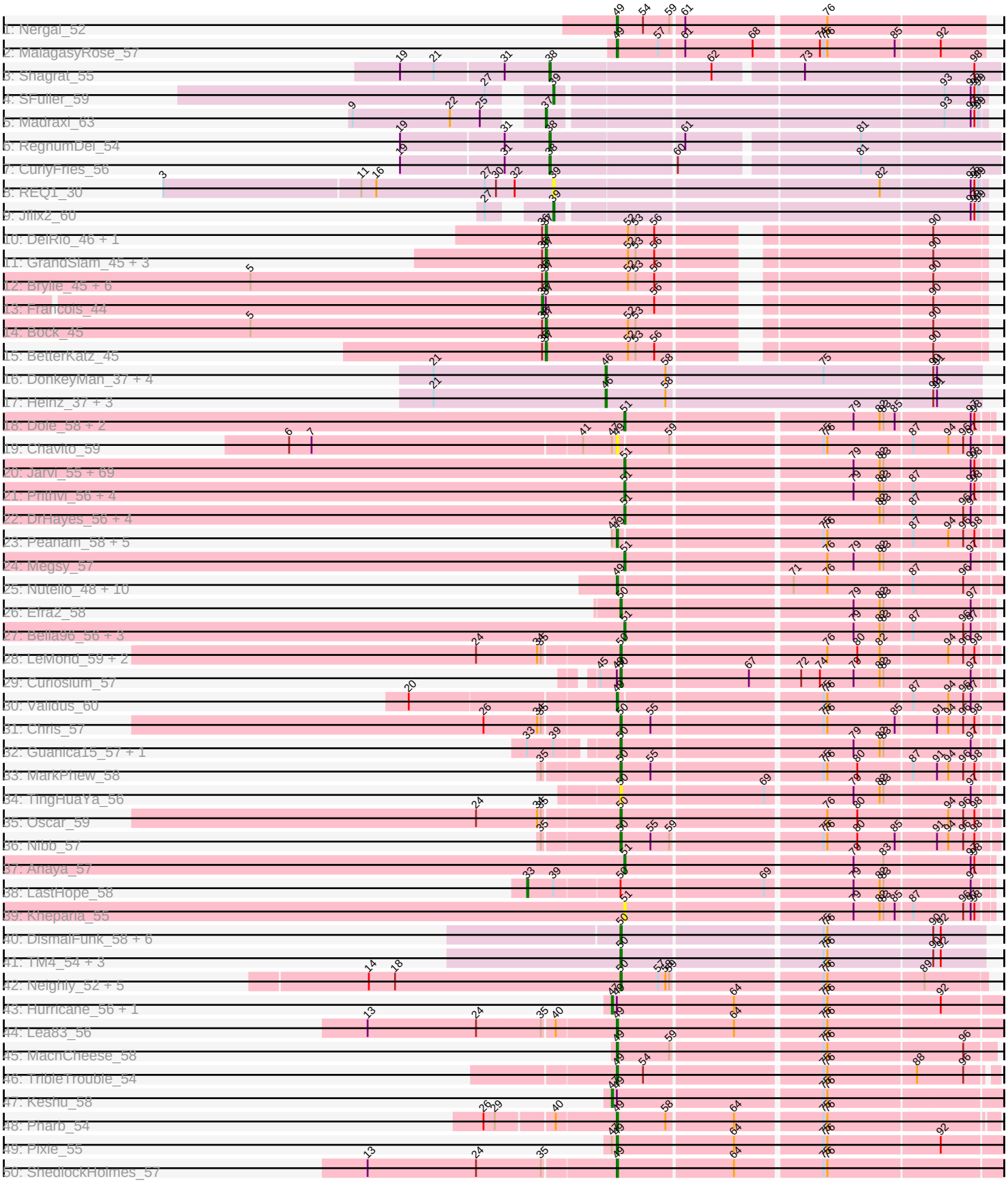
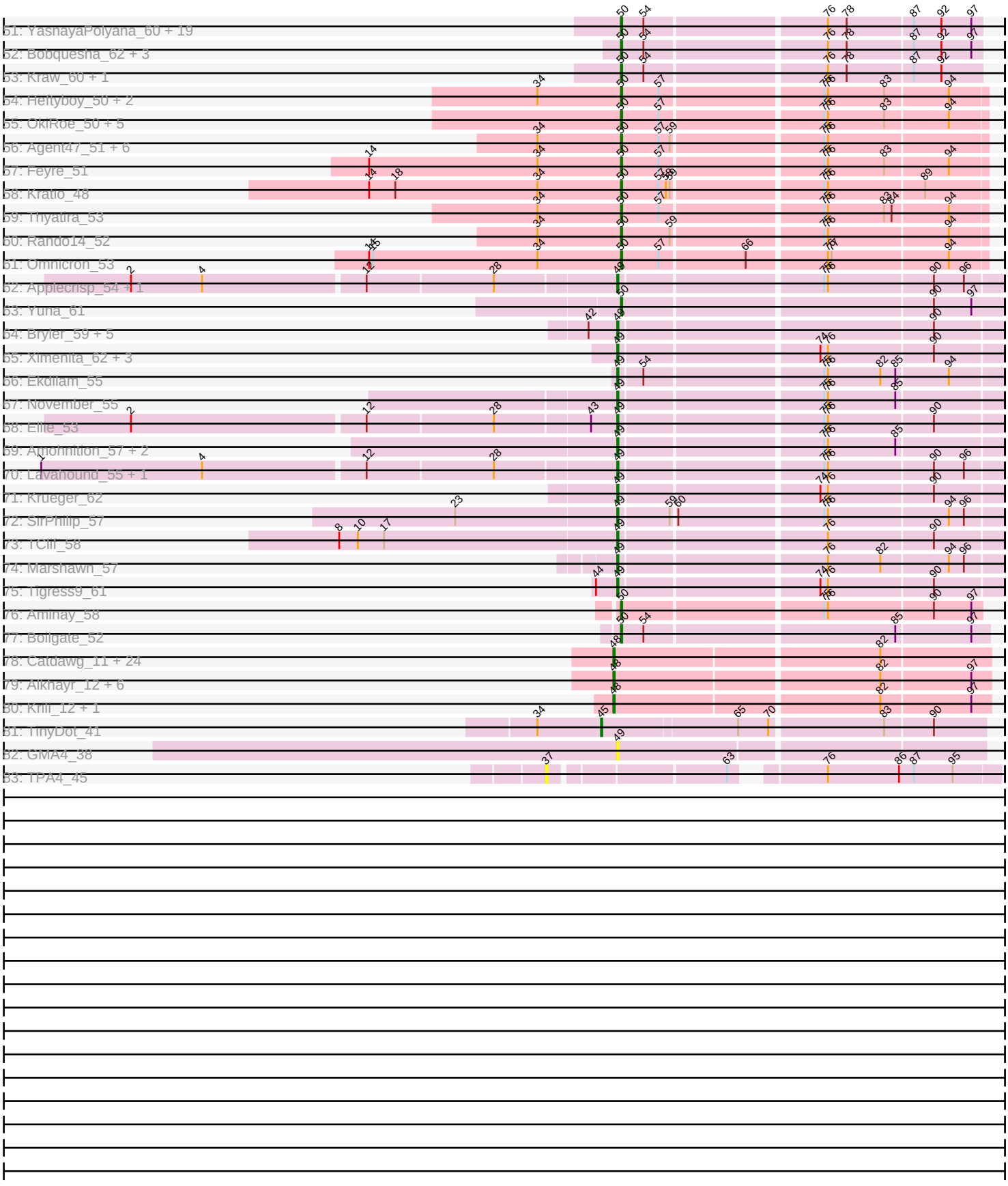
Pham 343563


1: Nergal_52
2: MalagasyRose_57
3: Shagrat_55
4: SFuller_59
5: Madraxi_63
6: RegnumDei_54
7: CurlyFries_56
8: REQ1_30
9: Jillx2_60
10: DelRio_46 + 1
11: GrandSlam_45 + 3
12: Brylie_45 + 6
13: Francois_44
14: Bock_45
15: BetterKatz_45
16: DonkeyMan_37 + 4
17: Heinz_37 + 3
18: Dole_58 + 2
19: Chavito_59
20: Jarvi_55 + 69
21: Prithvi_56 + 4
22: DrHayes_56 + 4
23: Peaham_58 + 5
24: Megsy_57
25: Nutello_48 + 10
26: Elra2_58
27: Bella96_56 + 3
28: LeMond_59 + 2
29: Curiosium_57
30: Validus_60
31: Chris_57
32: Guanica15_57 + 1
33: MarkPhew_58
34: TingHuaYa_56
35: Oscar_59
36: Nibb_57
37: Anaya_57
38: LastHope_58
39: Kheparia_55
40: DismalFunk_58 + 6
41: TM4_54 + 3
42: Neighly_52 + 5
43: Hurricane_56 + 1
44: Lea83_56
45: MachCheese_58
46: TribleTrouble_54
47: Keshu_58
48: Pharb_54
49: Pixie_55
50: ShedlockHolmes_57

Pham 343563


51: YasnayaPolyana_60 + 19
52: Bobquesha_62 + 3
53: Kraw_60 + 1
54: Heftyboy_50 + 2
55: OkiRoe_50 + 5
56: Agent47_51 + 6
57: Feyre_51
58: Kratio_48
59: Thyatira_53
60: Rando14_52
61: Omnicron_53
62: Applecrisp_54 + 1
63: Yuna_61
64: Bryler_59 + 5
65: Ximenita_62 + 3
66: Ekollam_55
67: November_55
68: Ellie_53
69: Ammonition_57 + 2
70: Lavahound_55 + 1
71: Krueger_62
72: SirPhilip_57
73: TCill_58
74: Marshawn_57
75: Tigress9_61
76: Aminay_58
77: Boilgate_52
78: Catdawg_11 + 24
79: Alkhayr_12 + 6
80: Krill_12 + 1
81: TinyDot_41
82: GMA4_38
83: TPA4_45

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 343563 Report

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

Pham number 343563 has 294 members, 23 are drafts.

Phages represented in each track:
• Track 1 : Nergal_52
• Track 2 : MalagasyRose_57
• Track 3 : Shagrat_55
• Track 4 : SFuller_59
• Track 5 : Madraxi_63
• Track 6 : RegnumDei_54
• Track 7 : CurlyFries_56
• Track 8 : REQ1_30
• Track 9 : Jflix2_60
• Track 10 : DelRio_46, Pimento_46
• Track 11 : GrandSlam_45, Hamood_45, Ayotoya_45, Chop_45
• Track 12 : Brylie_45, NancyRae_45, Nadeem_45, WheatThin_45, SussRoloMann_46, Mulch_45, Parada_45
• Track 13 : Francois_44
• Track 14 : Bock_45
• Track 15 : BetterKatz_45
• Track 16 : DonkeyMan_37, DearBasketball_39, DinoNuggs_37, Reyja_37, Tarzan_37
• Track 17 : Heinz_37, Hibiscus_38, Jojo24_36, Santhid_36
• Track 18 : Dole_58, Illumine_58, Devera_60
• Track 19 : Chavito_59
• Track 20 : Jarvi_55, JAWS_55, Peel_55, Rosmarinus_55, CREW_55, Lokum_56, CheetoDust_54, Geraldini_58, Capricorn_55, Topper_55, Boiiii_55, Ageofdapage_58, TruffulaTree_55, Dalmuri_55, MacKat_50, ShiaSurprise_56, BGlluviae_55, Asayake_55, Hyperbowlee_55, Tiri_56, Apocalypse_58, BaghaKamala_54, Jeckyll_55, Bern_56, AlishaPH_55, Atiba_56, BEEST_55, Zavala_57, Slimphazie_55, Joy99_55, Inky_55, Pokerus_54, Lunahalos_55, Clipper_58, Blizzard_55, CallaLilly_55, Adonis_55, Beezoo_57, Belladonna_55, Adephagia_55, YoureAdopted_54, Durfee_55, Rapunzel97_56, Angelica_55, Tachez_55, Mynx_56, Homura_55, Veliki_56, CrimD_55, Ramen_56, Padpat_57, Spock_55, Deby_55, Zabiza_50, Twitch_55, MeaningOfLife_56, HedwigODU_55, Ganymede_56, Emerson_56, QuincyRose_54, Piatt_55, BarrelRoll_55, CaseJules_57, Sulley_55, Llorens_55, ActinUp_55, Padfoot_55, Jayhawk_56, Stinson_56, Murucutumbu_56
• Track 21 : Prithvi_56, LaterM_56, LindNT_54, TaiwanKao_57, TreyKay_56
• Track 22 : DrHayes_56, Anma_56, TiniBug_56, Urkel_56, SamuelLPlaqson_56
• Track 23 : Peanam_58, McMater_58, Shaobing_58, Dartin_58, Richo_58, Niklas_58
• Track 24 : Megsy_57

