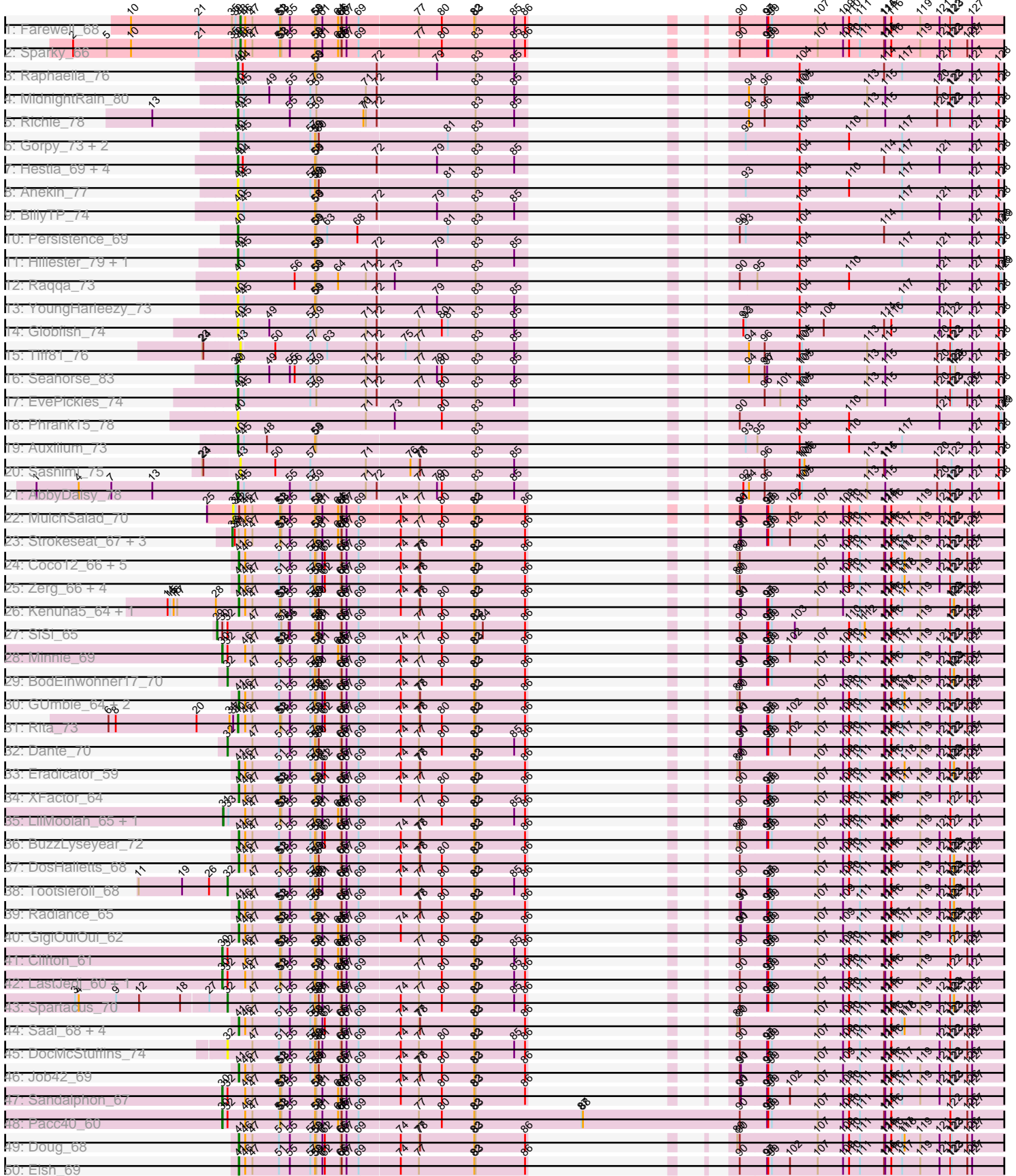


Zoomed Pham 166636



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 166636 Report

This analysis was run 07/09/24 on database version 566.

Pham number 166636 has 90 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Farewell_68
- Track 2 : Sparky_66
- Track 3 : Raphaella_76
- Track 4 : MidnightRain_80
- Track 5 : Richie_78
- Track 6 : Gorpy_73, Sakai_72, Aikyam_74
- Track 7 : Hestia_69, Isolde_73, Faja_78, BenchScraper_72, CookieBear_72
- Track 8 : Anekin_77
- Track 9 : BillyTP_74
- Track 10 : Persistence_69
- Track 11 : Hillester_79, RadFad_80
- Track 12 : Raqqa_73
- Track 13 : YoungHarleezy_73
- Track 14 : Globfish_74
- Track 15 : Tiff81_76
- Track 16 : Seahorse_83
- Track 17 : EvePickles_74
- Track 18 : Phrank15_78
- Track 19 : Auxilium_73
- Track 20 : Sashimi_75
- Track 21 : AbbyDaisy_78
- Track 22 : MulchSalad_70
- Track 23 : Strokeseat_67, Andies_52, Hlubikazi_67, Mandlovu_67
- Track 24 : Coco12_66, Cerasum_63, Sarma624_65, BigPhil_63, Velveteen_62, Kingsley_64
- Track 25 : Zerg_66, MisterCuddles_64, Girr_64, Ruby_62, Alexphander_70
- Track 26 : Kenuha5_64, SuperGrey_70
- Track 27 : SiSi_65
- Track 28 : Minnie_69
- Track 29 : BodEinwohner17_70
- Track 30 : GUmbie_64, RockyHorror_67, Lizziana_72
- Track 31 : Rita_73
- Track 32 : Dante_70
- Track 33 : Eradicator_59
- Track 34 : XFactor_64
- Track 35 : LilMoolah_65, Nivrat_63
- Track 36 : BuzzLyseyear_72

- Track 37 : DosHalletts_68
- Track 38 : Tootsieroll_68
- Track 39 : Radiance_65
- Track 40 : GigiOuiOui_62
- Track 41 : Clifton_61
- Track 42 : LastJedi_60, Brocalys_61
- Track 43 : Spartacus_70
- Track 44 : Saal_68, OlympiaSaint_68, Gorge_70, James_70, Mattes_70
- Track 45 : DocMcStuffins_74
- Track 46 : Job42_69
- Track 47 : Sandalphon_67
- Track 48 : Pacc40_60
- Track 49 : Doug_68
- Track 50 : Eish_69
- Track 51 : LunaBlu_68, Galactic_65
- Track 52 : Veteran_63
- Track 53 : Madiba_67
- Track 54 : Piper2020_77
- Track 55 : Squirty_68
- Track 56 : Cornie_64
- Track 57 : Charlie_56, Bosection6_56
- Track 58 : Scitech_50
- Track 59 : Tapioca_56
- Track 60 : 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 41, it was called in 36 of the 74 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alexphander_70, BigPhil_63, BuzzLyseyear_72, Cerasum_63, Coco12_66, Cornie_64, DosHalletts_68, Doug_68, Eish_69, Eradicator_59, GUmbie_64, Galactic_65, GigiOuiOui_62, Girr_64, Gorge_70, James_70, Job42_69, Kenuha5_64, Kingsley_64, Lizziana_72, LunaBlu_68, Madiba_67, Mattes_70, MisterCuddles_64, OlympiaSaint_68, Phrann_57, Radiance_65, RockyHorror_67, Ruby_62, Saal_68, Sarma624_65, SuperGrey_70, Velveteen_62, Veteran_63, XFactor_64, Zerg_66,

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

- Andies_52, Bosection6_56, Charlie_56, Hlubikazi_67, Mandlovu_67, Scitech_50, Strokeseat_67, Tapioca_56,

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

- AbbyDaisy_78, Aikyam_74, Anekin_77, Auxilium_73, BenchScraper_72, BillyTP_74, BodEinwohner17_70, Brocalys_61, Clifton_61, CookieBear_72, Dante_70, DocMcStuffins_74, EvePickles_74, Faja_78, Farewell_68, Globfish_74, Gorpy_73, Hestia_69, Hillester_79, Isolde_73, LastJedi_60, LilMoolah_65, MidnightRain_80, Minnie_69, MulchSalad_70, Nivrat_63, Pacc40_60, Persistence_69, Phrank15_78, Piper2020_77, RadFad_80, Raphaella_76, Raqqa_73, Richie_78, Rita_73, Sakai_72, Sandalphon_67, Sashimi_75,

Seahorse_83, SiSi_65, Sparky_66, Spartacus_70, Squirty_68, Tiff81_76, Tootsieroll_68, YoungHarleezy_73,

Summary by start number:

Start 22:

- Found in 1 of 90 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Squirty_68 (F3),

Start 29:

- Found in 1 of 90 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SiSi_65 (F1),

Start 30:

- Found in 7 of 90 (7.8%) of genes in pham
- Manual Annotations of this start: 6 of 74
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Brocalys_61 (F1), Clifton_61 (F1), LastJedi_60 (F1), Minnie_69 (F1), Pacc40_60 (F1), Sandalphon_67 (F1),

Start 31:

- Found in 2 of 90 (2.2%) of genes in pham
- Manual Annotations of this start: 2 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilMoolah_65 (F1), Nivrat_63 (F1),

Start 32:

- Found in 13 of 90 (14.4%) of genes in pham
- Manual Annotations of this start: 4 of 74
- Called 38.5% of time when present
- Phage (with cluster) where this start called: BodEinwohner17_70 (F1), Dante_70 (F1), DocMcStuffins_74 (F1), Spartacus_70 (F1), Tootsieroll_68 (F1),

Start 36:

- Found in 8 of 90 (8.9%) of genes in pham
- Manual Annotations of this start: 6 of 74
- Called 100.0% 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 37:

- Found in 3 of 90 (3.3%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: MulchSalad_70 (F),

Start 40:

- Found in 25 of 90 (27.8%) of genes in pham

- Manual Annotations of this start: 15 of 74
- 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_76 (AY), Raqqa_73 (AY), Richie_78 (AY), Rita_73 (F1), Sakai_72 (AY), Seahorse_83 (AY), YoungHarleezy_73 (AY),

Start 41:

- Found in 44 of 90 (48.9%) of genes in pham
- Manual Annotations of this start: 36 of 74
- Called 81.8% of time when present
- Phage (with cluster) where this start called: Alexphander_70 (F1), BigPhil_63 (F1), BuzzLyseyear_72 (F1), Cerasum_63 (F1), Coco12_66 (F1), Cornie_64 (F5), DosHalletts_68 (F1), Doug_68 (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), Job42_69 (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), Phrann_57 (N), Radiance_65 (F1), RockyHorror_67 (F1), Ruby_62 (F1), Saal_68 (F1), Sarma624_65 (F1), SuperGrey_70 (F1), Velveteen_62 (F1), Veteran_63 (F1), XFactor_64 (F1), Zerg_66 (F1),

Start 43:

- Found in 5 of 90 (5.6%) of genes in pham
- Manual Annotations of this start: 3 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Farewell_68 (AF), Piper2020_77 (F1), Sashimi_75 (AY), Sparky_66 (AF), Tiff81_76 (AY),

Summary by clusters:

There are 7 clusters represented in this pham: F1, F3, F5, AF, F, N, AY,

Info for manual annotations of cluster AF:

- Start number 43 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AY:

- Start number 40 was manually annotated 14 times for cluster AY.

Info for manual annotations of cluster F1:

- Start number 29 was manually annotated 1 time for cluster F1.
- Start number 30 was manually annotated 6 times for cluster F1.
- Start number 31 was manually annotated 2 times for cluster F1.
- Start number 32 was manually annotated 4 times for cluster F1.
- Start number 36 was manually annotated 3 times for cluster F1.
- Start number 40 was manually annotated 1 time for cluster F1.
- Start number 41 was manually annotated 34 times for cluster F1.
- Start number 43 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F3:

- Start number 22 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F5:

- Start number 41 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster N:

- Start number 36 was manually annotated 3 times for cluster N.
- Start number 41 was manually annotated 1 time for cluster N.

Gene Information:

Gene: AbbyDaisy_78 Start: 41569, Stop: 44097, Start Num: 40

Candidate Starts for AbbyDaisy_78:

(1, 41074), (4, 41179), (7, 41260), (13, 41362), (Start: 40 @41569 has 15 MA's), (45, 41584), (55, 41695), (57, 41746), (59, 41761), (71, 41878), (72, 41905), (77, 42004), (79, 42049), (80, 42061), (83, 42145), (85, 42241), (92, 42337), (94, 42349), (96, 42388), (104, 42475), (105, 42481), (113, 42643), (115, 42688), (120, 42817), (122, 42850), (123, 42853), (127, 42904), (128, 42970), (133, 43048), (134, 43063), (136, 43168), (138, 43198), (140, 43231), (144, 43282), (146, 43318), (148, 43345), (155, 43432), (164, 43636), (166, 43663), (167, 43672), (169, 43744), (173, 43798), (175, 43834), (176, 43840), (182, 43912), (183, 43933), (198, 44053),

Gene: Aikyam_74 Start: 37985, Stop: 40513, Start Num: 40

Candidate Starts for Aikyam_74:

(Start: 40 @37985 has 15 MA's), (45, 38000), (57, 38162), (58, 38174), (59, 38177), (60, 38183), (81, 38492), (83, 38561), (93, 38759), (104, 38891), (110, 39014), (117, 39146), (127, 39320), (128, 39386), (133, 39464), (134, 39479), (136, 39584), (144, 39698), (145, 39713), (148, 39761), (155, 39848), (164, 40052), (169, 40160), (172, 40205), (173, 40214), (176, 40256), (180, 40286), (198, 40469),

Gene: Alexphander_70 Start: 42641, Stop: 45160, Start Num: 41

Candidate Starts for Alexphander_70:

(Start: 41 @42641 has 36 MA's), (46, 42653), (47, 42671), (51, 42737), (55, 42764), (57, 42815), (58, 42827), (59, 42830), (61, 42845), (62, 42851), (65, 42890), (66, 42893), (67, 42905), (69, 42935), (74, 43031), (77, 43076), (78, 43079), (82, 43214), (83, 43217), (86, 43340), (89, 43394), (90, 43400), (107, 43592), (109, 43655), (110, 43670), (111, 43697), (114, 43757), (115, 43760), (116, 43775), (117, 43802), (118, 43808), (119, 43847), (121, 43895), (122, 43922), (123, 43925), (126, 43964), (127, 43976), (131, 44081), (133, 44120), (134, 44135), (136, 44240), (141, 44318), (143, 44345), (144, 44354), (148, 44417), (149, 44426), (151, 44438), (152, 44441), (155, 44504), (162, 44627), (169, 44816), (171, 44849), (172, 44861), (173, 44870), (174, 44879), (176, 44912), (177, 44918), (181, 44981), (182, 44984), (184, 45014), (185, 45020), (198, 45125),

