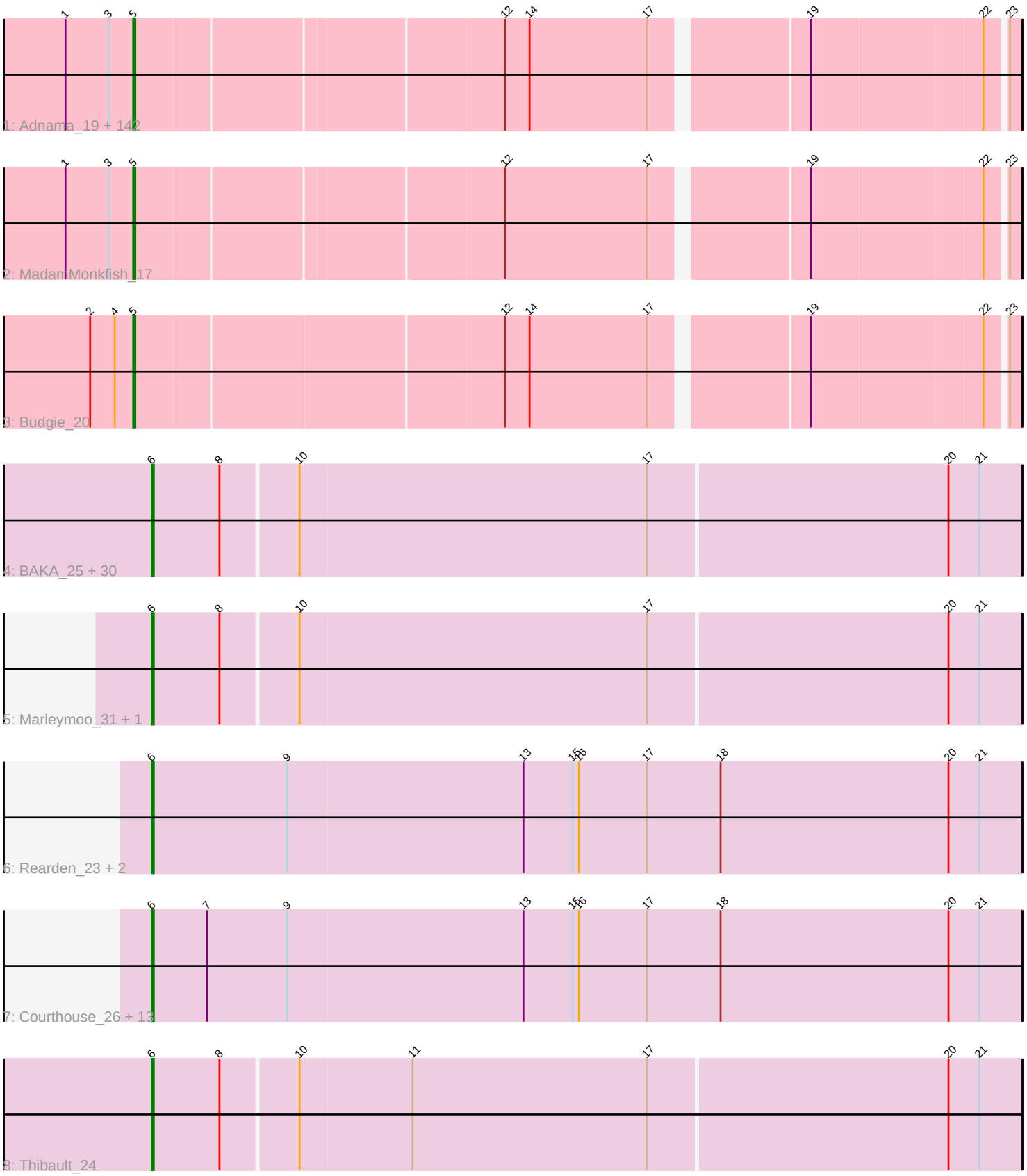
Pham 347281


1
3
5
12
14
17
19
22
23
1: Adnama_19 + 142
1
3
5
12
17
19
22
23
2: MadamMonkfish_17
2
4
5
12
14
17
19
22
23
3: Budgie_20
6
8
10
17
20
21
4: BAKA_25 + 30
6
8
10
17
20
21
5: Marleymoo_31 + 1
6
9
13
15
16
17
18
20
21
6: Rearden_23 + 2
6
7
9
13
15
16
17
18
20
21
7: Courthouse_26 + 13
6
8
10
11
17
20
21
8: Thibault_24

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 347281 Report

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

Pham number 347281 has 196 members, 21 are drafts.

Phages represented in each track:
• Track 1 : Adnama_19, Lilpickle_16, Petra64142_18, DoctorDiddles_18, BigBubba_17, Palpatine_17, FireRed_17, IHOP_17, GoldenSpark_19, ChotaBhai_17, Bruin_17, Kanye_19, Holt_19, Thresher_18, Paperbeatsrock_19, Hopey_18, Rakim_19, HanKaySha_18, Greep_18, Willez_17, MISSy_17, Terminus_17, AmericanBeauty_19, Easy2Say_18, Quallification_19, Filch_18, Bench_19, Balomoji_17, Bask21_17, Dusk_17, StellaBean_18, Becksu_17, Miniwave_18, Gator_16, Command613_19, Mindy_18, Porky_16, CrystalP_18, Maxxinista_18, Tomaszewski_17, Stark_18, 244_18, Manda_18, Myrale_18, Hoonter_19, Cjw1_17, BugsBunny_15, Ukulele_17, Pat3_17, Icee_17, Harella_16, Misfit_17, MPhalcon_17, Marshmallow_18, FairyPath_18, TBrady12_19, BaboJay_17, ShamWow_18, Goku_18, ChosenOne_16, YassJohnny_18, Moldemort_18, Rimmer_17, Cookies_18, Teaspoon_17, Sotrice96_18, Pharsalus_18, Simpliphy_18, Czyszczon1_18, Buck_17, Kostya_18, NelitzaMV_18, Pumpkin_18, Cactus_19, Thimble_18, Eureka_18, SophKB_18, Highbury_18, Livelaughbron_17, GooberAzure_19, Phaja_17, Henry_18, Stank_19, RiverMonster_17, TeardropMSU_17, ABCat_17, Wiggin_19, Argent26_19, Xandras_19, Nimrod_17, Elite2014_16, Emmina_17, Youngblood_17, SirDuracell_17, ShereKhan_19, Goldilocks_19, Tuco_18, Elph10_18, DrDrey_18, BilboSwaggins_18, Sassay_17, Toto_18, Lilizi_19, Contagion_17, StolenFromERC_19, Murica_16, Policronamos_17, Murphy_17, Brewer_17, OrionPax_18, Inca_17, Asriel_17, Barbarian_17, NonchalantPear_17, Lilac_19, Traaww1_16, PhatBacter_17, StormChicken_18, Phrux_17, PaddyBaddy_18, Gemini_19, Flypotenuse_16, Daikon_16, Bogg_18, Dumbo_17, Mosby_17, TeamEdward_18, FoghornLeghorn_17, MollyToe_18, JeTaime_19, Tarkin_19, Ptowny_17, Phaux_16, Glexan_16, xkcd_18, NoSleep_18, Gage_19, Amao_18, BadStone_17, Saints25_18, Kimchi_19, HufflyPuff_16, Nala_17
• Track 2 : MadamMonkfish_17
• Track 3 : Budgie_20
• Track 4 : BAKA_25, Bobby_29, Minerva_28, Beem_28, ThreeRngTarjay_27, NihilNomen_27, HokkenD_23, Yeet_26, JuicyJay_30, Kalah2_29, Pound_28, EricMillard_28, Dallas_28, Constella_23, Odette_27, Schatzie_26, Duke13_25, Hughesyang_27, Halley_28, Klein_28, Redno2_27, Zelink_29, Ejimix_29, Xiaokay_25, DmpstrDiver_27, Wanda_29, Bagrid_26, Optimus_26, Phoebus_28, Bombitas_25, Dove_26
• Track 5 : Marleymoo_31, Hidrated_28
• Track 6 : Rearden_23, Porcelain_26, MiaZeal_26
• Track 7 : Courthouse_26, Ariel_26, Gonephishing_24, BronnyJames_20, Superphikiman_26, Shaboozey_20, Omega_28, Hannaconda_23, Lucky2013_26,

