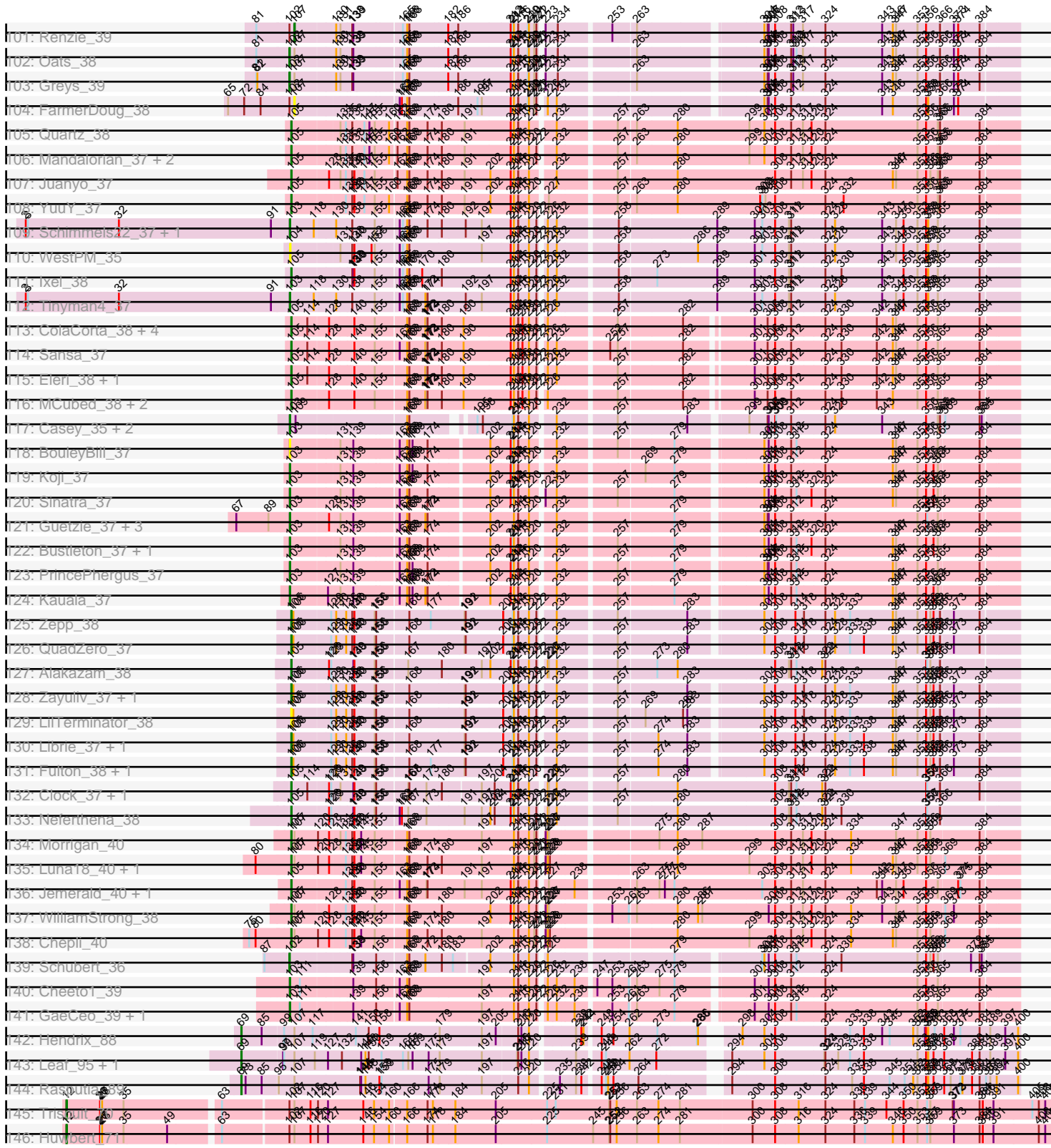


1. Mac06_42	47	51	53	100	130	154	166	177	185	212	222	230	258	281	291	304	310	316	324	336	354	374	397
2. FF47_43	51	53	99	100	130	141	160	175	185	212	222	230	258	281	291	304	310	316	324	336	354	374	397
3. NoShow_53	51	53	99	100	130	154	166	175	185	212	222	230	258	281	291	304	310	316	324	336	354	374	397
4. Muddy_44	47	51	53	100	130	154	166	175	185	212	222	230	258	281	291	304	310	316	324	336	354	374	397
5. 8UZI_44	51	53	99	100	130	154	166	175	185	212	222	230	258	281	291	304	310	316	324	336	354	374	397
6. JacoRen7_40	115	161	174	185	212	222	230	258	281	291	304	310	316	324	336	354	374	397					
7. Adat_36 + 3	174	185	212	222	230	258	281	291	304	310	316	324	336	354	374	397							
8. Jasmine_38	174	185	212	222	230	258	281	291	304	310	316	324	336	354	374	397							
9. Cassiope_35	54	60	69	70	121	160	168	176	189	212	222	230	258	281	291	304	310	316	324	336	354	374	397
10. Zia_45	54	60	69	70	121	160	168	176	189	212	222	230	258	281	291	304	310	316	324	336	354	374	397
11. KimJong_41	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
12. MAnoi_48	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
13. Jamzy_44	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
14. Yummy_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
15. PoiPie_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
16. Buttini_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
17. Sopes_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
18. GoldFury_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
19. SheckV_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
20. Zia_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
21. Anok_44	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
22. Button_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
23. Hippo_41	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
24. GKEZ_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
25. Heibug_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
26. BigChung_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
27. SummitArmy_44	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
28. Frns8_44	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
29. BillJoel_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
30. Yam_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
31. Dre3_44	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
32. MScam_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
33. Burnse_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
34. Elnal_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
35. Ragdear_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
36. Elnaln_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
37. Mavan_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
38. C15038_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
39. AikoCa_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
40. Agaoa_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
41. Steam_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
42. Axym_42	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
43. Lauer_41	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
44. Tiye_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
45. Margat_49	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
46. GIKK_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
47. Quasar_45	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
48. Yakut_42	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
49. Chayonem_46	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266
50. Nollgi_51	51	53	99	101	121	130	138	146	154	162	170	178	186	194	202	210	218	226	234	242	250	258	266



Pham 163306



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 163306 Report

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

Pham number 163306 has 266 members, 42 are drafts.

Phages represented in each track:

- Track 1 : Maco6\_42
- Track 2 : FF47\_43
- Track 3 : NoShow\_52
- Track 4 : Muddy\_44
- Track 5 : 8UZL\_44
- Track 6 : JacoRen57\_40
- Track 7 : Adat\_36, GurgleFerb\_36, Brad\_36, Nellie\_36
- Track 8 : Jasmine\_38
- Track 9 : Casserole\_35
- Track 10 : Zuko\_78
- Track 11 : KimJongPhill\_80
- Track 12 : MAnor\_46
- Track 13 : Jamzy\_48
- Track 14 : Yummy\_45, SketchMex\_43, Horseradish\_45, SweatNTears\_44, Biskit\_45
- Track 15 : PotPie\_45
- Track 16 : Buttrmilkdreams\_45
- Track 17 : Sopespian\_41, Elliott\_43, PsychoKiller\_42
- Track 18 : GoldHunter\_44
- Track 19 : SheckWes\_48
- Track 20 : Zareef\_42, Azira\_40, Nibbles\_39
- Track 21 : Amok\_44
- Track 22 : Button\_46
- Track 23 : HippoPololi\_40
- Track 24 : GTE2\_35
- Track 25 : Hexbug\_51, Orla\_51
- Track 26 : BigChungus\_44, Feastonyeet\_44
- Track 27 : SummitAcademy\_44, Vine\_47
- Track 28 : Fribs8\_39
- Track 29 : BillDoor\_43
- Track 30 : Yarn\_40
- Track 31 : Dre3\_38, Gibbous\_38
- Track 32 : MScarn\_47
- Track 33 : Burnsey\_43
- Track 34 : Elinal\_48, KayGee\_45
- Track 35 : RedBaron\_45
- Track 36 : Emalyn\_42

- Track 37 : MaVan\_40
- Track 38 : Cleo\_38
- Track 39 : AikoCarson\_44
- Track 40 : Agatha\_43, Cozz\_41, Nina\_42
- Track 41 : SteamedHams\_43
- Track 42 : Axym\_42
- Track 43 : Lauer\_41
- Track 44 : Troje\_45
- Track 45 : Margaret\_49
- Track 46 : GiKK\_48
- Track 47 : Quasar\_43
- Track 48 : Yakult\_46
- Track 49 : CherryonLim\_46
- Track 50 : Nodigi\_51
- Track 51 : Typhonmarchy\_43
- Track 52 : Mayweather\_49
- Track 53 : Tolls\_44
- Track 54 : AndPeggy\_40
- Track 55 : Pons\_46
- Track 56 : MunkgeeRoachy\_43
- Track 57 : Survivors\_40
- Track 58 : Mercedes\_34
- Track 59 : Asta\_40, Ludgate\_39, Klimt\_38, Etta\_38, Erla\_38, Gelo\_38, TeddyBear\_38, Superfresh\_39, Bonino\_38, Nagem\_39, Calix\_38, Raptor\_39, Baines\_38, Pocket\_38, SJay\_39, Gershwin\_38
- Track 60 : Acosta\_40
- Track 61 : SonOfLevi\_38, Chamuel\_38
- Track 62 : Nattles\_38, Winzigespinne\_38, Kale\_38, AlexAdler\_39
- Track 63 : BeautPeep30\_39, Phireproof\_39
- Track 64 : BigRedClifford\_39, Blage\_39
- Track 65 : Knox\_39, BonesMcCoy\_39, Convict\_39
- Track 66 : McGalleon\_41
- Track 67 : MonChoix\_37
- Track 68 : MrWorldwide\_39, Duocatuli\_38, Jerbirus\_39, Espinosa\_38, Robinson\_39, AranulaLuti\_38, Clancy\_38, MaeLinda\_39, Janus167\_38, ManRay\_38, Aubergine\_38, JeriBeth\_39, Thorongil\_39, Rapheph\_39, HanSolo\_38, Rog141\_39, Gubbabump\_38, Ilzat\_38, Tenda\_38, HungryHenry\_39, Papafritta\_38, ParleG\_39, Sedgewig\_38, Riyhil\_39, Benjalauen\_39, StingRay\_38, JasperRussell\_38, StirfryIV\_39, KannH\_38, Zada\_39, Figueroism\_39
- Track 69 : Phiderman\_40
- Track 70 : Christoph\_38
- Track 71 : Hamlet\_38
- Track 72 : Oxtober96\_39, Velene\_39, Den3\_39, Lovelyunicorn\_39
- Track 73 : Peppino\_38, Schnapsidee\_38
- Track 74 : Alyxandracam\_39
- Track 75 : Kurt1\_39, Dothraki\_39, TinSulphur\_39, Byron23\_39, Pherferi\_39, Stanktossa\_39, Inventa\_39, Martin\_40, PhredFlintston\_39, Shee\_39, MillyPhilly\_39
- Track 76 : HankSprout\_40, Ioannes\_39
- Track 77 : TatarkaPM\_39
- Track 78 : Antoinette\_39, Peep\_39, Dave\_39
- Track 79 : Redfield\_38
- Track 80 : AxiPup\_39, Vispistious\_39, PuppyEggo\_39, Strathdee\_39
- Track 81 : JasonD\_43

- Track 82 : Endor\_39
- Track 83 : KingJulien\_38, Etna\_38, Stormbreaker8\_38
- Track 84 : Phriends\_39, Delphidian\_40, OldNelly\_39, SoilGremlin\_39
- Track 85 : Teagan\_39
- Track 86 : Gargoyle\_39
- Track 87 : Agente005\_39
- Track 88 : Garey24\_38
- Track 89 : ShaiHulud\_39
- Track 90 : Bandik\_39
- Track 91 : NickSell\_40
- Track 92 : BeeBee8\_39
- Track 93 : Raccoon\_38
- Track 94 : Chako\_38
- Track 95 : Balsa\_38
- Track 96 : WildNOut\_39
- Track 97 : GardenB\_38
- Track 98 : Thompsone\_39
- Track 99 : Jenos\_42
- Track 100 : Leafus\_38
- Track 101 : Renzie\_39
- Track 102 : Oats\_38
- Track 103 : Greys\_39
- Track 104 : FarmerDoug\_38
- Track 105 : Quartz\_38
- Track 106 : Mandalorian\_37, Nucci\_37, Carostasia\_37
- Track 107 : Juanyo\_37
- Track 108 : YuuY\_37
- Track 109 : Schimmels22\_37, HerculesXL\_37
- Track 110 : WestPM\_35
- Track 111 : Ixel\_38
- Track 112 : Tinyman4\_37
- Track 113 : ColaCorta\_38, ChikPic\_38, Andromedas\_38, Glamour\_37, Shamu\_38
- Track 114 : Sansa\_37
- Track 115 : Eleri\_38, Saratos\_38
- Track 116 : MCubed\_38, Finny\_38, Zenitsu\_38
- Track 117 : Casey\_35, Pajaza\_35, Pikmin\_35
- Track 118 : BouleyBill\_37
- Track 119 : Koji\_37
- Track 120 : Sinatra\_37
- Track 121 : Guetzie\_37, SirVictor\_37, Golden\_37, Lucky3\_37
- Track 122 : Bustleton\_37, Pherbot\_37
- Track 123 : PrincePhergus\_37
- Track 124 : Kauala\_37
- Track 125 : Zepp\_38
- Track 126 : QuadZero\_37
- Track 127 : Alakazam\_38
- Track 128 : Zayuliv\_37, Greenlvy\_38
- Track 129 : LilTerminator\_38
- Track 130 : Librie\_37, CaptainRex\_37
- Track 131 : Fulton\_38, Hasitha\_37
- Track 132 : Clock\_37, Nebulous\_37
- Track 133 : Neferthena\_38
- Track 134 : Morrigan\_40

- Track 135 : Luna18\_40, KatChan\_40
- Track 136 : Jemerald\_40, Juicer\_40
- Track 137 : WilliamStrong\_38
- Track 138 : Chepli\_40
- Track 139 : Schubert\_36
- Track 140 : Cheeto1\_39
- Track 141 : GaeCeo\_39, ChickenKing\_38
- Track 142 : Hendrix\_88
- Track 143 : Leaf\_95, Dewdrop\_95
- Track 144 : Rasputia\_89
- Track 145 : Triscuit\_70
- Track 146 : Huwbert\_71

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

The start number called the most often in the published annotations is 102, it was called in 96 of the 224 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acosta\_40, Agente005\_39, AlexAdler\_39, Alyxandracam\_39, Antoinette\_39, AranulaLuti\_38, Asta\_40, Aubergine\_38, AxiPup\_39, Baines\_38, Balsa\_38, Bandik\_39, BeautPeep30\_39, Benjalauren\_39, BigRedClifford\_39, Blage\_39, BonesMcCoy\_39, Bonino\_38, Byron23\_39, Calix\_38, Christoph\_38, Clancy\_38, Convict\_39, Dave\_39, Delphidian\_40, Den3\_39, Dothraki\_39, Duocatuli\_38, Endor\_39, Erla\_38, Espinosa\_38, Etna\_38, Etta\_38, Figueroism\_39, GardenB\_38, Gelo\_38, Gershwin\_38, Greys\_39, Gubbabump\_38, Hamlet\_38, HanSolo\_38, HungryHenry\_39, Ilzat\_38, Inventa\_39, Janus167\_38, JasonD\_43, JasperRussell\_38, Jenos\_42, Jerbirus\_39, JeriBeth\_39, Kale\_38, KannH\_38, KingJulien\_38, Klimt\_38, Knox\_39, Kurt1\_39, Leafus\_38, Lovelyunicorn\_39, Ludgate\_39, MaeLinda\_39, ManRay\_38, Martin\_40, McGalleon\_41, MillyPhilly\_39, MonChoix\_37, MrWorldwide\_39, Nagem\_39, Nattles\_38, Oats\_38, OldNelly\_39, Oxtober96\_39, Papafritta\_38, ParleG\_39, Peep\_39, Peppino\_38, Pherferi\_39, Phireproof\_39, PhredFlintston\_39, Phriends\_39, Pocket\_38, PuppyEggo\_39, Raccoon\_38, Rappheph\_39, Raptor\_39, Redfield\_38, Riyhil\_39, Robinson\_39, Rog141\_39, SJay\_39, Schnapsidee\_38, Schubert\_36, Sedgewig\_38, Shee\_39, SoilGremlin\_39, Stanktossa\_39, StingRay\_38, StirfryIV\_39, Stormbreaker8\_38, Strathdee\_39, Superfresh\_39, Teagan\_39, TeddyBear\_38, Tenda\_38, Thompsone\_39, Thorongil\_39, TinSulphur\_39, Velene\_39, Vispistious\_39, WildNOut\_39, Winzigespinne\_38, Zada\_39,

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

- BeeBee8\_39, Chako\_38, Chamuel\_38, FarmerDoug\_38, Garey24\_38, Gargoyle\_39, HankSprout\_40, Huwbert\_71, Ioannes\_39, NickSell\_40, Phiderman\_40, Renzie\_39, ShaiHulud\_39, SonOfLevi\_38, TatarkaPM\_39, Triscuit\_70,

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

- 8UZL\_44, Adat\_36, Agatha\_43, AikoCarson\_44, Alakazam\_38, Amok\_44, AndPeggy\_40, Andromedas\_38, Axym\_42, Azira\_40, BigChungus\_44, BillDoor\_43, Biskit\_45, BouleyBill\_37, Brad\_36, Burnsey\_43, Bustleton\_37, Button\_46,

Buttrmlkdreams\_45, CaptainRex\_37, Carostasia\_37, Casey\_35, Casserole\_35, Cheeto1\_39, Chepli\_40, CherryonLim\_46, ChickenKing\_38, ChikPic\_38, Cleo\_38, Clock\_37, ColaCorta\_38, Cozz\_41, Dewdrop\_95, Dre3\_38, Eleri\_38, Elinal\_48, Elliott\_43, Emalyn\_42, FF47\_43, Feastonyeet\_44, Finny\_38, Fribs8\_39, Fulton\_38, GTE2\_35, GaeCeo\_39, GiKK\_48, Gibbous\_38, Glamour\_37, GoldHunter\_44, Golden\_37, Greenlvy\_38, Guetzie\_37, GurgleFerb\_36, Hasitha\_37, Hendrix\_88, HerculesXL\_37, Hexbug\_51, HippoPololi\_40, Horseradish\_45, Ixel\_38, JacoRen57\_40, Jamzy\_48, Jasmine\_38, Jemerald\_40, Juanyo\_37, Juicer\_40, KatChan\_40, Kauala\_37, KayGee\_45, KimJongPhill\_80, Koji\_37, Lauer\_41, Leaf\_95, Librie\_37, LilTerminator\_38, Lucky3\_37, Luna18\_40, MAnor\_46, MCubed\_38, MScarn\_47, MaVan\_40, Maco6\_42, Mandalorian\_37, Margaret\_49, Mayweather\_49, Mercedes\_34, Morrigan\_40, Muddy\_44, MunkgeeRoachy\_43, Nebulous\_37, Neferthena\_38, Nellie\_36, Nibbles\_39, Nina\_42, NoShow\_52, Nodigi\_51, Nucci\_37, Orla\_51, Pajaza\_35, Pherbot\_37, Pikmin\_35, Pons\_46, PotPie\_45, PrincePhergus\_37, PsychoKiller\_42, QuadZero\_37, Quartz\_38, Quasar\_43, Rasputia\_89, RedBaron\_45, Sansa\_37, Saratos\_38, Schimmels22\_37, Shamu\_38, SheckWes\_48, Sinatra\_37, SirVictor\_37, SketchMex\_43, Sopespian\_41, SteamedHams\_43, SummitAcademy\_44, Survivors\_40, SweatNTears\_44, Tinyman4\_37, Tolls\_44, Troje\_45, Typhonmacy\_43, Vine\_47, WestPM\_35, WilliamStrong\_38, Yakult\_46, Yarn\_40, Yummy\_45, YuuY\_37, Zareef\_42, Zayuliv\_37, Zenitsu\_38, Zepp\_38, Zuko\_78,

### Summary by start number:

#### Start 6:

- Found in 2 of 266 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 224
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Zuko\_78 (BR),

#### Start 12:

- Found in 2 of 266 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 2 of 224
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Huwbert\_71 (GG), Triscuit\_70 (GG),

#### Start 15:

- Found in 1 of 266 ( 0.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: HippoPololi\_40 (CT),

#### Start 17:

- Found in 23 of 266 ( 8.6% ) of genes in pham
- Manual Annotations of this start: 15 of 224
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agatha\_43 (CT), Axym\_42 (CT), BillDoor\_43 (CT), Biskit\_45 (CT), Burnsey\_43 (CT), Buttrmlkdreams\_45 (CT), Cozz\_41 (CT), Elliott\_43 (CT), GTE2\_35 (CT), GoldHunter\_44 (CT), Horseradish\_45 (CT), MScarn\_47 (CT), MunkgeeRoachy\_43 (CT), Nina\_42 (CT), PsychoKiller\_42 (CT), Quasar\_43 (CT), RedBaron\_45 (CT), SketchMex\_43 (CT), Sopespian\_41 (CT), SweatNTears\_44 (CT), Troje\_45 (CT), Typhonmacy\_43 (CT), Yummy\_45 (CT),



Start 19:

- Found in 2 of 266 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 224
- Called 50.0% of time when present
- Phage (with cluster) where this start called: KimJongPhill\_80 (BR),

Start 22:

- Found in 5 of 266 ( 1.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: FF47\_43 (AB),

Start 23:

- Found in 26 of 266 ( 9.8% ) of genes in pham
- Manual Annotations of this start: 23 of 224
- Called 92.3% of time when present
- Phage (with cluster) where this start called: AikoCarson\_44 (CT), Amok\_44 (CT), AndPeggy\_40 (CT), Azira\_40 (CT), Button\_46 (CT), Cleo\_38 (CT), Dre3\_38 (CT), Emalyn\_42 (CT), Fribs8\_39 (CT), GiKK\_48 (CT), Gibbous\_38 (CT), Hexbug\_51 (CT), Jamzy\_48 (CT), MaVan\_40 (CT), Margaret\_49 (CT), Nibbles\_39 (CT), Nodigi\_51 (CT), Orla\_51 (CT), SteamedHams\_43 (CT), Survivors\_40 (CT), Tolls\_44 (CT), Yakult\_46 (CT), Yarn\_40 (CT), Zareef\_42 (CT),

Start 24:

- Found in 13 of 266 ( 4.9% ) of genes in pham
- Manual Annotations of this start: 10 of 224
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigChungus\_44 (CT), CherryonLim\_46 (CT), Elinal\_48 (CT), Feastonyeet\_44 (CT), KayGee\_45 (CT), Lauer\_41 (CT), MAnor\_46 (CT), Mayweather\_49 (CT), Pons\_46 (CT), PotPie\_45 (CT), SheckWes\_48 (CT), SummitAcademy\_44 (CT), Vine\_47 (CT),

Start 29:

- Found in 3 of 266 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 1 of 224
- Called 33.3% of time when present
- Phage (with cluster) where this start called: NoShow\_52 (AB),

Start 31:

- Found in 19 of 266 ( 7.1% ) of genes in pham
- Manual Annotations of this start: 1 of 224
- Called 5.3% of time when present
- Phage (with cluster) where this start called: JacoRen57\_40 (AB),

Start 34:

- Found in 5 of 266 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 224
- Called 40.0% of time when present
- Phage (with cluster) where this start called: 8UZL\_44 (AB), Muddy\_44 (AB),

Start 40:

- Found in 8 of 266 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 1 of 224

- Called 12.5% of time when present
- Phage (with cluster) where this start called: Maco6\_42 (AB),

#### Start 69:

- Found in 5 of 266 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 4 of 224
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Dewdrop\_95 (GC), Hendrix\_88 (GC), Leaf\_95 (GC), Rasputia\_89 (GC),

#### Start 71:

- Found in 2 of 266 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 224
- Called 50.0% of time when present
- Phage (with cluster) where this start called: TatarkaPM\_39 (EA1),

#### Start 81:

- Found in 102 of 266 ( 38.3% ) of genes in pham
- Manual Annotations of this start: 3 of 224
- Called 2.9% of time when present
- Phage (with cluster) where this start called: Chako\_38 (EA1), Chamuel\_38 (EA1), SonOfLevi\_38 (EA1),

#### Start 102:

- Found in 127 of 266 ( 47.7% ) of genes in pham
- Manual Annotations of this start: 96 of 224
- Called 87.4% of time when present
- Phage (with cluster) where this start called: Acosta\_40 (EA1), Agente005\_39 (EA1), AlexAdler\_39 (EA1), Alyxandracam\_39 (EA1), Antoinette\_39 (EA1), AranulaLuti\_38 (EA1), Asta\_40 (EA1), Aubergine\_38 (EA1), AxiPup\_39 (EA1), Baines\_38 (EA1), Balsa\_38 (EA1), Bandik\_39 (EA1), BeautPeep30\_39 (EA1), Benjalauen\_39 (EA1), BigRedClifford\_39 (EA1), Blage\_39 (EA1), BonesMcCoy\_39 (EA1), Bonino\_38 (EA1), Byron23\_39 (EA1), Calix\_38 (EA1), Christoph\_38 (EA1), Clancy\_38 (EA1), Convict\_39 (EA1), Dave\_39 (EA1), Delphidian\_40 (EA1), Den3\_39 (EA1), Dothraki\_39 (EA1), Duocatuli\_38 (EA1), Endor\_39 (EA1), Erla\_38 (EA1), Espinosa\_38 (EA1), Etna\_38 (EA1), Etta\_38 (EA1), Figueroism\_39 (EA1), GardenB\_38 (EA1), Gelo\_38 (EA1), Gershwin\_38 (EA1), Greys\_39 (EA1), Gubbabump\_38 (EA1), Hamlet\_38 (EA1), HanSolo\_38 (EA1), HungryHenry\_39 (EA1), Ilzat\_38 (EA1), Inventa\_39 (EA1), Janus167\_38 (EA1), JasonD\_43 (EA1), JasperRussell\_38 (EA1), Jenos\_42 (EA1), Jerbirus\_39 (EA1), JeriBeth\_39 (EA1), Kale\_38 (EA1), KannH\_38 (EA1), KingJulien\_38 (EA1), Klimt\_38 (EA1), Knox\_39 (EA1), Kurt1\_39 (EA1), Leafus\_38 (EA1), Lovelyunicorn\_39 (EA1), Ludgate\_39 (EA1), MaeLinda\_39 (EA1), ManRay\_38 (EA1), Martin\_40 (EA1), McGalleon\_41 (EA1), MillyPhilly\_39 (EA1), MonChoix\_37 (EA1), MrWorldwide\_39 (EA1), Nagem\_39 (EA1), Nattles\_38 (EA1), Oats\_38 (EA1), OldNelly\_39 (EA1), Oxtober96\_39 (EA1), Papafritta\_38 (EA1), ParleG\_39 (EA1), Peep\_39 (EA1), Peppino\_38 (EA1), Pherferi\_39 (EA1), Phireproof\_39 (EA1), PhredFlintston\_39 (EA1), Phriends\_39 (EA1), Pocket\_38 (EA1), PuppyEggo\_39 (EA1), Raccoon\_38 (EA1), Rapheph\_39 (EA1), Raptor\_39 (EA1), Redfield\_38 (EA1), Riyhil\_39 (EA1), Robinson\_39 (EA1), Rog141\_39 (EA1), SJay\_39 (EA1), Schnapsidee\_38 (EA1), Schubert\_36 (EA8), Sedgewig\_38 (EA1), Shee\_39 (EA1), SoilGremlin\_39 (EA1), Stanktossa\_39 (EA1), StingRay\_38 (EA1), StirfryIV\_39 (EA1), Stormbreaker8\_38 (EA1), Strathdee\_39 (EA1), Superfresh\_39 (EA1), Teagan\_39 (EA1), TeddyBear\_38 (EA1), Tenda\_38

(EA1), Thompsone\_39 (EA1), Thorongil\_39 (EA1), TinSulphur\_39 (EA1), Velene\_39 (EA1), Vispistious\_39 (EA1), WildNOut\_39 (EA1), Winzigespinne\_38 (EA1), Zada\_39 (EA1),

#### Start 103:

- Found in 20 of 266 ( 7.5% ) of genes in pham
- Manual Annotations of this start: 19 of 224
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BouleyBill\_37 (EA4), Bustleton\_37 (EA4), Casey\_35 (EA3), Cheeto1\_39 (EA9), ChickenKing\_38 (EA9), GaeCeo\_39 (EA9), Golden\_37 (EA4), Guetzie\_37 (EA4), HerculesXL\_37 (EA11), Kaula\_37 (EA4), Koji\_37 (EA4), Lucky3\_37 (EA4), Pajaza\_35 (EA3), Pherbot\_37 (EA4), Pikmin\_35 (EA3), PrincePhergus\_37 (EA4), Schimmels22\_37 (EA11), Sinatra\_37 (EA4), SirVictor\_37 (EA4), Tinyman4\_37 (EA11),

#### Start 104:

- Found in 1 of 266 ( 0.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: WestPM\_35 (EA11),

#### Start 105:

- Found in 39 of 266 ( 14.7% ) of genes in pham
- Manual Annotations of this start: 34 of 224
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alakazam\_38 (EA5), Andromedas\_38 (EA2), CaptainRex\_37 (EA5), Carostasia\_37 (EA10), Chepli\_40 (EA6), ChikPic\_38 (EA2), Clock\_37 (EA5), ColaCorta\_38 (EA2), Eleri\_38 (EA2), Finny\_38 (EA2), Fulton\_38 (EA5), Glamour\_37 (EA2), Greenlvy\_38 (EA5), Hasitha\_37 (EA5), Ixel\_38 (EA11), Jemerald\_40 (EA6), Juanyo\_37 (EA10), Juicer\_40 (EA6), KatChan\_40 (EA6), Librie\_37 (EA5), LilTerminator\_38 (EA5), Luna18\_40 (EA6), MCubed\_38 (EA2), Mandalorian\_37 (EA10), Mercedes\_34 (EA), Morrigan\_40 (EA6), Nebulous\_37 (EA5), Neferthena\_38 (EA5), Nucci\_37 (EA10), QuadZero\_37 (EA5), Quartz\_38 (EA10), Sansa\_37 (EA2), Saratos\_38 (EA2), Shamu\_38 (EA2), WilliamStrong\_38 (EA6), YuuY\_37 (EA10), Zayuliv\_37 (EA5), Zenitsu\_38 (EA2), Zepp\_38 (EA5),

#### Start 107:

- Found in 154 of 266 ( 57.9% ) of genes in pham
- Manual Annotations of this start: 5 of 224
- Called 6.5% of time when present
- Phage (with cluster) where this start called: BeeBee8\_39 (EA1), FarmerDoug\_38 (EA1), Garey24\_38 (EA1), Gargoyle\_39 (EA1), HankSprout\_40 (EA1), Ioannes\_39 (EA1), NickSell\_40 (EA1), Phiderman\_40 (EA1), Renzie\_39 (EA1), ShaiHulud\_39 (EA1),

#### Start 112:

- Found in 6 of 266 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 6 of 224
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adat\_36 (AV), Brad\_36 (AV), Casserole\_35 (AV), GurgleFerb\_36 (AV), Jasmine\_38 (AV), Nellie\_36 (AV),

## Summary by clusters:

There are 17 clusters represented in this pham: GG, AB, EA11, EA10, EA, EA2, EA9, EA8, GC, BR, AV, EA1, EA3, EA6, EA5, EA4, CT,

Info for manual annotations of cluster AB:

- Start number 29 was manually annotated 1 time for cluster AB.
- Start number 31 was manually annotated 1 time for cluster AB.
- Start number 34 was manually annotated 1 time for cluster AB.
- Start number 40 was manually annotated 1 time for cluster AB.

Info for manual annotations of cluster AV:

- Start number 112 was manually annotated 6 times for cluster AV.

Info for manual annotations of cluster BR:

- Start number 6 was manually annotated 1 time for cluster BR.
- Start number 19 was manually annotated 1 time for cluster BR.

Info for manual annotations of cluster CT:

- Start number 17 was manually annotated 15 times for cluster CT.
- Start number 23 was manually annotated 23 times for cluster CT.
- Start number 24 was manually annotated 10 times for cluster CT.

Info for manual annotations of cluster EA:

- Start number 105 was manually annotated 1 time for cluster EA.

Info for manual annotations of cluster EA1:

- Start number 71 was manually annotated 1 time for cluster EA1.
- Start number 81 was manually annotated 3 times for cluster EA1.
- Start number 102 was manually annotated 95 times for cluster EA1.
- Start number 107 was manually annotated 5 times for cluster EA1.

Info for manual annotations of cluster EA10:

- Start number 105 was manually annotated 5 times for cluster EA10.

Info for manual annotations of cluster EA11:

- Start number 103 was manually annotated 3 times for cluster EA11.
- Start number 105 was manually annotated 1 time for cluster EA11.

Info for manual annotations of cluster EA2:

- Start number 105 was manually annotated 11 times for cluster EA2.

Info for manual annotations of cluster EA3:

- Start number 103 was manually annotated 3 times for cluster EA3.

Info for manual annotations of cluster EA4:

- Start number 103 was manually annotated 10 times for cluster EA4.

Info for manual annotations of cluster EA5:

- Start number 105 was manually annotated 9 times for cluster EA5.

Info for manual annotations of cluster EA6:

- Start number 105 was manually annotated 7 times for cluster EA6.

Info for manual annotations of cluster EA8:

- Start number 102 was manually annotated 1 time for cluster EA8.

Info for manual annotations of cluster EA9:

- Start number 103 was manually annotated 3 times for cluster EA9.

Info for manual annotations of cluster GC:

- Start number 69 was manually annotated 4 times for cluster GC.

Info for manual annotations of cluster GG:

- Start number 12 was manually annotated 2 times for cluster GG.

