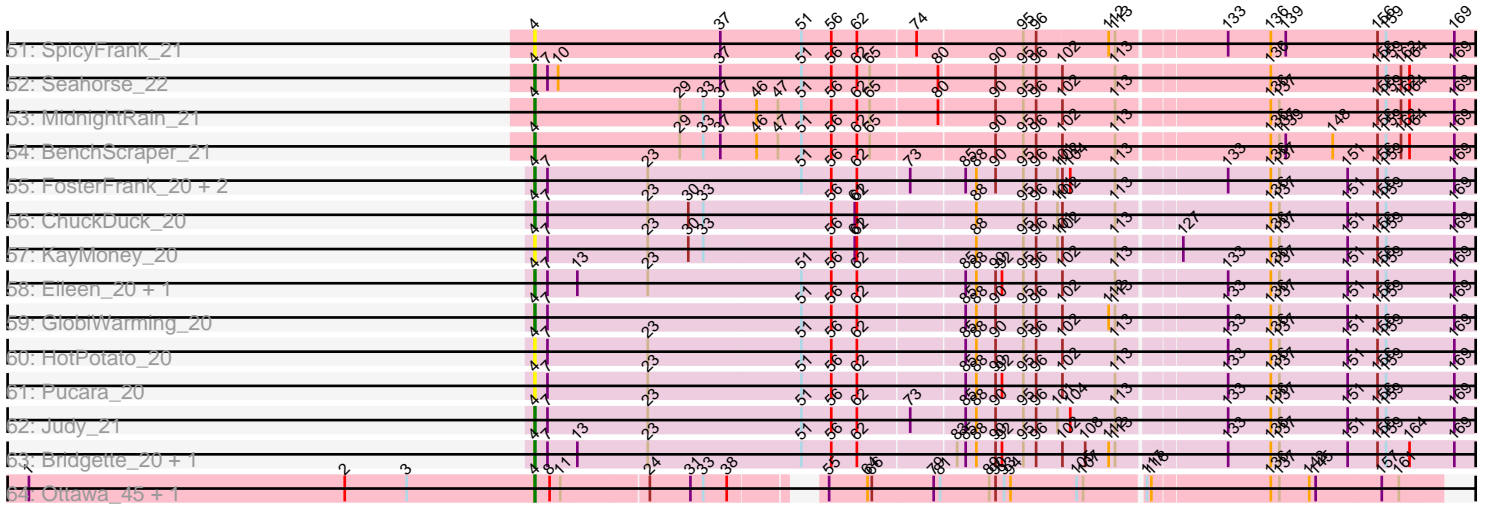


Pham 217745



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 217745 Report

This analysis was run 03/28/25 on database version 593.

Pham number 217745 has 107 members, 45 are drafts.

Phages represented in each track:

- Track 1 : Kovu_67
- Track 2 : Laroye_69, LiSara_66
- Track 3 : Waltz_66
- Track 4 : ApoKipo_69
- Track 5 : Wheelbite_65
- Track 6 : Salgado_69
- Track 7 : Shrooms_67
- Track 8 : Edmundo_69
- Track 9 : Orcanus_18
- Track 10 : Brynnie_18
- Track 11 : Vulpecula_18
- Track 12 : Eesa_18
- Track 13 : Pelletreau_19, Gravel_19, Toad24_19, Westrich_19, KendraB23_19
- Track 14 : Jamun_18
- Track 15 : Ruchi_18
- Track 16 : Basilisk_18
- Track 17 : WileyE_17, Chickaboom_17
- Track 18 : TaylorSipht_18
- Track 19 : OtsoOtso_18, Polka_18
- Track 20 : Cygnet_18
- Track 21 : LittleTokyo_18
- Track 22 : Kuleana_18
- Track 23 : Melons_19, Bedetta_19, Bibble12_19, Amelia_19, Cote_19, Lunar_19, Daob_19, Coral_18, Colusalem_18, Kepler_18, HannahPhantana_19, Jerole_19
- Track 24 : Zhuangyuan_20
- Track 25 : Antrice_18
- Track 26 : Leona_17, Rattail_17
- Track 27 : Juno112_17, AmiCi24_17, Camara_17
- Track 28 : HamCheese_17, PhluffyCoco_17
- Track 29 : Glotell_18, KHumphrey_17, DanHam62_17, Atlantica_17, RedFox_17
- Track 30 : Renna12_18
- Track 31 : StuartMinion_18
- Track 32 : Andrew_18
- Track 33 : Babushka_17
- Track 34 : Aikyam_21, MaterMagnus_21
- Track 35 : CookieBear_22
- Track 36 : ThayneTheZag_21

- Track 37 : JellyBread_21, RadFad_21, Vopal_22, Auxilium_21, Raphaella_21, YoungHarleezy_21, Hillester_21
- Track 38 : Tiff81_22
- Track 39 : MUWow_20, AdaS_21
- Track 40 : Phrank15_20
- Track 41 : Richie_21, Windest_22
- Track 42 : Bhageatrice_23
- Track 43 : Sakai_21, Gorpy_21
- Track 44 : BlueShadow_22
- Track 45 : Globfish_21
- Track 46 : Anekin_20
- Track 47 : Shukran_21
- Track 48 : Hestia_21
- Track 49 : BillyTP_21, Lawnathon_21, Isolde_21
- Track 50 : Persistence_20
- Track 51 : SpicyFrank_21
- Track 52 : Seahorse_22
- Track 53 : MidnightRain_21
- Track 54 : BenchScraper_21
- Track 55 : FosterFrank_20, PeggyLeg03_20, Constance_20
- Track 56 : ChuckDuck_20
- Track 57 : KayMoney_20
- Track 58 : Eileen_20, Peas_20
- Track 59 : GlobiWarming_20
- Track 60 : HotPotato_20
- Track 61 : Pucara_20
- Track 62 : Judy_21
- Track 63 : Bridgette_20, Karkharias_20
- Track 64 : Ottawa_45, Kharcho_45

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

The start number called the most often in the published annotations is 4, it was called in 62 of the 62 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AdaS_21, Aikyam_21, Amelia_19, AmiCi24_17, Andrew_18, Anekin_20, Antrice_18, Atlantica_17, Auxilium_21, Babushka_17, Basilisk_18, Bedetta_19, BenchScraper_21, Bhageatrice_23, Bibble12_19, BillyTP_21, BlueShadow_22, Bridgette_20, Brynnie_18, Camara_17, Chickaboom_17, ChuckDuck_20, Colusalem_18, Constance_20, CookieBear_22, Coral_18, Cote_19, Cygnet_18, DanHam62_17, Daob_19, Edmundo_69, Eesa_18, Eileen_20, FosterFrank_20, Globfish_21, GlobiWarming_20, Glotell_18, Gorpy_21, Gravel_19, HamCheese_17, HannahPhantana_19, Hestia_21, Hillester_21, HotPotato_20, Isolde_21, Jamun_18, JellyBread_21, Jerole_19, Judy_21, Juno112_17, KHumphrey_17, Karkharias_20, KayMoney_20, KendraB23_19, Kepler_18, Kharcho_45, Kovu_67, Kuleana_18, Laroye_69, Lawnathon_21, Leona_17, LiSara_66, LittleTokyo_18, Lunar_19, MUWow_20, MaterMagnus_21, Melons_19, MidnightRain_21, Orcanus_18, OtsoOtso_18, Ottawa_45, Peas_20, PeggyLeg03_20, Pelletreau_19, Persistence_20, PhluffyCoco_17, Phrank15_20, Polka_18, Pucara_20, RadFad_21,

Raphaella_21, Rattail_17, RedFox_17, Renna12_18, Richie_21, Ruchi_18, Sakai_21, Salgado_69, Seahorse_22, Shrooms_67, Shukran_21, SpicyFrank_21, StuartMinion_18, TaylorSipht_18, ThayneTheZag_21, Tiff81_22, Toad24_19, Vopal_22, Vulpecula_18, Waltz_66, Westrich_19, Wheelbite_65, WileyE_17, Windest_22, YoungHarleezy_21, Zhuangyuan_20,

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

- ApoKipo_69,

Genes that do not have the "Most Annotated" start:

-

Summary by start number:

Start 4:

- Found in 107 of 107 (100.0%) of genes in pham
- Manual Annotations of this start: 62 of 62
- Called 99.1% of time when present
- Phage (with cluster) where this start called: AdaS_21 (AY), Aikyam_21 (AY), Amelia_19 (AS2), AmiCi24_17 (AS3), Andrew_18 (AS3), Anekin_20 (AY), Antrice_18 (AS2), Atlantica_17 (AS3), Auxilium_21 (AY), Babushka_17 (AS3), Basilisk_18 (AS1), Bedetta_19 (AS2), BenchScraper_21 (AY), Bhageatrice_23 (AY), Bibble12_19 (AS2), BillyTP_21 (AY), BlueShadow_22 (AY), Bridgette_20 (FA), Brynnie_18 (AS1), Camara_17 (AS3), Chickaboom_17 (AS1), ChuckDuck_20 (FA), Colusalem_18 (AS2), Constance_20 (FA), CookieBear_22 (AY), Coral_18 (AS2), Cote_19 (AS2), Cygnet_18 (AS2), DanHam62_17 (AS3), Daob_19 (AS2), Edmundo_69 (AL), Eesa_18 (AS1), Eileen_20 (FA), FosterFrank_20 (FA), Globfish_21 (AY), GlobiWarming_20 (FA), Glotell_18 (AS3), Gorpy_21 (AY), Gravel_19 (AS1), HamCheese_17 (AS3), HannahPhantana_19 (AS2), Hestia_21 (AY), Hillester_21 (AY), HotPotato_20 (FA), Isolde_21 (AY), Jamun_18 (AS1), JellyBread_21 (AY), Jerole_19 (AS2), Judy_21 (FA), Juno112_17 (AS3), KHumphrey_17 (AS3), Karkharias_20 (FA), KayMoney_20 (FA), KendraB23_19 (AS1), Kepler_18 (AS2), Kharcho_45 (FM), Kovu_67 (AL), Kuleana_18 (AS2), Laroye_69 (AL), Lawnathon_21 (AY), Leona_17 (AS3), LiSara_66 (AL), LittleTokyo_18 (AS2), Lunar_19 (AS2), MUWow_20 (AY), MaterMagnus_21 (AY), Melons_19 (AS2), MidnightRain_21 (AY), Orcanus_18 (AS1), OtsoOtso_18 (AS2), Ottawa_45 (FM), Peas_20 (FA), PeggyLeg03_20 (FA), Pelletreau_19 (AS1), Persistence_20 (AY), PhluffyCoco_17 (AS3), Phrank15_20 (AY), Polka_18 (AS2), Pucara_20 (FA), RadFad_21 (AY), Raphaella_21 (AY), Rattail_17 (AS3), RedFox_17 (AS3), Renna12_18 (AS3), Richie_21 (AY), Ruchi_18 (AS1), Sakai_21 (AY), Salgado_69 (AL), Seahorse_22 (AY), Shrooms_67 (AL), Shukran_21 (AY), SpicyFrank_21 (AY), StuartMinion_18 (AS3), TaylorSipht_18 (AS1), ThayneTheZag_21 (AY), Tiff81_22 (AY), Toad24_19 (AS1), Vopal_22 (AY), Vulpecula_18 (AS1), Waltz_66 (AL), Westrich_19 (AS1), Wheelbite_65 (AL), WileyE_17 (AS1), Windest_22 (AY), YoungHarleezy_21 (AY), Zhuangyuan_20 (AS2),