KashFlow_20, Nekros_26, Nibley_21, Squint_25, LittleE_26
• Track 8 : Thibault_24

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

The start number called the most often in the published annotations is 5, it was called in 134 of the 175 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• 244_18, ABCat_17, Adnama_19, Amao_18, AmericanBeauty_19, Argent26_19, Asriel_17, BaboJay_17, BadStone_17, Balomoji_17, Barbarian_17, Bask21_17, Becksu_17, Bench_19, BigBubba_17, BilboSwaggins_18, Bogg_18, Brewer_17, Bruin_17, Buck_17, Budgie_20, BugsBunny_15, Cactus_19, ChosenOne_16, ChotaBhai_17, Cjw1_17, Command613_19, Contagion_17, Cookies_18, CrystalP_18, Czyszczon1_18, Daikon_16, DoctorDiddles_18, DrDrey_18, Dumbo_17, Dusk_17, Easy2Say_18, Elite2014_16, Elph10_18, Emmina_17, Eureka_18, FairyPath_18, Filch_18, FireRed_17, Flypotenuse_16, FoghornLeghorn_17, Gage_19, Gator_16, Gemini_19, Glexan_16, Goku_18, GoldenSpark_19, Goldilocks_19, GooberAzure_19, Greep_18, HanKaySha_18, Harella_16, Henry_18, Highbury_18, Holt_19, Hoonter_19, Hopey_18, HufflyPuff_16, IHOP_17, Icee_17, Inca_17, JeTaime_19, Kanye_19, Kimchi_19, Kostya_18, Lilac_19, Lilizi_19, Lilpickle_16, Livelaughbron_17, MISSy_17, MPhalcon_17, MadamMonkfish_17, Manda_18, Marshmallow_18, Maxxinista_18, Mindy_18, Miniwave_18, Misfit_17, Moldemort_18, MollyToe_18, Mosby_17, Murica_16, Murphy_17, Myrale_18, Nala_17, NelitzaMV_18, Nimrod_17, NoSleep_18, NonchalantPear_17, OrionPax_18, PaddyBaddy_18, Palpatine_17, Paperbeatsrock_19, Pat3_17, Petra64142_18, Phaja_17, Pharsalus_18, PhatBacter_17, Phaux_16, Phrux_17, Policronamos_17, Porky_16, Ptowny_17, Pumpkin_18, Quallification_19, Rakim_19, Rimmer_17, RiverMonster_17, Saints25_18, Sassay_17, ShamWow_18, ShereKhan_19, Simpliphy_18, SirDuracell_17, SophKB_18, Sotrice96_18, Stank_19, Stark_18, StellaBean_18, StolenFromERC_19, StormChicken_18, TBrady12_19, Tarkin_19, TeamEdward_18, TeardropMSU_17, Teaspoon_17, Terminus_17, Thimble_18, Thresher_18, Tomaszewski_17, Toto_18, Traaww1_16, Tuco_18, Ukulele_17, Wiggin_19, Willez_17, Xandras_19, YassJohnny_18, Youngblood_17, xkcd_18,

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

Genes that do not have the "Most Annotated" start:
• Ariel_26, BAKA_25, Bagrid_26, Beem_28, Bobby_29, Bombitas_25, BronnyJames_20, Constella_23, Courthouse_26, Dallas_28, DmpstrDiver_27, Dove_26, Duke13_25, Ejimix_29, EricMillard_28, Gonephishing_24, Halley_28, Hannaconda_23, Hidrated_28, HokkenD_23, Hughesyang_27, JuicyJay_30, Kalah2_29, KashFlow_20, Klein_28, LittleE_26, Lucky2013_26, Marleymoo_31, MiaZeal_26, Minerva_28, Nekros_26, Nibley_21, NihilNomen_27, Odette_27, Omega_28, Optimus_26, Phoebus_28, Porcelain_26, Pound_28, Rearden_23, Redno2_27, Schatzie_26, Shaboozey_20, Squint_25, Superphikiman_26, Thibault_24, ThreeRngTarjay_27, Wanda_29, Xiaokay_25, Yeet_26, Zelink_29,

Summary by start number:

Start 5:
• Found in 145 of 196 (74.0%) of genes in pham
• Manual Annotations of this start: 134 of 175
• Called 100.0% of time when present
• Phage (with cluster) where this start called: 244_18 (E), ABCat_17 (E), Adnama_19 (E), Amao_18 (E), AmericanBeauty_19 (E), Argent26_19 (E), Asriel_17 (E), BaboJay_17 (E), BadStone_17 (E), Balomoji_17 (E), Barbarian_17 (E), Bask21_17 (E), Becksu_17 (E), Bench_19 (E), BigBubba_17 (E), BilboSwaggins_18 (E), Bogg_18 (E), Brewer_17 (E), Bruin_17 (E), Buck_17 (E), Budgie_20 (E), BugsBunny_15 (E), Cactus_19 (E), ChosenOne_16 (E), ChotaBhai_17 (E), Cjw1_17 (E), Command613_19 (E), Contagion_17 (E), Cookies_18 (E), CrystalP_18 (E), Czyszczon1_18 (E), Daikon_16 (E), DoctorDiddles_18 (E), DrDrey_18 (E), Dumbo_17 (E), Dusk_17 (E), Easy2Say_18 (E), Elite2014_16 (E), Elph10_18 (E), Emmina_17 (E), Eureka_18 (E), FairyPath_18 (E), Filch_18 (E), FireRed_17 (E), Flypotenuse_16 (E), FoghornLeghorn_17 (E), Gage_19 (E), Gator_16 (E), Gemini_19 (E), Glexan_16 (E), Goku_18 (E), GoldenSpark_19 (E), Goldilocks_19 (E), GooberAzure_19 (E), Greep_18 (E), HanKaySha_18 (E), Harella_16 (E), Henry_18 (E), Highbury_18 (E), Holt_19 (E), Hoonter_19 (E), Hopey_18 (E), HufflyPuff_16 (E), IHOP_17 (E), Icee_17 (E), Inca_17 (E), JeTaime_19 (E), Kanye_19 (E), Kimchi_19 (E), Kostya_18 (E), Lilac_19 (E), Lilizi_19 (E), Lilpickle_16 (E), Livelaughbron_17 (E), MISSy_17 (E), MPhalcon_17 (E), MadamMonkfish_17 (E), Manda_18 (E), Marshmallow_18 (E), Maxxinista_18 (E), Mindy_18 (E), Miniwave_18 (E), Misfit_17 (E), Moldemort_18 (E), MollyToe_18 (E), Mosby_17 (E), Murica_16 (E), Murphy_17 (E), Myrale_18 (E), Nala_17 (E), NelitzaMV_18 (E), Nimrod_17 (E), NoSleep_18 (E), NonchalantPear_17 (E), OrionPax_18 (E), PaddyBaddy_18 (E), Palpatine_17 (E), Paperbeatsrock_19 (E), Pat3_17 (E), Petra64142_18 (E), Phaja_17 (E), Pharsalus_18 (E), PhatBacter_17 (E), Phaux_16 (E), Phrux_17 (E), Policronamos_17 (E), Porky_16 (E), Ptowny_17 (E), Pumpkin_18 (E), Quallification_19 (E), Rakim_19 (E), Rimmer_17 (E), RiverMonster_17 (E), Saints25_18 (E), Sassay_17 (E), ShamWow_18 (E), ShereKhan_19 (E), Simpliphy_18 (E), SirDuracell_17 (E), SophKB_18 (E), Sotrice96_18 (E), Stank_19 (E), Stark_18 (E), StellaBean_18 (E), StolenFromERC_19 (E), StormChicken_18 (E), TBrady12_19 (E), Tarkin_19 (E), TeamEdward_18 (E), TeardropMSU_17 (E), Teaspoon_17 (E), Terminus_17 (E), Thimble_18 (E), Thresher_18 (E), Tomaszewski_17 (E), Toto_18 (E), Traaww1_16 (E), Tuco_18 (E), Ukulele_17 (E), Wiggin_19 (E), Willez_17 (E), Xandras_19 (E), YassJohnny_18 (E), Youngblood_17 (E), xkcd_18 (E),

Start 6:
• Found in 51 of 196 (26.0%) of genes in pham
• Manual Annotations of this start: 41 of 175
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ariel_26 (J), BAKA_25 (J), Bagrid_26 (J), Beem_28 (J), Bobby_29 (J), Bombitas_25 (J), BronnyJames_20 (J), Constella_23 (J), Courthouse_26 (J), Dallas_28 (J), DmpstrDiver_27 (J), Dove_26 (J), Duke13_25 (J), Ejimix_29 (J), EricMillard_28 (J), Gonephishing_24 (J), Halley_28 (J), Hannaconda_23 (J), Hidrated_28 (J), HokkenD_23 (J), Hughesyang_27 (J), JuicyJay_30 (J), Kalah2_29 (J), KashFlow_20 (J), Klein_28 (J), LittleE_26 (J), Lucky2013_26 (J), Marleymoo_31 (J), MiaZeal_26 (J), Minerva_28 (J), Nekros_26 (J), Nibley_21 (J), NihilNomen_27 (J), Odette_27 (J), Omega_28 (J), Optimus_26 (J), Phoebus_28 (J), Porcelain_26 (J), Pound_28 (J), Rearden_23 (J), Redno2_27 (J), Schatzie_26 (J), Shaboozey_20 (J), Squint_25 (J), Superphikiman_26 (J),

Thibault_24 (J), ThreeRngTarjay_27 (J), Wanda_29 (J), Xiaokay_25 (J), Yeet_26 (J), Zelink_29 (J),

Summary by clusters:

There are 2 clusters represented in this pham: J, E,

Info for manual annotations of cluster E:
•Start number 5 was manually annotated 134 times for cluster E.

Info for manual annotations of cluster J:
•Start number 6 was manually annotated 41 times for cluster J.

