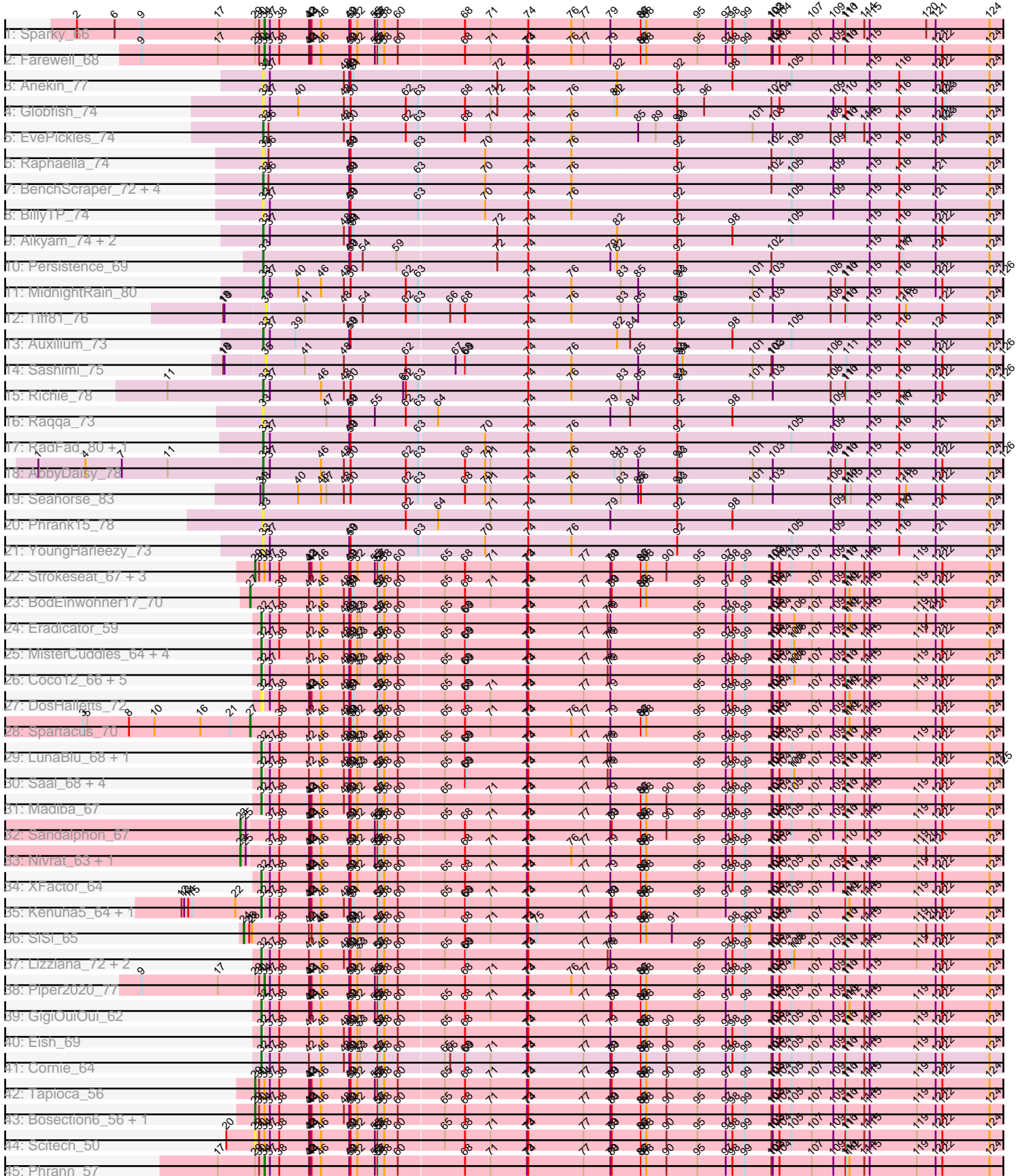


Zoomed Pham 163007



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 163007 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163007 has 74 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Sparky_66
- Track 2 : Farewell_68
- Track 3 : Anekin_77
- Track 4 : Globfish_74
- Track 5 : EvePickles_74
- Track 6 : Raphaella_74
- Track 7 : BenchScraper_72, Isolde_73, CookieBear_72, Faja_78, Hestia_69
- Track 8 : BillyTP_74
- Track 9 : Aikyam_74, Sakai_72, Gorpy_73
- Track 10 : Persistence_69
- Track 11 : MidnightRain_80
- Track 12 : Tiff81_76
- Track 13 : Auxilium_73
- Track 14 : Sashimi_75
- Track 15 : Richie_78
- Track 16 : Raqqa_73
- Track 17 : RadFad_80, Hillester_79
- Track 18 : AbbyDaisy_78
- Track 19 : Seahorse_83
- Track 20 : Phrank15_78
- Track 21 : YoungHarleezy_73
- Track 22 : Strokeseat_67, Andies_52, Hlubikazi_67, Mandlovu_67
- Track 23 : BodEinwohner17_70
- Track 24 : Eradicator_59
- Track 25 : MisterCuddles_64, Ruby_62, Girr_64, Alexphander_70, Zerg_66
- Track 26 : Coco12_66, Sarma624_65, Cerasum_63, Kingsley_64, BigPhil_63, Velveteen_62
- Track 27 : DosHalletts_72
- Track 28 : Spartacus_70
- Track 29 : LunaBlu_68, Galactic_65
- Track 30 : Saal_68, James_70, Gorge_70, Mattes_70, OlympiaSaint_68
- Track 31 : Madiba_67
- Track 32 : Sandalphon_67
- Track 33 : Nivrat_63, LilMoolah_65
- Track 34 : XFactor_64
- Track 35 : Kenuha5_64, SuperGrey_70
- Track 36 : SiSi_65

- Track 37 : Lizziana_72, GUmbie_64, RockyHorror_67
- Track 38 : Piper2020_77
- Track 39 : GigiOuiOui_62
- Track 40 : Eish_69
- Track 41 : Cornie_64
- Track 42 : Tapioca_56
- Track 43 : Bosection6_56, Charlie_56
- Track 44 : Scitech_50
- Track 45 : Phrann_57

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

The start number called the most often in the published annotations is 32, it was called in 29 of the 58 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alexphander_70, BigPhil_63, Cerasum_63, Coco12_66, Cornie_64, DosHalletts_72, Eish_69, Eradicator_59, GUmbie_64, Galactic_65, GigiOuiOui_62, Girr_64, Gorge_70, James_70, Kenuha5_64, Kingsley_64, Lizziana_72, LunaBlu_68, Madiba_67, Mattes_70, MisterCuddles_64, OlympiaSaint_68, RockyHorror_67, Ruby_62, Saal_68, Sarma624_65, SuperGrey_70, Velveteen_62, XFactor_64, Zerg_66,

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

-

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

- AbbyDaisy_78, Aikyam_74, Andies_52, Anekin_77, Auxilium_73, BenchScraper_72, BillyTP_74, BodEinwohner17_70, Bosection6_56, Charlie_56, CookieBear_72, EvePickles_74, Faja_78, Farewell_68, Globfish_74, Gorpy_73, Hestia_69, Hillester_79, Hlubikazi_67, Isolde_73, LilMoolah_65, Mandlovu_67, MidnightRain_80, Nivrat_63, Persistence_69, Phrank15_78, Phrann_57, Piper2020_77, RadFad_80, Raphaella_74, Raqqa_73, Richie_78, Sakai_72, Sandalphon_67, Sashimi_75, Scitech_50, Seahorse_83, SiSi_65, Sparky_66, Spartacus_70, Strokeseat_67, Tapioca_56, Tiff81_76, YoungHarleezy_73,

Summary by start number:

Start 23:

- Found in 3 of 74 (4.1%) of genes in pham
- Manual Annotations of this start: 3 of 58
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilMoolah_65 (F1), Nivrat_63 (F1), Sandalphon_67 (F1),

Start 24:

- Found in 1 of 74 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 58
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SiSi_65 (F1),

Start 27:

- Found in 2 of 74 (2.7%) of genes in pham
- Manual Annotations of this start: 2 of 58
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BodEinwohner17_70 (F1), Spartacus_70 (F1),

Start 29:

- Found in 12 of 74 (16.2%) of genes in pham
- Manual Annotations of this start: 6 of 58
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Andies_52 (N), Bosection6_56 (N), Charlie_56 (N), Hlubikazi_67 (F1), Mandlovu_67 (F1), Scitech_50 (N), Strokeseat_67 (F1), Tapioca_56 (N),

Start 32:

- Found in 30 of 74 (40.5%) of genes in pham
- Manual Annotations of this start: 29 of 58
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alexphander_70 (F1), BigPhil_63 (F1), Cerasum_63 (F1), Coco12_66 (F1), Cornie_64 (F5), DosHalletts_72 (F1), Eish_69 (F1), Eradicator_59 (F1), GUmbie_64 (F1), Galactic_65 (F1), GigiOuiOui_62 (F1), Girr_64 (F1), Gorge_70 (F1), James_70 (F1), Kenuha5_64 (F1), Kingsley_64 (F1), Lizziana_72 (F1), LunaBlu_68 (F1), Madiba_67 (F1), Mattes_70 (F1), MisterCuddles_64 (F1), OlympiaSaint_68 (F1), RockyHorror_67 (F1), Ruby_62 (F1), Saal_68 (F1), Sarma624_65 (F1), SuperGrey_70 (F1), Velveteen_62 (F1), XFactor_64 (F1), Zerg_66 (F1),

Start 33:

- Found in 24 of 74 (32.4%) of genes in pham
- Manual Annotations of this start: 13 of 58
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbyDaisy_78 (AY), Aikyam_74 (AY), Anekin_77 (AY), Auxilium_73 (AY), BenchScraper_72 (AY), BillyTP_74 (AY), CookieBear_72 (AY), EvePickles_74 (AY), Faja_78 (AY), Globfish_74 (AY), Gorpy_73 (AY), Hestia_69 (AY), Hillester_79 (AY), Isolde_73 (AY), MidnightRain_80 (AY), Persistence_69 (AY), Phrank15_78 (AY), RadFad_80 (AY), Raphaella_74 (AY), Raqqa_73 (AY), Richie_78 (AY), Sakai_72 (AY), Seahorse_83 (AY), YoungHarleezy_73 (AY),

Start 34:

- Found in 12 of 74 (16.2%) of genes in pham
- Manual Annotations of this start: 4 of 58
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Farewell_68 (AF), Phrann_57 (N), Piper2020_77 (F1), Sparky_66 (AF),

Start 35:

- Found in 2 of 74 (2.7%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sashimi_75 (AY), Tiff81_76 (AY),

Summary by clusters:

There are 5 clusters represented in this pham: AY, F1, AF, F5, N,

Info for manual annotations of cluster AF:

- Start number 34 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AY:

- Start number 33 was manually annotated 13 times for cluster AY.

Info for manual annotations of cluster F1:

- Start number 23 was manually annotated 3 times for cluster F1.
- Start number 24 was manually annotated 1 time for cluster F1.
- Start number 27 was manually annotated 2 times for cluster F1.
- Start number 29 was manually annotated 3 times for cluster F1.
- Start number 32 was manually annotated 28 times for cluster F1.
- Start number 34 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F5:

- Start number 32 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster N:

- Start number 29 was manually annotated 3 times for cluster N.
- Start number 34 was manually annotated 1 time for cluster N.

