate Starts for MagicMan_21:

(Start: 51 @19219 has 14 MA's), (Start: 54 @19237 has 131 MA's), (64, 19333), (67, 19354), (68, 19357), (89, 19549), (90, 19555), (112, 19714), (113, 19720), (118, 19747), (119, 19750), (125, 19768), (155, 19942), (161, 19963), (198, 20299),

Gene: Marteena_22 Start: 19678, Stop: 20778, Start Num: 54
Candidate Starts for Marteena_22:
(23, 19456), (46, 19645), (Start: 54 @19678 has 131 MA's), (Start: 57 @19708 has 1 MA's), (69, 19795), (87, 19975), (94, 20050), (113, 20155), (130, 20203), (135, 20215), (167, 20476), (168, 20479), (169, 20497), (176, 20533), (198, 20683),

Gene: Mcklovin_21 Start: 21693, Stop: 22802, Start Num: 54
Candidate Starts for Mcklovin_21:
(35, 21582), (40, 21621), (Start: 54 @21693 has 131 MA's), (64, 21789), (68, 21813), (89, 22005), (90, 22011), (97, 22080), (112, 22170), (113, 22176), (123, 22218), (133, 22242), (136, 22263), (146, 22314), (148, 22338), (155, 22398), (166, 22509), (170, 22536),

Gene: MichaelScott_21 Start: 19312, Stop: 20412, Start Num: 54
Candidate Starts for MichaelScott_21:
(13, 18814), (15, 18883), (16, 18946), (22, 19087), (29, 19171), (Start: 54 @19312 has 131 MA's), (Start: 61 @19357 has 1 MA's), (69, 19429), (113, 19789), (130, 19837), (135, 19849), (138, 19882), (149, 19951), (150, 19954), (163, 20077), (169, 20131), (198, 20317),

Gene: Mima20_34 Start: 30948, Stop: 32054, Start Num: 54
Candidate Starts for Mima20_34:
(Start: 54 @30948 has 131 MA's), (69, 31062), (75, 31137), (83, 31197), (108, 31359), (109, 31362), (113, 31419), (130, 31470), (135, 31482), (144, 31554), (150, 31587), (168, 31746), (213, 32016), (217, 32037),

Gene: Mocha12_18 Start: 16552, Stop: 17661, Start Num: 54
Candidate Starts for Mocha12_18:
(Start: 51 @16534 has 14 MA's), (Start: 54 @16552 has 131 MA's), (59, 16585), (62, 16612), (64, 16648), (68, 16672), (89, 16864), (90, 16870), (97, 16939), (112, 17029), (113, 17035), (119, 17065), (123, 17077), (136, 17122), (146, 17173), (155, 17257), (161, 17278), (165, 17347), (166, 17368), (170, 17395), (198, 17614),

Gene: MoiGyank_38 Start: 31629, Stop: 32735, Start Num: 54
Candidate Starts for MoiGyank_38:
(Start: 54 @31629 has 131 MA's), (69, 31743), (83, 31878), (108, 32040), (109, 32043), (113, 32100), (130, 32151), (135, 32163), (144, 32235), (150, 32268), (168, 32427), (213, 32697), (217, 32718),

Gene: Moonflower_22 Start: 19770, Stop: 20870, Start Num: 54
Candidate Starts for Moonflower_22:
(Start: 54 @19770 has 131 MA's), (69, 19887), (87, 20067), (94, 20142), (113, 20247), (130, 20295), (135, 20307), (149, 20409), (150, 20412), (168, 20571), (169, 20589), (176, 20625), (198, 20775), (206, 20796),

Gene: Moosehead_18 Start: 16438, Stop: 17538, Start Num: 54
Candidate Starts for Moosehead_18:
(32, 16303), (46, 16405), (Start: 54 @16438 has 131 MA's), (69, 16555), (82, 16675), (94, 16810), (95, 16813), (113, 16915), (130, 16963), (134, 16969), (135, 16975), (139, 17014), (167, 17236), (168, 17239), (169, 17257), (172, 17278), (198, 17443),

Gene: Morkie_20 Start: 17311, Stop: 18411, Start Num: 54

Candidate Starts for Morkie_20:
(21, 17068), (48, 17281), (Start: 54 @17311 has 131 MA's), (69, 17428), (78, 17527), (87, 17608), (113, 17788), (130, 17836), (134, 17842), (135, 17848), (139, 17887), (163, 18076), (167, 18109), (168, 18112), (169, 18130), (176, 18166), (198, 18316),