Gene: Andies_52 Start: 35603, Stop: 38227, Start Num: 36

Candidate Starts for Andies_52:

(Start: 36 @35603 has 6 MA's), (38, 35609), (Start: 41 @35618 has 36 MA's), (46, 35630), (47, 35648), (51, 35714), (52, 35717), (53, 35720), (55, 35741), (58, 35804), (59, 35807), (61, 35822), (64, 35861), (65, 35867), (66, 35870), (67, 35882), (69, 35912), (74, 36008), (77, 36053), (80, 36110), (82, 36191), (83, 36194), (86, 36317), (90, 36377), (91, 36380), (97, 36443), (98, 36446), (99, 36455), (102, 36500), (107, 36569), (109, 36632), (110, 36647), (111, 36674), (114, 36734), (115, 36737), (116, 36752), (117, 36779), (119, 36824), (121, 36872), (122, 36899), (123, 36902), (126, 36941), (127, 36953), (131, 37058), (133, 37097), (134, 37112), (136, 37217), (141, 37295), (143, 37322), (144, 37331), (148, 37394), (151, 37415), (152, 37418), (155, 37481), (160, 37607), (161, 37625),

(162, 37694), (165, 37784), (169, 37883), (171, 37916), (172, 37928), (173, 37937), (174, 37946), (176, 37979), (177, 37985), (181, 38048), (182, 38051), (184, 38081), (185, 38087), (196, 38165), (198, 38192),

Gene: Anekin_77 Start: 40557, Stop: 43085, Start Num: 40

Candidate Starts for Anekin_77:

(Start: 40 @40557 has 15 MA's), (45, 40572), (57, 40734), (58, 40746), (59, 40749), (60, 40755), (81, 41064), (83, 41133), (93, 41331), (104, 41463), (110, 41586), (117, 41718), (127, 41892), (128, 41958), (133, 42036), (134, 42051), (136, 42156), (144, 42270), (146, 42306), (147, 42327), (148, 42333), (150, 42345), (155, 42420), (158, 42495), (164, 42624), (166, 42651), (167, 42660), (169, 42732), (173, 42786), (175, 42822), (176, 42828), (180, 42858), (182, 42900), (183, 42921), (198, 43041),

Gene: Auxilium_73 Start: 37528, Stop: 40056, Start Num: 40

Candidate Starts for Auxilium_73:

(Start: 40 @37528 has 15 MA's), (45, 37543), (48, 37597), (58, 37717), (59, 37720), (83, 38104), (93, 38302), (95, 38329), (104, 38434), (110, 38557), (117, 38689), (127, 38863), (128, 38929), (133, 39007), (136, 39127), (144, 39241), (145, 39256), (148, 39304), (155, 39391), (164, 39595), (169, 39703), (172, 39748), (173, 39757), (176, 39799), (198, 40012),

Gene: BenchScraper_72 Start: 38690, Stop: 41218, Start Num: 40

Candidate Starts for BenchScraper_72:

(Start: 40 @38690 has 15 MA's), (44, 38702), (58, 38876), (59, 38879), (72, 39023), (79, 39167), (83, 39263), (85, 39359), (104, 39593), (114, 39803), (117, 39848), (121, 39941), (127, 40022), (128, 40088), (133, 40169), (136, 40289), (140, 40352), (147, 40460), (148, 40466), (154, 40532), (155, 40553), (169, 40865), (170, 40874), (173, 40919), (175, 40955), (176, 40961), (180, 40991), (186, 41078), (193, 41129),

Gene: BigPhil_63 Start: 39507, Stop: 42026, Start Num: 41

Candidate Starts for BigPhil_63:

(Start: 41 @39507 has 36 MA's), (46, 39519), (51, 39603), (55, 39630), (57, 39681), (58, 39693), (59, 39696), (61, 39711), (62, 39717), (65, 39756), (66, 39759), (67, 39771), (69, 39801), (74, 39897), (77, 39942), (78, 39945), (82, 40080), (83, 40083), (86, 40206), (89, 40260), (90, 40266), (107, 40458), (109, 40521), (110, 40536), (111, 40563), (114, 40623), (115, 40626), (116, 40641), (117, 40668), (118, 40674), (119, 40713), (121, 40761), (122, 40788), (123, 40791), (126, 40830), (127, 40842), (131, 40947), (133, 40986), (134, 41001), (136, 41106), (141, 41184), (143, 41211), (144, 41220), (148, 41283), (149, 41292), (151, 41304), (152, 41307), (155, 41370), (162, 41493), (164, 41574), (169, 41682), (171, 41715), (172, 41727), (173, 41736), (174, 41745), (176, 41778), (177, 41784), (181, 41847), (182, 41850), (184, 41880), (185, 41886), (198, 41991),

Gene: BillyTP_74 Start: 40518, Stop: 43049, Start Num: 40

Candidate Starts for BillyTP_74:

(Start: 40 @40518 has 15 MA's), (45, 40533), (58, 40707), (59, 40710), (72, 40854), (79, 40998), (83, 41094), (85, 41190), (104, 41424), (117, 41679), (121, 41772), (127, 41853), (128, 41919), (133, 42000), (136, 42120), (147, 42291), (148, 42297), (154, 42363), (155, 42384), (169, 42696), (170, 42705), (173, 42750), (175, 42786), (176, 42792), (180, 42822), (186, 42909), (193, 42960),

Gene: BodEinwohner17_70 Start: 43451, Stop: 46000, Start Num: 32

Candidate Starts for BodEinwohner17_70:

(Start: 32 @43451 has 4 MA's), (47, 43511), (51, 43577), (55, 43604), (57, 43655), (58, 43667), (59, 43670), (60, 43676), (65, 43730), (66, 43733), (67, 43745), (69, 43775), (74, 43871), (77, 43916), (80, 43973), (82, 44054), (83, 44057), (86, 44180), (90, 44240), (91, 44243), (97, 44306), (98, 44309), (99, 44318), (107, 44432), (109, 44495), (111, 44537), (114, 44597), (115, 44600), (116, 44615), (119,

44687), (121, 44735), (122, 44762), (123, 44765), (124, 44771), (126, 44804), (127, 44816), (131, 44921), (133, 44960), (134, 44975), (136, 45080), (141, 45158), (143, 45185), (144, 45194), (148, 45257), (149, 45266), (151, 45278), (152, 45281), (155, 45344), (162, 45467), (169, 45656), (171, 45689), (172, 45701), (173, 45710), (174, 45719), (176, 45752), (177, 45758), (178, 45767), (181, 45821), (182, 45824), (184, 45854), (185, 45860), (191, 45902), (198, 45965),

Gene: Bosection6_56 Start: 35309, Stop: 37933, Start Num: 36

Candidate Starts for Bosection6_56:

(Start: 36 @35309 has 6 MA's), (38, 35315), (Start: 41 @35324 has 36 MA's), (46, 35336), (47, 35354), (51, 35420), (52, 35423), (53, 35426), (55, 35447), (57, 35498), (58, 35510), (59, 35513), (61, 35528), (65, 35573), (66, 35576), (67, 35588), (69, 35618), (74, 35714), (77, 35759), (80, 35816), (82, 35897), (83, 35900), (86, 36023), (90, 36083), (91, 36086), (97, 36149), (98, 36152), (99, 36161), (102, 36206), (107, 36275), (109, 36338), (110, 36353), (111, 36380), (114, 36440), (115, 36443), (116, 36458), (117, 36485), (119, 36530), (121, 36578), (122, 36605), (123, 36608), (126, 36647), (127, 36659), (131, 36764), (133, 36803), (134, 36818), (136, 36923), (141, 37001), (143, 37028), (144, 37037), (148, 37100), (151, 37121), (152, 37124), (155, 37187), (160, 37313), (161, 37331), (162, 37400), (165, 37490), (169, 37589), (171, 37622), (172, 37634), (173, 37643), (174, 37652), (176, 37685), (177, 37691), (181, 37754), (182, 37757), (184, 37787), (185, 37793), (196, 37871), (198, 37898), (202, 37925),

Gene: Brocalys_61 Start: 39655, Stop: 43206, Start Num: 30

Candidate Starts for Brocalys_61:

(Start: 30 @39655 has 6 MA's), (Start: 32 @39667 has 4 MA's), (46, 39706), (47, 39724), (51, 39790), (52, 39793), (53, 39796), (55, 39817), (58, 39880), (59, 39883), (61, 39898), (64, 39937), (65, 39943), (66, 39946), (67, 39958), (69, 39988), (77, 40129), (80, 40186), (82, 40267), (83, 40270), (85, 40366), (86, 40393), (90, 40453), (97, 40519), (98, 40522), (99, 40531), (107, 40645), (109, 40708), (110, 40723), (111, 40750), (114, 40810), (115, 40813), (116, 40828), (119, 40900), (122, 40975), (127, 41029), (131, 41134), (132, 41155), (133, 41173), (136, 41293), (141, 41371), (148, 41470), (149, 41479), (151, 41491), (152, 41494), (155, 41557), (157, 41587), (169, 41869), (171, 41902), (172, 41914), (173, 41923), (174, 41932), (176, 41965), (177, 41971), (179, 41995), (188, 42112), (189, 42115), (194, 42148), (195, 42151), (197, 42169), (203, 42271), (204, 42319), (205, 42574), (206, 42607), (207, 42649), (208, 42661), (209, 42676), (210, 42727), (211, 42757), (212, 42775), (213, 42781), (214, 42865), (215, 42871), (216, 42919), (217, 42955), (218, 42973), (219, 43027), (220, 43030), (221, 43060), (222, 43066), (226, 43171),

Gene: BuzzLyseyear_72 Start: 43958, Stop: 47470, Start Num: 41

Candidate Starts for BuzzLyseyear_72:

(Start: 41 @43958 has 36 MA's), (46, 43970), (47, 43988), (51, 44054), (55, 44081), (57, 44132), (58, 44144), (59, 44147), (61, 44162), (62, 44168), (65, 44207), (66, 44210), (67, 44222), (69, 44252), (74, 44348), (77, 44393), (78, 44396), (82, 44531), (83, 44534), (86, 44657), (89, 44711), (90, 44717), (97, 44783), (98, 44786), (99, 44795), (107, 44909), (109, 44972), (110, 44987), (111, 45014), (114, 45074), (115, 45077), (116, 45092), (119, 45164), (121, 45212), (122, 45239), (127, 45293), (133, 45437), (134, 45452), (136, 45557), (141, 45635), (148, 45734), (149, 45743), (151, 45755), (152, 45758), (155, 45821), (162, 45944), (169, 46133), (171, 46166), (172, 46178), (173, 46187), (174, 46196), (176, 46229), (177, 46235), (179, 46259), (188, 46376), (189, 46379), (194, 46412), (195, 46415), (197, 46433), (203, 46535), (204, 46583), (205, 46838), (206, 46871), (208, 46925), (209, 46940), (210, 46991), (211, 47021), (212, 47039), (213, 47045), (214, 47129), (215, 47135), (216, 47183), (217, 47219), (218, 47237), (219, 47291), (220, 47294), (221, 47324), (222, 47330), (224, 47372), (225, 47408), (226, 47435),

Gene: Cerasum_63 Start: 39525, Stop: 42044, Start Num: 41

Candidate Starts for Cerasum_63:

(Start: 41 @39525 has 36 MA's), (46, 39537), (51, 39621), (55, 39648), (57, 39699), (58, 39711), (59, 39714), (61, 39729), (62, 39735), (65, 39774), (66, 39777), (67, 39789), (69, 39819), (74, 39915), (77, 39960), (78, 39963), (82, 40098), (83, 40101), (86, 40224), (89, 40278), (90, 40284), (107, 40476), (109, 40539), (110, 40554), (111, 40581), (114, 40641), (115, 40644), (116, 40659), (117, 40686), (118, 40692), (119, 40731), (121, 40779), (122, 40806), (123, 40809), (126, 40848), (127, 40860), (131, 40965), (133, 41004), (134, 41019), (136, 41124), (141, 41202), (143, 41229), (144, 41238), (148, 41301), (149, 41310), (151, 41322), (152, 41325), (155, 41388), (162, 41511), (164, 41592), (169, 41700), (171, 41733), (172, 41745), (173, 41754), (174, 41763), (176, 41796), (177, 41802), (181, 41865), (182, 41868), (184, 41898), (185, 41904), (198, 42009),

Gene: Charlie_56 Start: 34933, Stop: 37557, Start Num: 36

Candidate Starts for Charlie_56:

(Start: 36 @34933 has 6 MA's), (38, 34939), (Start: 41 @34948 has 36 MA's), (46, 34960), (47, 34978), (51, 35044), (52, 35047), (53, 35050), (55, 35071), (57, 35122), (58, 35134), (59, 35137), (61, 35152), (65, 35197), (66, 35200), (67, 35212), (69, 35242), (74, 35338), (77, 35383), (80, 35440), (82, 35521), (83, 35524), (86, 35647), (90, 35707), (91, 35710), (97, 35773), (98, 35776), (99, 35785), (102, 35830), (107, 35899), (109, 35962), (110, 35977), (111, 36004), (114, 36064), (115, 36067), (116, 36082), (117, 36109), (119, 36154), (121, 36202), (122, 36229), (123, 36232), (126, 36271), (127, 36283), (131, 36388), (133, 36427), (134, 36442), (136, 36547), (141, 36625), (143, 36652), (144, 36661), (148, 36724), (151, 36745), (152, 36748), (155, 36811), (160, 36937), (161, 36955), (162, 37024), (165, 37114), (169, 37213), (171, 37246), (172, 37258), (173, 37267), (174, 37276), (176, 37309), (177, 37315), (181, 37378), (182, 37381), (184, 37411), (185, 37417), (196, 37495), (198, 37522), (202, 37549),

Gene: Clifton_61 Start: 40006, Stop: 43557, Start Num: 30

Candidate Starts for Clifton_61:

(Start: 30 @40006 has 6 MA's), (Start: 32 @40018 has 4 MA's), (46, 40057), (47, 40075), (51, 40141), (52, 40144), (53, 40147), (55, 40168), (58, 40231), (59, 40234), (61, 40249), (64, 40288), (65, 40294), (66, 40297), (67, 40309), (69, 40339), (77, 40480), (80, 40537), (82, 40618), (83, 40621), (85, 40717), (86, 40744), (90, 40804), (97, 40870), (98, 40873), (99, 40882), (107, 40996), (109, 41059), (110, 41074), (111, 41101), (114, 41161), (115, 41164), (116, 41179), (119, 41251), (122, 41326), (126, 41368), (127, 41380), (131, 41485), (132, 41506), (133, 41524), (136, 41644), (141, 41722), (143, 41749), (144, 41758), (148, 41821), (151, 41842), (152, 41845), (155, 41908), (157, 41938), (169, 42220), (171, 42253), (172, 42265), (173, 42274), (174, 42283), (176, 42316), (177, 42322), (179, 42346), (188, 42463), (189, 42466), (194, 42499), (195, 42502), (197, 42520), (203, 42622), (204, 42670), (205, 42925), (206, 42958), (207, 43000), (208, 43012), (209, 43027), (210, 43078), (211, 43108), (212, 43126), (213, 43132), (214, 43216), (215, 43222), (216, 43270), (217, 43306), (218, 43324), (219, 43378), (220, 43381), (221, 43411), (222, 43417), (226, 43522),

