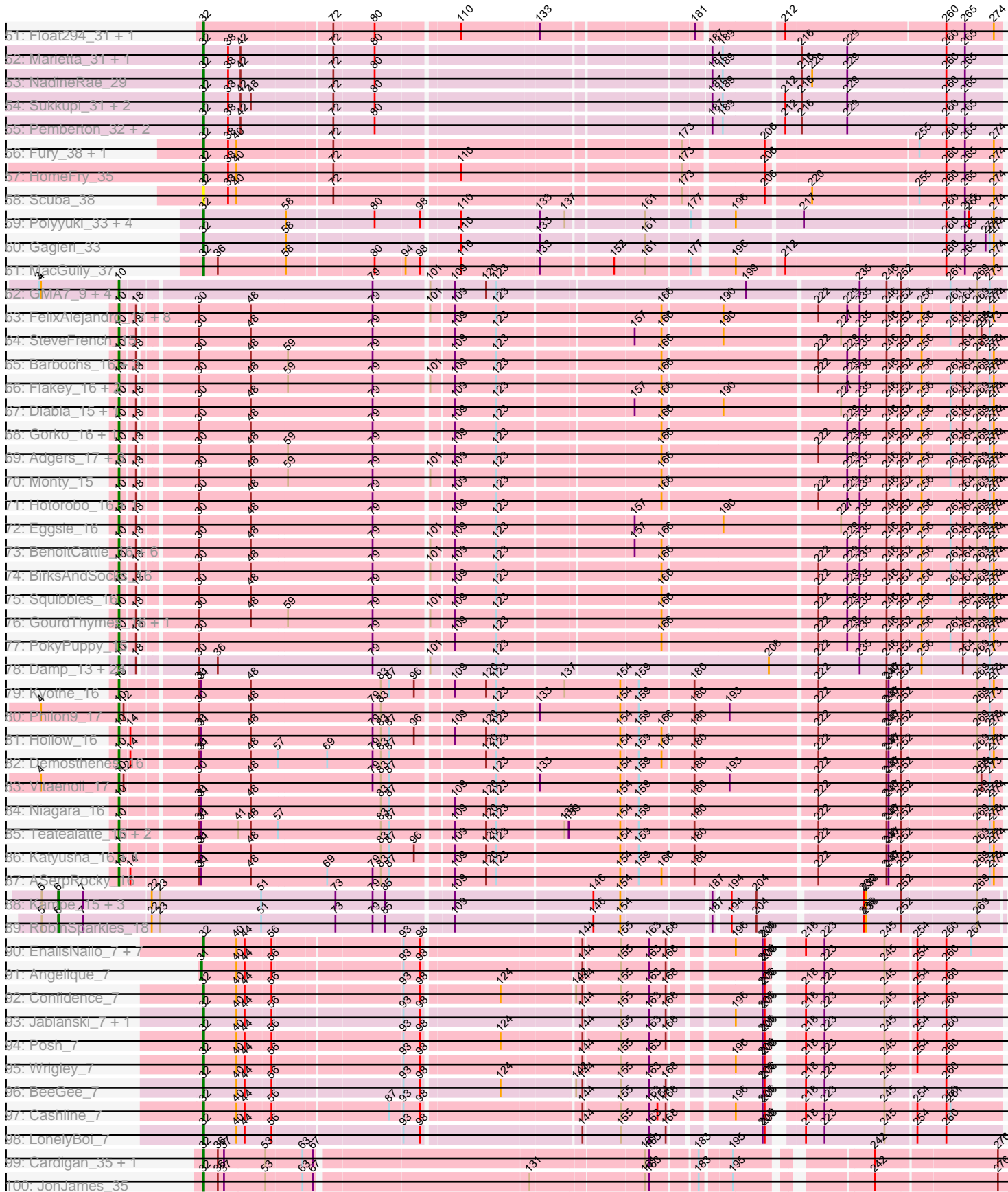
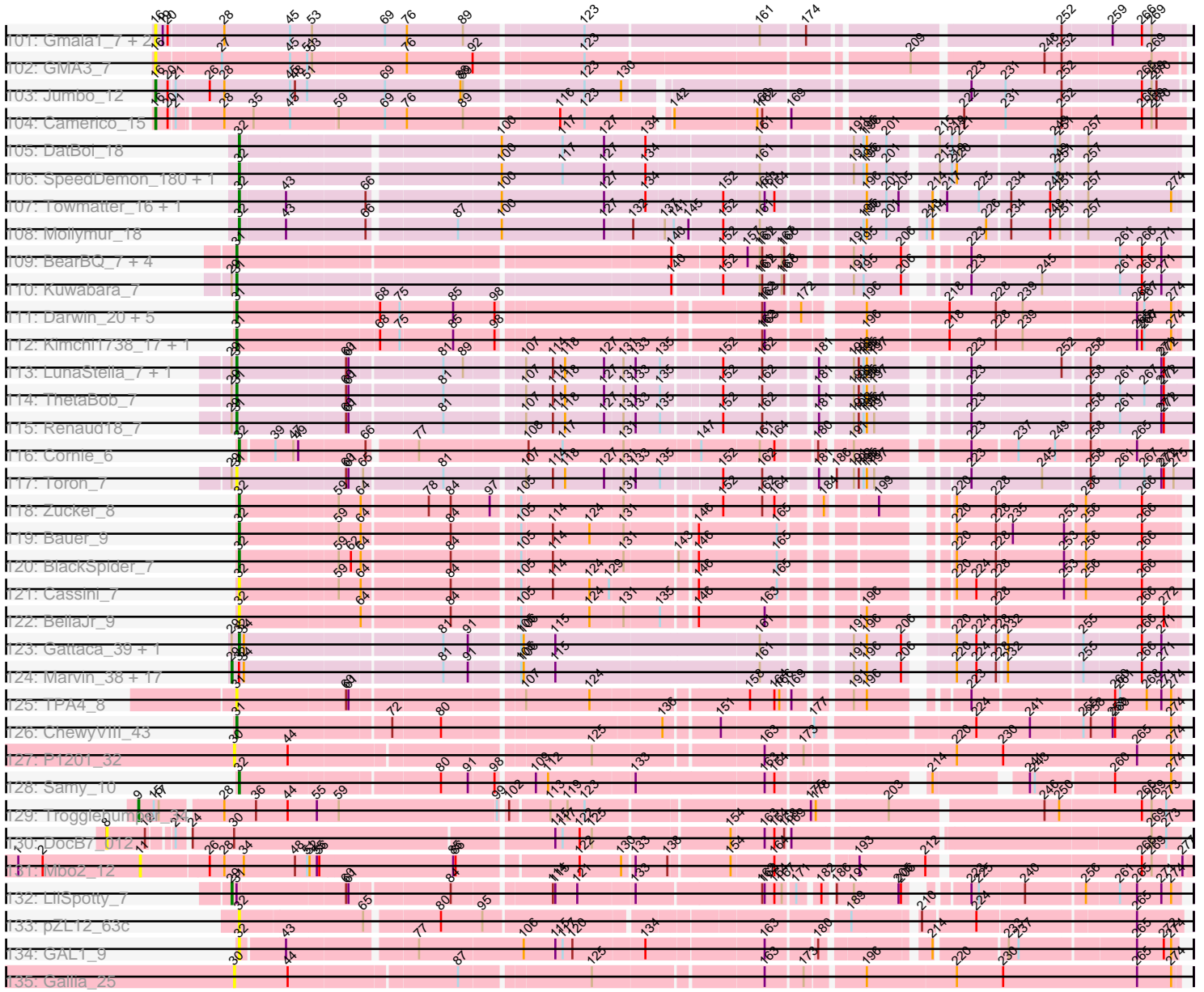




Pham 307955



Pham 307955



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 307955 Report

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

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 307955 has 308 members, 47 are drafts.

Phages represented in each track:

- Track 1 : DanielleIgnace\_17
- Track 2 : Kitkat\_25, KellEzio\_24, BeatusComedenti\_24
- Track 3 : BenchScraper\_8, Auxilium\_8, BasketStar\_8, Sporco\_9, YoungHarleezy\_8, CookieBear\_8, MUWow\_7, Raphaella\_8, AdaS\_8, Richie\_8, Vopal\_9, Lasker\_8, NewKitty\_9
- Track 4 : Isolde\_9
- Track 5 : Globfish\_8
- Track 6 : Faja\_8
- Track 7 : Ding\_8
- Track 8 : JakeTheSnake\_8
- Track 9 : Sashimi\_9
- Track 10 : Kabloowy\_8
- Track 11 : GumGum\_8, Anekin\_7
- Track 12 : LeBruni\_8
- Track 13 : DarwinJr\_11
- Track 14 : Mapleville\_7, Lawnathon\_8
- Track 15 : BlueShadow\_8, MidnightRain\_8, RadFad\_8, Hillester\_8
- Track 16 : EvePickles\_8
- Track 17 : MurphyJoseph\_8
- Track 18 : Hestia\_8
- Track 19 : Windest\_9
- Track 20 : MaterMagnus\_8, SonDevVon\_7, Gorpy\_8, Sakai\_8, Aikyam\_8
- Track 21 : Bhageatrice\_10
- Track 22 : Crescenzo\_8
- Track 23 : Satrap\_8, Shukran\_8
- Track 24 : Phrank15\_7
- Track 25 : SpicyFrank\_8
- Track 26 : Seahorse\_9
- Track 27 : BillyTP\_8
- Track 28 : Persistence\_7
- Track 29 : CosmicBrownie\_7
- Track 30 : JellyBread\_8
- Track 31 : Nyilah\_7, Tiff81\_9

- Track 32 : ThayneTheZag\_8
- Track 33 : VWB\_7
- Track 34 : SPB78\_7
- Track 35 : Reynauld\_20
- Track 36 : Srilaccoli3\_18
- Track 37 : Culver\_35, Miskis\_33, Geeche\_34, Dusty\_34, Lozinak\_35, Abscondus\_34, Smoothie\_36, Cucurbita\_37, Engineer\_36, Bachita\_37, Toniann\_35, Norvs\_36, ClubL\_35, PhinkBoden\_35, Aphelion\_35
- Track 38 : WilliamBoone\_35
- Track 39 : OneUp\_29
- Track 40 : BrutonGaster\_23
- Track 41 : GRU1\_19, Dalilpop\_34, Flapper\_33, Turuncu\_33, GTE5\_20
- Track 42 : Buggaboo\_30, Kabluna\_32, NosilaM\_32, Bonum\_32, SuperSulley\_30
- Track 43 : GrootJr\_31, Wheezy\_29, Arti\_29, NovumRegina\_29
- Track 44 : Outis\_30, StarStruck\_30
- Track 45 : Foxboro\_30
- Track 46 : NatB6\_29, Kurt\_29, KidneyBean\_29, Jifall16\_28, Phomeo\_28, Emianna\_29, Tracker\_29
- Track 47 : MerCougar\_30
- Track 48 : Commandaria\_31
- Track 49 : GTE8\_18
- Track 50 : Lollipop1437\_34, Patio\_32, Ennea\_35, RedRaider\_36
- Track 51 : Float294\_31, Skysand\_31
- Track 52 : Marietta\_31, HubbaBubba\_27
- Track 53 : NadineRae\_29
- Track 54 : Sukkupi\_31, BiPauneto\_32, Yndexa\_31
- Track 55 : Pemberton\_32, WhoseManz\_31, IDyn\_30
- Track 56 : Fury\_38, Pleakley\_38
- Track 57 : HomeFry\_35
- Track 58 : Scuba\_38
- Track 59 : Polyuyuki\_33, Apiary\_33, CoffeeBean\_33, Maselop\_33, Braxoaddie\_33
- Track 60 : Gagieri\_33
- Track 61 : MacGully\_37
- Track 62 : GMA7\_9, HayZem\_17, GTE7\_9, Amore2\_18, Austin\_18
- Track 63 : FelixAlejandro\_17, Boneham\_16, BillyBobJr\_17, CinnamonToast\_17, Sombrero\_16, Butterball\_16, Msay19\_17, Poland\_17, Jellybones\_16
- Track 64 : SteveFrench\_15
- Track 65 : Barbochs\_16, Breezic\_16, Beaver\_16, Worcestershire\_16
- Track 66 : Flakey\_16, Lizzo\_16, CathyBurgh\_16
- Track 67 : Diabla\_15, RoyalG\_17
- Track 68 : Gorko\_16, Ekhein\_16
- Track 69 : Adgers\_17, Sam12\_16, Kelzog\_16, Exiguo\_16
- Track 70 : Monty\_15
- Track 71 : Hotorobo\_16, John316\_16
- Track 72 : Eggsie\_16
- Track 73 : BenoitCattle\_16, Crete\_17, PierreThree\_16, Dakiti\_16, BigShaq\_16, Chelms\_16, Linetti\_17
- Track 74 : BirksAndSocks\_16
- Track 75 : Squibbles\_16
- Track 76 : GourdThymes\_16, RemRem\_17
- Track 77 : PokyPuppy\_15
- Track 78 : Damp\_13, Anamika\_13, MrWormie\_13, Lahirium\_13, Hail2Pitt\_13, Newt\_13, Bianmat\_13, Lidong\_13, Neoevie\_13, Teal\_13, Guillaume\_13, Hello\_13,

Berries\_13, Nimi13\_13, Minos\_13, Woes\_13, Jams\_13, Shelley\_13, Charianelly\_13, Jormungandr\_13, Kaseim\_13, GalacticEye\_13, Harambe\_13, Sticker17\_13, Luker\_13

- Track 79 : Kvothe\_16
- Track 80 : Philon9\_17
- Track 81 : Hollow\_16
- Track 82 : Demosthenes\_16
- Track 83 : Vitaenoi\_17
- Track 84 : Niagara\_16
- Track 85 : Teatealatte\_16, Teech\_16, Tredge\_16
- Track 86 : Katyusha\_16, Benczkowski14\_16
- Track 87 : ASerpRocky\_16
- Track 88 : Kampe\_15, PatrickStar\_15, Orchid\_15, Gibbles\_14
- Track 89 : RobinSparkles\_18
- Track 90 : EnalisNailo\_7, Lilas\_7, Floral\_7, Marteena\_7, BritBrat\_7, Bradissa\_7, EMSquaredA\_7, Pollux\_7
- Track 91 : Angelique\_7
- Track 92 : Confidence\_7
- Track 93 : Jablanski\_7, Pytheas\_7
- Track 94 : Posh\_7
- Track 95 : Wrigley\_7
- Track 96 : BeeGee\_7
- Track 97 : Cashline\_7
- Track 98 : LonelyBoi\_7
- Track 99 : Cardigan\_35, Yvonnetastic\_33
- Track 100 : JonJames\_35
- Track 101 : Gmala1\_7, GordTnk2\_7, GordDuk1\_7
- Track 102 : GMA3\_7
- Track 103 : Jumbo\_12
- Track 104 : Camerico\_15
- Track 105 : DatBoi\_18
- Track 106 : SpeedDemon\_180, Bantam\_17
- Track 107 : Towmatter\_16, Daredevil\_17
- Track 108 : Mollymur\_18
- Track 109 : BearBQ\_7, MortyNRick\_7, Crater\_7, Apricot\_7, Birdsong\_7
- Track 110 : Kuwabara\_7
- Track 111 : Darwin\_20, PeteyPab\_16, Zion\_17, Cruella\_17, C3PO\_17, PotatoChip\_17
- Track 112 : Kimchi1738\_17, Stickynote\_19
- Track 113 : LunaStella\_7, TChen\_7
- Track 114 : ThetaBob\_7
- Track 115 : Renaud18\_7
- Track 116 : Cornie\_6
- Track 117 : Toron\_7
- Track 118 : Zucker\_8
- Track 119 : Bauer\_9
- Track 120 : BlackSpider\_7
- Track 121 : Cassini\_7
- Track 122 : BellaJr\_9
- Track 123 : Gattaca\_39, Caprice\_37
- Track 124 : Marvin\_38, Corazon\_38, Clarkson\_41, Pringar\_40, Tesla\_39, Blackbeetle\_40, RedRaider77\_40, FeliMaine\_42, Lilbit\_39, JoieB\_41, Poise\_40, Huphlepuuff\_42, Raela\_40, MosMoris\_38, LittleLaf\_40, Beelzebub\_44,

VasuNzinga\_40, GoongGoong\_39

- Track 125 : TPA4\_8
- Track 126 : ChewyVIII\_43
- Track 127 : P1201\_32
- Track 128 : Samy\_10
- Track 129 : Trogglehumper\_34
- Track 130 : DocB7\_012
- Track 131 : Mbo2\_12
- Track 132 : LilSpotty\_7
- Track 133 : pZL12\_63c
- Track 134 : GAL1\_9
- Track 135 : Gallia\_25

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

The start number called the most often in the published annotations is 32, it was called in 136 of the 261 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abscondus\_34, AdaS\_8, Aikyam\_8, Anekin\_7, Aphelion\_35, Apiary\_33, Arti\_29, Auxilium\_8, Bachita\_37, Bantam\_17, BasketStar\_8, Bauer\_9, BeatusComedenti\_24, BeeGee\_7, BellaJr\_9, BenchScraper\_8, Bhageatrice\_10, BiPauneto\_32, BillyTP\_8, BlackSpider\_7, BlueShadow\_8, Bonum\_32, Bradissa\_7, Braxoaddie\_33, BritBrat\_7, BrutonGaster\_23, Buggaboo\_30, Caprice\_37, Cardigan\_35, Cashline\_7, Cassini\_7, ClubL\_35, CoffeeBean\_33, Commandaria\_31, Confidence\_7, CookieBear\_8, Cornie\_6, CosmicBrownie\_7, Crescenzo\_8, Cucurbita\_37, Culver\_35, Dalilpop\_34, DaniellEgnace\_17, Daredevil\_17, DarwinJr\_11, DatBoi\_18, Ding\_8, Dusty\_34, EMSquaredA\_7, Emianna\_29, EnalisNailo\_7, Engineer\_36, Ennea\_35, EvePickles\_8, Faja\_8, Flapper\_33, Float294\_31, Floral\_7, Foxboro\_30, Fury\_38, GAL1\_9, GRU1\_19, GTE5\_20, GTE8\_18, Gagieri\_33, Gattaca\_39, Geeche\_34, Globfish\_8, Gopy\_8, GrootJr\_31, GumGum\_8, Hestia\_8, Hillester\_8, HomeFry\_35, HubbaBubba\_27, IDyn\_30, Isolde\_9, Jablanski\_7, JakeTheSnake\_8, JellyBread\_8, Jifall16\_28, JonJames\_35, Kabloowy\_8, Kabluna\_32, KellEzio\_24, KidneyBean\_29, Kitkat\_25, Kurt\_29, Lasker\_8, Lawnathon\_8, LeBruni\_8, Lilas\_7, Lollipop1437\_34, LonelyBoi\_7, Lozinak\_35, MUWow\_7, MacGully\_37, Mapleville\_7, Marietta\_31, Marteena\_7, Maselop\_33, MaterMagnus\_8, MerCougar\_30, MidnightRain\_8, Miskis\_33, Mollymur\_18, MurphyJoseph\_8, NadineRae\_29, NatB6\_29, NewKitty\_9, Norvs\_36, NosilaM\_32, NovumRegina\_29, Nyilah\_7, OneUp\_29, Outis\_30, Patio\_32, Pemberton\_32, Persistence\_7, PhinkBoden\_35, Phomeo\_28, Phrank15\_7, Pleakley\_38, Pollux\_7, Polykyki\_33, Posh\_7, Pytheas\_7, RadFad\_8, Raphaella\_8, RedRaider\_36, Richie\_8, Sakai\_8, Samy\_10, Sashimi\_9, Satrap\_8, Scuba\_38, Shukran\_8, Skysand\_31, Smoothie\_36, SonDevVon\_7, SpeedDemon\_180, SpicyFrank\_8, Sporco\_9, StarStruck\_30, Sukkupi\_31, SuperSulley\_30, ThayneTheZag\_8, Tiff81\_9, Toniann\_35, Towmatter\_16, Tracker\_29, Turuncu\_33, Vopal\_9, Wheezy\_29, WhoseManz\_31, WilliamBoone\_35, Windest\_9, Wrigley\_7, Yndexa\_31, YoungHarleezy\_8, Yvonnetastic\_33, Zucker\_8, pZL12\_63c,