• Track 25 : Nutello_48, LilPharaoh_48, Teejan_50, Nikao_51, Torres_51, SgtBeansprout_48, Biglebops_48, Amelie_48, Enkosi_50, Mdavu_49, Trice_48
• Track 26 : Efra2_58
• Track 27 : Bella96_56, Pisa4_49, DartGoblin_57, Pisa1_55
• Track 28 : LeMond_59, Scarlett_59, KiSi_59
• Track 29 : Curiosium_57
• Track 30 : Validus_60
• Track 31 : Chris_57
• Track 32 : Guanica15_57, Yunkel11_57
• Track 33 : MarkPhew_58
• Track 34 : TingHuaYa_56
• Track 35 : Oscar_59
• Track 36 : Nibb_57
• Track 37 : Anaya_57
• Track 38 : LastHope_58
• Track 39 : Kheparia_55
• Track 40 : DismalFunk_58, Findley_58, DismalStressor_58, ZoeJ_57, Strobilo_58, Marcoliusprime_58, Milly_58
• Track 41 : TM4_54, Doughnut_58, Mufasa_58, BoostSeason_58
• Track 42 : Neighly_52, Larva_51, Dadosky_52, AlleyCat_52, Edugator_49, Psycho_50
• Track 43 : Hurricane_56, TBond007_54
• Track 44 : Lea83_56
• Track 45 : MacnCheese_58
• Track 46 : TribleTrouble_54
• Track 47 : Keshu_58
• Track 48 : Pharb_54
• Track 49 : Pixie_55
• Track 50 : ShedlockHolmes_57
• Track 51 : YasnayaPolyana_60, Lebo14_59, Qhanda_62, Eponine_62, SamScheppers_58, Fionnbharth_60, DanSyl44_63, Ruthiejr_61, Slarp_60, JF1_60, Taquito_59, Cheetobro_60, Wintermute_60, Chancellor_60, OmniCritical_59, Y10_59, Mitti_60, Nolwazi_62, Y2_59, Juliette_62
• Track 52 : Bobquesha_62, Patt_57, Reptar3000_58, MissDaisy_58
• Track 53 : Kraw_60, Malthus_61
• Track 54 : Heftyboy_50, Waterfoul_51, SoSeph_50
• Track 55 : OkiRoe_50, Gengar_50, Guillsminger_51, Leston_50, Paola_50, Miryou_53
• Track 56 : Agent47_51, LilDirt_50, ViviJ_50, Collard_49, BananenDer11_51, InvictusManeo_49, DoubleChamp_48
• Track 57 : Feyre_51
• Track 58 : Kratio_48
• Track 59 : Thyatira_53
• Track 60 : Rando14_52
• Track 61 : Omnicron_53
• Track 62 : Applecrisp_54, Fefferhead_55
• Track 63 : Yuna_61
• Track 64 : Bryler_59, Unicorn_57, Tierra_59, PhelpsODU_57, Cain_59, Phrank_59
• Track 65 : Ximenita_62, Shadow1_61, Syra333_61, Sunflower1121_62
• Track 66 : Ekdilam_55
• Track 67 : November_55
• Track 68 : Ellie_53
• Track 69 : Amohnition_57, DarthP_57, Hammy_57

• Track 70 : Lavahound_55, Amgine_56
• Track 71 : Krueger_62
• Track 72 : SirPhilip_57
• Track 73 : TClif_58
• Track 74 : Marshawn_57
• Track 75 : Tigress9_61
• Track 76 : Aminay_58
• Track 77 : Boilgate_52
• Track 78 : Catdawg_11, Dylan_12, Zakhe101_13, JangDynasty_11, FoulBall_11, Blessica_11, Ryadel_14, Ashwin_13, Idergollasper_11, Bora_12, Imara_12, KingPhillip3_11, Famílton_12, YungJamal_13, Vagabond_12, Shida_12, Corndog_13, Wildflower_12, Wogge42_12, Smooch_13, Firecracker_12, Zebo_11, TelAviv_11, Winget_12, SchoolBus_11
• Track 79 : Alkhayr_12, Mori_12, Murai_12, YoyoKar_12, Schuy_12, NiebruSaylor_12, Vorrps_12
• Track 80 : Krili_12, MadKillah_12
• Track 81 : TinyDot_41
• Track 82 : GMA4_38
• Track 83 : TPA4_45

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

The start number called the most often in the published annotations is 51, it was called in 85 of the 271 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ActinUp_55, Adephagia_55, Adonis_55, Ageofdapage_58, AlishaPH_55, Anaya_57, Angelica_55, Anma_56, Apocalypse_58, Asayake_55, Atiba_56, BEEST_55, BGlluviae_55, BaghaKamala_54, BarrelRoll_55, Beezoo_57, Bella96_56, Belladonna_55, Bern_56, Blizzard_55, Boiiii_55, CREW_55, CallaLilly_55, Capricorn_55, CaseJules_57, CheetoDust_54, Clipper_58, CrimD_55, Dalmuri_55, DartGoblin_57, Deby_55, Devera_60, Dole_58, DrHayes_56, Durfee_55, Emerson_56, Ganymede_56, Geraldini_58, HedwigODU_55, Homura_55, Hyperbowlee_55, Illumine_58, Inky_55, JAWS_55, Jarvi_55, Jayhawk_56, Jeckyll_55, Joy99_55, Kheparia_55, LaterM_56, LindNT_54, Llorens_55, Lokum_56, Lunahalos_55, MacKat_50, MeaningOfLife_56, Megsy_57, Murucutumbu_56, Mynx_56, Padfoot_55, Padpat_57, Peel_55, Piatt_55, Pisa1_55, Pisa4_49, Pokerus_54, Prithvi_56, QuincyRose_54, Ramen_56, Rapunzel97_56, Rosmarinus_55, SamuelLPlaqson_56, ShiaSurprise_56, Slimphazie_55, Spock_55, Stinson_56, Sulley_55, Tachez_55, TaiwanKao_57, TiniBug_56, Tiri_56, Topper_55, TreyKay_56, TruffulaTree_55, Twitch_55, Urkel_56, Veliki_56, YoureAdopted_54, Zabiza_50, Zavala_57,

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

Genes that do not have the "Most Annotated" start:
• Agent47_51, Alkhayr_12, AlleyCat_52, Amelie_48, Amgine_56, Aminay_58, Amohnition_57, Applecrisp_54, Ashwin_13, Ayotoya_45, BananenDer11_51, BetterKatz_45, Biglebops_48, Blessica_11, Bobquesha_62, Bock_45, Boilgate_52,

BoostSeason_58, Bora_12, Bryler_59, Brylie_45, Cain_59, Catdawg_11, Chancellor_60, Chavito_59, Cheetobro_60, Chop_45, Chris_57, Collard_49, Corndog_13, Curiosium_57, CurlyFries_56, Dadosky_52, DanSyl44_63, DarthP_57, Dartin_58, DearBasketball_39, DelRio_46, DinoNuggs_37, DismalFunk_58, DismalStressor_58, DonkeyMan_37, DoubleChamp_48, Doughnut_58, Dylan_12, Edugator_49, Efra2_58, Ekdilam_55, Ellie_53, Enkosi_50, Eponine_62, Familton_12, Fefferhead_55, Feyre_51, Findley_58, Fionnbharth_60, Firecracker_12, FoulBall_11, Francois_44, GMA4_38, Gengar_50, GrandSlam_45, Guanica15_57, Guillsminger_51, Hammy_57, Hamood_45, Heftyboy_50, Heinz_37, Hibiscus_38, Hurricane_56, Idergollasper_11, Imara_12, InvictusManeo_49, JF1_60, JangDynasty_11, Jflix2_60, Jojo24_36, Juliette_62, Keshu_58, KiSi_59, KingPhillip3_11, Kratio_48, Kraw_60, Krili_12, Krueger_62, Larva_51, LastHope_58, Lavahound_55, LeMond_59, Lea83_56, Lebo14_59, Leston_50, LilDirt_50, LilPharaoh_48, MacnCheese_58, MadKillah_12, Madraxi_63, MalagasyRose_57, Malthus_61, Marcoliusprime_58, MarkPhew_58, Marshawn_57, McMater_58, Mdavu_49, Milly_58, Miryou_53, MissDaisy_58, Mitti_60, Mori_12, Mufasa_58, Mulch_45, Murai_12, Nadeem_45, NancyRae_45, Neighly_52, Nergal_52, Nibb_57, NiebruSaylor_12, Nikao_51, Niklas_58, Nolwazi_62, November_55, Nutello_48, OkiRoe_50, OmniCritical_59, Omnicron_53, Oscar_59, Paola_50, Parada_45, Patt_57, Peanam_58, Pharb_54, PhelpsODU_57, Phrank_59, Pimento_46, Pixie_55, Psycho_50, Qhanda_62, REQ1_30, Rando14_52, RegnumDei_54, Reptar3000_58, Reyja_37, Richo_58, Ruthiejr_61, Ryadel_14, SFuller_59, SamScheppers_58, Santhid_36, Scarlett_59, SchoolBus_11, Schuy_12, SgtBeansprout_48, Shadow1_61, Shagrat_55, Shaobing_58, ShedlockHolmes_57, Shida_12, SirPhilip_57, Slarp_60, Smooch_13, SoSeph_50, Strobilo_58, Sunflower1121_62, SussRoloMann_46, Syra333_61, TBond007_54, TClif_58, TM4_54, TPA4_45, Taquito_59, Tarzan_37, Teejan_50, TelAviv_11, Thyatira_53, Tierra_59, Tigress9_61, TingHuaYa_56, TinyDot_41, Torres_51, TribleTrouble_54, Trice_48, Unicorn_57, Vagabond_12, Validus_60, ViviJ_50, Vorrps_12, Waterfoul_51, WheatThin_45, Wildflower_12, Winget_12, Wintermute_60, Wogge42_12, Ximenita_62, Y10_59, Y2_59, YasnayaPolyana_60, YoyoKar_12, Yuna_61, YungJamal_13, Yunkel11_57, Zakhe101_13, Zebo_11, ZoeJ_57,

Summary by start number:

Start 33:
• Found in 3 of 294 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 271
• Called 33.3% of time when present
• Phage (with cluster) where this start called: LastHope_58 (K1),

Start 36:
• Found in 16 of 294 (5.4%) of genes in pham
• Manual Annotations of this start: 1 of 271
• Called 6.2% of time when present
• Phage (with cluster) where this start called: Francois_44 (DI),

Start 37:
• Found in 18 of 294 (6.1%) of genes in pham
• Manual Annotations of this start: 15 of 271
• Called 94.4% of time when present
• Phage (with cluster) where this start called: Ayotoya_45 (DI), BetterKatz_45 (DI), Bock_45 (DI), Brylie_45 (DI), Chop_45 (DI), DelRio_46 (DI), GrandSlam_45 (DI),

Hamood_45 (DI), Madraxi_63 (CF), Mulch_45 (DI), Nadeem_45 (DI), NancyRae_45 (DI), Parada_45 (DI), Pimento_46 (DI), SussRoloMann_46 (DI), TPA4_45 (singleton), WheatThin_45 (DI),

Start 38:
• Found in 3 of 294 (1.0%) of genes in pham
• Manual Annotations of this start: 3 of 271
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CurlyFries_56 (CF), RegnumDei_54 (CF), Shagrat_55 (CF),

Start 39:
• Found in 6 of 294 (2.0%) of genes in pham
• Manual Annotations of this start: 2 of 271
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Jflix2_60 (CF), REQ1_30 (CF), SFuller_59 (CF),

Start 45:
• Found in 2 of 294 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 271
• Called 50.0% of time when present
• Phage (with cluster) where this start called: TinyDot_41 (singleton),

Start 46:
• Found in 9 of 294 (3.1%) of genes in pham
• Manual Annotations of this start: 7 of 271
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DearBasketball_39 (DY), DinoNuggs_37 (DY), DonkeyMan_37 (DY), Heinz_37 (DY), Hibiscus_38 (DY), Jojo24_36 (DY), Reyja_37 (DY), Santhid_36 (DY), Tarzan_37 (DY),

Start 47:
• Found in 11 of 294 (3.7%) of genes in pham
• Manual Annotations of this start: 3 of 271
• Called 27.3% of time when present
• Phage (with cluster) where this start called: Hurricane_56 (K3), Keshu_58 (K3), TBond007_54 (K3),

Start 48:
• Found in 34 of 294 (11.6%) of genes in pham
• Manual Annotations of this start: 32 of 271
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alkhayr_12 (O), Ashwin_13 (O), Blessica_11 (O), Bora_12 (O), Catdawg_11 (O), Corndog_13 (O), Dylan_12 (O), Familton_12 (O), Firecracker_12 (O), FoulBall_11 (O), Idergollasper_11 (O), Imara_12 (O), JangDynasty_11 (O), KingPhillip3_11 (O), Krili_12 (O), MadKillah_12 (O), Mori_12 (O), Murai_12 (O), NiebruSaylor_12 (O), Ryadel_14 (O), SchoolBus_11 (O), Schuy_12 (O), Shida_12 (O), Smooch_13 (O), TelAviv_11 (O), Vagabond_12 (O), Vorrps_12 (O), Wildflower_12 (O), Winget_12 (O), Wogge42_12 (O), YoyoKar_12 (O), YungJamal_13 (O), Zakhe101_13 (O), Zebo_11 (O),

Start 49:

• Found in 57 of 294 (19.4%) of genes in pham
• Manual Annotations of this start: 49 of 271
• Called 93.0% of time when present
• Phage (with cluster) where this start called: Amelie_48 (K1), Amgine_56 (K6), Amohnition_57 (K6), Applecrisp_54 (K6), Biglebops_48 (K1), Bryler_59 (K6), Cain_59 (K6), Chavito_59 (K1), DarthP_57 (K6), Dartin_58 (K1), Ekdilam_55 (K6), Ellie_53 (K6), Enkosi_50 (K1), Fefferhead_55 (K6), GMA4_38 (singleton), Hammy_57 (K6), Krueger_62 (K6), Lavahound_55 (K6), Lea83_56 (K3), LilPharaoh_48 (K1), MacnCheese_58 (K3), MalagasyRose_57 (AG), Marshawn_57 (K6), McMater_58 (K1), Mdavu_49 (K1), Nergal_52 (AG), Nikao_51 (K1), Niklas_58 (K1), November_55 (K6), Nutello_48 (K1), Peanam_58 (K1), Pharb_54 (K3), PhelpsODU_57 (K6), Phrank_59 (K6), Pixie_55 (K3), Richo_58 (K1), SgtBeansprout_48 (K1), Shadow1_61 (K6), Shaobing_58 (K1), ShedlockHolmes_57 (K3), SirPhilip_57 (K6), Sunflower1121_62 (K6), Syra333_61 (K6), TClif_58 (K6), Teejan_50 (K1), Tierra_59 (K6), Tigress9_61 (K6), Torres_51 (K1), TribleTrouble_54 (K3), Trice_48 (K1), Unicorn_57 (K6), Validus_60 (K1), Ximenita_62 (K6),

