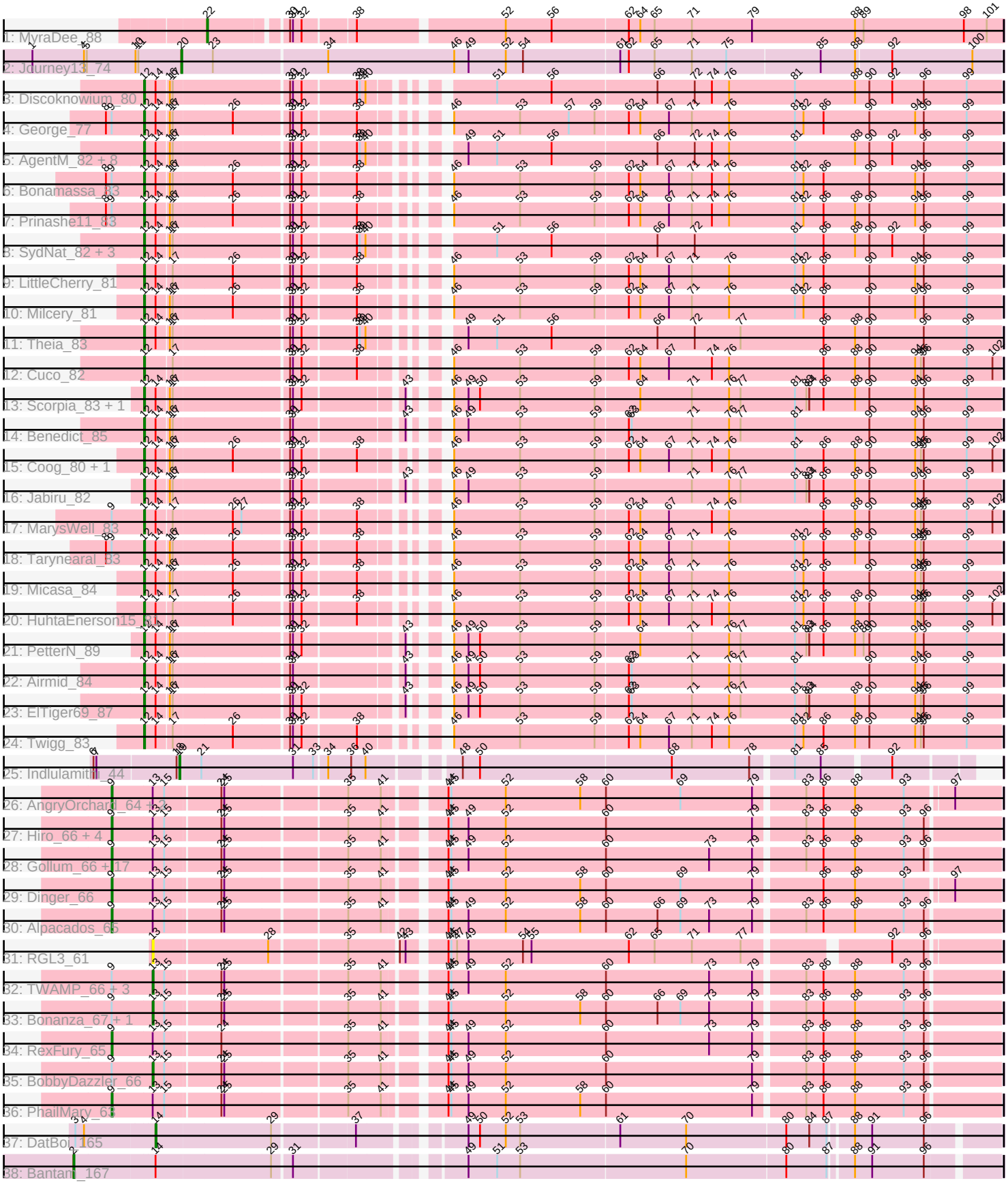
Pham 347537


1: MyraDee_88
2: Journey13_74
3: Discoknowium_80 + 1
4: George_77
5: AgentM_82 + 8
6: Bonamassa_83
7: Prinashe11_83
8: SydNat_82 + 3
9: LittleCherry_81
10: Milcery_81
11: Theia_83
12: Cuco_82
13: Scorpia_83 + 1
14: Benedict_85
15: Coog_80 + 1
16: Jabiru_82
17: MarysWell_83
18: Tarynearal_83
19: Micasa_84
20: HuhtaEnerson15_81
21: PetterN_89
22: Airmid_84
23: ElTiger69_87
24: Twigg_83
25: Indlulamithi_44
26: AngryOrchard_64 + 2
27: Hiro_66 + 4
28: Gollum_66 + 17
29: Dinger_66
30: Alpacados_65
31: RGL3_61
32: TWAMP_66 + 3
33: Bonanza_67 + 1
34: RexFury_65
35: BobbyDazzler_66
36: PhailMary_63
37: DatBoi_165
38: Bantam_167

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 347537 Report

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

Pham number 347537 has 78 members, 2 are drafts.

Phages represented in each track:
• Track 1 : MyraDee_88
• Track 2 : Journey13_74
• Track 3 : Discoknowium_80
• Track 4 : George_77
• Track 5 : AgentM_82, ForGetIt_84, Tiger_81, Phlorence_81, Lev2_83, Jovo_81, Aragog_83, Conspiracy_83, PickleBack_84
• Track 6 : Bonamassa_83
• Track 7 : Prinashe11_83
• Track 8 : SydNat_82, Bluefalcon_78, Zolita_81, Ghoulboy_83
• Track 9 : LittleCherry_81
• Track 10 : Milcery_81
• Track 11 : Theia_83
• Track 12 : Cuco_82
• Track 13 : Scorpia_83, Naca_85
• Track 14 : Benedict_85
• Track 15 : Coog_80, Midas2_80
• Track 16 : Jabiru_82
• Track 17 : MarysWell_83
• Track 18 : Tarynearal_83
• Track 19 : Micasa_84
• Track 20 : HuhtaEnerson15_81
• Track 21 : PetterN_89
• Track 22 : Airmid_84
• Track 23 : ElTiger69_87
• Track 24 : Twigg_83
• Track 25 : Indlulamithi_44
• Track 26 : AngryOrchard_64, Partridge_67, Takoda_68
• Track 27 : Hiro_66, Harlequin_66, Bryce_65, Yoncess_65, Jester_65
• Track 28 : Gollum_66, Alatin_65, Espica_67, Bradshaw_66, Rasputin_66, StCroix_65, UhSalsa_66, Erik_66, Swann_66, Belenaria_67, RER2_60, Phrankenstein_66, Nancinator_65, Shuman_67, AppleCloud_63, Natosaleda_65, Naiad_65, Krishelle_66
• Track 29 : Dinger_66
• Track 30 : Alpacados_65
• Track 31 : RGL3_61
• Track 32 : TWAMP_66, CosmicSans_66, Lillie_66, Rhodalysa_66
• Track 33 : Bonanza_67, Yogi_67

