





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 163364 Report

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

Pham number 163364 has 193 members, 29 are drafts.

Phages represented in each track:

- Track 1 : Ranunculus\_20
- Track 2 : Tank\_20, Wilde\_20
- Track 3 : Rizwana\_19
- Track 4 : Beagle\_27, Pointis\_26, Pureglobe5\_28
- Track 5 : Odyssey395\_28
- Track 6 : MellowYellow\_21
- Track 7 : BruhMoment\_21
- Track 8 : SilentRX\_21
- Track 9 : AWGoat\_19
- Track 10 : BayC\_13, Salete\_13, Maih\_13
- Track 11 : TP1604\_13, Asis\_13, BabyGotBac\_13
- Track 12 : Abt2graduatex2\_13
- Track 13 : Xkcd426\_14
- Track 14 : RainyPolka\_13
- Track 15 : YDN12\_14
- Track 16 : Mischief19\_14
- Track 17 : Jambalaya\_19, TillyBobJoe\_19, Savbucketdawg\_19, Shinji\_19, Portcullis\_19
- Track 18 : Mutzi\_21
- Track 19 : Danyall\_21, VanDeWege\_22, RogerDodger\_22, Twister6\_21, Valary\_22
- Track 20 : Salvador\_19, SmokingBunny\_19, Nubi\_19, Evamon\_19, Togo\_19
- Track 21 : KimmyK\_21, PinkCoffee\_21, ClamChowder\_21, Fugax\_21, Barb\_21
- Track 22 : Halo3\_20
- Track 23 : Gezellig\_20, Fireball\_20, Wizard\_19
- Track 24 : Phlop\_19, PullumCavea\_19
- Track 25 : YungMoney\_21
- Track 26 : Bakery\_20
- Track 27 : Arri\_22
- Track 28 : Clown\_23
- Track 29 : Belphegor\_18
- Track 30 : Baumdotcom\_20, Saronaya\_20, Gustavo\_20
- Track 31 : Lennon\_22, Stultus\_20, Bibwit\_21, Sedona\_22, Sitar\_22, Ailee\_20
- Track 32 : Flatwoods\_21, Gaea\_20, Tycho\_20, Kroos\_21, Kwobi\_21, Bizzy\_21
- Track 33 : Fosterous\_18, Love\_22, MoontowerMania\_19, Shivanishola\_20, Brandonk123\_22, Kamashten\_21, BobBob\_18, Sanjuju\_18, Charming\_18, Tangent\_18, Thing3\_21, Paries\_21, Jabberwocky\_18, Geodirt\_19

- Track 34 : Kewpiedoll\_21, ChadMasterC\_20, Vivi2\_20, Barsten\_21, Fitzgerald\_18, Galadriel\_22, McKinley\_21
- Track 35 : Ribeye\_21
- Track 36 : Derg\_18, LilHam\_18, SchottB\_19
- Track 37 : Ashertheman\_21, StorminNorm\_20, Tangerine\_20
- Track 38 : Affeca\_20, Angelicage\_20
- Track 39 : JKSyngboy\_19
- Track 40 : Rofo\_20
- Track 41 : Keitabear\_22
- Track 42 : Baddon\_20
- Track 43 : YorkOnyx\_21
- Track 44 : Nordenberg\_15
- Track 45 : RiverRaider\_22
- Track 46 : Leonard\_21, Ali17\_19, Phinally\_21
- Track 47 : Hans\_23
- Track 48 : EMoore\_16
- Track 49 : MelBins\_22
- Track 50 : Phauci\_14
- Track 51 : Inspectinfecti\_22
- Track 52 : Chickadee\_20, Tiamoceli\_21
- Track 53 : Kwekel\_20
- Track 54 : Twonlo\_18
- Track 55 : GTE6\_20
- Track 56 : RoadKill\_18, Dexdert\_21, EdmundFerry\_19
- Track 57 : Scioto\_21, Natkenzie\_21, Sampson\_21, Abblin\_21
- Track 58 : Delrey21\_21, DoctorFroggo\_21, Zipp\_21, Verity\_21
- Track 59 : Zitch\_23
- Track 60 : APunk\_23
- Track 61 : ViaConlectus\_22
- Track 62 : Tardus\_22
- Track 63 : Lilbeanie\_18
- Track 64 : Ganandorf\_26, Quhwah\_30, Jefe\_27, BrazzalePHS\_26, Cranjjs\_28, Jollipop\_27, PiperSansNom\_27, Hermeonysus\_26, Onika\_26, Busephilis\_26, Savannah\_26, Selwyn23\_28, PierreOrion\_27, Pulchra\_28, Piperis\_27, Antares\_27, Scumberland\_28, Shotgun\_26, CrazyRich\_26, Phorgeous\_26, Honeyfin\_28, Yeti\_27
- Track 65 : Paschalis\_26, Ramiel05\_26, Kowalski\_26
- Track 66 : LittleFortune\_28
- Track 67 : Crisis\_28, KaiHaiDragon\_27, EarickHC\_27, Phrancesco\_27
- Track 68 : ClearAsMud\_29
- Track 69 : Jayden\_28
- Track 70 : Ariadne\_35, Smarties\_35
- Track 71 : Megan\_21
- Track 72 : Gina\_28, Teamocil\_28
- Track 73 : Nicole72\_22
- Track 74 : Metamorphoo\_27
- Track 75 : Tyumbra\_25, Fireman\_27
- Track 76 : RobsFeet\_28
- Track 77 : NoodlelyBoi\_27
- Track 78 : Terij\_23
- Track 79 : Cressida\_24
- Track 80 : Cinna\_22, Matzah\_23
- Track 81 : Kozie\_23
- Track 82 : MementoMori\_23

- Track 83 : Margaery\_22
- Track 84 : Rasputia\_56
- Track 85 : Dewdrop\_60, Leaf\_60
- Track 86 : Hendrix\_57
- Track 87 : FuzzBuster\_31
- Track 88 : RomansRevenge\_16
- Track 89 : TurkishDelight\_17

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

The start number called the most often in the published annotations is 20, it was called in 94 of the 164 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- APunk\_23, Abblin\_21, Affeca\_20, Ailee\_20, Ali17\_19, Angelicage\_20, Arri\_22, Ashertheman\_21, Baddon\_20, Bakery\_20, Barb\_21, Barsten\_21, Baumdotcom\_20, Belphegor\_18, Bibwit\_21, Bizzy\_21, BobBob\_18, Brandonk123\_22, ChadMasterC\_20, Charming\_18, Chickadee\_20, ClamChowder\_21, Clown\_23, Danyall\_21, Delrey21\_21, Derg\_18, Dexdert\_21, DoctorFroggo\_21, EMoore\_16, EdmundFerry\_19, Evamon\_19, Fireball\_20, Fitzgerald\_18, Flatwoods\_21, Fosterous\_18, Fugax\_21, GTE6\_20, Gaea\_20, Galadriel\_22, Geodirt\_19, Gezellig\_20, Gustavo\_20, Halo3\_20, Hans\_23, Inspectinfecti\_22, JKSyngboy\_19, Jabberwocky\_18, Jambalaya\_19, Kamashten\_21, Keitabear\_22, Kewpiedoll\_21, KimmyK\_21, Kroos\_21, Kwekel\_20, Kwobi\_21, Lennon\_22, Leonard\_21, LilHam\_18, Lilbeanie\_18, Love\_22, McKinley\_21, MelBins\_22, MoontowerMania\_19, Mutzi\_21, Natkenzie\_21, Nordenberg\_15, Nubi\_19, Paries\_21, Phauci\_14, Phinally\_21, Phlop\_19, PinkCoffee\_21, Portcullis\_19, PullumCavea\_19, Ribeye\_21, RiverRaider\_22, RoadKill\_18, Rofo\_20, RogerDodger\_22, Salvador\_19, Sampson\_21, Sanjuju\_18, Saronaya\_20, Savbucketdawg\_19, SchottB\_19, Scioto\_21, Sedona\_22, Shinji\_19, Shivanishola\_20, Sitar\_22, SmokingBunny\_19, StorminNorm\_20, Stultus\_20, Tangent\_18, Tangerine\_20, Tardus\_22, Thing3\_21, Tiamoceli\_21, TillyBobJoe\_19, Togo\_19, Twister6\_21, Twonlo\_18, Tycho\_20, Valary\_22, VanDeWege\_22, Verity\_21, ViaConlectus\_22, Vivi2\_20, Wizard\_19, YorkOnyx\_21, YungMoney\_21, Zipp\_21, Zitch\_23,

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

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

- AWGoat\_19, Abt2graduatex2\_13, Antares\_27, Ariadne\_35, Asis\_13, BabyGotBac\_13, BayC\_13, Beagle\_27, BrazzalePHS\_26, BruhMoment\_21, Busephilis\_26, Cinna\_22, ClearAsMud\_29, Cranjis\_28, CrazyRich\_26, Cressida\_24, Crisis\_28, Dewdrop\_60, EarickHC\_27, Fireman\_27, FuzzBuster\_31, Ganandorf\_26, Gina\_28, Hendrix\_57, Hermeonysus\_26, Honeyfin\_28, Jayden\_28, Jefe\_27, Jollipop\_27, KaiHaiDragon\_27, Kowalski\_26, Kozi\_23, Leaf\_60, LittleFortune\_28, Maih\_13, Margaery\_22, Matzah\_23, Megan\_21, MellowYellow\_21, MementoMori\_23, Metamorphoo\_27, Mischief19\_14, Nicole72\_22, NoodlelyBoi\_27, Odyssey395\_28, Onika\_26, Paschalis\_26, Phorgeous\_26, Phrancesco\_27, PierreOrion\_27, PiperSansNom\_27, Piperis\_27, Pointis\_26, Pulchra\_28, Pureglobe5\_28, Quhwah\_30, RainyPolka\_13, Ramiel05\_26, Ranunculus\_20, Rasputia\_56,

Rizwana\_19, RobsFeet\_28, RomansRevenge\_16, Salete\_13, Savannah\_26, Scumberland\_28, Selwyn23\_28, Shotgun\_26, SilentRX\_21, Smarties\_35, TP1604\_13, Tank\_20, Teamocil\_28, Terij\_23, TurkishDelight\_17, Tyumbra\_25, Wilde\_20, Xkcd426\_14, YDN12\_14, Yeti\_27,

### Summary by start number:

Start 9:

- Found in 1 of 193 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: FuzzBuster\_31 (singleton),

Start 16:

- Found in 54 of 193 ( 28.0% ) of genes in pham
- Manual Annotations of this start: 50 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antares\_27 (EC), Ariadne\_35 (EC), BrazzalePHS\_26 (EC), Busephilis\_26 (EC), Cinna\_22 (EI), ClearAsMud\_29 (EC), Cranjis\_28 (EC), CrazyRich\_26 (EC), Cressida\_24 (EI), Crisis\_28 (EC), Dewdrop\_60 (GC), EarickHC\_27 (EC), Fireman\_27 (EC), Ganandorf\_26 (EC), Gina\_28 (EC), Hendrix\_57 (GC), Hermeonysus\_26 (EC), Honeyfin\_28 (EC), Jayden\_28 (EC), Jefe\_27 (EC), Jollipop\_27 (EC), KaiHaiDragon\_27 (EC), Kowalski\_26 (EC), Kozie\_23 (EI), Leaf\_60 (GC), LittleFortune\_28 (EC), Margaery\_22 (EI), Matzah\_23 (EI), Megan\_21 (EC), MementoMori\_23 (EI), Metamorphoo\_27 (EC), Nicole72\_22 (EC), NoodlelyBoi\_27 (EC), Onika\_26 (EC), Paschalis\_26 (EC), Phorgeous\_26 (EC), Phrancesco\_27 (EC), PierreOrion\_27 (EC), PiperSansNom\_27 (EC), Piperis\_27 (EC), Pulchra\_28 (EC), Quhwah\_30 (EC), Ramiel05\_26 (EC), Rasputia\_56 (GC), RobsFeet\_28 (EC), Savannah\_26 (EC), Scumberland\_28 (EC), Selwyn23\_28 (EC), Shotgun\_26 (EC), Smarties\_35 (EC), Teamocil\_28 (EC), Terij\_23 (EI), Tyumbra\_25 (EC), Yeti\_27 (EC),

Start 20:

- Found in 113 of 193 ( 58.5% ) of genes in pham
- Manual Annotations of this start: 94 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: APunk\_23 (DE4), Abblin\_21 (DE4), Affeca\_20 (DE1), Ailee\_20 (DE1), Ali17\_19 (DE2), Angelicage\_20 (DE1), Arri\_22 (DC1), Ashertheman\_21 (DE1), Baddon\_20 (DE1), Bakery\_20 (DC1), Barb\_21 (DC1), Barsten\_21 (DE1), Baumdotcom\_20 (DE1), Belphegor\_18 (DE), Bibwit\_21 (DE1), Bizzy\_21 (DE1), BobBob\_18 (DE1), Brandonk123\_22 (DE1), ChadMasterC\_20 (DE1), Charming\_18 (DE1), Chickadee\_20 (DE3), ClamChowder\_21 (DC1), Clown\_23 (DC2), Danyall\_21 (DC1), Delrey21\_21 (DE4), Derg\_18 (DE1), Dextert\_21 (DE3), DoctorFroggo\_21 (DE4), EMOore\_16 (DE2), EdmundFerry\_19 (DE3), Evamon\_19 (DC1), Fireball\_20 (DC1), Fitzgerald\_18 (DE1), Flatwoods\_21 (DE1), Fosterous\_18 (DE1), Fugax\_21 (DC1), GTE6\_20 (DE3), Gaea\_20 (DE1), Galadriel\_22 (DE1), Geodirt\_19 (DE1), Gezellig\_20 (DC1), Gustavo\_20 (DE1), Halo3\_20 (DC1), Hans\_23 (DE2), Inspectinfecti\_22 (DE2), JKSyngboy\_19 (DE1), Jabberwocky\_18 (DE1), Jambalaya\_19 (DC1), Kamashten\_21 (DE1), Keitabear\_22 (DE1), Kewpiedoll\_21 (DE1), KimmyK\_21 (DC1), Kroos\_21 (DE1), Kwekel\_20 (DE3), Kwobi\_21 (DE1), Lennon\_22 (DE1), Leonard\_21 (DE2), LilHam\_18 (DE1), Lilbeanie\_18 (DE5), Love\_22 (DE1), McKinley\_21 (DE1), MelBins\_22 (DE2), MoontowerMania\_19 (DE1), Mutzi\_21 (DC1), Natkenzie\_21

(DE4), Nordenberg\_15 (DE1), Nubi\_19 (DC1), Paries\_21 (DE1), Phauci\_14 (DE2), Phinally\_21 (DE2), Phlop\_19 (DC1), PinkCoffee\_21 (DC1), Portcullis\_19 (DC1), PullumCavea\_19 (DC1), Ribeye\_21 (DE1), RiverRaider\_22 (DE1), RoadKill\_18 (DE3), Rofo\_20 (DE1), RogerDodger\_22 (DC1), Salvador\_19 (DC1), Sampson\_21 (DE4), Sanjuju\_18 (DE1), Saronaya\_20 (DE1), Savbucketdawg\_19 (DC1), SchottB\_19 (DE1), Scioto\_21 (DE4), Sedona\_22 (DE1), Shinji\_19 (DC1), Shivanishola\_20 (DE1), Sitar\_22 (DE1), SmokingBunny\_19 (DC1), StorminNorm\_20 (DE1), Stultus\_20 (DE1), Tangent\_18 (DE1), Tangerine\_20 (DE1), Tardus\_22 (DE4), Thing3\_21 (DE1), Tiamoceli\_21 (DE3), TillyBobJoe\_19 (DC1), Togo\_19 (DC1), Twister6\_21 (DC1), Twonlo\_18 (DE3), Tycho\_20 (DE1), Valary\_22 (DC1), VanDeWege\_22 (DC1), Verity\_21 (DE4), ViaConlectus\_22 (DE4), Vivi2\_20 (DE1), Wizard\_19 (DC1), YorkOnyx\_21 (DE1), YungMoney\_21 (DC1), Zipp\_21 (DE4), Zitch\_23 (DE4),

Start 23:

- Found in 1 of 193 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RomansRevenge\_16 (singleton),

Start 27:

- Found in 32 of 193 ( 16.6% ) of genes in pham
- Manual Annotations of this start: 19 of 164
- Called 75.0% of time when present
- Phage (with cluster) where this start called: AWGoat\_19 (AP4), Abt2graduatex2\_13 (BG), Asis\_13 (BG), BabyGotBac\_13 (BG), BayC\_13 (BG), Beagle\_27 (AP2), BruhMoment\_21 (AP3), Maih\_13 (BG), MellowYellow\_21 (AP2), Mischief19\_14 (BG), Odyssey395\_28 (AP2), Pointis\_26 (AP2), Pureglobe5\_28 (AP2), RainyPolka\_13 (BG), Ranunculus\_20 (AP), Rizwana\_19 (AP1), Salete\_13 (BG), SilentRX\_21 (AP4), TP1604\_13 (BG), Tank\_20 (AP1), TurkishDelight\_17 (singleton), Wilde\_20 (AP1), Xkcd426\_14 (BG), YDN12\_14 (BG),

### Summary by clusters:

There are 18 clusters represented in this pham: AP1, singleton, DE, EI, AP2, DE1, DE2, DE3, DE4, DE5, EC, AP, BG, GC, AP4, AP3, DC2, DC1,

Info for manual annotations of cluster AP1:

- Start number 27 was manually annotated 3 times for cluster AP1.