Start 50:
• Found in 80 of 294 (27.2%) of genes in pham
• Manual Annotations of this start: 72 of 271
• Called 98.8% of time when present
• Phage (with cluster) where this start called: Agent47_51 (K5), AlleyCat_52 (K5), Aminay_58 (K7), BananenDer11_51 (K5), Bobquesha_62 (K4), Boilgate_52 (K8), BoostSeason_58 (K2), Chancellor_60 (K4), Cheetobro_60 (K4), Chris_57 (K1), Collard_49 (K5), Curiosium_57 (K1), Dadosky_52 (K5), DanSyl44_63 (K4), DismalFunk_58 (K2), DismalStressor_58 (K2), DoubleChamp_48 (K5), Doughnut_58 (K2), Edugator_49 (K5), Efra2_58 (K1), Eponine_62 (K4), Feyre_51 (K5), Findley_58 (K2), Fionnbharth_60 (K4), Gengar_50 (K5), Guanica15_57 (K1), Guillsminger_51 (K5), Heftyboy_50 (K5), InvictusManeo_49 (K5), JF1_60 (K4), Juliette_62 (K4), KiSi_59 (K1), Kratio_48 (K5), Kraw_60 (K4), Larva_51 (K5), LeMond_59 (K1), Lebo14_59 (K4), Leston_50 (K5), LilDirt_50 (K5), Malthus_61 (K4), Marcoliusprime_58 (K2), MarkPhew_58 (K1), Milly_58 (K2), Miryou_53 (K5), MissDaisy_58 (K4), Mitti_60 (K4), Mufasa_58 (K2), Neighly_52 (K3), Nibb_57 (K1), Nolwazi_62 (K4), OkiRoe_50 (K5), OmniCritical_59 (K4), Omnicron_53 (K5), Oscar_59 (K1), Paola_50 (K5), Patt_57 (K4), Psycho_50 (K5), Qhanda_62 (K4), Rando14_52 (K5), Reptar3000_58 (K4), Ruthiejr_61 (K4), SamScheppers_58 (K4), Scarlett_59 (K1), Slarp_60 (K4), SoSeph_50 (K5), Strobilo_58 (K2), TM4_54 (K2), Taquito_59 (K4), Thyatira_53 (K5), TingHuaYa_56 (K1), ViviJ_50 (K5), Waterfoul_51 (K5), Wintermute_60 (K4), Y10_59 (K4), Y2_59 (K4), YasnayaPolyana_60 (K4), Yuna_61 (K6), Yunkel11_57 (K1), ZoeJ_57 (K2),

Start 51:
• Found in 90 of 294 (30.6%) of genes in pham
• Manual Annotations of this start: 85 of 271
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ActinUp_55 (K1), Adephagia_55 (K1), Adonis_55 (K1), Ageofdapage_58 (K1), AlishaPH_55 (K1), Anaya_57 (K1), Angelica_55 (K1), Anma_56 (K1), Apocalypse_58 (K1), Asayake_55 (K1), Atiba_56 (K1), BEEST_55 (K1), BGlluviae_55 (K1), BaghaKamala_54 (K1), BarrelRoll_55 (K1), Beezoo_57 (K1), Bella96_56 (K1), Belladonna_55 (K1), Bern_56 (K1), Blizzard_55 (K1), Boiiii_55 (K1), CREW_55 (K1), CallaLilly_55 (K1), Capricorn_55 (K1), CaseJules_57 (K1), CheetoDust_54 (K1), Clipper_58 (K1), CrimD_55 (K1), Dalmuri_55 (K1), DartGoblin_57 (K1), Deby_55 (K1), Devera_60 (K1), Dole_58 (K1),

DrHayes_56 (K1), Durfee_55 (K1), Emerson_56 (K1), Ganymede_56 (K1), Geraldini_58 (K1), HedwigODU_55 (K1), Homura_55 (K1), Hyperbowlee_55 (K1), Illumine_58 (K1), Inky_55 (K1), JAWS_55 (K1), Jarvi_55 (K1), Jayhawk_56 (K1), Jeckyll_55 (K1), Joy99_55 (K1), Kheparia_55 (K1), LaterM_56 (K1), LindNT_54 (K1), Llorens_55 (K1), Lokum_56 (K1), Lunahalos_55 (K1), MacKat_50 (K1), MeaningOfLife_56 (K1), Megsy_57 (K1), Murucutumbu_56 (K1), Mynx_56 (K1), Padfoot_55 (K1), Padpat_57 (K1), Peel_55 (K1), Piatt_55 (K1), Pisa1_55 (K1), Pisa4_49 (K1), Pokerus_54 (K1), Prithvi_56 (K1), QuincyRose_54 (K1), Ramen_56 (K1), Rapunzel97_56 (K1), Rosmarinus_55 (K1), SamuelLPlaqson_56 (K1), ShiaSurprise_56 (K1), Slimphazie_55 (K1), Spock_55 (K1), Stinson_56 (K1), Sulley_55 (K1), Tachez_55 (K1), TaiwanKao_57 (K1), TiniBug_56 (K1), Tiri_56 (K1), Topper_55 (K1), TreyKay_56 (K1), TruffulaTree_55 (K1), Twitch_55 (K1), Urkel_56 (K1), Veliki_56 (K1), YoureAdopted_54 (K1), Zabiza_50 (K1), Zavala_57 (K1),

Summary by clusters:

There are 14 clusters represented in this pham: singleton, AG, DI, DY, CF, O, K3, K2, K1, K7, K6, K5, K4, K8,

Info for manual annotations of cluster AG:
•Start number 49 was manually annotated 2 times for cluster AG.

Info for manual annotations of cluster CF:
•Start number 37 was manually annotated 1 time for cluster CF.
•Start number 38 was manually annotated 3 times for cluster CF.
•Start number 39 was manually annotated 2 times for cluster CF.

Info for manual annotations of cluster DI:
•Start number 36 was manually annotated 1 time for cluster DI.
•Start number 37 was manually annotated 14 times for cluster DI.

Info for manual annotations of cluster DY:
•Start number 46 was manually annotated 7 times for cluster DY.

Info for manual annotations of cluster K1:
•Start number 33 was manually annotated 1 time for cluster K1.
•Start number 49 was manually annotated 16 times for cluster K1.
•Start number 50 was manually annotated 11 times for cluster K1.
•Start number 51 was manually annotated 85 times for cluster K1.

Info for manual annotations of cluster K2:
•Start number 50 was manually annotated 11 times for cluster K2.

Info for manual annotations of cluster K3:
•Start number 47 was manually annotated 3 times for cluster K3.
•Start number 49 was manually annotated 6 times for cluster K3.

Info for manual annotations of cluster K4:
•Start number 50 was manually annotated 22 times for cluster K4.

Info for manual annotations of cluster K5:
•Start number 50 was manually annotated 25 times for cluster K5.

Info for manual annotations of cluster K6:
•Start number 49 was manually annotated 25 times for cluster K6.
•Start number 50 was manually annotated 1 time for cluster K6.

Info for manual annotations of cluster K7:
•Start number 50 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:
•Start number 50 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster O:
•Start number 48 was manually annotated 32 times for cluster O.

Gene Information:

Gene: ActinUp_55 Start: 39499, Stop: 39777, Start Num: 51
Candidate Starts for ActinUp_55:
(Start: 51 @39499 has 85 MA's), (79, 39673), (82, 39694), (83, 39697), (97, 39763), (98, 39766),

Gene: Adephagia_55 Start: 39499, Stop: 39777, Start Num: 51
Candidate Starts for Adephagia_55:
(Start: 51 @39499 has 85 MA's), (79, 39673), (82, 39694), (83, 39697), (97, 39763), (98, 39766),

Gene: Adonis_55 Start: 39743, Stop: 40021, Start Num: 51
Candidate Starts for Adonis_55:
(Start: 51 @39743 has 85 MA's), (79, 39917), (82, 39938), (83, 39941), (97, 40007), (98, 40010),

Gene: Agent47_51 Start: 37637, Stop: 37915, Start Num: 50
Candidate Starts for Agent47_51:
(34, 37571), (Start: 50 @37637 has 72 MA's), (57, 37667), (59, 37676), (75, 37790), (76, 37793),

Gene: Ageofdapage_58 Start: 40488, Stop: 40766, Start Num: 51
Candidate Starts for Ageofdapage_58:
(Start: 51 @40488 has 85 MA's), (79, 40662), (82, 40683), (83, 40686), (97, 40752), (98, 40755),

Gene: AlishaPH_55 Start: 39760, Stop: 40038, Start Num: 51
Candidate Starts for AlishaPH_55:
(Start: 51 @39760 has 85 MA's), (79, 39934), (82, 39955), (83, 39958), (97, 40024), (98, 40027),

Gene: Alkhayr_12 Start: 4795, Stop: 5082, Start Num: 48
Candidate Starts for Alkhayr_12:
(Start: 48 @4795 has 32 MA's), (82, 4999), (97, 5068),

Gene: AlleyCat_52 Start: 37713, Stop: 37991, Start Num: 50
Candidate Starts for AlleyCat_52:
(14, 37512), (18, 37533), (Start: 50 @37713 has 72 MA's), (57, 37743), (58, 37749), (59, 37752), (75, 37866), (76, 37869), (89, 37944),

Gene: Amelie_48 Start: 37745, Stop: 38032, Start Num: 49
Candidate Starts for Amelie_48:
(Start: 49 @37745 has 49 MA's), (71, 37874), (76, 37901), (87, 37967), (96, 38006),

Gene: Amgine_56 Start: 40809, Stop: 41099, Start Num: 49
Candidate Starts for Amgine_56:
(1, 40365), (4, 40494), (12, 40620), (28, 40719), (Start: 49 @40809 has 49 MA's), (75, 40962), (76, 40965), (90, 41046), (96, 41070),

Gene: Aminay_58 Start: 40476, Stop: 40751, Start Num: 50
Candidate Starts for Aminay_58:
(Start: 50 @40476 has 72 MA's), (75, 40629), (76, 40632), (90, 40713), (97, 40743),

Gene: Amohnition_57 Start: 40401, Stop: 40691, Start Num: 49
Candidate Starts for Amohnition_57:
(Start: 49 @40401 has 49 MA's), (75, 40554), (76, 40557), (85, 40611),

Gene: Anaya_57 Start: 40018, Stop: 40299, Start Num: 51
Candidate Starts for Anaya_57:
(Start: 51 @40018 has 85 MA's), (79, 40192), (83, 40216), (97, 40282), (98, 40285),

Gene: Angelica_55 Start: 39652, Stop: 39930, Start Num: 51
Candidate Starts for Angelica_55:
(Start: 51 @39652 has 85 MA's), (79, 39826), (82, 39847), (83, 39850), (97, 39916), (98, 39919),

Gene: Anma_56 Start: 40396, Stop: 40674, Start Num: 51
Candidate Starts for Anma_56:
(Start: 51 @40396 has 85 MA's), (82, 40591), (83, 40594), (87, 40615), (96, 40654), (97, 40660),

Gene: Apocalypse_58 Start: 40429, Stop: 40707, Start Num: 51
Candidate Starts for Apocalypse_58:
(Start: 51 @40429 has 85 MA's), (79, 40603), (82, 40624), (83, 40627), (97, 40693), (98, 40696),

Gene: Applecrisp_54 Start: 39946, Stop: 40236, Start Num: 49
Candidate Starts for Applecrisp_54:
(2, 39574), (4, 39631), (12, 39757), (28, 39856), (Start: 49 @39946 has 49 MA's), (75, 40099), (76, 40102), (90, 40183), (96, 40207),

Gene: Asayake_55 Start: 39814, Stop: 40092, Start Num: 51
Candidate Starts for Asayake_55:
(Start: 51 @39814 has 85 MA's), (79, 39988), (82, 40009), (83, 40012), (97, 40078), (98, 40081),

Gene: Ashwin_13 Start: 5030, Stop: 5317, Start Num: 48
Candidate Starts for Ashwin_13:
(Start: 48 @5030 has 32 MA's), (82, 5234),

Gene: Atiba_56 Start: 39462, Stop: 39740, Start Num: 51
Candidate Starts for Atiba_56:
(Start: 51 @39462 has 85 MA's), (79, 39636), (82, 39657), (83, 39660), (97, 39726), (98, 39729),

Gene: Ayotoya_45 Start: 34119, Stop: 34439, Start Num: 37
Candidate Starts for Ayotoya_45:
(Start: 36 @34116 has 1 MA's), (Start: 37 @34119 has 15 MA's), (52, 34185), (53, 34191), (56, 34206), (90, 34398),

Gene: BEEST_55 Start: 39814, Stop: 40092, Start Num: 51

Candidate Starts for BEEST_55:
(Start: 51 @39814 has 85 MA's), (79, 39988), (82, 40009), (83, 40012), (97, 40078), (98, 40081),

Gene: BGlluviae_55 Start: 39617, Stop: 39895, Start Num: 51
Candidate Starts for BGlluviae_55:
(Start: 51 @39617 has 85 MA's), (79, 39791), (82, 39812), (83, 39815), (97, 39881), (98, 39884),

Gene: BaghaKamala_54 Start: 38861, Stop: 39139, Start Num: 51
Candidate Starts for BaghaKamala_54:
(Start: 51 @38861 has 85 MA's), (79, 39035), (82, 39056), (83, 39059), (97, 39125), (98, 39128),

Gene: BananenDer11_51 Start: 37598, Stop: 37876, Start Num: 50
Candidate Starts for BananenDer11_51:
(34, 37532), (Start: 50 @37598 has 72 MA's), (57, 37628), (59, 37637), (75, 37751), (76, 37754),

Gene: BarrelRoll_55 Start: 39482, Stop: 39760, Start Num: 51
Candidate Starts for BarrelRoll_55:
(Start: 51 @39482 has 85 MA's), (79, 39656), (82, 39677), (83, 39680), (97, 39746), (98, 39749),

Gene: Beezoo_57 Start: 40460, Stop: 40738, Start Num: 51
Candidate Starts for Beezoo_57:
(Start: 51 @40460 has 85 MA's), (79, 40634), (82, 40655), (83, 40658), (97, 40724), (98, 40727),