• Track 34 : RexFury_65
• Track 35 : BobbyDazzler_66
• Track 36 : PhailMary_63
• Track 37 : DatBoi_165
• Track 38 : Bantam_167

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

The start number called the most often in the published annotations is 12, it was called in 35 of the 76 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AgentM_82, Airmid_84, Aragog_83, Benedict_85, Bluefalcon_78, Bonamassa_83, Conspiracy_83, Coog_80, Cuco_82, Discoknowium_80, ElTiger69_87, ForGetIt_84, George_77, Ghoulboy_83, HuhtaEnerson15_81, Jabiru_82, Jovo_81, Lev2_83, LittleCherry_81, MarysWell_83, Micasa_84, Midas2_80, Milcery_81, Naca_85, PetterN_89, Phlorence_81, PickleBack_84, Prinashe11_83, Scorpia_83, SydNat_82, Tarynearal_83, Theia_83, Tiger_81, Twigg_83, Zolita_81,

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

Genes that do not have the "Most Annotated" start:
• Alatin_65, Alpacados_65, AngryOrchard_64, AppleCloud_63, Bantam_167, Belenaria_67, BobbyDazzler_66, Bonanza_67, Bradshaw_66, Bryce_65, CosmicSans_66, DatBoi_165, Dinger_66, Erik_66, Espica_67, Gollum_66, Harlequin_66, Hiro_66, Indlulamithi_44, Jester_65, Journey13_74, Krishelle_66, Lillie_66, MyraDee_88, Naiad_65, Nancinator_65, Natosaleda_65, Partridge_67, PhailMary_63, Phrankenstein_66, RER2_60, RGL3_61, Rasputin_66, RexFury_65, Rhodalysa_66, Shuman_67, StCroix_65, Swann_66, TWAMP_66, Takoda_68, UhSalsa_66, Yogi_67, Yoncess_65,

Summary by start number:

Start 2:
• Found in 1 of 78 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bantam_167 (DL),

Start 9:
• Found in 42 of 78 (53.8%) of genes in pham
• Manual Annotations of this start: 29 of 76
• Called 71.4% of time when present
• Phage (with cluster) where this start called: Alatin_65 (CA), Alpacados_65 (CA), AngryOrchard_64 (CA), AppleCloud_63 (CA), Belenaria_67 (CA), Bradshaw_66 (CA), Bryce_65 (CA), Dinger_66 (CA), Erik_66 (CA), Espica_67 (CA), Gollum_66 (CA), Harlequin_66 (CA), Hiro_66 (CA), Jester_65 (CA), Krishelle_66 (CA), Naiad_65 (CA), Nancinator_65 (CA), Natosaleda_65 (CA), Partridge_67 (CA), PhailMary_63 (CA), Phrankenstein_66 (CA), RER2_60 (CA), Rasputin_66 (CA), RexFury_65 (CA),

Shuman_67 (CA), StCroix_65 (CA), Swann_66 (CA), Takoda_68 (CA), UhSalsa_66 (CA), Yoncess_65 (CA),

Start 12:
• Found in 35 of 78 (44.9%) of genes in pham
• Manual Annotations of this start: 35 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AgentM_82 (A5), Airmid_84 (A5), Aragog_83 (A5), Benedict_85 (A5), Bluefalcon_78 (A5), Bonamassa_83 (A5), Conspiracy_83 (A5), Coog_80 (A5), Cuco_82 (A5), Discoknowium_80 (A5), ElTiger69_87 (A5), ForGetIt_84 (A5), George_77 (A5), Ghoulboy_83 (A5), HuhtaEnerson15_81 (A5), Jabiru_82 (A5), Jovo_81 (A5), Lev2_83 (A5), LittleCherry_81 (A5), MarysWell_83 (A5), Micasa_84 (A5), Midas2_80 (A5), Milcery_81 (A5), Naca_85 (A5), PetterN_89 (A5), Phlorence_81 (A5), PickleBack_84 (A5), Prinashe11_83 (A5), Scorpia_83 (A5), SydNat_82 (A5), Tarynearal_83 (A5), Theia_83 (A5), Tiger_81 (A5), Twigg_83 (A5), Zolita_81 (A5),

Start 13:
• Found in 38 of 78 (48.7%) of genes in pham
• Manual Annotations of this start: 7 of 76
• Called 21.1% of time when present
• Phage (with cluster) where this start called: BobbyDazzler_66 (CA), Bonanza_67 (CA), CosmicSans_66 (CA), Lillie_66 (CA), RGL3_61 (CA), Rhodalysa_66 (CA), TWAMP_66 (CA), Yogi_67 (CA),

Start 14:
• Found in 36 of 78 (46.2%) of genes in pham
• Manual Annotations of this start: 1 of 76
• Called 2.8% of time when present
• Phage (with cluster) where this start called: DatBoi_165 (DL),

Start 19:
• Found in 1 of 78 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Indlulamithi_44 (AC),

Start 20:
• Found in 1 of 78 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Journey13_74 (A2),

Start 22:
• Found in 1 of 78 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MyraDee_88 (A18),

Summary by clusters:

There are 6 clusters represented in this pham: AC, CA, DL, A18, A2, A5,

Info for manual annotations of cluster A18:
•Start number 22 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:
•Start number 20 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A5:
•Start number 12 was manually annotated 35 times for cluster A5.

Info for manual annotations of cluster AC:
•Start number 19 was manually annotated 1 time for cluster AC.

Info for manual annotations of cluster CA:
•Start number 9 was manually annotated 29 times for cluster CA.
•Start number 13 was manually annotated 7 times for cluster CA.

Info for manual annotations of cluster DL:
•Start number 2 was manually annotated 1 time for cluster DL.
•Start number 14 was manually annotated 1 time for cluster DL.

Gene Information:

Gene: AgentM_82 Start: 48112, Stop: 47279, Start Num: 12
Candidate Starts for AgentM_82:
(Start: 12 @48112 has 35 MA's), (Start: 14 @48100 has 1 MA's), (16, 48088), (17, 48085), (30, 47971), (31, 47968), (32, 47959), (38, 47905), (39, 47902), (40, 47896), (49, 47833), (51, 47803), (56, 47746), (66, 47638), (72, 47599), (74, 47581), (76, 47563), (81, 47494), (88, 47431), (90, 47416), (92, 47392), (96, 47359), (99, 47314),

Gene: Airmid_84 Start: 48460, Stop: 47627, Start Num: 12
Candidate Starts for Airmid_84:
(Start: 12 @48460 has 35 MA's), (Start: 14 @48448 has 1 MA's), (16, 48436), (17, 48433), (30, 48319), (31, 48316), (43, 48214), (46, 48196), (49, 48181), (50, 48169), (53, 48127), (59, 48049), (62, 48016), (63, 48013), (71, 47950), (76, 47911), (77, 47899), (81, 47842), (90, 47764), (94, 47716), (96, 47707), (99, 47662),

