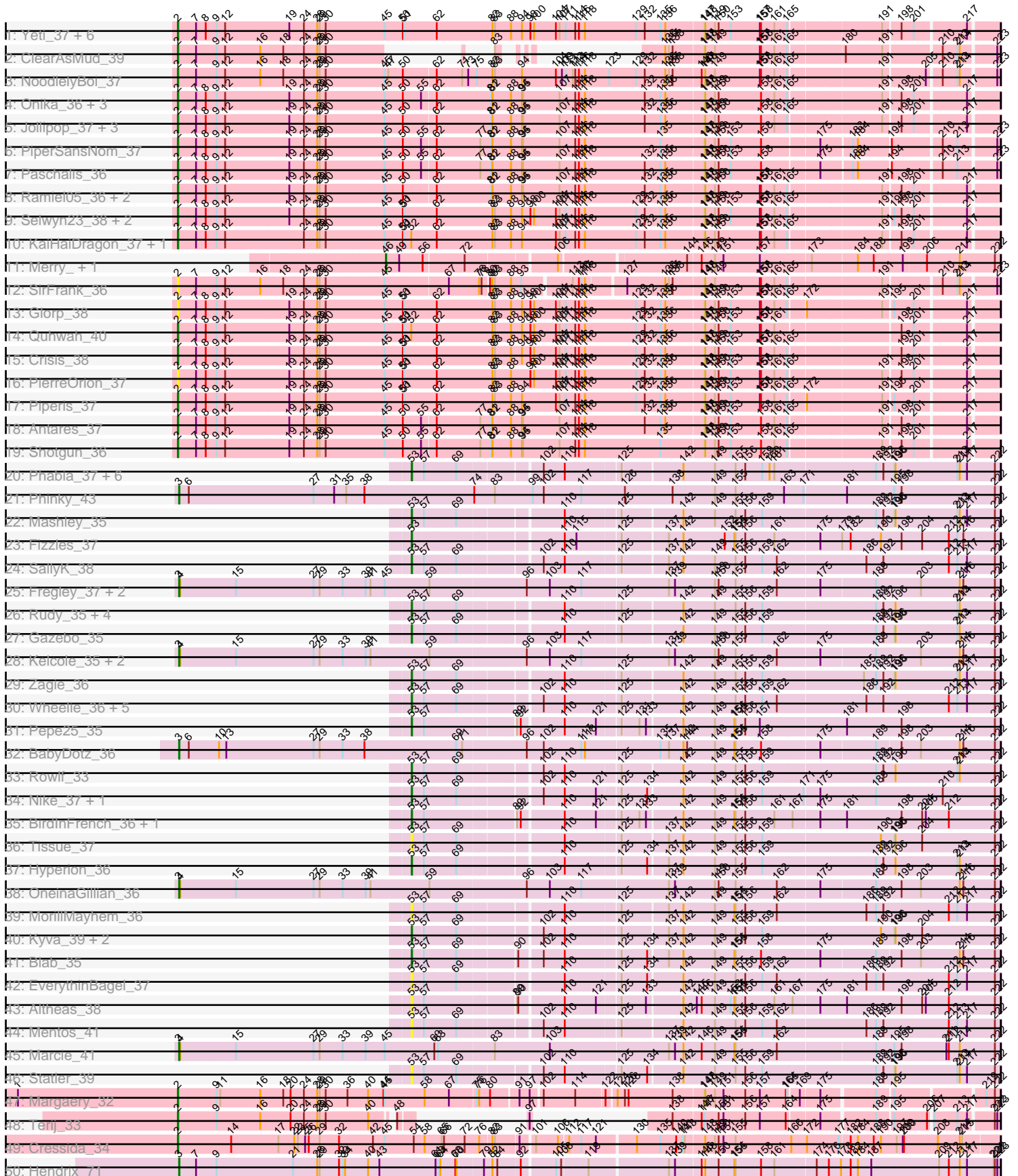
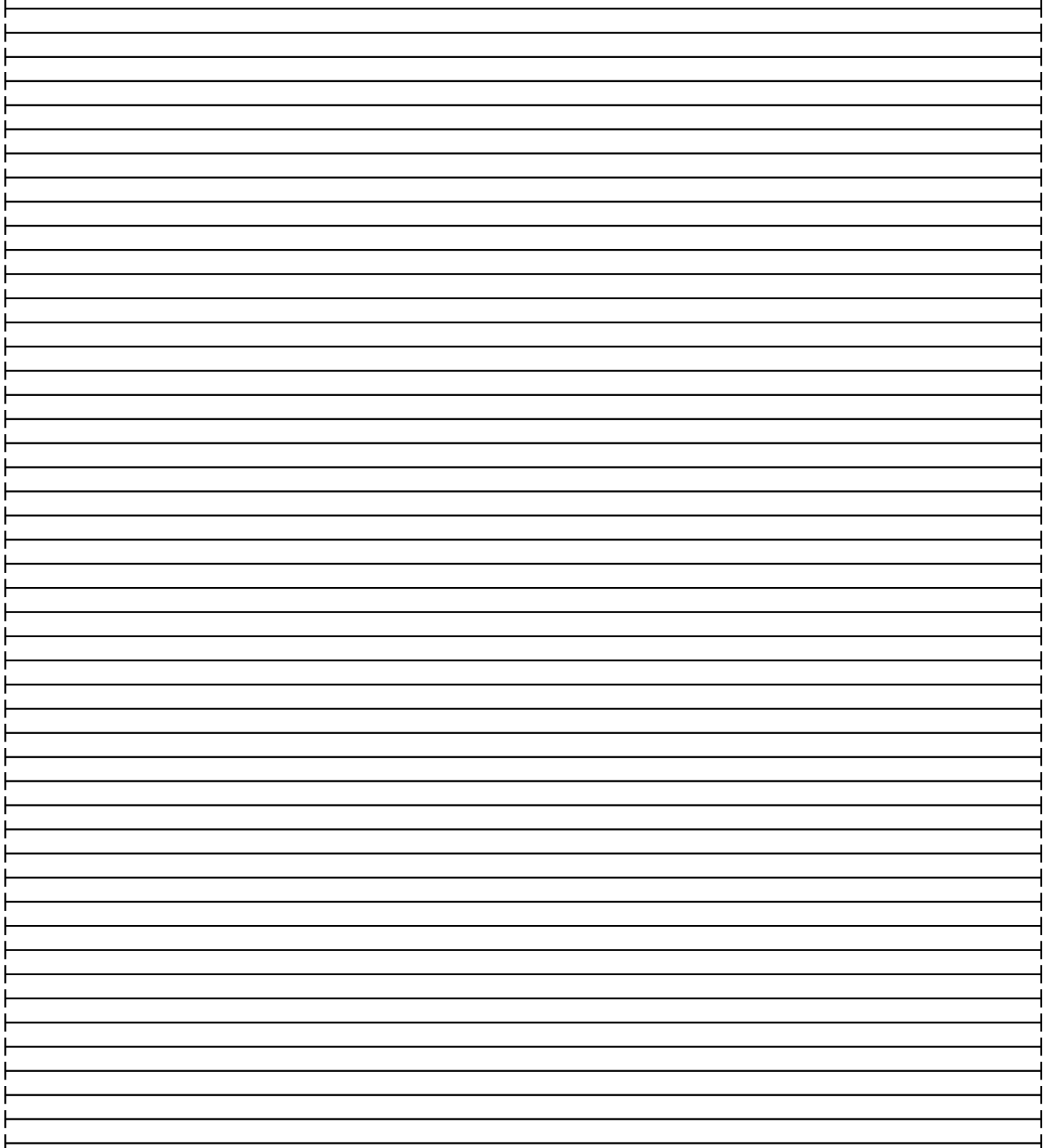
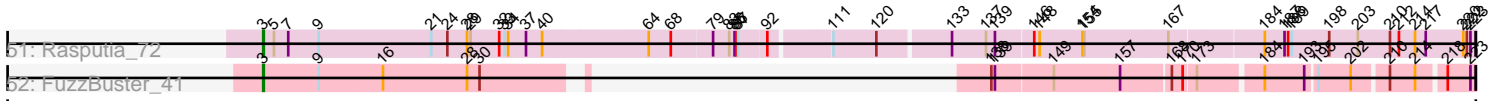


Pham 216051



Pham 216051



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 216051 Report

This analysis was run 02/22/25 on database version 588.

Pham number 216051 has 93 members, 17 are drafts.

