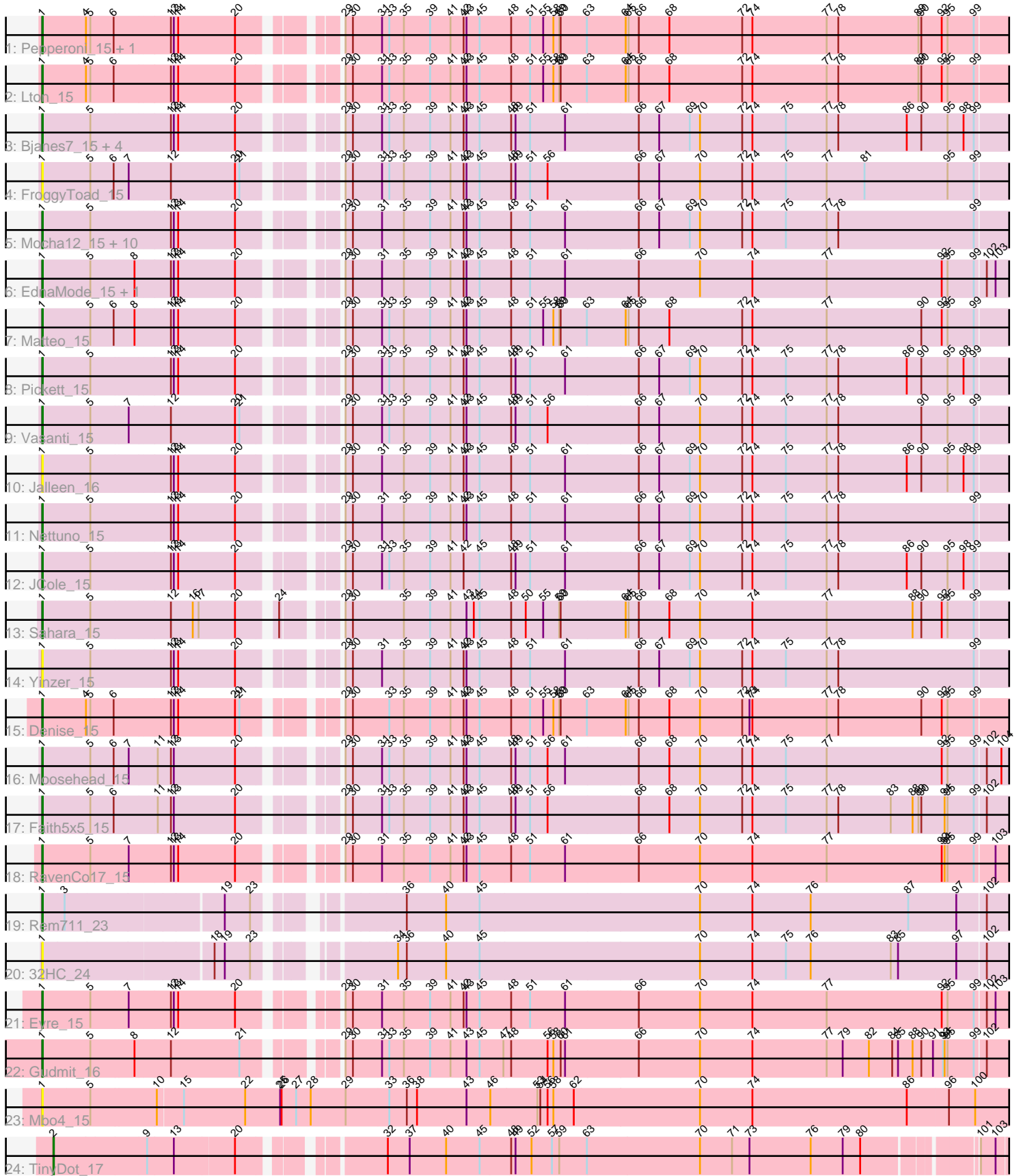


Zoomed Pham 311788



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 311788 Report

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

Pham number 311788 has 40 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Pepperoni_15, OneDirection_15
- Track 2 : Lton_15
- Track 3 : Bjaner7_15, SoilAssassin_15, LordFarquaad_15, Yeet412_15, Attis_15
- Track 4 : FroggyToad_15
- Track 5 : Mocha12_15, Whiteclaw_15, Savage_15, Clap_15, Haley23_15, Cynthia_15, Gizermo_15, TuertoX_15, Ebert_15, GemG_15, Sproutie_15
- Track 6 : EdnaMode_15, Lamberg_15
- Track 7 : Matteo_15
- Track 8 : Pickett_15
- Track 9 : Vasanti_15
- Track 10 : Jalleen_16
- Track 11 : Nettuno_15
- Track 12 : JCole_15
- Track 13 : Sahara_15
- Track 14 : Yinzer_15
- Track 15 : Denise_15
- Track 16 : Moosehead_15
- Track 17 : Faith5x5_15
- Track 18 : RavenCo17_15
- Track 19 : Rem711_23
- Track 20 : 32HC_24
- Track 21 : Eyre_15
- Track 22 : Gudmit_16
- Track 23 : Mbo4_15
- Track 24 : TinyDot_17

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

The start number called the most often in the published annotations is 1, it was called in 34 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 32HC_24, Attis_15, Bjaner7_15, Clap_15, Cynthia_15, Denise_15, Ebert_15, EdnaMode_15, Eyre_15, Faith5x5_15, FroggyToad_15, GemG_15, Gizermo_15,

Gudmit_16, Haley23_15, JCole_15, Jalleen_16, Lamberg_15, LordFarquaad_15, Lton_15, Matteo_15, Mbo4_15, Mocha12_15, Moosehead_15, Nettuno_15, OneDirection_15, Pepperoni_15, Pickett_15, RavenCo17_15, Rem711_23, Sahara_15, Savage_15, SoilAssassin_15, Sproutie_15, TuertoX_15, Vasanti_15, Whiteclaw_15, Yeet412_15, Yinzer_15,

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

-

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

- TinyDot_17,

Summary by start number:

Start 1:

- Found in 39 of 40 (97.5%) of genes in pham
- Manual Annotations of this start: 34 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 32HC_24 (Z), Attis_15 (CZ2), Bjanes7_15 (CZ2), Clap_15 (CZ2), Cynthia_15 (CZ2), Denise_15 (CZ5), Ebert_15 (CZ2), EdnaMode_15 (CZ2), Eyre_15 (singleton), Faith5x5_15 (CZ6), FroggyToad_15 (CZ2), GemG_15 (CZ2), Gizermo_15 (CZ2), Gudmit_16 (singleton), Haley23_15 (CZ2), JCole_15 (CZ2), Jalleen_16 (CZ2), Lamberg_15 (CZ2), LordFarquaad_15 (CZ2), Lton_15 (CZ), Matteo_15 (CZ2), Mbo4_15 (singleton), Mocha12_15 (CZ2), Moosehead_15 (CZ6), Nettuno_15 (CZ2), OneDirection_15 (CZ6), Pepperoni_15 (CZ), Pickett_15 (CZ2), RavenCo17_15 (CZ8), Rem711_23 (Z), Sahara_15 (CZ2), Savage_15 (CZ2), SoilAssassin_15 (CZ2), Sproutie_15 (CZ2), TuertoX_15 (CZ2), Vasanti_15 (CZ2), Whiteclaw_15 (CZ2), Yeet412_15 (CZ2), Yinzer_15 (CZ2),

Start 2:

- Found in 1 of 40 (2.5%) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TinyDot_17 (singleton),

Summary by clusters:

There are 7 clusters represented in this pham: CZ8, CZ2, CZ6, singleton, CZ5, CZ, Z,

Info for manual annotations of cluster CZ:

- Start number 1 was manually annotated 2 times for cluster CZ.