Gene: Alatin_65 Start: 44561, Stop: 43683, Start Num: 9
Candidate Starts for Alatin_65:
(Start: 9 @44561 has 29 MA's), (Start: 13 @44519 has 7 MA's), (15, 44507), (24, 44453), (25, 44450), (35, 44330), (41, 44297), (44, 44246), (45, 44243), (49, 44225), (52, 44186), (60, 44081), (73, 43973), (79, 43928), (83, 43880), (86, 43862), (88, 43829), (93, 43778), (96, 43757),

Gene: Alpacados_65 Start: 44384, Stop: 43506, Start Num: 9
Candidate Starts for Alpacados_65:
(Start: 9 @44384 has 29 MA's), (Start: 13 @44342 has 7 MA's), (15, 44330), (24, 44276), (25, 44273), (35, 44153), (41, 44120), (44, 44069), (45, 44066), (49, 44048), (52, 44009), (58, 43931), (60, 43904), (66, 43850), (69, 43826), (73, 43796), (79, 43751), (83, 43703), (86, 43685), (88, 43652), (93, 43601), (96, 43580),

Gene: AngryOrchard_64 Start: 44603, Stop: 43728, Start Num: 9
Candidate Starts for AngryOrchard_64:

(Start: 9 @44603 has 29 MA's), (Start: 13 @44561 has 7 MA's), (15, 44549), (24, 44495), (25, 44492), (35, 44372), (41, 44339), (44, 44288), (45, 44285), (52, 44228), (58, 44150), (60, 44123), (69, 44045), (79, 43970), (83, 43922), (86, 43904), (88, 43871), (93, 43820), (97, 43775),

Gene: AppleCloud_63 Start: 44278, Stop: 43400, Start Num: 9
Candidate Starts for AppleCloud_63:
(Start: 9 @44278 has 29 MA's), (Start: 13 @44236 has 7 MA's), (15, 44224), (24, 44170), (25, 44167), (35, 44047), (41, 44014), (44, 43963), (45, 43960), (49, 43942), (52, 43903), (60, 43798), (73, 43690), (79, 43645), (83, 43597), (86, 43579), (88, 43546), (93, 43495), (96, 43474),

Gene: Aragog_83 Start: 48409, Stop: 47576, Start Num: 12
Candidate Starts for Aragog_83:
(Start: 12 @48409 has 35 MA's), (Start: 14 @48397 has 1 MA's), (16, 48385), (17, 48382), (30, 48268), (31, 48265), (32, 48256), (38, 48202), (39, 48199), (40, 48193), (49, 48130), (51, 48100), (56, 48043), (66, 47935), (72, 47896), (74, 47878), (76, 47860), (81, 47791), (88, 47728), (90, 47713), (92, 47689), (96, 47656), (99, 47611),

Gene: Bantam_167 Start: 90131, Stop: 89235, Start Num: 2
Candidate Starts for Bantam_167:
(Start: 2 @90131 has 1 MA's), (Start: 14 @90050 has 1 MA's), (29, 89933), (31, 89915), (49, 89765), (51, 89735), (53, 89711), (70, 89540), (80, 89438), (87, 89396), (88, 89375), (91, 89357), (96, 89303),

Gene: Belenaria_67 Start: 44426, Stop: 43548, Start Num: 9
Candidate Starts for Belenaria_67:
(Start: 9 @44426 has 29 MA's), (Start: 13 @44384 has 7 MA's), (15, 44372), (24, 44318), (25, 44315), (35, 44195), (41, 44162), (44, 44111), (45, 44108), (49, 44090), (52, 44051), (60, 43946), (73, 43838), (79, 43793), (83, 43745), (86, 43727), (88, 43694), (93, 43643), (96, 43622),

Gene: Benedict_85 Start: 48303, Stop: 47470, Start Num: 12
Candidate Starts for Benedict_85:
(Start: 12 @48303 has 35 MA's), (Start: 14 @48291 has 1 MA's), (16, 48279), (17, 48276), (30, 48162), (31, 48159), (43, 48057), (46, 48039), (49, 48024), (53, 47970), (59, 47892), (62, 47859), (63, 47856), (71, 47793), (76, 47754), (77, 47742), (81, 47685), (90, 47607), (94, 47559), (96, 47550), (99, 47505),

Gene: Bluefalcon_78 Start: 48692, Stop: 47859, Start Num: 12
Candidate Starts for Bluefalcon_78:
(Start: 12 @48692 has 35 MA's), (Start: 14 @48680 has 1 MA's), (16, 48668), (17, 48665), (30, 48551), (31, 48548), (32, 48539), (38, 48485), (39, 48482), (40, 48476), (51, 48383), (56, 48326), (66, 48218), (72, 48179), (81, 48074), (86, 48044), (88, 48011), (90, 47996), (92, 47972), (96, 47939), (99, 47894),

Gene: BobbyDazzler_66 Start: 44490, Stop: 43654, Start Num: 13
Candidate Starts for BobbyDazzler_66:
(Start: 9 @44532 has 29 MA's), (Start: 13 @44490 has 7 MA's), (15, 44478), (24, 44424), (25, 44421), (35, 44301), (41, 44268), (44, 44217), (45, 44214), (49, 44196), (52, 44157), (60, 44052), (79, 43899), (83, 43851), (86, 43833), (88, 43800), (93, 43749), (96, 43728),

Gene: Bonamassa_83 Start: 48451, Stop: 47618, Start Num: 12
Candidate Starts for Bonamassa_83:
(8, 48490), (Start: 9 @48484 has 29 MA's), (Start: 12 @48451 has 35 MA's), (Start: 14 @48439 has 1 MA's), (16, 48427), (17, 48424), (26, 48364), (30, 48310), (31, 48307), (32, 48298), (38, 48244), (46, 48187), (53, 48118), (59, 48040), (62, 48007), (64, 47995), (67, 47965), (71, 47941), (74, 47920), (76, 47902), (81, 47833), (82, 47824), (86, 47803), (90, 47755), (94, 47707), (96, 47698), (99, 47653),

Gene: Bonanza_67 Start: 44794, Stop: 43958, Start Num: 13
Candidate Starts for Bonanza_67:
(Start: 9 @44836 has 29 MA's), (Start: 13 @44794 has 7 MA's), (15, 44782), (24, 44728), (25, 44725), (35, 44605), (41, 44572), (44, 44521), (45, 44518), (52, 44461), (58, 44383), (60, 44356), (66, 44302), (69, 44278), (73, 44248), (79, 44203), (83, 44155), (86, 44137), (88, 44104), (93, 44053), (96, 44032),

Gene: Bradshaw_66 Start: 44494, Stop: 43616, Start Num: 9
Candidate Starts for Bradshaw_66:
(Start: 9 @44494 has 29 MA's), (Start: 13 @44452 has 7 MA's), (15, 44440), (24, 44386), (25, 44383), (35, 44263), (41, 44230), (44, 44179), (45, 44176), (49, 44158), (52, 44119), (60, 44014), (73, 43906), (79, 43861), (83, 43813), (86, 43795), (88, 43762), (93, 43711), (96, 43690),