Gene: Coco12_66 Start: 43582, Stop: 46101, Start Num: 41

Candidate Starts for Coco12_66:

(Start: 41 @43582 has 36 MA's), (46, 43594), (51, 43678), (55, 43705), (57, 43756), (58, 43768), (59, 43771), (61, 43786), (62, 43792), (65, 43831), (66, 43834), (67, 43846), (69, 43876), (74, 43972), (77, 44017), (78, 44020), (82, 44155), (83, 44158), (86, 44281), (89, 44335), (90, 44341), (107, 44533), (109, 44596), (110, 44611), (111, 44638), (114, 44698), (115, 44701), (116, 44716), (117, 44743), (118, 44749), (119, 44788), (121, 44836), (122, 44863), (123, 44866), (126, 44905), (127, 44917), (131, 45022), (133, 45061), (134, 45076), (136, 45181), (141, 45259), (143, 45286), (144, 45295), (148, 45358), (149, 45367), (151, 45379), (152, 45382), (155, 45445), (162, 45568), (164, 45649), (169, 45757), (171, 45790), (172, 45802), (173, 45811), (174, 45820), (176, 45853), (177, 45859), (181, 45922), (182, 45925), (184, 45955), (185, 45961), (198, 46066),

Gene: CookieBear_72 Start: 39164, Stop: 41692, Start Num: 40

Candidate Starts for CookieBear_72:

(Start: 40 @39164 has 15 MA's), (44, 39176), (58, 39350), (59, 39353), (72, 39497), (79, 39641), (83, 39737), (85, 39833), (104, 40067), (114, 40277), (117, 40322), (121, 40415), (127, 40496), (128, 40562), (133, 40643), (136, 40763), (140, 40826), (147, 40934), (148, 40940), (154, 41006), (155, 41027), (169, 41339), (170, 41348), (173, 41393), (175, 41429), (176, 41435), (180, 41465), (186, 41552), (193, 41603),

Gene: Cornie_64 Start: 41301, Stop: 43820, Start Num: 41

Candidate Starts for Cornie_64:

(Start: 41 @41301 has 36 MA's), (46, 41313), (47, 41331), (51, 41397), (55, 41424), (57, 41475), (58, 41487), (59, 41490), (61, 41505), (62, 41511), (65, 41550), (66, 41553), (67, 41565), (69, 41595), (74, 41691), (75, 41703), (77, 41736), (78, 41739), (80, 41793), (82, 41874), (83, 41877), (86, 42000), (90, 42060), (91, 42063), (97, 42126), (98, 42129), (99, 42138), (102, 42183), (107, 42252), (109, 42315), (110, 42330), (111, 42357), (114, 42417), (115, 42420), (116, 42435), (117, 42462), (119, 42507), (121, 42555), (122, 42582), (123, 42585), (126, 42624), (127, 42636), (131, 42741), (133, 42780), (134, 42795), (136, 42900), (141, 42978), (143, 43005), (144, 43014), (148, 43077), (149, 43086), (151, 43098), (152, 43101), (155, 43164), (162, 43287), (164, 43368), (169, 43476), (171, 43509), (172, 43521), (173, 43530), (174, 43539), (176, 43572), (177, 43578), (181, 43641), (182, 43644), (184, 43674), (185, 43680), (198, 43785),

Gene: Dante_70 Start: 44090, Stop: 47632, Start Num: 32

Candidate Starts for Dante_70:

(Start: 32 @44090 has 4 MA's), (47, 44150), (51, 44216), (55, 44243), (57, 44294), (58, 44306), (59, 44309), (60, 44315), (65, 44369), (66, 44372), (67, 44384), (69, 44414), (74, 44510), (77, 44555), (80, 44612), (82, 44693), (83, 44696), (85, 44792), (86, 44819), (90, 44879), (91, 44882), (97, 44945), (98, 44948), (99, 44957), (102, 45002), (107, 45071), (109, 45134), (110, 45149), (111, 45176), (114, 45236), (115, 45239), (116, 45254), (117, 45281), (119, 45326), (121, 45374), (122, 45401), (123, 45404), (126, 45443), (127, 45455), (131, 45560), (133, 45599), (134, 45614), (136, 45719), (141, 45797), (143, 45824), (144, 45833), (148, 45896), (151, 45917), (155, 45983), (162, 46106), (164, 46187), (165, 46196), (169, 46295), (171, 46328), (172, 46340), (173, 46349), (174, 46358), (176, 46391), (177, 46397), (179, 46421), (188, 46538), (189, 46541), (194, 46574), (195, 46577), (197, 46595), (203, 46697), (204, 46745), (205, 47000), (206, 47033), (208, 47087), (209, 47102), (210, 47153), (211, 47183), (212, 47201), (213, 47207), (214, 47291), (215, 47297), (216, 47345), (217, 47381), (218, 47399), (219, 47453), (220, 47456), (221, 47486), (222, 47492), (224, 47534), (226, 47597),

Gene: DocMcStuffins_74 Start: 46780, Stop: 50322, Start Num: 32

Candidate Starts for DocMcStuffins_74:

(Start: 32 @46780 has 4 MA's), (47, 46840), (51, 46906), (55, 46933), (57, 46984), (58, 46996), (59, 46999), (60, 47005), (61, 47014), (65, 47059), (66, 47062), (67, 47074), (69, 47104), (74, 47200), (77, 47245), (80, 47302), (82, 47383), (83, 47386), (85, 47482), (86, 47509), (90, 47569), (97, 47635), (98, 47638), (99, 47647), (107, 47761), (109, 47824), (110, 47839), (111, 47866), (114, 47926), (115, 47929), (116, 47944), (121, 48064), (122, 48091), (123, 48094), (126, 48133), (127, 48145), (133, 48289), (134, 48304), (136, 48409), (141, 48487), (148, 48586), (149, 48595), (151, 48607), (152, 48610), (155, 48673), (162, 48796), (165, 48886), (169, 48985), (171, 49018), (172, 49030), (173, 49039), (174, 49048), (176, 49081), (177, 49087), (179, 49111), (188, 49228), (189, 49231), (192, 49243), (194, 49264), (195, 49267), (197, 49285), (203, 49387), (204, 49435), (205, 49690), (206, 49723), (208, 49777), (209, 49792), (210, 49843), (211, 49873), (212, 49891), (213, 49897), (214, 49981), (215, 49987), (216, 50035), (217, 50071), (218, 50089), (219, 50143), (220, 50146), (221, 50176), (222, 50182), (224, 50224), (226, 50287),

Gene: DosHalletts_68 Start: 43662, Stop: 46181, Start Num: 41

Candidate Starts for DosHalletts_68:

(Start: 41 @43662 has 36 MA's), (46, 43674), (47, 43692), (51, 43758), (52, 43761), (53, 43764), (55, 43785), (57, 43836), (58, 43848), (59, 43851), (60, 43857), (65, 43911), (66, 43914), (67, 43926), (69, 43956), (74, 44052), (77, 44097), (78, 44100), (80, 44154), (82, 44235), (83, 44238), (86, 44361), (90, 44421), (107, 44613), (109, 44676), (110, 44691), (111, 44718), (114, 44778), (115, 44781), (116, 44796), (119, 44868), (121, 44916), (122, 44943), (123, 44946), (124, 44952), (126, 44985), (127, 44997), (131, 45102), (133, 45141), (134, 45156), (136, 45261), (141, 45339), (143, 45366), (144, 45375), (148, 45438), (149, 45447), (151, 45459), (152, 45462), (155, 45525), (162, 45648), (164, 45729), (169, 45837), (171, 45870), (172, 45882), (173, 45891), (174, 45900), (176, 45933), (177, 45939), (181, 46002), (182, 46005), (184, 46035), (185, 46041), (198, 46146),

Gene: Doug_68 Start: 42994, Stop: 46506, Start Num: 41

Candidate Starts for Doug_68:

(Start: 41 @42994 has 36 MA's), (46, 43006), (47, 43024), (51, 43090), (55, 43117), (57, 43168), (58, 43180), (59, 43183), (61, 43198), (62, 43204), (65, 43243), (66, 43246), (67, 43258), (69, 43288), (74, 43384), (77, 43429), (78, 43432), (82, 43567), (83, 43570), (86, 43693), (89, 43747), (90, 43753), (107, 43945), (109, 44008), (110, 44023), (111, 44050), (114, 44110), (115, 44113), (116, 44128), (117, 44155), (118, 44161), (119, 44200), (121, 44248), (122, 44275), (123, 44278), (126, 44317), (127, 44329), (131, 44434), (133, 44473), (134, 44488), (136, 44593), (141, 44671), (143, 44698), (144, 44707), (148, 44770), (149, 44779), (151, 44791), (152, 44794), (155, 44857), (162, 44980), (164, 45061), (169, 45169), (171, 45202), (172, 45214), (173, 45223), (174, 45232), (176, 45265), (177, 45271), (179, 45295), (188, 45412), (189, 45415), (194, 45448), (195, 45451), (197, 45469), (203, 45571), (204, 45619), (207, 45949), (208, 45961), (209, 45976), (210, 46027), (211, 46057), (212, 46075), (213, 46081), (214, 46165), (215, 46171), (216, 46219), (217, 46255), (218, 46273), (220, 46330), (221, 46360), (222, 46366), (226, 46471),

Gene: Eish_69 Start: 42896, Stop: 45415, Start Num: 41

Candidate Starts for Eish_69:

(Start: 41 @42896 has 36 MA's), (46, 42908), (47, 42926), (51, 42992), (55, 43019), (57, 43070), (58, 43082), (59, 43085), (61, 43100), (62, 43106), (65, 43145), (66, 43148), (67, 43160), (69, 43190), (74, 43286), (77, 43331), (82, 43469), (83, 43472), (86, 43595), (90, 43655), (97, 43721), (98, 43724), (99, 43733), (102, 43778), (107, 43847), (109, 43910), (110, 43925), (111, 43952), (114, 44012), (115, 44015), (116, 44030), (117, 44057), (119, 44102), (121, 44150), (122, 44177), (123, 44180), (126, 44219), (127, 44231), (131, 44336), (133, 44375), (134, 44390), (136, 44495), (141, 44573), (143, 44600), (144, 44609), (148, 44672), (149, 44681), (151, 44693), (152, 44696), (155, 44759), (162, 44882), (164, 44963), (166, 44990), (169, 45071), (171, 45104), (172, 45116), (173, 45125), (174, 45134), (176, 45167), (177, 45173), (181, 45236), (182, 45239), (184, 45269), (185, 45275), (198, 45380),

Gene: Eradicator_59 Start: 40808, Stop: 43327, Start Num: 41

Candidate Starts for Eradicator_59:

(Start: 41 @40808 has 36 MA's), (46, 40820), (47, 40838), (51, 40904), (55, 40931), (57, 40982), (58, 40994), (59, 40997), (61, 41012), (62, 41018), (65, 41057), (66, 41060), (67, 41072), (69, 41102), (74, 41198), (77, 41243), (78, 41246), (82, 41381), (83, 41384), (86, 41507), (89, 41561), (90, 41567), (107, 41759), (109, 41822), (110, 41837), (111, 41864), (114, 41924), (115, 41927), (116, 41942), (118, 41975), (119, 42014), (121, 42062), (122, 42089), (123, 42092), (124, 42098), (126, 42131), (127, 42143), (131, 42248), (132, 42269), (133, 42287), (136, 42407), (141, 42485), (148, 42584), (149, 42593), (151, 42605), (152, 42608), (155, 42671), (162, 42794), (169, 42983), (171, 43016), (172, 43028), (173, 43037), (174, 43046), (176, 43079), (177, 43085), (178, 43094), (181, 43148), (182, 43151), (184, 43181), (185, 43187), (198, 43292),

Gene: EvePickles_74 Start: 40431, Stop: 42962, Start Num: 40

Candidate Starts for EvePickles_74:

(Start: 40 @40431 has 15 MA's), (45, 40443), (57, 40605), (59, 40620), (71, 40740), (72, 40767), (77, 40866), (80, 40923), (83, 41007), (85, 41103), (96, 41250), (101, 41289), (104, 41337), (105, 41343), (113, 41505), (115, 41550), (120, 41679), (122, 41712), (123, 41715), (126, 41754), (127, 41766), (128, 41832), (133, 41913), (134, 41928), (135, 41934), (136, 42033), (139, 42066), (142, 42123), (146, 42183), (147, 42204), (148, 42210), (154, 42276), (155, 42297), (159, 42378), (169, 42609), (170, 42618), (173, 42663), (176, 42705), (198, 42918),

Gene: Faja_78 Start: 41206, Stop: 43734, Start Num: 40

Candidate Starts for Faja_78:

(Start: 40 @41206 has 15 MA's), (44, 41218), (58, 41392), (59, 41395), (72, 41539), (79, 41683), (83, 41779), (85, 41875), (104, 42109), (114, 42319), (117, 42364), (121, 42457), (127, 42538), (128, 42604), (133, 42685), (136, 42805), (140, 42868), (147, 42976), (148, 42982), (154, 43048), (155, 43069), (169, 43381), (170, 43390), (173, 43435), (175, 43471), (176, 43477), (180, 43507), (186, 43594), (193, 43645),

Gene: Farewell_68 Start: 44606, Stop: 47125, Start Num: 43

Candidate Starts for Farewell_68:

(10, 44336), (21, 44504), (35, 44585), (39, 44594), (Start: 43 @44606 has 3 MA's), (46, 44618), (47, 44636), (51, 44702), (52, 44705), (53, 44708), (55, 44729), (58, 44792), (59, 44795), (61, 44810), (64, 44849), (65, 44855), (66, 44858), (67, 44870), (69, 44900), (77, 45041), (80, 45098), (82, 45179), (83, 45182), (85, 45278), (86, 45305), (90, 45365), (97, 45431), (98, 45434), (99, 45443), (107, 45557), (109, 45620), (110, 45635), (111, 45662), (114, 45722), (115, 45725), (116, 45740), (119, 45812), (121, 45860), (122, 45887), (123, 45890), (127, 45941), (133, 46085), (134, 46100), (136, 46205), (141, 46283), (148, 46382), (149, 46391), (151, 46403), (152, 46406), (155, 46469), (157, 46499), (162, 46592), (168, 46730), (169, 46781), (172, 46826), (173, 46835), (174, 46844), (176, 46877), (177, 46883), (178, 46892), (181, 46946), (182, 46949), (184, 46979), (185, 46985), (196, 47063), (198, 47090), (202, 47117),