Gene Information:

Gene: 244_18 Start: 10172, Stop: 10576, Start Num: 5
Candidate Starts for 244_18:
(1, 10139), (3, 10160), (Start: 5 @10172 has 134 MA's), (12, 10343), (14, 10355), (17, 10412), (19, 10481), (22, 10562), (23, 10571),

Gene: ABCat_17 Start: 10947, Stop: 11351, Start Num: 5
Candidate Starts for ABCat_17:
(1, 10914), (3, 10935), (Start: 5 @10947 has 134 MA's), (12, 11118), (14, 11130), (17, 11187), (19, 11256), (22, 11337), (23, 11346),

Gene: Adnama_19 Start: 10404, Stop: 10808, Start Num: 5
Candidate Starts for Adnama_19:
(1, 10371), (3, 10392), (Start: 5 @10404 has 134 MA's), (12, 10575), (14, 10587), (17, 10644), (19, 10713), (22, 10794), (23, 10803),

Gene: Amao_18 Start: 10152, Stop: 10556, Start Num: 5
Candidate Starts for Amao_18:
(1, 10119), (3, 10140), (Start: 5 @10152 has 134 MA's), (12, 10323), (14, 10335), (17, 10392), (19, 10461), (22, 10542), (23, 10551),

Gene: AmericanBeauty_19 Start: 10401, Stop: 10805, Start Num: 5
Candidate Starts for AmericanBeauty_19:
(1, 10368), (3, 10389), (Start: 5 @10401 has 134 MA's), (12, 10572), (14, 10584), (17, 10641), (19, 10710), (22, 10791), (23, 10800),

Gene: Argent26_19 Start: 10404, Stop: 10808, Start Num: 5
Candidate Starts for Argent26_19:
(1, 10371), (3, 10392), (Start: 5 @10404 has 134 MA's), (12, 10575), (14, 10587), (17, 10644), (19, 10713), (22, 10794), (23, 10803),

Gene: Ariel_26 Start: 14884, Stop: 15306, Start Num: 6
Candidate Starts for Ariel_26:
(Start: 6 @14884 has 41 MA's), (7, 14911), (9, 14950), (13, 15064), (15, 15088), (16, 15091), (17, 15124), (18, 15160), (20, 15271), (21, 15286),

Gene: Asriel_17 Start: 9819, Stop: 10223, Start Num: 5

Candidate Starts for Asriel_17:
(1, 9786), (3, 9807), (Start: 5 @9819 has 134 MA's), (12, 9990), (14, 10002), (17, 10059), (19, 10128), (22, 10209), (23, 10218),

Gene: BAKA_25 Start: 16991, Stop: 17407, Start Num: 6
Candidate Starts for BAKA_25:
(Start: 6 @16991 has 41 MA's), (8, 17024), (10, 17060), (17, 17228), (20, 17372), (21, 17387),

Gene: BaboJay_17 Start: 10483, Stop: 10887, Start Num: 5
Candidate Starts for BaboJay_17:
(1, 10450), (3, 10471), (Start: 5 @10483 has 134 MA's), (12, 10654), (14, 10666), (17, 10723), (19, 10792), (22, 10873), (23, 10882),

Gene: BadStone_17 Start: 10947, Stop: 11351, Start Num: 5
Candidate Starts for BadStone_17:
(1, 10914), (3, 10935), (Start: 5 @10947 has 134 MA's), (12, 11118), (14, 11130), (17, 11187), (19, 11256), (22, 11337), (23, 11346),

Gene: Bagrid_26 Start: 16780, Stop: 17196, Start Num: 6
Candidate Starts for Bagrid_26:
(Start: 6 @16780 has 41 MA's), (8, 16813), (10, 16849), (17, 17017), (20, 17161), (21, 17176),

Gene: Balomoji_17 Start: 10681, Stop: 11085, Start Num: 5
Candidate Starts for Balomoji_17:
(1, 10648), (3, 10669), (Start: 5 @10681 has 134 MA's), (12, 10852), (14, 10864), (17, 10921), (19, 10990), (22, 11071), (23, 11080),

Gene: Barbarian_17 Start: 9819, Stop: 10223, Start Num: 5
Candidate Starts for Barbarian_17:
(1, 9786), (3, 9807), (Start: 5 @9819 has 134 MA's), (12, 9990), (14, 10002), (17, 10059), (19, 10128), (22, 10209), (23, 10218),

Gene: Bask21_17 Start: 9614, Stop: 10018, Start Num: 5
Candidate Starts for Bask21_17:
(1, 9581), (3, 9602), (Start: 5 @9614 has 134 MA's), (12, 9785), (14, 9797), (17, 9854), (19, 9923), (22, 10004), (23, 10013),

Gene: Becksu_17 Start: 10591, Stop: 10995, Start Num: 5
Candidate Starts for Becksu_17:
(1, 10558), (3, 10579), (Start: 5 @10591 has 134 MA's), (12, 10762), (14, 10774), (17, 10831), (19, 10900), (22, 10981), (23, 10990),

Gene: Beem_28 Start: 17346, Stop: 17762, Start Num: 6
Candidate Starts for Beem_28:
(Start: 6 @17346 has 41 MA's), (8, 17379), (10, 17415), (17, 17583), (20, 17727), (21, 17742),

Gene: Bench_19 Start: 10277, Stop: 10681, Start Num: 5
Candidate Starts for Bench_19:
(1, 10244), (3, 10265), (Start: 5 @10277 has 134 MA's), (12, 10448), (14, 10460), (17, 10517), (19, 10586), (22, 10667), (23, 10676),

Gene: BigBubba_17 Start: 9660, Stop: 10064, Start Num: 5
Candidate Starts for BigBubba_17:

(1, 9627), (3, 9648), (Start: 5 @9660 has 134 MA's), (12, 9831), (14, 9843), (17, 9900), (19, 9969), (22, 10050), (23, 10059),

Gene: BilboSwaggins_18 Start: 10948, Stop: 11352, Start Num: 5
Candidate Starts for BilboSwaggins_18:
(1, 10915), (3, 10936), (Start: 5 @10948 has 134 MA's), (12, 11119), (14, 11131), (17, 11188), (19, 11257), (22, 11338), (23, 11347),

Gene: Bobby_29 Start: 17299, Stop: 17715, Start Num: 6
Candidate Starts for Bobby_29:
(Start: 6 @17299 has 41 MA's), (8, 17332), (10, 17368), (17, 17536), (20, 17680), (21, 17695),

Gene: Bogg_18 Start: 9833, Stop: 10237, Start Num: 5
Candidate Starts for Bogg_18:
(1, 9800), (3, 9821), (Start: 5 @9833 has 134 MA's), (12, 10004), (14, 10016), (17, 10073), (19, 10142), (22, 10223), (23, 10232),

Gene: Bombitas_25 Start: 16656, Stop: 17072, Start Num: 6
Candidate Starts for Bombitas_25:
(Start: 6 @16656 has 41 MA's), (8, 16689), (10, 16725), (17, 16893), (20, 17037), (21, 17052),

Gene: Brewer_17 Start: 10659, Stop: 11063, Start Num: 5
Candidate Starts for Brewer_17:
(1, 10626), (3, 10647), (Start: 5 @10659 has 134 MA's), (12, 10830), (14, 10842), (17, 10899), (19, 10968), (22, 11049), (23, 11058),

Gene: BronnyJames_20 Start: 13516, Stop: 13938, Start Num: 6
Candidate Starts for BronnyJames_20:
(Start: 6 @13516 has 41 MA's), (7, 13543), (9, 13582), (13, 13696), (15, 13720), (16, 13723), (17, 13756), (18, 13792), (20, 13903), (21, 13918),

Gene: Bruin_17 Start: 10455, Stop: 10859, Start Num: 5
Candidate Starts for Bruin_17:
(1, 10422), (3, 10443), (Start: 5 @10455 has 134 MA's), (12, 10626), (14, 10638), (17, 10695), (19, 10764), (22, 10845), (23, 10854),

Gene: Buck_17 Start: 10904, Stop: 11308, Start Num: 5
Candidate Starts for Buck_17:
(1, 10871), (3, 10892), (Start: 5 @10904 has 134 MA's), (12, 11075), (14, 11087), (17, 11144), (19, 11213), (22, 11294), (23, 11303),

Gene: Budgie_20 Start: 10335, Stop: 10742, Start Num: 5
Candidate Starts for Budgie_20:
(2, 10314), (4, 10326), (Start: 5 @10335 has 134 MA's), (12, 10509), (14, 10521), (17, 10578), (19, 10647), (22, 10728), (23, 10737),

Gene: BugsBunny_15 Start: 10021, Stop: 10425, Start Num: 5
Candidate Starts for BugsBunny_15:
(1, 9988), (3, 10009), (Start: 5 @10021 has 134 MA's), (12, 10192), (14, 10204), (17, 10261), (19, 10330), (22, 10411), (23, 10420),

Gene: Cactus_19 Start: 10160, Stop: 10564, Start Num: 5
Candidate Starts for Cactus_19:

(1, 10127), (3, 10148), (Start: 5 @10160 has 134 MA's), (12, 10331), (14, 10343), (17, 10400), (19, 10469), (22, 10550), (23, 10559),

Gene: ChosenOne_16 Start: 9624, Stop: 10028, Start Num: 5
Candidate Starts for ChosenOne_16:
(1, 9591), (3, 9612), (Start: 5 @9624 has 134 MA's), (12, 9795), (14, 9807), (17, 9864), (19, 9933), (22, 10014), (23, 10023),

Gene: ChotaBhai_17 Start: 9660, Stop: 10064, Start Num: 5
Candidate Starts for ChotaBhai_17:
(1, 9627), (3, 9648), (Start: 5 @9660 has 134 MA's), (12, 9831), (14, 9843), (17, 9900), (19, 9969), (22, 10050), (23, 10059),

Gene: Cjw1_17 Start: 11174, Stop: 11578, Start Num: 5
Candidate Starts for Cjw1_17:
(1, 11141), (3, 11162), (Start: 5 @11174 has 134 MA's), (12, 11345), (14, 11357), (17, 11414), (19, 11483), (22, 11564), (23, 11573),

Gene: Command613_19 Start: 11216, Stop: 11620, Start Num: 5
Candidate Starts for Command613_19:
(1, 11183), (3, 11204), (Start: 5 @11216 has 134 MA's), (12, 11387), (14, 11399), (17, 11456), (19, 11525), (22, 11606), (23, 11615),

Gene: Constella_23 Start: 16169, Stop: 16585, Start Num: 6
Candidate Starts for Constella_23:
(Start: 6 @16169 has 41 MA's), (8, 16202), (10, 16238), (17, 16406), (20, 16550), (21, 16565),

Gene: Contagion_17 Start: 10455, Stop: 10859, Start Num: 5
Candidate Starts for Contagion_17:
(1, 10422), (3, 10443), (Start: 5 @10455 has 134 MA's), (12, 10626), (14, 10638), (17, 10695), (19, 10764), (22, 10845), (23, 10854),

Gene: Cookies_18 Start: 10820, Stop: 11224, Start Num: 5
Candidate Starts for Cookies_18:
(1, 10787), (3, 10808), (Start: 5 @10820 has 134 MA's), (12, 10991), (14, 11003), (17, 11060), (19, 11129), (22, 11210), (23, 11219),