Gene: Bryce_65 Start: 44240, Stop: 43362, Start Num: 9
Candidate Starts for Bryce_65:
(Start: 9 @44240 has 29 MA's), (Start: 13 @44198 has 7 MA's), (15, 44186), (24, 44132), (25, 44129), (35, 44009), (41, 43976), (44, 43925), (45, 43922), (49, 43904), (52, 43865), (60, 43760), (79, 43607), (83, 43559), (86, 43541), (88, 43508), (93, 43457), (96, 43436),

Gene: Conspiracy_83 Start: 48352, Stop: 47519, Start Num: 12
Candidate Starts for Conspiracy_83:
(Start: 12 @48352 has 35 MA's), (Start: 14 @48340 has 1 MA's), (16, 48328), (17, 48325), (30, 48211), (31, 48208), (32, 48199), (38, 48145), (39, 48142), (40, 48136), (49, 48073), (51, 48043), (56, 47986), (66, 47878), (72, 47839), (74, 47821), (76, 47803), (81, 47734), (88, 47671), (90, 47656), (92, 47632), (96, 47599), (99, 47554),

Gene: Coog_80 Start: 48489, Stop: 47656, Start Num: 12
Candidate Starts for Coog_80:
(Start: 12 @48489 has 35 MA's), (Start: 14 @48477 has 1 MA's), (16, 48465), (17, 48462), (26, 48402), (30, 48348), (31, 48345), (32, 48336), (38, 48282), (46, 48225), (53, 48156), (59, 48078), (62, 48045), (64, 48033), (67, 48003), (71, 47979), (74, 47958), (76, 47940), (81, 47871), (86, 47841), (88, 47808), (90, 47793), (94, 47745), (95, 47739), (96, 47736), (99, 47691), (102, 47664),

Gene: CosmicSans_66 Start: 44443, Stop: 43607, Start Num: 13
Candidate Starts for CosmicSans_66:
(Start: 9 @44485 has 29 MA's), (Start: 13 @44443 has 7 MA's), (15, 44431), (24, 44377), (25, 44374), (35, 44254), (41, 44221), (44, 44170), (45, 44167), (49, 44149), (52, 44110), (60, 44005), (73, 43897), (79, 43852), (83, 43804), (86, 43786), (88, 43753), (93, 43702), (96, 43681),

Gene: Cuco_82 Start: 48349, Stop: 47516, Start Num: 12
Candidate Starts for Cuco_82:
(Start: 12 @48349 has 35 MA's), (17, 48322), (30, 48208), (31, 48205), (32, 48196), (38, 48142), (46, 48085), (53, 48016), (59, 47938), (62, 47905), (64, 47893), (67, 47863), (74, 47818), (76, 47800), (86, 47701), (88, 47668), (90, 47653), (94, 47605), (95, 47599), (96, 47596), (99, 47551), (102, 47524),

Gene: DatBoi_165 Start: 90002, Stop: 89187, Start Num: 14
Candidate Starts for DatBoi_165:
(3, 90080), (4, 90071), (Start: 14 @90002 has 1 MA's), (29, 89885), (37, 89807), (49, 89717), (50, 89705), (52, 89678), (53, 89663), (61, 89561), (70, 89492), (80, 89390), (84, 89366), (87, 89348), (88, 89327), (91, 89309), (96, 89255),

Gene: Dinger_66 Start: 44621, Stop: 43746, Start Num: 9
Candidate Starts for Dinger_66:

(Start: 9 @44621 has 29 MA's), (Start: 13 @44579 has 7 MA's), (15, 44567), (24, 44513), (25, 44510), (35, 44390), (41, 44357), (44, 44306), (45, 44303), (52, 44246), (58, 44168), (60, 44141), (69, 44063), (79, 43988), (86, 43922), (88, 43889), (93, 43838), (97, 43793),

Gene: Discoknowium_80 Start: 47869, Stop: 47036, Start Num: 12
Candidate Starts for Discoknowium_80:
(Start: 12 @47869 has 35 MA's), (Start: 14 @47857 has 1 MA's), (16, 47845), (17, 47842), (30, 47728), (31, 47725), (32, 47716), (38, 47662), (39, 47659), (40, 47653), (51, 47560), (56, 47503), (66, 47395), (72, 47356), (74, 47338), (76, 47320), (81, 47251), (88, 47188), (90, 47173), (92, 47149), (96, 47116), (99, 47071),

Gene: ElTiger69_87 Start: 48724, Stop: 47891, Start Num: 12
Candidate Starts for ElTiger69_87:
(Start: 12 @48724 has 35 MA's), (Start: 14 @48712 has 1 MA's), (16, 48700), (17, 48697), (30, 48583), (31, 48580), (32, 48571), (43, 48478), (46, 48460), (49, 48445), (50, 48433), (53, 48391), (59, 48313), (62, 48280), (63, 48277), (71, 48214), (76, 48175), (77, 48163), (81, 48106), (83, 48094), (84, 48091), (88, 48043), (90, 48028), (94, 47980), (95, 47974), (96, 47971), (99, 47926),

Gene: Erik_66 Start: 44316, Stop: 43438, Start Num: 9
Candidate Starts for Erik_66:
(Start: 9 @44316 has 29 MA's), (Start: 13 @44274 has 7 MA's), (15, 44262), (24, 44208), (25, 44205), (35, 44085), (41, 44052), (44, 44001), (45, 43998), (49, 43980), (52, 43941), (60, 43836), (73, 43728), (79, 43683), (83, 43635), (86, 43617), (88, 43584), (93, 43533), (96, 43512),

Gene: Espica_67 Start: 44426, Stop: 43548, Start Num: 9
Candidate Starts for Espica_67:
(Start: 9 @44426 has 29 MA's), (Start: 13 @44384 has 7 MA's), (15, 44372), (24, 44318), (25, 44315), (35, 44195), (41, 44162), (44, 44111), (45, 44108), (49, 44090), (52, 44051), (60, 43946), (73, 43838), (79, 43793), (83, 43745), (86, 43727), (88, 43694), (93, 43643), (96, 43622),

Gene: ForGetIt_84 Start: 48659, Stop: 47826, Start Num: 12
Candidate Starts for ForGetIt_84:
(Start: 12 @48659 has 35 MA's), (Start: 14 @48647 has 1 MA's), (16, 48635), (17, 48632), (30, 48518), (31, 48515), (32, 48506), (38, 48452), (39, 48449), (40, 48443), (49, 48380), (51, 48350), (56, 48293), (66, 48185), (72, 48146), (74, 48128), (76, 48110), (81, 48041), (88, 47978), (90, 47963), (92, 47939), (96, 47906), (99, 47861),

Gene: George_77 Start: 48622, Stop: 47789, Start Num: 12
Candidate Starts for George_77:
(8, 48661), (Start: 9 @48655 has 29 MA's), (Start: 12 @48622 has 35 MA's), (Start: 14 @48610 has 1 MA's), (16, 48598), (17, 48595), (26, 48535), (30, 48481), (31, 48478), (32, 48469), (38, 48415), (46, 48358), (53, 48289), (57, 48238), (59, 48211), (62, 48178), (64, 48166), (67, 48136), (71, 48112), (76, 48073), (81, 48004), (82, 47995), (86, 47974), (90, 47926), (94, 47878), (96, 47869), (99, 47824),