Gene: NaLuna_21 Start: 18931, Stop: 20040, Start Num: 54
Candidate Starts for NaLuna_21:
(Start: 51 @18913 has 14 MA's), (Start: 54 @18931 has 131 MA's), (59, 18964), (62, 18991), (64, 19027), (68, 19051), (89, 19243), (90, 19249), (97, 19318), (112, 19408), (113, 19414), (133, 19480), (136, 19501), (146, 19552), (148, 19576), (155, 19636), (161, 19657), (166, 19747), (198, 19993),

Gene: Nettle_37 Start: 31483, Stop: 32589, Start Num: 54
Candidate Starts for Nettle_37:
(Start: 54 @31483 has 131 MA's), (69, 31597), (83, 31732), (108, 31894), (109, 31897), (113, 31954), (130, 32005), (135, 32017), (144, 32089), (150, 32122), (168, 32281), (213, 32551), (217, 32572),

Gene: Nettuno_18 Start: 16492, Stop: 17592, Start Num: 54
Candidate Starts for Nettuno_18:
(Start: 54 @16492 has 131 MA's), (69, 16609), (113, 16969), (130, 17017), (134, 17023), (135, 17029), (139, 17068), (163, 17257), (167, 17290), (168, 17293), (169, 17311), (176, 17347), (198, 17497),

Gene: NiceHouse_51 Start: 23181, Stop: 24578, Start Num: 53
Candidate Starts for NiceHouse_51:
(Start: 53 @23181 has 6 MA's), (67, 23301), (68, 23304), (69, 23307), (74, 23385), (84, 23469), (91, 23523), (144, 23808), (162, 23946), (175, 24048), (176, 24051), (178, 24060), (181, 24084), (191, 24156), (205, 24249), (221, 24438), (222, 24534), (223, 24540),

Gene: NoShow_26 Start: 23358, Stop: 24416, Start Num: 53
Candidate Starts for NoShow_26:
(36, 23277), (Start: 53 @23358 has 6 MA's), (58, 23397), (64, 23460), (78, 23583), (81, 23598), (98, 23763), (101, 23778), (113, 23871), (120, 23904), (162, 24135), (164, 24162), (166, 24180), (169, 24201), (188, 24330),

Gene: NorManre_37 Start: 30832, Stop: 31941, Start Num: 54
Candidate Starts for NorManre_37:
(Start: 54 @30832 has 131 MA's), (62, 30892), (69, 30949), (82, 31066), (97, 31213), (108, 31246), (109, 31249), (113, 31306), (130, 31357), (135, 31369), (144, 31441), (150, 31474), (168, 31633), (213, 31903), (217, 31924),

Gene: NovaSharks_36 Start: 29113, Stop: 30219, Start Num: 54
Candidate Starts for NovaSharks_36:
(Start: 54 @29113 has 131 MA's), (62, 29170), (69, 29227), (83, 29362), (108, 29524), (109, 29527), (112, 29578), (113, 29584), (130, 29635), (135, 29647), (149, 29749), (150, 29752), (168, 29911), (183, 30019), (189, 30064), (194, 30091), (213, 30181), (215, 30187), (217, 30202),

Gene: OneDirection_18 Start: 16457, Stop: 17557, Start Num: 54
Candidate Starts for OneDirection_18:
(30, 16304), (Start: 54 @16457 has 131 MA's), (69, 16574), (87, 16754), (109, 16877), (113, 16934), (130, 16982), (135, 16994), (163, 17222), (167, 17255), (168, 17258), (169, 17276), (176, 17312), (198, 17462), (215, 17528),

Gene: Opie_21 Start: 19244, Stop: 20371, Start Num: 51
Candidate Starts for Opie_21:

(19, 19001), (25, 19076), (27, 19091), (33, 19142), (Start: 51 @19244 has 14 MA's), (Start: 54 @19262 has 131 MA's), (59, 19295), (62, 19322), (64, 19358), (68, 19382), (86, 19553), (89, 19574), (90, 19580), (97, 19649), (112, 19739), (113, 19745), (133, 19811), (136, 19832), (155, 19967), (161, 19988), (166, 20078), (198, 20324),

Gene: Oregano_21 Start: 18977, Stop: 20077, Start Num: 54
Candidate Starts for Oregano_21:
(13, 18479), (15, 18548), (16, 18611), (22, 18752), (29, 18836), (Start: 54 @18977 has 131 MA's), (Start: 61 @19022 has 1 MA's), (69, 19094), (113, 19454), (130, 19502), (135, 19514), (138, 19547), (149, 19616), (150, 19619), (163, 19742), (169, 19796), (198, 19982),