Gene: Courthouse_26 Start: 15286, Stop: 15708, Start Num: 6
Candidate Starts for Courthouse_26:
(Start: 6 @15286 has 41 MA's), (7, 15313), (9, 15352), (13, 15466), (15, 15490), (16, 15493), (17, 15526), (18, 15562), (20, 15673), (21, 15688),

Gene: CrystalP_18 Start: 10948, Stop: 11352, Start Num: 5
Candidate Starts for CrystalP_18:
(1, 10915), (3, 10936), (Start: 5 @10948 has 134 MA's), (12, 11119), (14, 11131), (17, 11188), (19, 11257), (22, 11338), (23, 11347),

Gene: Czyszczon1_18 Start: 10159, Stop: 10563, Start Num: 5
Candidate Starts for Czyszczon1_18:
(1, 10126), (3, 10147), (Start: 5 @10159 has 134 MA's), (12, 10330), (14, 10342), (17, 10399), (19, 10468), (22, 10549), (23, 10558),

Gene: Daikon_16 Start: 10682, Stop: 11086, Start Num: 5

Candidate Starts for Daikon_16:
(1, 10649), (3, 10670), (Start: 5 @10682 has 134 MA's), (12, 10853), (14, 10865), (17, 10922), (19, 10991), (22, 11072), (23, 11081),

Gene: Dallas_28 Start: 16886, Stop: 17302, Start Num: 6
Candidate Starts for Dallas_28:
(Start: 6 @16886 has 41 MA's), (8, 16919), (10, 16955), (17, 17123), (20, 17267), (21, 17282),

Gene: DmpstrDiver_27 Start: 17522, Stop: 17938, Start Num: 6
Candidate Starts for DmpstrDiver_27:
(Start: 6 @17522 has 41 MA's), (8, 17555), (10, 17591), (17, 17759), (20, 17903), (21, 17918),

Gene: DoctorDiddles_18 Start: 10113, Stop: 10517, Start Num: 5
Candidate Starts for DoctorDiddles_18:
(1, 10080), (3, 10101), (Start: 5 @10113 has 134 MA's), (12, 10284), (14, 10296), (17, 10353), (19, 10422), (22, 10503), (23, 10512),

Gene: Dove_26 Start: 16655, Stop: 17071, Start Num: 6
Candidate Starts for Dove_26:
(Start: 6 @16655 has 41 MA's), (8, 16688), (10, 16724), (17, 16892), (20, 17036), (21, 17051),

Gene: DrDrey_18 Start: 10900, Stop: 11304, Start Num: 5
Candidate Starts for DrDrey_18:
(1, 10867), (3, 10888), (Start: 5 @10900 has 134 MA's), (12, 11071), (14, 11083), (17, 11140), (19, 11209), (22, 11290), (23, 11299),

Gene: Duke13_25 Start: 16920, Stop: 17336, Start Num: 6
Candidate Starts for Duke13_25:
(Start: 6 @16920 has 41 MA's), (8, 16953), (10, 16989), (17, 17157), (20, 17301), (21, 17316),

Gene: Dumbo_17 Start: 9881, Stop: 10285, Start Num: 5
Candidate Starts for Dumbo_17:
(1, 9848), (3, 9869), (Start: 5 @9881 has 134 MA's), (12, 10052), (14, 10064), (17, 10121), (19, 10190), (22, 10271), (23, 10280),

Gene: Dusk_17 Start: 10607, Stop: 11011, Start Num: 5
Candidate Starts for Dusk_17:
(1, 10574), (3, 10595), (Start: 5 @10607 has 134 MA's), (12, 10778), (14, 10790), (17, 10847), (19, 10916), (22, 10997), (23, 11006),

Gene: Easy2Say_18 Start: 11147, Stop: 11551, Start Num: 5
Candidate Starts for Easy2Say_18:
(1, 11114), (3, 11135), (Start: 5 @11147 has 134 MA's), (12, 11318), (14, 11330), (17, 11387), (19, 11456), (22, 11537), (23, 11546),

Gene: Ejimix_29 Start: 18096, Stop: 18512, Start Num: 6
Candidate Starts for Ejimix_29:
(Start: 6 @18096 has 41 MA's), (8, 18129), (10, 18165), (17, 18333), (20, 18477), (21, 18492),

Gene: Elite2014_16 Start: 9624, Stop: 10028, Start Num: 5
Candidate Starts for Elite2014_16:
(1, 9591), (3, 9612), (Start: 5 @9624 has 134 MA's), (12, 9795), (14, 9807), (17, 9864), (19, 9933), (22, 10014), (23, 10023),

Gene: Elph10_18 Start: 9884, Stop: 10288, Start Num: 5
Candidate Starts for Elph10_18:
(1, 9851), (3, 9872), (Start: 5 @9884 has 134 MA's), (12, 10055), (14, 10067), (17, 10124), (19, 10193), (22, 10274), (23, 10283),

Gene: Emmina_17 Start: 9729, Stop: 10133, Start Num: 5
Candidate Starts for Emmina_17:
(1, 9696), (3, 9717), (Start: 5 @9729 has 134 MA's), (12, 9900), (14, 9912), (17, 9969), (19, 10038), (22, 10119), (23, 10128),

Gene: EricMillard_28 Start: 17632, Stop: 18048, Start Num: 6
Candidate Starts for EricMillard_28:
(Start: 6 @17632 has 41 MA's), (8, 17665), (10, 17701), (17, 17869), (20, 18013), (21, 18028),

Gene: Eureka_18 Start: 10927, Stop: 11331, Start Num: 5
Candidate Starts for Eureka_18:
(1, 10894), (3, 10915), (Start: 5 @10927 has 134 MA's), (12, 11098), (14, 11110), (17, 11167), (19, 11236), (22, 11317), (23, 11326),

Gene: FairyPath_18 Start: 11145, Stop: 11549, Start Num: 5
Candidate Starts for FairyPath_18:
(1, 11112), (3, 11133), (Start: 5 @11145 has 134 MA's), (12, 11316), (14, 11328), (17, 11385), (19, 11454), (22, 11535), (23, 11544),

Gene: Filch_18 Start: 10169, Stop: 10573, Start Num: 5
Candidate Starts for Filch_18:
(1, 10136), (3, 10157), (Start: 5 @10169 has 134 MA's), (12, 10340), (14, 10352), (17, 10409), (19, 10478), (22, 10559), (23, 10568),

Gene: FireRed_17 Start: 10457, Stop: 10861, Start Num: 5
Candidate Starts for FireRed_17:
(1, 10424), (3, 10445), (Start: 5 @10457 has 134 MA's), (12, 10628), (14, 10640), (17, 10697), (19, 10766), (22, 10847), (23, 10856),

Gene: Flypotenuse_16 Start: 10564, Stop: 10968, Start Num: 5
Candidate Starts for Flypotenuse_16:
(1, 10531), (3, 10552), (Start: 5 @10564 has 134 MA's), (12, 10735), (14, 10747), (17, 10804), (19, 10873), (22, 10954), (23, 10963),

Gene: FoghornLeghorn_17 Start: 10452, Stop: 10856, Start Num: 5
Candidate Starts for FoghornLeghorn_17:
(1, 10419), (3, 10440), (Start: 5 @10452 has 134 MA's), (12, 10623), (14, 10635), (17, 10692), (19, 10761), (22, 10842), (23, 10851),

Gene: Gage_19 Start: 10404, Stop: 10808, Start Num: 5
Candidate Starts for Gage_19:
(1, 10371), (3, 10392), (Start: 5 @10404 has 134 MA's), (12, 10575), (14, 10587), (17, 10644), (19, 10713), (22, 10794), (23, 10803),

Gene: Gator_16 Start: 10563, Stop: 10967, Start Num: 5
Candidate Starts for Gator_16:

(1, 10530), (3, 10551), (Start: 5 @10563 has 134 MA's), (12, 10734), (14, 10746), (17, 10803), (19, 10872), (22, 10953), (23, 10962),

Gene: Gemini_19 Start: 10404, Stop: 10808, Start Num: 5
Candidate Starts for Gemini_19:
(1, 10371), (3, 10392), (Start: 5 @10404 has 134 MA's), (12, 10575), (14, 10587), (17, 10644), (19, 10713), (22, 10794), (23, 10803),

Gene: Glexan_16 Start: 10564, Stop: 10968, Start Num: 5
Candidate Starts for Glexan_16:
(1, 10531), (3, 10552), (Start: 5 @10564 has 134 MA's), (12, 10735), (14, 10747), (17, 10804), (19, 10873), (22, 10954), (23, 10963),

Gene: Goku_18 Start: 10656, Stop: 11060, Start Num: 5
Candidate Starts for Goku_18:
(1, 10623), (3, 10644), (Start: 5 @10656 has 134 MA's), (12, 10827), (14, 10839), (17, 10896), (19, 10965), (22, 11046), (23, 11055),

Gene: GoldenSpark_19 Start: 10404, Stop: 10808, Start Num: 5
Candidate Starts for GoldenSpark_19:
(1, 10371), (3, 10392), (Start: 5 @10404 has 134 MA's), (12, 10575), (14, 10587), (17, 10644), (19, 10713), (22, 10794), (23, 10803),

Gene: Goldilocks_19 Start: 10358, Stop: 10762, Start Num: 5
Candidate Starts for Goldilocks_19:
(1, 10325), (3, 10346), (Start: 5 @10358 has 134 MA's), (12, 10529), (14, 10541), (17, 10598), (19, 10667), (22, 10748), (23, 10757),

Gene: Gonephishing_24 Start: 15459, Stop: 15881, Start Num: 6
Candidate Starts for Gonephishing_24:
(Start: 6 @15459 has 41 MA's), (7, 15486), (9, 15525), (13, 15639), (15, 15663), (16, 15666), (17, 15699), (18, 15735), (20, 15846), (21, 15861),