Gene Information:

Gene: AbbyDaisy_78 Start: 41569, Stop: 44097, Start Num: 33

Candidate Starts for AbbyDaisy_78:

(1, 41074), (4, 41179), (7, 41260), (11, 41362), (Start: 33 @41569 has 13 MA's), (37, 41584), (46, 41695), (48, 41746), (50, 41761), (62, 41878), (63, 41905), (68, 42004), (70, 42049), (71, 42061), (74, 42145), (76, 42241), (81, 42337), (83, 42349), (85, 42388), (92, 42475), (93, 42481), (101, 42643), (103, 42688), (108, 42817), (110, 42850), (111, 42853), (115, 42904), (116, 42970), (121, 43048), (122, 43063), (124, 43168), (126, 43198), (128, 43231), (132, 43282), (134, 43318), (136, 43345), (143, 43432), (152, 43636), (154, 43663), (155, 43672), (157, 43744), (161, 43798), (163, 43834), (164, 43840), (169, 43912), (170, 43933), (179, 44053),

Gene: Aikyam_74 Start: 37985, Stop: 40513, Start Num: 33

Candidate Starts for Aikyam_74:

(Start: 33 @37985 has 13 MA's), (37, 38000), (48, 38162), (49, 38174), (50, 38177), (51, 38183), (72, 38492), (74, 38561), (82, 38759), (92, 38891), (98, 39014), (105, 39146), (115, 39320), (116, 39386), (121, 39464), (122, 39479), (124, 39584), (132, 39698), (133, 39713), (136, 39761), (143, 39848), (152, 40052), (157, 40160), (160, 40205), (161, 40214), (164, 40256), (167, 40286), (179, 40469),

Gene: Alexphander_70 Start: 42641, Stop: 45160, Start Num: 32

Candidate Starts for Alexphander_70:

(Start: 32 @42641 has 29 MA's), (37, 42653), (38, 42671), (42, 42737), (46, 42764), (48, 42815), (49, 42827), (50, 42830), (52, 42845), (53, 42851), (56, 42890), (57, 42893), (58, 42905), (60, 42935), (65, 43031), (68, 43076), (69, 43079), (73, 43214), (74, 43217), (77, 43340), (78, 43394), (79, 43400), (95, 43592), (97, 43655), (98, 43670), (99, 43697), (102, 43757), (103, 43760), (104, 43775), (105, 43802),

(106, 43808), (107, 43847), (109, 43895), (110, 43922), (111, 43925), (114, 43964), (115, 43976), (119, 44081), (121, 44120), (122, 44135), (124, 44240), (129, 44318), (131, 44345), (132, 44354), (136, 44417), (137, 44426), (139, 44438), (140, 44441), (143, 44504), (150, 44627), (157, 44816), (159, 44849), (160, 44861), (161, 44870), (162, 44879), (164, 44912), (165, 44918), (168, 44981), (169, 44984), (171, 45014), (172, 45020), (179, 45125),

Gene: Andies_52 Start: 35603, Stop: 38227, Start Num: 29

Candidate Starts for Andies_52:

(Start: 29 @35603 has 6 MA's), (30, 35609), (Start: 34 @35618 has 4 MA's), (37, 35630), (38, 35648), (42, 35714), (43, 35717), (44, 35720), (46, 35741), (49, 35804), (50, 35807), (52, 35822), (55, 35861), (56, 35867), (57, 35870), (58, 35882), (60, 35912), (65, 36008), (68, 36053), (71, 36110), (73, 36191), (74, 36194), (77, 36317), (79, 36377), (80, 36380), (86, 36443), (87, 36446), (88, 36455), (90, 36500), (95, 36569), (97, 36632), (98, 36647), (99, 36674), (102, 36734), (103, 36737), (104, 36752), (105, 36779), (107, 36824), (109, 36872), (110, 36899), (111, 36902), (114, 36941), (115, 36953), (119, 37058), (121, 37097), (122, 37112), (124, 37217), (129, 37295), (131, 37322), (132, 37331), (136, 37394), (139, 37415), (140, 37418), (143, 37481), (148, 37607), (149, 37625), (150, 37694), (153, 37784), (157, 37883), (159, 37916), (160, 37928), (161, 37937), (162, 37946), (164, 37979), (165, 37985), (168, 38048), (169, 38051), (171, 38081), (172, 38087), (178, 38165), (179, 38192),

Gene: Anekin_77 Start: 40557, Stop: 43085, Start Num: 33

Candidate Starts for Anekin_77:

(Start: 33 @40557 has 13 MA's), (37, 40572), (48, 40734), (49, 40746), (50, 40749), (51, 40755), (72, 41064), (74, 41133), (82, 41331), (92, 41463), (98, 41586), (105, 41718), (115, 41892), (116, 41958), (121, 42036), (122, 42051), (124, 42156), (132, 42270), (134, 42306), (135, 42327), (136, 42333), (138, 42345), (143, 42420), (146, 42495), (152, 42624), (154, 42651), (155, 42660), (157, 42732), (161, 42786), (163, 42822), (164, 42828), (167, 42858), (169, 42900), (170, 42921), (179, 43041),

Gene: Auxilium_73 Start: 37528, Stop: 40056, Start Num: 33

Candidate Starts for Auxilium_73:

(Start: 33 @37528 has 13 MA's), (37, 37543), (39, 37597), (49, 37717), (50, 37720), (74, 38104), (82, 38302), (84, 38329), (92, 38434), (98, 38557), (105, 38689), (115, 38863), (116, 38929), (121, 39007), (124, 39127), (132, 39241), (133, 39256), (136, 39304), (143, 39391), (152, 39595), (157, 39703), (160, 39748), (161, 39757), (164, 39799), (179, 40012),

Gene: BenchScraper_72 Start: 38690, Stop: 41218, Start Num: 33

Candidate Starts for BenchScraper_72:

(Start: 33 @38690 has 13 MA's), (36, 38702), (49, 38876), (50, 38879), (63, 39023), (70, 39167), (74, 39263), (76, 39359), (92, 39593), (102, 39803), (105, 39848), (109, 39941), (115, 40022), (116, 40088), (121, 40169), (124, 40289), (128, 40352), (135, 40460), (136, 40466), (142, 40532), (143, 40553), (157, 40865), (158, 40874), (161, 40919), (163, 40955), (164, 40961), (167, 40991), (173, 41078), (177, 41129),

Gene: BigPhil_63 Start: 39507, Stop: 42026, Start Num: 32

Candidate Starts for BigPhil_63:

(Start: 32 @39507 has 29 MA's), (37, 39519), (42, 39603), (46, 39630), (48, 39681), (49, 39693), (50, 39696), (52, 39711), (53, 39717), (56, 39756), (57, 39759), (58, 39771), (60, 39801), (65, 39897), (68, 39942), (69, 39945), (73, 40080), (74, 40083), (77, 40206), (78, 40260), (79, 40266), (95, 40458), (97, 40521), (98, 40536), (99, 40563), (102, 40623), (103, 40626), (104, 40641), (105, 40668), (106, 40674), (107, 40713), (109, 40761), (110, 40788), (111, 40791), (114, 40830), (115, 40842), (119, 40947), (121, 40986), (122, 41001), (124, 41106), (129, 41184), (131, 41211), (132, 41220), (136, 41283), (137, 41292), (139, 41304), (140, 41307), (143, 41370), (150, 41493), (152, 41574), (157, 41682), (159, 41715), (160, 41727), (161, 41736), (162, 41745), (164, 41778), (165, 41784), (168, 41847), (169, 41850), (171, 41880), (172, 41886), (179, 41991),

Gene: BillyTP_74 Start: 40518, Stop: 43049, Start Num: 33

Candidate Starts for BillyTP_74:

(Start: 33 @40518 has 13 MA's), (37, 40533), (49, 40707), (50, 40710), (63, 40854), (70, 40998), (74, 41094), (76, 41190), (92, 41424), (105, 41679), (109, 41772), (115, 41853), (116, 41919), (121, 42000), (124, 42120), (135, 42291), (136, 42297), (142, 42363), (143, 42384), (157, 42696), (158, 42705), (161, 42750), (163, 42786), (164, 42792), (167, 42822), (173, 42909), (177, 42960),

Gene: BodEinwohner17_70 Start: 43451, Stop: 46000, Start Num: 27

Candidate Starts for BodEinwohner17_70:

(Start: 27 @43451 has 2 MA's), (38, 43511), (42, 43577), (46, 43604), (48, 43655), (49, 43667), (50, 43670), (51, 43676), (56, 43730), (57, 43733), (58, 43745), (60, 43775), (65, 43871), (68, 43916), (71, 43973), (73, 44054), (74, 44057), (77, 44180), (79, 44240), (80, 44243), (86, 44306), (87, 44309), (88, 44318), (95, 44432), (97, 44495), (99, 44537), (102, 44597), (103, 44600), (104, 44615), (107, 44687), (109, 44735), (110, 44762), (111, 44765), (112, 44771), (114, 44804), (115, 44816), (119, 44921), (121, 44960), (122, 44975), (124, 45080), (129, 45158), (131, 45185), (132, 45194), (136, 45257), (137, 45266), (139, 45278), (140, 45281), (143, 45344), (150, 45467), (157, 45656), (159, 45689), (160, 45701), (161, 45710), (162, 45719), (164, 45752), (165, 45758), (166, 45767), (168, 45821), (169, 45824), (171, 45854), (172, 45860), (176, 45902), (179, 45965),

Gene: Bosection6_56 Start: 35309, Stop: 37933, Start Num: 29

Candidate Starts for Bosection6_56:

(Start: 29 @35309 has 6 MA's), (30, 35315), (Start: 34 @35324 has 4 MA's), (37, 35336), (38, 35354), (42, 35420), (43, 35423), (44, 35426), (46, 35447), (48, 35498), (49, 35510), (50, 35513), (52, 35528), (56, 35573), (57, 35576), (58, 35588), (60, 35618), (65, 35714), (68, 35759), (71, 35816), (73, 35897), (74, 35900), (77, 36023), (79, 36083), (80, 36086), (86, 36149), (87, 36152), (88, 36161), (90, 36206), (95, 36275), (97, 36338), (98, 36353), (99, 36380), (102, 36440), (103, 36443), (104, 36458), (105, 36485), (107, 36530), (109, 36578), (110, 36605), (111, 36608), (114, 36647), (115, 36659), (119, 36764), (121, 36803), (122, 36818), (124, 36923), (129, 37001), (131, 37028), (132, 37037), (136, 37100), (139, 37121), (140, 37124), (143, 37187), (148, 37313), (149, 37331), (150, 37400), (153, 37490), (157, 37589), (159, 37622), (160, 37634), (161, 37643), (162, 37652), (164, 37685), (165, 37691), (168, 37754), (169, 37757), (171, 37787), (172, 37793), (178, 37871), (179, 37898), (183, 37925),

Gene: Cerasum_63 Start: 39525, Stop: 42044, Start Num: 32

Candidate Starts for Cerasum_63:

(Start: 32 @39525 has 29 MA's), (37, 39537), (42, 39621), (46, 39648), (48, 39699), (49, 39711), (50, 39714), (52, 39729), (53, 39735), (56, 39774), (57, 39777), (58, 39789), (60, 39819), (65, 39915), (68, 39960), (69, 39963), (73, 40098), (74, 40101), (77, 40224), (78, 40278), (79, 40284), (95, 40476), (97, 40539), (98, 40554), (99, 40581), (102, 40641), (103, 40644), (104, 40659), (105, 40686), (106, 40692), (107, 40731), (109, 40779), (110, 40806), (111, 40809), (114, 40848), (115, 40860), (119, 40965), (121, 41004), (122, 41019), (124, 41124), (129, 41202), (131, 41229), (132, 41238), (136, 41301), (137, 41310), (139, 41322), (140, 41325), (143, 41388), (150, 41511), (152, 41592), (157, 41700), (159, 41733), (160, 41745), (161, 41754), (162, 41763), (164, 41796), (165, 41802), (168, 41865), (169, 41868), (171, 41898), (172, 41904), (179, 42009),