Info for manual annotations of cluster CZ2:

- Start number 1 was manually annotated 24 times for cluster CZ2.

Info for manual annotations of cluster CZ5:

- Start number 1 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 1 was manually annotated 3 times for cluster CZ6.

Info for manual annotations of cluster CZ8:

- Start number 1 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster Z:

- Start number 1 was manually annotated 1 time for cluster Z.

Gene Information:

Gene: 32HC_24 Start: 13803, Stop: 17879, Start Num: 1

Candidate Starts for 32HC_24:

(Start: 1 @13803 has 34 MA's), (18, 14139), (19, 14160), (23, 14211), (34, 14421), (36, 14439), (40, 14520), (45, 14589), (70, 15036), (74, 15144), (75, 15213), (76, 15264), (83, 15429), (85, 15444), (97, 15561), (102, 15618), (134, 16047), (151, 16272), (164, 16386), (171, 16449), (183, 16572), (185, 16617), (202, 16761), (203, 16782), (208, 16848), (242, 17499), (251, 17643), (258, 17775), (262, 17826), (265, 17856), (266, 17862),

Gene: Attis_15 Start: 9497, Stop: 13906, Start Num: 1

Candidate Starts for Attis_15:

(Start: 1 @9497 has 34 MA's), (5, 9596), (12, 9752), (13, 9758), (14, 9767), (20, 9884), (29, 10037), (30, 10052), (31, 10109), (33, 10124), (35, 10154), (39, 10208), (41, 10250), (42, 10277), (43, 10283), (45, 10310), (48, 10373), (49, 10382), (51, 10412), (61, 10484), (66, 10634), (67, 10676), (69, 10739), (70, 10760), (72, 10847), (74, 10868), (75, 10937), (77, 11021), (78, 11045), (86, 11186), (90, 11216), (95, 11270), (98, 11303), (99, 11324), (110, 11444), (126, 11648), (127, 11654), (129, 11729), (130, 11741), (132, 11750), (145, 11891), (146, 11927), (157, 12095), (160, 12122), (174, 12284), (180, 12329), (187, 12455), (216, 12833), (217, 12842), (219, 12875), (237, 13271), (243, 13376), (247, 13412), (255, 13538), (258, 13595), (260, 13622), (262, 13646), (265, 13676), (266, 13682), (267, 13688), (271, 13769), (274, 13811), (276, 13823),

Gene: Bjan7_15 Start: 9497, Stop: 13906, Start Num: 1

Candidate Starts for Bjan7_15:

(Start: 1 @9497 has 34 MA's), (5, 9596), (12, 9752), (13, 9758), (14, 9767), (20, 9884), (29, 10037), (30, 10052), (31, 10109), (33, 10124), (35, 10154), (39, 10208), (41, 10250), (42, 10277), (43, 10283), (45, 10310), (48, 10373), (49, 10382), (51, 10412), (61, 10484), (66, 10634), (67, 10676), (69, 10739), (70, 10760), (72, 10847), (74, 10868), (75, 10937), (77, 11021), (78, 11045), (86, 11186), (90, 11216), (95, 11270), (98, 11303), (99, 11324), (110, 11444), (126, 11648), (127, 11654), (129, 11729), (130, 11741), (132, 11750), (145, 11891), (146, 11927), (157, 12095), (160, 12122), (174, 12284), (180, 12329), (187, 12455), (216, 12833), (217, 12842), (219, 12875), (237, 13271), (243, 13376), (247, 13412), (255, 13538), (258, 13595), (260, 13622), (262, 13646), (265, 13676), (266, 13682), (267, 13688), (271, 13769), (274, 13811), (276, 13823),

Gene: Clap_15 Start: 9564, Stop: 13913, Start Num: 1

Candidate Starts for Clap_15:

(Start: 1 @9564 has 34 MA's), (5, 9663), (12, 9819), (13, 9825), (14, 9834), (20, 9951), (29, 10104), (30, 10119), (31, 10176), (35, 10221), (39, 10275), (41, 10317), (42, 10344), (43, 10350), (45, 10377), (48, 10440), (51, 10479), (61, 10551), (66, 10701), (67, 10743), (69, 10806), (70, 10827), (72, 10914), (74, 10935), (75, 11004), (77, 11088), (78, 11112), (99, 11391), (110, 11511), (122, 11691), (126, 11715), (132, 11817), (135, 11856), (145, 11967), (146, 12003), (149, 12078), (155, 12162), (162, 12213), (173, 12321), (186, 12483), (188, 12492), (196, 12546), (198, 12558), (206, 12663), (211, 12804), (225, 12927), (237, 13278), (241, 13356), (242, 13368), (243, 13383), (255, 13545), (258, 13602), (260, 13629), (261, 13641), (262, 13653), (265, 13683), (266, 13689), (267, 13695), (275, 13821),

Gene: Cynthia_15 Start: 9564, Stop: 13913, Start Num: 1

Candidate Starts for Cynthia_15:

(Start: 1 @9564 has 34 MA's), (5, 9663), (12, 9819), (13, 9825), (14, 9834), (20, 9951), (29, 10104), (30, 10119), (31, 10176), (35, 10221), (39, 10275), (41, 10317), (42, 10344), (43, 10350), (45, 10377), (48, 10440), (51, 10479), (61, 10551), (66, 10701), (67, 10743), (69, 10806), (70, 10827), (72, 10914), (74, 10935), (75, 11004), (77, 11088), (78, 11112), (99, 11391), (110, 11511), (122, 11691), (126, 11715), (132, 11817), (135, 11856), (145, 11967), (146, 12003), (149, 12078), (155, 12162), (162, 12213), (173, 12321), (186, 12483), (188, 12492), (196, 12546), (198, 12558), (206, 12663), (211, 12804), (225, 12927), (237, 13278), (241, 13356), (242, 13368), (243, 13383), (255, 13545), (258, 13602), (260, 13629), (261, 13641), (262, 13653), (265, 13683), (266, 13689), (267, 13695), (275, 13821),

Gene: Denise_15 Start: 9594, Stop: 13949, Start Num: 1

Candidate Starts for Denise_15:

(Start: 1 @9594 has 34 MA's), (4, 9684), (5, 9693), (6, 9741), (12, 9849), (13, 9855), (14, 9864), (20, 9981), (21, 9990), (29, 10134), (30, 10149), (33, 10221), (35, 10251), (39, 10305), (41, 10347), (42, 10374), (43, 10380), (45, 10407), (48, 10470), (51, 10509), (55, 10536), (58, 10557), (59, 10569), (60, 10572), (63, 10626), (64, 10704), (65, 10710), (66, 10731), (68, 10794), (70, 10857), (72, 10944), (73, 10959), (74, 10965), (77, 11118), (78, 11142), (90, 11313), (92, 11355), (95, 11367), (99, 11421), (110, 11541), (117, 11634), (122, 11721), (126, 11745), (127, 11751), (129, 11826), (130, 11838), (132, 11847), (145, 12000), (149, 12111), (155, 12195), (173, 12354), (176, 12396), (178, 12405), (186, 12516), (188, 12525), (190, 12555), (196, 12579), (198, 12591), (204, 12660), (211, 12837), (225, 12957), (226, 12972), (228, 13041), (236, 13269), (241, 13392), (242, 13404), (243, 13419), (247, 13455), (253, 13545), (255, 13581), (258, 13638), (260, 13665), (262, 13689), (265, 13719), (266, 13725), (267, 13731), (268, 13758), (276, 13866), (279, 13896),

Gene: Ebert_15 Start: 9564, Stop: 13913, Start Num: 1

Candidate Starts for Ebert_15:

(Start: 1 @9564 has 34 MA's), (5, 9663), (12, 9819), (13, 9825), (14, 9834), (20, 9951), (29, 10104), (30, 10119), (31, 10176), (35, 10221), (39, 10275), (41, 10317), (42, 10344), (43, 10350), (45, 10377), (48, 10440), (51, 10479), (61, 10551), (66, 10701), (67, 10743), (69, 10806), (70, 10827), (72, 10914), (74, 10935), (75, 11004), (77, 11088), (78, 11112), (99, 11391), (110, 11511), (122, 11691), (126, 11715), (132, 11817), (135, 11856), (145, 11967), (146, 12003), (149, 12078), (155, 12162), (162, 12213), (173, 12321), (186, 12483), (188, 12492), (196, 12546), (198, 12558), (206, 12663), (211, 12804), (225, 12927), (237, 13278), (241, 13356), (242, 13368), (243, 13383), (255, 13545), (258, 13602), (260, 13629), (261, 13641), (262, 13653), (265, 13683), (266, 13689), (267, 13695), (275, 13821),

Gene: EdnaMode_15 Start: 9497, Stop: 13849, Start Num: 1

Candidate Starts for EdnaMode_15:

(Start: 1 @9497 has 34 MA's), (5, 9596), (8, 9683), (12, 9752), (13, 9758), (14, 9767), (20, 9884), (29, 10037), (30, 10052), (31, 10109), (35, 10154), (39, 10208), (41, 10250), (42, 10277), (43, 10283), (45, 10310), (48, 10373), (51, 10412), (61, 10484), (66, 10634), (70, 10760), (74, 10868), (77, 11021), (92, 11258), (95, 11270), (99, 11324), (102, 11345), (103, 11363), (110, 11444), (118, 11546), (126, 11648), (129, 11729), (132, 11750), (145, 11900), (146, 11936), (149, 12011), (155, 12095), (173, 12254), (186, 12416), (188, 12425), (198, 12491), (206, 12596), (225, 12857), (226, 12872), (228, 12941), (237, 13214), (242, 13304), (243, 13319), (245, 13352), (247, 13355), (255, 13481), (258, 13538), (260, 13565), (262, 13589), (265, 13619), (266, 13625), (267, 13631), (268, 13658), (275, 13757), (279, 13796),

Gene: Eyre_15 Start: 10187, Stop: 14536, Start Num: 1

Candidate Starts for Eyre_15:

(Start: 1 @10187 has 34 MA's), (5, 10286), (7, 10361), (12, 10442), (13, 10448), (14, 10457), (20, 10574), (29, 10727), (30, 10742), (31, 10799), (35, 10844), (39, 10898), (41, 10940), (42, 10967), (43, 10973), (45, 11000), (48, 11063), (51, 11102), (61, 11174), (66, 11324), (70, 11450), (74, 11558), (77, 11711), (92, 11948), (95, 11960), (99, 12014), (102, 12035), (103, 12053), (110, 12134), (118, 12236), (126, 12338), (129, 12419), (132, 12440), (145, 12590), (146, 12626), (149, 12701), (155, 12785), (173, 12944), (186, 13106), (188, 13115), (198, 13181), (206, 13286), (211, 13427), (225, 13550), (226, 13565), (237, 13901), (241, 13979), (242, 13991), (243, 14006), (247, 14042), (255, 14168), (260, 14252), (262, 14276), (263, 14279), (266, 14312), (272, 14408), (281, 14516), (282, 14531),

Gene: Faith5x5_15 Start: 9469, Stop: 13809, Start Num: 1

Candidate Starts for Faith5x5_15:

(Start: 1 @9469 has 34 MA's), (5, 9568), (6, 9616), (11, 9697), (12, 9724), (13, 9730), (20, 9856), (29, 10009), (30, 10024), (31, 10081), (33, 10096), (35, 10126), (39, 10180), (41, 10222), (42, 10249), (43, 10255), (45, 10282), (48, 10345), (49, 10354), (51, 10384), (56, 10420), (66, 10606), (68, 10669), (70, 10732), (72, 10819), (74, 10840), (75, 10909), (77, 10993), (78, 11017), (83, 11125), (88, 11170), (89, 11182), (90, 11188), (94, 11236), (95, 11242), (99, 11296), (102, 11317), (122, 11596), (126, 11620), (132, 11722), (145, 11866), (146, 11902), (149, 11977), (150, 11995), (173, 12220), (178, 12271), (179, 12280), (188, 12391), (189, 12415), (190, 12421), (194, 12442), (196, 12445), (198, 12457), (204, 12526), (218, 12781), (222, 12793), (228, 12901), (237, 13174), (241, 13252), (242, 13264), (243, 13279), (245, 13312), (247, 13315), (253, 13405), (255, 13441), (258, 13498), (259, 13522), (261, 13537), (262, 13549), (265, 13579), (266, 13585), (267, 13591), (268, 13618),

Gene: FroggyToad_15 Start: 9513, Stop: 13859, Start Num: 1

Candidate Starts for FroggyToad_15:

(Start: 1 @9513 has 34 MA's), (5, 9612), (6, 9660), (7, 9687), (12, 9768), (20, 9900), (21, 9909), (29, 10053), (30, 10068), (31, 10125), (33, 10140), (35, 10170), (39, 10224), (41, 10266), (42, 10293), (43, 10299), (45, 10326), (48, 10389), (49, 10398), (51, 10428), (56, 10464), (66, 10650), (67, 10692), (70, 10776), (72, 10863), (74, 10884), (75, 10953), (77, 11037), (81, 11115), (95, 11286), (99, 11340), (108, 11433), (122, 11640), (126, 11664), (127, 11670), (129, 11745), (132, 11766), (145, 11910), (146, 11946), (149, 12021), (158, 12117), (159, 12123), (173, 12264), (176, 12306), (178, 12315), (186, 12426), (188, 12435), (194, 12486), (196, 12489), (198, 12501), (206, 12606), (224, 12870), (237, 13224), (241, 13302), (242, 13314), (243, 13329), (247, 13365), (255, 13491), (258, 13548), (260, 13575), (261, 13587), (262, 13599), (265, 13629), (266, 13635), (267, 13641), (268, 13668), (275, 13767),

Gene: GemG_15 Start: 9564, Stop: 13913, Start Num: 1

Candidate Starts for GemG_15:

(Start: 1 @9564 has 34 MA's), (5, 9663), (12, 9819), (13, 9825), (14, 9834), (20, 9951), (29, 10104), (30, 10119), (31, 10176), (35, 10221), (39, 10275), (41, 10317), (42, 10344), (43, 10350), (45, 10377), (48, 10440), (51, 10479), (61, 10551), (66, 10701), (67, 10743), (69, 10806), (70, 10827), (72, 10914), (74, 10935), (75, 11004), (77, 11088), (78, 11112), (99, 11391), (110, 11511), (122, 11691), (126, 11715), (132, 11817), (135, 11856), (145, 11967), (146, 12003), (149, 12078), (155, 12162), (162, 12213), (173, 12321), (186, 12483), (188, 12492), (196, 12546), (198, 12558), (206, 12663), (211, 12804), (225, 12927), (237, 13278), (241, 13356), (242, 13368), (243, 13383), (255, 13545), (258, 13602), (260, 13629), (261, 13641), (262, 13653), (265, 13683), (266, 13689), (267, 13695), (275, 13821),

Gene: Gizermo_15 Start: 9564, Stop: 13913, Start Num: 1

Candidate Starts for Gizermo_15:

(Start: 1 @9564 has 34 MA's), (5, 9663), (12, 9819), (13, 9825), (14, 9834), (20, 9951), (29, 10104), (30, 10119), (31, 10176), (35, 10221), (39, 10275), (41, 10317), (42, 10344), (43, 10350), (45, 10377), (48, 10440), (51, 10479), (61, 10551), (66, 10701), (67, 10743), (69, 10806), (70, 10827), (72, 10914), (74, 10935), (75, 11004), (77, 11088), (78, 11112), (99, 11391), (110, 11511), (122, 11691), (126,

11715), (132, 11817), (135, 11856), (145, 11967), (146, 12003), (149, 12078), (155, 12162), (162, 12213), (173, 12321), (186, 12483), (188, 12492), (196, 12546), (198, 12558), (206, 12663), (211, 12804), (225, 12927), (237, 13278), (241, 13356), (242, 13368), (243, 13383), (255, 13545), (258, 13602), (260, 13629), (261, 13641), (262, 13653), (265, 13683), (266, 13689), (267, 13695), (275, 13821),

Gene: Gudmit_16 Start: 10286, Stop: 14710, Start Num: 1

Candidate Starts for Gudmit_16:

(Start: 1 @10286 has 34 MA's), (5, 10385), (8, 10472), (12, 10541), (21, 10682), (29, 10826), (30, 10841), (31, 10898), (33, 10913), (35, 10943), (39, 10997), (41, 11039), (43, 11072), (45, 11099), (47, 11147), (48, 11162), (56, 11237), (58, 11249), (60, 11264), (61, 11273), (66, 11423), (70, 11549), (74, 11657), (77, 11810), (79, 11843), (82, 11897), (84, 11945), (85, 11957), (88, 11987), (90, 12005), (91, 12029), (93, 12050), (94, 12053), (95, 12059), (99, 12113), (102, 12134), (105, 12185), (126, 12437), (130, 12530), (138, 12608), (146, 12722), (150, 12815), (154, 12842), (161, 12920), (162, 12929), (173, 13037), (176, 13079), (179, 13097), (188, 13208), (199, 13313), (206, 13448), (212, 13613), (214, 13622), (216, 13643), (217, 13652), (220, 13685), (221, 13688), (228, 13802), (236, 14030), (239, 14093), (241, 14153), (242, 14165), (243, 14180), (258, 14399), (260, 14426), (261, 14438), (262, 14450), (263, 14453), (266, 14486),

Gene: Haley23_15 Start: 9564, Stop: 13913, Start Num: 1

Candidate Starts for Haley23_15:

(Start: 1 @9564 has 34 MA's), (5, 9663), (12, 9819), (13, 9825), (14, 9834), (20, 9951), (29, 10104), (30, 10119), (31, 10176), (35, 10221), (39, 10275), (41, 10317), (42, 10344), (43, 10350), (45, 10377), (48, 10440), (51, 10479), (61, 10551), (66, 10701), (67, 10743), (69, 10806), (70, 10827), (72, 10914), (74, 10935), (75, 11004), (77, 11088), (78, 11112), (99, 11391), (110, 11511), (122, 11691), (126, 11715), (132, 11817), (135, 11856), (145, 11967), (146, 12003), (149, 12078), (155, 12162), (162, 12213), (173, 12321), (186, 12483), (188, 12492), (196, 12546), (198, 12558), (206, 12663), (211, 12804), (225, 12927), (237, 13278), (241, 13356), (242, 13368), (243, 13383), (255, 13545), (258, 13602), (260, 13629), (261, 13641), (262, 13653), (265, 13683), (266, 13689), (267, 13695), (275, 13821),

Gene: JCole_15 Start: 9564, Stop: 13904, Start Num: 1

Candidate Starts for JCole_15:

(Start: 1 @9564 has 34 MA's), (5, 9663), (12, 9819), (13, 9825), (14, 9834), (20, 9951), (29, 10104), (30, 10119), (31, 10176), (33, 10191), (35, 10221), (39, 10275), (41, 10317), (42, 10344), (45, 10377), (48, 10440), (49, 10449), (51, 10479), (61, 10551), (66, 10701), (67, 10743), (69, 10806), (70, 10827), (72, 10914), (74, 10935), (75, 11004), (77, 11088), (78, 11112), (86, 11253), (90, 11283), (95, 11337), (98, 11370), (99, 11391), (110, 11511), (126, 11715), (129, 11796), (130, 11808), (132, 11817), (145, 11958), (146, 11994), (149, 12069), (155, 12153), (162, 12204), (173, 12312), (176, 12354), (178, 12363), (186, 12474), (188, 12483), (190, 12513), (196, 12537), (201, 12567), (206, 12654), (237, 13269), (241, 13347), (242, 13359), (243, 13374), (245, 13407), (255, 13536), (258, 13593), (260, 13620), (262, 13644), (265, 13674), (266, 13680), (267, 13686), (268, 13713), (275, 13812), (279, 13851), (281, 13884),

Gene: Jalleen_16 Start: 9497, Stop: 13906, Start Num: 1

Candidate Starts for Jalleen_16:

(Start: 1 @9497 has 34 MA's), (5, 9596), (12, 9752), (13, 9758), (14, 9767), (20, 9884), (29, 10037), (30, 10052), (31, 10109), (35, 10154), (39, 10208), (41, 10250), (42, 10277), (43, 10283), (45, 10310), (48, 10373), (51, 10412), (61, 10484), (66, 10634), (67, 10676), (69, 10739), (70, 10760), (72, 10847), (74, 10868), (75, 10937), (77, 11021), (78, 11045), (86, 11186), (90, 11216), (95, 11270), (98, 11303), (99, 11324), (110, 11444), (126, 11648), (129, 11729), (130, 11741), (132, 11750), (145, 11891), (146, 11927), (157, 12095), (160, 12122), (174, 12284), (180, 12329), (187, 12455), (216, 12833), (217, 12842), (219, 12875), (237, 13271), (242, 13361), (243, 13376), (247, 13412), (255, 13538), (258,

13595), (260, 13622), (262, 13646), (265, 13676), (266, 13682), (267, 13688), (271, 13769), (274, 13811), (276, 13823),