Gene: GooberAzure_19 Start: 10404, Stop: 10808, Start Num: 5
Candidate Starts for GooberAzure_19:
(1, 10371), (3, 10392), (Start: 5 @10404 has 134 MA's), (12, 10575), (14, 10587), (17, 10644), (19, 10713), (22, 10794), (23, 10803),

Gene: Greep_18 Start: 10734, Stop: 11138, Start Num: 5
Candidate Starts for Greep_18:
(1, 10701), (3, 10722), (Start: 5 @10734 has 134 MA's), (12, 10905), (14, 10917), (17, 10974), (19, 11043), (22, 11124), (23, 11133),

Gene: Halley_28 Start: 17345, Stop: 17761, Start Num: 6
Candidate Starts for Halley_28:
(Start: 6 @17345 has 41 MA's), (8, 17378), (10, 17414), (17, 17582), (20, 17726), (21, 17741),

Gene: HanKaySha_18 Start: 10159, Stop: 10563, Start Num: 5
Candidate Starts for HanKaySha_18:
(1, 10126), (3, 10147), (Start: 5 @10159 has 134 MA's), (12, 10330), (14, 10342), (17, 10399), (19, 10468), (22, 10549), (23, 10558),

Gene: Hannaconda_23 Start: 13966, Stop: 14388, Start Num: 6

Candidate Starts for Hannaconda_23:
(Start: 6 @13966 has 41 MA's), (7, 13993), (9, 14032), (13, 14146), (15, 14170), (16, 14173), (17, 14206), (18, 14242), (20, 14353), (21, 14368),

Gene: Harella_16 Start: 10564, Stop: 10968, Start Num: 5
Candidate Starts for Harella_16:
(1, 10531), (3, 10552), (Start: 5 @10564 has 134 MA's), (12, 10735), (14, 10747), (17, 10804), (19, 10873), (22, 10954), (23, 10963),

Gene: Henry_18 Start: 10947, Stop: 11351, Start Num: 5
Candidate Starts for Henry_18:
(1, 10914), (3, 10935), (Start: 5 @10947 has 134 MA's), (12, 11118), (14, 11130), (17, 11187), (19, 11256), (22, 11337), (23, 11346),

Gene: Hidrated_28 Start: 18791, Stop: 19207, Start Num: 6
Candidate Starts for Hidrated_28:
(Start: 6 @18791 has 41 MA's), (8, 18824), (10, 18860), (17, 19028), (20, 19172), (21, 19187),

Gene: Highbury_18 Start: 10078, Stop: 10482, Start Num: 5
Candidate Starts for Highbury_18:
(1, 10045), (3, 10066), (Start: 5 @10078 has 134 MA's), (12, 10249), (14, 10261), (17, 10318), (19, 10387), (22, 10468), (23, 10477),

Gene: HokkenD_23 Start: 16915, Stop: 17331, Start Num: 6
Candidate Starts for HokkenD_23:
(Start: 6 @16915 has 41 MA's), (8, 16948), (10, 16984), (17, 17152), (20, 17296), (21, 17311),

Gene: Holt_19 Start: 10231, Stop: 10635, Start Num: 5
Candidate Starts for Holt_19:
(1, 10198), (3, 10219), (Start: 5 @10231 has 134 MA's), (12, 10402), (14, 10414), (17, 10471), (19, 10540), (22, 10621), (23, 10630),

Gene: Hoonter_19 Start: 10404, Stop: 10808, Start Num: 5
Candidate Starts for Hoonter_19:
(1, 10371), (3, 10392), (Start: 5 @10404 has 134 MA's), (12, 10575), (14, 10587), (17, 10644), (19, 10713), (22, 10794), (23, 10803),

Gene: Hopey_18 Start: 10169, Stop: 10573, Start Num: 5
Candidate Starts for Hopey_18:
(1, 10136), (3, 10157), (Start: 5 @10169 has 134 MA's), (12, 10340), (14, 10352), (17, 10409), (19, 10478), (22, 10559), (23, 10568),

Gene: HufflyPuff_16 Start: 10413, Stop: 10817, Start Num: 5
Candidate Starts for HufflyPuff_16:
(1, 10380), (3, 10401), (Start: 5 @10413 has 134 MA's), (12, 10584), (14, 10596), (17, 10653), (19, 10722), (22, 10803), (23, 10812),

Gene: Hughesyang_27 Start: 17528, Stop: 17944, Start Num: 6
Candidate Starts for Hughesyang_27:
(Start: 6 @17528 has 41 MA's), (8, 17561), (10, 17597), (17, 17765), (20, 17909), (21, 17924),

Gene: IHOP_17 Start: 10607, Stop: 11011, Start Num: 5
Candidate Starts for IHOP_17:

(1, 10574), (3, 10595), (Start: 5 @10607 has 134 MA's), (12, 10778), (14, 10790), (17, 10847), (19, 10916), (22, 10997), (23, 11006),

Gene: Icee_17 Start: 10607, Stop: 11011, Start Num: 5
Candidate Starts for Icee_17:
(1, 10574), (3, 10595), (Start: 5 @10607 has 134 MA's), (12, 10778), (14, 10790), (17, 10847), (19, 10916), (22, 10997), (23, 11006),

Gene: Inca_17 Start: 9627, Stop: 10031, Start Num: 5
Candidate Starts for Inca_17:
(1, 9594), (3, 9615), (Start: 5 @9627 has 134 MA's), (12, 9798), (14, 9810), (17, 9867), (19, 9936), (22, 10017), (23, 10026),

Gene: JeTaime_19 Start: 11209, Stop: 11613, Start Num: 5
Candidate Starts for JeTaime_19:
(1, 11176), (3, 11197), (Start: 5 @11209 has 134 MA's), (12, 11380), (14, 11392), (17, 11449), (19, 11518), (22, 11599), (23, 11608),

Gene: JuicyJay_30 Start: 18179, Stop: 18595, Start Num: 6
Candidate Starts for JuicyJay_30:
(Start: 6 @18179 has 41 MA's), (8, 18212), (10, 18248), (17, 18416), (20, 18560), (21, 18575),

Gene: Kalah2_29 Start: 17947, Stop: 18363, Start Num: 6
Candidate Starts for Kalah2_29:
(Start: 6 @17947 has 41 MA's), (8, 17980), (10, 18016), (17, 18184), (20, 18328), (21, 18343),

Gene: Kanye_19 Start: 11397, Stop: 11801, Start Num: 5
Candidate Starts for Kanye_19:
(1, 11364), (3, 11385), (Start: 5 @11397 has 134 MA's), (12, 11568), (14, 11580), (17, 11637), (19, 11706), (22, 11787), (23, 11796),

Gene: KashFlow_20 Start: 13532, Stop: 13954, Start Num: 6
Candidate Starts for KashFlow_20:
(Start: 6 @13532 has 41 MA's), (7, 13559), (9, 13598), (13, 13712), (15, 13736), (16, 13739), (17, 13772), (18, 13808), (20, 13919), (21, 13934),

Gene: Kimchi_19 Start: 10404, Stop: 10808, Start Num: 5
Candidate Starts for Kimchi_19:
(1, 10371), (3, 10392), (Start: 5 @10404 has 134 MA's), (12, 10575), (14, 10587), (17, 10644), (19, 10713), (22, 10794), (23, 10803),

Gene: Klein_28 Start: 16925, Stop: 17341, Start Num: 6
Candidate Starts for Klein_28:
(Start: 6 @16925 has 41 MA's), (8, 16958), (10, 16994), (17, 17162), (20, 17306), (21, 17321),

Gene: Kostya_18 Start: 10947, Stop: 11351, Start Num: 5
Candidate Starts for Kostya_18:
(1, 10914), (3, 10935), (Start: 5 @10947 has 134 MA's), (12, 11118), (14, 11130), (17, 11187), (19, 11256), (22, 11337), (23, 11346),

Gene: Lilac_19 Start: 9905, Stop: 10309, Start Num: 5
Candidate Starts for Lilac_19:

(1, 9872), (3, 9893), (Start: 5 @9905 has 134 MA's), (12, 10076), (14, 10088), (17, 10145), (19, 10214), (22, 10295), (23, 10304),

Gene: Lilizi_19 Start: 10116, Stop: 10520, Start Num: 5
Candidate Starts for Lilizi_19:
(1, 10083), (3, 10104), (Start: 5 @10116 has 134 MA's), (12, 10287), (14, 10299), (17, 10356), (19, 10425), (22, 10506), (23, 10515),

Gene: Lilpickle_16 Start: 9624, Stop: 10028, Start Num: 5
Candidate Starts for Lilpickle_16:
(1, 9591), (3, 9612), (Start: 5 @9624 has 134 MA's), (12, 9795), (14, 9807), (17, 9864), (19, 9933), (22, 10014), (23, 10023),

Gene: LittleE_26 Start: 16671, Stop: 17093, Start Num: 6
Candidate Starts for LittleE_26:
(Start: 6 @16671 has 41 MA's), (7, 16698), (9, 16737), (13, 16851), (15, 16875), (16, 16878), (17, 16911), (18, 16947), (20, 17058), (21, 17073),

Gene: Livelaughbron_17 Start: 10545, Stop: 10949, Start Num: 5
Candidate Starts for Livelaughbron_17:
(1, 10512), (3, 10533), (Start: 5 @10545 has 134 MA's), (12, 10716), (14, 10728), (17, 10785), (19, 10854), (22, 10935), (23, 10944),

Gene: Lucky2013_26 Start: 15414, Stop: 15836, Start Num: 6
Candidate Starts for Lucky2013_26:
(Start: 6 @15414 has 41 MA's), (7, 15441), (9, 15480), (13, 15594), (15, 15618), (16, 15621), (17, 15654), (18, 15690), (20, 15801), (21, 15816),