### **Gene Information:**

Gene: 8UZL\_44 Start: 34273, Stop: 31928, Start Num: 34

Candidate Starts for 8UZL\_44:

(22, 34339), (26, 34330), (Start: 31 @34285 has 1 MA's), (Start: 34 @34273 has 1 MA's), (Start: 40 @34234 has 1 MA's), (47, 34177), (57, 34075), (59, 34045), (63, 34015), (100, 33847), (130, 33727), (154, 33625), (166, 33544), (175, 33484), (185, 33418), (212, 33286), (222, 33238), (237, 33166), (238, 33157), (240, 33145), (258, 33076), (287, 32863), (291, 32809), (300, 32728), (304, 32695), (311, 32629), (312, 32623), (313, 32617), (314, 32611), (318, 32587), (321, 32554), (322, 32539), (324, 32530), (343, 32371), (344, 32359), (378, 32131), (384, 32104), (397, 32035),

Gene: Acosta\_40 Start: 29335, Stop: 27470, Start Num: 102

Candidate Starts for Acosta\_40:

(Start: 81 @29422 has 3 MA's), (82, 29419), (Start: 102 @29335 has 96 MA's), (Start: 107 @29326 has 5 MA's), (165, 29059), (166, 29047), (168, 29041), (214, 28759), (216, 28747), (220, 28717), (221, 28702), (222, 28696), (226, 28684), (253, 28528), (257, 28513), (263, 28468), (304, 28153), (308, 28123), (312, 28081), (324, 27994), (330, 27949), (343, 27835), (347, 27796), (353, 27736), (356, 27712), (357, 27709), (358, 27706), (366, 27673), (373, 27640), (374, 27628),

Gene: Adat\_36 Start: 31889, Stop: 30144, Start Num: 112

Candidate Starts for Adat\_36:

(108, 31916), (Start: 112 @31889 has 6 MA's), (113, 31886), (122, 31853), (124, 31847), (142, 31754), (151, 31721), (157, 31694), (174, 31559), (194, 31430), (195, 31424), (200, 31400), (203, 31385), (209, 31358), (215, 31328), (229, 31247), (233, 31238), (241, 31178), (246, 31157), (263, 31043), (267, 31025), (312, 30647), (319, 30629), (327, 30563), (330, 30548), (359, 30329), (370, 30287), (384, 30203), (392, 30170),

Gene: Agatha\_43 Start: 32554, Stop: 30161, Start Num: 17

Candidate Starts for Agatha\_43:

(Start: 17 @32554 has 15 MA's), (25, 32548), (Start: 31 @32500 has 1 MA's), (38, 32458), (44, 32434), (56, 32308), (57, 32284), (63, 32239), (68, 32188), (73, 32173), (78, 32152), (92, 32104), (99, 32071), (101, 32062), (121, 31987), (125, 31975), (137, 31906), (145, 31879), (146, 31873), (150, 31858), (160, 31804), (161, 31801), (163, 31783), (166, 31762), (175, 31702), (195, 31579), (196, 31573), (212, 31504), (221, 31462), (238, 31375), (243, 31351), (247, 31345), (249, 31321), (251, 31312), (255, 31297), (258, 31285), (265, 31243), (266, 31240), (267, 31237), (274, 31201), (286, 31090), (292, 31021), (293, 31015), (297, 30979), (303, 30922), (308, 30886), (311, 30850), (312, 30844), (313, 30838), (314, 30832), (321, 30775), (324, 30751), (330, 30706), (384, 30325), (394, 30280), (395, 30271), (402, 30211), (403, 30193),

Gene: Agente005\_39 Start: 29167, Stop: 27299, Start Num: 102

Candidate Starts for Agente005\_39:

(65, 29332), (72, 29287), (84, 29242), (Start: 102 @29167 has 96 MA's), (Start: 107 @29158 has 5 MA's), (163, 28900), (164, 28894), (166, 28879), (168, 28873), (195, 28687), (212, 28600), (214, 28591), (216, 28579), (219, 28552), (220, 28549), (221, 28534), (222, 28528), (226, 28516), (232, 28492), (279, 28198), (304, 27985), (306, 27976), (308, 27955), (312, 27913), (324, 27823), (330, 27778), (343, 27664), (346, 27634), (353, 27565), (356, 27541), (366, 27502), (374, 27457),

Gene: AikoCarson\_44 Start: 32796, Stop: 30409, Start Num: 23

Candidate Starts for AikoCarson\_44:

(4, 32943), (5, 32901), (9, 32868), (10, 32853), (Start: 23 @32796 has 23 MA's), (26, 32787), (28, 32781), (38, 32700), (49, 32604), (53, 32580), (56, 32553), (57, 32529), (78, 32397), (86, 32370), (90, 32355), (101, 32307), (110, 32277), (121, 32232), (125, 32220), (137, 32154), (150, 32106), (160, 32052), (163, 32031), (166, 32010), (169, 31995), (175, 31950), (195, 31827), (208, 31767), (212, 31752), (221, 31710), (238, 31623), (243, 31599), (247, 31593), (249, 31569), (251, 31560), (265, 31491), (266, 31488), (267, 31485), (281, 31389), (286, 31338), (292, 31269), (293, 31263), (308, 31134), (311, 31098), (312, 31092), (313, 31086), (314, 31080), (318, 31056), (321, 31023), (324, 30999), (330, 30954), (353, 30741), (355, 30720), (360, 30702), (361, 30699), (384, 30573), (394, 30528), (395, 30519),

Gene: Alakazam\_38 Start: 28696, Stop: 26795, Start Num: 105

Candidate Starts for Alakazam\_38:

(Start: 105 @28696 has 34 MA's), (128, 28597), (129, 28591), (139, 28540), (140, 28537), (155, 28486), (156, 28483), (167, 28405), (180, 28312), (197, 28201), (202, 28180), (212, 28126), (213, 28120), (214, 28117), (216, 28105), (220, 28075), (222, 28054), (226, 28042), (227, 28039), (232, 28018), (257, 27871), (273, 27772), (280, 27715), (308, 27448), (311, 27412), (312, 27406), (315, 27391), (322, 27328), (324, 27319), (347, 27121), (356, 27037), (357, 27034), (359, 27025), (366, 26998),

Gene: AlexAdler\_39 Start: 28925, Stop: 27060, Start Num: 102

Candidate Starts for AlexAdler\_39:

(Start: 81 @29012 has 3 MA's), (Start: 102 @28925 has 96 MA's), (Start: 107 @28916 has 5 MA's), (130, 28811), (131, 28802), (138, 28772), (139, 28769), (165, 28649), (166, 28637), (168, 28631), (182, 28526), (186, 28499), (212, 28358), (213, 28352), (214, 28349), (216, 28337), (219, 28310), (220, 28307), (221, 28292), (222, 28286), (223, 28280), (234, 28247), (263, 28058), (304, 27743), (306, 27734), (307, 27731), (308, 27713), (312, 27671), (313, 27665), (317, 27641), (324, 27584), (343, 27425), (346, 27395), (347, 27386), (353, 27326), (356, 27302), (366, 27263), (373, 27230), (374, 27218), (384, 27158),

Gene: Alyxandracam\_39 Start: 28935, Stop: 27070, Start Num: 102

Candidate Starts for Alyxandracam\_39:

(Start: 81 @29022 has 3 MA's), (82, 29019), (Start: 102 @28935 has 96 MA's), (Start: 107 @28926 has 5 MA's), (130, 28821), (131, 28812), (138, 28782), (139, 28779), (164, 28662), (166, 28647), (168, 28641), (182, 28536), (186, 28509), (212, 28368), (214, 28359), (216, 28347), (219, 28320), (220, 28317), (221, 28302), (222, 28296), (223, 28290), (234, 28257), (263, 28068), (304, 27753), (306, 27744), (307, 27741), (308, 27723), (312, 27681), (313, 27675), (317, 27651), (324, 27594), (343, 27435), (346, 27405), (347, 27396), (353, 27336), (356, 27312), (366, 27273), (373, 27240), (374, 27228), (384, 27168),

Gene: Amok\_44 Start: 32820, Stop: 30433, Start Num: 23

Candidate Starts for Amok\_44:

(5, 32925), (9, 32892), (10, 32877), (Start: 23 @32820 has 23 MA's), (26, 32811), (28, 32805), (38, 32724), (49, 32628), (53, 32604), (56, 32577), (57, 32553), (78, 32421), (86, 32394), (90, 32379), (101, 32331), (110, 32301), (121, 32256), (125, 32244), (137, 32178), (150, 32130), (160, 32076), (163, 32055), (166, 32034), (169, 32019), (175, 31974), (195, 31851), (208, 31791), (212, 31776), (221, 31734), (238, 31647), (243, 31623), (247, 31617), (249, 31593), (251, 31584), (265, 31515), (266, 31512), (267, 31509), (281, 31413), (286, 31362), (292, 31293), (293, 31287), (308, 31158), (311, 31122), (312, 31116), (313, 31110), (314, 31104), (318, 31080), (321, 31047), (324, 31023), (330, 30978), (353, 30765), (355, 30744), (360, 30726), (361, 30723), (384, 30597), (394, 30552), (395, 30543),

Gene: AndPeggy\_40 Start: 32151, Stop: 29764, Start Num: 23

Candidate Starts for AndPeggy\_40:

(9, 32223), (10, 32208), (Start: 23 @32151 has 23 MA's), (26, 32142), (28, 32136), (38, 32055), (53, 31935), (57, 31884), (78, 31752), (86, 31725), (110, 31632), (121, 31587), (134, 31527), (137, 31509), (150, 31461), (160, 31407), (161, 31404), (163, 31386), (166, 31365), (172, 31314), (175, 31305), (176, 31302), (188, 31227), (195, 31182), (208, 31122), (212, 31107), (232, 31023), (238, 30978), (243, 30954), (247, 30948), (249, 30924), (265, 30846), (266, 30843), (267, 30840), (286, 30693), (292, 30624), (303, 30525), (308, 30489), (311, 30453), (312, 30447), (313, 30441), (314, 30435), (318, 30411), (321, 30378), (324, 30354), (330, 30309), (337, 30249), (353, 30096), (355, 30075), (360, 30057), (361, 30054), (384, 29928), (394, 29883), (395, 29874),

Gene: Andromedas\_38 Start: 28731, Stop: 26866, Start Num: 105

Candidate Starts for Andromedas\_38:

(Start: 105 @28731 has 34 MA's), (114, 28686), (128, 28632), (140, 28572), (155, 28521), (166, 28443), (168, 28437), (172, 28392), (173, 28389), (174, 28386), (180, 28347), (190, 28287), (212, 28164), (214, 28155), (216, 28143), (218, 28131), (220, 28113), (222, 28092), (226, 28080), (257, 27909), (282, 27741), (301, 27576), (306, 27540), (308, 27519), (312, 27477), (324, 27390), (330, 27345), (342, 27246), (346, 27201), (347, 27192), (353, 27132), (356, 27108), (365, 27075), (384, 26964),

Gene: Antoinette\_39 Start: 28922, Stop: 27057, Start Num: 102

Candidate Starts for Antoinette\_39:

(Start: 81 @29009 has 3 MA's), (82, 29006), (Start: 102 @28922 has 96 MA's), (Start: 107 @28913 has 5 MA's), (130, 28808), (131, 28799), (138, 28769), (139, 28766), (165, 28646), (166, 28634), (168, 28628), (182, 28523), (186, 28496), (212, 28355), (213, 28349), (214, 28346), (216, 28334), (219, 28307), (220, 28304), (221, 28289), (222, 28283), (223, 28277), (234, 28244), (253, 28115), (263, 28055), (286, 27890), (304, 27740), (306, 27731), (307, 27728), (308, 27710), (312, 27668), (313, 27662), (315, 27653), (317, 27638), (324, 27581), (343, 27422), (346, 27392), (347, 27383), (353, 27323), (356, 27299), (366, 27260), (373, 27227), (374, 27215), (384, 27155),

Gene: AranulaLuti\_38 Start: 28619, Stop: 26754, Start Num: 102

Candidate Starts for AranulaLuti\_38:

(Start: 81 @28706 has 3 MA's), (82, 28703), (Start: 102 @28619 has 96 MA's), (Start: 107 @28610 has 5 MA's), (130, 28505), (131, 28496), (138, 28466), (139, 28463), (165, 28343), (166, 28331), (168, 28325), (182, 28220), (186, 28193), (212, 28052), (213, 28046), (214, 28043), (216, 28031), (219, 28004), (220, 28001), (221, 27986), (222, 27980), (223, 27974), (234, 27941), (253, 27812), (263, 27752), (304, 27437), (306, 27428), (307, 27425), (308, 27407), (312, 27365), (313, 27359), (315, 27350), (317, 27335), (324, 27278), (343, 27119), (346, 27089), (347, 27080), (353, 27020), (356, 26996), (366, 26957), (373, 26924), (374, 26912), (384, 26852),

Gene: Asta\_40 Start: 28632, Stop: 26767, Start Num: 102

Candidate Starts for Asta\_40:

(Start: 81 @28719 has 3 MA's), (Start: 102 @28632 has 96 MA's), (Start: 107 @28623 has 5 MA's), (130, 28518), (131, 28509), (138, 28479), (139, 28476), (165, 28356), (166, 28344), (168, 28338), (182, 28233), (186, 28206), (212, 28065), (213, 28059), (214, 28056), (216, 28044), (219, 28017), (220, 28014), (221, 27999), (222, 27993), (223, 27987), (234, 27954), (253, 27825), (263, 27765), (304, 27450), (306, 27441), (307, 27438), (308, 27420), (312, 27378), (313, 27372), (317, 27348), (324, 27291), (343, 27132), (346, 27102), (347, 27093), (353, 27033), (356, 27009), (366, 26970), (373, 26937), (374, 26925), (384, 26865),

Gene: Aubergine\_38 Start: 28632, Stop: 26767, Start Num: 102

Candidate Starts for Aubergine\_38:

(Start: 81 @28719 has 3 MA's), (82, 28716), (Start: 102 @28632 has 96 MA's), (Start: 107 @28623 has 5 MA's), (130, 28518), (131, 28509), (138, 28479), (139, 28476), (165, 28356), (166, 28344), (168, 28338), (182, 28233), (186, 28206), (212, 28065), (213, 28059), (214, 28056), (216, 28044), (219, 28017), (220, 28014), (221, 27999), (222, 27993), (223, 27987), (234, 27954), (253, 27825), (263, 27765), (304, 27450), (306, 27441), (307, 27438), (308, 27420), (312, 27378), (313, 27372), (315, 27363), (317, 27348), (324, 27291), (343, 27132), (346, 27102), (347, 27093), (353, 27033), (356, 27009), (366, 26970), (373, 26937), (374, 26925), (384, 26865),

Gene: AxiPup\_39 Start: 28904, Stop: 27039, Start Num: 102

Candidate Starts for AxiPup\_39:

(Start: 81 @28991 has 3 MA's), (82, 28988), (Start: 102 @28904 has 96 MA's), (Start: 107 @28895 has 5 MA's), (130, 28790), (131, 28781), (138, 28751), (139, 28748), (165, 28628), (166, 28616), (168, 28610), (182, 28505), (186, 28478), (212, 28337), (213, 28331), (214, 28328), (216, 28316), (219, 28289), (220, 28286), (221, 28271), (222, 28265), (223, 28259), (234, 28226), (253, 28097), (263, 28037), (277, 27962), (304, 27722), (306, 27713), (307, 27710), (308, 27692), (312, 27650), (313, 27644), (315, 27635), (317, 27620), (324, 27563), (343, 27404), (346, 27374), (347, 27365), (353, 27305), (356, 27281), (366, 27242), (373, 27209), (374, 27197), (384, 27137),

Gene: Axym\_42 Start: 32451, Stop: 30058, Start Num: 17

Candidate Starts for Axym\_42:

(Start: 17 @32451 has 15 MA's), (25, 32445), (Start: 31 @32397 has 1 MA's), (38, 32355), (44, 32331), (56, 32205), (57, 32181), (63, 32136), (68, 32085), (73, 32070), (78, 32049), (92, 32001), (101, 31959), (121, 31884), (125, 31872), (137, 31803), (145, 31776), (146, 31770), (150, 31755), (160, 31701), (161, 31698), (163, 31680), (166, 31659), (175, 31599), (195, 31476), (196, 31470), (212, 31401), (221, 31359), (238, 31272), (243, 31248), (247, 31242), (249, 31218), (251, 31209), (255, 31194), (258, 31182), (265, 31140), (266, 31137), (267, 31134), (286, 30987), (292, 30918), (293, 30912), (297, 30876), (308, 30783), (311, 30747), (312, 30741), (313, 30735), (314, 30729), (321, 30672), (324, 30648), (330, 30603), (383, 30225), (384, 30222), (394, 30177), (395, 30168), (402, 30108),

Gene: Azira\_40 Start: 32021, Stop: 29664, Start Num: 23

Candidate Starts for Azira\_40:

(18, 32030), (Start: 23 @32021 has 23 MA's), (28, 32006), (30, 31970), (50, 31835), (57, 31772), (62, 31730), (64, 31718), (85, 31616), (88, 31613), (106, 31538), (115, 31499), (121, 31478), (133, 31427), (143, 31385), (150, 31355), (160, 31301), (163, 31280), (166, 31259), (176, 31196), (198, 31061), (201, 31046), (207, 31019), (212, 31001), (232, 30917), (237, 30881), (258, 30788), (265, 30746), (266, 30743), (267, 30740), (271, 30716), (274, 30704), (276, 30692), (288, 30551), (292, 30524), (308, 30389), (311, 30353), (312, 30347), (313, 30341), (314, 30335), (318, 30311), (321, 30278), (324, 30254), (330, 30209), (332, 30203), (339, 30143), (350, 30035), (358, 29966), (361, 29954), (367, 29930), (379, 29852), (384, 29828), (397, 29759),

Gene: Baines\_38 Start: 28622, Stop: 26757, Start Num: 102

Candidate Starts for Baines\_38:



(Start: 81 @28709 has 3 MA's), (Start: 102 @28622 has 96 MA's), (Start: 107 @28613 has 5 MA's), (130, 28508), (131, 28499), (138, 28469), (139, 28466), (165, 28346), (166, 28334), (168, 28328), (182, 28223), (186, 28196), (212, 28055), (213, 28049), (214, 28046), (216, 28034), (219, 28007), (220, 28004), (221, 27989), (222, 27983), (223, 27977), (234, 27944), (253, 27815), (263, 27755), (304, 27440), (306, 27431), (307, 27428), (308, 27410), (312, 27368), (313, 27362), (317, 27338), (324, 27281), (343, 27122), (346, 27092), (347, 27083), (353, 27023), (356, 26999), (366, 26960), (373, 26927), (374, 26915), (384, 26855),

Gene: Balsa\_38 Start: 29055, Stop: 27190, Start Num: 102

Candidate Starts for Balsa\_38:

(Start: 102 @29055 has 96 MA's), (Start: 107 @29046 has 5 MA's), (164, 28782), (166, 28767), (168, 28761), (186, 28629), (195, 28575), (212, 28488), (214, 28479), (216, 28467), (219, 28440), (220, 28437), (221, 28422), (222, 28416), (279, 28086), (304, 27873), (306, 27864), (307, 27861), (308, 27843), (312, 27801), (317, 27771), (324, 27714), (343, 27555), (346, 27525), (353, 27456), (356, 27432), (366, 27393), (373, 27360), (374, 27348),

Gene: Bandik\_39 Start: 28930, Stop: 27065, Start Num: 102

Candidate Starts for Bandik\_39:

(Start: 81 @29017 has 3 MA's), (82, 29014), (Start: 102 @28930 has 96 MA's), (Start: 107 @28921 has 5 MA's), (130, 28816), (131, 28807), (138, 28777), (139, 28774), (165, 28654), (166, 28642), (168, 28636), (182, 28531), (186, 28504), (212, 28363), (213, 28357), (214, 28354), (216, 28342), (219, 28315), (220, 28312), (221, 28297), (222, 28291), (223, 28285), (234, 28252), (263, 28063), (279, 27961), (304, 27748), (306, 27739), (307, 27736), (308, 27718), (312, 27676), (313, 27670), (317, 27646), (324, 27589), (343, 27430), (346, 27400), (347, 27391), (353, 27331), (356, 27307), (366, 27268), (373, 27235), (374, 27223), (384, 27163),

Gene: BeautPeep30\_39 Start: 28936, Stop: 27071, Start Num: 102

Candidate Starts for BeautPeep30\_39:

(Start: 81 @29023 has 3 MA's), (82, 29020), (Start: 102 @28936 has 96 MA's), (Start: 107 @28927 has 5 MA's), (130, 28822), (131, 28813), (138, 28783), (139, 28780), (165, 28660), (166, 28648), (168, 28642), (182, 28537), (186, 28510), (212, 28369), (213, 28363), (214, 28360), (216, 28348), (219, 28321), (220, 28318), (221, 28303), (222, 28297), (223, 28291), (234, 28258), (263, 28069), (304, 27754), (306, 27745), (307, 27742), (308, 27724), (312, 27682), (313, 27676), (317, 27652), (324, 27595), (343, 27436), (346, 27406), (347, 27397), (353, 27337), (356, 27313), (366, 27274), (373, 27241), (374, 27229), (384, 27169),

Gene: BeeBee8\_39 Start: 29216, Stop: 27360, Start Num: 107

Candidate Starts for BeeBee8\_39:

(Start: 102 @29225 has 96 MA's), (Start: 107 @29216 has 5 MA's), (164, 28952), (166, 28937), (168, 28931), (186, 28799), (195, 28745), (212, 28658), (214, 28649), (216, 28637), (219, 28610), (220, 28607), (221, 28592), (222, 28586), (279, 28256), (304, 28043), (306, 28034), (307, 28031), (308, 28013), (312, 27971), (317, 27941), (324, 27884), (343, 27725), (346, 27695), (353, 27626), (356, 27602), (366, 27563), (373, 27530), (374, 27518),

Gene: Benjalauren\_39 Start: 28635, Stop: 26770, Start Num: 102

Candidate Starts for Benjalauren\_39:

(Start: 81 @28722 has 3 MA's), (82, 28719), (Start: 102 @28635 has 96 MA's), (Start: 107 @28626 has 5 MA's), (130, 28521), (131, 28512), (138, 28482), (139, 28479), (165, 28359), (166, 28347), (168, 28341), (182, 28236), (186, 28209), (212, 28068), (213, 28062), (214, 28059), (216, 28047), (219, 28020), (220, 28017), (221, 28002), (222, 27996), (223, 27990), (234, 27957), (253, 27828), (263, 27768), (304, 27453), (306, 27444), (307, 27441), (308, 27423), (312, 27381), (313, 27375), (315, 27366), (317, 27351), (324, 27294), (343, 27135), (346, 27105), (347, 27096), (353, 27036), (356, 27012), (366, 26973), (373, 26940), (374, 26928), (384, 26868),

Gene: BigChungus\_44 Start: 33868, Stop: 31490, Start Num: 24

Candidate Starts for BigChungus\_44:

(Start: 24 @33868 has 10 MA's), (33, 33808), (41, 33766), (46, 33727), (55, 33637), (57, 33607), (58, 33586), (63, 33562), (76, 33484), (77, 33478), (78, 33475), (88, 33445), (92, 33427), (95, 33409), (106, 33370), (Start: 107 @33367 has 5 MA's), (121, 33310), (128, 33286), (130, 33271), (144, 33208), (150, 33184), (153, 33175), (154, 33169), (156, 33163), (160, 33130), (163, 33109), (166, 33088), (195, 32905), (212, 32830), (221, 32788), (238, 32701), (247, 32677), (249, 32653), (251, 32644), (256, 32623), (266, 32572), (267, 32569), (270, 32554), (273, 32533), (287, 32407), (290, 32359), (292, 32350), (297, 32308), (308, 32215), (311, 32179), (312, 32173), (313, 32167), (314, 32161), (321, 32104), (324, 32080), (337, 31975), (338, 31972), (348, 31879), (350, 31861), (353, 31822), (361, 31780), (367, 31756), (373, 31726), (379, 31678), (384, 31654), (388, 31630), (394, 31609), (404, 31522), (407, 31510),

Gene: BigRedClifford\_39 Start: 28934, Stop: 27069, Start Num: 102

Candidate Starts for BigRedClifford\_39:

(Start: 81 @29021 has 3 MA's), (82, 29018), (Start: 102 @28934 has 96 MA's), (Start: 107 @28925 has 5 MA's), (130, 28820), (131, 28811), (138, 28781), (139, 28778), (165, 28658), (166, 28646), (168, 28640), (182, 28535), (186, 28508), (212, 28367), (214, 28358), (216, 28346), (219, 28319), (220, 28316), (221, 28301), (222, 28295), (223, 28289), (234, 28256), (253, 28127), (263, 28067), (304, 27752), (306, 27743), (307, 27740), (308, 27722), (312, 27680), (313, 27674), (315, 27665), (317, 27650), (324, 27593), (343, 27434), (346, 27404), (347, 27395), (353, 27335), (356, 27311), (366, 27272), (373, 27239), (374, 27227), (384, 27167),

Gene: BillDoor\_43 Start: 31825, Stop: 29438, Start Num: 17

Candidate Starts for BillDoor\_43:

(Start: 17 @31825 has 15 MA's), (33, 31762), (44, 31705), (56, 31582), (57, 31558), (78, 31426), (86, 31399), (110, 31306), (121, 31261), (134, 31201), (137, 31183), (150, 31135), (160, 31081), (161, 31078), (163, 31060), (166, 31039), (172, 30988), (175, 30979), (176, 30976), (195, 30856), (208, 30796), (212, 30781), (232, 30697), (238, 30652), (243, 30628), (247, 30622), (249, 30598), (265, 30520), (266, 30517), (267, 30514), (271, 30490), (286, 30367), (292, 30298), (293, 30292), (303, 30199), (308, 30163), (311, 30127), (312, 30121), (313, 30115), (314, 30109), (318, 30085), (321, 30052), (324, 30028), (330, 29983), (337, 29923), (353, 29770), (360, 29731), (361, 29728), (384, 29602), (394, 29557), (395, 29548), (402, 29488),

Gene: Biskit\_45 Start: 32515, Stop: 30125, Start Num: 17

Candidate Starts for Biskit\_45:

(Start: 17 @32515 has 15 MA's), (33, 32452), (37, 32434), (38, 32419), (46, 32365), (47, 32353), (48, 32332), (53, 32299), (56, 32272), (57, 32248), (61, 32221), (78, 32116), (92, 32068), (121, 31951), (137, 31870), (145, 31843), (150, 31822), (160, 31768), (161, 31765), (163, 31747), (166, 31726), (175, 31666), (212, 31468), (221, 31426), (238, 31339), (243, 31315), (247, 31309), (256, 31255), (258, 31249), (265, 31207), (266, 31204), (267, 31201), (286, 31054), (288, 31012), (292, 30985), (297, 30943), (308, 30850), (311, 30814), (312, 30808), (313, 30802), (314, 30796), (318, 30772), (321, 30739), (324, 30715), (330, 30670), (337, 30610), (353, 30457), (384, 30289), (394, 30244), (395, 30235), (396, 30226),

Gene: Blage\_39 Start: 28934, Stop: 27069, Start Num: 102

Candidate Starts for Blage\_39:

(Start: 81 @29021 has 3 MA's), (82, 29018), (Start: 102 @28934 has 96 MA's), (Start: 107 @28925 has 5 MA's), (130, 28820), (131, 28811), (138, 28781), (139, 28778), (165, 28658), (166, 28646), (168, 28640), (182, 28535), (186, 28508), (212, 28367), (214, 28358), (216, 28346), (219, 28319), (220, 28316), (221, 28301), (222, 28295), (223, 28289), (234, 28256), (253, 28127), (263, 28067), (304, 27752), (306, 27743), (307, 27740), (308, 27722), (312, 27680), (313, 27674), (315, 27665), (317,

27650), (324, 27593), (343, 27434), (346, 27404), (347, 27395), (353, 27335), (356, 27311), (366, 27272), (373, 27239), (374, 27227), (384, 27167),

Gene: BonesMcCoy\_39 Start: 28934, Stop: 27069, Start Num: 102

Candidate Starts for BonesMcCoy\_39:

(Start: 81 @29021 has 3 MA's), (82, 29018), (Start: 102 @28934 has 96 MA's), (Start: 107 @28925 has 5 MA's), (130, 28820), (131, 28811), (138, 28781), (139, 28778), (164, 28661), (166, 28646), (168, 28640), (182, 28535), (186, 28508), (212, 28367), (214, 28358), (216, 28346), (219, 28319), (220, 28316), (221, 28301), (222, 28295), (223, 28289), (234, 28256), (263, 28067), (273, 28013), (277, 27992), (304, 27752), (306, 27743), (307, 27740), (308, 27722), (312, 27680), (313, 27674), (317, 27650), (324, 27593), (343, 27434), (346, 27404), (347, 27395), (353, 27335), (356, 27311), (366, 27272), (373, 27239), (374, 27227), (384, 27167),

Gene: Bonino\_38 Start: 28608, Stop: 26743, Start Num: 102

Candidate Starts for Bonino\_38:

(Start: 81 @28695 has 3 MA's), (Start: 102 @28608 has 96 MA's), (Start: 107 @28599 has 5 MA's), (130, 28494), (131, 28485), (138, 28455), (139, 28452), (165, 28332), (166, 28320), (168, 28314), (182, 28209), (186, 28182), (212, 28041), (213, 28035), (214, 28032), (216, 28020), (219, 27993), (220, 27990), (221, 27975), (222, 27969), (223, 27963), (234, 27930), (253, 27801), (263, 27741), (304, 27426), (306, 27417), (307, 27414), (308, 27396), (312, 27354), (313, 27348), (317, 27324), (324, 27267), (343, 27108), (346, 27078), (347, 27069), (353, 27009), (356, 26985), (366, 26946), (373, 26913), (374, 26901), (384, 26841),

Gene: BouleyBill\_37 Start: 28490, Stop: 26640, Start Num: 103

Candidate Starts for BouleyBill\_37:

(Start: 103 @28490 has 19 MA's), (131, 28367), (139, 28334), (163, 28223), (166, 28202), (168, 28196), (169, 28187), (174, 28145), (202, 27989), (212, 27935), (213, 27929), (214, 27926), (216, 27914), (220, 27884), (232, 27827), (257, 27680), (279, 27533), (304, 27323), (307, 27311), (308, 27293), (312, 27251), (315, 27236), (324, 27164), (346, 26975), (347, 26966), (353, 26906), (356, 26882), (365, 26849), (384, 26738),

Gene: Brad\_36 Start: 31887, Stop: 30142, Start Num: 112

Candidate Starts for Brad\_36:

(108, 31914), (Start: 112 @31887 has 6 MA's), (113, 31884), (122, 31851), (124, 31845), (142, 31752), (151, 31719), (157, 31692), (174, 31557), (194, 31428), (195, 31422), (200, 31398), (203, 31383), (209, 31356), (215, 31326), (229, 31245), (233, 31236), (241, 31176), (246, 31155), (263, 31041), (267, 31023), (312, 30645), (319, 30627), (327, 30561), (330, 30546), (359, 30327), (370, 30285), (384, 30201), (392, 30168),

Gene: Burnsey\_43 Start: 32545, Stop: 30152, Start Num: 17

Candidate Starts for Burnsey\_43:

(Start: 17 @32545 has 15 MA's), (25, 32539), (Start: 31 @32491 has 1 MA's), (38, 32449), (44, 32425), (56, 32299), (57, 32275), (63, 32230), (68, 32179), (73, 32164), (78, 32143), (92, 32095), (101, 32053), (121, 31978), (125, 31966), (137, 31897), (146, 31864), (150, 31849), (160, 31795), (161, 31792), (163, 31774), (166, 31753), (175, 31693), (195, 31570), (196, 31564), (212, 31495), (221, 31453), (238, 31366), (243, 31342), (247, 31336), (249, 31312), (251, 31303), (255, 31288), (258, 31276), (265, 31234), (266, 31231), (267, 31228), (286, 31081), (292, 31012), (293, 31006), (297, 30970), (308, 30877), (311, 30841), (312, 30835), (313, 30829), (314, 30823), (321, 30766), (324, 30742), (330, 30697), (384, 30316), (394, 30271), (395, 30262), (402, 30202),

Gene: Bustleton\_37 Start: 28493, Stop: 26643, Start Num: 103

Candidate Starts for Bustleton\_37:

(Start: 103 @28493 has 19 MA's), (131, 28370), (139, 28337), (163, 28226), (166, 28205), (168, 28199), (174, 28148), (202, 27992), (212, 27938), (213, 27932), (214, 27929), (216, 27917), (220, 27887), (232, 27830), (257, 27683), (279, 27536), (304, 27326), (307, 27314), (308, 27296), (312, 27254), (315, 27239), (320, 27203), (324, 27167), (346, 26978), (347, 26969), (353, 26909), (356, 26885), (362, 26864), (365, 26852), (384, 26741),

Gene: Button\_46 Start: 32802, Stop: 30418, Start Num: 23

Candidate Starts for Button\_46:

(Start: 23 @32802 has 23 MA's), (44, 32688), (46, 32658), (57, 32550), (58, 32529), (86, 32391), (90, 32376), (101, 32328), (121, 32253), (123, 32247), (125, 32241), (126, 32235), (137, 32166), (144, 32142), (149, 32121), (150, 32118), (153, 32109), (163, 32043), (166, 32022), (192, 31875), (212, 31761), (222, 31713), (224, 31704), (230, 31683), (232, 31677), (249, 31584), (252, 31572), (266, 31500), (274, 31458), (276, 31446), (288, 31305), (291, 31281), (293, 31266), (297, 31230), (308, 31137), (311, 31101), (312, 31095), (313, 31089), (314, 31083), (321, 31026), (322, 31011), (324, 31002), (343, 30843), (345, 30822), (350, 30783), (353, 30744), (355, 30723), (361, 30702), (364, 30690), (369, 30672), (377, 30609), (378, 30603), (384, 30576), (388, 30552), (394, 30531), (403, 30444),

Gene: Buttrmlkdreams\_45 Start: 32962, Stop: 30572, Start Num: 17

Candidate Starts for Buttrmlkdreams\_45:

(Start: 17 @32962 has 15 MA's), (33, 32899), (37, 32881), (38, 32866), (46, 32812), (47, 32800), (48, 32779), (53, 32746), (56, 32719), (57, 32695), (61, 32668), (78, 32563), (92, 32515), (121, 32398), (137, 32317), (145, 32290), (150, 32269), (161, 32212), (163, 32194), (166, 32173), (175, 32113), (195, 31990), (196, 31984), (212, 31915), (221, 31873), (238, 31786), (243, 31762), (247, 31756), (249, 31732), (251, 31723), (255, 31708), (258, 31696), (265, 31654), (266, 31651), (267, 31648), (286, 31501), (292, 31432), (293, 31426), (297, 31390), (308, 31297), (311, 31261), (312, 31255), (313, 31249), (314, 31243), (321, 31186), (324, 31162), (330, 31117), (384, 30736), (394, 30691), (395, 30682), (402, 30622),

Gene: Byron23\_39 Start: 28933, Stop: 27068, Start Num: 102

Candidate Starts for Byron23\_39:

(Start: 81 @29020 has 3 MA's), (82, 29017), (Start: 102 @28933 has 96 MA's), (Start: 107 @28924 has 5 MA's), (130, 28819), (131, 28810), (138, 28780), (139, 28777), (165, 28657), (166, 28645), (168, 28639), (182, 28534), (186, 28507), (212, 28366), (213, 28360), (214, 28357), (216, 28345), (219, 28318), (220, 28315), (221, 28300), (222, 28294), (223, 28288), (234, 28255), (263, 28066), (304, 27751), (306, 27742), (307, 27739), (308, 27721), (312, 27679), (313, 27673), (315, 27664), (317, 27649), (324, 27592), (343, 27433), (346, 27403), (347, 27394), (353, 27334), (356, 27310), (366, 27271), (373, 27238), (374, 27226), (384, 27166),

Gene: Calix\_38 Start: 28615, Stop: 26750, Start Num: 102

Candidate Starts for Calix\_38:

(Start: 81 @28702 has 3 MA's), (Start: 102 @28615 has 96 MA's), (Start: 107 @28606 has 5 MA's), (130, 28501), (131, 28492), (138, 28462), (139, 28459), (165, 28339), (166, 28327), (168, 28321), (182, 28216), (186, 28189), (212, 28048), (213, 28042), (214, 28039), (216, 28027), (219, 28000), (220, 27997), (221, 27982), (222, 27976), (223, 27970), (234, 27937), (253, 27808), (263, 27748), (304, 27433), (306, 27424), (307, 27421), (308, 27403), (312, 27361), (313, 27355), (317, 27331), (324, 27274), (343, 27115), (346, 27085), (347, 27076), (353, 27016), (356, 26992), (366, 26953), (373, 26920), (374, 26908), (384, 26848),

Gene: CaptainRex\_37 Start: 26990, Stop: 25125, Start Num: 105

Candidate Starts for CaptainRex\_37:

(Start: 105 @26990 has 34 MA's), (106, 26984), (129, 26885), (130, 26876), (136, 26852), (138, 26837), (140, 26831), (155, 26780), (156, 26777), (168, 26696), (191, 26546), (192, 26543), (206,

26444), (213, 26417), (214, 26414), (216, 26402), (220, 26372), (222, 26351), (232, 26315), (257, 26168), (274, 26066), (283, 25988), (304, 25808), (308, 25778), (314, 25724), (318, 25706), (324, 25649), (328, 25622), (333, 25580), (338, 25541), (346, 25460), (347, 25451), (353, 25391), (356, 25367), (359, 25355), (362, 25346), (366, 25328), (373, 25295), (384, 25223),

Gene: Carostasia\_37 Start: 28508, Stop: 26607, Start Num: 105

Candidate Starts for Carostasia\_37:

(Start: 105 @28508 has 34 MA's), (131, 28385), (135, 28370), (138, 28355), (147, 28322), (151, 28313), (155, 28298), (160, 28262), (162, 28247), (166, 28220), (168, 28214), (174, 28163), (180, 28124), (191, 28064), (212, 27938), (214, 27929), (216, 27917), (220, 27887), (222, 27866), (232, 27830), (257, 27683), (263, 27638), (280, 27527), (299, 27332), (304, 27290), (308, 27260), (312, 27218), (317, 27188), (320, 27167), (324, 27131), (353, 26873), (356, 26849), (365, 26816), (366, 26810), (384, 26705),

Gene: Casey\_35 Start: 27722, Stop: 25905, Start Num: 103

Candidate Starts for Casey\_35:

(Start: 103 @27722 has 19 MA's), (109, 27707), (166, 27431), (168, 27425), (195, 27290), (198, 27275), (213, 27197), (214, 27194), (216, 27182), (220, 27152), (232, 27095), (257, 26948), (283, 26768), (299, 26630), (306, 26579), (307, 26576), (308, 26558), (309, 26555), (312, 26516), (324, 26429), (328, 26402), (343, 26270), (356, 26147), (365, 26114), (366, 26108), (369, 26099), (384, 26003), (385, 25997),

Gene: Casserole\_35 Start: 32865, Stop: 31120, Start Num: 112

Candidate Starts for Casserole\_35:

(108, 32892), (Start: 112 @32865 has 6 MA's), (113, 32862), (122, 32829), (124, 32823), (142, 32730), (151, 32697), (157, 32670), (174, 32535), (194, 32406), (195, 32400), (200, 32376), (203, 32361), (209, 32334), (215, 32304), (229, 32223), (233, 32214), (241, 32154), (246, 32133), (263, 32019), (267, 32001), (312, 31623), (319, 31605), (327, 31539), (330, 31524), (359, 31305), (370, 31263), (384, 31179),

Gene: Chako\_38 Start: 28706, Stop: 26754, Start Num: 81

Candidate Starts for Chako\_38:

(Start: 81 @28706 has 3 MA's), (82, 28703), (Start: 102 @28619 has 96 MA's), (Start: 107 @28610 has 5 MA's), (130, 28505), (131, 28496), (138, 28466), (139, 28463), (165, 28343), (166, 28331), (168, 28325), (182, 28220), (186, 28193), (212, 28052), (213, 28046), (214, 28043), (216, 28031), (219, 28004), (220, 28001), (221, 27986), (222, 27980), (223, 27974), (234, 27941), (253, 27812), (263, 27752), (304, 27437), (306, 27428), (307, 27425), (308, 27407), (312, 27365), (313, 27359), (315, 27350), (317, 27335), (324, 27278), (343, 27119), (346, 27089), (347, 27080), (353, 27020), (356, 26996), (366, 26957), (373, 26924), (374, 26912), (384, 26852),

Gene: Chamuel\_38 Start: 28695, Stop: 26743, Start Num: 81

Candidate Starts for Chamuel\_38:

(Start: 81 @28695 has 3 MA's), (Start: 102 @28608 has 96 MA's), (Start: 107 @28599 has 5 MA's), (130, 28494), (131, 28485), (138, 28455), (139, 28452), (165, 28332), (166, 28320), (168, 28314), (182, 28209), (186, 28182), (212, 28041), (213, 28035), (214, 28032), (216, 28020), (219, 27993), (220, 27990), (221, 27975), (222, 27969), (223, 27963), (234, 27930), (253, 27801), (263, 27741), (304, 27426), (306, 27417), (307, 27414), (308, 27396), (312, 27354), (313, 27348), (317, 27324), (324, 27267), (343, 27108), (346, 27078), (347, 27069), (353, 27009), (356, 26985), (366, 26946), (373, 26913), (374, 26901), (384, 26841),

Gene: Cheeto1\_39 Start: 29061, Stop: 27196, Start Num: 103

Candidate Starts for Cheeto1\_39:

(Start: 103 @29061 has 19 MA's), (111, 29037), (139, 28905), (156, 28848), (163, 28794), (166, 28773), (168, 28767), (197, 28566), (214, 28482), (216, 28470), (220, 28440), (222, 28419), (226, 28407), (232, 28383), (238, 28338), (247, 28293), (253, 28251), (261, 28206), (263, 28191), (275, 28131), (279, 28089), (301, 27906), (307, 27867), (308, 27849), (312, 27807), (324, 27720), (353, 27462), (356, 27438), (365, 27405), (384, 27294),

Gene: Chepli\_40 Start: 28352, Stop: 26460, Start Num: 105

Candidate Starts for Chepli\_40:

(75, 28460), (80, 28442), (Start: 105 @28352 has 34 MA's), (Start: 107 @28343 has 5 MA's), (120, 28286), (128, 28256), (135, 28217), (138, 28202), (140, 28196), (145, 28178), (155, 28145), (166, 28067), (168, 28061), (174, 28010), (180, 27971), (197, 27860), (214, 27776), (216, 27764), (220, 27734), (221, 27719), (222, 27713), (223, 27707), (226, 27701), (228, 27695), (280, 27380), (299, 27185), (308, 27113), (312, 27071), (317, 27041), (320, 27020), (324, 26984), (334, 26912), (346, 26795), (347, 26786), (353, 26726), (356, 26702), (359, 26690), (369, 26654), (384, 26558),

Gene: CherryonLim\_46 Start: 35452, Stop: 33086, Start Num: 24

Candidate Starts for CherryonLim\_46:

(Start: 24 @35452 has 10 MA's), (33, 35392), (38, 35365), (41, 35350), (46, 35311), (57, 35206), (63, 35161), (76, 35083), (77, 35077), (78, 35074), (86, 35047), (88, 35044), (95, 35008), (96, 35005), (97, 34996), (106, 34969), (Start: 107 @34966 has 5 MA's), (121, 34909), (130, 34870), (144, 34807), (150, 34783), (156, 34762), (160, 34729), (161, 34726), (163, 34708), (166, 34687), (175, 34627), (195, 34504), (212, 34429), (216, 34408), (221, 34387), (238, 34300), (249, 34252), (256, 34222), (258, 34216), (266, 34171), (267, 34168), (270, 34153), (273, 34132), (276, 34117), (281, 34069), (283, 34048), (290, 33958), (292, 33949), (294, 33934), (295, 33919), (297, 33907), (308, 33814), (311, 33778), (312, 33772), (313, 33766), (314, 33760), (321, 33703), (324, 33679), (337, 33574), (338, 33571), (348, 33478), (350, 33460), (361, 33379), (367, 33355), (373, 33325), (379, 33277), (381, 33268), (384, 33253), (388, 33229), (394, 33208), (401, 33142), (403, 33121), (404, 33115), (406, 33109),

Gene: ChickenKing\_38 Start: 28974, Stop: 27109, Start Num: 103

Candidate Starts for ChickenKing\_38:

(Start: 103 @28974 has 19 MA's), (111, 28950), (139, 28818), (156, 28761), (163, 28707), (166, 28686), (168, 28680), (197, 28479), (214, 28395), (216, 28383), (220, 28353), (222, 28332), (226, 28320), (232, 28296), (238, 28251), (253, 28164), (261, 28119), (263, 28104), (279, 28002), (301, 27819), (307, 27780), (308, 27762), (312, 27720), (315, 27705), (324, 27633), (353, 27375), (356, 27351), (365, 27318), (384, 27207),

Gene: ChikPic\_38 Start: 28741, Stop: 26876, Start Num: 105

Candidate Starts for ChikPic\_38:

(Start: 105 @28741 has 34 MA's), (114, 28696), (128, 28642), (140, 28582), (155, 28531), (166, 28453), (168, 28447), (172, 28402), (173, 28399), (174, 28396), (180, 28357), (190, 28297), (212, 28174), (214, 28165), (216, 28153), (218, 28141), (220, 28123), (222, 28102), (226, 28090), (257, 27919), (282, 27751), (301, 27586), (306, 27550), (308, 27529), (312, 27487), (324, 27400), (330, 27355), (342, 27256), (346, 27211), (347, 27202), (353, 27142), (356, 27118), (365, 27085), (384, 26974),

Gene: Christoph\_38 Start: 28630, Stop: 26765, Start Num: 102

Candidate Starts for Christoph\_38:

(Start: 102 @28630 has 96 MA's), (Start: 107 @28621 has 5 MA's), (130, 28516), (131, 28507), (138, 28477), (139, 28474), (165, 28354), (166, 28342), (168, 28336), (182, 28231), (186, 28204), (212, 28063), (213, 28057), (214, 28054), (216, 28042), (219, 28015), (220, 28012), (221, 27997), (222, 27991), (223, 27985), (234, 27952), (253, 27823), (263, 27763), (304, 27448), (306, 27439), (307, 27436), (308, 27418), (312, 27376), (313, 27370), (315, 27361), (317, 27346), (324, 27289), (343,

27130), (346, 27100), (347, 27091), (353, 27031), (356, 27007), (366, 26968), (373, 26935), (374, 26923), (384, 26863),

Gene: Clancy\_38 Start: 28664, Stop: 26799, Start Num: 102

Candidate Starts for Clancy\_38:

(Start: 81 @28751 has 3 MA's), (82, 28748), (Start: 102 @28664 has 96 MA's), (Start: 107 @28655 has 5 MA's), (130, 28550), (131, 28541), (138, 28511), (139, 28508), (165, 28388), (166, 28376), (168, 28370), (182, 28265), (186, 28238), (212, 28097), (213, 28091), (214, 28088), (216, 28076), (219, 28049), (220, 28046), (221, 28031), (222, 28025), (223, 28019), (234, 27986), (253, 27857), (263, 27797), (304, 27482), (306, 27473), (307, 27470), (308, 27452), (312, 27410), (313, 27404), (315, 27395), (317, 27380), (324, 27323), (343, 27164), (346, 27134), (347, 27125), (353, 27065), (356, 27041), (366, 27002), (373, 26969), (374, 26957), (384, 26897),

Gene: Cleo\_38 Start: 31604, Stop: 29244, Start Num: 23

Candidate Starts for Cleo\_38:

(16, 31628), (Start: 23 @31604 has 23 MA's), (28, 31589), (30, 31553), (50, 31421), (56, 31382), (57, 31358), (62, 31316), (101, 31139), (Start: 107 @31121 has 5 MA's), (121, 31064), (130, 31025), (150, 30938), (160, 30884), (163, 30863), (166, 30842), (198, 30644), (207, 30602), (212, 30584), (232, 30500), (237, 30464), (258, 30371), (266, 30326), (271, 30299), (274, 30287), (276, 30275), (288, 30134), (297, 30065), (302, 30014), (307, 29990), (308, 29972), (311, 29936), (312, 29930), (313, 29924), (314, 29918), (318, 29894), (321, 29861), (324, 29837), (330, 29792), (331, 29789), (339, 29726), (340, 29699), (350, 29618), (358, 29549), (361, 29537), (367, 29513), (378, 29438), (379, 29435), (384, 29411), (388, 29387), (394, 29366), (397, 29342), (402, 29297), (403, 29279),

Gene: Clock\_37 Start: 29844, Stop: 27952, Start Num: 105

Candidate Starts for Clock\_37:

(Start: 105 @29844 has 34 MA's), (114, 29799), (128, 29745), (129, 29739), (131, 29721), (139, 29688), (140, 29685), (155, 29634), (156, 29631), (167, 29553), (168, 29550), (173, 29502), (180, 29460), (197, 29358), (204, 29325), (212, 29283), (213, 29277), (214, 29274), (216, 29262), (220, 29232), (226, 29199), (227, 29196), (232, 29175), (257, 29028), (280, 28872), (308, 28605), (311, 28569), (312, 28563), (315, 28548), (322, 28485), (324, 28476), (356, 28194), (357, 28191), (366, 28155), (384, 28050),

Gene: ColaCorta\_38 Start: 28731, Stop: 26866, Start Num: 105

Candidate Starts for ColaCorta\_38:

(Start: 105 @28731 has 34 MA's), (114, 28686), (128, 28632), (140, 28572), (155, 28521), (166, 28443), (168, 28437), (172, 28392), (173, 28389), (174, 28386), (180, 28347), (190, 28287), (212, 28164), (214, 28155), (216, 28143), (218, 28131), (220, 28113), (222, 28092), (226, 28080), (257, 27909), (282, 27741), (301, 27576), (306, 27540), (308, 27519), (312, 27477), (324, 27390), (330, 27345), (342, 27246), (346, 27201), (347, 27192), (353, 27132), (356, 27108), (365, 27075), (384, 26964),

Gene: Convict\_39 Start: 28934, Stop: 27069, Start Num: 102

Candidate Starts for Convict\_39:

(Start: 81 @29021 has 3 MA's), (82, 29018), (Start: 102 @28934 has 96 MA's), (Start: 107 @28925 has 5 MA's), (130, 28820), (131, 28811), (138, 28781), (139, 28778), (164, 28661), (166, 28646), (168, 28640), (182, 28535), (186, 28508), (212, 28367), (214, 28358), (216, 28346), (219, 28319), (220, 28316), (221, 28301), (222, 28295), (223, 28289), (234, 28256), (263, 28067), (273, 28013), (277, 27992), (304, 27752), (306, 27743), (307, 27740), (308, 27722), (312, 27680), (313, 27674), (317, 27650), (324, 27593), (343, 27434), (346, 27404), (347, 27395), (353, 27335), (356, 27311), (366, 27272), (373, 27239), (374, 27227), (384, 27167),

Gene: Cozz\_41 Start: 32142, Stop: 29749, Start Num: 17

Candidate Starts for Cozz\_41:

(Start: 17 @32142 has 15 MA's), (25, 32136), (Start: 31 @32088 has 1 MA's), (38, 32046), (44, 32022), (56, 31896), (57, 31872), (63, 31827), (68, 31776), (73, 31761), (78, 31740), (92, 31692), (99, 31659), (101, 31650), (121, 31575), (125, 31563), (137, 31494), (145, 31467), (146, 31461), (150, 31446), (160, 31392), (161, 31389), (163, 31371), (166, 31350), (175, 31290), (195, 31167), (196, 31161), (212, 31092), (221, 31050), (238, 30963), (243, 30939), (247, 30933), (249, 30909), (251, 30900), (255, 30885), (258, 30873), (265, 30831), (266, 30828), (267, 30825), (274, 30789), (286, 30678), (292, 30609), (293, 30603), (297, 30567), (303, 30510), (308, 30474), (311, 30438), (312, 30432), (313, 30426), (314, 30420), (321, 30363), (324, 30339), (330, 30294), (384, 29913), (394, 29868), (395, 29859), (402, 29799), (403, 29781),

Gene: Dave\_39 Start: 28922, Stop: 27057, Start Num: 102

Candidate Starts for Dave\_39:

(Start: 81 @29009 has 3 MA's), (82, 29006), (Start: 102 @28922 has 96 MA's), (Start: 107 @28913 has 5 MA's), (130, 28808), (131, 28799), (138, 28769), (139, 28766), (165, 28646), (166, 28634), (168, 28628), (182, 28523), (186, 28496), (212, 28355), (213, 28349), (214, 28346), (216, 28334), (219, 28307), (220, 28304), (221, 28289), (222, 28283), (223, 28277), (234, 28244), (253, 28115), (263, 28055), (286, 27890), (304, 27740), (306, 27731), (307, 27728), (308, 27710), (312, 27668), (313, 27662), (315, 27653), (317, 27638), (324, 27581), (343, 27422), (346, 27392), (347, 27383), (353, 27323), (356, 27299), (366, 27260), (373, 27227), (374, 27215), (384, 27155),

Gene: Delphidian\_40 Start: 28933, Stop: 27068, Start Num: 102

Candidate Starts for Delphidian\_40:

(Start: 81 @29020 has 3 MA's), (Start: 102 @28933 has 96 MA's), (Start: 107 @28924 has 5 MA's), (130, 28819), (131, 28810), (138, 28780), (139, 28777), (165, 28657), (166, 28645), (168, 28639), (182, 28534), (186, 28507), (212, 28366), (213, 28360), (214, 28357), (216, 28345), (219, 28318), (220, 28315), (221, 28300), (222, 28294), (223, 28288), (234, 28255), (253, 28126), (263, 28066), (304, 27751), (306, 27742), (307, 27739), (308, 27721), (312, 27679), (313, 27673), (315, 27664), (317, 27649), (324, 27592), (343, 27433), (346, 27403), (347, 27394), (353, 27334), (356, 27310), (366, 27271), (373, 27238), (374, 27226), (384, 27166),

Gene: Den3\_39 Start: 28939, Stop: 27074, Start Num: 102

Candidate Starts for Den3\_39:

(Start: 81 @29026 has 3 MA's), (82, 29023), (98, 28954), (Start: 102 @28939 has 96 MA's), (Start: 107 @28930 has 5 MA's), (130, 28825), (131, 28816), (138, 28786), (139, 28783), (165, 28663), (166, 28651), (168, 28645), (182, 28540), (186, 28513), (212, 28372), (214, 28363), (216, 28351), (219, 28324), (220, 28321), (221, 28306), (222, 28300), (223, 28294), (234, 28261), (263, 28072), (304, 27757), (306, 27748), (307, 27745), (308, 27727), (312, 27685), (313, 27679), (317, 27655), (324, 27598), (343, 27439), (346, 27409), (347, 27400), (353, 27340), (356, 27316), (366, 27277), (373, 27244), (374, 27232), (384, 27172),

Gene: Dewdrop\_95 Start: 58518, Stop: 60557, Start Num: 69

Candidate Starts for Dewdrop\_95:

(Start: 69 @58518 has 4 MA's), (97, 58629), (99, 58632), (Start: 107 @58659 has 5 MA's), (119, 58716), (127, 58752), (132, 58791), (145, 58845), (148, 58857), (150, 58866), (159, 58902), (165, 58962), (167, 58977), (169, 58989), (175, 59034), (179, 59064), (197, 59178), (215, 59271), (216, 59274), (217, 59283), (220, 59301), (239, 59409), (248, 59463), (249, 59475), (262, 59541), (272, 59610), (294, 59763), (304, 59847), (308, 59877), (323, 60009), (324, 60012), (329, 60048), (333, 60081), (338, 60120), (353, 60270), (356, 60294), (358, 60300), (362, 60315), (368, 60345), (380, 60423), (384, 60444), (389, 60474), (397, 60516), (400, 60552),

Gene: Dothraki\_39 Start: 28930, Stop: 27065, Start Num: 102

Candidate Starts for Dothraki\_39:



(Start: 81 @29017 has 3 MA's), (82, 29014), (Start: 102 @28930 has 96 MA's), (Start: 107 @28921 has 5 MA's), (130, 28816), (131, 28807), (138, 28777), (139, 28774), (165, 28654), (166, 28642), (168, 28636), (182, 28531), (186, 28504), (212, 28363), (213, 28357), (214, 28354), (216, 28342), (219, 28315), (220, 28312), (221, 28297), (222, 28291), (223, 28285), (234, 28252), (263, 28063), (304, 27748), (306, 27739), (307, 27736), (308, 27718), (312, 27676), (313, 27670), (315, 27661), (317, 27646), (324, 27589), (343, 27430), (346, 27400), (347, 27391), (353, 27331), (356, 27307), (366, 27268), (373, 27235), (374, 27223), (384, 27163),

Gene: Dre3\_38 Start: 31347, Stop: 28987, Start Num: 23

Candidate Starts for Dre3\_38:

(16, 31371), (Start: 23 @31347 has 23 MA's), (28, 31332), (30, 31296), (56, 31125), (57, 31101), (Start: 107 @30864 has 5 MA's), (121, 30807), (130, 30768), (134, 30747), (150, 30681), (160, 30627), (163, 30606), (166, 30585), (198, 30387), (207, 30345), (212, 30327), (215, 30309), (227, 30264), (231, 30246), (232, 30243), (237, 30207), (258, 30114), (266, 30069), (271, 30042), (274, 30030), (276, 30018), (288, 29877), (297, 29808), (302, 29757), (307, 29733), (308, 29715), (310, 29706), (311, 29679), (312, 29673), (313, 29667), (314, 29661), (321, 29604), (324, 29580), (330, 29535), (331, 29532), (339, 29469), (350, 29361), (358, 29292), (361, 29280), (367, 29256), (378, 29181), (379, 29178), (384, 29154), (388, 29130), (394, 29109), (397, 29085), (402, 29040), (403, 29022),

Gene: Duocatuli\_38 Start: 28619, Stop: 26754, Start Num: 102

Candidate Starts for Duocatuli\_38:

(Start: 81 @28706 has 3 MA's), (82, 28703), (Start: 102 @28619 has 96 MA's), (Start: 107 @28610 has 5 MA's), (130, 28505), (131, 28496), (138, 28466), (139, 28463), (165, 28343), (166, 28331), (168, 28325), (182, 28220), (186, 28193), (212, 28052), (213, 28046), (214, 28043), (216, 28031), (219, 28004), (220, 28001), (221, 27986), (222, 27980), (223, 27974), (234, 27941), (253, 27812), (263, 27752), (304, 27437), (306, 27428), (307, 27425), (308, 27407), (312, 27365), (313, 27359), (315, 27350), (317, 27335), (324, 27278), (343, 27119), (346, 27089), (347, 27080), (353, 27020), (356, 26996), (366, 26957), (373, 26924), (374, 26912), (384, 26852),

Gene: Eleri\_38 Start: 28732, Stop: 26867, Start Num: 105

Candidate Starts for Eleri\_38:

(Start: 105 @28732 has 34 MA's), (114, 28687), (128, 28633), (140, 28573), (155, 28522), (166, 28444), (168, 28438), (172, 28393), (173, 28390), (174, 28387), (180, 28348), (190, 28288), (212, 28165), (214, 28156), (216, 28144), (218, 28132), (220, 28114), (222, 28093), (226, 28081), (232, 28057), (257, 27910), (282, 27742), (301, 27577), (306, 27541), (308, 27520), (312, 27478), (324, 27391), (330, 27346), (342, 27247), (346, 27202), (347, 27193), (353, 27133), (356, 27109), (365, 27076), (384, 26965),

Gene: Elinal\_48 Start: 34208, Stop: 31833, Start Num: 24

Candidate Starts for Elinal\_48:

(Start: 24 @34208 has 10 MA's), (33, 34148), (41, 34106), (46, 34067), (57, 33947), (58, 33926), (63, 33902), (76, 33824), (77, 33818), (78, 33815), (88, 33785), (92, 33767), (95, 33749), (106, 33710), (Start: 107 @33707 has 5 MA's), (121, 33650), (128, 33626), (130, 33611), (144, 33548), (150, 33524), (153, 33515), (154, 33509), (156, 33503), (160, 33470), (163, 33449), (166, 33428), (195, 33245), (212, 33170), (221, 33128), (247, 33017), (249, 32993), (256, 32963), (266, 32912), (267, 32909), (270, 32894), (273, 32873), (290, 32699), (292, 32690), (295, 32660), (308, 32555), (311, 32519), (312, 32513), (313, 32507), (314, 32501), (321, 32444), (324, 32420), (337, 32315), (338, 32312), (348, 32219), (350, 32201), (353, 32162), (361, 32120), (367, 32096), (373, 32066), (379, 32018), (384, 31994), (394, 31949), (404, 31862),

Gene: Elliott\_43 Start: 32440, Stop: 30047, Start Num: 17

Candidate Starts for Elliott\_43:

(Start: 17 @32440 has 15 MA's), (25, 32434), (Start: 31 @32386 has 1 MA's), (38, 32344), (44, 32320), (56, 32194), (57, 32170), (63, 32125), (68, 32074), (73, 32059), (78, 32038), (92, 31990), (99, 31957), (101, 31948), (121, 31873), (125, 31861), (137, 31792), (145, 31765), (146, 31759), (150, 31744), (160, 31690), (161, 31687), (163, 31669), (166, 31648), (175, 31588), (195, 31465), (196, 31459), (212, 31390), (221, 31348), (238, 31261), (243, 31237), (247, 31231), (249, 31207), (251, 31198), (255, 31183), (258, 31171), (265, 31129), (266, 31126), (267, 31123), (286, 30976), (288, 30934), (292, 30907), (293, 30901), (308, 30772), (311, 30736), (312, 30730), (313, 30724), (314, 30718), (321, 30661), (324, 30637), (330, 30592), (383, 30214), (384, 30211), (394, 30166), (395, 30157), (402, 30097),

Gene: Emalyn\_42 Start: 31612, Stop: 29225, Start Num: 23

Candidate Starts for Emalyn\_42:

(4, 31759), (5, 31717), (9, 31684), (10, 31669), (Start: 23 @31612 has 23 MA's), (26, 31603), (28, 31597), (38, 31516), (49, 31420), (53, 31396), (56, 31369), (57, 31345), (78, 31213), (86, 31186), (90, 31171), (101, 31123), (110, 31093), (121, 31048), (125, 31036), (137, 30970), (150, 30922), (160, 30868), (163, 30847), (166, 30826), (169, 30811), (175, 30766), (195, 30643), (208, 30583), (212, 30568), (221, 30526), (238, 30439), (243, 30415), (247, 30409), (249, 30385), (251, 30376), (265, 30307), (266, 30304), (267, 30301), (281, 30205), (286, 30154), (292, 30085), (293, 30079), (308, 29950), (311, 29914), (312, 29908), (313, 29902), (314, 29896), (321, 29839), (324, 29815), (330, 29770), (337, 29710), (353, 29557), (360, 29518), (361, 29515), (384, 29389), (394, 29344), (395, 29335),

Gene: Endor\_39 Start: 29287, Stop: 27419, Start Num: 102

Candidate Starts for Endor\_39:

(80, 29374), (Start: 102 @29287 has 96 MA's), (Start: 107 @29278 has 5 MA's), (164, 29014), (165, 29011), (166, 28999), (168, 28993), (195, 28807), (212, 28720), (214, 28711), (216, 28699), (219, 28672), (220, 28669), (221, 28654), (222, 28648), (226, 28636), (279, 28318), (304, 28105), (306, 28096), (308, 28075), (312, 28033), (324, 27943), (343, 27784), (346, 27754), (353, 27685), (356, 27661), (366, 27622), (373, 27589), (374, 27577),

Gene: Erla\_38 Start: 28612, Stop: 26747, Start Num: 102

Candidate Starts for Erla\_38:

(Start: 81 @28699 has 3 MA's), (Start: 102 @28612 has 96 MA's), (Start: 107 @28603 has 5 MA's), (130, 28498), (131, 28489), (138, 28459), (139, 28456), (165, 28336), (166, 28324), (168, 28318), (182, 28213), (186, 28186), (212, 28045), (213, 28039), (214, 28036), (216, 28024), (219, 27997), (220, 27994), (221, 27979), (222, 27973), (223, 27967), (234, 27934), (253, 27805), (263, 27745), (304, 27430), (306, 27421), (307, 27418), (308, 27400), (312, 27358), (313, 27352), (317, 27328), (324, 27271), (343, 27112), (346, 27082), (347, 27073), (353, 27013), (356, 26989), (366, 26950), (373, 26917), (374, 26905), (384, 26845),

Gene: Espinosa\_38 Start: 28630, Stop: 26765, Start Num: 102

Candidate Starts for Espinosa\_38:

(Start: 81 @28717 has 3 MA's), (82, 28714), (Start: 102 @28630 has 96 MA's), (Start: 107 @28621 has 5 MA's), (130, 28516), (131, 28507), (138, 28477), (139, 28474), (165, 28354), (166, 28342), (168, 28336), (182, 28231), (186, 28204), (212, 28063), (213, 28057), (214, 28054), (216, 28042), (219, 28015), (220, 28012), (221, 27997), (222, 27991), (223, 27985), (234, 27952), (253, 27823), (263, 27763), (304, 27448), (306, 27439), (307, 27436), (308, 27418), (312, 27376), (313, 27370), (315, 27361), (317, 27346), (324, 27289), (343, 27130), (346, 27100), (347, 27091), (353, 27031), (356, 27007), (366, 26968), (373, 26935), (374, 26923), (384, 26863),

Gene: Etna\_38 Start: 29066, Stop: 27201, Start Num: 102

Candidate Starts for Etna\_38:

(Start: 102 @29066 has 96 MA's), (Start: 107 @29057 has 5 MA's), (164, 28793), (166, 28778), (168, 28772), (186, 28640), (195, 28586), (197, 28574), (212, 28499), (214, 28490), (216, 28478), (219, 28451), (220, 28448), (221, 28433), (222, 28427), (226, 28415), (238, 28346), (279, 28097), (304, 27884), (306, 27875), (307, 27872), (308, 27854), (312, 27812), (324, 27725), (343, 27566), (346, 27536), (353, 27467), (356, 27443), (366, 27404), (373, 27371), (374, 27359),

Gene: Etta\_38 Start: 28616, Stop: 26751, Start Num: 102

Candidate Starts for Etta\_38:

(Start: 81 @28703 has 3 MA's), (Start: 102 @28616 has 96 MA's), (Start: 107 @28607 has 5 MA's), (130, 28502), (131, 28493), (138, 28463), (139, 28460), (165, 28340), (166, 28328), (168, 28322), (182, 28217), (186, 28190), (212, 28049), (213, 28043), (214, 28040), (216, 28028), (219, 28001), (220, 27998), (221, 27983), (222, 27977), (223, 27971), (234, 27938), (253, 27809), (263, 27749), (304, 27434), (306, 27425), (307, 27422), (308, 27404), (312, 27362), (313, 27356), (317, 27332), (324, 27275), (343, 27116), (346, 27086), (347, 27077), (353, 27017), (356, 26993), (366, 26954), (373, 26921), (374, 26909), (384, 26849),

Gene: FF47\_43 Start: 34250, Stop: 31839, Start Num: 22

Candidate Starts for FF47\_43:

(22, 34250), (26, 34241), (Start: 31 @34196 has 1 MA's), (Start: 34 @34184 has 1 MA's), (Start: 40 @34145 has 1 MA's), (57, 33986), (59, 33956), (63, 33926), (100, 33758), (130, 33638), (154, 33536), (166, 33455), (175, 33395), (185, 33329), (212, 33197), (222, 33149), (237, 33077), (238, 33068), (240, 33056), (258, 32987), (287, 32774), (291, 32720), (300, 32639), (304, 32606), (311, 32540), (312, 32534), (313, 32528), (314, 32522), (318, 32498), (321, 32465), (322, 32450), (324, 32441), (343, 32282), (344, 32270), (378, 32042), (384, 32015), (397, 31946),

Gene: FarmerDoug\_38 Start: 28909, Stop: 27050, Start Num: 107

Candidate Starts for FarmerDoug\_38:

(65, 29086), (72, 29041), (84, 28996), (Start: 102 @28918 has 96 MA's), (Start: 107 @28909 has 5 MA's), (163, 28651), (164, 28645), (166, 28630), (168, 28624), (186, 28492), (195, 28438), (197, 28426), (212, 28351), (214, 28342), (216, 28330), (219, 28303), (220, 28300), (221, 28285), (222, 28279), (226, 28267), (232, 28243), (304, 27736), (306, 27727), (307, 27724), (308, 27706), (312, 27664), (324, 27574), (343, 27415), (346, 27385), (353, 27316), (356, 27292), (358, 27286), (366, 27253), (373, 27220), (374, 27208),

Gene: Feastonyeet\_44 Start: 33868, Stop: 31490, Start Num: 24

Candidate Starts for Feastonyeet\_44:

(Start: 24 @33868 has 10 MA's), (33, 33808), (41, 33766), (46, 33727), (55, 33637), (57, 33607), (58, 33586), (63, 33562), (76, 33484), (77, 33478), (78, 33475), (88, 33445), (92, 33427), (95, 33409), (106, 33370), (Start: 107 @33367 has 5 MA's), (121, 33310), (128, 33286), (130, 33271), (144, 33208), (150, 33184), (153, 33175), (154, 33169), (156, 33163), (160, 33130), (163, 33109), (166, 33088), (195, 32905), (212, 32830), (221, 32788), (238, 32701), (247, 32677), (249, 32653), (251, 32644), (256, 32623), (266, 32572), (267, 32569), (270, 32554), (273, 32533), (287, 32407), (290, 32359), (292, 32350), (297, 32308), (308, 32215), (311, 32179), (312, 32173), (313, 32167), (314, 32161), (321, 32104), (324, 32080), (337, 31975), (338, 31972), (348, 31879), (350, 31861), (353, 31822), (361, 31780), (367, 31756), (373, 31726), (379, 31678), (384, 31654), (388, 31630), (394, 31609), (404, 31522), (407, 31510),

Gene: Figueroism\_39 Start: 28924, Stop: 27059, Start Num: 102

Candidate Starts for Figueroism\_39:

(Start: 81 @29011 has 3 MA's), (82, 29008), (Start: 102 @28924 has 96 MA's), (Start: 107 @28915 has 5 MA's), (130, 28810), (131, 28801), (138, 28771), (139, 28768), (165, 28648), (166, 28636), (168, 28630), (182, 28525), (186, 28498), (212, 28357), (213, 28351), (214, 28348), (216, 28336), (219, 28309), (220, 28306), (221, 28291), (222, 28285), (223, 28279), (234, 28246), (253, 28117), (263,

28057), (304, 27742), (306, 27733), (307, 27730), (308, 27712), (312, 27670), (313, 27664), (315, 27655), (317, 27640), (324, 27583), (343, 27424), (346, 27394), (347, 27385), (353, 27325), (356, 27301), (366, 27262), (373, 27229), (374, 27217), (384, 27157),

Gene: Finny\_38 Start: 28772, Stop: 26907, Start Num: 105

Candidate Starts for Finny\_38:

(Start: 105 @28772 has 34 MA's), (128, 28673), (140, 28613), (155, 28562), (166, 28484), (168, 28478), (172, 28433), (173, 28430), (174, 28427), (180, 28388), (190, 28328), (212, 28205), (214, 28196), (216, 28184), (218, 28172), (220, 28154), (222, 28133), (226, 28121), (257, 27950), (282, 27782), (301, 27617), (306, 27581), (308, 27560), (312, 27518), (324, 27431), (330, 27386), (342, 27287), (346, 27242), (353, 27173), (356, 27149), (365, 27116), (384, 27005),

Gene: Fribs8\_39 Start: 31749, Stop: 29392, Start Num: 23

Candidate Starts for Fribs8\_39:

(Start: 23 @31749 has 23 MA's), (28, 31734), (30, 31698), (50, 31563), (57, 31500), (62, 31458), (64, 31446), (85, 31344), (106, 31266), (121, 31206), (143, 31113), (150, 31083), (160, 31029), (166, 30987), (176, 30924), (198, 30789), (212, 30729), (215, 30711), (232, 30645), (237, 30609), (258, 30516), (266, 30471), (271, 30444), (274, 30432), (276, 30420), (288, 30279), (302, 30159), (307, 30135), (308, 30117), (310, 30108), (311, 30081), (312, 30075), (313, 30069), (314, 30063), (318, 30039), (321, 30006), (324, 29982), (330, 29937), (339, 29871), (350, 29763), (358, 29694), (367, 29658), (378, 29583), (379, 29580), (384, 29556), (397, 29487), (403, 29424),

Gene: Fulton\_38 Start: 26991, Stop: 25126, Start Num: 105

Candidate Starts for Fulton\_38:

(Start: 105 @26991 has 34 MA's), (106, 26985), (129, 26886), (130, 26877), (136, 26853), (138, 26838), (140, 26832), (155, 26781), (156, 26778), (168, 26697), (177, 26637), (191, 26547), (192, 26544), (206, 26445), (213, 26418), (214, 26415), (216, 26403), (220, 26373), (222, 26352), (232, 26316), (257, 26169), (274, 26067), (283, 25989), (304, 25809), (308, 25779), (314, 25725), (318, 25707), (324, 25650), (328, 25623), (333, 25581), (338, 25542), (346, 25461), (347, 25452), (353, 25392), (356, 25368), (359, 25356), (362, 25347), (366, 25329), (373, 25296), (384, 25224),

Gene: GTE2\_35 Start: 32210, Stop: 29823, Start Num: 17

Candidate Starts for GTE2\_35:

(Start: 17 @32210 has 15 MA's), (33, 32147), (44, 32090), (56, 31967), (57, 31943), (78, 31811), (86, 31784), (121, 31646), (137, 31568), (150, 31520), (160, 31466), (161, 31463), (163, 31445), (166, 31424), (169, 31409), (172, 31373), (175, 31364), (176, 31361), (195, 31241), (208, 31181), (212, 31166), (232, 31082), (238, 31037), (243, 31013), (247, 31007), (249, 30983), (251, 30974), (265, 30905), (266, 30902), (267, 30899), (286, 30752), (292, 30683), (293, 30677), (297, 30641), (308, 30548), (310, 30539), (311, 30512), (312, 30506), (313, 30500), (314, 30494), (318, 30470), (321, 30437), (322, 30422), (324, 30413), (330, 30368), (337, 30308), (340, 30275), (353, 30155), (360, 30116), (361, 30113), (384, 29987), (394, 29942), (395, 29933), (402, 29873),

Gene: GaeCeo\_39 Start: 29207, Stop: 27342, Start Num: 103

Candidate Starts for GaeCeo\_39:

(Start: 103 @29207 has 19 MA's), (111, 29183), (139, 29051), (156, 28994), (163, 28940), (166, 28919), (168, 28913), (197, 28712), (214, 28628), (216, 28616), (220, 28586), (222, 28565), (226, 28553), (232, 28529), (238, 28484), (253, 28397), (261, 28352), (263, 28337), (279, 28235), (301, 28052), (307, 28013), (308, 27995), (312, 27953), (315, 27938), (324, 27866), (353, 27608), (356, 27584), (365, 27551), (384, 27440),

Gene: GardenB\_38 Start: 29033, Stop: 27168, Start Num: 102

Candidate Starts for GardenB\_38:

(Start: 102 @29033 has 96 MA's), (Start: 107 @29024 has 5 MA's), (140, 28874), (164, 28760), (166, 28745), (168, 28739), (195, 28553), (197, 28541), (212, 28466), (214, 28457), (216, 28445), (219, 28418), (220, 28415), (221, 28400), (222, 28394), (223, 28388), (232, 28358), (238, 28313), (263, 28166), (279, 28064), (282, 28043), (304, 27851), (306, 27842), (307, 27839), (308, 27821), (312, 27779), (315, 27764), (324, 27692), (343, 27533), (346, 27503), (353, 27434), (356, 27410), (366, 27371), (373, 27338), (374, 27326),

Gene: Garey24\_38 Start: 28589, Stop: 26733, Start Num: 107

Candidate Starts for Garey24\_38:

(Start: 81 @28685 has 3 MA's), (Start: 102 @28598 has 96 MA's), (Start: 107 @28589 has 5 MA's), (130, 28484), (131, 28475), (138, 28445), (139, 28442), (165, 28322), (166, 28310), (168, 28304), (182, 28199), (186, 28172), (212, 28031), (213, 28025), (214, 28022), (216, 28010), (219, 27983), (220, 27980), (221, 27965), (222, 27959), (223, 27953), (234, 27920), (253, 27791), (263, 27731), (304, 27416), (306, 27407), (307, 27404), (308, 27386), (312, 27344), (313, 27338), (315, 27329), (317, 27314), (324, 27257), (343, 27098), (346, 27068), (347, 27059), (353, 26999), (356, 26975), (366, 26936), (373, 26903), (374, 26891), (384, 26831),

Gene: Gargoyle\_39 Start: 28930, Stop: 27074, Start Num: 107

Candidate Starts for Gargoyle\_39:

(Start: 81 @29026 has 3 MA's), (82, 29023), (Start: 102 @28939 has 96 MA's), (Start: 107 @28930 has 5 MA's), (130, 28825), (131, 28816), (138, 28786), (139, 28783), (164, 28666), (166, 28651), (168, 28645), (182, 28540), (186, 28513), (212, 28372), (214, 28363), (216, 28351), (219, 28324), (220, 28321), (221, 28306), (222, 28300), (223, 28294), (234, 28261), (263, 28072), (273, 28018), (277, 27997), (304, 27757), (306, 27748), (307, 27745), (308, 27727), (312, 27685), (313, 27679), (317, 27655), (324, 27598), (343, 27439), (346, 27409), (347, 27400), (353, 27340), (356, 27316), (366, 27277), (373, 27244), (374, 27232), (384, 27172),

Gene: Gelo\_38 Start: 28622, Stop: 26757, Start Num: 102

Candidate Starts for Gelo\_38:

(Start: 81 @28709 has 3 MA's), (Start: 102 @28622 has 96 MA's), (Start: 107 @28613 has 5 MA's), (130, 28508), (131, 28499), (138, 28469), (139, 28466), (165, 28346), (166, 28334), (168, 28328), (182, 28223), (186, 28196), (212, 28055), (213, 28049), (214, 28046), (216, 28034), (219, 28007), (220, 28004), (221, 27989), (222, 27983), (223, 27977), (234, 27944), (253, 27815), (263, 27755), (304, 27440), (306, 27431), (307, 27428), (308, 27410), (312, 27368), (313, 27362), (317, 27338), (324, 27281), (343, 27122), (346, 27092), (347, 27083), (353, 27023), (356, 26999), (366, 26960), (373, 26927), (374, 26915), (384, 26855),

Gene: Gershwin\_38 Start: 28632, Stop: 26767, Start Num: 102

Candidate Starts for Gershwin\_38:

(Start: 81 @28719 has 3 MA's), (Start: 102 @28632 has 96 MA's), (Start: 107 @28623 has 5 MA's), (130, 28518), (131, 28509), (138, 28479), (139, 28476), (165, 28356), (166, 28344), (168, 28338), (182, 28233), (186, 28206), (212, 28065), (213, 28059), (214, 28056), (216, 28044), (219, 28017), (220, 28014), (221, 27999), (222, 27993), (223, 27987), (234, 27954), (253, 27825), (263, 27765), (304, 27450), (306, 27441), (307, 27438), (308, 27420), (312, 27378), (313, 27372), (317, 27348), (324, 27291), (343, 27132), (346, 27102), (347, 27093), (353, 27033), (356, 27009), (366, 26970), (373, 26937), (374, 26925), (384, 26865),

Gene: GiKK\_48 Start: 33132, Stop: 30748, Start Num: 23

Candidate Starts for GiKK\_48:

(Start: 23 @33132 has 23 MA's), (44, 33018), (46, 32988), (56, 32904), (57, 32880), (64, 32826), (86, 32721), (90, 32706), (101, 32658), (121, 32583), (123, 32577), (125, 32571), (126, 32565), (137, 32496), (144, 32472), (150, 32448), (161, 32391), (163, 32373), (166, 32352), (192, 32205), (212, 32091), (224, 32034), (230, 32013), (232, 32007), (249, 31914), (252, 31902), (266, 31830), (274,

31788), (276, 31776), (288, 31635), (291, 31611), (297, 31560), (308, 31467), (311, 31431), (312, 31425), (313, 31419), (314, 31413), (321, 31356), (322, 31341), (324, 31332), (343, 31173), (345, 31152), (350, 31113), (353, 31074), (355, 31053), (361, 31032), (364, 31020), (369, 31002), (377, 30939), (378, 30933), (384, 30906), (388, 30882), (394, 30861), (403, 30774),

Gene: Gibbous\_38 Start: 31347, Stop: 28987, Start Num: 23

Candidate Starts for Gibbous\_38:

(16, 31371), (Start: 23 @31347 has 23 MA's), (28, 31332), (30, 31296), (56, 31125), (57, 31101), (Start: 107 @30864 has 5 MA's), (121, 30807), (130, 30768), (134, 30747), (150, 30681), (160, 30627), (163, 30606), (166, 30585), (198, 30387), (207, 30345), (212, 30327), (215, 30309), (227, 30264), (231, 30246), (232, 30243), (237, 30207), (258, 30114), (266, 30069), (271, 30042), (274, 30030), (276, 30018), (288, 29877), (297, 29808), (302, 29757), (307, 29733), (308, 29715), (310, 29706), (311, 29679), (312, 29673), (313, 29667), (314, 29661), (321, 29604), (324, 29580), (330, 29535), (331, 29532), (339, 29469), (350, 29361), (358, 29292), (361, 29280), (367, 29256), (378, 29181), (379, 29178), (384, 29154), (388, 29130), (394, 29109), (397, 29085), (402, 29040), (403, 29022),

Gene: Glamour\_37 Start: 28723, Stop: 26858, Start Num: 105

Candidate Starts for Glamour\_37:

(Start: 105 @28723 has 34 MA's), (114, 28678), (128, 28624), (140, 28564), (155, 28513), (166, 28435), (168, 28429), (172, 28384), (173, 28381), (174, 28378), (180, 28339), (190, 28279), (212, 28156), (214, 28147), (216, 28135), (218, 28123), (220, 28105), (222, 28084), (226, 28072), (257, 27901), (282, 27733), (301, 27568), (306, 27532), (308, 27511), (312, 27469), (324, 27382), (330, 27337), (342, 27238), (346, 27193), (347, 27184), (353, 27124), (356, 27100), (365, 27067), (384, 26956),

Gene: GoldHunter\_44 Start: 32554, Stop: 30161, Start Num: 17

Candidate Starts for GoldHunter\_44:

(Start: 17 @32554 has 15 MA's), (25, 32548), (Start: 31 @32500 has 1 MA's), (38, 32458), (44, 32434), (56, 32308), (57, 32284), (63, 32239), (68, 32188), (73, 32173), (78, 32152), (92, 32104), (99, 32071), (101, 32062), (121, 31987), (125, 31975), (137, 31906), (146, 31873), (150, 31858), (160, 31804), (161, 31801), (163, 31783), (166, 31762), (175, 31702), (195, 31579), (196, 31573), (212, 31504), (221, 31462), (238, 31375), (243, 31351), (247, 31345), (249, 31321), (251, 31312), (255, 31297), (258, 31285), (265, 31243), (266, 31240), (267, 31237), (286, 31090), (292, 31021), (293, 31015), (297, 30979), (308, 30886), (311, 30850), (312, 30844), (313, 30838), (314, 30832), (321, 30775), (324, 30751), (330, 30706), (384, 30325), (394, 30280), (402, 30211),

Gene: Golden\_37 Start: 28582, Stop: 26732, Start Num: 103

Candidate Starts for Golden\_37:

(67, 28723), (89, 28633), (Start: 103 @28582 has 19 MA's), (128, 28483), (131, 28459), (139, 28426), (163, 28315), (166, 28294), (168, 28288), (172, 28243), (174, 28237), (202, 28081), (214, 28018), (216, 28006), (220, 27976), (232, 27919), (279, 27625), (304, 27415), (306, 27406), (307, 27403), (308, 27385), (312, 27343), (324, 27256), (353, 26998), (356, 26974), (357, 26971), (365, 26941), (384, 26830),

Gene: Greenlvy\_38 Start: 27580, Stop: 25715, Start Num: 105

Candidate Starts for Greenlvy\_38:

(Start: 105 @27580 has 34 MA's), (106, 27574), (129, 27475), (130, 27466), (136, 27442), (138, 27427), (140, 27421), (155, 27370), (156, 27367), (168, 27286), (191, 27136), (192, 27133), (206, 27034), (213, 27007), (214, 27004), (216, 26992), (220, 26962), (222, 26941), (232, 26905), (257, 26758), (283, 26578), (304, 26398), (308, 26368), (314, 26314), (318, 26296), (324, 26239), (328, 26212), (333, 26170), (346, 26050), (347, 26041), (353, 25981), (356, 25957), (359, 25945), (362, 25936), (366, 25918), (373, 25885), (384, 25813),

Gene: Greys\_39 Start: 28932, Stop: 27067, Start Num: 102

Candidate Starts for Greys\_39:

(Start: 81 @29019 has 3 MA's), (82, 29016), (Start: 102 @28932 has 96 MA's), (Start: 107 @28923 has 5 MA's), (130, 28818), (131, 28809), (138, 28779), (139, 28776), (165, 28656), (166, 28644), (168, 28638), (182, 28533), (186, 28506), (212, 28365), (214, 28356), (216, 28344), (219, 28317), (220, 28314), (221, 28299), (222, 28293), (223, 28287), (234, 28254), (263, 28065), (304, 27750), (306, 27741), (307, 27738), (308, 27720), (312, 27678), (313, 27672), (317, 27648), (324, 27591), (343, 27432), (346, 27402), (347, 27393), (353, 27333), (356, 27309), (366, 27270), (373, 27237), (374, 27225), (384, 27165),

Gene: Gubbabump\_38 Start: 28612, Stop: 26747, Start Num: 102

Candidate Starts for Gubbabump\_38:

(Start: 81 @28699 has 3 MA's), (82, 28696), (Start: 102 @28612 has 96 MA's), (Start: 107 @28603 has 5 MA's), (130, 28498), (131, 28489), (138, 28459), (139, 28456), (165, 28336), (166, 28324), (168, 28318), (182, 28213), (186, 28186), (212, 28045), (213, 28039), (214, 28036), (216, 28024), (219, 27997), (220, 27994), (221, 27979), (222, 27973), (223, 27967), (234, 27934), (253, 27805), (263, 27745), (304, 27430), (306, 27421), (307, 27418), (308, 27400), (312, 27358), (313, 27352), (315, 27343), (317, 27328), (324, 27271), (343, 27112), (346, 27082), (347, 27073), (353, 27013), (356, 26989), (366, 26950), (373, 26917), (374, 26905), (384, 26845),

Gene: Guetzie\_37 Start: 28567, Stop: 26717, Start Num: 103

Candidate Starts for Guetzie\_37:

(67, 28708), (89, 28618), (Start: 103 @28567 has 19 MA's), (128, 28468), (131, 28444), (139, 28411), (163, 28300), (166, 28279), (168, 28273), (172, 28228), (174, 28222), (202, 28066), (214, 28003), (216, 27991), (220, 27961), (232, 27904), (279, 27610), (304, 27400), (306, 27391), (307, 27388), (308, 27370), (312, 27328), (324, 27241), (353, 26983), (356, 26959), (357, 26956), (365, 26926), (384, 26815),

Gene: GurgleFerb\_36 Start: 31888, Stop: 30143, Start Num: 112

Candidate Starts for GurgleFerb\_36:

(108, 31915), (Start: 112 @31888 has 6 MA's), (113, 31885), (122, 31852), (124, 31846), (142, 31753), (151, 31720), (157, 31693), (174, 31558), (194, 31429), (195, 31423), (200, 31399), (203, 31384), (209, 31357), (215, 31327), (229, 31246), (233, 31237), (241, 31177), (246, 31156), (263, 31042), (267, 31024), (312, 30646), (319, 30628), (327, 30562), (330, 30547), (359, 30328), (370, 30286), (384, 30202), (392, 30169),

Gene: Hamlet\_38 Start: 29064, Stop: 27199, Start Num: 102

Candidate Starts for Hamlet\_38:

(Start: 102 @29064 has 96 MA's), (Start: 107 @29055 has 5 MA's), (164, 28791), (166, 28776), (168, 28770), (186, 28638), (195, 28584), (212, 28497), (214, 28488), (216, 28476), (219, 28449), (220, 28446), (221, 28431), (222, 28425), (232, 28389), (238, 28344), (263, 28197), (279, 28095), (304, 27882), (307, 27870), (308, 27852), (312, 27810), (317, 27780), (324, 27723), (343, 27564), (346, 27534), (353, 27465), (356, 27441), (366, 27402), (374, 27357),

Gene: HanSolo\_38 Start: 28619, Stop: 26754, Start Num: 102

Candidate Starts for HanSolo\_38:

(Start: 81 @28706 has 3 MA's), (82, 28703), (Start: 102 @28619 has 96 MA's), (Start: 107 @28610 has 5 MA's), (130, 28505), (131, 28496), (138, 28466), (139, 28463), (165, 28343), (166, 28331), (168, 28325), (182, 28220), (186, 28193), (212, 28052), (213, 28046), (214, 28043), (216, 28031), (219, 28004), (220, 28001), (221, 27986), (222, 27980), (223, 27974), (234, 27941), (253, 27812), (263, 27752), (304, 27437), (306, 27428), (307, 27425), (308, 27407), (312, 27365), (313, 27359), (315, 27350), (317, 27335), (324, 27278), (343, 27119), (346, 27089), (347, 27080), (353, 27020), (356,

26996), (366, 26957), (373, 26924), (374, 26912), (384, 26852),

Gene: HankSprout\_40 Start: 28490, Stop: 26634, Start Num: 107

Candidate Starts for HankSprout\_40:

(Start: 81 @28586 has 3 MA's), (82, 28583), (Start: 102 @28499 has 96 MA's), (Start: 107 @28490 has 5 MA's), (130, 28385), (131, 28376), (138, 28346), (139, 28343), (165, 28223), (166, 28211), (168, 28205), (182, 28100), (186, 28073), (212, 27932), (213, 27926), (214, 27923), (216, 27911), (219, 27884), (220, 27881), (221, 27866), (222, 27860), (223, 27854), (234, 27821), (253, 27692), (263, 27632), (304, 27317), (306, 27308), (307, 27305), (308, 27287), (312, 27245), (313, 27239), (315, 27230), (317, 27215), (324, 27158), (343, 26999), (346, 26969), (347, 26960), (353, 26900), (356, 26876), (366, 26837), (373, 26804), (374, 26792), (384, 26732),

Gene: Hasitha\_37 Start: 27003, Stop: 25138, Start Num: 105

Candidate Starts for Hasitha\_37:

(Start: 105 @27003 has 34 MA's), (106, 26997), (129, 26898), (130, 26889), (136, 26865), (138, 26850), (140, 26844), (155, 26793), (156, 26790), (168, 26709), (177, 26649), (191, 26559), (192, 26556), (206, 26457), (213, 26430), (214, 26427), (216, 26415), (220, 26385), (222, 26364), (232, 26328), (257, 26181), (274, 26079), (283, 26001), (304, 25821), (308, 25791), (314, 25737), (318, 25719), (324, 25662), (328, 25635), (333, 25593), (338, 25554), (346, 25473), (347, 25464), (353, 25404), (356, 25380), (359, 25368), (362, 25359), (366, 25341), (373, 25308), (384, 25236),

Gene: Hendrix\_88 Start: 57216, Stop: 59255, Start Num: 69

Candidate Starts for Hendrix\_88:

(Start: 69 @57216 has 4 MA's), (85, 57273), (99, 57330), (Start: 107 @57357 has 5 MA's), (117, 57408), (141, 57528), (150, 57564), (158, 57594), (179, 57762), (197, 57876), (205, 57915), (216, 57972), (217, 57981), (220, 57999), (239, 58107), (242, 58122), (244, 58128), (248, 58161), (254, 58194), (262, 58239), (273, 58311), (285, 58416), (286, 58419), (298, 58488), (304, 58545), (308, 58575), (324, 58710), (333, 58779), (338, 58818), (343, 58869), (345, 58890), (352, 58956), (353, 58968), (355, 58989), (356, 58992), (358, 58998), (363, 59016), (368, 59043), (373, 59070), (375, 59088), (384, 59142), (389, 59172), (397, 59214), (400, 59250),

Gene: HerculesXL\_37 Start: 27313, Stop: 25415, Start Num: 103

Candidate Starts for HerculesXL\_37:

(2, 28051), (3, 28045), (32, 27790), (91, 27364), (Start: 103 @27313 has 19 MA's), (118, 27250), (130, 27199), (138, 27160), (155, 27103), (163, 27046), (165, 27037), (166, 27025), (168, 27019), (174, 26968), (180, 26929), (192, 26866), (197, 26821), (212, 26746), (214, 26737), (216, 26725), (220, 26695), (222, 26674), (226, 26662), (232, 26638), (258, 26488), (289, 26227), (301, 26125), (303, 26104), (308, 26068), (311, 26032), (312, 26026), (324, 25939), (328, 25912), (343, 25780), (347, 25741), (350, 25720), (353, 25681), (356, 25657), (358, 25651), (365, 25624), (384, 25513),

Gene: Hexbug\_51 Start: 35224, Stop: 32828, Start Num: 23

Candidate Starts for Hexbug\_51:

(7, 35353), (8, 35344), (Start: 23 @35224 has 23 MA's), (45, 35092), (46, 35080), (50, 35035), (57, 34972), (58, 34951), (64, 34918), (73, 34861), (86, 34813), (90, 34798), (101, 34750), (121, 34675), (123, 34669), (125, 34663), (126, 34657), (137, 34588), (144, 34564), (150, 34540), (163, 34465), (166, 34444), (171, 34396), (175, 34384), (181, 34339), (210, 34183), (212, 34177), (238, 34048), (249, 34000), (252, 33988), (266, 33916), (274, 33874), (286, 33763), (288, 33721), (291, 33697), (292, 33688), (297, 33646), (308, 33553), (311, 33517), (312, 33511), (313, 33505), (314, 33499), (321, 33442), (324, 33418), (326, 33400), (339, 33307), (345, 33238), (350, 33199), (353, 33160), (355, 33139), (364, 33106), (369, 33088), (384, 32992), (388, 32968), (396, 32929), (403, 32860),

Gene: HippoPololi\_40 Start: 31786, Stop: 29405, Start Num: 15

Candidate Starts for HippoPololi\_40:



(15, 31786), (22, 31759), (28, 31744), (30, 31708), (57, 31513), (97, 31306), (Start: 107 @31276 has 5 MA's), (121, 31219), (130, 31183), (133, 31168), (143, 31126), (144, 31120), (150, 31096), (160, 31042), (166, 31000), (198, 30802), (207, 30760), (212, 30742), (237, 30622), (258, 30529), (259, 30520), (266, 30484), (274, 30445), (276, 30433), (288, 30292), (294, 30250), (308, 30130), (311, 30094), (312, 30088), (313, 30082), (314, 30076), (318, 30052), (321, 30019), (324, 29995), (330, 29950), (339, 29884), (350, 29776), (358, 29707), (361, 29695), (367, 29671), (379, 29593), (382, 29581), (384, 29569), (388, 29545), (394, 29524), (397, 29500), (402, 29455), (403, 29437),

Gene: Horseradish\_45 Start: 32448, Stop: 30058, Start Num: 17

Candidate Starts for Horseradish\_45:

(Start: 17 @32448 has 15 MA's), (33, 32385), (37, 32367), (38, 32352), (46, 32298), (47, 32286), (48, 32265), (53, 32232), (56, 32205), (57, 32181), (61, 32154), (78, 32049), (92, 32001), (121, 31884), (137, 31803), (145, 31776), (150, 31755), (160, 31701), (161, 31698), (163, 31680), (166, 31659), (175, 31599), (212, 31401), (221, 31359), (238, 31272), (243, 31248), (247, 31242), (256, 31188), (258, 31182), (265, 31140), (266, 31137), (267, 31134), (286, 30987), (288, 30945), (292, 30918), (297, 30876), (308, 30783), (311, 30747), (312, 30741), (313, 30735), (314, 30729), (318, 30705), (321, 30672), (324, 30648), (330, 30603), (337, 30543), (353, 30390), (384, 30222), (394, 30177), (395, 30168), (396, 30159),

Gene: HungryHenry\_39 Start: 28624, Stop: 26759, Start Num: 102

Candidate Starts for HungryHenry\_39:

(Start: 81 @28711 has 3 MA's), (82, 28708), (Start: 102 @28624 has 96 MA's), (Start: 107 @28615 has 5 MA's), (130, 28510), (131, 28501), (138, 28471), (139, 28468), (165, 28348), (166, 28336), (168, 28330), (182, 28225), (186, 28198), (212, 28057), (213, 28051), (214, 28048), (216, 28036), (219, 28009), (220, 28006), (221, 27991), (222, 27985), (223, 27979), (234, 27946), (253, 27817), (263, 27757), (304, 27442), (306, 27433), (307, 27430), (308, 27412), (312, 27370), (313, 27364), (315, 27355), (317, 27340), (324, 27283), (343, 27124), (346, 27094), (347, 27085), (353, 27025), (356, 27001), (366, 26962), (373, 26929), (374, 26917), (384, 26857),

Gene: Huwbert\_71 Start: 43958, Stop: 46630, Start Num: 12

Candidate Starts for Huwbert\_71:

(Start: 12 @43958 has 2 MA's), (26, 44048), (27, 44051), (28, 44054), (35, 44114), (49, 44231), (63, 44360), (Start: 102 @44537 has 96 MA's), (Start: 107 @44549 has 5 MA's), (116, 44594), (120, 44609), (127, 44636), (146, 44735), (154, 44765), (160, 44804), (166, 44846), (174, 44903), (178, 44918), (184, 44972), (205, 45083), (225, 45224), (245, 45353), (251, 45398), (252, 45401), (256, 45419), (263, 45476), (274, 45536), (281, 45596), (300, 45791), (308, 45854), (316, 45917), (324, 45992), (336, 46073), (339, 46103), (346, 46181), (350, 46211), (353, 46250), (357, 46277), (359, 46286), (373, 46352), (384, 46424), (386, 46433), (391, 46463), (408, 46589), (409, 46607),

Gene: Ilzat\_38 Start: 28635, Stop: 26770, Start Num: 102

Candidate Starts for Ilzat\_38:

(Start: 81 @28722 has 3 MA's), (82, 28719), (Start: 102 @28635 has 96 MA's), (Start: 107 @28626 has 5 MA's), (130, 28521), (131, 28512), (138, 28482), (139, 28479), (165, 28359), (166, 28347), (168, 28341), (182, 28236), (186, 28209), (212, 28068), (213, 28062), (214, 28059), (216, 28047), (219, 28020), (220, 28017), (221, 28002), (222, 27996), (223, 27990), (234, 27957), (253, 27828), (263, 27768), (304, 27453), (306, 27444), (307, 27441), (308, 27423), (312, 27381), (313, 27375), (315, 27366), (317, 27351), (324, 27294), (343, 27135), (346, 27105), (347, 27096), (353, 27036), (356, 27012), (366, 26973), (373, 26940), (374, 26928), (384, 26868),

Gene: Inventa\_39 Start: 28930, Stop: 27065, Start Num: 102

Candidate Starts for Inventa\_39:

(Start: 81 @29017 has 3 MA's), (82, 29014), (Start: 102 @28930 has 96 MA's), (Start: 107 @28921 has 5 MA's), (130, 28816), (131, 28807), (138, 28777), (139, 28774), (165, 28654), (166, 28642), (168,

28636), (182, 28531), (186, 28504), (212, 28363), (213, 28357), (214, 28354), (216, 28342), (219, 28315), (220, 28312), (221, 28297), (222, 28291), (223, 28285), (234, 28252), (263, 28063), (304, 27748), (306, 27739), (307, 27736), (308, 27718), (312, 27676), (313, 27670), (315, 27661), (317, 27646), (324, 27589), (343, 27430), (346, 27400), (347, 27391), (353, 27331), (356, 27307), (366, 27268), (373, 27235), (374, 27223), (384, 27163),

Gene: loannes\_39 Start: 28925, Stop: 27069, Start Num: 107

Candidate Starts for loannes\_39:

(Start: 81 @29021 has 3 MA's), (82, 29018), (Start: 102 @28934 has 96 MA's), (Start: 107 @28925 has 5 MA's), (130, 28820), (131, 28811), (138, 28781), (139, 28778), (165, 28658), (166, 28646), (168, 28640), (182, 28535), (186, 28508), (212, 28367), (213, 28361), (214, 28358), (216, 28346), (219, 28319), (220, 28316), (221, 28301), (222, 28295), (223, 28289), (234, 28256), (253, 28127), (263, 28067), (304, 27752), (306, 27743), (307, 27740), (308, 27722), (312, 27680), (313, 27674), (315, 27665), (317, 27650), (324, 27593), (343, 27434), (346, 27404), (347, 27395), (353, 27335), (356, 27311), (366, 27272), (373, 27239), (374, 27227), (384, 27167),

Gene: Ixel\_38 Start: 27481, Stop: 25580, Start Num: 105

Candidate Starts for Ixel\_38:

(Start: 105 @27481 has 34 MA's), (138, 27328), (139, 27325), (140, 27322), (155, 27271), (163, 27214), (165, 27205), (166, 27193), (168, 27187), (170, 27151), (180, 27097), (212, 26911), (214, 26902), (216, 26890), (220, 26860), (222, 26839), (226, 26827), (232, 26803), (258, 26653), (273, 26557), (289, 26392), (301, 26290), (308, 26233), (311, 26197), (312, 26191), (324, 26104), (330, 26059), (343, 25945), (350, 25885), (353, 25846), (356, 25822), (358, 25816), (365, 25789), (384, 25678),

Gene: JacoRen57\_40 Start: 35060, Stop: 32673, Start Num: 31

Candidate Starts for JacoRen57\_40:

(20, 35138), (Start: 23 @35114 has 23 MA's), (Start: 29 @35084 has 1 MA's), (Start: 31 @35060 has 1 MA's), (Start: 40 @35009 has 1 MA's), (42, 35003), (54, 34895), (55, 34880), (57, 34850), (59, 34823), (63, 34793), (Start: 69 @34739 has 4 MA's), (73, 34727), (74, 34718), (115, 34562), (153, 34406), (170, 34277), (175, 34259), (193, 34154), (195, 34136), (198, 34121), (212, 34061), (236, 33944), (238, 33932), (240, 33920), (259, 33842), (271, 33773), (287, 33638), (300, 33503), (303, 33476), (304, 33470), (310, 33431), (311, 33404), (312, 33398), (313, 33392), (314, 33386), (321, 33329), (324, 33305), (351, 33083), (377, 32912), (384, 32879), (394, 32834), (397, 32810), (410, 32684),

Gene: Jamzy\_48 Start: 33115, Stop: 30731, Start Num: 23

Candidate Starts for Jamzy\_48:

(Start: 23 @33115 has 23 MA's), (44, 33001), (46, 32971), (56, 32887), (57, 32863), (64, 32809), (86, 32704), (90, 32689), (101, 32641), (121, 32566), (123, 32560), (125, 32554), (126, 32548), (137, 32479), (144, 32455), (150, 32431), (161, 32374), (163, 32356), (166, 32335), (192, 32188), (212, 32074), (224, 32017), (230, 31996), (232, 31990), (249, 31897), (252, 31885), (266, 31813), (276, 31759), (288, 31618), (291, 31594), (297, 31543), (308, 31450), (311, 31414), (312, 31408), (313, 31402), (314, 31396), (321, 31339), (324, 31315), (343, 31156), (345, 31135), (350, 31096), (353, 31057), (355, 31036), (361, 31015), (364, 31003), (369, 30985), (377, 30922), (378, 30916), (384, 30889), (388, 30865), (394, 30844), (403, 30757),

