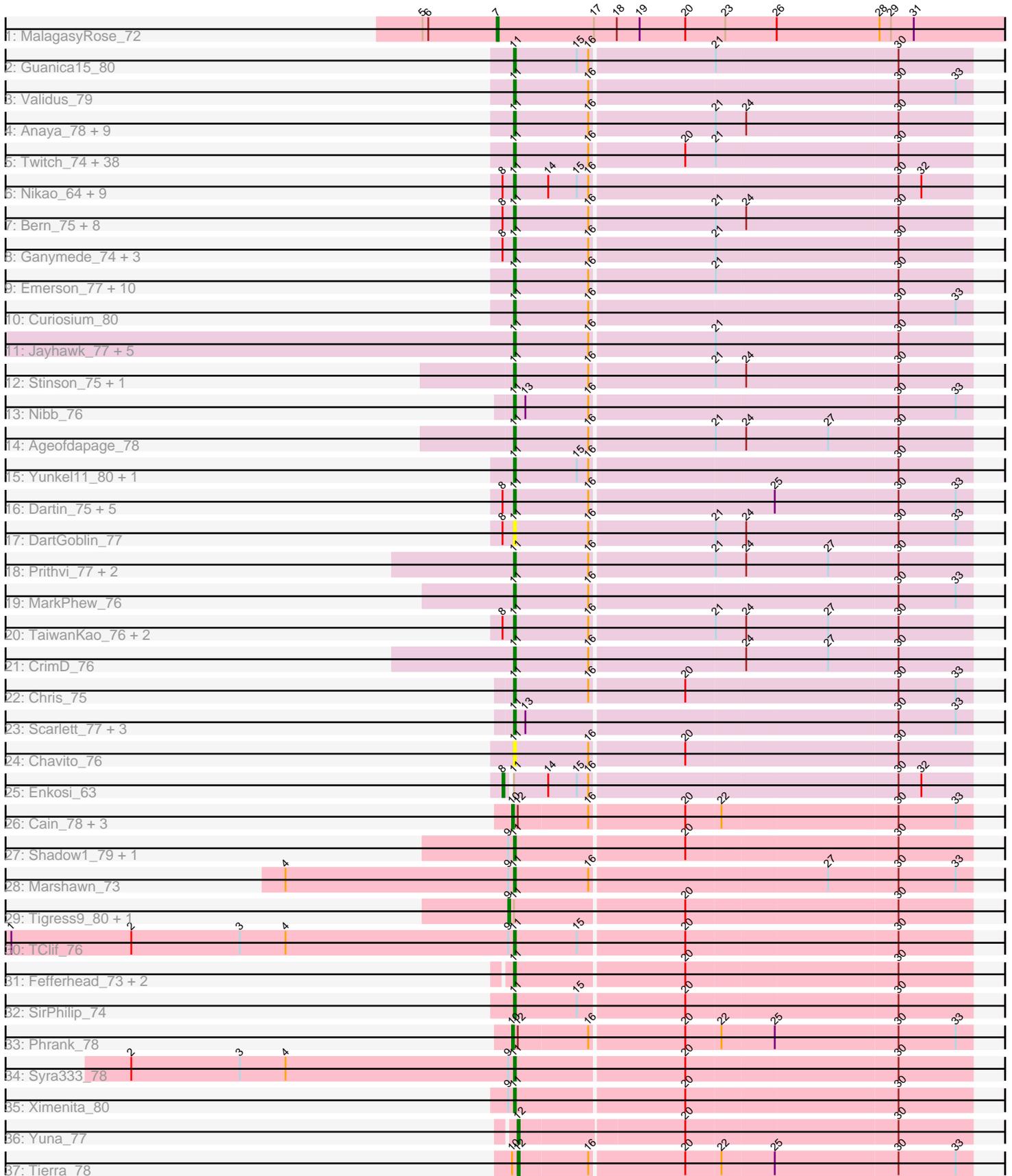# Pham 283582

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 283582 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283582 has 140 members, 14 are drafts.

Phages represented in each track:
• Track 1 : MalagasyRose_72
• Track 2 : Guanica15_80
• Track 3 : Validus_79
• Track 4 : Anaya_78, Urkel_74, DrHayes_74, Pisa4_66, SamuelLPlaqson_74, Pisa1_72, Devera_82, Dole_79, Illumine_80, Anma_74
• Track 5 : Twitch_74, Jeckyll_74, AlishaPH_73, HedwigODU_74, Atiba_75, Belladonna_74, Zabiza_70, CaseJules_76, Pokerus_75, Adephagia_73, Blizzard_74, Rosmarinus_74, Lunahalos_74, Boiiii_74, Hyperbowlee_73, Durfee_74, Homura_73, Piatt_73, CallaLilly_74, Spock_74, Jarvi_74, ShiaSurprise_75, BEEST_74, Padfoot_74, Joy99_75, Inky_74, Asayake_74, Capricorn_74, Peel_74, CREW_73, Geraldini_78, ActinUp_75, Llorens_74, Topper_74, Tachez_74, BGlluviae_74, Dalmuri_74, TingHuaYa_77, BaghaKamala_73
• Track 6 : Nikao_64, LilPharaoh_62, SgtBeansprout_62, Torres_64, Nutello_61, Biglebops_61, Teejan_63, Amelie_61, Trice_61, Mdavu_62
• Track 7 : Bern_75, MeaningOfLife_76, Clipper_79, TiniBug_74, Bella96_75, Sulley_73, Angelica_73, MacKat_71, Adonis_74
• Track 8 : Ganymede_74, Beezoo_77, YoureAdopted_74, QuincyRose_72
• Track 9 : Emerson_77, Veliki_75, Padpat_78, Apocalypse_77, Deby_74, JAWS_73, Tiri_74, CheetoDust_74, Ramen_75, Zavala_77, Mynx_76
• Track 10 : Curiosium_80
• Track 11 : Jayhawk_77, Rapunzel97_77, BarrelRoll_75, TruffulaTree_76, LastHope_80, Slimphazie_76
• Track 12 : Stinson_75, LaterM_74
• Track 13 : Nibb_76
• Track 14 : Ageofdapage_78
• Track 15 : Yunkel11_80, Efra2_81
• Track 16 : Dartin_75, Shaobing_75, Niklas_76, McMater_75, Peanam_76, Richo_75
• Track 17 : DartGoblin_77
• Track 18 : Prithvi_77, LindNT_73, TreyKay_77
• Track 19 : MarkPhew_76
• Track 20 : TaiwanKao_76, Murucutumbu_75, Megsy_76
• Track 21 : CrimD_76
• Track 22 : Chris_75
• Track 23 : Scarlett_77, LeMond_76, KiSi_77, Oscar_76
• Track 24 : Chavito_76
• Track 25 : Enkosi_63
• Track 26 : Cain_78, PhelpsODU_77, Unicorn_77, Bryler_78