Gene: OtterstedtS21_36 Start: 30906, Stop: 32012, Start Num: 54
Candidate Starts for OtterstedtS21_36:
(Start: 54 @30906 has 131 MA's), (69, 31020), (83, 31155), (108, 31317), (109, 31320), (113, 31377), (130, 31428), (135, 31440), (144, 31512), (150, 31545), (168, 31704), (213, 31974), (217, 31995),

Gene: ParvusTarda_36 Start: 30374, Stop: 31480, Start Num: 54
Candidate Starts for ParvusTarda_36:
(Start: 54 @30374 has 131 MA's), (62, 30431), (69, 30488), (83, 30623), (108, 30785), (109, 30788), (113, 30845), (130, 30896), (135, 30908), (144, 30980), (150, 31013), (168, 31172), (213, 31442), (217, 31463),

Gene: Patos_37 Start: 30832, Stop: 31941, Start Num: 54
Candidate Starts for Patos_37:
(Start: 54 @30832 has 131 MA's), (62, 30892), (69, 30949), (82, 31066), (97, 31213), (108, 31246), (109, 31249), (113, 31306), (130, 31357), (135, 31369), (144, 31441), (150, 31474), (168, 31633), (213, 31903), (217, 31924),

Gene: Petra_22 Start: 18743, Stop: 19855, Start Num: 54
Candidate Starts for Petra_22:
(Start: 54 @18743 has 131 MA's), (64, 18839), (68, 18863), (79, 18971), (89, 19055), (90, 19061), (93, 19112), (105, 19166), (112, 19235), (113, 19241), (120, 19274), (131, 19307), (198, 19808),

Gene: Phendrix_93 Start: 59176, Stop: 60240, Start Num: 54
Candidate Starts for Phendrix_93:
(52, 59164), (Start: 54 @59176 has 131 MA's), (77, 59389), (81, 59407), (108, 59593), (113, 59653), (119, 59686), (145, 59806), (152, 59878), (159, 59923), (163, 59980), (167, 60013), (195, 60202),

Gene: PhorbesPhlower_20 Start: 17311, Stop: 18411, Start Num: 54
Candidate Starts for PhorbesPhlower_20:
(21, 17068), (48, 17281), (Start: 54 @17311 has 131 MA's), (69, 17428), (78, 17527), (87, 17608), (113, 17788), (130, 17836), (134, 17842), (135, 17848), (139, 17887), (163, 18076), (167, 18109), (168, 18112), (169, 18130), (176, 18166), (198, 18316),

Gene: PhriskyACE_20 Start: 18447, Stop: 19547, Start Num: 54
Candidate Starts for PhriskyACE_20:
(34, 18333), (Start: 38 @18372 has 1 MA's), (Start: 54 @18447 has 131 MA's), (Start: 61 @18492 has 1 MA's), (69, 18564), (71, 18591), (82, 18684), (95, 18822), (113, 18924), (135, 18984), (149, 19086), (163, 19212), (168, 19248), (169, 19266), (178, 19311), (193, 19425), (198, 19452),

Gene: Pollux_22 Start: 19678, Stop: 20778, Start Num: 54
Candidate Starts for Pollux_22:

(23, 19456), (46, 19645), (Start: 54 @19678 has 131 MA's), (Start: 57 @19708 has 1 MA's), (69, 19795), (87, 19975), (94, 20050), (113, 20155), (130, 20203), (135, 20215), (167, 20476), (168, 20479), (169, 20497), (176, 20533), (198, 20683),

Gene: Pywacket_35 Start: 31720, Stop: 32826, Start Num: 54
Candidate Starts for Pywacket_35:
(Start: 54 @31720 has 131 MA's), (62, 31777), (69, 31834), (83, 31969), (108, 32131), (109, 32134), (113, 32191), (130, 32242), (135, 32254), (144, 32326), (150, 32359), (168, 32518), (189, 32671), (213, 32788), (217, 32809),

Gene: Ranch_36 Start: 29732, Stop: 30838, Start Num: 54
Candidate Starts for Ranch_36:
(Start: 54 @29732 has 131 MA's), (69, 29846), (83, 29981), (108, 30143), (109, 30146), (113, 30203), (130, 30254), (135, 30266), (144, 30338), (150, 30371), (168, 30530), (213, 30800), (217, 30821),

Gene: RazorC_35 Start: 29505, Stop: 30611, Start Num: 54
Candidate Starts for RazorC_35:
(Start: 54 @29505 has 131 MA's), (62, 29562), (69, 29619), (83, 29754), (108, 29916), (109, 29919), (112, 29970), (113, 29976), (130, 30027), (135, 30039), (149, 30141), (168, 30303), (183, 30411), (189, 30456), (194, 30483), (213, 30573), (215, 30579), (217, 30594),