Gene: GUmbie_64 Start: 42035, Stop: 44554, Start Num: 41

Candidate Starts for GUmbie_64:

(Start: 41 @42035 has 36 MA's), (46, 42047), (47, 42065), (51, 42131), (55, 42158), (57, 42209), (58, 42221), (59, 42224), (61, 42239), (62, 42245), (65, 42284), (66, 42287), (67, 42299), (69, 42329), (74, 42425), (77, 42470), (78, 42473), (82, 42608), (83, 42611), (86, 42734), (89, 42788), (90, 42794), (107, 42986), (109, 43049), (110, 43064), (111, 43091), (114, 43151), (115, 43154), (116, 43169), (117, 43196), (118, 43202), (119, 43241), (121, 43289), (122, 43316), (123, 43319), (126, 43358), (127, 43370), (131, 43475), (133, 43514), (134, 43529), (136, 43634), (141, 43712), (143, 43739), (144, 43748), (148, 43811), (149, 43820), (151, 43832), (152, 43835), (155, 43898), (162, 44021), (164, 44102), (169, 44210), (171, 44243), (172, 44255), (173, 44264), (174, 44273), (176, 44306), (177, 44312), (181, 44375), (182, 44378), (184, 44408), (185, 44414), (198, 44519),

Gene: Galactic_65 Start: 42192, Stop: 44711, Start Num: 41

Candidate Starts for Galactic_65:

(Start: 41 @42192 has 36 MA's), (46, 42204), (47, 42222), (51, 42288), (55, 42315), (57, 42366), (58, 42378), (59, 42381), (61, 42396), (62, 42402), (65, 42441), (66, 42444), (67, 42456), (69, 42486), (74, 42582), (77, 42627), (78, 42630), (82, 42765), (83, 42768), (86, 42891), (89, 42945), (90, 42951), (107, 43143), (109, 43206), (110, 43221), (111, 43248), (114, 43308), (115, 43311), (116, 43326), (117, 43353), (119, 43398), (121, 43446), (122, 43473), (123, 43476), (126, 43515), (127, 43527), (131, 43632), (133, 43671), (134, 43686), (136, 43791), (141, 43869), (143, 43896), (144, 43905), (148, 43968), (149, 43977), (151, 43989), (152, 43992), (155, 44055), (162, 44178), (164, 44259), (169, 44367), (171, 44400), (172, 44412), (173, 44421), (174, 44430), (176, 44463), (177, 44469), (181, 44532), (182, 44535), (184, 44565), (185, 44571), (198, 44676),

Gene: GigiOuiOui_62 Start: 41181, Stop: 43700, Start Num: 41

Candidate Starts for GigiOuiOui_62:

(Start: 41 @41181 has 36 MA's), (46, 41193), (47, 41211), (51, 41277), (52, 41280), (53, 41283), (55, 41304), (58, 41367), (59, 41370), (61, 41385), (64, 41424), (65, 41430), (66, 41433), (67, 41445), (69, 41475), (74, 41571), (77, 41616), (80, 41673), (82, 41754), (83, 41757), (86, 41880), (90, 41940), (91, 41943), (97, 42006), (98, 42009), (99, 42018), (107, 42132), (109, 42195), (111, 42237), (114, 42297), (115, 42300), (116, 42315), (117, 42342), (119, 42387), (121, 42435), (122, 42462), (123, 42465), (124, 42471), (126, 42504), (127, 42516), (131, 42621), (133, 42660), (134, 42675), (136, 42780), (141, 42858), (143, 42885), (144, 42894), (148, 42957), (149, 42966), (151, 42978), (152, 42981), (155, 43044), (162, 43167), (169, 43356), (171, 43389), (172, 43401), (173, 43410), (174, 43419), (176, 43452), (177, 43458), (181, 43521), (182, 43524), (184, 43554), (185, 43560), (198, 43665),

Gene: Girr_64 Start: 42051, Stop: 44570, Start Num: 41

Candidate Starts for Girr_64:

(Start: 41 @42051 has 36 MA's), (46, 42063), (47, 42081), (51, 42147), (55, 42174), (57, 42225), (58, 42237), (59, 42240), (61, 42255), (62, 42261), (65, 42300), (66, 42303), (67, 42315), (69, 42345), (74, 42441), (77, 42486), (78, 42489), (82, 42624), (83, 42627), (86, 42750), (89, 42804), (90, 42810), (107, 43002), (109, 43065), (110, 43080), (111, 43107), (114, 43167), (115, 43170), (116, 43185), (117, 43212), (118, 43218), (119, 43257), (121, 43305), (122, 43332), (123, 43335), (126, 43374), (127, 43386), (131, 43491), (133, 43530), (134, 43545), (136, 43650), (141, 43728), (143, 43755), (144, 43764), (148, 43827), (149, 43836), (151, 43848), (152, 43851), (155, 43914), (162, 44037), (169, 44226), (171, 44259), (172, 44271), (173, 44280), (174, 44289), (176, 44322), (177, 44328), (181, 44391), (182, 44394), (184, 44424), (185, 44430), (198, 44535),

Gene: Globfish_74 Start: 38895, Stop: 41429, Start Num: 40

Candidate Starts for Globfish_74:

(Start: 40 @38895 has 15 MA's), (45, 38910), (49, 38970), (57, 39072), (59, 39087), (71, 39207), (72, 39234), (77, 39333), (80, 39390), (81, 39405), (83, 39474), (85, 39570), (92, 39666), (93, 39672), (104, 39804), (108, 39864), (114, 40014), (116, 40032), (121, 40152), (122, 40179), (127, 40233), (128, 40299), (133, 40380), (134, 40395), (135, 40401), (136, 40500), (139, 40533), (142, 40590), (146, 40650), (147, 40671), (148, 40677), (154, 40743), (159, 40845), (169, 41076), (170, 41085), (173, 41130), (176, 41172), (198, 41385),

Gene: Gorge_70 Start: 43977, Stop: 46496, Start Num: 41

Candidate Starts for Gorge_70:

(Start: 41 @43977 has 36 MA's), (46, 43989), (47, 44007), (51, 44073), (55, 44100), (57, 44151), (58, 44163), (59, 44166), (61, 44181), (62, 44187), (65, 44226), (66, 44229), (67, 44241), (69, 44271), (74, 44367), (77, 44412), (78, 44415), (82, 44550), (83, 44553), (86, 44676), (89, 44730), (90, 44736), (107, 44928), (109, 44991), (110, 45006), (111, 45033), (114, 45093), (115, 45096), (116, 45111), (117, 45138), (118, 45144), (119, 45183), (121, 45231), (122, 45258), (123, 45261), (126, 45300), (127, 45312), (133, 45456), (134, 45471), (136, 45576), (137, 45600), (141, 45654), (143, 45681), (144, 45690), (148, 45753), (151, 45774), (153, 45804), (155, 45840), (162, 45963), (163, 46029), (169, 46152), (171, 46185), (172, 46197), (173, 46206), (174, 46215), (176, 46248), (177, 46254), (181, 46317), (182, 46320), (184, 46350), (185, 46356), (198, 46461),

Gene: Gorpy_73 Start: 40405, Stop: 42933, Start Num: 40

Candidate Starts for Gorpy_73:

(Start: 40 @40405 has 15 MA's), (45, 40420), (57, 40582), (58, 40594), (59, 40597), (60, 40603), (81, 40912), (83, 40981), (93, 41179), (104, 41311), (110, 41434), (117, 41566), (127, 41740), (128, 41806), (133, 41884), (134, 41899), (136, 42004), (144, 42118), (145, 42133), (148, 42181), (155, 42268), (164, 42472), (169, 42580), (172, 42625), (173, 42634), (176, 42676), (180, 42706), (198, 42889),

Gene: Hestia_69 Start: 37429, Stop: 39957, Start Num: 40

Candidate Starts for Hestia_69:

(Start: 40 @37429 has 15 MA's), (44, 37441), (58, 37615), (59, 37618), (72, 37762), (79, 37906), (83, 38002), (85, 38098), (104, 38332), (114, 38542), (117, 38587), (121, 38680), (127, 38761), (128, 38827), (133, 38908), (136, 39028), (140, 39091), (147, 39199), (148, 39205), (154, 39271), (155, 39292), (169, 39604), (170, 39613), (173, 39658), (175, 39694), (176, 39700), (180, 39730), (186, 39817), (193, 39868),

Gene: Hillester_79 Start: 40447, Stop: 42978, Start Num: 40

Candidate Starts for Hillester_79:

(Start: 40 @40447 has 15 MA's), (45, 40462), (58, 40636), (59, 40639), (72, 40783), (79, 40927), (83, 41023), (85, 41119), (104, 41353), (117, 41608), (121, 41701), (127, 41782), (128, 41848), (133, 41929), (136, 42049), (147, 42220), (148, 42226), (154, 42292), (155, 42313), (169, 42625), (170, 42634), (173, 42679), (176, 42721), (180, 42751), (186, 42838), (193, 42889),

Gene: Hlubikazi_67 Start: 41441, Stop: 44065, Start Num: 36

Candidate Starts for Hlubikazi_67:

(Start: 36 @41441 has 6 MA's), (38, 41447), (Start: 41 @41456 has 36 MA's), (46, 41468), (47, 41486), (51, 41552), (52, 41555), (53, 41558), (55, 41579), (58, 41642), (59, 41645), (61, 41660), (64, 41699), (65, 41705), (66, 41708), (67, 41720), (69, 41750), (74, 41846), (77, 41891), (80, 41948), (82, 42029), (83, 42032), (86, 42155), (90, 42215), (91, 42218), (97, 42281), (98, 42284), (99, 42293), (102, 42338), (107, 42407), (109, 42470), (110, 42485), (111, 42512), (114, 42572), (115, 42575), (116, 42590), (117, 42617), (119, 42662), (121, 42710), (122, 42737), (123, 42740), (126, 42779), (127, 42791), (131, 42896), (133, 42935), (134, 42950), (136, 43055), (141, 43133), (143, 43160), (144, 43169), (148, 43232), (151, 43253), (152, 43256), (155, 43319), (160, 43445), (161, 43463), (162, 43532), (165, 43622), (169, 43721), (171, 43754), (172, 43766), (173, 43775), (174, 43784), (176, 43817), (177, 43823), (181, 43886), (182, 43889), (184, 43919), (185, 43925), (196, 44003), (198, 44030),

Gene: Isolde_73 Start: 39275, Stop: 41803, Start Num: 40

Candidate Starts for Isolde_73:

(Start: 40 @39275 has 15 MA's), (44, 39287), (58, 39461), (59, 39464), (72, 39608), (79, 39752), (83, 39848), (85, 39944), (104, 40178), (114, 40388), (117, 40433), (121, 40526), (127, 40607), (128, 40673), (133, 40754), (136, 40874), (140, 40937), (147, 41045), (148, 41051), (154, 41117), (155, 41138), (169, 41450), (170, 41459), (173, 41504), (175, 41540), (176, 41546), (180, 41576), (186, 41663), (193, 41714),

Gene: James_70 Start: 44102, Stop: 46621, Start Num: 41

Candidate Starts for James_70:

(Start: 41 @44102 has 36 MA's), (46, 44114), (47, 44132), (51, 44198), (55, 44225), (57, 44276), (58, 44288), (59, 44291), (61, 44306), (62, 44312), (65, 44351), (66, 44354), (67, 44366), (69, 44396), (74, 44492), (77, 44537), (78, 44540), (82, 44675), (83, 44678), (86, 44801), (89, 44855), (90, 44861), (107, 45053), (109, 45116), (110, 45131), (111, 45158), (114, 45218), (115, 45221), (116, 45236), (117, 45263), (118, 45269), (119, 45308), (121, 45356), (122, 45383), (123, 45386), (126, 45425), (127, 45437), (133, 45581), (134, 45596), (136, 45701), (137, 45725), (141, 45779), (143, 45806), (144, 45815), (148, 45878), (151, 45899), (153, 45929), (155, 45965), (162, 46088), (163, 46154), (169, 46277), (171, 46310), (172, 46322), (173, 46331), (174, 46340), (176, 46373), (177, 46379), (181, 46442), (182, 46445), (184, 46475), (185, 46481), (198, 46586),

Gene: Job42_69 Start: 45077, Stop: 48589, Start Num: 41

Candidate Starts for Job42_69:

(Start: 41 @45077 has 36 MA's), (46, 45089), (47, 45107), (51, 45173), (52, 45176), (53, 45179), (55, 45200), (57, 45251), (58, 45263), (59, 45266), (60, 45272), (65, 45326), (66, 45329), (67, 45341), (69, 45371), (74, 45467), (77, 45512), (78, 45515), (80, 45569), (82, 45650), (83, 45653), (86, 45776), (90,

45836), (91, 45839), (97, 45902), (98, 45905), (99, 45914), (107, 46028), (109, 46091), (111, 46133), (114, 46193), (115, 46196), (116, 46211), (117, 46238), (119, 46283), (121, 46331), (122, 46358), (123, 46361), (126, 46400), (127, 46412), (131, 46517), (133, 46556), (134, 46571), (136, 46676), (141, 46754), (143, 46781), (144, 46790), (148, 46853), (151, 46874), (155, 46940), (157, 46970), (162, 47063), (169, 47252), (171, 47285), (172, 47297), (173, 47306), (174, 47315), (176, 47348), (177, 47354), (179, 47378), (188, 47495), (189, 47498), (194, 47531), (195, 47534), (197, 47552), (203, 47654), (204, 47702), (205, 47957), (206, 47990), (208, 48044), (209, 48059), (210, 48110), (211, 48140), (212, 48158), (213, 48164), (214, 48248), (215, 48254), (216, 48302), (217, 48338), (218, 48356), (219, 48410), (220, 48413), (221, 48443), (222, 48449), (224, 48491), (226, 48554),

Gene: Kenuha5_64 Start: 41648, Stop: 44167, Start Num: 41

Candidate Starts for Kenuha5_64:

(14, 41471), (15, 41477), (16, 41486), (17, 41495), (28, 41591), (Start: 41 @41648 has 36 MA's), (46, 41660), (47, 41678), (51, 41744), (52, 41747), (53, 41750), (55, 41771), (57, 41822), (58, 41834), (59, 41837), (60, 41843), (65, 41897), (66, 41900), (67, 41912), (69, 41942), (74, 42038), (77, 42083), (78, 42086), (80, 42140), (82, 42221), (83, 42224), (86, 42347), (90, 42407), (91, 42410), (97, 42473), (98, 42476), (99, 42485), (107, 42599), (109, 42662), (111, 42704), (114, 42764), (115, 42767), (116, 42782), (117, 42809), (119, 42854), (122, 42929), (123, 42932), (124, 42938), (126, 42971), (127, 42983), (131, 43088), (133, 43127), (134, 43142), (136, 43247), (141, 43325), (143, 43352), (144, 43361), (148, 43424), (151, 43445), (152, 43448), (155, 43511), (157, 43541), (162, 43634), (164, 43715), (169, 43823), (171, 43856), (172, 43868), (173, 43877), (174, 43886), (176, 43919), (177, 43925), (181, 43988), (182, 43991), (184, 44021), (185, 44027), (190, 44063), (198, 44132),

Gene: Kingsley_64 Start: 42315, Stop: 44834, Start Num: 41

Candidate Starts for Kingsley_64:

(Start: 41 @42315 has 36 MA's), (46, 42327), (51, 42411), (55, 42438), (57, 42489), (58, 42501), (59, 42504), (61, 42519), (62, 42525), (65, 42564), (66, 42567), (67, 42579), (69, 42609), (74, 42705), (77, 42750), (78, 42753), (82, 42888), (83, 42891), (86, 43014), (89, 43068), (90, 43074), (107, 43266), (109, 43329), (110, 43344), (111, 43371), (114, 43431), (115, 43434), (116, 43449), (117, 43476), (118, 43482), (119, 43521), (121, 43569), (122, 43596), (123, 43599), (126, 43638), (127, 43650), (131, 43755), (133, 43794), (134, 43809), (136, 43914), (141, 43992), (143, 44019), (144, 44028), (148, 44091), (149, 44100), (151, 44112), (152, 44115), (155, 44178), (162, 44301), (164, 44382), (169, 44490), (171, 44523), (172, 44535), (173, 44544), (174, 44553), (176, 44586), (177, 44592), (181, 44655), (182, 44658), (184, 44688), (185, 44694), (198, 44799),

Gene: LastJedi_60 Start: 40049, Stop: 43600, Start Num: 30

Candidate Starts for LastJedi_60:

(Start: 30 @40049 has 6 MA's), (Start: 32 @40061 has 4 MA's), (46, 40100), (47, 40118), (51, 40184), (52, 40187), (53, 40190), (55, 40211), (58, 40274), (59, 40277), (61, 40292), (64, 40331), (65, 40337), (66, 40340), (67, 40352), (69, 40382), (77, 40523), (80, 40580), (82, 40661), (83, 40664), (85, 40760), (86, 40787), (90, 40847), (97, 40913), (98, 40916), (99, 40925), (107, 41039), (109, 41102), (110, 41117), (111, 41144), (114, 41204), (115, 41207), (116, 41222), (119, 41294), (122, 41369), (127, 41423), (131, 41528), (132, 41549), (133, 41567), (136, 41687), (141, 41765), (148, 41864), (149, 41873), (151, 41885), (152, 41888), (155, 41951), (157, 41981), (169, 42263), (171, 42296), (172, 42308), (173, 42317), (174, 42326), (176, 42359), (177, 42365), (179, 42389), (188, 42506), (189, 42509), (194, 42542), (195, 42545), (197, 42563), (203, 42665), (204, 42713), (205, 42968), (206, 43001), (207, 43043), (208, 43055), (209, 43070), (210, 43121), (211, 43151), (212, 43169), (213, 43175), (214, 43259), (215, 43265), (216, 43313), (217, 43349), (218, 43367), (219, 43421), (220, 43424), (221, 43454), (222, 43460), (226, 43565),

Gene: LilMoolah_65 Start: 42579, Stop: 45227, Start Num: 31

Candidate Starts for LilMoolah_65:

(Start: 31 @42579 has 2 MA's), (33, 42591), (46, 42630), (47, 42648), (51, 42714), (52, 42717), (53, 42720), (55, 42741), (58, 42804), (59, 42807), (61, 42822), (64, 42861), (65, 42867), (66, 42870), (67, 42882), (69, 42912), (77, 43053), (80, 43110), (82, 43191), (83, 43194), (85, 43290), (86, 43317), (90, 43377), (97, 43443), (98, 43446), (99, 43455), (107, 43569), (109, 43632), (110, 43647), (111, 43674), (114, 43734), (115, 43737), (116, 43752), (119, 43824), (122, 43899), (127, 43953), (131, 44058), (132, 44079), (133, 44097), (136, 44217), (141, 44295), (148, 44394), (149, 44403), (151, 44415), (152, 44418), (155, 44481), (156, 44505), (157, 44511), (158, 44556), (160, 44607), (161, 44625), (169, 44883), (171, 44916), (172, 44928), (173, 44937), (174, 44946), (176, 44979), (177, 44985), (181, 45048), (182, 45051), (184, 45081), (185, 45087), (191, 45129), (198, 45192),

Gene: Lizziana_72 Start: 43583, Stop: 46102, Start Num: 41

Candidate Starts for Lizziana_72:

(Start: 41 @43583 has 36 MA's), (46, 43595), (47, 43613), (51, 43679), (55, 43706), (57, 43757), (58, 43769), (59, 43772), (61, 43787), (62, 43793), (65, 43832), (66, 43835), (67, 43847), (69, 43877), (74, 43973), (77, 44018), (78, 44021), (82, 44156), (83, 44159), (86, 44282), (89, 44336), (90, 44342), (107, 44534), (109, 44597), (110, 44612), (111, 44639), (114, 44699), (115, 44702), (116, 44717), (117, 44744), (118, 44750), (119, 44789), (121, 44837), (122, 44864), (123, 44867), (126, 44906), (127, 44918), (131, 45023), (133, 45062), (134, 45077), (136, 45182), (141, 45260), (143, 45287), (144, 45296), (148, 45359), (149, 45368), (151, 45380), (152, 45383), (155, 45446), (162, 45569), (164, 45650), (169, 45758), (171, 45791), (172, 45803), (173, 45812), (174, 45821), (176, 45854), (177, 45860), (181, 45923), (182, 45926), (184, 45956), (185, 45962), (198, 46067),

Gene: LunaBlu_68 Start: 42851, Stop: 45370, Start Num: 41

Candidate Starts for LunaBlu_68:

(Start: 41 @42851 has 36 MA's), (46, 42863), (47, 42881), (51, 42947), (55, 42974), (57, 43025), (58, 43037), (59, 43040), (61, 43055), (62, 43061), (65, 43100), (66, 43103), (67, 43115), (69, 43145), (74, 43241), (77, 43286), (78, 43289), (82, 43424), (83, 43427), (86, 43550), (89, 43604), (90, 43610), (107, 43802), (109, 43865), (110, 43880), (111, 43907), (114, 43967), (115, 43970), (116, 43985), (117, 44012), (119, 44057), (121, 44105), (122, 44132), (123, 44135), (126, 44174), (127, 44186), (131, 44291), (133, 44330), (134, 44345), (136, 44450), (141, 44528), (143, 44555), (144, 44564), (148, 44627), (149, 44636), (151, 44648), (152, 44651), (155, 44714), (162, 44837), (164, 44918), (169, 45026), (171, 45059), (172, 45071), (173, 45080), (174, 45089), (176, 45122), (177, 45128), (181, 45191), (182, 45194), (184, 45224), (185, 45230), (198, 45335),

Gene: Madiba_67 Start: 42084, Stop: 44603, Start Num: 41

Candidate Starts for Madiba_67:

(Start: 41 @42084 has 36 MA's), (46, 42096), (47, 42114), (51, 42180), (52, 42183), (53, 42186), (55, 42207), (57, 42258), (58, 42270), (59, 42273), (61, 42288), (65, 42333), (66, 42336), (67, 42348), (69, 42378), (74, 42474), (80, 42576), (82, 42657), (83, 42660), (86, 42783), (90, 42843), (97, 42909), (98, 42912), (99, 42921), (102, 42966), (107, 43035), (109, 43098), (110, 43113), (111, 43140), (114, 43200), (115, 43203), (116, 43218), (117, 43245), (119, 43290), (121, 43338), (122, 43365), (123, 43368), (126, 43407), (127, 43419), (131, 43524), (133, 43563), (134, 43578), (136, 43683), (141, 43761), (143, 43788), (144, 43797), (148, 43860), (151, 43881), (152, 43884), (155, 43947), (162, 44070), (164, 44151), (169, 44259), (171, 44292), (172, 44304), (173, 44313), (174, 44322), (176, 44355), (177, 44361), (181, 44424), (182, 44427), (184, 44457), (185, 44463), (198, 44568),

Gene: Mandlovu_67 Start: 41383, Stop: 44007, Start Num: 36

Candidate Starts for Mandlovu_67:

(Start: 36 @41383 has 6 MA's), (38, 41389), (Start: 41 @41398 has 36 MA's), (46, 41410), (47, 41428), (51, 41494), (52, 41497), (53, 41500), (55, 41521), (58, 41584), (59, 41587), (61, 41602), (64, 41641), (65, 41647), (66, 41650), (67, 41662), (69, 41692), (74, 41788), (77, 41833), (80, 41890), (82, 41971), (83, 41974), (86, 42097), (90, 42157), (91, 42160), (97, 42223), (98, 42226), (99, 42235), (102, 42280), (107, 42349), (109, 42412), (110, 42427), (111, 42454), (114, 42514), (115, 42517),

(116, 42532), (117, 42559), (119, 42604), (121, 42652), (122, 42679), (123, 42682), (126, 42721), (127, 42733), (131, 42838), (133, 42877), (134, 42892), (136, 42997), (141, 43075), (143, 43102), (144, 43111), (148, 43174), (151, 43195), (152, 43198), (155, 43261), (160, 43387), (161, 43405), (162, 43474), (165, 43564), (169, 43663), (171, 43696), (172, 43708), (173, 43717), (174, 43726), (176, 43759), (177, 43765), (181, 43828), (182, 43831), (184, 43861), (185, 43867), (196, 43945), (198, 43972),

Gene: Mattes_70 Start: 44102, Stop: 46621, Start Num: 41

Candidate Starts for Mattes_70:

(Start: 41 @44102 has 36 MA's), (46, 44114), (47, 44132), (51, 44198), (55, 44225), (57, 44276), (58, 44288), (59, 44291), (61, 44306), (62, 44312), (65, 44351), (66, 44354), (67, 44366), (69, 44396), (74, 44492), (77, 44537), (78, 44540), (82, 44675), (83, 44678), (86, 44801), (89, 44855), (90, 44861), (107, 45053), (109, 45116), (110, 45131), (111, 45158), (114, 45218), (115, 45221), (116, 45236), (117, 45263), (118, 45269), (119, 45308), (121, 45356), (122, 45383), (123, 45386), (126, 45425), (127, 45437), (133, 45581), (134, 45596), (136, 45701), (137, 45725), (141, 45779), (143, 45806), (144, 45815), (148, 45878), (151, 45899), (153, 45929), (155, 45965), (162, 46088), (163, 46154), (169, 46277), (171, 46310), (172, 46322), (173, 46331), (174, 46340), (176, 46373), (177, 46379), (181, 46442), (182, 46445), (184, 46475), (185, 46481), (198, 46586),

Gene: MidnightRain_80 Start: 40745, Stop: 43273, Start Num: 40

Candidate Starts for MidnightRain_80:

(Start: 40 @40745 has 15 MA's), (45, 40760), (49, 40820), (55, 40871), (57, 40922), (59, 40937), (71, 41054), (72, 41081), (83, 41321), (85, 41417), (94, 41525), (96, 41564), (104, 41651), (105, 41657), (113, 41819), (115, 41864), (120, 41993), (122, 42026), (123, 42029), (127, 42080), (128, 42146), (133, 42224), (134, 42239), (136, 42344), (138, 42374), (140, 42407), (147, 42515), (148, 42521), (155, 42608), (164, 42812), (166, 42839), (167, 42848), (169, 42920), (173, 42974), (175, 43010), (176, 43016), (180, 43046), (182, 43088), (183, 43109), (198, 43229), (201, 43247),

Gene: Minnie_69 Start: 44325, Stop: 47966, Start Num: 30

Candidate Starts for Minnie_69:

(Start: 30 @44325 has 6 MA's), (Start: 32 @44337 has 4 MA's), (46, 44376), (47, 44394), (51, 44460), (52, 44463), (53, 44466), (55, 44487), (58, 44550), (59, 44553), (61, 44568), (64, 44607), (65, 44613), (66, 44616), (67, 44628), (69, 44658), (74, 44754), (77, 44799), (80, 44856), (82, 44937), (83, 44940), (86, 45063), (90, 45123), (91, 45126), (97, 45189), (98, 45192), (99, 45201), (102, 45246), (107, 45315), (109, 45378), (110, 45393), (111, 45420), (114, 45480), (115, 45483), (116, 45498), (117, 45525), (119, 45570), (121, 45618), (122, 45645), (123, 45648), (126, 45687), (127, 45699), (131, 45804), (133, 45843), (134, 45858), (136, 45963), (141, 46041), (143, 46068), (144, 46077), (148, 46140), (151, 46161), (152, 46164), (155, 46227), (160, 46353), (161, 46371), (162, 46440), (165, 46530), (169, 46629), (171, 46662), (172, 46674), (173, 46683), (174, 46692), (176, 46725), (177, 46731), (179, 46755), (188, 46872), (189, 46875), (194, 46908), (195, 46911), (197, 46929), (203, 47031), (204, 47079), (205, 47334), (206, 47367), (208, 47421), (209, 47436), (210, 47487), (211, 47517), (212, 47535), (213, 47541), (214, 47625), (215, 47631), (216, 47679), (217, 47715), (218, 47733), (219, 47787), (220, 47790), (221, 47820), (222, 47826), (224, 47868), (225, 47904), (226, 47931),

Gene: MisterCuddles_64 Start: 42051, Stop: 44570, Start Num: 41

Candidate Starts for MisterCuddles_64:

(Start: 41 @42051 has 36 MA's), (46, 42063), (47, 42081), (51, 42147), (55, 42174), (57, 42225), (58, 42237), (59, 42240), (61, 42255), (62, 42261), (65, 42300), (66, 42303), (67, 42315), (69, 42345), (74, 42441), (77, 42486), (78, 42489), (82, 42624), (83, 42627), (86, 42750), (89, 42804), (90, 42810), (107, 43002), (109, 43065), (110, 43080), (111, 43107), (114, 43167), (115, 43170), (116, 43185), (117, 43212), (118, 43218), (119, 43257), (121, 43305), (122, 43332), (123, 43335), (126, 43374), (127, 43386), (131, 43491), (133, 43530), (134, 43545), (136, 43650), (141, 43728), (143, 43755),