- Track 27 : Shadow1_79, Sunflower1121_80
- Track 28 : Marshawn_73
- Track 29 : Tigress9_80, Krueger_79
- Track 30 : TClif_76
- Track 31 : Fefferhead_73, Lavahound_71, Amgine_72
- Track 32 : SirPhilip_74
- Track 33 : Phrank_78
- Track 34 : Syra333_78
- Track 35 : Ximenita_80
- Track 36 : Yuna_77
- Track 37 : Tierra_78

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

The start number called the most often in the published annotations is 11, it was called in 116 of the 126 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- ActinUp_75, Adephagia_73, Adonis_74, Ageofdapage_78, AlishaPH_73, Amelie_61, Amgine_72, Anaya_78, Angelica_73, Anma_74, Apocalypse_77, Asayake_74, Atiba_75, BEEST_74, BGlluviae_74, BaghaKamala_73, BarrelRoll_75, Beezoo_77, Bella96_75, Belladonna_74, Bern_75, Biglebops_61, Blizzard_74, Boiiii_74, CREW_73, CallaLilly_74, Capricorn_74, CaseJules_76, Chavito_76, CheetoDust_74, Chris_75, Clipper_79, CrimD_76, Curiosium_80, Dalmuri_74, DartGoblin_77, Dartin_75, Deby_74, Devera_82, Dole_79, DrHayes_74, Durfee_74, Efra2_81, Emerson_77, Fefferhead_73, Ganymede_74, Geraldini_78, Guanica15_80, HedwigODU_74, Homura_73, Hyperbowlee_73, Illumine_80, Inky_74, JAWS_73, Jarvi_74, Jayhawk_77, Jeckyll_74, Joy99_75, KiSi_77, LastHope_80, LaterM_74, Lavahound_71, LeMond_76, LilPharaoh_62, LindNT_73, Llorens_74, Lunahalos_74, MacKat_71, MarkPhew_76, Marshawn_73, McMater_75, Mdavu_62, MeaningOfLife_76, Megsy_76, Murucutumbu_75, Mynx_76, Nibb_76, Nikao_64, Niklas_76, Nutello_61, Oscar_76, Padfoot_74, Padpat_78, Peanam_76, Peel_74, Piatt_73, Pisa1_72, Pisa4_66, Pokerus_75, Prithvi_77, QuincyRose_72, Ramen_75, Rapunzel97_77, Richo_75, Rosmarinus_74, SamuelLPlaqson_74, Scarlett_77, SgtBeansprout_62, Shadow1_79, Shaobing_75, ShiaSurprise_75, SirPhilip_74, Slimphazie_76, Spock_74, Stinson_75, Sulley_73, Sunflower1121_80, Syra333_78, TClif_76, Tachez_74, TaiwanKao_76, Teejan_63, TingHuaYa_77, TiniBug_74, Tiri_74, Topper_74, Torres_64, TreyKay_77, Trice_61, TruffulaTree_76, Twitch_74, Urkel_74, Validus_79, Veliki_75, Ximenita_80, YoureAdopted_74, Yunkel11_80, Zabiza_70, Zavala_77,

Genes that have the "Most Annotated" start but do not call it:
- Enkosi_63, Krueger_79, Tigress9_80,

Genes that do not have the "Most Annotated" start:
- Bryler_78, Cain_78, MalagasyRose_72, PhelpsODU_77, Phrank_78, Tierra_78, Unicorn_77, Yuna_77,

Summary by start number:

Start 7:
• Found in 1 of 140 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 126
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MalagasyRose_72 (AG),

Start 8:
• Found in 34 of 140 (24.3%) of genes in pham
• Manual Annotations of this start: 1 of 126
• Called 2.9% of time when present
• Phage (with cluster) where this start called: Enkosi_63 (K1),

Start 9:
• Found in 8 of 140 (5.7%) of genes in pham
• Manual Annotations of this start: 1 of 126
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Krueger_79 (K6), Tigress9_80 (K6),

Start 10:
• Found in 6 of 140 (4.3%) of genes in pham
• Manual Annotations of this start: 5 of 126
• Called 83.3% of time when present
• Phage (with cluster) where this start called: Bryler_78 (K6), Cain_78 (K6), PhelpsODU_77 (K6), Phrank_78 (K6), Unicorn_77 (K6),

Start 11:
• Found in 132 of 140 (94.3%) of genes in pham
• Manual Annotations of this start: 116 of 126
• Called 97.7% of time when present
• Phage (with cluster) where this start called: ActinUp_75 (K1), Adephagia_73 (K1), Adonis_74 (K1), Ageofdapage_78 (K1), AlishaPH_73 (K1), Amelie_61 (K1), Amgine_72 (K6), Anaya_78 (K1), Angelica_73 (K1), Anma_74 (K1), Apocalypse_77 (K1), Asayake_74 (K1), Atiba_75 (K1), BEEST_74 (K1), BGlluviae_74 (K1), BaghaKamala_73 (K1), BarrelRoll_75 (K1), Beezoo_77 (K1), Bella96_75 (K1), Belladonna_74 (K1), Bern_75 (K1), Biglebops_61 (K1), Blizzard_74 (K1), Boiiii_74 (K1), CREW_73 (K1), CallaLilly_74 (K1), Capricorn_74 (K1), CaseJules_76 (K1), Chavito_76 (K1), CheetoDust_74 (K1), Chris_75 (K1), Clipper_79 (K1), CrimD_76 (K1), Curiosium_80 (K1), Dalmuri_74 (K1), DartGoblin_77 (K1), Dartin_75 (K1), Deby_74 (K1), Devera_82 (K1), Dole_79 (K1), DrHayes_74 (K1), Durfee_74 (K1), Efra2_81 (K1), Emerson_77 (K1), Fefferhead_73 (K6), Ganymede_74 (K1), Geraldini_78 (K1), Guanica15_80 (K1), HedwigODU_74 (K1), Homura_73 (K1), Hyperbowlee_73 (K1), Illumine_80 (K1), Inky_74 (K1), JAWS_73 (K1), Jarvi_74 (K1), Jayhawk_77 (K1), Jeckyll_74 (K1), Joy99_75 (K1), KiSi_77 (K1), LastHope_80 (K1), LaterM_74 (K1), Lavahound_71 (K6), LeMond_76 (K1), LilPharaoh_62 (K1), LindNT_73 (K1), Llorens_74 (K1), Lunahalos_74 (K1), MacKat_71 (K1), MarkPhew_76 (K1), Marshawn_73 (K6), McMater_75 (K1), Mdavu_62 (K1), MeaningOfLife_76 (K1), Megsy_76 (K1), Murucutumbu_75 (K1), Mynx_76 (K1), Nibb_76 (K1), Nikao_64 (K1), Niklas_76 (K1), Nutello_61 (K1), Oscar_76 (K1), Padfoot_74 (K1), Padpat_78 (K1), Peanam_76 (K1), Peel_74 (K1), Piatt_73 (K1), Pisa1_72 (K1), Pisa4_66 (K1), Pokerus_75 (K1), Prithvi_77 (K1), QuincyRose_72 (K1), Ramen_75 (K1), Rapunzel97_77 (K1), Richo_75 (K1), Rosmarinus_74 (K1), SamuelLPlaqson_74 (K1), Scarlett_77 (K1), SgtBeansprout_62 (K1), Shadow1_79 (K6), Shaobing_75 (K1), ShiaSurprise_75 (K1), SirPhilip_74 (K6), Slimphazie_76