Gene: Bella96_56 Start: 40241, Stop: 40519, Start Num: 51
Candidate Starts for Bella96_56:
(Start: 51 @40241 has 85 MA's), (79, 40415), (82, 40436), (83, 40439), (87, 40460), (96, 40499), (97, 40505),

Gene: Belladonna_55 Start: 39617, Stop: 39895, Start Num: 51
Candidate Starts for Belladonna_55:
(Start: 51 @39617 has 85 MA's), (79, 39791), (82, 39812), (83, 39815), (97, 39881), (98, 39884),

Gene: Bern_56 Start: 38451, Stop: 38729, Start Num: 51
Candidate Starts for Bern_56:
(Start: 51 @38451 has 85 MA's), (79, 38625), (82, 38646), (83, 38649), (97, 38715), (98, 38718),

Gene: BetterKatz_45 Start: 33644, Stop: 33964, Start Num: 37
Candidate Starts for BetterKatz_45:
(Start: 36 @33641 has 1 MA's), (Start: 37 @33644 has 15 MA's), (52, 33710), (53, 33716), (56, 33731), (90, 33923),

Gene: Biglebops_48 Start: 37745, Stop: 38032, Start Num: 49
Candidate Starts for Biglebops_48:
(Start: 49 @37745 has 49 MA's), (71, 37874), (76, 37901), (87, 37967), (96, 38006),

Gene: Blessica_11 Start: 4427, Stop: 4714, Start Num: 48
Candidate Starts for Blessica_11:
(Start: 48 @4427 has 32 MA's), (82, 4631),

Gene: Blizzard_55 Start: 39814, Stop: 40092, Start Num: 51
Candidate Starts for Blizzard_55:
(Start: 51 @39814 has 85 MA's), (79, 39988), (82, 40009), (83, 40012), (97, 40078), (98, 40081),

Gene: Bobquesha_62 Start: 39304, Stop: 39579, Start Num: 50
Candidate Starts for Bobquesha_62:
(Start: 50 @39304 has 72 MA's), (54, 39322), (76, 39460), (78, 39475), (87, 39526), (92, 39547), (97, 39571),

Gene: Bock_45 Start: 33342, Stop: 33662, Start Num: 37
Candidate Starts for Bock_45:
(5, 33105), (Start: 36 @33339 has 1 MA's), (Start: 37 @33342 has 15 MA's), (52, 33408), (53, 33414), (90, 33621),

Gene: Boiiii_55 Start: 39816, Stop: 40094, Start Num: 51
Candidate Starts for Boiiii_55:
(Start: 51 @39816 has 85 MA's), (79, 39990), (82, 40011), (83, 40014), (97, 40080), (98, 40083),

Gene: Boilgate_52 Start: 39523, Stop: 39804, Start Num: 50
Candidate Starts for Boilgate_52:
(Start: 50 @39523 has 72 MA's), (54, 39541), (85, 39733), (97, 39790),

Gene: BoostSeason_58 Start: 41135, Stop: 41413, Start Num: 50
Candidate Starts for BoostSeason_58:
(Start: 50 @41135 has 72 MA's), (75, 41288), (76, 41291), (90, 41372), (92, 41378),

Gene: Bora_12 Start: 4828, Stop: 5115, Start Num: 48
Candidate Starts for Bora_12:
(Start: 48 @4828 has 32 MA's), (82, 5032),

Gene: Bryler_59 Start: 39176, Stop: 39466, Start Num: 49
Candidate Starts for Bryler_59:
(42, 39155), (Start: 49 @39176 has 49 MA's), (90, 39413),

Gene: Brylie_45 Start: 33389, Stop: 33709, Start Num: 37
Candidate Starts for Brylie_45:
(5, 33152), (Start: 36 @33386 has 1 MA's), (Start: 37 @33389 has 15 MA's), (52, 33455), (53, 33461), (56, 33476), (90, 33668),

Gene: CREW_55 Start: 39617, Stop: 39895, Start Num: 51
Candidate Starts for CREW_55:
(Start: 51 @39617 has 85 MA's), (79, 39791), (82, 39812), (83, 39815), (97, 39881), (98, 39884),

Gene: Cain_59 Start: 39164, Stop: 39454, Start Num: 49
Candidate Starts for Cain_59:
(42, 39143), (Start: 49 @39164 has 49 MA's), (90, 39401),

Gene: CallaLilly_55 Start: 39540, Stop: 39818, Start Num: 51
Candidate Starts for CallaLilly_55:
(Start: 51 @39540 has 85 MA's), (79, 39714), (82, 39735), (83, 39738), (97, 39804), (98, 39807),

Gene: Capricorn_55 Start: 39617, Stop: 39895, Start Num: 51
Candidate Starts for Capricorn_55:
(Start: 51 @39617 has 85 MA's), (79, 39791), (82, 39812), (83, 39815), (97, 39881), (98, 39884),

Gene: CaseJules_57 Start: 39814, Stop: 40092, Start Num: 51
Candidate Starts for CaseJules_57:

(Start: 51 @39814 has 85 MA's), (79, 39988), (82, 40009), (83, 40012), (97, 40078), (98, 40081),

Gene: Catdawg_11 Start: 4467, Stop: 4754, Start Num: 48
Candidate Starts for Catdawg_11:
(Start: 48 @4467 has 32 MA's), (82, 4671),

Gene: Chancellor_60 Start: 39806, Stop: 40081, Start Num: 50
Candidate Starts for Chancellor_60:
(Start: 50 @39806 has 72 MA's), (54, 39824), (76, 39962), (78, 39977), (87, 40028), (92, 40049), (97, 40073),

Gene: Chavito_59 Start: 40836, Stop: 41123, Start Num: 49
Candidate Starts for Chavito_59:
(6, 40581), (7, 40599), (41, 40812), (Start: 47 @40833 has 3 MA's), (Start: 49 @40836 has 49 MA's), (59, 40875), (75, 40989), (76, 40992), (87, 41058), (94, 41085), (96, 41097), (97, 41103),

Gene: CheetoDust_54 Start: 38905, Stop: 39183, Start Num: 51
Candidate Starts for CheetoDust_54:
(Start: 51 @38905 has 85 MA's), (79, 39079), (82, 39100), (83, 39103), (97, 39169), (98, 39172),

Gene: Cheetobro_60 Start: 39803, Stop: 40078, Start Num: 50
Candidate Starts for Cheetobro_60:
(Start: 50 @39803 has 72 MA's), (54, 39821), (76, 39959), (78, 39974), (87, 40025), (92, 40046), (97, 40070),

Gene: Chop_45 Start: 33866, Stop: 34186, Start Num: 37
Candidate Starts for Chop_45:
(Start: 36 @33863 has 1 MA's), (Start: 37 @33866 has 15 MA's), (52, 33932), (53, 33938), (56, 33953), (90, 34145),

Gene: Chris_57 Start: 40206, Stop: 40490, Start Num: 50
Candidate Starts for Chris_57:
(26, 40104), (34, 40146), (35, 40149), (Start: 50 @40206 has 72 MA's), (55, 40230), (75, 40359), (76, 40362), (85, 40416), (91, 40446), (94, 40455), (96, 40467), (98, 40476),

Gene: Clipper_58 Start: 40078, Stop: 40356, Start Num: 51
Candidate Starts for Clipper_58:
(Start: 51 @40078 has 85 MA's), (79, 40252), (82, 40273), (83, 40276), (97, 40342), (98, 40345),

Gene: Collard_49 Start: 37598, Stop: 37876, Start Num: 50
Candidate Starts for Collard_49:
(34, 37532), (Start: 50 @37598 has 72 MA's), (57, 37628), (59, 37637), (75, 37751), (76, 37754),

Gene: Corndog_13 Start: 5024, Stop: 5311, Start Num: 48
Candidate Starts for Corndog_13:
(Start: 48 @5024 has 32 MA's), (82, 5228),

Gene: CrimD_55 Start: 39734, Stop: 40012, Start Num: 51
Candidate Starts for CrimD_55:
(Start: 51 @39734 has 85 MA's), (79, 39908), (82, 39929), (83, 39932), (97, 39998), (98, 40001),

Gene: Curiosium_57 Start: 38369, Stop: 38650, Start Num: 50
Candidate Starts for Curiosium_57:

(Start: 45 @38354 has 1 MA's), (Start: 49 @38366 has 49 MA's), (Start: 50 @38369 has 72 MA's), (67, 38468), (72, 38504), (74, 38519), (79, 38546), (82, 38567), (83, 38570), (97, 38636),

Gene: CurlyFries_56 Start: 37511, Stop: 37849, Start Num: 38
Candidate Starts for CurlyFries_56:
(19, 37394), (31, 37475), (Start: 38 @37511 has 3 MA's), (60, 37607), (81, 37742),

Gene: Dadosky_52 Start: 37715, Stop: 37993, Start Num: 50
Candidate Starts for Dadosky_52:
(14, 37514), (18, 37535), (Start: 50 @37715 has 72 MA's), (57, 37745), (58, 37751), (59, 37754), (75, 37868), (76, 37871), (89, 37946),

Gene: Dalmuri_55 Start: 39617, Stop: 39895, Start Num: 51
Candidate Starts for Dalmuri_55:
(Start: 51 @39617 has 85 MA's), (79, 39791), (82, 39812), (83, 39815), (97, 39881), (98, 39884),

Gene: DanSyl44_63 Start: 40931, Stop: 41206, Start Num: 50
Candidate Starts for DanSyl44_63:
(Start: 50 @40931 has 72 MA's), (54, 40949), (76, 41087), (78, 41102), (87, 41153), (92, 41174), (97, 41198),

Gene: DartGoblin_57 Start: 40213, Stop: 40491, Start Num: 51
Candidate Starts for DartGoblin_57:
(Start: 51 @40213 has 85 MA's), (79, 40387), (82, 40408), (83, 40411), (87, 40432), (96, 40471), (97, 40477),

Gene: DarthP_57 Start: 40285, Stop: 40575, Start Num: 49
Candidate Starts for DarthP_57:
(Start: 49 @40285 has 49 MA's), (75, 40438), (76, 40441), (85, 40495),

Gene: Dartin_58 Start: 40108, Stop: 40395, Start Num: 49
Candidate Starts for Dartin_58:
(Start: 47 @40105 has 3 MA's), (Start: 49 @40108 has 49 MA's), (75, 40261), (76, 40264), (87, 40330), (94, 40357), (96, 40369), (98, 40378),

Gene: DearBasketball_39 Start: 27861, Stop: 28154, Start Num: 46
Candidate Starts for DearBasketball_39:
(21, 27723), (Start: 46 @27861 has 7 MA's), (58, 27909), (75, 28032), (90, 28116), (91, 28119),

Gene: Deby_55 Start: 39673, Stop: 39951, Start Num: 51
Candidate Starts for Deby_55:
(Start: 51 @39673 has 85 MA's), (79, 39847), (82, 39868), (83, 39871), (97, 39937), (98, 39940),

Gene: DelRio_46 Start: 34571, Stop: 34891, Start Num: 37
Candidate Starts for DelRio_46:
(Start: 36 @34568 has 1 MA's), (Start: 37 @34571 has 15 MA's), (52, 34637), (53, 34643), (56, 34658), (90, 34850),

Gene: Devera_60 Start: 40253, Stop: 40531, Start Num: 51
Candidate Starts for Devera_60:
(Start: 51 @40253 has 85 MA's), (79, 40427), (82, 40448), (83, 40451), (85, 40460), (97, 40517), (98, 40520),

Gene: DinoNuggs_37 Start: 27530, Stop: 27823, Start Num: 46
Candidate Starts for DinoNuggs_37:
(21, 27392), (Start: 46 @27530 has 7 MA's), (58, 27578), (75, 27701), (90, 27785), (91, 27788),

Gene: DismalFunk_58 Start: 41557, Stop: 41835, Start Num: 50
Candidate Starts for DismalFunk_58:
(Start: 50 @41557 has 72 MA's), (75, 41710), (76, 41713), (90, 41794), (92, 41800),

Gene: DismalStressor_58 Start: 41557, Stop: 41835, Start Num: 50
Candidate Starts for DismalStressor_58:
(Start: 50 @41557 has 72 MA's), (75, 41710), (76, 41713), (90, 41794), (92, 41800),

Gene: Dole_58 Start: 40256, Stop: 40534, Start Num: 51
Candidate Starts for Dole_58:
(Start: 51 @40256 has 85 MA's), (79, 40430), (82, 40451), (83, 40454), (85, 40463), (97, 40520), (98, 40523),

Gene: DonkeyMan_37 Start: 28581, Stop: 28874, Start Num: 46
Candidate Starts for DonkeyMan_37:
(21, 28443), (Start: 46 @28581 has 7 MA's), (58, 28629), (75, 28752), (90, 28836), (91, 28839),

Gene: DoubleChamp_48 Start: 37598, Stop: 37876, Start Num: 50
Candidate Starts for DoubleChamp_48:
(34, 37532), (Start: 50 @37598 has 72 MA's), (57, 37628), (59, 37637), (75, 37751), (76, 37754),

Gene: Doughnut_58 Start: 41176, Stop: 41454, Start Num: 50
Candidate Starts for Doughnut_58:
(Start: 50 @41176 has 72 MA's), (75, 41329), (76, 41332), (90, 41413), (92, 41419),

Gene: DrHayes_56 Start: 40396, Stop: 40674, Start Num: 51
Candidate Starts for DrHayes_56:
(Start: 51 @40396 has 85 MA's), (82, 40591), (83, 40594), (87, 40615), (96, 40654), (97, 40660),

Gene: Durfee_55 Start: 39814, Stop: 40092, Start Num: 51
Candidate Starts for Durfee_55:
(Start: 51 @39814 has 85 MA's), (79, 39988), (82, 40009), (83, 40012), (97, 40078), (98, 40081),

Gene: Dylan_12 Start: 5030, Stop: 5317, Start Num: 48
Candidate Starts for Dylan_12:
(Start: 48 @5030 has 32 MA's), (82, 5234),