(144, 43764), (148, 43827), (149, 43836), (151, 43848), (152, 43851), (155, 43914), (162, 44037), (169, 44226), (171, 44259), (172, 44271), (173, 44280), (174, 44289), (176, 44322), (177, 44328), (181, 44391), (182, 44394), (184, 44424), (185, 44430), (198, 44535),

Gene: MulchSalad_70 Start: 41683, Stop: 45210, Start Num: 37

Candidate Starts for MulchSalad_70:

(25, 41620), (37, 41683), (39, 41689), (42, 41698), (46, 41710), (47, 41728), (51, 41794), (52, 41797), (53, 41800), (55, 41821), (58, 41884), (59, 41887), (61, 41902), (64, 41941), (65, 41947), (66, 41950), (67, 41962), (69, 41992), (74, 42088), (77, 42133), (80, 42190), (82, 42271), (83, 42274), (86, 42397), (90, 42457), (91, 42460), (97, 42523), (98, 42526), (99, 42535), (102, 42580), (107, 42649), (109, 42712), (110, 42727), (111, 42754), (114, 42814), (115, 42817), (116, 42832), (119, 42904), (121, 42952), (122, 42979), (123, 42982), (127, 43033), (133, 43177), (134, 43192), (136, 43297), (141, 43375), (148, 43474), (149, 43483), (151, 43495), (152, 43498), (155, 43561), (162, 43684), (169, 43873), (171, 43906), (172, 43918), (173, 43927), (174, 43936), (176, 43969), (177, 43975), (179, 43999), (188, 44116), (189, 44119), (192, 44131), (194, 44152), (195, 44155), (197, 44173), (203, 44275), (204, 44323), (205, 44578), (206, 44611), (208, 44665), (209, 44680), (210, 44731), (211, 44761), (212, 44779), (213, 44785), (214, 44869), (215, 44875), (216, 44923), (217, 44959), (218, 44977), (219, 45031), (220, 45034), (221, 45064), (222, 45070), (224, 45112), (225, 45148), (226, 45175),

Gene: Nivrat_63 Start: 42452, Stop: 45100, Start Num: 31

Candidate Starts for Nivrat_63:

(Start: 31 @42452 has 2 MA's), (33, 42464), (46, 42503), (47, 42521), (51, 42587), (52, 42590), (53, 42593), (55, 42614), (58, 42677), (59, 42680), (61, 42695), (64, 42734), (65, 42740), (66, 42743), (67, 42755), (69, 42785), (77, 42926), (80, 42983), (82, 43064), (83, 43067), (85, 43163), (86, 43190), (90, 43250), (97, 43316), (98, 43319), (99, 43328), (107, 43442), (109, 43505), (110, 43520), (111, 43547), (114, 43607), (115, 43610), (116, 43625), (119, 43697), (122, 43772), (127, 43826), (131, 43931), (132, 43952), (133, 43970), (136, 44090), (141, 44168), (148, 44267), (149, 44276), (151, 44288), (152, 44291), (155, 44354), (156, 44378), (157, 44384), (158, 44429), (160, 44480), (161, 44498), (169, 44756), (171, 44789), (172, 44801), (173, 44810), (174, 44819), (176, 44852), (177, 44858), (181, 44921), (182, 44924), (184, 44954), (185, 44960), (191, 45002), (198, 45065),

Gene: OlympiaSaint_68 Start: 43044, Stop: 45563, Start Num: 41

Candidate Starts for OlympiaSaint_68:

(Start: 41 @43044 has 36 MA's), (46, 43056), (47, 43074), (51, 43140), (55, 43167), (57, 43218), (58, 43230), (59, 43233), (61, 43248), (62, 43254), (65, 43293), (66, 43296), (67, 43308), (69, 43338), (74, 43434), (77, 43479), (78, 43482), (82, 43617), (83, 43620), (86, 43743), (89, 43797), (90, 43803), (107, 43995), (109, 44058), (110, 44073), (111, 44100), (114, 44160), (115, 44163), (116, 44178), (117, 44205), (118, 44211), (119, 44250), (121, 44298), (122, 44325), (123, 44328), (126, 44367), (127, 44379), (133, 44523), (134, 44538), (136, 44643), (137, 44667), (141, 44721), (143, 44748), (144, 44757), (148, 44820), (151, 44841), (153, 44871), (155, 44907), (162, 45030), (163, 45096), (169, 45219), (171, 45252), (172, 45264), (173, 45273), (174, 45282), (176, 45315), (177, 45321), (181, 45384), (182, 45387), (184, 45417), (185, 45423), (198, 45528),

Gene: Pacc40_60 Start: 41101, Stop: 45126, Start Num: 30

Candidate Starts for Pacc40_60:

(Start: 30 @41101 has 6 MA's), (Start: 32 @41113 has 4 MA's), (46, 41152), (47, 41170), (51, 41236), (52, 41239), (53, 41242), (55, 41263), (58, 41326), (59, 41329), (61, 41344), (64, 41383), (65, 41389), (66, 41392), (67, 41404), (69, 41434), (77, 41575), (80, 41632), (82, 41713), (83, 41716), (87, 41980), (88, 41983), (90, 42373), (97, 42439), (98, 42442), (99, 42451), (107, 42565), (109, 42628), (110, 42643), (111, 42670), (114, 42730), (115, 42733), (116, 42748), (122, 42895), (126, 42937), (127, 42949), (133, 43093), (134, 43108), (136, 43213), (141, 43291), (148, 43390), (149, 43399), (151, 43411), (152, 43414), (155, 43477), (162, 43600), (163, 43666), (169, 43789), (171, 43822), (172,

43834), (173, 43843), (174, 43852), (176, 43885), (177, 43891), (179, 43915), (188, 44032), (189, 44035), (194, 44068), (195, 44071), (197, 44089), (203, 44191), (204, 44239), (205, 44494), (206, 44527), (208, 44581), (209, 44596), (210, 44647), (211, 44677), (212, 44695), (213, 44701), (214, 44785), (215, 44791), (216, 44839), (217, 44875), (218, 44893), (219, 44947), (220, 44950), (221, 44980), (222, 44986), (224, 45028), (226, 45091),

Gene: Persistence_69 Start: 37815, Stop: 40346, Start Num: 40

Candidate Starts for Persistence_69:

(Start: 40 @37815 has 15 MA's), (58, 38007), (59, 38010), (63, 38037), (68, 38109), (81, 38325), (83, 38394), (90, 38577), (93, 38592), (104, 38724), (114, 38934), (127, 39153), (128, 39219), (129, 39225), (133, 39297), (136, 39417), (142, 39507), (145, 39546), (147, 39588), (148, 39594), (155, 39681), (164, 39885), (169, 39993), (173, 40047), (175, 40083), (176, 40089), (198, 40302), (199, 40308),

Gene: Phrank15_78 Start: 39240, Stop: 41798, Start Num: 40

Candidate Starts for Phrank15_78:

(Start: 40 @39240 has 15 MA's), (71, 39552), (73, 39624), (80, 39741), (83, 39825), (90, 40008), (104, 40155), (110, 40278), (121, 40503), (127, 40584), (128, 40650), (129, 40656), (133, 40728), (136, 40848), (142, 40938), (145, 40977), (147, 41019), (148, 41025), (155, 41112), (164, 41316), (169, 41424), (173, 41478), (175, 41514), (176, 41520), (178, 41535), (181, 41589), (184, 41622), (187, 41643), (191, 41670), (193, 41688), (198, 41733), (201, 41751),

Gene: Phrann_57 Start: 37839, Stop: 40448, Start Num: 41

Candidate Starts for Phrann_57:

(20, 37737), (34, 37818), (37, 37827), (Start: 41 @37839 has 36 MA's), (46, 37851), (47, 37869), (51, 37935), (52, 37938), (53, 37941), (55, 37962), (58, 38025), (59, 38028), (61, 38043), (64, 38082), (65, 38088), (66, 38091), (67, 38103), (69, 38133), (77, 38274), (80, 38331), (82, 38412), (83, 38415), (86, 38538), (90, 38598), (91, 38601), (97, 38664), (98, 38667), (99, 38676), (102, 38721), (107, 38790), (109, 38853), (110, 38868), (111, 38895), (114, 38955), (115, 38958), (116, 38973), (119, 39045), (121, 39093), (122, 39120), (123, 39123), (124, 39129), (126, 39162), (127, 39174), (131, 39279), (133, 39318), (134, 39333), (136, 39438), (141, 39516), (143, 39543), (144, 39552), (148, 39615), (151, 39636), (152, 39639), (155, 39702), (160, 39828), (161, 39846), (162, 39915), (165, 40005), (169, 40104), (171, 40137), (172, 40149), (173, 40158), (174, 40167), (176, 40200), (177, 40206), (181, 40269), (182, 40272), (184, 40302), (185, 40308), (196, 40386), (198, 40413),

Gene: Piper2020_77 Start: 46674, Stop: 49193, Start Num: 43

Candidate Starts for Piper2020_77:

(10, 46404), (21, 46572), (35, 46653), (39, 46662), (Start: 43 @46674 has 3 MA's), (46, 46686), (47, 46704), (51, 46770), (52, 46773), (53, 46776), (55, 46797), (58, 46860), (59, 46863), (61, 46878), (64, 46917), (65, 46923), (66, 46926), (67, 46938), (69, 46968), (77, 47109), (80, 47166), (82, 47247), (83, 47250), (85, 47346), (86, 47373), (90, 47433), (97, 47499), (98, 47502), (99, 47511), (107, 47625), (109, 47688), (110, 47703), (111, 47730), (114, 47790), (115, 47793), (116, 47808), (119, 47880), (121, 47928), (122, 47955), (123, 47958), (127, 48009), (133, 48153), (134, 48168), (136, 48273), (141, 48351), (148, 48450), (149, 48459), (151, 48471), (152, 48474), (155, 48537), (157, 48567), (162, 48660), (169, 48849), (171, 48882), (172, 48894), (173, 48903), (174, 48912), (176, 48945), (177, 48951), (181, 49014), (182, 49017), (184, 49047), (185, 49053), (196, 49131), (198, 49158),

Gene: RadFad_80 Start: 40447, Stop: 42978, Start Num: 40

Candidate Starts for RadFad_80:

(Start: 40 @40447 has 15 MA's), (45, 40462), (58, 40636), (59, 40639), (72, 40783), (79, 40927), (83, 41023), (85, 41119), (104, 41353), (117, 41608), (121, 41701), (127, 41782), (128, 41848), (133, 41929), (136, 42049), (147, 42220), (148, 42226), (154, 42292), (155, 42313), (169, 42625), (170, 42634), (173, 42679), (176, 42721), (180, 42751), (186, 42838), (193, 42889),

Gene: Radiance_65 Start: 42260, Stop: 45772, Start Num: 41

Candidate Starts for Radiance_65:

(Start: 41 @42260 has 36 MA's), (46, 42272), (47, 42290), (51, 42356), (52, 42359), (53, 42362), (55, 42383), (57, 42434), (58, 42446), (59, 42449), (65, 42509), (66, 42512), (67, 42524), (69, 42554), (77, 42695), (78, 42698), (80, 42752), (82, 42833), (83, 42836), (86, 42959), (90, 43019), (91, 43022), (97, 43085), (98, 43088), (99, 43097), (107, 43211), (109, 43274), (111, 43316), (114, 43376), (115, 43379), (116, 43394), (119, 43466), (121, 43514), (122, 43541), (123, 43544), (124, 43550), (127, 43595), (133, 43739), (134, 43754), (136, 43859), (141, 43937), (148, 44036), (149, 44045), (151, 44057), (152, 44060), (155, 44123), (162, 44246), (169, 44435), (171, 44468), (172, 44480), (173, 44489), (174, 44498), (176, 44531), (177, 44537), (179, 44561), (188, 44678), (189, 44681), (194, 44714), (195, 44717), (197, 44735), (203, 44837), (204, 44885), (205, 45140), (206, 45173), (208, 45227), (209, 45242), (210, 45293), (211, 45323), (212, 45341), (213, 45347), (214, 45431), (215, 45437), (216, 45485), (217, 45521), (218, 45539), (219, 45593), (220, 45596), (221, 45626), (222, 45632), (224, 45674), (225, 45710), (226, 45737),

Gene: Raphaella_76 Start: 39221, Stop: 41749, Start Num: 40

Candidate Starts for Raphaella_76:

(Start: 40 @39221 has 15 MA's), (44, 39233), (58, 39407), (59, 39410), (72, 39554), (79, 39698), (83, 39794), (85, 39890), (104, 40124), (114, 40334), (117, 40379), (121, 40472), (127, 40553), (128, 40619), (133, 40700), (136, 40820), (140, 40883), (147, 40991), (148, 40997), (154, 41063), (155, 41084), (158, 41159), (169, 41396), (170, 41405), (173, 41450), (175, 41486), (176, 41492), (180, 41522), (186, 41609), (193, 41660),

Gene: Raqqa_73 Start: 39905, Stop: 42439, Start Num: 40

Candidate Starts for Raqqa_73:

(Start: 40 @39905 has 15 MA's), (56, 40043), (58, 40094), (59, 40097), (64, 40148), (71, 40214), (72, 40241), (73, 40286), (83, 40487), (90, 40670), (95, 40712), (104, 40817), (110, 40940), (121, 41165), (127, 41246), (128, 41312), (129, 41318), (133, 41390), (136, 41510), (141, 41588), (142, 41600), (144, 41624), (145, 41639), (147, 41681), (148, 41687), (155, 41774), (164, 41978), (169, 42086), (173, 42140), (176, 42182), (180, 42212), (184, 42284), (198, 42395), (200, 42404),

Gene: Richie_78 Start: 41089, Stop: 43617, Start Num: 40

Candidate Starts for Richie_78:

(13, 40882), (Start: 40 @41089 has 15 MA's), (45, 41104), (55, 41215), (57, 41266), (59, 41281), (70, 41392), (71, 41398), (72, 41425), (83, 41665), (85, 41761), (94, 41869), (96, 41908), (104, 41995), (105, 42001), (113, 42163), (115, 42208), (120, 42337), (122, 42370), (123, 42373), (127, 42424), (128, 42490), (133, 42568), (134, 42583), (136, 42688), (138, 42718), (140, 42751), (142, 42778), (145, 42817), (147, 42859), (148, 42865), (155, 42952), (164, 43156), (167, 43192), (169, 43264), (173, 43318), (176, 43360), (180, 43390), (183, 43453), (198, 43573), (201, 43591),

Gene: Rita_73 Start: 42477, Stop: 45989, Start Num: 40

Candidate Starts for Rita_73:

(6, 42156), (8, 42174), (20, 42375), (34, 42456), (37, 42465), (Start: 40 @42477 has 15 MA's), (46, 42489), (47, 42507), (51, 42573), (52, 42576), (53, 42579), (55, 42600), (57, 42651), (58, 42663), (59, 42666), (61, 42681), (62, 42687), (65, 42726), (66, 42729), (67, 42741), (69, 42771), (74, 42867), (77, 42912), (78, 42915), (80, 42969), (82, 43050), (83, 43053), (86, 43176), (90, 43236), (91, 43239), (97, 43302), (98, 43305), (99, 43314), (102, 43359), (107, 43428), (109, 43491), (110, 43506), (111, 43533), (114, 43593), (115, 43596), (116, 43611), (117, 43638), (119, 43683), (121, 43731), (122, 43758), (123, 43761), (126, 43800), (127, 43812), (133, 43956), (134, 43971), (136, 44076), (141, 44154), (148, 44253), (149, 44262), (151, 44274), (152, 44277), (155, 44340), (162, 44463), (169, 44652), (171, 44685), (172, 44697), (173, 44706), (174, 44715), (176, 44748), (177, 44754), (179, 44778), (188, 44895), (189, 44898), (194, 44931), (195, 44934), (197, 44952), (203, 45054), (204,

45102), (205, 45357), (206, 45390), (208, 45444), (209, 45459), (210, 45510), (211, 45540), (212, 45558), (213, 45564), (214, 45648), (215, 45654), (216, 45702), (217, 45738), (218, 45756), (219, 45810), (220, 45813), (221, 45843), (222, 45849), (226, 45954),

Gene: RockyHorror_67 Start: 41923, Stop: 44442, Start Num: 41

Candidate Starts for RockyHorror_67:

(Start: 41 @41923 has 36 MA's), (46, 41935), (47, 41953), (51, 42019), (55, 42046), (57, 42097), (58, 42109), (59, 42112), (61, 42127), (62, 42133), (65, 42172), (66, 42175), (67, 42187), (69, 42217), (74, 42313), (77, 42358), (78, 42361), (82, 42496), (83, 42499), (86, 42622), (89, 42676), (90, 42682), (107, 42874), (109, 42937), (110, 42952), (111, 42979), (114, 43039), (115, 43042), (116, 43057), (117, 43084), (118, 43090), (119, 43129), (121, 43177), (122, 43204), (123, 43207), (126, 43246), (127, 43258), (131, 43363), (133, 43402), (134, 43417), (136, 43522), (141, 43600), (143, 43627), (144, 43636), (148, 43699), (149, 43708), (151, 43720), (152, 43723), (155, 43786), (162, 43909), (164, 43990), (169, 44098), (171, 44131), (172, 44143), (173, 44152), (174, 44161), (176, 44194), (177, 44200), (181, 44263), (182, 44266), (184, 44296), (185, 44302), (198, 44407),

Gene: Ruby_62 Start: 42052, Stop: 44571, Start Num: 41

Candidate Starts for Ruby_62:

(Start: 41 @42052 has 36 MA's), (46, 42064), (47, 42082), (51, 42148), (55, 42175), (57, 42226), (58, 42238), (59, 42241), (61, 42256), (62, 42262), (65, 42301), (66, 42304), (67, 42316), (69, 42346), (74, 42442), (77, 42487), (78, 42490), (82, 42625), (83, 42628), (86, 42751), (89, 42805), (90, 42811), (107, 43003), (109, 43066), (110, 43081), (111, 43108), (114, 43168), (115, 43171), (116, 43186), (117, 43213), (118, 43219), (119, 43258), (121, 43306), (122, 43333), (123, 43336), (126, 43375), (127, 43387), (131, 43492), (133, 43531), (134, 43546), (136, 43651), (141, 43729), (143, 43756), (144, 43765), (148, 43828), (149, 43837), (151, 43849), (152, 43852), (155, 43915), (162, 44038), (169, 44227), (171, 44260), (172, 44272), (173, 44281), (174, 44290), (176, 44323), (177, 44329), (181, 44392), (182, 44395), (184, 44425), (185, 44431), (198, 44536),

Gene: Saal_68 Start: 43796, Stop: 46315, Start Num: 41

Candidate Starts for Saal_68:

(Start: 41 @43796 has 36 MA's), (46, 43808), (47, 43826), (51, 43892), (55, 43919), (57, 43970), (58, 43982), (59, 43985), (61, 44000), (62, 44006), (65, 44045), (66, 44048), (67, 44060), (69, 44090), (74, 44186), (77, 44231), (78, 44234), (82, 44369), (83, 44372), (86, 44495), (89, 44549), (90, 44555), (107, 44747), (109, 44810), (110, 44825), (111, 44852), (114, 44912), (115, 44915), (116, 44930), (117, 44957), (118, 44963), (119, 45002), (121, 45050), (122, 45077), (123, 45080), (126, 45119), (127, 45131), (133, 45275), (134, 45290), (136, 45395), (137, 45419), (141, 45473), (143, 45500), (144, 45509), (148, 45572), (151, 45593), (153, 45623), (155, 45659), (162, 45782), (163, 45848), (169, 45971), (171, 46004), (172, 46016), (173, 46025), (174, 46034), (176, 46067), (177, 46073), (181, 46136), (182, 46139), (184, 46169), (185, 46175), (198, 46280),

Gene: Sakai_72 Start: 39116, Stop: 41644, Start Num: 40

Candidate Starts for Sakai_72:

(Start: 40 @39116 has 15 MA's), (45, 39131), (57, 39293), (58, 39305), (59, 39308), (60, 39314), (81, 39623), (83, 39692), (93, 39890), (104, 40022), (110, 40145), (117, 40277), (127, 40451), (128, 40517), (133, 40595), (134, 40610), (136, 40715), (144, 40829), (145, 40844), (148, 40892), (155, 40979), (164, 41183), (169, 41291), (172, 41336), (173, 41345), (176, 41387), (180, 41417), (198, 41600),

Gene: Sandalphon_67 Start: 43303, Stop: 45951, Start Num: 30

Candidate Starts for Sandalphon_67:

(Start: 30 @43303 has 6 MA's), (Start: 32 @43315 has 4 MA's), (46, 43354), (47, 43372), (51, 43438), (52, 43441), (53, 43444), (55, 43465), (58, 43528), (59, 43531), (61, 43546), (64, 43585), (65, 43591), (66, 43594), (67, 43606), (69, 43636), (74, 43732), (77, 43777), (80, 43834), (82, 43915), (83, 43918),

(86, 44041), (90, 44101), (91, 44104), (97, 44167), (98, 44170), (99, 44179), (102, 44224), (107, 44293), (109, 44356), (110, 44371), (111, 44398), (114, 44458), (115, 44461), (116, 44476), (117, 44503), (119, 44548), (121, 44596), (122, 44623), (123, 44626), (126, 44665), (127, 44677), (131, 44782), (133, 44821), (134, 44836), (136, 44941), (141, 45019), (143, 45046), (144, 45055), (148, 45118), (151, 45139), (152, 45142), (155, 45205), (160, 45331), (161, 45349), (162, 45418), (165, 45508), (169, 45607), (171, 45640), (172, 45652), (173, 45661), (174, 45670), (176, 45703), (177, 45709), (181, 45772), (182, 45775), (184, 45805), (185, 45811), (196, 45889), (198, 45916),

Gene: Sarma624_65 Start: 39507, Stop: 42026, Start Num: 41

Candidate Starts for Sarma624_65:

(Start: 41 @39507 has 36 MA's), (46, 39519), (51, 39603), (55, 39630), (57, 39681), (58, 39693), (59, 39696), (61, 39711), (62, 39717), (65, 39756), (66, 39759), (67, 39771), (69, 39801), (74, 39897), (77, 39942), (78, 39945), (82, 40080), (83, 40083), (86, 40206), (89, 40260), (90, 40266), (107, 40458), (109, 40521), (110, 40536), (111, 40563), (114, 40623), (115, 40626), (116, 40641), (117, 40668), (118, 40674), (119, 40713), (121, 40761), (122, 40788), (123, 40791), (126, 40830), (127, 40842), (131, 40947), (133, 40986), (134, 41001), (136, 41106), (141, 41184), (143, 41211), (144, 41220), (148, 41283), (149, 41292), (151, 41304), (152, 41307), (155, 41370), (162, 41493), (164, 41574), (169, 41682), (171, 41715), (172, 41727), (173, 41736), (174, 41745), (176, 41778), (177, 41784), (181, 41847), (182, 41850), (184, 41880), (185, 41886), (198, 41991),

Gene: Sashimi_75 Start: 39807, Stop: 42329, Start Num: 43

Candidate Starts for Sashimi_75:

(23, 39723), (24, 39726), (Start: 43 @39807 has 3 MA's), (50, 39891), (57, 39978), (71, 40110), (76, 40215), (77, 40236), (78, 40239), (83, 40377), (85, 40473), (96, 40620), (104, 40707), (105, 40713), (106, 40719), (113, 40875), (114, 40917), (115, 40920), (120, 41049), (123, 41085), (127, 41136), (128, 41202), (133, 41280), (134, 41295), (136, 41400), (138, 41430), (146, 41550), (147, 41571), (148, 41577), (155, 41664), (164, 41868), (169, 41976), (173, 42030), (175, 42066), (176, 42072), (180, 42102), (182, 42144), (198, 42285),

Gene: Scitech_50 Start: 33763, Stop: 36387, Start Num: 36

Candidate Starts for Scitech_50:

(25, 33700), (Start: 36 @33763 has 6 MA's), (38, 33769), (Start: 41 @33778 has 36 MA's), (46, 33790), (47, 33808), (51, 33874), (52, 33877), (53, 33880), (55, 33901), (58, 33964), (59, 33967), (61, 33982), (64, 34021), (65, 34027), (66, 34030), (67, 34042), (69, 34072), (74, 34168), (77, 34213), (80, 34270), (82, 34351), (83, 34354), (86, 34477), (90, 34537), (91, 34540), (97, 34603), (98, 34606), (99, 34615), (102, 34660), (107, 34729), (109, 34792), (110, 34807), (111, 34834), (114, 34894), (115, 34897), (116, 34912), (117, 34939), (119, 34984), (121, 35032), (122, 35059), (123, 35062), (126, 35101), (127, 35113), (131, 35218), (133, 35257), (134, 35272), (136, 35377), (141, 35455), (143, 35482), (144, 35491), (148, 35554), (151, 35575), (152, 35578), (155, 35641), (160, 35767), (161, 35785), (162, 35854), (165, 35944), (169, 36043), (171, 36076), (172, 36088), (173, 36097), (174, 36106), (176, 36139), (177, 36145), (181, 36208), (182, 36211), (184, 36241), (185, 36247), (196, 36325), (198, 36352),

Gene: Seahorse_83 Start: 44779, Stop: 47307, Start Num: 40

Candidate Starts for Seahorse_83:

(39, 44773), (Start: 40 @44779 has 15 MA's), (49, 44854), (55, 44905), (56, 44917), (57, 44956), (59, 44971), (71, 45088), (72, 45115), (77, 45214), (79, 45259), (80, 45271), (83, 45355), (85, 45451), (94, 45559), (96, 45598), (97, 45604), (104, 45685), (105, 45691), (113, 45853), (115, 45898), (120, 46027), (122, 46060), (123, 46063), (125, 46072), (127, 46114), (128, 46180), (130, 46195), (133, 46258), (134, 46273), (136, 46378), (146, 46528), (147, 46549), (148, 46555), (155, 46642), (158, 46717), (164, 46846), (167, 46882), (169, 46954), (173, 47008), (175, 47044), (176, 47050), (183, 47143), (198, 47263),

Gene: SiSi_65 Start: 41752, Stop: 44313, Start Num: 29

Candidate Starts for SiSi_65:

(Start: 29 @41752 has 1 MA's), (Start: 30 @41764 has 6 MA's), (Start: 32 @41770 has 4 MA's), (47, 41824), (51, 41890), (53, 41896), (54, 41914), (55, 41917), (58, 41980), (59, 41983), (60, 41989), (61, 41998), (65, 42043), (66, 42046), (67, 42058), (69, 42088), (77, 42229), (80, 42286), (82, 42367), (83, 42370), (84, 42388), (86, 42493), (90, 42553), (97, 42619), (98, 42622), (99, 42631), (103, 42688), (110, 42823), (111, 42850), (112, 42862), (114, 42910), (115, 42913), (116, 42928), (119, 43000), (122, 43075), (123, 43078), (126, 43117), (127, 43129), (131, 43234), (132, 43255), (133, 43273), (134, 43288), (136, 43393), (141, 43471), (143, 43498), (144, 43507), (148, 43570), (149, 43579), (151, 43591), (152, 43594), (155, 43657), (162, 43780), (164, 43861), (169, 43969), (171, 44002), (172, 44014), (173, 44023), (174, 44032), (176, 44065), (177, 44071), (181, 44134), (182, 44137), (184, 44167), (185, 44173), (198, 44278),

Gene: Sparky_66 Start: 45788, Stop: 48307, Start Num: 43

Candidate Starts for Sparky_66:

(2, 45374), (5, 45458), (10, 45518), (21, 45686), (35, 45767), (39, 45776), (Start: 43 @45788 has 3 MA's), (46, 45800), (47, 45818), (51, 45884), (52, 45887), (53, 45890), (55, 45911), (58, 45974), (59, 45977), (61, 45992), (64, 46031), (65, 46037), (66, 46040), (67, 46052), (69, 46082), (77, 46223), (80, 46280), (83, 46364), (85, 46460), (86, 46487), (90, 46547), (97, 46613), (98, 46616), (99, 46625), (107, 46739), (109, 46802), (110, 46817), (111, 46844), (114, 46904), (115, 46907), (116, 46922), (119, 46994), (121, 47042), (122, 47069), (123, 47072), (126, 47111), (127, 47123), (132, 47249), (133, 47267), (136, 47387), (141, 47465), (148, 47564), (149, 47573), (151, 47585), (152, 47588), (155, 47651), (162, 47774), (169, 47963), (171, 47996), (172, 48008), (173, 48017), (174, 48026), (176, 48059), (177, 48065), (178, 48074), (181, 48128), (182, 48131), (184, 48161), (185, 48167), (196, 48245), (198, 48272),

Gene: Spartacus_70 Start: 43606, Stop: 46155, Start Num: 32

Candidate Starts for Spartacus_70:

(3, 43234), (4, 43243), (9, 43336), (12, 43393), (18, 43495), (27, 43561), (Start: 32 @43606 has 4 MA's), (47, 43666), (51, 43732), (55, 43759), (57, 43810), (58, 43822), (59, 43825), (60, 43831), (61, 43840), (65, 43885), (66, 43888), (67, 43900), (69, 43930), (74, 44026), (77, 44071), (80, 44128), (82, 44209), (83, 44212), (85, 44308), (86, 44335), (90, 44395), (97, 44461), (98, 44464), (99, 44473), (107, 44587), (109, 44650), (110, 44665), (111, 44692), (114, 44752), (115, 44755), (116, 44770), (119, 44842), (121, 44890), (122, 44917), (123, 44920), (124, 44926), (126, 44959), (127, 44971), (133, 45115), (134, 45130), (136, 45235), (141, 45313), (148, 45412), (149, 45421), (151, 45433), (152, 45436), (155, 45499), (162, 45622), (169, 45811), (171, 45844), (172, 45856), (173, 45865), (174, 45874), (176, 45907), (177, 45913), (178, 45922), (181, 45976), (182, 45979), (184, 46009), (185, 46015), (198, 46120),