Gene: Ghoulboy_83 Start: 48623, Stop: 47790, Start Num: 12
Candidate Starts for Ghoulboy_83:
(Start: 12 @48623 has 35 MA's), (Start: 14 @48611 has 1 MA's), (16, 48599), (17, 48596), (30, 48482), (31, 48479), (32, 48470), (38, 48416), (39, 48413), (40, 48407), (51, 48314), (56, 48257), (66, 48149), (72, 48110), (81, 48005), (86, 47975), (88, 47942), (90, 47927), (92, 47903), (96, 47870), (99, 47825),

Gene: Gollum_66 Start: 44427, Stop: 43549, Start Num: 9
Candidate Starts for Gollum_66:

(Start: 9 @44427 has 29 MA's), (Start: 13 @44385 has 7 MA's), (15, 44373), (24, 44319), (25, 44316), (35, 44196), (41, 44163), (44, 44112), (45, 44109), (49, 44091), (52, 44052), (60, 43947), (73, 43839), (79, 43794), (83, 43746), (86, 43728), (88, 43695), (93, 43644), (96, 43623),

Gene: Harlequin_66 Start: 44275, Stop: 43397, Start Num: 9
Candidate Starts for Harlequin_66:
(Start: 9 @44275 has 29 MA's), (Start: 13 @44233 has 7 MA's), (15, 44221), (24, 44167), (25, 44164), (35, 44044), (41, 44011), (44, 43960), (45, 43957), (49, 43939), (52, 43900), (60, 43795), (79, 43642), (83, 43594), (86, 43576), (88, 43543), (93, 43492), (96, 43471),

Gene: Hiro_66 Start: 44746, Stop: 43868, Start Num: 9
Candidate Starts for Hiro_66:
(Start: 9 @44746 has 29 MA's), (Start: 13 @44704 has 7 MA's), (15, 44692), (24, 44638), (25, 44635), (35, 44515), (41, 44482), (44, 44431), (45, 44428), (49, 44410), (52, 44371), (60, 44266), (79, 44113), (83, 44065), (86, 44047), (88, 44014), (93, 43963), (96, 43942),

Gene: HuhtaEnerson15_81 Start: 48382, Stop: 47549, Start Num: 12
Candidate Starts for HuhtaEnerson15_81:
(Start: 12 @48382 has 35 MA's), (Start: 14 @48370 has 1 MA's), (17, 48355), (26, 48295), (30, 48241), (31, 48238), (32, 48229), (38, 48175), (46, 48118), (53, 48049), (59, 47971), (62, 47938), (64, 47926), (67, 47896), (71, 47872), (74, 47851), (76, 47833), (81, 47764), (82, 47755), (86, 47734), (88, 47701), (90, 47686), (94, 47638), (95, 47632), (96, 47629), (99, 47584), (102, 47557),

Gene: Indlulamithi_44 Start: 36119, Stop: 36895, Start Num: 19
Candidate Starts for Indlulamithi_44:
(6, 36032), (7, 36035), (18, 36116), (Start: 19 @36119 has 1 MA's), (21, 36140), (31, 36236), (33, 36257), (34, 36269), (36, 36293), (40, 36308), (48, 36389), (50, 36407), (68, 36605), (78, 36686), (81, 36725), (85, 36752), (92, 36818),

Gene: Jabiru_82 Start: 47878, Stop: 47045, Start Num: 12
Candidate Starts for Jabiru_82:
(Start: 12 @47878 has 35 MA's), (Start: 14 @47866 has 1 MA's), (16, 47854), (17, 47851), (30, 47737), (31, 47734), (32, 47725), (43, 47632), (46, 47614), (49, 47599), (53, 47545), (59, 47467), (71, 47368), (76, 47329), (77, 47317), (81, 47260), (83, 47248), (84, 47245), (86, 47230), (88, 47197), (90, 47182), (94, 47134), (96, 47125), (99, 47080),

Gene: Jester_65 Start: 44206, Stop: 43328, Start Num: 9
Candidate Starts for Jester_65:
(Start: 9 @44206 has 29 MA's), (Start: 13 @44164 has 7 MA's), (15, 44152), (24, 44098), (25, 44095), (35, 43975), (41, 43942), (44, 43891), (45, 43888), (49, 43870), (52, 43831), (60, 43726), (79, 43573), (83, 43525), (86, 43507), (88, 43474), (93, 43423), (96, 43402),

Gene: Journey13_74 Start: 45508, Stop: 44666, Start Num: 20
Candidate Starts for Journey13_74:
(1, 45664), (4, 45610), (5, 45607), (10, 45556), (11, 45553), (Start: 20 @45508 has 1 MA's), (23, 45475), (34, 45361), (46, 45229), (49, 45214), (52, 45175), (54, 45157), (61, 45058), (62, 45049), (65, 45022), (71, 44983), (75, 44947), (85, 44851), (88, 44815), (92, 44779), (100, 44695),

Gene: Jovo_81 Start: 48915, Stop: 48082, Start Num: 12
Candidate Starts for Jovo_81:
(Start: 12 @48915 has 35 MA's), (Start: 14 @48903 has 1 MA's), (16, 48891), (17, 48888), (30, 48774), (31, 48771), (32, 48762), (38, 48708), (39, 48705), (40, 48699), (49, 48636), (51, 48606), (56, 48549), (66, 48441), (72, 48402), (74, 48384), (76, 48366), (81, 48297), (88, 48234), (90, 48219), (92, 48195),

(96, 48162), (99, 48117),

Gene: Krishelle_66 Start: 44854, Stop: 43976, Start Num: 9
Candidate Starts for Krishelle_66:
(Start: 9 @44854 has 29 MA's), (Start: 13 @44812 has 7 MA's), (15, 44800), (24, 44746), (25, 44743), (35, 44623), (41, 44590), (44, 44539), (45, 44536), (49, 44518), (52, 44479), (60, 44374), (73, 44266), (79, 44221), (83, 44173), (86, 44155), (88, 44122), (93, 44071), (96, 44050),

Gene: Lev2_83 Start: 48268, Stop: 47435, Start Num: 12
Candidate Starts for Lev2_83:
(Start: 12 @48268 has 35 MA's), (Start: 14 @48256 has 1 MA's), (16, 48244), (17, 48241), (30, 48127), (31, 48124), (32, 48115), (38, 48061), (39, 48058), (40, 48052), (49, 47989), (51, 47959), (56, 47902), (66, 47794), (72, 47755), (74, 47737), (76, 47719), (81, 47650), (88, 47587), (90, 47572), (92, 47548), (96, 47515), (99, 47470),

Gene: Lillie_66 Start: 44443, Stop: 43607, Start Num: 13
Candidate Starts for Lillie_66:
(Start: 9 @44485 has 29 MA's), (Start: 13 @44443 has 7 MA's), (15, 44431), (24, 44377), (25, 44374), (35, 44254), (41, 44221), (44, 44170), (45, 44167), (49, 44149), (52, 44110), (60, 44005), (73, 43897), (79, 43852), (83, 43804), (86, 43786), (88, 43753), (93, 43702), (96, 43681),

