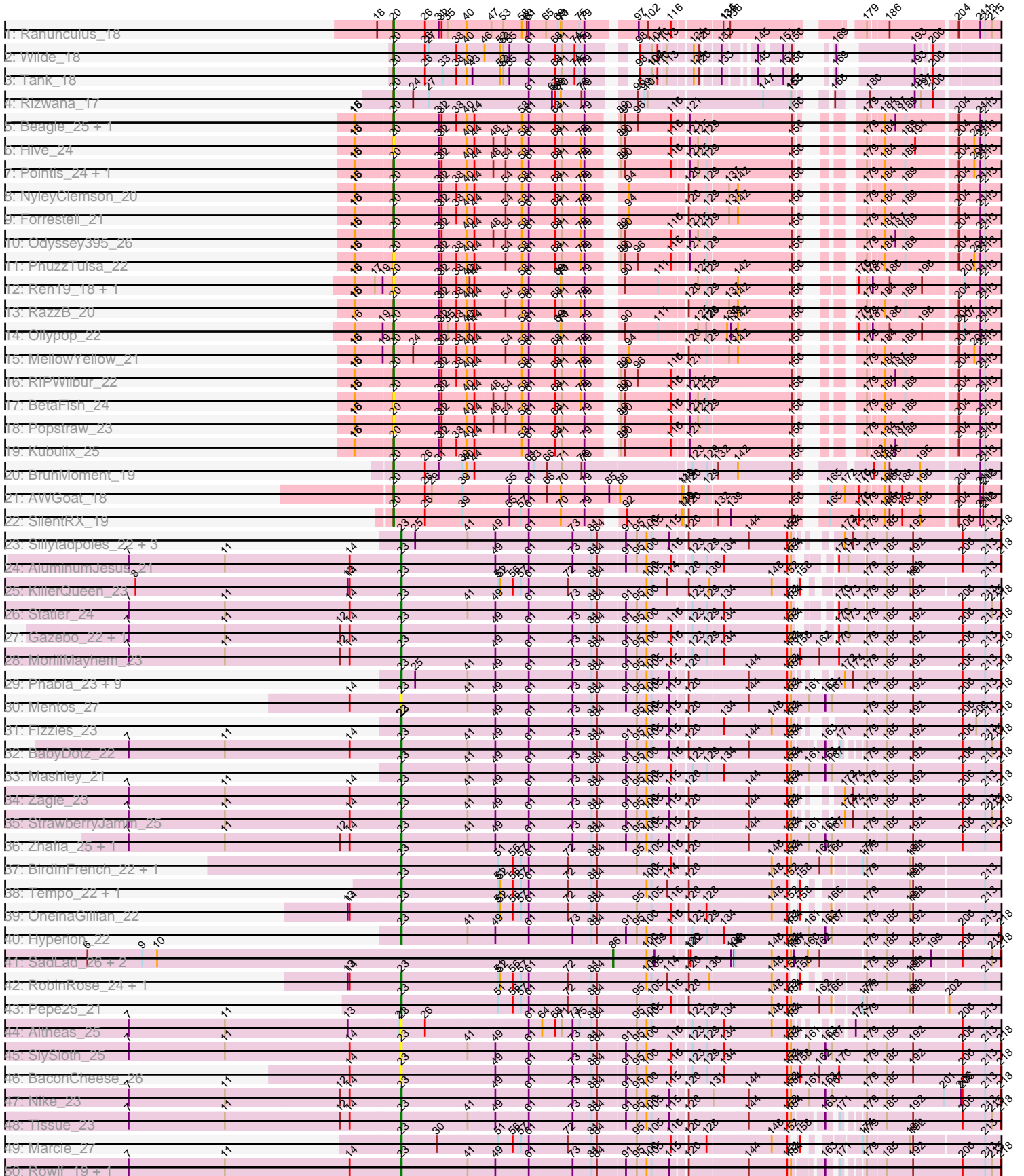
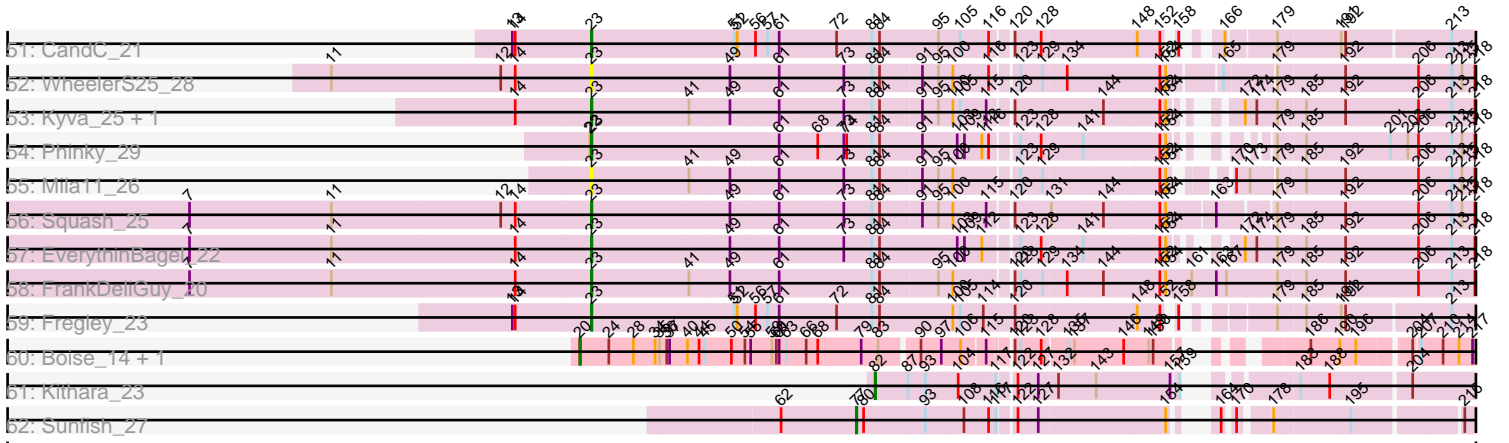


Zoomed Pham 311473



Zoomed Pham 311473



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 311473 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311473 has 87 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Ranunculus_18
- Track 2 : Wilde_18
- Track 3 : Tank_18
- Track 4 : Rizwana_17
- Track 5 : Beagle_25, Pureglobe5_26
- Track 6 : Hive_24
- Track 7 : Pointis_24, DogYard_24
- Track 8 : NyleyClemson_20
- Track 9 : Forrestell_21
- Track 10 : Odyssey395_26
- Track 11 : PhuzzTulsa_22
- Track 12 : Ren19_18, Nikan_20
- Track 13 : RazzB_20
- Track 14 : Ollypop_22
- Track 15 : MellowYellow_21
- Track 16 : RIPWilbur_22
- Track 17 : BetaFish_24
- Track 18 : Popstraw_23
- Track 19 : Kubulix_25
- Track 20 : BruhMoment_19
- Track 21 : AWGoat_18
- Track 22 : SilentRX_19
- Track 23 : Sillytadpoles_22, Rudy_21, Viceroy_22, Quammi_21
- Track 24 : AluminumJesus_21
- Track 25 : KillerQueen_23
- Track 26 : Statler_24
- Track 27 : Gazebo_22, Blab_21
- Track 28 : MorillMayhem_23
- Track 29 : Phabia_23, Llemily_22, Casend_24, Wheelie_22, Jehoshaphat_25, Teehee_24, DonaldDuck_22, Judebell_25, Lonelysoil_22, Wayne3_24
- Track 30 : Mentos_27
- Track 31 : Fizzles_23
- Track 32 : BabyDotz_22
- Track 33 : Mashley_21
- Track 34 : Zagie_23
- Track 35 : StrawberryJamm_25
- Track 36 : Zhafia_25, Namago_23

- Track 37 : BirdInFrench_22, Wilca_22
- Track 38 : Tempo_22, Kelcole_21
- Track 39 : OneinaGillian_22
- Track 40 : Hyperion_22
- Track 41 : SadLad_26, RubyRalph_25, Fransoyer_25
- Track 42 : RobinRose_24, Romm_24
- Track 43 : Pepe25_21
- Track 44 : Altheas_25
- Track 45 : SlySloth_25
- Track 46 : BaconCheese_26
- Track 47 : Nike_23
- Track 48 : Tissue_23
- Track 49 : Marcie_27
- Track 50 : Rowlf_19, SallyK_24
- Track 51 : CandC_21
- Track 52 : WheelerS25_28
- Track 53 : Kyva_25, Grassboy_24
- Track 54 : Phinky_29
- Track 55 : Mila11_26
- Track 56 : Squash_25
- Track 57 : EverythinBagel_22
- Track 58 : FrankDeliGuy_20
- Track 59 : Fregley_23
- Track 60 : Boise_14, RomansRevenge_14
- Track 61 : Kithara_23
- Track 62 : Sunfish_27

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

The start number called the most often in the published annotations is 23, it was called in 48 of the 73 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Altheas_25, AluminumJesus_21, BabyDotz_22, BaconCheese_26, BirdInFrench_22, Blab_21, CandC_21, Casend_24, DonaldDuck_22, EverythinBagel_22, Fizzles_23, FrankDeliGuy_20, Fregley_23, Gazebo_22, Grassboy_24, Hyperion_22, Jehoshaphat_25, Judebell_25, Kelcole_21, KillerQueen_23, Kyva_25, Llemily_22, Lonelysoil_22, Marcie_27, Mashley_21, Mentos_27, Mila11_26, MorillMayhem_23, Namago_23, Nike_23, OneinaGillian_22, Pepe25_21, Phabia_23, Phinky_29, Quammi_21, RobinRose_24, Romm_24, Rowlf_19, Rudy_21, SallyK_24, Sillytadpoles_22, SlySloth_25, Squash_25, Statler_24, StrawberryJamm_25, Teehee_24, Tempo_22, Tissue_23, Viceroy_22, Wayne3_24, WheelerS25_28, Wheelie_22, Wilca_22, Zagie_23, Zhafia_25,

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

-

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

- AWGoat_18, Beagle_25, BetaFish_24, Boise_14, BruhMoment_19, DogYard_24, Forrestell_21, Fransoyer_25, Hive_24, Kithara_23, Kubulix_25, MellowYellow_21,

Nikan_20, NyleyClemson_20, Odyssey395_26, Ollypop_22, PhuzzTulsa_22, Pointis_24, Popstraw_23, Pureglobe5_26, RIPWilbur_22, Ranunculus_18, RazzB_20, Ren19_18, Rizwana_17, RomansRevenge_14, RubyRalph_25, SadLad_26, SilentRX_19, Sunfish_27, Tank_18, Wilde_18,

Summary by start number:

Start 20:

- Found in 27 of 87 (31.0%) of genes in pham
- Manual Annotations of this start: 20 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AWGoat_18 (AP4), Beagle_25 (AP2), BetaFish_24 (AP2), Boise_14 (FT), BruhMoment_19 (AP3), DogYard_24 (AP2), Forrestell_21 (AP2), Hive_24 (AP2), Kubulix_25 (AP2), MellowYellow_21 (AP2), Nikan_20 (AP2), NyleyClemson_20 (AP2), Odyssey395_26 (AP2), Ollypop_22 (AP2), PhuzzTulsa_22 (AP2), Pointis_24 (AP2), Popstraw_23 (AP2), Pureglobe5_26 (AP2), RIPWilbur_22 (AP2), Ranunculus_18 (AP), RazzB_20 (AP2), Ren19_18 (AP2), Rizwana_17 (AP1), RomansRevenge_14 (FT), SilentRX_19 (AP4), Tank_18 (AP1), Wilde_18 (AP1),

Start 23:

- Found in 55 of 87 (63.2%) of genes in pham
- Manual Annotations of this start: 48 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altheas_25 (EG), AluminumJesus_21 (EG), BabyDotz_22 (EG), BaconCheese_26 (EG), BirdInFrench_22 (EG), Blab_21 (EG), CandC_21 (EG), Casend_24 (EG), DonaldDuck_22 (EG), EverythinBagel_22 (EG), Fizzles_23 (EG), FrankDeliGuy_20 (EG), Fregley_23 (EG), Gazebo_22 (EG), Grassboy_24 (EG), Hyperion_22 (EG), Jehoshaphat_25 (EG), Judebell_25 (EG), Kelcole_21 (EG), KillerQueen_23 (EG), Kyva_25 (EG), Llemily_22 (EG), Lonelysoil_22 (EG), Marcie_27 (EG), Mashley_21 (EG), Mentos_27 (EG), Mila11_26 (EG), MorillMayhem_23 (EG), Namago_23 (EG), Nike_23 (EG), OneinaGillian_22 (EG), Pepe25_21 (EG), Phabia_23 (EG), Phinky_29 (EG), Quammi_21 (EG), RobinRose_24 (EG), Romm_24 (EG), Rowlf_19 (EG), Rudy_21 (EG), SallyK_24 (EG), Sillytadpoles_22 (EG), SlySloth_25 (EG), Squash_25 (EG), Statler_24 (EG), StrawberryJamm_25 (EG), Teehee_24 (EG), Tempo_22 (EG), Tissue_23 (EG), Viceroy_22 (EG), Wayne3_24 (EG), WheelerS25_28 (EG), Wheelie_22 (EG), Wilca_22 (EG), Zagie_23 (EG), Zhafia_25 (EG),

Start 77:

- Found in 1 of 87 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sunfish_27 (singleton),

Start 82:

- Found in 1 of 87 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kithara_23 (singleton),

Start 86:

- Found in 3 of 87 (3.4%) of genes in pham

- Manual Annotations of this start: 3 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fransoyer_25 (EG), RubyRalph_25 (EG), SadLad_26 (EG),

Summary by clusters:

There are 8 clusters represented in this pham: singleton, FT, AP2, AP3, EG, AP1, AP4, AP,

Info for manual annotations of cluster AP:

- Start number 20 was manually annotated 1 time for cluster AP.

Info for manual annotations of cluster AP1:

- Start number 20 was manually annotated 3 times for cluster AP1.

Info for manual annotations of cluster AP2:

- Start number 20 was manually annotated 12 times for cluster AP2.

Info for manual annotations of cluster AP3:

- Start number 20 was manually annotated 1 time for cluster AP3.

Info for manual annotations of cluster AP4:

- Start number 20 was manually annotated 2 times for cluster AP4.

Info for manual annotations of cluster EG:

- Start number 23 was manually annotated 48 times for cluster EG.
- Start number 86 was manually annotated 3 times for cluster EG.

Info for manual annotations of cluster FT:

- Start number 20 was manually annotated 1 time for cluster FT.

Gene Information:

Gene: AWGoat_18 Start: 10621, Stop: 13443, Start Num: 20

Candidate Starts for AWGoat_18:

(Start: 20 @10621 has 20 MA's), (26, 10717), (29, 10738), (39, 10831), (55, 10966), (61, 11023), (66, 11074), (70, 11113), (79, 11185), (85, 11251), (88, 11272), (118, 11443), (119, 11449), (120, 11452), (129, 11506), (156, 11740), (165, 11794), (172, 11836), (176, 11866), (179, 11887), (184, 11923), (186, 11938), (188, 11977), (196, 12031), (204, 12124), (211, 12181), (212, 12190), (213, 12196), (221, 12244), (266, 12475), (282, 12676), (284, 12706), (285, 12712), (291, 12736), (305, 12814), (311, 12886), (316, 12943), (318, 12964), (321, 12985), (334, 13114), (339, 13186), (342, 13210), (347, 13234), (348, 13240), (350, 13255), (352, 13276), (367, 13426),

Gene: Altheas_25 Start: 10980, Stop: 14174, Start Num: 23

Candidate Starts for Altheas_25:

(4, 9573), (7, 10161), (11, 10452), (13, 10824), (21, 10977), (Start: 23 @10980 has 48 MA's), (26, 11052), (61, 11361), (64, 11397), (68, 11436), (71, 11454), (73, 11487), (75, 11508), (81, 11544), (84, 11559), (95, 11676), (100, 11706), (105, 11721), (123, 11823), (129, 11865), (134, 11910), (148, 12051), (152, 12090), (154, 12102), (175, 12186), (179, 12219), (206, 12501), (213, 12570), (234, 12726), (243, 12801), (244, 12804), (261, 13014), (262, 13020), (278, 13230), (280, 13269), (281,

13281), (282, 13290), (291, 13359), (294, 13371), (306, 13458), (335, 13767), (337, 13791), (338, 13800), (343, 13866),

Gene: AluminumJesus_21 Start: 10324, Stop: 13551, Start Num: 23

Candidate Starts for AluminumJesus_21:

(7, 9502), (11, 9793), (14, 10171), (Start: 23 @10324 has 48 MA's), (49, 10606), (61, 10705), (73, 10831), (81, 10888), (84, 10903), (91, 10984), (95, 11017), (100, 11047), (116, 11119), (123, 11164), (129, 11206), (134, 11251), (152, 11431), (154, 11443), (170, 11515), (173, 11539), (179, 11581), (185, 11632), (192, 11713), (206, 11863), (213, 11932), (218, 11980), (239, 12103), (243, 12163), (244, 12166), (261, 12385), (263, 12412), (280, 12640), (281, 12652), (282, 12661), (295, 12751), (306, 12835), (335, 13144), (337, 13168), (338, 13177), (343, 13243),

Gene: BabyDotz_22 Start: 10589, Stop: 13792, Start Num: 23

Candidate Starts for BabyDotz_22:

(7, 9767), (11, 10058), (14, 10436), (Start: 23 @10589 has 48 MA's), (41, 10790), (49, 10871), (61, 10970), (73, 11096), (81, 11153), (84, 11168), (91, 11249), (95, 11282), (100, 11312), (105, 11327), (115, 11378), (120, 11411), (144, 11579), (152, 11687), (154, 11699), (163, 11771), (171, 11795), (179, 11837), (185, 11888), (192, 11969), (206, 12119), (213, 12188), (215, 12209), (218, 12236), (226, 12293), (243, 12410), (261, 12632), (263, 12659), (280, 12887), (281, 12899), (291, 12977), (295, 12992), (306, 13076), (335, 13385), (337, 13409), (338, 13418), (343, 13484),

Gene: BaconCheese_26 Start: 11742, Stop: 15041, Start Num: 23

Candidate Starts for BaconCheese_26:

(14, 11589), (Start: 23 @11742 has 48 MA's), (49, 12024), (61, 12123), (73, 12249), (81, 12306), (84, 12321), (91, 12402), (95, 12435), (100, 12465), (116, 12537), (123, 12582), (129, 12624), (134, 12669), (152, 12849), (154, 12861), (158, 12888), (162, 12948), (170, 13008), (179, 13092), (185, 13143), (192, 13224), (206, 13374), (213, 13443), (218, 13491), (239, 13614), (243, 13674), (244, 13677), (261, 13881), (265, 13935), (280, 14136), (281, 14148), (291, 14226), (295, 14241), (306, 14325), (335, 14634), (337, 14658), (338, 14667), (343, 14733), (350, 14772),

Gene: Beagle_25 Start: 11274, Stop: 13937, Start Num: 20

Candidate Starts for Beagle_25:

(15, 11160), (16, 11163), (Start: 20 @11274 has 20 MA's), (31, 11412), (32, 11421), (38, 11466), (40, 11496), (44, 11520), (58, 11655), (61, 11676), (68, 11751), (71, 11769), (79, 11838), (89, 11892), (90, 11904), (96, 11943), (116, 12033), (121, 12072), (156, 12354), (179, 12444), (184, 12483), (187, 12516), (189, 12546), (204, 12684), (211, 12741), (213, 12756), (252, 12915), (253, 12921), (261, 12951), (266, 12966), (271, 13026), (278, 13107), (288, 13215), (307, 13311), (318, 13455), (319, 13461), (325, 13521), (330, 13578), (339, 13677), (340, 13683), (344, 13710), (348, 13731), (353, 13785), (355, 13794), (356, 13809), (367, 13923),

Gene: BetaFish_24 Start: 11477, Stop: 14140, Start Num: 20

Candidate Starts for BetaFish_24:

(15, 11363), (16, 11366), (Start: 20 @11477 has 20 MA's), (31, 11615), (32, 11624), (40, 11699), (44, 11723), (48, 11774), (54, 11810), (58, 11858), (61, 11879), (68, 11954), (71, 11972), (76, 12029), (79, 12041), (89, 12095), (90, 12107), (116, 12236), (121, 12275), (125, 12299), (129, 12326), (156, 12557), (179, 12647), (184, 12686), (189, 12749), (204, 12887), (211, 12944), (213, 12959), (252, 13118), (253, 13124), (261, 13154), (266, 13169), (271, 13229), (288, 13418), (307, 13514), (318, 13658), (319, 13664), (325, 13724), (330, 13781), (339, 13880), (340, 13886), (344, 13913), (348, 13934), (353, 13988), (355, 13997), (356, 14012), (367, 14126),

Gene: BirdInFrench_22 Start: 9464, Stop: 12697, Start Num: 23

Candidate Starts for BirdInFrench_22:

(Start: 23 @9464 has 48 MA's), (51, 9755), (56, 9797), (57, 9821), (61, 9845), (72, 9956), (81, 10028), (84, 10043), (95, 10157), (105, 10199), (116, 10250), (120, 10283), (148, 10520), (152, 10559), (154, 10571), (162, 10658), (166, 10694), (177, 10769), (179, 10781), (191, 10904), (192, 10913), (220, 11183), (223, 11192), (235, 11261), (238, 11270), (243, 11333), (244, 11336), (254, 11462), (280, 11795), (316, 12095), (318, 12116), (321, 12137), (328, 12212), (336, 12278), (345, 12377), (349, 12407), (356, 12509), (357, 12521), (361, 12587),

Gene: Blab_21 Start: 10200, Stop: 13427, Start Num: 23

Candidate Starts for Blab_21:

(7, 9378), (11, 9669), (12, 10017), (14, 10047), (Start: 23 @10200 has 48 MA's), (49, 10482), (61, 10581), (73, 10707), (81, 10764), (84, 10779), (91, 10860), (95, 10893), (100, 10923), (116, 10995), (123, 11040), (129, 11082), (134, 11127), (152, 11307), (154, 11319), (170, 11391), (173, 11415), (179, 11457), (185, 11508), (192, 11589), (206, 11739), (213, 11808), (218, 11856), (239, 11979), (243, 12039), (244, 12042), (261, 12261), (263, 12288), (280, 12516), (281, 12528), (282, 12537), (295, 12627), (306, 12711), (335, 13020), (337, 13044), (338, 13053), (343, 13119),

Gene: Boise_14 Start: 8225, Stop: 11137, Start Num: 20

Candidate Starts for Boise_14:

(Start: 20 @8225 has 20 MA's), (24, 8285), (28, 8336), (34, 8381), (35, 8390), (36, 8405), (37, 8411), (40, 8447), (44, 8471), (45, 8483), (50, 8531), (54, 8558), (55, 8570), (59, 8612), (60, 8621), (61, 8627), (63, 8642), (66, 8678), (68, 8702), (79, 8789), (83, 8816), (90, 8879), (97, 8921), (106, 8954), (115, 8996), (120, 9029), (123, 9041), (128, 9080), (135, 9128), (137, 9140), (146, 9242), (149, 9293), (150, 9302), (186, 9476), (190, 9536), (196, 9569), (204, 9662), (207, 9671), (210, 9716), (214, 9749), (217, 9776), (245, 10004), (247, 10013), (271, 10214), (274, 10250), (282, 10355), (294, 10424), (316, 10628), (318, 10649), (319, 10655), (320, 10664), (321, 10670), (328, 10745), (332, 10787), (336, 10811), (343, 10889), (344, 10892), (348, 10913),

Gene: BruhMoment_19 Start: 10544, Stop: 13339, Start Num: 20

Candidate Starts for BruhMoment_19:

(Start: 20 @10544 has 20 MA's), (26, 10640), (31, 10682), (39, 10754), (40, 10766), (44, 10790), (61, 10946), (63, 10961), (66, 10997), (71, 11039), (78, 11099), (79, 11108), (123, 11396), (129, 11438), (132, 11462), (142, 11519), (156, 11672), (182, 11822), (184, 11855), (186, 11870), (196, 11963), (211, 12113), (213, 12128), (249, 12284), (250, 12287), (256, 12335), (266, 12380), (276, 12503), (282, 12581), (285, 12617), (286, 12620), (297, 12665), (302, 12704), (316, 12854), (319, 12881), (326, 12959), (343, 13127), (347, 13145), (348, 13151), (350, 13166), (354, 13211), (355, 13214), (362, 13256),

Gene: CandC_21 Start: 9150, Stop: 12302, Start Num: 23

Candidate Starts for CandC_21:

(13, 8991), (14, 8997), (Start: 23 @9150 has 48 MA's), (51, 9441), (52, 9447), (56, 9483), (57, 9507), (61, 9531), (72, 9642), (81, 9714), (84, 9729), (95, 9843), (105, 9885), (116, 9936), (120, 9969), (128, 10020), (148, 10206), (152, 10245), (158, 10257), (166, 10296), (179, 10383), (191, 10506), (192, 10515), (213, 10722), (223, 10794), (237, 10866), (238, 10869), (243, 10932), (244, 10935), (246, 10995), (257, 11103), (258, 11109), (264, 11190), (280, 11400), (308, 11568), (316, 11700), (318, 11721), (321, 11742), (336, 11883), (345, 11982), (349, 12012), (356, 12114), (357, 12126), (361, 12192),

Gene: Casend_24 Start: 10926, Stop: 14138, Start Num: 23

Candidate Starts for Casend_24:

(Start: 23 @10926 has 48 MA's), (25, 10968), (41, 11127), (49, 11208), (61, 11307), (73, 11433), (81, 11490), (84, 11505), (91, 11586), (95, 11619), (100, 11649), (105, 11664), (115, 11715), (120, 11748), (144, 11916), (152, 12024), (154, 12036), (172, 12108), (174, 12132), (179, 12174), (185, 12225), (192, 12306), (206, 12456), (213, 12525), (218, 12573), (239, 12696), (243, 12756), (244, 12759),

(261, 12978), (263, 13005), (280, 13233), (281, 13245), (282, 13254), (295, 13338), (306, 13422), (335, 13731), (337, 13755), (338, 13764), (343, 13830),

Gene: DogYard_24 Start: 11344, Stop: 14007, Start Num: 20

Candidate Starts for DogYard_24:

(15, 11230), (16, 11233), (Start: 20 @11344 has 20 MA's), (31, 11482), (32, 11491), (40, 11566), (44, 11590), (48, 11641), (54, 11677), (58, 11725), (61, 11746), (68, 11821), (71, 11839), (76, 11896), (79, 11908), (89, 11962), (90, 11974), (116, 12103), (121, 12142), (125, 12166), (129, 12193), (156, 12424), (179, 12514), (184, 12553), (189, 12616), (204, 12754), (208, 12793), (211, 12811), (213, 12826), (252, 12985), (253, 12991), (261, 13021), (266, 13036), (271, 13096), (278, 13177), (288, 13285), (307, 13381), (318, 13525), (319, 13531), (325, 13591), (330, 13648), (339, 13747), (340, 13753), (344, 13780), (348, 13801), (353, 13855), (355, 13864), (367, 13993),

Gene: DonaldDuck_22 Start: 10272, Stop: 13484, Start Num: 23

Candidate Starts for DonaldDuck_22:

(Start: 23 @10272 has 48 MA's), (25, 10314), (41, 10473), (49, 10554), (61, 10653), (73, 10779), (81, 10836), (84, 10851), (91, 10932), (95, 10965), (100, 10995), (105, 11010), (115, 11061), (120, 11094), (144, 11262), (152, 11370), (154, 11382), (172, 11454), (174, 11478), (179, 11520), (185, 11571), (192, 11652), (206, 11802), (213, 11871), (218, 11919), (239, 12042), (243, 12102), (244, 12105), (261, 12324), (263, 12351), (280, 12579), (281, 12591), (282, 12600), (295, 12684), (306, 12768), (335, 13077), (337, 13101), (338, 13110), (343, 13176),

Gene: EverythinBagel_22 Start: 10666, Stop: 13887, Start Num: 23

Candidate Starts for EverythinBagel_22:

(2, 8956), (3, 8971), (4, 9256), (7, 9844), (11, 10135), (14, 10513), (Start: 23 @10666 has 48 MA's), (49, 10948), (61, 11047), (73, 11173), (81, 11230), (84, 11245), (103, 11401), (109, 11416), (112, 11449), (123, 11506), (128, 11545), (141, 11626), (152, 11773), (154, 11785), (172, 11857), (174, 11881), (179, 11923), (185, 11974), (192, 12055), (206, 12205), (213, 12274), (218, 12322), (219, 12325), (239, 12445), (243, 12505), (244, 12508), (261, 12727), (263, 12754), (280, 12982), (281, 12994), (291, 13072), (295, 13087), (306, 13171), (335, 13480), (337, 13504), (338, 13513), (343, 13579),

Gene: Fizzles_23 Start: 10269, Stop: 13466, Start Num: 23

Candidate Starts for Fizzles_23:

(22, 10266), (Start: 23 @10269 has 48 MA's), (49, 10551), (61, 10650), (73, 10776), (81, 10833), (84, 10848), (95, 10965), (100, 10992), (105, 11007), (115, 11058), (120, 11091), (134, 11190), (148, 11328), (152, 11367), (154, 11379), (179, 11517), (185, 11568), (192, 11649), (206, 11799), (209, 11841), (213, 11868), (218, 11916), (228, 11991), (243, 12099), (244, 12102), (261, 12309), (263, 12336), (278, 12525), (280, 12564), (281, 12576), (282, 12585), (295, 12669), (300, 12702), (306, 12756), (322, 12939), (331, 13038), (335, 13065), (338, 13098), (343, 13164), (346, 13176),

Gene: Forrestell_21 Start: 9985, Stop: 12645, Start Num: 20

Candidate Starts for Forrestell_21:

(15, 9871), (16, 9874), (Start: 20 @9985 has 20 MA's), (31, 10123), (32, 10132), (38, 10177), (40, 10207), (44, 10231), (54, 10318), (58, 10366), (61, 10387), (68, 10462), (71, 10480), (76, 10537), (79, 10549), (94, 10624), (120, 10777), (129, 10831), (137, 10888), (142, 10912), (156, 11062), (179, 11152), (184, 11191), (189, 11254), (204, 11392), (211, 11449), (213, 11464), (233, 11581), (252, 11623), (253, 11629), (261, 11659), (266, 11674), (271, 11734), (278, 11815), (288, 11923), (303, 11995), (307, 12019), (318, 12163), (325, 12229), (339, 12385), (340, 12391), (344, 12418), (348, 12439), (353, 12493), (355, 12502), (356, 12517), (367, 12631),

Gene: FrankDeliGuy_20 Start: 10132, Stop: 13446, Start Num: 23

Candidate Starts for FrankDeliGuy_20:

(1, 8293), (2, 8422), (3, 8437), (4, 8722), (7, 9310), (11, 9601), (14, 9979), (Start: 23 @10132 has 48 MA's), (41, 10333), (49, 10414), (61, 10513), (81, 10696), (84, 10711), (95, 10825), (100, 10855), (120, 10960), (123, 10972), (129, 11014), (134, 11059), (144, 11131), (152, 11239), (154, 11251), (161, 11305), (163, 11356), (167, 11377), (179, 11482), (185, 11533), (192, 11614), (206, 11764), (213, 11833), (218, 11881), (239, 12004), (243, 12064), (244, 12067), (261, 12286), (263, 12313), (280, 12541), (281, 12553), (291, 12631), (295, 12646), (306, 12730), (315, 12862), (337, 13063), (338, 13072), (343, 13138),

Gene: Fransoyer_25 Start: 10895, Stop: 13540, Start Num: 86

Candidate Starts for Fransoyer_25:

(6, 9308), (9, 9476), (10, 9521), (Start: 86 @10895 has 3 MA's), (100, 10997), (109, 11021), (120, 11099), (122, 11105), (139, 11219), (140, 11228), (141, 11231), (148, 11339), (152, 11378), (154, 11390), (157, 11399), (160, 11441), (162, 11477), (179, 11600), (185, 11651), (192, 11732), (199, 11786), (206, 11870), (215, 11960), (218, 11987), (223, 12011), (227, 12041), (231, 12059), (239, 12098), (243, 12158), (261, 12380), (268, 12479), (280, 12629), (293, 12728), (295, 12734), (306, 12818), (312, 12896), (327, 13067), (337, 13151), (338, 13160), (343, 13226), (346, 13238), (347, 13244), (356, 13337), (364, 13451),

Gene: Fregley_23 Start: 9690, Stop: 12875, Start Num: 23

Candidate Starts for Fregley_23:

(13, 9531), (14, 9537), (Start: 23 @9690 has 48 MA's), (51, 9981), (52, 9987), (56, 10023), (57, 10047), (61, 10071), (72, 10182), (81, 10254), (84, 10269), (100, 10416), (105, 10431), (114, 10476), (120, 10542), (148, 10779), (152, 10818), (158, 10830), (179, 10956), (185, 11007), (191, 11079), (192, 11088), (213, 11295), (223, 11367), (237, 11439), (238, 11442), (243, 11505), (244, 11508), (246, 11568), (257, 11676), (258, 11682), (264, 11763), (280, 11973), (308, 12141), (316, 12273), (318, 12294), (321, 12315), (336, 12456), (345, 12555), (349, 12585), (356, 12687), (357, 12699), (361, 12765),

Gene: Gazebo_22 Start: 10766, Stop: 13993, Start Num: 23

Candidate Starts for Gazebo_22:

(7, 9944), (11, 10235), (12, 10583), (14, 10613), (Start: 23 @10766 has 48 MA's), (49, 11048), (61, 11147), (73, 11273), (81, 11330), (84, 11345), (91, 11426), (95, 11459), (100, 11489), (116, 11561), (123, 11606), (129, 11648), (134, 11693), (152, 11873), (154, 11885), (170, 11957), (173, 11981), (179, 12023), (185, 12074), (192, 12155), (206, 12305), (213, 12374), (218, 12422), (239, 12545), (243, 12605), (244, 12608), (261, 12827), (263, 12854), (280, 13082), (281, 13094), (282, 13103), (295, 13193), (306, 13277), (335, 13586), (337, 13610), (338, 13619), (343, 13685),

Gene: Grassboy_24 Start: 10948, Stop: 14160, Start Num: 23

Candidate Starts for Grassboy_24:

(14, 10795), (Start: 23 @10948 has 48 MA's), (41, 11149), (49, 11230), (61, 11329), (73, 11455), (81, 11512), (84, 11527), (91, 11608), (95, 11641), (100, 11671), (105, 11686), (115, 11737), (120, 11770), (144, 11938), (152, 12046), (154, 12058), (172, 12130), (174, 12154), (179, 12196), (185, 12247), (192, 12328), (206, 12478), (213, 12547), (218, 12595), (239, 12718), (243, 12778), (244, 12781), (261, 13000), (263, 13027), (280, 13255), (281, 13267), (291, 13345), (295, 13360), (306, 13444), (335, 13753), (337, 13777), (338, 13786), (343, 13852),

Gene: Hive_24 Start: 11358, Stop: 14021, Start Num: 20

Candidate Starts for Hive_24:

(15, 11244), (16, 11247), (Start: 20 @11358 has 20 MA's), (31, 11496), (32, 11505), (40, 11580), (44, 11604), (48, 11655), (54, 11691), (58, 11739), (61, 11760), (68, 11835), (71, 11853), (76, 11910), (79, 11922), (89, 11976), (90, 11988), (116, 12117), (121, 12156), (125, 12180), (129, 12207), (156, 12438), (179, 12528), (184, 12567), (189, 12630), (194, 12660), (204, 12768), (208, 12807), (211, 12825), (213, 12840), (233, 12957), (252, 12999), (253, 13005), (261, 13035), (266, 13050), (271,

13110), (278, 13191), (288, 13299), (291, 13311), (307, 13395), (318, 13539), (319, 13545), (325, 13605), (330, 13662), (339, 13761), (340, 13767), (344, 13794), (348, 13815), (353, 13869), (355, 13878), (367, 14007),

Gene: Hyperion_22 Start: 10639, Stop: 13953, Start Num: 23

Candidate Starts for Hyperion_22:

(Start: 23 @10639 has 48 MA's), (41, 10840), (49, 10921), (61, 11020), (73, 11146), (81, 11203), (84, 11218), (91, 11299), (95, 11332), (100, 11362), (116, 11434), (123, 11479), (129, 11521), (134, 11566), (152, 11746), (154, 11758), (161, 11812), (163, 11863), (167, 11884), (179, 11989), (185, 12040), (192, 12121), (206, 12271), (213, 12340), (218, 12388), (239, 12511), (243, 12571), (244, 12574), (261, 12793), (263, 12820), (280, 13048), (281, 13060), (291, 13138), (295, 13153), (306, 13237), (335, 13546), (337, 13570), (338, 13579), (343, 13645),

Gene: Jehoshaphat_25 Start: 11191, Stop: 14403, Start Num: 23

Candidate Starts for Jehoshaphat_25:

(Start: 23 @11191 has 48 MA's), (25, 11233), (41, 11392), (49, 11473), (61, 11572), (73, 11698), (81, 11755), (84, 11770), (91, 11851), (95, 11884), (100, 11914), (105, 11929), (115, 11980), (120, 12013), (144, 12181), (152, 12289), (154, 12301), (172, 12373), (174, 12397), (179, 12439), (185, 12490), (192, 12571), (206, 12721), (213, 12790), (218, 12838), (239, 12961), (243, 13021), (244, 13024), (261, 13243), (263, 13270), (280, 13498), (281, 13510), (282, 13519), (295, 13603), (306, 13687), (335, 13996), (337, 14020), (338, 14029), (343, 14095),

Gene: Judebell_25 Start: 10732, Stop: 13944, Start Num: 23

Candidate Starts for Judebell_25:

(Start: 23 @10732 has 48 MA's), (25, 10774), (41, 10933), (49, 11014), (61, 11113), (73, 11239), (81, 11296), (84, 11311), (91, 11392), (95, 11425), (100, 11455), (105, 11470), (115, 11521), (120, 11554), (144, 11722), (152, 11830), (154, 11842), (172, 11914), (174, 11938), (179, 11980), (185, 12031), (192, 12112), (206, 12262), (213, 12331), (218, 12379), (239, 12502), (243, 12562), (244, 12565), (261, 12784), (263, 12811), (280, 13039), (281, 13051), (282, 13060), (295, 13144), (306, 13228), (335, 13537), (337, 13561), (338, 13570), (343, 13636),

Gene: Kelcole_21 Start: 9542, Stop: 12727, Start Num: 23

Candidate Starts for Kelcole_21:

(Start: 23 @9542 has 48 MA's), (51, 9833), (52, 9839), (56, 9875), (57, 9899), (61, 9923), (72, 10034), (81, 10106), (84, 10121), (100, 10268), (105, 10283), (114, 10328), (120, 10394), (148, 10631), (152, 10670), (158, 10682), (179, 10808), (191, 10931), (192, 10940), (213, 11147), (223, 11219), (237, 11291), (238, 11294), (243, 11357), (244, 11360), (246, 11420), (257, 11528), (258, 11534), (264, 11615), (280, 11825), (308, 11993), (316, 12125), (318, 12146), (321, 12167), (336, 12308), (345, 12407), (349, 12437), (356, 12539), (357, 12551), (361, 12617),

Gene: KillerQueen_23 Start: 9358, Stop: 12549, Start Num: 23

Candidate Starts for KillerQueen_23:

(5, 7966), (8, 8554), (13, 9199), (14, 9205), (Start: 23 @9358 has 48 MA's), (51, 9649), (52, 9655), (56, 9691), (57, 9715), (61, 9739), (72, 9850), (81, 9922), (84, 9937), (100, 10084), (105, 10099), (114, 10144), (120, 10210), (130, 10270), (148, 10447), (152, 10486), (158, 10498), (179, 10624), (185, 10675), (191, 10747), (192, 10756), (213, 10963), (223, 11035), (228, 11068), (237, 11110), (238, 11113), (239, 11116), (242, 11161), (243, 11176), (246, 11239), (257, 11347), (258, 11353), (262, 11392), (264, 11431), (280, 11641), (287, 11710), (308, 11815), (316, 11947), (318, 11968), (321, 11989), (336, 12130), (345, 12229), (349, 12259), (356, 12361), (357, 12373), (361, 12439),

Gene: Kithara_23 Start: 11702, Stop: 14305, Start Num: 82

Candidate Starts for Kithara_23:

(Start: 82 @11702 has 1 MA's), (87, 11768), (93, 11801), (104, 11864), (117, 11936), (122, 11963), (127, 12005), (132, 12041), (143, 12110), (157, 12254), (159, 12266), (183, 12407), (188, 12467), (204, 12617), (224, 12788), (228, 12821), (240, 12902), (251, 13037), (255, 13079), (256, 13097), (260, 13142), (264, 13193), (280, 13403), (292, 13508), (307, 13610), (309, 13628), (314, 13685), (316, 13736), (318, 13757), (332, 13895), (337, 13934), (341, 13991), (343, 13997), (347, 14015), (348, 14021), (356, 14105), (360, 14180), (363, 14204),

Gene: Kubulix_25 Start: 11467, Stop: 14130, Start Num: 20

Candidate Starts for Kubulix_25:

(15, 11353), (16, 11356), (Start: 20 @11467 has 20 MA's), (31, 11605), (32, 11614), (38, 11659), (40, 11689), (44, 11713), (58, 11848), (61, 11869), (68, 11944), (71, 11962), (79, 12031), (89, 12085), (90, 12097), (116, 12226), (121, 12265), (156, 12547), (179, 12637), (184, 12676), (187, 12709), (189, 12739), (204, 12877), (211, 12934), (213, 12949), (233, 13066), (252, 13108), (253, 13114), (261, 13144), (266, 13159), (271, 13219), (278, 13300), (288, 13408), (307, 13504), (318, 13648), (319, 13654), (325, 13714), (330, 13771), (339, 13870), (340, 13876), (344, 13903), (348, 13924), (353, 13978), (355, 13987), (356, 14002), (367, 14116),

Gene: Kyva_25 Start: 10983, Stop: 14195, Start Num: 23

Candidate Starts for Kyva_25:

(14, 10830), (Start: 23 @10983 has 48 MA's), (41, 11184), (49, 11265), (61, 11364), (73, 11490), (81, 11547), (84, 11562), (91, 11643), (95, 11676), (100, 11706), (105, 11721), (115, 11772), (120, 11805), (144, 11973), (152, 12081), (154, 12093), (172, 12165), (174, 12189), (179, 12231), (185, 12282), (192, 12363), (206, 12513), (213, 12582), (218, 12630), (239, 12753), (243, 12813), (244, 12816), (261, 13035), (263, 13062), (280, 13290), (281, 13302), (291, 13380), (295, 13395), (306, 13479), (335, 13788), (337, 13812), (338, 13821), (343, 13887),

Gene: Llemily_22 Start: 9967, Stop: 13179, Start Num: 23

Candidate Starts for Llemily_22:

(Start: 23 @9967 has 48 MA's), (25, 10009), (41, 10168), (49, 10249), (61, 10348), (73, 10474), (81, 10531), (84, 10546), (91, 10627), (95, 10660), (100, 10690), (105, 10705), (115, 10756), (120, 10789), (144, 10957), (152, 11065), (154, 11077), (172, 11149), (174, 11173), (179, 11215), (185, 11266), (192, 11347), (206, 11497), (213, 11566), (218, 11614), (239, 11737), (243, 11797), (244, 11800), (261, 12019), (263, 12046), (280, 12274), (281, 12286), (282, 12295), (295, 12379), (306, 12463), (335, 12772), (337, 12796), (338, 12805), (343, 12871),

Gene: Lonelysoil_22 Start: 10212, Stop: 13424, Start Num: 23

Candidate Starts for Lonelysoil_22:

(Start: 23 @10212 has 48 MA's), (25, 10254), (41, 10413), (49, 10494), (61, 10593), (73, 10719), (81, 10776), (84, 10791), (91, 10872), (95, 10905), (100, 10935), (105, 10950), (115, 11001), (120, 11034), (144, 11202), (152, 11310), (154, 11322), (172, 11394), (174, 11418), (179, 11460), (185, 11511), (192, 11592), (206, 11742), (213, 11811), (218, 11859), (239, 11982), (243, 12042), (244, 12045), (261, 12264), (263, 12291), (280, 12519), (281, 12531), (282, 12540), (295, 12624), (306, 12708), (335, 13017), (337, 13041), (338, 13050), (343, 13116),

Gene: Marcie_27 Start: 10256, Stop: 13402, Start Num: 23

Candidate Starts for Marcie_27:

(Start: 23 @10256 has 48 MA's), (30, 10364), (51, 10547), (56, 10589), (57, 10613), (61, 10637), (72, 10748), (81, 10820), (84, 10835), (95, 10949), (105, 10991), (116, 11042), (120, 11075), (128, 11126), (148, 11312), (152, 11351), (158, 11363), (177, 11477), (179, 11489), (191, 11612), (192, 11621), (213, 11828), (235, 11966), (238, 11975), (243, 12038), (244, 12041), (254, 12167), (280, 12500), (304, 12656), (310, 12719), (316, 12800), (318, 12821), (321, 12842), (323, 12869), (328, 12917), (336, 12983), (345, 13082), (351, 13145), (357, 13226), (361, 13292),

Gene: Mashley_21 Start: 10450, Stop: 13764, Start Num: 23

Candidate Starts for Mashley_21:

(Start: 23 @10450 has 48 MA's), (41, 10651), (49, 10732), (61, 10831), (73, 10957), (81, 11014), (84, 11029), (91, 11110), (95, 11143), (100, 11173), (116, 11245), (123, 11290), (129, 11332), (134, 11377), (152, 11557), (154, 11569), (161, 11623), (163, 11674), (167, 11695), (179, 11800), (185, 11851), (192, 11932), (206, 12082), (213, 12151), (218, 12199), (239, 12322), (243, 12382), (244, 12385), (261, 12604), (263, 12631), (280, 12859), (281, 12871), (291, 12949), (295, 12964), (306, 13048), (337, 13381), (338, 13390), (343, 13456),