(K1), Spock_74 (K1), Stinson_75 (K1), Sulley_73 (K1), Sunflower1121_80 (K6), Syra333_78 (K6), TClif_76 (K6), Tachez_74 (K1), TaiwanKao_76 (K1), Teejan_63 (K1), TingHuaYa_77 (K1), TiniBug_74 (K1), Tiri_74 (K1), Topper_74 (K1), Torres_64 (K1), TreyKay_77 (K1), Trice_61 (K1), TruffulaTree_76 (K1), Twitch_74 (K1), Urkel_74 (K1), Validus_79 (K1), Veliki_75 (K1), Ximenita_80 (K6), YoureAdopted_74 (K1), Yunkel11_80 (K1), Zabiza_70 (K1), Zavala_77 (K1),

Start 12:
• Found in 7 of 140 (5.0%) of genes in pham
• Manual Annotations of this start: 2 of 126
• Called 28.6% of time when present
• Phage (with cluster) where this start called: Tierra_78 (K6), Yuna_77 (K6),

Summary by clusters:

There are 3 clusters represented in this pham: K1, K6, AG,

Info for manual annotations of cluster AG:
•Start number 7 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster K1:
•Start number 8 was manually annotated 1 time for cluster K1.
•Start number 11 was manually annotated 107 times for cluster K1.

Info for manual annotations of cluster K6:
•Start number 9 was manually annotated 1 time for cluster K6.
•Start number 10 was manually annotated 5 times for cluster K6.
•Start number 11 was manually annotated 9 times for cluster K6.
•Start number 12 was manually annotated 2 times for cluster K6.

Gene Information:
Gene: ActinUp_75 Start: 49931, Stop: 50164, Start Num: 11
Candidate Starts for ActinUp_75:
(Start: 11 @49931 has 116 MA's), (16, 49970), (20, 50018), (21, 50033), (30, 50126),

Gene: Adephagia_73 Start: 49768, Stop: 50001, Start Num: 11
Candidate Starts for Adephagia_73:
(Start: 11 @49768 has 116 MA's), (16, 49807), (20, 49855), (21, 49870), (30, 49963),

Gene: Adonis_74 Start: 50203, Stop: 50436, Start Num: 11
Candidate Starts for Adonis_74:
(Start: 8 @50197 has 1 MA's), (Start: 11 @50203 has 116 MA's), (16, 50242), (21, 50305), (24, 50320), (30, 50398),

Gene: Ageofdapage_78 Start: 51128, Stop: 51361, Start Num: 11
Candidate Starts for Ageofdapage_78:
(Start: 11 @51128 has 116 MA's), (16, 51167), (21, 51230), (24, 51245), (27, 51287), (30, 51323),

Gene: AlishaPH_73 Start: 50029, Stop: 50262, Start Num: 11
Candidate Starts for AlishaPH_73:

(Start: 11 @50029 has 116 MA's), (16, 50068), (20, 50116), (21, 50131), (30, 50224),

Gene: Amelie_61 Start: 46926, Stop: 47159, Start Num: 11
Candidate Starts for Amelie_61:
(Start: 8 @46923 has 1 MA's), (Start: 11 @46926 has 116 MA's), (14, 46944), (15, 46959), (16, 46965), (30, 47121), (32, 47133),

Gene: Amgine_72 Start: 50438, Stop: 50671, Start Num: 11
Candidate Starts for Amgine_72:
(Start: 11 @50438 has 116 MA's), (20, 50525), (30, 50633),

Gene: Anaya_78 Start: 50826, Stop: 51059, Start Num: 11
Candidate Starts for Anaya_78:
(Start: 11 @50826 has 116 MA's), (16, 50865), (21, 50928), (24, 50943), (30, 51021),

Gene: Angelica_73 Start: 49888, Stop: 50121, Start Num: 11
Candidate Starts for Angelica_73:
(Start: 8 @49882 has 1 MA's), (Start: 11 @49888 has 116 MA's), (16, 49927), (21, 49990), (24, 50005), (30, 50083),

Gene: Anma_74 Start: 50282, Stop: 50515, Start Num: 11
Candidate Starts for Anma_74:
(Start: 11 @50282 has 116 MA's), (16, 50321), (21, 50384), (24, 50399), (30, 50477),

Gene: Apocalypse_77 Start: 50570, Stop: 50803, Start Num: 11
Candidate Starts for Apocalypse_77:
(Start: 11 @50570 has 116 MA's), (16, 50609), (21, 50672), (30, 50765),

Gene: Asayake_74 Start: 50083, Stop: 50316, Start Num: 11
Candidate Starts for Asayake_74:
(Start: 11 @50083 has 116 MA's), (16, 50122), (20, 50170), (21, 50185), (30, 50278),

Gene: Atiba_75 Start: 49731, Stop: 49964, Start Num: 11
Candidate Starts for Atiba_75:
(Start: 11 @49731 has 116 MA's), (16, 49770), (20, 49818), (21, 49833), (30, 49926),

Gene: BEEST_74 Start: 50083, Stop: 50316, Start Num: 11
Candidate Starts for BEEST_74:
(Start: 11 @50083 has 116 MA's), (16, 50122), (20, 50170), (21, 50185), (30, 50278),

Gene: BGlluviae_74 Start: 49886, Stop: 50119, Start Num: 11
Candidate Starts for BGlluviae_74:
(Start: 11 @49886 has 116 MA's), (16, 49925), (20, 49973), (21, 49988), (30, 50081),