Gene: LittleCherry_81 Start: 47974, Stop: 47141, Start Num: 12
Candidate Starts for LittleCherry_81:
(Start: 12 @47974 has 35 MA's), (Start: 14 @47962 has 1 MA's), (17, 47947), (26, 47887), (30, 47833), (31, 47830), (32, 47821), (38, 47767), (46, 47710), (53, 47641), (59, 47563), (62, 47530), (64, 47518), (67, 47488), (71, 47464), (76, 47425), (81, 47356), (82, 47347), (86, 47326), (90, 47278), (94, 47230), (96, 47221), (99, 47176),

Gene: MarysWell_83 Start: 48865, Stop: 48032, Start Num: 12
Candidate Starts for MarysWell_83:
(Start: 9 @48898 has 29 MA's), (Start: 12 @48865 has 35 MA's), (Start: 14 @48853 has 1 MA's), (17, 48838), (26, 48778), (27, 48769), (30, 48724), (31, 48721), (32, 48712), (38, 48658), (46, 48601), (53, 48532), (59, 48454), (62, 48421), (64, 48409), (67, 48379), (74, 48334), (76, 48316), (86, 48217), (88, 48184), (90, 48169), (94, 48121), (95, 48115), (96, 48112), (99, 48067), (102, 48040),

Gene: Micasa_84 Start: 48639, Stop: 47806, Start Num: 12
Candidate Starts for Micasa_84:
(Start: 12 @48639 has 35 MA's), (Start: 14 @48627 has 1 MA's), (16, 48615), (17, 48612), (26, 48552), (30, 48498), (31, 48495), (32, 48486), (38, 48432), (46, 48375), (53, 48306), (59, 48228), (62, 48195), (64, 48183), (67, 48153), (71, 48129), (76, 48090), (81, 48021), (82, 48012), (86, 47991), (90, 47943), (94, 47895), (95, 47889), (96, 47886), (99, 47841),

Gene: Midas2_80 Start: 48489, Stop: 47656, Start Num: 12
Candidate Starts for Midas2_80:
(Start: 12 @48489 has 35 MA's), (Start: 14 @48477 has 1 MA's), (16, 48465), (17, 48462), (26, 48402), (30, 48348), (31, 48345), (32, 48336), (38, 48282), (46, 48225), (53, 48156), (59, 48078), (62, 48045), (64, 48033), (67, 48003), (71, 47979), (74, 47958), (76, 47940), (81, 47871), (86, 47841), (88, 47808), (90, 47793), (94, 47745), (95, 47739), (96, 47736), (99, 47691), (102, 47664),

Gene: Milcery_81 Start: 48268, Stop: 47435, Start Num: 12
Candidate Starts for Milcery_81:
(Start: 12 @48268 has 35 MA's), (Start: 14 @48256 has 1 MA's), (16, 48244), (17, 48241), (26, 48181), (30, 48127), (31, 48124), (32, 48115), (38, 48061), (46, 48004), (53, 47935), (59, 47857), (62, 47824),

(64, 47812), (67, 47782), (71, 47758), (76, 47719), (81, 47650), (82, 47641), (86, 47620), (90, 47572), (94, 47524), (96, 47515), (99, 47470),

Gene: MyraDee_88 Start: 47959, Stop: 47162, Start Num: 22
Candidate Starts for MyraDee_88:
(Start: 22 @47959 has 1 MA's), (30, 47887), (31, 47884), (32, 47875), (38, 47824), (52, 47680), (56, 47632), (62, 47554), (64, 47542), (65, 47527), (71, 47488), (79, 47425), (88, 47317), (89, 47308), (98, 47203), (101, 47179),

Gene: Naca_85 Start: 48942, Stop: 48109, Start Num: 12
Candidate Starts for Naca_85:
(Start: 12 @48942 has 35 MA's), (Start: 14 @48930 has 1 MA's), (16, 48918), (17, 48915), (30, 48801), (31, 48798), (32, 48789), (43, 48696), (46, 48678), (49, 48663), (50, 48651), (53, 48609), (59, 48531), (64, 48486), (71, 48432), (76, 48393), (77, 48381), (81, 48324), (83, 48312), (84, 48309), (86, 48294), (88, 48261), (90, 48246), (94, 48198), (96, 48189), (99, 48144),

Gene: Naiad_65 Start: 44507, Stop: 43629, Start Num: 9
Candidate Starts for Naiad_65:
(Start: 9 @44507 has 29 MA's), (Start: 13 @44465 has 7 MA's), (15, 44453), (24, 44399), (25, 44396), (35, 44276), (41, 44243), (44, 44192), (45, 44189), (49, 44171), (52, 44132), (60, 44027), (73, 43919), (79, 43874), (83, 43826), (86, 43808), (88, 43775), (93, 43724), (96, 43703),

Gene: Nancinator_65 Start: 43824, Stop: 42946, Start Num: 9
Candidate Starts for Nancinator_65:
(Start: 9 @43824 has 29 MA's), (Start: 13 @43782 has 7 MA's), (15, 43770), (24, 43716), (25, 43713), (35, 43593), (41, 43560), (44, 43509), (45, 43506), (49, 43488), (52, 43449), (60, 43344), (73, 43236), (79, 43191), (83, 43143), (86, 43125), (88, 43092), (93, 43041), (96, 43020),

Gene: Natosaleda_65 Start: 44425, Stop: 43547, Start Num: 9
Candidate Starts for Natosaleda_65:
(Start: 9 @44425 has 29 MA's), (Start: 13 @44383 has 7 MA's), (15, 44371), (24, 44317), (25, 44314), (35, 44194), (41, 44161), (44, 44110), (45, 44107), (49, 44089), (52, 44050), (60, 43945), (73, 43837), (79, 43792), (83, 43744), (86, 43726), (88, 43693), (93, 43642), (96, 43621),

Gene: Partridge_67 Start: 44967, Stop: 44092, Start Num: 9
Candidate Starts for Partridge_67:
(Start: 9 @44967 has 29 MA's), (Start: 13 @44925 has 7 MA's), (15, 44913), (24, 44859), (25, 44856), (35, 44736), (41, 44703), (44, 44652), (45, 44649), (52, 44592), (58, 44514), (60, 44487), (69, 44409), (79, 44334), (83, 44286), (86, 44268), (88, 44235), (93, 44184), (97, 44139),

Gene: PetterN_89 Start: 48468, Stop: 47635, Start Num: 12
Candidate Starts for PetterN_89:
(Start: 12 @48468 has 35 MA's), (Start: 14 @48456 has 1 MA's), (16, 48444), (17, 48441), (30, 48327), (31, 48324), (32, 48315), (43, 48222), (46, 48204), (49, 48189), (50, 48177), (53, 48135), (59, 48057), (64, 48012), (71, 47958), (76, 47919), (77, 47907), (81, 47850), (83, 47838), (84, 47835), (86, 47820), (88, 47787), (89, 47778), (90, 47772), (94, 47724), (96, 47715), (99, 47670),