Gene: Riduram_34 Start: 29083, Stop: 30189, Start Num: 54
Candidate Starts for Riduram_34:
(Start: 54 @29083 has 131 MA's), (62, 29140), (69, 29197), (83, 29332), (108, 29494), (109, 29497), (112, 29548), (113, 29554), (130, 29605), (135, 29617), (149, 29719), (168, 29881), (183, 29989), (189, 30034), (194, 30061), (213, 30151), (215, 30157), (217, 30172),

Gene: Rizz_24 Start: 19312, Stop: 20412, Start Num: 54
Candidate Starts for Rizz_24:
(13, 18814), (15, 18883), (16, 18946), (22, 19087), (29, 19171), (Start: 54 @19312 has 131 MA's), (Start: 61 @19357 has 1 MA's), (69, 19429), (113, 19789), (130, 19837), (135, 19849), (138, 19882), (149, 19951), (150, 19954), (163, 20077), (169, 20131), (198, 20317),

Gene: Ronaldo_63 Start: 34603, Stop: 35637, Start Num: 54
Candidate Starts for Ronaldo_63:
(Start: 54 @34603 has 131 MA's), (Start: 57 @34633 has 1 MA's), (81, 34834), (93, 34969), (100, 34999), (113, 35080), (121, 35113), (198, 35626),

Gene: Rota_35 Start: 31115, Stop: 32221, Start Num: 54
Candidate Starts for Rota_35:
(Start: 54 @31115 has 131 MA's), (62, 31172), (69, 31229), (83, 31364), (108, 31526), (109, 31529), (113, 31586), (130, 31637), (135, 31649), (144, 31721), (150, 31754), (168, 31913), (189, 32066), (213, 32183), (217, 32204),

Gene: Rukungu_36 Start: 31424, Stop: 32530, Start Num: 54
Candidate Starts for Rukungu_36:
(Start: 54 @31424 has 131 MA's), (62, 31481), (69, 31538), (83, 31673), (108, 31835), (109, 31838), (113, 31895), (130, 31946), (135, 31958), (144, 32030), (150, 32063), (168, 32222), (213, 32492), (217, 32513),

Gene: Rumi_36 Start: 29116, Stop: 30222, Start Num: 54
Candidate Starts for Rumi_36:

(Start: 54 @29116 has 131 MA's), (62, 29173), (69, 29230), (83, 29365), (108, 29527), (109, 29530), (112, 29581), (113, 29587), (130, 29638), (135, 29650), (149, 29752), (150, 29755), (168, 29914), (183, 30022), (189, 30067), (194, 30094), (213, 30184), (215, 30190), (217, 30205),

Gene: Sadboi_37 Start: 31591, Stop: 32697, Start Num: 54
Candidate Starts for Sadboi_37:
(Start: 54 @31591 has 131 MA's), (69, 31705), (83, 31840), (108, 32002), (109, 32005), (113, 32062), (130, 32113), (135, 32125), (144, 32197), (150, 32230), (168, 32389), (213, 32659), (217, 32680),

Gene: Sahara_18 Start: 16560, Stop: 17687, Start Num: 51
Candidate Starts for Sahara_18:
(Start: 51 @16560 has 14 MA's), (Start: 54 @16578 has 131 MA's), (59, 16611), (62, 16638), (64, 16674), (68, 16698), (89, 16890), (90, 16896), (97, 16965), (112, 17055), (113, 17061), (119, 17091), (123, 17103), (136, 17148), (146, 17199), (155, 17283), (161, 17304), (165, 17373), (166, 17394), (170, 17421), (198, 17640),

Gene: Samman98_21 Start: 18946, Stop: 20046, Start Num: 54
Candidate Starts for Samman98_21:
(13, 18448), (15, 18517), (16, 18580), (22, 18721), (29, 18805), (Start: 54 @18946 has 131 MA's), (Start: 61 @18991 has 1 MA's), (69, 19063), (113, 19423), (130, 19471), (135, 19483), (138, 19516), (149, 19585), (150, 19588), (163, 19711), (169, 19765), (198, 19951),

Gene: Sampudon_36 Start: 31759, Stop: 32865, Start Num: 54
Candidate Starts for Sampudon_36:
(Start: 54 @31759 has 131 MA's), (69, 31873), (83, 32008), (108, 32170), (109, 32173), (113, 32230), (130, 32281), (135, 32293), (144, 32365), (150, 32398), (168, 32557), (213, 32827), (217, 32848),