Phages represented in each track:

- Track 1 : Yeti_37, Ganandorf_36, Jefe_37, Busephilis_36, Honeyfin_38, Phrancesco_37, Phorgeous_36
- Track 2 : ClearAsMud_39
- Track 3 : NoodlelyBoi_37
- Track 4 : Onika_36, Cranjjs_38, CrazyRich_36, PhedwardCullen_35
- Track 5 : Jollipop_37, Hermeonysus_36, BrazzalePHS_36, Pulchra_38
- Track 6 : PiperSansNom_37
- Track 7 : Paschalis_36
- Track 8 : Ramiel05_36, Savannah_36, Kowalski_36
- Track 9 : Selwyn23_38, Scumberland_38, LittleFortune_38
- Track 10 : KaiHaiDragon_37, EarickHC_37
- Track 11 : Merry_, Sunny_
- Track 12 : SirFrank_36
- Track 13 : Glorp_38
- Track 14 : Quhwah_40
- Track 15 : Crisis_38
- Track 16 : PierreOrion_37
- Track 17 : Piperis_37
- Track 18 : Antares_37
- Track 19 : Shotgun_36
- Track 20 : Phabia_37, Lonelysoil_36, Judebell_39, Casend_38, Teehee_38, FrankDeliGuy_35, Wayne3_38
- Track 21 : Phinky_43
- Track 22 : Mashley_35
- Track 23 : Fizzles_37
- Track 24 : SallyK_38
- Track 25 : Fregley_37, Tempo_36, CandC_35
- Track 26 : Rudy_35, Quammi_35, StrawberryJamm_39, Viceroy_35, AluminumJesus_35
- Track 27 : Gazebo_35
- Track 28 : Kelcole_35, RobinRose_38, Romm_38
- Track 29 : Zagie_36
- Track 30 : Wheelie_36, Jehoshaphat_39, Llemily_37, DonaldDuck_37, Zhafia_40, Sillytadpoles_38
- Track 31 : Pepe25_35
- Track 32 : BabyDotz_36
- Track 33 : Rowlf_33

- Track 34 : Nike_37, Squash_39
- Track 35 : BirdInFrench_36, Wilca_36
- Track 36 : Tissue_37
- Track 37 : Hyperion_36
- Track 38 : OneinaGillian_36
- Track 39 : MorillMayhem_36
- Track 40 : Kyva_39, Namago_37, Grassboy_38
- Track 41 : Blab_35
- Track 42 : EverythinBagel_37
- Track 43 : Altheas_38
- Track 44 : Mentos_41
- Track 45 : Marcie_41
- Track 46 : Statler_39
- Track 47 : Margaery_32
- Track 48 : Terij_33
- Track 49 : Cressida_34
- Track 50 : Hendrix_71
- Track 51 : Rasputia_72
- Track 52 : FuzzBuster_41

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

The start number called the most often in the published annotations is 2, it was called in 34 of the 76 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Antares_37, BrazzalePHS_36, Busephilis_36, ClearAsMud_39, Cranjiss_38, CrazyRich_36, Cressida_34, Crisis_38, EarickHC_37, Ganandorf_36, Glorp_38, Hermeonysus_36, Honeyfin_38, Jefe_37, Jollipop_37, KaiHaiDragon_37, Kowalski_36, LittleFortune_38, Margaery_32, NoodlelyBoi_37, Onika_36, Paschalis_36, PhedwardCullen_35, Phorgeous_36, Phrancesco_37, PierreOrion_37, PiperSansNom_37, Piperis_37, Pulchra_38, Quhwah_40, Ramiel05_36, Savannah_36, Scumberland_38, Selwyn23_38, Shotgun_36, SirFrank_36, Terij_33, Yeti_37,

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

-

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

- Altheas_38, AluminumJesus_35, BabyDotz_36, BirdInFrench_36, Blab_35, CandC_35, Casend_38, DonaldDuck_37, EverythinBagel_37, Fizzles_37, FrankDeliGuy_35, Fregley_37, FuzzBuster_41, Gazebo_35, Grassboy_38, Hendrix_71, Hyperion_36, Jehoshaphat_39, Judebell_39, Kelcole_35, Kyva_39, Llemily_37, Lonelysoil_36, Marcie_41, Mashley_35, Mentos_41, Merry_, MorillMayhem_36, Namago_37, Nike_37, OneinaGillian_36, Pepe25_35, Phabia_37, Phinky_43, Quammi_35, Rasputia_72, RobinRose_38, Romm_38, Rowlf_33, Rudy_35, SallyK_38, Sillytadpoles_38, Squash_39, Statler_39, StrawberryJamm_39, Sunny_, Teehee_38, Tempo_36, Tissue_37, Viceroy_35, Wayne3_38, Wheelie_36, Wilca_36, Zagie_36, Zhafia_40,

Summary by start number:

Start 2:

- Found in 38 of 93 (40.9%) of genes in pham
- Manual Annotations of this start: 34 of 76
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antares_37 (EC), BrazzalePHS_36 (EC), Busephilis_36 (EC), ClearAsMud_39 (EC), Cranjis_38 (EC), CrazyRich_36 (EC), Cressida_34 (EI), Crisis_38 (EC), EarickHC_37 (EC), Ganandorf_36 (EC), Glorp_38 (EC), Hermeonysus_36 (EC), Honeyfin_38 (EC), Jefe_37 (EC), Jollipop_37 (EC), KaiHaiDragon_37 (EC), Kowalski_36 (EC), LittleFortune_38 (EC), Margaery_32 (EI), NoodlelyBoi_37 (EC), Onika_36 (EC), Paschalis_36 (EC), PhedwardCullen_35 (EC), Phorgeous_36 (EC), Phrancesco_37 (EC), PierreOrion_37 (EC), PiperSansNom_37 (EC), Piperis_37 (EC), Pulchra_38 (EC), Quhwah_40 (EC), Ramiel05_36 (EC), Savannah_36 (EC), Scumberland_38 (EC), Selwyn23_38 (EC), Shotgun_36 (EC), SirFrank_36 (EC), Terij_33 (EI), Yeti_37 (EC),

Start 3:

- Found in 13 of 93 (14.0%) of genes in pham
- Manual Annotations of this start: 12 of 76
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BabyDotz_36 (EG), CandC_35 (EG), Fregley_37 (EG), FuzzBuster_41 (singleton), Hendrix_71 (GC), Kelcole_35 (EG), Marcie_41 (EG), OneinaGillian_36 (EG), Phinky_43 (EG), Rasputia_72 (GC), RobinRose_38 (EG), Romm_38 (EG), Tempo_36 (EG),

Start 46:

- Found in 2 of 93 (2.2%) of genes in pham
- Manual Annotations of this start: 2 of 76
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Merry_ (EC), Sunny_ (EC),

Start 53:

- Found in 40 of 93 (43.0%) of genes in pham
- Manual Annotations of this start: 28 of 76
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altheas_38 (EG), AluminumJesus_35 (EG), BirdInFrench_36 (EG), Blab_35 (EG), Casend_38 (EG), DonaldDuck_37 (EG), EverythinBagel_37 (EG), Fizzles_37 (EG), FrankDeliGuy_35 (EG), Gazebo_35 (EG), Grassboy_38 (EG), Hyperion_36 (EG), Jehoshaphat_39 (EG), Judebell_39 (EG), Kyva_39 (EG), Llemily_37 (EG), Lonelysoil_36 (EG), Mashley_35 (EG), Mentos_41 (EG), MorillMayhem_36 (EG), Namago_37 (EG), Nike_37 (EG), Pepe25_35 (EG), Phabia_37 (EG), Quammi_35 (EG), Rowlf_33 (EG), Rudy_35 (EG), SallyK_38 (EG), Sillytadpoles_38 (EG), Squash_39 (EG), Statler_39 (EG), StrawberryJamm_39 (EG), Teehee_38 (EG), Tissue_37 (EG), Viceroy_35 (EG), Wayne3_38 (EG), Wheelie_36 (EG), Wilca_36 (EG), Zagie_36 (EG), Zhafia_40 (EG),

Summary by clusters:

There are 5 clusters represented in this pham: GC, EG, EI, singleton, EC,

Info for manual annotations of cluster EC:

- Start number 2 was manually annotated 31 times for cluster EC.

- Start number 46 was manually annotated 2 times for cluster EC.

Info for manual annotations of cluster EG:

- Start number 3 was manually annotated 9 times for cluster EG.
- Start number 53 was manually annotated 28 times for cluster EG.

Info for manual annotations of cluster EI:

- Start number 2 was manually annotated 3 times for cluster EI.

Info for manual annotations of cluster GC:

- Start number 3 was manually annotated 2 times for cluster GC.

Gene Information:

Gene: Altheas_38 Start: 26739, Stop: 28082, Start Num: 53

Candidate Starts for Altheas_38:

(Start: 53 @26739 has 28 MA's), (57, 26763), (89, 26964), (90, 26967), (110, 27066), (121, 27138), (125, 27189), (133, 27240), (142, 27321), (145, 27351), (146, 27363), (149, 27396), (153, 27435), (154, 27444), (155, 27447), (156, 27471), (161, 27543), (167, 27585), (175, 27645), (181, 27711), (198, 27843), (204, 27891), (205, 27900), (212, 27954), (222, 28068),

Gene: AluminumJesus_35 Start: 26345, Stop: 27685, Start Num: 53

Candidate Starts for AluminumJesus_35:

(Start: 53 @26345 has 28 MA's), (57, 26369), (69, 26441), (110, 26672), (125, 26795), (142, 26927), (149, 27002), (155, 27053), (156, 27077), (159, 27119), (189, 27383), (192, 27401), (196, 27431), (213, 27578), (214, 27584), (222, 27671),

Gene: Antares_37 Start: 23711, Stop: 25657, Start Num: 2

Candidate Starts for Antares_37:

(Start: 2 @23711 has 34 MA's), (7, 23756), (8, 23780), (9, 23807), (12, 23828), (19, 23984), (24, 24020), (28, 24053), (29, 24059), (30, 24074), (45, 24218), (50, 24260), (55, 24305), (62, 24338), (77, 24446), (81, 24473), (82, 24476), (88, 24521), (94, 24548), (95, 24551), (107, 24641), (114, 24680), (116, 24689), (118, 24704), (132, 24851), (135, 24890), (136, 24902), (147, 24992), (148, 24995), (149, 25019), (150, 25028), (153, 25058), (158, 25133), (161, 25166), (165, 25196), (191, 25403), (198, 25442), (201, 25472), (217, 25589),

Gene: BabyDotz_36 Start: 26482, Stop: 28446, Start Num: 3

Candidate Starts for BabyDotz_36:

(Start: 3 @26482 has 12 MA's), (6, 26506), (10, 26578), (13, 26593), (27, 26809), (29, 26824), (33, 26881), (38, 26932), (69, 27151), (71, 27166), (96, 27319), (102, 27361), (117, 27451), (118, 27460), (135, 27640), (137, 27661), (142, 27694), (144, 27703), (149, 27769), (154, 27817), (155, 27820), (158, 27883), (175, 28018), (189, 28147), (198, 28204), (203, 28252), (214, 28345), (216, 28354), (222, 28432),