Gene: Edugator_49 Start: 39136, Stop: 39414, Start Num: 50
Candidate Starts for Edugator_49:
(14, 38935), (18, 38956), (Start: 50 @39136 has 72 MA's), (57, 39166), (58, 39172), (59, 39175), (75, 39289), (76, 39292), (89, 39367),

Gene: Efra2_58 Start: 39255, Stop: 39536, Start Num: 50
Candidate Starts for Efra2_58:
(Start: 50 @39255 has 72 MA's), (79, 39432), (82, 39453), (83, 39456), (97, 39522),

Gene: Ekdilam_55 Start: 40290, Stop: 40580, Start Num: 49
Candidate Starts for Ekdilam_55:

(Start: 49 @40290 has 49 MA's), (54, 40308), (75, 40443), (76, 40446), (82, 40488), (85, 40500), (94, 40539),

Gene: Ellie_53 Start: 39638, Stop: 39928, Start Num: 49
Candidate Starts for Ellie_53:
(2, 39266), (12, 39449), (28, 39548), (43, 39620), (Start: 49 @39638 has 49 MA's), (75, 39791), (76, 39794), (90, 39875),

Gene: Emerson_56 Start: 39496, Stop: 39774, Start Num: 51
Candidate Starts for Emerson_56:
(Start: 51 @39496 has 85 MA's), (79, 39670), (82, 39691), (83, 39694), (97, 39760), (98, 39763),

Gene: Enkosi_50 Start: 40358, Stop: 40645, Start Num: 49
Candidate Starts for Enkosi_50:
(Start: 49 @40358 has 49 MA's), (71, 40487), (76, 40514), (87, 40580), (96, 40619),

Gene: Eponine_62 Start: 40649, Stop: 40924, Start Num: 50
Candidate Starts for Eponine_62:
(Start: 50 @40649 has 72 MA's), (54, 40667), (76, 40805), (78, 40820), (87, 40871), (92, 40892), (97, 40916),

Gene: Familton_12 Start: 4468, Stop: 4755, Start Num: 48
Candidate Starts for Familton_12:
(Start: 48 @4468 has 32 MA's), (82, 4672),

Gene: Fefferhead_55 Start: 39585, Stop: 39875, Start Num: 49
Candidate Starts for Fefferhead_55:
(2, 39213), (4, 39270), (12, 39396), (28, 39495), (Start: 49 @39585 has 49 MA's), (75, 39738), (76, 39741), (90, 39822), (96, 39846),

Gene: Feyre_51 Start: 39951, Stop: 40229, Start Num: 50
Candidate Starts for Feyre_51:
(14, 39750), (34, 39885), (Start: 50 @39951 has 72 MA's), (57, 39981), (75, 40104), (76, 40107), (83, 40152), (94, 40200),

Gene: Findley_58 Start: 41550, Stop: 41828, Start Num: 50
Candidate Starts for Findley_58:
(Start: 50 @41550 has 72 MA's), (75, 41703), (76, 41706), (90, 41787), (92, 41793),

Gene: Fionnbharth_60 Start: 40047, Stop: 40322, Start Num: 50
Candidate Starts for Fionnbharth_60:
(Start: 50 @40047 has 72 MA's), (54, 40065), (76, 40203), (78, 40218), (87, 40269), (92, 40290), (97, 40314),

Gene: Firecracker_12 Start: 4763, Stop: 5050, Start Num: 48
Candidate Starts for Firecracker_12:
(Start: 48 @4763 has 32 MA's), (82, 4967),

Gene: FoulBall_11 Start: 4468, Stop: 4755, Start Num: 48
Candidate Starts for FoulBall_11:
(Start: 48 @4468 has 32 MA's), (82, 4672),

Gene: Francois_44 Start: 33464, Stop: 33787, Start Num: 36

Candidate Starts for Francois_44:
(Start: 36 @33464 has 1 MA's), (Start: 37 @33467 has 15 MA's), (56, 33554), (90, 33746),

Gene: GMA4_38 Start: 29479, Stop: 29760, Start Num: 49
Candidate Starts for GMA4_38:
(Start: 49 @29479 has 49 MA's),

Gene: Ganymede_56 Start: 39875, Stop: 40153, Start Num: 51
Candidate Starts for Ganymede_56:
(Start: 51 @39875 has 85 MA's), (79, 40049), (82, 40070), (83, 40073), (97, 40139), (98, 40142),

Gene: Gengar_50 Start: 38562, Stop: 38840, Start Num: 50
Candidate Starts for Gengar_50:
(Start: 50 @38562 has 72 MA's), (57, 38592), (75, 38715), (76, 38718), (83, 38763), (94, 38811),

Gene: Geraldini_58 Start: 40549, Stop: 40827, Start Num: 51
Candidate Starts for Geraldini_58:
(Start: 51 @40549 has 85 MA's), (79, 40723), (82, 40744), (83, 40747), (97, 40813), (98, 40816),

Gene: GrandSlam_45 Start: 33866, Stop: 34186, Start Num: 37
Candidate Starts for GrandSlam_45:
(Start: 36 @33863 has 1 MA's), (Start: 37 @33866 has 15 MA's), (52, 33932), (53, 33938), (56, 33953), (90, 34145),

Gene: Guanica15_57 Start: 38996, Stop: 39277, Start Num: 50
Candidate Starts for Guanica15_57:
(Start: 33 @38933 has 1 MA's), (Start: 39 @38954 has 2 MA's), (Start: 50 @38996 has 72 MA's), (79, 39173), (82, 39194), (83, 39197), (97, 39263),

Gene: Guillsminger_51 Start: 38533, Stop: 38811, Start Num: 50
Candidate Starts for Guillsminger_51:
(Start: 50 @38533 has 72 MA's), (57, 38563), (75, 38686), (76, 38689), (83, 38734), (94, 38782),

Gene: Hammy_57 Start: 40273, Stop: 40563, Start Num: 49
Candidate Starts for Hammy_57:
(Start: 49 @40273 has 49 MA's), (75, 40426), (76, 40429), (85, 40483),

Gene: Hamood_45 Start: 33866, Stop: 34186, Start Num: 37
Candidate Starts for Hamood_45:
(Start: 36 @33863 has 1 MA's), (Start: 37 @33866 has 15 MA's), (52, 33932), (53, 33938), (56, 33953), (90, 34145),

Gene: HedwigODU_55 Start: 39499, Stop: 39777, Start Num: 51
Candidate Starts for HedwigODU_55:
(Start: 51 @39499 has 85 MA's), (79, 39673), (82, 39694), (83, 39697), (97, 39763), (98, 39766),

Gene: Heftyboy_50 Start: 38708, Stop: 38986, Start Num: 50
Candidate Starts for Heftyboy_50:
(34, 38642), (Start: 50 @38708 has 72 MA's), (57, 38738), (75, 38861), (76, 38864), (83, 38909), (94, 38957),

Gene: Heinz_37 Start: 26504, Stop: 26797, Start Num: 46
Candidate Starts for Heinz_37:

(21, 26366), (Start: 46 @26504 has 7 MA's), (58, 26552), (90, 26759), (91, 26762),

Gene: Hibiscus_38 Start: 26453, Stop: 26746, Start Num: 46
Candidate Starts for Hibiscus_38:
(21, 26315), (Start: 46 @26453 has 7 MA's), (58, 26501), (90, 26708), (91, 26711),

Gene: Homura_55 Start: 39617, Stop: 39895, Start Num: 51
Candidate Starts for Homura_55:
(Start: 51 @39617 has 85 MA's), (79, 39791), (82, 39812), (83, 39815), (97, 39881), (98, 39884),

Gene: Hurricane_56 Start: 39943, Stop: 40239, Start Num: 47
Candidate Starts for Hurricane_56:
(Start: 47 @39943 has 3 MA's), (Start: 49 @39946 has 49 MA's), (64, 40036), (75, 40102), (76, 40105), (92, 40192),

Gene: Hyperbowlee_55 Start: 39814, Stop: 40092, Start Num: 51
Candidate Starts for Hyperbowlee_55:
(Start: 51 @39814 has 85 MA's), (79, 39988), (82, 40009), (83, 40012), (97, 40078), (98, 40081),

Gene: Idergollasper_11 Start: 4468, Stop: 4755, Start Num: 48
Candidate Starts for Idergollasper_11:
(Start: 48 @4468 has 32 MA's), (82, 4672),

Gene: Illumine_58 Start: 40255, Stop: 40533, Start Num: 51
Candidate Starts for Illumine_58:
(Start: 51 @40255 has 85 MA's), (79, 40429), (82, 40450), (83, 40453), (85, 40462), (97, 40519), (98, 40522),

Gene: Imara_12 Start: 4721, Stop: 5008, Start Num: 48
Candidate Starts for Imara_12:
(Start: 48 @4721 has 32 MA's), (82, 4925),

Gene: Inky_55 Start: 39617, Stop: 39895, Start Num: 51
Candidate Starts for Inky_55:
(Start: 51 @39617 has 85 MA's), (79, 39791), (82, 39812), (83, 39815), (97, 39881), (98, 39884),

Gene: InvictusManeo_49 Start: 37641, Stop: 37919, Start Num: 50
Candidate Starts for InvictusManeo_49:
(34, 37575), (Start: 50 @37641 has 72 MA's), (57, 37671), (59, 37680), (75, 37794), (76, 37797),

Gene: JAWS_55 Start: 39488, Stop: 39766, Start Num: 51
Candidate Starts for JAWS_55:
(Start: 51 @39488 has 85 MA's), (79, 39662), (82, 39683), (83, 39686), (97, 39752), (98, 39755),

Gene: JF1_60 Start: 39964, Stop: 40239, Start Num: 50
Candidate Starts for JF1_60:
(Start: 50 @39964 has 72 MA's), (54, 39982), (76, 40120), (78, 40135), (87, 40186), (92, 40207), (97, 40231),

Gene: JangDynasty_11 Start: 4557, Stop: 4844, Start Num: 48
Candidate Starts for JangDynasty_11:
(Start: 48 @4557 has 32 MA's), (82, 4761),

Gene: Jarvi_55 Start: 39617, Stop: 39895, Start Num: 51
Candidate Starts for Jarvi_55:
(Start: 51 @39617 has 85 MA's), (79, 39791), (82, 39812), (83, 39815), (97, 39881), (98, 39884),

Gene: Jayhawk_56 Start: 39497, Stop: 39775, Start Num: 51
Candidate Starts for Jayhawk_56:
(Start: 51 @39497 has 85 MA's), (79, 39671), (82, 39692), (83, 39695), (97, 39761), (98, 39764),

Gene: Jeckyll_55 Start: 39617, Stop: 39895, Start Num: 51
Candidate Starts for Jeckyll_55:
(Start: 51 @39617 has 85 MA's), (79, 39791), (82, 39812), (83, 39815), (97, 39881), (98, 39884),

Gene: Jflix2_60 Start: 40583, Stop: 40909, Start Num: 39
Candidate Starts for Jflix2_60:
(27, 40547), (Start: 39 @40583 has 2 MA's), (97, 40898), (98, 40901), (99, 40904),

Gene: Jojo24_36 Start: 27174, Stop: 27467, Start Num: 46
Candidate Starts for Jojo24_36:
(21, 27036), (Start: 46 @27174 has 7 MA's), (58, 27222), (90, 27429), (91, 27432),

Gene: Joy99_55 Start: 39546, Stop: 39824, Start Num: 51
Candidate Starts for Joy99_55:
(Start: 51 @39546 has 85 MA's), (79, 39720), (82, 39741), (83, 39744), (97, 39810), (98, 39813),

Gene: Juliette_62 Start: 40111, Stop: 40386, Start Num: 50
Candidate Starts for Juliette_62:
(Start: 50 @40111 has 72 MA's), (54, 40129), (76, 40267), (78, 40282), (87, 40333), (92, 40354), (97, 40378),

Gene: Keshu_58 Start: 40041, Stop: 40337, Start Num: 47
Candidate Starts for Keshu_58:
(Start: 47 @40041 has 3 MA's), (Start: 49 @40044 has 49 MA's), (75, 40200), (76, 40203),

Gene: Kheparia_55 Start: 37490, Stop: 37768, Start Num: 51
Candidate Starts for Kheparia_55:
(Start: 51 @37490 has 85 MA's), (79, 37664), (82, 37685), (83, 37688), (85, 37697), (87, 37709), (96, 37748), (97, 37754), (98, 37757),

Gene: KiSi_59 Start: 40237, Stop: 40521, Start Num: 50
Candidate Starts for KiSi_59:
(24, 40129), (34, 40177), (35, 40180), (Start: 50 @40237 has 72 MA's), (76, 40393), (80, 40417), (82, 40435), (94, 40486), (96, 40498), (98, 40507),

Gene: KingPhillip3_11 Start: 4468, Stop: 4755, Start Num: 48
Candidate Starts for KingPhillip3_11:
(Start: 48 @4468 has 32 MA's), (82, 4672),

Gene: Kratio_48 Start: 37190, Stop: 37468, Start Num: 50
Candidate Starts for Kratio_48:
(14, 36989), (18, 37010), (34, 37124), (Start: 50 @37190 has 72 MA's), (57, 37220), (58, 37226), (59, 37229), (75, 37343), (76, 37346), (89, 37421),

Gene: Kraw_60 Start: 39799, Stop: 40074, Start Num: 50

Candidate Starts for Kraw_60:
(Start: 50 @39799 has 72 MA's), (54, 39817), (76, 39955), (78, 39970), (87, 40021), (92, 40042),

Gene: Krili_12 Start: 4642, Stop: 4929, Start Num: 48
Candidate Starts for Krili_12:
(Start: 48 @4642 has 32 MA's), (82, 4846), (97, 4915),

Gene: Krueger_62 Start: 40156, Stop: 40446, Start Num: 49
Candidate Starts for Krueger_62:
(Start: 49 @40156 has 49 MA's), (74, 40306), (76, 40312), (90, 40393),