Gene: Savage_18 Start: 16534, Stop: 17661, Start Num: 51
Candidate Starts for Savage_18:
(Start: 51 @16534 has 14 MA's), (Start: 54 @16552 has 131 MA's), (59, 16585), (62, 16612), (64, 16648), (68, 16672), (89, 16864), (90, 16870), (97, 16939), (112, 17029), (113, 17035), (119, 17065), (123, 17077), (136, 17122), (146, 17173), (155, 17257), (165, 17347), (166, 17368), (170, 17395), (198, 17614),

Gene: Schnabeltier_21 Start: 19238, Stop: 20347, Start Num: 54
Candidate Starts for Schnabeltier_21:
(Start: 51 @19220 has 14 MA's), (Start: 54 @19238 has 131 MA's), (64, 19334), (67, 19355), (68, 19358), (89, 19550), (90, 19556), (112, 19715), (113, 19721), (118, 19748), (119, 19751), (125, 19769), (155, 19943), (161, 19964), (198, 20300),

Gene: Sekhmet_21 Start: 19306, Stop: 20406, Start Num: 54
Candidate Starts for Sekhmet_21:
(11, 18787), (13, 18808), (15, 18877), (16, 18940), (29, 19165), (Start: 54 @19306 has 131 MA's), (Start: 61 @19351 has 1 MA's), (69, 19423), (95, 19681), (113, 19783), (130, 19831), (135, 19843), (138, 19876), (149, 19945), (150, 19948), (163, 20071), (169, 20125), (198, 20311),

Gene: Shatter_41 Start: 34143, Stop: 35276, Start Num: 54
Candidate Starts for Shatter_41:
(Start: 37 @34059 has 1 MA's), (41, 34092), (Start: 54 @34143 has 131 MA's), (Start: 61 @34188 has 1 MA's), (64, 34236), (69, 34263), (80, 34368), (109, 34566), (113, 34623), (127, 34662), (130, 34668), (132, 34671), (135, 34677), (146, 34755), (154, 34836), (167, 34971), (168, 34974), (171, 35001), (174, 35019), (175, 35034), (185, 35115), (215, 35244), (217, 35259),

Gene: Shlim410_21 Start: 19524, Stop: 20633, Start Num: 54
Candidate Starts for Shlim410_21:
(35, 19413), (40, 19452), (Start: 54 @19524 has 131 MA's), (64, 19620), (68, 19644), (89, 19836), (90, 19842), (97, 19911), (112, 20001), (113, 20007), (123, 20049), (133, 20073), (136, 20094), (146, 20145), (148, 20169), (155, 20229), (166, 20340), (170, 20367),

Gene: Sienna_29 Start: 25970, Stop: 27115, Start Num: 54
Candidate Starts for Sienna_29:
(Start: 54 @25970 has 131 MA's), (55, 25988), (65, 26072), (69, 26087), (87, 26267), (113, 26447), (130, 26498), (135, 26507), (144, 26579), (168, 26804), (175, 26861), (211, 27056),

Gene: Sisko_41 Start: 34922, Stop: 36076, Start Num: 54
Candidate Starts for Sisko_41:
(17, 34568), (Start: 37 @34838 has 1 MA's), (41, 34871), (43, 34877), (Start: 54 @34922 has 131 MA's), (64, 35015), (70, 35051), (82, 35165), (110, 35372), (113, 35405), (135, 35456), (146, 35534), (149, 35558), (167, 35750), (169, 35771), (171, 35780), (174, 35798), (175, 35813), (185, 35894), (204, 35990),

Gene: Sleepyhead_20 Start: 17954, Stop: 19021, Start Num: 53
Candidate Starts for Sleepyhead_20:
(28, 17792), (Start: 53 @17954 has 6 MA's), (113, 18449), (119, 18479), (128, 18512), (155, 18674), (179, 18875),

Gene: SoilAssassin_18 Start: 16527, Stop: 17654, Start Num: 51
Candidate Starts for SoilAssassin_18:
(Start: 51 @16527 has 14 MA's), (Start: 54 @16545 has 131 MA's), (55, 16563), (59, 16578), (62, 16605), (64, 16641), (68, 16665), (86, 16836), (89, 16857), (90, 16863), (97, 16932), (112, 17022), (113, 17028), (119, 17058), (123, 17070), (136, 17115), (146, 17166), (155, 17250), (161, 17271), (165, 17340), (166, 17361), (170, 17388), (198, 17607),