Info for manual annotations of cluster AP2:

- Start number 27 was manually annotated 3 times for cluster AP2.

Info for manual annotations of cluster AP3:

- Start number 27 was manually annotated 1 time for cluster AP3.

Info for manual annotations of cluster AP4:

- Start number 27 was manually annotated 1 time for cluster AP4.

Info for manual annotations of cluster BG:

- Start number 27 was manually annotated 10 times for cluster BG.

Info for manual annotations of cluster DC1:

- Start number 20 was manually annotated 28 times for cluster DC1.

Info for manual annotations of cluster DC2:

- Start number 20 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DE1:

- Start number 20 was manually annotated 42 times for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 20 was manually annotated 7 times for cluster DE2.

Info for manual annotations of cluster DE3:

- Start number 20 was manually annotated 6 times for cluster DE3.

Info for manual annotations of cluster DE4:

- Start number 20 was manually annotated 9 times for cluster DE4.

Info for manual annotations of cluster DE5:

- Start number 20 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster EC:

- Start number 16 was manually annotated 39 times for cluster EC.

Info for manual annotations of cluster EI:

- Start number 16 was manually annotated 7 times for cluster EI.

Info for manual annotations of cluster GC:

- Start number 16 was manually annotated 4 times for cluster GC.

### ***Gene Information:***

Gene: APunk\_23 Start: 16314, Stop: 18233, Start Num: 20

Candidate Starts for APunk\_23:

(Start: 20 @16314 has 94 MA's), (38, 16530), (41, 16545), (53, 16719), (75, 16866), (83, 16935), (86, 16941), (95, 16995), (100, 17019), (137, 17271), (139, 17289), (141, 17295), (147, 17358), (149, 17370), (150, 17373), (152, 17385), (169, 17475), (174, 17502), (197, 17661), (207, 17739), (223, 17835), (257, 18105), (265, 18150),

Gene: AWGoat\_19 Start: 13739, Stop: 15430, Start Num: 27

Candidate Starts for AWGoat\_19:

(19, 13679), (21, 13691), (22, 13694), (Start: 27 @13739 has 19 MA's), (139, 14555), (145, 14609), (151, 14639), (153, 14651), (170, 14735), (171, 14738), (172, 14741), (183, 14810), (194, 14882), (201, 14930), (218, 15047), (227, 15113), (247, 15230), (258, 15317), (260, 15323),

Gene: Abblin\_21 Start: 15527, Stop: 17449, Start Num: 20

Candidate Starts for Abblin\_21:

(Start: 20 @15527 has 94 MA's), (38, 15743), (41, 15758), (53, 15932), (74, 16070), (75, 16079), (83, 16148), (86, 16154), (95, 16208), (100, 16232), (137, 16484), (139, 16502), (141, 16508), (147, 16571), (149, 16583), (150, 16586), (152, 16598), (169, 16688), (174, 16715), (197, 16874), (207,



16952), (223, 17048), (227, 17084), (240, 17204), (244, 17237), (257, 17321), (265, 17366),

Gene: Abt2graduatex2\_13 Start: 13868, Stop: 15571, Start Num: 27

Candidate Starts for Abt2graduatex2\_13:

(Start: 27 @13868 has 19 MA's), (28, 13877), (33, 13964), (50, 14111), (51, 14135), (76, 14318), (84, 14372), (90, 14402), (95, 14432), (96, 14435), (107, 14483), (116, 14519), (126, 14564), (130, 14606), (136, 14675), (169, 14855), (182, 14933), (183, 14936), (204, 15086), (208, 15128), (218, 15188), (222, 15209), (242, 15341), (251, 15398), (255, 15419), (259, 15461), (261, 15467), (277, 15542),

Gene: Affeca\_20 Start: 15348, Stop: 17258, Start Num: 20

Candidate Starts for Affeca\_20:

(Start: 20 @15348 has 94 MA's), (41, 15579), (44, 15597), (64, 15867), (89, 16005), (101, 16074), (109, 16107), (139, 16332), (141, 16338), (149, 16413), (150, 16416), (152, 16428), (165, 16464), (169, 16515), (188, 16638), (192, 16674), (212, 16818), (221, 16869), (241, 17013), (242, 17016), (243, 17019), (250, 17067), (257, 17124),

Gene: Ailee\_20 Start: 15256, Stop: 17172, Start Num: 20

Candidate Starts for Ailee\_20:

(Start: 20 @15256 has 94 MA's), (41, 15487), (44, 15505), (64, 15781), (89, 15919), (101, 15988), (109, 16021), (139, 16246), (141, 16252), (147, 16315), (149, 16327), (150, 16330), (152, 16342), (169, 16429), (188, 16552), (192, 16588), (212, 16732), (221, 16783), (241, 16927), (242, 16930), (243, 16933), (250, 16981), (257, 17038), (278, 17155),

Gene: Ali17\_19 Start: 14661, Stop: 16580, Start Num: 20

Candidate Starts for Ali17\_19:

(Start: 20 @14661 has 94 MA's), (36, 14862), (50, 14985), (64, 15156), (75, 15201), (77, 15222), (89, 15279), (114, 15405), (123, 15456), (125, 15465), (129, 15516), (131, 15567), (139, 15630), (141, 15636), (147, 15699), (152, 15726), (169, 15813), (196, 15996), (206, 16071), (209, 16086), (212, 16110), (218, 16143), (221, 16161), (228, 16218), (240, 16329), (252, 16398), (253, 16410), (257, 16446), (269, 16512),

Gene: Angelicage\_20 Start: 15771, Stop: 17681, Start Num: 20

Candidate Starts for Angelicage\_20:

(Start: 20 @15771 has 94 MA's), (41, 16002), (44, 16020), (64, 16290), (89, 16428), (101, 16497), (109, 16530), (139, 16755), (141, 16761), (149, 16836), (150, 16839), (152, 16851), (165, 16887), (169, 16938), (188, 17061), (192, 17097), (212, 17241), (221, 17292), (241, 17436), (242, 17439), (243, 17442), (250, 17490), (257, 17547),

Gene: Antares\_27 Start: 14003, Stop: 15859, Start Num: 16

Candidate Starts for Antares\_27:

(Start: 16 @14003 has 50 MA's), (78, 14579), (88, 14624), (94, 14660), (108, 14729), (112, 14750), (113, 14753), (118, 14783), (132, 14903), (143, 14984), (164, 15098), (166, 15125), (193, 15314), (210, 15440), (228, 15554), (229, 15569), (243, 15617), (247, 15647), (249, 15659), (252, 15674), (254, 15689), (260, 15740), (264, 15758), (268, 15776),

Gene: Ariadne\_35 Start: 15581, Stop: 17596, Start Num: 16

Candidate Starts for Ariadne\_35:

(Start: 16 @15581 has 50 MA's), (78, 16160), (88, 16205), (94, 16241), (99, 16265), (108, 16310), (112, 16331), (117, 16349), (132, 16484), (162, 16814), (163, 16817), (166, 16874), (167, 16898), (188, 17036), (193, 17063), (209, 17174), (228, 17303), (229, 17318), (232, 17327), (240, 17354), (243, 17366), (247, 17396), (252, 17423), (264, 17507), (268, 17525),

Gene: Arri\_22 Start: 12537, Stop: 14423, Start Num: 20

Candidate Starts for Arri\_22:

(Start: 20 @12537 has 94 MA's), (42, 12774), (44, 12786), (47, 12840), (68, 13062), (97, 13224), (102, 13257), (141, 13509), (148, 13581), (165, 13638), (166, 13650), (182, 13767), (188, 13812), (189, 13815), (206, 13938), (208, 13950), (218, 14010), (233, 14112), (240, 14163), (242, 14172), (253, 14244), (256, 14274), (269, 14346), (274, 14370),

Gene: Ashertheman\_21 Start: 14855, Stop: 16762, Start Num: 20

Candidate Starts for Ashertheman\_21:

(Start: 20 @14855 has 94 MA's), (30, 14990), (41, 15086), (64, 15368), (77, 15437), (84, 15485), (89, 15509), (95, 15545), (101, 15578), (105, 15602), (125, 15695), (139, 15836), (141, 15842), (147, 15905), (149, 15917), (150, 15920), (152, 15932), (169, 16019), (188, 16142), (192, 16178), (206, 16283), (212, 16322), (221, 16373), (240, 16511), (241, 16517), (242, 16520), (250, 16571), (257, 16628), (258, 16640), (261, 16649), (279, 16748),

Gene: Asis\_13 Start: 13751, Stop: 15445, Start Num: 27

Candidate Starts for Asis\_13:

(Start: 27 @13751 has 19 MA's), (28, 13760), (34, 13862), (50, 13994), (51, 14018), (59, 14114), (76, 14195), (82, 14240), (84, 14249), (92, 14282), (95, 14309), (96, 14312), (107, 14360), (115, 14393), (116, 14396), (124, 14435), (126, 14441), (132, 14519), (136, 14552), (149, 14642), (167, 14717), (169, 14732), (179, 14798), (182, 14810), (183, 14813), (198, 14930), (204, 14963), (208, 15005), (225, 15122), (242, 15218), (251, 15275), (255, 15296), (259, 15338), (261, 15344), (268, 15377), (271, 15401), (277, 15419), (279, 15434),

Gene: BabyGotBac\_13 Start: 13751, Stop: 15445, Start Num: 27

Candidate Starts for BabyGotBac\_13:

(Start: 27 @13751 has 19 MA's), (28, 13760), (34, 13862), (50, 13994), (51, 14018), (59, 14114), (76, 14195), (82, 14240), (84, 14249), (92, 14282), (95, 14309), (96, 14312), (107, 14360), (115, 14393), (116, 14396), (124, 14435), (126, 14441), (132, 14519), (136, 14552), (149, 14642), (167, 14717), (169, 14732), (179, 14798), (182, 14810), (183, 14813), (198, 14930), (204, 14963), (208, 15005), (225, 15122), (242, 15218), (251, 15275), (255, 15296), (259, 15338), (261, 15344), (268, 15377), (271, 15401), (277, 15419), (279, 15434),

Gene: Baddon\_20 Start: 15702, Stop: 17609, Start Num: 20

Candidate Starts for Baddon\_20:

(Start: 20 @15702 has 94 MA's), (30, 15837), (33, 15870), (41, 15933), (64, 16215), (77, 16284), (84, 16332), (89, 16356), (101, 16425), (105, 16449), (125, 16542), (139, 16683), (141, 16689), (147, 16752), (149, 16764), (150, 16767), (152, 16779), (169, 16866), (188, 16989), (192, 17025), (197, 17058), (202, 17088), (206, 17130), (212, 17169), (221, 17220), (241, 17364), (242, 17367), (250, 17418), (257, 17475), (258, 17487), (261, 17496), (265, 17520),

Gene: Bakery\_20 Start: 11735, Stop: 13636, Start Num: 20

Candidate Starts for Bakery\_20:

(Start: 20 @11735 has 94 MA's), (42, 11972), (44, 11984), (47, 12038), (97, 12425), (102, 12458), (109, 12482), (125, 12563), (128, 12590), (141, 12728), (165, 12857), (166, 12869), (169, 12908), (182, 12986), (188, 13031), (189, 13034), (192, 13055), (199, 13097), (202, 13118), (206, 13160), (208, 13172), (253, 13466), (256, 13496), (260, 13520), (266, 13550),

Gene: Barb\_21 Start: 12512, Stop: 14410, Start Num: 20

Candidate Starts for Barb\_21:

(Start: 20 @12512 has 94 MA's), (42, 12749), (44, 12761), (47, 12815), (97, 13208), (102, 13241), (109, 13265), (141, 13505), (165, 13634), (166, 13646), (182, 13763), (188, 13808), (189, 13811), (199, 13871), (201, 13889), (206, 13934), (208, 13946), (209, 13949), (211, 13970), (227, 14069), (233, 14108), (242, 14168), (253, 14240), (256, 14270), (260, 14294), (265, 14321), (266, 14324),

(270, 14351),

Gene: Barsten\_21 Start: 15284, Stop: 17188, Start Num: 20

Candidate Starts for Barsten\_21:

(Start: 20 @15284 has 94 MA's), (41, 15515), (44, 15533), (64, 15800), (89, 15938), (101, 16007), (109, 16040), (139, 16265), (141, 16271), (147, 16334), (149, 16346), (150, 16349), (152, 16361), (169, 16448), (188, 16571), (192, 16607), (212, 16751), (221, 16802), (241, 16946), (242, 16949), (243, 16952), (250, 17000), (257, 17057),

Gene: Baumdotcom\_20 Start: 14471, Stop: 16378, Start Num: 20

Candidate Starts for Baumdotcom\_20:

(Start: 20 @14471 has 94 MA's), (30, 14606), (41, 14702), (64, 14984), (77, 15053), (84, 15101), (89, 15125), (95, 15161), (101, 15194), (105, 15218), (125, 15311), (139, 15452), (141, 15458), (147, 15521), (149, 15533), (150, 15536), (152, 15548), (169, 15635), (188, 15758), (192, 15794), (206, 15899), (212, 15938), (221, 15989), (240, 16127), (241, 16133), (242, 16136), (250, 16187), (257, 16244), (258, 16256), (261, 16265),

Gene: BayC\_13 Start: 13751, Stop: 15445, Start Num: 27

Candidate Starts for BayC\_13:

(Start: 27 @13751 has 19 MA's), (28, 13760), (34, 13862), (50, 13994), (51, 14018), (59, 14114), (76, 14195), (82, 14240), (84, 14249), (92, 14282), (95, 14309), (96, 14312), (107, 14360), (115, 14393), (116, 14396), (124, 14435), (126, 14441), (132, 14519), (136, 14552), (149, 14642), (169, 14732), (179, 14798), (182, 14810), (183, 14813), (198, 14930), (204, 14963), (208, 15005), (225, 15122), (242, 15218), (251, 15275), (259, 15338), (261, 15344), (268, 15377), (271, 15401), (277, 15419), (279, 15434),

Gene: Beagle\_27 Start: 14234, Stop: 15961, Start Num: 27

Candidate Starts for Beagle\_27:

(18, 14171), (Start: 27 @14234 has 19 MA's), (102, 14843), (144, 15131), (145, 15143), (151, 15173), (170, 15269), (171, 15272), (172, 15275), (180, 15335), (205, 15497), (214, 15557), (215, 15563), (218, 15581), (227, 15644), (245, 15755), (260, 15854),

Gene: Belphegor\_18 Start: 13765, Stop: 15693, Start Num: 20

Candidate Starts for Belphegor\_18:

(Start: 20 @13765 has 94 MA's), (36, 13969), (43, 14008), (50, 14092), (67, 14272), (89, 14392), (105, 14485), (123, 14569), (125, 14578), (129, 14629), (131, 14680), (139, 14743), (141, 14749), (147, 14812), (152, 14839), (169, 14926), (206, 15184), (209, 15199), (212, 15223), (221, 15274), (228, 15331), (239, 15427), (240, 15442), (252, 15511), (253, 15523), (257, 15559), (267, 15610),

Gene: Bibwit\_21 Start: 15528, Stop: 17423, Start Num: 20

Candidate Starts for Bibwit\_21:

(Start: 20 @15528 has 94 MA's), (41, 15759), (44, 15777), (64, 16032), (89, 16170), (101, 16239), (109, 16272), (139, 16497), (141, 16503), (147, 16566), (149, 16578), (150, 16581), (152, 16593), (169, 16680), (188, 16803), (192, 16839), (212, 16983), (221, 17034), (241, 17178), (242, 17181), (243, 17184), (250, 17232), (257, 17289), (278, 17406),

Gene: Bizzy\_21 Start: 14750, Stop: 16663, Start Num: 20

Candidate Starts for Bizzy\_21:

(Start: 20 @14750 has 94 MA's), (30, 14885), (41, 14981), (64, 15269), (77, 15338), (84, 15386), (89, 15410), (95, 15446), (101, 15479), (105, 15503), (125, 15596), (139, 15737), (141, 15743), (147, 15806), (149, 15818), (150, 15821), (152, 15833), (169, 15920), (188, 16043), (192, 16079), (197, 16112), (206, 16184), (212, 16223), (221, 16274), (240, 16412), (241, 16418), (242, 16421), (250, 16472), (257, 16529), (258, 16541), (261, 16550),

Gene: BobBob\_18 Start: 14138, Stop: 16045, Start Num: 20

Candidate Starts for BobBob\_18:

(Start: 20 @14138 has 94 MA's), (41, 14369), (44, 14387), (64, 14654), (89, 14792), (101, 14861), (109, 14894), (139, 15119), (141, 15125), (147, 15188), (149, 15200), (150, 15203), (152, 15215), (169, 15302), (177, 15356), (188, 15425), (192, 15461), (212, 15605), (221, 15656), (241, 15800), (242, 15803), (243, 15806), (250, 15854), (257, 15911),

Gene: Brandonk123\_22 Start: 14830, Stop: 16737, Start Num: 20

Candidate Starts for Brandonk123\_22:

(Start: 20 @14830 has 94 MA's), (41, 15061), (44, 15079), (64, 15346), (89, 15484), (101, 15553), (109, 15586), (139, 15811), (141, 15817), (147, 15880), (149, 15892), (150, 15895), (152, 15907), (169, 15994), (177, 16048), (188, 16117), (192, 16153), (212, 16297), (221, 16348), (241, 16492), (242, 16495), (243, 16498), (250, 16546), (257, 16603),

Gene: BrazzalePHS\_26 Start: 13795, Stop: 15654, Start Num: 16

Candidate Starts for BrazzalePHS\_26:

(Start: 16 @13795 has 50 MA's), (78, 14374), (88, 14419), (94, 14455), (108, 14524), (112, 14545), (113, 14548), (118, 14578), (132, 14698), (143, 14779), (164, 14893), (166, 14920), (193, 15109), (210, 15235), (228, 15349), (229, 15364), (243, 15412), (247, 15442), (249, 15454), (252, 15469), (254, 15484), (260, 15535), (264, 15553), (268, 15571),

Gene: BruhMoment\_21 Start: 13658, Stop: 15379, Start Num: 27

Candidate Starts for BruhMoment\_21:

(19, 13598), (Start: 27 @13658 has 19 MA's), (88, 14171), (102, 14249), (105, 14264), (145, 14558), (151, 14588), (170, 14684), (171, 14687), (172, 14690), (183, 14759), (201, 14879), (208, 14936), (212, 14963), (218, 14996), (237, 15116), (244, 15170), (248, 15188), (257, 15254), (260, 15272), (266, 15302),

Gene: Busephilis\_26 Start: 13734, Stop: 15590, Start Num: 16

Candidate Starts for Busephilis\_26:

(Start: 16 @13734 has 50 MA's), (78, 14310), (88, 14355), (94, 14391), (108, 14460), (112, 14481), (113, 14484), (118, 14514), (132, 14634), (143, 14715), (164, 14829), (166, 14856), (193, 15045), (210, 15171), (228, 15285), (229, 15300), (243, 15348), (247, 15378), (249, 15390), (252, 15405), (254, 15420), (260, 15471), (264, 15489), (268, 15507),

Gene: ChadMasterC\_20 Start: 15249, Stop: 17144, Start Num: 20

Candidate Starts for ChadMasterC\_20:

(Start: 20 @15249 has 94 MA's), (41, 15480), (44, 15498), (64, 15753), (89, 15891), (101, 15960), (109, 15993), (139, 16218), (141, 16224), (147, 16287), (149, 16299), (150, 16302), (152, 16314), (169, 16401), (188, 16524), (192, 16560), (212, 16704), (221, 16755), (241, 16899), (242, 16902), (243, 16905), (250, 16953), (257, 17010),

Gene: Charming\_18 Start: 14140, Stop: 16047, Start Num: 20

Candidate Starts for Charming\_18:

(Start: 20 @14140 has 94 MA's), (41, 14371), (44, 14389), (64, 14656), (89, 14794), (101, 14863), (109, 14896), (139, 15121), (141, 15127), (147, 15190), (149, 15202), (150, 15205), (152, 15217), (169, 15304), (177, 15358), (188, 15427), (192, 15463), (212, 15607), (221, 15658), (241, 15802), (242, 15805), (243, 15808), (250, 15856), (257, 15913),

Gene: Chickadee\_20 Start: 13744, Stop: 15633, Start Num: 20

Candidate Starts for Chickadee\_20:

(17, 13735), (Start: 20 @13744 has 94 MA's), (Start: 27 @13810 has 19 MA's), (41, 13978), (44, 13996), (68, 14269), (84, 14365), (121, 14557), (124, 14572), (131, 14650), (141, 14719), (147, 14782), (149, 14794), (150, 14797), (167, 14881), (169, 14896), (184, 14995), (192, 15049), (206, 15154), (221, 15244), (231, 15325), (240, 15382), (253, 15463), (257, 15499), (269, 15565),

Gene: Cinna\_22 Start: 13276, Stop: 15141, Start Num: 16

Candidate Starts for Cinna\_22:

(Start: 16 @13276 has 50 MA's), (52, 13630), (61, 13756), (87, 13894), (94, 13936), (111, 14017), (112, 14026), (122, 14083), (125, 14095), (139, 14227), (142, 14248), (143, 14254), (164, 14368), (175, 14467), (176, 14485), (193, 14584), (195, 14599), (203, 14641), (209, 14695), (210, 14710), (218, 14752), (221, 14767), (223, 14779), (228, 14824), (240, 14887), (244, 14920),

Gene: ClamChowder\_21 Start: 12512, Stop: 14410, Start Num: 20

Candidate Starts for ClamChowder\_21:

(Start: 20 @12512 has 94 MA's), (42, 12749), (44, 12761), (47, 12815), (97, 13208), (102, 13241), (109, 13265), (141, 13505), (165, 13634), (166, 13646), (182, 13763), (188, 13808), (189, 13811), (199, 13871), (201, 13889), (206, 13934), (208, 13946), (209, 13949), (211, 13970), (227, 14069), (233, 14108), (242, 14168), (253, 14240), (256, 14270), (260, 14294), (265, 14321), (266, 14324), (270, 14351),

Gene: ClearAsMud\_29 Start: 14527, Stop: 16377, Start Num: 16

Candidate Starts for ClearAsMud\_29:

(Start: 16 @14527 has 50 MA's), (78, 15103), (88, 15148), (94, 15184), (108, 15253), (112, 15274), (113, 15277), (118, 15307), (132, 15427), (166, 15649), (170, 15694), (193, 15838), (216, 15994), (228, 16078), (243, 16141), (247, 16171), (249, 16183), (252, 16198), (254, 16213), (260, 16264), (264, 16282),

Gene: Clown\_23 Start: 14522, Stop: 16378, Start Num: 20

Candidate Starts for Clown\_23:

(15, 14495), (Start: 20 @14522 has 94 MA's), (24, 14543), (29, 14624), (41, 14756), (44, 14774), (49, 14840), (91, 15146), (102, 15212), (105, 15227), (110, 15239), (141, 15479), (148, 15551), (165, 15608), (166, 15620), (169, 15659), (182, 15737), (186, 15767), (188, 15782), (206, 15908), (208, 15920), (209, 15923), (227, 16043), (228, 16052), (240, 16133), (249, 16187), (253, 16214), (265, 16295), (266, 16298),

Gene: Cranjjs\_28 Start: 13958, Stop: 15814, Start Num: 16

Candidate Starts for Cranjjs\_28:

(Start: 16 @13958 has 50 MA's), (78, 14534), (88, 14579), (94, 14615), (108, 14684), (112, 14705), (113, 14708), (118, 14738), (132, 14858), (143, 14939), (164, 15053), (166, 15080), (193, 15269), (210, 15395), (228, 15509), (229, 15524), (243, 15572), (247, 15602), (249, 15614), (252, 15629), (254, 15644), (260, 15695), (264, 15713), (268, 15731),

Gene: CrazyRich\_26 Start: 13768, Stop: 15624, Start Num: 16

Candidate Starts for CrazyRich\_26:

(Start: 16 @13768 has 50 MA's), (78, 14344), (88, 14389), (94, 14425), (108, 14494), (112, 14515), (113, 14518), (118, 14548), (132, 14668), (143, 14749), (164, 14863), (166, 14890), (193, 15079), (210, 15205), (228, 15319), (229, 15334), (243, 15382), (247, 15412), (249, 15424), (252, 15439), (254, 15454), (260, 15505), (264, 15523), (268, 15541),

Gene: Cressida\_24 Start: 13311, Stop: 15185, Start Num: 16

Candidate Starts for Cressida\_24:

(Start: 16 @13311 has 50 MA's), (61, 13797), (73, 13836), (87, 13935), (94, 13977), (111, 14058), (112, 14067), (122, 14124), (125, 14136), (139, 14268), (142, 14289), (143, 14295), (164, 14409),

(175, 14508), (176, 14526), (193, 14625), (195, 14640), (203, 14682), (209, 14736), (210, 14751), (218, 14793), (221, 14808), (223, 14820), (228, 14865), (240, 14928), (247, 14970), (253, 15009), (254, 15012), (268, 15099),

Gene: Crisis\_28 Start: 13753, Stop: 15609, Start Num: 16

Candidate Starts for Crisis\_28:

(Start: 16 @13753 has 50 MA's), (78, 14329), (88, 14374), (94, 14410), (108, 14479), (112, 14500), (113, 14503), (118, 14533), (132, 14653), (143, 14734), (164, 14848), (166, 14875), (193, 15064), (210, 15190), (215, 15214), (228, 15304), (229, 15319), (243, 15367), (247, 15397), (249, 15409), (252, 15424), (254, 15439), (260, 15490), (264, 15508), (268, 15526),

Gene: Danyall\_21 Start: 12369, Stop: 14255, Start Num: 20

Candidate Starts for Danyall\_21:

(Start: 20 @12369 has 94 MA's), (42, 12606), (44, 12618), (47, 12672), (68, 12894), (97, 13056), (102, 13089), (141, 13341), (148, 13413), (165, 13470), (166, 13482), (182, 13599), (188, 13644), (189, 13647), (206, 13770), (208, 13782), (218, 13842), (240, 13995), (242, 14004), (253, 14076), (256, 14106), (269, 14178), (274, 14202),

Gene: Delrey21\_21 Start: 14990, Stop: 16909, Start Num: 20

Candidate Starts for Delrey21\_21:

(Start: 20 @14990 has 94 MA's), (29, 15089), (38, 15206), (40, 15218), (41, 15221), (53, 15395), (71, 15509), (75, 15542), (83, 15608), (86, 15614), (95, 15668), (100, 15692), (107, 15728), (137, 15944), (139, 15962), (141, 15968), (147, 16031), (149, 16043), (150, 16046), (152, 16058), (169, 16148), (174, 16175), (197, 16334), (207, 16412), (213, 16448), (223, 16508), (228, 16553), (240, 16664), (244, 16697), (257, 16781), (260, 16799), (266, 16829),

Gene: Derg\_18 Start: 14345, Stop: 16255, Start Num: 20

Candidate Starts for Derg\_18:

(Start: 20 @14345 has 94 MA's), (30, 14480), (41, 14576), (64, 14861), (77, 14930), (84, 14978), (89, 15002), (95, 15038), (101, 15071), (105, 15095), (125, 15188), (139, 15329), (141, 15335), (147, 15398), (149, 15410), (150, 15413), (152, 15425), (169, 15512), (188, 15635), (192, 15671), (197, 15704), (206, 15776), (212, 15815), (221, 15866), (241, 16010), (242, 16013), (250, 16064), (257, 16121), (258, 16133), (261, 16142),

Gene: Dewdrop\_60 Start: 29654, Stop: 31561, Start Num: 16

Candidate Starts for Dewdrop\_60:

(1, 29438), (4, 29510), (7, 29543), (8, 29546), (Start: 16 @29654 has 50 MA's), (50, 29993), (58, 30131), (62, 30161), (81, 30269), (92, 30314), (154, 30755), (183, 30929), (187, 30959), (188, 30971), (193, 30998), (203, 31055), (205, 31082), (209, 31109), (213, 31136), (217, 31160), (223, 31202), (225, 31232), (228, 31247), (253, 31391), (266, 31475), (274, 31517),

Gene: Dxdert\_21 Start: 14191, Stop: 16077, Start Num: 20

Candidate Starts for Dxdert\_21:

(17, 14182), (Start: 20 @14191 has 94 MA's), (Start: 27 @14257 has 19 MA's), (41, 14425), (44, 14443), (68, 14713), (84, 14809), (124, 15016), (131, 15094), (141, 15163), (147, 15226), (149, 15238), (150, 15241), (167, 15325), (169, 15340), (184, 15439), (192, 15493), (206, 15598), (221, 15688), (231, 15769), (240, 15826), (243, 15838), (252, 15895), (253, 15907), (257, 15943), (269, 16009),

Gene: DoctorFroggo\_21 Start: 14990, Stop: 16909, Start Num: 20

Candidate Starts for DoctorFroggo\_21:

(Start: 20 @14990 has 94 MA's), (29, 15089), (38, 15206), (40, 15218), (41, 15221), (53, 15395), (71, 15509), (75, 15542), (83, 15608), (86, 15614), (95, 15668), (100, 15692), (107, 15728), (137, 15944),

(139, 15962), (141, 15968), (147, 16031), (149, 16043), (150, 16046), (152, 16058), (169, 16148), (174, 16175), (197, 16334), (207, 16412), (213, 16448), (223, 16508), (228, 16553), (240, 16664), (244, 16697), (257, 16781), (260, 16799), (266, 16829),

Gene: EMoore\_16 Start: 13023, Stop: 14942, Start Num: 20

Candidate Starts for EMoore\_16:

(Start: 20 @13023 has 94 MA's), (43, 13263), (72, 13551), (123, 13818), (125, 13827), (127, 13845), (129, 13878), (139, 13992), (141, 13998), (147, 14061), (152, 14088), (169, 14175), (196, 14358), (206, 14433), (208, 14445), (212, 14472), (221, 14523), (228, 14580), (240, 14691), (252, 14760), (253, 14772), (257, 14808), (258, 14820), (260, 14826),

Gene: EarickHC\_27 Start: 13679, Stop: 15535, Start Num: 16

Candidate Starts for EarickHC\_27:

(Start: 16 @13679 has 50 MA's), (78, 14255), (88, 14300), (94, 14336), (108, 14405), (112, 14426), (113, 14429), (118, 14459), (132, 14579), (143, 14660), (164, 14774), (166, 14801), (193, 14990), (210, 15116), (215, 15140), (228, 15230), (229, 15245), (243, 15293), (247, 15323), (249, 15335), (252, 15350), (254, 15365), (260, 15416), (264, 15434), (268, 15452),

Gene: EdmundFerry\_19 Start: 13775, Stop: 15661, Start Num: 20

Candidate Starts for EdmundFerry\_19:

(17, 13766), (Start: 20 @13775 has 94 MA's), (Start: 27 @13841 has 19 MA's), (41, 14009), (44, 14027), (68, 14297), (84, 14393), (124, 14600), (131, 14678), (141, 14747), (147, 14810), (149, 14822), (150, 14825), (167, 14909), (169, 14924), (184, 15023), (192, 15077), (206, 15182), (221, 15272), (231, 15353), (240, 15410), (243, 15422), (252, 15479), (253, 15491), (257, 15527), (269, 15593),

Gene: Evamon\_19 Start: 11844, Stop: 13742, Start Num: 20

Candidate Starts for Evamon\_19:

(Start: 20 @11844 has 94 MA's), (42, 12081), (44, 12093), (47, 12147), (68, 12378), (97, 12540), (102, 12573), (141, 12837), (165, 12966), (166, 12978), (182, 13095), (188, 13140), (189, 13143), (199, 13203), (201, 13221), (204, 13236), (206, 13266), (208, 13278), (209, 13281), (227, 13401), (233, 13440), (242, 13500), (253, 13572), (256, 13602), (260, 13626), (265, 13653), (266, 13656), (270, 13683),

Gene: Fireball\_20 Start: 11982, Stop: 13874, Start Num: 20

Candidate Starts for Fireball\_20:

(Start: 20 @11982 has 94 MA's), (42, 12219), (44, 12231), (47, 12285), (68, 12510), (97, 12672), (102, 12705), (110, 12732), (165, 13098), (166, 13110), (182, 13227), (188, 13272), (189, 13275), (199, 13335), (201, 13353), (206, 13398), (208, 13410), (209, 13413), (227, 13533), (233, 13572), (242, 13632), (253, 13704), (256, 13734), (260, 13758), (265, 13785), (266, 13788), (270, 13815),

Gene: Fireman\_27 Start: 13483, Stop: 15504, Start Num: 16

Candidate Starts for Fireman\_27:

(Start: 16 @13483 has 50 MA's), (78, 14068), (94, 14149), (99, 14173), (108, 14218), (112, 14239), (132, 14392), (160, 14650), (162, 14722), (166, 14782), (167, 14806), (188, 14944), (192, 14968), (193, 14971), (209, 15082), (228, 15211), (229, 15226), (232, 15235), (240, 15262), (243, 15274), (247, 15304), (252, 15331), (268, 15433),

Gene: Fitzgerald\_18 Start: 14566, Stop: 16473, Start Num: 20

Candidate Starts for Fitzgerald\_18:

(Start: 20 @14566 has 94 MA's), (41, 14797), (44, 14815), (64, 15082), (89, 15220), (101, 15289), (109, 15322), (139, 15547), (141, 15553), (147, 15616), (149, 15628), (150, 15631), (152, 15643), (169, 15730), (188, 15853), (192, 15889), (212, 16033), (221, 16084), (241, 16228), (242, 16231),

(243, 16234), (250, 16282), (257, 16339),

Gene: Flatwoods\_21 Start: 14757, Stop: 16682, Start Num: 20

Candidate Starts for Flatwoods\_21:

(Start: 20 @14757 has 94 MA's), (30, 14892), (41, 14988), (64, 15288), (77, 15357), (84, 15405), (89, 15429), (95, 15465), (101, 15498), (105, 15522), (125, 15615), (139, 15756), (141, 15762), (147, 15825), (149, 15837), (150, 15840), (152, 15852), (169, 15939), (188, 16062), (192, 16098), (197, 16131), (206, 16203), (212, 16242), (221, 16293), (240, 16431), (241, 16437), (242, 16440), (250, 16491), (257, 16548), (258, 16560), (261, 16569),

Gene: Fosterous\_18 Start: 15029, Stop: 16936, Start Num: 20

Candidate Starts for Fosterous\_18:

(Start: 20 @15029 has 94 MA's), (41, 15260), (44, 15278), (64, 15545), (89, 15683), (101, 15752), (109, 15785), (139, 16010), (141, 16016), (147, 16079), (149, 16091), (150, 16094), (152, 16106), (169, 16193), (177, 16247), (188, 16316), (192, 16352), (212, 16496), (221, 16547), (241, 16691), (242, 16694), (243, 16697), (250, 16745), (257, 16802),

Gene: Fugax\_21 Start: 12512, Stop: 14410, Start Num: 20

Candidate Starts for Fugax\_21:

(Start: 20 @12512 has 94 MA's), (42, 12749), (44, 12761), (47, 12815), (97, 13208), (102, 13241), (109, 13265), (141, 13505), (165, 13634), (166, 13646), (182, 13763), (188, 13808), (189, 13811), (199, 13871), (201, 13889), (206, 13934), (208, 13946), (209, 13949), (211, 13970), (227, 14069), (233, 14108), (242, 14168), (253, 14240), (256, 14270), (260, 14294), (265, 14321), (266, 14324), (270, 14351),

Gene: FuzzBuster\_31 Start: 13864, Stop: 15825, Start Num: 9

Candidate Starts for FuzzBuster\_31:

(Start: 9 @13864 has 1 MA's), (11, 13891), (18, 13975), (25, 14026), (50, 14296), (81, 14533), (119, 14728), (131, 14842), (168, 15121), (173, 15148), (176, 15175), (181, 15199), (184, 15223), (188, 15247), (189, 15250), (190, 15268), (198, 15307), (209, 15385), (250, 15637), (253, 15658), (270, 15769), (272, 15778),

Gene: GTE6\_20 Start: 14261, Stop: 16150, Start Num: 20

Candidate Starts for GTE6\_20:

(17, 14252), (Start: 20 @14261 has 94 MA's), (Start: 27 @14327 has 19 MA's), (41, 14495), (44, 14513), (68, 14786), (84, 14882), (124, 15089), (131, 15167), (141, 15236), (147, 15299), (149, 15311), (150, 15314), (167, 15398), (169, 15413), (184, 15512), (192, 15566), (206, 15671), (221, 15761), (231, 15842), (240, 15899), (244, 15932), (253, 15980), (257, 16016), (269, 16082),

Gene: Gaea\_20 Start: 14451, Stop: 16370, Start Num: 20

Candidate Starts for Gaea\_20:

(Start: 20 @14451 has 94 MA's), (30, 14586), (41, 14682), (64, 14976), (77, 15045), (84, 15093), (89, 15117), (95, 15153), (101, 15186), (105, 15210), (125, 15303), (139, 15444), (141, 15450), (147, 15513), (149, 15525), (150, 15528), (152, 15540), (169, 15627), (188, 15750), (192, 15786), (197, 15819), (206, 15891), (212, 15930), (221, 15981), (240, 16119), (241, 16125), (242, 16128), (250, 16179), (257, 16236), (258, 16248), (261, 16257),

Gene: Galadriel\_22 Start: 14888, Stop: 16786, Start Num: 20

Candidate Starts for Galadriel\_22:

(Start: 20 @14888 has 94 MA's), (41, 15119), (44, 15137), (64, 15395), (89, 15533), (101, 15602), (109, 15635), (139, 15860), (141, 15866), (147, 15929), (149, 15941), (150, 15944), (152, 15956), (169, 16043), (188, 16166), (192, 16202), (212, 16346), (221, 16397), (241, 16541), (242, 16544), (243, 16547), (250, 16595), (257, 16652),



Gene: Ganandorf\_26 Start: 13815, Stop: 15671, Start Num: 16

Candidate Starts for Ganandorf\_26:

(Start: 16 @13815 has 50 MA's), (78, 14391), (88, 14436), (94, 14472), (108, 14541), (112, 14562), (113, 14565), (118, 14595), (132, 14715), (143, 14796), (164, 14910), (166, 14937), (193, 15126), (210, 15252), (228, 15366), (229, 15381), (243, 15429), (247, 15459), (249, 15471), (252, 15486), (254, 15501), (260, 15552), (264, 15570), (268, 15588),

Gene: Geodirt\_19 Start: 15093, Stop: 17003, Start Num: 20

Candidate Starts for Geodirt\_19:

(Start: 20 @15093 has 94 MA's), (41, 15324), (44, 15342), (64, 15612), (89, 15750), (101, 15819), (109, 15852), (139, 16077), (141, 16083), (147, 16146), (149, 16158), (150, 16161), (152, 16173), (169, 16260), (177, 16314), (188, 16383), (192, 16419), (212, 16563), (221, 16614), (241, 16758), (242, 16761), (243, 16764), (250, 16812), (257, 16869),

Gene: Gezellig\_20 Start: 11982, Stop: 13874, Start Num: 20

Candidate Starts for Gezellig\_20:

(Start: 20 @11982 has 94 MA's), (42, 12219), (44, 12231), (47, 12285), (68, 12510), (97, 12672), (102, 12705), (110, 12732), (165, 13098), (166, 13110), (182, 13227), (188, 13272), (189, 13275), (199, 13335), (201, 13353), (206, 13398), (208, 13410), (209, 13413), (227, 13533), (233, 13572), (242, 13632), (253, 13704), (256, 13734), (260, 13758), (265, 13785), (266, 13788), (270, 13815),

Gene: Gina\_28 Start: 13149, Stop: 15167, Start Num: 16

Candidate Starts for Gina\_28:

(Start: 16 @13149 has 50 MA's), (60, 13617), (78, 13731), (87, 13770), (94, 13812), (99, 13836), (108, 13881), (112, 13902), (113, 13905), (117, 13920), (124, 13974), (132, 14055), (141, 14115), (156, 14259), (158, 14277), (166, 14445), (167, 14469), (188, 14607), (193, 14634), (209, 14745), (228, 14874), (229, 14889), (240, 14925), (243, 14937), (247, 14967), (252, 14994), (268, 15096),

Gene: Gustavo\_20 Start: 14562, Stop: 16469, Start Num: 20

Candidate Starts for Gustavo\_20:

(Start: 20 @14562 has 94 MA's), (30, 14697), (41, 14793), (64, 15075), (77, 15144), (84, 15192), (89, 15216), (95, 15252), (101, 15285), (105, 15309), (125, 15402), (139, 15543), (141, 15549), (147, 15612), (149, 15624), (150, 15627), (152, 15639), (169, 15726), (188, 15849), (192, 15885), (206, 15990), (212, 16029), (221, 16080), (240, 16218), (241, 16224), (242, 16227), (250, 16278), (257, 16335), (258, 16347), (261, 16356),

Gene: Halo3\_20 Start: 12297, Stop: 14195, Start Num: 20

Candidate Starts for Halo3\_20:

(Start: 20 @12297 has 94 MA's), (42, 12534), (44, 12546), (47, 12600), (97, 12993), (102, 13026), (141, 13290), (165, 13419), (166, 13431), (168, 13467), (182, 13548), (188, 13593), (189, 13596), (199, 13656), (206, 13719), (208, 13731), (209, 13734), (233, 13893), (242, 13953), (253, 14025), (256, 14055), (260, 14079), (265, 14106), (266, 14109),

Gene: Hans\_23 Start: 15322, Stop: 17238, Start Num: 20

Candidate Starts for Hans\_23:

(Start: 20 @15322 has 94 MA's), (36, 15523), (50, 15646), (64, 15814), (77, 15880), (89, 15937), (123, 16114), (125, 16123), (129, 16174), (131, 16225), (139, 16288), (141, 16294), (147, 16357), (152, 16384), (169, 16471), (174, 16498), (196, 16654), (206, 16729), (209, 16744), (212, 16768), (218, 16801), (221, 16819), (228, 16876), (240, 16987), (252, 17056), (253, 17068), (257, 17104), (269, 17170),

Gene: Hendrix\_57 Start: 29698, Stop: 31632, Start Num: 16

Candidate Starts for Hendrix\_57:

(Start: 16 @29698 has 50 MA's), (39, 29935), (62, 30232), (81, 30343), (113, 30505), (130, 30619), (187, 31033), (188, 31045), (193, 31072), (203, 31129), (205, 31156), (209, 31183), (210, 31198), (221, 31264), (274, 31591),

Gene: Hermeonysus\_26 Start: 13684, Stop: 15543, Start Num: 16

Candidate Starts for Hermeonysus\_26:

(Start: 16 @13684 has 50 MA's), (78, 14263), (88, 14308), (94, 14344), (108, 14413), (112, 14434), (113, 14437), (118, 14467), (132, 14587), (143, 14668), (164, 14782), (166, 14809), (193, 14998), (210, 15124), (228, 15238), (229, 15253), (243, 15301), (247, 15331), (249, 15343), (252, 15358), (254, 15373), (260, 15424), (264, 15442), (268, 15460),

Gene: Honeyfin\_28 Start: 14000, Stop: 15859, Start Num: 16

Candidate Starts for Honeyfin\_28:

(Start: 16 @14000 has 50 MA's), (78, 14579), (88, 14624), (94, 14660), (108, 14729), (112, 14750), (113, 14753), (118, 14783), (132, 14903), (143, 14984), (164, 15098), (166, 15125), (193, 15314), (210, 15440), (228, 15554), (229, 15569), (243, 15617), (247, 15647), (249, 15659), (252, 15674), (254, 15689), (260, 15740), (264, 15758), (268, 15776),

Gene: Inspectinfecti\_22 Start: 15744, Stop: 17663, Start Num: 20

Candidate Starts for Inspectinfecti\_22:

(Start: 20 @15744 has 94 MA's), (36, 15945), (50, 16068), (64, 16239), (75, 16284), (77, 16305), (89, 16362), (123, 16539), (125, 16548), (129, 16599), (131, 16650), (139, 16713), (141, 16719), (147, 16782), (152, 16809), (169, 16896), (174, 16923), (181, 16971), (196, 17079), (206, 17154), (209, 17169), (212, 17193), (218, 17226), (221, 17244), (228, 17301), (240, 17412), (252, 17481), (253, 17493), (257, 17529), (269, 17595),

Gene: JKSyngboy\_19 Start: 15221, Stop: 17128, Start Num: 20

Candidate Starts for JKSyngboy\_19:

(Start: 20 @15221 has 94 MA's), (30, 15356), (33, 15389), (41, 15452), (64, 15734), (77, 15803), (84, 15851), (89, 15875), (101, 15944), (105, 15968), (125, 16061), (139, 16202), (141, 16208), (147, 16271), (149, 16283), (150, 16286), (152, 16298), (169, 16385), (188, 16508), (192, 16544), (197, 16577), (206, 16649), (212, 16688), (221, 16739), (241, 16883), (242, 16886), (250, 16937), (257, 16994), (258, 17006), (261, 17015),

Gene: Jabberwocky\_18 Start: 15000, Stop: 16907, Start Num: 20

Candidate Starts for Jabberwocky\_18:

(Start: 20 @15000 has 94 MA's), (41, 15231), (44, 15249), (64, 15516), (89, 15654), (101, 15723), (109, 15756), (139, 15981), (141, 15987), (147, 16050), (149, 16062), (150, 16065), (152, 16077), (169, 16164), (177, 16218), (188, 16287), (192, 16323), (212, 16467), (221, 16518), (241, 16662), (242, 16665), (243, 16668), (250, 16716), (257, 16773),

Gene: Jambalaya\_19 Start: 11635, Stop: 13521, Start Num: 20

Candidate Starts for Jambalaya\_19:

(Start: 20 @11635 has 94 MA's), (42, 11872), (44, 11884), (47, 11938), (97, 12319), (102, 12352), (110, 12379), (165, 12745), (166, 12757), (182, 12874), (188, 12919), (189, 12922), (199, 12982), (201, 13000), (206, 13045), (208, 13057), (209, 13060), (227, 13180), (233, 13219), (242, 13279), (253, 13351), (256, 13381), (260, 13405), (265, 13432), (266, 13435), (270, 13462),

Gene: Jayden\_28 Start: 13519, Stop: 15375, Start Num: 16

Candidate Starts for Jayden\_28:

(Start: 16 @13519 has 50 MA's), (35, 13699), (78, 14092), (87, 14131), (88, 14137), (94, 14173), (108, 14242), (112, 14263), (113, 14266), (132, 14416), (166, 14638), (167, 14662), (188, 14800), (193,

14827), (209, 14938), (210, 14953), (228, 15067), (229, 15082), (232, 15091), (240, 15118), (243, 15130), (246, 15157), (247, 15160), (254, 15202),

Gene: Jefe\_27 Start: 13737, Stop: 15596, Start Num: 16

Candidate Starts for Jefe\_27:

(Start: 16 @13737 has 50 MA's), (78, 14316), (88, 14361), (94, 14397), (108, 14466), (112, 14487), (113, 14490), (118, 14520), (132, 14640), (143, 14721), (164, 14835), (166, 14862), (193, 15051), (210, 15177), (228, 15291), (229, 15306), (243, 15354), (247, 15384), (249, 15396), (252, 15411), (254, 15426), (260, 15477), (264, 15495), (268, 15513),

Gene: Jollipop\_27 Start: 14085, Stop: 15941, Start Num: 16

Candidate Starts for Jollipop\_27:

(Start: 16 @14085 has 50 MA's), (78, 14661), (88, 14706), (94, 14742), (108, 14811), (112, 14832), (113, 14835), (118, 14865), (132, 14985), (143, 15066), (164, 15180), (166, 15207), (193, 15396), (210, 15522), (228, 15636), (229, 15651), (243, 15699), (247, 15729), (249, 15741), (252, 15756), (254, 15771), (260, 15822), (264, 15840), (268, 15858),

Gene: KaiHaiDragon\_27 Start: 13679, Stop: 15535, Start Num: 16

Candidate Starts for KaiHaiDragon\_27:

(Start: 16 @13679 has 50 MA's), (78, 14255), (88, 14300), (94, 14336), (108, 14405), (112, 14426), (113, 14429), (118, 14459), (132, 14579), (143, 14660), (164, 14774), (166, 14801), (193, 14990), (210, 15116), (215, 15140), (228, 15230), (229, 15245), (243, 15293), (247, 15323), (249, 15335), (252, 15350), (254, 15365), (260, 15416), (264, 15434), (268, 15452),

Gene: Kamashten\_21 Start: 15684, Stop: 17591, Start Num: 20

Candidate Starts for Kamashten\_21:

(Start: 20 @15684 has 94 MA's), (41, 15915), (44, 15933), (64, 16200), (89, 16338), (101, 16407), (109, 16440), (139, 16665), (141, 16671), (147, 16734), (149, 16746), (150, 16749), (152, 16761), (169, 16848), (177, 16902), (188, 16971), (192, 17007), (212, 17151), (221, 17202), (241, 17346), (242, 17349), (243, 17352), (250, 17400), (257, 17457),

Gene: Keitabear\_22 Start: 17233, Stop: 19128, Start Num: 20

Candidate Starts for Keitabear\_22:

(Start: 20 @17233 has 94 MA's), (41, 17464), (44, 17482), (64, 17737), (89, 17875), (101, 17944), (109, 17977), (139, 18202), (141, 18208), (149, 18283), (150, 18286), (152, 18298), (165, 18334), (169, 18385), (188, 18508), (192, 18544), (212, 18688), (221, 18739), (241, 18883), (242, 18886), (243, 18889), (250, 18937), (257, 18994), (278, 19111),

Gene: Kewpiedoll\_21 Start: 15069, Stop: 16979, Start Num: 20

Candidate Starts for Kewpiedoll\_21:

(Start: 20 @15069 has 94 MA's), (41, 15300), (44, 15318), (64, 15588), (89, 15726), (101, 15795), (109, 15828), (139, 16053), (141, 16059), (147, 16122), (149, 16134), (150, 16137), (152, 16149), (169, 16236), (188, 16359), (192, 16395), (212, 16539), (221, 16590), (241, 16734), (242, 16737), (243, 16740), (250, 16788), (257, 16845),

Gene: KimmyK\_21 Start: 12512, Stop: 14410, Start Num: 20

Candidate Starts for KimmyK\_21:

(Start: 20 @12512 has 94 MA's), (42, 12749), (44, 12761), (47, 12815), (97, 13208), (102, 13241), (109, 13265), (141, 13505), (165, 13634), (166, 13646), (182, 13763), (188, 13808), (189, 13811), (199, 13871), (201, 13889), (206, 13934), (208, 13946), (209, 13949), (211, 13970), (227, 14069), (233, 14108), (242, 14168), (253, 14240), (256, 14270), (260, 14294), (265, 14321), (266, 14324), (270, 14351),

Gene: Kowalski\_26 Start: 13795, Stop: 15651, Start Num: 16

Candidate Starts for Kowalski\_26:

(Start: 16 @13795 has 50 MA's), (78, 14371), (88, 14416), (94, 14452), (108, 14521), (112, 14542), (113, 14545), (118, 14575), (132, 14695), (143, 14776), (164, 14890), (166, 14917), (193, 15106), (228, 15346), (229, 15361), (243, 15409), (247, 15439), (249, 15451), (252, 15466), (254, 15481), (260, 15532), (264, 15550), (268, 15568),

Gene: Kozi\_23 Start: 13272, Stop: 15131, Start Num: 16

Candidate Starts for Kozi\_23:

(Start: 16 @13272 has 50 MA's), (65, 13767), (94, 13923), (112, 14013), (141, 14220), (164, 14355), (170, 14427), (176, 14472), (188, 14544), (190, 14565), (193, 14571), (203, 14628), (209, 14682), (215, 14721), (216, 14727), (223, 14766), (226, 14799), (268, 15045),

Gene: Kroos\_21 Start: 15314, Stop: 17227, Start Num: 20

Candidate Starts for Kroos\_21:

(Start: 20 @15314 has 94 MA's), (30, 15449), (41, 15545), (64, 15833), (77, 15902), (84, 15950), (89, 15974), (95, 16010), (101, 16043), (105, 16067), (125, 16160), (139, 16301), (141, 16307), (147, 16370), (149, 16382), (150, 16385), (152, 16397), (169, 16484), (188, 16607), (192, 16643), (197, 16676), (206, 16748), (212, 16787), (221, 16838), (240, 16976), (241, 16982), (242, 16985), (250, 17036), (257, 17093), (258, 17105), (261, 17114),

Gene: Kwekel\_20 Start: 13711, Stop: 15594, Start Num: 20

Candidate Starts for Kwekel\_20:

(17, 13702), (Start: 20 @13711 has 94 MA's), (41, 13945), (44, 13963), (68, 14233), (84, 14329), (124, 14536), (131, 14614), (139, 14677), (141, 14683), (147, 14746), (149, 14758), (150, 14761), (167, 14845), (169, 14860), (192, 15013), (206, 15118), (221, 15208), (231, 15289), (240, 15346), (252, 15415), (253, 15427), (257, 15463), (269, 15529),

Gene: Kwobi\_21 Start: 15290, Stop: 17209, Start Num: 20

Candidate Starts for Kwobi\_21:

(Start: 20 @15290 has 94 MA's), (30, 15425), (41, 15521), (64, 15815), (77, 15884), (84, 15932), (89, 15956), (95, 15992), (101, 16025), (105, 16049), (125, 16142), (139, 16283), (141, 16289), (147, 16352), (149, 16364), (150, 16367), (152, 16379), (169, 16466), (188, 16589), (192, 16625), (197, 16658), (206, 16730), (212, 16769), (221, 16820), (240, 16958), (241, 16964), (242, 16967), (250, 17018), (257, 17075), (258, 17087), (261, 17096),

Gene: Leaf\_60 Start: 29654, Stop: 31561, Start Num: 16

Candidate Starts for Leaf\_60:

(1, 29438), (4, 29510), (7, 29543), (8, 29546), (Start: 16 @29654 has 50 MA's), (50, 29993), (58, 30131), (62, 30161), (81, 30269), (92, 30314), (154, 30755), (183, 30929), (187, 30959), (188, 30971), (193, 30998), (203, 31055), (205, 31082), (209, 31109), (213, 31136), (217, 31160), (223, 31202), (225, 31232), (228, 31247), (253, 31391), (266, 31475), (274, 31517),

Gene: Lennon\_22 Start: 16336, Stop: 18231, Start Num: 20

Candidate Starts for Lennon\_22:

(Start: 20 @16336 has 94 MA's), (41, 16567), (44, 16585), (64, 16840), (89, 16978), (101, 17047), (109, 17080), (139, 17305), (141, 17311), (147, 17374), (149, 17386), (150, 17389), (152, 17401), (169, 17488), (188, 17611), (192, 17647), (212, 17791), (221, 17842), (241, 17986), (242, 17989), (243, 17992), (250, 18040), (257, 18097), (278, 18214),

Gene: Leonard\_21 Start: 15339, Stop: 17258, Start Num: 20

Candidate Starts for Leonard\_21:

(Start: 20 @15339 has 94 MA's), (36, 15540), (50, 15663), (64, 15834), (75, 15879), (77, 15900), (89, 15957), (114, 16083), (123, 16134), (125, 16143), (129, 16194), (131, 16245), (139, 16308), (141, 16314), (147, 16377), (152, 16404), (169, 16491), (196, 16674), (206, 16749), (209, 16764), (212, 16788), (218, 16821), (221, 16839), (228, 16896), (240, 17007), (252, 17076), (253, 17088), (257, 17124), (269, 17190),

Gene: LilHam\_18 Start: 13869, Stop: 15788, Start Num: 20

Candidate Starts for LilHam\_18:

(Start: 20 @13869 has 94 MA's), (30, 14004), (41, 14100), (64, 14394), (77, 14463), (84, 14511), (89, 14535), (95, 14571), (101, 14604), (105, 14628), (125, 14721), (139, 14862), (141, 14868), (147, 14931), (149, 14943), (150, 14946), (152, 14958), (169, 15045), (188, 15168), (192, 15204), (197, 15237), (206, 15309), (212, 15348), (221, 15399), (241, 15543), (242, 15546), (250, 15597), (257, 15654), (258, 15666), (261, 15675),

Gene: Lilbeanie\_18 Start: 10655, Stop: 12583, Start Num: 20

Candidate Starts for Lilbeanie\_18:

(13, 10613), (Start: 20 @10655 has 94 MA's), (29, 10754), (38, 10871), (41, 10886), (64, 11204), (110, 11441), (119, 11489), (141, 11672), (168, 11846), (184, 11948), (188, 11972), (208, 12107), (220, 12179), (221, 12185), (235, 12287), (236, 12299), (248, 12377), (257, 12443), (260, 12461), (265, 12488),

Gene: LittleFortune\_28 Start: 14042, Stop: 15901, Start Num: 16

Candidate Starts for LittleFortune\_28:

(Start: 16 @14042 has 50 MA's), (78, 14621), (88, 14666), (94, 14702), (108, 14771), (112, 14792), (113, 14795), (118, 14825), (132, 14945), (143, 15026), (164, 15140), (166, 15167), (193, 15356), (210, 15482), (228, 15596), (229, 15611), (243, 15659), (247, 15689), (252, 15716), (254, 15731), (260, 15782), (264, 15800), (268, 15818),

Gene: Love\_22 Start: 15199, Stop: 17106, Start Num: 20

Candidate Starts for Love\_22:

(Start: 20 @15199 has 94 MA's), (41, 15430), (44, 15448), (64, 15715), (89, 15853), (101, 15922), (109, 15955), (139, 16180), (141, 16186), (147, 16249), (149, 16261), (150, 16264), (152, 16276), (169, 16363), (177, 16417), (188, 16486), (192, 16522), (212, 16666), (221, 16717), (241, 16861), (242, 16864), (243, 16867), (250, 16915), (257, 16972),

Gene: Maih\_13 Start: 13750, Stop: 15444, Start Num: 27

Candidate Starts for Maih\_13:

(Start: 27 @13750 has 19 MA's), (28, 13759), (34, 13861), (50, 13993), (51, 14017), (59, 14113), (76, 14194), (82, 14239), (84, 14248), (92, 14281), (95, 14308), (96, 14311), (107, 14359), (115, 14392), (116, 14395), (124, 14434), (126, 14440), (132, 14518), (136, 14551), (149, 14641), (169, 14731), (179, 14797), (182, 14809), (183, 14812), (198, 14929), (204, 14962), (208, 15004), (225, 15121), (242, 15217), (251, 15274), (259, 15337), (261, 15343), (268, 15376), (271, 15400), (277, 15418), (279, 15433),

Gene: Margaery\_22 Start: 13234, Stop: 15096, Start Num: 16

Candidate Starts for Margaery\_22:

(10, 13135), (Start: 16 @13234 has 50 MA's), (52, 13588), (78, 13807), (87, 13846), (94, 13888), (112, 13978), (125, 14047), (142, 14200), (164, 14320), (176, 14437), (193, 14536), (195, 14551), (203, 14593), (209, 14647), (216, 14692), (218, 14704), (221, 14719), (223, 14731), (240, 14839), (244, 14872), (254, 14923), (263, 14989),

Gene: Matzah\_23 Start: 13253, Stop: 15118, Start Num: 16

Candidate Starts for Matzah\_23:

(Start: 16 @13253 has 50 MA's), (52, 13607), (61, 13733), (87, 13871), (94, 13913), (111, 13994), (112, 14003), (122, 14060), (125, 14072), (139, 14204), (142, 14225), (143, 14231), (164, 14345), (175, 14444), (176, 14462), (193, 14561), (195, 14576), (203, 14618), (209, 14672), (210, 14687), (218, 14729), (221, 14744), (223, 14756), (228, 14801), (240, 14864), (244, 14897),

Gene: McKinley\_21 Start: 15222, Stop: 17132, Start Num: 20

Candidate Starts for McKinley\_21:

(Start: 20 @15222 has 94 MA's), (41, 15453), (44, 15471), (64, 15741), (89, 15879), (101, 15948), (109, 15981), (139, 16206), (141, 16212), (147, 16275), (149, 16287), (150, 16290), (152, 16302), (169, 16389), (188, 16512), (192, 16548), (212, 16692), (221, 16743), (241, 16887), (242, 16890), (243, 16893), (250, 16941), (257, 16998),

Gene: Megan\_21 Start: 14855, Stop: 16870, Start Num: 16

Candidate Starts for Megan\_21:

(2, 14651), (3, 14660), (5, 14723), (6, 14741), (14, 14843), (Start: 16 @14855 has 50 MA's), (37, 15056), (78, 15434), (88, 15479), (94, 15515), (108, 15584), (112, 15605), (113, 15608), (117, 15623), (132, 15758), (134, 15773), (159, 16007), (161, 16076), (166, 16148), (188, 16310), (189, 16313), (192, 16334), (201, 16388), (209, 16448), (216, 16493), (218, 16505), (226, 16565), (228, 16577), (243, 16640), (247, 16670), (252, 16697), (265, 16790), (266, 16793), (268, 16799), (275, 16838),

Gene: MelBins\_22 Start: 15543, Stop: 17459, Start Num: 20

Candidate Starts for MelBins\_22:

(Start: 20 @15543 has 94 MA's), (36, 15744), (50, 15867), (64, 16035), (77, 16101), (89, 16158), (123, 16335), (125, 16344), (129, 16395), (131, 16446), (139, 16509), (141, 16515), (147, 16578), (152, 16605), (169, 16692), (196, 16875), (206, 16950), (209, 16965), (212, 16989), (218, 17022), (221, 17040), (228, 17097), (240, 17208), (252, 17277), (253, 17289), (257, 17325), (269, 17391),

Gene: MellowYellow\_21 Start: 12969, Stop: 14696, Start Num: 27

Candidate Starts for MellowYellow\_21:

(18, 12906), (Start: 27 @12969 has 19 MA's), (102, 13578), (137, 13806), (144, 13866), (145, 13878), (151, 13908), (170, 14004), (171, 14007), (172, 14010), (180, 14070), (205, 14232), (212, 14283), (214, 14292), (218, 14316), (227, 14379), (240, 14454), (241, 14460), (243, 14466), (244, 14487), (260, 14589),

Gene: MementoMori\_23 Start: 12969, Stop: 14840, Start Num: 16

Candidate Starts for MementoMori\_23:

(Start: 16 @12969 has 50 MA's), (61, 13452), (80, 13560), (87, 13590), (94, 13632), (111, 13713), (112, 13722), (122, 13779), (125, 13791), (139, 13923), (142, 13944), (143, 13950), (164, 14064), (175, 14163), (176, 14181), (193, 14280), (195, 14295), (203, 14337), (209, 14391), (210, 14406), (218, 14448), (221, 14463), (223, 14475), (228, 14520), (240, 14583), (244, 14616), (268, 14754),

Gene: Metamorphoo\_27 Start: 13469, Stop: 15490, Start Num: 16

Candidate Starts for Metamorphoo\_27:

(Start: 16 @13469 has 50 MA's), (78, 14054), (94, 14135), (99, 14159), (108, 14204), (112, 14225), (113, 14228), (132, 14378), (157, 14588), (160, 14636), (162, 14708), (166, 14768), (167, 14792), (188, 14930), (192, 14954), (193, 14957), (209, 15068), (228, 15197), (229, 15212), (232, 15221), (240, 15248), (243, 15260), (247, 15290), (252, 15317), (264, 15401), (268, 15419),

Gene: Mischief19\_14 Start: 15652, Stop: 17313, Start Num: 27

Candidate Starts for Mischief19\_14:

(Start: 27 @15652 has 19 MA's), (31, 15730), (50, 15895), (55, 15976), (70, 16060), (86, 16147), (93, 16189), (96, 16204), (104, 16243), (106, 16249), (107, 16252), (115, 16285), (132, 16411), (136, 16444), (139, 16465), (146, 16525), (167, 16609), (178, 16684), (182, 16702), (204, 16837), (208,

16879), (225, 16996), (238, 17065), (243, 17095),

Gene: MoontowerMania\_19 Start: 14205, Stop: 16112, Start Num: 20

Candidate Starts for MoontowerMania\_19:

(Start: 20 @14205 has 94 MA's), (41, 14436), (44, 14454), (64, 14721), (89, 14859), (101, 14928), (109, 14961), (139, 15186), (141, 15192), (147, 15255), (149, 15267), (150, 15270), (152, 15282), (169, 15369), (177, 15423), (188, 15492), (192, 15528), (212, 15672), (221, 15723), (241, 15867), (242, 15870), (243, 15873), (250, 15921), (257, 15978),

Gene: Mutzi\_21 Start: 12236, Stop: 14134, Start Num: 20

Candidate Starts for Mutzi\_21:

(Start: 20 @12236 has 94 MA's), (42, 12473), (44, 12485), (47, 12539), (97, 12932), (102, 12965), (109, 12989), (141, 13229), (166, 13370), (182, 13487), (188, 13532), (189, 13535), (199, 13595), (206, 13658), (233, 13832), (242, 13892), (243, 13895), (253, 13964), (256, 13994), (260, 14018), (265, 14045), (266, 14048),

Gene: Natkenzie\_21 Start: 15527, Stop: 17449, Start Num: 20

Candidate Starts for Natkenzie\_21:

(Start: 20 @15527 has 94 MA's), (38, 15743), (41, 15758), (53, 15932), (74, 16070), (75, 16079), (83, 16148), (86, 16154), (95, 16208), (100, 16232), (137, 16484), (139, 16502), (141, 16508), (147, 16571), (149, 16583), (150, 16586), (152, 16598), (169, 16688), (174, 16715), (197, 16874), (207, 16952), (223, 17048), (227, 17084), (240, 17204), (244, 17237), (257, 17321), (265, 17366),

Gene: Nicole72\_22 Start: 15232, Stop: 17253, Start Num: 16

Candidate Starts for Nicole72\_22:

(14, 15220), (Start: 16 @15232 has 50 MA's), (37, 15433), (46, 15505), (78, 15817), (88, 15862), (94, 15898), (108, 15967), (112, 15988), (119, 16024), (132, 16141), (138, 16186), (141, 16201), (166, 16531), (188, 16693), (189, 16696), (192, 16717), (209, 16831), (218, 16888), (226, 16948), (228, 16960), (243, 17023), (247, 17053), (265, 17173), (266, 17176), (268, 17182), (275, 17221),

Gene: NoodlelyBoi\_27 Start: 14134, Stop: 15984, Start Num: 16

Candidate Starts for NoodlelyBoi\_27:

(Start: 16 @14134 has 50 MA's), (78, 14710), (88, 14755), (94, 14791), (108, 14860), (112, 14881), (113, 14884), (118, 14914), (132, 15034), (164, 15229), (166, 15256), (170, 15301), (193, 15445), (216, 15601), (228, 15685), (243, 15748), (247, 15778), (249, 15790), (252, 15805), (254, 15820), (260, 15871), (264, 15889),