Gene: MellowYellow_21 Start: 10012, Stop: 12672, Start Num: 20

Candidate Starts for MellowYellow_21:

(15, 9898), (16, 9901), (19, 9985), (Start: 20 @10012 has 20 MA's), (24, 10072), (31, 10150), (32, 10159), (38, 10204), (40, 10234), (44, 10258), (54, 10345), (58, 10393), (61, 10414), (68, 10489), (71, 10507), (76, 10564), (79, 10576), (94, 10651), (120, 10804), (129, 10858), (137, 10915), (142, 10939), (156, 11089), (179, 11179), (184, 11218), (189, 11281), (204, 11419), (208, 11458), (211, 11476), (213, 11491), (252, 11650), (253, 11656), (261, 11686), (266, 11701), (271, 11761), (288, 11950), (303, 12022), (307, 12046), (318, 12190), (319, 12196), (325, 12256), (339, 12412), (340, 12418), (344, 12445), (348, 12466), (353, 12520), (355, 12529), (356, 12544), (367, 12658),

Gene: Mentos_27 Start: 11546, Stop: 14851, Start Num: 23

Candidate Starts for Mentos_27:

(14, 11393), (Start: 23 @11546 has 48 MA's), (41, 11747), (49, 11828), (61, 11927), (73, 12053), (81, 12110), (84, 12125), (91, 12206), (95, 12239), (100, 12269), (105, 12284), (115, 12335), (120, 12368), (144, 12536), (152, 12644), (154, 12656), (161, 12710), (163, 12761), (167, 12782), (179, 12887), (185, 12938), (192, 13019), (206, 13169), (213, 13238), (218, 13286), (239, 13409), (243, 13469), (244, 13472), (261, 13691), (263, 13718), (280, 13946), (281, 13958), (291, 14036), (295, 14051), (306, 14135), (335, 14444), (337, 14468), (338, 14477), (343, 14543),

Gene: Mila11_26 Start: 11525, Stop: 14731, Start Num: 23

Candidate Starts for Mila11_26:

(Start: 23 @11525 has 48 MA's), (41, 11726), (49, 11807), (61, 11906), (73, 12032), (81, 12089), (84, 12104), (91, 12185), (95, 12218), (100, 12248), (123, 12365), (129, 12407), (152, 12632), (154, 12644), (170, 12716), (173, 12740), (179, 12782), (185, 12833), (192, 12914), (206, 13064), (213, 13133), (215, 13154), (218, 13181), (239, 13304), (243, 13364), (244, 13367), (261, 13571), (265, 13625), (280, 13826), (281, 13838), (282, 13847), (291, 13916), (294, 13928), (295, 13931), (306, 14015), (337, 14348), (338, 14357), (343, 14423),

Gene: MorillMayhem_23 Start: 10458, Stop: 13757, Start Num: 23

Candidate Starts for MorillMayhem_23:

(1, 8619), (2, 8748), (3, 8763), (4, 9048), (7, 9636), (11, 9927), (12, 10275), (14, 10305), (Start: 23 @10458 has 48 MA's), (49, 10740), (61, 10839), (73, 10965), (81, 11022), (84, 11037), (91, 11118), (95, 11151), (100, 11181), (116, 11253), (123, 11298), (129, 11340), (134, 11385), (152, 11565), (154, 11577), (158, 11604), (162, 11664), (170, 11724), (179, 11808), (185, 11859), (192, 11940), (206, 12090), (213, 12159), (218, 12207), (239, 12330), (243, 12390), (244, 12393), (261, 12597), (265, 12651), (280, 12852), (281, 12864), (291, 12942), (295, 12957), (306, 13041), (335, 13350), (337, 13374), (338, 13383), (343, 13449), (350, 13488),

Gene: Namago_23 Start: 10020, Stop: 13325, Start Num: 23

Candidate Starts for Namago_23:

(7, 9198), (11, 9489), (12, 9837), (14, 9867), (Start: 23 @10020 has 48 MA's), (41, 10221), (49, 10302), (61, 10401), (73, 10527), (81, 10584), (84, 10599), (91, 10680), (95, 10713), (100, 10743), (105, 10758), (115, 10809), (120, 10842), (144, 11010), (152, 11118), (154, 11130), (161, 11184), (163, 11235), (167, 11256), (179, 11361), (185, 11412), (192, 11493), (206, 11643), (213, 11712), (218,

11760), (239, 11883), (243, 11943), (244, 11946), (261, 12165), (263, 12192), (280, 12420), (281, 12432), (291, 12510), (295, 12525), (306, 12609), (335, 12918), (337, 12942), (338, 12951), (343, 13017),

Gene: Nikan_20 Start: 10494, Stop: 13184, Start Num: 20

Candidate Starts for Nikan_20:

(15, 10380), (16, 10383), (17, 10443), (19, 10467), (Start: 20 @10494 has 20 MA's), (31, 10632), (32, 10641), (38, 10686), (40, 10716), (42, 10725), (44, 10740), (58, 10875), (61, 10896), (69, 10980), (70, 10986), (71, 10989), (79, 11058), (90, 11121), (111, 11217), (125, 11313), (129, 11340), (142, 11421), (156, 11574), (176, 11652), (179, 11673), (181, 11682), (186, 11727), (198, 11826), (207, 11922), (211, 11970), (213, 11985), (233, 12102), (248, 12135), (266, 12216), (271, 12276), (289, 12468), (291, 12480), (307, 12561), (330, 12828), (332, 12843), (339, 12927), (340, 12933), (344, 12960), (353, 13035), (355, 13044), (366, 13149), (367, 13170),

Gene: Nike_23 Start: 10927, Stop: 14223, Start Num: 23

Candidate Starts for Nike_23:

(1, 9088), (2, 9217), (3, 9232), (4, 9517), (7, 10105), (11, 10396), (12, 10744), (14, 10774), (Start: 23 @10927 has 48 MA's), (49, 11209), (61, 11308), (73, 11434), (81, 11491), (84, 11506), (91, 11587), (95, 11620), (100, 11650), (115, 11716), (120, 11749), (131, 11815), (144, 11917), (152, 12025), (154, 12037), (161, 12091), (163, 12142), (167, 12163), (179, 12268), (185, 12319), (201, 12493), (205, 12544), (206, 12550), (213, 12619), (218, 12667), (226, 12724), (243, 12841), (244, 12844), (261, 13063), (263, 13090), (280, 13318), (281, 13330), (291, 13408), (295, 13423), (306, 13507), (333, 13810), (335, 13816), (337, 13840), (338, 13849), (343, 13915),

Gene: NyleyClemson_20 Start: 9957, Stop: 12617, Start Num: 20

Candidate Starts for NyleyClemson_20:

(15, 9843), (16, 9846), (Start: 20 @9957 has 20 MA's), (31, 10095), (32, 10104), (38, 10149), (40, 10179), (44, 10203), (54, 10290), (58, 10338), (61, 10359), (68, 10434), (71, 10452), (76, 10509), (79, 10521), (94, 10596), (120, 10749), (129, 10803), (137, 10860), (142, 10884), (156, 11034), (179, 11124), (184, 11163), (189, 11226), (204, 11364), (211, 11421), (213, 11436), (252, 11595), (253, 11601), (261, 11631), (266, 11646), (271, 11706), (288, 11895), (303, 11967), (307, 11991), (318, 12135), (319, 12141), (325, 12201), (339, 12357), (340, 12363), (344, 12390), (348, 12411), (353, 12465), (355, 12474), (356, 12489), (367, 12603),

Gene: Odyssey395_26 Start: 11469, Stop: 14132, Start Num: 20

Candidate Starts for Odyssey395_26:

(15, 11355), (16, 11358), (Start: 20 @11469 has 20 MA's), (31, 11607), (32, 11616), (40, 11691), (44, 11715), (48, 11766), (54, 11802), (58, 11850), (61, 11871), (68, 11946), (71, 11964), (76, 12021), (79, 12033), (89, 12087), (90, 12099), (116, 12228), (121, 12267), (125, 12291), (129, 12318), (156, 12549), (179, 12639), (184, 12678), (187, 12711), (189, 12741), (204, 12879), (211, 12936), (213, 12951), (252, 13110), (253, 13116), (261, 13146), (266, 13161), (271, 13221), (278, 13302), (288, 13410), (291, 13422), (307, 13506), (318, 13650), (319, 13656), (325, 13716), (330, 13773), (339, 13872), (340, 13878), (344, 13905), (348, 13926), (353, 13980), (355, 13989), (367, 14118),

Gene: Ollypop_22 Start: 10462, Stop: 13146, Start Num: 20

Candidate Starts for Ollypop_22:

(16, 10351), (19, 10435), (Start: 20 @10462 has 20 MA's), (31, 10600), (32, 10609), (35, 10627), (38, 10654), (40, 10684), (42, 10693), (44, 10708), (58, 10843), (61, 10864), (69, 10948), (70, 10954), (71, 10957), (79, 11026), (90, 11089), (111, 11185), (125, 11281), (128, 11305), (129, 11308), (136, 11359), (139, 11371), (142, 11389), (156, 11542), (176, 11614), (179, 11635), (181, 11644), (186, 11689), (198, 11788), (204, 11875), (207, 11884), (211, 11932), (213, 11947), (233, 12064), (266, 12178), (271, 12238), (278, 12319), (289, 12430), (291, 12442), (307, 12523), (325, 12733), (330, 12790), (332, 12805), (339, 12889), (340, 12895), (344, 12922), (353, 12997), (355, 13006), (366,

13111), (367, 13132),

Gene: OneinaGillian_22 Start: 9225, Stop: 12377, Start Num: 23

Candidate Starts for OneinaGillian_22:

(13, 9066), (14, 9072), (Start: 23 @9225 has 48 MA's), (51, 9516), (52, 9522), (56, 9558), (57, 9582), (61, 9606), (72, 9717), (81, 9789), (84, 9804), (95, 9918), (105, 9960), (116, 10011), (120, 10044), (128, 10095), (148, 10281), (152, 10320), (158, 10332), (166, 10371), (179, 10458), (191, 10581), (192, 10590), (213, 10797), (223, 10869), (237, 10941), (238, 10944), (243, 11007), (244, 11010), (246, 11070), (257, 11178), (258, 11184), (264, 11265), (280, 11475), (308, 11643), (316, 11775), (318, 11796), (321, 11817), (336, 11958), (345, 12057), (349, 12087), (356, 12189), (357, 12201), (361, 12267),

Gene: Pepe25_21 Start: 9481, Stop: 12714, Start Num: 23

Candidate Starts for Pepe25_21:

(Start: 23 @9481 has 48 MA's), (51, 9772), (56, 9814), (57, 9838), (61, 9862), (72, 9973), (81, 10045), (84, 10060), (95, 10174), (105, 10216), (116, 10267), (120, 10300), (148, 10537), (152, 10576), (154, 10588), (162, 10675), (166, 10711), (177, 10786), (179, 10798), (191, 10921), (192, 10930), (202, 11029), (220, 11200), (223, 11209), (235, 11278), (238, 11287), (243, 11350), (244, 11353), (254, 11479), (280, 11812), (316, 12112), (318, 12133), (321, 12154), (328, 12229), (336, 12295), (345, 12394), (349, 12424), (356, 12526), (357, 12538), (361, 12604),

Gene: Phabia_23 Start: 10385, Stop: 13597, Start Num: 23

Candidate Starts for Phabia_23:

(Start: 23 @10385 has 48 MA's), (25, 10427), (41, 10586), (49, 10667), (61, 10766), (73, 10892), (81, 10949), (84, 10964), (91, 11045), (95, 11078), (100, 11108), (105, 11123), (115, 11174), (120, 11207), (144, 11375), (152, 11483), (154, 11495), (172, 11567), (174, 11591), (179, 11633), (185, 11684), (192, 11765), (206, 11915), (213, 11984), (218, 12032), (239, 12155), (243, 12215), (244, 12218), (261, 12437), (263, 12464), (280, 12692), (281, 12704), (282, 12713), (295, 12797), (306, 12881), (335, 13190), (337, 13214), (338, 13223), (343, 13289),

Gene: Phinky_29 Start: 11324, Stop: 14482, Start Num: 23

Candidate Starts for Phinky_29:

(22, 11321), (Start: 23 @11324 has 48 MA's), (61, 11705), (68, 11780), (73, 11831), (74, 11837), (81, 11888), (84, 11903), (91, 11990), (103, 12059), (109, 12074), (112, 12107), (116, 12119), (123, 12164), (128, 12203), (141, 12284), (152, 12431), (154, 12443), (179, 12539), (185, 12590), (201, 12764), (203, 12800), (206, 12821), (213, 12890), (215, 12911), (218, 12938), (243, 13121), (244, 13124), (280, 13592), (290, 13679), (291, 13682), (306, 13781), (317, 13934), (337, 14114), (338, 14123), (343, 14189), (354, 14282),

Gene: PhuzzTulsa_22 Start: 11256, Stop: 13919, Start Num: 20

Candidate Starts for PhuzzTulsa_22:

(15, 11142), (16, 11145), (Start: 20 @11256 has 20 MA's), (31, 11394), (32, 11403), (38, 11448), (40, 11478), (44, 11502), (54, 11589), (58, 11637), (61, 11658), (68, 11733), (71, 11751), (76, 11808), (79, 11820), (89, 11874), (90, 11886), (96, 11925), (116, 12015), (121, 12054), (129, 12105), (156, 12336), (179, 12426), (184, 12465), (189, 12528), (204, 12666), (208, 12705), (211, 12723), (213, 12738), (233, 12855), (252, 12897), (253, 12903), (261, 12933), (266, 12948), (271, 13008), (278, 13089), (288, 13197), (291, 13209), (307, 13293), (318, 13437), (319, 13443), (325, 13503), (330, 13560), (339, 13659), (340, 13665), (344, 13692), (348, 13713), (353, 13767), (355, 13776), (367, 13905),

Gene: Pointis_24 Start: 11473, Stop: 14136, Start Num: 20

Candidate Starts for Pointis_24:

(15, 11359), (16, 11362), (Start: 20 @11473 has 20 MA's), (31, 11611), (32, 11620), (40, 11695), (44, 11719), (48, 11770), (54, 11806), (58, 11854), (61, 11875), (68, 11950), (71, 11968), (76, 12025), (79,

12037), (89, 12091), (90, 12103), (116, 12232), (121, 12271), (125, 12295), (129, 12322), (156, 12553), (179, 12643), (184, 12682), (189, 12745), (204, 12883), (208, 12922), (211, 12940), (213, 12955), (252, 13114), (253, 13120), (261, 13150), (266, 13165), (271, 13225), (278, 13306), (288, 13414), (307, 13510), (318, 13654), (319, 13660), (325, 13720), (330, 13777), (339, 13876), (340, 13882), (344, 13909), (348, 13930), (353, 13984), (355, 13993), (367, 14122),

Gene: Popstraw_23 Start: 11259, Stop: 13922, Start Num: 20

Candidate Starts for Popstraw_23:

(15, 11145), (16, 11148), (Start: 20 @11259 has 20 MA's), (31, 11397), (32, 11406), (40, 11481), (44, 11505), (48, 11556), (54, 11592), (58, 11640), (61, 11661), (68, 11736), (71, 11754), (79, 11823), (89, 11877), (90, 11889), (116, 12018), (121, 12057), (125, 12081), (129, 12108), (156, 12339), (179, 12429), (184, 12468), (189, 12531), (204, 12669), (211, 12726), (213, 12741), (252, 12900), (253, 12906), (261, 12936), (266, 12951), (271, 13011), (278, 13092), (288, 13200), (291, 13212), (307, 13296), (318, 13440), (319, 13446), (325, 13506), (330, 13563), (339, 13662), (340, 13668), (344, 13695), (348, 13716), (353, 13770), (355, 13779), (367, 13908),

Gene: Pureglobe5_26 Start: 11483, Stop: 14146, Start Num: 20

Candidate Starts for Pureglobe5_26:

(15, 11369), (16, 11372), (Start: 20 @11483 has 20 MA's), (31, 11621), (32, 11630), (38, 11675), (40, 11705), (44, 11729), (58, 11864), (61, 11885), (68, 11960), (71, 11978), (79, 12047), (89, 12101), (90, 12113), (96, 12152), (116, 12242), (121, 12281), (156, 12563), (179, 12653), (184, 12692), (187, 12725), (189, 12755), (204, 12893), (211, 12950), (213, 12965), (252, 13124), (253, 13130), (261, 13160), (266, 13175), (271, 13235), (278, 13316), (288, 13424), (307, 13520), (318, 13664), (319, 13670), (325, 13730), (330, 13787), (339, 13886), (340, 13892), (344, 13919), (348, 13940), (353, 13994), (355, 14003), (356, 14018), (367, 14132),

Gene: Quammi_21 Start: 9956, Stop: 13168, Start Num: 23

Candidate Starts for Quammi_21:

(Start: 23 @9956 has 48 MA's), (25, 9998), (41, 10157), (49, 10238), (61, 10337), (73, 10463), (81, 10520), (84, 10535), (91, 10616), (95, 10649), (100, 10679), (105, 10694), (115, 10745), (120, 10778), (144, 10946), (152, 11054), (154, 11066), (172, 11138), (174, 11162), (179, 11204), (185, 11255), (192, 11336), (206, 11486), (213, 11555), (218, 11603), (239, 11726), (243, 11786), (244, 11789), (261, 12008), (263, 12035), (280, 12263), (281, 12275), (291, 12353), (295, 12368), (306, 12452), (335, 12761), (337, 12785), (338, 12794), (343, 12860),

Gene: RIPWilbur_22 Start: 10619, Stop: 13282, Start Num: 20

Candidate Starts for RIPWilbur_22:

(15, 10505), (16, 10508), (Start: 20 @10619 has 20 MA's), (31, 10757), (32, 10766), (38, 10811), (40, 10841), (44, 10865), (58, 11000), (61, 11021), (68, 11096), (71, 11114), (76, 11171), (79, 11183), (89, 11237), (90, 11249), (96, 11288), (116, 11378), (121, 11417), (156, 11699), (179, 11789), (184, 11828), (187, 11861), (189, 11891), (204, 12029), (211, 12086), (213, 12101), (252, 12260), (253, 12266), (261, 12296), (266, 12311), (271, 12371), (278, 12452), (288, 12560), (307, 12656), (318, 12800), (319, 12806), (325, 12866), (330, 12923), (339, 13022), (340, 13028), (344, 13055), (348, 13076), (353, 13130), (355, 13139), (356, 13154), (367, 13268),

Gene: Ranunculus_18 Start: 10289, Stop: 13027, Start Num: 20

Candidate Starts for Ranunculus_18:

(18, 10241), (Start: 20 @10289 has 20 MA's), (26, 10385), (31, 10427), (32, 10436), (35, 10454), (40, 10511), (47, 10580), (53, 10616), (58, 10670), (60, 10685), (61, 10691), (65, 10739), (69, 10775), (70, 10781), (71, 10784), (75, 10838), (79, 10853), (97, 10976), (102, 11003), (116, 11063), (134, 11192), (135, 11195), (138, 11210), (179, 11510), (186, 11564), (204, 11750), (211, 11807), (213, 11822), (215, 11837), (245, 11963), (250, 11981), (266, 12044), (278, 12185), (295, 12323), (316, 12521), (324, 12596), (325, 12608), (329, 12653), (339, 12764), (342, 12788), (347, 12812), (352, 12857),

(355, 12884), (358, 12923), (365, 12977),

Gene: RazzB_20 Start: 9785, Stop: 12445, Start Num: 20

Candidate Starts for RazzB_20:

(15, 9671), (16, 9674), (Start: 20 @9785 has 20 MA's), (31, 9923), (32, 9932), (38, 9977), (40, 10007), (44, 10031), (54, 10118), (58, 10166), (61, 10187), (68, 10262), (71, 10280), (76, 10337), (79, 10349), (120, 10577), (129, 10631), (137, 10688), (142, 10712), (156, 10862), (179, 10952), (184, 10991), (189, 11054), (204, 11192), (211, 11249), (213, 11264), (252, 11423), (253, 11429), (261, 11459), (266, 11474), (271, 11534), (288, 11723), (303, 11795), (307, 11819), (318, 11963), (319, 11969), (325, 12029), (339, 12185), (340, 12191), (344, 12218), (348, 12239), (353, 12293), (355, 12302), (356, 12317), (367, 12431),

Gene: Ren19_18 Start: 10494, Stop: 13184, Start Num: 20

Candidate Starts for Ren19_18:

(15, 10380), (16, 10383), (17, 10443), (19, 10467), (Start: 20 @10494 has 20 MA's), (31, 10632), (32, 10641), (38, 10686), (40, 10716), (42, 10725), (44, 10740), (58, 10875), (61, 10896), (69, 10980), (70, 10986), (71, 10989), (79, 11058), (90, 11121), (111, 11217), (125, 11313), (129, 11340), (142, 11421), (156, 11574), (176, 11652), (179, 11673), (181, 11682), (186, 11727), (198, 11826), (207, 11922), (211, 11970), (213, 11985), (233, 12102), (248, 12135), (266, 12216), (271, 12276), (289, 12468), (291, 12480), (307, 12561), (330, 12828), (332, 12843), (339, 12927), (340, 12933), (344, 12960), (353, 13035), (355, 13044), (366, 13149), (367, 13170),

Gene: Rizwana_17 Start: 10224, Stop: 12896, Start Num: 20

Candidate Starts for Rizwana_17:

(Start: 20 @10224 has 20 MA's), (24, 10278), (27, 10326), (61, 10623), (67, 10689), (68, 10698), (69, 10707), (70, 10713), (78, 10776), (79, 10785), (96, 10893), (99, 10911), (101, 10920), (147, 11241), (153, 11313), (155, 11316), (168, 11367), (180, 11430), (193, 11556), (197, 11571), (200, 11607), (230, 11817), (232, 11823), (236, 11850), (240, 11853), (241, 11856), (267, 11949), (269, 11964), (270, 11982), (273, 12018), (275, 12036), (279, 12105), (283, 12159), (297, 12213), (302, 12255), (316, 12405), (318, 12426), (324, 12492), (329, 12549), (338, 12624), (342, 12684), (344, 12693), (347, 12708), (352, 12750), (353, 12768), (355, 12777),

Gene: RobinRose_24 Start: 9693, Stop: 12878, Start Num: 23

Candidate Starts for RobinRose_24:

(13, 9534), (14, 9540), (Start: 23 @9693 has 48 MA's), (51, 9984), (52, 9990), (56, 10026), (57, 10050), (61, 10074), (72, 10185), (81, 10257), (84, 10272), (100, 10419), (105, 10434), (114, 10479), (120, 10545), (130, 10605), (148, 10782), (152, 10821), (158, 10833), (179, 10959), (185, 11010), (191, 11082), (192, 11091), (213, 11298), (223, 11370), (237, 11442), (238, 11445), (243, 11508), (244, 11511), (246, 11571), (257, 11679), (258, 11685), (264, 11766), (280, 11976), (308, 12144), (316, 12276), (318, 12297), (321, 12318), (336, 12459), (345, 12558), (349, 12588), (356, 12690), (357, 12702), (361, 12768),