Gene: BirdInFrench_36 Start: 24913, Stop: 26256, Start Num: 53

Candidate Starts for BirdInFrench_36:

(Start: 53 @24913 has 28 MA's), (57, 24937), (89, 25138), (92, 25147), (110, 25240), (121, 25312), (125, 25363), (131, 25399), (133, 25414), (142, 25495), (149, 25570), (154, 25618), (155, 25621), (156, 25645), (161, 25717), (167, 25759), (175, 25819), (181, 25885), (198, 26017), (204, 26065), (205, 26074), (212, 26128), (222, 26242),

Gene: Blab_35 Start: 26270, Stop: 27604, Start Num: 53

Candidate Starts for Blab_35:

(Start: 53 @26270 has 28 MA's), (57, 26294), (69, 26366), (90, 26498), (102, 26549), (110, 26597), (125, 26720), (134, 26774), (137, 26819), (142, 26852), (149, 26927), (154, 26975), (155, 26978), (158, 27041), (175, 27176), (189, 27305), (198, 27362), (203, 27410), (214, 27503), (216, 27512), (222, 27590),

Gene: BrazzalePHS_36 Start: 23506, Stop: 25452, Start Num: 2

Candidate Starts for BrazzalePHS_36:

(Start: 2 @23506 has 34 MA's), (7, 23551), (8, 23575), (9, 23602), (12, 23623), (19, 23779), (24, 23815), (28, 23848), (29, 23854), (30, 23869), (45, 24013), (50, 24055), (62, 24133), (81, 24268), (82, 24271), (88, 24316), (94, 24343), (95, 24346), (107, 24436), (114, 24475), (116, 24484), (118, 24499), (132, 24646), (135, 24685), (136, 24697), (147, 24787), (148, 24790), (149, 24814), (150, 24823), (158, 24928), (161, 24961), (165, 24991), (191, 25198), (198, 25237), (201, 25267), (217, 25384),

Gene: Busephilis_36 Start: 23441, Stop: 25393, Start Num: 2

Candidate Starts for Busephilis_36:

(Start: 2 @23441 has 34 MA's), (7, 23486), (8, 23510), (9, 23537), (12, 23558), (19, 23714), (24, 23750), (28, 23783), (29, 23789), (30, 23804), (45, 23948), (50, 23990), (51, 23993), (62, 24074), (82, 24212), (83, 24218), (88, 24257), (94, 24284), (98, 24305), (100, 24314), (104, 24368), (107, 24377), (111, 24392), (114, 24416), (116, 24425), (118, 24440), (129, 24566), (132, 24587), (135, 24626), (136, 24638), (147, 24728), (148, 24731), (149, 24755), (150, 24764), (153, 24794), (157, 24866), (158, 24869), (161, 24902), (165, 24932), (191, 25139), (198, 25178), (201, 25208), (217, 25325),

Gene: CandC_35 Start: 24614, Stop: 26587, Start Num: 3

Candidate Starts for CandC_35:

(Start: 3 @24614 has 12 MA's), (4, 24617), (15, 24752), (27, 24944), (29, 24959), (33, 25016), (39, 25070), (41, 25082), (45, 25115), (59, 25220), (96, 25454), (103, 25511), (117, 25586), (137, 25796), (139, 25811), (149, 25910), (150, 25919), (155, 25961), (162, 26063), (175, 26159), (189, 26288), (203, 26393), (214, 26486), (216, 26495), (222, 26573),

Gene: Casend_38 Start: 26891, Stop: 28231, Start Num: 53

Candidate Starts for Casend_38:

(Start: 53 @26891 has 28 MA's), (57, 26915), (69, 26987), (102, 27170), (110, 27218), (125, 27341), (142, 27473), (149, 27548), (155, 27599), (156, 27623), (159, 27665), (160, 27683), (161, 27695), (189, 27929), (192, 27947), (195, 27974), (196, 27977), (213, 28124), (214, 28130), (217, 28148), (222, 28217),

Gene: ClearAsMud_39 Start: 24222, Stop: 25577, Start Num: 2

Candidate Starts for ClearAsMud_39:

(Start: 2 @24222 has 34 MA's), (7, 24267), (9, 24318), (12, 24339), (16, 24426), (18, 24480), (24, 24531), (28, 24564), (29, 24570), (30, 24585), (83, 24732), (136, 24822), (137, 24831), (138, 24840), (147, 24912), (148, 24915), (149, 24939), (157, 25050), (158, 25053), (161, 25086), (165, 25116), (180, 25239), (191, 25323), (210, 25449), (213, 25485), (214, 25491), (223, 25569),

Gene: Cranjis_38 Start: 23666, Stop: 25612, Start Num: 2

Candidate Starts for Cranjis_38:

(Start: 2 @23666 has 34 MA's), (7, 23711), (8, 23735), (9, 23762), (12, 23783), (19, 23939), (24, 23975), (28, 24008), (29, 24014), (30, 24029), (45, 24173), (50, 24215), (55, 24260), (62, 24293), (81, 24428), (82, 24431), (88, 24476), (94, 24503), (95, 24506), (107, 24596), (114, 24635), (116, 24644), (118, 24659), (132, 24806), (135, 24845), (136, 24857), (147, 24947), (148, 24950), (149, 24974), (150, 24983), (158, 25088), (161, 25121), (165, 25151), (191, 25358), (198, 25397), (201, 25427), (217, 25544),

Gene: CrazyRich_36 Start: 23475, Stop: 25421, Start Num: 2

Candidate Starts for CrazyRich_36:

(Start: 2 @23475 has 34 MA's), (7, 23520), (8, 23544), (9, 23571), (12, 23592), (19, 23748), (24, 23784), (28, 23817), (29, 23823), (30, 23838), (45, 23982), (50, 24024), (55, 24069), (62, 24102), (81, 24237), (82, 24240), (88, 24285), (94, 24312), (95, 24315), (107, 24405), (114, 24444), (116, 24453), (118, 24468), (132, 24615), (135, 24654), (136, 24666), (147, 24756), (148, 24759), (149, 24783), (150, 24792), (158, 24897), (161, 24930), (165, 24960), (191, 25167), (198, 25206), (201, 25236), (217, 25353),

Gene: Cressida_34 Start: 22922, Stop: 24850, Start Num: 2

Candidate Starts for Cressida_34:

(Start: 2 @22922 has 34 MA's), (14, 23048), (17, 23165), (22, 23204), (23, 23213), (25, 23231), (26, 23240), (29, 23267), (32, 23315), (42, 23399), (45, 23426), (54, 23495), (58, 23522), (65, 23558), (66, 23564), (72, 23615), (76, 23651), (82, 23678), (83, 23684), (91, 23738), (101, 23765), (106, 23816), (112, 23837), (117, 23867), (121, 23900), (130, 23990), (135, 24047), (140, 24086), (141, 24101), (143, 24107), (148, 24152), (149, 24176), (150, 24185), (151, 24197), (155, 24227), (166, 24362), (172, 24401), (177, 24473), (182, 24494), (184, 24512), (188, 24551), (190, 24569), (197, 24602), (199, 24617), (200, 24620), (208, 24704), (214, 24758), (215, 24764),

Gene: Crisis_38 Start: 23460, Stop: 25412, Start Num: 2

Candidate Starts for Crisis_38:

(Start: 2 @23460 has 34 MA's), (7, 23505), (8, 23529), (9, 23556), (12, 23577), (19, 23733), (24, 23769), (28, 23802), (29, 23808), (30, 23823), (45, 23967), (50, 24009), (51, 24012), (62, 24093), (82, 24231), (83, 24237), (88, 24276), (94, 24303), (98, 24324), (100, 24333), (104, 24387), (107, 24396), (111, 24411), (114, 24435), (116, 24444), (118, 24459), (129, 24585), (132, 24606), (135, 24645), (136, 24657), (147, 24747), (148, 24750), (149, 24774), (150, 24783), (153, 24813), (157, 24885), (158, 24888), (161, 24921), (165, 24951), (198, 25197), (201, 25227), (217, 25344),

Gene: DonaldDuck_37 Start: 26237, Stop: 27580, Start Num: 53

Candidate Starts for DonaldDuck_37:

(Start: 53 @26237 has 28 MA's), (57, 26261), (69, 26333), (102, 26516), (110, 26564), (125, 26687), (142, 26819), (149, 26894), (155, 26945), (156, 26969), (159, 27011), (162, 27047), (186, 27251), (192, 27293), (212, 27452), (213, 27473), (217, 27497), (222, 27566),

Gene: EarickHC_37 Start: 23386, Stop: 25338, Start Num: 2

Candidate Starts for EarickHC_37:

(Start: 2 @23386 has 34 MA's), (7, 23431), (8, 23455), (9, 23482), (12, 23503), (24, 23695), (28, 23728), (29, 23734), (30, 23749), (45, 23893), (50, 23935), (51, 23938), (52, 23956), (62, 24019), (82, 24157), (83, 24163), (88, 24202), (94, 24229), (104, 24313), (107, 24322), (111, 24337), (114, 24361), (116, 24370), (118, 24385), (129, 24511), (132, 24532), (135, 24571), (136, 24583), (147, 24673), (148, 24676), (149, 24700), (150, 24709), (157, 24811), (158, 24814), (161, 24847), (165, 24877), (191, 25084), (198, 25123), (201, 25153), (217, 25270),

Gene: EverythinBagel_37 Start: 26625, Stop: 27968, Start Num: 53

Candidate Starts for EverythinBagel_37:

(Start: 53 @26625 has 28 MA's), (57, 26649), (69, 26721), (110, 26952), (125, 27075), (134, 27129), (142, 27207), (149, 27282), (155, 27333), (156, 27357), (159, 27399), (162, 27435), (186, 27639), (189, 27663), (192, 27681), (212, 27840), (213, 27861), (217, 27885), (222, 27954),