Gene: MISSy_17 Start: 10457, Stop: 10861, Start Num: 5
Candidate Starts for MISSy_17:
(1, 10424), (3, 10445), (Start: 5 @10457 has 134 MA's), (12, 10628), (14, 10640), (17, 10697), (19, 10766), (22, 10847), (23, 10856),

Gene: MPhalcon_17 Start: 10457, Stop: 10861, Start Num: 5
Candidate Starts for MPhalcon_17:
(1, 10424), (3, 10445), (Start: 5 @10457 has 134 MA's), (12, 10628), (14, 10640), (17, 10697), (19, 10766), (22, 10847), (23, 10856),

Gene: MadamMonkfish_17 Start: 9835, Stop: 10239, Start Num: 5
Candidate Starts for MadamMonkfish_17:
(1, 9802), (3, 9823), (Start: 5 @9835 has 134 MA's), (12, 10006), (17, 10075), (19, 10144), (22, 10225), (23, 10234),

Gene: Manda_18 Start: 10917, Stop: 11321, Start Num: 5
Candidate Starts for Manda_18:
(1, 10884), (3, 10905), (Start: 5 @10917 has 134 MA's), (12, 11088), (14, 11100), (17, 11157), (19, 11226), (22, 11307), (23, 11316),

Gene: Marleymoo_31 Start: 19336, Stop: 19752, Start Num: 6
Candidate Starts for Marleymoo_31:
(Start: 6 @19336 has 41 MA's), (8, 19369), (10, 19405), (17, 19573), (20, 19717), (21, 19732),

Gene: Marshmallow_18 Start: 10947, Stop: 11351, Start Num: 5

Candidate Starts for Marshmallow_18:
(1, 10914), (3, 10935), (Start: 5 @10947 has 134 MA's), (12, 11118), (14, 11130), (17, 11187), (19, 11256), (22, 11337), (23, 11346),

Gene: Maxxinista_18 Start: 9884, Stop: 10288, Start Num: 5
Candidate Starts for Maxxinista_18:
(1, 9851), (3, 9872), (Start: 5 @9884 has 134 MA's), (12, 10055), (14, 10067), (17, 10124), (19, 10193), (22, 10274), (23, 10283),

Gene: MiaZeal_26 Start: 15105, Stop: 15527, Start Num: 6
Candidate Starts for MiaZeal_26:
(Start: 6 @15105 has 41 MA's), (9, 15171), (13, 15285), (15, 15309), (16, 15312), (17, 15345), (18, 15381), (20, 15492), (21, 15507),

Gene: Mindy_18 Start: 10726, Stop: 11130, Start Num: 5
Candidate Starts for Mindy_18:
(1, 10693), (3, 10714), (Start: 5 @10726 has 134 MA's), (12, 10897), (14, 10909), (17, 10966), (19, 11035), (22, 11116), (23, 11125),

Gene: Minerva_28 Start: 17410, Stop: 17826, Start Num: 6
Candidate Starts for Minerva_28:
(Start: 6 @17410 has 41 MA's), (8, 17443), (10, 17479), (17, 17647), (20, 17791), (21, 17806),

Gene: Miniwave_18 Start: 11145, Stop: 11549, Start Num: 5
Candidate Starts for Miniwave_18:
(1, 11112), (3, 11133), (Start: 5 @11145 has 134 MA's), (12, 11316), (14, 11328), (17, 11385), (19, 11454), (22, 11535), (23, 11544),

Gene: Misfit_17 Start: 10501, Stop: 10905, Start Num: 5
Candidate Starts for Misfit_17:
(1, 10468), (3, 10489), (Start: 5 @10501 has 134 MA's), (12, 10672), (14, 10684), (17, 10741), (19, 10810), (22, 10891), (23, 10900),

Gene: Moldemort_18 Start: 10159, Stop: 10563, Start Num: 5
Candidate Starts for Moldemort_18:
(1, 10126), (3, 10147), (Start: 5 @10159 has 134 MA's), (12, 10330), (14, 10342), (17, 10399), (19, 10468), (22, 10549), (23, 10558),

Gene: MollyToe_18 Start: 11119, Stop: 11523, Start Num: 5
Candidate Starts for MollyToe_18:
(1, 11086), (3, 11107), (Start: 5 @11119 has 134 MA's), (12, 11290), (14, 11302), (17, 11359), (19, 11428), (22, 11509), (23, 11518),

Gene: Mosby_17 Start: 10455, Stop: 10859, Start Num: 5
Candidate Starts for Mosby_17:
(1, 10422), (3, 10443), (Start: 5 @10455 has 134 MA's), (12, 10626), (14, 10638), (17, 10695), (19, 10764), (22, 10845), (23, 10854),

Gene: Murica_16 Start: 10413, Stop: 10817, Start Num: 5
Candidate Starts for Murica_16:
(1, 10380), (3, 10401), (Start: 5 @10413 has 134 MA's), (12, 10584), (14, 10596), (17, 10653), (19, 10722), (22, 10803), (23, 10812),

Gene: Murphy_17 Start: 9876, Stop: 10280, Start Num: 5
Candidate Starts for Murphy_17:
(1, 9843), (3, 9864), (Start: 5 @9876 has 134 MA's), (12, 10047), (14, 10059), (17, 10116), (19, 10185), (22, 10266), (23, 10275),

Gene: Myrale_18 Start: 10818, Stop: 11222, Start Num: 5
Candidate Starts for Myrale_18:
(1, 10785), (3, 10806), (Start: 5 @10818 has 134 MA's), (12, 10989), (14, 11001), (17, 11058), (19, 11127), (22, 11208), (23, 11217),

Gene: Nala_17 Start: 10455, Stop: 10859, Start Num: 5
Candidate Starts for Nala_17:
(1, 10422), (3, 10443), (Start: 5 @10455 has 134 MA's), (12, 10626), (14, 10638), (17, 10695), (19, 10764), (22, 10845), (23, 10854),

Gene: Nekros_26 Start: 17351, Stop: 17773, Start Num: 6
Candidate Starts for Nekros_26:
(Start: 6 @17351 has 41 MA's), (7, 17378), (9, 17417), (13, 17531), (15, 17555), (16, 17558), (17, 17591), (18, 17627), (20, 17738), (21, 17753),

Gene: NelitzaMV_18 Start: 11017, Stop: 11421, Start Num: 5
Candidate Starts for NelitzaMV_18:
(1, 10984), (3, 11005), (Start: 5 @11017 has 134 MA's), (12, 11188), (14, 11200), (17, 11257), (19, 11326), (22, 11407), (23, 11416),

Gene: Nibley_21 Start: 14033, Stop: 14455, Start Num: 6
Candidate Starts for Nibley_21:
(Start: 6 @14033 has 41 MA's), (7, 14060), (9, 14099), (13, 14213), (15, 14237), (16, 14240), (17, 14273), (18, 14309), (20, 14420), (21, 14435),

Gene: NihilNomen_27 Start: 17407, Stop: 17823, Start Num: 6
Candidate Starts for NihilNomen_27:
(Start: 6 @17407 has 41 MA's), (8, 17440), (10, 17476), (17, 17644), (20, 17788), (21, 17803),

Gene: Nimrod_17 Start: 10656, Stop: 11060, Start Num: 5
Candidate Starts for Nimrod_17:
(1, 10623), (3, 10644), (Start: 5 @10656 has 134 MA's), (12, 10827), (14, 10839), (17, 10896), (19, 10965), (22, 11046), (23, 11055),

Gene: NoSleep_18 Start: 10156, Stop: 10560, Start Num: 5
Candidate Starts for NoSleep_18:
(1, 10123), (3, 10144), (Start: 5 @10156 has 134 MA's), (12, 10327), (14, 10339), (17, 10396), (19, 10465), (22, 10546), (23, 10555),

Gene: NonchalantPear_17 Start: 10109, Stop: 10513, Start Num: 5
Candidate Starts for NonchalantPear_17:
(1, 10076), (3, 10097), (Start: 5 @10109 has 134 MA's), (12, 10280), (14, 10292), (17, 10349), (19, 10418), (22, 10499), (23, 10508),

Gene: Odette_27 Start: 16888, Stop: 17304, Start Num: 6
Candidate Starts for Odette_27:
(Start: 6 @16888 has 41 MA's), (8, 16921), (10, 16957), (17, 17125), (20, 17269), (21, 17284),

Gene: Omega_28 Start: 19031, Stop: 19453, Start Num: 6
Candidate Starts for Omega_28:
(Start: 6 @19031 has 41 MA's), (7, 19058), (9, 19097), (13, 19211), (15, 19235), (16, 19238), (17, 19271), (18, 19307), (20, 19418), (21, 19433),

Gene: Optimus_26 Start: 16985, Stop: 17401, Start Num: 6
Candidate Starts for Optimus_26:
(Start: 6 @16985 has 41 MA's), (8, 17018), (10, 17054), (17, 17222), (20, 17366), (21, 17381),

Gene: OrionPax_18 Start: 10159, Stop: 10563, Start Num: 5
Candidate Starts for OrionPax_18:
(1, 10126), (3, 10147), (Start: 5 @10159 has 134 MA's), (12, 10330), (14, 10342), (17, 10399), (19, 10468), (22, 10549), (23, 10558),

Gene: PaddyBaddy_18 Start: 10169, Stop: 10573, Start Num: 5
Candidate Starts for PaddyBaddy_18:
(1, 10136), (3, 10157), (Start: 5 @10169 has 134 MA's), (12, 10340), (14, 10352), (17, 10409), (19, 10478), (22, 10559), (23, 10568),