Gene: Lamberg_15 Start: 9497, Stop: 13849, Start Num: 1

Candidate Starts for Lamberg_15:

(Start: 1 @9497 has 34 MA's), (5, 9596), (8, 9683), (12, 9752), (13, 9758), (14, 9767), (20, 9884), (29, 10037), (30, 10052), (31, 10109), (35, 10154), (39, 10208), (41, 10250), (42, 10277), (43, 10283), (45, 10310), (48, 10373), (51, 10412), (61, 10484), (66, 10634), (70, 10760), (74, 10868), (77, 11021), (92, 11258), (95, 11270), (99, 11324), (102, 11345), (103, 11363), (110, 11444), (118, 11546), (126, 11648), (129, 11729), (132, 11750), (145, 11900), (146, 11936), (149, 12011), (155, 12095), (173, 12254), (186, 12416), (188, 12425), (198, 12491), (206, 12596), (225, 12857), (226, 12872), (228, 12941), (237, 13214), (242, 13304), (243, 13319), (245, 13352), (247, 13355), (255, 13481), (258, 13538), (260, 13565), (262, 13589), (265, 13619), (266, 13625), (267, 13631), (268, 13658), (275, 13757), (279, 13796),

Gene: LordFarquaad_15 Start: 9497, Stop: 13906, Start Num: 1

Candidate Starts for LordFarquaad_15:

(Start: 1 @9497 has 34 MA's), (5, 9596), (12, 9752), (13, 9758), (14, 9767), (20, 9884), (29, 10037), (30, 10052), (31, 10109), (33, 10124), (35, 10154), (39, 10208), (41, 10250), (42, 10277), (43, 10283), (45, 10310), (48, 10373), (49, 10382), (51, 10412), (61, 10484), (66, 10634), (67, 10676), (69, 10739), (70, 10760), (72, 10847), (74, 10868), (75, 10937), (77, 11021), (78, 11045), (86, 11186), (90, 11216), (95, 11270), (98, 11303), (99, 11324), (110, 11444), (126, 11648), (127, 11654), (129, 11729), (130, 11741), (132, 11750), (145, 11891), (146, 11927), (157, 12095), (160, 12122), (174, 12284), (180, 12329), (187, 12455), (216, 12833), (217, 12842), (219, 12875), (237, 13271), (243, 13376), (247, 13412), (255, 13538), (258, 13595), (260, 13622), (262, 13646), (265, 13676), (266, 13682), (267, 13688), (271, 13769), (274, 13811), (276, 13823),

Gene: Lton_15 Start: 9526, Stop: 13878, Start Num: 1

Candidate Starts for Lton_15:

(Start: 1 @9526 has 34 MA's), (4, 9616), (5, 9625), (6, 9673), (12, 9781), (13, 9787), (14, 9796), (20, 9913), (29, 10066), (30, 10081), (31, 10138), (33, 10153), (35, 10183), (39, 10237), (41, 10279), (42, 10306), (43, 10312), (45, 10339), (48, 10402), (51, 10441), (55, 10468), (58, 10489), (59, 10501), (60, 10504), (63, 10558), (64, 10636), (65, 10642), (66, 10663), (68, 10726), (72, 10876), (74, 10897), (77, 11050), (78, 11074), (89, 11239), (90, 11245), (92, 11287), (95, 11299), (99, 11353), (110, 11473), (126, 11677), (127, 11683), (129, 11758), (130, 11770), (132, 11779), (137, 11824), (145, 11932), (146, 11968), (149, 12043), (155, 12127), (173, 12286), (178, 12337), (179, 12346), (196, 12511), (211, 12766), (218, 12844), (225, 12886), (226, 12901), (237, 13243), (241, 13321), (242, 13333), (243, 13348), (247, 13384), (253, 13474), (255, 13510), (258, 13567), (260, 13594), (262, 13618), (265, 13648), (266, 13654), (267, 13660), (275, 13786), (279, 13825), (281, 13858),

Gene: Matteo_15 Start: 9497, Stop: 13849, Start Num: 1

Candidate Starts for Matteo_15:

(Start: 1 @9497 has 34 MA's), (5, 9596), (6, 9644), (8, 9683), (12, 9752), (13, 9758), (14, 9767), (20, 9884), (29, 10037), (30, 10052), (31, 10109), (33, 10124), (35, 10154), (39, 10208), (41, 10250), (42, 10277), (43, 10283), (45, 10310), (48, 10373), (51, 10412), (55, 10439), (58, 10460), (59, 10472), (60, 10475), (63, 10529), (64, 10607), (65, 10613), (66, 10634), (68, 10697), (72, 10847), (74, 10868), (77, 11021), (90, 11216), (92, 11258), (95, 11270), (99, 11324), (108, 11417), (110, 11444), (126, 11648), (127, 11654), (129, 11729), (130, 11741), (132, 11750), (137, 11795), (145, 11903), (146, 11939), (149, 12014), (155, 12098), (173, 12257), (178, 12308), (179, 12317), (188, 12428), (196, 12482), (211, 12737), (218, 12815), (225, 12857), (226, 12872), (228, 12941), (237, 13214), (242, 13304), (243, 13319), (245, 13352), (247, 13355), (248, 13376), (253, 13445), (255, 13481), (258, 13538), (260, 13565), (262, 13589), (265, 13619), (266, 13625), (267, 13631), (268, 13658), (275, 13757), (279, 13796),

Gene: Mbo4_15 Start: 10173, Stop: 14930, Start Num: 1

Candidate Starts for Mbo4_15:

(Start: 1 @10173 has 34 MA's), (5, 10269), (10, 10401), (15, 10452), (22, 10578), (25, 10650), (26, 10653), (27, 10683), (28, 10713), (29, 10785), (33, 10872), (36, 10908), (38, 10929), (43, 11031), (46, 11079), (53, 11175), (54, 11181), (56, 11196), (58, 11208), (62, 11250), (70, 11508), (74, 11616), (86, 11934), (96, 12018), (100, 12072), (106, 12147), (112, 12213), (114, 12246), (116, 12285), (119, 12333), (120, 12369), (125, 12405), (131, 12516), (133, 12528), (139, 12594), (140, 12612), (147, 12750), (152, 12840), (156, 12903), (163, 12957), (166, 12981), (167, 12984), (172, 13059), (179, 13152), (181, 13170), (182, 13188), (184, 13218), (191, 13359), (192, 13368), (193, 13374), (200, 13443), (204, 13533), (207, 13587), (209, 13644), (210, 13668), (215, 13773), (227, 13971), (230, 14064), (231, 14103), (232, 14127), (233, 14130), (234, 14193), (238, 14274), (240, 14295), (244, 14397), (248, 14460), (251, 14508), (253, 14529), (257, 14622), (258, 14625), (264, 14685), (266, 14712), (269, 14748), (273, 14808), (277, 14856), (278, 14865), (280, 14901),

Gene: Mocha12_15 Start: 9564, Stop: 13913, Start Num: 1

Candidate Starts for Mocha12_15:

(Start: 1 @9564 has 34 MA's), (5, 9663), (12, 9819), (13, 9825), (14, 9834), (20, 9951), (29, 10104), (30, 10119), (31, 10176), (35, 10221), (39, 10275), (41, 10317), (42, 10344), (43, 10350), (45, 10377), (48, 10440), (51, 10479), (61, 10551), (66, 10701), (67, 10743), (69, 10806), (70, 10827), (72, 10914), (74, 10935), (75, 11004), (77, 11088), (78, 11112), (99, 11391), (110, 11511), (122, 11691), (126, 11715), (132, 11817), (135, 11856), (145, 11967), (146, 12003), (149, 12078), (155, 12162), (162, 12213), (173, 12321), (186, 12483), (188, 12492), (196, 12546), (198, 12558), (206, 12663), (211, 12804), (225, 12927), (237, 13278), (241, 13356), (242, 13368), (243, 13383), (255, 13545), (258, 13602), (260, 13629), (261, 13641), (262, 13653), (265, 13683), (266, 13689), (267, 13695), (275, 13821),

Gene: Moosehead_15 Start: 9472, Stop: 13818, Start Num: 1

Candidate Starts for Moosehead_15:

(Start: 1 @9472 has 34 MA's), (5, 9571), (6, 9619), (7, 9646), (11, 9700), (12, 9727), (13, 9733), (20, 9859), (29, 10012), (30, 10027), (31, 10084), (33, 10099), (35, 10129), (39, 10183), (41, 10225), (42, 10252), (43, 10258), (45, 10285), (48, 10348), (49, 10357), (51, 10387), (56, 10423), (61, 10459), (66, 10609), (68, 10672), (70, 10735), (72, 10822), (74, 10843), (75, 10912), (77, 10996), (92, 11233), (95, 11245), (99, 11299), (102, 11320), (104, 11350), (110, 11419), (124, 11608), (132, 11725), (145, 11875), (146, 11911), (149, 11986), (150, 12004), (155, 12070), (173, 12229), (178, 12280), (179, 12289), (188, 12400), (189, 12424), (190, 12430), (194, 12451), (196, 12454), (198, 12466), (217, 12763), (218, 12790), (222, 12802), (237, 13183), (241, 13261), (242, 13273), (243, 13288), (245, 13321), (247, 13324), (248, 13345), (253, 13414), (258, 13507), (259, 13531), (262, 13558), (265, 13588), (266, 13594), (267, 13600), (268, 13627),

Gene: Nettuno_15 Start: 9497, Stop: 13852, Start Num: 1

Candidate Starts for Nettuno_15:

(Start: 1 @9497 has 34 MA's), (5, 9596), (12, 9752), (13, 9758), (14, 9767), (20, 9884), (29, 10037), (30, 10052), (31, 10109), (35, 10154), (39, 10208), (41, 10250), (42, 10277), (43, 10283), (45, 10310), (48, 10373), (51, 10412), (61, 10484), (66, 10634), (67, 10676), (69, 10739), (70, 10760), (72, 10847), (74, 10868), (75, 10937), (77, 11021), (78, 11045), (99, 11324), (126, 11648), (127, 11654), (129, 11729), (130, 11741), (132, 11750), (137, 11795), (145, 11903), (146, 11939), (149, 12014), (155, 12098), (173, 12257), (176, 12299), (188, 12428), (196, 12482), (198, 12494), (206, 12599), (225, 12860), (226, 12875), (228, 12944), (237, 13217), (242, 13307), (243, 13322), (245, 13355), (247, 13358), (255, 13484), (258, 13541), (260, 13568), (262, 13592), (265, 13622), (266, 13628), (267, 13634), (268, 13661), (275, 13760), (279, 13799),

Gene: OneDirection_15 Start: 9470, Stop: 13819, Start Num: 1

Candidate Starts for OneDirection_15:

(Start: 1 @9470 has 34 MA's), (4, 9560), (5, 9569), (6, 9617), (12, 9725), (13, 9731), (14, 9740), (20, 9857), (29, 10010), (30, 10025), (31, 10082), (33, 10097), (35, 10127), (39, 10181), (41, 10223), (42, 10250), (43, 10256), (45, 10283), (48, 10346), (51, 10385), (55, 10412), (58, 10433), (59, 10445), (60, 10448), (63, 10502), (64, 10580), (65, 10586), (66, 10607), (68, 10670), (72, 10820), (74, 10841), (77, 10994), (78, 11018), (89, 11183), (90, 11189), (92, 11231), (95, 11243), (99, 11297), (110, 11417), (126, 11621), (127, 11627), (129, 11702), (130, 11714), (132, 11723), (142, 11843), (146, 11906), (149, 11981), (155, 12065), (173, 12224), (176, 12266), (178, 12275), (186, 12386), (188, 12395), (190, 12425), (196, 12449), (198, 12461), (205, 12554), (206, 12566), (207, 12575), (211, 12707), (225, 12827), (226, 12842), (237, 13184), (241, 13262), (242, 13274), (243, 13289), (247, 13325), (253, 13415), (255, 13451), (258, 13508), (260, 13535), (262, 13559), (265, 13589), (266, 13595), (267, 13601), (275, 13727), (279, 13766), (281, 13799),

Gene: Pepperoni_15 Start: 9820, Stop: 14169, Start Num: 1

Candidate Starts for Pepperoni_15:

(Start: 1 @9820 has 34 MA's), (4, 9910), (5, 9919), (6, 9967), (12, 10075), (13, 10081), (14, 10090), (20, 10207), (29, 10360), (30, 10375), (31, 10432), (33, 10447), (35, 10477), (39, 10531), (41, 10573), (42, 10600), (43, 10606), (45, 10633), (48, 10696), (51, 10735), (55, 10762), (58, 10783), (59, 10795), (60, 10798), (63, 10852), (64, 10930), (65, 10936), (66, 10957), (68, 11020), (72, 11170), (74, 11191), (77, 11344), (78, 11368), (89, 11533), (90, 11539), (92, 11581), (95, 11593), (99, 11647), (110, 11767), (126, 11971), (127, 11977), (129, 12052), (130, 12064), (132, 12073), (142, 12193), (146, 12256), (149, 12331), (155, 12415), (173, 12574), (176, 12616), (178, 12625), (186, 12736), (188, 12745), (190, 12775), (196, 12799), (198, 12811), (205, 12904), (206, 12916), (207, 12925), (211, 13057), (225, 13177), (226, 13192), (237, 13534), (241, 13612), (242, 13624), (243, 13639), (247, 13675), (253, 13765), (255, 13801), (258, 13858), (260, 13885), (262, 13909), (265, 13939), (266, 13945), (267, 13951), (275, 14077), (279, 14116), (281, 14149),

Gene: Pickett_15 Start: 9497, Stop: 13837, Start Num: 1

Candidate Starts for Pickett_15:

(Start: 1 @9497 has 34 MA's), (5, 9596), (12, 9752), (13, 9758), (14, 9767), (20, 9884), (29, 10037), (30, 10052), (31, 10109), (33, 10124), (35, 10154), (39, 10208), (41, 10250), (42, 10277), (43, 10283), (45, 10310), (48, 10373), (49, 10382), (51, 10412), (61, 10484), (66, 10634), (67, 10676), (69, 10739), (70, 10760), (72, 10847), (74, 10868), (75, 10937), (77, 11021), (78, 11045), (86, 11186), (90, 11216), (95, 11270), (98, 11303), (99, 11324), (110, 11444), (126, 11648), (127, 11654), (129, 11729), (130, 11741), (132, 11750), (145, 11891), (146, 11927), (149, 12002), (155, 12086), (162, 12137), (173, 12245), (176, 12287), (178, 12296), (186, 12407), (188, 12416), (190, 12446), (196, 12470), (201, 12500), (206, 12587), (237, 13202), (241, 13280), (242, 13292), (243, 13307), (245, 13340), (255, 13469), (258, 13526), (260, 13553), (262, 13577), (265, 13607), (266, 13613), (267, 13619), (268, 13646), (275, 13745), (279, 13784), (281, 13817),