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

- Beelzebub\_44, Blackbeetle\_40, Clarkson\_41, Corazon\_38, FeliMaine\_42, GoongGoong\_39, Huphlepuuff\_42, JoieB\_41, Lilbit\_39, LittleLaf\_40, Marvin\_38,

MosMoris\_38, Poise\_40, Pringar\_40, Raela\_40, RedRaider77\_40, Tesla\_39, VasuNzinga\_40,

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

- ASerpRocky\_16, Adgers\_17, Amore2\_18, Anamika\_13, Angelique\_7, Apricot\_7, Austin\_18, Barbochs\_16, BearBQ\_7, Beaver\_16, Benczkowski14\_16, BenoitCattle\_16, Berries\_13, Bianmat\_13, BigShaq\_16, BillyBobJr\_17, Birdsong\_7, BirksAndSocks\_16, Boneham\_16, Breezic\_16, Butterball\_16, C3PO\_17, Camerico\_15, CathyBurgh\_16, Charianelly\_13, Chelms\_16, ChewyVIII\_43, CinnamonToast\_17, Crater\_7, Crete\_17, Cruella\_17, Dakiti\_16, Damp\_13, Darwin\_20, Demosthenes\_16, Diabla\_15, DocB7\_012, Eggsie\_16, Ekhein\_16, Exiguo\_16, FelixAlejandro\_17, Flakey\_16, GMA3\_7, GMA7\_9, GTE7\_9, GalacticEye\_13, Gallia\_25, Gibbles\_14, Gmala1\_7, GordDuk1\_7, GordTnk2\_7, Gorko\_16, GourdThymes\_16, Guillaume\_13, Hail2Pitt\_13, Harambe\_13, HayZem\_17, Hello\_13, Hollow\_16, Hotorobo\_16, Jams\_13, Jellybones\_16, John316\_16, Jormungandr\_13, Jumbo\_12, Kampe\_15, Kaseim\_13, Katyusha\_16, Kelzog\_16, Kimchi1738\_17, Kuwabara\_7, Kvothe\_16, Lahirium\_13, Lidong\_13, LilSpotty\_7, Linetti\_17, Lizzo\_16, Luker\_13, LunaStella\_7, Mbo2\_12, Minos\_13, Monty\_15, MortyNRick\_7, MrWormie\_13, Msay19\_17, Neoevie\_13, Newt\_13, Niagara\_16, Nimi13\_13, Orchid\_15, P1201\_32, PatrickStar\_15, PeteyPab\_16, Pilon9\_17, PierreThree\_16, PokyPuppy\_15, Poland\_17, PotatoChip\_17, RemRem\_17, Renaud18\_7, Reynauld\_20, RobinSparkles\_18, RoyalG\_17, SPB78\_7, Sam12\_16, Seahorse\_9, Shelley\_13, Sombrero\_16, Squibbles\_16, Srilaccoli3\_18, SteveFrench\_15, Sticker17\_13, Stickynote\_19, TChen\_7, TPA4\_8, Teal\_13, Teatealatte\_16, Teech\_16, ThetaBob\_7, Toron\_7, Tredge\_16, Trogglehumper\_34, VWB\_7, Vitaenoi\_17, Woes\_13, Worcestershire\_16, Zion\_17,

### Summary by start number:

Start 6:

- Found in 5 of 308 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 5 of 261
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gibbles\_14 (CX), Kampe\_15 (CX), Orchid\_15 (CX), PatrickStar\_15 (CX), RobinSparkles\_18 (CX),

Start 8:

- Found in 1 of 308 ( 0.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DocB7\_012 (singleton),

Start 9:

- Found in 3 of 308 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 2 of 261
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Reynauld\_20 (CH), Srilaccoli3\_18 (CH), Trogglehumper\_34 (singleton),

Start 10:

- Found in 83 of 308 ( 26.9% ) of genes in pham
- Manual Annotations of this start: 76 of 261
- Called 100.0% of time when present

- Phage (with cluster) where this start called: ASerpRocky\_16 (CS4), Adgers\_17 (CS2), Amore2\_18 (CS1), Anamika\_13 (CS3), Austin\_18 (CS1), Barbochs\_16 (CS2), Beaver\_16 (CS2), Benczkowski14\_16 (CS4), BenoitCattle\_16 (CS2), Berries\_13 (CS3), Bianmat\_13 (CS3), BigShaq\_16 (CS2), BillyBobJr\_17 (CS2), BirksAndSocks\_16 (CS2), Boneham\_16 (CS2), Breezic\_16 (CS2), Butterball\_16 (CS2), CathyBurgh\_16 (CS2), Charianelly\_13 (CS3), Chelms\_16 (CS2), CinnamonToast\_17 (CS2), Crete\_17 (CS2), Dakiti\_16 (CS2), Damp\_13 (CS3), Demosthenes\_16 (CS4), Diabla\_15 (CS2), Eggsie\_16 (CS2), Ekhein\_16 (CS2), Exiguo\_16 (CS2), FelixAlejandro\_17 (CS2), Flakey\_16 (CS2), GMA7\_9 (CS1), GTE7\_9 (CS1), GalacticEye\_13 (CS3), Gorko\_16 (CS2), GourdThymes\_16 (CS2), Guillaume\_13 (CS3), Hail2Pitt\_13 (CS3), Harambe\_13 (CS3), HayZem\_17 (CS1), Hello\_13 (CS3), Hollow\_16 (CS4), Hotorobo\_16 (CS2), Jams\_13 (CS3), Jellybones\_16 (CS2), John316\_16 (CS2), Jormungandr\_13 (CS3), Kaseim\_13 (CS3), Katyusha\_16 (CS4), Kelzog\_16 (CS2), Kvothe\_16 (CS4), Lahirium\_13 (CS3), Lidong\_13 (CS3), Linetti\_17 (CS2), Lizzo\_16 (CS2), Luker\_13 (CS3), Minos\_13 (CS3), Monty\_15 (CS2), MrWormie\_13 (CS3), Msay19\_17 (CS2), Neoevie\_13 (CS3), Newt\_13 (CS3), Niagara\_16 (CS4), Nimi13\_13 (CS3), Philon9\_17 (CS4), PierreThree\_16 (CS2), PokyPuppy\_15 (CS2), Poland\_17 (CS2), RemRem\_17 (CS2), RoyalG\_17 (CS2), Sam12\_16 (CS2), Shelley\_13 (CS3), Sombrero\_16 (CS2), Squibbles\_16 (CS2), SteveFrench\_15 (CS2), Sticker17\_13 (CS3), Teal\_13 (CS3), Teatealatte\_16 (CS4), Teech\_16 (CS4), Tredge\_16 (CS4), Vitaenoi\_17 (CS4), Woes\_13 (CS3), Worcestershire\_16 (CS2),

#### Start 11:

- Found in 1 of 308 ( 0.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mbo2\_12 (singleton),

#### Start 16:

- Found in 6 of 308 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 2 of 261
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Camerico\_15 (DF4), GMA3\_7 (DF2), Gmala1\_7 (DF1), GordDuk1\_7 (DF1), GordTnk2\_7 (DF1), Jumbo\_12 (DF3),

#### Start 29:

- Found in 27 of 308 ( 8.8% ) of genes in pham
- Manual Annotations of this start: 19 of 261
- Called 70.4% of time when present
- Phage (with cluster) where this start called: Beelzebub\_44 (S), Blackbeetle\_40 (S), Clarkson\_41 (S), Corazon\_38 (S), FeliMaine\_42 (S), GoongGoong\_39 (S), Huphlepuuff\_42 (S), JoieB\_41 (S), LilSpotty\_7 (singleton), Lilbit\_39 (S), LittleLaf\_40 (S), Marvin\_38 (S), MosMoris\_38 (S), Poise\_40 (S), Pringar\_40 (S), Raela\_40 (S), RedRaider77\_40 (S), Tesla\_39 (S), VasuNzinga\_40 (S),

#### Start 30:

- Found in 85 of 308 ( 27.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 4.7% of time when present
- Phage (with cluster) where this start called: Gallia\_25 (singleton), P1201\_32 (singleton), SPB78\_7 (BA), VWB\_7 (BA),

Start 31:

- Found in 33 of 308 ( 10.7% ) of genes in pham
- Manual Annotations of this start: 20 of 261
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Angelique\_7 (CY1), Apricot\_7 (DN3), BearBQ\_7 (DN), Birdsong\_7 (DN), C3PO\_17 (EN), ChewyVIII\_43 (singleton), Crater\_7 (DN3), Cruella\_17 (EN), Darwin\_20 (EN), Kimchi1738\_17 (EN), Kuwabara\_7 (DN4), LunaStella\_7 (F4), MortyNRick\_7 (DN), PeteyPab\_16 (EN), PotatoChip\_17 (EN), Renaud18\_7 (F4), Stickynote\_19 (EN), TChen\_7 (F4), TPA4\_8 (singleton), ThetaBob\_7 (F4), Toron\_7 (F6), Zion\_17 (EN),

Start 32:

- Found in 181 of 308 ( 58.8% ) of genes in pham
- Manual Annotations of this start: 136 of 261
- Called 90.1% of time when present
- Phage (with cluster) where this start called: Abscondus\_34 (CQ1), AdaS\_8 (AY), Aikyam\_8 (AY), Anekin\_7 (AY), Aphelion\_35 (CQ1), Apiary\_33 (CR6), Arti\_29 (CR2), Auxilium\_8 (AY), Bachita\_37 (CQ1), Bantam\_17 (DL), BasketStar\_8 (AY), Bauer\_9 (FN), BeatusComedenti\_24 (AT), BeeGee\_7 (CY5), BellaJr\_9 (FN), BenchScraper\_8 (AY), Bhageatrice\_10 (AY), BiPauneto\_32 (CR4), BillyTP\_8 (AY), BlackSpider\_7 (FN), BlueShadow\_8 (AY), Bonum\_32 (CR2), Bradissa\_7 (CY1), Braxoaddie\_33 (CR6), BritBrat\_7 (CY2), BrutonGaster\_23 (CQ2), Buggaboo\_30 (CR2), Caprice\_37 (S), Cardigan\_35 (DD), Cashline\_7 (CY6), Cassini\_7 (FN), ClubL\_35 (CQ1), CoffeeBean\_33 (CR6), Commandaria\_31 (CR2), Confidence\_7 (CY1), CookieBear\_8 (AY), Cornie\_6 (F5), CosmicBrownie\_7 (AY), Crescenzo\_8 (AY), Cucurbita\_37 (CQ1), Culver\_35 (CQ1), Dalilpop\_34 (CR1), DanielleIgnace\_17 (AT), Daredevil\_17 (DL), DarwinJr\_11 (AY), DatBoi\_18 (DL), Ding\_8 (AY), Dusty\_34 (CQ1), EMSquaredA\_7 (CY1), Emianna\_29 (CR2), EnalisNailo\_7 (CY1), Engineer\_36 (CQ1), Ennea\_35 (CR3), EvePickles\_8 (AY), Faja\_8 (AY), Flapper\_33 (CR1), Float294\_31 (CR3), Floral\_7 (CY1), Foxboro\_30 (CR2), Fury\_38 (CR5), GAL1\_9 (singleton), GRU1\_19 (CR1), GTE5\_20 (CR1), GTE8\_18 (CR2), Gagieri\_33 (CR6), Gattaca\_39 (S), Geeche\_34 (CQ1), Globfish\_8 (AY), Gorpy\_8 (AY), GrootJr\_31 (CR2), GumGum\_8 (AY), Hestia\_8 (AY), Hillester\_8 (AY), HomeFry\_35 (CR5), HubbaBubba\_27 (CR4), IDyn\_30 (CR4), Isolde\_9 (AY), Jablanski\_7 (CY3), JakeTheSnake\_8 (AY), JellyBread\_8 (AY), Jifall16\_28 (CR2), JonJames\_35 (DD), Kabloowy\_8 (AY), Kabluna\_32 (CR2), KellEzio\_24 (AT), KidneyBean\_29 (CR2), Kitkat\_25 (AT), Kurt\_29 (CR2), Lasker\_8 (AY), Lawnathon\_8 (AY), LeBruni\_8 (AY), Lilas\_7 (CY1), Lollipop1437\_34 (CR3), LonelyBoi\_7 (CY7), Lozinak\_35 (CQ1), MUWow\_7 (AY), MacGully\_37 (CR7), Mapleville\_7 (AY), Marietta\_31 (CR4), Marteena\_7 (CY1), Maselop\_33 (CR6), MaterMagnus\_8 (AY), MerCougar\_30 (CR2), MidnightRain\_8 (AY), Miskis\_33 (CQ1), Mollymur\_18 (DL), MurphyJoseph\_8 (AY), NadineRae\_29 (CR4), NatB6\_29 (CR2), NewKitty\_9 (AY), Norvs\_36 (CQ1), NosilaM\_32 (CR2), NovumRegina\_29 (CR2), Nyilah\_7 (AY), OneUp\_29 (CQ2), Outis\_30 (CR2), Patio\_32 (CR3), Pemberton\_32 (CR4), Persistence\_7 (AY), PhinkBoden\_35 (CQ1), Phomeo\_28 (CR2), Phrank15\_7 (AY), Pleakley\_38 (CR5), Pollux\_7 (CY1), Polyuyuki\_33 (CR6), Posh\_7 (CY4), Pytheas\_7 (CY3), RadFad\_8 (AY), Raphaella\_8 (AY), RedRaider\_36 (CR3), Richie\_8 (AY), Sakai\_8 (AY), Samy\_10 (singleton), Sashimi\_9 (AY), Satrap\_8 (AY), Scuba\_38 (CR5), Shukran\_8 (AY), Skysand\_31 (CR3), Smoothie\_36 (CQ1), SonDevVon\_7 (AY), SpeedDemon\_180 (DL), SpicyFrank\_8 (AY), Sporco\_9 (AY), StarStruck\_30 (CR2), Sukkupi\_31 (CR4), SuperSulley\_30 (CR2), ThayneTheZag\_8 (AY), Tiff81\_9 (AY), Toniann\_35 (CQ1), Towmatter\_16 (DL), Tracker\_29 (CR2), Turuncu\_33 (CR1), Vopal\_9 (AY), Wheezy\_29 (CR2), WhoseManz\_31 (CR4), WilliamBoone\_35 (CQ1),

Windest\_9 (AY), Wrigley\_7 (CY4), Yndexa\_31 (CR4), YoungHarleezy\_8 (AY), Yvonnestic\_33 (DD), Zucker\_8 (FN), pZL12\_63c (singleton),

Start 33:

- Found in 1 of 308 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 261
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Seahorse\_9 (AY),

### **Summary by clusters:**

There are 41 clusters represented in this pham: DN, DL, BA, DD, singleton, CH, CR7, FN, DF4, DF1, DF3, DF2, DN4, DN3, CS4, CQ1, CS1, CS3, CS2, CY3, CY2, CY1, EN, CY7, CY6, CY5, CY4, S, CX, AT, CQ2, AY, CR6, F5, CR2, CR3, CR1, F4, F6, CR4, CR5,

Info for manual annotations of cluster AT:

- Start number 32 was manually annotated 4 times for cluster AT.

Info for manual annotations of cluster AY:

- Start number 32 was manually annotated 37 times for cluster AY.
- Start number 33 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster CH:

- Start number 9 was manually annotated 1 time for cluster CH.

Info for manual annotations of cluster CQ1:

- Start number 32 was manually annotated 15 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 32 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster CR1:

- Start number 32 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 32 was manually annotated 21 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 32 was manually annotated 6 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 32 was manually annotated 8 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 32 was manually annotated 3 times for cluster CR5.

Info for manual annotations of cluster CR6:

- Start number 32 was manually annotated 6 times for cluster CR6.

Info for manual annotations of cluster CR7:

- Start number 32 was manually annotated 1 time for cluster CR7.

Info for manual annotations of cluster CS1:

- Start number 10 was manually annotated 3 times for cluster CS1.

Info for manual annotations of cluster CS2:

- Start number 10 was manually annotated 36 times for cluster CS2.

Info for manual annotations of cluster CS3:

- Start number 10 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CS4:

- Start number 10 was manually annotated 12 times for cluster CS4.

Info for manual annotations of cluster CX:

- Start number 6 was manually annotated 5 times for cluster CX.

Info for manual annotations of cluster CY1:

- Start number 31 was manually annotated 1 time for cluster CY1.
- Start number 32 was manually annotated 8 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 32 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CY3:

- Start number 32 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:

- Start number 32 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CY5:

- Start number 32 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CY6:

- Start number 32 was manually annotated 1 time for cluster CY6.

Info for manual annotations of cluster CY7:

- Start number 32 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster DD:

- Start number 32 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DF3:

- Start number 16 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DF4:

- Start number 16 was manually annotated 1 time for cluster DF4.

Info for manual annotations of cluster DL:

- Start number 32 was manually annotated 6 times for cluster DL.

Info for manual annotations of cluster DN:

- Start number 31 was manually annotated 3 times for cluster DN.

Info for manual annotations of cluster DN3:

- Start number 31 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 31 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster EN:

- Start number 31 was manually annotated 8 times for cluster EN.

Info for manual annotations of cluster F4:

- Start number 31 was manually annotated 4 times for cluster F4.

Info for manual annotations of cluster F5:

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

Info for manual annotations of cluster FN:

- Start number 32 was manually annotated 3 times for cluster FN.

Info for manual annotations of cluster S:

- Start number 29 was manually annotated 18 times for cluster S.
- Start number 32 was manually annotated 1 time for cluster S.