Gene: BaghaKamala_73 Start: 49317, Stop: 49550, Start Num: 11
Candidate Starts for BaghaKamala_73:
(Start: 11 @49317 has 116 MA's), (16, 49356), (20, 49404), (21, 49419), (30, 49512),

Gene: BarrelRoll_75 Start: 50288, Stop: 50521, Start Num: 11
Candidate Starts for BarrelRoll_75:
(Start: 11 @50288 has 116 MA's), (16, 50327), (21, 50390), (30, 50483),

Gene: Beezoo_77 Start: 50865, Stop: 51098, Start Num: 11

Candidate Starts for Beezoo_77:
(Start: 8 @50859 has 1 MA's), (Start: 11 @50865 has 116 MA's), (16, 50904), (21, 50967), (30, 51060),

Gene: Bella96_75 Start: 50149, Stop: 50382, Start Num: 11
Candidate Starts for Bella96_75:
(Start: 8 @50143 has 1 MA's), (Start: 11 @50149 has 116 MA's), (16, 50188), (21, 50251), (24, 50266), (30, 50344),

Gene: Belladonna_74 Start: 49886, Stop: 50119, Start Num: 11
Candidate Starts for Belladonna_74:
(Start: 11 @49886 has 116 MA's), (16, 49925), (20, 49973), (21, 49988), (30, 50081),

Gene: Bern_75 Start: 48835, Stop: 49068, Start Num: 11
Candidate Starts for Bern_75:
(Start: 8 @48829 has 1 MA's), (Start: 11 @48835 has 116 MA's), (16, 48874), (21, 48937), (24, 48952), (30, 49030),

Gene: Biglebops_61 Start: 46941, Stop: 47174, Start Num: 11
Candidate Starts for Biglebops_61:
(Start: 8 @46938 has 1 MA's), (Start: 11 @46941 has 116 MA's), (14, 46959), (15, 46974), (16, 46980), (30, 47136), (32, 47148),

Gene: Blizzard_74 Start: 50083, Stop: 50316, Start Num: 11
Candidate Starts for Blizzard_74:
(Start: 11 @50083 has 116 MA's), (16, 50122), (20, 50170), (21, 50185), (30, 50278),

Gene: Boiiii_74 Start: 50085, Stop: 50318, Start Num: 11
Candidate Starts for Boiiii_74:
(Start: 11 @50085 has 116 MA's), (16, 50124), (20, 50172), (21, 50187), (30, 50280),

Gene: Bryler_78 Start: 49714, Stop: 49947, Start Num: 10
Candidate Starts for Bryler_78:
(Start: 10 @49714 has 5 MA's), (Start: 12 @49717 has 2 MA's), (16, 49753), (20, 49801), (22, 49819), (30, 49909), (33, 49939),

Gene: CREW_73 Start: 49886, Stop: 50119, Start Num: 11
Candidate Starts for CREW_73:
(Start: 11 @49886 has 116 MA's), (16, 49925), (20, 49973), (21, 49988), (30, 50081),

Gene: Cain_78 Start: 49702, Stop: 49935, Start Num: 10
Candidate Starts for Cain_78:
(Start: 10 @49702 has 5 MA's), (Start: 12 @49705 has 2 MA's), (16, 49741), (20, 49789), (22, 49807), (30, 49897), (33, 49927),

Gene: CallaLilly_74 Start: 49809, Stop: 50042, Start Num: 11
Candidate Starts for CallaLilly_74:
(Start: 11 @49809 has 116 MA's), (16, 49848), (20, 49896), (21, 49911), (30, 50004),

Gene: Capricorn_74 Start: 49886, Stop: 50119, Start Num: 11
Candidate Starts for Capricorn_74:
(Start: 11 @49886 has 116 MA's), (16, 49925), (20, 49973), (21, 49988), (30, 50081),

Gene: CaseJules_76 Start: 50083, Stop: 50316, Start Num: 11

Candidate Starts for CaseJules_76:
(Start: 11 @50083 has 116 MA's), (16, 50122), (20, 50170), (21, 50185), (30, 50278),

Gene: Chavito_76 Start: 50809, Stop: 51042, Start Num: 11
Candidate Starts for Chavito_76:
(Start: 11 @50809 has 116 MA's), (16, 50848), (20, 50896), (30, 51004),

Gene: CheetoDust_74 Start: 49483, Stop: 49716, Start Num: 11
Candidate Starts for CheetoDust_74:
(Start: 11 @49483 has 116 MA's), (16, 49522), (21, 49585), (30, 49678),

Gene: Chris_75 Start: 50488, Stop: 50721, Start Num: 11
Candidate Starts for Chris_75:
(Start: 11 @50488 has 116 MA's), (16, 50527), (20, 50575), (30, 50683), (33, 50713),

Gene: Clipper_79 Start: 50985, Stop: 51218, Start Num: 11
Candidate Starts for Clipper_79:
(Start: 8 @50979 has 1 MA's), (Start: 11 @50985 has 116 MA's), (16, 51024), (21, 51087), (24, 51102), (30, 51180),

Gene: CrimD_76 Start: 50884, Stop: 51117, Start Num: 11
Candidate Starts for CrimD_76:
(Start: 11 @50884 has 116 MA's), (16, 50923), (24, 51001), (27, 51043), (30, 51079),

Gene: Curiosium_80 Start: 49850, Stop: 50083, Start Num: 11
Candidate Starts for Curiosium_80:
(Start: 11 @49850 has 116 MA's), (16, 49889), (30, 50045), (33, 50075),

Gene: Dalmuri_74 Start: 49886, Stop: 50119, Start Num: 11
Candidate Starts for Dalmuri_74:
(Start: 11 @49886 has 116 MA's), (16, 49925), (20, 49973), (21, 49988), (30, 50081),

Gene: DartGoblin_77 Start: 50112, Stop: 50345, Start Num: 11
Candidate Starts for DartGoblin_77:
(Start: 8 @50106 has 1 MA's), (Start: 11 @50112 has 116 MA's), (16, 50151), (21, 50214), (24, 50229), (30, 50307), (33, 50337),

Gene: Dartin_75 Start: 50057, Stop: 50290, Start Num: 11
Candidate Starts for Dartin_75:
(Start: 8 @50054 has 1 MA's), (Start: 11 @50057 has 116 MA's), (16, 50096), (25, 50189), (30, 50252), (33, 50282),

Gene: Deby_74 Start: 50255, Stop: 50488, Start Num: 11
Candidate Starts for Deby_74:
(Start: 11 @50255 has 116 MA's), (16, 50294), (21, 50357), (30, 50450),