Gene: Larva_51 Start: 38587, Stop: 38865, Start Num: 50
Candidate Starts for Larva_51:
(14, 38386), (18, 38407), (Start: 50 @38587 has 72 MA's), (57, 38617), (58, 38623), (59, 38626), (75, 38740), (76, 38743), (89, 38818),

Gene: LastHope_58 Start: 38580, Stop: 38930, Start Num: 33
Candidate Starts for LastHope_58:
(Start: 33 @38580 has 1 MA's), (Start: 39 @38601 has 2 MA's), (Start: 50 @38649 has 72 MA's), (69, 38760), (79, 38826), (82, 38847), (83, 38850), (97, 38916),

Gene: LaterM_56 Start: 40380, Stop: 40658, Start Num: 51
Candidate Starts for LaterM_56:
(Start: 51 @40380 has 85 MA's), (79, 40554), (82, 40575), (83, 40578), (87, 40599), (97, 40644), (98, 40647),

Gene: Lavahound_55 Start: 40930, Stop: 41220, Start Num: 49
Candidate Starts for Lavahound_55:
(1, 40486), (4, 40615), (12, 40741), (28, 40840), (Start: 49 @40930 has 49 MA's), (75, 41083), (76, 41086), (90, 41167), (96, 41191),

Gene: LeMond_59 Start: 40218, Stop: 40502, Start Num: 50
Candidate Starts for LeMond_59:
(24, 40110), (34, 40158), (35, 40161), (Start: 50 @40218 has 72 MA's), (76, 40374), (80, 40398), (82, 40416), (94, 40467), (96, 40479), (98, 40488),

Gene: Lea83_56 Start: 39999, Stop: 40292, Start Num: 49
Candidate Starts for Lea83_56:
(13, 39807), (24, 39894), (35, 39945), (40, 39954), (Start: 49 @39999 has 49 MA's), (64, 40089), (75, 40155), (76, 40158),

Gene: Lebo14_59 Start: 40066, Stop: 40341, Start Num: 50
Candidate Starts for Lebo14_59:
(Start: 50 @40066 has 72 MA's), (54, 40084), (76, 40222), (78, 40237), (87, 40288), (92, 40309), (97, 40333),

Gene: Leston_50 Start: 38662, Stop: 38940, Start Num: 50
Candidate Starts for Leston_50:
(Start: 50 @38662 has 72 MA's), (57, 38692), (75, 38815), (76, 38818), (83, 38863), (94, 38911),

Gene: LilDirt_50 Start: 37399, Stop: 37677, Start Num: 50
Candidate Starts for LilDirt_50:
(34, 37333), (Start: 50 @37399 has 72 MA's), (57, 37429), (59, 37438), (75, 37552), (76, 37555),

Gene: LilPharaoh_48 Start: 37473, Stop: 37760, Start Num: 49
Candidate Starts for LilPharaoh_48:
(Start: 49 @37473 has 49 MA's), (71, 37602), (76, 37629), (87, 37695), (96, 37734),

Gene: LindNT_54 Start: 39702, Stop: 39980, Start Num: 51
Candidate Starts for LindNT_54:
(Start: 51 @39702 has 85 MA's), (79, 39876), (82, 39897), (83, 39900), (87, 39921), (97, 39966), (98, 39969),

Gene: Llorens_55 Start: 39617, Stop: 39895, Start Num: 51
Candidate Starts for Llorens_55:
(Start: 51 @39617 has 85 MA's), (79, 39791), (82, 39812), (83, 39815), (97, 39881), (98, 39884),

Gene: Lokum_56 Start: 39618, Stop: 39896, Start Num: 51
Candidate Starts for Lokum_56:
(Start: 51 @39618 has 85 MA's), (79, 39792), (82, 39813), (83, 39816), (97, 39882), (98, 39885),

Gene: Lunahalos_55 Start: 39617, Stop: 39895, Start Num: 51
Candidate Starts for Lunahalos_55:
(Start: 51 @39617 has 85 MA's), (79, 39791), (82, 39812), (83, 39815), (97, 39881), (98, 39884),

Gene: MacKat_50 Start: 34962, Stop: 35240, Start Num: 51
Candidate Starts for MacKat_50:
(Start: 51 @34962 has 85 MA's), (79, 35136), (82, 35157), (83, 35160), (97, 35226), (98, 35229),

Gene: MacnCheese_58 Start: 40525, Stop: 40812, Start Num: 49
Candidate Starts for MacnCheese_58:
(Start: 49 @40525 has 49 MA's), (59, 40567), (75, 40681), (76, 40684), (96, 40789),

Gene: MadKillah_12 Start: 4663, Stop: 4950, Start Num: 48
Candidate Starts for MadKillah_12:
(Start: 48 @4663 has 32 MA's), (82, 4867), (97, 4936),

Gene: Madraxi_63 Start: 43104, Stop: 43436, Start Num: 37
Candidate Starts for Madraxi_63:
(9, 42969), (22, 43047), (25, 43071), (Start: 37 @43104 has 15 MA's), (93, 43404), (97, 43425), (98, 43428), (99, 43431),

Gene: MalagasyRose_57 Start: 38780, Stop: 39061, Start Num: 49
Candidate Starts for MalagasyRose_57:
(Start: 49 @38780 has 49 MA's), (57, 38813), (61, 38831), (68, 38885), (74, 38933), (75, 38936), (76, 38939), (85, 38993), (92, 39026),

Gene: Malthus_61 Start: 39799, Stop: 40074, Start Num: 50
Candidate Starts for Malthus_61:
(Start: 50 @39799 has 72 MA's), (54, 39817), (76, 39955), (78, 39970), (87, 40021), (92, 40042),

Gene: Marcoliusprime_58 Start: 41557, Stop: 41835, Start Num: 50
Candidate Starts for Marcoliusprime_58:
(Start: 50 @41557 has 72 MA's), (75, 41710), (76, 41713), (90, 41794), (92, 41800),

Gene: MarkPhew_58 Start: 39906, Stop: 40190, Start Num: 50

Candidate Starts for MarkPhew_58:
(35, 39849), (Start: 50 @39906 has 72 MA's), (55, 39930), (75, 40059), (76, 40062), (80, 40086), (87, 40128), (91, 40146), (94, 40155), (96, 40167), (98, 40176),

Gene: Marshawn_57 Start: 39928, Stop: 40218, Start Num: 49
Candidate Starts for Marshawn_57:
(Start: 49 @39928 has 49 MA's), (76, 40084), (82, 40126), (94, 40177), (96, 40189),

Gene: McMater_58 Start: 40108, Stop: 40395, Start Num: 49
Candidate Starts for McMater_58:
(Start: 47 @40105 has 3 MA's), (Start: 49 @40108 has 49 MA's), (75, 40261), (76, 40264), (87, 40330), (94, 40357), (96, 40369), (98, 40378),

Gene: Mdavu_49 Start: 37734, Stop: 38021, Start Num: 49
Candidate Starts for Mdavu_49:
(Start: 49 @37734 has 49 MA's), (71, 37863), (76, 37890), (87, 37956), (96, 37995),

Gene: MeaningOfLife_56 Start: 40372, Stop: 40650, Start Num: 51
Candidate Starts for MeaningOfLife_56:
(Start: 51 @40372 has 85 MA's), (79, 40546), (82, 40567), (83, 40570), (97, 40636), (98, 40639),

Gene: Megsy_57 Start: 39770, Stop: 40048, Start Num: 51
Candidate Starts for Megsy_57:
(Start: 51 @39770 has 85 MA's), (76, 39923), (79, 39944), (82, 39965), (83, 39968), (97, 40034),

Gene: Milly_58 Start: 41530, Stop: 41808, Start Num: 50
Candidate Starts for Milly_58:
(Start: 50 @41530 has 72 MA's), (75, 41683), (76, 41686), (90, 41767), (92, 41773),

Gene: Miryou_53 Start: 40864, Stop: 41142, Start Num: 50
Candidate Starts for Miryou_53:
(Start: 50 @40864 has 72 MA's), (57, 40894), (75, 41017), (76, 41020), (83, 41065), (94, 41113),

Gene: MissDaisy_58 Start: 39319, Stop: 39594, Start Num: 50
Candidate Starts for MissDaisy_58:
(Start: 50 @39319 has 72 MA's), (54, 39337), (76, 39475), (78, 39490), (87, 39541), (92, 39562), (97, 39586),

Gene: Mitti_60 Start: 39978, Stop: 40253, Start Num: 50
Candidate Starts for Mitti_60:
(Start: 50 @39978 has 72 MA's), (54, 39996), (76, 40134), (78, 40149), (87, 40200), (92, 40221), (97, 40245),

Gene: Mori_12 Start: 4656, Stop: 4943, Start Num: 48
Candidate Starts for Mori_12:
(Start: 48 @4656 has 32 MA's), (82, 4860), (97, 4929),

Gene: Mufasa_58 Start: 41120, Stop: 41398, Start Num: 50
Candidate Starts for Mufasa_58:
(Start: 50 @41120 has 72 MA's), (75, 41273), (76, 41276), (90, 41357), (92, 41363),

Gene: Mulch_45 Start: 33389, Stop: 33709, Start Num: 37
Candidate Starts for Mulch_45:

(5, 33152), (Start: 36 @33386 has 1 MA's), (Start: 37 @33389 has 15 MA's), (52, 33455), (53, 33461), (56, 33476), (90, 33668),

Gene: Murai_12 Start: 4656, Stop: 4943, Start Num: 48
Candidate Starts for Murai_12:
(Start: 48 @4656 has 32 MA's), (82, 4860), (97, 4929),

Gene: Murucutumbu_56 Start: 40479, Stop: 40757, Start Num: 51
Candidate Starts for Murucutumbu_56:
(Start: 51 @40479 has 85 MA's), (79, 40653), (82, 40674), (83, 40677), (97, 40743), (98, 40746),

Gene: Mynx_56 Start: 39818, Stop: 40096, Start Num: 51
Candidate Starts for Mynx_56:
(Start: 51 @39818 has 85 MA's), (79, 39992), (82, 40013), (83, 40016), (97, 40082), (98, 40085),

Gene: Nadeem_45 Start: 33389, Stop: 33709, Start Num: 37
Candidate Starts for Nadeem_45:
(5, 33152), (Start: 36 @33386 has 1 MA's), (Start: 37 @33389 has 15 MA's), (52, 33455), (53, 33461), (56, 33476), (90, 33668),

Gene: NancyRae_45 Start: 33399, Stop: 33719, Start Num: 37
Candidate Starts for NancyRae_45:
(5, 33162), (Start: 36 @33396 has 1 MA's), (Start: 37 @33399 has 15 MA's), (52, 33465), (53, 33471), (56, 33486), (90, 33678),

Gene: Neighly_52 Start: 38586, Stop: 38864, Start Num: 50
Candidate Starts for Neighly_52:
(14, 38385), (18, 38406), (Start: 50 @38586 has 72 MA's), (57, 38616), (58, 38622), (59, 38625), (75, 38739), (76, 38742), (89, 38817),

Gene: Nergal_52 Start: 37470, Stop: 37751, Start Num: 49
Candidate Starts for Nergal_52:
(Start: 49 @37470 has 49 MA's), (54, 37491), (59, 37512), (61, 37521), (76, 37629),

Gene: Nibb_57 Start: 39610, Stop: 39894, Start Num: 50
Candidate Starts for Nibb_57:
(35, 39553), (Start: 50 @39610 has 72 MA's), (55, 39634), (59, 39649), (75, 39763), (76, 39766), (80, 39790), (85, 39820), (91, 39850), (94, 39859), (96, 39871), (98, 39880),

Gene: NiebruSaylor_12 Start: 4656, Stop: 4943, Start Num: 48
Candidate Starts for NiebruSaylor_12:
(Start: 48 @4656 has 32 MA's), (82, 4860), (97, 4929),

Gene: Nikao_51 Start: 40358, Stop: 40645, Start Num: 49
Candidate Starts for Nikao_51:
(Start: 49 @40358 has 49 MA's), (71, 40487), (76, 40514), (87, 40580), (96, 40619),

Gene: Niklas_58 Start: 40169, Stop: 40456, Start Num: 49
Candidate Starts for Niklas_58:
(Start: 47 @40166 has 3 MA's), (Start: 49 @40169 has 49 MA's), (75, 40322), (76, 40325), (87, 40391), (94, 40418), (96, 40430), (98, 40439),

Gene: Nolwazi_62 Start: 39879, Stop: 40154, Start Num: 50

Candidate Starts for Nolwazi_62:
(Start: 50 @39879 has 72 MA's), (54, 39897), (76, 40035), (78, 40050), (87, 40101), (92, 40122), (97, 40146),

Gene: November_55 Start: 40159, Stop: 40449, Start Num: 49
Candidate Starts for November_55:
(Start: 49 @40159 has 49 MA's), (75, 40312), (76, 40315), (85, 40369),

Gene: Nutello_48 Start: 37745, Stop: 38032, Start Num: 49
Candidate Starts for Nutello_48:
(Start: 49 @37745 has 49 MA's), (71, 37874), (76, 37901), (87, 37967), (96, 38006),

Gene: OkiRoe_50 Start: 38535, Stop: 38813, Start Num: 50
Candidate Starts for OkiRoe_50:
(Start: 50 @38535 has 72 MA's), (57, 38565), (75, 38688), (76, 38691), (83, 38736), (94, 38784),

Gene: OmniCritical_59 Start: 39787, Stop: 40062, Start Num: 50
Candidate Starts for OmniCritical_59:
(Start: 50 @39787 has 72 MA's), (54, 39805), (76, 39943), (78, 39958), (87, 40009), (92, 40030), (97, 40054),

Gene: Omnicron_53 Start: 38139, Stop: 38417, Start Num: 50
Candidate Starts for Omnicron_53:
(14, 37938), (15, 37941), (34, 38073), (Start: 50 @38139 has 72 MA's), (57, 38169), (66, 38235), (76, 38295), (77, 38298), (94, 38388),

Gene: Oscar_59 Start: 40123, Stop: 40407, Start Num: 50
Candidate Starts for Oscar_59:
(24, 40015), (34, 40063), (35, 40066), (Start: 50 @40123 has 72 MA's), (76, 40279), (80, 40303), (94, 40372), (96, 40384), (98, 40393),