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

Gene: ASerpRocky\_16 Start: 16996, Stop: 18210, Start Num: 10

Candidate Starts for ASerpRocky\_16:

(Start: 10 @16996 has 76 MA's), (14, 17008), (30, 17092), (Start: 31 @17095 has 20 MA's), (48, 17167), (69, 17275), (79, 17341), (83, 17353), (87, 17365), (109, 17446), (120, 17491), (123, 17506), (154, 17680), (159, 17704), (166, 17737), (180, 17779), (222, 17950), (246, 18049), (247, 18052), (252, 18070), (269, 18175), (273, 18193), (274, 18199),

Gene: Abscondus\_34 Start: 14077, Stop: 15108, Start Num: 32

Candidate Starts for Abscondus\_34:

(Start: 32 @14077 has 136 MA's), (37, 14101), (84, 14311), (87, 14320), (121, 14464), (127, 14497), (129, 14503), (165, 14689), (191, 14761), (196, 14776), (211, 14833), (220, 14851), (242, 14935), (257, 14998), (271, 15085),

Gene: AdaS\_8 Start: 5902, Stop: 6942, Start Num: 32

Candidate Starts for AdaS\_8:

(Start: 32 @5902 has 136 MA's), (82, 6130), (90, 6154), (107, 6226), (120, 6283), (136, 6388), (143, 6403), (152, 6454), (153, 6460), (156, 6466), (168, 6526), (173, 6544), (197, 6610), (220, 6688), (248, 6796), (257, 6835), (262, 6877), (265, 6892),

Gene: Adgers\_17 Start: 14667, Stop: 15866, Start Num: 10

Candidate Starts for Adgers\_17:

(Start: 10 @14667 has 76 MA's), (18, 14685), (30, 14751), (48, 14826), (59, 14877), (79, 15000), (109, 15105), (123, 15165), (166, 15387), (222, 15594), (229, 15636), (235, 15654), (246, 15693), (252, 15714), (256, 15741), (261, 15780), (264, 15798), (269, 15819), (273, 15837), (274, 15843),

Gene: Aikyam\_8 Start: 5888, Stop: 6928, Start Num: 32

Candidate Starts for Aikyam\_8:

(Start: 32 @5888 has 136 MA's), (82, 6116), (90, 6140), (120, 6269), (136, 6374), (143, 6389), (161, 6482), (164, 6500), (168, 6512), (173, 6530), (191, 6572), (197, 6596), (248, 6782), (257, 6821), (262, 6863), (265, 6878),

Gene: Amore2\_18 Start: 14523, Stop: 15725, Start Num: 10

Candidate Starts for Amore2\_18:

(3, 14409), (4, 14412), (Start: 10 @14523 has 76 MA's), (79, 14865), (101, 14940), (109, 14970), (120, 15015), (123, 15030), (199, 15366), (235, 15519), (246, 15558), (252, 15579), (261, 15645), (269, 15684), (273, 15702),

Gene: Anamika\_13 Start: 15570, Stop: 16769, Start Num: 10

Candidate Starts for Anamika\_13:

(Start: 10 @15570 has 76 MA's), (18, 15588), (30, 15654), (36, 15681), (79, 15903), (101, 15978), (123, 16068), (208, 16437), (222, 16497), (235, 16557), (246, 16596), (252, 16617), (256, 16644), (264, 16701), (269, 16722), (273, 16740),

Gene: Anekin\_7 Start: 6040, Stop: 7080, Start Num: 32

Candidate Starts for Anekin\_7:

(Start: 32 @6040 has 136 MA's), (63, 6172), (82, 6268), (87, 6283), (90, 6292), (120, 6421), (136, 6526), (143, 6541), (161, 6634), (168, 6664), (173, 6682), (244, 6919), (248, 6934), (257, 6973), (262, 7015), (265, 7030),

Gene: Angelique\_7 Start: 5696, Stop: 6739, Start Num: 31

Candidate Starts for Angelique\_7:

(Start: 31 @5696 has 20 MA's), (40, 5747), (44, 5759), (56, 5795), (93, 5969), (98, 5993), (144, 6203), (155, 6254), (163, 6293), (168, 6317), (205, 6431), (206, 6434), (223, 6494), (245, 6581), (254, 6623), (260, 6662),

Gene: Aphelion\_35 Start: 14324, Stop: 15352, Start Num: 32

Candidate Starts for Aphelion\_35:

(Start: 32 @14324 has 136 MA's), (37, 14348), (84, 14558), (87, 14567), (121, 14711), (127, 14744), (129, 14750), (165, 14936), (191, 15008), (196, 15023), (211, 15080), (220, 15098), (242, 15182), (257, 15245), (271, 15332),

Gene: Apiary\_33 Start: 20020, Stop: 21072, Start Num: 32

Candidate Starts for Apiary\_33:

(Start: 32 @20020 has 136 MA's), (58, 20137), (80, 20254), (98, 20317), (110, 20362), (133, 20470), (137, 20506), (161, 20605), (177, 20662), (196, 20713), (217, 20800), (260, 20995), (265, 21022), (266, 21028), (274, 21064),

Gene: Apricot\_7 Start: 5225, Stop: 6259, Start Num: 31

Candidate Starts for Apricot\_7:

(Start: 31 @5225 has 20 MA's), (140, 5720), (152, 5774), (157, 5804), (161, 5819), (162, 5822), (167, 5846), (168, 5849), (191, 5909), (195, 5921), (206, 5966), (223, 6014), (261, 6185), (266, 6212), (271, 6236),

Gene: Arti\_29 Start: 18056, Stop: 19126, Start Num: 32

Candidate Starts for Arti\_29:

(Start: 32 @18056 has 136 MA's), (38, 18092), (40, 18104), (42, 18110), (72, 18233), (80, 18290), (110, 18398), (161, 18641), (173, 18689), (189, 18740), (212, 18821), (221, 18860), (229, 18908),

(239, 18938), (260, 19049), (265, 19076), (273, 19112), (274, 19118),

Gene: Austin\_18 Start: 14523, Stop: 15725, Start Num: 10

Candidate Starts for Austin\_18:

(3, 14409), (4, 14412), (Start: 10 @14523 has 76 MA's), (79, 14865), (101, 14940), (109, 14970), (120, 15015), (123, 15030), (199, 15366), (235, 15519), (246, 15558), (252, 15579), (261, 15645), (269, 15684), (273, 15702),

Gene: Auxilium\_8 Start: 5902, Stop: 6942, Start Num: 32

Candidate Starts for Auxilium\_8:

(Start: 32 @5902 has 136 MA's), (82, 6130), (90, 6154), (107, 6226), (120, 6283), (136, 6388), (143, 6403), (152, 6454), (153, 6460), (156, 6466), (168, 6526), (173, 6544), (197, 6610), (220, 6688), (248, 6796), (257, 6835), (262, 6877), (265, 6892),

Gene: Bachita\_37 Start: 14757, Stop: 15785, Start Num: 32

Candidate Starts for Bachita\_37:

(Start: 32 @14757 has 136 MA's), (37, 14781), (84, 14991), (87, 15000), (121, 15144), (127, 15177), (129, 15183), (165, 15369), (191, 15441), (196, 15456), (211, 15513), (220, 15531), (242, 15615), (257, 15678), (271, 15765),

Gene: Bantam\_17 Start: 11610, Stop: 12665, Start Num: 32

Candidate Starts for Bantam\_17:

(Start: 32 @11610 has 136 MA's), (100, 11907), (117, 11982), (127, 12033), (134, 12081), (161, 12207), (191, 12300), (195, 12312), (196, 12315), (201, 12339), (215, 12387), (219, 12402), (220, 12408), (249, 12522), (251, 12528), (257, 12555),

Gene: Barbochs\_16 Start: 14505, Stop: 15704, Start Num: 10

Candidate Starts for Barbochs\_16:

(Start: 10 @14505 has 76 MA's), (18, 14523), (30, 14589), (48, 14664), (59, 14715), (79, 14838), (109, 14943), (123, 15003), (166, 15225), (222, 15432), (229, 15474), (235, 15492), (246, 15531), (252, 15552), (256, 15579), (264, 15636), (269, 15657), (273, 15675), (274, 15681),

Gene: BasketStar\_8 Start: 5941, Stop: 6981, Start Num: 32

Candidate Starts for BasketStar\_8:

(Start: 32 @5941 has 136 MA's), (82, 6169), (90, 6193), (107, 6265), (120, 6322), (136, 6427), (143, 6442), (152, 6493), (153, 6499), (156, 6505), (168, 6565), (173, 6583), (197, 6649), (220, 6727), (248, 6835), (257, 6874), (262, 6916), (265, 6931),

Gene: Bauer\_9 Start: 6314, Stop: 7333, Start Num: 32

Candidate Starts for Bauer\_9:

(Start: 32 @6314 has 136 MA's), (59, 6431), (64, 6455), (84, 6557), (105, 6629), (114, 6665), (124, 6710), (131, 6749), (146, 6824), (165, 6920), (220, 7070), (228, 7118), (235, 7136), (253, 7199), (256, 7220), (266, 7289),

Gene: BearBQ\_7 Start: 5225, Stop: 6259, Start Num: 31

Candidate Starts for BearBQ\_7:

(Start: 31 @5225 has 20 MA's), (140, 5720), (152, 5774), (157, 5804), (161, 5819), (162, 5822), (167, 5846), (168, 5849), (191, 5909), (195, 5921), (206, 5966), (223, 6014), (261, 6185), (266, 6212), (271, 6236),

Gene: BeatusComedenti\_24 Start: 12882, Stop: 13964, Start Num: 32

Candidate Starts for BeatusComedenti\_24:

(Start: 32 @12882 has 136 MA's), (70, 13041), (71, 13044), (74, 13053), (75, 13056), (104, 13203), (120, 13269), (131, 13329), (137, 13377), (138, 13380), (176, 13548), (202, 13635), (214, 13677), (215, 13683), (222, 13713), (263, 13905), (267, 13920),

Gene: Beaver\_16 Start: 14513, Stop: 15712, Start Num: 10

Candidate Starts for Beaver\_16:

(Start: 10 @14513 has 76 MA's), (18, 14531), (30, 14597), (48, 14672), (59, 14723), (79, 14846), (109, 14951), (123, 15011), (166, 15233), (222, 15440), (229, 15482), (235, 15500), (246, 15539), (252, 15560), (256, 15587), (264, 15644), (269, 15665), (273, 15683), (274, 15689),

Gene: BeeGee\_7 Start: 5700, Stop: 6740, Start Num: 32

Candidate Starts for BeeGee\_7:

(Start: 32 @5700 has 136 MA's), (40, 5748), (44, 5760), (56, 5796), (93, 5970), (98, 5994), (124, 6099), (143, 6195), (144, 6204), (155, 6255), (163, 6294), (168, 6318), (205, 6432), (206, 6435), (218, 6468), (223, 6495), (245, 6582), (260, 6663),

Gene: Beelzebub\_44 Start: 16546, Stop: 17616, Start Num: 29

Candidate Starts for Beelzebub\_44:

(Start: 29 @16546 has 19 MA's), (Start: 32 @16555 has 136 MA's), (34, 16561), (81, 16792), (91, 16822), (105, 16873), (106, 16876), (115, 16915), (161, 17158), (191, 17248), (196, 17263), (206, 17305), (220, 17347), (224, 17371), (228, 17395), (232, 17404), (255, 17491), (266, 17560), (271, 17584),

Gene: BellaJr\_9 Start: 6377, Stop: 7396, Start Num: 32

Candidate Starts for BellaJr\_9:

(Start: 32 @6377 has 136 MA's), (64, 6518), (84, 6620), (105, 6692), (124, 6773), (131, 6812), (135, 6854), (146, 6887), (163, 6968), (196, 7061), (228, 7181), (266, 7352), (272, 7379),

Gene: BenchScraper\_8 Start: 5902, Stop: 6942, Start Num: 32

Candidate Starts for BenchScraper\_8:

(Start: 32 @5902 has 136 MA's), (82, 6130), (90, 6154), (107, 6226), (120, 6283), (136, 6388), (143, 6403), (152, 6454), (153, 6460), (156, 6466), (168, 6526), (173, 6544), (197, 6610), (220, 6688), (248, 6796), (257, 6835), (262, 6877), (265, 6892),

Gene: Benczkowski14\_16 Start: 17078, Stop: 18292, Start Num: 10

Candidate Starts for Benczkowski14\_16:

(Start: 10 @17078 has 76 MA's), (30, 17174), (Start: 31 @17177 has 20 MA's), (48, 17249), (83, 17435), (87, 17447), (96, 17483), (109, 17528), (120, 17573), (123, 17588), (154, 17762), (159, 17786), (180, 17861), (222, 18032), (246, 18131), (247, 18134), (252, 18152), (269, 18257), (273, 18275), (274, 18281),

Gene: BenoitCattle\_16 Start: 14499, Stop: 15698, Start Num: 10

Candidate Starts for BenoitCattle\_16:

(Start: 10 @14499 has 76 MA's), (18, 14517), (30, 14583), (48, 14658), (79, 14832), (101, 14907), (109, 14937), (123, 14997), (157, 15180), (166, 15219), (229, 15468), (235, 15486), (246, 15525), (252, 15546), (256, 15573), (261, 15612), (264, 15630), (269, 15651), (273, 15669), (274, 15675),

Gene: Berries\_13 Start: 15555, Stop: 16754, Start Num: 10

Candidate Starts for Berries\_13:

(Start: 10 @15555 has 76 MA's), (18, 15573), (30, 15639), (36, 15666), (79, 15888), (101, 15963), (123, 16053), (208, 16422), (222, 16482), (235, 16542), (246, 16581), (252, 16602), (256, 16629), (264, 16686), (269, 16707), (273, 16725),

Gene: Bhageatrice\_10 Start: 7097, Stop: 8137, Start Num: 32

Candidate Starts for Bhageatrice\_10:

(Start: 32 @7097 has 136 MA's), (82, 7325), (90, 7349), (120, 7478), (136, 7583), (143, 7598), (153, 7655), (161, 7691), (168, 7721), (191, 7781), (197, 7805), (257, 8030), (262, 8072), (265, 8087),

Gene: BiPauneto\_32 Start: 17934, Stop: 19001, Start Num: 32

Candidate Starts for BiPauneto\_32:

(Start: 32 @17934 has 136 MA's), (38, 17970), (42, 17988), (48, 18003), (72, 18111), (80, 18168), (187, 18603), (189, 18618), (212, 18699), (216, 18720), (229, 18786), (260, 18924), (265, 18951),

Gene: Bianmat\_13 Start: 15577, Stop: 16776, Start Num: 10

Candidate Starts for Bianmat\_13:

(Start: 10 @15577 has 76 MA's), (18, 15595), (30, 15661), (36, 15688), (79, 15910), (101, 15985), (123, 16075), (208, 16444), (222, 16504), (235, 16564), (246, 16603), (252, 16624), (256, 16651), (264, 16708), (269, 16729), (273, 16747),

Gene: BigShaq\_16 Start: 14501, Stop: 15700, Start Num: 10

Candidate Starts for BigShaq\_16:

(Start: 10 @14501 has 76 MA's), (18, 14519), (30, 14585), (48, 14660), (79, 14834), (101, 14909), (109, 14939), (123, 14999), (157, 15182), (166, 15221), (229, 15470), (235, 15488), (246, 15527), (252, 15548), (256, 15575), (261, 15614), (264, 15632), (269, 15653), (273, 15671), (274, 15677),

Gene: BillyBobJr\_17 Start: 14537, Stop: 15736, Start Num: 10

Candidate Starts for BillyBobJr\_17:

(Start: 10 @14537 has 76 MA's), (18, 14555), (30, 14621), (48, 14696), (79, 14870), (101, 14945), (109, 14975), (123, 15035), (166, 15257), (190, 15338), (222, 15464), (229, 15506), (235, 15524), (246, 15563), (252, 15584), (256, 15611), (261, 15650), (264, 15668), (269, 15689), (273, 15707), (274, 15713),

Gene: BillyTP\_8 Start: 5896, Stop: 6936, Start Num: 32

Candidate Starts for BillyTP\_8:

(Start: 32 @5896 has 136 MA's), (82, 6124), (90, 6148), (107, 6220), (120, 6277), (136, 6382), (143, 6397), (152, 6448), (153, 6454), (156, 6460), (168, 6520), (173, 6538), (197, 6604), (248, 6790), (257, 6829), (262, 6871), (265, 6886),

Gene: Birdsong\_7 Start: 5225, Stop: 6259, Start Num: 31

Candidate Starts for Birdsong\_7:

(Start: 31 @5225 has 20 MA's), (140, 5720), (152, 5774), (157, 5804), (161, 5819), (162, 5822), (167, 5846), (168, 5849), (191, 5909), (195, 5921), (206, 5966), (223, 6014), (261, 6185), (266, 6212), (271, 6236),

Gene: BirksAndSocks\_16 Start: 14502, Stop: 15701, Start Num: 10

Candidate Starts for BirksAndSocks\_16:

(Start: 10 @14502 has 76 MA's), (18, 14520), (30, 14586), (48, 14661), (79, 14835), (101, 14910), (109, 14940), (123, 15000), (166, 15222), (222, 15429), (229, 15471), (235, 15489), (246, 15528), (252, 15549), (256, 15576), (261, 15615), (264, 15633), (269, 15654), (273, 15672), (274, 15678),

Gene: BlackSpider\_7 Start: 5373, Stop: 6392, Start Num: 32

Candidate Starts for BlackSpider\_7:

(Start: 32 @5373 has 136 MA's), (59, 5490), (62, 5505), (64, 5514), (84, 5616), (105, 5688), (114, 5724), (131, 5808), (143, 5865), (146, 5883), (165, 5979), (220, 6129), (228, 6177), (253, 6258), (256, 6279), (266, 6348),

Gene: Blackbeetle\_40 Start: 15565, Stop: 16635, Start Num: 29

Candidate Starts for Blackbeetle\_40:

(Start: 29 @15565 has 19 MA's), (Start: 32 @15574 has 136 MA's), (34, 15580), (81, 15811), (91, 15841), (105, 15892), (106, 15895), (115, 15934), (161, 16177), (191, 16267), (196, 16282), (206, 16324), (220, 16366), (224, 16390), (228, 16414), (232, 16423), (255, 16510), (266, 16579), (271, 16603),

Gene: BlueShadow\_8 Start: 5887, Stop: 6927, Start Num: 32

Candidate Starts for BlueShadow\_8:

(Start: 32 @5887 has 136 MA's), (82, 6115), (107, 6211), (120, 6268), (134, 6355), (136, 6373), (143, 6388), (161, 6481), (168, 6511), (173, 6529), (248, 6781), (257, 6820), (262, 6862), (265, 6877),

Gene: Boneham\_16 Start: 14501, Stop: 15700, Start Num: 10

Candidate Starts for Boneham\_16:

(Start: 10 @14501 has 76 MA's), (18, 14519), (30, 14585), (48, 14660), (79, 14834), (101, 14909), (109, 14939), (123, 14999), (166, 15221), (190, 15302), (222, 15428), (229, 15470), (235, 15488), (246, 15527), (252, 15548), (256, 15575), (261, 15614), (264, 15632), (269, 15653), (273, 15671), (274, 15677),

Gene: Bonum\_32 Start: 18390, Stop: 19460, Start Num: 32

Candidate Starts for Bonum\_32:

(Start: 32 @18390 has 136 MA's), (38, 18426), (42, 18444), (72, 18567), (110, 18732), (148, 18918), (151, 18930), (164, 18993), (172, 19020), (185, 19050), (188, 19071), (189, 19074), (212, 19155), (216, 19176), (229, 19242), (239, 19272), (260, 19383), (265, 19410), (271, 19440), (274, 19452),

Gene: Bradissa\_7 Start: 5704, Stop: 6744, Start Num: 32

Candidate Starts for Bradissa\_7:

(Start: 32 @5704 has 136 MA's), (40, 5752), (44, 5764), (56, 5800), (93, 5974), (98, 5998), (144, 6208), (155, 6259), (163, 6298), (168, 6322), (196, 6397), (205, 6436), (206, 6439), (218, 6472), (223, 6499), (245, 6586), (254, 6628), (260, 6667), (267, 6703),

Gene: Braxoaddie\_33 Start: 20009, Stop: 21061, Start Num: 32

Candidate Starts for Braxoaddie\_33:

(Start: 32 @20009 has 136 MA's), (58, 20126), (80, 20243), (98, 20306), (110, 20351), (133, 20459), (137, 20495), (161, 20594), (177, 20651), (196, 20702), (217, 20789), (260, 20984), (265, 21011), (266, 21017), (274, 21053),

Gene: Breezic\_16 Start: 14516, Stop: 15715, Start Num: 10

Candidate Starts for Breezic\_16:

(Start: 10 @14516 has 76 MA's), (18, 14534), (30, 14600), (48, 14675), (59, 14726), (79, 14849), (109, 14954), (123, 15014), (166, 15236), (222, 15443), (229, 15485), (235, 15503), (246, 15542), (252, 15563), (256, 15590), (264, 15647), (269, 15668), (273, 15686), (274, 15692),

Gene: BritBrat\_7 Start: 5706, Stop: 6746, Start Num: 32

Candidate Starts for BritBrat\_7:

(Start: 32 @5706 has 136 MA's), (40, 5754), (44, 5766), (56, 5802), (93, 5976), (98, 6000), (144, 6210), (155, 6261), (163, 6300), (168, 6324), (196, 6399), (205, 6438), (206, 6441), (218, 6474), (223, 6501), (245, 6588), (254, 6630), (260, 6669), (267, 6705),

Gene: BrutonGaster\_23 Start: 11028, Stop: 12071, Start Num: 32

Candidate Starts for BrutonGaster\_23:

(Start: 32 @11028 has 136 MA's), (84, 11262), (87, 11271), (121, 11415), (127, 11448), (136, 11511), (161, 11619), (165, 11640), (191, 11712), (205, 11766), (220, 11802), (249, 11916), (258, 11952),

Gene: Buggaboo\_30 Start: 18875, Stop: 19945, Start Num: 32

Candidate Starts for Buggaboo\_30:

(Start: 32 @18875 has 136 MA's), (38, 18911), (42, 18929), (72, 19052), (110, 19217), (148, 19403), (151, 19415), (164, 19478), (172, 19505), (185, 19535), (188, 19556), (189, 19559), (212, 19640), (216, 19661), (229, 19727), (239, 19757), (260, 19868), (265, 19895), (271, 19925), (274, 19937),

Gene: Butterball\_16 Start: 14501, Stop: 15700, Start Num: 10

Candidate Starts for Butterball\_16:

(Start: 10 @14501 has 76 MA's), (18, 14519), (30, 14585), (48, 14660), (79, 14834), (101, 14909), (109, 14939), (123, 14999), (166, 15221), (190, 15302), (222, 15428), (229, 15470), (235, 15488), (246, 15527), (252, 15548), (256, 15575), (261, 15614), (264, 15632), (269, 15653), (273, 15671), (274, 15677),

Gene: C3PO\_17 Start: 12594, Stop: 13658, Start Num: 31

Candidate Starts for C3PO\_17:

(Start: 31 @12594 has 20 MA's), (68, 12762), (75, 12786), (85, 12849), (98, 12897), (162, 13191), (163, 13194), (172, 13233), (196, 13290), (218, 13386), (228, 13443), (239, 13476), (265, 13608), (267, 13617), (274, 13650),

Gene: Camerico\_15 Start: 14155, Stop: 15327, Start Num: 16

Candidate Starts for Camerico\_15:

(Start: 16 @14155 has 2 MA's), (20, 14170), (21, 14176), (28, 14227), (35, 14263), (45, 14308), (59, 14365), (69, 14422), (76, 14449), (89, 14518), (116, 14626), (123, 14656), (142, 14746), (160, 14845), (162, 14851), (169, 14881), (222, 15061), (231, 15112), (252, 15181), (266, 15274), (269, 15286), (270, 15292),

Gene: Caprice\_37 Start: 15644, Stop: 16705, Start Num: 32

Candidate Starts for Caprice\_37:

(Start: 29 @15635 has 19 MA's), (Start: 32 @15644 has 136 MA's), (34, 15650), (81, 15881), (91, 15911), (105, 15962), (106, 15965), (115, 16004), (161, 16247), (191, 16337), (196, 16352), (206, 16394), (220, 16436), (224, 16460), (228, 16484), (232, 16493), (255, 16580), (266, 16649), (271, 16673),

Gene: Cardigan\_35 Start: 16281, Stop: 17330, Start Num: 32

Candidate Starts for Cardigan\_35:

(Start: 32 @16281 has 136 MA's), (36, 16302), (37, 16311), (53, 16368), (63, 16419), (67, 16434), (161, 16878), (163, 16884), (183, 16944), (195, 16983), (242, 17145), (276, 17313),

Gene: Cashline\_7 Start: 5553, Stop: 6593, Start Num: 32

Candidate Starts for Cashline\_7:

(Start: 32 @5553 has 136 MA's), (40, 5601), (44, 5613), (56, 5649), (87, 5805), (93, 5823), (98, 5847), (144, 6057), (155, 6108), (163, 6147), (164, 6159), (168, 6171), (196, 6246), (205, 6285), (206, 6288), (218, 6321), (223, 6348), (245, 6435), (254, 6477), (260, 6516), (261, 6522),

Gene: Cassini\_7 Start: 5347, Stop: 6366, Start Num: 32

Candidate Starts for Cassini\_7:

(Start: 32 @5347 has 136 MA's), (59, 5464), (64, 5488), (84, 5590), (105, 5662), (114, 5698), (124, 5743), (129, 5767), (146, 5857), (165, 5953), (220, 6103), (224, 6127), (228, 6151), (253, 6232), (256, 6253), (266, 6322),

Gene: CathyBurgh\_16 Start: 15373, Stop: 16572, Start Num: 10

Candidate Starts for CathyBurgh\_16:

(Start: 10 @15373 has 76 MA's), (18, 15391), (30, 15457), (48, 15532), (59, 15583), (79, 15706), (101, 15781), (109, 15811), (123, 15871), (166, 16093), (222, 16300), (229, 16342), (235, 16360), (246, 16399), (252, 16420), (256, 16447), (261, 16486), (264, 16504), (269, 16525), (273, 16543), (274, 16549),

Gene: Charianelly\_13 Start: 15287, Stop: 16486, Start Num: 10

Candidate Starts for Charianelly\_13:

(Start: 10 @15287 has 76 MA's), (18, 15305), (30, 15371), (36, 15398), (79, 15620), (101, 15695), (123, 15785), (208, 16154), (222, 16214), (235, 16274), (246, 16313), (252, 16334), (256, 16361), (264, 16418), (269, 16439), (273, 16457),

Gene: Chelms\_16 Start: 14501, Stop: 15700, Start Num: 10

Candidate Starts for Chelms\_16:

(Start: 10 @14501 has 76 MA's), (18, 14519), (30, 14585), (48, 14660), (79, 14834), (101, 14909), (109, 14939), (123, 14999), (157, 15182), (166, 15221), (229, 15470), (235, 15488), (246, 15527), (252, 15548), (256, 15575), (261, 15614), (264, 15632), (269, 15653), (273, 15671), (274, 15677),

Gene: ChewyVIII\_43 Start: 25603, Stop: 26664, Start Num: 31

Candidate Starts for ChewyVIII\_43:

(Start: 31 @25603 has 20 MA's), (72, 25783), (80, 25840), (136, 26089), (151, 26146), (177, 26248), (224, 26422), (241, 26488), (255, 26548), (258, 26557), (259, 26584), (260, 26587), (274, 26656),

Gene: CinnamonToast\_17 Start: 14537, Stop: 15736, Start Num: 10

Candidate Starts for CinnamonToast\_17:

(Start: 10 @14537 has 76 MA's), (18, 14555), (30, 14621), (48, 14696), (79, 14870), (101, 14945), (109, 14975), (123, 15035), (166, 15257), (190, 15338), (222, 15464), (229, 15506), (235, 15524), (246, 15563), (252, 15584), (256, 15611), (261, 15650), (264, 15668), (269, 15689), (273, 15707), (274, 15713),

Gene: Clarkson\_41 Start: 16247, Stop: 17317, Start Num: 29

Candidate Starts for Clarkson\_41:

(Start: 29 @16247 has 19 MA's), (Start: 32 @16256 has 136 MA's), (34, 16262), (81, 16493), (91, 16523), (105, 16574), (106, 16577), (115, 16616), (161, 16859), (191, 16949), (196, 16964), (206, 17006), (220, 17048), (224, 17072), (228, 17096), (232, 17105), (255, 17192), (266, 17261), (271, 17285),

Gene: ClubL\_35 Start: 14258, Stop: 15286, Start Num: 32

Candidate Starts for ClubL\_35:

(Start: 32 @14258 has 136 MA's), (37, 14282), (84, 14492), (87, 14501), (121, 14645), (127, 14678), (129, 14684), (165, 14870), (191, 14942), (196, 14957), (211, 15014), (220, 15032), (242, 15116), (257, 15179), (271, 15266),

Gene: CoffeeBean\_33 Start: 19964, Stop: 21016, Start Num: 32

Candidate Starts for CoffeeBean\_33:

(Start: 32 @19964 has 136 MA's), (58, 20081), (80, 20198), (98, 20261), (110, 20306), (133, 20414), (137, 20450), (161, 20549), (177, 20606), (196, 20657), (217, 20744), (260, 20939), (265, 20966), (266, 20972), (274, 21008),

Gene: Commandaria\_31 Start: 19386, Stop: 20456, Start Num: 32

Candidate Starts for Commandaria\_31:

(Start: 32 @19386 has 136 MA's), (36, 19407), (38, 19422), (54, 19479), (72, 19563), (80, 19620), (94, 19662), (110, 19728), (173, 20019), (187, 20055), (189, 20070), (212, 20151), (229, 20238), (239, 20268), (253, 20319), (260, 20379), (265, 20406), (273, 20442), (274, 20448),

Gene: Confidence\_7 Start: 5700, Stop: 6740, Start Num: 32

Candidate Starts for Confidence\_7:

(Start: 32 @5700 has 136 MA's), (40, 5748), (44, 5760), (56, 5796), (93, 5970), (98, 5994), (124, 6099), (143, 6195), (144, 6204), (155, 6255), (163, 6294), (168, 6318), (205, 6432), (206, 6435), (218, 6468), (223, 6495), (245, 6582), (254, 6624), (260, 6663),

Gene: CookieBear\_8 Start: 5902, Stop: 6942, Start Num: 32

Candidate Starts for CookieBear\_8:

(Start: 32 @5902 has 136 MA's), (82, 6130), (90, 6154), (107, 6226), (120, 6283), (136, 6388), (143, 6403), (152, 6454), (153, 6460), (156, 6466), (168, 6526), (173, 6544), (197, 6610), (220, 6688), (248, 6796), (257, 6835), (262, 6877), (265, 6892),

Gene: Corazon\_38 Start: 16200, Stop: 17270, Start Num: 29

Candidate Starts for Corazon\_38:

(Start: 29 @16200 has 19 MA's), (Start: 32 @16209 has 136 MA's), (34, 16215), (81, 16446), (91, 16476), (105, 16527), (106, 16530), (115, 16569), (161, 16812), (191, 16902), (196, 16917), (206, 16959), (220, 17001), (224, 17025), (228, 17049), (232, 17058), (255, 17145), (266, 17214), (271, 17238),

Gene: Cornie\_6 Start: 4881, Stop: 5933, Start Num: 32

Candidate Starts for Cornie\_6:

(Start: 32 @4881 has 136 MA's), (39, 4920), (47, 4941), (49, 4947), (66, 5025), (77, 5076), (108, 5208), (117, 5250), (131, 5322), (147, 5406), (161, 5475), (164, 5493), (180, 5535), (191, 5565), (223, 5685), (237, 5736), (249, 5781), (258, 5817), (265, 5871),

Gene: CosmicBrownie\_7 Start: 6018, Stop: 7058, Start Num: 32

Candidate Starts for CosmicBrownie\_7:

(Start: 32 @6018 has 136 MA's), (63, 6150), (82, 6246), (90, 6270), (120, 6399), (134, 6486), (143, 6519), (156, 6582), (168, 6642), (173, 6660), (244, 6897), (248, 6912), (257, 6951), (265, 7008),

Gene: Crater\_7 Start: 5225, Stop: 6259, Start Num: 31

Candidate Starts for Crater\_7:

(Start: 31 @5225 has 20 MA's), (140, 5720), (152, 5774), (157, 5804), (161, 5819), (162, 5822), (167, 5846), (168, 5849), (191, 5909), (195, 5921), (206, 5966), (223, 6014), (261, 6185), (266, 6212), (271, 6236),

Gene: Crescenzo\_8 Start: 5968, Stop: 7008, Start Num: 32

Candidate Starts for Crescenzo\_8:

(Start: 32 @5968 has 136 MA's), (63, 6100), (82, 6196), (87, 6211), (90, 6220), (120, 6349), (136, 6454), (143, 6469), (156, 6532), (168, 6592), (173, 6610), (244, 6847), (248, 6862), (257, 6901), (262, 6943), (265, 6958),

Gene: Crete\_17 Start: 14752, Stop: 15951, Start Num: 10

Candidate Starts for Crete\_17:

(Start: 10 @14752 has 76 MA's), (18, 14770), (30, 14836), (48, 14911), (79, 15085), (101, 15160), (109, 15190), (123, 15250), (157, 15433), (166, 15472), (229, 15721), (235, 15739), (246, 15778), (252, 15799), (256, 15826), (261, 15865), (264, 15883), (269, 15904), (273, 15922), (274, 15928),

Gene: Cruella\_17 Start: 12594, Stop: 13658, Start Num: 31

Candidate Starts for Cruella\_17:

(Start: 31 @12594 has 20 MA's), (68, 12762), (75, 12786), (85, 12849), (98, 12897), (162, 13191), (163, 13194), (172, 13233), (196, 13290), (218, 13386), (228, 13443), (239, 13476), (265, 13608),

(267, 13617), (274, 13650),

Gene: Cucurbita\_37 Start: 15616, Stop: 16644, Start Num: 32

Candidate Starts for Cucurbita\_37:

(Start: 32 @15616 has 136 MA's), (37, 15640), (84, 15850), (87, 15859), (121, 16003), (127, 16036), (129, 16042), (165, 16228), (191, 16300), (196, 16315), (211, 16372), (220, 16390), (242, 16474), (257, 16537), (271, 16624),

Gene: Culver\_35 Start: 14077, Stop: 15108, Start Num: 32

Candidate Starts for Culver\_35:

(Start: 32 @14077 has 136 MA's), (37, 14101), (84, 14311), (87, 14320), (121, 14464), (127, 14497), (129, 14503), (165, 14689), (191, 14761), (196, 14776), (211, 14833), (220, 14851), (242, 14935), (257, 14998), (271, 15085),

Gene: Dakiti\_16 Start: 15369, Stop: 16568, Start Num: 10

Candidate Starts for Dakiti\_16:

(Start: 10 @15369 has 76 MA's), (18, 15387), (30, 15453), (48, 15528), (79, 15702), (101, 15777), (109, 15807), (123, 15867), (157, 16050), (166, 16089), (229, 16338), (235, 16356), (246, 16395), (252, 16416), (256, 16443), (261, 16482), (264, 16500), (269, 16521), (273, 16539), (274, 16545),

Gene: Dalilpop\_34 Start: 20415, Stop: 21476, Start Num: 32

Candidate Starts for Dalilpop\_34:

(Start: 32 @20415 has 136 MA's), (42, 20469), (72, 20592), (80, 20649), (94, 20691), (133, 20865), (181, 21063), (260, 21399), (265, 21426), (266, 21432), (274, 21468),

Gene: Damp\_13 Start: 14451, Stop: 15650, Start Num: 10

Candidate Starts for Damp\_13:

(Start: 10 @14451 has 76 MA's), (18, 14469), (30, 14535), (36, 14562), (79, 14784), (101, 14859), (123, 14949), (208, 15318), (222, 15378), (235, 15438), (246, 15477), (252, 15498), (256, 15525), (264, 15582), (269, 15603), (273, 15621),

Gene: DanielleIgnace\_17 Start: 12091, Stop: 13170, Start Num: 32

Candidate Starts for DanielleIgnace\_17:

(Start: 32 @12091 has 136 MA's), (46, 12148), (60, 12211), (71, 12253), (74, 12262), (75, 12265), (81, 12319), (108, 12424), (111, 12445), (120, 12478), (128, 12520), (131, 12538), (170, 12733), (202, 12844), (215, 12892), (238, 12985), (256, 13060), (267, 13129), (270, 13144),

Gene: Daredevil\_17 Start: 10493, Stop: 11542, Start Num: 32

Candidate Starts for Daredevil\_17:

(Start: 32 @10493 has 136 MA's), (43, 10547), (66, 10640), (100, 10790), (127, 10916), (134, 10964), (152, 11048), (161, 11090), (163, 11096), (164, 11108), (196, 11198), (201, 11222), (205, 11237), (214, 11264), (217, 11273), (225, 11312), (234, 11345), (248, 11393), (251, 11405), (257, 11432), (274, 11534),

Gene: Darwin\_20 Start: 13339, Stop: 14403, Start Num: 31

Candidate Starts for Darwin\_20:

(Start: 31 @13339 has 20 MA's), (68, 13507), (75, 13531), (85, 13594), (98, 13642), (162, 13936), (163, 13939), (172, 13978), (196, 14035), (218, 14131), (228, 14188), (239, 14221), (265, 14353), (267, 14362), (274, 14395),

Gene: DarwinJr\_11 Start: 7271, Stop: 8311, Start Num: 32

Candidate Starts for DarwinJr\_11:

(Start: 32 @7271 has 136 MA's), (63, 7403), (82, 7499), (87, 7514), (90, 7523), (120, 7652), (136, 7757), (143, 7772), (161, 7865), (168, 7895), (244, 8150), (248, 8165), (257, 8204), (262, 8246), (265, 8261),

Gene: DatBoi\_18 Start: 12446, Stop: 13501, Start Num: 32

Candidate Starts for DatBoi\_18:

(Start: 32 @12446 has 136 MA's), (100, 12743), (117, 12818), (127, 12869), (134, 12917), (161, 13043), (191, 13136), (195, 13148), (196, 13151), (201, 13175), (215, 13223), (219, 13238), (221, 13247), (249, 13358), (251, 13364), (257, 13391),

Gene: Demosthenes\_16 Start: 16969, Stop: 18183, Start Num: 10

Candidate Starts for Demosthenes\_16:

(Start: 10 @16969 has 76 MA's), (14, 16981), (30, 17065), (Start: 31 @17068 has 20 MA's), (48, 17140), (57, 17179), (69, 17248), (79, 17314), (83, 17326), (87, 17338), (120, 17464), (123, 17479), (154, 17653), (159, 17677), (166, 17710), (180, 17752), (222, 17923), (246, 18022), (247, 18025), (252, 18043), (269, 18148), (273, 18166), (274, 18172),

Gene: Diabla\_15 Start: 14320, Stop: 15519, Start Num: 10

Candidate Starts for Diabla\_15:

(Start: 10 @14320 has 76 MA's), (18, 14338), (30, 14404), (48, 14479), (79, 14653), (109, 14758), (123, 14818), (157, 15001), (166, 15040), (190, 15121), (227, 15280), (235, 15307), (246, 15346), (252, 15367), (256, 15394), (261, 15433), (264, 15451), (269, 15472), (273, 15490), (274, 15496),

Gene: Ding\_8 Start: 5913, Stop: 6953, Start Num: 32

Candidate Starts for Ding\_8:

(Start: 32 @5913 has 136 MA's), (82, 6141), (90, 6165), (120, 6294), (136, 6399), (143, 6414), (161, 6507), (162, 6510), (168, 6537), (191, 6597), (197, 6621), (214, 6678), (244, 6792), (257, 6846), (262, 6888), (265, 6903), (266, 6909),

Gene: DocB7\_012 Start: 12251, Stop: 13480, Start Num: 8

Candidate Starts for DocB7\_012:

(8, 12251), (12, 12296), (21, 12320), (24, 12332), (30, 12383), (115, 12764), (117, 12773), (122, 12794), (125, 12809), (154, 12965), (163, 13004), (164, 13016), (168, 13028), (169, 13031), (269, 13445), (273, 13463),

Gene: Dusty\_34 Start: 14077, Stop: 15108, Start Num: 32

Candidate Starts for Dusty\_34:

(Start: 32 @14077 has 136 MA's), (37, 14101), (84, 14311), (87, 14320), (121, 14464), (127, 14497), (129, 14503), (165, 14689), (191, 14761), (196, 14776), (211, 14833), (220, 14851), (242, 14935), (257, 14998), (271, 15085),

Gene: EMSquaredA\_7 Start: 5706, Stop: 6746, Start Num: 32

Candidate Starts for EMSquaredA\_7:

(Start: 32 @5706 has 136 MA's), (40, 5754), (44, 5766), (56, 5802), (93, 5976), (98, 6000), (144, 6210), (155, 6261), (163, 6300), (168, 6324), (196, 6399), (205, 6438), (206, 6441), (218, 6474), (223, 6501), (245, 6588), (254, 6630), (260, 6669), (267, 6705),

Gene: Eggsie\_16 Start: 14515, Stop: 15714, Start Num: 10

Candidate Starts for Eggsie\_16:

(Start: 10 @14515 has 76 MA's), (18, 14533), (30, 14599), (48, 14674), (79, 14848), (109, 14953), (123, 15013), (157, 15196), (190, 15316), (227, 15475), (235, 15502), (246, 15541), (252, 15562), (256, 15589), (261, 15628), (264, 15646), (269, 15667), (273, 15685), (274, 15691),

Gene: Ekhein\_16 Start: 14501, Stop: 15700, Start Num: 10

Candidate Starts for Ekhein\_16:

(Start: 10 @14501 has 76 MA's), (18, 14519), (30, 14585), (48, 14660), (79, 14834), (109, 14939), (123, 14999), (166, 15221), (229, 15470), (235, 15488), (246, 15527), (252, 15548), (256, 15575), (261, 15614), (264, 15632), (269, 15653), (273, 15671), (274, 15677),

Gene: Emianna\_29 Start: 19095, Stop: 20165, Start Num: 32

Candidate Starts for Emianna\_29:

(Start: 32 @19095 has 136 MA's), (38, 19131), (40, 19143), (42, 19149), (72, 19272), (80, 19329), (110, 19437), (143, 19590), (161, 19680), (173, 19728), (189, 19779), (212, 19860), (221, 19899), (229, 19947), (239, 19977), (260, 20088), (265, 20115), (273, 20151), (274, 20157),

Gene: EnalisNailo\_7 Start: 5706, Stop: 6746, Start Num: 32

Candidate Starts for EnalisNailo\_7:

(Start: 32 @5706 has 136 MA's), (40, 5754), (44, 5766), (56, 5802), (93, 5976), (98, 6000), (144, 6210), (155, 6261), (163, 6300), (168, 6324), (196, 6399), (205, 6438), (206, 6441), (218, 6474), (223, 6501), (245, 6588), (254, 6630), (260, 6669), (267, 6705),

Gene: Engineer\_36 Start: 14272, Stop: 15300, Start Num: 32

Candidate Starts for Engineer\_36:

(Start: 32 @14272 has 136 MA's), (37, 14296), (84, 14506), (87, 14515), (121, 14659), (127, 14692), (129, 14698), (165, 14884), (191, 14956), (196, 14971), (211, 15028), (220, 15046), (242, 15130), (257, 15193), (271, 15280),

Gene: Ennea\_35 Start: 19712, Stop: 20773, Start Num: 32

Candidate Starts for Ennea\_35:

(Start: 32 @19712 has 136 MA's), (72, 19889), (80, 19946), (110, 20054), (133, 20162), (181, 20360), (260, 20696), (265, 20723), (274, 20765),

Gene: EvePickles\_8 Start: 5944, Stop: 6984, Start Num: 32

Candidate Starts for EvePickles\_8:

(Start: 32 @5944 has 136 MA's), (82, 6172), (90, 6196), (107, 6268), (120, 6325), (136, 6430), (143, 6445), (153, 6502), (156, 6508), (162, 6541), (168, 6568), (173, 6586), (197, 6652), (248, 6838), (257, 6877), (265, 6934),

Gene: Exiguo\_16 Start: 14513, Stop: 15712, Start Num: 10

Candidate Starts for Exiguo\_16:

(Start: 10 @14513 has 76 MA's), (18, 14531), (30, 14597), (48, 14672), (59, 14723), (79, 14846), (109, 14951), (123, 15011), (166, 15233), (222, 15440), (229, 15482), (235, 15500), (246, 15539), (252, 15560), (256, 15587), (261, 15626), (264, 15644), (269, 15665), (273, 15683), (274, 15689),

Gene: Faja\_8 Start: 5888, Stop: 6928, Start Num: 32

Candidate Starts for Faja\_8:

(Start: 32 @5888 has 136 MA's), (82, 6116), (90, 6140), (120, 6269), (136, 6374), (143, 6389), (161, 6482), (164, 6500), (168, 6512), (173, 6530), (191, 6572), (197, 6596), (248, 6782), (257, 6821), (262, 6863), (265, 6878), (266, 6884),

Gene: FeliMaine\_42 Start: 16248, Stop: 17318, Start Num: 29

Candidate Starts for FeliMaine\_42:

(Start: 29 @16248 has 19 MA's), (Start: 32 @16257 has 136 MA's), (34, 16263), (81, 16494), (91, 16524), (105, 16575), (106, 16578), (115, 16617), (161, 16860), (191, 16950), (196, 16965), (206, 17007), (220, 17049), (224, 17073), (228, 17097), (232, 17106), (255, 17193), (266, 17262), (271, 17286),

Gene: FelixAlejandro\_17 Start: 14699, Stop: 15898, Start Num: 10

Candidate Starts for FelixAlejandro\_17:

(Start: 10 @14699 has 76 MA's), (18, 14717), (30, 14783), (48, 14858), (79, 15032), (101, 15107), (109, 15137), (123, 15197), (166, 15419), (190, 15500), (222, 15626), (229, 15668), (235, 15686), (246, 15725), (252, 15746), (256, 15773), (261, 15812), (264, 15830), (269, 15851), (273, 15869), (274, 15875),

Gene: Flakey\_16 Start: 15374, Stop: 16573, Start Num: 10

Candidate Starts for Flakey\_16:

(Start: 10 @15374 has 76 MA's), (18, 15392), (30, 15458), (48, 15533), (59, 15584), (79, 15707), (101, 15782), (109, 15812), (123, 15872), (166, 16094), (222, 16301), (229, 16343), (235, 16361), (246, 16400), (252, 16421), (256, 16448), (261, 16487), (264, 16505), (269, 16526), (273, 16544), (274, 16550),

Gene: Flapper\_33 Start: 19496, Stop: 20557, Start Num: 32

Candidate Starts for Flapper\_33:

(Start: 32 @19496 has 136 MA's), (42, 19550), (72, 19673), (80, 19730), (94, 19772), (133, 19946), (181, 20144), (260, 20480), (265, 20507), (266, 20513), (274, 20549),

Gene: Float294\_31 Start: 19154, Stop: 20215, Start Num: 32

Candidate Starts for Float294\_31:

(Start: 32 @19154 has 136 MA's), (72, 19331), (80, 19388), (110, 19496), (133, 19604), (181, 19802), (212, 19913), (260, 20138), (265, 20165), (274, 20207),

Gene: Floral\_7 Start: 5706, Stop: 6746, Start Num: 32

Candidate Starts for Floral\_7:

(Start: 32 @5706 has 136 MA's), (40, 5754), (44, 5766), (56, 5802), (93, 5976), (98, 6000), (144, 6210), (155, 6261), (163, 6300), (168, 6324), (196, 6399), (205, 6438), (206, 6441), (218, 6474), (223, 6501), (245, 6588), (254, 6630), (260, 6669), (267, 6705),

Gene: Foxboro\_30 Start: 19601, Stop: 20671, Start Num: 32

Candidate Starts for Foxboro\_30:

(Start: 32 @19601 has 136 MA's), (38, 19637), (40, 19649), (42, 19655), (72, 19778), (80, 19835), (110, 19943), (143, 20096), (161, 20186), (173, 20234), (189, 20285), (212, 20366), (221, 20405), (229, 20453), (239, 20483), (260, 20594), (265, 20621), (267, 20630), (273, 20657), (274, 20663),

Gene: Fury\_38 Start: 18776, Stop: 19837, Start Num: 32

Candidate Starts for Fury\_38:

(Start: 32 @18776 has 136 MA's), (38, 18812), (40, 18824), (72, 18953), (173, 19409), (206, 19514), (255, 19721), (260, 19760), (265, 19787), (274, 19829),

Gene: GAL1\_9 Start: 6815, Stop: 7852, Start Num: 32

Candidate Starts for GAL1\_9:

(Start: 32 @6815 has 136 MA's), (43, 6866), (77, 7010), (106, 7136), (115, 7175), (117, 7184), (120, 7196), (134, 7280), (163, 7415), (180, 7469), (214, 7577), (233, 7655), (237, 7667), (265, 7802), (272, 7835), (274, 7844),

Gene: GMA3\_7 Start: 8860, Stop: 10044, Start Num: 16

Candidate Starts for GMA3\_7:

(Start: 16 @8860 has 2 MA's), (27, 8935), (45, 9019), (51, 9040), (53, 9046), (76, 9160), (92, 9241), (123, 9367), (209, 9733), (246, 9883), (252, 9904), (269, 10009),

Gene: GMA7\_9 Start: 8712, Stop: 9914, Start Num: 10

Candidate Starts for GMA7\_9:

(3, 8598), (4, 8601), (Start: 10 @8712 has 76 MA's), (79, 9054), (101, 9129), (109, 9159), (120, 9204), (123, 9219), (199, 9555), (235, 9708), (246, 9747), (252, 9768), (261, 9834), (269, 9873), (273, 9891),

Gene: GRU1\_19 Start: 11381, Stop: 12442, Start Num: 32

Candidate Starts for GRU1\_19:

(Start: 32 @11381 has 136 MA's), (42, 11435), (72, 11558), (80, 11615), (94, 11657), (133, 11831), (181, 12029), (260, 12365), (265, 12392), (266, 12398), (274, 12434),

Gene: GTE5\_20 Start: 12384, Stop: 13445, Start Num: 32

Candidate Starts for GTE5\_20:

(Start: 32 @12384 has 136 MA's), (42, 12438), (72, 12561), (80, 12618), (94, 12660), (133, 12834), (181, 13032), (260, 13368), (265, 13395), (266, 13401), (274, 13437),

Gene: GTE7\_9 Start: 8771, Stop: 9973, Start Num: 10

Candidate Starts for GTE7\_9:

(3, 8657), (4, 8660), (Start: 10 @8771 has 76 MA's), (79, 9113), (101, 9188), (109, 9218), (120, 9263), (123, 9278), (199, 9614), (235, 9767), (246, 9806), (252, 9827), (261, 9893), (269, 9932), (273, 9950),

Gene: GTE8\_18 Start: 12360, Stop: 13430, Start Num: 32

Candidate Starts for GTE8\_18:

(Start: 32 @12360 has 136 MA's), (40, 12408), (72, 12537), (80, 12594), (110, 12702), (161, 12945), (173, 12993), (189, 13044), (212, 13125), (221, 13164), (229, 13212), (239, 13242), (260, 13353), (265, 13380), (273, 13416), (274, 13422),

Gene: Gagieri\_33 Start: 19811, Stop: 20863, Start Num: 32

Candidate Starts for Gagieri\_33:

(Start: 32 @19811 has 136 MA's), (58, 19928), (110, 20153), (133, 20261), (161, 20396), (260, 20786), (265, 20813), (271, 20843), (273, 20849), (274, 20855),

Gene: GalacticEye\_13 Start: 15276, Stop: 16475, Start Num: 10

Candidate Starts for GalacticEye\_13:

(Start: 10 @15276 has 76 MA's), (18, 15294), (30, 15360), (36, 15387), (79, 15609), (101, 15684), (123, 15774), (208, 16143), (222, 16203), (235, 16263), (246, 16302), (252, 16323), (256, 16350), (264, 16407), (269, 16428), (273, 16446),

Gene: Gallia\_25 Start: 16350, Stop: 17435, Start Num: 30

Candidate Starts for Gallia\_25:

(30, 16350), (44, 16416), (87, 16611), (125, 16758), (163, 16950), (173, 16992), (196, 17055), (220, 17163), (230, 17220), (265, 17385), (274, 17427),

Gene: Gattaca\_39 Start: 15436, Stop: 16497, Start Num: 32

Candidate Starts for Gattaca\_39:

(Start: 29 @15427 has 19 MA's), (Start: 32 @15436 has 136 MA's), (34, 15442), (81, 15673), (91, 15703), (105, 15754), (106, 15757), (115, 15796), (161, 16039), (191, 16129), (196, 16144), (206, 16186), (220, 16228), (224, 16252), (228, 16276), (232, 16285), (255, 16372), (266, 16441), (271, 16465),

Gene: Geeche\_34 Start: 14146, Stop: 15174, Start Num: 32

Candidate Starts for Geeche\_34:

(Start: 32 @14146 has 136 MA's), (37, 14170), (84, 14380), (87, 14389), (121, 14533), (127, 14566), (129, 14572), (165, 14758), (191, 14830), (196, 14845), (211, 14902), (220, 14920), (242, 15004),

(257, 15067), (271, 15154),

Gene: Gibbles\_14 Start: 12646, Stop: 13941, Start Num: 6

Candidate Starts for Gibbles\_14:

(5, 12622), (Start: 6 @12646 has 5 MA's), (7, 12682), (22, 12778), (23, 12790), (51, 12937), (73, 13042), (79, 13096), (85, 13114), (109, 13201), (146, 13396), (154, 13435), (187, 13552), (194, 13570), (204, 13606), (236, 13747), (238, 13750), (252, 13801), (269, 13906),

Gene: Globfish\_8 Start: 5947, Stop: 6987, Start Num: 32

Candidate Starts for Globfish\_8:

(Start: 32 @5947 has 136 MA's), (63, 6079), (82, 6175), (90, 6199), (107, 6271), (120, 6328), (143, 6448), (153, 6505), (156, 6511), (162, 6544), (164, 6559), (168, 6571), (173, 6589), (191, 6631), (197, 6655), (207, 6691), (244, 6826), (248, 6841), (255, 6874), (262, 6922), (265, 6937),

Gene: Gmala1\_7 Start: 9110, Stop: 10300, Start Num: 16

Candidate Starts for Gmala1\_7:

(Start: 16 @9110 has 2 MA's), (19, 9119), (20, 9125), (28, 9188), (45, 9269), (53, 9296), (69, 9383), (76, 9410), (89, 9479), (123, 9617), (161, 9824), (174, 9875), (252, 10157), (259, 10214), (266, 10250), (269, 10262),

Gene: GoongGoong\_39 Start: 15467, Stop: 16537, Start Num: 29

Candidate Starts for GoongGoong\_39:

(Start: 29 @15467 has 19 MA's), (Start: 32 @15476 has 136 MA's), (34, 15482), (81, 15713), (91, 15743), (105, 15794), (106, 15797), (115, 15836), (161, 16079), (191, 16169), (196, 16184), (206, 16226), (220, 16268), (224, 16292), (228, 16316), (232, 16325), (255, 16412), (266, 16481), (271, 16505),

Gene: GordDuk1\_7 Start: 9050, Stop: 10240, Start Num: 16

Candidate Starts for GordDuk1\_7:

(Start: 16 @9050 has 2 MA's), (19, 9059), (20, 9065), (28, 9128), (45, 9209), (53, 9236), (69, 9323), (76, 9350), (89, 9419), (123, 9557), (161, 9764), (174, 9815), (252, 10097), (259, 10154), (266, 10190), (269, 10202),

Gene: GordTnk2\_7 Start: 9017, Stop: 10207, Start Num: 16

Candidate Starts for GordTnk2\_7:

(Start: 16 @9017 has 2 MA's), (19, 9026), (20, 9032), (28, 9095), (45, 9176), (53, 9203), (69, 9290), (76, 9317), (89, 9386), (123, 9524), (161, 9731), (174, 9782), (252, 10064), (259, 10121), (266, 10157), (269, 10169),

Gene: Gorko\_16 Start: 14505, Stop: 15704, Start Num: 10

Candidate Starts for Gorko\_16:

(Start: 10 @14505 has 76 MA's), (18, 14523), (30, 14589), (48, 14664), (79, 14838), (109, 14943), (123, 15003), (166, 15225), (229, 15474), (235, 15492), (246, 15531), (252, 15552), (256, 15579), (261, 15618), (264, 15636), (269, 15657), (273, 15675), (274, 15681),

Gene: Gorpy\_8 Start: 5896, Stop: 6936, Start Num: 32

Candidate Starts for Gorpy\_8:

(Start: 32 @5896 has 136 MA's), (82, 6124), (90, 6148), (120, 6277), (136, 6382), (143, 6397), (161, 6490), (164, 6508), (168, 6520), (173, 6538), (191, 6580), (197, 6604), (248, 6790), (257, 6829), (262, 6871), (265, 6886),

Gene: GourdThymes\_16 Start: 15373, Stop: 16572, Start Num: 10

Candidate Starts for GourdThymes\_16:

(Start: 10 @15373 has 76 MA's), (18, 15391), (30, 15457), (48, 15532), (59, 15583), (79, 15706), (101, 15781), (109, 15811), (123, 15871), (166, 16093), (222, 16300), (229, 16342), (235, 16360), (246, 16399), (252, 16420), (256, 16447), (264, 16504), (269, 16525), (273, 16543), (274, 16549),

Gene: GrootJr\_31 Start: 18451, Stop: 19521, Start Num: 32

Candidate Starts for GrootJr\_31:

(Start: 32 @18451 has 136 MA's), (38, 18487), (40, 18499), (42, 18505), (72, 18628), (80, 18685), (110, 18793), (161, 19036), (173, 19084), (189, 19135), (212, 19216), (221, 19255), (229, 19303), (239, 19333), (260, 19444), (265, 19471), (273, 19507), (274, 19513),

Gene: Guillaume\_13 Start: 15308, Stop: 16507, Start Num: 10

Candidate Starts for Guillaume\_13:

(Start: 10 @15308 has 76 MA's), (18, 15326), (30, 15392), (36, 15419), (79, 15641), (101, 15716), (123, 15806), (208, 16175), (222, 16235), (235, 16295), (246, 16334), (252, 16355), (256, 16382), (264, 16439), (269, 16460), (273, 16478),

Gene: GumGum\_8 Start: 5972, Stop: 7012, Start Num: 32

Candidate Starts for GumGum\_8:

(Start: 32 @5972 has 136 MA's), (63, 6104), (82, 6200), (87, 6215), (90, 6224), (120, 6353), (136, 6458), (143, 6473), (161, 6566), (168, 6596), (173, 6614), (244, 6851), (248, 6866), (257, 6905), (262, 6947), (265, 6962),

Gene: Hail2Pitt\_13 Start: 15785, Stop: 16984, Start Num: 10

Candidate Starts for Hail2Pitt\_13:

(Start: 10 @15785 has 76 MA's), (18, 15803), (30, 15869), (36, 15896), (79, 16118), (101, 16193), (123, 16283), (208, 16652), (222, 16712), (235, 16772), (246, 16811), (252, 16832), (256, 16859), (264, 16916), (269, 16937), (273, 16955),

Gene: Harambe\_13 Start: 15569, Stop: 16768, Start Num: 10

Candidate Starts for Harambe\_13:

(Start: 10 @15569 has 76 MA's), (18, 15587), (30, 15653), (36, 15680), (79, 15902), (101, 15977), (123, 16067), (208, 16436), (222, 16496), (235, 16556), (246, 16595), (252, 16616), (256, 16643), (264, 16700), (269, 16721), (273, 16739),

Gene: HayZem\_17 Start: 14523, Stop: 15725, Start Num: 10

Candidate Starts for HayZem\_17:

(3, 14409), (4, 14412), (Start: 10 @14523 has 76 MA's), (79, 14865), (101, 14940), (109, 14970), (120, 15015), (123, 15030), (199, 15366), (235, 15519), (246, 15558), (252, 15579), (261, 15645), (269, 15684), (273, 15702),

Gene: Hello\_13 Start: 15555, Stop: 16754, Start Num: 10

Candidate Starts for Hello\_13:

(Start: 10 @15555 has 76 MA's), (18, 15573), (30, 15639), (36, 15666), (79, 15888), (101, 15963), (123, 16053), (208, 16422), (222, 16482), (235, 16542), (246, 16581), (252, 16602), (256, 16629), (264, 16686), (269, 16707), (273, 16725),

Gene: Hestia\_8 Start: 6036, Stop: 7076, Start Num: 32

Candidate Starts for Hestia\_8:

(Start: 32 @6036 has 136 MA's), (63, 6168), (82, 6264), (87, 6279), (90, 6288), (117, 6405), (120, 6417), (134, 6504), (136, 6522), (143, 6537), (156, 6600), (168, 6660), (173, 6678), (244, 6915), (248, 6930), (257, 6969), (262, 7011), (265, 7026),

Gene: Hillester\_8 Start: 5887, Stop: 6927, Start Num: 32

Candidate Starts for Hillester\_8:

(Start: 32 @5887 has 136 MA's), (82, 6115), (107, 6211), (120, 6268), (134, 6355), (136, 6373), (143, 6388), (161, 6481), (168, 6511), (173, 6529), (248, 6781), (257, 6820), (262, 6862), (265, 6877),

Gene: Hollow\_16 Start: 16244, Stop: 17458, Start Num: 10

Candidate Starts for Hollow\_16:

(Start: 10 @16244 has 76 MA's), (14, 16256), (30, 16340), (Start: 31 @16343 has 20 MA's), (48, 16415), (79, 16589), (83, 16601), (87, 16613), (96, 16649), (109, 16694), (120, 16739), (123, 16754), (154, 16928), (159, 16952), (166, 16985), (180, 17027), (222, 17198), (246, 17297), (247, 17300), (252, 17318), (269, 17423), (273, 17441), (274, 17447),

Gene: HomeFry\_35 Start: 17448, Stop: 18509, Start Num: 32

Candidate Starts for HomeFry\_35:

(Start: 32 @17448 has 136 MA's), (38, 17484), (40, 17496), (72, 17625), (110, 17790), (173, 18081), (206, 18186), (260, 18432), (265, 18459), (274, 18501),

Gene: Hotorobo\_16 Start: 15384, Stop: 16583, Start Num: 10

Candidate Starts for Hotorobo\_16:

(Start: 10 @15384 has 76 MA's), (18, 15402), (30, 15468), (48, 15543), (79, 15717), (109, 15822), (123, 15882), (166, 16104), (222, 16311), (229, 16353), (235, 16371), (246, 16410), (252, 16431), (256, 16458), (264, 16515), (269, 16536), (273, 16554), (274, 16560),

Gene: HubbaBubba\_27 Start: 14952, Stop: 16019, Start Num: 32

Candidate Starts for HubbaBubba\_27:

(Start: 32 @14952 has 136 MA's), (38, 14988), (42, 15006), (72, 15129), (80, 15186), (187, 15621), (189, 15636), (216, 15738), (229, 15804), (260, 15942), (265, 15969),

Gene: Huphleuff\_42 Start: 16052, Stop: 17122, Start Num: 29

Candidate Starts for Huphleuff\_42:

(Start: 29 @16052 has 19 MA's), (Start: 32 @16061 has 136 MA's), (34, 16067), (81, 16298), (91, 16328), (105, 16379), (106, 16382), (115, 16421), (161, 16664), (191, 16754), (196, 16769), (206, 16811), (220, 16853), (224, 16877), (228, 16901), (232, 16910), (255, 16997), (266, 17066), (271, 17090),

Gene: IDyn\_30 Start: 16348, Stop: 17415, Start Num: 32

Candidate Starts for IDyn\_30:

(Start: 32 @16348 has 136 MA's), (38, 16384), (42, 16402), (72, 16525), (80, 16582), (187, 17017), (189, 17032), (212, 17113), (216, 17134), (229, 17200), (260, 17338), (265, 17365),

Gene: Isolde\_9 Start: 5959, Stop: 6999, Start Num: 32

Candidate Starts for Isolde\_9:

(Start: 32 @5959 has 136 MA's), (82, 6187), (87, 6202), (90, 6211), (120, 6340), (162, 6556), (168, 6583), (173, 6601), (191, 6643), (244, 6838), (248, 6853), (257, 6892), (262, 6934), (265, 6949),

Gene: Jablanski\_7 Start: 5553, Stop: 6593, Start Num: 32

Candidate Starts for Jablanski\_7:

(Start: 32 @5553 has 136 MA's), (40, 5601), (44, 5613), (56, 5649), (93, 5823), (98, 5847), (144, 6057), (155, 6108), (163, 6147), (168, 6171), (196, 6246), (205, 6285), (206, 6288), (218, 6321), (223, 6348), (245, 6435), (254, 6477), (260, 6516),

Gene: JakeTheSnake\_8 Start: 5927, Stop: 6967, Start Num: 32

Candidate Starts for JakeTheSnake\_8:

(Start: 32 @5927 has 136 MA's), (63, 6059), (82, 6155), (90, 6179), (120, 6308), (136, 6413), (143, 6428), (168, 6551), (173, 6569), (191, 6611), (244, 6806), (248, 6821), (257, 6860), (262, 6902), (265, 6917),

Gene: Jams\_13 Start: 14749, Stop: 15948, Start Num: 10

Candidate Starts for Jams\_13:

(Start: 10 @14749 has 76 MA's), (18, 14767), (30, 14833), (36, 14860), (79, 15082), (101, 15157), (123, 15247), (208, 15616), (222, 15676), (235, 15736), (246, 15775), (252, 15796), (256, 15823), (264, 15880), (269, 15901), (273, 15919),

Gene: JellyBread\_8 Start: 5895, Stop: 6935, Start Num: 32

Candidate Starts for JellyBread\_8:

(Start: 32 @5895 has 136 MA's), (82, 6123), (90, 6147), (97, 6174), (107, 6219), (120, 6276), (136, 6381), (143, 6396), (152, 6447), (153, 6453), (156, 6459), (168, 6519), (173, 6537), (197, 6603), (220, 6681), (248, 6789), (257, 6828), (262, 6870), (265, 6885),

Gene: Jellybones\_16 Start: 14536, Stop: 15735, Start Num: 10

Candidate Starts for Jellybones\_16:

(Start: 10 @14536 has 76 MA's), (18, 14554), (30, 14620), (48, 14695), (79, 14869), (101, 14944), (109, 14974), (123, 15034), (166, 15256), (190, 15337), (222, 15463), (229, 15505), (235, 15523), (246, 15562), (252, 15583), (256, 15610), (261, 15649), (264, 15667), (269, 15688), (273, 15706), (274, 15712),

Gene: Jifall16\_28 Start: 18731, Stop: 19801, Start Num: 32

Candidate Starts for Jifall16\_28:

(Start: 32 @18731 has 136 MA's), (38, 18767), (40, 18779), (42, 18785), (72, 18908), (80, 18965), (110, 19073), (143, 19226), (161, 19316), (173, 19364), (189, 19415), (212, 19496), (221, 19535), (229, 19583), (239, 19613), (260, 19724), (265, 19751), (273, 19787), (274, 19793),

Gene: John316\_16 Start: 14501, Stop: 15700, Start Num: 10

Candidate Starts for John316\_16:

(Start: 10 @14501 has 76 MA's), (18, 14519), (30, 14585), (48, 14660), (79, 14834), (109, 14939), (123, 14999), (166, 15221), (222, 15428), (229, 15470), (235, 15488), (246, 15527), (252, 15548), (256, 15575), (264, 15632), (269, 15653), (273, 15671), (274, 15677),

Gene: JoieB\_41 Start: 16271, Stop: 17341, Start Num: 29

Candidate Starts for JoieB\_41:

(Start: 29 @16271 has 19 MA's), (Start: 32 @16280 has 136 MA's), (34, 16286), (81, 16517), (91, 16547), (105, 16598), (106, 16601), (115, 16640), (161, 16883), (191, 16973), (196, 16988), (206, 17030), (220, 17072), (224, 17096), (228, 17120), (232, 17129), (255, 17216), (266, 17285), (271, 17309),

Gene: JonJames\_35 Start: 18496, Stop: 19545, Start Num: 32

Candidate Starts for JonJames\_35:

(Start: 32 @18496 has 136 MA's), (36, 18517), (37, 18526), (53, 18583), (63, 18634), (67, 18649), (131, 18943), (161, 19093), (163, 19099), (183, 19159), (195, 19198), (242, 19360), (276, 19528),

Gene: Jormungandr\_13 Start: 15290, Stop: 16489, Start Num: 10

Candidate Starts for Jormungandr\_13:

(Start: 10 @15290 has 76 MA's), (18, 15308), (30, 15374), (36, 15401), (79, 15623), (101, 15698), (123, 15788), (208, 16157), (222, 16217), (235, 16277), (246, 16316), (252, 16337), (256, 16364), (264, 16421), (269, 16442), (273, 16460),

Gene: Jumbo\_12 Start: 13987, Stop: 15156, Start Num: 16

Candidate Starts for Jumbo\_12:

(Start: 16 @13987 has 2 MA's), (20, 14002), (21, 14008), (26, 14047), (28, 14065), (45, 14146), (48, 14152), (51, 14167), (69, 14260), (88, 14353), (89, 14356), (123, 14494), (130, 14539), (223, 14905), (231, 14947), (252, 15016), (266, 15109), (269, 15121), (270, 15127),

Gene: Kabloowy\_8 Start: 5969, Stop: 7009, Start Num: 32

Candidate Starts for Kabloowy\_8:

(Start: 32 @5969 has 136 MA's), (63, 6101), (82, 6197), (90, 6221), (120, 6350), (136, 6455), (168, 6593), (173, 6611), (191, 6653), (244, 6848), (248, 6863), (257, 6902), (262, 6944), (265, 6959),

Gene: Kabluna\_32 Start: 17790, Stop: 18860, Start Num: 32

Candidate Starts for Kabluna\_32:

(Start: 32 @17790 has 136 MA's), (38, 17826), (42, 17844), (72, 17967), (110, 18132), (148, 18318), (151, 18330), (164, 18393), (172, 18420), (185, 18450), (188, 18471), (189, 18474), (212, 18555), (216, 18576), (229, 18642), (239, 18672), (260, 18783), (265, 18810), (271, 18840), (274, 18852),

Gene: Kampe\_15 Start: 12504, Stop: 13799, Start Num: 6

Candidate Starts for Kampe\_15:

(5, 12480), (Start: 6 @12504 has 5 MA's), (7, 12540), (22, 12636), (23, 12648), (51, 12795), (73, 12900), (79, 12954), (85, 12972), (109, 13059), (146, 13254), (154, 13293), (187, 13410), (194, 13428), (204, 13464), (236, 13605), (238, 13608), (252, 13659), (269, 13764),

Gene: Kaseim\_13 Start: 14741, Stop: 15940, Start Num: 10

Candidate Starts for Kaseim\_13:

(Start: 10 @14741 has 76 MA's), (18, 14759), (30, 14825), (36, 14852), (79, 15074), (101, 15149), (123, 15239), (208, 15608), (222, 15668), (235, 15728), (246, 15767), (252, 15788), (256, 15815), (264, 15872), (269, 15893), (273, 15911),

Gene: Katyusha\_16 Start: 17078, Stop: 18292, Start Num: 10

Candidate Starts for Katyusha\_16:

(Start: 10 @17078 has 76 MA's), (30, 17174), (Start: 31 @17177 has 20 MA's), (48, 17249), (83, 17435), (87, 17447), (96, 17483), (109, 17528), (120, 17573), (123, 17588), (154, 17762), (159, 17786), (180, 17861), (222, 18032), (246, 18131), (247, 18134), (252, 18152), (269, 18257), (273, 18275), (274, 18281),

Gene: KellEzio\_24 Start: 12884, Stop: 13966, Start Num: 32

Candidate Starts for KellEzio\_24:

(Start: 32 @12884 has 136 MA's), (70, 13043), (71, 13046), (74, 13055), (75, 13058), (104, 13205), (120, 13271), (131, 13331), (137, 13379), (138, 13382), (176, 13550), (202, 13637), (214, 13679), (215, 13685), (222, 13715), (263, 13907), (267, 13922),

Gene: Kelzog\_16 Start: 15385, Stop: 16584, Start Num: 10

Candidate Starts for Kelzog\_16:

(Start: 10 @15385 has 76 MA's), (18, 15403), (30, 15469), (48, 15544), (59, 15595), (79, 15718), (109, 15823), (123, 15883), (166, 16105), (222, 16312), (229, 16354), (235, 16372), (246, 16411), (252, 16432), (256, 16459), (261, 16498), (264, 16516), (269, 16537), (273, 16555), (274, 16561),

Gene: KidneyBean\_29 Start: 18843, Stop: 19913, Start Num: 32

Candidate Starts for KidneyBean\_29:

(Start: 32 @18843 has 136 MA's), (38, 18879), (40, 18891), (42, 18897), (72, 19020), (80, 19077), (110, 19185), (143, 19338), (161, 19428), (173, 19476), (189, 19527), (212, 19608), (221, 19647), (229, 19695), (239, 19725), (260, 19836), (265, 19863), (273, 19899), (274, 19905),

Gene: Kimchi1738\_17 Start: 12192, Stop: 13256, Start Num: 31

Candidate Starts for Kimchi1738\_17:

(Start: 31 @12192 has 20 MA's), (68, 12360), (75, 12384), (85, 12447), (98, 12495), (162, 12789), (163, 12792), (196, 12888), (218, 12984), (228, 13041), (239, 13074), (265, 13206), (266, 13212), (267, 13215), (274, 13248),

Gene: Kitkat\_25 Start: 13002, Stop: 14084, Start Num: 32

Candidate Starts for Kitkat\_25:

(Start: 32 @13002 has 136 MA's), (70, 13161), (71, 13164), (74, 13173), (75, 13176), (104, 13323), (120, 13389), (131, 13449), (137, 13497), (138, 13500), (176, 13668), (202, 13755), (214, 13797), (215, 13803), (222, 13833), (263, 14025), (267, 14040),

Gene: Kurt\_29 Start: 19110, Stop: 20180, Start Num: 32

Candidate Starts for Kurt\_29:

(Start: 32 @19110 has 136 MA's), (38, 19146), (40, 19158), (42, 19164), (72, 19287), (80, 19344), (110, 19452), (143, 19605), (161, 19695), (173, 19743), (189, 19794), (212, 19875), (221, 19914), (229, 19962), (239, 19992), (260, 20103), (265, 20130), (273, 20166), (274, 20172),

Gene: Kuwabara\_7 Start: 5225, Stop: 6259, Start Num: 31

Candidate Starts for Kuwabara\_7:

(Start: 29 @5219 has 19 MA's), (Start: 31 @5225 has 20 MA's), (140, 5720), (152, 5774), (161, 5819), (162, 5822), (167, 5846), (168, 5849), (191, 5909), (195, 5921), (206, 5966), (223, 6014), (245, 6098), (261, 6185), (266, 6212), (271, 6236),

Gene: Kvothe\_16 Start: 17015, Stop: 18229, Start Num: 10

Candidate Starts for Kvothe\_16:

(Start: 10 @17015 has 76 MA's), (30, 17111), (Start: 31 @17114 has 20 MA's), (48, 17186), (83, 17372), (87, 17384), (96, 17420), (109, 17465), (120, 17510), (123, 17525), (137, 17618), (154, 17699), (159, 17723), (180, 17798), (222, 17969), (246, 18068), (247, 18071), (252, 18089), (269, 18194), (273, 18212), (274, 18218),

Gene: Lahirium\_13 Start: 15806, Stop: 17005, Start Num: 10

Candidate Starts for Lahirium\_13:

(Start: 10 @15806 has 76 MA's), (18, 15824), (30, 15890), (36, 15917), (79, 16139), (101, 16214), (123, 16304), (208, 16673), (222, 16733), (235, 16793), (246, 16832), (252, 16853), (256, 16880), (264, 16937), (269, 16958), (273, 16976),

Gene: Lasker\_8 Start: 5895, Stop: 6935, Start Num: 32

Candidate Starts for Lasker\_8:

(Start: 32 @5895 has 136 MA's), (82, 6123), (90, 6147), (107, 6219), (120, 6276), (136, 6381), (143, 6396), (152, 6447), (153, 6453), (156, 6459), (168, 6519), (173, 6537), (197, 6603), (220, 6681), (248, 6789), (257, 6828), (262, 6870), (265, 6885),

Gene: Lawnathon\_8 Start: 5971, Stop: 7011, Start Num: 32

Candidate Starts for Lawnathon\_8:

(Start: 32 @5971 has 136 MA's), (82, 6199), (90, 6223), (107, 6295), (120, 6352), (136, 6457), (168, 6595), (173, 6613), (191, 6655), (197, 6679), (244, 6850), (248, 6865), (257, 6904), (262, 6946), (265, 6961),

Gene: LeBruni\_8 Start: 5942, Stop: 6982, Start Num: 32

Candidate Starts for LeBruni\_8:

(Start: 32 @5942 has 136 MA's), (82, 6170), (90, 6194), (120, 6323), (134, 6410), (136, 6428), (168, 6566), (173, 6584), (191, 6626), (244, 6821), (248, 6836), (257, 6875), (262, 6917), (265, 6932),

Gene: Lidong\_13 Start: 15555, Stop: 16754, Start Num: 10

Candidate Starts for Lidong\_13:

(Start: 10 @15555 has 76 MA's), (18, 15573), (30, 15639), (36, 15666), (79, 15888), (101, 15963), (123, 16053), (208, 16422), (222, 16482), (235, 16542), (246, 16581), (252, 16602), (256, 16629), (264, 16686), (269, 16707), (273, 16725),

Gene: LilSpotty\_7 Start: 4918, Stop: 5958, Start Num: 29

Candidate Starts for LilSpotty\_7:

(Start: 29 @4918 has 19 MA's), (Start: 31 @4924 has 20 MA's), (60, 5050), (61, 5053), (84, 5167), (114, 5278), (115, 5281), (121, 5308), (133, 5374), (162, 5521), (163, 5524), (164, 5536), (167, 5545), (171, 5557), (182, 5578), (186, 5587), (191, 5608), (205, 5662), (206, 5665), (223, 5713), (225, 5722), (240, 5776), (256, 5845), (261, 5884), (265, 5905), (271, 5935), (274, 5947),

Gene: Lilas\_7 Start: 5706, Stop: 6746, Start Num: 32

Candidate Starts for Lilas\_7:

(Start: 32 @5706 has 136 MA's), (40, 5754), (44, 5766), (56, 5802), (93, 5976), (98, 6000), (144, 6210), (155, 6261), (163, 6300), (168, 6324), (196, 6399), (205, 6438), (206, 6441), (218, 6474), (223, 6501), (245, 6588), (254, 6630), (260, 6669), (267, 6705),

Gene: Lilbit\_39 Start: 16248, Stop: 17318, Start Num: 29

Candidate Starts for Lilbit\_39:

(Start: 29 @16248 has 19 MA's), (Start: 32 @16257 has 136 MA's), (34, 16263), (81, 16494), (91, 16524), (105, 16575), (106, 16578), (115, 16617), (161, 16860), (191, 16950), (196, 16965), (206, 17007), (220, 17049), (224, 17073), (228, 17097), (232, 17106), (255, 17193), (266, 17262), (271, 17286),

Gene: Linetti\_17 Start: 15518, Stop: 16717, Start Num: 10

Candidate Starts for Linetti\_17:

(Start: 10 @15518 has 76 MA's), (18, 15536), (30, 15602), (48, 15677), (79, 15851), (101, 15926), (109, 15956), (123, 16016), (157, 16199), (166, 16238), (229, 16487), (235, 16505), (246, 16544), (252, 16565), (256, 16592), (261, 16631), (264, 16649), (269, 16670), (273, 16688), (274, 16694),