Gene: Charlie_56 Start: 34933, Stop: 37557, Start Num: 29

Candidate Starts for Charlie_56:

(Start: 29 @34933 has 6 MA's), (30, 34939), (Start: 34 @34948 has 4 MA's), (37, 34960), (38, 34978), (42, 35044), (43, 35047), (44, 35050), (46, 35071), (48, 35122), (49, 35134), (50, 35137), (52, 35152), (56, 35197), (57, 35200), (58, 35212), (60, 35242), (65, 35338), (68, 35383), (71, 35440), (73, 35521), (74, 35524), (77, 35647), (79, 35707), (80, 35710), (86, 35773), (87, 35776), (88, 35785), (90, 35830), (95, 35899), (97, 35962), (98, 35977), (99, 36004), (102, 36064), (103, 36067), (104, 36082), (105,

36109), (107, 36154), (109, 36202), (110, 36229), (111, 36232), (114, 36271), (115, 36283), (119, 36388), (121, 36427), (122, 36442), (124, 36547), (129, 36625), (131, 36652), (132, 36661), (136, 36724), (139, 36745), (140, 36748), (143, 36811), (148, 36937), (149, 36955), (150, 37024), (153, 37114), (157, 37213), (159, 37246), (160, 37258), (161, 37267), (162, 37276), (164, 37309), (165, 37315), (168, 37378), (169, 37381), (171, 37411), (172, 37417), (178, 37495), (179, 37522), (183, 37549),

Gene: Coco12_66 Start: 43582, Stop: 46101, Start Num: 32

Candidate Starts for Coco12_66:

(Start: 32 @43582 has 29 MA's), (37, 43594), (42, 43678), (46, 43705), (48, 43756), (49, 43768), (50, 43771), (52, 43786), (53, 43792), (56, 43831), (57, 43834), (58, 43846), (60, 43876), (65, 43972), (68, 44017), (69, 44020), (73, 44155), (74, 44158), (77, 44281), (78, 44335), (79, 44341), (95, 44533), (97, 44596), (98, 44611), (99, 44638), (102, 44698), (103, 44701), (104, 44716), (105, 44743), (106, 44749), (107, 44788), (109, 44836), (110, 44863), (111, 44866), (114, 44905), (115, 44917), (119, 45022), (121, 45061), (122, 45076), (124, 45181), (129, 45259), (131, 45286), (132, 45295), (136, 45358), (137, 45367), (139, 45379), (140, 45382), (143, 45445), (150, 45568), (152, 45649), (157, 45757), (159, 45790), (160, 45802), (161, 45811), (162, 45820), (164, 45853), (165, 45859), (168, 45922), (169, 45925), (171, 45955), (172, 45961), (179, 46066),

Gene: CookieBear_72 Start: 39164, Stop: 41692, Start Num: 33

Candidate Starts for CookieBear_72:

(Start: 33 @39164 has 13 MA's), (36, 39176), (49, 39350), (50, 39353), (63, 39497), (70, 39641), (74, 39737), (76, 39833), (92, 40067), (102, 40277), (105, 40322), (109, 40415), (115, 40496), (116, 40562), (121, 40643), (124, 40763), (128, 40826), (135, 40934), (136, 40940), (142, 41006), (143, 41027), (157, 41339), (158, 41348), (161, 41393), (163, 41429), (164, 41435), (167, 41465), (173, 41552), (177, 41603),

Gene: Cornie_64 Start: 41301, Stop: 43820, Start Num: 32

Candidate Starts for Cornie_64:

(Start: 32 @41301 has 29 MA's), (37, 41313), (38, 41331), (42, 41397), (46, 41424), (48, 41475), (49, 41487), (50, 41490), (52, 41505), (53, 41511), (56, 41550), (57, 41553), (58, 41565), (60, 41595), (65, 41691), (66, 41703), (68, 41736), (69, 41739), (71, 41793), (73, 41874), (74, 41877), (77, 42000), (79, 42060), (80, 42063), (86, 42126), (87, 42129), (88, 42138), (90, 42183), (95, 42252), (97, 42315), (98, 42330), (99, 42357), (102, 42417), (103, 42420), (104, 42435), (105, 42462), (107, 42507), (109, 42555), (110, 42582), (111, 42585), (114, 42624), (115, 42636), (119, 42741), (121, 42780), (122, 42795), (124, 42900), (129, 42978), (131, 43005), (132, 43014), (136, 43077), (137, 43086), (139, 43098), (140, 43101), (143, 43164), (150, 43287), (152, 43368), (157, 43476), (159, 43509), (160, 43521), (161, 43530), (162, 43539), (164, 43572), (165, 43578), (168, 43641), (169, 43644), (171, 43674), (172, 43680), (179, 43785),

Gene: DosHalletts_72 Start: 43662, Stop: 46181, Start Num: 32

Candidate Starts for DosHalletts_72:

(Start: 32 @43662 has 29 MA's), (37, 43674), (38, 43692), (42, 43758), (43, 43761), (44, 43764), (46, 43785), (48, 43836), (49, 43848), (50, 43851), (51, 43857), (56, 43911), (57, 43914), (58, 43926), (60, 43956), (65, 44052), (68, 44097), (69, 44100), (71, 44154), (73, 44235), (74, 44238), (77, 44361), (79, 44421), (95, 44613), (97, 44676), (98, 44691), (99, 44718), (102, 44778), (103, 44781), (104, 44796), (107, 44868), (109, 44916), (110, 44943), (111, 44946), (112, 44952), (114, 44985), (115, 44997), (119, 45102), (121, 45141), (122, 45156), (124, 45261), (129, 45339), (131, 45366), (132, 45375), (136, 45438), (137, 45447), (139, 45459), (140, 45462), (143, 45525), (150, 45648), (152, 45729), (157, 45837), (159, 45870), (160, 45882), (161, 45891), (162, 45900), (164, 45933), (165, 45939), (168, 46002), (169, 46005), (171, 46035), (172, 46041), (179, 46146),

Gene: Eish_69 Start: 42896, Stop: 45415, Start Num: 32

Candidate Starts for Eish_69:

(Start: 32 @42896 has 29 MA's), (37, 42908), (38, 42926), (42, 42992), (46, 43019), (48, 43070), (49, 43082), (50, 43085), (52, 43100), (53, 43106), (56, 43145), (57, 43148), (58, 43160), (60, 43190), (65, 43286), (68, 43331), (73, 43469), (74, 43472), (77, 43595), (79, 43655), (86, 43721), (87, 43724), (88, 43733), (90, 43778), (95, 43847), (97, 43910), (98, 43925), (99, 43952), (102, 44012), (103, 44015), (104, 44030), (105, 44057), (107, 44102), (109, 44150), (110, 44177), (111, 44180), (114, 44219), (115, 44231), (119, 44336), (121, 44375), (122, 44390), (124, 44495), (129, 44573), (131, 44600), (132, 44609), (136, 44672), (137, 44681), (139, 44693), (140, 44696), (143, 44759), (150, 44882), (152, 44963), (154, 44990), (157, 45071), (159, 45104), (160, 45116), (161, 45125), (162, 45134), (164, 45167), (165, 45173), (168, 45236), (169, 45239), (171, 45269), (172, 45275), (179, 45380),

Gene: Eradicator_59 Start: 40808, Stop: 43327, Start Num: 32

Candidate Starts for Eradicator_59:

(Start: 32 @40808 has 29 MA's), (37, 40820), (38, 40838), (42, 40904), (46, 40931), (48, 40982), (49, 40994), (50, 40997), (52, 41012), (53, 41018), (56, 41057), (57, 41060), (58, 41072), (60, 41102), (65, 41198), (68, 41243), (69, 41246), (73, 41381), (74, 41384), (77, 41507), (78, 41561), (79, 41567), (95, 41759), (97, 41822), (98, 41837), (99, 41864), (102, 41924), (103, 41927), (104, 41942), (106, 41975), (107, 42014), (109, 42062), (110, 42089), (111, 42092), (112, 42098), (114, 42131), (115, 42143), (119, 42248), (120, 42269), (121, 42287), (124, 42407), (129, 42485), (136, 42584), (137, 42593), (139, 42605), (140, 42608), (143, 42671), (150, 42794), (157, 42983), (159, 43016), (160, 43028), (161, 43037), (162, 43046), (164, 43079), (165, 43085), (166, 43094), (168, 43148), (169, 43151), (171, 43181), (172, 43187), (179, 43292),

Gene: EvePickles_74 Start: 40431, Stop: 42962, Start Num: 33

Candidate Starts for EvePickles_74:

(Start: 33 @40431 has 13 MA's), (36, 40443), (48, 40605), (50, 40620), (62, 40740), (63, 40767), (68, 40866), (71, 40923), (74, 41007), (76, 41103), (85, 41250), (89, 41289), (92, 41337), (93, 41343), (101, 41505), (103, 41550), (108, 41679), (110, 41712), (111, 41715), (114, 41754), (115, 41766), (116, 41832), (121, 41913), (122, 41928), (123, 41934), (124, 42033), (127, 42066), (130, 42123), (134, 42183), (135, 42204), (136, 42210), (142, 42276), (143, 42297), (147, 42378), (157, 42609), (158, 42618), (161, 42663), (164, 42705), (179, 42918),

Gene: Faja_78 Start: 41206, Stop: 43734, Start Num: 33

Candidate Starts for Faja_78:

(Start: 33 @41206 has 13 MA's), (36, 41218), (49, 41392), (50, 41395), (63, 41539), (70, 41683), (74, 41779), (76, 41875), (92, 42109), (102, 42319), (105, 42364), (109, 42457), (115, 42538), (116, 42604), (121, 42685), (124, 42805), (128, 42868), (135, 42976), (136, 42982), (142, 43048), (143, 43069), (157, 43381), (158, 43390), (161, 43435), (163, 43471), (164, 43477), (167, 43507), (173, 43594), (177, 43645),

Gene: Farewell_68 Start: 44606, Stop: 47125, Start Num: 34

Candidate Starts for Farewell_68:

(9, 44336), (17, 44504), (Start: 29 @44585 has 6 MA's), (30, 44594), (Start: 34 @44606 has 4 MA's), (37, 44618), (38, 44636), (42, 44702), (43, 44705), (44, 44708), (46, 44729), (49, 44792), (50, 44795), (52, 44810), (55, 44849), (56, 44855), (57, 44858), (58, 44870), (60, 44900), (68, 45041), (71, 45098), (73, 45179), (74, 45182), (76, 45278), (77, 45305), (79, 45365), (86, 45431), (87, 45434), (88, 45443), (95, 45557), (97, 45620), (98, 45635), (99, 45662), (102, 45722), (103, 45725), (104, 45740), (107, 45812), (109, 45860), (110, 45887), (111, 45890), (115, 45941), (121, 46085), (122, 46100), (124, 46205), (129, 46283), (136, 46382), (137, 46391), (139, 46403), (140, 46406), (143, 46469), (145, 46499), (150, 46592), (156, 46730), (157, 46781), (160, 46826), (161, 46835), (162, 46844), (164, 46877), (165, 46883), (166, 46892), (168, 46946), (169, 46949), (171, 46979), (172, 46985), (178, 47063), (179, 47090), (183, 47117),