Gene: Janus167\_38 Start: 28619, Stop: 26754, Start Num: 102

Candidate Starts for Janus167\_38:

(Start: 81 @28706 has 3 MA's), (82, 28703), (Start: 102 @28619 has 96 MA's), (Start: 107 @28610 has 5 MA's), (130, 28505), (131, 28496), (138, 28466), (139, 28463), (165, 28343), (166, 28331), (168, 28325), (182, 28220), (186, 28193), (212, 28052), (213, 28046), (214, 28043), (216, 28031), (219, 28004), (220, 28001), (221, 27986), (222, 27980), (223, 27974), (234, 27941), (253, 27812), (263,

27752), (304, 27437), (306, 27428), (307, 27425), (308, 27407), (312, 27365), (313, 27359), (315, 27350), (317, 27335), (324, 27278), (343, 27119), (346, 27089), (347, 27080), (353, 27020), (356, 26996), (366, 26957), (373, 26924), (374, 26912), (384, 26852),

Gene: Jasmine\_38 Start: 33398, Stop: 31653, Start Num: 112

Candidate Starts for Jasmine\_38:

(108, 33425), (Start: 112 @33398 has 6 MA's), (113, 33395), (122, 33362), (124, 33356), (142, 33263), (151, 33230), (157, 33203), (174, 33068), (194, 32939), (195, 32933), (200, 32909), (203, 32894), (209, 32867), (215, 32837), (229, 32756), (241, 32687), (246, 32666), (263, 32552), (267, 32534), (304, 32231), (312, 32156), (319, 32138), (327, 32072), (359, 31838), (370, 31796), (384, 31712), (392, 31679),

Gene: JasonD\_43 Start: 29488, Stop: 27620, Start Num: 102

Candidate Starts for JasonD\_43:

(Start: 81 @29575 has 3 MA's), (82, 29572), (Start: 102 @29488 has 96 MA's), (Start: 107 @29479 has 5 MA's), (139, 29332), (165, 29212), (166, 29200), (168, 29194), (212, 28921), (214, 28912), (216, 28900), (220, 28870), (221, 28855), (222, 28849), (223, 28843), (238, 28768), (278, 28522), (304, 28306), (306, 28297), (307, 28294), (308, 28276), (312, 28234), (324, 28144), (330, 28099), (343, 27985), (347, 27946), (353, 27886), (356, 27862), (358, 27856), (366, 27823), (373, 27790), (374, 27778),

Gene: JasperRussell\_38 Start: 28619, Stop: 26754, Start Num: 102

Candidate Starts for JasperRussell\_38:

(Start: 81 @28706 has 3 MA's), (82, 28703), (Start: 102 @28619 has 96 MA's), (Start: 107 @28610 has 5 MA's), (130, 28505), (131, 28496), (138, 28466), (139, 28463), (165, 28343), (166, 28331), (168, 28325), (182, 28220), (186, 28193), (212, 28052), (213, 28046), (214, 28043), (216, 28031), (219, 28004), (220, 28001), (221, 27986), (222, 27980), (223, 27974), (234, 27941), (253, 27812), (263, 27752), (304, 27437), (306, 27428), (307, 27425), (308, 27407), (312, 27365), (313, 27359), (315, 27350), (317, 27335), (324, 27278), (343, 27119), (346, 27089), (347, 27080), (353, 27020), (356, 26996), (366, 26957), (373, 26924), (374, 26912), (384, 26852),

Gene: Jemerald\_40 Start: 29369, Stop: 27471, Start Num: 105

Candidate Starts for Jemerald\_40:

(Start: 105 @29369 has 34 MA's), (135, 29231), (138, 29216), (140, 29210), (155, 29159), (163, 29102), (166, 29081), (168, 29075), (173, 29027), (174, 29024), (191, 28925), (197, 28877), (212, 28802), (214, 28793), (216, 28781), (220, 28751), (222, 28730), (227, 28715), (238, 28649), (263, 28502), (275, 28442), (277, 28427), (279, 28400), (303, 28160), (308, 28124), (312, 28082), (317, 28052), (324, 27995), (342, 27851), (343, 27836), (347, 27797), (350, 27776), (356, 27713), (365, 27680), (374, 27629), (375, 27623), (384, 27569),

Gene: Jenos\_42 Start: 30134, Stop: 28266, Start Num: 102

Candidate Starts for Jenos\_42:

(98, 30149), (Start: 102 @30134 has 96 MA's), (Start: 107 @30125 has 5 MA's), (138, 29981), (139, 29978), (163, 29867), (165, 29858), (166, 29846), (168, 29840), (182, 29735), (197, 29642), (212, 29567), (214, 29558), (216, 29546), (219, 29519), (220, 29516), (221, 29501), (222, 29495), (223, 29489), (253, 29327), (304, 28952), (306, 28943), (307, 28940), (308, 28922), (312, 28880), (324, 28790), (328, 28763), (343, 28631), (347, 28592), (353, 28532), (356, 28508), (366, 28469), (373, 28436), (374, 28424),

Gene: Jerbirus\_39 Start: 28619, Stop: 26754, Start Num: 102

Candidate Starts for Jerbirus\_39:

(Start: 81 @28706 has 3 MA's), (82, 28703), (Start: 102 @28619 has 96 MA's), (Start: 107 @28610 has 5 MA's), (130, 28505), (131, 28496), (138, 28466), (139, 28463), (165, 28343), (166, 28331), (168,

28325), (182, 28220), (186, 28193), (212, 28052), (213, 28046), (214, 28043), (216, 28031), (219, 28004), (220, 28001), (221, 27986), (222, 27980), (223, 27974), (234, 27941), (253, 27812), (263, 27752), (304, 27437), (306, 27428), (307, 27425), (308, 27407), (312, 27365), (313, 27359), (315, 27350), (317, 27335), (324, 27278), (343, 27119), (346, 27089), (347, 27080), (353, 27020), (356, 26996), (366, 26957), (373, 26924), (374, 26912), (384, 26852),

Gene: JeriBeth\_39 Start: 28482, Stop: 26617, Start Num: 102

Candidate Starts for JeriBeth\_39:

(Start: 81 @28569 has 3 MA's), (82, 28566), (Start: 102 @28482 has 96 MA's), (Start: 107 @28473 has 5 MA's), (130, 28368), (131, 28359), (138, 28329), (139, 28326), (165, 28206), (166, 28194), (168, 28188), (182, 28083), (186, 28056), (212, 27915), (213, 27909), (214, 27906), (216, 27894), (219, 27867), (220, 27864), (221, 27849), (222, 27843), (223, 27837), (234, 27804), (253, 27675), (263, 27615), (304, 27300), (306, 27291), (307, 27288), (308, 27270), (312, 27228), (313, 27222), (315, 27213), (317, 27198), (324, 27141), (343, 26982), (346, 26952), (347, 26943), (353, 26883), (356, 26859), (366, 26820), (373, 26787), (374, 26775), (384, 26715),

Gene: Juanyo\_37 Start: 28491, Stop: 26590, Start Num: 105

Candidate Starts for Juanyo\_37:

(Start: 105 @28491 has 34 MA's), (128, 28392), (131, 28368), (135, 28353), (138, 28338), (140, 28332), (147, 28305), (155, 28281), (162, 28230), (166, 28203), (168, 28197), (174, 28146), (180, 28107), (191, 28047), (202, 27978), (212, 27921), (214, 27912), (216, 27900), (220, 27870), (232, 27813), (257, 27666), (280, 27510), (308, 27243), (312, 27201), (317, 27171), (320, 27150), (324, 27114), (346, 26925), (347, 26916), (353, 26856), (356, 26832), (359, 26820), (365, 26799), (366, 26793), (384, 26688),

Gene: Juicer\_40 Start: 29369, Stop: 27471, Start Num: 105

Candidate Starts for Juicer\_40:

(Start: 105 @29369 has 34 MA's), (135, 29231), (138, 29216), (140, 29210), (155, 29159), (163, 29102), (166, 29081), (168, 29075), (173, 29027), (174, 29024), (191, 28925), (197, 28877), (212, 28802), (214, 28793), (216, 28781), (220, 28751), (222, 28730), (227, 28715), (238, 28649), (263, 28502), (275, 28442), (277, 28427), (279, 28400), (303, 28160), (308, 28124), (312, 28082), (317, 28052), (324, 27995), (342, 27851), (343, 27836), (347, 27797), (350, 27776), (356, 27713), (365, 27680), (374, 27629), (375, 27623), (384, 27569),

Gene: Kale\_38 Start: 28634, Stop: 26769, Start Num: 102

Candidate Starts for Kale\_38:

(Start: 81 @28721 has 3 MA's), (Start: 102 @28634 has 96 MA's), (Start: 107 @28625 has 5 MA's), (130, 28520), (131, 28511), (138, 28481), (139, 28478), (165, 28358), (166, 28346), (168, 28340), (182, 28235), (186, 28208), (212, 28067), (213, 28061), (214, 28058), (216, 28046), (219, 28019), (220, 28016), (221, 28001), (222, 27995), (223, 27989), (234, 27956), (263, 27767), (304, 27452), (306, 27443), (307, 27440), (308, 27422), (312, 27380), (313, 27374), (317, 27350), (324, 27293), (343, 27134), (346, 27104), (347, 27095), (353, 27035), (356, 27011), (366, 26972), (373, 26939), (374, 26927), (384, 26867),

Gene: KannH\_38 Start: 28619, Stop: 26754, Start Num: 102

Candidate Starts for KannH\_38:

(Start: 81 @28706 has 3 MA's), (82, 28703), (Start: 102 @28619 has 96 MA's), (Start: 107 @28610 has 5 MA's), (130, 28505), (131, 28496), (138, 28466), (139, 28463), (165, 28343), (166, 28331), (168, 28325), (182, 28220), (186, 28193), (212, 28052), (213, 28046), (214, 28043), (216, 28031), (219, 28004), (220, 28001), (221, 27986), (222, 27980), (223, 27974), (234, 27941), (253, 27812), (263, 27752), (304, 27437), (306, 27428), (307, 27425), (308, 27407), (312, 27365), (313, 27359), (315, 27350), (317, 27335), (324, 27278), (343, 27119), (346, 27089), (347, 27080), (353, 27020), (356, 26996), (366, 26957), (373, 26924), (374, 26912), (384, 26852),

Gene: KatChan\_40 Start: 28364, Stop: 26472, Start Num: 105

Candidate Starts for KatChan\_40:

(80, 28454), (Start: 105 @28364 has 34 MA's), (Start: 107 @28355 has 5 MA's), (120, 28298), (128, 28268), (135, 28229), (138, 28214), (140, 28208), (145, 28190), (155, 28157), (166, 28079), (168, 28073), (174, 28022), (180, 27983), (197, 27872), (214, 27788), (216, 27776), (220, 27746), (221, 27731), (222, 27725), (223, 27719), (226, 27713), (228, 27707), (280, 27392), (299, 27197), (308, 27125), (312, 27083), (317, 27053), (320, 27032), (324, 26996), (334, 26924), (346, 26807), (347, 26798), (353, 26738), (356, 26714), (359, 26702), (369, 26666), (384, 26570),

Gene: Kauala\_37 Start: 28473, Stop: 26623, Start Num: 103

Candidate Starts for Kauala\_37:

(Start: 103 @28473 has 19 MA's), (127, 28377), (131, 28350), (139, 28317), (163, 28206), (166, 28185), (168, 28179), (169, 28170), (172, 28134), (174, 28128), (202, 27972), (212, 27918), (214, 27909), (216, 27897), (220, 27867), (232, 27810), (257, 27663), (279, 27516), (304, 27306), (307, 27294), (308, 27276), (312, 27234), (315, 27219), (324, 27147), (346, 26958), (347, 26949), (353, 26889), (356, 26865), (362, 26844), (365, 26832), (384, 26721),

Gene: KayGee\_45 Start: 34208, Stop: 31833, Start Num: 24

Candidate Starts for KayGee\_45:

(Start: 24 @34208 has 10 MA's), (33, 34148), (41, 34106), (46, 34067), (57, 33947), (58, 33926), (63, 33902), (76, 33824), (77, 33818), (78, 33815), (88, 33785), (92, 33767), (95, 33749), (106, 33710), (Start: 107 @33707 has 5 MA's), (121, 33650), (128, 33626), (130, 33611), (144, 33548), (150, 33524), (153, 33515), (154, 33509), (156, 33503), (160, 33470), (163, 33449), (166, 33428), (195, 33245), (212, 33170), (221, 33128), (247, 33017), (249, 32993), (256, 32963), (266, 32912), (267, 32909), (270, 32894), (273, 32873), (290, 32699), (292, 32690), (295, 32660), (308, 32555), (311, 32519), (312, 32513), (313, 32507), (314, 32501), (321, 32444), (324, 32420), (337, 32315), (338, 32312), (348, 32219), (350, 32201), (353, 32162), (361, 32120), (367, 32096), (373, 32066), (379, 32018), (384, 31994), (394, 31949), (404, 31862),

Gene: KimJongPhill\_80 Start: 57331, Stop: 59844, Start Num: 19

Candidate Starts for KimJongPhill\_80:

(Start: 6 @57226 has 1 MA's), (11, 57268), (14, 57298), (Start: 19 @57331 has 1 MA's), (39, 57460), (Start: 40 @57466 has 1 MA's), (43, 57475), (51, 57571), (54, 57589), (66, 57733), (70, 57766), (78, 57796), (101, 57892), (Start: 107 @57910 has 5 MA's), (121, 57979), (160, 58159), (162, 58174), (166, 58201), (178, 58273), (189, 58321), (212, 58438), (238, 58567), (266, 58753), (267, 58756), (271, 58780), (276, 58804), (284, 58891), (300, 59047), (302, 59068), (308, 59110), (311, 59146), (312, 59152), (313, 59158), (314, 59164), (324, 59245), (340, 59383), (343, 59404), (355, 59524), (360, 59542), (367, 59569), (377, 59638), (378, 59644), (381, 59656), (384, 59671), (390, 59704), (399, 59770),

Gene: KingJulien\_38 Start: 29054, Stop: 27189, Start Num: 102

Candidate Starts for KingJulien\_38:

(Start: 102 @29054 has 96 MA's), (Start: 107 @29045 has 5 MA's), (164, 28781), (166, 28766), (168, 28760), (186, 28628), (195, 28574), (197, 28562), (212, 28487), (214, 28478), (216, 28466), (219, 28439), (220, 28436), (221, 28421), (222, 28415), (226, 28403), (238, 28334), (279, 28085), (304, 27872), (306, 27863), (307, 27860), (308, 27842), (312, 27800), (324, 27713), (343, 27554), (346, 27524), (353, 27455), (356, 27431), (366, 27392), (373, 27359), (374, 27347),

Gene: Klimt\_38 Start: 28614, Stop: 26749, Start Num: 102

Candidate Starts for Klimt\_38:

(Start: 81 @28701 has 3 MA's), (Start: 102 @28614 has 96 MA's), (Start: 107 @28605 has 5 MA's), (130, 28500), (131, 28491), (138, 28461), (139, 28458), (165, 28338), (166, 28326), (168, 28320),

(182, 28215), (186, 28188), (212, 28047), (213, 28041), (214, 28038), (216, 28026), (219, 27999), (220, 27996), (221, 27981), (222, 27975), (223, 27969), (234, 27936), (253, 27807), (263, 27747), (304, 27432), (306, 27423), (307, 27420), (308, 27402), (312, 27360), (313, 27354), (317, 27330), (324, 27273), (343, 27114), (346, 27084), (347, 27075), (353, 27015), (356, 26991), (366, 26952), (373, 26919), (374, 26907), (384, 26847),

Gene: Knox\_39 Start: 28934, Stop: 27069, Start Num: 102

Candidate Starts for Knox\_39:

(Start: 81 @29021 has 3 MA's), (82, 29018), (Start: 102 @28934 has 96 MA's), (Start: 107 @28925 has 5 MA's), (130, 28820), (131, 28811), (138, 28781), (139, 28778), (164, 28661), (166, 28646), (168, 28640), (182, 28535), (186, 28508), (212, 28367), (214, 28358), (216, 28346), (219, 28319), (220, 28316), (221, 28301), (222, 28295), (223, 28289), (234, 28256), (263, 28067), (273, 28013), (277, 27992), (304, 27752), (306, 27743), (307, 27740), (308, 27722), (312, 27680), (313, 27674), (317, 27650), (324, 27593), (343, 27434), (346, 27404), (347, 27395), (353, 27335), (356, 27311), (366, 27272), (373, 27239), (374, 27227), (384, 27167),

Gene: Koji\_37 Start: 28666, Stop: 26816, Start Num: 103

Candidate Starts for Koji\_37:

(Start: 103 @28666 has 19 MA's), (131, 28543), (139, 28510), (163, 28399), (166, 28378), (168, 28372), (169, 28363), (174, 28321), (202, 28165), (212, 28111), (213, 28105), (214, 28102), (216, 28090), (220, 28060), (232, 28003), (269, 27787), (279, 27709), (304, 27499), (307, 27487), (308, 27469), (312, 27427), (324, 27340), (346, 27151), (347, 27142), (353, 27082), (356, 27058), (362, 27037), (365, 27025), (384, 26914),

Gene: Kurt1\_39 Start: 28930, Stop: 27065, Start Num: 102

Candidate Starts for Kurt1\_39:

(Start: 81 @29017 has 3 MA's), (82, 29014), (Start: 102 @28930 has 96 MA's), (Start: 107 @28921 has 5 MA's), (130, 28816), (131, 28807), (138, 28777), (139, 28774), (165, 28654), (166, 28642), (168, 28636), (182, 28531), (186, 28504), (212, 28363), (213, 28357), (214, 28354), (216, 28342), (219, 28315), (220, 28312), (221, 28297), (222, 28291), (223, 28285), (234, 28252), (263, 28063), (304, 27748), (306, 27739), (307, 27736), (308, 27718), (312, 27676), (313, 27670), (315, 27661), (317, 27646), (324, 27589), (343, 27430), (346, 27400), (347, 27391), (353, 27331), (356, 27307), (366, 27268), (373, 27235), (374, 27223), (384, 27163),

Gene: Lauer\_41 Start: 35269, Stop: 32888, Start Num: 24

Candidate Starts for Lauer\_41:

(Start: 24 @35269 has 10 MA's), (33, 35209), (41, 35167), (46, 35128), (55, 35038), (57, 35008), (58, 34987), (63, 34963), (76, 34885), (77, 34879), (78, 34876), (88, 34846), (97, 34798), (106, 34771), (Start: 107 @34768 has 5 MA's), (121, 34711), (128, 34687), (130, 34672), (134, 34651), (144, 34609), (150, 34585), (153, 34576), (154, 34570), (156, 34564), (160, 34531), (163, 34510), (166, 34489), (195, 34306), (212, 34231), (221, 34189), (238, 34102), (256, 34024), (258, 34018), (266, 33973), (267, 33970), (270, 33955), (273, 33934), (287, 33808), (290, 33760), (292, 33751), (295, 33721), (297, 33709), (308, 33616), (311, 33580), (312, 33574), (313, 33568), (314, 33562), (321, 33505), (324, 33481), (337, 33376), (338, 33373), (348, 33280), (350, 33262), (353, 33223), (361, 33181), (367, 33157), (373, 33127), (379, 33079), (381, 33070), (384, 33055), (394, 33010), (401, 32944), (403, 32923), (404, 32917), (406, 32911),

Gene: Leaf\_95 Start: 58518, Stop: 60557, Start Num: 69

Candidate Starts for Leaf\_95:

(Start: 69 @58518 has 4 MA's), (97, 58629), (99, 58632), (Start: 107 @58659 has 5 MA's), (119, 58716), (127, 58752), (132, 58791), (145, 58845), (148, 58857), (150, 58866), (159, 58902), (165, 58962), (167, 58977), (169, 58989), (175, 59034), (179, 59064), (197, 59178), (215, 59271), (216, 59274), (217, 59283), (220, 59301), (239, 59409), (248, 59463), (249, 59475), (262, 59541), (272,

59610), (294, 59763), (304, 59847), (308, 59877), (323, 60009), (324, 60012), (329, 60048), (333, 60081), (338, 60120), (353, 60270), (356, 60294), (358, 60300), (362, 60315), (368, 60345), (380, 60423), (384, 60444), (389, 60474), (397, 60516), (400, 60552),

Gene: Leafus\_38 Start: 29199, Stop: 27334, Start Num: 102

Candidate Starts for Leafus\_38:

(Start: 102 @29199 has 96 MA's), (Start: 107 @29190 has 5 MA's), (164, 28926), (166, 28911), (168, 28905), (186, 28773), (195, 28719), (212, 28632), (214, 28623), (216, 28611), (219, 28584), (220, 28581), (221, 28566), (222, 28560), (238, 28479), (263, 28332), (279, 28230), (304, 28017), (306, 28008), (307, 28005), (308, 27987), (312, 27945), (317, 27915), (324, 27858), (343, 27699), (346, 27669), (353, 27600), (356, 27576), (366, 27537), (374, 27492),

Gene: Librie\_37 Start: 26990, Stop: 25125, Start Num: 105

Candidate Starts for Librie\_37:

(Start: 105 @26990 has 34 MA's), (106, 26984), (129, 26885), (130, 26876), (136, 26852), (138, 26837), (140, 26831), (155, 26780), (156, 26777), (168, 26696), (191, 26546), (192, 26543), (206, 26444), (213, 26417), (214, 26414), (216, 26402), (220, 26372), (222, 26351), (232, 26315), (257, 26168), (274, 26066), (283, 25988), (304, 25808), (308, 25778), (314, 25724), (318, 25706), (324, 25649), (328, 25622), (333, 25580), (338, 25541), (346, 25460), (347, 25451), (353, 25391), (356, 25367), (359, 25355), (362, 25346), (366, 25328), (373, 25295), (384, 25223),

Gene: LilTerminator\_38 Start: 27012, Stop: 25147, Start Num: 105

Candidate Starts for LilTerminator\_38:

(Start: 105 @27012 has 34 MA's), (106, 27006), (129, 26907), (130, 26898), (136, 26874), (138, 26859), (140, 26853), (155, 26802), (156, 26799), (168, 26718), (191, 26568), (192, 26565), (206, 26466), (213, 26439), (214, 26436), (216, 26424), (220, 26394), (222, 26373), (232, 26337), (257, 26190), (269, 26121), (282, 26022), (283, 26010), (304, 25830), (308, 25800), (314, 25746), (318, 25728), (324, 25671), (328, 25644), (333, 25602), (346, 25482), (347, 25473), (353, 25413), (356, 25389), (359, 25377), (362, 25368), (366, 25350), (373, 25317), (384, 25245),

Gene: Lovelyunicorn\_39 Start: 28935, Stop: 27070, Start Num: 102

Candidate Starts for Lovelyunicorn\_39:

(Start: 81 @29022 has 3 MA's), (82, 29019), (98, 28950), (Start: 102 @28935 has 96 MA's), (Start: 107 @28926 has 5 MA's), (130, 28821), (131, 28812), (138, 28782), (139, 28779), (165, 28659), (166, 28647), (168, 28641), (182, 28536), (186, 28509), (212, 28368), (214, 28359), (216, 28347), (219, 28320), (220, 28317), (221, 28302), (222, 28296), (223, 28290), (234, 28257), (263, 28068), (304, 27753), (306, 27744), (307, 27741), (308, 27723), (312, 27681), (313, 27675), (317, 27651), (324, 27594), (343, 27435), (346, 27405), (347, 27396), (353, 27336), (356, 27312), (366, 27273), (373, 27240), (374, 27228), (384, 27168),

Gene: Lucky3\_37 Start: 28582, Stop: 26732, Start Num: 103

Candidate Starts for Lucky3\_37:

(67, 28723), (89, 28633), (Start: 103 @28582 has 19 MA's), (128, 28483), (131, 28459), (139, 28426), (163, 28315), (166, 28294), (168, 28288), (172, 28243), (174, 28237), (202, 28081), (214, 28018), (216, 28006), (220, 27976), (232, 27919), (279, 27625), (304, 27415), (306, 27406), (307, 27403), (308, 27385), (312, 27343), (324, 27256), (353, 26998), (356, 26974), (357, 26971), (365, 26941), (384, 26830),

Gene: Ludgate\_39 Start: 28930, Stop: 27065, Start Num: 102

Candidate Starts for Ludgate\_39:

(Start: 81 @29017 has 3 MA's), (Start: 102 @28930 has 96 MA's), (Start: 107 @28921 has 5 MA's), (130, 28816), (131, 28807), (138, 28777), (139, 28774), (165, 28654), (166, 28642), (168, 28636), (182, 28531), (186, 28504), (212, 28363), (213, 28357), (214, 28354), (216, 28342), (219, 28315),

(220, 28312), (221, 28297), (222, 28291), (223, 28285), (234, 28252), (253, 28123), (263, 28063), (304, 27748), (306, 27739), (307, 27736), (308, 27718), (312, 27676), (313, 27670), (317, 27646), (324, 27589), (343, 27430), (346, 27400), (347, 27391), (353, 27331), (356, 27307), (366, 27268), (373, 27235), (374, 27223), (384, 27163),

Gene: Luna18\_40 Start: 28364, Stop: 26472, Start Num: 105

Candidate Starts for Luna18\_40:

(80, 28454), (Start: 105 @28364 has 34 MA's), (Start: 107 @28355 has 5 MA's), (120, 28298), (128, 28268), (135, 28229), (138, 28214), (140, 28208), (145, 28190), (155, 28157), (166, 28079), (168, 28073), (174, 28022), (180, 27983), (197, 27872), (214, 27788), (216, 27776), (220, 27746), (221, 27731), (222, 27725), (223, 27719), (226, 27713), (228, 27707), (280, 27392), (299, 27197), (308, 27125), (312, 27083), (317, 27053), (320, 27032), (324, 26996), (334, 26924), (346, 26807), (347, 26798), (353, 26738), (356, 26714), (359, 26702), (369, 26666), (384, 26570),

Gene: MAnor\_46 Start: 34598, Stop: 32220, Start Num: 24

Candidate Starts for MAnor\_46:

(Start: 24 @34598 has 10 MA's), (33, 34538), (46, 34457), (57, 34337), (63, 34292), (76, 34214), (77, 34208), (78, 34205), (79, 34202), (88, 34175), (96, 34136), (97, 34127), (Start: 107 @34097 has 5 MA's), (121, 34040), (130, 34001), (134, 33980), (144, 33938), (146, 33929), (150, 33914), (153, 33905), (156, 33893), (160, 33860), (161, 33857), (163, 33839), (166, 33818), (195, 33635), (212, 33560), (221, 33518), (238, 33431), (256, 33353), (258, 33347), (266, 33302), (267, 33299), (270, 33284), (273, 33263), (283, 33179), (286, 33149), (290, 33089), (292, 33080), (294, 33065), (295, 33050), (297, 33038), (308, 32945), (311, 32909), (312, 32903), (313, 32897), (314, 32891), (321, 32834), (324, 32810), (337, 32705), (338, 32702), (343, 32651), (348, 32609), (350, 32591), (353, 32552), (361, 32510), (367, 32486), (379, 32408), (384, 32384), (388, 32360), (394, 32339), (399, 32285), (403, 32252), (406, 32240),

Gene: MCubed\_38 Start: 28748, Stop: 26883, Start Num: 105

Candidate Starts for MCubed\_38:

(Start: 105 @28748 has 34 MA's), (128, 28649), (140, 28589), (155, 28538), (166, 28460), (168, 28454), (172, 28409), (173, 28406), (174, 28403), (180, 28364), (190, 28304), (212, 28181), (214, 28172), (216, 28160), (218, 28148), (220, 28130), (222, 28109), (226, 28097), (257, 27926), (282, 27758), (301, 27593), (306, 27557), (308, 27536), (312, 27494), (324, 27407), (330, 27362), (342, 27263), (346, 27218), (353, 27149), (356, 27125), (365, 27092), (384, 26981),

Gene: MScarn\_47 Start: 32630, Stop: 30240, Start Num: 17

Candidate Starts for MScarn\_47:

(Start: 17 @32630 has 15 MA's), (37, 32549), (38, 32534), (46, 32480), (47, 32468), (48, 32447), (53, 32414), (56, 32387), (57, 32363), (61, 32336), (78, 32231), (92, 32183), (121, 32066), (137, 31985), (145, 31958), (150, 31937), (160, 31883), (161, 31880), (163, 31862), (166, 31841), (175, 31781), (212, 31583), (221, 31541), (238, 31454), (243, 31430), (247, 31424), (256, 31370), (258, 31364), (265, 31322), (266, 31319), (267, 31316), (286, 31169), (292, 31100), (293, 31094), (297, 31058), (308, 30965), (311, 30929), (312, 30923), (313, 30917), (314, 30911), (321, 30854), (324, 30830), (330, 30785), (384, 30404), (394, 30359), (395, 30350), (402, 30290),

Gene: MaVan\_40 Start: 32050, Stop: 29693, Start Num: 23

Candidate Starts for MaVan\_40:

(18, 32059), (Start: 23 @32050 has 23 MA's), (28, 32035), (30, 31999), (50, 31864), (57, 31801), (62, 31759), (64, 31747), (85, 31645), (88, 31642), (106, 31567), (115, 31528), (121, 31507), (133, 31456), (143, 31414), (150, 31384), (160, 31330), (163, 31309), (166, 31288), (176, 31225), (198, 31090), (201, 31075), (212, 31030), (232, 30946), (237, 30910), (258, 30817), (265, 30775), (266, 30772), (267, 30769), (271, 30745), (274, 30733), (276, 30721), (288, 30580), (292, 30553), (308, 30418), (311, 30382), (312, 30376), (313, 30370), (314, 30364), (318, 30340), (321, 30307), (324, 30283),



(330, 30238), (332, 30232), (339, 30172), (350, 30064), (357, 29998), (358, 29995), (361, 29983), (367, 29959), (379, 29881), (384, 29857), (397, 29788),

Gene: Maco6\_42 Start: 33485, Stop: 31179, Start Num: 40

Candidate Starts for Maco6\_42:

(22, 33590), (26, 33581), (Start: 31 @33536 has 1 MA's), (Start: 34 @33524 has 1 MA's), (Start: 40 @33485 has 1 MA's), (47, 33428), (57, 33326), (59, 33296), (63, 33266), (100, 33098), (130, 32978), (154, 32876), (166, 32795), (175, 32735), (177, 32729), (185, 32669), (212, 32537), (222, 32489), (237, 32417), (238, 32408), (240, 32396), (258, 32327), (295, 32021), (296, 32018), (300, 31979), (303, 31952), (304, 31946), (311, 31880), (312, 31874), (313, 31868), (314, 31862), (318, 31838), (321, 31805), (322, 31790), (324, 31781), (343, 31622), (346, 31592), (378, 31382), (384, 31355), (397, 31286),

Gene: MaeLinda\_39 Start: 28934, Stop: 27069, Start Num: 102

Candidate Starts for MaeLinda\_39:

(Start: 81 @29021 has 3 MA's), (82, 29018), (Start: 102 @28934 has 96 MA's), (Start: 107 @28925 has 5 MA's), (130, 28820), (131, 28811), (138, 28781), (139, 28778), (165, 28658), (166, 28646), (168, 28640), (182, 28535), (186, 28508), (212, 28367), (213, 28361), (214, 28358), (216, 28346), (219, 28319), (220, 28316), (221, 28301), (222, 28295), (223, 28289), (234, 28256), (253, 28127), (263, 28067), (304, 27752), (306, 27743), (307, 27740), (308, 27722), (312, 27680), (313, 27674), (315, 27665), (317, 27650), (324, 27593), (343, 27434), (346, 27404), (347, 27395), (353, 27335), (356, 27311), (366, 27272), (373, 27239), (374, 27227), (384, 27167),

Gene: ManRay\_38 Start: 28632, Stop: 26767, Start Num: 102

Candidate Starts for ManRay\_38:

(Start: 81 @28719 has 3 MA's), (82, 28716), (Start: 102 @28632 has 96 MA's), (Start: 107 @28623 has 5 MA's), (130, 28518), (131, 28509), (138, 28479), (139, 28476), (165, 28356), (166, 28344), (168, 28338), (182, 28233), (186, 28206), (212, 28065), (213, 28059), (214, 28056), (216, 28044), (219, 28017), (220, 28014), (221, 27999), (222, 27993), (223, 27987), (234, 27954), (253, 27825), (263, 27765), (304, 27450), (306, 27441), (307, 27438), (308, 27420), (312, 27378), (313, 27372), (315, 27363), (317, 27348), (324, 27291), (343, 27132), (346, 27102), (347, 27093), (353, 27033), (356, 27009), (366, 26970), (373, 26937), (374, 26925), (384, 26865),

Gene: Mandalorian\_37 Start: 28518, Stop: 26617, Start Num: 105

Candidate Starts for Mandalorian\_37:

(Start: 105 @28518 has 34 MA's), (131, 28395), (135, 28380), (138, 28365), (147, 28332), (151, 28323), (155, 28308), (160, 28272), (162, 28257), (166, 28230), (168, 28224), (174, 28173), (180, 28134), (191, 28074), (212, 27948), (214, 27939), (216, 27927), (220, 27897), (222, 27876), (232, 27840), (257, 27693), (263, 27648), (280, 27537), (299, 27342), (304, 27300), (308, 27270), (312, 27228), (317, 27198), (320, 27177), (324, 27141), (353, 26883), (356, 26859), (365, 26826), (366, 26820), (384, 26715),

Gene: Margaret\_49 Start: 33864, Stop: 31474, Start Num: 23

Candidate Starts for Margaret\_49:

(7, 33993), (8, 33984), (Start: 23 @33864 has 23 MA's), (Start: 34 @33798 has 1 MA's), (45, 33732), (50, 33675), (56, 33636), (57, 33612), (58, 33591), (62, 33570), (73, 33501), (86, 33453), (90, 33438), (101, 33390), (123, 33309), (126, 33297), (137, 33228), (144, 33204), (150, 33180), (163, 33105), (166, 33084), (175, 33024), (181, 32979), (192, 32931), (210, 32823), (212, 32817), (231, 32736), (238, 32688), (252, 32628), (266, 32556), (274, 32514), (276, 32502), (288, 32361), (291, 32337), (293, 32322), (297, 32286), (308, 32193), (311, 32157), (312, 32151), (314, 32139), (318, 32115), (324, 32058), (326, 32040), (339, 31947), (345, 31878), (349, 31851), (350, 31839), (351, 31836), (353, 31800), (355, 31779), (364, 31746), (369, 31728), (378, 31659), (384, 31632), (388, 31608), (403, 31500), (406, 31488),