Start 8:

- Found in 11 of 107 (10.3%) of genes in pham
- No Manual Annotations of this start.
- Called 9.1% of time when present
- Phage (with cluster) where this start called: ApoKipo_69 (AL),

Summary by clusters:

There are 7 clusters represented in this pham: AS3, AS2, AS1, AL, FA, AY, FM,

Info for manual annotations of cluster AL:

- Start number 4 was manually annotated 8 times for cluster AL.

Info for manual annotations of cluster AS1:

- Start number 4 was manually annotated 9 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 4 was manually annotated 11 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 4 was manually annotated 7 times for cluster AS3.

Info for manual annotations of cluster AY:

- Start number 4 was manually annotated 16 times for cluster AY.

Info for manual annotations of cluster FA:

- Start number 4 was manually annotated 9 times for cluster FA.

Info for manual annotations of cluster FM:

- Start number 4 was manually annotated 2 times for cluster FM.

Gene Information:

Gene: AdaS_21 Start: 15623, Stop: 16924, Start Num: 4

Candidate Starts for AdaS_21:

(Start: 4 @15623 has 62 MA's), (33, 15860), (37, 15884), (43, 15911), (47, 15962), (51, 15992), (56, 16034), (62, 16070), (65, 16088), (80, 16178), (90, 16253), (95, 16292), (96, 16310), (102, 16343), (113, 16415), (136, 16613), (137, 16625), (139, 16634), (148, 16700), (156, 16763), (159, 16775), (162, 16796), (164, 16808), (169, 16871),

Gene: Aikyam_21 Start: 15624, Stop: 16925, Start Num: 4

Candidate Starts for Aikyam_21:

(Start: 4 @15624 has 62 MA's), (37, 15885), (51, 15993), (56, 16035), (62, 16071), (65, 16089), (80, 16179), (90, 16254), (95, 16293), (96, 16311), (102, 16344), (113, 16416), (136, 16614), (137, 16626), (139, 16635), (148, 16701), (156, 16764), (159, 16776), (162, 16797), (164, 16809), (169, 16872),

Gene: Amelia_19 Start: 13377, Stop: 14630, Start Num: 4

Candidate Starts for Amelia_19:

(Start: 4 @13377 has 62 MA's), (5, 13380), (9, 13401), (17, 13470), (23, 13536), (25, 13545), (36, 13632), (38, 13647), (56, 13791), (57, 13794), (58, 13809), (59, 13812), (60, 13818), (77, 13923), (79, 13935), (85, 13974), (91, 14019), (95, 14055), (100, 14097), (103, 14112), (115, 14190), (123, 14253), (127, 14277), (142, 14454), (149, 14490), (151, 14508), (153, 14517), (155, 14544), (157, 14553), (163, 14586),

Gene: AmiCi24_17 Start: 12929, Stop: 14173, Start Num: 4

Candidate Starts for AmiCi24_17:

(Start: 4 @12929 has 62 MA's), (17, 13022), (21, 13043), (23, 13088), (28, 13112), (36, 13184), (38, 13199), (55, 13340), (56, 13343), (57, 13346), (58, 13361), (59, 13364), (60, 13370), (72, 13451), (77,

13475), (79, 13487), (83, 13514), (91, 13571), (95, 13607), (100, 13649), (103, 13664), (114, 13739), (118, 13781), (119, 13787), (126, 13814), (127, 13826), (129, 13853), (142, 14003), (144, 14009), (149, 14039), (153, 14066), (155, 14093), (157, 14102), (163, 14135), (167, 14165),

Gene: Andrew_18 Start: 13390, Stop: 14640, Start Num: 4

Candidate Starts for Andrew_18:

(Start: 4 @13390 has 62 MA's), (17, 13483), (18, 13486), (20, 13498), (21, 13504), (23, 13549), (36, 13645), (38, 13660), (53, 13780), (54, 13798), (55, 13801), (56, 13804), (57, 13807), (58, 13822), (59, 13825), (60, 13831), (67, 13864), (72, 13912), (77, 13936), (79, 13948), (81, 13957), (83, 13975), (91, 14032), (95, 14068), (100, 14110), (101, 14116), (114, 14200), (119, 14251), (122, 14260), (126, 14278), (127, 14290), (129, 14317), (131, 14341), (132, 14344), (142, 14467), (149, 14503), (153, 14530), (157, 14566), (163, 14599), (167, 14629),

Gene: Anekin_20 Start: 15586, Stop: 16887, Start Num: 4

Candidate Starts for Anekin_20:

(Start: 4 @15586 has 62 MA's), (7, 15604), (23, 15745), (33, 15823), (46, 15895), (56, 15997), (59, 16018), (62, 16033), (76, 16120), (81, 16144), (85, 16174), (88, 16189), (90, 16216), (95, 16255), (96, 16273), (97, 16288), (102, 16306), (113, 16378), (133, 16516), (151, 16684), (156, 16726), (159, 16738), (169, 16834),

Gene: Antrice_18 Start: 13934, Stop: 15181, Start Num: 4

Candidate Starts for Antrice_18:

(Start: 4 @13934 has 62 MA's), (14, 14000), (17, 14027), (18, 14030), (21, 14048), (23, 14093), (41, 14219), (53, 14324), (56, 14348), (59, 14369), (60, 14375), (63, 14396), (68, 14420), (72, 14456), (77, 14480), (78, 14489), (79, 14492), (85, 14528), (87, 14540), (90, 14570), (91, 14573), (95, 14609), (100, 14651), (114, 14741), (125, 14816), (137, 14966), (142, 15008), (144, 15014), (147, 15029), (153, 15071), (155, 15098), (157, 15107), (160, 15119), (165, 15161),

Gene: ApoKipo_69 Start: 42442, Stop: 43596, Start Num: 8

Candidate Starts for ApoKipo_69:

(Start: 4 @42421 has 62 MA's), (8, 42442), (15, 42490), (19, 42523), (31, 42628), (39, 42688), (40, 42691), (48, 42745), (57, 42772), (64, 42820), (79, 42910), (80, 42916), (81, 42919), (85, 42955), (87, 42967), (89, 42988), (90, 42997), (93, 43009), (94, 43018), (109, 43129), (117, 43198), (118, 43204), (130, 43270), (136, 43360), (138, 43378), (141, 43402), (142, 43414), (157, 43513), (159, 43519), (161, 43537), (166, 43567),

Gene: Atlantica_17 Start: 12931, Stop: 14175, Start Num: 4

Candidate Starts for Atlantica_17:

(Start: 4 @12931 has 62 MA's), (17, 13024), (21, 13045), (23, 13090), (28, 13114), (36, 13186), (55, 13342), (56, 13345), (57, 13348), (58, 13363), (59, 13366), (60, 13372), (72, 13453), (77, 13477), (79, 13489), (83, 13516), (91, 13573), (95, 13609), (100, 13651), (103, 13666), (114, 13741), (118, 13783), (119, 13789), (126, 13816), (127, 13828), (129, 13855), (142, 14005), (144, 14011), (149, 14041), (153, 14068), (155, 14095), (157, 14104), (163, 14137), (167, 14167),

Gene: Auxilium_21 Start: 15623, Stop: 16924, Start Num: 4

Candidate Starts for Auxilium_21:

(Start: 4 @15623 has 62 MA's), (33, 15860), (37, 15884), (43, 15911), (47, 15962), (51, 15992), (56, 16034), (59, 16055), (62, 16070), (65, 16088), (90, 16253), (95, 16292), (96, 16310), (102, 16343), (113, 16415), (136, 16613), (137, 16625), (139, 16634), (140, 16649), (156, 16763), (159, 16775), (162, 16796), (164, 16808), (169, 16871),

Gene: Babushka_17 Start: 12984, Stop: 14228, Start Num: 4

Candidate Starts for Babushka_17:

(Start: 4 @12984 has 62 MA's), (17, 13077), (21, 13098), (23, 13143), (36, 13239), (38, 13254), (55, 13395), (56, 13398), (57, 13401), (58, 13416), (59, 13419), (60, 13425), (72, 13506), (77, 13530), (79, 13542), (83, 13569), (91, 13626), (95, 13662), (100, 13704), (103, 13719), (110, 13770), (114, 13794), (118, 13836), (119, 13842), (122, 13851), (126, 13869), (127, 13881), (129, 13908), (142, 14058), (144, 14064), (149, 14094), (153, 14121), (155, 14148), (157, 14157), (163, 14190), (167, 14220),

Gene: Basilisk_18 Start: 14668, Stop: 15918, Start Num: 4

Candidate Starts for Basilisk_18:

(Start: 4 @14668 has 62 MA's), (10, 14701), (14, 14734), (22, 14797), (23, 14827), (34, 14917), (43, 14956), (49, 15016), (52, 15040), (53, 15055), (56, 15079), (57, 15082), (59, 15100), (72, 15187), (77, 15211), (78, 15220), (79, 15223), (83, 15250), (91, 15307), (95, 15343), (101, 15391), (123, 15541), (127, 15565), (132, 15619), (134, 15637), (140, 15724), (142, 15742), (149, 15778), (152, 15799), (153, 15805), (154, 15811), (155, 15832), (157, 15841), (163, 15874),

Gene: Bedetta_19 Start: 13377, Stop: 14630, Start Num: 4

Candidate Starts for Bedetta_19:

(Start: 4 @13377 has 62 MA's), (5, 13380), (9, 13401), (17, 13470), (23, 13536), (25, 13545), (36, 13632), (38, 13647), (56, 13791), (57, 13794), (58, 13809), (59, 13812), (60, 13818), (77, 13923), (79, 13935), (85, 13974), (91, 14019), (95, 14055), (100, 14097), (103, 14112), (115, 14190), (123, 14253), (127, 14277), (142, 14454), (149, 14490), (151, 14508), (153, 14517), (155, 14544), (157, 14553), (163, 14586),

Gene: BenchScraper_21 Start: 15638, Stop: 16939, Start Num: 4

Candidate Starts for BenchScraper_21:

(Start: 4 @15638 has 62 MA's), (29, 15842), (33, 15875), (37, 15899), (46, 15947), (47, 15977), (51, 16007), (56, 16049), (62, 16085), (65, 16103), (90, 16268), (95, 16307), (96, 16325), (102, 16358), (113, 16430), (136, 16628), (137, 16640), (139, 16649), (148, 16715), (156, 16778), (159, 16790), (162, 16811), (164, 16823), (169, 16886),

Gene: Bhageatrice_23 Start: 16913, Stop: 18214, Start Num: 4

Candidate Starts for Bhageatrice_23:

(Start: 4 @16913 has 62 MA's), (10, 16946), (37, 17174), (51, 17282), (56, 17324), (62, 17360), (65, 17378), (80, 17468), (90, 17543), (95, 17582), (96, 17600), (102, 17633), (113, 17705), (139, 17924), (148, 17990), (156, 18053), (159, 18065), (162, 18086), (164, 18098), (169, 18161),

Gene: Bible12_19 Start: 13380, Stop: 14633, Start Num: 4

Candidate Starts for Bible12_19:

(Start: 4 @13380 has 62 MA's), (5, 13383), (9, 13404), (17, 13473), (23, 13539), (25, 13548), (36, 13635), (38, 13650), (56, 13794), (57, 13797), (58, 13812), (59, 13815), (60, 13821), (77, 13926), (79, 13938), (85, 13977), (91, 14022), (95, 14058), (100, 14100), (103, 14115), (115, 14193), (123, 14256), (127, 14280), (142, 14457), (149, 14493), (151, 14511), (153, 14520), (155, 14547), (157, 14556), (163, 14589),

Gene: BillyTP_21 Start: 15407, Stop: 16708, Start Num: 4

Candidate Starts for BillyTP_21:

(Start: 4 @15407 has 62 MA's), (37, 15668), (51, 15776), (56, 15818), (62, 15854), (65, 15872), (80, 15962), (90, 16037), (95, 16076), (96, 16094), (102, 16127), (113, 16199), (136, 16397), (137, 16409), (139, 16418), (140, 16433), (156, 16547), (159, 16559), (162, 16580), (164, 16592), (169, 16655),

Gene: BlueShadow_22 Start: 15623, Stop: 16924, Start Num: 4

Candidate Starts for BlueShadow_22:

(Start: 4 @15623 has 62 MA's), (29, 15827), (33, 15860), (37, 15884), (46, 15932), (47, 15962), (51, 15992), (56, 16034), (62, 16070), (65, 16088), (90, 16253), (95, 16292), (96, 16310), (102, 16343),

(107, 16370), (113, 16415), (136, 16613), (137, 16625), (156, 16763), (159, 16775), (162, 16796), (164, 16808), (169, 16871),

Gene: Bridgette_20 Start: 15685, Stop: 16986, Start Num: 4

Candidate Starts for Bridgette_20:

(Start: 4 @15685 has 62 MA's), (7, 15703), (13, 15745), (23, 15844), (51, 16054), (56, 16096), (62, 16132), (83, 16261), (85, 16273), (88, 16288), (90, 16315), (92, 16324), (95, 16354), (96, 16372), (102, 16405), (108, 16435), (112, 16468), (113, 16477), (133, 16615), (136, 16675), (137, 16687), (151, 16783), (156, 16825), (159, 16837), (164, 16870), (169, 16933),

Gene: Brynnie_18 Start: 14480, Stop: 15730, Start Num: 4

Candidate Starts for Brynnie_18:

(Start: 4 @14480 has 62 MA's), (10, 14513), (14, 14546), (22, 14609), (23, 14639), (34, 14729), (43, 14768), (49, 14828), (52, 14852), (53, 14867), (56, 14891), (57, 14894), (59, 14912), (72, 14999), (77, 15023), (78, 15032), (79, 15035), (83, 15062), (91, 15119), (95, 15155), (101, 15203), (115, 15290), (123, 15353), (127, 15377), (132, 15431), (134, 15449), (140, 15536), (142, 15554), (149, 15590), (152, 15611), (153, 15617), (155, 15644), (157, 15653), (163, 15686),

Gene: Camara_17 Start: 12932, Stop: 14176, Start Num: 4

Candidate Starts for Camara_17:

(Start: 4 @12932 has 62 MA's), (17, 13025), (21, 13046), (23, 13091), (28, 13115), (36, 13187), (38, 13202), (55, 13343), (56, 13346), (57, 13349), (58, 13364), (59, 13367), (60, 13373), (72, 13454), (77, 13478), (79, 13490), (83, 13517), (91, 13574), (95, 13610), (100, 13652), (103, 13667), (114, 13742), (118, 13784), (119, 13790), (126, 13817), (127, 13829), (129, 13856), (142, 14006), (144, 14012), (149, 14042), (153, 14069), (155, 14096), (157, 14105), (163, 14138), (167, 14168),

Gene: Chickaboom_17 Start: 13406, Stop: 14656, Start Num: 4

Candidate Starts for Chickaboom_17:

(Start: 4 @13406 has 62 MA's), (10, 13439), (14, 13472), (22, 13535), (23, 13565), (34, 13655), (43, 13694), (49, 13754), (52, 13778), (53, 13793), (56, 13817), (57, 13820), (59, 13838), (72, 13925), (77, 13949), (79, 13961), (83, 13988), (91, 14045), (95, 14081), (101, 14129), (115, 14216), (123, 14279), (127, 14303), (132, 14357), (134, 14375), (140, 14462), (149, 14516), (152, 14537), (153, 14543), (154, 14549), (155, 14570), (157, 14579), (163, 14612),

Gene: ChuckDuck_20 Start: 15527, Stop: 16828, Start Num: 4

Candidate Starts for ChuckDuck_20:

(Start: 4 @15527 has 62 MA's), (7, 15545), (23, 15686), (30, 15743), (33, 15764), (56, 15938), (61, 15971), (62, 15974), (88, 16130), (95, 16196), (96, 16214), (101, 16244), (102, 16247), (113, 16319), (136, 16517), (137, 16529), (151, 16625), (156, 16667), (159, 16679), (169, 16775),

Gene: Colusalem_18 Start: 13216, Stop: 14469, Start Num: 4

Candidate Starts for Colusalem_18:

(Start: 4 @13216 has 62 MA's), (5, 13219), (9, 13240), (17, 13309), (23, 13375), (25, 13384), (36, 13471), (38, 13486), (56, 13630), (57, 13633), (58, 13648), (59, 13651), (60, 13657), (77, 13762), (79, 13774), (85, 13813), (91, 13858), (95, 13894), (100, 13936), (103, 13951), (115, 14029), (123, 14092), (127, 14116), (142, 14293), (149, 14329), (151, 14347), (153, 14356), (155, 14383), (157, 14392), (163, 14425),

Gene: Constance_20 Start: 15667, Stop: 16968, Start Num: 4

Candidate Starts for Constance_20:

(Start: 4 @15667 has 62 MA's), (7, 15685), (23, 15826), (51, 16036), (56, 16078), (62, 16114), (73, 16183), (85, 16255), (88, 16270), (90, 16297), (95, 16336), (96, 16354), (101, 16384), (102, 16387), (104, 16396), (113, 16459), (133, 16597), (136, 16657), (137, 16669), (151, 16765), (156, 16807),

(159, 16819), (169, 16915),

Gene: CookieBear_22 Start: 15623, Stop: 16924, Start Num: 4

Candidate Starts for CookieBear_22:

(Start: 4 @15623 has 62 MA's), (37, 15884), (51, 15992), (56, 16034), (62, 16070), (65, 16088), (80, 16178), (90, 16253), (95, 16292), (96, 16310), (102, 16343), (113, 16415), (136, 16613), (137, 16625), (156, 16763), (159, 16775), (162, 16796), (164, 16808), (169, 16871),

Gene: Coral_18 Start: 13216, Stop: 14469, Start Num: 4

Candidate Starts for Coral_18:

(Start: 4 @13216 has 62 MA's), (5, 13219), (9, 13240), (17, 13309), (23, 13375), (25, 13384), (36, 13471), (38, 13486), (56, 13630), (57, 13633), (58, 13648), (59, 13651), (60, 13657), (77, 13762), (79, 13774), (85, 13813), (91, 13858), (95, 13894), (100, 13936), (103, 13951), (115, 14029), (123, 14092), (127, 14116), (142, 14293), (149, 14329), (151, 14347), (153, 14356), (155, 14383), (157, 14392), (163, 14425),

Gene: Cote_19 Start: 13377, Stop: 14630, Start Num: 4

Candidate Starts for Cote_19:

(Start: 4 @13377 has 62 MA's), (5, 13380), (9, 13401), (17, 13470), (23, 13536), (25, 13545), (36, 13632), (38, 13647), (56, 13791), (57, 13794), (58, 13809), (59, 13812), (60, 13818), (77, 13923), (79, 13935), (85, 13974), (91, 14019), (95, 14055), (100, 14097), (103, 14112), (115, 14190), (123, 14253), (127, 14277), (142, 14454), (149, 14490), (151, 14508), (153, 14517), (155, 14544), (157, 14553), (163, 14586),

Gene: Cygnet_18 Start: 14044, Stop: 15291, Start Num: 4

Candidate Starts for Cygnet_18:

(Start: 4 @14044 has 62 MA's), (17, 14137), (21, 14158), (23, 14203), (41, 14329), (55, 14455), (57, 14461), (59, 14479), (60, 14485), (63, 14506), (68, 14530), (72, 14566), (77, 14590), (78, 14599), (79, 14602), (85, 14638), (87, 14650), (90, 14680), (91, 14683), (95, 14719), (100, 14761), (114, 14851), (125, 14926), (137, 15076), (142, 15118), (144, 15124), (147, 15139), (153, 15181), (155, 15208), (157, 15217), (160, 15229), (165, 15271),

Gene: DanHam62_17 Start: 12931, Stop: 14175, Start Num: 4

Candidate Starts for DanHam62_17:

(Start: 4 @12931 has 62 MA's), (17, 13024), (21, 13045), (23, 13090), (28, 13114), (36, 13186), (55, 13342), (56, 13345), (57, 13348), (58, 13363), (59, 13366), (60, 13372), (72, 13453), (77, 13477), (79, 13489), (83, 13516), (91, 13573), (95, 13609), (100, 13651), (103, 13666), (114, 13741), (118, 13783), (119, 13789), (126, 13816), (127, 13828), (129, 13855), (142, 14005), (144, 14011), (149, 14041), (153, 14068), (155, 14095), (157, 14104), (163, 14137), (167, 14167),

Gene: Daob_19 Start: 13380, Stop: 14633, Start Num: 4

Candidate Starts for Daob_19:

(Start: 4 @13380 has 62 MA's), (5, 13383), (9, 13404), (17, 13473), (23, 13539), (25, 13548), (36, 13635), (38, 13650), (56, 13794), (57, 13797), (58, 13812), (59, 13815), (60, 13821), (77, 13926), (79, 13938), (85, 13977), (91, 14022), (95, 14058), (100, 14100), (103, 14115), (115, 14193), (123, 14256), (127, 14280), (142, 14457), (149, 14493), (151, 14511), (153, 14520), (155, 14547), (157, 14556), (163, 14589),

Gene: Edmundo_69 Start: 42213, Stop: 43382, Start Num: 4

Candidate Starts for Edmundo_69:

(Start: 4 @42213 has 62 MA's), (6, 42222), (8, 42234), (12, 42261), (19, 42318), (21, 42324), (24, 42366), (31, 42423), (33, 42441), (34, 42453), (38, 42474), (57, 42567), (60, 42591), (64, 42615), (68, 42636), (69, 42651), (83, 42732), (85, 42744), (88, 42759), (89, 42777), (95, 42825), (107, 42909),

(120, 43002), (124, 43008), (135, 43134), (142, 43203), (157, 43302), (163, 43335),

Gene: Eesa_18 Start: 14631, Stop: 15881, Start Num: 4

Candidate Starts for Eesa_18:

(Start: 4 @14631 has 62 MA's), (10, 14664), (14, 14697), (28, 14814), (34, 14880), (56, 15042), (57, 15045), (70, 15132), (79, 15186), (83, 15213), (85, 15225), (86, 15231), (90, 15267), (91, 15270), (95, 15306), (101, 15354), (111, 15420), (123, 15504), (127, 15528), (136, 15651), (137, 15663), (139, 15672), (142, 15705), (144, 15711), (147, 15726), (150, 15747), (152, 15762), (153, 15768), (154, 15774), (155, 15795), (157, 15804), (163, 15837),

Gene: Eileen_20 Start: 15628, Stop: 16929, Start Num: 4

Candidate Starts for Eileen_20:

(Start: 4 @15628 has 62 MA's), (7, 15646), (13, 15688), (23, 15787), (51, 15997), (56, 16039), (62, 16075), (85, 16216), (88, 16231), (90, 16258), (92, 16267), (95, 16297), (96, 16315), (102, 16348), (113, 16420), (133, 16558), (136, 16618), (137, 16630), (151, 16726), (156, 16768), (159, 16780), (169, 16876),

Gene: FosterFrank_20 Start: 15625, Stop: 16926, Start Num: 4

Candidate Starts for FosterFrank_20:

(Start: 4 @15625 has 62 MA's), (7, 15643), (23, 15784), (51, 15994), (56, 16036), (62, 16072), (73, 16141), (85, 16213), (88, 16228), (90, 16255), (95, 16294), (96, 16312), (101, 16342), (102, 16345), (104, 16354), (113, 16417), (133, 16555), (136, 16615), (137, 16627), (151, 16723), (156, 16765), (159, 16777), (169, 16873),

Gene: Globfish_21 Start: 15696, Stop: 16997, Start Num: 4

Candidate Starts for Globfish_21:

(Start: 4 @15696 has 62 MA's), (37, 15957), (51, 16065), (56, 16107), (65, 16161), (81, 16254), (90, 16326), (95, 16365), (96, 16383), (101, 16413), (102, 16416), (108, 16446), (113, 16488), (128, 16569), (136, 16686), (139, 16707), (148, 16773), (156, 16836), (159, 16848), (169, 16944),

Gene: GlobiWarming_20 Start: 15621, Stop: 16922, Start Num: 4

Candidate Starts for GlobiWarming_20:

(Start: 4 @15621 has 62 MA's), (7, 15639), (51, 15990), (56, 16032), (62, 16068), (85, 16209), (88, 16224), (90, 16251), (95, 16290), (96, 16308), (102, 16341), (112, 16404), (113, 16413), (133, 16551), (136, 16611), (137, 16623), (151, 16719), (156, 16761), (159, 16773), (169, 16869),

Gene: Glotell_18 Start: 12929, Stop: 14173, Start Num: 4

Candidate Starts for Glotell_18:

(Start: 4 @12929 has 62 MA's), (17, 13022), (21, 13043), (23, 13088), (28, 13112), (36, 13184), (55, 13340), (56, 13343), (57, 13346), (58, 13361), (59, 13364), (60, 13370), (72, 13451), (77, 13475), (79, 13487), (83, 13514), (91, 13571), (95, 13607), (100, 13649), (103, 13664), (114, 13739), (118, 13781), (119, 13787), (126, 13814), (127, 13826), (129, 13853), (142, 14003), (144, 14009), (149, 14039), (153, 14066), (155, 14093), (157, 14102), (163, 14135), (167, 14165),

Gene: Gorpy_21 Start: 15632, Stop: 16933, Start Num: 4

Candidate Starts for Gorpy_21:

(Start: 4 @15632 has 62 MA's), (37, 15893), (43, 15920), (47, 15971), (51, 16001), (56, 16043), (59, 16064), (62, 16079), (65, 16097), (90, 16262), (95, 16301), (96, 16319), (102, 16352), (113, 16424), (136, 16622), (137, 16634), (139, 16643), (140, 16658), (156, 16772), (159, 16784), (162, 16805), (164, 16817), (169, 16880),

Gene: Gravel_19 Start: 14537, Stop: 15787, Start Num: 4

Candidate Starts for Gravel_19:

(Start: 4 @14537 has 62 MA's), (14, 14603), (20, 14645), (26, 14708), (30, 14753), (34, 14786), (56, 14948), (57, 14951), (75, 15071), (79, 15092), (83, 15119), (85, 15131), (86, 15137), (91, 15176), (95, 15212), (101, 15260), (123, 15410), (127, 15434), (136, 15557), (137, 15569), (139, 15578), (142, 15611), (144, 15617), (147, 15632), (150, 15653), (152, 15668), (153, 15674), (154, 15680), (155, 15701), (157, 15710), (163, 15743),

Gene: HamCheese_17 Start: 12931, Stop: 14175, Start Num: 4

Candidate Starts for HamCheese_17:

(Start: 4 @12931 has 62 MA's), (17, 13024), (21, 13045), (23, 13090), (28, 13114), (36, 13186), (55, 13342), (56, 13345), (57, 13348), (58, 13363), (59, 13366), (60, 13372), (72, 13453), (79, 13489), (83, 13516), (91, 13573), (95, 13609), (100, 13651), (103, 13666), (114, 13741), (118, 13783), (119, 13789), (126, 13816), (127, 13828), (129, 13855), (142, 14005), (144, 14011), (149, 14041), (153, 14068), (155, 14095), (157, 14104), (163, 14137), (167, 14167),

Gene: HannahPhantana_19 Start: 13380, Stop: 14633, Start Num: 4

Candidate Starts for HannahPhantana_19:

(Start: 4 @13380 has 62 MA's), (5, 13383), (9, 13404), (17, 13473), (23, 13539), (25, 13548), (36, 13635), (38, 13650), (56, 13794), (57, 13797), (58, 13812), (59, 13815), (60, 13821), (77, 13926), (79, 13938), (85, 13977), (91, 14022), (95, 14058), (100, 14100), (103, 14115), (115, 14193), (123, 14256), (127, 14280), (142, 14457), (149, 14493), (151, 14511), (153, 14520), (155, 14547), (157, 14556), (163, 14589),

Gene: Hestia_21 Start: 15801, Stop: 17102, Start Num: 4

Candidate Starts for Hestia_21:

(Start: 4 @15801 has 62 MA's), (37, 16062), (51, 16170), (56, 16212), (62, 16248), (65, 16266), (80, 16356), (90, 16431), (95, 16470), (96, 16488), (102, 16521), (113, 16593), (136, 16791), (137, 16803), (139, 16812), (156, 16941), (159, 16953), (162, 16974), (164, 16986), (169, 17049),

Gene: Hillester_21 Start: 15623, Stop: 16924, Start Num: 4

Candidate Starts for Hillester_21:

(Start: 4 @15623 has 62 MA's), (33, 15860), (37, 15884), (43, 15911), (47, 15962), (51, 15992), (56, 16034), (59, 16055), (62, 16070), (65, 16088), (90, 16253), (95, 16292), (96, 16310), (102, 16343), (113, 16415), (136, 16613), (137, 16625), (139, 16634), (140, 16649), (156, 16763), (159, 16775), (162, 16796), (164, 16808), (169, 16871),

Gene: HotPotato_20 Start: 15629, Stop: 16930, Start Num: 4

Candidate Starts for HotPotato_20:

(Start: 4 @15629 has 62 MA's), (7, 15647), (23, 15788), (51, 15998), (56, 16040), (62, 16076), (85, 16217), (88, 16232), (90, 16259), (95, 16298), (96, 16316), (102, 16349), (113, 16421), (133, 16559), (136, 16619), (137, 16631), (151, 16727), (156, 16769), (159, 16781), (169, 16877),

Gene: Isolde_21 Start: 15458, Stop: 16759, Start Num: 4

Candidate Starts for Isolde_21:

(Start: 4 @15458 has 62 MA's), (37, 15719), (51, 15827), (56, 15869), (62, 15905), (65, 15923), (80, 16013), (90, 16088), (95, 16127), (96, 16145), (102, 16178), (113, 16250), (136, 16448), (137, 16460), (139, 16469), (140, 16484), (156, 16598), (159, 16610), (162, 16631), (164, 16643), (169, 16706),

Gene: Jamun_18 Start: 14074, Stop: 15324, Start Num: 4

Candidate Starts for Jamun_18:

(Start: 4 @14074 has 62 MA's), (10, 14107), (14, 14140), (22, 14203), (23, 14233), (34, 14323), (43, 14362), (49, 14422), (52, 14446), (53, 14461), (56, 14485), (57, 14488), (59, 14506), (72, 14593), (77, 14617), (79, 14629), (83, 14656), (91, 14713), (95, 14749), (101, 14797), (115, 14884), (123, 14947), (127, 14971), (132, 15025), (134, 15043), (140, 15130), (142, 15148), (149, 15184), (152, 15205),

(153, 15211), (155, 15238), (157, 15247), (163, 15280),

Gene: JellyBread_21 Start: 15616, Stop: 16917, Start Num: 4

Candidate Starts for JellyBread_21:

(Start: 4 @15616 has 62 MA's), (33, 15853), (37, 15877), (43, 15904), (47, 15955), (51, 15985), (56, 16027), (59, 16048), (62, 16063), (65, 16081), (90, 16246), (95, 16285), (96, 16303), (102, 16336), (113, 16408), (136, 16606), (137, 16618), (139, 16627), (140, 16642), (156, 16756), (159, 16768), (162, 16789), (164, 16801), (169, 16864),

Gene: Jerole_19 Start: 13377, Stop: 14630, Start Num: 4

Candidate Starts for Jerole_19:

(Start: 4 @13377 has 62 MA's), (5, 13380), (9, 13401), (17, 13470), (23, 13536), (25, 13545), (36, 13632), (38, 13647), (56, 13791), (57, 13794), (58, 13809), (59, 13812), (60, 13818), (77, 13923), (79, 13935), (85, 13974), (91, 14019), (95, 14055), (100, 14097), (103, 14112), (115, 14190), (123, 14253), (127, 14277), (142, 14454), (149, 14490), (151, 14508), (153, 14517), (155, 14544), (157, 14553), (163, 14586),

Gene: Judy_21 Start: 15938, Stop: 17239, Start Num: 4

Candidate Starts for Judy_21:

(Start: 4 @15938 has 62 MA's), (7, 15956), (23, 16097), (51, 16307), (56, 16349), (62, 16385), (73, 16454), (85, 16526), (88, 16541), (90, 16568), (95, 16607), (96, 16625), (101, 16655), (104, 16667), (113, 16730), (133, 16868), (136, 16928), (137, 16940), (151, 17036), (156, 17078), (159, 17090), (169, 17186),

Gene: Juno112_17 Start: 12932, Stop: 14176, Start Num: 4

Candidate Starts for Juno112_17:

(Start: 4 @12932 has 62 MA's), (17, 13025), (21, 13046), (23, 13091), (28, 13115), (36, 13187), (38, 13202), (55, 13343), (56, 13346), (57, 13349), (58, 13364), (59, 13367), (60, 13373), (72, 13454), (77, 13478), (79, 13490), (83, 13517), (91, 13574), (95, 13610), (100, 13652), (103, 13667), (114, 13742), (118, 13784), (119, 13790), (126, 13817), (127, 13829), (129, 13856), (142, 14006), (144, 14012), (149, 14042), (153, 14069), (155, 14096), (157, 14105), (163, 14138), (167, 14168),

Gene: KHumphrey_17 Start: 12929, Stop: 14173, Start Num: 4

Candidate Starts for KHumphrey_17:

(Start: 4 @12929 has 62 MA's), (17, 13022), (21, 13043), (23, 13088), (28, 13112), (36, 13184), (55, 13340), (56, 13343), (57, 13346), (58, 13361), (59, 13364), (60, 13370), (72, 13451), (77, 13475), (79, 13487), (83, 13514), (91, 13571), (95, 13607), (100, 13649), (103, 13664), (114, 13739), (118, 13781), (119, 13787), (126, 13814), (127, 13826), (129, 13853), (142, 14003), (144, 14009), (149, 14039), (153, 14066), (155, 14093), (157, 14102), (163, 14135), (167, 14165),

Gene: Karkharias_20 Start: 15625, Stop: 16926, Start Num: 4

Candidate Starts for Karkharias_20:

(Start: 4 @15625 has 62 MA's), (7, 15643), (13, 15685), (23, 15784), (51, 15994), (56, 16036), (62, 16072), (83, 16201), (85, 16213), (88, 16228), (90, 16255), (92, 16264), (95, 16294), (96, 16312), (102, 16345), (108, 16375), (112, 16408), (113, 16417), (133, 16555), (136, 16615), (137, 16627), (151, 16723), (156, 16765), (159, 16777), (164, 16810), (169, 16873),

Gene: KayMoney_20 Start: 15529, Stop: 16830, Start Num: 4

Candidate Starts for KayMoney_20:

(Start: 4 @15529 has 62 MA's), (7, 15547), (23, 15688), (30, 15745), (33, 15766), (56, 15940), (61, 15973), (62, 15976), (88, 16132), (95, 16198), (96, 16216), (101, 16246), (102, 16249), (113, 16321), (127, 16396), (136, 16519), (137, 16531), (151, 16627), (156, 16669), (159, 16681), (169, 16777),

Gene: KendraB23_19 Start: 14538, Stop: 15788, Start Num: 4

Candidate Starts for KendraB23_19:

(Start: 4 @14538 has 62 MA's), (14, 14604), (20, 14646), (26, 14709), (30, 14754), (34, 14787), (56, 14949), (57, 14952), (75, 15072), (79, 15093), (83, 15120), (85, 15132), (86, 15138), (91, 15177), (95, 15213), (101, 15261), (123, 15411), (127, 15435), (136, 15558), (137, 15570), (139, 15579), (142, 15612), (144, 15618), (147, 15633), (150, 15654), (152, 15669), (153, 15675), (154, 15681), (155, 15702), (157, 15711), (163, 15744),

Gene: Kepler_18 Start: 13215, Stop: 14468, Start Num: 4

Candidate Starts for Kepler_18:

(Start: 4 @13215 has 62 MA's), (5, 13218), (9, 13239), (17, 13308), (23, 13374), (25, 13383), (36, 13470), (38, 13485), (56, 13629), (57, 13632), (58, 13647), (59, 13650), (60, 13656), (77, 13761), (79, 13773), (85, 13812), (91, 13857), (95, 13893), (100, 13935), (103, 13950), (115, 14028), (123, 14091), (127, 14115), (142, 14292), (149, 14328), (151, 14346), (153, 14355), (155, 14382), (157, 14391), (163, 14424),

Gene: Kharcho_45 Start: 24006, Stop: 25181, Start Num: 4

Candidate Starts for Kharcho_45:

(1, 23298), (2, 23742), (3, 23829), (Start: 4 @24006 has 62 MA's), (8, 24027), (11, 24042), (24, 24156), (31, 24213), (33, 24231), (38, 24264), (55, 24351), (64, 24405), (66, 24411), (79, 24495), (81, 24504), (89, 24573), (90, 24582), (93, 24594), (94, 24603), (105, 24696), (107, 24705), (117, 24783), (118, 24789), (136, 24945), (137, 24957), (142, 24999), (145, 25008), (157, 25098), (161, 25122),

Gene: Kovu_67 Start: 42081, Stop: 43256, Start Num: 4

Candidate Starts for Kovu_67:

(3, 41904), (Start: 4 @42081 has 62 MA's), (8, 42102), (15, 42150), (19, 42183), (31, 42288), (39, 42348), (40, 42351), (48, 42405), (57, 42432), (64, 42480), (79, 42570), (80, 42576), (87, 42627), (89, 42648), (90, 42657), (93, 42669), (94, 42678), (117, 42858), (118, 42864), (130, 42930), (136, 43020), (138, 43038), (157, 43173), (159, 43179), (161, 43197), (166, 43227),

Gene: Kuleana_18 Start: 13395, Stop: 14642, Start Num: 4

Candidate Starts for Kuleana_18:

(Start: 4 @13395 has 62 MA's), (17, 13488), (18, 13491), (20, 13503), (21, 13509), (23, 13554), (25, 13563), (27, 13572), (32, 13626), (41, 13680), (57, 13812), (59, 13830), (60, 13836), (79, 13953), (87, 14001), (91, 14034), (95, 14070), (98, 14106), (101, 14118), (106, 14148), (113, 14196), (118, 14247), (121, 14259), (127, 14292), (140, 14451), (142, 14469), (144, 14475), (147, 14490), (153, 14532), (154, 14538), (155, 14559), (157, 14568), (158, 14571), (168, 14637),

Gene: Laroye_69 Start: 41604, Stop: 42773, Start Num: 4

Candidate Starts for Laroye_69:

(Start: 4 @41604 has 62 MA's), (6, 41613), (8, 41625), (12, 41652), (19, 41709), (21, 41715), (31, 41814), (33, 41832), (34, 41844), (38, 41865), (57, 41958), (60, 41982), (64, 42006), (68, 42027), (82, 42120), (83, 42123), (84, 42129), (85, 42135), (87, 42147), (89, 42168), (95, 42216), (99, 42255), (107, 42300), (120, 42393), (124, 42399), (130, 42450), (141, 42582), (142, 42594), (157, 42693), (163, 42726),

Gene: Lawnathon_21 Start: 15552, Stop: 16853, Start Num: 4

Candidate Starts for Lawnathon_21:

(Start: 4 @15552 has 62 MA's), (37, 15813), (51, 15921), (56, 15963), (62, 15999), (65, 16017), (80, 16107), (90, 16182), (95, 16221), (96, 16239), (102, 16272), (113, 16344), (136, 16542), (137, 16554), (139, 16563), (140, 16578), (156, 16692), (159, 16704), (162, 16725), (164, 16737), (169, 16800),

Gene: Leona_17 Start: 12982, Stop: 14229, Start Num: 4

Candidate Starts for Leona_17:

(Start: 4 @12982 has 62 MA's), (17, 13075), (21, 13096), (23, 13141), (28, 13165), (36, 13237), (55, 13393), (56, 13396), (57, 13399), (58, 13414), (59, 13417), (72, 13504), (77, 13528), (79, 13540), (83, 13567), (91, 13624), (95, 13660), (103, 13717), (114, 13792), (118, 13834), (119, 13840), (126, 13867), (127, 13879), (129, 13906), (142, 14056), (144, 14062), (149, 14092), (153, 14119), (155, 14146), (157, 14155), (163, 14188), (167, 14218), (168, 14224),

Gene: LiSara_66 Start: 41766, Stop: 42935, Start Num: 4

Candidate Starts for LiSara_66:

(Start: 4 @41766 has 62 MA's), (6, 41775), (8, 41787), (12, 41814), (19, 41871), (21, 41877), (31, 41976), (33, 41994), (34, 42006), (38, 42027), (57, 42120), (60, 42144), (64, 42168), (68, 42189), (82, 42282), (83, 42285), (84, 42291), (85, 42297), (87, 42309), (89, 42330), (95, 42378), (99, 42417), (107, 42462), (120, 42555), (124, 42561), (130, 42612), (141, 42744), (142, 42756), (157, 42855), (163, 42888),

Gene: LittleTokyo_18 Start: 13345, Stop: 14595, Start Num: 4

Candidate Starts for LittleTokyo_18:

(Start: 4 @13345 has 62 MA's), (17, 13438), (20, 13453), (23, 13504), (25, 13513), (33, 13582), (35, 13597), (53, 13735), (55, 13756), (56, 13759), (57, 13762), (59, 13780), (60, 13786), (72, 13867), (79, 13903), (82, 13924), (83, 13927), (85, 13939), (87, 13951), (90, 13981), (91, 13984), (95, 14020), (140, 14401), (142, 14419), (144, 14425), (147, 14440), (153, 14482), (155, 14509), (157, 14518), (158, 14521), (165, 14572),

Gene: Lunar_19 Start: 13377, Stop: 14630, Start Num: 4

Candidate Starts for Lunar_19:

(Start: 4 @13377 has 62 MA's), (5, 13380), (9, 13401), (17, 13470), (23, 13536), (25, 13545), (36, 13632), (38, 13647), (56, 13791), (57, 13794), (58, 13809), (59, 13812), (60, 13818), (77, 13923), (79, 13935), (85, 13974), (91, 14019), (95, 14055), (100, 14097), (103, 14112), (115, 14190), (123, 14253), (127, 14277), (142, 14454), (149, 14490), (151, 14508), (153, 14517), (155, 14544), (157, 14553), (163, 14586),

Gene: MUWow_20 Start: 15716, Stop: 17017, Start Num: 4

Candidate Starts for MUWow_20:

(Start: 4 @15716 has 62 MA's), (33, 15953), (37, 15977), (43, 16004), (47, 16055), (51, 16085), (56, 16127), (62, 16163), (65, 16181), (80, 16271), (90, 16346), (95, 16385), (96, 16403), (102, 16436), (113, 16508), (136, 16706), (137, 16718), (139, 16727), (148, 16793), (156, 16856), (159, 16868), (162, 16889), (164, 16901), (169, 16964),

Gene: MaterMagnus_21 Start: 15624, Stop: 16925, Start Num: 4

Candidate Starts for MaterMagnus_21:

(Start: 4 @15624 has 62 MA's), (37, 15885), (51, 15993), (56, 16035), (62, 16071), (65, 16089), (80, 16179), (90, 16254), (95, 16293), (96, 16311), (102, 16344), (113, 16416), (136, 16614), (137, 16626), (139, 16635), (148, 16701), (156, 16764), (159, 16776), (162, 16797), (164, 16809), (169, 16872),

Gene: Melons_19 Start: 13377, Stop: 14630, Start Num: 4

Candidate Starts for Melons_19:

(Start: 4 @13377 has 62 MA's), (5, 13380), (9, 13401), (17, 13470), (23, 13536), (25, 13545), (36, 13632), (38, 13647), (56, 13791), (57, 13794), (58, 13809), (59, 13812), (60, 13818), (77, 13923), (79, 13935), (85, 13974), (91, 14019), (95, 14055), (100, 14097), (103, 14112), (115, 14190), (123, 14253), (127, 14277), (142, 14454), (149, 14490), (151, 14508), (153, 14517), (155, 14544), (157, 14553), (163, 14586),

Gene: MidnightRain_21 Start: 15622, Stop: 16923, Start Num: 4

Candidate Starts for MidnightRain_21:

(Start: 4 @15622 has 62 MA's), (29, 15826), (33, 15859), (37, 15883), (46, 15931), (47, 15961), (51, 15991), (56, 16033), (62, 16069), (65, 16087), (80, 16177), (90, 16252), (95, 16291), (96, 16309), (102, 16342), (113, 16414), (136, 16612), (137, 16624), (156, 16762), (159, 16774), (162, 16795), (164, 16807), (169, 16870),

Gene: Orcanus_18 Start: 14331, Stop: 15581, Start Num: 4

Candidate Starts for Orcanus_18:

(Start: 4 @14331 has 62 MA's), (14, 14397), (20, 14439), (26, 14502), (30, 14547), (34, 14580), (56, 14742), (57, 14745), (70, 14832), (75, 14865), (79, 14886), (83, 14913), (85, 14925), (86, 14931), (91, 14970), (95, 15006), (101, 15054), (112, 15123), (123, 15204), (127, 15228), (136, 15351), (139, 15372), (142, 15405), (144, 15411), (147, 15426), (150, 15447), (152, 15462), (153, 15468), (154, 15474), (155, 15495), (157, 15504), (163, 15537),

Gene: OtsoOtso_18 Start: 13219, Stop: 14472, Start Num: 4

Candidate Starts for OtsoOtso_18:

(Start: 4 @13219 has 62 MA's), (5, 13222), (9, 13243), (17, 13312), (23, 13378), (25, 13387), (36, 13474), (38, 13489), (56, 13633), (57, 13636), (58, 13651), (59, 13654), (60, 13660), (77, 13765), (79, 13777), (85, 13816), (91, 13861), (95, 13897), (100, 13939), (103, 13954), (115, 14032), (123, 14095), (127, 14119), (128, 14125), (142, 14296), (149, 14332), (151, 14350), (153, 14359), (155, 14386), (157, 14395), (163, 14428),

Gene: Ottawa_45 Start: 24004, Stop: 25179, Start Num: 4

Candidate Starts for Ottawa_45:

(1, 23296), (2, 23740), (3, 23827), (Start: 4 @24004 has 62 MA's), (8, 24025), (11, 24040), (24, 24154), (31, 24211), (33, 24229), (38, 24262), (55, 24349), (64, 24403), (66, 24409), (79, 24493), (81, 24502), (89, 24571), (90, 24580), (93, 24592), (94, 24601), (105, 24694), (107, 24703), (117, 24781), (118, 24787), (136, 24943), (137, 24955), (142, 24997), (145, 25006), (157, 25096), (161, 25120),

Gene: Peas_20 Start: 15628, Stop: 16929, Start Num: 4

Candidate Starts for Peas_20:

(Start: 4 @15628 has 62 MA's), (7, 15646), (13, 15688), (23, 15787), (51, 15997), (56, 16039), (62, 16075), (85, 16216), (88, 16231), (90, 16258), (92, 16267), (95, 16297), (96, 16315), (102, 16348), (113, 16420), (133, 16558), (136, 16618), (137, 16630), (151, 16726), (156, 16768), (159, 16780), (169, 16876),

Gene: PeggyLeg03_20 Start: 15667, Stop: 16968, Start Num: 4

Candidate Starts for PeggyLeg03_20:

(Start: 4 @15667 has 62 MA's), (7, 15685), (23, 15826), (51, 16036), (56, 16078), (62, 16114), (73, 16183), (85, 16255), (88, 16270), (90, 16297), (95, 16336), (96, 16354), (101, 16384), (102, 16387), (104, 16396), (113, 16459), (133, 16597), (136, 16657), (137, 16669), (151, 16765), (156, 16807), (159, 16819), (169, 16915),

Gene: Pelletreau_19 Start: 14537, Stop: 15787, Start Num: 4

Candidate Starts for Pelletreau_19:

(Start: 4 @14537 has 62 MA's), (14, 14603), (20, 14645), (26, 14708), (30, 14753), (34, 14786), (56, 14948), (57, 14951), (75, 15071), (79, 15092), (83, 15119), (85, 15131), (86, 15137), (91, 15176), (95, 15212), (101, 15260), (123, 15410), (127, 15434), (136, 15557), (137, 15569), (139, 15578), (142, 15611), (144, 15617), (147, 15632), (150, 15653), (152, 15668), (153, 15674), (154, 15680), (155, 15701), (157, 15710), (163, 15743),

Gene: Persistence_20 Start: 15544, Stop: 16845, Start Num: 4

Candidate Starts for Persistence_20:

(Start: 4 @15544 has 62 MA's), (23, 15703), (38, 15814), (43, 15832), (46, 15853), (51, 15913), (56, 15955), (57, 15958), (65, 16009), (72, 16057), (80, 16099), (82, 16117), (85, 16132), (87, 16144), (88, 16147), (95, 16213), (96, 16231), (97, 16246), (102, 16264), (113, 16336), (128, 16417), (129, 16438), (139, 16555), (151, 16642), (156, 16684), (169, 16792),

Gene: PhluffyCoco_17 Start: 12931, Stop: 14175, Start Num: 4

Candidate Starts for PhluffyCoco_17:

(Start: 4 @12931 has 62 MA's), (17, 13024), (21, 13045), (23, 13090), (28, 13114), (36, 13186), (55, 13342), (56, 13345), (57, 13348), (58, 13363), (59, 13366), (60, 13372), (72, 13453), (79, 13489), (83, 13516), (91, 13573), (95, 13609), (100, 13651), (103, 13666), (114, 13741), (118, 13783), (119, 13789), (126, 13816), (127, 13828), (129, 13855), (142, 14005), (144, 14011), (149, 14041), (153, 14068), (155, 14095), (157, 14104), (163, 14137), (167, 14167),

Gene: Phrank15_20 Start: 15557, Stop: 16858, Start Num: 4

Candidate Starts for Phrank15_20:

(Start: 4 @15557 has 62 MA's), (37, 15818), (51, 15926), (56, 15968), (62, 16004), (65, 16022), (80, 16112), (90, 16187), (93, 16199), (95, 16226), (96, 16244), (102, 16277), (113, 16349), (136, 16547), (137, 16559), (139, 16568), (140, 16583), (156, 16697), (159, 16709), (162, 16730), (164, 16742), (169, 16805),

Gene: Polka_18 Start: 13219, Stop: 14472, Start Num: 4

Candidate Starts for Polka_18:

(Start: 4 @13219 has 62 MA's), (5, 13222), (9, 13243), (17, 13312), (23, 13378), (25, 13387), (36, 13474), (38, 13489), (56, 13633), (57, 13636), (58, 13651), (59, 13654), (60, 13660), (77, 13765), (79, 13777), (85, 13816), (91, 13861), (95, 13897), (100, 13939), (103, 13954), (115, 14032), (123, 14095), (127, 14119), (128, 14125), (142, 14296), (149, 14332), (151, 14350), (153, 14359), (155, 14386), (157, 14395), (163, 14428),

Gene: Pucara_20 Start: 15628, Stop: 16929, Start Num: 4

Candidate Starts for Pucara_20:

(Start: 4 @15628 has 62 MA's), (7, 15646), (23, 15787), (51, 15997), (56, 16039), (62, 16075), (85, 16216), (88, 16231), (90, 16258), (92, 16267), (95, 16297), (96, 16315), (102, 16348), (113, 16420), (133, 16558), (136, 16618), (137, 16630), (151, 16726), (156, 16768), (159, 16780), (169, 16876),

Gene: RadFad_21 Start: 15623, Stop: 16924, Start Num: 4

Candidate Starts for RadFad_21:

(Start: 4 @15623 has 62 MA's), (33, 15860), (37, 15884), (43, 15911), (47, 15962), (51, 15992), (56, 16034), (59, 16055), (62, 16070), (65, 16088), (90, 16253), (95, 16292), (96, 16310), (102, 16343), (113, 16415), (136, 16613), (137, 16625), (139, 16634), (140, 16649), (156, 16763), (159, 16775), (162, 16796), (164, 16808), (169, 16871),

Gene: Raphaella_21 Start: 15623, Stop: 16924, Start Num: 4

Candidate Starts for Raphaella_21:

(Start: 4 @15623 has 62 MA's), (33, 15860), (37, 15884), (43, 15911), (47, 15962), (51, 15992), (56, 16034), (59, 16055), (62, 16070), (65, 16088), (90, 16253), (95, 16292), (96, 16310), (102, 16343), (113, 16415), (136, 16613), (137, 16625), (139, 16634), (140, 16649), (156, 16763), (159, 16775), (162, 16796), (164, 16808), (169, 16871),

Gene: Rattail_17 Start: 12982, Stop: 14229, Start Num: 4

Candidate Starts for Rattail_17:

(Start: 4 @12982 has 62 MA's), (17, 13075), (21, 13096), (23, 13141), (28, 13165), (36, 13237), (55, 13393), (56, 13396), (57, 13399), (58, 13414), (59, 13417), (72, 13504), (77, 13528), (79, 13540), (83, 13567), (91, 13624), (95, 13660), (103, 13717), (114, 13792), (118, 13834), (119, 13840), (126,

13867), (127, 13879), (129, 13906), (142, 14056), (144, 14062), (149, 14092), (153, 14119), (155, 14146), (157, 14155), (163, 14188), (167, 14218), (168, 14224),

Gene: RedFox_17 Start: 12931, Stop: 14175, Start Num: 4

Candidate Starts for RedFox_17:

(Start: 4 @12931 has 62 MA's), (17, 13024), (21, 13045), (23, 13090), (28, 13114), (36, 13186), (55, 13342), (56, 13345), (57, 13348), (58, 13363), (59, 13366), (60, 13372), (72, 13453), (77, 13477), (79, 13489), (83, 13516), (91, 13573), (95, 13609), (100, 13651), (103, 13666), (114, 13741), (118, 13783), (119, 13789), (126, 13816), (127, 13828), (129, 13855), (142, 14005), (144, 14011), (149, 14041), (153, 14068), (155, 14095), (157, 14104), (163, 14137), (167, 14167),

Gene: Renna12_18 Start: 13275, Stop: 14519, Start Num: 4

Candidate Starts for Renna12_18:

(Start: 4 @13275 has 62 MA's), (17, 13368), (21, 13389), (23, 13434), (36, 13530), (38, 13545), (55, 13686), (56, 13689), (57, 13692), (58, 13707), (59, 13710), (60, 13716), (72, 13797), (77, 13821), (79, 13833), (83, 13860), (91, 13917), (95, 13953), (100, 13995), (103, 14010), (113, 14079), (114, 14085), (118, 14127), (119, 14133), (126, 14160), (127, 14172), (129, 14199), (142, 14349), (144, 14355), (149, 14385), (153, 14412), (155, 14439), (157, 14448), (163, 14481), (167, 14511),

Gene: Richie_21 Start: 15638, Stop: 16939, Start Num: 4

Candidate Starts for Richie_21:

(Start: 4 @15638 has 62 MA's), (29, 15842), (33, 15875), (37, 15899), (46, 15947), (47, 15977), (51, 16007), (56, 16049), (62, 16085), (65, 16103), (90, 16268), (95, 16307), (96, 16325), (102, 16358), (113, 16430), (136, 16628), (137, 16640), (156, 16778), (159, 16790), (162, 16811), (164, 16823), (169, 16886),

Gene: Ruchi_18 Start: 14614, Stop: 15864, Start Num: 4

Candidate Starts for Ruchi_18:

(Start: 4 @14614 has 62 MA's), (10, 14647), (14, 14680), (22, 14743), (23, 14773), (34, 14863), (43, 14902), (49, 14962), (52, 14986), (53, 15001), (56, 15025), (57, 15028), (59, 15046), (72, 15133), (77, 15157), (79, 15169), (91, 15253), (95, 15289), (101, 15337), (115, 15424), (123, 15487), (127, 15511), (132, 15565), (134, 15583), (140, 15670), (142, 15688), (149, 15724), (152, 15745), (153, 15751), (155, 15778), (157, 15787),

Gene: Sakai_21 Start: 15632, Stop: 16933, Start Num: 4

Candidate Starts for Sakai_21:

(Start: 4 @15632 has 62 MA's), (37, 15893), (43, 15920), (47, 15971), (51, 16001), (56, 16043), (59, 16064), (62, 16079), (65, 16097), (90, 16262), (95, 16301), (96, 16319), (102, 16352), (113, 16424), (136, 16622), (137, 16634), (139, 16643), (140, 16658), (156, 16772), (159, 16784), (162, 16805), (164, 16817), (169, 16880),

Gene: Salgado_69 Start: 41420, Stop: 42589, Start Num: 4

Candidate Starts for Salgado_69:

(Start: 4 @41420 has 62 MA's), (6, 41429), (8, 41441), (12, 41468), (19, 41525), (21, 41531), (31, 41630), (33, 41648), (34, 41660), (38, 41681), (57, 41774), (60, 41798), (64, 41822), (68, 41843), (82, 41936), (84, 41945), (85, 41951), (87, 41963), (89, 41984), (95, 42032), (99, 42071), (107, 42116), (120, 42209), (124, 42215), (130, 42266), (141, 42398), (142, 42410), (157, 42509), (163, 42542),

Gene: Seahorse_22 Start: 15990, Stop: 17291, Start Num: 4

Candidate Starts for Seahorse_22:

(Start: 4 @15990 has 62 MA's), (7, 16008), (10, 16023), (37, 16251), (51, 16359), (56, 16401), (62, 16437), (65, 16455), (80, 16545), (90, 16620), (95, 16659), (96, 16677), (102, 16710), (113, 16782), (136, 16980), (156, 17130), (159, 17142), (162, 17163), (164, 17175), (169, 17238),

Gene: Shrooms_67 Start: 39941, Stop: 41110, Start Num: 4

Candidate Starts for Shrooms_67:

(Start: 4 @39941 has 62 MA's), (6, 39950), (8, 39962), (19, 40046), (22, 40067), (23, 40091), (27, 40109), (28, 40115), (31, 40151), (33, 40169), (34, 40181), (38, 40202), (42, 40217), (45, 40229), (57, 40295), (68, 40364), (83, 40460), (85, 40472), (87, 40484), (89, 40505), (93, 40526), (94, 40535), (95, 40553), (99, 40592), (116, 40703), (120, 40730), (124, 40736), (130, 40787), (141, 40919), (142, 40931), (151, 40985), (153, 40994), (155, 41021), (157, 41030), (163, 41063),

Gene: Shukran_21 Start: 15544, Stop: 16845, Start Num: 4

Candidate Starts for Shukran_21:

(Start: 4 @15544 has 62 MA's), (16, 15634), (20, 15652), (23, 15703), (27, 15721), (33, 15781), (43, 15832), (49, 15892), (51, 15913), (55, 15952), (56, 15955), (59, 15976), (60, 15982), (62, 15991), (71, 16054), (80, 16099), (85, 16132), (88, 16147), (92, 16183), (95, 16213), (96, 16231), (97, 16246), (102, 16264), (112, 16327), (113, 16336), (129, 16438), (139, 16555), (146, 16606), (151, 16642), (156, 16684), (169, 16792),

Gene: SpicyFrank_21 Start: 15700, Stop: 17001, Start Num: 4

Candidate Starts for SpicyFrank_21:

(Start: 4 @15700 has 62 MA's), (37, 15961), (51, 16069), (56, 16111), (62, 16147), (74, 16225), (95, 16369), (96, 16387), (112, 16483), (113, 16492), (133, 16630), (136, 16690), (139, 16711), (156, 16840), (159, 16852), (169, 16948),

Gene: StuartMinion_18 Start: 12969, Stop: 14216, Start Num: 4

Candidate Starts for StuartMinion_18:

(Start: 4 @12969 has 62 MA's), (17, 13062), (21, 13083), (23, 13128), (28, 13152), (36, 13224), (38, 13239), (55, 13380), (56, 13383), (57, 13386), (58, 13401), (59, 13404), (60, 13410), (72, 13491), (80, 13533), (83, 13554), (91, 13611), (95, 13647), (100, 13689), (101, 13695), (103, 13704), (113, 13773), (114, 13779), (119, 13827), (126, 13854), (127, 13866), (128, 13872), (129, 13893), (142, 14043), (144, 14049), (149, 14079), (153, 14106), (155, 14133), (157, 14142), (163, 14175),

Gene: TaylorSipt_18 Start: 13348, Stop: 14598, Start Num: 4

Candidate Starts for TaylorSipt_18:

(Start: 4 @13348 has 62 MA's), (10, 13381), (14, 13414), (17, 13441), (26, 13519), (34, 13597), (49, 13696), (56, 13759), (57, 13762), (59, 13780), (70, 13849), (75, 13882), (79, 13903), (82, 13927), (83, 13930), (85, 13942), (86, 13948), (91, 13987), (95, 14023), (101, 14071), (103, 14080), (110, 14131), (111, 14137), (123, 14221), (127, 14245), (136, 14368), (142, 14422), (143, 14425), (146, 14440), (150, 14464), (155, 14512), (157, 14521), (159, 14527),

Gene: ThayneTheZag_21 Start: 15791, Stop: 17092, Start Num: 4

Candidate Starts for ThayneTheZag_21:

(Start: 4 @15791 has 62 MA's), (7, 15809), (23, 15950), (55, 16199), (56, 16202), (59, 16223), (62, 16238), (81, 16349), (85, 16379), (88, 16394), (92, 16430), (95, 16460), (96, 16478), (97, 16493), (101, 16508), (102, 16511), (104, 16520), (113, 16583), (129, 16685), (151, 16889), (156, 16931), (159, 16943), (169, 17039),

Gene: Tiff81_22 Start: 15718, Stop: 17019, Start Num: 4

Candidate Starts for Tiff81_22:

(Start: 4 @15718 has 62 MA's), (10, 15751), (37, 15979), (51, 16087), (56, 16129), (62, 16165), (65, 16183), (80, 16273), (90, 16348), (95, 16387), (96, 16405), (102, 16438), (113, 16510), (136, 16708), (156, 16858), (159, 16870), (162, 16891), (164, 16903), (169, 16966),

Gene: Toad24_19 Start: 14538, Stop: 15788, Start Num: 4

Candidate Starts for Toad24_19:

(Start: 4 @14538 has 62 MA's), (14, 14604), (20, 14646), (26, 14709), (30, 14754), (34, 14787), (56, 14949), (57, 14952), (75, 15072), (79, 15093), (83, 15120), (85, 15132), (86, 15138), (91, 15177), (95, 15213), (101, 15261), (123, 15411), (127, 15435), (136, 15558), (137, 15570), (139, 15579), (142, 15612), (144, 15618), (147, 15633), (150, 15654), (152, 15669), (153, 15675), (154, 15681), (155, 15702), (157, 15711), (163, 15744),

Gene: Vopal_22 Start: 15695, Stop: 16996, Start Num: 4

Candidate Starts for Vopal_22:

(Start: 4 @15695 has 62 MA's), (33, 15932), (37, 15956), (43, 15983), (47, 16034), (51, 16064), (56, 16106), (59, 16127), (62, 16142), (65, 16160), (90, 16325), (95, 16364), (96, 16382), (102, 16415), (113, 16487), (136, 16685), (137, 16697), (139, 16706), (140, 16721), (156, 16835), (159, 16847), (162, 16868), (164, 16880), (169, 16943),

Gene: Vulpecula_18 Start: 14072, Stop: 15322, Start Num: 4

Candidate Starts for Vulpecula_18:

(Start: 4 @14072 has 62 MA's), (10, 14105), (14, 14138), (22, 14201), (23, 14231), (26, 14243), (34, 14321), (43, 14360), (49, 14420), (52, 14444), (53, 14459), (56, 14483), (57, 14486), (59, 14504), (72, 14591), (77, 14615), (79, 14627), (91, 14711), (95, 14747), (101, 14795), (115, 14882), (123, 14945), (126, 14957), (127, 14969), (132, 15023), (134, 15041), (140, 15128), (142, 15146), (149, 15182), (152, 15203), (153, 15209), (155, 15236), (157, 15245), (163, 15278),

Gene: Waltz_66 Start: 39954, Stop: 41123, Start Num: 4

Candidate Starts for Waltz_66:

(Start: 4 @39954 has 62 MA's), (6, 39963), (8, 39975), (18, 40050), (27, 40122), (29, 40149), (31, 40164), (33, 40182), (34, 40194), (42, 40230), (44, 40236), (45, 40242), (57, 40308), (68, 40377), (83, 40473), (85, 40485), (87, 40497), (89, 40518), (93, 40539), (95, 40566), (124, 40749), (136, 40890), (137, 40902), (140, 40926), (142, 40944), (147, 40965), (151, 40998), (153, 41007), (155, 41034), (157, 41043), (159, 41049), (161, 41067), (163, 41076),

Gene: Westrich_19 Start: 14526, Stop: 15797, Start Num: 4

Candidate Starts for Westrich_19:

(Start: 4 @14526 has 62 MA's), (14, 14592), (20, 14634), (26, 14697), (30, 14742), (34, 14775), (56, 14937), (57, 14940), (75, 15060), (79, 15081), (83, 15108), (85, 15120), (86, 15126), (91, 15165), (95, 15201), (101, 15249), (123, 15399), (127, 15423), (136, 15546), (137, 15558), (139, 15567), (142, 15600), (144, 15606), (147, 15621), (150, 15642), (152, 15657), (153, 15663), (154, 15669), (155, 15690), (157, 15699), (163, 15732),

Gene: Wheelbite_65 Start: 41577, Stop: 42746, Start Num: 4

Candidate Starts for Wheelbite_65:

(Start: 4 @41577 has 62 MA's), (6, 41586), (8, 41598), (12, 41625), (19, 41682), (21, 41688), (24, 41730), (31, 41787), (33, 41805), (34, 41817), (57, 41931), (64, 41979), (68, 42000), (69, 42015), (77, 42057), (83, 42096), (85, 42108), (89, 42141), (95, 42189), (99, 42228), (107, 42273), (120, 42366), (135, 42498), (136, 42513), (141, 42555), (142, 42567), (157, 42666), (163, 42699),

Gene: WileyE_17 Start: 13406, Stop: 14656, Start Num: 4

Candidate Starts for WileyE_17:

(Start: 4 @13406 has 62 MA's), (10, 13439), (14, 13472), (22, 13535), (23, 13565), (34, 13655), (43, 13694), (49, 13754), (52, 13778), (53, 13793), (56, 13817), (57, 13820), (59, 13838), (72, 13925), (77, 13949), (79, 13961), (83, 13988), (91, 14045), (95, 14081), (101, 14129), (115, 14216), (123, 14279), (127, 14303), (132, 14357), (134, 14375), (140, 14462), (149, 14516), (152, 14537), (153, 14543), (154, 14549), (155, 14570), (157, 14579), (163, 14612),

Gene: Windest_22 Start: 15679, Stop: 16980, Start Num: 4

Candidate Starts for Windest_22:

(Start: 4 @15679 has 62 MA's), (29, 15883), (33, 15916), (37, 15940), (46, 15988), (47, 16018), (51, 16048), (56, 16090), (62, 16126), (65, 16144), (90, 16309), (95, 16348), (96, 16366), (102, 16399), (113, 16471), (136, 16669), (137, 16681), (156, 16819), (159, 16831), (162, 16852), (164, 16864), (169, 16927),

Gene: YoungHarleezy_21 Start: 15636, Stop: 16937, Start Num: 4

Candidate Starts for YoungHarleezy_21:

(Start: 4 @15636 has 62 MA's), (33, 15873), (37, 15897), (43, 15924), (47, 15975), (51, 16005), (56, 16047), (59, 16068), (62, 16083), (65, 16101), (90, 16266), (95, 16305), (96, 16323), (102, 16356), (113, 16428), (136, 16626), (137, 16638), (139, 16647), (140, 16662), (156, 16776), (159, 16788), (162, 16809), (164, 16821), (169, 16884),

Gene: Zhuangyuan_20 Start: 13779, Stop: 15026, Start Num: 4

Candidate Starts for Zhuangyuan_20:

(Start: 4 @13779 has 62 MA's), (14, 13845), (17, 13872), (18, 13875), (23, 13938), (28, 13962), (41, 14064), (50, 14145), (57, 14196), (59, 14214), (60, 14220), (68, 14265), (72, 14301), (79, 14337), (85, 14373), (87, 14385), (90, 14415), (91, 14418), (95, 14454), (100, 14496), (113, 14580), (114, 14586), (119, 14637), (125, 14661), (128, 14682), (140, 14835), (142, 14853), (153, 14916), (155, 14943), (157, 14952),