Gene: RomansRevenge_14 Start: 8225, Stop: 11137, Start Num: 20

Candidate Starts for RomansRevenge_14:

(Start: 20 @8225 has 20 MA's), (24, 8285), (28, 8336), (34, 8381), (35, 8390), (36, 8405), (37, 8411), (40, 8447), (44, 8471), (45, 8483), (50, 8531), (54, 8558), (55, 8570), (59, 8612), (60, 8621), (61, 8627), (63, 8642), (66, 8678), (68, 8702), (79, 8789), (83, 8816), (90, 8879), (97, 8921), (106, 8954), (115, 8996), (120, 9029), (123, 9041), (128, 9080), (135, 9128), (137, 9140), (146, 9242), (149, 9293), (150, 9302), (186, 9476), (190, 9536), (196, 9569), (204, 9662), (207, 9671), (210, 9716), (214, 9749), (217, 9776), (245, 10004), (247, 10013), (271, 10214), (274, 10250), (282, 10355), (294, 10424), (316, 10628), (318, 10649), (319, 10655), (320, 10664), (321, 10670), (328, 10745), (332, 10787), (336, 10811), (343, 10889), (344, 10892), (348, 10913),

Gene: Romm_24 Start: 9693, Stop: 12878, Start Num: 23

Candidate Starts for Romm_24:

(13, 9534), (14, 9540), (Start: 23 @9693 has 48 MA's), (51, 9984), (52, 9990), (56, 10026), (57, 10050), (61, 10074), (72, 10185), (81, 10257), (84, 10272), (100, 10419), (105, 10434), (114, 10479), (120, 10545), (130, 10605), (148, 10782), (152, 10821), (158, 10833), (179, 10959), (185, 11010), (191, 11082), (192, 11091), (213, 11298), (223, 11370), (237, 11442), (238, 11445), (243, 11508), (244, 11511), (246, 11571), (257, 11679), (258, 11685), (264, 11766), (280, 11976), (308, 12144), (316, 12276), (318, 12297), (321, 12318), (336, 12459), (345, 12558), (349, 12588), (356, 12690), (357, 12702), (361, 12768),

Gene: Rowlf_19 Start: 9723, Stop: 12926, Start Num: 23

Candidate Starts for Rowlf_19:

(7, 8901), (11, 9192), (14, 9570), (Start: 23 @9723 has 48 MA's), (41, 9924), (49, 10005), (61, 10104), (73, 10230), (81, 10287), (84, 10302), (91, 10383), (95, 10416), (100, 10446), (105, 10461), (115, 10512), (120, 10545), (144, 10713), (152, 10821), (154, 10833), (163, 10905), (171, 10929), (179, 10971), (185, 11022), (192, 11103), (206, 11253), (213, 11322), (215, 11343), (218, 11370), (226, 11427), (243, 11544), (261, 11766), (263, 11793), (280, 12021), (281, 12033), (291, 12111), (295, 12126), (306, 12210), (335, 12519), (337, 12543), (338, 12552), (343, 12618),

Gene: RubyRalph_25 Start: 10829, Stop: 13474, Start Num: 86

Candidate Starts for RubyRalph_25:

(6, 9242), (9, 9410), (10, 9455), (Start: 86 @10829 has 3 MA's), (100, 10931), (109, 10955), (120, 11033), (122, 11039), (139, 11153), (140, 11162), (141, 11165), (148, 11273), (152, 11312), (154, 11324), (157, 11333), (160, 11375), (162, 11411), (179, 11534), (185, 11585), (192, 11666), (199, 11720), (206, 11804), (215, 11894), (218, 11921), (223, 11945), (227, 11975), (231, 11993), (239, 12032), (243, 12092), (261, 12314), (268, 12413), (280, 12563), (293, 12662), (295, 12668), (306, 12752), (312, 12830), (327, 13001), (337, 13085), (338, 13094), (343, 13160), (346, 13172), (347, 13178), (356, 13271), (364, 13385),

Gene: Rudy_21 Start: 9956, Stop: 13168, Start Num: 23

Candidate Starts for Rudy_21:

(Start: 23 @9956 has 48 MA's), (25, 9998), (41, 10157), (49, 10238), (61, 10337), (73, 10463), (81, 10520), (84, 10535), (91, 10616), (95, 10649), (100, 10679), (105, 10694), (115, 10745), (120, 10778), (144, 10946), (152, 11054), (154, 11066), (172, 11138), (174, 11162), (179, 11204), (185, 11255), (192, 11336), (206, 11486), (213, 11555), (218, 11603), (239, 11726), (243, 11786), (244, 11789), (261, 12008), (263, 12035), (280, 12263), (281, 12275), (291, 12353), (295, 12368), (306, 12452), (335, 12761), (337, 12785), (338, 12794), (343, 12860),

Gene: SadLad_26 Start: 11286, Stop: 13931, Start Num: 86

Candidate Starts for SadLad_26:

(6, 9699), (9, 9867), (10, 9912), (Start: 86 @11286 has 3 MA's), (100, 11388), (109, 11412), (120, 11490), (122, 11496), (139, 11610), (140, 11619), (141, 11622), (148, 11730), (152, 11769), (154, 11781), (157, 11790), (160, 11832), (162, 11868), (179, 11991), (185, 12042), (192, 12123), (199, 12177), (206, 12261), (215, 12351), (218, 12378), (223, 12402), (227, 12432), (231, 12450), (239, 12489), (243, 12549), (261, 12771), (268, 12870), (280, 13020), (293, 13119), (295, 13125), (306, 13209), (312, 13287), (327, 13458), (337, 13542), (338, 13551), (343, 13617), (346, 13629), (347, 13635), (356, 13728), (364, 13842),

Gene: SallyK_24 Start: 11117, Stop: 14320, Start Num: 23

Candidate Starts for SallyK_24:

(7, 10295), (11, 10586), (14, 10964), (Start: 23 @11117 has 48 MA's), (41, 11318), (49, 11399), (61, 11498), (73, 11624), (81, 11681), (84, 11696), (91, 11777), (95, 11810), (100, 11840), (105, 11855), (115, 11906), (120, 11939), (144, 12107), (152, 12215), (154, 12227), (163, 12299), (171, 12323),

(179, 12365), (185, 12416), (192, 12497), (206, 12647), (213, 12716), (215, 12737), (218, 12764), (226, 12821), (243, 12938), (261, 13160), (263, 13187), (280, 13415), (281, 13427), (291, 13505), (295, 13520), (306, 13604), (335, 13913), (337, 13937), (338, 13946), (343, 14012),

Gene: SilentRX_19 Start: 10411, Stop: 13206, Start Num: 20

Candidate Starts for SilentRX_19:

(Start: 20 @10411 has 20 MA's), (26, 10507), (39, 10621), (55, 10756), (57, 10789), (61, 10813), (70, 10903), (79, 10975), (92, 11044), (118, 11194), (119, 11200), (120, 11203), (132, 11281), (139, 11320), (156, 11491), (165, 11548), (176, 11632), (179, 11653), (184, 11689), (186, 11704), (188, 11743), (196, 11797), (204, 11890), (211, 11947), (212, 11956), (213, 11962), (221, 12010), (266, 12241), (282, 12442), (284, 12472), (285, 12478), (291, 12502), (305, 12580), (316, 12709), (321, 12751), (339, 12952), (342, 12976), (347, 13000), (348, 13006), (350, 13021), (352, 13042),

Gene: Sillytadpoles_22 Start: 9954, Stop: 13166, Start Num: 23

Candidate Starts for Sillytadpoles_22:

(Start: 23 @9954 has 48 MA's), (25, 9996), (41, 10155), (49, 10236), (61, 10335), (73, 10461), (81, 10518), (84, 10533), (91, 10614), (95, 10647), (100, 10677), (105, 10692), (115, 10743), (120, 10776), (144, 10944), (152, 11052), (154, 11064), (172, 11136), (174, 11160), (179, 11202), (185, 11253), (192, 11334), (206, 11484), (213, 11553), (218, 11601), (239, 11724), (243, 11784), (244, 11787), (261, 12006), (263, 12033), (280, 12261), (281, 12273), (291, 12351), (295, 12366), (306, 12450), (335, 12759), (337, 12783), (338, 12792), (343, 12858),

Gene: SlySloth_25 Start: 10909, Stop: 14223, Start Num: 23

Candidate Starts for SlySloth_25:

(7, 10087), (11, 10378), (14, 10756), (Start: 23 @10909 has 48 MA's), (41, 11110), (49, 11191), (61, 11290), (73, 11416), (81, 11473), (84, 11488), (91, 11569), (95, 11602), (100, 11632), (116, 11704), (123, 11749), (129, 11791), (134, 11836), (152, 12016), (154, 12028), (161, 12082), (163, 12133), (167, 12154), (179, 12259), (185, 12310), (192, 12391), (206, 12541), (213, 12610), (218, 12658), (239, 12781), (243, 12841), (244, 12844), (261, 13063), (263, 13090), (280, 13318), (281, 13330), (291, 13408), (295, 13423), (306, 13507), (335, 13816), (337, 13840), (338, 13849), (343, 13915),

Gene: Squash_25 Start: 10982, Stop: 14236, Start Num: 23

Candidate Starts for Squash_25:

(1, 9143), (2, 9272), (3, 9287), (4, 9572), (7, 10160), (11, 10451), (12, 10799), (14, 10829), (Start: 23 @10982 has 48 MA's), (49, 11264), (61, 11363), (73, 11489), (81, 11546), (84, 11561), (91, 11642), (95, 11675), (100, 11705), (115, 11771), (120, 11804), (131, 11870), (144, 11972), (152, 12080), (154, 12092), (163, 12188), (179, 12281), (192, 12413), (206, 12563), (213, 12632), (215, 12653), (218, 12680), (226, 12737), (243, 12854), (244, 12857), (261, 13076), (263, 13103), (280, 13331), (281, 13343), (291, 13421), (295, 13436), (306, 13520), (333, 13823), (335, 13829), (337, 13853), (338, 13862), (343, 13928),

Gene: Statler_24 Start: 10936, Stop: 14148, Start Num: 23

Candidate Starts for Statler_24:

(1, 9097), (2, 9226), (3, 9241), (4, 9526), (7, 10114), (11, 10405), (14, 10783), (Start: 23 @10936 has 48 MA's), (41, 11137), (49, 11218), (61, 11317), (73, 11443), (81, 11500), (84, 11515), (91, 11596), (95, 11629), (100, 11659), (123, 11776), (129, 11818), (134, 11863), (152, 12043), (154, 12055), (170, 12127), (173, 12151), (179, 12193), (185, 12244), (192, 12325), (206, 12475), (213, 12544), (215, 12565), (218, 12592), (226, 12649), (243, 12766), (261, 12988), (263, 13015), (280, 13243), (281, 13255), (291, 13333), (295, 13348), (306, 13432), (335, 13741), (337, 13765), (338, 13774), (343, 13840),

Gene: StrawberryJamm_25 Start: 10256, Stop: 13468, Start Num: 23

Candidate Starts for StrawberryJamm_25:

(2, 8546), (3, 8561), (4, 8846), (7, 9434), (11, 9725), (14, 10103), (Start: 23 @10256 has 48 MA's), (41, 10457), (49, 10538), (61, 10637), (73, 10763), (81, 10820), (84, 10835), (91, 10916), (95, 10949), (100, 10979), (105, 10994), (115, 11045), (120, 11078), (144, 11246), (152, 11354), (154, 11366), (172, 11438), (174, 11462), (179, 11504), (185, 11555), (192, 11636), (206, 11786), (213, 11855), (215, 11876), (218, 11903), (239, 12026), (243, 12086), (244, 12089), (261, 12308), (263, 12335), (280, 12563), (281, 12575), (291, 12653), (295, 12668), (306, 12752), (335, 13061), (337, 13085), (338, 13094), (343, 13160),