Gene: Devera_82 Start: 51680, Stop: 51913, Start Num: 11
Candidate Starts for Devera_82:
(Start: 11 @51680 has 116 MA's), (16, 51719), (21, 51782), (24, 51797), (30, 51875),

Gene: Dole_79 Start: 51683, Stop: 51916, Start Num: 11
Candidate Starts for Dole_79:
(Start: 11 @51683 has 116 MA's), (16, 51722), (21, 51785), (24, 51800), (30, 51878),

Gene: DrHayes_74 Start: 50282, Stop: 50515, Start Num: 11
Candidate Starts for DrHayes_74:
(Start: 11 @50282 has 116 MA's), (16, 50321), (21, 50384), (24, 50399), (30, 50477),

Gene: Durfee_74 Start: 50083, Stop: 50316, Start Num: 11
Candidate Starts for Durfee_74:
(Start: 11 @50083 has 116 MA's), (16, 50122), (20, 50170), (21, 50185), (30, 50278),

Gene: Efra2_81 Start: 50716, Stop: 50949, Start Num: 11
Candidate Starts for Efra2_81:
(Start: 11 @50716 has 116 MA's), (15, 50749), (16, 50755), (30, 50911),

Gene: Emerson_77 Start: 50322, Stop: 50555, Start Num: 11
Candidate Starts for Emerson_77:
(Start: 11 @50322 has 116 MA's), (16, 50361), (21, 50424), (30, 50517),

Gene: Enkosi_63 Start: 49536, Stop: 49772, Start Num: 8
Candidate Starts for Enkosi_63:
(Start: 8 @49536 has 1 MA's), (Start: 11 @49539 has 116 MA's), (14, 49557), (15, 49572), (16, 49578),
(30, 49734), (32, 49746),

Gene: Fefferhead_73 Start: 49667, Stop: 49900, Start Num: 11
Candidate Starts for Fefferhead_73:
(Start: 11 @49667 has 116 MA's), (20, 49754), (30, 49862),

Gene: Ganymede_74 Start: 50293, Stop: 50526, Start Num: 11
Candidate Starts for Ganymede_74:
(Start: 8 @50287 has 1 MA's), (Start: 11 @50293 has 116 MA's), (16, 50332), (21, 50395), (30, 50488),

Gene: Geraldini_78 Start: 50883, Stop: 51116, Start Num: 11
Candidate Starts for Geraldini_78:
(Start: 11 @50883 has 116 MA's), (16, 50922), (20, 50970), (21, 50985), (30, 51078),

Gene: Guanica15_80 Start: 50462, Stop: 50695, Start Num: 11
Candidate Starts for Guanica15_80:
(Start: 11 @50462 has 116 MA's), (15, 50495), (16, 50501), (21, 50564), (30, 50657),

Gene: HedwigODU_74 Start: 49931, Stop: 50164, Start Num: 11
Candidate Starts for HedwigODU_74:
(Start: 11 @49931 has 116 MA's), (16, 49970), (20, 50018), (21, 50033), (30, 50126),

Gene: Homura_73 Start: 49886, Stop: 50119, Start Num: 11
Candidate Starts for Homura_73:
(Start: 11 @49886 has 116 MA's), (16, 49925), (20, 49973), (21, 49988), (30, 50081),

Gene: Hyperbowlee_73 Start: 50083, Stop: 50316, Start Num: 11
Candidate Starts for Hyperbowlee_73:
(Start: 11 @50083 has 116 MA's), (16, 50122), (20, 50170), (21, 50185), (30, 50278),

Gene: Illumine_80 Start: 51682, Stop: 51915, Start Num: 11
Candidate Starts for Illumine_80:
(Start: 11 @51682 has 116 MA's), (16, 51721), (21, 51784), (24, 51799), (30, 51877),

Gene: Inky_74 Start: 49886, Stop: 50119, Start Num: 11
Candidate Starts for Inky_74:
(Start: 11 @49886 has 116 MA's), (16, 49925), (20, 49973), (21, 49988), (30, 50081),

Gene: JAWS_73 Start: 49848, Stop: 50081, Start Num: 11
Candidate Starts for JAWS_73:
(Start: 11 @49848 has 116 MA's), (16, 49887), (21, 49950), (30, 50043),

Gene: Jarvi_74 Start: 49886, Stop: 50119, Start Num: 11
Candidate Starts for Jarvi_74:
(Start: 11 @49886 has 116 MA's), (16, 49925), (20, 49973), (21, 49988), (30, 50081),

Gene: Jayhawk_77 Start: 50348, Stop: 50581, Start Num: 11
Candidate Starts for Jayhawk_77:
(Start: 11 @50348 has 116 MA's), (16, 50387), (21, 50450), (30, 50543),

Gene: Jeckyll_74 Start: 49886, Stop: 50119, Start Num: 11
Candidate Starts for Jeckyll_74:
(Start: 11 @49886 has 116 MA's), (16, 49925), (20, 49973), (21, 49988), (30, 50081),

Gene: Joy99_75 Start: 50015, Stop: 50248, Start Num: 11
Candidate Starts for Joy99_75:
(Start: 11 @50015 has 116 MA's), (16, 50054), (20, 50102), (21, 50117), (30, 50210),

Gene: KiSi_77 Start: 50476, Stop: 50709, Start Num: 11
Candidate Starts for KiSi_77:
(Start: 11 @50476 has 116 MA's), (13, 50482), (30, 50671), (33, 50701),

Gene: Krueger_79 Start: 50225, Stop: 50461, Start Num: 9
Candidate Starts for Krueger_79:
(Start: 9 @50225 has 1 MA's), (Start: 11 @50228 has 116 MA's), (20, 50315), (30, 50423),

Gene: LastHope_80 Start: 49572, Stop: 49805, Start Num: 11
Candidate Starts for LastHope_80:
(Start: 11 @49572 has 116 MA's), (16, 49611), (21, 49674), (30, 49767),

Gene: LaterM_74 Start: 50546, Stop: 50779, Start Num: 11
Candidate Starts for LaterM_74:
(Start: 11 @50546 has 116 MA's), (16, 50585), (21, 50648), (24, 50663), (30, 50741),

Gene: Lavahound_71 Start: 50572, Stop: 50805, Start Num: 11
Candidate Starts for Lavahound_71:
(Start: 11 @50572 has 116 MA's), (20, 50659), (30, 50767),

Gene: LeMond_76 Start: 50080, Stop: 50313, Start Num: 11
Candidate Starts for LeMond_76:
(Start: 11 @50080 has 116 MA's), (13, 50086), (30, 50275), (33, 50305),