Gene: Fizzles_37 Start: 25850, Stop: 27190, Start Num: 53

Candidate Starts for Fizzles_37:

(Start: 53 @25850 has 28 MA's), (110, 26177), (115, 26201), (125, 26300), (137, 26399), (142, 26432), (152, 26531), (154, 26555), (155, 26558), (156, 26582), (161, 26654), (175, 26756), (179, 26807), (182, 26828), (190, 26900), (198, 26951), (204, 26999), (212, 27062), (213, 27083), (216, 27098), (222, 27176),

Gene: FrankDeliGuy_35 Start: 26197, Stop: 27537, Start Num: 53

Candidate Starts for FrankDeliGuy_35:

(Start: 53 @26197 has 28 MA's), (57, 26221), (69, 26293), (102, 26476), (110, 26524), (125, 26647), (142, 26779), (149, 26854), (155, 26905), (156, 26929), (159, 26971), (160, 26989), (161, 27001), (189, 27235), (192, 27253), (195, 27280), (196, 27283), (213, 27430), (214, 27436), (217, 27454), (222, 27523),

Gene: Fregley_37 Start: 25184, Stop: 27157, Start Num: 3

Candidate Starts for Fregley_37:

(Start: 3 @25184 has 12 MA's), (4, 25187), (15, 25322), (27, 25514), (29, 25529), (33, 25586), (39, 25640), (41, 25652), (45, 25685), (59, 25790), (96, 26024), (103, 26081), (117, 26156), (137, 26366), (139, 26381), (149, 26480), (150, 26489), (155, 26531), (162, 26633), (175, 26729), (189, 26858), (203, 26963), (214, 27056), (216, 27065), (222, 27143),

Gene: FuzzBuster_41 Start: 23513, Stop: 24814, Start Num: 3

Candidate Starts for FuzzBuster_41:

(Start: 3 @23513 has 12 MA's), (9, 23603), (16, 23708), (28, 23849), (30, 23870), (138, 24074), (139, 24080), (149, 24173), (157, 24284), (168, 24362), (170, 24380), (173, 24398), (184, 24497), (193, 24563), (195, 24578), (202, 24632), (210, 24686), (214, 24728), (218, 24770), (223, 24806),

Gene: Ganandorf_36 Start: 23522, Stop: 25474, Start Num: 2

Candidate Starts for Ganandorf_36:

(Start: 2 @23522 has 34 MA's), (7, 23567), (8, 23591), (9, 23618), (12, 23639), (19, 23795), (24, 23831), (28, 23864), (29, 23870), (30, 23885), (45, 24029), (50, 24071), (51, 24074), (62, 24155), (82, 24293), (83, 24299), (88, 24338), (94, 24365), (98, 24386), (100, 24395), (104, 24449), (107, 24458), (111, 24473), (114, 24497), (116, 24506), (118, 24521), (129, 24647), (132, 24668), (135, 24707), (136, 24719), (147, 24809), (148, 24812), (149, 24836), (150, 24845), (153, 24875), (157, 24947), (158, 24950), (161, 24983), (165, 25013), (191, 25220), (198, 25259), (201, 25289), (217, 25406),

Gene: Gazebo_35 Start: 26808, Stop: 28148, Start Num: 53

Candidate Starts for Gazebo_35:

(Start: 53 @26808 has 28 MA's), (57, 26832), (69, 26904), (110, 27135), (125, 27258), (142, 27390), (149, 27465), (155, 27516), (156, 27540), (159, 27582), (189, 27846), (192, 27864), (195, 27891), (196, 27894), (213, 28041), (214, 28047), (222, 28134),

Gene: Glorp_38 Start: 23523, Stop: 25475, Start Num: 2

Candidate Starts for Glorp_38:

(Start: 2 @23523 has 34 MA's), (7, 23568), (8, 23592), (9, 23619), (12, 23640), (19, 23796), (24, 23832), (28, 23865), (29, 23871), (30, 23886), (45, 24030), (50, 24072), (51, 24075), (62, 24156), (82, 24294), (83, 24300), (88, 24339), (94, 24366), (98, 24387), (100, 24396), (104, 24450), (107, 24459), (111, 24474), (114, 24498), (116, 24507), (118, 24522), (129, 24648), (132, 24669), (135, 24708), (136, 24720), (147, 24810), (148, 24813), (149, 24837), (150, 24846), (153, 24876), (157, 24948), (158, 24951), (161, 24984), (165, 25014), (172, 25050), (191, 25221), (195, 25242), (201, 25290), (217, 25407),

Gene: Grassboy_38 Start: 26866, Stop: 28209, Start Num: 53

Candidate Starts for Grassboy_38:

(Start: 53 @26866 has 28 MA's), (57, 26890), (69, 26962), (102, 27145), (110, 27193), (125, 27316), (137, 27415), (142, 27448), (149, 27523), (155, 27574), (156, 27598), (159, 27640), (190, 27919), (195, 27952), (196, 27955), (204, 28018), (222, 28195),

Gene: Hendrix_71 Start: 44066, Stop: 46000, Start Num: 3

Candidate Starts for Hendrix_71:

(Start: 3 @44066 has 12 MA's), (7, 44108), (9, 44156), (21, 44342), (28, 44402), (29, 44408), (32, 44456), (33, 44465), (34, 44471), (40, 44528), (43, 44555), (61, 44684), (63, 44690), (64, 44696), (68, 44726), (70, 44729), (79, 44792), (82, 44813), (84, 44825), (92, 44876), (105, 44951), (108, 44963), (119, 45026), (137, 45209), (139, 45224), (146, 45284), (148, 45293), (150, 45323), (154, 45362), (155, 45365), (158, 45428), (161, 45461), (174, 45554), (176, 45584), (178, 45614), (182, 45638), (184, 45656), (187, 45686), (209, 45848), (212, 45872), (214, 45899), (217, 45917), (221, 45983), (222, 45986), (223, 45992),

Gene: Hermeonysus_36 Start: 23395, Stop: 25341, Start Num: 2

Candidate Starts for Hermeonysus_36:

(Start: 2 @23395 has 34 MA's), (7, 23440), (8, 23464), (9, 23491), (12, 23512), (19, 23668), (24, 23704), (28, 23737), (29, 23743), (30, 23758), (45, 23902), (50, 23944), (62, 24022), (81, 24157), (82, 24160), (88, 24205), (94, 24232), (95, 24235), (107, 24325), (114, 24364), (116, 24373), (118, 24388), (132, 24535), (135, 24574), (136, 24586), (147, 24676), (148, 24679), (149, 24703), (150, 24712), (158, 24817), (161, 24850), (165, 24880), (191, 25087), (198, 25126), (201, 25156), (217, 25273),

Gene: Honeyfin_38 Start: 23710, Stop: 25662, Start Num: 2

Candidate Starts for Honeyfin_38:

(Start: 2 @23710 has 34 MA's), (7, 23755), (8, 23779), (9, 23806), (12, 23827), (19, 23983), (24, 24019), (28, 24052), (29, 24058), (30, 24073), (45, 24217), (50, 24259), (51, 24262), (62, 24343), (82, 24481), (83, 24487), (88, 24526), (94, 24553), (98, 24574), (100, 24583), (104, 24637), (107, 24646), (111, 24661), (114, 24685), (116, 24694), (118, 24709), (129, 24835), (132, 24856), (135, 24895), (136, 24907), (147, 24997), (148, 25000), (149, 25024), (150, 25033), (153, 25063), (157, 25135), (158, 25138), (161, 25171), (165, 25201), (191, 25408), (198, 25447), (201, 25477), (217, 25594),

Gene: Hyperion_36 Start: 26764, Stop: 28104, Start Num: 53

Candidate Starts for Hyperion_36:

(Start: 53 @26764 has 28 MA's), (57, 26788), (69, 26860), (110, 27091), (125, 27214), (134, 27268), (137, 27313), (142, 27346), (149, 27421), (155, 27472), (156, 27496), (159, 27538), (189, 27802), (192, 27820), (196, 27850), (213, 27997), (214, 28003), (222, 28090),

Gene: Jefe_37 Start: 23447, Stop: 25399, Start Num: 2

Candidate Starts for Jefe_37:

(Start: 2 @23447 has 34 MA's), (7, 23492), (8, 23516), (9, 23543), (12, 23564), (19, 23720), (24, 23756), (28, 23789), (29, 23795), (30, 23810), (45, 23954), (50, 23996), (51, 23999), (62, 24080), (82, 24218), (83, 24224), (88, 24263), (94, 24290), (98, 24311), (100, 24320), (104, 24374), (107, 24383), (111, 24398), (114, 24422), (116, 24431), (118, 24446), (129, 24572), (132, 24593), (135, 24632), (136, 24644), (147, 24734), (148, 24737), (149, 24761), (150, 24770), (153, 24800), (157, 24872), (158, 24875), (161, 24908), (165, 24938), (191, 25145), (198, 25184), (201, 25214), (217, 25331),

Gene: Jehoshaphat_39 Start: 27156, Stop: 28499, Start Num: 53

Candidate Starts for Jehoshaphat_39:

(Start: 53 @27156 has 28 MA's), (57, 27180), (69, 27252), (102, 27435), (110, 27483), (125, 27606), (142, 27738), (149, 27813), (155, 27864), (156, 27888), (159, 27930), (162, 27966), (186, 28170), (192, 28212), (212, 28371), (213, 28392), (217, 28416), (222, 28485),

Gene: Jollipop_37 Start: 23792, Stop: 25738, Start Num: 2

Candidate Starts for Jollipop_37:

(Start: 2 @23792 has 34 MA's), (7, 23837), (8, 23861), (9, 23888), (12, 23909), (19, 24065), (24, 24101), (28, 24134), (29, 24140), (30, 24155), (45, 24299), (50, 24341), (62, 24419), (81, 24554), (82, 24557), (88, 24602), (94, 24629), (95, 24632), (107, 24722), (114, 24761), (116, 24770), (118, 24785), (132, 24932), (135, 24971), (136, 24983), (147, 25073), (148, 25076), (149, 25100), (150, 25109), (158, 25214), (161, 25247), (165, 25277), (191, 25484), (198, 25523), (201, 25553), (217, 25670),

Gene: Judebell_39 Start: 26662, Stop: 28002, Start Num: 53

Candidate Starts for Judebell_39:

(Start: 53 @26662 has 28 MA's), (57, 26686), (69, 26758), (102, 26941), (110, 26989), (125, 27112), (142, 27244), (149, 27319), (155, 27370), (156, 27394), (159, 27436), (160, 27454), (161, 27466), (189, 27700), (192, 27718), (195, 27745), (196, 27748), (213, 27895), (214, 27901), (217, 27919), (222, 27988),

Gene: KaiHaiDragon_37 Start: 23386, Stop: 25338, Start Num: 2

Candidate Starts for KaiHaiDragon_37:

(Start: 2 @23386 has 34 MA's), (7, 23431), (8, 23455), (9, 23482), (12, 23503), (24, 23695), (28, 23728), (29, 23734), (30, 23749), (45, 23893), (50, 23935), (51, 23938), (52, 23956), (62, 24019), (82, 24157), (83, 24163), (88, 24202), (94, 24229), (104, 24313), (107, 24322), (111, 24337), (114, 24361), (116, 24370), (118, 24385), (129, 24511), (132, 24532), (135, 24571), (136, 24583), (147, 24673), (148, 24676), (149, 24700), (150, 24709), (157, 24811), (158, 24814), (161, 24847), (165, 24877), (191, 25084), (198, 25123), (201, 25153), (217, 25270),

Gene: Kelcole_35 Start: 25066, Stop: 27039, Start Num: 3

Candidate Starts for Kelcole_35:

(Start: 3 @25066 has 12 MA's), (4, 25069), (15, 25204), (27, 25396), (29, 25411), (33, 25468), (39, 25522), (41, 25534), (59, 25672), (96, 25906), (103, 25963), (117, 26038), (137, 26248), (139, 26263), (149, 26362), (150, 26371), (155, 26413), (162, 26515), (175, 26611), (189, 26740), (203, 26845), (214, 26938), (216, 26947), (222, 27025),

Gene: Kowalski_36 Start: 23502, Stop: 25448, Start Num: 2

Candidate Starts for Kowalski_36:

(Start: 2 @23502 has 34 MA's), (7, 23547), (8, 23571), (9, 23598), (12, 23619), (19, 23775), (24, 23811), (28, 23844), (29, 23850), (30, 23865), (45, 24009), (50, 24051), (62, 24129), (81, 24264), (82, 24267), (88, 24312), (94, 24339), (95, 24342), (107, 24432), (114, 24471), (116, 24480), (118, 24495), (132, 24642), (135, 24681), (136, 24693), (147, 24783), (148, 24786), (149, 24810), (150, 24819), (157, 24921), (158, 24924), (161, 24957), (165, 24987), (191, 25194), (198, 25233), (201, 25263), (217, 25380),

Gene: Kyva_39 Start: 26901, Stop: 28244, Start Num: 53

Candidate Starts for Kyva_39:

(Start: 53 @26901 has 28 MA's), (57, 26925), (69, 26997), (102, 27180), (110, 27228), (125, 27351), (137, 27450), (142, 27483), (149, 27558), (155, 27609), (156, 27633), (159, 27675), (190, 27954), (195, 27987), (196, 27990), (204, 28053), (222, 28230),

Gene: LittleFortune_38 Start: 23752, Stop: 25704, Start Num: 2

Candidate Starts for LittleFortune_38:

(Start: 2 @23752 has 34 MA's), (7, 23797), (8, 23821), (9, 23848), (12, 23869), (19, 24025), (24, 24061), (28, 24094), (29, 24100), (30, 24115), (45, 24259), (50, 24301), (51, 24304), (62, 24385), (82, 24523), (83, 24529), (88, 24568), (94, 24595), (98, 24616), (100, 24625), (104, 24679), (107, 24688), (111, 24703), (114, 24727), (116, 24736), (118, 24751), (129, 24877), (132, 24898), (135, 24937), (136, 24949), (147, 25039), (148, 25042), (149, 25066), (150, 25075), (153, 25105), (157, 25177), (158, 25180), (161, 25213), (165, 25243), (191, 25450), (195, 25471), (198, 25489), (201, 25519),

(217, 25636),

Gene: Llemily_37 Start: 25932, Stop: 27275, Start Num: 53

Candidate Starts for Llemily_37:

(Start: 53 @25932 has 28 MA's), (57, 25956), (69, 26028), (102, 26211), (110, 26259), (125, 26382), (142, 26514), (149, 26589), (155, 26640), (156, 26664), (159, 26706), (162, 26742), (186, 26946), (192, 26988), (212, 27147), (213, 27168), (217, 27192), (222, 27261),

Gene: Lonelysoil_36 Start: 26177, Stop: 27517, Start Num: 53

Candidate Starts for Lonelysoil_36:

(Start: 53 @26177 has 28 MA's), (57, 26201), (69, 26273), (102, 26456), (110, 26504), (125, 26627), (142, 26759), (149, 26834), (155, 26885), (156, 26909), (159, 26951), (160, 26969), (161, 26981), (189, 27215), (192, 27233), (195, 27260), (196, 27263), (213, 27410), (214, 27416), (217, 27434), (222, 27503),

Gene: Marcie_41 Start: 25722, Stop: 27695, Start Num: 3

Candidate Starts for Marcie_41:

(Start: 3 @25722 has 12 MA's), (4, 25725), (15, 25860), (27, 26052), (29, 26067), (33, 26124), (39, 26178), (45, 26223), (60, 26340), (63, 26349), (83, 26484), (103, 26619), (137, 26904), (139, 26919), (142, 26940), (146, 26985), (149, 27018), (154, 27066), (155, 27069), (162, 27171), (189, 27396), (195, 27438), (198, 27456), (211, 27561), (212, 27567), (214, 27594), (222, 27681),

Gene: Margaery_32 Start: 22803, Stop: 24701, Start Num: 2

Candidate Starts for Margaery_32:

(1, 22407), (Start: 2 @22803 has 34 MA's), (9, 22899), (11, 22908), (16, 23007), (18, 23061), (20, 23079), (24, 23112), (28, 23145), (29, 23151), (30, 23166), (36, 23220), (40, 23271), (44, 23307), (45, 23310), (58, 23406), (67, 23466), (75, 23529), (76, 23535), (80, 23562), (91, 23625), (97, 23649), (102, 23673), (114, 23751), (122, 23820), (124, 23841), (126, 23859), (128, 23868), (138, 23976), (147, 24048), (148, 24051), (149, 24075), (151, 24096), (156, 24150), (157, 24186), (164, 24249), (165, 24252), (169, 24273), (175, 24315), (189, 24432), (195, 24468), (219, 24666), (222, 24687),

Gene: Mashley_35 Start: 26580, Stop: 27920, Start Num: 53

Candidate Starts for Mashley_35:

(Start: 53 @26580 has 28 MA's), (57, 26604), (69, 26676), (110, 26907), (125, 27030), (142, 27162), (149, 27237), (155, 27288), (156, 27312), (159, 27354), (189, 27618), (192, 27636), (195, 27663), (196, 27666), (213, 27813), (214, 27819), (217, 27837), (222, 27906),

Gene: Mentos_41 Start: 27667, Stop: 29010, Start Num: 53

Candidate Starts for Mentos_41:

(Start: 53 @27667 has 28 MA's), (57, 27691), (69, 27763), (102, 27946), (110, 27994), (125, 28117), (142, 28249), (149, 28324), (155, 28375), (156, 28399), (159, 28441), (162, 28477), (186, 28681), (189, 28705), (192, 28723), (212, 28882), (213, 28903), (217, 28927), (222, 28996),

Gene: Merry_ Start: 25560, Stop: 26966, Start Num: 46

Candidate Starts for Merry_:

(Start: 46 @25560 has 2 MA's), (49, 25593), (56, 25650), (72, 25743), (106, 25938), (144, 26226), (146, 26256), (149, 26289), (151, 26310), (157, 26400), (173, 26523), (184, 26628), (188, 26667), (199, 26736), (206, 26784), (214, 26865), (222, 26952),

Gene: MorillMayhem_36 Start: 26447, Stop: 27790, Start Num: 53

Candidate Starts for MorillMayhem_36:

(Start: 53 @26447 has 28 MA's), (57, 26471), (69, 26543), (110, 26774), (125, 26897), (137, 26996), (142, 27029), (149, 27104), (154, 27152), (155, 27155), (156, 27179), (162, 27257), (186, 27461),

(189, 27485), (192, 27503), (212, 27662), (213, 27683), (217, 27707), (222, 27776),

Gene: Namago_37 Start: 26031, Stop: 27374, Start Num: 53

Candidate Starts for Namago_37:

(Start: 53 @26031 has 28 MA's), (57, 26055), (69, 26127), (102, 26310), (110, 26358), (125, 26481), (137, 26580), (142, 26613), (149, 26688), (155, 26739), (156, 26763), (159, 26805), (190, 27084), (195, 27117), (196, 27120), (204, 27183), (222, 27360),

Gene: Nike_37 Start: 26983, Stop: 28329, Start Num: 53

Candidate Starts for Nike_37:

(Start: 53 @26983 has 28 MA's), (57, 27007), (69, 27079), (102, 27262), (110, 27310), (121, 27382), (125, 27433), (134, 27487), (142, 27565), (149, 27640), (155, 27691), (156, 27715), (159, 27757), (171, 27856), (175, 27889), (189, 28024), (210, 28186), (222, 28315),

Gene: NoodlelyBoi_37 Start: 23832, Stop: 25775, Start Num: 2

Candidate Starts for NoodlelyBoi_37:

(Start: 2 @23832 has 34 MA's), (7, 23877), (9, 23928), (12, 23949), (16, 24036), (18, 24090), (24, 24141), (28, 24174), (29, 24180), (30, 24195), (45, 24339), (47, 24348), (50, 24381), (62, 24459), (71, 24522), (73, 24537), (75, 24558), (82, 24597), (83, 24603), (94, 24669), (104, 24750), (109, 24765), (111, 24774), (113, 24792), (114, 24798), (116, 24807), (118, 24822), (123, 24882), (129, 24948), (132, 24969), (136, 25020), (137, 25029), (138, 25038), (146, 25104), (147, 25110), (148, 25113), (149, 25137), (157, 25248), (158, 25251), (161, 25284), (165, 25314), (191, 25521), (205, 25617), (210, 25647), (213, 25683), (214, 25689), (223, 25767),

Gene: OneinaGillian_36 Start: 24713, Stop: 26689, Start Num: 3

Candidate Starts for OneinaGillian_36:

(Start: 3 @24713 has 12 MA's), (4, 24716), (15, 24851), (27, 25043), (29, 25058), (33, 25115), (39, 25169), (41, 25181), (59, 25319), (96, 25553), (103, 25610), (117, 25685), (137, 25895), (139, 25910), (149, 26009), (150, 26018), (155, 26060), (162, 26162), (175, 26258), (189, 26387), (198, 26447), (203, 26495), (214, 26588), (216, 26597), (222, 26675),

Gene: Onika_36 Start: 23477, Stop: 25423, Start Num: 2

Candidate Starts for Onika_36:

(Start: 2 @23477 has 34 MA's), (7, 23522), (8, 23546), (9, 23573), (12, 23594), (19, 23750), (24, 23786), (28, 23819), (29, 23825), (30, 23840), (45, 23984), (50, 24026), (55, 24071), (62, 24104), (81, 24239), (82, 24242), (88, 24287), (94, 24314), (95, 24317), (107, 24407), (114, 24446), (116, 24455), (118, 24470), (132, 24617), (135, 24656), (136, 24668), (147, 24758), (148, 24761), (149, 24785), (150, 24794), (158, 24899), (161, 24932), (165, 24962), (191, 25169), (198, 25208), (201, 25238), (217, 25355),

Gene: Paschalis_36 Start: 23490, Stop: 25430, Start Num: 2

Candidate Starts for Paschalis_36:

(Start: 2 @23490 has 34 MA's), (7, 23535), (8, 23559), (9, 23586), (12, 23607), (19, 23763), (24, 23799), (28, 23832), (29, 23838), (30, 23853), (45, 23997), (50, 24039), (55, 24084), (62, 24117), (77, 24225), (81, 24252), (82, 24255), (88, 24300), (94, 24327), (95, 24330), (107, 24420), (114, 24459), (116, 24468), (118, 24483), (132, 24630), (135, 24669), (136, 24681), (147, 24771), (148, 24774), (149, 24798), (150, 24807), (153, 24837), (158, 24912), (175, 25041), (183, 25110), (184, 25122), (194, 25191), (210, 25302), (213, 25338), (223, 25422),

Gene: Pepe25_35 Start: 24930, Stop: 26273, Start Num: 53

Candidate Starts for Pepe25_35:

(Start: 53 @24930 has 28 MA's), (57, 24954), (89, 25155), (92, 25164), (110, 25257), (121, 25329), (125, 25380), (131, 25416), (133, 25431), (142, 25512), (149, 25587), (154, 25635), (155, 25638),

(156, 25662), (157, 25698), (181, 25902), (198, 26034), (222, 26259),

Gene: Phabia_37 Start: 26350, Stop: 27690, Start Num: 53

Candidate Starts for Phabia_37:

(Start: 53 @26350 has 28 MA's), (57, 26374), (69, 26446), (102, 26629), (110, 26677), (125, 26800), (142, 26932), (149, 27007), (155, 27058), (156, 27082), (159, 27124), (160, 27142), (161, 27154), (189, 27388), (192, 27406), (195, 27433), (196, 27436), (213, 27583), (214, 27589), (217, 27607), (222, 27676),

Gene: PhedwardCullen_35 Start: 23235, Stop: 25181, Start Num: 2

Candidate Starts for PhedwardCullen_35:

(Start: 2 @23235 has 34 MA's), (7, 23280), (8, 23304), (9, 23331), (12, 23352), (19, 23508), (24, 23544), (28, 23577), (29, 23583), (30, 23598), (45, 23742), (50, 23784), (55, 23829), (62, 23862), (81, 23997), (82, 24000), (88, 24045), (94, 24072), (95, 24075), (107, 24165), (114, 24204), (116, 24213), (118, 24228), (132, 24375), (135, 24414), (136, 24426), (147, 24516), (148, 24519), (149, 24543), (150, 24552), (158, 24657), (161, 24690), (165, 24720), (191, 24927), (198, 24966), (201, 24996), (217, 25113),

Gene: Phinky_43 Start: 27523, Stop: 29499, Start Num: 3

Candidate Starts for Phinky_43:

(Start: 3 @27523 has 12 MA's), (6, 27547), (27, 27850), (31, 27901), (35, 27931), (38, 27973), (74, 28234), (83, 28285), (99, 28378), (102, 28405), (117, 28495), (126, 28597), (138, 28714), (149, 28813), (155, 28864), (163, 28984), (171, 29029), (181, 29128), (195, 29242), (198, 29260), (222, 29485),

Gene: Phorgeous_36 Start: 23344, Stop: 25296, Start Num: 2

Candidate Starts for Phorgeous_36:

(Start: 2 @23344 has 34 MA's), (7, 23389), (8, 23413), (9, 23440), (12, 23461), (19, 23617), (24, 23653), (28, 23686), (29, 23692), (30, 23707), (45, 23851), (50, 23893), (51, 23896), (62, 23977), (82, 24115), (83, 24121), (88, 24160), (94, 24187), (98, 24208), (100, 24217), (104, 24271), (107, 24280), (111, 24295), (114, 24319), (116, 24328), (118, 24343), (129, 24469), (132, 24490), (135, 24529), (136, 24541), (147, 24631), (148, 24634), (149, 24658), (150, 24667), (153, 24697), (157, 24769), (158, 24772), (161, 24805), (165, 24835), (191, 25042), (198, 25081), (201, 25111), (217, 25228),

Gene: Phrancesco_37 Start: 23622, Stop: 25574, Start Num: 2

Candidate Starts for Phrancesco_37:

(Start: 2 @23622 has 34 MA's), (7, 23667), (8, 23691), (9, 23718), (12, 23739), (19, 23895), (24, 23931), (28, 23964), (29, 23970), (30, 23985), (45, 24129), (50, 24171), (51, 24174), (62, 24255), (82, 24393), (83, 24399), (88, 24438), (94, 24465), (98, 24486), (100, 24495), (104, 24549), (107, 24558), (111, 24573), (114, 24597), (116, 24606), (118, 24621), (129, 24747), (132, 24768), (135, 24807), (136, 24819), (147, 24909), (148, 24912), (149, 24936), (150, 24945), (153, 24975), (157, 25047), (158, 25050), (161, 25083), (165, 25113), (191, 25320), (198, 25359), (201, 25389), (217, 25506),

Gene: PierreOrion_37 Start: 23645, Stop: 25597, Start Num: 2

Candidate Starts for PierreOrion_37:

(Start: 2 @23645 has 34 MA's), (7, 23690), (8, 23714), (9, 23741), (12, 23762), (19, 23918), (24, 23954), (28, 23987), (29, 23993), (30, 24008), (45, 24152), (50, 24194), (51, 24197), (62, 24278), (82, 24416), (83, 24422), (88, 24461), (98, 24509), (100, 24518), (104, 24572), (107, 24581), (111, 24596), (114, 24620), (116, 24629), (118, 24644), (129, 24770), (132, 24791), (135, 24830), (136, 24842), (147, 24932), (148, 24935), (149, 24959), (150, 24968), (153, 24998), (157, 25070), (158, 25073), (161, 25106), (165, 25136), (191, 25343), (198, 25382), (201, 25412), (217, 25529),

Gene: PiperSansNom_37 Start: 23797, Stop: 25737, Start Num: 2

Candidate Starts for PiperSansNom_37:

(Start: 2 @23797 has 34 MA's), (7, 23842), (8, 23866), (9, 23893), (12, 23914), (19, 24070), (24, 24106), (28, 24139), (29, 24145), (30, 24160), (45, 24304), (50, 24346), (55, 24391), (62, 24424), (77, 24532), (81, 24559), (82, 24562), (88, 24607), (94, 24634), (95, 24637), (107, 24727), (114, 24766), (116, 24775), (118, 24790), (135, 24976), (147, 25078), (148, 25081), (149, 25105), (150, 25114), (153, 25144), (158, 25219), (175, 25348), (183, 25417), (184, 25429), (194, 25498), (210, 25609), (213, 25645), (223, 25729),

Gene: Piperis_37 Start: 23467, Stop: 25419, Start Num: 2

Candidate Starts for Piperis_37:

(Start: 2 @23467 has 34 MA's), (7, 23512), (8, 23536), (9, 23563), (12, 23584), (19, 23740), (24, 23776), (28, 23809), (29, 23815), (30, 23830), (45, 23974), (50, 24016), (51, 24019), (62, 24100), (82, 24238), (83, 24244), (88, 24283), (94, 24310), (104, 24394), (107, 24403), (111, 24418), (114, 24442), (116, 24451), (118, 24466), (129, 24592), (132, 24613), (135, 24652), (136, 24664), (147, 24754), (148, 24757), (149, 24781), (150, 24790), (153, 24820), (157, 24892), (158, 24895), (161, 24928), (165, 24958), (172, 24994), (191, 25165), (195, 25186), (201, 25234), (217, 25351),

Gene: Pulchra_38 Start: 23867, Stop: 25813, Start Num: 2

Candidate Starts for Pulchra_38:

(Start: 2 @23867 has 34 MA's), (7, 23912), (8, 23936), (9, 23963), (12, 23984), (19, 24140), (24, 24176), (28, 24209), (29, 24215), (30, 24230), (45, 24374), (50, 24416), (62, 24494), (81, 24629), (82, 24632), (88, 24677), (94, 24704), (95, 24707), (107, 24797), (114, 24836), (116, 24845), (118, 24860), (132, 25007), (135, 25046), (136, 25058), (147, 25148), (148, 25151), (149, 25175), (150, 25184), (158, 25289), (161, 25322), (165, 25352), (191, 25559), (198, 25598), (201, 25628), (217, 25745),

Gene: Quammi_35 Start: 26053, Stop: 27393, Start Num: 53

Candidate Starts for Quammi_35:

(Start: 53 @26053 has 28 MA's), (57, 26077), (69, 26149), (110, 26380), (125, 26503), (142, 26635), (149, 26710), (155, 26761), (156, 26785), (159, 26827), (189, 27091), (192, 27109), (196, 27139), (213, 27286), (214, 27292), (222, 27379),

Gene: Quhwah_40 Start: 24093, Stop: 26045, Start Num: 2

Candidate Starts for Quhwah_40:

(Start: 2 @24093 has 34 MA's), (7, 24138), (8, 24162), (9, 24189), (12, 24210), (19, 24366), (24, 24402), (28, 24435), (29, 24441), (30, 24456), (45, 24600), (50, 24642), (51, 24645), (52, 24663), (62, 24726), (82, 24864), (83, 24870), (88, 24909), (94, 24936), (98, 24957), (100, 24966), (104, 25020), (107, 25029), (111, 25044), (114, 25068), (116, 25077), (118, 25092), (129, 25218), (132, 25239), (135, 25278), (136, 25290), (147, 25380), (148, 25383), (149, 25407), (150, 25416), (153, 25446), (157, 25518), (158, 25521), (161, 25554), (198, 25830), (201, 25860), (217, 25977),

Gene: Ramiel05_36 Start: 23502, Stop: 25448, Start Num: 2

Candidate Starts for Ramiel05_36:

(Start: 2 @23502 has 34 MA's), (7, 23547), (8, 23571), (9, 23598), (12, 23619), (19, 23775), (24, 23811), (28, 23844), (29, 23850), (30, 23865), (45, 24009), (50, 24051), (62, 24129), (81, 24264), (82, 24267), (88, 24312), (94, 24339), (95, 24342), (107, 24432), (114, 24471), (116, 24480), (118, 24495), (132, 24642), (135, 24681), (136, 24693), (147, 24783), (148, 24786), (149, 24810), (150, 24819), (157, 24921), (158, 24924), (161, 24957), (165, 24987), (191, 25194), (198, 25233), (201, 25263), (217, 25380),

Gene: Rasputia_72 Start: 44029, Stop: 45960, Start Num: 3

Candidate Starts for Rasputia_72:

(Start: 3 @44029 has 12 MA's), (5, 44047), (7, 44071), (9, 44119), (21, 44305), (24, 44332), (28, 44365), (29, 44371), (32, 44419), (33, 44428), (34, 44434), (37, 44464), (40, 44491), (64, 44659), (68,

44692), (79, 44758), (83, 44785), (85, 44794), (86, 44797), (87, 44800), (92, 44842), (111, 44935), (120, 45007), (133, 45118), (137, 45175), (139, 45190), (146, 45250), (148, 45259), (154, 45328), (155, 45331), (167, 45469), (184, 45616), (187, 45646), (188, 45652), (189, 45658), (198, 45718), (203, 45766), (210, 45817), (212, 45832), (214, 45859), (217, 45877), (220, 45940), (222, 45946), (223, 45952),

Gene: RobinRose_38 Start: 25217, Stop: 27190, Start Num: 3

Candidate Starts for RobinRose_38:

(Start: 3 @25217 has 12 MA's), (4, 25220), (15, 25355), (27, 25547), (29, 25562), (33, 25619), (39, 25673), (41, 25685), (59, 25823), (96, 26057), (103, 26114), (117, 26189), (137, 26399), (139, 26414), (149, 26513), (150, 26522), (155, 26564), (162, 26666), (175, 26762), (189, 26891), (203, 26996), (214, 27089), (216, 27098), (222, 27176),

Gene: Romm_38 Start: 25217, Stop: 27190, Start Num: 3

Candidate Starts for Romm_38:

(Start: 3 @25217 has 12 MA's), (4, 25220), (15, 25355), (27, 25547), (29, 25562), (33, 25619), (39, 25673), (41, 25685), (59, 25823), (96, 26057), (103, 26114), (117, 26189), (137, 26399), (139, 26414), (149, 26513), (150, 26522), (155, 26564), (162, 26666), (175, 26762), (189, 26891), (203, 26996), (214, 27089), (216, 27098), (222, 27176),

Gene: Rowlf_33 Start: 26228, Stop: 27568, Start Num: 53

Candidate Starts for Rowlf_33:

(Start: 53 @26228 has 28 MA's), (57, 26252), (69, 26324), (102, 26507), (110, 26555), (125, 26678), (142, 26810), (149, 26885), (155, 26936), (156, 26960), (159, 27002), (189, 27266), (192, 27284), (196, 27314), (213, 27461), (214, 27467), (222, 27554),

Gene: Rudy_35 Start: 26086, Stop: 27426, Start Num: 53

Candidate Starts for Rudy_35:

(Start: 53 @26086 has 28 MA's), (57, 26110), (69, 26182), (110, 26413), (125, 26536), (142, 26668), (149, 26743), (155, 26794), (156, 26818), (159, 26860), (189, 27124), (192, 27142), (196, 27172), (213, 27319), (214, 27325), (222, 27412),

Gene: SallyK_38 Start: 27030, Stop: 28373, Start Num: 53

Candidate Starts for SallyK_38:

(Start: 53 @27030 has 28 MA's), (57, 27054), (69, 27126), (102, 27309), (110, 27357), (125, 27480), (137, 27579), (142, 27612), (149, 27687), (155, 27738), (156, 27762), (159, 27804), (162, 27840), (186, 28044), (192, 28086), (212, 28245), (213, 28266), (217, 28290), (222, 28359),

Gene: Savannah_36 Start: 23529, Stop: 25475, Start Num: 2

Candidate Starts for Savannah_36:

(Start: 2 @23529 has 34 MA's), (7, 23574), (8, 23598), (9, 23625), (12, 23646), (19, 23802), (24, 23838), (28, 23871), (29, 23877), (30, 23892), (45, 24036), (50, 24078), (62, 24156), (81, 24291), (82, 24294), (88, 24339), (94, 24366), (95, 24369), (107, 24459), (114, 24498), (116, 24507), (118, 24522), (132, 24669), (135, 24708), (136, 24720), (147, 24810), (148, 24813), (149, 24837), (150, 24846), (157, 24948), (158, 24951), (161, 24984), (165, 25014), (191, 25221), (198, 25260), (201, 25290), (217, 25407),

Gene: Scumberland_38 Start: 23718, Stop: 25670, Start Num: 2

Candidate Starts for Scumberland_38:

(Start: 2 @23718 has 34 MA's), (7, 23763), (8, 23787), (9, 23814), (12, 23835), (19, 23991), (24, 24027), (28, 24060), (29, 24066), (30, 24081), (45, 24225), (50, 24267), (51, 24270), (62, 24351), (82, 24489), (83, 24495), (88, 24534), (94, 24561), (98, 24582), (100, 24591), (104, 24645), (107, 24654), (111, 24669), (114, 24693), (116, 24702), (118, 24717), (129, 24843), (132, 24864), (135, 24903),

(136, 24915), (147, 25005), (148, 25008), (149, 25032), (150, 25041), (153, 25071), (157, 25143), (158, 25146), (161, 25179), (165, 25209), (191, 25416), (195, 25437), (198, 25455), (201, 25485), (217, 25602),

Gene: Selwyn23_38 Start: 23695, Stop: 25647, Start Num: 2

Candidate Starts for Selwyn23_38:

(Start: 2 @23695 has 34 MA's), (7, 23740), (8, 23764), (9, 23791), (12, 23812), (19, 23968), (24, 24004), (28, 24037), (29, 24043), (30, 24058), (45, 24202), (50, 24244), (51, 24247), (62, 24328), (82, 24466), (83, 24472), (88, 24511), (94, 24538), (98, 24559), (100, 24568), (104, 24622), (107, 24631), (111, 24646), (114, 24670), (116, 24679), (118, 24694), (129, 24820), (132, 24841), (135, 24880), (136, 24892), (147, 24982), (148, 24985), (149, 25009), (150, 25018), (153, 25048), (157, 25120), (158, 25123), (161, 25156), (165, 25186), (191, 25393), (195, 25414), (198, 25432), (201, 25462), (217, 25579),

Gene: Shotgun_36 Start: 23328, Stop: 25274, Start Num: 2

Candidate Starts for Shotgun_36:

(Start: 2 @23328 has 34 MA's), (7, 23373), (8, 23397), (9, 23424), (12, 23445), (19, 23601), (24, 23637), (28, 23670), (29, 23676), (30, 23691), (45, 23835), (50, 23877), (55, 23922), (62, 23955), (77, 24063), (81, 24090), (82, 24093), (88, 24138), (94, 24165), (95, 24168), (107, 24258), (114, 24297), (116, 24306), (118, 24321), (135, 24507), (147, 24609), (148, 24612), (149, 24636), (150, 24645), (153, 24675), (158, 24750), (161, 24783), (165, 24813), (191, 25020), (198, 25059), (201, 25089), (217, 25206),

Gene: Sillytadpoles_38 Start: 25920, Stop: 27263, Start Num: 53

Candidate Starts for Sillytadpoles_38:

(Start: 53 @25920 has 28 MA's), (57, 25944), (69, 26016), (102, 26199), (110, 26247), (125, 26370), (142, 26502), (149, 26577), (155, 26628), (156, 26652), (159, 26694), (162, 26730), (186, 26934), (192, 26976), (212, 27135), (213, 27156), (217, 27180), (222, 27249),

Gene: SirFrank_36 Start: 23432, Stop: 25330, Start Num: 2

Candidate Starts for SirFrank_36:

(Start: 2 @23432 has 34 MA's), (7, 23477), (9, 23528), (12, 23549), (16, 23636), (18, 23690), (24, 23741), (28, 23774), (29, 23780), (30, 23795), (45, 23939), (67, 24089), (76, 24164), (78, 24170), (80, 24182), (82, 24188), (83, 24194), (88, 24233), (93, 24257), (113, 24365), (116, 24380), (117, 24386), (118, 24395), (127, 24482), (136, 24575), (137, 24584), (138, 24593), (147, 24665), (148, 24668), (149, 24692), (157, 24803), (158, 24806), (161, 24839), (165, 24869), (191, 25076), (210, 25202), (213, 25238), (214, 25244), (223, 25322),

Gene: Squash_39 Start: 26994, Stop: 28340, Start Num: 53

Candidate Starts for Squash_39:

(Start: 53 @26994 has 28 MA's), (57, 27018), (69, 27090), (102, 27273), (110, 27321), (121, 27393), (125, 27444), (134, 27498), (142, 27576), (149, 27651), (155, 27702), (156, 27726), (159, 27768), (171, 27867), (175, 27900), (189, 28035), (210, 28197), (222, 28326),

Gene: Statler_39 Start: 26839, Stop: 28179, Start Num: 53

Candidate Starts for Statler_39:

(Start: 53 @26839 has 28 MA's), (57, 26863), (69, 26935), (102, 27118), (110, 27166), (125, 27289), (134, 27343), (142, 27421), (149, 27496), (155, 27547), (156, 27571), (159, 27613), (189, 27877), (192, 27895), (195, 27922), (196, 27925), (213, 28072), (214, 28078), (217, 28096), (222, 28165),

Gene: StrawberryJamm_39 Start: 26290, Stop: 27630, Start Num: 53

Candidate Starts for StrawberryJamm_39:

(Start: 53 @26290 has 28 MA's), (57, 26314), (69, 26386), (110, 26617), (125, 26740), (142, 26872), (149, 26947), (155, 26998), (156, 27022), (159, 27064), (189, 27328), (192, 27346), (196, 27376), (213, 27523), (214, 27529), (222, 27616),

Gene: Sunny_ Start: 25562, Stop: 26968, Start Num: 46

Candidate Starts for Sunny_:

(Start: 46 @25562 has 2 MA's), (49, 25595), (56, 25652), (72, 25745), (106, 25940), (144, 26228), (146, 26258), (149, 26291), (151, 26312), (157, 26402), (173, 26525), (184, 26630), (188, 26669), (199, 26738), (206, 26786), (214, 26867), (222, 26954),

Gene: Teehee_38 Start: 27156, Stop: 28496, Start Num: 53

Candidate Starts for Teehee_38:

(Start: 53 @27156 has 28 MA's), (57, 27180), (69, 27252), (102, 27435), (110, 27483), (125, 27606), (142, 27738), (149, 27813), (155, 27864), (156, 27888), (159, 27930), (160, 27948), (161, 27960), (189, 28194), (192, 28212), (195, 28239), (196, 28242), (213, 28389), (214, 28395), (217, 28413), (222, 28482),

Gene: Tempo_36 Start: 25093, Stop: 27066, Start Num: 3

Candidate Starts for Tempo_36:

(Start: 3 @25093 has 12 MA's), (4, 25096), (15, 25231), (27, 25423), (29, 25438), (33, 25495), (39, 25549), (41, 25561), (45, 25594), (59, 25699), (96, 25933), (103, 25990), (117, 26065), (137, 26275), (139, 26290), (149, 26389), (150, 26398), (155, 26440), (162, 26542), (175, 26638), (189, 26767), (203, 26872), (214, 26965), (216, 26974), (222, 27052),

Gene: Terij_33 Start: 22891, Stop: 24228, Start Num: 2

Candidate Starts for Terij_33:

(Start: 2 @22891 has 34 MA's), (9, 22987), (16, 23095), (20, 23167), (24, 23200), (28, 23233), (29, 23239), (30, 23254), (40, 23359), (48, 23398), (97, 23437), (138, 23503), (146, 23569), (147, 23575), (150, 23611), (151, 23623), (156, 23677), (157, 23713), (164, 23776), (175, 23842), (189, 23959), (195, 23995), (206, 24073), (207, 24079), (213, 24136), (217, 24160), (222, 24214), (223, 24220),

Gene: Tissue_37 Start: 26673, Stop: 28016, Start Num: 53

Candidate Starts for Tissue_37:

(Start: 53 @26673 has 28 MA's), (57, 26697), (69, 26769), (110, 27000), (125, 27123), (137, 27222), (142, 27255), (149, 27330), (155, 27381), (156, 27405), (159, 27447), (190, 27726), (195, 27759), (196, 27762), (204, 27825), (222, 28002),

Gene: Viceroy_35 Start: 26053, Stop: 27393, Start Num: 53

Candidate Starts for Viceroy_35:

(Start: 53 @26053 has 28 MA's), (57, 26077), (69, 26149), (110, 26380), (125, 26503), (142, 26635), (149, 26710), (155, 26761), (156, 26785), (159, 26827), (189, 27091), (192, 27109), (196, 27139), (213, 27286), (214, 27292), (222, 27379),

Gene: Wayne3_38 Start: 26919, Stop: 28259, Start Num: 53

Candidate Starts for Wayne3_38:

(Start: 53 @26919 has 28 MA's), (57, 26943), (69, 27015), (102, 27198), (110, 27246), (125, 27369), (142, 27501), (149, 27576), (155, 27627), (156, 27651), (159, 27693), (160, 27711), (161, 27723), (189, 27957), (192, 27975), (195, 28002), (196, 28005), (213, 28152), (214, 28158), (217, 28176), (222, 28245),

Gene: Wheelie_36 Start: 26237, Stop: 27580, Start Num: 53

Candidate Starts for Wheelie_36:

(Start: 53 @26237 has 28 MA's), (57, 26261), (69, 26333), (102, 26516), (110, 26564), (125, 26687), (142, 26819), (149, 26894), (155, 26945), (156, 26969), (159, 27011), (162, 27047), (186, 27251), (192, 27293), (212, 27452), (213, 27473), (217, 27497), (222, 27566),

Gene: Wilca_36 Start: 24913, Stop: 26256, Start Num: 53

Candidate Starts for Wilca_36:

(Start: 53 @24913 has 28 MA's), (57, 24937), (89, 25138), (92, 25147), (110, 25240), (121, 25312), (125, 25363), (131, 25399), (133, 25414), (142, 25495), (149, 25570), (154, 25618), (155, 25621), (156, 25645), (161, 25717), (167, 25759), (175, 25819), (181, 25885), (198, 26017), (204, 26065), (205, 26074), (212, 26128), (222, 26242),

Gene: Yeti_37 Start: 23497, Stop: 25449, Start Num: 2

Candidate Starts for Yeti_37:

(Start: 2 @23497 has 34 MA's), (7, 23542), (8, 23566), (9, 23593), (12, 23614), (19, 23770), (24, 23806), (28, 23839), (29, 23845), (30, 23860), (45, 24004), (50, 24046), (51, 24049), (62, 24130), (82, 24268), (83, 24274), (88, 24313), (94, 24340), (98, 24361), (100, 24370), (104, 24424), (107, 24433), (111, 24448), (114, 24472), (116, 24481), (118, 24496), (129, 24622), (132, 24643), (135, 24682), (136, 24694), (147, 24784), (148, 24787), (149, 24811), (150, 24820), (153, 24850), (157, 24922), (158, 24925), (161, 24958), (165, 24988), (191, 25195), (198, 25234), (201, 25264), (217, 25381),

Gene: Zagie_36 Start: 26491, Stop: 27831, Start Num: 53

Candidate Starts for Zagie_36:

(Start: 53 @26491 has 28 MA's), (57, 26515), (69, 26587), (110, 26818), (125, 26941), (142, 27073), (149, 27148), (155, 27199), (156, 27223), (159, 27265), (185, 27499), (189, 27529), (192, 27547), (195, 27574), (196, 27577), (213, 27724), (214, 27730), (217, 27748), (222, 27817),

Gene: Zhafia_40 Start: 26715, Stop: 28058, Start Num: 53

Candidate Starts for Zhafia_40:

(Start: 53 @26715 has 28 MA's), (57, 26739), (69, 26811), (102, 26994), (110, 27042), (125, 27165), (142, 27297), (149, 27372), (155, 27423), (156, 27447), (159, 27489), (162, 27525), (186, 27729), (192, 27771), (212, 27930), (213, 27951), (217, 27975), (222, 28044),