Gene: RavenCo17_15 Start: 10368, Stop: 14717, Start Num: 1

Candidate Starts for RavenCo17_15:

(Start: 1 @10368 has 34 MA's), (5, 10467), (7, 10542), (12, 10623), (13, 10629), (14, 10638), (20, 10755), (29, 10908), (30, 10923), (31, 10980), (35, 11025), (39, 11079), (41, 11121), (42, 11148), (43, 11154), (45, 11181), (48, 11244), (51, 11283), (61, 11355), (66, 11505), (70, 11631), (74, 11739), (77, 11892), (92, 12129), (94, 12135), (95, 12141), (99, 12195), (103, 12234), (110, 12315), (126, 12519), (129, 12600), (132, 12621), (145, 12771), (146, 12807), (149, 12882), (155, 12966), (158, 12978), (173, 13125), (186, 13287), (188, 13296), (198, 13362), (206, 13467), (211, 13608), (225, 13731), (226, 13746), (237, 14082), (241, 14160), (242, 14172), (243, 14187), (247, 14223), (255, 14349), (260, 14433), (262, 14457), (263, 14460), (266, 14493), (272, 14589), (281, 14697), (282, 14712),

Gene: Rem711_23 Start: 13850, Stop: 17929, Start Num: 1

Candidate Starts for Rem711_23:

(Start: 1 @13850 has 34 MA's), (3, 13895), (19, 14207), (23, 14258), (36, 14486), (40, 14567), (45, 14636), (70, 15083), (74, 15191), (76, 15311), (87, 15512), (97, 15608), (102, 15665), (134, 16094), (136, 16100), (151, 16316), (164, 16430), (171, 16493), (183, 16616), (185, 16661), (202, 16805), (203, 16826), (208, 16892), (213, 17030), (242, 17549), (251, 17693), (256, 17795), (262, 17876), (265, 17906), (266, 17912),

Gene: Sahara_15 Start: 9584, Stop: 13939, Start Num: 1

Candidate Starts for Sahara_15:

(Start: 1 @9584 has 34 MA's), (5, 9683), (12, 9839), (16, 9884), (17, 9896), (20, 9971), (24, 10034), (29, 10124), (30, 10139), (35, 10241), (39, 10295), (41, 10337), (43, 10370), (44, 10385), (45, 10397), (48, 10460), (50, 10490), (55, 10526), (59, 10559), (60, 10562), (64, 10694), (65, 10700), (66, 10721), (68, 10784), (70, 10847), (74, 10955), (77, 11108), (88, 11285), (90, 11303), (92, 11345), (95, 11357), (99, 11411), (107, 11498), (111, 11540), (122, 11711), (123, 11717), (126, 11735), (127, 11741), (129, 11816), (130, 11828), (132, 11837), (145, 11990), (146, 12026), (149, 12101), (155, 12185), (173, 12344), (176, 12386), (178, 12395), (186, 12506), (188, 12515), (196, 12569), (198, 12581), (211, 12827), (228, 13031), (236, 13259), (241, 13382), (242, 13394), (243, 13409), (247, 13445), (255, 13571), (258, 13628), (260, 13655), (262, 13679), (265, 13709), (266, 13715), (267, 13721), (268, 13748), (276, 13856), (279, 13886),

Gene: Savage_15 Start: 9564, Stop: 13913, Start Num: 1

Candidate Starts for Savage_15:

(Start: 1 @9564 has 34 MA's), (5, 9663), (12, 9819), (13, 9825), (14, 9834), (20, 9951), (29, 10104), (30, 10119), (31, 10176), (35, 10221), (39, 10275), (41, 10317), (42, 10344), (43, 10350), (45, 10377), (48, 10440), (51, 10479), (61, 10551), (66, 10701), (67, 10743), (69, 10806), (70, 10827), (72, 10914), (74, 10935), (75, 11004), (77, 11088), (78, 11112), (99, 11391), (110, 11511), (122, 11691), (126, 11715), (132, 11817), (135, 11856), (145, 11967), (146, 12003), (149, 12078), (155, 12162), (162, 12213), (173, 12321), (186, 12483), (188, 12492), (196, 12546), (198, 12558), (206, 12663), (211, 12804), (225, 12927), (237, 13278), (241, 13356), (242, 13368), (243, 13383), (255, 13545), (258, 13602), (260, 13629), (261, 13641), (262, 13653), (265, 13683), (266, 13689), (267, 13695), (275, 13821),

Gene: SoilAssassin_15 Start: 9497, Stop: 13906, Start Num: 1

Candidate Starts for SoilAssassin_15:

(Start: 1 @9497 has 34 MA's), (5, 9596), (12, 9752), (13, 9758), (14, 9767), (20, 9884), (29, 10037), (30, 10052), (31, 10109), (33, 10124), (35, 10154), (39, 10208), (41, 10250), (42, 10277), (43, 10283), (45, 10310), (48, 10373), (49, 10382), (51, 10412), (61, 10484), (66, 10634), (67, 10676), (69, 10739), (70, 10760), (72, 10847), (74, 10868), (75, 10937), (77, 11021), (78, 11045), (86, 11186), (90, 11216), (95, 11270), (98, 11303), (99, 11324), (110, 11444), (126, 11648), (127, 11654), (129, 11729), (130, 11741), (132, 11750), (145, 11891), (146, 11927), (157, 12095), (160, 12122), (174, 12284), (180, 12329), (187, 12455), (216, 12833), (217, 12842), (219, 12875), (237, 13271), (243, 13376), (247, 13412), (255, 13538), (258, 13595), (260, 13622), (262, 13646), (265, 13676), (266, 13682), (267, 13688), (271, 13769), (274, 13811), (276, 13823),

Gene: Sproutie_15 Start: 9564, Stop: 13913, Start Num: 1

Candidate Starts for Sproutie_15:

(Start: 1 @9564 has 34 MA's), (5, 9663), (12, 9819), (13, 9825), (14, 9834), (20, 9951), (29, 10104), (30, 10119), (31, 10176), (35, 10221), (39, 10275), (41, 10317), (42, 10344), (43, 10350), (45, 10377), (48, 10440), (51, 10479), (61, 10551), (66, 10701), (67, 10743), (69, 10806), (70, 10827), (72, 10914), (74, 10935), (75, 11004), (77, 11088), (78, 11112), (99, 11391), (110, 11511), (122, 11691), (126, 11715), (132, 11817), (135, 11856), (145, 11967), (146, 12003), (149, 12078), (155, 12162), (162, 12213), (173, 12321), (186, 12483), (188, 12492), (196, 12546), (198, 12558), (206, 12663), (211, 12804), (225, 12927), (237, 13278), (241, 13356), (242, 13368), (243, 13383), (255, 13545), (258, 13602), (260, 13629), (261, 13641), (262, 13653), (265, 13683), (266, 13689), (267, 13695), (275, 13821),