Gene: GUmble_64 Start: 42035, Stop: 44554, Start Num: 32

Candidate Starts for GUmble_64:

(Start: 32 @42035 has 29 MA's), (37, 42047), (38, 42065), (42, 42131), (46, 42158), (48, 42209), (49, 42221), (50, 42224), (52, 42239), (53, 42245), (56, 42284), (57, 42287), (58, 42299), (60, 42329), (65, 42425), (68, 42470), (69, 42473), (73, 42608), (74, 42611), (77, 42734), (78, 42788), (79, 42794), (95, 42986), (97, 43049), (98, 43064), (99, 43091), (102, 43151), (103, 43154), (104, 43169), (105, 43196), (106, 43202), (107, 43241), (109, 43289), (110, 43316), (111, 43319), (114, 43358), (115, 43370), (119, 43475), (121, 43514), (122, 43529), (124, 43634), (129, 43712), (131, 43739), (132, 43748), (136, 43811), (137, 43820), (139, 43832), (140, 43835), (143, 43898), (150, 44021), (152, 44102), (157, 44210), (159, 44243), (160, 44255), (161, 44264), (162, 44273), (164, 44306), (165, 44312), (168, 44375), (169, 44378), (171, 44408), (172, 44414), (179, 44519),

Gene: Galactic_65 Start: 42192, Stop: 44711, Start Num: 32

Candidate Starts for Galactic_65:

(Start: 32 @42192 has 29 MA's), (37, 42204), (38, 42222), (42, 42288), (46, 42315), (48, 42366), (49, 42378), (50, 42381), (52, 42396), (53, 42402), (56, 42441), (57, 42444), (58, 42456), (60, 42486), (65, 42582), (68, 42627), (69, 42630), (73, 42765), (74, 42768), (77, 42891), (78, 42945), (79, 42951), (95, 43143), (97, 43206), (98, 43221), (99, 43248), (102, 43308), (103, 43311), (104, 43326), (105, 43353), (107, 43398), (109, 43446), (110, 43473), (111, 43476), (114, 43515), (115, 43527), (119, 43632), (121, 43671), (122, 43686), (124, 43791), (129, 43869), (131, 43896), (132, 43905), (136, 43968), (137, 43977), (139, 43989), (140, 43992), (143, 44055), (150, 44178), (152, 44259), (157, 44367), (159, 44400), (160, 44412), (161, 44421), (162, 44430), (164, 44463), (165, 44469), (168, 44532), (169, 44535), (171, 44565), (172, 44571), (179, 44676),

Gene: GigiOuiOui_62 Start: 41181, Stop: 43700, Start Num: 32

Candidate Starts for GigiOuiOui_62:

(Start: 32 @41181 has 29 MA's), (37, 41193), (38, 41211), (42, 41277), (43, 41280), (44, 41283), (46, 41304), (49, 41367), (50, 41370), (52, 41385), (55, 41424), (56, 41430), (57, 41433), (58, 41445), (60, 41475), (65, 41571), (68, 41616), (71, 41673), (73, 41754), (74, 41757), (77, 41880), (79, 41940), (80, 41943), (86, 42006), (87, 42009), (88, 42018), (95, 42132), (97, 42195), (99, 42237), (102, 42297), (103, 42300), (104, 42315), (105, 42342), (107, 42387), (109, 42435), (110, 42462), (111, 42465), (112, 42471), (114, 42504), (115, 42516), (119, 42621), (121, 42660), (122, 42675), (124, 42780), (129, 42858), (131, 42885), (132, 42894), (136, 42957), (137, 42966), (139, 42978), (140, 42981), (143, 43044), (150, 43167), (157, 43356), (159, 43389), (160, 43401), (161, 43410), (162, 43419), (164, 43452), (165, 43458), (168, 43521), (169, 43524), (171, 43554), (172, 43560), (179, 43665),

Gene: Girr_64 Start: 42051, Stop: 44570, Start Num: 32

Candidate Starts for Girr_64:

(Start: 32 @42051 has 29 MA's), (37, 42063), (38, 42081), (42, 42147), (46, 42174), (48, 42225), (49, 42237), (50, 42240), (52, 42255), (53, 42261), (56, 42300), (57, 42303), (58, 42315), (60, 42345), (65, 42441), (68, 42486), (69, 42489), (73, 42624), (74, 42627), (77, 42750), (78, 42804), (79, 42810), (95, 43002), (97, 43065), (98, 43080), (99, 43107), (102, 43167), (103, 43170), (104, 43185), (105, 43212), (106, 43218), (107, 43257), (109, 43305), (110, 43332), (111, 43335), (114, 43374), (115, 43386), (119, 43491), (121, 43530), (122, 43545), (124, 43650), (129, 43728), (131, 43755), (132, 43764), (136, 43827), (137, 43836), (139, 43848), (140, 43851), (143, 43914), (150, 44037), (157, 44226), (159, 44259), (160, 44271), (161, 44280), (162, 44289), (164, 44322), (165, 44328), (168, 44391), (169, 44394), (171, 44424), (172, 44430), (179, 44535),

Gene: Globfish_74 Start: 38895, Stop: 41429, Start Num: 33

Candidate Starts for Globfish_74:

(Start: 33 @38895 has 13 MA's), (37, 38910), (40, 38970), (48, 39072), (50, 39087), (62, 39207), (63, 39234), (68, 39333), (71, 39390), (72, 39405), (74, 39474), (76, 39570), (81, 39666), (82, 39672), (92, 39804), (96, 39864), (102, 40014), (104, 40032), (109, 40152), (110, 40179), (115, 40233), (116,

40299), (121, 40380), (122, 40395), (123, 40401), (124, 40500), (127, 40533), (130, 40590), (134, 40650), (135, 40671), (136, 40677), (142, 40743), (147, 40845), (157, 41076), (158, 41085), (161, 41130), (164, 41172), (179, 41385),

Gene: Gorge_70 Start: 43977, Stop: 46496, Start Num: 32

Candidate Starts for Gorge_70:

(Start: 32 @43977 has 29 MA's), (37, 43989), (38, 44007), (42, 44073), (46, 44100), (48, 44151), (49, 44163), (50, 44166), (52, 44181), (53, 44187), (56, 44226), (57, 44229), (58, 44241), (60, 44271), (65, 44367), (68, 44412), (69, 44415), (73, 44550), (74, 44553), (77, 44676), (78, 44730), (79, 44736), (95, 44928), (97, 44991), (98, 45006), (99, 45033), (102, 45093), (103, 45096), (104, 45111), (105, 45138), (106, 45144), (107, 45183), (109, 45231), (110, 45258), (111, 45261), (114, 45300), (115, 45312), (121, 45456), (122, 45471), (124, 45576), (125, 45600), (129, 45654), (131, 45681), (132, 45690), (136, 45753), (139, 45774), (141, 45804), (143, 45840), (150, 45963), (151, 46029), (157, 46152), (159, 46185), (160, 46197), (161, 46206), (162, 46215), (164, 46248), (165, 46254), (168, 46317), (169, 46320), (171, 46350), (172, 46356), (179, 46461),

Gene: Gorpy_73 Start: 40405, Stop: 42933, Start Num: 33

Candidate Starts for Gorpy_73:

(Start: 33 @40405 has 13 MA's), (37, 40420), (48, 40582), (49, 40594), (50, 40597), (51, 40603), (72, 40912), (74, 40981), (82, 41179), (92, 41311), (98, 41434), (105, 41566), (115, 41740), (116, 41806), (121, 41884), (122, 41899), (124, 42004), (132, 42118), (133, 42133), (136, 42181), (143, 42268), (152, 42472), (157, 42580), (160, 42625), (161, 42634), (164, 42676), (167, 42706), (179, 42889),

Gene: Hestia_69 Start: 37429, Stop: 39957, Start Num: 33

Candidate Starts for Hestia_69:

(Start: 33 @37429 has 13 MA's), (36, 37441), (49, 37615), (50, 37618), (63, 37762), (70, 37906), (74, 38002), (76, 38098), (92, 38332), (102, 38542), (105, 38587), (109, 38680), (115, 38761), (116, 38827), (121, 38908), (124, 39028), (128, 39091), (135, 39199), (136, 39205), (142, 39271), (143, 39292), (157, 39604), (158, 39613), (161, 39658), (163, 39694), (164, 39700), (167, 39730), (173, 39817), (177, 39868),

Gene: Hillester_79 Start: 40447, Stop: 42978, Start Num: 33

Candidate Starts for Hillester_79:

(Start: 33 @40447 has 13 MA's), (37, 40462), (49, 40636), (50, 40639), (63, 40783), (70, 40927), (74, 41023), (76, 41119), (92, 41353), (105, 41608), (109, 41701), (115, 41782), (116, 41848), (121, 41929), (124, 42049), (135, 42220), (136, 42226), (142, 42292), (143, 42313), (157, 42625), (158, 42634), (161, 42679), (164, 42721), (167, 42751), (173, 42838), (177, 42889),

Gene: Hlubikazi_67 Start: 41441, Stop: 44065, Start Num: 29

Candidate Starts for Hlubikazi_67:

(Start: 29 @41441 has 6 MA's), (30, 41447), (Start: 34 @41456 has 4 MA's), (37, 41468), (38, 41486), (42, 41552), (43, 41555), (44, 41558), (46, 41579), (49, 41642), (50, 41645), (52, 41660), (55, 41699), (56, 41705), (57, 41708), (58, 41720), (60, 41750), (65, 41846), (68, 41891), (71, 41948), (73, 42029), (74, 42032), (77, 42155), (79, 42215), (80, 42218), (86, 42281), (87, 42284), (88, 42293), (90, 42338), (95, 42407), (97, 42470), (98, 42485), (99, 42512), (102, 42572), (103, 42575), (104, 42590), (105, 42617), (107, 42662), (109, 42710), (110, 42737), (111, 42740), (114, 42779), (115, 42791), (119, 42896), (121, 42935), (122, 42950), (124, 43055), (129, 43133), (131, 43160), (132, 43169), (136, 43232), (139, 43253), (140, 43256), (143, 43319), (148, 43445), (149, 43463), (150, 43532), (153, 43622), (157, 43721), (159, 43754), (160, 43766), (161, 43775), (162, 43784), (164, 43817), (165, 43823), (168, 43886), (169, 43889), (171, 43919), (172, 43925), (178, 44003), (179, 44030),

Gene: Isolde_73 Start: 39275, Stop: 41803, Start Num: 33

Candidate Starts for Isolde_73:

(Start: 33 @39275 has 13 MA's), (36, 39287), (49, 39461), (50, 39464), (63, 39608), (70, 39752), (74, 39848), (76, 39944), (92, 40178), (102, 40388), (105, 40433), (109, 40526), (115, 40607), (116, 40673), (121, 40754), (124, 40874), (128, 40937), (135, 41045), (136, 41051), (142, 41117), (143, 41138), (157, 41450), (158, 41459), (161, 41504), (163, 41540), (164, 41546), (167, 41576), (173, 41663), (177, 41714),

Gene: James_70 Start: 44102, Stop: 46621, Start Num: 32

Candidate Starts for James_70:

(Start: 32 @44102 has 29 MA's), (37, 44114), (38, 44132), (42, 44198), (46, 44225), (48, 44276), (49, 44288), (50, 44291), (52, 44306), (53, 44312), (56, 44351), (57, 44354), (58, 44366), (60, 44396), (65, 44492), (68, 44537), (69, 44540), (73, 44675), (74, 44678), (77, 44801), (78, 44855), (79, 44861), (95, 45053), (97, 45116), (98, 45131), (99, 45158), (102, 45218), (103, 45221), (104, 45236), (105, 45263), (106, 45269), (107, 45308), (109, 45356), (110, 45383), (111, 45386), (114, 45425), (115, 45437), (121, 45581), (122, 45596), (124, 45701), (125, 45725), (129, 45779), (131, 45806), (132, 45815), (136, 45878), (139, 45899), (141, 45929), (143, 45965), (150, 46088), (151, 46154), (157, 46277), (159, 46310), (160, 46322), (161, 46331), (162, 46340), (164, 46373), (165, 46379), (168, 46442), (169, 46445), (171, 46475), (172, 46481), (179, 46586),

Gene: Kenuha5_64 Start: 41648, Stop: 44167, Start Num: 32

Candidate Starts for Kenuha5_64:

(12, 41471), (13, 41477), (14, 41486), (15, 41495), (22, 41591), (Start: 32 @41648 has 29 MA's), (37, 41660), (38, 41678), (42, 41744), (43, 41747), (44, 41750), (46, 41771), (48, 41822), (49, 41834), (50, 41837), (51, 41843), (56, 41897), (57, 41900), (58, 41912), (60, 41942), (65, 42038), (68, 42083), (69, 42086), (71, 42140), (73, 42221), (74, 42224), (77, 42347), (79, 42407), (80, 42410), (86, 42473), (87, 42476), (88, 42485), (95, 42599), (97, 42662), (99, 42704), (102, 42764), (103, 42767), (104, 42782), (105, 42809), (107, 42854), (110, 42929), (111, 42932), (112, 42938), (114, 42971), (115, 42983), (119, 43088), (121, 43127), (122, 43142), (124, 43247), (129, 43325), (131, 43352), (132, 43361), (136, 43424), (139, 43445), (140, 43448), (143, 43511), (145, 43541), (150, 43634), (152, 43715), (157, 43823), (159, 43856), (160, 43868), (161, 43877), (162, 43886), (164, 43919), (165, 43925), (168, 43988), (169, 43991), (171, 44021), (172, 44027), (175, 44063), (179, 44132),

Gene: Kingsley_64 Start: 42315, Stop: 44834, Start Num: 32

Candidate Starts for Kingsley_64:

(Start: 32 @42315 has 29 MA's), (37, 42327), (42, 42411), (46, 42438), (48, 42489), (49, 42501), (50, 42504), (52, 42519), (53, 42525), (56, 42564), (57, 42567), (58, 42579), (60, 42609), (65, 42705), (68, 42750), (69, 42753), (73, 42888), (74, 42891), (77, 43014), (78, 43068), (79, 43074), (95, 43266), (97, 43329), (98, 43344), (99, 43371), (102, 43431), (103, 43434), (104, 43449), (105, 43476), (106, 43482), (107, 43521), (109, 43569), (110, 43596), (111, 43599), (114, 43638), (115, 43650), (119, 43755), (121, 43794), (122, 43809), (124, 43914), (129, 43992), (131, 44019), (132, 44028), (136, 44091), (137, 44100), (139, 44112), (140, 44115), (143, 44178), (150, 44301), (152, 44382), (157, 44490), (159, 44523), (160, 44535), (161, 44544), (162, 44553), (164, 44586), (165, 44592), (168, 44655), (169, 44658), (171, 44688), (172, 44694), (179, 44799),

Gene: LilMoolah_65 Start: 42579, Stop: 45227, Start Num: 23

Candidate Starts for LilMoolah_65:

(Start: 23 @42579 has 3 MA's), (25, 42591), (37, 42630), (38, 42648), (42, 42714), (43, 42717), (44, 42720), (46, 42741), (49, 42804), (50, 42807), (52, 42822), (55, 42861), (56, 42867), (57, 42870), (58, 42882), (60, 42912), (68, 43053), (71, 43110), (73, 43191), (74, 43194), (76, 43290), (77, 43317), (79, 43377), (86, 43443), (87, 43446), (88, 43455), (95, 43569), (97, 43632), (98, 43647), (99, 43674), (102, 43734), (103, 43737), (104, 43752), (107, 43824), (110, 43899), (115, 43953), (119, 44058), (120, 44079), (121, 44097), (124, 44217), (129, 44295), (136, 44394), (137, 44403), (139, 44415), (140, 44418), (143, 44481), (144, 44505), (145, 44511), (146, 44556), (148, 44607), (149, 44625), (157, 44883), (159, 44916), (160, 44928), (161, 44937), (162, 44946), (164, 44979), (165, 44985),

(168, 45048), (169, 45051), (171, 45081), (172, 45087), (176, 45129), (179, 45192),

Gene: Lizziana_72 Start: 43583, Stop: 46102, Start Num: 32

Candidate Starts for Lizziana_72:

(Start: 32 @43583 has 29 MA's), (37, 43595), (38, 43613), (42, 43679), (46, 43706), (48, 43757), (49, 43769), (50, 43772), (52, 43787), (53, 43793), (56, 43832), (57, 43835), (58, 43847), (60, 43877), (65, 43973), (68, 44018), (69, 44021), (73, 44156), (74, 44159), (77, 44282), (78, 44336), (79, 44342), (95, 44534), (97, 44597), (98, 44612), (99, 44639), (102, 44699), (103, 44702), (104, 44717), (105, 44744), (106, 44750), (107, 44789), (109, 44837), (110, 44864), (111, 44867), (114, 44906), (115, 44918), (119, 45023), (121, 45062), (122, 45077), (124, 45182), (129, 45260), (131, 45287), (132, 45296), (136, 45359), (137, 45368), (139, 45380), (140, 45383), (143, 45446), (150, 45569), (152, 45650), (157, 45758), (159, 45791), (160, 45803), (161, 45812), (162, 45821), (164, 45854), (165, 45860), (168, 45923), (169, 45926), (171, 45956), (172, 45962), (179, 46067),

Gene: LunaBlu_68 Start: 42851, Stop: 45370, Start Num: 32

Candidate Starts for LunaBlu_68:

(Start: 32 @42851 has 29 MA's), (37, 42863), (38, 42881), (42, 42947), (46, 42974), (48, 43025), (49, 43037), (50, 43040), (52, 43055), (53, 43061), (56, 43100), (57, 43103), (58, 43115), (60, 43145), (65, 43241), (68, 43286), (69, 43289), (73, 43424), (74, 43427), (77, 43550), (78, 43604), (79, 43610), (95, 43802), (97, 43865), (98, 43880), (99, 43907), (102, 43967), (103, 43970), (104, 43985), (105, 44012), (107, 44057), (109, 44105), (110, 44132), (111, 44135), (114, 44174), (115, 44186), (119, 44291), (121, 44330), (122, 44345), (124, 44450), (129, 44528), (131, 44555), (132, 44564), (136, 44627), (137, 44636), (139, 44648), (140, 44651), (143, 44714), (150, 44837), (152, 44918), (157, 45026), (159, 45059), (160, 45071), (161, 45080), (162, 45089), (164, 45122), (165, 45128), (168, 45191), (169, 45194), (171, 45224), (172, 45230), (179, 45335),

Gene: Madiba_67 Start: 42084, Stop: 44603, Start Num: 32

Candidate Starts for Madiba_67:

(Start: 32 @42084 has 29 MA's), (37, 42096), (38, 42114), (42, 42180), (43, 42183), (44, 42186), (46, 42207), (48, 42258), (49, 42270), (50, 42273), (52, 42288), (56, 42333), (57, 42336), (58, 42348), (60, 42378), (65, 42474), (71, 42576), (73, 42657), (74, 42660), (77, 42783), (79, 42843), (86, 42909), (87, 42912), (88, 42921), (90, 42966), (95, 43035), (97, 43098), (98, 43113), (99, 43140), (102, 43200), (103, 43203), (104, 43218), (105, 43245), (107, 43290), (109, 43338), (110, 43365), (111, 43368), (114, 43407), (115, 43419), (119, 43524), (121, 43563), (122, 43578), (124, 43683), (129, 43761), (131, 43788), (132, 43797), (136, 43860), (139, 43881), (140, 43884), (143, 43947), (150, 44070), (152, 44151), (157, 44259), (159, 44292), (160, 44304), (161, 44313), (162, 44322), (164, 44355), (165, 44361), (168, 44424), (169, 44427), (171, 44457), (172, 44463), (179, 44568),

Gene: Mandlovu_67 Start: 41383, Stop: 44007, Start Num: 29

Candidate Starts for Mandlovu_67:

(Start: 29 @41383 has 6 MA's), (30, 41389), (Start: 34 @41398 has 4 MA's), (37, 41410), (38, 41428), (42, 41494), (43, 41497), (44, 41500), (46, 41521), (49, 41584), (50, 41587), (52, 41602), (55, 41641), (56, 41647), (57, 41650), (58, 41662), (60, 41692), (65, 41788), (68, 41833), (71, 41890), (73, 41971), (74, 41974), (77, 42097), (79, 42157), (80, 42160), (86, 42223), (87, 42226), (88, 42235), (90, 42280), (95, 42349), (97, 42412), (98, 42427), (99, 42454), (102, 42514), (103, 42517), (104, 42532), (105, 42559), (107, 42604), (109, 42652), (110, 42679), (111, 42682), (114, 42721), (115, 42733), (119, 42838), (121, 42877), (122, 42892), (124, 42997), (129, 43075), (131, 43102), (132, 43111), (136, 43174), (139, 43195), (140, 43198), (143, 43261), (148, 43387), (149, 43405), (150, 43474), (153, 43564), (157, 43663), (159, 43696), (160, 43708), (161, 43717), (162, 43726), (164, 43759), (165, 43765), (168, 43828), (169, 43831), (171, 43861), (172, 43867), (178, 43945), (179, 43972),

Gene: Mattes_70 Start: 44102, Stop: 46621, Start Num: 32

Candidate Starts for Mattes_70:

(Start: 32 @44102 has 29 MA's), (37, 44114), (38, 44132), (42, 44198), (46, 44225), (48, 44276), (49, 44288), (50, 44291), (52, 44306), (53, 44312), (56, 44351), (57, 44354), (58, 44366), (60, 44396), (65, 44492), (68, 44537), (69, 44540), (73, 44675), (74, 44678), (77, 44801), (78, 44855), (79, 44861), (95, 45053), (97, 45116), (98, 45131), (99, 45158), (102, 45218), (103, 45221), (104, 45236), (105, 45263), (106, 45269), (107, 45308), (109, 45356), (110, 45383), (111, 45386), (114, 45425), (115, 45437), (121, 45581), (122, 45596), (124, 45701), (125, 45725), (129, 45779), (131, 45806), (132, 45815), (136, 45878), (139, 45899), (141, 45929), (143, 45965), (150, 46088), (151, 46154), (157, 46277), (159, 46310), (160, 46322), (161, 46331), (162, 46340), (164, 46373), (165, 46379), (168, 46442), (169, 46445), (171, 46475), (172, 46481), (179, 46586),

Gene: MidnightRain_80 Start: 40745, Stop: 43273, Start Num: 33

Candidate Starts for MidnightRain_80:

(Start: 33 @40745 has 13 MA's), (37, 40760), (40, 40820), (46, 40871), (48, 40922), (50, 40937), (62, 41054), (63, 41081), (74, 41321), (76, 41417), (83, 41525), (85, 41564), (92, 41651), (93, 41657), (101, 41819), (103, 41864), (108, 41993), (110, 42026), (111, 42029), (115, 42080), (116, 42146), (121, 42224), (122, 42239), (124, 42344), (126, 42374), (128, 42407), (135, 42515), (136, 42521), (143, 42608), (152, 42812), (154, 42839), (155, 42848), (157, 42920), (161, 42974), (163, 43010), (164, 43016), (167, 43046), (169, 43088), (170, 43109), (179, 43229), (182, 43247),

Gene: MisterCuddles_64 Start: 42051, Stop: 44570, Start Num: 32

Candidate Starts for MisterCuddles_64:

(Start: 32 @42051 has 29 MA's), (37, 42063), (38, 42081), (42, 42147), (46, 42174), (48, 42225), (49, 42237), (50, 42240), (52, 42255), (53, 42261), (56, 42300), (57, 42303), (58, 42315), (60, 42345), (65, 42441), (68, 42486), (69, 42489), (73, 42624), (74, 42627), (77, 42750), (78, 42804), (79, 42810), (95, 43002), (97, 43065), (98, 43080), (99, 43107), (102, 43167), (103, 43170), (104, 43185), (105, 43212), (106, 43218), (107, 43257), (109, 43305), (110, 43332), (111, 43335), (114, 43374), (115, 43386), (119, 43491), (121, 43530), (122, 43545), (124, 43650), (129, 43728), (131, 43755), (132, 43764), (136, 43827), (137, 43836), (139, 43848), (140, 43851), (143, 43914), (150, 44037), (157, 44226), (159, 44259), (160, 44271), (161, 44280), (162, 44289), (164, 44322), (165, 44328), (168, 44391), (169, 44394), (171, 44424), (172, 44430), (179, 44535),

Gene: Nivrat_63 Start: 42452, Stop: 45100, Start Num: 23

Candidate Starts for Nivrat_63:

(Start: 23 @42452 has 3 MA's), (25, 42464), (37, 42503), (38, 42521), (42, 42587), (43, 42590), (44, 42593), (46, 42614), (49, 42677), (50, 42680), (52, 42695), (55, 42734), (56, 42740), (57, 42743), (58, 42755), (60, 42785), (68, 42926), (71, 42983), (73, 43064), (74, 43067), (76, 43163), (77, 43190), (79, 43250), (86, 43316), (87, 43319), (88, 43328), (95, 43442), (97, 43505), (98, 43520), (99, 43547), (102, 43607), (103, 43610), (104, 43625), (107, 43697), (110, 43772), (115, 43826), (119, 43931), (120, 43952), (121, 43970), (124, 44090), (129, 44168), (136, 44267), (137, 44276), (139, 44288), (140, 44291), (143, 44354), (144, 44378), (145, 44384), (146, 44429), (148, 44480), (149, 44498), (157, 44756), (159, 44789), (160, 44801), (161, 44810), (162, 44819), (164, 44852), (165, 44858), (168, 44921), (169, 44924), (171, 44954), (172, 44960), (176, 45002), (179, 45065),

Gene: OlympiaSaint_68 Start: 43044, Stop: 45563, Start Num: 32

Candidate Starts for OlympiaSaint_68:

(Start: 32 @43044 has 29 MA's), (37, 43056), (38, 43074), (42, 43140), (46, 43167), (48, 43218), (49, 43230), (50, 43233), (52, 43248), (53, 43254), (56, 43293), (57, 43296), (58, 43308), (60, 43338), (65, 43434), (68, 43479), (69, 43482), (73, 43617), (74, 43620), (77, 43743), (78, 43797), (79, 43803), (95, 43995), (97, 44058), (98, 44073), (99, 44100), (102, 44160), (103, 44163), (104, 44178), (105, 44205), (106, 44211), (107, 44250), (109, 44298), (110, 44325), (111, 44328), (114, 44367), (115, 44379), (121, 44523), (122, 44538), (124, 44643), (125, 44667), (129, 44721), (131, 44748), (132, 44757), (136, 44820), (139, 44841), (141, 44871), (143, 44907), (150, 45030), (151, 45096), (157, 45219), (159, 45252), (160, 45264), (161, 45273), (162, 45282), (164, 45315), (165, 45321), (168, 45384),

(169, 45387), (171, 45417), (172, 45423), (179, 45528),

Gene: Persistence_69 Start: 37815, Stop: 40346, Start Num: 33

Candidate Starts for Persistence_69:

(Start: 33 @37815 has 13 MA's), (49, 38007), (50, 38010), (54, 38037), (59, 38109), (72, 38325), (74, 38394), (79, 38577), (82, 38592), (92, 38724), (102, 38934), (115, 39153), (116, 39219), (117, 39225), (121, 39297), (124, 39417), (130, 39507), (133, 39546), (135, 39588), (136, 39594), (143, 39681), (152, 39885), (157, 39993), (161, 40047), (163, 40083), (164, 40089), (179, 40302), (180, 40308),

Gene: Phrank15_78 Start: 39240, Stop: 41798, Start Num: 33

Candidate Starts for Phrank15_78:

(Start: 33 @39240 has 13 MA's), (62, 39552), (64, 39624), (71, 39741), (74, 39825), (79, 40008), (92, 40155), (98, 40278), (109, 40503), (115, 40584), (116, 40650), (117, 40656), (121, 40728), (124, 40848), (130, 40938), (133, 40977), (135, 41019), (136, 41025), (143, 41112), (152, 41316), (157, 41424), (161, 41478), (163, 41514), (164, 41520), (166, 41535), (168, 41589), (171, 41622), (174, 41643), (176, 41670), (177, 41688), (179, 41733), (182, 41751),

Gene: Phrann_57 Start: 37839, Stop: 40448, Start Num: 34

Candidate Starts for Phrann_57:

(17, 37737), (Start: 29 @37818 has 6 MA's), (30, 37827), (Start: 34 @37839 has 4 MA's), (37, 37851), (38, 37869), (42, 37935), (43, 37938), (44, 37941), (46, 37962), (49, 38025), (50, 38028), (52, 38043), (55, 38082), (56, 38088), (57, 38091), (58, 38103), (60, 38133), (68, 38274), (71, 38331), (73, 38412), (74, 38415), (77, 38538), (79, 38598), (80, 38601), (86, 38664), (87, 38667), (88, 38676), (90, 38721), (95, 38790), (97, 38853), (98, 38868), (99, 38895), (102, 38955), (103, 38958), (104, 38973), (107, 39045), (109, 39093), (110, 39120), (111, 39123), (112, 39129), (114, 39162), (115, 39174), (119, 39279), (121, 39318), (122, 39333), (124, 39438), (129, 39516), (131, 39543), (132, 39552), (136, 39615), (139, 39636), (140, 39639), (143, 39702), (148, 39828), (149, 39846), (150, 39915), (153, 40005), (157, 40104), (159, 40137), (160, 40149), (161, 40158), (162, 40167), (164, 40200), (165, 40206), (168, 40269), (169, 40272), (171, 40302), (172, 40308), (178, 40386), (179, 40413),

Gene: Piper2020_77 Start: 46674, Stop: 49193, Start Num: 34

Candidate Starts for Piper2020_77:

(9, 46404), (17, 46572), (Start: 29 @46653 has 6 MA's), (30, 46662), (Start: 34 @46674 has 4 MA's), (37, 46686), (38, 46704), (42, 46770), (43, 46773), (44, 46776), (46, 46797), (49, 46860), (50, 46863), (52, 46878), (55, 46917), (56, 46923), (57, 46926), (58, 46938), (60, 46968), (68, 47109), (71, 47166), (73, 47247), (74, 47250), (76, 47346), (77, 47373), (79, 47433), (86, 47499), (87, 47502), (88, 47511), (95, 47625), (97, 47688), (98, 47703), (99, 47730), (102, 47790), (103, 47793), (104, 47808), (107, 47880), (109, 47928), (110, 47955), (111, 47958), (115, 48009), (121, 48153), (122, 48168), (124, 48273), (129, 48351), (136, 48450), (137, 48459), (139, 48471), (140, 48474), (143, 48537), (145, 48567), (150, 48660), (157, 48849), (159, 48882), (160, 48894), (161, 48903), (162, 48912), (164, 48945), (165, 48951), (168, 49014), (169, 49017), (171, 49047), (172, 49053), (178, 49131), (179, 49158),

Gene: RadFad_80 Start: 40447, Stop: 42978, Start Num: 33

Candidate Starts for RadFad_80:

(Start: 33 @40447 has 13 MA's), (37, 40462), (49, 40636), (50, 40639), (63, 40783), (70, 40927), (74, 41023), (76, 41119), (92, 41353), (105, 41608), (109, 41701), (115, 41782), (116, 41848), (121, 41929), (124, 42049), (135, 42220), (136, 42226), (142, 42292), (143, 42313), (157, 42625), (158, 42634), (161, 42679), (164, 42721), (167, 42751), (173, 42838), (177, 42889),

Gene: Raphaella_74 Start: 39221, Stop: 41749, Start Num: 33

Candidate Starts for Raphaella_74:

(Start: 33 @39221 has 13 MA's), (36, 39233), (49, 39407), (50, 39410), (63, 39554), (70, 39698), (74, 39794), (76, 39890), (92, 40124), (102, 40334), (105, 40379), (109, 40472), (115, 40553), (116, 40619), (121, 40700), (124, 40820), (128, 40883), (135, 40991), (136, 40997), (142, 41063), (143, 41084), (146, 41159), (157, 41396), (158, 41405), (161, 41450), (163, 41486), (164, 41492), (167, 41522), (173, 41609), (177, 41660),

Gene: Raqqa_73 Start: 39905, Stop: 42439, Start Num: 33

Candidate Starts for Raqqa_73:

(Start: 33 @39905 has 13 MA's), (47, 40043), (49, 40094), (50, 40097), (55, 40148), (62, 40214), (63, 40241), (64, 40286), (74, 40487), (79, 40670), (84, 40712), (92, 40817), (98, 40940), (109, 41165), (115, 41246), (116, 41312), (117, 41318), (121, 41390), (124, 41510), (129, 41588), (130, 41600), (132, 41624), (133, 41639), (135, 41681), (136, 41687), (143, 41774), (152, 41978), (157, 42086), (161, 42140), (164, 42182), (167, 42212), (171, 42284), (179, 42395), (181, 42404),

Gene: Richie_78 Start: 41089, Stop: 43617, Start Num: 33

Candidate Starts for Richie_78:

(11, 40882), (Start: 33 @41089 has 13 MA's), (37, 41104), (46, 41215), (48, 41266), (50, 41281), (61, 41392), (62, 41398), (63, 41425), (74, 41665), (76, 41761), (83, 41869), (85, 41908), (92, 41995), (93, 42001), (101, 42163), (103, 42208), (108, 42337), (110, 42370), (111, 42373), (115, 42424), (116, 42490), (121, 42568), (122, 42583), (124, 42688), (126, 42718), (128, 42751), (130, 42778), (133, 42817), (135, 42859), (136, 42865), (143, 42952), (152, 43156), (155, 43192), (157, 43264), (161, 43318), (164, 43360), (167, 43390), (170, 43453), (179, 43573), (182, 43591),

Gene: RockyHorror_67 Start: 41923, Stop: 44442, Start Num: 32

Candidate Starts for RockyHorror_67:

(Start: 32 @41923 has 29 MA's), (37, 41935), (38, 41953), (42, 42019), (46, 42046), (48, 42097), (49, 42109), (50, 42112), (52, 42127), (53, 42133), (56, 42172), (57, 42175), (58, 42187), (60, 42217), (65, 42313), (68, 42358), (69, 42361), (73, 42496), (74, 42499), (77, 42622), (78, 42676), (79, 42682), (95, 42874), (97, 42937), (98, 42952), (99, 42979), (102, 43039), (103, 43042), (104, 43057), (105, 43084), (106, 43090), (107, 43129), (109, 43177), (110, 43204), (111, 43207), (114, 43246), (115, 43258), (119, 43363), (121, 43402), (122, 43417), (124, 43522), (129, 43600), (131, 43627), (132, 43636), (136, 43699), (137, 43708), (139, 43720), (140, 43723), (143, 43786), (150, 43909), (152, 43990), (157, 44098), (159, 44131), (160, 44143), (161, 44152), (162, 44161), (164, 44194), (165, 44200), (168, 44263), (169, 44266), (171, 44296), (172, 44302), (179, 44407),

Gene: Ruby_62 Start: 42052, Stop: 44571, Start Num: 32

Candidate Starts for Ruby_62:

(Start: 32 @42052 has 29 MA's), (37, 42064), (38, 42082), (42, 42148), (46, 42175), (48, 42226), (49, 42238), (50, 42241), (52, 42256), (53, 42262), (56, 42301), (57, 42304), (58, 42316), (60, 42346), (65, 42442), (68, 42487), (69, 42490), (73, 42625), (74, 42628), (77, 42751), (78, 42805), (79, 42811), (95, 43003), (97, 43066), (98, 43081), (99, 43108), (102, 43168), (103, 43171), (104, 43186), (105, 43213), (106, 43219), (107, 43258), (109, 43306), (110, 43333), (111, 43336), (114, 43375), (115, 43387), (119, 43492), (121, 43531), (122, 43546), (124, 43651), (129, 43729), (131, 43756), (132, 43765), (136, 43828), (137, 43837), (139, 43849), (140, 43852), (143, 43915), (150, 44038), (157, 44227), (159, 44260), (160, 44272), (161, 44281), (162, 44290), (164, 44323), (165, 44329), (168, 44392), (169, 44395), (171, 44425), (172, 44431), (179, 44536),

Gene: Saal_68 Start: 43796, Stop: 46315, Start Num: 32

Candidate Starts for Saal_68:

(Start: 32 @43796 has 29 MA's), (37, 43808), (38, 43826), (42, 43892), (46, 43919), (48, 43970), (49, 43982), (50, 43985), (52, 44000), (53, 44006), (56, 44045), (57, 44048), (58, 44060), (60, 44090), (65, 44186), (68, 44231), (69, 44234), (73, 44369), (74, 44372), (77, 44495), (78, 44549), (79, 44555), (95, 44747), (97, 44810), (98, 44825), (99, 44852), (102, 44912), (103, 44915), (104, 44930), (105, 44957),

(106, 44963), (107, 45002), (109, 45050), (110, 45077), (111, 45080), (114, 45119), (115, 45131), (121, 45275), (122, 45290), (124, 45395), (125, 45419), (129, 45473), (131, 45500), (132, 45509), (136, 45572), (139, 45593), (141, 45623), (143, 45659), (150, 45782), (151, 45848), (157, 45971), (159, 46004), (160, 46016), (161, 46025), (162, 46034), (164, 46067), (165, 46073), (168, 46136), (169, 46139), (171, 46169), (172, 46175), (179, 46280),

Gene: Sakai_72 Start: 39116, Stop: 41644, Start Num: 33

Candidate Starts for Sakai_72:

(Start: 33 @39116 has 13 MA's), (37, 39131), (48, 39293), (49, 39305), (50, 39308), (51, 39314), (72, 39623), (74, 39692), (82, 39890), (92, 40022), (98, 40145), (105, 40277), (115, 40451), (116, 40517), (121, 40595), (122, 40610), (124, 40715), (132, 40829), (133, 40844), (136, 40892), (143, 40979), (152, 41183), (157, 41291), (160, 41336), (161, 41345), (164, 41387), (167, 41417), (179, 41600),

Gene: Sandalphon_67 Start: 43303, Stop: 45951, Start Num: 23

Candidate Starts for Sandalphon_67:

(Start: 23 @43303 has 3 MA's), (25, 43315), (37, 43354), (38, 43372), (42, 43438), (43, 43441), (44, 43444), (46, 43465), (49, 43528), (50, 43531), (52, 43546), (55, 43585), (56, 43591), (57, 43594), (58, 43606), (60, 43636), (65, 43732), (68, 43777), (71, 43834), (73, 43915), (74, 43918), (77, 44041), (79, 44101), (80, 44104), (86, 44167), (87, 44170), (88, 44179), (90, 44224), (95, 44293), (97, 44356), (98, 44371), (99, 44398), (102, 44458), (103, 44461), (104, 44476), (105, 44503), (107, 44548), (109, 44596), (110, 44623), (111, 44626), (114, 44665), (115, 44677), (119, 44782), (121, 44821), (122, 44836), (124, 44941), (129, 45019), (131, 45046), (132, 45055), (136, 45118), (139, 45139), (140, 45142), (143, 45205), (148, 45331), (149, 45349), (150, 45418), (153, 45508), (157, 45607), (159, 45640), (160, 45652), (161, 45661), (162, 45670), (164, 45703), (165, 45709), (168, 45772), (169, 45775), (171, 45805), (172, 45811), (178, 45889), (179, 45916),

Gene: Sarma624_65 Start: 39507, Stop: 42026, Start Num: 32

Candidate Starts for Sarma624_65:

(Start: 32 @39507 has 29 MA's), (37, 39519), (42, 39603), (46, 39630), (48, 39681), (49, 39693), (50, 39696), (52, 39711), (53, 39717), (56, 39756), (57, 39759), (58, 39771), (60, 39801), (65, 39897), (68, 39942), (69, 39945), (73, 40080), (74, 40083), (77, 40206), (78, 40260), (79, 40266), (95, 40458), (97, 40521), (98, 40536), (99, 40563), (102, 40623), (103, 40626), (104, 40641), (105, 40668), (106, 40674), (107, 40713), (109, 40761), (110, 40788), (111, 40791), (114, 40830), (115, 40842), (119, 40947), (121, 40986), (122, 41001), (124, 41106), (129, 41184), (131, 41211), (132, 41220), (136, 41283), (137, 41292), (139, 41304), (140, 41307), (143, 41370), (150, 41493), (152, 41574), (157, 41682), (159, 41715), (160, 41727), (161, 41736), (162, 41745), (164, 41778), (165, 41784), (168, 41847), (169, 41850), (171, 41880), (172, 41886), (179, 41991),

Gene: Sashimi_75 Start: 39807, Stop: 42329, Start Num: 35

Candidate Starts for Sashimi_75:

(18, 39723), (19, 39726), (35, 39807), (41, 39891), (48, 39978), (62, 40110), (67, 40215), (68, 40236), (69, 40239), (74, 40377), (76, 40473), (85, 40620), (92, 40707), (93, 40713), (94, 40719), (101, 40875), (102, 40917), (103, 40920), (108, 41049), (111, 41085), (115, 41136), (116, 41202), (121, 41280), (122, 41295), (124, 41400), (126, 41430), (134, 41550), (135, 41571), (136, 41577), (143, 41664), (152, 41868), (157, 41976), (161, 42030), (163, 42066), (164, 42072), (167, 42102), (169, 42144), (179, 42285),

Gene: Scitech_50 Start: 33763, Stop: 36387, Start Num: 29

Candidate Starts for Scitech_50:

(20, 33700), (Start: 29 @33763 has 6 MA's), (30, 33769), (Start: 34 @33778 has 4 MA's), (37, 33790), (38, 33808), (42, 33874), (43, 33877), (44, 33880), (46, 33901), (49, 33964), (50, 33967), (52, 33982), (55, 34021), (56, 34027), (57, 34030), (58, 34042), (60, 34072), (65, 34168), (68, 34213), (71, 34270), (73, 34351), (74, 34354), (77, 34477), (79, 34537), (80, 34540), (86, 34603), (87, 34606), (88, 34615),

(90, 34660), (95, 34729), (97, 34792), (98, 34807), (99, 34834), (102, 34894), (103, 34897), (104, 34912), (105, 34939), (107, 34984), (109, 35032), (110, 35059), (111, 35062), (114, 35101), (115, 35113), (119, 35218), (121, 35257), (122, 35272), (124, 35377), (129, 35455), (131, 35482), (132, 35491), (136, 35554), (139, 35575), (140, 35578), (143, 35641), (148, 35767), (149, 35785), (150, 35854), (153, 35944), (157, 36043), (159, 36076), (160, 36088), (161, 36097), (162, 36106), (164, 36139), (165, 36145), (168, 36208), (169, 36211), (171, 36241), (172, 36247), (178, 36325), (179, 36352),

Gene: Seahorse_83 Start: 44779, Stop: 47307, Start Num: 33

Candidate Starts for Seahorse_83:

(31, 44773), (Start: 33 @44779 has 13 MA's), (40, 44854), (46, 44905), (47, 44917), (48, 44956), (50, 44971), (62, 45088), (63, 45115), (68, 45214), (70, 45259), (71, 45271), (74, 45355), (76, 45451), (83, 45559), (85, 45598), (86, 45604), (92, 45685), (93, 45691), (101, 45853), (103, 45898), (108, 46027), (110, 46060), (111, 46063), (113, 46072), (115, 46114), (116, 46180), (118, 46195), (121, 46258), (122, 46273), (124, 46378), (134, 46528), (135, 46549), (136, 46555), (143, 46642), (146, 46717), (152, 46846), (155, 46882), (157, 46954), (161, 47008), (163, 47044), (164, 47050), (170, 47143), (179, 47263),

Gene: SiSi_65 Start: 41752, Stop: 44313, Start Num: 24

Candidate Starts for SiSi_65:

(Start: 24 @41752 has 1 MA's), (26, 41764), (28, 41770), (38, 41824), (42, 41890), (44, 41896), (45, 41914), (46, 41917), (49, 41980), (50, 41983), (51, 41989), (52, 41998), (56, 42043), (57, 42046), (58, 42058), (60, 42088), (68, 42229), (71, 42286), (73, 42367), (74, 42370), (75, 42388), (77, 42493), (79, 42553), (86, 42619), (87, 42622), (88, 42631), (91, 42688), (98, 42823), (99, 42850), (100, 42862), (102, 42910), (103, 42913), (104, 42928), (107, 43000), (110, 43075), (111, 43078), (114, 43117), (115, 43129), (119, 43234), (120, 43255), (121, 43273), (122, 43288), (124, 43393), (129, 43471), (131, 43498), (132, 43507), (136, 43570), (137, 43579), (139, 43591), (140, 43594), (143, 43657), (150, 43780), (152, 43861), (157, 43969), (159, 44002), (160, 44014), (161, 44023), (162, 44032), (164, 44065), (165, 44071), (168, 44134), (169, 44137), (171, 44167), (172, 44173), (179, 44278),

Gene: Sparky_66 Start: 45788, Stop: 48307, Start Num: 34

Candidate Starts for Sparky_66:

(2, 45374), (6, 45458), (9, 45518), (17, 45686), (Start: 29 @45767 has 6 MA's), (30, 45776), (Start: 34 @45788 has 4 MA's), (37, 45800), (38, 45818), (42, 45884), (43, 45887), (44, 45890), (46, 45911), (49, 45974), (50, 45977), (52, 45992), (55, 46031), (56, 46037), (57, 46040), (58, 46052), (60, 46082), (68, 46223), (71, 46280), (74, 46364), (76, 46460), (77, 46487), (79, 46547), (86, 46613), (87, 46616), (88, 46625), (95, 46739), (97, 46802), (98, 46817), (99, 46844), (102, 46904), (103, 46907), (104, 46922), (107, 46994), (109, 47042), (110, 47069), (111, 47072), (114, 47111), (115, 47123), (120, 47249), (121, 47267), (124, 47387), (129, 47465), (136, 47564), (137, 47573), (139, 47585), (140, 47588), (143, 47651), (150, 47774), (157, 47963), (159, 47996), (160, 48008), (161, 48017), (162, 48026), (164, 48059), (165, 48065), (166, 48074), (168, 48128), (169, 48131), (171, 48161), (172, 48167), (178, 48245), (179, 48272),

Gene: Spartacus_70 Start: 43606, Stop: 46155, Start Num: 27

Candidate Starts for Spartacus_70:

(3, 43234), (5, 43243), (8, 43336), (10, 43393), (16, 43495), (21, 43561), (Start: 27 @43606 has 2 MA's), (38, 43666), (42, 43732), (46, 43759), (48, 43810), (49, 43822), (50, 43825), (51, 43831), (52, 43840), (56, 43885), (57, 43888), (58, 43900), (60, 43930), (65, 44026), (68, 44071), (71, 44128), (73, 44209), (74, 44212), (76, 44308), (77, 44335), (79, 44395), (86, 44461), (87, 44464), (88, 44473), (95, 44587), (97, 44650), (98, 44665), (99, 44692), (102, 44752), (103, 44755), (104, 44770), (107, 44842), (109, 44890), (110, 44917), (111, 44920), (112, 44926), (114, 44959), (115, 44971), (121, 45115), (122, 45130), (124, 45235), (129, 45313), (136, 45412), (137, 45421), (139, 45433), (140, 45436), (143, 45499), (150, 45622), (157, 45811), (159, 45844), (160, 45856), (161, 45865), (162, 45874),

(164, 45907), (165, 45913), (166, 45922), (168, 45976), (169, 45979), (171, 46009), (172, 46015), (179, 46120),

Gene: Strokeseat_67 Start: 41440, Stop: 44064, Start Num: 29

Candidate Starts for Strokeseat_67:

(Start: 29 @41440 has 6 MA's), (30, 41446), (Start: 34 @41455 has 4 MA's), (37, 41467), (38, 41485), (42, 41551), (43, 41554), (44, 41557), (46, 41578), (49, 41641), (50, 41644), (52, 41659), (55, 41698), (56, 41704), (57, 41707), (58, 41719), (60, 41749), (65, 41845), (68, 41890), (71, 41947), (73, 42028), (74, 42031), (77, 42154), (79, 42214), (80, 42217), (86, 42280), (87, 42283), (88, 42292), (90, 42337), (95, 42406), (97, 42469), (98, 42484), (99, 42511), (102, 42571), (103, 42574), (104, 42589), (105, 42616), (107, 42661), (109, 42709), (110, 42736), (111, 42739), (114, 42778), (115, 42790), (119, 42895), (121, 42934), (122, 42949), (124, 43054), (129, 43132), (131, 43159), (132, 43168), (136, 43231), (139, 43252), (140, 43255), (143, 43318), (148, 43444), (149, 43462), (150, 43531), (153, 43621), (157, 43720), (159, 43753), (160, 43765), (161, 43774), (162, 43783), (164, 43816), (165, 43822), (168, 43885), (169, 43888), (171, 43918), (172, 43924), (178, 44002), (179, 44029),

Gene: SuperGrey_70 Start: 44825, Stop: 47344, Start Num: 32

Candidate Starts for SuperGrey_70:

(12, 44648), (13, 44654), (14, 44663), (15, 44672), (22, 44768), (Start: 32 @44825 has 29 MA's), (37, 44837), (38, 44855), (42, 44921), (43, 44924), (44, 44927), (46, 44948), (48, 44999), (49, 45011), (50, 45014), (51, 45020), (56, 45074), (57, 45077), (58, 45089), (60, 45119), (65, 45215), (68, 45260), (69, 45263), (71, 45317), (73, 45398), (74, 45401), (77, 45524), (79, 45584), (80, 45587), (86, 45650), (87, 45653), (88, 45662), (95, 45776), (97, 45839), (99, 45881), (102, 45941), (103, 45944), (104, 45959), (105, 45986), (107, 46031), (110, 46106), (111, 46109), (112, 46115), (114, 46148), (115, 46160), (119, 46265), (121, 46304), (122, 46319), (124, 46424), (129, 46502), (131, 46529), (132, 46538), (136, 46601), (139, 46622), (140, 46625), (143, 46688), (145, 46718), (150, 46811), (152, 46892), (157, 47000), (159, 47033), (160, 47045), (161, 47054), (162, 47063), (164, 47096), (165, 47102), (168, 47165), (169, 47168), (171, 47198), (172, 47204), (175, 47240), (179, 47309),

Gene: Tapioca_56 Start: 36042, Stop: 38666, Start Num: 29

Candidate Starts for Tapioca_56:

(Start: 29 @36042 has 6 MA's), (30, 36048), (Start: 34 @36057 has 4 MA's), (37, 36069), (38, 36087), (42, 36153), (43, 36156), (44, 36159), (46, 36180), (49, 36243), (50, 36246), (52, 36261), (55, 36300), (56, 36306), (57, 36309), (58, 36321), (60, 36351), (65, 36447), (68, 36492), (71, 36549), (73, 36630), (74, 36633), (77, 36756), (79, 36816), (80, 36819), (86, 36882), (87, 36885), (88, 36894), (90, 36939), (95, 37008), (97, 37071), (99, 37113), (102, 37173), (103, 37176), (104, 37191), (105, 37218), (107, 37263), (109, 37311), (110, 37338), (111, 37341), (114, 37380), (115, 37392), (119, 37497), (121, 37536), (122, 37551), (124, 37656), (129, 37734), (131, 37761), (132, 37770), (136, 37833), (139, 37854), (140, 37857), (143, 37920), (148, 38046), (149, 38064), (150, 38133), (153, 38223), (157, 38322), (159, 38355), (160, 38367), (161, 38376), (162, 38385), (164, 38418), (165, 38424), (168, 38487), (169, 38490), (171, 38520), (172, 38526), (178, 38604), (179, 38631),

Gene: Tiff81_76 Start: 38408, Stop: 40924, Start Num: 35

Candidate Starts for Tiff81_76:

(18, 38324), (19, 38327), (35, 38408), (41, 38486), (48, 38573), (54, 38615), (62, 38705), (63, 38732), (66, 38798), (68, 38831), (74, 38972), (76, 39068), (83, 39176), (85, 39215), (92, 39302), (93, 39308), (101, 39470), (103, 39515), (108, 39644), (110, 39677), (111, 39680), (115, 39731), (116, 39797), (118, 39812), (122, 39890), (124, 39995), (134, 40145), (135, 40166), (136, 40172), (143, 40259), (146, 40334), (152, 40463), (155, 40499), (157, 40571), (161, 40625), (163, 40661), (164, 40667), (167, 40697), (170, 40760), (179, 40880),

Gene: Velveteen_62 Start: 39507, Stop: 42026, Start Num: 32

Candidate Starts for Velveteen_62:

(Start: 32 @39507 has 29 MA's), (37, 39519), (42, 39603), (46, 39630), (48, 39681), (49, 39693), (50, 39696), (52, 39711), (53, 39717), (56, 39756), (57, 39759), (58, 39771), (60, 39801), (65, 39897), (68, 39942), (69, 39945), (73, 40080), (74, 40083), (77, 40206), (78, 40260), (79, 40266), (95, 40458), (97, 40521), (98, 40536), (99, 40563), (102, 40623), (103, 40626), (104, 40641), (105, 40668), (106, 40674), (107, 40713), (109, 40761), (110, 40788), (111, 40791), (114, 40830), (115, 40842), (119, 40947), (121, 40986), (122, 41001), (124, 41106), (129, 41184), (131, 41211), (132, 41220), (136, 41283), (137, 41292), (139, 41304), (140, 41307), (143, 41370), (150, 41493), (152, 41574), (157, 41682), (159, 41715), (160, 41727), (161, 41736), (162, 41745), (164, 41778), (165, 41784), (168, 41847), (169, 41850), (171, 41880), (172, 41886), (179, 41991),

Gene: XFactor_64 Start: 41191, Stop: 43710, Start Num: 32

Candidate Starts for XFactor_64:

(Start: 32 @41191 has 29 MA's), (37, 41203), (38, 41221), (42, 41287), (43, 41290), (44, 41293), (46, 41314), (49, 41377), (50, 41380), (52, 41395), (56, 41440), (57, 41443), (58, 41455), (60, 41485), (65, 41581), (68, 41626), (71, 41683), (73, 41764), (74, 41767), (77, 41890), (79, 41950), (86, 42016), (87, 42019), (88, 42028), (95, 42142), (97, 42205), (98, 42220), (99, 42247), (102, 42307), (103, 42310), (104, 42325), (105, 42352), (107, 42397), (109, 42445), (110, 42472), (111, 42475), (114, 42514), (115, 42526), (119, 42631), (121, 42670), (122, 42685), (124, 42790), (129, 42868), (131, 42895), (132, 42904), (136, 42967), (139, 42988), (140, 42991), (143, 43054), (150, 43177), (152, 43258), (157, 43366), (159, 43399), (160, 43411), (161, 43420), (162, 43429), (164, 43462), (165, 43468), (168, 43531), (169, 43534), (171, 43564), (172, 43570), (179, 43675),

Gene: YoungHarleezy_73 Start: 39488, Stop: 42019, Start Num: 33

Candidate Starts for YoungHarleezy_73:

(Start: 33 @39488 has 13 MA's), (37, 39503), (49, 39677), (50, 39680), (63, 39824), (70, 39968), (74, 40064), (76, 40160), (92, 40394), (105, 40649), (109, 40742), (115, 40823), (116, 40889), (121, 40970), (124, 41090), (128, 41153), (135, 41261), (136, 41267), (142, 41333), (143, 41354), (157, 41666), (158, 41675), (161, 41720), (163, 41756), (164, 41762), (167, 41792), (173, 41879), (177, 41930),

Gene: Zerg_66 Start: 42035, Stop: 44554, Start Num: 32

Candidate Starts for Zerg_66:

(Start: 32 @42035 has 29 MA's), (37, 42047), (38, 42065), (42, 42131), (46, 42158), (48, 42209), (49, 42221), (50, 42224), (52, 42239), (53, 42245), (56, 42284), (57, 42287), (58, 42299), (60, 42329), (65, 42425), (68, 42470), (69, 42473), (73, 42608), (74, 42611), (77, 42734), (78, 42788), (79, 42794), (95, 42986), (97, 43049), (98, 43064), (99, 43091), (102, 43151), (103, 43154), (104, 43169), (105, 43196), (106, 43202), (107, 43241), (109, 43289), (110, 43316), (111, 43319), (114, 43358), (115, 43370), (119, 43475), (121, 43514), (122, 43529), (124, 43634), (129, 43712), (131, 43739), (132, 43748), (136, 43811), (137, 43820), (139, 43832), (140, 43835), (143, 43898), (150, 44021), (157, 44210), (159, 44243), (160, 44255), (161, 44264), (162, 44273), (164, 44306), (165, 44312), (168, 44375), (169, 44378), (171, 44408), (172, 44414), (179, 44519),