Gene: Nordenberg\_15 Start: 13519, Stop: 15426, Start Num: 20

Candidate Starts for Nordenberg\_15:

(Start: 20 @13519 has 94 MA's), (41, 13750), (44, 13768), (64, 14035), (89, 14173), (101, 14242), (109, 14275), (139, 14500), (141, 14506), (147, 14569), (149, 14581), (150, 14584), (152, 14596), (169, 14683), (188, 14806), (192, 14842), (212, 14986), (221, 15037), (240, 15175), (241, 15181), (242, 15184), (243, 15187), (250, 15235), (257, 15292),

Gene: Nubi\_19 Start: 11864, Stop: 13762, Start Num: 20

Candidate Starts for Nubi\_19:

(Start: 20 @11864 has 94 MA's), (42, 12101), (44, 12113), (47, 12167), (68, 12398), (97, 12560), (102, 12593), (141, 12857), (165, 12986), (166, 12998), (182, 13115), (188, 13160), (189, 13163), (199, 13223), (201, 13241), (204, 13256), (206, 13286), (208, 13298), (209, 13301), (227, 13421), (233, 13460), (242, 13520), (253, 13592), (256, 13622), (260, 13646), (265, 13673), (266, 13676), (270, 13703),

Gene: Odyssey395\_28 Start: 14429, Stop: 16156, Start Num: 27

Candidate Starts for Odyssey395\_28:

(18, 14366), (Start: 27 @14429 has 19 MA's), (102, 15038), (138, 15275), (144, 15326), (145, 15338), (151, 15368), (170, 15464), (171, 15467), (172, 15470), (180, 15530), (205, 15692), (214, 15752), (215, 15758), (218, 15776), (227, 15839), (245, 15950), (260, 16049),

Gene: Onika\_26 Start: 13769, Stop: 15625, Start Num: 16

Candidate Starts for Onika\_26:

(Start: 16 @13769 has 50 MA's), (78, 14345), (88, 14390), (94, 14426), (108, 14495), (112, 14516), (113, 14519), (118, 14549), (132, 14669), (143, 14750), (164, 14864), (166, 14891), (193, 15080), (210, 15206), (228, 15320), (229, 15335), (243, 15383), (247, 15413), (249, 15425), (252, 15440), (254, 15455), (260, 15506), (264, 15524), (268, 15542),

Gene: Paries\_21 Start: 14887, Stop: 16794, Start Num: 20

Candidate Starts for Paries\_21:

(Start: 20 @14887 has 94 MA's), (41, 15118), (44, 15136), (64, 15403), (89, 15541), (101, 15610), (109, 15643), (139, 15868), (141, 15874), (147, 15937), (149, 15949), (150, 15952), (152, 15964), (169, 16051), (177, 16105), (188, 16174), (192, 16210), (212, 16354), (221, 16405), (241, 16549), (242, 16552), (243, 16555), (250, 16603), (257, 16660),

Gene: Paschalis\_26 Start: 13783, Stop: 15639, Start Num: 16

Candidate Starts for Paschalis\_26:

(Start: 16 @13783 has 50 MA's), (78, 14359), (88, 14404), (94, 14440), (108, 14509), (112, 14530), (113, 14533), (118, 14563), (132, 14683), (143, 14764), (164, 14878), (166, 14905), (193, 15094), (228, 15334), (229, 15349), (243, 15397), (247, 15427), (249, 15439), (252, 15454), (254, 15469), (260, 15520), (264, 15538), (268, 15556),

Gene: Phauci\_14 Start: 11906, Stop: 13825, Start Num: 20

Candidate Starts for Phauci\_14:

(Start: 20 @11906 has 94 MA's), (36, 12107), (50, 12230), (64, 12401), (75, 12446), (77, 12467), (89, 12524), (123, 12701), (125, 12710), (129, 12761), (131, 12812), (139, 12875), (141, 12881), (147, 12944), (152, 12971), (169, 13058), (196, 13241), (206, 13316), (209, 13331), (212, 13355), (218, 13388), (221, 13406), (228, 13463), (240, 13574), (252, 13643), (253, 13655), (257, 13691), (269, 13757),

Gene: Phinally\_21 Start: 15336, Stop: 17255, Start Num: 20

Candidate Starts for Phinally\_21:

(Start: 20 @15336 has 94 MA's), (36, 15537), (50, 15660), (64, 15831), (75, 15876), (77, 15897), (89, 15954), (114, 16080), (123, 16131), (125, 16140), (129, 16191), (131, 16242), (139, 16305), (141, 16311), (147, 16374), (152, 16401), (169, 16488), (196, 16671), (206, 16746), (209, 16761), (212, 16785), (218, 16818), (221, 16836), (228, 16893), (240, 17004), (252, 17073), (253, 17085), (257, 17121), (269, 17187),

Gene: Phlop\_19 Start: 11937, Stop: 13826, Start Num: 20

Candidate Starts for Phlop\_19:

(Start: 20 @11937 has 94 MA's), (42, 12174), (44, 12186), (47, 12240), (68, 12465), (97, 12627), (102, 12660), (109, 12684), (141, 12912), (148, 12984), (165, 13041), (182, 13170), (188, 13215), (189, 13218), (206, 13341), (208, 13353), (218, 13413), (240, 13566), (242, 13575), (253, 13647), (256, 13677), (265, 13728), (269, 13749), (274, 13773),

Gene: Phorgeous\_26 Start: 13636, Stop: 15492, Start Num: 16

Candidate Starts for Phorgeous\_26:

(Start: 16 @13636 has 50 MA's), (78, 14212), (88, 14257), (94, 14293), (108, 14362), (112, 14383), (113, 14386), (118, 14416), (132, 14536), (143, 14617), (164, 14731), (166, 14758), (193, 14947),



(210, 15073), (228, 15187), (229, 15202), (243, 15250), (247, 15280), (249, 15292), (252, 15307), (254, 15322), (260, 15373), (264, 15391), (268, 15409),

Gene: Phrancesco\_27 Start: 13914, Stop: 15770, Start Num: 16

Candidate Starts for Phrancesco\_27:

(Start: 16 @13914 has 50 MA's), (78, 14490), (88, 14535), (94, 14571), (108, 14640), (112, 14661), (113, 14664), (118, 14694), (132, 14814), (143, 14895), (164, 15009), (166, 15036), (193, 15225), (210, 15351), (215, 15375), (228, 15465), (229, 15480), (243, 15528), (247, 15558), (249, 15570), (252, 15585), (254, 15600), (260, 15651), (264, 15669), (268, 15687),

Gene: PierreOrion\_27 Start: 13938, Stop: 15794, Start Num: 16

Candidate Starts for PierreOrion\_27:

(Start: 16 @13938 has 50 MA's), (78, 14514), (88, 14559), (94, 14595), (108, 14664), (112, 14685), (113, 14688), (118, 14718), (132, 14838), (143, 14919), (164, 15033), (166, 15060), (193, 15249), (210, 15375), (228, 15489), (229, 15504), (243, 15552), (247, 15582), (249, 15594), (252, 15609), (254, 15624), (260, 15675), (264, 15693), (268, 15711),

Gene: PinkCoffee\_21 Start: 12521, Stop: 14419, Start Num: 20

Candidate Starts for PinkCoffee\_21:

(Start: 20 @12521 has 94 MA's), (42, 12758), (44, 12770), (47, 12824), (97, 13217), (102, 13250), (109, 13274), (141, 13514), (165, 13643), (166, 13655), (182, 13772), (188, 13817), (189, 13820), (199, 13880), (201, 13898), (206, 13943), (208, 13955), (209, 13958), (211, 13979), (227, 14078), (233, 14117), (242, 14177), (253, 14249), (256, 14279), (260, 14303), (265, 14330), (266, 14333), (270, 14360),

Gene: PiperSansNom\_27 Start: 14090, Stop: 15946, Start Num: 16

Candidate Starts for PiperSansNom\_27:

(Start: 16 @14090 has 50 MA's), (78, 14666), (88, 14711), (94, 14747), (108, 14816), (112, 14837), (113, 14840), (118, 14870), (132, 14990), (143, 15071), (164, 15185), (166, 15212), (193, 15401), (210, 15527), (228, 15641), (229, 15656), (243, 15704), (247, 15734), (249, 15746), (252, 15761), (254, 15776), (260, 15827), (264, 15845), (268, 15863),

Gene: Piperis\_27 Start: 13760, Stop: 15616, Start Num: 16

Candidate Starts for Piperis\_27:

(Start: 16 @13760 has 50 MA's), (78, 14336), (88, 14381), (94, 14417), (108, 14486), (112, 14507), (113, 14510), (118, 14540), (132, 14660), (143, 14741), (164, 14855), (166, 14882), (193, 15071), (210, 15197), (228, 15311), (229, 15326), (243, 15374), (247, 15404), (249, 15416), (252, 15431), (254, 15446), (260, 15497), (264, 15515), (268, 15533),

Gene: Pointis\_26 Start: 14433, Stop: 16160, Start Num: 27

Candidate Starts for Pointis\_26:

(18, 14370), (Start: 27 @14433 has 19 MA's), (102, 15042), (144, 15330), (145, 15342), (151, 15372), (170, 15468), (171, 15471), (172, 15474), (180, 15534), (205, 15696), (214, 15756), (215, 15762), (218, 15780), (227, 15843), (245, 15954), (260, 16053),

Gene: Portcullis\_19 Start: 11883, Stop: 13769, Start Num: 20

Candidate Starts for Portcullis\_19:

(Start: 20 @11883 has 94 MA's), (42, 12120), (44, 12132), (47, 12186), (97, 12567), (102, 12600), (110, 12627), (165, 12993), (166, 13005), (182, 13122), (188, 13167), (189, 13170), (199, 13230), (201, 13248), (206, 13293), (208, 13305), (209, 13308), (227, 13428), (233, 13467), (242, 13527), (253, 13599), (256, 13629), (260, 13653), (265, 13680), (266, 13683), (270, 13710),

Gene: Pulchra\_28 Start: 14160, Stop: 16016, Start Num: 16

Candidate Starts for Pulchra\_28:

(Start: 16 @14160 has 50 MA's), (78, 14736), (88, 14781), (94, 14817), (108, 14886), (112, 14907), (113, 14910), (118, 14940), (132, 15060), (143, 15141), (164, 15255), (166, 15282), (193, 15471), (210, 15597), (228, 15711), (229, 15726), (243, 15774), (247, 15804), (249, 15816), (252, 15831), (254, 15846), (260, 15897), (264, 15915), (268, 15933),

Gene: PullumCavea\_19 Start: 11937, Stop: 13826, Start Num: 20

Candidate Starts for PullumCavea\_19:

(Start: 20 @11937 has 94 MA's), (42, 12174), (44, 12186), (47, 12240), (68, 12465), (97, 12627), (102, 12660), (109, 12684), (141, 12912), (148, 12984), (165, 13041), (182, 13170), (188, 13215), (189, 13218), (206, 13341), (208, 13353), (218, 13413), (240, 13566), (242, 13575), (253, 13647), (256, 13677), (265, 13728), (269, 13749), (274, 13773),

Gene: Pureglobe5\_28 Start: 14443, Stop: 16170, Start Num: 27

Candidate Starts for Pureglobe5\_28:

(18, 14380), (Start: 27 @14443 has 19 MA's), (102, 15052), (144, 15340), (145, 15352), (151, 15382), (170, 15478), (171, 15481), (172, 15484), (180, 15544), (205, 15706), (214, 15766), (215, 15772), (218, 15790), (227, 15853), (245, 15964), (260, 16063),

Gene: Quhwah\_30 Start: 14383, Stop: 16242, Start Num: 16

Candidate Starts for Quhwah\_30:

(Start: 16 @14383 has 50 MA's), (78, 14962), (88, 15007), (94, 15043), (108, 15112), (112, 15133), (113, 15136), (118, 15166), (132, 15286), (143, 15367), (164, 15481), (166, 15508), (193, 15697), (210, 15823), (228, 15937), (229, 15952), (243, 16000), (247, 16030), (249, 16042), (252, 16057), (254, 16072), (260, 16123), (264, 16141), (268, 16159),

Gene: RainyPolka\_13 Start: 13679, Stop: 15376, Start Num: 27

Candidate Starts for RainyPolka\_13:

(Start: 27 @13679 has 19 MA's), (28, 13688), (31, 13757), (33, 13775), (34, 13790), (50, 13922), (51, 13946), (59, 14045), (76, 14126), (84, 14180), (90, 14210), (92, 14213), (95, 14240), (96, 14243), (107, 14291), (126, 14372), (130, 14414), (136, 14483), (149, 14573), (169, 14663), (179, 14729), (182, 14741), (183, 14744), (191, 14810), (204, 14894), (208, 14936), (218, 14996), (242, 15149), (251, 15206), (258, 15266), (259, 15269), (268, 15308), (271, 15332), (277, 15350),

Gene: Ramiel05\_26 Start: 13795, Stop: 15651, Start Num: 16

Candidate Starts for Ramiel05\_26:

(Start: 16 @13795 has 50 MA's), (78, 14371), (88, 14416), (94, 14452), (108, 14521), (112, 14542), (113, 14545), (118, 14575), (132, 14695), (143, 14776), (164, 14890), (166, 14917), (193, 15106), (228, 15346), (229, 15361), (243, 15409), (247, 15439), (249, 15451), (252, 15466), (254, 15481), (260, 15532), (264, 15550), (268, 15568),

Gene: Ranunculus\_20 Start: 13327, Stop: 15048, Start Num: 27

Candidate Starts for Ranunculus\_20:

(19, 13264), (Start: 27 @13327 has 19 MA's), (102, 13921), (108, 13942), (126, 14044), (144, 14218), (145, 14230), (151, 14260), (171, 14359), (172, 14362), (196, 14527), (205, 14584), (210, 14626), (212, 14635), (214, 14644), (218, 14668), (227, 14731), (243, 14818), (248, 14857), (252, 14875),

Gene: Rasputia\_56 Start: 29361, Stop: 31292, Start Num: 16

Candidate Starts for Rasputia\_56:

(Start: 16 @29361 has 50 MA's), (33, 29544), (45, 29628), (50, 29697), (62, 29895), (64, 29904), (81, 30003), (92, 30048), (113, 30165), (183, 30663), (187, 30693), (188, 30705), (193, 30732), (200, 30777), (205, 30816), (210, 30858), (240, 31044), (274, 31251),

Gene: Ribeye\_21 Start: 15768, Stop: 17690, Start Num: 20

Candidate Starts for Ribeye\_21:

(Start: 20 @15768 has 94 MA's), (41, 15999), (64, 16296), (77, 16365), (84, 16413), (89, 16437), (101, 16506), (105, 16530), (125, 16623), (139, 16764), (141, 16770), (147, 16833), (149, 16845), (150, 16848), (152, 16860), (169, 16947), (188, 17070), (192, 17106), (197, 17139), (206, 17211), (212, 17250), (221, 17301), (240, 17439), (241, 17445), (242, 17448), (250, 17499), (257, 17556), (258, 17568), (261, 17577),

Gene: RiverRaider\_22 Start: 14172, Stop: 16070, Start Num: 20

Candidate Starts for RiverRaider\_22:

(12, 14094), (Start: 20 @14172 has 94 MA's), (41, 14403), (44, 14421), (50, 14496), (64, 14670), (77, 14751), (89, 14817), (101, 14886), (139, 15144), (141, 15150), (147, 15213), (149, 15225), (150, 15228), (152, 15240), (169, 15327), (188, 15450), (192, 15486), (206, 15591), (212, 15630), (221, 15681), (224, 15714), (241, 15825), (242, 15828), (243, 15831), (244, 15852), (250, 15879), (255, 15906), (257, 15936), (258, 15948),

Gene: Rizwana\_19 Start: 13218, Stop: 14954, Start Num: 27

Candidate Starts for Rizwana\_19:

(18, 13155), (Start: 27 @13218 has 19 MA's), (60, 13608), (69, 13644), (115, 13878), (130, 13986), (135, 14049), (137, 14058), (140, 14079), (151, 14160), (171, 14259), (172, 14262), (177, 14304), (182, 14328), (184, 14349), (185, 14355), (205, 14484), (214, 14544), (221, 14583), (225, 14625), (243, 14718), (260, 14841), (266, 14871),

Gene: RoadKill\_18 Start: 13249, Stop: 15138, Start Num: 20

Candidate Starts for RoadKill\_18:

(17, 13240), (Start: 20 @13249 has 94 MA's), (Start: 27 @13315 has 19 MA's), (41, 13483), (44, 13501), (68, 13774), (84, 13870), (124, 14077), (131, 14155), (141, 14224), (147, 14287), (149, 14299), (150, 14302), (167, 14386), (169, 14401), (184, 14500), (192, 14554), (206, 14659), (221, 14749), (231, 14830), (240, 14887), (243, 14899), (252, 14956), (253, 14968), (257, 15004), (269, 15070),