13821),

Gene: TinyDot_17 Start: 10139, Stop: 14464, Start Num: 2

Candidate Starts for TinyDot_17:

(Start: 2 @10139 has 1 MA's), (9, 10325), (13, 10379), (20, 10499), (32, 10739), (37, 10784), (40, 10859), (45, 10928), (48, 10991), (49, 11000), (52, 11033), (57, 11075), (59, 11090), (63, 11147), (70, 11378), (71, 11444), (73, 11480), (76, 11606), (79, 11669), (80, 11705), (101, 11909), (103, 11939), (109, 12002), (113, 12023), (115, 12059), (121, 12164), (128, 12230), (141, 12410), (143, 12431), (144, 12434), (148, 12551), (153, 12593), (168, 12704), (169, 12710), (170, 12722), (175, 12800), (177, 12821), (195, 13016), (197, 13022), (223, 13412), (237, 13787), (238, 13793), (246, 13937), (249, 13982), (250, 13997), (252, 14045), (254, 14081), (258, 14153), (260, 14180), (263, 14207), (265, 14234), (270, 14312), (276, 14381), (278, 14405),

Gene: TuertoX_15 Start: 9564, Stop: 13913, Start Num: 1

Candidate Starts for TuertoX_15:

(Start: 1 @9564 has 34 MA's), (5, 9663), (12, 9819), (13, 9825), (14, 9834), (20, 9951), (29, 10104), (30, 10119), (31, 10176), (35, 10221), (39, 10275), (41, 10317), (42, 10344), (43, 10350), (45, 10377), (48, 10440), (51, 10479), (61, 10551), (66, 10701), (67, 10743), (69, 10806), (70, 10827), (72, 10914), (74, 10935), (75, 11004), (77, 11088), (78, 11112), (99, 11391), (110, 11511), (122, 11691), (126, 11715), (132, 11817), (135, 11856), (145, 11967), (146, 12003), (149, 12078), (155, 12162), (162, 12213), (173, 12321), (186, 12483), (188, 12492), (196, 12546), (198, 12558), (206, 12663), (211, 12804), (225, 12927), (237, 13278), (241, 13356), (242, 13368), (243, 13383), (255, 13545), (258, 13602), (260, 13629), (261, 13641), (262, 13653), (265, 13683), (266, 13689), (267, 13695), (275, 13821),

Gene: Vasanti_15 Start: 9513, Stop: 13859, Start Num: 1

Candidate Starts for Vasanti_15:

(Start: 1 @9513 has 34 MA's), (5, 9612), (7, 9687), (12, 9768), (20, 9900), (21, 9909), (29, 10053), (30, 10068), (31, 10125), (33, 10140), (35, 10170), (39, 10224), (41, 10266), (42, 10293), (43, 10299), (45, 10326), (48, 10389), (49, 10398), (51, 10428), (56, 10464), (66, 10650), (67, 10692), (70, 10776), (72, 10863), (74, 10884), (75, 10953), (77, 11037), (78, 11061), (90, 11232), (95, 11286), (99, 11340), (110, 11460), (126, 11664), (127, 11670), (132, 11766), (135, 11805), (145, 11910), (146, 11946), (155, 12105), (165, 12183), (173, 12264), (178, 12315), (186, 12426), (188, 12435), (190, 12465), (194, 12486), (198, 12501), (229, 12957), (237, 13224), (241, 13302), (242, 13314), (243, 13329), (255, 13491), (258, 13548), (260, 13575), (262, 13599), (265, 13629), (266, 13635), (267, 13641), (268, 13668), (275, 13767),

Gene: Whiteclaw_15 Start: 9564, Stop: 13913, Start Num: 1

Candidate Starts for Whiteclaw_15:

(Start: 1 @9564 has 34 MA's), (5, 9663), (12, 9819), (13, 9825), (14, 9834), (20, 9951), (29, 10104), (30, 10119), (31, 10176), (35, 10221), (39, 10275), (41, 10317), (42, 10344), (43, 10350), (45, 10377), (48, 10440), (51, 10479), (61, 10551), (66, 10701), (67, 10743), (69, 10806), (70, 10827), (72, 10914), (74, 10935), (75, 11004), (77, 11088), (78, 11112), (99, 11391), (110, 11511), (122, 11691), (126, 11715), (132, 11817), (135, 11856), (145, 11967), (146, 12003), (149, 12078), (155, 12162), (162, 12213), (173, 12321), (186, 12483), (188, 12492), (196, 12546), (198, 12558), (206, 12663), (211, 12804), (225, 12927), (237, 13278), (241, 13356), (242, 13368), (243, 13383), (255, 13545), (258, 13602), (260, 13629), (261, 13641), (262, 13653), (265, 13683), (266, 13689), (267, 13695), (275, 13821),

Gene: Yeet412_15 Start: 9497, Stop: 13906, Start Num: 1

Candidate Starts for Yeet412_15:

(Start: 1 @9497 has 34 MA's), (5, 9596), (12, 9752), (13, 9758), (14, 9767), (20, 9884), (29, 10037), (30, 10052), (31, 10109), (33, 10124), (35, 10154), (39, 10208), (41, 10250), (42, 10277), (43, 10283),

(45, 10310), (48, 10373), (49, 10382), (51, 10412), (61, 10484), (66, 10634), (67, 10676), (69, 10739), (70, 10760), (72, 10847), (74, 10868), (75, 10937), (77, 11021), (78, 11045), (86, 11186), (90, 11216), (95, 11270), (98, 11303), (99, 11324), (110, 11444), (126, 11648), (127, 11654), (129, 11729), (130, 11741), (132, 11750), (145, 11891), (146, 11927), (157, 12095), (160, 12122), (174, 12284), (180, 12329), (187, 12455), (216, 12833), (217, 12842), (219, 12875), (237, 13271), (243, 13376), (247, 13412), (255, 13538), (258, 13595), (260, 13622), (262, 13646), (265, 13676), (266, 13682), (267, 13688), (271, 13769), (274, 13811), (276, 13823),

Gene: Yinzer_15 Start: 9564, Stop: 13913, Start Num: 1

Candidate Starts for Yinzer_15:

(Start: 1 @9564 has 34 MA's), (5, 9663), (12, 9819), (13, 9825), (14, 9834), (20, 9951), (29, 10104), (30, 10119), (31, 10176), (35, 10221), (39, 10275), (41, 10317), (42, 10344), (43, 10350), (45, 10377), (48, 10440), (51, 10479), (61, 10551), (66, 10701), (67, 10743), (69, 10806), (70, 10827), (72, 10914), (74, 10935), (75, 11004), (77, 11088), (78, 11112), (99, 11391), (110, 11511), (122, 11691), (126, 11715), (132, 11817), (135, 11856), (145, 11967), (146, 12003), (149, 12078), (155, 12162), (162, 12213), (173, 12321), (186, 12483), (188, 12492), (196, 12546), (198, 12558), (206, 12663), (211, 12804), (225, 12927), (235, 13230), (237, 13278), (241, 13356), (242, 13368), (243, 13383), (255, 13545), (258, 13602), (260, 13629), (261, 13641), (262, 13653), (265, 13683), (266, 13689), (267, 13695), (275, 13821),