Gene: PhailMary_63 Start: 43502, Stop: 42624, Start Num: 9
Candidate Starts for PhailMary_63:
(Start: 9 @43502 has 29 MA's), (Start: 13 @43460 has 7 MA's), (15, 43448), (24, 43394), (25, 43391), (35, 43271), (41, 43238), (44, 43187), (45, 43184), (49, 43166), (52, 43127), (58, 43049), (60, 43022), (79, 42869), (83, 42821), (86, 42803), (88, 42770), (93, 42719), (96, 42698),

Gene: Phlorence_81 Start: 48012, Stop: 47179, Start Num: 12
Candidate Starts for Phlorence_81:
(Start: 12 @48012 has 35 MA's), (Start: 14 @48000 has 1 MA's), (16, 47988), (17, 47985), (30, 47871), (31, 47868), (32, 47859), (38, 47805), (39, 47802), (40, 47796), (49, 47733), (51, 47703), (56, 47646), (66, 47538), (72, 47499), (74, 47481), (76, 47463), (81, 47394), (88, 47331), (90, 47316), (92, 47292), (96, 47259), (99, 47214),

Gene: Phrankenstein_66 Start: 44431, Stop: 43553, Start Num: 9
Candidate Starts for Phrankenstein_66:
(Start: 9 @44431 has 29 MA's), (Start: 13 @44389 has 7 MA's), (15, 44377), (24, 44323), (25, 44320), (35, 44200), (41, 44167), (44, 44116), (45, 44113), (49, 44095), (52, 44056), (60, 43951), (73, 43843), (79, 43798), (83, 43750), (86, 43732), (88, 43699), (93, 43648), (96, 43627),

Gene: PickleBack_84 Start: 48466, Stop: 47633, Start Num: 12
Candidate Starts for PickleBack_84:
(Start: 12 @48466 has 35 MA's), (Start: 14 @48454 has 1 MA's), (16, 48442), (17, 48439), (30, 48325), (31, 48322), (32, 48313), (38, 48259), (39, 48256), (40, 48250), (49, 48187), (51, 48157), (56, 48100), (66, 47992), (72, 47953), (74, 47935), (76, 47917), (81, 47848), (88, 47785), (90, 47770), (92, 47746), (96, 47713), (99, 47668),

Gene: Prinashe11_83 Start: 48478, Stop: 47645, Start Num: 12
Candidate Starts for Prinashe11_83:
(8, 48517), (Start: 9 @48511 has 29 MA's), (Start: 12 @48478 has 35 MA's), (Start: 14 @48466 has 1 MA's), (16, 48454), (17, 48451), (26, 48391), (30, 48337), (31, 48334), (32, 48325), (38, 48271), (46, 48214), (53, 48145), (59, 48067), (62, 48034), (64, 48022), (67, 47992), (71, 47968), (74, 47947), (76, 47929), (81, 47860), (82, 47851), (86, 47830), (88, 47797), (90, 47782), (94, 47734), (96, 47725), (99, 47680),

Gene: RER2_60 Start: 41357, Stop: 40479, Start Num: 9
Candidate Starts for RER2_60:
(Start: 9 @41357 has 29 MA's), (Start: 13 @41315 has 7 MA's), (15, 41303), (24, 41249), (25, 41246), (35, 41126), (41, 41093), (44, 41042), (45, 41039), (49, 41021), (52, 40982), (60, 40877), (73, 40769), (79, 40724), (83, 40676), (86, 40658), (88, 40625), (93, 40574), (96, 40553),

Gene: RGL3_61 Start: 42901, Stop: 42080, Start Num: 13
Candidate Starts for RGL3_61:
(Start: 13 @42901 has 7 MA's), (28, 42787), (35, 42712), (42, 42664), (43, 42658), (44, 42625), (45, 42622), (47, 42616), (49, 42604), (54, 42547), (55, 42538), (62, 42436), (65, 42409), (71, 42370), (77, 42319), (92, 42184), (96, 42151),

Gene: Rasputin_66 Start: 44455, Stop: 43577, Start Num: 9
Candidate Starts for Rasputin_66:
(Start: 9 @44455 has 29 MA's), (Start: 13 @44413 has 7 MA's), (15, 44401), (24, 44347), (25, 44344), (35, 44224), (41, 44191), (44, 44140), (45, 44137), (49, 44119), (52, 44080), (60, 43975), (73, 43867), (79, 43822), (83, 43774), (86, 43756), (88, 43723), (93, 43672), (96, 43651),

Gene: RexFury_65 Start: 44515, Stop: 43637, Start Num: 9
Candidate Starts for RexFury_65:
(Start: 9 @44515 has 29 MA's), (Start: 13 @44473 has 7 MA's), (15, 44461), (24, 44407), (35, 44284), (41, 44251), (44, 44200), (45, 44197), (49, 44179), (52, 44140), (60, 44035), (73, 43927), (79, 43882), (83, 43834), (86, 43816), (88, 43783), (93, 43732), (96, 43711),

Gene: Rhodalysa_66 Start: 44443, Stop: 43607, Start Num: 13

Candidate Starts for Rhodalysa_66:
(Start: 9 @44485 has 29 MA's), (Start: 13 @44443 has 7 MA's), (15, 44431), (24, 44377), (25, 44374), (35, 44254), (41, 44221), (44, 44170), (45, 44167), (49, 44149), (52, 44110), (60, 44005), (73, 43897), (79, 43852), (83, 43804), (86, 43786), (88, 43753), (93, 43702), (96, 43681),

Gene: Scorpia_83 Start: 48040, Stop: 47207, Start Num: 12
Candidate Starts for Scorpia_83:
(Start: 12 @48040 has 35 MA's), (Start: 14 @48028 has 1 MA's), (16, 48016), (17, 48013), (30, 47899), (31, 47896), (32, 47887), (43, 47794), (46, 47776), (49, 47761), (50, 47749), (53, 47707), (59, 47629), (64, 47584), (71, 47530), (76, 47491), (77, 47479), (81, 47422), (83, 47410), (84, 47407), (86, 47392), (88, 47359), (90, 47344), (94, 47296), (96, 47287), (99, 47242),

Gene: Shuman_67 Start: 44436, Stop: 43558, Start Num: 9
Candidate Starts for Shuman_67:
(Start: 9 @44436 has 29 MA's), (Start: 13 @44394 has 7 MA's), (15, 44382), (24, 44328), (25, 44325), (35, 44205), (41, 44172), (44, 44121), (45, 44118), (49, 44100), (52, 44061), (60, 43956), (73, 43848), (79, 43803), (83, 43755), (86, 43737), (88, 43704), (93, 43653), (96, 43632),