Gene: LilPharaoh_62 Start: 46654, Stop: 46887, Start Num: 11
Candidate Starts for LilPharaoh_62:
(Start: 8 @46651 has 1 MA's), (Start: 11 @46654 has 116 MA's), (14, 46672), (15, 46687), (16, 46693), (30, 46849), (32, 46861),

Gene: LindNT_73 Start: 50348, Stop: 50581, Start Num: 11
Candidate Starts for LindNT_73:
(Start: 11 @50348 has 116 MA's), (16, 50387), (21, 50450), (24, 50465), (27, 50507), (30, 50543),

Gene: Llorens_74 Start: 49886, Stop: 50119, Start Num: 11
Candidate Starts for Llorens_74:
(Start: 11 @49886 has 116 MA's), (16, 49925), (20, 49973), (21, 49988), (30, 50081),

Gene: Lunahalos_74 Start: 49886, Stop: 50119, Start Num: 11
Candidate Starts for Lunahalos_74:
(Start: 11 @49886 has 116 MA's), (16, 49925), (20, 49973), (21, 49988), (30, 50081),

Gene: MacKat_71 Start: 45869, Stop: 46102, Start Num: 11
Candidate Starts for MacKat_71:
(Start: 8 @45863 has 1 MA's), (Start: 11 @45869 has 116 MA's), (16, 45908), (21, 45971), (24, 45986), (30, 46064),

Gene: MalagasyRose_72 Start: 48317, Stop: 48583, Start Num: 7
Candidate Starts for MalagasyRose_72:
(5, 48278), (6, 48281), (Start: 7 @48317 has 1 MA's), (17, 48368), (18, 48380), (19, 48392), (20, 48416), (23, 48437), (26, 48464), (28, 48518), (29, 48524), (31, 48536),

Gene: MarkPhew_76 Start: 49965, Stop: 50198, Start Num: 11
Candidate Starts for MarkPhew_76:
(Start: 11 @49965 has 116 MA's), (16, 50004), (30, 50160), (33, 50190),

Gene: Marshawn_73 Start: 50358, Stop: 50591, Start Num: 11
Candidate Starts for Marshawn_73:
(4, 50238), (Start: 9 @50355 has 1 MA's), (Start: 11 @50358 has 116 MA's), (16, 50397), (27, 50517), (30, 50553), (33, 50583),

Gene: McMater_75 Start: 50057, Stop: 50290, Start Num: 11
Candidate Starts for McMater_75:
(Start: 8 @50054 has 1 MA's), (Start: 11 @50057 has 116 MA's), (16, 50096), (25, 50189), (30, 50252), (33, 50282),

Gene: Mdavu_62 Start: 46930, Stop: 47163, Start Num: 11
Candidate Starts for Mdavu_62:
(Start: 8 @46927 has 1 MA's), (Start: 11 @46930 has 116 MA's), (14, 46948), (15, 46963), (16, 46969), (30, 47125), (32, 47137),

Gene: MeaningOfLife_76 Start: 50838, Stop: 51071, Start Num: 11
Candidate Starts for MeaningOfLife_76:
(Start: 8 @50832 has 1 MA's), (Start: 11 @50838 has 116 MA's), (16, 50877), (21, 50940), (24, 50955), (30, 51033),

Gene: Megsy_76 Start: 49976, Stop: 50209, Start Num: 11
Candidate Starts for Megsy_76:
(Start: 8 @49970 has 1 MA's), (Start: 11 @49976 has 116 MA's), (16, 50015), (21, 50078), (24, 50093), (27, 50135), (30, 50171),

Gene: Murucutumbu_75 Start: 51122, Stop: 51355, Start Num: 11

Candidate Starts for Murucutumbu_75:
(Start: 8 @51116 has 1 MA's), (Start: 11 @51122 has 116 MA's), (16, 51161), (21, 51224), (24, 51239), (27, 51281), (30, 51317),

Gene: Mynx_76 Start: 50617, Stop: 50850, Start Num: 11
Candidate Starts for Mynx_76:
(Start: 11 @50617 has 116 MA's), (16, 50656), (21, 50719), (30, 50812),

Gene: Nibb_76 Start: 49781, Stop: 50014, Start Num: 11
Candidate Starts for Nibb_76:
(Start: 11 @49781 has 116 MA's), (13, 49787), (16, 49820), (30, 49976), (33, 50006),

Gene: Nikao_64 Start: 49539, Stop: 49772, Start Num: 11
Candidate Starts for Nikao_64:
(Start: 8 @49536 has 1 MA's), (Start: 11 @49539 has 116 MA's), (14, 49557), (15, 49572), (16, 49578), (30, 49734), (32, 49746),

Gene: Niklas_76 Start: 50118, Stop: 50351, Start Num: 11
Candidate Starts for Niklas_76:
(Start: 8 @50115 has 1 MA's), (Start: 11 @50118 has 116 MA's), (16, 50157), (25, 50250), (30, 50313), (33, 50343),

Gene: Nutello_61 Start: 46926, Stop: 47159, Start Num: 11
Candidate Starts for Nutello_61:
(Start: 8 @46923 has 1 MA's), (Start: 11 @46926 has 116 MA's), (14, 46944), (15, 46959), (16, 46965), (30, 47121), (32, 47133),

Gene: Oscar_76 Start: 50000, Stop: 50233, Start Num: 11
Candidate Starts for Oscar_76:
(Start: 11 @50000 has 116 MA's), (13, 50006), (30, 50195), (33, 50225),

Gene: Padfoot_74 Start: 50083, Stop: 50316, Start Num: 11
Candidate Starts for Padfoot_74:
(Start: 11 @50083 has 116 MA's), (16, 50122), (20, 50170), (21, 50185), (30, 50278),

Gene: Padpat_78 Start: 50322, Stop: 50555, Start Num: 11
Candidate Starts for Padpat_78:
(Start: 11 @50322 has 116 MA's), (16, 50361), (21, 50424), (30, 50517),

Gene: Peanam_76 Start: 50076, Stop: 50309, Start Num: 11
Candidate Starts for Peanam_76:
(Start: 8 @50073 has 1 MA's), (Start: 11 @50076 has 116 MA's), (16, 50115), (25, 50208), (30, 50271), (33, 50301),

Gene: Peel_74 Start: 49888, Stop: 50121, Start Num: 11
Candidate Starts for Peel_74:
(Start: 11 @49888 has 116 MA's), (16, 49927), (20, 49975), (21, 49990), (30, 50083),