Gene: RobsFeet\_28 Start: 13750, Stop: 15771, Start Num: 16

Candidate Starts for RobsFeet\_28:

(Start: 16 @13750 has 50 MA's), (78, 14335), (94, 14416), (99, 14440), (108, 14485), (112, 14506), (113, 14509), (132, 14659), (160, 14917), (162, 14989), (166, 15049), (167, 15073), (188, 15211), (192, 15235), (193, 15238), (209, 15349), (228, 15478), (229, 15493), (232, 15502), (240, 15529), (243, 15541), (247, 15571), (252, 15598), (268, 15700),

Gene: Rofo\_20 Start: 15139, Stop: 17046, Start Num: 20

Candidate Starts for Rofo\_20:

(Start: 20 @15139 has 94 MA's), (41, 15370), (44, 15388), (64, 15655), (89, 15793), (101, 15862), (109, 15895), (139, 16120), (141, 16126), (147, 16189), (149, 16201), (150, 16204), (152, 16216), (188, 16426), (192, 16462), (212, 16606), (221, 16657), (241, 16801), (242, 16804), (243, 16807), (250, 16855), (257, 16912),

Gene: RogerDodger\_22 Start: 12733, Stop: 14619, Start Num: 20

Candidate Starts for RogerDodger\_22:

(Start: 20 @12733 has 94 MA's), (42, 12970), (44, 12982), (47, 13036), (68, 13258), (97, 13420), (102, 13453), (141, 13705), (148, 13777), (165, 13834), (166, 13846), (182, 13963), (188, 14008), (189, 14011), (206, 14134), (208, 14146), (218, 14206), (240, 14359), (242, 14368), (253, 14440), (256, 14470), (269, 14542), (274, 14566),

Gene: RomansRevenge\_16 Start: 11444, Stop: 13249, Start Num: 23

Candidate Starts for RomansRevenge\_16:

(23, 11444), (Start: 27 @11492 has 19 MA's), (32, 11582), (54, 11834), (56, 11849), (69, 11942), (88, 12053), (92, 12062), (102, 12131), (113, 12176), (120, 12218), (133, 12323), (141, 12380), (151, 12458), (169, 12548), (171, 12557), (184, 12647), (201, 12749), (218, 12866), (227, 12929), (243, 13013), (252, 13070), (253, 13082), (260, 13136),

Gene: Salete\_13 Start: 13751, Stop: 15445, Start Num: 27

Candidate Starts for Salete\_13:

(Start: 27 @13751 has 19 MA's), (28, 13760), (34, 13862), (50, 13994), (51, 14018), (59, 14114), (76, 14195), (82, 14240), (84, 14249), (92, 14282), (95, 14309), (96, 14312), (107, 14360), (115, 14393), (116, 14396), (124, 14435), (126, 14441), (132, 14519), (136, 14552), (149, 14642), (169, 14732), (179, 14798), (182, 14810), (183, 14813), (198, 14930), (204, 14963), (208, 15005), (225, 15122), (242, 15218), (251, 15275), (259, 15338), (261, 15344), (268, 15377), (271, 15401), (277, 15419), (279, 15434),

Gene: Salvador\_19 Start: 11842, Stop: 13740, Start Num: 20

Candidate Starts for Salvador\_19:

(Start: 20 @11842 has 94 MA's), (42, 12079), (44, 12091), (47, 12145), (68, 12376), (97, 12538), (102, 12571), (141, 12835), (165, 12964), (166, 12976), (182, 13093), (188, 13138), (189, 13141), (199, 13201), (201, 13219), (204, 13234), (206, 13264), (208, 13276), (209, 13279), (227, 13399), (233, 13438), (242, 13498), (253, 13570), (256, 13600), (260, 13624), (265, 13651), (266, 13654), (270, 13681),

Gene: Sampson\_21 Start: 15472, Stop: 17394, Start Num: 20

Candidate Starts for Sampson\_21:

(Start: 20 @15472 has 94 MA's), (38, 15688), (41, 15703), (53, 15877), (74, 16015), (75, 16024), (83, 16093), (86, 16099), (95, 16153), (100, 16177), (137, 16429), (139, 16447), (141, 16453), (147, 16516), (149, 16528), (150, 16531), (152, 16543), (169, 16633), (174, 16660), (197, 16819), (207, 16897), (223, 16993), (227, 17029), (240, 17149), (244, 17182), (257, 17266), (265, 17311),

Gene: Sanjuju\_18 Start: 14651, Stop: 16558, Start Num: 20

Candidate Starts for Sanjuju\_18:

(Start: 20 @14651 has 94 MA's), (41, 14882), (44, 14900), (64, 15167), (89, 15305), (101, 15374), (109, 15407), (139, 15632), (141, 15638), (147, 15701), (149, 15713), (150, 15716), (152, 15728), (169, 15815), (177, 15869), (188, 15938), (192, 15974), (212, 16118), (221, 16169), (241, 16313), (242, 16316), (243, 16319), (250, 16367), (257, 16424),

Gene: Saronaya\_20 Start: 14562, Stop: 16469, Start Num: 20

Candidate Starts for Saronaya\_20:

(Start: 20 @14562 has 94 MA's), (30, 14697), (41, 14793), (64, 15075), (77, 15144), (84, 15192), (89, 15216), (95, 15252), (101, 15285), (105, 15309), (125, 15402), (139, 15543), (141, 15549), (147, 15612), (149, 15624), (150, 15627), (152, 15639), (169, 15726), (188, 15849), (192, 15885), (206, 15990), (212, 16029), (221, 16080), (240, 16218), (241, 16224), (242, 16227), (250, 16278), (257, 16335), (258, 16347), (261, 16356),

Gene: Savannah\_26 Start: 13819, Stop: 15678, Start Num: 16

Candidate Starts for Savannah\_26:

(Start: 16 @13819 has 50 MA's), (78, 14398), (88, 14443), (94, 14479), (108, 14548), (112, 14569), (113, 14572), (118, 14602), (132, 14722), (143, 14803), (164, 14917), (166, 14944), (193, 15133), (210, 15259), (228, 15373), (229, 15388), (243, 15436), (247, 15466), (249, 15478), (252, 15493), (254, 15508), (260, 15559), (264, 15577), (268, 15595),

Gene: Savbucketdawg\_19 Start: 11635, Stop: 13521, Start Num: 20

Candidate Starts for Savbucketdawg\_19:

(Start: 20 @11635 has 94 MA's), (42, 11872), (44, 11884), (47, 11938), (97, 12319), (102, 12352), (110, 12379), (165, 12745), (166, 12757), (182, 12874), (188, 12919), (189, 12922), (199, 12982), (201, 13000), (206, 13045), (208, 13057), (209, 13060), (227, 13180), (233, 13219), (242, 13279), (253, 13351), (256, 13381), (260, 13405), (265, 13432), (266, 13435), (270, 13462),

Gene: SchottB\_19 Start: 15551, Stop: 17470, Start Num: 20

Candidate Starts for SchottB\_19:

(Start: 20 @15551 has 94 MA's), (30, 15686), (41, 15782), (64, 16076), (77, 16145), (84, 16193), (89, 16217), (95, 16253), (101, 16286), (105, 16310), (125, 16403), (139, 16544), (141, 16550), (147, 16613), (149, 16625), (150, 16628), (152, 16640), (169, 16727), (188, 16850), (192, 16886), (197, 16919), (206, 16991), (212, 17030), (221, 17081), (241, 17225), (242, 17228), (250, 17279), (257, 17336), (258, 17348), (261, 17357),

Gene: Scioto\_21 Start: 15527, Stop: 17449, Start Num: 20

Candidate Starts for Scioto\_21:

(Start: 20 @15527 has 94 MA's), (38, 15743), (41, 15758), (53, 15932), (74, 16070), (75, 16079), (83, 16148), (86, 16154), (95, 16208), (100, 16232), (137, 16484), (139, 16502), (141, 16508), (147, 16571), (149, 16583), (150, 16586), (152, 16598), (169, 16688), (174, 16715), (197, 16874), (207, 16952), (223, 17048), (227, 17084), (240, 17204), (244, 17237), (257, 17321), (265, 17366),

Gene: Scumberland\_28 Start: 14010, Stop: 15866, Start Num: 16

Candidate Starts for Scumberland\_28:

(Start: 16 @14010 has 50 MA's), (78, 14586), (88, 14631), (94, 14667), (108, 14736), (112, 14757), (113, 14760), (118, 14790), (132, 14910), (143, 14991), (164, 15105), (166, 15132), (193, 15321), (210, 15447), (228, 15561), (229, 15576), (243, 15624), (247, 15654), (249, 15666), (252, 15681), (254, 15696), (260, 15747), (264, 15765), (268, 15783),

Gene: Sedona\_22 Start: 16968, Stop: 18863, Start Num: 20

Candidate Starts for Sedona\_22:

(Start: 20 @16968 has 94 MA's), (41, 17199), (44, 17217), (64, 17472), (89, 17610), (101, 17679), (109, 17712), (139, 17937), (141, 17943), (147, 18006), (149, 18018), (150, 18021), (152, 18033), (169, 18120), (188, 18243), (192, 18279), (212, 18423), (221, 18474), (241, 18618), (242, 18621), (243, 18624), (250, 18672), (257, 18729), (278, 18846),

Gene: Selwyn23\_28 Start: 13988, Stop: 15844, Start Num: 16

Candidate Starts for Selwyn23\_28:

(Start: 16 @13988 has 50 MA's), (78, 14564), (88, 14609), (94, 14645), (108, 14714), (112, 14735), (113, 14738), (118, 14768), (132, 14888), (143, 14969), (164, 15083), (166, 15110), (193, 15299), (210, 15425), (228, 15539), (229, 15554), (243, 15602), (247, 15632), (249, 15644), (252, 15659), (254, 15674), (260, 15725), (264, 15743), (268, 15761),

Gene: Shinji\_19 Start: 11824, Stop: 13710, Start Num: 20

Candidate Starts for Shinji\_19:

(Start: 20 @11824 has 94 MA's), (42, 12061), (44, 12073), (47, 12127), (97, 12508), (102, 12541), (110, 12568), (165, 12934), (166, 12946), (182, 13063), (188, 13108), (189, 13111), (199, 13171), (201, 13189), (206, 13234), (208, 13246), (209, 13249), (227, 13369), (233, 13408), (242, 13468), (253, 13540), (256, 13570), (260, 13594), (265, 13621), (266, 13624), (270, 13651),

Gene: Shivanishola\_20 Start: 14945, Stop: 16852, Start Num: 20

Candidate Starts for Shivanishola\_20:

(Start: 20 @14945 has 94 MA's), (41, 15176), (44, 15194), (64, 15461), (89, 15599), (101, 15668), (109, 15701), (139, 15926), (141, 15932), (147, 15995), (149, 16007), (150, 16010), (152, 16022),

(169, 16109), (177, 16163), (188, 16232), (192, 16268), (212, 16412), (221, 16463), (241, 16607), (242, 16610), (243, 16613), (250, 16661), (257, 16718),

Gene: Shotgun\_26 Start: 13617, Stop: 15476, Start Num: 16

Candidate Starts for Shotgun\_26:

(Start: 16 @13617 has 50 MA's), (78, 14196), (88, 14241), (94, 14277), (108, 14346), (112, 14367), (113, 14370), (118, 14400), (132, 14520), (143, 14601), (164, 14715), (166, 14742), (193, 14931), (210, 15057), (228, 15171), (229, 15186), (243, 15234), (247, 15264), (249, 15276), (252, 15291), (254, 15306), (260, 15357), (264, 15375), (268, 15393),

Gene: SilentRX\_21 Start: 13505, Stop: 15193, Start Num: 27

Candidate Starts for SilentRX\_21:

(19, 13445), (21, 13457), (22, 13460), (Start: 27 @13505 has 19 MA's), (145, 14372), (151, 14402), (153, 14414), (170, 14498), (171, 14501), (172, 14504), (183, 14573), (194, 14645), (201, 14693), (218, 14810), (227, 14876), (247, 14993), (258, 15080), (260, 15086),

Gene: Sitar\_22 Start: 16336, Stop: 18231, Start Num: 20

Candidate Starts for Sitar\_22:

(Start: 20 @16336 has 94 MA's), (41, 16567), (44, 16585), (64, 16840), (89, 16978), (101, 17047), (109, 17080), (139, 17305), (141, 17311), (147, 17374), (149, 17386), (150, 17389), (152, 17401), (169, 17488), (188, 17611), (192, 17647), (212, 17791), (221, 17842), (241, 17986), (242, 17989), (243, 17992), (250, 18040), (257, 18097), (278, 18214),

Gene: Smarties\_35 Start: 15581, Stop: 17596, Start Num: 16

Candidate Starts for Smarties\_35:

(Start: 16 @15581 has 50 MA's), (78, 16160), (88, 16205), (94, 16241), (99, 16265), (108, 16310), (112, 16331), (117, 16349), (132, 16484), (162, 16814), (163, 16817), (166, 16874), (167, 16898), (188, 17036), (193, 17063), (209, 17174), (228, 17303), (229, 17318), (232, 17327), (240, 17354), (243, 17366), (247, 17396), (252, 17423), (264, 17507), (268, 17525),

Gene: SmokingBunny\_19 Start: 11842, Stop: 13740, Start Num: 20

Candidate Starts for SmokingBunny\_19:

(Start: 20 @11842 has 94 MA's), (42, 12079), (44, 12091), (47, 12145), (68, 12376), (97, 12538), (102, 12571), (141, 12835), (165, 12964), (166, 12976), (182, 13093), (188, 13138), (189, 13141), (199, 13201), (201, 13219), (204, 13234), (206, 13264), (208, 13276), (209, 13279), (227, 13399), (233, 13438), (242, 13498), (253, 13570), (256, 13600), (260, 13624), (265, 13651), (266, 13654), (270, 13681),

Gene: StorminNorm\_20 Start: 14442, Stop: 16349, Start Num: 20

Candidate Starts for StorminNorm\_20:

(Start: 20 @14442 has 94 MA's), (30, 14577), (41, 14673), (64, 14955), (77, 15024), (84, 15072), (89, 15096), (95, 15132), (101, 15165), (105, 15189), (125, 15282), (139, 15423), (141, 15429), (147, 15492), (149, 15504), (150, 15507), (152, 15519), (169, 15606), (188, 15729), (192, 15765), (206, 15870), (212, 15909), (221, 15960), (240, 16098), (241, 16104), (242, 16107), (250, 16158), (257, 16215), (258, 16227), (261, 16236), (279, 16335),

Gene: Stultus\_20 Start: 14947, Stop: 16842, Start Num: 20

Candidate Starts for Stultus\_20:

(Start: 20 @14947 has 94 MA's), (41, 15178), (44, 15196), (64, 15451), (89, 15589), (101, 15658), (109, 15691), (139, 15916), (141, 15922), (147, 15985), (149, 15997), (150, 16000), (152, 16012), (169, 16099), (188, 16222), (192, 16258), (212, 16402), (221, 16453), (241, 16597), (242, 16600), (243, 16603), (250, 16651), (257, 16708), (278, 16825),

Gene: TP1604\_13 Start: 13751, Stop: 15445, Start Num: 27

Candidate Starts for TP1604\_13:

(Start: 27 @13751 has 19 MA's), (28, 13760), (34, 13862), (50, 13994), (51, 14018), (59, 14114), (76, 14195), (82, 14240), (84, 14249), (92, 14282), (95, 14309), (96, 14312), (107, 14360), (115, 14393), (116, 14396), (124, 14435), (126, 14441), (132, 14519), (136, 14552), (149, 14642), (167, 14717), (169, 14732), (179, 14798), (182, 14810), (183, 14813), (198, 14930), (204, 14963), (208, 15005), (225, 15122), (242, 15218), (251, 15275), (255, 15296), (259, 15338), (261, 15344), (268, 15377), (271, 15401), (277, 15419), (279, 15434),

Gene: Tangent\_18 Start: 14140, Stop: 16047, Start Num: 20

Candidate Starts for Tangent\_18:

(Start: 20 @14140 has 94 MA's), (41, 14371), (44, 14389), (64, 14656), (89, 14794), (101, 14863), (109, 14896), (139, 15121), (141, 15127), (147, 15190), (149, 15202), (150, 15205), (152, 15217), (169, 15304), (177, 15358), (188, 15427), (192, 15463), (212, 15607), (221, 15658), (241, 15802), (242, 15805), (243, 15808), (250, 15856), (257, 15913),

Gene: Tangerine\_20 Start: 14448, Stop: 16355, Start Num: 20

Candidate Starts for Tangerine\_20:

(Start: 20 @14448 has 94 MA's), (30, 14583), (41, 14679), (64, 14961), (77, 15030), (84, 15078), (89, 15102), (95, 15138), (101, 15171), (105, 15195), (125, 15288), (139, 15429), (141, 15435), (147, 15498), (149, 15510), (150, 15513), (152, 15525), (169, 15612), (188, 15735), (192, 15771), (206, 15876), (212, 15915), (221, 15966), (240, 16104), (241, 16110), (242, 16113), (250, 16164), (257, 16221), (258, 16233), (261, 16242), (279, 16341),