Gene: Palpatine_17 Start: 10452, Stop: 10856, Start Num: 5
Candidate Starts for Palpatine_17:
(1, 10419), (3, 10440), (Start: 5 @10452 has 134 MA's), (12, 10623), (14, 10635), (17, 10692), (19, 10761), (22, 10842), (23, 10851),

Gene: Paperbeatsrock_19 Start: 11391, Stop: 11795, Start Num: 5
Candidate Starts for Paperbeatsrock_19:
(1, 11358), (3, 11379), (Start: 5 @11391 has 134 MA's), (12, 11562), (14, 11574), (17, 11631), (19, 11700), (22, 11781), (23, 11790),

Gene: Pat3_17 Start: 9659, Stop: 10063, Start Num: 5
Candidate Starts for Pat3_17:
(1, 9626), (3, 9647), (Start: 5 @9659 has 134 MA's), (12, 9830), (14, 9842), (17, 9899), (19, 9968), (22, 10049), (23, 10058),

Gene: Petra64142_18 Start: 10872, Stop: 11276, Start Num: 5
Candidate Starts for Petra64142_18:
(1, 10839), (3, 10860), (Start: 5 @10872 has 134 MA's), (12, 11043), (14, 11055), (17, 11112), (19, 11181), (22, 11262), (23, 11271),

Gene: Phaja_17 Start: 10607, Stop: 11011, Start Num: 5
Candidate Starts for Phaja_17:
(1, 10574), (3, 10595), (Start: 5 @10607 has 134 MA's), (12, 10778), (14, 10790), (17, 10847), (19, 10916), (22, 10997), (23, 11006),

Gene: Pharsalus_18 Start: 11191, Stop: 11595, Start Num: 5
Candidate Starts for Pharsalus_18:
(1, 11158), (3, 11179), (Start: 5 @11191 has 134 MA's), (12, 11362), (14, 11374), (17, 11431), (19, 11500), (22, 11581), (23, 11590),

Gene: PhatBacter_17 Start: 10457, Stop: 10861, Start Num: 5
Candidate Starts for PhatBacter_17:
(1, 10424), (3, 10445), (Start: 5 @10457 has 134 MA's), (12, 10628), (14, 10640), (17, 10697), (19, 10766), (22, 10847), (23, 10856),

Gene: Phaux_16 Start: 10455, Stop: 10859, Start Num: 5
Candidate Starts for Phaux_16:
(1, 10422), (3, 10443), (Start: 5 @10455 has 134 MA's), (12, 10626), (14, 10638), (17, 10695), (19, 10764), (22, 10845), (23, 10854),

Gene: Phoebus_28 Start: 17632, Stop: 18048, Start Num: 6
Candidate Starts for Phoebus_28:
(Start: 6 @17632 has 41 MA's), (8, 17665), (10, 17701), (17, 17869), (20, 18013), (21, 18028),

Gene: Phrux_17 Start: 10155, Stop: 10559, Start Num: 5
Candidate Starts for Phrux_17:
(1, 10122), (3, 10143), (Start: 5 @10155 has 134 MA's), (12, 10326), (14, 10338), (17, 10395), (19, 10464), (22, 10545), (23, 10554),

Gene: Policronamos_17 Start: 10457, Stop: 10861, Start Num: 5
Candidate Starts for Policronamos_17:
(1, 10424), (3, 10445), (Start: 5 @10457 has 134 MA's), (12, 10628), (14, 10640), (17, 10697), (19, 10766), (22, 10847), (23, 10856),

Gene: Porcelain_26 Start: 15105, Stop: 15527, Start Num: 6
Candidate Starts for Porcelain_26:
(Start: 6 @15105 has 41 MA's), (9, 15171), (13, 15285), (15, 15309), (16, 15312), (17, 15345), (18, 15381), (20, 15492), (21, 15507),

Gene: Porky_16 Start: 9729, Stop: 10133, Start Num: 5
Candidate Starts for Porky_16:
(1, 9696), (3, 9717), (Start: 5 @9729 has 134 MA's), (12, 9900), (14, 9912), (17, 9969), (19, 10038), (22, 10119), (23, 10128),

Gene: Pound_28 Start: 17724, Stop: 18140, Start Num: 6
Candidate Starts for Pound_28:
(Start: 6 @17724 has 41 MA's), (8, 17757), (10, 17793), (17, 17961), (20, 18105), (21, 18120),

Gene: Ptowny_17 Start: 9796, Stop: 10200, Start Num: 5
Candidate Starts for Ptowny_17:
(1, 9763), (3, 9784), (Start: 5 @9796 has 134 MA's), (12, 9967), (14, 9979), (17, 10036), (19, 10105), (22, 10186), (23, 10195),

Gene: Pumpkin_18 Start: 9972, Stop: 10376, Start Num: 5
Candidate Starts for Pumpkin_18:
(1, 9939), (3, 9960), (Start: 5 @9972 has 134 MA's), (12, 10143), (14, 10155), (17, 10212), (19, 10281), (22, 10362), (23, 10371),

Gene: Quallification_19 Start: 11154, Stop: 11558, Start Num: 5
Candidate Starts for Quallification_19:
(1, 11121), (3, 11142), (Start: 5 @11154 has 134 MA's), (12, 11325), (14, 11337), (17, 11394), (19, 11463), (22, 11544), (23, 11553),

Gene: Rakim_19 Start: 11061, Stop: 11465, Start Num: 5
Candidate Starts for Rakim_19:
(1, 11028), (3, 11049), (Start: 5 @11061 has 134 MA's), (12, 11232), (14, 11244), (17, 11301), (19, 11370), (22, 11451), (23, 11460),

Gene: Rearden_23 Start: 14090, Stop: 14512, Start Num: 6
Candidate Starts for Rearden_23:
(Start: 6 @14090 has 41 MA's), (9, 14156), (13, 14270), (15, 14294), (16, 14297), (17, 14330), (18, 14366), (20, 14477), (21, 14492),

Gene: Redno2_27 Start: 17116, Stop: 17532, Start Num: 6
Candidate Starts for Redno2_27:
(Start: 6 @17116 has 41 MA's), (8, 17149), (10, 17185), (17, 17353), (20, 17497), (21, 17512),

Gene: Rimmer_17 Start: 10514, Stop: 10918, Start Num: 5
Candidate Starts for Rimmer_17:
(1, 10481), (3, 10502), (Start: 5 @10514 has 134 MA's), (12, 10685), (14, 10697), (17, 10754), (19, 10823), (22, 10904), (23, 10913),

Gene: RiverMonster_17 Start: 10169, Stop: 10573, Start Num: 5
Candidate Starts for RiverMonster_17:
(1, 10136), (3, 10157), (Start: 5 @10169 has 134 MA's), (12, 10340), (14, 10352), (17, 10409), (19, 10478), (22, 10559), (23, 10568),

Gene: Saints25_18 Start: 10078, Stop: 10482, Start Num: 5
Candidate Starts for Saints25_18:
(1, 10045), (3, 10066), (Start: 5 @10078 has 134 MA's), (12, 10249), (14, 10261), (17, 10318), (19, 10387), (22, 10468), (23, 10477),

Gene: Sassay_17 Start: 10455, Stop: 10859, Start Num: 5
Candidate Starts for Sassay_17:
(1, 10422), (3, 10443), (Start: 5 @10455 has 134 MA's), (12, 10626), (14, 10638), (17, 10695), (19, 10764), (22, 10845), (23, 10854),

Gene: Schatzie_26 Start: 16657, Stop: 17073, Start Num: 6
Candidate Starts for Schatzie_26:
(Start: 6 @16657 has 41 MA's), (8, 16690), (10, 16726), (17, 16894), (20, 17038), (21, 17053),

Gene: Shaboozey_20 Start: 13516, Stop: 13938, Start Num: 6
Candidate Starts for Shaboozey_20:
(Start: 6 @13516 has 41 MA's), (7, 13543), (9, 13582), (13, 13696), (15, 13720), (16, 13723), (17, 13756), (18, 13792), (20, 13903), (21, 13918),

Gene: ShamWow_18 Start: 10948, Stop: 11352, Start Num: 5
Candidate Starts for ShamWow_18:
(1, 10915), (3, 10936), (Start: 5 @10948 has 134 MA's), (12, 11119), (14, 11131), (17, 11188), (19, 11257), (22, 11338), (23, 11347),

Gene: ShereKhan_19 Start: 11397, Stop: 11801, Start Num: 5
Candidate Starts for ShereKhan_19:
(1, 11364), (3, 11385), (Start: 5 @11397 has 134 MA's), (12, 11568), (14, 11580), (17, 11637), (19, 11706), (22, 11787), (23, 11796),

Gene: Simpliphy_18 Start: 10159, Stop: 10563, Start Num: 5
Candidate Starts for Simpliphy_18:
(1, 10126), (3, 10147), (Start: 5 @10159 has 134 MA's), (12, 10330), (14, 10342), (17, 10399), (19, 10468), (22, 10549), (23, 10558),

Gene: SirDuracell_17 Start: 9614, Stop: 10018, Start Num: 5
Candidate Starts for SirDuracell_17:
(1, 9581), (3, 9602), (Start: 5 @9614 has 134 MA's), (12, 9785), (14, 9797), (17, 9854), (19, 9923), (22, 10004), (23, 10013),

Gene: SophKB_18 Start: 10947, Stop: 11351, Start Num: 5
Candidate Starts for SophKB_18:
(1, 10914), (3, 10935), (Start: 5 @10947 has 134 MA's), (12, 11118), (14, 11130), (17, 11187), (19, 11256), (22, 11337), (23, 11346),

Gene: Sotrice96_18 Start: 10903, Stop: 11307, Start Num: 5
Candidate Starts for Sotrice96_18:
(1, 10870), (3, 10891), (Start: 5 @10903 has 134 MA's), (12, 11074), (14, 11086), (17, 11143), (19, 11212), (22, 11293), (23, 11302),