Gene: PhelpsODU_77 Start: 49829, Stop: 50062, Start Num: 10
Candidate Starts for PhelpsODU_77:
(Start: 10 @49829 has 5 MA's), (Start: 12 @49832 has 2 MA's), (16, 49868), (20, 49916), (22, 49934), (30, 50024), (33, 50054),

Gene: Phrank_78 Start: 49689, Stop: 49922, Start Num: 10
Candidate Starts for Phrank_78:
(Start: 10 @49689 has 5 MA's), (Start: 12 @49692 has 2 MA's), (16, 49728), (20, 49776), (22, 49794), (25, 49821), (30, 49884), (33, 49914),

Gene: Piatt_73 Start: 50083, Stop: 50316, Start Num: 11
Candidate Starts for Piatt_73:
(Start: 11 @50083 has 116 MA's), (16, 50122), (20, 50170), (21, 50185), (30, 50278),

Gene: Pisa1_72 Start: 50381, Stop: 50614, Start Num: 11
Candidate Starts for Pisa1_72:
(Start: 11 @50381 has 116 MA's), (16, 50420), (21, 50483), (24, 50498), (30, 50576),

Gene: Pisa4_66 Start: 45750, Stop: 45983, Start Num: 11
Candidate Starts for Pisa4_66:
(Start: 11 @45750 has 116 MA's), (16, 45789), (21, 45852), (24, 45867), (30, 45945),

Gene: Pokerus_75 Start: 50331, Stop: 50564, Start Num: 11
Candidate Starts for Pokerus_75:
(Start: 11 @50331 has 116 MA's), (16, 50370), (20, 50418), (21, 50433), (30, 50526),

Gene: Prithvi_77 Start: 50348, Stop: 50581, Start Num: 11
Candidate Starts for Prithvi_77:
(Start: 11 @50348 has 116 MA's), (16, 50387), (21, 50450), (24, 50465), (27, 50507), (30, 50543),

Gene: QuincyRose_72 Start: 50293, Stop: 50526, Start Num: 11
Candidate Starts for QuincyRose_72:
(Start: 8 @50287 has 1 MA's), (Start: 11 @50293 has 116 MA's), (16, 50332), (21, 50395), (30, 50488),

Gene: Ramen_75 Start: 49652, Stop: 49885, Start Num: 11
Candidate Starts for Ramen_75:
(Start: 11 @49652 has 116 MA's), (16, 49691), (21, 49754), (30, 49847),

Gene: Rapunzel97_77 Start: 50303, Stop: 50536, Start Num: 11
Candidate Starts for Rapunzel97_77:
(Start: 11 @50303 has 116 MA's), (16, 50342), (21, 50405), (30, 50498),

Gene: Richo_75 Start: 50057, Stop: 50290, Start Num: 11
Candidate Starts for Richo_75:
(Start: 8 @50054 has 1 MA's), (Start: 11 @50057 has 116 MA's), (16, 50096), (25, 50189), (30, 50252), (33, 50282),

Gene: Rosmarinus_74 Start: 49874, Stop: 50107, Start Num: 11
Candidate Starts for Rosmarinus_74:
(Start: 11 @49874 has 116 MA's), (16, 49913), (20, 49961), (21, 49976), (30, 50069),

Gene: SamuelLPlaqson_74 Start: 50282, Stop: 50515, Start Num: 11
Candidate Starts for SamuelLPlaqson_74:
(Start: 11 @50282 has 116 MA's), (16, 50321), (21, 50384), (24, 50399), (30, 50477),

Gene: Scarlett_77 Start: 50336, Stop: 50569, Start Num: 11
Candidate Starts for Scarlett_77:
(Start: 11 @50336 has 116 MA's), (13, 50342), (30, 50531), (33, 50561),

Gene: SgtBeansprout_62 Start: 46926, Stop: 47159, Start Num: 11
Candidate Starts for SgtBeansprout_62:
(Start: 8 @46923 has 1 MA's), (Start: 11 @46926 has 116 MA's), (14, 46944), (15, 46959), (16, 46965), (30, 47121), (32, 47133),

Gene: Shadow1_79 Start: 50368, Stop: 50601, Start Num: 11
Candidate Starts for Shadow1_79:
(Start: 9 @50365 has 1 MA's), (Start: 11 @50368 has 116 MA's), (20, 50455), (30, 50563),

Gene: Shaobing_75 Start: 50093, Stop: 50326, Start Num: 11
Candidate Starts for Shaobing_75:
(Start: 8 @50090 has 1 MA's), (Start: 11 @50093 has 116 MA's), (16, 50132), (25, 50225), (30, 50288), (33, 50318),

Gene: ShiaSurprise_75 Start: 50083, Stop: 50316, Start Num: 11
Candidate Starts for ShiaSurprise_75:
(Start: 11 @50083 has 116 MA's), (16, 50122), (20, 50170), (21, 50185), (30, 50278),

Gene: SirPhilip_74 Start: 50594, Stop: 50827, Start Num: 11
Candidate Starts for SirPhilip_74:
(Start: 11 @50594 has 116 MA's), (15, 50627), (20, 50681), (30, 50789),

Gene: Slimphazie_76 Start: 50303, Stop: 50536, Start Num: 11
Candidate Starts for Slimphazie_76:
(Start: 11 @50303 has 116 MA's), (16, 50342), (21, 50405), (30, 50498),

Gene: Spock_74 Start: 49887, Stop: 50120, Start Num: 11
Candidate Starts for Spock_74:
(Start: 11 @49887 has 116 MA's), (16, 49926), (20, 49974), (21, 49989), (30, 50082),

Gene: Stinson_75 Start: 50481, Stop: 50714, Start Num: 11
Candidate Starts for Stinson_75:
(Start: 11 @50481 has 116 MA's), (16, 50520), (21, 50583), (24, 50598), (30, 50676),

Gene: Sulley_73 Start: 49914, Stop: 50147, Start Num: 11
Candidate Starts for Sulley_73:
(Start: 8 @49908 has 1 MA's), (Start: 11 @49914 has 116 MA's), (16, 49953), (21, 50016), (24, 50031), (30, 50109),

Gene: Sunflower1121_80 Start: 50514, Stop: 50747, Start Num: 11
Candidate Starts for Sunflower1121_80:
(Start: 9 @50511 has 1 MA's), (Start: 11 @50514 has 116 MA's), (20, 50601), (30, 50709),

Gene: Syra333_78 Start: 50242, Stop: 50475, Start Num: 11
Candidate Starts for Syra333_78:
(2, 50041), (3, 50098), (4, 50122), (Start: 9 @50239 has 1 MA's), (Start: 11 @50242 has 116 MA's), (20, 50329), (30, 50437),