Gene: Martin\_40 Start: 28939, Stop: 27074, Start Num: 102

Candidate Starts for Martin\_40:

(Start: 81 @29026 has 3 MA's), (82, 29023), (Start: 102 @28939 has 96 MA's), (Start: 107 @28930 has 5 MA's), (130, 28825), (131, 28816), (138, 28786), (139, 28783), (165, 28663), (166, 28651), (168, 28645), (182, 28540), (186, 28513), (212, 28372), (213, 28366), (214, 28363), (216, 28351), (219, 28324), (220, 28321), (221, 28306), (222, 28300), (223, 28294), (234, 28261), (263, 28072), (304, 27757), (306, 27748), (307, 27745), (308, 27727), (312, 27685), (313, 27679), (315, 27670), (317, 27655), (324, 27598), (343, 27439), (346, 27409), (347, 27400), (353, 27340), (356, 27316), (366, 27277), (373, 27244), (374, 27232), (384, 27172),

Gene: Mayweather\_49 Start: 35337, Stop: 32956, Start Num: 24

Candidate Starts for Mayweather\_49:

(Start: 24 @35337 has 10 MA's), (33, 35277), (46, 35196), (57, 35076), (63, 35031), (76, 34953), (77, 34947), (78, 34944), (88, 34914), (96, 34875), (97, 34866), (Start: 107 @34836 has 5 MA's), (121, 34779), (130, 34740), (134, 34719), (144, 34677), (146, 34668), (150, 34653), (153, 34644), (156, 34632), (160, 34599), (161, 34596), (163, 34578), (166, 34557), (195, 34374), (212, 34299), (221, 34257), (238, 34170), (249, 34122), (256, 34092), (258, 34086), (266, 34041), (267, 34038), (270, 34023), (273, 34002), (283, 33918), (286, 33888), (290, 33828), (292, 33819), (294, 33804), (295, 33789), (297, 33777), (308, 33684), (311, 33648), (312, 33642), (313, 33636), (314, 33630), (321, 33573), (324, 33549), (337, 33444), (338, 33441), (343, 33390), (348, 33348), (350, 33330), (353, 33291), (361, 33249), (367, 33225), (379, 33147), (384, 33123), (394, 33078), (401, 33012), (403, 32991), (404, 32985), (406, 32979),

Gene: McGalleon\_41 Start: 30345, Stop: 28477, Start Num: 102

Candidate Starts for McGalleon\_41:

(98, 30360), (Start: 102 @30345 has 96 MA's), (Start: 107 @30336 has 5 MA's), (138, 30192), (139, 30189), (163, 30078), (165, 30069), (166, 30057), (168, 30051), (182, 29946), (197, 29853), (212, 29778), (214, 29769), (216, 29757), (220, 29727), (221, 29712), (222, 29706), (223, 29700), (263, 29478), (304, 29163), (306, 29154), (307, 29151), (308, 29133), (312, 29091), (324, 29001), (328, 28974), (343, 28842), (347, 28803), (353, 28743), (356, 28719), (366, 28680), (373, 28647), (374, 28635),

Gene: Mercedes\_34 Start: 25967, Stop: 24108, Start Num: 105

Candidate Starts for Mercedes\_34:

(Start: 105 @25967 has 34 MA's), (106, 25961), (128, 25868), (138, 25814), (140, 25808), (163, 25700), (166, 25679), (168, 25673), (174, 25622), (187, 25538), (214, 25403), (216, 25391), (220, 25361), (221, 25346), (222, 25340), (226, 25328), (257, 25157), (268, 25091), (273, 25058), (282, 24989), (283, 24977), (304, 24797), (308, 24767), (321, 24656), (324, 24632), (325, 24629), (328, 24605), (347, 24434), (353, 24374), (356, 24350), (359, 24338), (362, 24329), (373, 24278), (384, 24206),

Gene: MillyPhilly\_39 Start: 28927, Stop: 27062, Start Num: 102

Candidate Starts for MillyPhilly\_39:

(Start: 81 @29014 has 3 MA's), (82, 29011), (Start: 102 @28927 has 96 MA's), (Start: 107 @28918 has 5 MA's), (130, 28813), (131, 28804), (138, 28774), (139, 28771), (165, 28651), (166, 28639), (168, 28633), (182, 28528), (186, 28501), (212, 28360), (213, 28354), (214, 28351), (216, 28339), (219, 28312), (220, 28309), (221, 28294), (222, 28288), (223, 28282), (234, 28249), (263, 28060), (304, 27745), (306, 27736), (307, 27733), (308, 27715), (312, 27673), (313, 27667), (315, 27658), (317, 27643), (324, 27586), (343, 27427), (346, 27397), (347, 27388), (353, 27328), (356, 27304), (366, 27265), (373, 27232), (374, 27220), (384, 27160),

Gene: MonChoix\_37 Start: 28950, Stop: 27082, Start Num: 102

Candidate Starts for MonChoix\_37:

(65, 29115), (72, 29070), (84, 29025), (Start: 102 @28950 has 96 MA's), (Start: 107 @28941 has 5 MA's), (163, 28683), (164, 28677), (166, 28662), (168, 28656), (186, 28524), (195, 28470), (212, 28383), (214, 28374), (216, 28362), (219, 28335), (220, 28332), (221, 28317), (222, 28311), (226, 28299), (279, 27981), (306, 27759), (307, 27756), (308, 27738), (312, 27696), (324, 27606), (328, 27579), (343, 27447), (346, 27417), (347, 27408), (353, 27348), (356, 27324), (358, 27318), (366, 27285), (373, 27252), (374, 27240),

Gene: Morrigan\_40 Start: 28385, Stop: 26493, Start Num: 105

Candidate Starts for Morrigan\_40:

(Start: 105 @28385 has 34 MA's), (Start: 107 @28376 has 5 MA's), (120, 28319), (128, 28289), (131, 28265), (135, 28250), (138, 28235), (140, 28229), (145, 28211), (155, 28178), (166, 28100), (168, 28094), (197, 27893), (214, 27809), (216, 27797), (220, 27767), (221, 27752), (222, 27746), (223, 27740), (226, 27734), (227, 27731), (275, 27464), (280, 27413), (287, 27347), (308, 27146), (312, 27104), (317, 27074), (320, 27053), (324, 27017), (334, 26945), (347, 26819), (353, 26759), (356, 26735), (359, 26723), (384, 26591),

Gene: MrWorldwide\_39 Start: 28937, Stop: 27072, Start Num: 102

Candidate Starts for MrWorldwide\_39:

(Start: 81 @29024 has 3 MA's), (82, 29021), (Start: 102 @28937 has 96 MA's), (Start: 107 @28928 has 5 MA's), (130, 28823), (131, 28814), (138, 28784), (139, 28781), (165, 28661), (166, 28649), (168, 28643), (182, 28538), (186, 28511), (212, 28370), (213, 28364), (214, 28361), (216, 28349), (219, 28322), (220, 28319), (221, 28304), (222, 28298), (223, 28292), (234, 28259), (253, 28130), (263, 28070), (304, 27755), (306, 27746), (307, 27743), (308, 27725), (312, 27683), (313, 27677), (315, 27668), (317, 27653), (324, 27596), (343, 27437), (346, 27407), (347, 27398), (353, 27338), (356, 27314), (366, 27275), (373, 27242), (374, 27230), (384, 27170),

Gene: Muddy\_44 Start: 34756, Stop: 32411, Start Num: 34

Candidate Starts for Muddy\_44:

(22, 34822), (26, 34813), (Start: 31 @34768 has 1 MA's), (Start: 34 @34756 has 1 MA's), (Start: 40 @34717 has 1 MA's), (57, 34558), (59, 34528), (63, 34498), (100, 34330), (130, 34210), (154, 34108), (166, 34027), (175, 33967), (185, 33901), (212, 33769), (237, 33649), (238, 33640), (240, 33628), (258, 33559), (287, 33346), (291, 33292), (300, 33211), (304, 33178), (311, 33112), (312, 33106), (313, 33100), (314, 33094), (318, 33070), (321, 33037), (322, 33022), (324, 33013), (343, 32854), (346, 32824), (355, 32734), (378, 32614), (384, 32587), (397, 32518),

Gene: MunkgeeRoachy\_43 Start: 31903, Stop: 29510, Start Num: 17

Candidate Starts for MunkgeeRoachy\_43:

(Start: 17 @31903 has 15 MA's), (Start: 31 @31849 has 1 MA's), (38, 31807), (44, 31783), (56, 31657), (57, 31633), (63, 31588), (68, 31537), (73, 31522), (78, 31501), (92, 31453), (101, 31411), (121, 31336), (125, 31324), (137, 31255), (146, 31222), (150, 31207), (160, 31153), (161, 31150), (163, 31132), (166, 31111), (169, 31096), (175, 31051), (195, 30928), (196, 30922), (212, 30853), (221, 30811), (238, 30724), (243, 30700), (247, 30694), (249, 30670), (251, 30661), (255, 30646), (258, 30634), (265, 30592), (266, 30589), (267, 30586), (281, 30490), (286, 30439), (287, 30427), (292, 30370), (293, 30364), (297, 30328), (303, 30271), (308, 30235), (311, 30199), (312, 30193), (313, 30187), (314, 30181), (321, 30124), (324, 30100), (330, 30055), (345, 29920), (383, 29677), (384, 29674), (394, 29629), (395, 29620), (402, 29560),

Gene: Nagem\_39 Start: 28930, Stop: 27065, Start Num: 102

Candidate Starts for Nagem\_39:

(Start: 81 @29017 has 3 MA's), (Start: 102 @28930 has 96 MA's), (Start: 107 @28921 has 5 MA's), (130, 28816), (131, 28807), (138, 28777), (139, 28774), (165, 28654), (166, 28642), (168, 28636), (182, 28531), (186, 28504), (212, 28363), (213, 28357), (214, 28354), (216, 28342), (219, 28315),

(220, 28312), (221, 28297), (222, 28291), (223, 28285), (234, 28252), (253, 28123), (263, 28063), (304, 27748), (306, 27739), (307, 27736), (308, 27718), (312, 27676), (313, 27670), (317, 27646), (324, 27589), (343, 27430), (346, 27400), (347, 27391), (353, 27331), (356, 27307), (366, 27268), (373, 27235), (374, 27223), (384, 27163),

Gene: Nattles\_38 Start: 28619, Stop: 26754, Start Num: 102

Candidate Starts for Nattles\_38:

(Start: 81 @28706 has 3 MA's), (Start: 102 @28619 has 96 MA's), (Start: 107 @28610 has 5 MA's), (130, 28505), (131, 28496), (138, 28466), (139, 28463), (165, 28343), (166, 28331), (168, 28325), (182, 28220), (186, 28193), (212, 28052), (213, 28046), (214, 28043), (216, 28031), (219, 28004), (220, 28001), (221, 27986), (222, 27980), (223, 27974), (234, 27941), (263, 27752), (304, 27437), (306, 27428), (307, 27425), (308, 27407), (312, 27365), (313, 27359), (317, 27335), (324, 27278), (343, 27119), (346, 27089), (347, 27080), (353, 27020), (356, 26996), (366, 26957), (373, 26924), (374, 26912), (384, 26852),

Gene: Nebulous\_37 Start: 30025, Stop: 28133, Start Num: 105

Candidate Starts for Nebulous\_37:

(Start: 105 @30025 has 34 MA's), (114, 29980), (128, 29926), (129, 29920), (131, 29902), (139, 29869), (140, 29866), (155, 29815), (156, 29812), (167, 29734), (168, 29731), (173, 29683), (180, 29641), (197, 29539), (204, 29506), (212, 29464), (213, 29458), (214, 29455), (216, 29443), (220, 29413), (226, 29380), (227, 29377), (232, 29356), (257, 29209), (280, 29053), (308, 28786), (311, 28750), (312, 28744), (315, 28729), (322, 28666), (324, 28657), (356, 28375), (357, 28372), (366, 28336), (384, 28231),

Gene: Neferthema\_38 Start: 29229, Stop: 27331, Start Num: 105

Candidate Starts for Neferthema\_38:

(Start: 105 @29229 has 34 MA's), (128, 29130), (129, 29124), (139, 29073), (140, 29070), (155, 29019), (156, 29016), (163, 28962), (164, 28956), (167, 28938), (173, 28887), (191, 28785), (197, 28737), (202, 28716), (204, 28704), (212, 28662), (213, 28656), (214, 28653), (216, 28641), (220, 28611), (222, 28590), (226, 28578), (227, 28575), (232, 28554), (257, 28407), (280, 28251), (308, 27984), (311, 27948), (312, 27942), (315, 27927), (322, 27864), (324, 27855), (330, 27810), (356, 27573), (357, 27570), (366, 27534),

Gene: Nellie\_36 Start: 31889, Stop: 30144, Start Num: 112

Candidate Starts for Nellie\_36:

(108, 31916), (Start: 112 @31889 has 6 MA's), (113, 31886), (122, 31853), (124, 31847), (142, 31754), (151, 31721), (157, 31694), (174, 31559), (194, 31430), (195, 31424), (200, 31400), (203, 31385), (209, 31358), (215, 31328), (229, 31247), (233, 31238), (241, 31178), (246, 31157), (263, 31043), (267, 31025), (312, 30647), (319, 30629), (327, 30563), (330, 30548), (359, 30329), (370, 30287), (384, 30203), (392, 30170),

Gene: Nibbles\_39 Start: 31737, Stop: 29380, Start Num: 23

Candidate Starts for Nibbles\_39:

(18, 31746), (Start: 23 @31737 has 23 MA's), (28, 31722), (30, 31686), (50, 31551), (57, 31488), (62, 31446), (64, 31434), (85, 31332), (88, 31329), (106, 31254), (115, 31215), (121, 31194), (133, 31143), (143, 31101), (150, 31071), (160, 31017), (163, 30996), (166, 30975), (176, 30912), (198, 30777), (201, 30762), (207, 30735), (212, 30717), (232, 30633), (237, 30597), (258, 30504), (265, 30462), (266, 30459), (267, 30456), (271, 30432), (274, 30420), (276, 30408), (288, 30267), (292, 30240), (308, 30105), (311, 30069), (312, 30063), (313, 30057), (314, 30051), (318, 30027), (321, 29994), (324, 29970), (330, 29925), (332, 29919), (339, 29859), (350, 29751), (358, 29682), (361, 29670), (367, 29646), (379, 29568), (384, 29544), (397, 29475),

Gene: NickSell\_40 Start: 28930, Stop: 27074, Start Num: 107

Candidate Starts for NickSell\_40:

(1, 29698), (36, 29395), (Start: 71 @29065 has 1 MA's), (80, 29029), (83, 29023), (Start: 102 @28939 has 96 MA's), (Start: 107 @28930 has 5 MA's), (130, 28825), (131, 28816), (138, 28786), (139, 28783), (165, 28663), (166, 28651), (168, 28645), (182, 28540), (186, 28513), (212, 28372), (213, 28366), (214, 28363), (216, 28351), (219, 28324), (220, 28321), (221, 28306), (222, 28300), (223, 28294), (234, 28261), (263, 28072), (304, 27757), (306, 27748), (307, 27745), (308, 27727), (312, 27685), (313, 27679), (315, 27670), (317, 27655), (324, 27598), (343, 27439), (346, 27409), (347, 27400), (353, 27340), (356, 27316), (366, 27277), (373, 27244), (374, 27232), (384, 27172),

Gene: Nina\_42 Start: 32678, Stop: 30285, Start Num: 17

Candidate Starts for Nina\_42:

(Start: 17 @32678 has 15 MA's), (25, 32672), (Start: 31 @32624 has 1 MA's), (38, 32582), (44, 32558), (56, 32432), (57, 32408), (63, 32363), (68, 32312), (73, 32297), (78, 32276), (92, 32228), (99, 32195), (101, 32186), (121, 32111), (125, 32099), (137, 32030), (145, 32003), (146, 31997), (150, 31982), (160, 31928), (161, 31925), (163, 31907), (166, 31886), (175, 31826), (195, 31703), (196, 31697), (212, 31628), (221, 31586), (238, 31499), (243, 31475), (247, 31469), (249, 31445), (251, 31436), (255, 31421), (258, 31409), (265, 31367), (266, 31364), (267, 31361), (274, 31325), (286, 31214), (292, 31145), (293, 31139), (297, 31103), (303, 31046), (308, 31010), (311, 30974), (312, 30968), (313, 30962), (314, 30956), (321, 30899), (324, 30875), (330, 30830), (384, 30449), (394, 30404), (395, 30395), (402, 30335), (403, 30317),

Gene: NoShow\_52 Start: 37810, Stop: 35447, Start Num: 29

Candidate Starts for NoShow\_52:

(21, 37861), (Start: 23 @37840 has 23 MA's), (Start: 29 @37810 has 1 MA's), (Start: 31 @37786 has 1 MA's), (39, 37741), (Start: 40 @37735 has 1 MA's), (52, 37630), (54, 37621), (57, 37576), (63, 37531), (68, 37480), (73, 37465), (78, 37444), (147, 37165), (160, 37099), (175, 36997), (193, 36892), (195, 36874), (198, 36859), (211, 36802), (212, 36799), (215, 36781), (221, 36757), (222, 36751), (236, 36682), (237, 36679), (238, 36670), (259, 36580), (260, 36571), (271, 36511), (273, 36502), (275, 36496), (295, 36283), (296, 36280), (300, 36241), (304, 36208), (311, 36142), (312, 36136), (313, 36130), (314, 36124), (321, 36067), (324, 36043), (354, 35776), (373, 35689), (379, 35641), (384, 35617), (397, 35548),

Gene: Nodigi\_51 Start: 35275, Stop: 32885, Start Num: 23

Candidate Starts for Nodigi\_51:

(7, 35404), (8, 35395), (Start: 23 @35275 has 23 MA's), (45, 35143), (46, 35131), (50, 35086), (57, 35023), (58, 35002), (64, 34969), (73, 34912), (86, 34864), (90, 34849), (101, 34801), (121, 34726), (123, 34720), (125, 34714), (126, 34708), (137, 34639), (144, 34615), (150, 34591), (163, 34516), (166, 34495), (171, 34447), (175, 34435), (181, 34390), (210, 34234), (212, 34228), (238, 34099), (249, 34051), (252, 34039), (266, 33967), (274, 33925), (286, 33814), (288, 33772), (291, 33748), (292, 33739), (297, 33697), (308, 33604), (311, 33568), (312, 33562), (313, 33556), (314, 33550), (321, 33493), (324, 33469), (326, 33451), (339, 33358), (345, 33289), (350, 33250), (353, 33211), (355, 33190), (364, 33157), (369, 33139), (384, 33043), (388, 33019), (403, 32911),

Gene: Nucci\_37 Start: 28513, Stop: 26612, Start Num: 105

Candidate Starts for Nucci\_37:

(Start: 105 @28513 has 34 MA's), (131, 28390), (135, 28375), (138, 28360), (147, 28327), (151, 28318), (155, 28303), (160, 28267), (162, 28252), (166, 28225), (168, 28219), (174, 28168), (180, 28129), (191, 28069), (212, 27943), (214, 27934), (216, 27922), (220, 27892), (222, 27871), (232, 27835), (257, 27688), (263, 27643), (280, 27532), (299, 27337), (304, 27295), (308, 27265), (312, 27223), (317, 27193), (320, 27172), (324, 27136), (353, 26878), (356, 26854), (365, 26821), (366, 26815), (384, 26710),

Gene: Oats\_38 Start: 28632, Stop: 26767, Start Num: 102

Candidate Starts for Oats\_38:

(Start: 81 @28719 has 3 MA's), (Start: 102 @28632 has 96 MA's), (Start: 107 @28623 has 5 MA's), (130, 28518), (131, 28509), (138, 28479), (139, 28476), (165, 28356), (166, 28344), (168, 28338), (182, 28233), (186, 28206), (212, 28065), (213, 28059), (214, 28056), (216, 28044), (219, 28017), (220, 28014), (221, 27999), (222, 27993), (223, 27987), (234, 27954), (263, 27765), (304, 27450), (306, 27441), (307, 27438), (308, 27420), (312, 27378), (313, 27372), (315, 27363), (317, 27348), (324, 27291), (343, 27132), (346, 27102), (347, 27093), (353, 27033), (356, 27009), (366, 26970), (373, 26937), (374, 26925), (384, 26865),

Gene: OldNelly\_39 Start: 28936, Stop: 27071, Start Num: 102

Candidate Starts for OldNelly\_39:

(Start: 81 @29023 has 3 MA's), (Start: 102 @28936 has 96 MA's), (Start: 107 @28927 has 5 MA's), (130, 28822), (131, 28813), (138, 28783), (139, 28780), (165, 28660), (166, 28648), (168, 28642), (182, 28537), (186, 28510), (212, 28369), (213, 28363), (214, 28360), (216, 28348), (219, 28321), (220, 28318), (221, 28303), (222, 28297), (223, 28291), (234, 28258), (253, 28129), (263, 28069), (304, 27754), (306, 27745), (307, 27742), (308, 27724), (312, 27682), (313, 27676), (315, 27667), (317, 27652), (324, 27595), (343, 27436), (346, 27406), (347, 27397), (353, 27337), (356, 27313), (366, 27274), (373, 27241), (374, 27229), (384, 27169),

Gene: Orla\_51 Start: 35183, Stop: 32787, Start Num: 23

Candidate Starts for Orla\_51:

(7, 35312), (8, 35303), (Start: 23 @35183 has 23 MA's), (45, 35051), (46, 35039), (50, 34994), (57, 34931), (58, 34910), (64, 34877), (73, 34820), (86, 34772), (90, 34757), (101, 34709), (121, 34634), (123, 34628), (125, 34622), (126, 34616), (137, 34547), (144, 34523), (150, 34499), (163, 34424), (166, 34403), (171, 34355), (175, 34343), (181, 34298), (210, 34142), (212, 34136), (238, 34007), (249, 33959), (252, 33947), (266, 33875), (274, 33833), (286, 33722), (288, 33680), (291, 33656), (292, 33647), (297, 33605), (308, 33512), (311, 33476), (312, 33470), (313, 33464), (314, 33458), (321, 33401), (324, 33377), (326, 33359), (339, 33266), (345, 33197), (350, 33158), (353, 33119), (355, 33098), (364, 33065), (369, 33047), (384, 32951), (388, 32927), (396, 32888), (403, 32819),

Gene: Oxtober96\_39 Start: 28935, Stop: 27070, Start Num: 102

Candidate Starts for Oxtober96\_39:

(Start: 81 @29022 has 3 MA's), (82, 29019), (98, 28950), (Start: 102 @28935 has 96 MA's), (Start: 107 @28926 has 5 MA's), (130, 28821), (131, 28812), (138, 28782), (139, 28779), (165, 28659), (166, 28647), (168, 28641), (182, 28536), (186, 28509), (212, 28368), (214, 28359), (216, 28347), (219, 28320), (220, 28317), (221, 28302), (222, 28296), (223, 28290), (234, 28257), (263, 28068), (304, 27753), (306, 27744), (307, 27741), (308, 27723), (312, 27681), (313, 27675), (317, 27651), (324, 27594), (343, 27435), (346, 27405), (347, 27396), (353, 27336), (356, 27312), (366, 27273), (373, 27240), (374, 27228), (384, 27168),

Gene: Pajaza\_35 Start: 27722, Stop: 25905, Start Num: 103

Candidate Starts for Pajaza\_35:

(Start: 103 @27722 has 19 MA's), (109, 27707), (166, 27431), (168, 27425), (195, 27290), (198, 27275), (213, 27197), (214, 27194), (216, 27182), (220, 27152), (232, 27095), (257, 26948), (283, 26768), (299, 26630), (306, 26579), (307, 26576), (308, 26558), (309, 26555), (312, 26516), (324, 26429), (328, 26402), (343, 26270), (356, 26147), (365, 26114), (366, 26108), (369, 26099), (384, 26003), (385, 25997),

Gene: Papafritta\_38 Start: 28640, Stop: 26775, Start Num: 102

Candidate Starts for Papafritta\_38:

(Start: 81 @28727 has 3 MA's), (82, 28724), (Start: 102 @28640 has 96 MA's), (Start: 107 @28631 has 5 MA's), (130, 28526), (131, 28517), (138, 28487), (139, 28484), (165, 28364), (166, 28352), (168, 28346), (182, 28241), (186, 28214), (212, 28073), (213, 28067), (214, 28064), (216, 28052), (219,

28025), (220, 28022), (221, 28007), (222, 28001), (223, 27995), (234, 27962), (253, 27833), (263, 27773), (304, 27458), (306, 27449), (307, 27446), (308, 27428), (312, 27386), (313, 27380), (315, 27371), (317, 27356), (324, 27299), (343, 27140), (346, 27110), (347, 27101), (353, 27041), (356, 27017), (366, 26978), (373, 26945), (374, 26933), (384, 26873),

Gene: ParleG\_39 Start: 28937, Stop: 27072, Start Num: 102

Candidate Starts for ParleG\_39:

(Start: 81 @29024 has 3 MA's), (82, 29021), (Start: 102 @28937 has 96 MA's), (Start: 107 @28928 has 5 MA's), (130, 28823), (131, 28814), (138, 28784), (139, 28781), (165, 28661), (166, 28649), (168, 28643), (182, 28538), (186, 28511), (212, 28370), (213, 28364), (214, 28361), (216, 28349), (219, 28322), (220, 28319), (221, 28304), (222, 28298), (223, 28292), (234, 28259), (253, 28130), (263, 28070), (304, 27755), (306, 27746), (307, 27743), (308, 27725), (312, 27683), (313, 27677), (315, 27668), (317, 27653), (324, 27596), (343, 27437), (346, 27407), (347, 27398), (353, 27338), (356, 27314), (366, 27275), (373, 27242), (374, 27230), (384, 27170),

Gene: Peep\_39 Start: 28922, Stop: 27057, Start Num: 102

Candidate Starts for Peep\_39:

(Start: 81 @29009 has 3 MA's), (82, 29006), (Start: 102 @28922 has 96 MA's), (Start: 107 @28913 has 5 MA's), (130, 28808), (131, 28799), (138, 28769), (139, 28766), (165, 28646), (166, 28634), (168, 28628), (182, 28523), (186, 28496), (212, 28355), (213, 28349), (214, 28346), (216, 28334), (219, 28307), (220, 28304), (221, 28289), (222, 28283), (223, 28277), (234, 28244), (253, 28115), (263, 28055), (286, 27890), (304, 27740), (306, 27731), (307, 27728), (308, 27710), (312, 27668), (313, 27662), (315, 27653), (317, 27638), (324, 27581), (343, 27422), (346, 27392), (347, 27383), (353, 27323), (356, 27299), (366, 27260), (373, 27227), (374, 27215), (384, 27155),

Gene: Peppino\_38 Start: 29047, Stop: 27182, Start Num: 102

Candidate Starts for Peppino\_38:

(Start: 102 @29047 has 96 MA's), (Start: 107 @29038 has 5 MA's), (164, 28774), (166, 28759), (168, 28753), (186, 28621), (195, 28567), (212, 28480), (214, 28471), (216, 28459), (219, 28432), (220, 28429), (221, 28414), (222, 28408), (279, 28078), (304, 27865), (306, 27856), (307, 27853), (308, 27835), (312, 27793), (315, 27778), (324, 27706), (328, 27679), (343, 27547), (346, 27517), (353, 27448), (356, 27424), (358, 27418), (366, 27385), (373, 27352), (374, 27340),

Gene: Pherbot\_37 Start: 28480, Stop: 26630, Start Num: 103

Candidate Starts for Pherbot\_37:

(Start: 103 @28480 has 19 MA's), (131, 28357), (139, 28324), (163, 28213), (166, 28192), (168, 28186), (174, 28135), (202, 27979), (212, 27925), (213, 27919), (214, 27916), (216, 27904), (220, 27874), (232, 27817), (257, 27670), (279, 27523), (304, 27313), (307, 27301), (308, 27283), (312, 27241), (315, 27226), (320, 27190), (324, 27154), (346, 26965), (347, 26956), (353, 26896), (356, 26872), (362, 26851), (365, 26839), (384, 26728),

Gene: Pherferi\_39 Start: 28930, Stop: 27065, Start Num: 102

Candidate Starts for Pherferi\_39:

(Start: 81 @29017 has 3 MA's), (82, 29014), (Start: 102 @28930 has 96 MA's), (Start: 107 @28921 has 5 MA's), (130, 28816), (131, 28807), (138, 28777), (139, 28774), (165, 28654), (166, 28642), (168, 28636), (182, 28531), (186, 28504), (212, 28363), (213, 28357), (214, 28354), (216, 28342), (219, 28315), (220, 28312), (221, 28297), (222, 28291), (223, 28285), (234, 28252), (263, 28063), (304, 27748), (306, 27739), (307, 27736), (308, 27718), (312, 27676), (313, 27670), (315, 27661), (317, 27646), (324, 27589), (343, 27430), (346, 27400), (347, 27391), (353, 27331), (356, 27307), (366, 27268), (373, 27235), (374, 27223), (384, 27163),

Gene: Phiderman\_40 Start: 28918, Stop: 27062, Start Num: 107

Candidate Starts for Phiderman\_40:

(Start: 81 @29014 has 3 MA's), (82, 29011), (Start: 102 @28927 has 96 MA's), (Start: 107 @28918 has 5 MA's), (130, 28813), (131, 28804), (138, 28774), (139, 28771), (165, 28651), (166, 28639), (168, 28633), (182, 28528), (186, 28501), (212, 28360), (213, 28354), (214, 28351), (216, 28339), (219, 28312), (220, 28309), (221, 28294), (222, 28288), (223, 28282), (234, 28249), (263, 28060), (304, 27745), (306, 27736), (307, 27733), (308, 27715), (312, 27673), (313, 27667), (315, 27658), (317, 27643), (324, 27586), (343, 27427), (346, 27397), (347, 27388), (353, 27328), (356, 27304), (366, 27265), (373, 27232), (374, 27220), (384, 27160),

Gene: Phireproof\_39 Start: 28936, Stop: 27071, Start Num: 102

Candidate Starts for Phireproof\_39:

(Start: 81 @29023 has 3 MA's), (82, 29020), (Start: 102 @28936 has 96 MA's), (Start: 107 @28927 has 5 MA's), (130, 28822), (131, 28813), (138, 28783), (139, 28780), (165, 28660), (166, 28648), (168, 28642), (182, 28537), (186, 28510), (212, 28369), (213, 28363), (214, 28360), (216, 28348), (219, 28321), (220, 28318), (221, 28303), (222, 28297), (223, 28291), (234, 28258), (263, 28069), (304, 27754), (306, 27745), (307, 27742), (308, 27724), (312, 27682), (313, 27676), (317, 27652), (324, 27595), (343, 27436), (346, 27406), (347, 27397), (353, 27337), (356, 27313), (366, 27274), (373, 27241), (374, 27229), (384, 27169),

Gene: PhredFlintston\_39 Start: 28930, Stop: 27065, Start Num: 102

Candidate Starts for PhredFlintston\_39:

(Start: 81 @29017 has 3 MA's), (82, 29014), (Start: 102 @28930 has 96 MA's), (Start: 107 @28921 has 5 MA's), (130, 28816), (131, 28807), (138, 28777), (139, 28774), (165, 28654), (166, 28642), (168, 28636), (182, 28531), (186, 28504), (212, 28363), (213, 28357), (214, 28354), (216, 28342), (219, 28315), (220, 28312), (221, 28297), (222, 28291), (223, 28285), (234, 28252), (263, 28063), (304, 27748), (306, 27739), (307, 27736), (308, 27718), (312, 27676), (313, 27670), (315, 27661), (317, 27646), (324, 27589), (343, 27430), (346, 27400), (347, 27391), (353, 27331), (356, 27307), (366, 27268), (373, 27235), (374, 27223), (384, 27163),

Gene: Phriends\_39 Start: 28936, Stop: 27071, Start Num: 102

Candidate Starts for Phriends\_39:

(Start: 81 @29023 has 3 MA's), (Start: 102 @28936 has 96 MA's), (Start: 107 @28927 has 5 MA's), (130, 28822), (131, 28813), (138, 28783), (139, 28780), (165, 28660), (166, 28648), (168, 28642), (182, 28537), (186, 28510), (212, 28369), (213, 28363), (214, 28360), (216, 28348), (219, 28321), (220, 28318), (221, 28303), (222, 28297), (223, 28291), (234, 28258), (253, 28129), (263, 28069), (304, 27754), (306, 27745), (307, 27742), (308, 27724), (312, 27682), (313, 27676), (315, 27667), (317, 27652), (324, 27595), (343, 27436), (346, 27406), (347, 27397), (353, 27337), (356, 27313), (366, 27274), (373, 27241), (374, 27229), (384, 27169),

Gene: Pikmin\_35 Start: 27722, Stop: 25905, Start Num: 103

Candidate Starts for Pikmin\_35:

(Start: 103 @27722 has 19 MA's), (109, 27707), (166, 27431), (168, 27425), (195, 27290), (198, 27275), (213, 27197), (214, 27194), (216, 27182), (220, 27152), (232, 27095), (257, 26948), (283, 26768), (299, 26630), (306, 26579), (307, 26576), (308, 26558), (309, 26555), (312, 26516), (324, 26429), (328, 26402), (343, 26270), (356, 26147), (365, 26114), (366, 26108), (369, 26099), (384, 26003), (385, 25997),

Gene: Pocket\_38 Start: 28623, Stop: 26758, Start Num: 102

Candidate Starts for Pocket\_38:

(Start: 81 @28710 has 3 MA's), (Start: 102 @28623 has 96 MA's), (Start: 107 @28614 has 5 MA's), (130, 28509), (131, 28500), (138, 28470), (139, 28467), (165, 28347), (166, 28335), (168, 28329), (182, 28224), (186, 28197), (212, 28056), (213, 28050), (214, 28047), (216, 28035), (219, 28008), (220, 28005), (221, 27990), (222, 27984), (223, 27978), (234, 27945), (253, 27816), (263, 27756), (304, 27441), (306, 27432), (307, 27429), (308, 27411), (312, 27369), (313, 27363), (317, 27339),



(324, 27282), (343, 27123), (346, 27093), (347, 27084), (353, 27024), (356, 27000), (366, 26961), (373, 26928), (374, 26916), (384, 26856),

Gene: Pons\_46 Start: 34228, Stop: 31850, Start Num: 24

Candidate Starts for Pons\_46:

(Start: 24 @34228 has 10 MA's), (33, 34168), (46, 34087), (57, 33967), (63, 33922), (76, 33844), (77, 33838), (78, 33835), (88, 33805), (96, 33766), (97, 33757), (106, 33730), (Start: 107 @33727 has 5 MA's), (121, 33670), (130, 33631), (144, 33568), (150, 33544), (153, 33535), (156, 33523), (160, 33490), (161, 33487), (163, 33469), (166, 33448), (175, 33388), (195, 33265), (212, 33190), (221, 33148), (238, 33061), (249, 33013), (256, 32983), (258, 32977), (266, 32932), (267, 32929), (270, 32914), (273, 32893), (281, 32830), (286, 32779), (290, 32719), (292, 32710), (294, 32695), (295, 32680), (297, 32668), (308, 32575), (311, 32539), (312, 32533), (313, 32527), (314, 32521), (321, 32464), (324, 32440), (337, 32335), (338, 32332), (343, 32281), (348, 32239), (350, 32221), (353, 32182), (361, 32140), (367, 32116), (373, 32086), (379, 32038), (381, 32029), (384, 32014), (394, 31969), (399, 31915), (403, 31882), (406, 31870),

Gene: PotPie\_45 Start: 34903, Stop: 32528, Start Num: 24

Candidate Starts for PotPie\_45:

(Start: 24 @34903 has 10 MA's), (33, 34843), (41, 34801), (46, 34762), (57, 34642), (58, 34621), (63, 34597), (76, 34519), (77, 34513), (78, 34510), (88, 34480), (97, 34432), (106, 34405), (Start: 107 @34402 has 5 MA's), (121, 34345), (130, 34306), (134, 34285), (144, 34243), (150, 34219), (153, 34210), (154, 34204), (156, 34198), (160, 34165), (163, 34144), (166, 34123), (195, 33940), (212, 33865), (221, 33823), (238, 33736), (247, 33712), (249, 33688), (251, 33679), (256, 33658), (266, 33607), (267, 33604), (270, 33589), (273, 33568), (287, 33442), (290, 33394), (292, 33385), (297, 33343), (308, 33250), (311, 33214), (312, 33208), (313, 33202), (314, 33196), (321, 33139), (324, 33115), (337, 33010), (338, 33007), (348, 32914), (350, 32896), (353, 32857), (361, 32815), (367, 32791), (373, 32761), (379, 32713), (384, 32689), (394, 32644), (404, 32557),

Gene: PrincePhergus\_37 Start: 28495, Stop: 26645, Start Num: 103

Candidate Starts for PrincePhergus\_37:

(Start: 103 @28495 has 19 MA's), (131, 28372), (139, 28339), (163, 28228), (166, 28207), (168, 28201), (169, 28192), (174, 28150), (202, 27994), (212, 27940), (213, 27934), (214, 27931), (216, 27919), (220, 27889), (232, 27832), (257, 27685), (279, 27538), (304, 27328), (306, 27319), (307, 27316), (308, 27298), (312, 27256), (315, 27241), (324, 27169), (346, 26980), (347, 26971), (353, 26911), (356, 26887), (365, 26854), (384, 26743),

Gene: PsychoKiller\_42 Start: 32441, Stop: 30048, Start Num: 17

Candidate Starts for PsychoKiller\_42:

(Start: 17 @32441 has 15 MA's), (25, 32435), (Start: 31 @32387 has 1 MA's), (38, 32345), (44, 32321), (56, 32195), (57, 32171), (63, 32126), (68, 32075), (73, 32060), (78, 32039), (92, 31991), (99, 31958), (101, 31949), (121, 31874), (125, 31862), (137, 31793), (145, 31766), (146, 31760), (150, 31745), (160, 31691), (161, 31688), (163, 31670), (166, 31649), (175, 31589), (195, 31466), (196, 31460), (212, 31391), (221, 31349), (238, 31262), (243, 31238), (247, 31232), (249, 31208), (251, 31199), (255, 31184), (258, 31172), (265, 31130), (266, 31127), (267, 31124), (286, 30977), (288, 30935), (292, 30908), (293, 30902), (308, 30773), (311, 30737), (312, 30731), (313, 30725), (314, 30719), (321, 30662), (324, 30638), (330, 30593), (383, 30215), (384, 30212), (394, 30167), (395, 30158), (402, 30098),

Gene: PuppyEggo\_39 Start: 28937, Stop: 27072, Start Num: 102

Candidate Starts for PuppyEggo\_39:

(Start: 81 @29024 has 3 MA's), (82, 29021), (Start: 102 @28937 has 96 MA's), (Start: 107 @28928 has 5 MA's), (130, 28823), (131, 28814), (138, 28784), (139, 28781), (165, 28661), (166, 28649), (168, 28643), (182, 28538), (186, 28511), (212, 28370), (213, 28364), (214, 28361), (216, 28349), (219,

28322), (220, 28319), (221, 28304), (222, 28298), (223, 28292), (234, 28259), (253, 28130), (263, 28070), (277, 27995), (304, 27755), (306, 27746), (307, 27743), (308, 27725), (312, 27683), (313, 27677), (315, 27668), (317, 27653), (324, 27596), (343, 27437), (346, 27407), (347, 27398), (353, 27338), (356, 27314), (366, 27275), (373, 27242), (374, 27230), (384, 27170),

Gene: QuadZero\_37 Start: 27017, Stop: 25152, Start Num: 105

Candidate Starts for QuadZero\_37:

(Start: 105 @27017 has 34 MA's), (106, 27011), (129, 26912), (130, 26903), (136, 26879), (138, 26864), (140, 26858), (155, 26807), (156, 26804), (168, 26723), (191, 26573), (192, 26570), (206, 26471), (213, 26444), (214, 26441), (216, 26429), (220, 26399), (222, 26378), (232, 26342), (257, 26195), (283, 26015), (304, 25835), (308, 25805), (314, 25751), (318, 25733), (324, 25676), (328, 25649), (333, 25607), (338, 25568), (346, 25487), (347, 25478), (353, 25418), (356, 25394), (359, 25382), (362, 25373), (366, 25355), (373, 25322), (384, 25250),

Gene: Quartz\_38 Start: 28631, Stop: 26730, Start Num: 105

Candidate Starts for Quartz\_38:

(Start: 105 @28631 has 34 MA's), (131, 28508), (135, 28493), (138, 28478), (147, 28445), (151, 28436), (155, 28421), (160, 28385), (162, 28370), (166, 28343), (168, 28337), (174, 28286), (180, 28247), (191, 28187), (212, 28061), (214, 28052), (216, 28040), (220, 28010), (232, 27953), (257, 27806), (263, 27761), (280, 27650), (299, 27455), (304, 27413), (308, 27383), (312, 27341), (317, 27311), (320, 27290), (324, 27254), (353, 26996), (356, 26972), (365, 26939), (366, 26933), (384, 26828),

Gene: Quasar\_43 Start: 33103, Stop: 30710, Start Num: 17

Candidate Starts for Quasar\_43:

(Start: 17 @33103 has 15 MA's), (25, 33097), (Start: 31 @33049 has 1 MA's), (38, 33007), (44, 32983), (56, 32857), (57, 32833), (63, 32788), (68, 32737), (73, 32722), (78, 32701), (92, 32653), (99, 32620), (101, 32611), (121, 32536), (125, 32524), (137, 32455), (145, 32428), (146, 32422), (150, 32407), (160, 32353), (161, 32350), (163, 32332), (166, 32311), (175, 32251), (195, 32128), (196, 32122), (212, 32053), (221, 32011), (238, 31924), (243, 31900), (247, 31894), (249, 31870), (251, 31861), (255, 31846), (258, 31834), (265, 31792), (266, 31789), (267, 31786), (274, 31750), (286, 31639), (292, 31570), (293, 31564), (297, 31528), (308, 31435), (310, 31426), (311, 31399), (312, 31393), (313, 31387), (314, 31381), (321, 31324), (322, 31309), (324, 31300), (330, 31255), (383, 30877), (384, 30874), (394, 30829), (395, 30820), (402, 30760),

Gene: Raccoon\_38 Start: 29022, Stop: 27157, Start Num: 102

Candidate Starts for Raccoon\_38:

(Start: 102 @29022 has 96 MA's), (Start: 107 @29013 has 5 MA's), (164, 28749), (166, 28734), (168, 28728), (186, 28596), (195, 28542), (212, 28455), (214, 28446), (216, 28434), (219, 28407), (220, 28404), (221, 28389), (222, 28383), (279, 28053), (304, 27840), (306, 27831), (307, 27828), (308, 27810), (312, 27768), (315, 27753), (324, 27681), (328, 27654), (343, 27522), (346, 27492), (353, 27423), (356, 27399), (366, 27360), (374, 27315),

Gene: Rapheph\_39 Start: 28930, Stop: 27065, Start Num: 102

Candidate Starts for Rapheph\_39:

(Start: 81 @29017 has 3 MA's), (82, 29014), (Start: 102 @28930 has 96 MA's), (Start: 107 @28921 has 5 MA's), (130, 28816), (131, 28807), (138, 28777), (139, 28774), (165, 28654), (166, 28642), (168, 28636), (182, 28531), (186, 28504), (212, 28363), (213, 28357), (214, 28354), (216, 28342), (219, 28315), (220, 28312), (221, 28297), (222, 28291), (223, 28285), (234, 28252), (253, 28123), (263, 28063), (304, 27748), (306, 27739), (307, 27736), (308, 27718), (312, 27676), (313, 27670), (315, 27661), (317, 27646), (324, 27589), (343, 27430), (346, 27400), (347, 27391), (353, 27331), (356, 27307), (366, 27268), (373, 27235), (374, 27223), (384, 27163),

Gene: Raptor\_39 Start: 28934, Stop: 27069, Start Num: 102

Candidate Starts for Raptor\_39:

(Start: 81 @29021 has 3 MA's), (Start: 102 @28934 has 96 MA's), (Start: 107 @28925 has 5 MA's), (130, 28820), (131, 28811), (138, 28781), (139, 28778), (165, 28658), (166, 28646), (168, 28640), (182, 28535), (186, 28508), (212, 28367), (213, 28361), (214, 28358), (216, 28346), (219, 28319), (220, 28316), (221, 28301), (222, 28295), (223, 28289), (234, 28256), (253, 28127), (263, 28067), (304, 27752), (306, 27743), (307, 27740), (308, 27722), (312, 27680), (313, 27674), (317, 27650), (324, 27593), (343, 27434), (346, 27404), (347, 27395), (353, 27335), (356, 27311), (366, 27272), (373, 27239), (374, 27227), (384, 27167),

Gene: Rasputia\_89 Start: 56570, Stop: 58606, Start Num: 69

Candidate Starts for Rasputia\_89:

(Start: 69 @56570 has 4 MA's), (73, 56582), (85, 56627), (95, 56669), (Start: 107 @56711 has 5 MA's), (144, 56894), (145, 56897), (148, 56909), (158, 56948), (159, 56954), (175, 57086), (179, 57116), (197, 57230), (216, 57323), (220, 57350), (235, 57416), (239, 57458), (242, 57473), (248, 57512), (249, 57524), (250, 57530), (254, 57545), (264, 57611), (294, 57812), (308, 57926), (324, 58061), (335, 58136), (338, 58169), (345, 58241), (351, 58283), (352, 58307), (353, 58319), (356, 58343), (358, 58349), (362, 58364), (368, 58394), (371, 58412), (375, 58439), (376, 58445), (380, 58472), (384, 58493), (387, 58511), (389, 58523), (394, 58541), (400, 58601),

Gene: RedBaron\_45 Start: 32770, Stop: 30377, Start Num: 17

Candidate Starts for RedBaron\_45:

(Start: 17 @32770 has 15 MA's), (25, 32764), (Start: 31 @32716 has 1 MA's), (38, 32674), (44, 32650), (56, 32524), (57, 32500), (63, 32455), (68, 32404), (73, 32389), (78, 32368), (92, 32320), (101, 32278), (121, 32203), (125, 32191), (137, 32122), (146, 32089), (150, 32074), (160, 32020), (161, 32017), (163, 31999), (166, 31978), (175, 31918), (195, 31795), (196, 31789), (212, 31720), (221, 31678), (238, 31591), (243, 31567), (247, 31561), (249, 31537), (251, 31528), (255, 31513), (258, 31501), (265, 31459), (266, 31456), (267, 31453), (286, 31306), (292, 31237), (293, 31231), (297, 31195), (308, 31102), (310, 31093), (311, 31066), (312, 31060), (313, 31054), (314, 31048), (321, 30991), (324, 30967), (330, 30922), (383, 30544), (384, 30541), (394, 30496), (395, 30487), (402, 30427),

Gene: Redfield\_38 Start: 29054, Stop: 27189, Start Num: 102

Candidate Starts for Redfield\_38:

(Start: 102 @29054 has 96 MA's), (Start: 107 @29045 has 5 MA's), (164, 28781), (166, 28766), (168, 28760), (186, 28628), (195, 28574), (212, 28487), (214, 28478), (216, 28466), (219, 28439), (220, 28436), (221, 28421), (222, 28415), (279, 28085), (304, 27872), (306, 27863), (307, 27860), (308, 27842), (312, 27800), (317, 27770), (324, 27713), (343, 27554), (346, 27524), (353, 27455), (356, 27431), (358, 27425), (366, 27392), (373, 27359), (374, 27347),

Gene: Renzie\_39 Start: 28913, Stop: 27057, Start Num: 107

Candidate Starts for Renzie\_39:

(Start: 81 @29009 has 3 MA's), (Start: 102 @28922 has 96 MA's), (Start: 107 @28913 has 5 MA's), (130, 28808), (131, 28799), (138, 28769), (139, 28766), (165, 28646), (166, 28634), (168, 28628), (182, 28523), (186, 28496), (212, 28355), (213, 28349), (214, 28346), (216, 28334), (219, 28307), (220, 28304), (221, 28289), (222, 28283), (223, 28277), (234, 28244), (253, 28115), (263, 28055), (304, 27740), (306, 27731), (307, 27728), (308, 27710), (312, 27668), (313, 27662), (317, 27638), (324, 27581), (343, 27422), (346, 27392), (347, 27383), (353, 27323), (356, 27299), (366, 27260), (373, 27227), (374, 27215), (384, 27155),

Gene: Riyhil\_39 Start: 28940, Stop: 27075, Start Num: 102

Candidate Starts for Riyhil\_39:

(Start: 81 @29027 has 3 MA's), (82, 29024), (Start: 102 @28940 has 96 MA's), (Start: 107 @28931 has 5 MA's), (130, 28826), (131, 28817), (138, 28787), (139, 28784), (165, 28664), (166, 28652), (168, 28646), (182, 28541), (186, 28514), (212, 28373), (213, 28367), (214, 28364), (216, 28352), (219, 28325), (220, 28322), (221, 28307), (222, 28301), (223, 28295), (234, 28262), (253, 28133), (263, 28073), (304, 27758), (306, 27749), (307, 27746), (308, 27728), (312, 27686), (313, 27680), (315, 27671), (317, 27656), (324, 27599), (343, 27440), (346, 27410), (347, 27401), (353, 27341), (356, 27317), (366, 27278), (373, 27245), (374, 27233), (384, 27173),

Gene: Robinson\_39 Start: 28928, Stop: 27063, Start Num: 102

Candidate Starts for Robinson\_39:

(Start: 81 @29015 has 3 MA's), (82, 29012), (Start: 102 @28928 has 96 MA's), (Start: 107 @28919 has 5 MA's), (130, 28814), (131, 28805), (138, 28775), (139, 28772), (165, 28652), (166, 28640), (168, 28634), (182, 28529), (186, 28502), (212, 28361), (213, 28355), (214, 28352), (216, 28340), (219, 28313), (220, 28310), (221, 28295), (222, 28289), (223, 28283), (234, 28250), (253, 28121), (263, 28061), (304, 27746), (306, 27737), (307, 27734), (308, 27716), (312, 27674), (313, 27668), (315, 27659), (317, 27644), (324, 27587), (343, 27428), (346, 27398), (347, 27389), (353, 27329), (356, 27305), (366, 27266), (373, 27233), (374, 27221), (384, 27161),

Gene: Rog141\_39 Start: 28619, Stop: 26754, Start Num: 102

Candidate Starts for Rog141\_39:

(Start: 81 @28706 has 3 MA's), (82, 28703), (Start: 102 @28619 has 96 MA's), (Start: 107 @28610 has 5 MA's), (130, 28505), (131, 28496), (138, 28466), (139, 28463), (165, 28343), (166, 28331), (168, 28325), (182, 28220), (186, 28193), (212, 28052), (213, 28046), (214, 28043), (216, 28031), (219, 28004), (220, 28001), (221, 27986), (222, 27980), (223, 27974), (234, 27941), (253, 27812), (263, 27752), (304, 27437), (306, 27428), (307, 27425), (308, 27407), (312, 27365), (313, 27359), (315, 27350), (317, 27335), (324, 27278), (343, 27119), (346, 27089), (347, 27080), (353, 27020), (356, 26996), (366, 26957), (373, 26924), (374, 26912), (384, 26852),

Gene: SJay\_39 Start: 28931, Stop: 27066, Start Num: 102

Candidate Starts for SJay\_39:

(Start: 81 @29018 has 3 MA's), (Start: 102 @28931 has 96 MA's), (Start: 107 @28922 has 5 MA's), (130, 28817), (131, 28808), (138, 28778), (139, 28775), (165, 28655), (166, 28643), (168, 28637), (182, 28532), (186, 28505), (212, 28364), (213, 28358), (214, 28355), (216, 28343), (219, 28316), (220, 28313), (221, 28298), (222, 28292), (223, 28286), (234, 28253), (253, 28124), (263, 28064), (304, 27749), (306, 27740), (307, 27737), (308, 27719), (312, 27677), (313, 27671), (317, 27647), (324, 27590), (343, 27431), (346, 27401), (347, 27392), (353, 27332), (356, 27308), (366, 27269), (373, 27236), (374, 27224), (384, 27164),

Gene: Sansa\_37 Start: 28809, Stop: 26944, Start Num: 105

Candidate Starts for Sansa\_37:

(Start: 105 @28809 has 34 MA's), (114, 28764), (128, 28710), (140, 28650), (155, 28599), (163, 28542), (166, 28521), (168, 28515), (172, 28470), (173, 28467), (174, 28464), (180, 28425), (190, 28365), (212, 28242), (214, 28233), (216, 28221), (218, 28209), (220, 28191), (222, 28170), (226, 28158), (232, 28134), (252, 28008), (257, 27987), (282, 27819), (301, 27654), (306, 27618), (308, 27597), (312, 27555), (324, 27468), (330, 27423), (342, 27324), (346, 27279), (347, 27270), (353, 27210), (356, 27186), (365, 27153), (384, 27042),

Gene: Saratos\_38 Start: 28717, Stop: 26852, Start Num: 105

Candidate Starts for Saratos\_38:

(Start: 105 @28717 has 34 MA's), (114, 28672), (128, 28618), (140, 28558), (155, 28507), (166, 28429), (168, 28423), (172, 28378), (173, 28375), (174, 28372), (180, 28333), (190, 28273), (212, 28150), (214, 28141), (216, 28129), (218, 28117), (220, 28099), (222, 28078), (226, 28066), (232, 28042), (257, 27895), (282, 27727), (301, 27562), (306, 27526), (308, 27505), (312, 27463), (324,

27376), (330, 27331), (342, 27232), (346, 27187), (347, 27178), (353, 27118), (356, 27094), (365, 27061), (384, 26950),

Gene: Schimmels22\_37 Start: 27687, Stop: 25789, Start Num: 103

Candidate Starts for Schimmels22\_37:

(2, 28425), (3, 28419), (32, 28164), (91, 27738), (Start: 103 @27687 has 19 MA's), (118, 27624), (130, 27573), (138, 27534), (155, 27477), (163, 27420), (165, 27411), (166, 27399), (168, 27393), (174, 27342), (180, 27303), (192, 27240), (197, 27195), (212, 27120), (214, 27111), (216, 27099), (220, 27069), (222, 27048), (226, 27036), (232, 27012), (258, 26862), (289, 26601), (301, 26499), (303, 26478), (308, 26442), (311, 26406), (312, 26400), (324, 26313), (328, 26286), (343, 26154), (347, 26115), (350, 26094), (353, 26055), (356, 26031), (358, 26025), (365, 25998), (384, 25887),

Gene: Schnapsidee\_38 Start: 29060, Stop: 27195, Start Num: 102

Candidate Starts for Schnapsidee\_38:

(Start: 102 @29060 has 96 MA's), (Start: 107 @29051 has 5 MA's), (164, 28787), (166, 28772), (168, 28766), (186, 28634), (195, 28580), (212, 28493), (214, 28484), (216, 28472), (219, 28445), (220, 28442), (221, 28427), (222, 28421), (279, 28091), (304, 27878), (306, 27869), (307, 27866), (308, 27848), (312, 27806), (315, 27791), (324, 27719), (328, 27692), (343, 27560), (346, 27530), (353, 27461), (356, 27437), (358, 27431), (366, 27398), (373, 27365), (374, 27353),

Gene: Schubert\_36 Start: 28339, Stop: 26486, Start Num: 102

Candidate Starts for Schubert\_36:

(87, 28408), (Start: 102 @28339 has 96 MA's), (138, 28186), (139, 28183), (156, 28126), (166, 28051), (168, 28045), (172, 28000), (180, 27955), (183, 27925), (202, 27838), (214, 27775), (216, 27763), (220, 27733), (222, 27712), (226, 27700), (279, 27382), (303, 27175), (304, 27169), (307, 27157), (308, 27139), (312, 27097), (315, 27082), (324, 27010), (330, 26965), (353, 26752), (356, 26728), (359, 26716), (362, 26707), (365, 26695), (379, 26608), (384, 26584), (385, 26578),

Gene: Sedgewig\_38 Start: 28617, Stop: 26752, Start Num: 102

Candidate Starts for Sedgewig\_38:

(Start: 81 @28704 has 3 MA's), (82, 28701), (Start: 102 @28617 has 96 MA's), (Start: 107 @28608 has 5 MA's), (130, 28503), (131, 28494), (138, 28464), (139, 28461), (165, 28341), (166, 28329), (168, 28323), (182, 28218), (186, 28191), (212, 28050), (213, 28044), (214, 28041), (216, 28029), (219, 28002), (220, 27999), (221, 27984), (222, 27978), (223, 27972), (234, 27939), (253, 27810), (263, 27750), (304, 27435), (306, 27426), (307, 27423), (308, 27405), (312, 27363), (313, 27357), (315, 27348), (317, 27333), (324, 27276), (343, 27117), (346, 27087), (347, 27078), (353, 27018), (356, 26994), (366, 26955), (373, 26922), (374, 26910), (384, 26850),

Gene: ShaiHulud\_39 Start: 28925, Stop: 27069, Start Num: 107

Candidate Starts for ShaiHulud\_39:

(Start: 81 @29021 has 3 MA's), (82, 29018), (Start: 102 @28934 has 96 MA's), (Start: 107 @28925 has 5 MA's), (130, 28820), (131, 28811), (138, 28781), (139, 28778), (165, 28658), (166, 28646), (168, 28640), (182, 28535), (186, 28508), (212, 28367), (213, 28361), (214, 28358), (216, 28346), (219, 28319), (220, 28316), (221, 28301), (222, 28295), (223, 28289), (234, 28256), (253, 28127), (263, 28067), (277, 27992), (304, 27752), (306, 27743), (307, 27740), (308, 27722), (312, 27680), (313, 27674), (315, 27665), (317, 27650), (324, 27593), (343, 27434), (346, 27404), (347, 27395), (353, 27335), (356, 27311), (366, 27272), (373, 27239), (374, 27227), (384, 27167),

Gene: Shamu\_38 Start: 28738, Stop: 26873, Start Num: 105

Candidate Starts for Shamu\_38:

(Start: 105 @28738 has 34 MA's), (114, 28693), (128, 28639), (140, 28579), (155, 28528), (166, 28450), (168, 28444), (172, 28399), (173, 28396), (174, 28393), (180, 28354), (190, 28294), (212, 28171), (214, 28162), (216, 28150), (218, 28138), (220, 28120), (222, 28099), (226, 28087), (257,

27916), (282, 27748), (301, 27583), (306, 27547), (308, 27526), (312, 27484), (324, 27397), (330, 27352), (342, 27253), (346, 27208), (347, 27199), (353, 27139), (356, 27115), (365, 27082), (384, 26971),

Gene: SheckWes\_48 Start: 33927, Stop: 31552, Start Num: 24

Candidate Starts for SheckWes\_48:

(Start: 24 @33927 has 10 MA's), (33, 33867), (46, 33786), (57, 33666), (63, 33621), (76, 33543), (77, 33537), (78, 33534), (88, 33504), (92, 33486), (97, 33456), (106, 33429), (Start: 107 @33426 has 5 MA's), (121, 33369), (127, 33348), (130, 33330), (144, 33267), (150, 33243), (153, 33234), (156, 33222), (160, 33189), (163, 33168), (166, 33147), (195, 32964), (212, 32889), (216, 32868), (221, 32847), (238, 32760), (249, 32712), (256, 32682), (258, 32676), (266, 32631), (267, 32628), (270, 32613), (273, 32592), (274, 32589), (283, 32508), (286, 32478), (290, 32418), (292, 32409), (294, 32394), (295, 32379), (297, 32367), (308, 32274), (311, 32238), (312, 32232), (313, 32226), (314, 32220), (321, 32163), (324, 32139), (337, 32034), (338, 32031), (343, 31980), (348, 31938), (350, 31920), (353, 31881), (361, 31839), (367, 31815), (373, 31785), (379, 31737), (381, 31728), (384, 31713), (388, 31689), (394, 31668), (399, 31614), (403, 31581),

Gene: Shee\_39 Start: 28927, Stop: 27062, Start Num: 102

Candidate Starts for Shee\_39:

(Start: 81 @29014 has 3 MA's), (82, 29011), (Start: 102 @28927 has 96 MA's), (Start: 107 @28918 has 5 MA's), (130, 28813), (131, 28804), (138, 28774), (139, 28771), (165, 28651), (166, 28639), (168, 28633), (182, 28528), (186, 28501), (212, 28360), (213, 28354), (214, 28351), (216, 28339), (219, 28312), (220, 28309), (221, 28294), (222, 28288), (223, 28282), (234, 28249), (263, 28060), (304, 27745), (306, 27736), (307, 27733), (308, 27715), (312, 27673), (313, 27667), (315, 27658), (317, 27643), (324, 27586), (343, 27427), (346, 27397), (347, 27388), (353, 27328), (356, 27304), (366, 27265), (373, 27232), (374, 27220), (384, 27160),

Gene: Sinatra\_37 Start: 28491, Stop: 26641, Start Num: 103

Candidate Starts for Sinatra\_37:

(Start: 103 @28491 has 19 MA's), (131, 28368), (139, 28335), (163, 28224), (166, 28203), (168, 28197), (174, 28146), (202, 27990), (212, 27936), (213, 27930), (214, 27927), (216, 27915), (220, 27885), (223, 27858), (232, 27828), (257, 27681), (279, 27534), (304, 27324), (307, 27312), (308, 27294), (312, 27252), (315, 27237), (320, 27201), (324, 27165), (346, 26976), (347, 26967), (353, 26907), (356, 26883), (362, 26862), (365, 26850), (384, 26739),

Gene: SirVictor\_37 Start: 28567, Stop: 26717, Start Num: 103

Candidate Starts for SirVictor\_37:

(67, 28708), (89, 28618), (Start: 103 @28567 has 19 MA's), (128, 28468), (131, 28444), (139, 28411), (163, 28300), (166, 28279), (168, 28273), (172, 28228), (174, 28222), (202, 28066), (214, 28003), (216, 27991), (220, 27961), (232, 27904), (279, 27610), (304, 27400), (306, 27391), (307, 27388), (308, 27370), (312, 27328), (324, 27241), (353, 26983), (356, 26959), (357, 26956), (365, 26926), (384, 26815),

Gene: SketchMex\_43 Start: 32515, Stop: 30125, Start Num: 17

Candidate Starts for SketchMex\_43:

(Start: 17 @32515 has 15 MA's), (33, 32452), (37, 32434), (38, 32419), (46, 32365), (47, 32353), (48, 32332), (53, 32299), (56, 32272), (57, 32248), (61, 32221), (78, 32116), (92, 32068), (121, 31951), (137, 31870), (145, 31843), (150, 31822), (160, 31768), (161, 31765), (163, 31747), (166, 31726), (175, 31666), (212, 31468), (221, 31426), (238, 31339), (243, 31315), (247, 31309), (256, 31255), (258, 31249), (265, 31207), (266, 31204), (267, 31201), (286, 31054), (288, 31012), (292, 30985), (297, 30943), (308, 30850), (311, 30814), (312, 30808), (313, 30802), (314, 30796), (318, 30772), (321, 30739), (324, 30715), (330, 30670), (337, 30610), (353, 30457), (384, 30289), (394, 30244), (395, 30235), (396, 30226),

Gene: SoilGremlin\_39 Start: 28933, Stop: 27068, Start Num: 102

Candidate Starts for SoilGremlin\_39:

(Start: 81 @29020 has 3 MA's), (Start: 102 @28933 has 96 MA's), (Start: 107 @28924 has 5 MA's), (130, 28819), (131, 28810), (138, 28780), (139, 28777), (165, 28657), (166, 28645), (168, 28639), (182, 28534), (186, 28507), (212, 28366), (213, 28360), (214, 28357), (216, 28345), (219, 28318), (220, 28315), (221, 28300), (222, 28294), (223, 28288), (234, 28255), (253, 28126), (263, 28066), (304, 27751), (306, 27742), (307, 27739), (308, 27721), (312, 27679), (313, 27673), (315, 27664), (317, 27649), (324, 27592), (343, 27433), (346, 27403), (347, 27394), (353, 27334), (356, 27310), (366, 27271), (373, 27238), (374, 27226), (384, 27166),

Gene: SonOfLevi\_38 Start: 28701, Stop: 26749, Start Num: 81

Candidate Starts for SonOfLevi\_38:

(Start: 81 @28701 has 3 MA's), (Start: 102 @28614 has 96 MA's), (Start: 107 @28605 has 5 MA's), (130, 28500), (131, 28491), (138, 28461), (139, 28458), (165, 28338), (166, 28326), (168, 28320), (182, 28215), (186, 28188), (212, 28047), (213, 28041), (214, 28038), (216, 28026), (219, 27999), (220, 27996), (221, 27981), (222, 27975), (223, 27969), (234, 27936), (253, 27807), (263, 27747), (304, 27432), (306, 27423), (307, 27420), (308, 27402), (312, 27360), (313, 27354), (317, 27330), (324, 27273), (343, 27114), (346, 27084), (347, 27075), (353, 27015), (356, 26991), (366, 26952), (373, 26919), (374, 26907), (384, 26847),

Gene: Sopespian\_41 Start: 32442, Stop: 30049, Start Num: 17

Candidate Starts for Sopespian\_41:

(Start: 17 @32442 has 15 MA's), (25, 32436), (Start: 31 @32388 has 1 MA's), (38, 32346), (44, 32322), (56, 32196), (57, 32172), (63, 32127), (68, 32076), (73, 32061), (78, 32040), (92, 31992), (99, 31959), (101, 31950), (121, 31875), (125, 31863), (137, 31794), (145, 31767), (146, 31761), (150, 31746), (160, 31692), (161, 31689), (163, 31671), (166, 31650), (175, 31590), (195, 31467), (196, 31461), (212, 31392), (221, 31350), (238, 31263), (243, 31239), (247, 31233), (249, 31209), (251, 31200), (255, 31185), (258, 31173), (265, 31131), (266, 31128), (267, 31125), (286, 30978), (288, 30936), (292, 30909), (293, 30903), (308, 30774), (311, 30738), (312, 30732), (313, 30726), (314, 30720), (321, 30663), (324, 30639), (330, 30594), (383, 30216), (384, 30213), (394, 30168), (395, 30159), (402, 30099),

Gene: Stanktossa\_39 Start: 28930, Stop: 27065, Start Num: 102

Candidate Starts for Stanktossa\_39:

(Start: 81 @29017 has 3 MA's), (82, 29014), (Start: 102 @28930 has 96 MA's), (Start: 107 @28921 has 5 MA's), (130, 28816), (131, 28807), (138, 28777), (139, 28774), (165, 28654), (166, 28642), (168, 28636), (182, 28531), (186, 28504), (212, 28363), (213, 28357), (214, 28354), (216, 28342), (219, 28315), (220, 28312), (221, 28297), (222, 28291), (223, 28285), (234, 28252), (263, 28063), (304, 27748), (306, 27739), (307, 27736), (308, 27718), (312, 27676), (313, 27670), (315, 27661), (317, 27646), (324, 27589), (343, 27430), (346, 27400), (347, 27391), (353, 27331), (356, 27307), (366, 27268), (373, 27235), (374, 27223), (384, 27163),

Gene: SteamedHams\_43 Start: 32003, Stop: 29616, Start Num: 23

Candidate Starts for SteamedHams\_43:

(9, 32075), (10, 32060), (Start: 23 @32003 has 23 MA's), (26, 31994), (28, 31988), (38, 31907), (53, 31787), (57, 31736), (78, 31604), (86, 31577), (90, 31562), (101, 31514), (110, 31484), (121, 31439), (137, 31361), (150, 31313), (160, 31259), (161, 31256), (163, 31238), (166, 31217), (172, 31166), (175, 31157), (176, 31154), (188, 31079), (195, 31034), (208, 30974), (212, 30959), (232, 30875), (238, 30830), (243, 30806), (247, 30800), (249, 30776), (265, 30698), (266, 30695), (267, 30692), (286, 30545), (292, 30476), (303, 30377), (308, 30341), (311, 30305), (312, 30299), (313, 30293), (314, 30287), (318, 30263), (321, 30230), (324, 30206), (330, 30161), (337, 30101), (353, 29948), (360, 29909), (361, 29906), (384, 29780), (394, 29735), (395, 29726),

Gene: StingRay\_38 Start: 28635, Stop: 26770, Start Num: 102

Candidate Starts for StingRay\_38:

(Start: 81 @28722 has 3 MA's), (82, 28719), (Start: 102 @28635 has 96 MA's), (Start: 107 @28626 has 5 MA's), (130, 28521), (131, 28512), (138, 28482), (139, 28479), (165, 28359), (166, 28347), (168, 28341), (182, 28236), (186, 28209), (212, 28068), (213, 28062), (214, 28059), (216, 28047), (219, 28020), (220, 28017), (221, 28002), (222, 27996), (223, 27990), (234, 27957), (253, 27828), (263, 27768), (304, 27453), (306, 27444), (307, 27441), (308, 27423), (312, 27381), (313, 27375), (315, 27366), (317, 27351), (324, 27294), (343, 27135), (346, 27105), (347, 27096), (353, 27036), (356, 27012), (366, 26973), (373, 26940), (374, 26928), (384, 26868),