Gene: Sunfish_27 Start: 11573, Stop: 13966, Start Num: 77

Candidate Starts for Sunfish_27:

(62, 11417), (Start: 77 @11573 has 1 MA's), (80, 11588), (93, 11711), (108, 11786), (116, 11831), (117, 11846), (122, 11873), (127, 11915), (154, 12158), (164, 12188), (170, 12200), (178, 12248), (195, 12395), (216, 12587), (222, 12620), (225, 12650), (229, 12674), (237, 12710), (259, 12920), (277, 13100), (280, 13148), (282, 13169), (298, 13253), (301, 13280), (310, 13391), (313, 13406), (347, 13748),

Gene: Tank_18 Start: 10257, Stop: 12758, Start Num: 20

Candidate Starts for Tank_18:

(Start: 20 @10257 has 20 MA's), (26, 10347), (33, 10401), (38, 10443), (40, 10473), (43, 10491), (52, 10575), (53, 10584), (55, 10602), (61, 10659), (68, 10734), (71, 10752), (74, 10791), (75, 10806), (79, 10821), (98, 10896), (105, 10929), (107, 10932), (110, 10947), (113, 10968), (124, 11022), (126, 11037), (133, 11082), (145, 11133), (151, 11181), (156, 11196), (169, 11214), (193, 11367), (200, 11400), (230, 11613), (236, 11646), (240, 11649), (267, 11745), (269, 11760), (270, 11778), (272, 11799), (273, 11814), (275, 11832), (279, 11901), (283, 11955), (296, 12006), (299, 12030), (302, 12051), (305, 12072), (318, 12222), (321, 12243), (324, 12288), (329, 12345), (342, 12480), (343, 12486), (347, 12504), (352, 12546), (355, 12573), (359, 12639),

Gene: Teehee_24 Start: 11191, Stop: 14403, Start Num: 23

Candidate Starts for Teehee_24:

(Start: 23 @11191 has 48 MA's), (25, 11233), (41, 11392), (49, 11473), (61, 11572), (73, 11698), (81, 11755), (84, 11770), (91, 11851), (95, 11884), (100, 11914), (105, 11929), (115, 11980), (120, 12013), (144, 12181), (152, 12289), (154, 12301), (172, 12373), (174, 12397), (179, 12439), (185, 12490), (192, 12571), (206, 12721), (213, 12790), (218, 12838), (239, 12961), (243, 13021), (244, 13024), (261, 13243), (263, 13270), (280, 13498), (281, 13510), (282, 13519), (295, 13603), (306, 13687), (335, 13996), (337, 14020), (338, 14029), (343, 14095),

Gene: Tempo_22 Start: 9569, Stop: 12754, Start Num: 23

Candidate Starts for Tempo_22:

(Start: 23 @9569 has 48 MA's), (51, 9860), (52, 9866), (56, 9902), (57, 9926), (61, 9950), (72, 10061), (81, 10133), (84, 10148), (100, 10295), (105, 10310), (114, 10355), (120, 10421), (148, 10658), (152, 10697), (158, 10709), (179, 10835), (191, 10958), (192, 10967), (213, 11174), (223, 11246), (237, 11318), (238, 11321), (243, 11384), (244, 11387), (246, 11447), (257, 11555), (258, 11561), (264, 11642), (280, 11852), (308, 12020), (316, 12152), (318, 12173), (321, 12194), (336, 12335), (345, 12434), (349, 12464), (356, 12566), (357, 12578), (361, 12644),

Gene: Tissue_23 Start: 10765, Stop: 13968, Start Num: 23

Candidate Starts for Tissue_23:

(2, 9055), (3, 9070), (4, 9355), (7, 9943), (11, 10234), (12, 10582), (14, 10612), (Start: 23 @10765 has 48 MA's), (41, 10966), (49, 11047), (61, 11146), (73, 11272), (81, 11329), (84, 11344), (91, 11425), (95, 11458), (100, 11488), (105, 11503), (115, 11554), (120, 11587), (144, 11755), (152, 11863), (154, 11875), (163, 11947), (171, 11971), (179, 12013), (185, 12064), (192, 12145), (206, 12295), (213, 12364), (215, 12385), (218, 12412), (226, 12469), (243, 12586), (261, 12808), (263, 12835), (280, 13063), (281, 13075), (291, 13153), (295, 13168), (306, 13252), (335, 13561), (337, 13585), (338,

13594), (343, 13660),

Gene: Viceroy_22 Start: 9956, Stop: 13168, Start Num: 23

Candidate Starts for Viceroy_22:

(Start: 23 @9956 has 48 MA's), (25, 9998), (41, 10157), (49, 10238), (61, 10337), (73, 10463), (81, 10520), (84, 10535), (91, 10616), (95, 10649), (100, 10679), (105, 10694), (115, 10745), (120, 10778), (144, 10946), (152, 11054), (154, 11066), (172, 11138), (174, 11162), (179, 11204), (185, 11255), (192, 11336), (206, 11486), (213, 11555), (218, 11603), (239, 11726), (243, 11786), (244, 11789), (261, 12008), (263, 12035), (280, 12263), (281, 12275), (291, 12353), (295, 12368), (306, 12452), (335, 12761), (337, 12785), (338, 12794), (343, 12860),

Gene: Wayne3_24 Start: 10921, Stop: 14133, Start Num: 23

Candidate Starts for Wayne3_24:

(Start: 23 @10921 has 48 MA's), (25, 10963), (41, 11122), (49, 11203), (61, 11302), (73, 11428), (81, 11485), (84, 11500), (91, 11581), (95, 11614), (100, 11644), (105, 11659), (115, 11710), (120, 11743), (144, 11911), (152, 12019), (154, 12031), (172, 12103), (174, 12127), (179, 12169), (185, 12220), (192, 12301), (206, 12451), (213, 12520), (218, 12568), (239, 12691), (243, 12751), (244, 12754), (261, 12973), (263, 13000), (280, 13228), (281, 13240), (282, 13249), (295, 13333), (306, 13417), (335, 13726), (337, 13750), (338, 13759), (343, 13825),

Gene: WheelerS25_28 Start: 11697, Stop: 14969, Start Num: 23

Candidate Starts for WheelerS25_28:

(11, 11166), (12, 11514), (14, 11544), (Start: 23 @11697 has 48 MA's), (49, 11979), (61, 12078), (73, 12204), (81, 12261), (84, 12276), (91, 12357), (95, 12390), (100, 12420), (116, 12492), (123, 12537), (129, 12579), (134, 12624), (152, 12804), (154, 12816), (165, 12912), (179, 13005), (192, 13137), (206, 13287), (213, 13356), (215, 13377), (218, 13404), (239, 13527), (243, 13587), (244, 13590), (261, 13809), (263, 13836), (280, 14064), (281, 14076), (282, 14085), (294, 14166), (295, 14169), (306, 14253), (335, 14562), (337, 14586), (338, 14595), (343, 14661),

Gene: Wheelie_22 Start: 10272, Stop: 13484, Start Num: 23

Candidate Starts for Wheelie_22:

(Start: 23 @10272 has 48 MA's), (25, 10314), (41, 10473), (49, 10554), (61, 10653), (73, 10779), (81, 10836), (84, 10851), (91, 10932), (95, 10965), (100, 10995), (105, 11010), (115, 11061), (120, 11094), (144, 11262), (152, 11370), (154, 11382), (172, 11454), (174, 11478), (179, 11520), (185, 11571), (192, 11652), (206, 11802), (213, 11871), (218, 11919), (239, 12042), (243, 12102), (244, 12105), (261, 12324), (263, 12351), (280, 12579), (281, 12591), (282, 12600), (295, 12684), (306, 12768), (335, 13077), (337, 13101), (338, 13110), (343, 13176),

Gene: Wilca_22 Start: 9464, Stop: 12697, Start Num: 23

Candidate Starts for Wilca_22:

(Start: 23 @9464 has 48 MA's), (51, 9755), (56, 9797), (57, 9821), (61, 9845), (72, 9956), (81, 10028), (84, 10043), (95, 10157), (105, 10199), (116, 10250), (120, 10283), (148, 10520), (152, 10559), (154, 10571), (162, 10658), (166, 10694), (177, 10769), (179, 10781), (191, 10904), (192, 10913), (220, 11183), (223, 11192), (235, 11261), (238, 11270), (243, 11333), (244, 11336), (254, 11462), (280, 11795), (316, 12095), (318, 12116), (321, 12137), (328, 12212), (336, 12278), (345, 12377), (349, 12407), (356, 12509), (357, 12521), (361, 12587),

Gene: Wilde_18 Start: 10185, Stop: 12686, Start Num: 20

Candidate Starts for Wilde_18:

(Start: 20 @10185 has 20 MA's), (26, 10275), (27, 10287), (38, 10371), (40, 10401), (46, 10455), (52, 10503), (53, 10512), (55, 10530), (61, 10587), (68, 10662), (71, 10680), (74, 10719), (75, 10734), (79, 10749), (98, 10824), (107, 10860), (110, 10875), (113, 10896), (124, 10950), (126, 10965), (133, 11010), (145, 11061), (151, 11109), (156, 11124), (169, 11142), (193, 11295), (200, 11328), (230,

11541), (236, 11574), (240, 11577), (256, 11622), (267, 11673), (269, 11688), (270, 11706), (272, 11727), (273, 11742), (275, 11760), (279, 11829), (283, 11883), (296, 11934), (299, 11958), (302, 11979), (305, 12000), (318, 12150), (321, 12171), (324, 12216), (329, 12273), (342, 12408), (343, 12414), (347, 12432), (352, 12474), (355, 12501), (359, 12567),

Gene: Zagie_23 Start: 10460, Stop: 13672, Start Num: 23

Candidate Starts for Zagie_23:

(7, 9638), (11, 9929), (14, 10307), (Start: 23 @10460 has 48 MA's), (41, 10661), (49, 10742), (61, 10841), (73, 10967), (81, 11024), (84, 11039), (91, 11120), (95, 11153), (100, 11183), (105, 11198), (115, 11249), (120, 11282), (144, 11450), (152, 11558), (154, 11570), (172, 11642), (174, 11666), (179, 11708), (185, 11759), (192, 11840), (206, 11990), (213, 12059), (218, 12107), (239, 12230), (243, 12290), (244, 12293), (261, 12512), (263, 12539), (280, 12767), (281, 12779), (291, 12857), (295, 12872), (306, 12956), (335, 13265), (337, 13289), (338, 13298), (343, 13364),

Gene: Zhafia_25 Start: 10690, Stop: 13995, Start Num: 23

Candidate Starts for Zhafia_25:

(7, 9868), (11, 10159), (12, 10507), (14, 10537), (Start: 23 @10690 has 48 MA's), (41, 10891), (49, 10972), (61, 11071), (73, 11197), (81, 11254), (84, 11269), (91, 11350), (95, 11383), (100, 11413), (105, 11428), (115, 11479), (120, 11512), (144, 11680), (152, 11788), (154, 11800), (161, 11854), (163, 11905), (167, 11926), (179, 12031), (185, 12082), (192, 12163), (206, 12313), (213, 12382), (218, 12430), (239, 12553), (243, 12613), (244, 12616), (261, 12835), (263, 12862), (280, 13090), (281, 13102), (291, 13180), (295, 13195), (306, 13279), (335, 13588), (337, 13612), (338, 13621), (343, 13687),