Gene: TClif_76 Start: 49980, Stop: 50213, Start Num: 11
Candidate Starts for TClif_76:
(1, 49716), (2, 49779), (3, 49836), (4, 49860), (Start: 9 @49977 has 1 MA's), (Start: 11 @49980 has 116 MA's), (15, 50013), (20, 50067), (30, 50175),

Gene: Tachez_74 Start: 49731, Stop: 49964, Start Num: 11
Candidate Starts for Tachez_74:
(Start: 11 @49731 has 116 MA's), (16, 49770), (20, 49818), (21, 49833), (30, 49926),

Gene: TaiwanKao_76 Start: 50406, Stop: 50639, Start Num: 11
Candidate Starts for TaiwanKao_76:
(Start: 8 @50400 has 1 MA's), (Start: 11 @50406 has 116 MA's), (16, 50445), (21, 50508), (24, 50523), (27, 50565), (30, 50601),

Gene: Teejan_63 Start: 49539, Stop: 49772, Start Num: 11
Candidate Starts for Teejan_63:
(Start: 8 @49536 has 1 MA's), (Start: 11 @49539 has 116 MA's), (14, 49557), (15, 49572), (16, 49578), (30, 49734), (32, 49746),

Gene: Tierra_78 Start: 50503, Stop: 50733, Start Num: 12
Candidate Starts for Tierra_78:
(Start: 10 @50500 has 5 MA's), (Start: 12 @50503 has 2 MA's), (16, 50539), (20, 50587), (22, 50605), (25, 50632), (30, 50695), (33, 50725),

Gene: Tigress9_80 Start: 50554, Stop: 50790, Start Num: 9
Candidate Starts for Tigress9_80:
(Start: 9 @50554 has 1 MA's), (Start: 11 @50557 has 116 MA's), (20, 50644), (30, 50752),

Gene: TingHuaYa_77 Start: 49643, Stop: 49876, Start Num: 11
Candidate Starts for TingHuaYa_77:
(Start: 11 @49643 has 116 MA's), (16, 49682), (20, 49730), (21, 49745), (30, 49838),

Gene: TiniBug_74 Start: 50282, Stop: 50515, Start Num: 11
Candidate Starts for TiniBug_74:
(Start: 8 @50276 has 1 MA's), (Start: 11 @50282 has 116 MA's), (16, 50321), (21, 50384), (24, 50399), (30, 50477),

Gene: Tiri_74 Start: 49787, Stop: 50020, Start Num: 11
Candidate Starts for Tiri_74:
(Start: 11 @49787 has 116 MA's), (16, 49826), (21, 49889), (30, 49982),

Gene: Topper_74 Start: 49886, Stop: 50119, Start Num: 11
Candidate Starts for Topper_74:
(Start: 11 @49886 has 116 MA's), (16, 49925), (20, 49973), (21, 49988), (30, 50081),

Gene: Torres_64 Start: 49540, Stop: 49773, Start Num: 11
Candidate Starts for Torres_64:
(Start: 8 @49537 has 1 MA's), (Start: 11 @49540 has 116 MA's), (14, 49558), (15, 49573), (16, 49579), (30, 49735), (32, 49747),

Gene: TreyKay_77 Start: 50348, Stop: 50581, Start Num: 11
Candidate Starts for TreyKay_77:
(Start: 11 @50348 has 116 MA's), (16, 50387), (21, 50450), (24, 50465), (27, 50507), (30, 50543),

Gene: Trice_61 Start: 46927, Stop: 47160, Start Num: 11
Candidate Starts for Trice_61:

(Start: 8 @46924 has 1 MA's), (Start: 11 @46927 has 116 MA's), (14, 46945), (15, 46960), (16, 46966), (30, 47122), (32, 47134),

Gene: TruffulaTree_76 Start: 50299, Stop: 50532, Start Num: 11
Candidate Starts for TruffulaTree_76:
(Start: 11 @50299 has 116 MA's), (16, 50338), (21, 50401), (30, 50494),

Gene: Twitch_74 Start: 49888, Stop: 50121, Start Num: 11
Candidate Starts for Twitch_74:
(Start: 11 @49888 has 116 MA's), (16, 49927), (20, 49975), (21, 49990), (30, 50083),

Gene: Unicorn_77 Start: 49829, Stop: 50062, Start Num: 10
Candidate Starts for Unicorn_77:
(Start: 10 @49829 has 5 MA's), (Start: 12 @49832 has 2 MA's), (16, 49868), (20, 49916), (22, 49934), (30, 50024), (33, 50054),

Gene: Urkel_74 Start: 50282, Stop: 50515, Start Num: 11
Candidate Starts for Urkel_74:
(Start: 11 @50282 has 116 MA's), (16, 50321), (21, 50384), (24, 50399), (30, 50477),

Gene: Validus_79 Start: 50643, Stop: 50876, Start Num: 11
Candidate Starts for Validus_79:
(Start: 11 @50643 has 116 MA's), (16, 50682), (30, 50838), (33, 50868),

Gene: Veliki_75 Start: 49839, Stop: 50072, Start Num: 11
Candidate Starts for Veliki_75:
(Start: 11 @49839 has 116 MA's), (16, 49878), (21, 49941), (30, 50034),

Gene: Ximenita_80 Start: 50566, Stop: 50799, Start Num: 11
Candidate Starts for Ximenita_80:
(Start: 9 @50563 has 1 MA's), (Start: 11 @50566 has 116 MA's), (20, 50653), (30, 50761),

Gene: YoureAdopted_74 Start: 50250, Stop: 50483, Start Num: 11
Candidate Starts for YoureAdopted_74:
(Start: 8 @50244 has 1 MA's), (Start: 11 @50250 has 116 MA's), (16, 50289), (21, 50352), (30, 50445),

Gene: Yuna_77 Start: 51331, Stop: 51561, Start Num: 12
Candidate Starts for Yuna_77:
(Start: 12 @51331 has 2 MA's), (20, 51415), (30, 51523),

Gene: Yunkel11_80 Start: 50467, Stop: 50700, Start Num: 11
Candidate Starts for Yunkel11_80:
(Start: 11 @50467 has 116 MA's), (15, 50500), (16, 50506), (30, 50662),

Gene: Zabiza_70 Start: 46236, Stop: 46469, Start Num: 11
Candidate Starts for Zabiza_70:
(Start: 11 @46236 has 116 MA's), (16, 46275), (20, 46323), (21, 46338), (30, 46431),

Gene: Zavala_77 Start: 50377, Stop: 50610, Start Num: 11
Candidate Starts for Zavala_77:
(Start: 11 @50377 has 116 MA's), (16, 50416), (21, 50479), (30, 50572),