Gene: StirfryIV\_39 Start: 28628, Stop: 26763, Start Num: 102

Candidate Starts for StirfryIV\_39:

(Start: 81 @28715 has 3 MA's), (82, 28712), (Start: 102 @28628 has 96 MA's), (Start: 107 @28619 has 5 MA's), (130, 28514), (131, 28505), (138, 28475), (139, 28472), (165, 28352), (166, 28340), (168, 28334), (182, 28229), (186, 28202), (212, 28061), (213, 28055), (214, 28052), (216, 28040), (219, 28013), (220, 28010), (221, 27995), (222, 27989), (223, 27983), (234, 27950), (253, 27821), (263, 27761), (304, 27446), (306, 27437), (307, 27434), (308, 27416), (312, 27374), (313, 27368), (315, 27359), (317, 27344), (324, 27287), (343, 27128), (346, 27098), (347, 27089), (353, 27029), (356, 27005), (366, 26966), (373, 26933), (374, 26921), (384, 26861),

Gene: Stormbreaker8\_38 Start: 29054, Stop: 27189, Start Num: 102

Candidate Starts for Stormbreaker8\_38:

(Start: 102 @29054 has 96 MA's), (Start: 107 @29045 has 5 MA's), (164, 28781), (166, 28766), (168, 28760), (186, 28628), (195, 28574), (197, 28562), (212, 28487), (214, 28478), (216, 28466), (219, 28439), (220, 28436), (221, 28421), (222, 28415), (226, 28403), (238, 28334), (279, 28085), (304, 27872), (306, 27863), (307, 27860), (308, 27842), (312, 27800), (324, 27713), (343, 27554), (346, 27524), (353, 27455), (356, 27431), (366, 27392), (373, 27359), (374, 27347),

Gene: Strathdee\_39 Start: 28935, Stop: 27070, Start Num: 102

Candidate Starts for Strathdee\_39:

(Start: 81 @29022 has 3 MA's), (82, 29019), (Start: 102 @28935 has 96 MA's), (Start: 107 @28926 has 5 MA's), (130, 28821), (131, 28812), (138, 28782), (139, 28779), (165, 28659), (166, 28647), (168, 28641), (182, 28536), (186, 28509), (212, 28368), (213, 28362), (214, 28359), (216, 28347), (219, 28320), (220, 28317), (221, 28302), (222, 28296), (223, 28290), (234, 28257), (253, 28128), (263, 28068), (277, 27993), (304, 27753), (306, 27744), (307, 27741), (308, 27723), (312, 27681), (313, 27675), (315, 27666), (317, 27651), (324, 27594), (343, 27435), (346, 27405), (347, 27396), (353, 27336), (356, 27312), (366, 27273), (373, 27240), (374, 27228), (384, 27168),

Gene: SummitAcademy\_44 Start: 33992, Stop: 31611, Start Num: 24

Candidate Starts for SummitAcademy\_44:

(Start: 24 @33992 has 10 MA's), (33, 33932), (41, 33890), (46, 33851), (57, 33731), (58, 33710), (63, 33686), (76, 33608), (77, 33602), (78, 33599), (88, 33569), (97, 33521), (106, 33494), (Start: 107 @33491 has 5 MA's), (121, 33434), (130, 33395), (134, 33374), (144, 33332), (150, 33308), (153, 33299), (154, 33293), (156, 33287), (160, 33254), (163, 33233), (166, 33212), (195, 33029), (212, 32954), (221, 32912), (238, 32825), (247, 32801), (249, 32777), (251, 32768), (256, 32747), (266, 32696), (267, 32693), (270, 32678), (273, 32657), (287, 32531), (290, 32483), (292, 32474), (297, 32432), (308, 32339), (311, 32303), (312, 32297), (313, 32291), (314, 32285), (321, 32228), (324, 32204), (337, 32099), (338, 32096), (348, 32003), (350, 31985), (353, 31946), (361, 31904), (367, 31880), (373, 31850), (379, 31802), (384, 31778), (394, 31733), (401, 31667), (403, 31646), (404, 31640), (406, 31634),

Gene: Superfresh\_39 Start: 28922, Stop: 27057, Start Num: 102



Candidate Starts for Superfresh\_39:

(Start: 81 @29009 has 3 MA's), (Start: 102 @28922 has 96 MA's), (Start: 107 @28913 has 5 MA's), (130, 28808), (131, 28799), (138, 28769), (139, 28766), (165, 28646), (166, 28634), (168, 28628), (182, 28523), (186, 28496), (212, 28355), (213, 28349), (214, 28346), (216, 28334), (219, 28307), (220, 28304), (221, 28289), (222, 28283), (223, 28277), (234, 28244), (253, 28115), (263, 28055), (304, 27740), (306, 27731), (307, 27728), (308, 27710), (312, 27668), (313, 27662), (317, 27638), (324, 27581), (343, 27422), (346, 27392), (347, 27383), (353, 27323), (356, 27299), (366, 27260), (373, 27227), (374, 27215), (384, 27155),

Gene: Survivors\_40 Start: 31946, Stop: 29589, Start Num: 23

Candidate Starts for Survivors\_40:

(18, 31955), (Start: 23 @31946 has 23 MA's), (28, 31931), (30, 31895), (50, 31760), (57, 31697), (64, 31643), (85, 31541), (88, 31538), (106, 31463), (121, 31403), (133, 31352), (143, 31310), (150, 31280), (160, 31226), (163, 31205), (166, 31184), (176, 31121), (198, 30986), (201, 30971), (207, 30944), (212, 30926), (232, 30842), (237, 30806), (258, 30713), (265, 30671), (266, 30668), (267, 30665), (271, 30641), (274, 30629), (276, 30617), (288, 30476), (292, 30449), (308, 30314), (311, 30278), (312, 30272), (313, 30266), (314, 30260), (318, 30236), (321, 30203), (324, 30179), (330, 30134), (332, 30128), (339, 30068), (350, 29960), (357, 29894), (358, 29891), (361, 29879), (367, 29855), (379, 29777), (384, 29753), (397, 29684),

Gene: SweatNTears\_44 Start: 32451, Stop: 30061, Start Num: 17

Candidate Starts for SweatNTears\_44:

(Start: 17 @32451 has 15 MA's), (33, 32388), (37, 32370), (38, 32355), (46, 32301), (47, 32289), (48, 32268), (53, 32235), (56, 32208), (57, 32184), (61, 32157), (78, 32052), (92, 32004), (121, 31887), (137, 31806), (145, 31779), (150, 31758), (160, 31704), (161, 31701), (163, 31683), (166, 31662), (175, 31602), (212, 31404), (221, 31362), (238, 31275), (243, 31251), (247, 31245), (256, 31191), (258, 31185), (265, 31143), (266, 31140), (267, 31137), (286, 30990), (288, 30948), (292, 30921), (297, 30879), (308, 30786), (311, 30750), (312, 30744), (313, 30738), (314, 30732), (318, 30708), (321, 30675), (324, 30651), (330, 30606), (337, 30546), (353, 30393), (384, 30225), (394, 30180), (395, 30171), (396, 30162),

Gene: TatarkaPM\_39 Start: 29065, Stop: 27074, Start Num: 71

Candidate Starts for TatarkaPM\_39:

(1, 29698), (36, 29395), (Start: 71 @29065 has 1 MA's), (80, 29029), (83, 29023), (Start: 102 @28939 has 96 MA's), (Start: 107 @28930 has 5 MA's), (130, 28825), (131, 28816), (138, 28786), (139, 28783), (165, 28663), (166, 28651), (168, 28645), (182, 28540), (186, 28513), (212, 28372), (213, 28366), (214, 28363), (216, 28351), (219, 28324), (220, 28321), (221, 28306), (222, 28300), (223, 28294), (234, 28261), (263, 28072), (304, 27757), (306, 27748), (307, 27745), (308, 27727), (312, 27685), (313, 27679), (315, 27670), (317, 27655), (324, 27598), (343, 27439), (346, 27409), (347, 27400), (353, 27340), (356, 27316), (366, 27277), (373, 27244), (374, 27232), (384, 27172),

Gene: Teagan\_39 Start: 28930, Stop: 27065, Start Num: 102

Candidate Starts for Teagan\_39:

(Start: 81 @29017 has 3 MA's), (82, 29014), (Start: 102 @28930 has 96 MA's), (Start: 107 @28921 has 5 MA's), (130, 28816), (131, 28807), (138, 28777), (139, 28774), (165, 28654), (166, 28642), (168, 28636), (182, 28531), (186, 28504), (212, 28363), (213, 28357), (214, 28354), (216, 28342), (219, 28315), (220, 28312), (221, 28297), (222, 28291), (223, 28285), (234, 28252), (263, 28063), (277, 27988), (304, 27748), (306, 27739), (307, 27736), (308, 27718), (312, 27676), (313, 27670), (315, 27661), (317, 27646), (324, 27589), (343, 27430), (346, 27400), (347, 27391), (353, 27331), (356, 27307), (366, 27268), (373, 27235), (374, 27223), (384, 27163),

Gene: TeddyBear\_38 Start: 28632, Stop: 26767, Start Num: 102

Candidate Starts for TeddyBear\_38:

(Start: 81 @28719 has 3 MA's), (Start: 102 @28632 has 96 MA's), (Start: 107 @28623 has 5 MA's), (130, 28518), (131, 28509), (138, 28479), (139, 28476), (165, 28356), (166, 28344), (168, 28338), (182, 28233), (186, 28206), (212, 28065), (213, 28059), (214, 28056), (216, 28044), (219, 28017), (220, 28014), (221, 27999), (222, 27993), (223, 27987), (234, 27954), (253, 27825), (263, 27765), (304, 27450), (306, 27441), (307, 27438), (308, 27420), (312, 27378), (313, 27372), (317, 27348), (324, 27291), (343, 27132), (346, 27102), (347, 27093), (353, 27033), (356, 27009), (366, 26970), (373, 26937), (374, 26925), (384, 26865),

Gene: Tenda\_38 Start: 28630, Stop: 26765, Start Num: 102

Candidate Starts for Tenda\_38:

(Start: 81 @28717 has 3 MA's), (82, 28714), (Start: 102 @28630 has 96 MA's), (Start: 107 @28621 has 5 MA's), (130, 28516), (131, 28507), (138, 28477), (139, 28474), (165, 28354), (166, 28342), (168, 28336), (182, 28231), (186, 28204), (212, 28063), (213, 28057), (214, 28054), (216, 28042), (219, 28015), (220, 28012), (221, 27997), (222, 27991), (223, 27985), (234, 27952), (253, 27823), (263, 27763), (304, 27448), (306, 27439), (307, 27436), (308, 27418), (312, 27376), (313, 27370), (315, 27361), (317, 27346), (324, 27289), (343, 27130), (346, 27100), (347, 27091), (353, 27031), (356, 27007), (366, 26968), (373, 26935), (374, 26923), (384, 26863),

Gene: Thompsone\_39 Start: 28937, Stop: 27072, Start Num: 102

Candidate Starts for Thompsone\_39:

(Start: 81 @29024 has 3 MA's), (82, 29021), (Start: 102 @28937 has 96 MA's), (Start: 107 @28928 has 5 MA's), (130, 28823), (131, 28814), (138, 28784), (139, 28781), (164, 28664), (166, 28649), (168, 28643), (182, 28538), (186, 28511), (212, 28370), (214, 28361), (216, 28349), (219, 28322), (220, 28319), (221, 28304), (222, 28298), (223, 28292), (234, 28259), (253, 28130), (263, 28070), (277, 27995), (304, 27755), (306, 27746), (307, 27743), (308, 27725), (312, 27683), (313, 27677), (315, 27668), (317, 27653), (324, 27596), (343, 27437), (346, 27407), (347, 27398), (353, 27338), (356, 27314), (366, 27275), (373, 27242), (374, 27230), (384, 27170),

Gene: Thorongil\_39 Start: 28937, Stop: 27072, Start Num: 102

Candidate Starts for Thorongil\_39:

(Start: 81 @29024 has 3 MA's), (82, 29021), (Start: 102 @28937 has 96 MA's), (Start: 107 @28928 has 5 MA's), (130, 28823), (131, 28814), (138, 28784), (139, 28781), (165, 28661), (166, 28649), (168, 28643), (182, 28538), (186, 28511), (212, 28370), (213, 28364), (214, 28361), (216, 28349), (219, 28322), (220, 28319), (221, 28304), (222, 28298), (223, 28292), (234, 28259), (253, 28130), (263, 28070), (304, 27755), (306, 27746), (307, 27743), (308, 27725), (312, 27683), (313, 27677), (315, 27668), (317, 27653), (324, 27596), (343, 27437), (346, 27407), (347, 27398), (353, 27338), (356, 27314), (366, 27275), (373, 27242), (374, 27230), (384, 27170),

Gene: TinSulphur\_39 Start: 28936, Stop: 27071, Start Num: 102

Candidate Starts for TinSulphur\_39:

(Start: 81 @29023 has 3 MA's), (82, 29020), (Start: 102 @28936 has 96 MA's), (Start: 107 @28927 has 5 MA's), (130, 28822), (131, 28813), (138, 28783), (139, 28780), (165, 28660), (166, 28648), (168, 28642), (182, 28537), (186, 28510), (212, 28369), (213, 28363), (214, 28360), (216, 28348), (219, 28321), (220, 28318), (221, 28303), (222, 28297), (223, 28291), (234, 28258), (263, 28069), (304, 27754), (306, 27745), (307, 27742), (308, 27724), (312, 27682), (313, 27676), (315, 27667), (317, 27652), (324, 27595), (343, 27436), (346, 27406), (347, 27397), (353, 27337), (356, 27313), (366, 27274), (373, 27241), (374, 27229), (384, 27169),

Gene: Tinyman4\_37 Start: 27313, Stop: 25415, Start Num: 103

Candidate Starts for Tinyman4\_37:

(2, 28051), (3, 28045), (32, 27790), (91, 27364), (Start: 103 @27313 has 19 MA's), (118, 27250), (130, 27199), (138, 27160), (155, 27103), (163, 27046), (165, 27037), (166, 27025), (168, 27019), (172, 26974), (174, 26968), (192, 26866), (197, 26821), (212, 26746), (214, 26737), (216, 26725), (220,

26695), (222, 26674), (226, 26662), (232, 26638), (258, 26488), (289, 26227), (301, 26125), (303, 26104), (308, 26068), (311, 26032), (312, 26026), (324, 25939), (328, 25912), (343, 25780), (347, 25741), (350, 25720), (353, 25681), (356, 25657), (358, 25651), (365, 25624), (384, 25513),

Gene: Tolls\_44 Start: 32396, Stop: 30009, Start Num: 23

Candidate Starts for Tolls\_44:

(9, 32468), (10, 32453), (Start: 23 @32396 has 23 MA's), (26, 32387), (28, 32381), (38, 32300), (53, 32180), (57, 32129), (78, 31997), (86, 31970), (110, 31877), (121, 31832), (137, 31754), (150, 31706), (160, 31652), (161, 31649), (163, 31631), (166, 31610), (172, 31559), (175, 31550), (176, 31547), (188, 31472), (195, 31427), (208, 31367), (212, 31352), (232, 31268), (238, 31223), (243, 31199), (247, 31193), (249, 31169), (265, 31091), (266, 31088), (267, 31085), (286, 30938), (292, 30869), (303, 30770), (308, 30734), (311, 30698), (312, 30692), (313, 30686), (314, 30680), (318, 30656), (321, 30623), (324, 30599), (330, 30554), (337, 30494), (353, 30341), (360, 30302), (361, 30299), (384, 30173), (394, 30128), (395, 30119),

Gene: Triscuit\_70 Start: 43915, Stop: 46587, Start Num: 12

Candidate Starts for Triscuit\_70:

(Start: 12 @43915 has 2 MA's), (26, 44005), (27, 44008), (28, 44011), (35, 44071), (63, 44317), (Start: 102 @44494 has 96 MA's), (Start: 107 @44506 has 5 MA's), (116, 44551), (120, 44566), (127, 44593), (146, 44692), (154, 44722), (160, 44761), (166, 44803), (174, 44860), (178, 44875), (184, 44929), (205, 45040), (225, 45181), (231, 45205), (251, 45355), (252, 45358), (256, 45376), (263, 45433), (274, 45493), (281, 45553), (300, 45748), (308, 45811), (316, 45874), (324, 45949), (336, 46030), (339, 46060), (344, 46120), (350, 46168), (353, 46207), (357, 46234), (359, 46243), (372, 46306), (373, 46309), (384, 46381), (386, 46390), (391, 46420), (405, 46528), (408, 46546), (409, 46564),

Gene: Troje\_45 Start: 32853, Stop: 30463, Start Num: 17

Candidate Starts for Troje\_45:

(Start: 17 @32853 has 15 MA's), (33, 32790), (37, 32772), (38, 32757), (46, 32703), (47, 32691), (48, 32670), (53, 32637), (56, 32610), (57, 32586), (61, 32559), (78, 32454), (92, 32406), (121, 32289), (137, 32208), (145, 32181), (150, 32160), (160, 32106), (161, 32103), (163, 32085), (166, 32064), (175, 32004), (212, 31806), (221, 31764), (238, 31677), (243, 31653), (247, 31647), (256, 31593), (258, 31587), (265, 31545), (266, 31542), (267, 31539), (286, 31392), (288, 31350), (292, 31323), (297, 31281), (308, 31188), (311, 31152), (312, 31146), (313, 31140), (314, 31134), (318, 31110), (321, 31077), (324, 31053), (330, 31008), (345, 30873), (383, 30630), (384, 30627), (394, 30582), (395, 30573), (402, 30513),

Gene: Typhonomachy\_43 Start: 32264, Stop: 29871, Start Num: 17

Candidate Starts for Typhonomachy\_43:

(Start: 17 @32264 has 15 MA's), (25, 32258), (Start: 31 @32210 has 1 MA's), (38, 32168), (44, 32144), (56, 32018), (57, 31994), (63, 31949), (68, 31898), (73, 31883), (78, 31862), (92, 31814), (101, 31772), (121, 31697), (125, 31685), (137, 31616), (145, 31589), (146, 31583), (150, 31568), (160, 31514), (161, 31511), (163, 31493), (166, 31472), (195, 31289), (196, 31283), (212, 31214), (221, 31172), (238, 31085), (243, 31061), (247, 31055), (249, 31031), (251, 31022), (255, 31007), (258, 30995), (265, 30953), (266, 30950), (267, 30947), (286, 30800), (292, 30731), (293, 30725), (297, 30689), (308, 30596), (310, 30587), (311, 30560), (312, 30554), (313, 30548), (314, 30542), (321, 30485), (324, 30461), (330, 30416), (384, 30035), (394, 29990), (395, 29981), (402, 29921),

Gene: Velene\_39 Start: 28935, Stop: 27070, Start Num: 102

Candidate Starts for Velene\_39:

(Start: 81 @29022 has 3 MA's), (82, 29019), (98, 28950), (Start: 102 @28935 has 96 MA's), (Start: 107 @28926 has 5 MA's), (130, 28821), (131, 28812), (138, 28782), (139, 28779), (165, 28659), (166, 28647), (168, 28641), (182, 28536), (186, 28509), (212, 28368), (214, 28359), (216, 28347), (219,

28320), (220, 28317), (221, 28302), (222, 28296), (223, 28290), (234, 28257), (263, 28068), (304, 27753), (306, 27744), (307, 27741), (308, 27723), (312, 27681), (313, 27675), (317, 27651), (324, 27594), (343, 27435), (346, 27405), (347, 27396), (353, 27336), (356, 27312), (366, 27273), (373, 27240), (374, 27228), (384, 27168),

Gene: Vine\_47 Start: 34669, Stop: 32288, Start Num: 24

Candidate Starts for Vine\_47:

(Start: 24 @34669 has 10 MA's), (33, 34609), (41, 34567), (46, 34528), (57, 34408), (58, 34387), (63, 34363), (76, 34285), (77, 34279), (78, 34276), (88, 34246), (97, 34198), (106, 34171), (Start: 107 @34168 has 5 MA's), (121, 34111), (130, 34072), (134, 34051), (144, 34009), (150, 33985), (153, 33976), (154, 33970), (156, 33964), (160, 33931), (163, 33910), (166, 33889), (195, 33706), (212, 33631), (221, 33589), (238, 33502), (247, 33478), (249, 33454), (251, 33445), (256, 33424), (266, 33373), (267, 33370), (270, 33355), (273, 33334), (287, 33208), (290, 33160), (292, 33151), (297, 33109), (308, 33016), (311, 32980), (312, 32974), (313, 32968), (314, 32962), (321, 32905), (324, 32881), (337, 32776), (338, 32773), (348, 32680), (350, 32662), (353, 32623), (361, 32581), (367, 32557), (373, 32527), (379, 32479), (384, 32455), (394, 32410), (401, 32344), (403, 32323), (404, 32317), (406, 32311),

Gene: Vispistious\_39 Start: 28937, Stop: 27072, Start Num: 102

Candidate Starts for Vispistious\_39:

(Start: 81 @29024 has 3 MA's), (82, 29021), (Start: 102 @28937 has 96 MA's), (Start: 107 @28928 has 5 MA's), (130, 28823), (131, 28814), (138, 28784), (139, 28781), (165, 28661), (166, 28649), (168, 28643), (182, 28538), (186, 28511), (212, 28370), (213, 28364), (214, 28361), (216, 28349), (219, 28322), (220, 28319), (221, 28304), (222, 28298), (223, 28292), (234, 28259), (253, 28130), (263, 28070), (277, 27995), (304, 27755), (306, 27746), (307, 27743), (308, 27725), (312, 27683), (313, 27677), (315, 27668), (317, 27653), (324, 27596), (343, 27437), (346, 27407), (347, 27398), (353, 27338), (356, 27314), (366, 27275), (373, 27242), (374, 27230), (384, 27170),

Gene: WestPM\_35 Start: 27173, Stop: 25272, Start Num: 104

Candidate Starts for WestPM\_35:

(104, 27173), (131, 27050), (138, 27020), (140, 27014), (152, 26972), (155, 26963), (163, 26906), (165, 26897), (166, 26885), (168, 26879), (197, 26678), (212, 26603), (214, 26594), (216, 26582), (220, 26552), (222, 26531), (226, 26519), (232, 26495), (258, 26345), (286, 26138), (289, 26084), (301, 25982), (303, 25961), (308, 25925), (311, 25889), (312, 25883), (324, 25796), (328, 25769), (343, 25637), (347, 25598), (350, 25577), (353, 25538), (356, 25514), (358, 25508), (365, 25481), (384, 25370),

Gene: WildNOut\_39 Start: 28934, Stop: 27069, Start Num: 102

Candidate Starts for WildNOut\_39:

(Start: 102 @28934 has 96 MA's), (Start: 107 @28925 has 5 MA's), (130, 28820), (131, 28811), (138, 28781), (139, 28778), (165, 28658), (166, 28646), (168, 28640), (182, 28535), (186, 28508), (212, 28367), (213, 28361), (214, 28358), (216, 28346), (219, 28319), (220, 28316), (221, 28301), (222, 28295), (223, 28289), (234, 28256), (253, 28127), (263, 28067), (277, 27992), (304, 27752), (306, 27743), (307, 27740), (308, 27722), (312, 27680), (313, 27674), (315, 27665), (317, 27650), (324, 27593), (343, 27434), (346, 27404), (347, 27395), (353, 27335), (356, 27311), (366, 27272), (373, 27239), (374, 27227), (384, 27167),

Gene: WilliamStrong\_38 Start: 28667, Stop: 26775, Start Num: 105

Candidate Starts for WilliamStrong\_38:

(Start: 105 @28667 has 34 MA's), (Start: 107 @28658 has 5 MA's), (128, 28571), (135, 28532), (138, 28517), (140, 28511), (155, 28460), (166, 28382), (168, 28376), (180, 28286), (202, 28154), (212, 28100), (214, 28091), (216, 28079), (220, 28049), (222, 28028), (223, 28022), (226, 28016), (227, 28013), (253, 27866), (261, 27821), (263, 27806), (280, 27695), (286, 27641), (287, 27629), (307,

27446), (308, 27428), (312, 27386), (317, 27356), (320, 27335), (324, 27299), (334, 27227), (343, 27140), (347, 27101), (353, 27041), (356, 27017), (369, 26969), (373, 26945), (384, 26873),

Gene: Winzigespinne\_38 Start: 28618, Stop: 26753, Start Num: 102

Candidate Starts for Winzigespinne\_38:

(Start: 81 @28705 has 3 MA's), (Start: 102 @28618 has 96 MA's), (Start: 107 @28609 has 5 MA's), (130, 28504), (131, 28495), (138, 28465), (139, 28462), (165, 28342), (166, 28330), (168, 28324), (182, 28219), (186, 28192), (212, 28051), (213, 28045), (214, 28042), (216, 28030), (219, 28003), (220, 28000), (221, 27985), (222, 27979), (223, 27973), (234, 27940), (263, 27751), (304, 27436), (306, 27427), (307, 27424), (308, 27406), (312, 27364), (313, 27358), (317, 27334), (324, 27277), (343, 27118), (346, 27088), (347, 27079), (353, 27019), (356, 26995), (366, 26956), (373, 26923), (374, 26911), (384, 26851),

Gene: Yakult\_46 Start: 33938, Stop: 31554, Start Num: 23

Candidate Starts for Yakult\_46:

(Start: 23 @33938 has 23 MA's), (Start: 29 @33908 has 1 MA's), (44, 33824), (46, 33794), (57, 33686), (58, 33665), (86, 33527), (90, 33512), (101, 33464), (121, 33389), (123, 33383), (125, 33377), (126, 33371), (137, 33302), (144, 33278), (149, 33257), (150, 33254), (153, 33245), (163, 33179), (166, 33158), (172, 33107), (192, 33011), (199, 32957), (212, 32897), (216, 32876), (230, 32819), (232, 32813), (238, 32768), (249, 32720), (252, 32708), (266, 32636), (274, 32594), (276, 32582), (286, 32483), (288, 32441), (291, 32417), (297, 32366), (308, 32273), (311, 32237), (312, 32231), (313, 32225), (314, 32219), (321, 32162), (324, 32138), (343, 31979), (345, 31958), (350, 31919), (353, 31880), (355, 31859), (361, 31838), (364, 31826), (369, 31808), (376, 31760), (384, 31712), (388, 31688), (394, 31667), (403, 31580),

Gene: Yarn\_40 Start: 32156, Stop: 29769, Start Num: 23

Candidate Starts for Yarn\_40:

(9, 32228), (10, 32213), (Start: 23 @32156 has 23 MA's), (26, 32147), (28, 32141), (38, 32060), (53, 31940), (57, 31889), (78, 31757), (86, 31730), (110, 31637), (121, 31592), (137, 31514), (150, 31466), (160, 31412), (161, 31409), (163, 31391), (166, 31370), (172, 31319), (175, 31310), (176, 31307), (188, 31232), (195, 31187), (208, 31127), (212, 31112), (232, 31028), (238, 30983), (243, 30959), (247, 30953), (249, 30929), (251, 30920), (265, 30851), (266, 30848), (267, 30845), (286, 30698), (292, 30629), (303, 30530), (308, 30494), (311, 30458), (312, 30452), (313, 30446), (314, 30440), (318, 30416), (321, 30383), (324, 30359), (330, 30314), (337, 30254), (360, 30062), (361, 30059), (384, 29933), (394, 29888), (395, 29879),

Gene: Yummy\_45 Start: 32562, Stop: 30172, Start Num: 17

Candidate Starts for Yummy\_45:

(Start: 17 @32562 has 15 MA's), (33, 32499), (37, 32481), (38, 32466), (46, 32412), (47, 32400), (48, 32379), (53, 32346), (56, 32319), (57, 32295), (61, 32268), (78, 32163), (92, 32115), (121, 31998), (137, 31917), (145, 31890), (150, 31869), (160, 31815), (161, 31812), (163, 31794), (166, 31773), (175, 31713), (212, 31515), (221, 31473), (238, 31386), (243, 31362), (247, 31356), (256, 31302), (258, 31296), (265, 31254), (266, 31251), (267, 31248), (286, 31101), (288, 31059), (292, 31032), (297, 30990), (308, 30897), (311, 30861), (312, 30855), (313, 30849), (314, 30843), (318, 30819), (321, 30786), (324, 30762), (330, 30717), (337, 30657), (353, 30504), (384, 30336), (394, 30291), (395, 30282), (396, 30273),

Gene: YuuY\_37 Start: 29162, Stop: 27261, Start Num: 105

Candidate Starts for YuuY\_37:

(Start: 105 @29162 has 34 MA's), (135, 29024), (138, 29009), (140, 29003), (147, 28976), (155, 28952), (160, 28916), (166, 28874), (168, 28868), (174, 28817), (180, 28778), (191, 28718), (202, 28649), (212, 28592), (214, 28583), (216, 28571), (220, 28541), (227, 28505), (257, 28337), (263, 28292), (280, 28181), (302, 27956), (303, 27950), (305, 27941), (308, 27914), (324, 27785), (332,

27734), (353, 27527), (356, 27503), (365, 27470), (366, 27464), (384, 27359),

Gene: Zada\_39 Start: 28906, Stop: 27041, Start Num: 102

Candidate Starts for Zada\_39:

(Start: 81 @28993 has 3 MA's), (82, 28990), (Start: 102 @28906 has 96 MA's), (Start: 107 @28897 has 5 MA's), (130, 28792), (131, 28783), (138, 28753), (139, 28750), (165, 28630), (166, 28618), (168, 28612), (182, 28507), (186, 28480), (212, 28339), (213, 28333), (214, 28330), (216, 28318), (219, 28291), (220, 28288), (221, 28273), (222, 28267), (223, 28261), (234, 28228), (253, 28099), (263, 28039), (304, 27724), (306, 27715), (307, 27712), (308, 27694), (312, 27652), (313, 27646), (315, 27637), (317, 27622), (324, 27565), (343, 27406), (346, 27376), (347, 27367), (353, 27307), (356, 27283), (366, 27244), (373, 27211), (374, 27199), (384, 27139),

Gene: Zareef\_42 Start: 32040, Stop: 29683, Start Num: 23

Candidate Starts for Zareef\_42:

(18, 32049), (Start: 23 @32040 has 23 MA's), (28, 32025), (30, 31989), (50, 31854), (57, 31791), (62, 31749), (64, 31737), (85, 31635), (88, 31632), (106, 31557), (115, 31518), (121, 31497), (133, 31446), (143, 31404), (150, 31374), (160, 31320), (163, 31299), (166, 31278), (176, 31215), (198, 31080), (201, 31065), (207, 31038), (212, 31020), (232, 30936), (237, 30900), (258, 30807), (265, 30765), (266, 30762), (267, 30759), (271, 30735), (274, 30723), (276, 30711), (288, 30570), (292, 30543), (308, 30408), (311, 30372), (312, 30366), (313, 30360), (314, 30354), (318, 30330), (321, 30297), (324, 30273), (330, 30228), (332, 30222), (339, 30162), (350, 30054), (358, 29985), (361, 29973), (367, 29949), (379, 29871), (384, 29847), (397, 29778),

Gene: Zayuliv\_37 Start: 27590, Stop: 25725, Start Num: 105

Candidate Starts for Zayuliv\_37:

(Start: 105 @27590 has 34 MA's), (106, 27584), (129, 27485), (130, 27476), (136, 27452), (138, 27437), (140, 27431), (155, 27380), (156, 27377), (168, 27296), (191, 27146), (192, 27143), (206, 27044), (213, 27017), (214, 27014), (216, 27002), (220, 26972), (222, 26951), (232, 26915), (257, 26768), (283, 26588), (304, 26408), (308, 26378), (314, 26324), (318, 26306), (324, 26249), (328, 26222), (333, 26180), (346, 26060), (347, 26051), (353, 25991), (356, 25967), (359, 25955), (362, 25946), (366, 25928), (373, 25895), (384, 25823),

Gene: Zenitsu\_38 Start: 28753, Stop: 26888, Start Num: 105

Candidate Starts for Zenitsu\_38:

(Start: 105 @28753 has 34 MA's), (128, 28654), (140, 28594), (155, 28543), (166, 28465), (168, 28459), (172, 28414), (173, 28411), (174, 28408), (180, 28369), (190, 28309), (212, 28186), (214, 28177), (216, 28165), (218, 28153), (220, 28135), (222, 28114), (226, 28102), (257, 27931), (282, 27763), (301, 27598), (306, 27562), (308, 27541), (312, 27499), (324, 27412), (330, 27367), (342, 27268), (346, 27223), (353, 27154), (356, 27130), (365, 27097), (384, 26986),

Gene: Zepp\_38 Start: 27049, Stop: 25184, Start Num: 105

Candidate Starts for Zepp\_38:

(Start: 105 @27049 has 34 MA's), (106, 27043), (129, 26944), (130, 26935), (136, 26911), (138, 26896), (140, 26890), (155, 26839), (156, 26836), (168, 26755), (177, 26695), (191, 26605), (192, 26602), (206, 26503), (213, 26476), (214, 26473), (216, 26461), (220, 26431), (222, 26410), (232, 26374), (257, 26227), (283, 26047), (304, 25867), (308, 25837), (314, 25783), (318, 25765), (324, 25708), (328, 25681), (333, 25639), (346, 25519), (347, 25510), (353, 25450), (356, 25426), (359, 25414), (362, 25405), (366, 25387), (373, 25354), (384, 25282),

Gene: Zuko\_78 Start: 57486, Stop: 60083, Start Num: 6

Candidate Starts for Zuko\_78:

(Start: 6 @57486 has 1 MA's), (11, 57528), (13, 57549), (14, 57558), (Start: 19 @57591 has 1 MA's), (39, 57720), (Start: 40 @57726 has 1 MA's), (54, 57849), (60, 57927), (66, 57990), (70, 58023), (73,

58032), (93, 58110), (94, 58122), (Start: 107 @58167 has 5 MA's), (121, 58236), (127, 58257), (160, 58416), (162, 58431), (166, 58458), (175, 58518), (178, 58530), (189, 58578), (212, 58695), (237, 58815), (263, 58995), (266, 59010), (267, 59013), (280, 59103), (284, 59148), (292, 59232), (300, 59304), (304, 59337), (308, 59367), (311, 59403), (312, 59409), (313, 59415), (314, 59421), (321, 59478), (324, 59502), (341, 59643), (345, 59682), (355, 59781), (360, 59799), (367, 59826), (377, 59895), (381, 59913), (384, 59928), (393, 59967), (394, 59973), (398, 60021),