Gene: Padfoot_55 Start: 39814, Stop: 40092, Start Num: 51
Candidate Starts for Padfoot_55:
(Start: 51 @39814 has 85 MA's), (79, 39988), (82, 40009), (83, 40012), (97, 40078), (98, 40081),

Gene: Padpat_57 Start: 39496, Stop: 39774, Start Num: 51
Candidate Starts for Padpat_57:
(Start: 51 @39496 has 85 MA's), (79, 39670), (82, 39691), (83, 39694), (97, 39760), (98, 39763),

Gene: Paola_50 Start: 38533, Stop: 38811, Start Num: 50
Candidate Starts for Paola_50:
(Start: 50 @38533 has 72 MA's), (57, 38563), (75, 38686), (76, 38689), (83, 38734), (94, 38782),

Gene: Parada_45 Start: 33389, Stop: 33709, Start Num: 37
Candidate Starts for Parada_45:
(5, 33152), (Start: 36 @33386 has 1 MA's), (Start: 37 @33389 has 15 MA's), (52, 33455), (53, 33461), (56, 33476), (90, 33668),

Gene: Patt_57 Start: 39043, Stop: 39318, Start Num: 50
Candidate Starts for Patt_57:
(Start: 50 @39043 has 72 MA's), (54, 39061), (76, 39199), (78, 39214), (87, 39265), (92, 39286), (97, 39310),

Gene: Peanam_58 Start: 40127, Stop: 40414, Start Num: 49
Candidate Starts for Peanam_58:
(Start: 47 @40124 has 3 MA's), (Start: 49 @40127 has 49 MA's), (75, 40280), (76, 40283), (87, 40349), (94, 40376), (96, 40388), (98, 40397),

Gene: Peel_55 Start: 39619, Stop: 39897, Start Num: 51
Candidate Starts for Peel_55:
(Start: 51 @39619 has 85 MA's), (79, 39793), (82, 39814), (83, 39817), (97, 39883), (98, 39886),

Gene: Pharb_54 Start: 38890, Stop: 39177, Start Num: 49
Candidate Starts for Pharb_54:
(26, 38794), (29, 38803), (40, 38845), (Start: 49 @38890 has 49 MA's), (58, 38929), (64, 38980), (75, 39046), (76, 39049),

Gene: PhelpsODU_57 Start: 39094, Stop: 39384, Start Num: 49
Candidate Starts for PhelpsODU_57:
(42, 39073), (Start: 49 @39094 has 49 MA's), (90, 39331),

Gene: Phrank_59 Start: 39154, Stop: 39444, Start Num: 49
Candidate Starts for Phrank_59:
(42, 39133), (Start: 49 @39154 has 49 MA's), (90, 39391),

Gene: Piatt_55 Start: 39814, Stop: 40092, Start Num: 51
Candidate Starts for Piatt_55:
(Start: 51 @39814 has 85 MA's), (79, 39988), (82, 40009), (83, 40012), (97, 40078), (98, 40081),

Gene: Pimento_46 Start: 33040, Stop: 33360, Start Num: 37
Candidate Starts for Pimento_46:
(Start: 36 @33037 has 1 MA's), (Start: 37 @33040 has 15 MA's), (52, 33106), (53, 33112), (56, 33127), (90, 33319),

Gene: Pisa1_55 Start: 40475, Stop: 40753, Start Num: 51
Candidate Starts for Pisa1_55:
(Start: 51 @40475 has 85 MA's), (79, 40649), (82, 40670), (83, 40673), (87, 40694), (96, 40733), (97, 40739),

Gene: Pisa4_49 Start: 35844, Stop: 36122, Start Num: 51
Candidate Starts for Pisa4_49:
(Start: 51 @35844 has 85 MA's), (79, 36018), (82, 36039), (83, 36042), (87, 36063), (96, 36102), (97, 36108),

Gene: Pixie_55 Start: 39484, Stop: 39777, Start Num: 49
Candidate Starts for Pixie_55:
(Start: 47 @39481 has 3 MA's), (Start: 49 @39484 has 49 MA's), (64, 39574), (75, 39640), (76, 39643), (92, 39730),

Gene: Pokerus_54 Start: 39549, Stop: 39827, Start Num: 51
Candidate Starts for Pokerus_54:
(Start: 51 @39549 has 85 MA's), (79, 39723), (82, 39744), (83, 39747), (97, 39813), (98, 39816),

Gene: Prithvi_56 Start: 39702, Stop: 39980, Start Num: 51
Candidate Starts for Prithvi_56:

(Start: 51 @39702 has 85 MA's), (79, 39876), (82, 39897), (83, 39900), (87, 39921), (97, 39966), (98, 39969),

Gene: Psycho_50 Start: 37712, Stop: 37990, Start Num: 50
Candidate Starts for Psycho_50:
(14, 37511), (18, 37532), (Start: 50 @37712 has 72 MA's), (57, 37742), (58, 37748), (59, 37751), (75, 37865), (76, 37868), (89, 37943),

Gene: Qhanda_62 Start: 39815, Stop: 40090, Start Num: 50
Candidate Starts for Qhanda_62:
(Start: 50 @39815 has 72 MA's), (54, 39833), (76, 39971), (78, 39986), (87, 40037), (92, 40058), (97, 40082),

Gene: QuincyRose_54 Start: 39875, Stop: 40153, Start Num: 51
Candidate Starts for QuincyRose_54:
(Start: 51 @39875 has 85 MA's), (79, 40049), (82, 40070), (83, 40073), (97, 40139), (98, 40142),

Gene: REQ1_30 Start: 12128, Stop: 12460, Start Num: 39
Candidate Starts for REQ1_30:
(3, 11819), (11, 11975), (16, 11987), (27, 12074), (30, 12083), (32, 12098), (Start: 39 @12128 has 2 MA's), (82, 12380), (97, 12449), (98, 12452), (99, 12455),

Gene: Ramen_56 Start: 39501, Stop: 39779, Start Num: 51
Candidate Starts for Ramen_56:
(Start: 51 @39501 has 85 MA's), (79, 39675), (82, 39696), (83, 39699), (97, 39765), (98, 39768),

Gene: Rando14_52 Start: 36717, Stop: 36995, Start Num: 50
Candidate Starts for Rando14_52:
(34, 36651), (Start: 50 @36717 has 72 MA's), (59, 36756), (75, 36870), (76, 36873), (94, 36966),

Gene: Rapunzel97_56 Start: 39497, Stop: 39775, Start Num: 51
Candidate Starts for Rapunzel97_56:
(Start: 51 @39497 has 85 MA's), (79, 39671), (82, 39692), (83, 39695), (97, 39761), (98, 39764),

Gene: RegnumDei_54 Start: 37773, Stop: 38111, Start Num: 38
Candidate Starts for RegnumDei_54:
(19, 37656), (31, 37737), (Start: 38 @37773 has 3 MA's), (61, 37875), (81, 38004),

Gene: Reptar3000_58 Start: 39031, Stop: 39306, Start Num: 50
Candidate Starts for Reptar3000_58:
(Start: 50 @39031 has 72 MA's), (54, 39049), (76, 39187), (78, 39202), (87, 39253), (92, 39274), (97, 39298),

Gene: Reyja_37 Start: 27530, Stop: 27823, Start Num: 46
Candidate Starts for Reyja_37:
(21, 27392), (Start: 46 @27530 has 7 MA's), (58, 27578), (75, 27701), (90, 27785), (91, 27788),

Gene: Richo_58 Start: 40108, Stop: 40395, Start Num: 49
Candidate Starts for Richo_58:
(Start: 47 @40105 has 3 MA's), (Start: 49 @40108 has 49 MA's), (75, 40261), (76, 40264), (87, 40330), (94, 40357), (96, 40369), (98, 40378),

Gene: Rosmarinus_55 Start: 39605, Stop: 39883, Start Num: 51

Candidate Starts for Rosmarinus_55:
(Start: 51 @39605 has 85 MA's), (79, 39779), (82, 39800), (83, 39803), (97, 39869), (98, 39872),

Gene: Ruthiejr_61 Start: 39849, Stop: 40124, Start Num: 50
Candidate Starts for Ruthiejr_61:
(Start: 50 @39849 has 72 MA's), (54, 39867), (76, 40005), (78, 40020), (87, 40071), (92, 40092), (97, 40116),

Gene: Ryadel_14 Start: 5250, Stop: 5537, Start Num: 48
Candidate Starts for Ryadel_14:
(Start: 48 @5250 has 32 MA's), (82, 5454),

Gene: SFuller_59 Start: 40775, Stop: 41101, Start Num: 39
Candidate Starts for SFuller_59:
(27, 40739), (Start: 39 @40775 has 2 MA's), (93, 41069), (97, 41090), (98, 41093), (99, 41096),

Gene: SamScheppers_58 Start: 40278, Stop: 40553, Start Num: 50
Candidate Starts for SamScheppers_58:
(Start: 50 @40278 has 72 MA's), (54, 40296), (76, 40434), (78, 40449), (87, 40500), (92, 40521), (97, 40545),

Gene: SamuelLPlaqson_56 Start: 40396, Stop: 40674, Start Num: 51
Candidate Starts for SamuelLPlaqson_56:
(Start: 51 @40396 has 85 MA's), (82, 40591), (83, 40594), (87, 40615), (96, 40654), (97, 40660),

Gene: Santhid_36 Start: 25893, Stop: 26186, Start Num: 46
Candidate Starts for Santhid_36:
(21, 25755), (Start: 46 @25893 has 7 MA's), (58, 25941), (90, 26148), (91, 26151),

Gene: Scarlett_59 Start: 40118, Stop: 40402, Start Num: 50
Candidate Starts for Scarlett_59:
(24, 40010), (34, 40058), (35, 40061), (Start: 50 @40118 has 72 MA's), (76, 40274), (80, 40298), (82, 40316), (94, 40367), (96, 40379), (98, 40388),

Gene: SchoolBus_11 Start: 4468, Stop: 4755, Start Num: 48
Candidate Starts for SchoolBus_11:
(Start: 48 @4468 has 32 MA's), (82, 4672),

Gene: Schuy_12 Start: 4663, Stop: 4950, Start Num: 48
Candidate Starts for Schuy_12:
(Start: 48 @4663 has 32 MA's), (82, 4867), (97, 4936),

Gene: SgtBeansprout_48 Start: 37745, Stop: 38032, Start Num: 49
Candidate Starts for SgtBeansprout_48:
(Start: 49 @37745 has 49 MA's), (71, 37874), (76, 37901), (87, 37967), (96, 38006),

Gene: Shadow1_61 Start: 40001, Stop: 40291, Start Num: 49
Candidate Starts for Shadow1_61:
(Start: 49 @40001 has 49 MA's), (74, 40151), (76, 40157), (90, 40238),

Gene: Shagrat_55 Start: 38233, Stop: 38571, Start Num: 38
Candidate Starts for Shagrat_55:

(19, 38116), (21, 38143), (31, 38197), (Start: 38 @38233 has 3 MA's), (62, 38356), (73, 38419), (98, 38551),

Gene: Shaobing_58 Start: 40145, Stop: 40432, Start Num: 49
Candidate Starts for Shaobing_58:
(Start: 47 @40142 has 3 MA's), (Start: 49 @40145 has 49 MA's), (75, 40298), (76, 40301), (87, 40367), (94, 40394), (96, 40406), (98, 40415),

Gene: ShedlockHolmes_57 Start: 40003, Stop: 40296, Start Num: 49
Candidate Starts for ShedlockHolmes_57:
(13, 39811), (24, 39898), (35, 39949), (Start: 49 @40003 has 49 MA's), (64, 40093), (75, 40159), (76, 40162),

Gene: ShiaSurprise_56 Start: 39814, Stop: 40092, Start Num: 51
Candidate Starts for ShiaSurprise_56:
(Start: 51 @39814 has 85 MA's), (79, 39988), (82, 40009), (83, 40012), (97, 40078), (98, 40081),

Gene: Shida_12 Start: 4722, Stop: 5009, Start Num: 48
Candidate Starts for Shida_12:
(Start: 48 @4722 has 32 MA's), (82, 4926),

Gene: SirPhilip_57 Start: 40407, Stop: 40697, Start Num: 49
Candidate Starts for SirPhilip_57:
(23, 40281), (Start: 49 @40407 has 49 MA's), (59, 40446), (60, 40449), (75, 40560), (76, 40563), (94, 40656), (96, 40668),

Gene: Slarp_60 Start: 39806, Stop: 40081, Start Num: 50
Candidate Starts for Slarp_60:
(Start: 50 @39806 has 72 MA's), (54, 39824), (76, 39962), (78, 39977), (87, 40028), (92, 40049), (97, 40073),

Gene: Slimphazie_55 Start: 39497, Stop: 39775, Start Num: 51
Candidate Starts for Slimphazie_55:
(Start: 51 @39497 has 85 MA's), (79, 39671), (82, 39692), (83, 39695), (97, 39761), (98, 39764),

Gene: Smooch_13 Start: 4986, Stop: 5273, Start Num: 48
Candidate Starts for Smooch_13:
(Start: 48 @4986 has 32 MA's), (82, 5190),

Gene: SoSeph_50 Start: 38708, Stop: 38986, Start Num: 50
Candidate Starts for SoSeph_50:
(34, 38642), (Start: 50 @38708 has 72 MA's), (57, 38738), (75, 38861), (76, 38864), (83, 38909), (94, 38957),

Gene: Spock_55 Start: 39618, Stop: 39896, Start Num: 51
Candidate Starts for Spock_55:
(Start: 51 @39618 has 85 MA's), (79, 39792), (82, 39813), (83, 39816), (97, 39882), (98, 39885),

Gene: Stinson_56 Start: 40002, Stop: 40280, Start Num: 51
Candidate Starts for Stinson_56:
(Start: 51 @40002 has 85 MA's), (79, 40176), (82, 40197), (83, 40200), (97, 40266), (98, 40269),