Gene: Sour_46 Start: 38789, Stop: 39943, Start Num: 54
Candidate Starts for Sour_46:
(44, 38750), (49, 38759), (Start: 54 @38789 has 131 MA's), (64, 38882), (70, 38918), (82, 39032), (110, 39239), (113, 39272), (135, 39323), (138, 39356), (146, 39401), (153, 39479), (154, 39482), (167, 39617), (169, 39638), (174, 39665), (185, 39764), (216, 39926),

Gene: Sproutie_18 Start: 16552, Stop: 17661, Start Num: 54
Candidate Starts for Sproutie_18:
(Start: 51 @16534 has 14 MA's), (Start: 54 @16552 has 131 MA's), (59, 16585), (62, 16612), (64, 16648), (68, 16672), (89, 16864), (90, 16870), (97, 16939), (112, 17029), (113, 17035), (119, 17065), (123, 17077), (136, 17122), (146, 17173), (155, 17257), (165, 17347), (166, 17368), (170, 17395), (198, 17614),

Gene: Stormer_35 Start: 29119, Stop: 30225, Start Num: 54
Candidate Starts for Stormer_35:
(Start: 54 @29119 has 131 MA's), (62, 29176), (69, 29233), (83, 29368), (108, 29530), (109, 29533), (112, 29584), (113, 29590), (130, 29641), (135, 29653), (149, 29755), (150, 29758), (168, 29917), (183, 30025), (189, 30070), (194, 30097), (213, 30187), (215, 30193), (217, 30208),

Gene: Suerte_19 Start: 18436, Stop: 19536, Start Num: 54
Candidate Starts for Suerte_19:
(34, 18322), (Start: 38 @18361 has 1 MA's), (Start: 54 @18436 has 131 MA's), (Start: 61 @18481 has 1 MA's), (69, 18553), (71, 18580), (82, 18673), (95, 18811), (113, 18913), (135, 18973), (149, 19075),

(163, 19201), (168, 19237), (169, 19255), (175, 19288), (176, 19291),

Gene: Suzy_29 Start: 27111, Stop: 28256, Start Num: 54
Candidate Starts for Suzy_29:
(Start: 54 @27111 has 131 MA's), (55, 27129), (65, 27213), (69, 27228), (87, 27408), (113, 27588), (132, 27642), (135, 27648), (144, 27720), (168, 27945), (175, 28002), (211, 28197),

Gene: TPA4_31 Start: 28502, Stop: 29614, Start Num: 54
Candidate Starts for TPA4_31:
(Start: 54 @28502 has 131 MA's), (56, 28529), (63, 28574), (110, 28970), (112, 28997), (113, 29003), (132, 29072), (154, 29234), (157, 29255), (163, 29330), (167, 29378), (169, 29399), (175, 29435), (176, 29438), (190, 29540),

Gene: TaronosaurasRx_21 Start: 19240, Stop: 20367, Start Num: 51
Candidate Starts for TaronosaurasRx_21:
(Start: 51 @19240 has 14 MA's), (Start: 54 @19258 has 131 MA's), (59, 19291), (62, 19318), (64, 19354), (68, 19378), (86, 19549), (89, 19570), (90, 19576), (97, 19645), (112, 19735), (113, 19741), (133, 19807), (146, 19879), (155, 19963), (161, 19984), (166, 20074), (198, 20320),

Gene: Terapin_30 Start: 25971, Stop: 27116, Start Num: 54
Candidate Starts for Terapin_30:
(Start: 54 @25971 has 131 MA's), (55, 25989), (65, 26073), (69, 26088), (73, 26151), (87, 26268), (113, 26448), (130, 26499), (135, 26508), (144, 26580), (168, 26805), (175, 26862), (211, 27057),

Gene: Thimann_21 Start: 18904, Stop: 20004, Start Num: 54
Candidate Starts for Thimann_21:
(15, 18475), (29, 18763), (Start: 54 @18904 has 131 MA's), (69, 19021), (95, 19279), (108, 19321), (113, 19381), (130, 19429), (135, 19441), (138, 19474), (149, 19543), (150, 19546), (163, 19669), (169, 19723),

Gene: Tillicus_35 Start: 30161, Stop: 31315, Start Num: 54
Candidate Starts for Tillicus_35:
(Start: 54 @30161 has 131 MA's), (55, 30179), (69, 30278), (109, 30581), (113, 30638), (122, 30674), (124, 30677), (144, 30770), (163, 30947), (175, 31052), (198, 31205), (207, 31235), (209, 31244),