Gene: StCroix_65 Start: 44507, Stop: 43629, Start Num: 9
Candidate Starts for StCroix_65:
(Start: 9 @44507 has 29 MA's), (Start: 13 @44465 has 7 MA's), (15, 44453), (24, 44399), (25, 44396), (35, 44276), (41, 44243), (44, 44192), (45, 44189), (49, 44171), (52, 44132), (60, 44027), (73, 43919), (79, 43874), (83, 43826), (86, 43808), (88, 43775), (93, 43724), (96, 43703),

Gene: Swann_66 Start: 44483, Stop: 43605, Start Num: 9
Candidate Starts for Swann_66:
(Start: 9 @44483 has 29 MA's), (Start: 13 @44441 has 7 MA's), (15, 44429), (24, 44375), (25, 44372), (35, 44252), (41, 44219), (44, 44168), (45, 44165), (49, 44147), (52, 44108), (60, 44003), (73, 43895), (79, 43850), (83, 43802), (86, 43784), (88, 43751), (93, 43700), (96, 43679),

Gene: SydNat_82 Start: 48632, Stop: 47799, Start Num: 12
Candidate Starts for SydNat_82:
(Start: 12 @48632 has 35 MA's), (Start: 14 @48620 has 1 MA's), (16, 48608), (17, 48605), (30, 48491), (31, 48488), (32, 48479), (38, 48425), (39, 48422), (40, 48416), (51, 48323), (56, 48266), (66, 48158), (72, 48119), (81, 48014), (86, 47984), (88, 47951), (90, 47936), (92, 47912), (96, 47879), (99, 47834),

Gene: TWAMP_66 Start: 44443, Stop: 43607, Start Num: 13
Candidate Starts for TWAMP_66:
(Start: 9 @44485 has 29 MA's), (Start: 13 @44443 has 7 MA's), (15, 44431), (24, 44377), (25, 44374), (35, 44254), (41, 44221), (44, 44170), (45, 44167), (49, 44149), (52, 44110), (60, 44005), (73, 43897), (79, 43852), (83, 43804), (86, 43786), (88, 43753), (93, 43702), (96, 43681),

Gene: Takoda_68 Start: 44811, Stop: 43936, Start Num: 9
Candidate Starts for Takoda_68:
(Start: 9 @44811 has 29 MA's), (Start: 13 @44769 has 7 MA's), (15, 44757), (24, 44703), (25, 44700), (35, 44580), (41, 44547), (44, 44496), (45, 44493), (52, 44436), (58, 44358), (60, 44331), (69, 44253), (79, 44178), (83, 44130), (86, 44112), (88, 44079), (93, 44028), (97, 43983),

Gene: Tarynearal_83 Start: 48422, Stop: 47589, Start Num: 12
Candidate Starts for Tarynearal_83:
(8, 48461), (Start: 9 @48455 has 29 MA's), (Start: 12 @48422 has 35 MA's), (Start: 14 @48410 has 1 MA's), (16, 48398), (17, 48395), (26, 48335), (30, 48281), (31, 48278), (32, 48269), (38, 48215), (46, 48158), (53, 48089), (59, 48011), (62, 47978), (64, 47966), (67, 47936), (71, 47912), (76, 47873), (81,

47804), (82, 47795), (86, 47774), (88, 47741), (90, 47726), (94, 47678), (95, 47672), (96, 47669), (99, 47624),

Gene: Theia_83 Start: 48975, Stop: 48142, Start Num: 12
Candidate Starts for Theia_83:
(Start: 12 @48975 has 35 MA's), (Start: 14 @48963 has 1 MA's), (16, 48951), (17, 48948), (30, 48834), (31, 48831), (32, 48822), (38, 48768), (39, 48765), (40, 48759), (49, 48696), (51, 48666), (56, 48609), (66, 48501), (72, 48462), (77, 48414), (86, 48327), (88, 48294), (90, 48279), (96, 48222), (99, 48177),

Gene: Tiger_81 Start: 47933, Stop: 47100, Start Num: 12
Candidate Starts for Tiger_81:
(Start: 12 @47933 has 35 MA's), (Start: 14 @47921 has 1 MA's), (16, 47909), (17, 47906), (30, 47792), (31, 47789), (32, 47780), (38, 47726), (39, 47723), (40, 47717), (49, 47654), (51, 47624), (56, 47567), (66, 47459), (72, 47420), (74, 47402), (76, 47384), (81, 47315), (88, 47252), (90, 47237), (92, 47213), (96, 47180), (99, 47135),

Gene: Twigg_83 Start: 48388, Stop: 47555, Start Num: 12
Candidate Starts for Twigg_83:
(Start: 12 @48388 has 35 MA's), (Start: 14 @48376 has 1 MA's), (17, 48361), (26, 48301), (30, 48247), (31, 48244), (32, 48235), (38, 48181), (46, 48124), (53, 48055), (59, 47977), (62, 47944), (64, 47932), (67, 47902), (71, 47878), (74, 47857), (76, 47839), (81, 47770), (82, 47761), (86, 47740), (88, 47707), (90, 47692), (94, 47644), (95, 47638), (96, 47635), (99, 47590),

Gene: UhSalsa_66 Start: 44426, Stop: 43548, Start Num: 9
Candidate Starts for UhSalsa_66:
(Start: 9 @44426 has 29 MA's), (Start: 13 @44384 has 7 MA's), (15, 44372), (24, 44318), (25, 44315), (35, 44195), (41, 44162), (44, 44111), (45, 44108), (49, 44090), (52, 44051), (60, 43946), (73, 43838), (79, 43793), (83, 43745), (86, 43727), (88, 43694), (93, 43643), (96, 43622),

Gene: Yogi_67 Start: 44794, Stop: 43958, Start Num: 13
Candidate Starts for Yogi_67:
(Start: 9 @44836 has 29 MA's), (Start: 13 @44794 has 7 MA's), (15, 44782), (24, 44728), (25, 44725), (35, 44605), (41, 44572), (44, 44521), (45, 44518), (52, 44461), (58, 44383), (60, 44356), (66, 44302), (69, 44278), (73, 44248), (79, 44203), (83, 44155), (86, 44137), (88, 44104), (93, 44053), (96, 44032),

Gene: Yoncess_65 Start: 44244, Stop: 43366, Start Num: 9
Candidate Starts for Yoncess_65:
(Start: 9 @44244 has 29 MA's), (Start: 13 @44202 has 7 MA's), (15, 44190), (24, 44136), (25, 44133), (35, 44013), (41, 43980), (44, 43929), (45, 43926), (49, 43908), (52, 43869), (60, 43764), (79, 43611), (83, 43563), (86, 43545), (88, 43512), (93, 43461), (96, 43440),

Gene: Zolita_81 Start: 48615, Stop: 47782, Start Num: 12
Candidate Starts for Zolita_81:
(Start: 12 @48615 has 35 MA's), (Start: 14 @48603 has 1 MA's), (16, 48591), (17, 48588), (30, 48474), (31, 48471), (32, 48462), (38, 48408), (39, 48405), (40, 48399), (51, 48306), (56, 48249), (66, 48141), (72, 48102), (81, 47997), (86, 47967), (88, 47934), (90, 47919), (92, 47895), (96, 47862), (99, 47817),