Gene: Tank\_20 Start: 13083, Stop: 14846, Start Num: 27

Candidate Starts for Tank\_20:

(18, 13017), (Start: 27 @13083 has 19 MA's), (69, 13521), (79, 13590), (85, 13614), (98, 13683), (115, 13764), (130, 13872), (134, 13923), (135, 13935), (137, 13944), (169, 14136), (171, 14145), (172, 14148), (182, 14214), (184, 14235), (185, 14241), (188, 14259), (205, 14370), (214, 14430), (221, 14469), (225, 14511), (243, 14604), (248, 14643), (273, 14796),

Gene: Tardus\_22 Start: 14807, Stop: 16726, Start Num: 20

Candidate Starts for Tardus\_22:

(Start: 20 @14807 has 94 MA's), (38, 15023), (40, 15035), (41, 15038), (53, 15212), (71, 15326), (74, 15350), (75, 15359), (83, 15425), (86, 15431), (95, 15485), (100, 15509), (137, 15761), (139, 15779), (141, 15785), (147, 15848), (149, 15860), (150, 15863), (152, 15875), (169, 15965), (174, 15992), (197, 16151), (207, 16229), (223, 16325), (244, 16514), (257, 16598), (260, 16616), (266, 16646),

Gene: Teamocil\_28 Start: 13248, Stop: 15266, Start Num: 16

Candidate Starts for Teamocil\_28:

(Start: 16 @13248 has 50 MA's), (60, 13716), (78, 13830), (87, 13869), (94, 13911), (99, 13935), (108, 13980), (112, 14001), (113, 14004), (117, 14019), (124, 14073), (132, 14154), (141, 14214), (156, 14358), (158, 14376), (166, 14544), (167, 14568), (188, 14706), (193, 14733), (209, 14844), (228, 14973), (229, 14988), (240, 15024), (243, 15036), (247, 15066), (252, 15093), (268, 15195),

Gene: Terij\_23 Start: 13292, Stop: 15169, Start Num: 16

Candidate Starts for Terij\_23:

(Start: 16 @13292 has 50 MA's), (78, 13889), (87, 13928), (94, 13970), (112, 14060), (125, 14129), (142, 14282), (164, 14402), (176, 14519), (193, 14618), (195, 14633), (201, 14669), (203, 14675), (209, 14729), (218, 14786), (221, 14801), (223, 14813), (228, 14858), (240, 14921), (247, 14963), (263, 15071),

Gene: Thing3\_21 Start: 15684, Stop: 17591, Start Num: 20

Candidate Starts for Thing3\_21:

(Start: 20 @15684 has 94 MA's), (41, 15915), (44, 15933), (64, 16200), (89, 16338), (101, 16407), (109, 16440), (139, 16665), (141, 16671), (147, 16734), (149, 16746), (150, 16749), (152, 16761), (169, 16848), (177, 16902), (188, 16971), (192, 17007), (212, 17151), (221, 17202), (241, 17346), (242, 17349), (243, 17352), (250, 17400), (257, 17457),

Gene: Tiamoceli\_21 Start: 14601, Stop: 16490, Start Num: 20

Candidate Starts for Tiamoceli\_21:

(17, 14592), (Start: 20 @14601 has 94 MA's), (Start: 27 @14667 has 19 MA's), (41, 14835), (44, 14853), (68, 15126), (84, 15222), (121, 15414), (124, 15429), (131, 15507), (141, 15576), (147, 15639), (149, 15651), (150, 15654), (167, 15738), (169, 15753), (184, 15852), (192, 15906), (206, 16011), (221, 16101), (231, 16182), (240, 16239), (253, 16320), (257, 16356), (269, 16422),

Gene: TillyBobJoe\_19 Start: 11638, Stop: 13524, Start Num: 20

Candidate Starts for TillyBobJoe\_19:

(Start: 20 @11638 has 94 MA's), (42, 11875), (44, 11887), (47, 11941), (97, 12322), (102, 12355), (110, 12382), (165, 12748), (166, 12760), (182, 12877), (188, 12922), (189, 12925), (199, 12985), (201, 13003), (206, 13048), (208, 13060), (209, 13063), (227, 13183), (233, 13222), (242, 13282), (253, 13354), (256, 13384), (260, 13408), (265, 13435), (266, 13438), (270, 13465),

Gene: Togo\_19 Start: 11842, Stop: 13740, Start Num: 20

Candidate Starts for Togo\_19:

(Start: 20 @11842 has 94 MA's), (42, 12079), (44, 12091), (47, 12145), (68, 12376), (97, 12538), (102, 12571), (141, 12835), (165, 12964), (166, 12976), (182, 13093), (188, 13138), (189, 13141), (199, 13201), (201, 13219), (204, 13234), (206, 13264), (208, 13276), (209, 13279), (227, 13399), (233, 13438), (242, 13498), (253, 13570), (256, 13600), (260, 13624), (265, 13651), (266, 13654), (270, 13681),

Gene: TurkishDelight\_17 Start: 12983, Stop: 14710, Start Num: 27

Candidate Starts for TurkishDelight\_17:

(24, 12944), (Start: 27 @12983 has 19 MA's), (32, 13091), (37, 13139), (38, 13148), (48, 13241), (66, 13418), (84, 13514), (107, 13625), (145, 13889), (146, 13898), (155, 13940), (170, 14003), (182, 14075), (183, 14078), (184, 14096), (198, 14177), (200, 14189), (204, 14210), (209, 14255), (225, 14369), (230, 14405), (250, 14516), (251, 14522), (261, 14594), (263, 14606), (276, 14669),

Gene: Twister6\_21 Start: 12280, Stop: 14166, Start Num: 20

Candidate Starts for Twister6\_21:

(Start: 20 @12280 has 94 MA's), (42, 12517), (44, 12529), (47, 12583), (68, 12805), (97, 12967), (102, 13000), (141, 13252), (148, 13324), (165, 13381), (166, 13393), (182, 13510), (188, 13555), (189, 13558), (206, 13681), (208, 13693), (218, 13753), (240, 13906), (242, 13915), (253, 13987), (256, 14017), (269, 14089), (274, 14113),

Gene: Twonlo\_18 Start: 13218, Stop: 15107, Start Num: 20

Candidate Starts for Twonlo\_18:

(17, 13209), (Start: 20 @13218 has 94 MA's), (Start: 27 @13284 has 19 MA's), (41, 13452), (44, 13470), (68, 13743), (84, 13839), (121, 14031), (124, 14046), (131, 14124), (141, 14193), (147, 14256), (149, 14268), (150, 14271), (167, 14355), (169, 14370), (184, 14469), (192, 14523), (206, 14628), (221, 14718), (231, 14799), (240, 14856), (252, 14925), (253, 14937), (257, 14973), (269, 15039),

Gene: Tycho\_20 Start: 14565, Stop: 16484, Start Num: 20

Candidate Starts for Tycho\_20:



(Start: 20 @14565 has 94 MA's), (30, 14700), (41, 14796), (64, 15090), (77, 15159), (84, 15207), (89, 15231), (95, 15267), (101, 15300), (105, 15324), (125, 15417), (139, 15558), (141, 15564), (147, 15627), (149, 15639), (150, 15642), (152, 15654), (169, 15741), (188, 15864), (192, 15900), (197, 15933), (206, 16005), (212, 16044), (221, 16095), (240, 16233), (241, 16239), (242, 16242), (250, 16293), (257, 16350), (258, 16362), (261, 16371),

Gene: Tyrumbra\_25 Start: 12826, Stop: 14847, Start Num: 16

Candidate Starts for Tyrumbra\_25:

(Start: 16 @12826 has 50 MA's), (78, 13411), (94, 13492), (99, 13516), (108, 13561), (112, 13582), (132, 13735), (160, 13993), (162, 14065), (166, 14125), (167, 14149), (188, 14287), (192, 14311), (193, 14314), (209, 14425), (228, 14554), (229, 14569), (232, 14578), (240, 14605), (243, 14617), (247, 14647), (252, 14674), (268, 14776),

Gene: Valary\_22 Start: 12733, Stop: 14619, Start Num: 20

Candidate Starts for Valary\_22:

(Start: 20 @12733 has 94 MA's), (42, 12970), (44, 12982), (47, 13036), (68, 13258), (97, 13420), (102, 13453), (141, 13705), (148, 13777), (165, 13834), (166, 13846), (182, 13963), (188, 14008), (189, 14011), (206, 14134), (208, 14146), (218, 14206), (240, 14359), (242, 14368), (253, 14440), (256, 14470), (269, 14542), (274, 14566),

Gene: VanDeWege\_22 Start: 12661, Stop: 14547, Start Num: 20

Candidate Starts for VanDeWege\_22:

(Start: 20 @12661 has 94 MA's), (42, 12898), (44, 12910), (47, 12964), (68, 13186), (97, 13348), (102, 13381), (141, 13633), (148, 13705), (165, 13762), (166, 13774), (182, 13891), (188, 13936), (189, 13939), (206, 14062), (208, 14074), (218, 14134), (240, 14287), (242, 14296), (253, 14368), (256, 14398), (269, 14470), (274, 14494),

Gene: Verity\_21 Start: 14990, Stop: 16909, Start Num: 20

Candidate Starts for Verity\_21:

(Start: 20 @14990 has 94 MA's), (29, 15089), (38, 15206), (40, 15218), (41, 15221), (53, 15395), (71, 15509), (75, 15542), (83, 15608), (86, 15614), (95, 15668), (100, 15692), (107, 15728), (137, 15944), (139, 15962), (141, 15968), (147, 16031), (149, 16043), (150, 16046), (152, 16058), (169, 16148), (174, 16175), (197, 16334), (207, 16412), (213, 16448), (223, 16508), (228, 16553), (240, 16664), (244, 16697), (257, 16781), (260, 16799), (266, 16829),

Gene: ViaConlectus\_22 Start: 15542, Stop: 17461, Start Num: 20

Candidate Starts for ViaConlectus\_22:

(Start: 20 @15542 has 94 MA's), (38, 15758), (41, 15773), (53, 15947), (75, 16094), (83, 16160), (86, 16166), (95, 16220), (100, 16244), (103, 16268), (137, 16496), (139, 16514), (141, 16520), (147, 16583), (149, 16595), (150, 16598), (152, 16610), (169, 16700), (174, 16727), (197, 16886), (207, 16964), (223, 17060), (227, 17096), (234, 17159), (236, 17189), (240, 17216), (244, 17249), (257, 17333), (265, 17378),

Gene: Vivi2\_20 Start: 15311, Stop: 17209, Start Num: 20

Candidate Starts for Vivi2\_20:

(Start: 20 @15311 has 94 MA's), (41, 15542), (44, 15560), (64, 15818), (89, 15956), (101, 16025), (109, 16058), (139, 16283), (141, 16289), (147, 16352), (149, 16364), (150, 16367), (152, 16379), (169, 16466), (188, 16589), (192, 16625), (212, 16769), (221, 16820), (241, 16964), (242, 16967), (243, 16970), (250, 17018), (257, 17075),

Gene: Wilde\_20 Start: 13011, Stop: 14774, Start Num: 27

Candidate Starts for Wilde\_20:

(18, 12945), (Start: 27 @13011 has 19 MA's), (69, 13449), (79, 13518), (85, 13542), (98, 13611), (115, 13692), (130, 13800), (134, 13851), (135, 13863), (137, 13872), (169, 14064), (171, 14073), (172, 14076), (182, 14142), (184, 14163), (185, 14169), (188, 14187), (205, 14298), (214, 14358), (221, 14397), (225, 14439), (243, 14532), (248, 14571), (273, 14724),

Gene: Wizard\_19 Start: 11982, Stop: 13874, Start Num: 20

Candidate Starts for Wizard\_19:

(Start: 20 @11982 has 94 MA's), (42, 12219), (44, 12231), (47, 12285), (68, 12510), (97, 12672), (102, 12705), (110, 12732), (165, 13098), (166, 13110), (182, 13227), (188, 13272), (189, 13275), (199, 13335), (201, 13353), (206, 13398), (208, 13410), (209, 13413), (227, 13533), (233, 13572), (242, 13632), (253, 13704), (256, 13734), (260, 13758), (265, 13785), (266, 13788), (270, 13815),

Gene: Xkcd426\_14 Start: 14736, Stop: 16433, Start Num: 27

Candidate Starts for Xkcd426\_14:

(26, 14721), (Start: 27 @14736 has 19 MA's), (32, 14823), (49, 14970), (57, 15072), (63, 15117), (82, 15210), (84, 15219), (86, 15225), (96, 15282), (106, 15327), (107, 15330), (117, 15369), (126, 15411), (136, 15522), (176, 15771), (177, 15774), (182, 15798), (187, 15831), (192, 15870), (194, 15876), (204, 15939), (208, 15981), (212, 16008), (213, 16011), (219, 16047), (251, 16257), (259, 16320), (262, 16335), (266, 16353),

Gene: YDN12\_14 Start: 13688, Stop: 15382, Start Num: 27

Candidate Starts for YDN12\_14:

(Start: 27 @13688 has 19 MA's), (28, 13697), (34, 13799), (51, 13955), (59, 14051), (76, 14132), (82, 14177), (84, 14186), (92, 14219), (95, 14246), (96, 14249), (107, 14297), (115, 14330), (116, 14333), (124, 14372), (126, 14378), (130, 14420), (136, 14489), (169, 14669), (179, 14735), (182, 14747), (198, 14867), (204, 14900), (208, 14942), (225, 15059), (242, 15155), (251, 15212), (259, 15275), (261, 15281), (268, 15314), (271, 15338), (277, 15356), (279, 15371),

Gene: Yeti\_27 Start: 13790, Stop: 15646, Start Num: 16

Candidate Starts for Yeti\_27:

(Start: 16 @13790 has 50 MA's), (78, 14366), (88, 14411), (94, 14447), (108, 14516), (112, 14537), (113, 14540), (118, 14570), (132, 14690), (143, 14771), (164, 14885), (166, 14912), (193, 15101), (210, 15227), (228, 15341), (229, 15356), (243, 15404), (247, 15434), (249, 15446), (252, 15461), (254, 15476), (260, 15527), (264, 15545), (268, 15563),

Gene: YorkOnyx\_21 Start: 14834, Stop: 16753, Start Num: 20

Candidate Starts for YorkOnyx\_21:

(Start: 20 @14834 has 94 MA's), (30, 14969), (41, 15065), (64, 15359), (77, 15428), (84, 15476), (89, 15500), (95, 15536), (101, 15569), (105, 15593), (125, 15686), (139, 15827), (141, 15833), (147, 15896), (149, 15908), (150, 15911), (152, 15923), (165, 15959), (167, 15995), (169, 16010), (177, 16064), (188, 16133), (192, 16169), (197, 16202), (206, 16274), (212, 16313), (221, 16364), (240, 16502), (241, 16508), (242, 16511), (250, 16562), (257, 16619), (258, 16631), (261, 16640),

Gene: YungMoney\_21 Start: 13292, Stop: 15184, Start Num: 20

Candidate Starts for YungMoney\_21:

(Start: 20 @13292 has 94 MA's), (42, 13529), (44, 13541), (47, 13595), (97, 13982), (102, 14015), (109, 14039), (141, 14279), (165, 14408), (166, 14420), (168, 14456), (182, 14537), (188, 14582), (189, 14585), (199, 14645), (206, 14708), (208, 14720), (242, 14942), (253, 15014), (256, 15044), (260, 15068), (265, 15095), (266, 15098),

Gene: Zipp\_21 Start: 15639, Stop: 17558, Start Num: 20

Candidate Starts for Zipp\_21:

(Start: 20 @15639 has 94 MA's), (29, 15738), (38, 15855), (40, 15867), (41, 15870), (53, 16044), (71, 16158), (75, 16191), (83, 16257), (86, 16263), (95, 16317), (100, 16341), (107, 16377), (137, 16593), (139, 16611), (141, 16617), (147, 16680), (149, 16692), (150, 16695), (152, 16707), (169, 16797), (174, 16824), (197, 16983), (207, 17061), (213, 17097), (223, 17157), (228, 17202), (240, 17313), (244, 17346), (257, 17430), (260, 17448), (266, 17478),

Gene: Zitch\_23 Start: 14769, Stop: 16688, Start Num: 20

Candidate Starts for Zitch\_23:

(Start: 20 @14769 has 94 MA's), (38, 14988), (40, 15000), (41, 15003), (47, 15075), (53, 15177), (75, 15324), (83, 15390), (86, 15396), (95, 15450), (100, 15474), (103, 15498), (137, 15726), (139, 15744), (141, 15750), (147, 15813), (149, 15825), (150, 15828), (152, 15840), (169, 15930), (174, 15957), (197, 16116), (207, 16194), (223, 16290), (257, 16560), (260, 16578), (266, 16608),