Gene: TinyDot_20 Start: 16935, Stop: 18035, Start Num: 54
Candidate Starts for TinyDot_20:
(Start: 54 @16935 has 131 MA's), (69, 17052), (87, 17232), (113, 17412), (130, 17460), (134, 17466), (135, 17472), (163, 17700), (167, 17733), (168, 17736), (169, 17754), (176, 17790), (198, 17940),

Gene: Trina_61 Start: 26883, Stop: 28274, Start Num: 53
Candidate Starts for Trina_61:
(Start: 53 @26883 has 6 MA's), (72, 27075), (76, 27102), (84, 27171), (97, 27291), (100, 27303), (102, 27309), (151, 27561), (162, 27651), (177, 27756), (184, 27813), (196, 27888), (219, 28023), (220, 28104),

Gene: Trine_20 Start: 16859, Stop: 18004, Start Num: 54
Candidate Starts for Trine_20:
(Start: 54 @16859 has 131 MA's), (Start: 61 @16904 has 1 MA's), (62, 16916), (69, 16979), (109, 17282), (113, 17339), (149, 17498), (171, 17720), (178, 17762), (214, 17972),

Gene: TuertoX_18 Start: 16534, Stop: 17661, Start Num: 51
Candidate Starts for TuertoX_18:

(Start: 51 @16534 has 14 MA's), (Start: 54 @16552 has 131 MA's), (59, 16585), (62, 16612), (64, 16648), (68, 16672), (89, 16864), (90, 16870), (97, 16939), (112, 17029), (113, 17035), (119, 17065), (123, 17077), (136, 17122), (146, 17173), (155, 17257), (165, 17347), (166, 17368), (170, 17395), (198, 17614),

Gene: Tuti_21 Start: 19334, Stop: 20434, Start Num: 54
Candidate Starts for Tuti_21:
(34, 19220), (Start: 38 @19259 has 1 MA's), (Start: 54 @19334 has 131 MA's), (Start: 61 @19379 has 1 MA's), (69, 19451), (71, 19478), (82, 19571), (95, 19709), (113, 19811), (135, 19871), (149, 19973), (163, 20099), (168, 20135), (169, 20153), (178, 20198), (193, 20312), (198, 20339),

Gene: Twinkle_21 Start: 20583, Stop: 21692, Start Num: 54
Candidate Starts for Twinkle_21:
(35, 20472), (40, 20511), (Start: 54 @20583 has 131 MA's), (64, 20679), (68, 20703), (89, 20895), (90, 20901), (97, 20970), (112, 21060), (113, 21066), (123, 21108), (133, 21132), (136, 21153), (146, 21204), (148, 21228), (155, 21288), (166, 21399), (170, 21426),

Gene: Upyo_20 Start: 17042, Stop: 18220, Start Num: 54
Candidate Starts for Upyo_20:
(Start: 54 @17042 has 131 MA's), (63, 17114), (108, 17465), (112, 17519), (113, 17525), (135, 17585), (150, 17690), (159, 17780), (168, 17870), (173, 17912), (175, 17939), (190, 18044), (192, 18050), (208, 18146), (212, 18176), (216, 18200),

Gene: VanLee_28 Start: 24067, Stop: 25176, Start Num: 54
Candidate Starts for VanLee_28:
(2, 23158), (4, 23359), (5, 23401), (7, 23416), (9, 23470), (14, 23593), (24, 23854), (52, 24055), (Start: 54 @24067 has 131 MA's), (Start: 57 @24097 has 1 MA's), (67, 24178), (85, 24340), (108, 24484), (113, 24544), (119, 24577), (130, 24598), (132, 24601), (138, 24643), (142, 24658), (149, 24700), (163, 24853), (167, 24898), (188, 25051), (197, 25099),

Gene: Volt_63 Start: 34767, Stop: 35801, Start Num: 54
Candidate Starts for Volt_63:
(Start: 54 @34767 has 131 MA's), (Start: 57 @34797 has 1 MA's), (81, 34998), (93, 35133), (100, 35163), (113, 35244), (121, 35277), (198, 35790),

Gene: Whiteclaw_18 Start: 16552, Stop: 17661, Start Num: 54
Candidate Starts for Whiteclaw_18:
(Start: 51 @16534 has 14 MA's), (Start: 54 @16552 has 131 MA's), (59, 16585), (62, 16612), (64, 16648), (68, 16672), (89, 16864), (90, 16870), (97, 16939), (112, 17029), (113, 17035), (119, 17065), (123, 17077), (136, 17122), (146, 17173), (155, 17257), (165, 17347), (166, 17368), (170, 17395), (198, 17614),