Gene: Squint_25 Start: 15232, Stop: 15654, Start Num: 6
Candidate Starts for Squint_25:
(Start: 6 @15232 has 41 MA's), (7, 15259), (9, 15298), (13, 15412), (15, 15436), (16, 15439), (17, 15472), (18, 15508), (20, 15619), (21, 15634),

Gene: Stank_19 Start: 10404, Stop: 10808, Start Num: 5
Candidate Starts for Stank_19:
(1, 10371), (3, 10392), (Start: 5 @10404 has 134 MA's), (12, 10575), (14, 10587), (17, 10644), (19, 10713), (22, 10794), (23, 10803),

Gene: Stark_18 Start: 10172, Stop: 10576, Start Num: 5
Candidate Starts for Stark_18:
(1, 10139), (3, 10160), (Start: 5 @10172 has 134 MA's), (12, 10343), (14, 10355), (17, 10412), (19, 10481), (22, 10562), (23, 10571),

Gene: StellaBean_18 Start: 10947, Stop: 11351, Start Num: 5
Candidate Starts for StellaBean_18:
(1, 10914), (3, 10935), (Start: 5 @10947 has 134 MA's), (12, 11118), (14, 11130), (17, 11187), (19, 11256), (22, 11337), (23, 11346),

Gene: StolenFromERC_19 Start: 10404, Stop: 10808, Start Num: 5
Candidate Starts for StolenFromERC_19:
(1, 10371), (3, 10392), (Start: 5 @10404 has 134 MA's), (12, 10575), (14, 10587), (17, 10644), (19, 10713), (22, 10794), (23, 10803),

Gene: StormChicken_18 Start: 11122, Stop: 11526, Start Num: 5
Candidate Starts for StormChicken_18:
(1, 11089), (3, 11110), (Start: 5 @11122 has 134 MA's), (12, 11293), (14, 11305), (17, 11362), (19, 11431), (22, 11512), (23, 11521),

Gene: Superphikiman_26 Start: 15286, Stop: 15708, Start Num: 6
Candidate Starts for Superphikiman_26:
(Start: 6 @15286 has 41 MA's), (7, 15313), (9, 15352), (13, 15466), (15, 15490), (16, 15493), (17, 15526), (18, 15562), (20, 15673), (21, 15688),

Gene: TBrady12_19 Start: 10401, Stop: 10805, Start Num: 5
Candidate Starts for TBrady12_19:

(1, 10368), (3, 10389), (Start: 5 @10401 has 134 MA's), (12, 10572), (14, 10584), (17, 10641), (19, 10710), (22, 10791), (23, 10800),

Gene: Tarkin_19 Start: 11400, Stop: 11804, Start Num: 5
Candidate Starts for Tarkin_19:
(1, 11367), (3, 11388), (Start: 5 @11400 has 134 MA's), (12, 11571), (14, 11583), (17, 11640), (19, 11709), (22, 11790), (23, 11799),

Gene: TeamEdward_18 Start: 11119, Stop: 11523, Start Num: 5
Candidate Starts for TeamEdward_18:
(1, 11086), (3, 11107), (Start: 5 @11119 has 134 MA's), (12, 11290), (14, 11302), (17, 11359), (19, 11428), (22, 11509), (23, 11518),

Gene: TeardropMSU_17 Start: 10855, Stop: 11259, Start Num: 5
Candidate Starts for TeardropMSU_17:
(1, 10822), (3, 10843), (Start: 5 @10855 has 134 MA's), (12, 11026), (14, 11038), (17, 11095), (19, 11164), (22, 11245), (23, 11254),

Gene: Teaspoon_17 Start: 9854, Stop: 10258, Start Num: 5
Candidate Starts for Teaspoon_17:
(1, 9821), (3, 9842), (Start: 5 @9854 has 134 MA's), (12, 10025), (14, 10037), (17, 10094), (19, 10163), (22, 10244), (23, 10253),

Gene: Terminus_17 Start: 10501, Stop: 10905, Start Num: 5
Candidate Starts for Terminus_17:
(1, 10468), (3, 10489), (Start: 5 @10501 has 134 MA's), (12, 10672), (14, 10684), (17, 10741), (19, 10810), (22, 10891), (23, 10900),

Gene: Thibault_24 Start: 16916, Stop: 17332, Start Num: 6
Candidate Starts for Thibault_24:
(Start: 6 @16916 has 41 MA's), (8, 16949), (10, 16985), (11, 17039), (17, 17153), (20, 17297), (21, 17312),

Gene: Thimble_18 Start: 9904, Stop: 10308, Start Num: 5
Candidate Starts for Thimble_18:
(1, 9871), (3, 9892), (Start: 5 @9904 has 134 MA's), (12, 10075), (14, 10087), (17, 10144), (19, 10213), (22, 10294), (23, 10303),

Gene: ThreeRngTarjay_27 Start: 17482, Stop: 17898, Start Num: 6
Candidate Starts for ThreeRngTarjay_27:
(Start: 6 @17482 has 41 MA's), (8, 17515), (10, 17551), (17, 17719), (20, 17863), (21, 17878),

Gene: Thresher_18 Start: 11162, Stop: 11566, Start Num: 5
Candidate Starts for Thresher_18:
(1, 11129), (3, 11150), (Start: 5 @11162 has 134 MA's), (12, 11333), (14, 11345), (17, 11402), (19, 11471), (22, 11552), (23, 11561),

Gene: Tomaszewski_17 Start: 10548, Stop: 10952, Start Num: 5
Candidate Starts for Tomaszewski_17:
(1, 10515), (3, 10536), (Start: 5 @10548 has 134 MA's), (12, 10719), (14, 10731), (17, 10788), (19, 10857), (22, 10938), (23, 10947),

Gene: Toto_18 Start: 10948, Stop: 11352, Start Num: 5

Candidate Starts for Toto_18:
(1, 10915), (3, 10936), (Start: 5 @10948 has 134 MA's), (12, 11119), (14, 11131), (17, 11188), (19, 11257), (22, 11338), (23, 11347),

Gene: Traaww1_16 Start: 10593, Stop: 10997, Start Num: 5
Candidate Starts for Traaww1_16:
(1, 10560), (3, 10581), (Start: 5 @10593 has 134 MA's), (12, 10764), (14, 10776), (17, 10833), (19, 10902), (22, 10983), (23, 10992),

Gene: Tuco_18 Start: 10947, Stop: 11351, Start Num: 5
Candidate Starts for Tuco_18:
(1, 10914), (3, 10935), (Start: 5 @10947 has 134 MA's), (12, 11118), (14, 11130), (17, 11187), (19, 11256), (22, 11337), (23, 11346),

Gene: Ukulele_17 Start: 10172, Stop: 10576, Start Num: 5
Candidate Starts for Ukulele_17:
(1, 10139), (3, 10160), (Start: 5 @10172 has 134 MA's), (12, 10343), (14, 10355), (17, 10412), (19, 10481), (22, 10562), (23, 10571),

Gene: Wanda_29 Start: 16925, Stop: 17341, Start Num: 6
Candidate Starts for Wanda_29:
(Start: 6 @16925 has 41 MA's), (8, 16958), (10, 16994), (17, 17162), (20, 17306), (21, 17321),

Gene: Wiggin_19 Start: 10404, Stop: 10808, Start Num: 5
Candidate Starts for Wiggin_19:
(1, 10371), (3, 10392), (Start: 5 @10404 has 134 MA's), (12, 10575), (14, 10587), (17, 10644), (19, 10713), (22, 10794), (23, 10803),

Gene: Willez_17 Start: 10455, Stop: 10859, Start Num: 5
Candidate Starts for Willez_17:
(1, 10422), (3, 10443), (Start: 5 @10455 has 134 MA's), (12, 10626), (14, 10638), (17, 10695), (19, 10764), (22, 10845), (23, 10854),

Gene: Xandras_19 Start: 10404, Stop: 10808, Start Num: 5
Candidate Starts for Xandras_19:
(1, 10371), (3, 10392), (Start: 5 @10404 has 134 MA's), (12, 10575), (14, 10587), (17, 10644), (19, 10713), (22, 10794), (23, 10803),

Gene: Xiaokay_25 Start: 16932, Stop: 17348, Start Num: 6
Candidate Starts for Xiaokay_25:
(Start: 6 @16932 has 41 MA's), (8, 16965), (10, 17001), (17, 17169), (20, 17313), (21, 17328),

Gene: YassJohnny_18 Start: 10947, Stop: 11351, Start Num: 5
Candidate Starts for YassJohnny_18:
(1, 10914), (3, 10935), (Start: 5 @10947 has 134 MA's), (12, 11118), (14, 11130), (17, 11187), (19, 11256), (22, 11337), (23, 11346),

Gene: Yeet_26 Start: 16658, Stop: 17074, Start Num: 6
Candidate Starts for Yeet_26:
(Start: 6 @16658 has 41 MA's), (8, 16691), (10, 16727), (17, 16895), (20, 17039), (21, 17054),

Gene: Youngblood_17 Start: 10582, Stop: 10986, Start Num: 5
Candidate Starts for Youngblood_17:

(1, 10549), (3, 10570), (Start: 5 @10582 has 134 MA's), (12, 10753), (14, 10765), (17, 10822), (19, 10891), (22, 10972), (23, 10981),

Gene: Zelink_29 Start: 17510, Stop: 17926, Start Num: 6
Candidate Starts for Zelink_29:
(Start: 6 @17510 has 41 MA's), (8, 17543), (10, 17579), (17, 17747), (20, 17891), (21, 17906),

Gene: xkcd_18 Start: 10607, Stop: 11011, Start Num: 5
Candidate Starts for xkcd_18:
(1, 10574), (3, 10595), (Start: 5 @10607 has 134 MA's), (12, 10778), (14, 10790), (17, 10847), (19, 10916), (22, 10997), (23, 11006),