Gene: Strobilo_58 Start: 41532, Stop: 41810, Start Num: 50

Candidate Starts for Strobilo_58:
(Start: 50 @41532 has 72 MA's), (75, 41685), (76, 41688), (90, 41769), (92, 41775),

Gene: Sulley_55 Start: 39667, Stop: 39945, Start Num: 51
Candidate Starts for Sulley_55:
(Start: 51 @39667 has 85 MA's), (79, 39841), (82, 39862), (83, 39865), (97, 39931), (98, 39934),

Gene: Sunflower1121_62 Start: 40147, Stop: 40437, Start Num: 49
Candidate Starts for Sunflower1121_62:
(Start: 49 @40147 has 49 MA's), (74, 40297), (76, 40303), (90, 40384),

Gene: SussRoloMann_46 Start: 33389, Stop: 33709, Start Num: 37
Candidate Starts for SussRoloMann_46:
(5, 33152), (Start: 36 @33386 has 1 MA's), (Start: 37 @33389 has 15 MA's), (52, 33455), (53, 33461), (56, 33476), (90, 33668),

Gene: Syra333_61 Start: 40168, Stop: 40458, Start Num: 49
Candidate Starts for Syra333_61:
(Start: 49 @40168 has 49 MA's), (74, 40318), (76, 40324), (90, 40405),

Gene: TBond007_54 Start: 39480, Stop: 39776, Start Num: 47
Candidate Starts for TBond007_54:
(Start: 47 @39480 has 3 MA's), (Start: 49 @39483 has 49 MA's), (64, 39573), (75, 39639), (76, 39642), (92, 39729),

Gene: TClif_58 Start: 39824, Stop: 40114, Start Num: 49
Candidate Starts for TClif_58:
(8, 39605), (10, 39620), (17, 39641), (Start: 49 @39824 has 49 MA's), (76, 39980), (90, 40061),

Gene: TM4_54 Start: 35905, Stop: 36183, Start Num: 50
Candidate Starts for TM4_54:
(Start: 50 @35905 has 72 MA's), (75, 36058), (76, 36061), (90, 36142), (92, 36148),

Gene: TPA4_45 Start: 35234, Stop: 35554, Start Num: 37
Candidate Starts for TPA4_45:
(Start: 37 @35234 has 15 MA's), (63, 35363), (76, 35420), (86, 35477), (87, 35489), (95, 35519),

Gene: Tachez_55 Start: 39462, Stop: 39740, Start Num: 51
Candidate Starts for Tachez_55:
(Start: 51 @39462 has 85 MA's), (79, 39636), (82, 39657), (83, 39660), (97, 39726), (98, 39729),

Gene: TaiwanKao_57 Start: 39764, Stop: 40042, Start Num: 51
Candidate Starts for TaiwanKao_57:
(Start: 51 @39764 has 85 MA's), (79, 39938), (82, 39959), (83, 39962), (87, 39983), (97, 40028), (98, 40031),

Gene: Taquito_59 Start: 40041, Stop: 40316, Start Num: 50
Candidate Starts for Taquito_59:
(Start: 50 @40041 has 72 MA's), (54, 40059), (76, 40197), (78, 40212), (87, 40263), (92, 40284), (97, 40308),

Gene: Tarzan_37 Start: 27063, Stop: 27356, Start Num: 46
Candidate Starts for Tarzan_37:

(21, 26925), (Start: 46 @27063 has 7 MA's), (58, 27111), (75, 27234), (90, 27318), (91, 27321),

Gene: Teejan_50 Start: 40358, Stop: 40645, Start Num: 49
Candidate Starts for Teejan_50:
(Start: 49 @40358 has 49 MA's), (71, 40487), (76, 40514), (87, 40580), (96, 40619),

Gene: TelAviv_11 Start: 4465, Stop: 4752, Start Num: 48
Candidate Starts for TelAviv_11:
(Start: 48 @4465 has 32 MA's), (82, 4669),

Gene: Thyatira_53 Start: 40869, Stop: 41147, Start Num: 50
Candidate Starts for Thyatira_53:
(34, 40803), (Start: 50 @40869 has 72 MA's), (57, 40899), (75, 41022), (76, 41025), (83, 41070), (84, 41076), (94, 41118),

Gene: Tierra_59 Start: 39965, Stop: 40255, Start Num: 49
Candidate Starts for Tierra_59:
(42, 39944), (Start: 49 @39965 has 49 MA's), (90, 40202),

Gene: Tigress9_61 Start: 40156, Stop: 40446, Start Num: 49
Candidate Starts for Tigress9_61:
(44, 40141), (Start: 49 @40156 has 49 MA's), (74, 40306), (76, 40312), (90, 40393),

Gene: TingHuaYa_56 Start: 38512, Stop: 38793, Start Num: 50
Candidate Starts for TingHuaYa_56:
(Start: 50 @38512 has 72 MA's), (69, 38623), (79, 38689), (82, 38710), (83, 38713), (97, 38779),

Gene: TiniBug_56 Start: 40392, Stop: 40670, Start Num: 51
Candidate Starts for TiniBug_56:
(Start: 51 @40392 has 85 MA's), (82, 40587), (83, 40590), (87, 40611), (96, 40650), (97, 40656),

Gene: TinyDot_41 Start: 29174, Stop: 29467, Start Num: 45
Candidate Starts for TinyDot_41:
(34, 29123), (Start: 45 @29174 has 1 MA's), (65, 29279), (70, 29303), (83, 29390), (90, 29426),

Gene: Tiri_56 Start: 39789, Stop: 40067, Start Num: 51
Candidate Starts for Tiri_56:
(Start: 51 @39789 has 85 MA's), (79, 39963), (82, 39984), (83, 39987), (97, 40053), (98, 40056),

Gene: Topper_55 Start: 39617, Stop: 39895, Start Num: 51
Candidate Starts for Topper_55:
(Start: 51 @39617 has 85 MA's), (79, 39791), (82, 39812), (83, 39815), (97, 39881), (98, 39884),

Gene: Torres_51 Start: 40359, Stop: 40646, Start Num: 49
Candidate Starts for Torres_51:
(Start: 49 @40359 has 49 MA's), (71, 40488), (76, 40515), (87, 40581), (96, 40620),

Gene: TreyKay_56 Start: 39702, Stop: 39980, Start Num: 51
Candidate Starts for TreyKay_56:
(Start: 51 @39702 has 85 MA's), (79, 39876), (82, 39897), (83, 39900), (87, 39921), (97, 39966), (98, 39969),

Gene: TribleTrouble_54 Start: 39704, Stop: 39988, Start Num: 49

Candidate Starts for TribleTrouble_54:
(Start: 49 @39704 has 49 MA's), (54, 39725), (75, 39860), (76, 39863), (88, 39932), (96, 39968),

Gene: Trice_48 Start: 37746, Stop: 38033, Start Num: 49
Candidate Starts for Trice_48:
(Start: 49 @37746 has 49 MA's), (71, 37875), (76, 37902), (87, 37968), (96, 38007),

Gene: TruffulaTree_55 Start: 39493, Stop: 39771, Start Num: 51
Candidate Starts for TruffulaTree_55:
(Start: 51 @39493 has 85 MA's), (79, 39667), (82, 39688), (83, 39691), (97, 39757), (98, 39760),

Gene: Twitch_55 Start: 39619, Stop: 39897, Start Num: 51
Candidate Starts for Twitch_55:
(Start: 51 @39619 has 85 MA's), (79, 39793), (82, 39814), (83, 39817), (97, 39883), (98, 39886),

Gene: Unicorn_57 Start: 39094, Stop: 39384, Start Num: 49
Candidate Starts for Unicorn_57:
(42, 39073), (Start: 49 @39094 has 49 MA's), (90, 39331),

Gene: Urkel_56 Start: 40396, Stop: 40674, Start Num: 51
Candidate Starts for Urkel_56:
(Start: 51 @40396 has 85 MA's), (82, 40591), (83, 40594), (87, 40615), (96, 40654), (97, 40660),

Gene: Vagabond_12 Start: 4722, Stop: 5009, Start Num: 48
Candidate Starts for Vagabond_12:
(Start: 48 @4722 has 32 MA's), (82, 4926),

Gene: Validus_60 Start: 40404, Stop: 40694, Start Num: 49
Candidate Starts for Validus_60:
(20, 40248), (Start: 49 @40404 has 49 MA's), (75, 40557), (76, 40560), (87, 40626), (94, 40653), (96, 40665), (97, 40671),

Gene: Veliki_56 Start: 39479, Stop: 39757, Start Num: 51
Candidate Starts for Veliki_56:
(Start: 51 @39479 has 85 MA's), (79, 39653), (82, 39674), (83, 39677), (97, 39743), (98, 39746),

Gene: ViviJ_50 Start: 37398, Stop: 37676, Start Num: 50
Candidate Starts for ViviJ_50:
(34, 37332), (Start: 50 @37398 has 72 MA's), (57, 37428), (59, 37437), (75, 37551), (76, 37554),

Gene: Vorrps_12 Start: 4656, Stop: 4943, Start Num: 48
Candidate Starts for Vorrps_12:
(Start: 48 @4656 has 32 MA's), (82, 4860), (97, 4929),

Gene: Waterfoul_51 Start: 38770, Stop: 39048, Start Num: 50
Candidate Starts for Waterfoul_51:
(34, 38704), (Start: 50 @38770 has 72 MA's), (57, 38800), (75, 38923), (76, 38926), (83, 38971), (94, 39019),

Gene: WheatThin_45 Start: 33389, Stop: 33709, Start Num: 37
Candidate Starts for WheatThin_45:
(5, 33152), (Start: 36 @33386 has 1 MA's), (Start: 37 @33389 has 15 MA's), (52, 33455), (53, 33461), (56, 33476), (90, 33668),

Gene: Wildflower_12 Start: 4682, Stop: 4969, Start Num: 48
Candidate Starts for Wildflower_12:
(Start: 48 @4682 has 32 MA's), (82, 4886),

Gene: Winget_12 Start: 4721, Stop: 5008, Start Num: 48
Candidate Starts for Winget_12:
(Start: 48 @4721 has 32 MA's), (82, 4925),

Gene: Wintermute_60 Start: 40036, Stop: 40311, Start Num: 50
Candidate Starts for Wintermute_60:
(Start: 50 @40036 has 72 MA's), (54, 40054), (76, 40192), (78, 40207), (87, 40258), (92, 40279), (97, 40303),

Gene: Wogge42_12 Start: 4811, Stop: 5098, Start Num: 48
Candidate Starts for Wogge42_12:
(Start: 48 @4811 has 32 MA's), (82, 5015),

Gene: Ximenita_62 Start: 40165, Stop: 40455, Start Num: 49
Candidate Starts for Ximenita_62:
(Start: 49 @40165 has 49 MA's), (74, 40315), (76, 40321), (90, 40402),

Gene: Y10_59 Start: 39964, Stop: 40239, Start Num: 50
Candidate Starts for Y10_59:
(Start: 50 @39964 has 72 MA's), (54, 39982), (76, 40120), (78, 40135), (87, 40186), (92, 40207), (97, 40231),

Gene: Y2_59 Start: 39964, Stop: 40239, Start Num: 50
Candidate Starts for Y2_59:
(Start: 50 @39964 has 72 MA's), (54, 39982), (76, 40120), (78, 40135), (87, 40186), (92, 40207), (97, 40231),

Gene: YasnayaPolyana_60 Start: 39889, Stop: 40164, Start Num: 50
Candidate Starts for YasnayaPolyana_60:
(Start: 50 @39889 has 72 MA's), (54, 39907), (76, 40045), (78, 40060), (87, 40111), (92, 40132), (97, 40156),

Gene: YoureAdopted_54 Start: 39617, Stop: 39895, Start Num: 51
Candidate Starts for YoureAdopted_54:
(Start: 51 @39617 has 85 MA's), (79, 39791), (82, 39812), (83, 39815), (97, 39881), (98, 39884),

Gene: YoyoKar_12 Start: 4469, Stop: 4756, Start Num: 48
Candidate Starts for YoyoKar_12:
(Start: 48 @4469 has 32 MA's), (82, 4673), (97, 4742),

Gene: Yuna_61 Start: 40952, Stop: 41245, Start Num: 50
Candidate Starts for Yuna_61:
(Start: 50 @40952 has 72 MA's), (90, 41189), (97, 41219),

Gene: YungJamal_13 Start: 5022, Stop: 5309, Start Num: 48
Candidate Starts for YungJamal_13:
(Start: 48 @5022 has 32 MA's), (82, 5226),

Gene: Yunkel11_57 Start: 38995, Stop: 39276, Start Num: 50
Candidate Starts for Yunkel11_57:
(Start: 33 @38932 has 1 MA's), (Start: 39 @38953 has 2 MA's), (Start: 50 @38995 has 72 MA's), (79, 39172), (82, 39193), (83, 39196), (97, 39262),

Gene: Zabiza_50 Start: 35804, Stop: 36082, Start Num: 51
Candidate Starts for Zabiza_50:
(Start: 51 @35804 has 85 MA's), (79, 35978), (82, 35999), (83, 36002), (97, 36068), (98, 36071),

Gene: Zakhe101_13 Start: 5034, Stop: 5321, Start Num: 48
Candidate Starts for Zakhe101_13:
(Start: 48 @5034 has 32 MA's), (82, 5238),

Gene: Zavala_57 Start: 39778, Stop: 40056, Start Num: 51
Candidate Starts for Zavala_57:
(Start: 51 @39778 has 85 MA's), (79, 39952), (82, 39973), (83, 39976), (97, 40042), (98, 40045),

Gene: Zebo_11 Start: 4468, Stop: 4755, Start Num: 48
Candidate Starts for Zebo_11:
(Start: 48 @4468 has 32 MA's), (82, 4672),

Gene: ZoeJ_57 Start: 40928, Stop: 41206, Start Num: 50
Candidate Starts for ZoeJ_57:
(Start: 50 @40928 has 72 MA's), (75, 41081), (76, 41084), (90, 41165), (92, 41171),