Gene: WinkNick_21 Start: 18931, Stop: 20031, Start Num: 54
Candidate Starts for WinkNick_21:
(13, 18433), (15, 18502), (16, 18565), (22, 18706), (29, 18790), (Start: 54 @18931 has 131 MA's), (Start: 61 @18976 has 1 MA's), (69, 19048), (113, 19408), (130, 19456), (135, 19468), (138, 19501), (149, 19570), (150, 19573), (163, 19696), (169, 19750), (198, 19936),

Gene: Wojtek_35 Start: 30458, Stop: 31564, Start Num: 54
Candidate Starts for Wojtek_35:
(Start: 54 @30458 has 131 MA's), (62, 30515), (69, 30572), (83, 30707), (108, 30869), (109, 30872), (113, 30929), (130, 30980), (135, 30992), (144, 31064), (150, 31097), (168, 31256), (213, 31526), (217, 31547),

Gene: WorMMAs_20 Start: 16712, Stop: 17848, Start Num: 54
Candidate Starts for WorMMAs_20:
(42, 16664), (Start: 54 @16712 has 131 MA's), (62, 16769), (64, 16805), (69, 16832), (108, 17132), (109, 17135), (113, 17192), (132, 17243), (138, 17282), (144, 17321), (150, 17354), (180, 17627), (198, 17747), (209, 17789), (213, 17810), (214, 17816),

Gene: Xenia2_33 Start: 28623, Stop: 29723, Start Num: 54
Candidate Starts for Xenia2_33:
(Start: 54 @28623 has 131 MA's), (62, 28680), (64, 28716), (69, 28737), (80, 28839), (82, 28854), (96, 28998), (97, 29001), (108, 29034), (109, 29037), (113, 29094), (135, 29157), (140, 29202), (163, 29385), (168, 29421), (198, 29625), (215, 29694),

Gene: Yago84_41 Start: 34996, Stop: 36150, Start Num: 54
Candidate Starts for Yago84_41:
(17, 34642), (Start: 37 @34912 has 1 MA's), (41, 34945), (43, 34951), (Start: 54 @34996 has 131 MA's), (64, 35089), (70, 35125), (82, 35239), (110, 35446), (113, 35479), (135, 35530), (146, 35608), (149, 35632), (167, 35824), (169, 35845), (171, 35854), (174, 35872), (185, 35968), (204, 36064),

Gene: Yeet412_18 Start: 16545, Stop: 17654, Start Num: 54
Candidate Starts for Yeet412_18:
(Start: 51 @16527 has 14 MA's), (Start: 54 @16545 has 131 MA's), (55, 16563), (59, 16578), (62, 16605), (64, 16641), (68, 16665), (86, 16836), (89, 16857), (90, 16863), (97, 16932), (112, 17022), (113, 17028), (119, 17058), (123, 17070), (136, 17115), (146, 17166), (155, 17250), (161, 17271), (165, 17340), (166, 17361), (170, 17388), (198, 17607),

Gene: Yikes_37 Start: 31838, Stop: 32944, Start Num: 54
Candidate Starts for Yikes_37:
(Start: 54 @31838 has 131 MA's), (62, 31895), (69, 31952), (83, 32087), (108, 32249), (109, 32252), (113, 32309), (130, 32360), (135, 32372), (144, 32444), (150, 32477), (168, 32636), (213, 32906), (217, 32927),

Gene: Yinzer_18 Start: 16552, Stop: 17661, Start Num: 54
Candidate Starts for Yinzer_18:
(Start: 51 @16534 has 14 MA's), (Start: 54 @16552 has 131 MA's), (59, 16585), (62, 16612), (64, 16648), (68, 16672), (89, 16864), (90, 16870), (97, 16939), (112, 17029), (113, 17035), (119, 17065), (123, 17077), (136, 17122), (146, 17173), (155, 17257), (161, 17278), (165, 17347), (166, 17368), (170, 17395), (198, 17614),

Gene: Zany_35 Start: 31363, Stop: 32469, Start Num: 54
Candidate Starts for Zany_35:
(Start: 54 @31363 has 131 MA's), (62, 31420), (69, 31477), (83, 31612), (108, 31774), (109, 31777), (113, 31834), (130, 31885), (135, 31897), (144, 31969), (150, 32002), (155, 32071), (168, 32161), (213, 32431), (217, 32452),

Gene: Ziko_63 Start: 34589, Stop: 35623, Start Num: 54
Candidate Starts for Ziko_63:
(Start: 54 @34589 has 131 MA's), (Start: 57 @34619 has 1 MA's), (81, 34820), (93, 34955), (100, 34985), (113, 35066), (121, 35099), (198, 35612),