Gene: Squirty_68 Start: 43755, Stop: 47360, Start Num: 22

Candidate Starts for Squirty_68:

(Start: 22 @43755 has 1 MA's), (Start: 32 @43818 has 4 MA's), (47, 43878), (51, 43944), (55, 43971), (57, 44022), (58, 44034), (59, 44037), (60, 44043), (61, 44052), (65, 44097), (66, 44100), (67, 44112), (69, 44142), (74, 44238), (77, 44283), (80, 44340), (82, 44421), (83, 44424), (86, 44547), (90, 44607), (91, 44610), (97, 44673), (98, 44676), (99, 44685), (100, 44697), (107, 44799), (109, 44862), (110, 44877), (111, 44904), (114, 44964), (115, 44967), (116, 44982), (119, 45054), (121, 45102), (122, 45129), (123, 45132), (126, 45171), (127, 45183), (133, 45327), (134, 45342), (136, 45447), (141, 45525), (148, 45624), (149, 45633), (151, 45645), (152, 45648), (155, 45711), (157, 45741), (162, 45834), (168, 45972), (169, 46023), (171, 46056), (172, 46068), (173, 46077), (174, 46086), (176, 46119), (177, 46125), (179, 46149), (188, 46266), (189, 46269), (194, 46302), (195, 46305), (197, 46323), (203, 46425), (204, 46473), (205, 46728), (206, 46761), (208, 46815), (209, 46830), (210, 46881), (211, 46911), (212, 46929), (213, 46935), (214, 47019), (215, 47025), (216, 47073), (217, 47109), (218, 47127), (219, 47181), (220, 47184), (221, 47214), (222, 47220), (224, 47262), (226,

47325),

Gene: Strokeseat_67 Start: 41440, Stop: 44064, Start Num: 36

Candidate Starts for Strokeseat_67:

(Start: 36 @41440 has 6 MA's), (38, 41446), (Start: 41 @41455 has 36 MA's), (46, 41467), (47, 41485), (51, 41551), (52, 41554), (53, 41557), (55, 41578), (58, 41641), (59, 41644), (61, 41659), (64, 41698), (65, 41704), (66, 41707), (67, 41719), (69, 41749), (74, 41845), (77, 41890), (80, 41947), (82, 42028), (83, 42031), (86, 42154), (90, 42214), (91, 42217), (97, 42280), (98, 42283), (99, 42292), (102, 42337), (107, 42406), (109, 42469), (110, 42484), (111, 42511), (114, 42571), (115, 42574), (116, 42589), (117, 42616), (119, 42661), (121, 42709), (122, 42736), (123, 42739), (126, 42778), (127, 42790), (131, 42895), (133, 42934), (134, 42949), (136, 43054), (141, 43132), (143, 43159), (144, 43168), (148, 43231), (151, 43252), (152, 43255), (155, 43318), (160, 43444), (161, 43462), (162, 43531), (165, 43621), (169, 43720), (171, 43753), (172, 43765), (173, 43774), (174, 43783), (176, 43816), (177, 43822), (181, 43885), (182, 43888), (184, 43918), (185, 43924), (196, 44002), (198, 44029),

Gene: SuperGrey_70 Start: 44825, Stop: 47344, Start Num: 41

Candidate Starts for SuperGrey_70:

(14, 44648), (15, 44654), (16, 44663), (17, 44672), (28, 44768), (Start: 41 @44825 has 36 MA's), (46, 44837), (47, 44855), (51, 44921), (52, 44924), (53, 44927), (55, 44948), (57, 44999), (58, 45011), (59, 45014), (60, 45020), (65, 45074), (66, 45077), (67, 45089), (69, 45119), (74, 45215), (77, 45260), (78, 45263), (80, 45317), (82, 45398), (83, 45401), (86, 45524), (90, 45584), (91, 45587), (97, 45650), (98, 45653), (99, 45662), (107, 45776), (109, 45839), (111, 45881), (114, 45941), (115, 45944), (116, 45959), (117, 45986), (119, 46031), (122, 46106), (123, 46109), (124, 46115), (126, 46148), (127, 46160), (131, 46265), (133, 46304), (134, 46319), (136, 46424), (141, 46502), (143, 46529), (144, 46538), (148, 46601), (151, 46622), (152, 46625), (155, 46688), (157, 46718), (162, 46811), (164, 46892), (169, 47000), (171, 47033), (172, 47045), (173, 47054), (174, 47063), (176, 47096), (177, 47102), (181, 47165), (182, 47168), (184, 47198), (185, 47204), (190, 47240), (198, 47309),

Gene: Tapioca_56 Start: 36042, Stop: 38666, Start Num: 36

Candidate Starts for Tapioca_56:

(Start: 36 @36042 has 6 MA's), (38, 36048), (Start: 41 @36057 has 36 MA's), (46, 36069), (47, 36087), (51, 36153), (52, 36156), (53, 36159), (55, 36180), (58, 36243), (59, 36246), (61, 36261), (64, 36300), (65, 36306), (66, 36309), (67, 36321), (69, 36351), (74, 36447), (77, 36492), (80, 36549), (82, 36630), (83, 36633), (86, 36756), (90, 36816), (91, 36819), (97, 36882), (98, 36885), (99, 36894), (102, 36939), (107, 37008), (109, 37071), (111, 37113), (114, 37173), (115, 37176), (116, 37191), (117, 37218), (119, 37263), (121, 37311), (122, 37338), (123, 37341), (126, 37380), (127, 37392), (131, 37497), (133, 37536), (134, 37551), (136, 37656), (141, 37734), (143, 37761), (144, 37770), (148, 37833), (151, 37854), (152, 37857), (155, 37920), (160, 38046), (161, 38064), (162, 38133), (165, 38223), (169, 38322), (171, 38355), (172, 38367), (173, 38376), (174, 38385), (176, 38418), (177, 38424), (181, 38487), (182, 38490), (184, 38520), (185, 38526), (196, 38604), (198, 38631),

Gene: Tiff81_76 Start: 38408, Stop: 40924, Start Num: 43

Candidate Starts for Tiff81_76:

(23, 38324), (24, 38327), (Start: 43 @38408 has 3 MA's), (50, 38486), (57, 38573), (63, 38615), (71, 38705), (72, 38732), (75, 38798), (77, 38831), (83, 38972), (85, 39068), (94, 39176), (96, 39215), (104, 39302), (105, 39308), (113, 39470), (115, 39515), (120, 39644), (122, 39677), (123, 39680), (127, 39731), (128, 39797), (130, 39812), (134, 39890), (136, 39995), (146, 40145), (147, 40166), (148, 40172), (155, 40259), (158, 40334), (164, 40463), (167, 40499), (169, 40571), (173, 40625), (175, 40661), (176, 40667), (180, 40697), (183, 40760), (198, 40880),

Gene: Tootsieroll_68 Start: 42866, Stop: 46408, Start Num: 32

Candidate Starts for Tootsieroll_68:

(11, 42647), (19, 42755), (26, 42821), (Start: 32 @42866 has 4 MA's), (47, 42926), (51, 42992), (55, 43019), (57, 43070), (58, 43082), (59, 43085), (60, 43091), (61, 43100), (65, 43145), (66, 43148), (67, 43160), (69, 43190), (74, 43286), (77, 43331), (80, 43388), (82, 43469), (83, 43472), (85, 43568), (86, 43595), (90, 43655), (97, 43721), (98, 43724), (99, 43733), (107, 43847), (109, 43910), (110, 43925), (111, 43952), (114, 44012), (115, 44015), (116, 44030), (119, 44102), (121, 44150), (122, 44177), (123, 44180), (124, 44186), (126, 44219), (127, 44231), (133, 44375), (134, 44390), (136, 44495), (141, 44573), (148, 44672), (149, 44681), (151, 44693), (152, 44696), (155, 44759), (162, 44882), (169, 45071), (171, 45104), (172, 45116), (173, 45125), (174, 45134), (176, 45167), (177, 45173), (179, 45197), (188, 45314), (189, 45317), (194, 45350), (195, 45353), (197, 45371), (203, 45473), (204, 45521), (207, 45851), (208, 45863), (209, 45878), (210, 45929), (211, 45959), (212, 45977), (213, 45983), (214, 46067), (215, 46073), (216, 46121), (217, 46157), (218, 46175), (220, 46232), (221, 46262), (222, 46268), (223, 46304), (226, 46373),

Gene: Velveteen_62 Start: 39507, Stop: 42026, Start Num: 41

Candidate Starts for Velveteen_62:

(Start: 41 @39507 has 36 MA's), (46, 39519), (51, 39603), (55, 39630), (57, 39681), (58, 39693), (59, 39696), (61, 39711), (62, 39717), (65, 39756), (66, 39759), (67, 39771), (69, 39801), (74, 39897), (77, 39942), (78, 39945), (82, 40080), (83, 40083), (86, 40206), (89, 40260), (90, 40266), (107, 40458), (109, 40521), (110, 40536), (111, 40563), (114, 40623), (115, 40626), (116, 40641), (117, 40668), (118, 40674), (119, 40713), (121, 40761), (122, 40788), (123, 40791), (126, 40830), (127, 40842), (131, 40947), (133, 40986), (134, 41001), (136, 41106), (141, 41184), (143, 41211), (144, 41220), (148, 41283), (149, 41292), (151, 41304), (152, 41307), (155, 41370), (162, 41493), (164, 41574), (169, 41682), (171, 41715), (172, 41727), (173, 41736), (174, 41745), (176, 41778), (177, 41784), (181, 41847), (182, 41850), (184, 41880), (185, 41886), (198, 41991),

Gene: Veteran_63 Start: 41151, Stop: 44663, Start Num: 41

Candidate Starts for Veteran_63:

(14, 40974), (16, 40989), (28, 41094), (Start: 41 @41151 has 36 MA's), (46, 41163), (47, 41181), (51, 41247), (55, 41274), (57, 41325), (58, 41337), (59, 41340), (61, 41355), (62, 41361), (65, 41400), (66, 41403), (67, 41415), (69, 41445), (74, 41541), (77, 41586), (78, 41589), (80, 41643), (82, 41724), (83, 41727), (86, 41850), (90, 41910), (91, 41913), (97, 41976), (98, 41979), (99, 41988), (110, 42180), (111, 42207), (112, 42219), (114, 42267), (115, 42270), (116, 42285), (117, 42312), (118, 42318), (119, 42357), (121, 42405), (122, 42432), (123, 42435), (124, 42441), (126, 42474), (127, 42486), (131, 42591), (133, 42630), (134, 42645), (136, 42750), (141, 42828), (143, 42855), (144, 42864), (148, 42927), (151, 42948), (152, 42951), (155, 43014), (162, 43137), (169, 43326), (171, 43359), (172, 43371), (173, 43380), (174, 43389), (176, 43422), (177, 43428), (179, 43452), (188, 43569), (189, 43572), (194, 43605), (195, 43608), (197, 43626), (203, 43728), (204, 43776), (205, 44031), (206, 44064), (208, 44118), (209, 44133), (210, 44184), (211, 44214), (212, 44232), (213, 44238), (214, 44322), (215, 44328), (216, 44376), (217, 44412), (218, 44430), (219, 44484), (220, 44487), (221, 44517), (222, 44523), (226, 44628),

Gene: XFactor_64 Start: 41191, Stop: 43710, Start Num: 41

Candidate Starts for XFactor_64:

(Start: 41 @41191 has 36 MA's), (46, 41203), (47, 41221), (51, 41287), (52, 41290), (53, 41293), (55, 41314), (58, 41377), (59, 41380), (61, 41395), (65, 41440), (66, 41443), (67, 41455), (69, 41485), (74, 41581), (77, 41626), (80, 41683), (82, 41764), (83, 41767), (86, 41890), (90, 41950), (97, 42016), (98, 42019), (99, 42028), (107, 42142), (109, 42205), (110, 42220), (111, 42247), (114, 42307), (115, 42310), (116, 42325), (117, 42352), (119, 42397), (121, 42445), (122, 42472), (123, 42475), (126, 42514), (127, 42526), (131, 42631), (133, 42670), (134, 42685), (136, 42790), (141, 42868), (143, 42895), (144, 42904), (148, 42967), (151, 42988), (152, 42991), (155, 43054), (162, 43177), (164, 43258), (169, 43366), (171, 43399), (172, 43411), (173, 43420), (174, 43429), (176, 43462), (177, 43468), (181, 43531), (182, 43534), (184, 43564), (185, 43570), (198, 43675),

Gene: YoungHarleezy_73 Start: 39488, Stop: 42019, Start Num: 40

Candidate Starts for YoungHarleezy_73:

(Start: 40 @39488 has 15 MA's), (45, 39503), (58, 39677), (59, 39680), (72, 39824), (79, 39968), (83, 40064), (85, 40160), (104, 40394), (117, 40649), (121, 40742), (127, 40823), (128, 40889), (133, 40970), (136, 41090), (140, 41153), (147, 41261), (148, 41267), (154, 41333), (155, 41354), (169, 41666), (170, 41675), (173, 41720), (175, 41756), (176, 41762), (180, 41792), (186, 41879), (193, 41930),

Gene: Zerg_66 Start: 42035, Stop: 44554, Start Num: 41

Candidate Starts for Zerg_66:

(Start: 41 @42035 has 36 MA's), (46, 42047), (47, 42065), (51, 42131), (55, 42158), (57, 42209), (58, 42221), (59, 42224), (61, 42239), (62, 42245), (65, 42284), (66, 42287), (67, 42299), (69, 42329), (74, 42425), (77, 42470), (78, 42473), (82, 42608), (83, 42611), (86, 42734), (89, 42788), (90, 42794), (107, 42986), (109, 43049), (110, 43064), (111, 43091), (114, 43151), (115, 43154), (116, 43169), (117, 43196), (118, 43202), (119, 43241), (121, 43289), (122, 43316), (123, 43319), (126, 43358), (127, 43370), (131, 43475), (133, 43514), (134, 43529), (136, 43634), (141, 43712), (143, 43739), (144, 43748), (148, 43811), (149, 43820), (151, 43832), (152, 43835), (155, 43898), (162, 44021), (169, 44210), (171, 44243), (172, 44255), (173, 44264), (174, 44273), (176, 44306), (177, 44312), (181, 44375), (182, 44378), (184, 44408), (185, 44414), (198, 44519),