Gene: LittleLaf\_40 Start: 15977, Stop: 17047, Start Num: 29

Candidate Starts for LittleLaf\_40:

(Start: 29 @15977 has 19 MA's), (Start: 32 @15986 has 136 MA's), (34, 15992), (81, 16223), (91, 16253), (105, 16304), (106, 16307), (115, 16346), (161, 16589), (191, 16679), (196, 16694), (206, 16736), (220, 16778), (224, 16802), (228, 16826), (232, 16835), (255, 16922), (266, 16991), (271, 17015),

Gene: Lizzo\_16 Start: 15373, Stop: 16572, Start Num: 10

Candidate Starts for Lizzo\_16:

(Start: 10 @15373 has 76 MA's), (18, 15391), (30, 15457), (48, 15532), (59, 15583), (79, 15706), (101, 15781), (109, 15811), (123, 15871), (166, 16093), (222, 16300), (229, 16342), (235, 16360), (246, 16399), (252, 16420), (256, 16447), (261, 16486), (264, 16504), (269, 16525), (273, 16543), (274, 16549),

Gene: Lollipop1437\_34 Start: 19700, Stop: 20761, Start Num: 32

Candidate Starts for Lollipop1437\_34:

(Start: 32 @19700 has 136 MA's), (72, 19877), (80, 19934), (110, 20042), (133, 20150), (181, 20348), (260, 20684), (265, 20711), (274, 20753),

Gene: LonelyBoi\_7 Start: 5553, Stop: 6593, Start Num: 32

Candidate Starts for LonelyBoi\_7:

(Start: 32 @5553 has 136 MA's), (40, 5601), (44, 5613), (56, 5649), (93, 5823), (98, 5847), (144, 6057), (155, 6108), (163, 6147), (168, 6171), (205, 6285), (206, 6288), (218, 6321), (223, 6348), (245, 6435), (254, 6477), (260, 6516),

Gene: Lozinak\_35 Start: 14327, Stop: 15355, Start Num: 32

Candidate Starts for Lozinak\_35:

(Start: 32 @14327 has 136 MA's), (37, 14351), (84, 14561), (87, 14570), (121, 14714), (127, 14747), (129, 14753), (165, 14939), (191, 15011), (196, 15026), (211, 15083), (220, 15101), (242, 15185), (257, 15248), (271, 15335),

Gene: Luker\_13 Start: 15270, Stop: 16469, Start Num: 10

Candidate Starts for Luker\_13:

(Start: 10 @15270 has 76 MA's), (18, 15288), (30, 15354), (36, 15381), (79, 15603), (101, 15678), (123, 15768), (208, 16137), (222, 16197), (235, 16257), (246, 16296), (252, 16317), (256, 16344), (264, 16401), (269, 16422), (273, 16440),

Gene: LunaStella\_7 Start: 5476, Stop: 6522, Start Num: 31

Candidate Starts for LunaStella\_7:

(Start: 29 @5470 has 19 MA's), (Start: 31 @5476 has 20 MA's), (60, 5605), (61, 5608), (81, 5713), (89, 5737), (107, 5800), (114, 5833), (118, 5848), (127, 5896), (131, 5917), (133, 5929), (135, 5959), (152, 6022), (162, 6070), (181, 6124), (191, 6157), (192, 6163), (195, 6169), (196, 6172), (197, 6181), (223, 6262), (252, 6370), (258, 6400), (271, 6484), (272, 6487),

Gene: MUWow\_7 Start: 5974, Stop: 7014, Start Num: 32

Candidate Starts for MUWow\_7:

(Start: 32 @5974 has 136 MA's), (82, 6202), (90, 6226), (107, 6298), (120, 6355), (136, 6460), (143, 6475), (152, 6526), (153, 6532), (156, 6538), (168, 6598), (173, 6616), (197, 6682), (220, 6760), (248, 6868), (257, 6907), (262, 6949), (265, 6964),

Gene: MacGully\_37 Start: 19988, Stop: 21046, Start Num: 32

Candidate Starts for MacGully\_37:

(Start: 32 @19988 has 136 MA's), (36, 20009), (58, 20105), (80, 20222), (94, 20264), (98, 20285), (110, 20330), (133, 20438), (152, 20531), (161, 20573), (177, 20630), (196, 20681), (212, 20744), (260, 20969), (265, 20996), (274, 21038),

Gene: Mapleville\_7 Start: 6041, Stop: 7081, Start Num: 32

Candidate Starts for Mapleville\_7:

(Start: 32 @6041 has 136 MA's), (82, 6269), (90, 6293), (107, 6365), (120, 6422), (136, 6527), (168, 6665), (173, 6683), (191, 6725), (197, 6749), (244, 6920), (248, 6935), (257, 6974), (262, 7016), (265, 7031),

Gene: Marietta\_31 Start: 16268, Stop: 17335, Start Num: 32

Candidate Starts for Marietta\_31:

(Start: 32 @16268 has 136 MA's), (38, 16304), (42, 16322), (72, 16445), (80, 16502), (187, 16937), (189, 16952), (216, 17054), (229, 17120), (260, 17258), (265, 17285),

Gene: Marteena\_7 Start: 5706, Stop: 6746, Start Num: 32

Candidate Starts for Marteena\_7:

(Start: 32 @5706 has 136 MA's), (40, 5754), (44, 5766), (56, 5802), (93, 5976), (98, 6000), (144, 6210), (155, 6261), (163, 6300), (168, 6324), (196, 6399), (205, 6438), (206, 6441), (218, 6474), (223, 6501),

(245, 6588), (254, 6630), (260, 6669), (267, 6705),

Gene: Marvin\_38 Start: 16247, Stop: 17317, Start Num: 29

Candidate Starts for Marvin\_38:

(Start: 29 @16247 has 19 MA's), (Start: 32 @16256 has 136 MA's), (34, 16262), (81, 16493), (91, 16523), (105, 16574), (106, 16577), (115, 16616), (161, 16859), (191, 16949), (196, 16964), (206, 17006), (220, 17048), (224, 17072), (228, 17096), (232, 17105), (255, 17192), (266, 17261), (271, 17285),

Gene: Maselop\_33 Start: 20040, Stop: 21092, Start Num: 32

Candidate Starts for Maselop\_33:

(Start: 32 @20040 has 136 MA's), (58, 20157), (80, 20274), (98, 20337), (110, 20382), (133, 20490), (137, 20526), (161, 20625), (177, 20682), (196, 20733), (217, 20820), (260, 21015), (265, 21042), (266, 21048), (274, 21084),

Gene: MaterMagnus\_8 Start: 5888, Stop: 6928, Start Num: 32

Candidate Starts for MaterMagnus\_8:

(Start: 32 @5888 has 136 MA's), (82, 6116), (90, 6140), (120, 6269), (136, 6374), (143, 6389), (161, 6482), (164, 6500), (168, 6512), (173, 6530), (191, 6572), (197, 6596), (248, 6782), (257, 6821), (262, 6863), (265, 6878),

Gene: Mbo2\_12 Start: 8600, Stop: 9808, Start Num: 11

Candidate Starts for Mbo2\_12:

(1, 8450), (2, 8480), (11, 8600), (26, 8681), (28, 8699), (34, 8723), (48, 8786), (51, 8801), (52, 8804), (55, 8813), (56, 8816), (85, 8978), (86, 8981), (122, 9119), (130, 9170), (133, 9182), (138, 9221), (154, 9290), (164, 9341), (193, 9428), (212, 9509), (266, 9758), (269, 9770), (277, 9800),

Gene: MerCougar\_30 Start: 18996, Stop: 20063, Start Num: 32

Candidate Starts for MerCougar\_30:

(Start: 32 @18996 has 136 MA's), (38, 19032), (42, 19050), (72, 19173), (110, 19338), (151, 19536), (164, 19599), (173, 19629), (187, 19665), (189, 19680), (212, 19761), (229, 19848), (239, 19878), (260, 19986), (265, 20013), (271, 20043), (273, 20049), (274, 20055),

Gene: MidnightRain\_8 Start: 5887, Stop: 6927, Start Num: 32

Candidate Starts for MidnightRain\_8:

(Start: 32 @5887 has 136 MA's), (82, 6115), (107, 6211), (120, 6268), (134, 6355), (136, 6373), (143, 6388), (161, 6481), (168, 6511), (173, 6529), (248, 6781), (257, 6820), (262, 6862), (265, 6877),

Gene: Minos\_13 Start: 15276, Stop: 16475, Start Num: 10

Candidate Starts for Minos\_13:

(Start: 10 @15276 has 76 MA's), (18, 15294), (30, 15360), (36, 15387), (79, 15609), (101, 15684), (123, 15774), (208, 16143), (222, 16203), (235, 16263), (246, 16302), (252, 16323), (256, 16350), (264, 16407), (269, 16428), (273, 16446),

Gene: Miskis\_33 Start: 14102, Stop: 15130, Start Num: 32

Candidate Starts for Miskis\_33:

(Start: 32 @14102 has 136 MA's), (37, 14126), (84, 14336), (87, 14345), (121, 14489), (127, 14522), (129, 14528), (165, 14714), (191, 14786), (196, 14801), (211, 14858), (220, 14876), (242, 14960), (257, 15023), (271, 15110),

Gene: Mollymur\_18 Start: 12528, Stop: 13580, Start Num: 32

Candidate Starts for Mollymur\_18:

(Start: 32 @12528 has 136 MA's), (43, 12582), (66, 12675), (87, 12774), (100, 12825), (127, 12951), (132, 12984), (137, 13020), (141, 13029), (145, 13044), (152, 13083), (161, 13125), (195, 13230), (196, 13233), (201, 13257), (213, 13293), (214, 13299), (226, 13356), (234, 13380), (248, 13428), (251, 13440), (257, 13467),

Gene: Monty\_15 Start: 14517, Stop: 15716, Start Num: 10

Candidate Starts for Monty\_15:

(Start: 10 @14517 has 76 MA's), (18, 14535), (30, 14601), (48, 14676), (59, 14727), (79, 14850), (101, 14925), (109, 14955), (123, 15015), (166, 15237), (229, 15486), (235, 15504), (246, 15543), (252, 15564), (256, 15591), (261, 15630), (264, 15648), (269, 15669), (273, 15687), (274, 15693),

Gene: MortyNRick\_7 Start: 5225, Stop: 6259, Start Num: 31

Candidate Starts for MortyNRick\_7:

(Start: 31 @5225 has 20 MA's), (140, 5720), (152, 5774), (157, 5804), (161, 5819), (162, 5822), (167, 5846), (168, 5849), (191, 5909), (195, 5921), (206, 5966), (223, 6014), (261, 6185), (266, 6212), (271, 6236),

Gene: MosMoris\_38 Start: 15427, Stop: 16497, Start Num: 29

Candidate Starts for MosMoris\_38:

(Start: 29 @15427 has 19 MA's), (Start: 32 @15436 has 136 MA's), (34, 15442), (81, 15673), (91, 15703), (105, 15754), (106, 15757), (115, 15796), (161, 16039), (191, 16129), (196, 16144), (206, 16186), (220, 16228), (224, 16252), (228, 16276), (232, 16285), (255, 16372), (266, 16441), (271, 16465),

Gene: MrWormie\_13 Start: 14440, Stop: 15639, Start Num: 10

Candidate Starts for MrWormie\_13:

(Start: 10 @14440 has 76 MA's), (18, 14458), (30, 14524), (36, 14551), (79, 14773), (101, 14848), (123, 14938), (208, 15307), (222, 15367), (235, 15427), (246, 15466), (252, 15487), (256, 15514), (264, 15571), (269, 15592), (273, 15610),

Gene: Msay19\_17 Start: 14691, Stop: 15890, Start Num: 10

Candidate Starts for Msay19\_17:

(Start: 10 @14691 has 76 MA's), (18, 14709), (30, 14775), (48, 14850), (79, 15024), (101, 15099), (109, 15129), (123, 15189), (166, 15411), (190, 15492), (222, 15618), (229, 15660), (235, 15678), (246, 15717), (252, 15738), (256, 15765), (261, 15804), (264, 15822), (269, 15843), (273, 15861), (274, 15867),

Gene: MurphyJoseph\_8 Start: 5898, Stop: 6938, Start Num: 32

Candidate Starts for MurphyJoseph\_8:

(Start: 32 @5898 has 136 MA's), (82, 6126), (90, 6150), (120, 6279), (136, 6384), (162, 6495), (168, 6522), (173, 6540), (207, 6642), (244, 6777), (248, 6792), (257, 6831), (262, 6873), (265, 6888),

Gene: NadineRae\_29 Start: 15514, Stop: 16581, Start Num: 32

Candidate Starts for NadineRae\_29:

(Start: 32 @15514 has 136 MA's), (38, 15550), (42, 15568), (72, 15691), (80, 15748), (187, 16183), (189, 16198), (216, 16300), (220, 16315), (229, 16366), (260, 16504), (265, 16531),

Gene: NatB6\_29 Start: 18119, Stop: 19189, Start Num: 32

Candidate Starts for NatB6\_29:

(Start: 32 @18119 has 136 MA's), (38, 18155), (40, 18167), (42, 18173), (72, 18296), (80, 18353), (110, 18461), (143, 18614), (161, 18704), (173, 18752), (189, 18803), (212, 18884), (221, 18923), (229, 18971), (239, 19001), (260, 19112), (265, 19139), (273, 19175), (274, 19181),

Gene: Neoevie\_13 Start: 15546, Stop: 16745, Start Num: 10

Candidate Starts for Neoevie\_13:

(Start: 10 @15546 has 76 MA's), (18, 15564), (30, 15630), (36, 15657), (79, 15879), (101, 15954), (123, 16044), (208, 16413), (222, 16473), (235, 16533), (246, 16572), (252, 16593), (256, 16620), (264, 16677), (269, 16698), (273, 16716),

Gene: NewKitty\_9 Start: 6117, Stop: 7157, Start Num: 32

Candidate Starts for NewKitty\_9:

(Start: 32 @6117 has 136 MA's), (82, 6345), (90, 6369), (107, 6441), (120, 6498), (136, 6603), (143, 6618), (152, 6669), (153, 6675), (156, 6681), (168, 6741), (173, 6759), (197, 6825), (220, 6903), (248, 7011), (257, 7050), (262, 7092), (265, 7107),

Gene: Newt\_13 Start: 15287, Stop: 16486, Start Num: 10

Candidate Starts for Newt\_13:

(Start: 10 @15287 has 76 MA's), (18, 15305), (30, 15371), (36, 15398), (79, 15620), (101, 15695), (123, 15785), (208, 16154), (222, 16214), (235, 16274), (246, 16313), (252, 16334), (256, 16361), (264, 16418), (269, 16439), (273, 16457),

Gene: Niagara\_16 Start: 17035, Stop: 18249, Start Num: 10

Candidate Starts for Niagara\_16:

(Start: 10 @17035 has 76 MA's), (30, 17131), (Start: 31 @17134 has 20 MA's), (48, 17206), (83, 17392), (87, 17404), (109, 17485), (120, 17530), (123, 17545), (154, 17719), (159, 17743), (180, 17818), (222, 17989), (246, 18088), (247, 18091), (252, 18109), (269, 18214), (273, 18232), (274, 18238),

Gene: Nimi13\_13 Start: 15288, Stop: 16487, Start Num: 10

Candidate Starts for Nimi13\_13:

(Start: 10 @15288 has 76 MA's), (18, 15306), (30, 15372), (36, 15399), (79, 15621), (101, 15696), (123, 15786), (208, 16155), (222, 16215), (235, 16275), (246, 16314), (252, 16335), (256, 16362), (264, 16419), (269, 16440), (273, 16458),

Gene: Norvs\_36 Start: 14329, Stop: 15357, Start Num: 32

Candidate Starts for Norvs\_36:

(Start: 32 @14329 has 136 MA's), (37, 14353), (84, 14563), (87, 14572), (121, 14716), (127, 14749), (129, 14755), (165, 14941), (191, 15013), (196, 15028), (211, 15085), (220, 15103), (242, 15187), (257, 15250), (271, 15337),

Gene: NosilaM\_32 Start: 18687, Stop: 19757, Start Num: 32

Candidate Starts for NosilaM\_32:

(Start: 32 @18687 has 136 MA's), (38, 18723), (42, 18741), (72, 18864), (110, 19029), (148, 19215), (151, 19227), (164, 19290), (172, 19317), (185, 19347), (188, 19368), (189, 19371), (212, 19452), (216, 19473), (229, 19539), (239, 19569), (260, 19680), (265, 19707), (271, 19737), (274, 19749),

Gene: NovumRegina\_29 Start: 18450, Stop: 19520, Start Num: 32

Candidate Starts for NovumRegina\_29:

(Start: 32 @18450 has 136 MA's), (38, 18486), (40, 18498), (42, 18504), (72, 18627), (80, 18684), (110, 18792), (161, 19035), (173, 19083), (189, 19134), (212, 19215), (221, 19254), (229, 19302), (239, 19332), (260, 19443), (265, 19470), (273, 19506), (274, 19512),

Gene: Nyilah\_7 Start: 5971, Stop: 7011, Start Num: 32

Candidate Starts for Nyilah\_7:

(Start: 32 @5971 has 136 MA's), (82, 6199), (90, 6223), (120, 6352), (136, 6457), (153, 6529), (161, 6565), (168, 6595), (173, 6613), (191, 6655), (197, 6679), (198, 6682), (205, 6709), (248, 6865), (257,

6904), (262, 6946), (265, 6961),

Gene: OneUp\_29 Start: 12114, Stop: 13157, Start Num: 32

Candidate Starts for OneUp\_29:

(Start: 32 @12114 has 136 MA's), (84, 12348), (87, 12357), (121, 12501), (127, 12534), (161, 12705), (165, 12726), (191, 12798), (205, 12852), (220, 12888), (249, 13002), (255, 13029), (258, 13038),

Gene: Orchid\_15 Start: 12504, Stop: 13799, Start Num: 6

Candidate Starts for Orchid\_15:

(5, 12480), (Start: 6 @12504 has 5 MA's), (7, 12540), (22, 12636), (23, 12648), (51, 12795), (73, 12900), (79, 12954), (85, 12972), (109, 13059), (146, 13254), (154, 13293), (187, 13410), (194, 13428), (204, 13464), (236, 13605), (238, 13608), (252, 13659), (269, 13764),

Gene: Outis\_30 Start: 18690, Stop: 19757, Start Num: 32

Candidate Starts for Outis\_30:

(Start: 32 @18690 has 136 MA's), (38, 18726), (42, 18744), (72, 18867), (110, 19032), (151, 19230), (164, 19293), (172, 19320), (173, 19323), (187, 19359), (189, 19374), (212, 19455), (229, 19542), (239, 19572), (260, 19680), (265, 19707), (271, 19737), (273, 19743), (274, 19749),

Gene: P1201\_32 Start: 19535, Stop: 20620, Start Num: 30

Candidate Starts for P1201\_32:

(30, 19535), (44, 19601), (125, 19943), (163, 20135), (173, 20177), (220, 20348), (230, 20405), (265, 20570), (274, 20612),

Gene: Patio\_32 Start: 18936, Stop: 19997, Start Num: 32

Candidate Starts for Patio\_32:

(Start: 32 @18936 has 136 MA's), (72, 19113), (80, 19170), (110, 19278), (133, 19386), (181, 19584), (260, 19920), (265, 19947), (274, 19989),

Gene: PatrickStar\_15 Start: 12504, Stop: 13799, Start Num: 6

Candidate Starts for PatrickStar\_15:

(5, 12480), (Start: 6 @12504 has 5 MA's), (7, 12540), (22, 12636), (23, 12648), (51, 12795), (73, 12900), (79, 12954), (85, 12972), (109, 13059), (146, 13254), (154, 13293), (187, 13410), (194, 13428), (204, 13464), (236, 13605), (238, 13608), (252, 13659), (269, 13764),

Gene: Pemberton\_32 Start: 16251, Stop: 17318, Start Num: 32

Candidate Starts for Pemberton\_32:

(Start: 32 @16251 has 136 MA's), (38, 16287), (42, 16305), (72, 16428), (80, 16485), (187, 16920), (189, 16935), (212, 17016), (216, 17037), (229, 17103), (260, 17241), (265, 17268),

Gene: Persistence\_7 Start: 5995, Stop: 7035, Start Num: 32

Candidate Starts for Persistence\_7:

(Start: 32 @5995 has 136 MA's), (63, 6127), (82, 6223), (90, 6247), (120, 6376), (136, 6481), (143, 6496), (168, 6619), (173, 6637), (191, 6679), (237, 6850), (244, 6874), (248, 6889), (257, 6928), (262, 6970), (265, 6985),

Gene: PeteyPab\_16 Start: 12559, Stop: 13623, Start Num: 31

Candidate Starts for PeteyPab\_16:

(Start: 31 @12559 has 20 MA's), (68, 12727), (75, 12751), (85, 12814), (98, 12862), (162, 13156), (163, 13159), (172, 13198), (196, 13255), (218, 13351), (228, 13408), (239, 13441), (265, 13573), (267, 13582), (274, 13615),

Gene: Philon9\_17 Start: 18916, Stop: 20130, Start Num: 10

Candidate Starts for Philon9\_17:

(4, 18805), (Start: 10 @18916 has 76 MA's), (12, 18922), (30, 19012), (48, 19087), (79, 19261), (83, 19273), (123, 19426), (133, 19483), (154, 19600), (159, 19624), (180, 19699), (193, 19750), (222, 19870), (246, 19969), (247, 19972), (252, 19990), (269, 20095), (273, 20113),

Gene: PhinkBoden\_35 Start: 14710, Stop: 15738, Start Num: 32

Candidate Starts for PhinkBoden\_35:

(Start: 32 @14710 has 136 MA's), (37, 14734), (84, 14944), (87, 14953), (121, 15097), (127, 15130), (129, 15136), (165, 15322), (191, 15394), (196, 15409), (211, 15466), (220, 15484), (242, 15568), (257, 15631), (271, 15718),

Gene: Phomeo\_28 Start: 18745, Stop: 19815, Start Num: 32

Candidate Starts for Phomeo\_28:

(Start: 32 @18745 has 136 MA's), (38, 18781), (40, 18793), (42, 18799), (72, 18922), (80, 18979), (110, 19087), (143, 19240), (161, 19330), (173, 19378), (189, 19429), (212, 19510), (221, 19549), (229, 19597), (239, 19627), (260, 19738), (265, 19765), (273, 19801), (274, 19807),

Gene: Phrank15\_7 Start: 6041, Stop: 7081, Start Num: 32

Candidate Starts for Phrank15\_7:

(Start: 32 @6041 has 136 MA's), (63, 6173), (82, 6269), (87, 6284), (90, 6293), (117, 6410), (120, 6422), (136, 6527), (143, 6542), (156, 6605), (168, 6665), (173, 6683), (191, 6725), (196, 6740), (244, 6920), (262, 7016), (265, 7031),

Gene: PierreThree\_16 Start: 15369, Stop: 16568, Start Num: 10

Candidate Starts for PierreThree\_16:

(Start: 10 @15369 has 76 MA's), (18, 15387), (30, 15453), (48, 15528), (79, 15702), (101, 15777), (109, 15807), (123, 15867), (157, 16050), (166, 16089), (229, 16338), (235, 16356), (246, 16395), (252, 16416), (256, 16443), (261, 16482), (264, 16500), (269, 16521), (273, 16539), (274, 16545),

Gene: Pleakley\_38 Start: 18777, Stop: 19838, Start Num: 32

Candidate Starts for Pleakley\_38:

(Start: 32 @18777 has 136 MA's), (38, 18813), (40, 18825), (72, 18954), (173, 19410), (206, 19515), (255, 19722), (260, 19761), (265, 19788), (274, 19830),

Gene: Poise\_40 Start: 15565, Stop: 16635, Start Num: 29

Candidate Starts for Poise\_40:

(Start: 29 @15565 has 19 MA's), (Start: 32 @15574 has 136 MA's), (34, 15580), (81, 15811), (91, 15841), (105, 15892), (106, 15895), (115, 15934), (161, 16177), (191, 16267), (196, 16282), (206, 16324), (220, 16366), (224, 16390), (228, 16414), (232, 16423), (255, 16510), (266, 16579), (271, 16603),

Gene: PokyPuppy\_15 Start: 15254, Stop: 16453, Start Num: 10

Candidate Starts for PokyPuppy\_15:

(Start: 10 @15254 has 76 MA's), (18, 15272), (30, 15338), (79, 15587), (109, 15692), (123, 15752), (166, 15974), (222, 16181), (229, 16223), (235, 16241), (246, 16280), (252, 16301), (256, 16328), (261, 16367), (264, 16385), (269, 16406), (273, 16424), (274, 16430),

Gene: Poland\_17 Start: 14667, Stop: 15866, Start Num: 10

Candidate Starts for Poland\_17:

(Start: 10 @14667 has 76 MA's), (18, 14685), (30, 14751), (48, 14826), (79, 15000), (101, 15075), (109, 15105), (123, 15165), (166, 15387), (190, 15468), (222, 15594), (229, 15636), (235, 15654), (246, 15693), (252, 15714), (256, 15741), (261, 15780), (264, 15798), (269, 15819), (273, 15837), (274, 15843),

Gene: Pollux\_7 Start: 5706, Stop: 6746, Start Num: 32

Candidate Starts for Pollux\_7:

(Start: 32 @5706 has 136 MA's), (40, 5754), (44, 5766), (56, 5802), (93, 5976), (98, 6000), (144, 6210), (155, 6261), (163, 6300), (168, 6324), (196, 6399), (205, 6438), (206, 6441), (218, 6474), (223, 6501), (245, 6588), (254, 6630), (260, 6669), (267, 6705),

Gene: Polyuki\_33 Start: 20032, Stop: 21084, Start Num: 32

Candidate Starts for Polyuki\_33:

(Start: 32 @20032 has 136 MA's), (58, 20149), (80, 20266), (98, 20329), (110, 20374), (133, 20482), (137, 20518), (161, 20617), (177, 20674), (196, 20725), (217, 20812), (260, 21007), (265, 21034), (266, 21040), (274, 21076),

Gene: Posh\_7 Start: 5700, Stop: 6740, Start Num: 32

Candidate Starts for Posh\_7:

(Start: 32 @5700 has 136 MA's), (40, 5748), (44, 5760), (56, 5796), (93, 5970), (98, 5994), (124, 6099), (144, 6204), (155, 6255), (163, 6294), (168, 6318), (205, 6432), (206, 6435), (218, 6468), (223, 6495), (245, 6582), (254, 6624), (260, 6663),

Gene: PotatoChip\_17 Start: 12561, Stop: 13625, Start Num: 31

Candidate Starts for PotatoChip\_17:

(Start: 31 @12561 has 20 MA's), (68, 12729), (75, 12753), (85, 12816), (98, 12864), (162, 13158), (163, 13161), (172, 13200), (196, 13257), (218, 13353), (228, 13410), (239, 13443), (265, 13575), (267, 13584), (274, 13617),

Gene: Pringar\_40 Start: 15877, Stop: 16947, Start Num: 29

Candidate Starts for Pringar\_40:

(Start: 29 @15877 has 19 MA's), (Start: 32 @15886 has 136 MA's), (34, 15892), (81, 16123), (91, 16153), (105, 16204), (106, 16207), (115, 16246), (161, 16489), (191, 16579), (196, 16594), (206, 16636), (220, 16678), (224, 16702), (228, 16726), (232, 16735), (255, 16822), (266, 16891), (271, 16915),

Gene: Pytheas\_7 Start: 5553, Stop: 6593, Start Num: 32

Candidate Starts for Pytheas\_7:

(Start: 32 @5553 has 136 MA's), (40, 5601), (44, 5613), (56, 5649), (93, 5823), (98, 5847), (144, 6057), (155, 6108), (163, 6147), (168, 6171), (196, 6246), (205, 6285), (206, 6288), (218, 6321), (223, 6348), (245, 6435), (254, 6477), (260, 6516),

Gene: RadFad\_8 Start: 5887, Stop: 6927, Start Num: 32

Candidate Starts for RadFad\_8:

(Start: 32 @5887 has 136 MA's), (82, 6115), (107, 6211), (120, 6268), (134, 6355), (136, 6373), (143, 6388), (161, 6481), (168, 6511), (173, 6529), (248, 6781), (257, 6820), (262, 6862), (265, 6877),

Gene: Raela\_40 Start: 16120, Stop: 17190, Start Num: 29

Candidate Starts for Raela\_40:

(Start: 29 @16120 has 19 MA's), (Start: 32 @16129 has 136 MA's), (34, 16135), (81, 16366), (91, 16396), (105, 16447), (106, 16450), (115, 16489), (161, 16732), (191, 16822), (196, 16837), (206, 16879), (220, 16921), (224, 16945), (228, 16969), (232, 16978), (255, 17065), (266, 17134), (271, 17158),

Gene: Raphaella\_8 Start: 5902, Stop: 6942, Start Num: 32

Candidate Starts for Raphaella\_8:

(Start: 32 @5902 has 136 MA's), (82, 6130), (90, 6154), (107, 6226), (120, 6283), (136, 6388), (143, 6403), (152, 6454), (153, 6460), (156, 6466), (168, 6526), (173, 6544), (197, 6610), (220, 6688), (248, 6796), (257, 6835), (262, 6877), (265, 6892),

Gene: RedRaider\_36 Start: 20940, Stop: 22001, Start Num: 32

Candidate Starts for RedRaider\_36:

(Start: 32 @20940 has 136 MA's), (72, 21117), (80, 21174), (110, 21282), (133, 21390), (181, 21588), (260, 21924), (265, 21951), (274, 21993),

Gene: RedRaider77\_40 Start: 16021, Stop: 17091, Start Num: 29

Candidate Starts for RedRaider77\_40:

(Start: 29 @16021 has 19 MA's), (Start: 32 @16030 has 136 MA's), (34, 16036), (81, 16267), (91, 16297), (105, 16348), (106, 16351), (115, 16390), (161, 16633), (191, 16723), (196, 16738), (206, 16780), (220, 16822), (224, 16846), (228, 16870), (232, 16879), (255, 16966), (266, 17035), (271, 17059),

Gene: RemRem\_17 Start: 14513, Stop: 15712, Start Num: 10

Candidate Starts for RemRem\_17:

(Start: 10 @14513 has 76 MA's), (18, 14531), (30, 14597), (48, 14672), (59, 14723), (79, 14846), (101, 14921), (109, 14951), (123, 15011), (166, 15233), (222, 15440), (229, 15482), (235, 15500), (246, 15539), (252, 15560), (256, 15587), (264, 15644), (269, 15665), (273, 15683), (274, 15689),

Gene: Renaud18\_7 Start: 5356, Stop: 6402, Start Num: 31

Candidate Starts for Renaud18\_7:

(Start: 29 @5350 has 19 MA's), (Start: 31 @5356 has 20 MA's), (60, 5485), (61, 5488), (81, 5593), (107, 5680), (114, 5713), (118, 5728), (127, 5776), (131, 5797), (133, 5809), (135, 5839), (152, 5902), (162, 5950), (181, 6004), (191, 6037), (192, 6043), (195, 6049), (196, 6052), (197, 6061), (223, 6142), (258, 6280), (261, 6313), (271, 6364), (272, 6367),

Gene: Reynauld\_20 Start: 15388, Stop: 16596, Start Num: 9

Candidate Starts for Reynauld\_20:

(Start: 9 @15388 has 2 MA's), (13, 15397), (25, 15439), (30, 15487), (36, 15514), (48, 15562), (52, 15580), (59, 15613), (79, 15736), (85, 15754), (103, 15817), (123, 15901), (125, 15910), (149, 16042), (190, 16189), (194, 16201), (212, 16279), (269, 16549), (273, 16567),

Gene: Richie\_8 Start: 5902, Stop: 6942, Start Num: 32

Candidate Starts for Richie\_8:

(Start: 32 @5902 has 136 MA's), (82, 6130), (90, 6154), (107, 6226), (120, 6283), (136, 6388), (143, 6403), (152, 6454), (153, 6460), (156, 6466), (168, 6526), (173, 6544), (197, 6610), (220, 6688), (248, 6796), (257, 6835), (262, 6877), (265, 6892),

Gene: RobinSparkles\_18 Start: 13097, Stop: 14392, Start Num: 6

Candidate Starts for RobinSparkles\_18:

(5, 13073), (Start: 6 @13097 has 5 MA's), (7, 13133), (22, 13229), (23, 13241), (51, 13388), (73, 13493), (79, 13547), (85, 13565), (109, 13652), (146, 13847), (154, 13886), (187, 14003), (194, 14021), (204, 14057), (236, 14198), (238, 14201), (252, 14252), (269, 14357),

Gene: RoyalG\_17 Start: 14997, Stop: 16196, Start Num: 10

Candidate Starts for RoyalG\_17:

(Start: 10 @14997 has 76 MA's), (18, 15015), (30, 15081), (48, 15156), (79, 15330), (109, 15435), (123, 15495), (157, 15678), (166, 15717), (190, 15798), (227, 15957), (235, 15984), (246, 16023), (252, 16044), (256, 16071), (261, 16110), (264, 16128), (269, 16149), (273, 16167), (274, 16173),

Gene: SPB78\_7 Start: 5580, Stop: 6626, Start Num: 30

Candidate Starts for SPB78\_7:

(30, 5580), (50, 5661), (80, 5817), (81, 5820), (131, 6015), (140, 6069), (150, 6117), (152, 6123), (163, 6171), (164, 6183), (168, 6195), (196, 6276), (197, 6285), (255, 6510),

Gene: Sakai\_8 Start: 5896, Stop: 6936, Start Num: 32

Candidate Starts for Sakai\_8:

(Start: 32 @5896 has 136 MA's), (82, 6124), (90, 6148), (120, 6277), (136, 6382), (143, 6397), (161, 6490), (164, 6508), (168, 6520), (173, 6538), (191, 6580), (197, 6604), (248, 6790), (257, 6829), (262, 6871), (265, 6886),

Gene: Sam12\_16 Start: 14513, Stop: 15712, Start Num: 10

Candidate Starts for Sam12\_16:

(Start: 10 @14513 has 76 MA's), (18, 14531), (30, 14597), (48, 14672), (59, 14723), (79, 14846), (109, 14951), (123, 15011), (166, 15233), (222, 15440), (229, 15482), (235, 15500), (246, 15539), (252, 15560), (256, 15587), (261, 15626), (264, 15644), (269, 15665), (273, 15683), (274, 15689),

Gene: Samy\_10 Start: 6935, Stop: 7969, Start Num: 32

Candidate Starts for Samy\_10:

(Start: 32 @6935 has 136 MA's), (80, 7166), (91, 7199), (98, 7229), (109, 7271), (112, 7286), (133, 7388), (163, 7541), (164, 7553), (214, 7700), (241, 7796), (243, 7802), (260, 7889), (274, 7958),

Gene: Sashimi\_9 Start: 6060, Stop: 7100, Start Num: 32

Candidate Starts for Sashimi\_9:

(Start: 32 @6060 has 136 MA's), (63, 6192), (82, 6288), (90, 6312), (107, 6384), (120, 6441), (136, 6546), (168, 6684), (173, 6702), (244, 6939), (248, 6954), (257, 6993), (262, 7035), (265, 7050),

Gene: Satrap\_8 Start: 5898, Stop: 6938, Start Num: 32

Candidate Starts for Satrap\_8:

(Start: 32 @5898 has 136 MA's), (82, 6126), (90, 6150), (107, 6222), (117, 6267), (120, 6279), (136, 6384), (143, 6399), (152, 6450), (153, 6456), (156, 6462), (162, 6495), (168, 6522), (173, 6540), (191, 6582), (244, 6777), (248, 6792), (257, 6831), (262, 6873), (265, 6888),

Gene: Scuba\_38 Start: 18870, Stop: 19931, Start Num: 32

Candidate Starts for Scuba\_38:

(Start: 32 @18870 has 136 MA's), (38, 18906), (40, 18918), (72, 19047), (173, 19503), (206, 19608), (220, 19665), (255, 19815), (260, 19854), (265, 19881), (274, 19923),

Gene: Seahorse\_9 Start: 6170, Stop: 7207, Start Num: 33

Candidate Starts for Seahorse\_9:

(Start: 33 @6170 has 1 MA's), (82, 6395), (90, 6419), (120, 6548), (131, 6611), (136, 6653), (143, 6668), (152, 6719), (161, 6761), (164, 6779), (197, 6875), (248, 7061), (257, 7100), (262, 7142), (265, 7157),

Gene: Shelley\_13 Start: 14764, Stop: 15963, Start Num: 10

Candidate Starts for Shelley\_13:

(Start: 10 @14764 has 76 MA's), (18, 14782), (30, 14848), (36, 14875), (79, 15097), (101, 15172), (123, 15262), (208, 15631), (222, 15691), (235, 15751), (246, 15790), (252, 15811), (256, 15838), (264, 15895), (269, 15916), (273, 15934),

Gene: Shukran\_8 Start: 5898, Stop: 6938, Start Num: 32

Candidate Starts for Shukran\_8:

(Start: 32 @5898 has 136 MA's), (82, 6126), (90, 6150), (107, 6222), (117, 6267), (120, 6279), (136, 6384), (143, 6399), (152, 6450), (153, 6456), (156, 6462), (162, 6495), (168, 6522), (173, 6540), (191, 6582), (244, 6777), (248, 6792), (257, 6831), (262, 6873), (265, 6888),

Gene: Skysand\_31 Start: 19156, Stop: 20217, Start Num: 32

Candidate Starts for Skysand\_31:

(Start: 32 @19156 has 136 MA's), (72, 19333), (80, 19390), (110, 19498), (133, 19606), (181, 19804), (212, 19915), (260, 20140), (265, 20167), (274, 20209),

Gene: Smoothie\_36 Start: 14327, Stop: 15355, Start Num: 32

Candidate Starts for Smoothie\_36:

(Start: 32 @14327 has 136 MA's), (37, 14351), (84, 14561), (87, 14570), (121, 14714), (127, 14747), (129, 14753), (165, 14939), (191, 15011), (196, 15026), (211, 15083), (220, 15101), (242, 15185), (257, 15248), (271, 15335),

Gene: Sombrero\_16 Start: 14545, Stop: 15744, Start Num: 10

Candidate Starts for Sombrero\_16:

(Start: 10 @14545 has 76 MA's), (18, 14563), (30, 14629), (48, 14704), (79, 14878), (101, 14953), (109, 14983), (123, 15043), (166, 15265), (190, 15346), (222, 15472), (229, 15514), (235, 15532), (246, 15571), (252, 15592), (256, 15619), (261, 15658), (264, 15676), (269, 15697), (273, 15715), (274, 15721),

Gene: SonDevVon\_7 Start: 5889, Stop: 6929, Start Num: 32

Candidate Starts for SonDevVon\_7:

(Start: 32 @5889 has 136 MA's), (82, 6117), (90, 6141), (120, 6270), (136, 6375), (143, 6390), (161, 6483), (164, 6501), (168, 6513), (173, 6531), (191, 6573), (197, 6597), (248, 6783), (257, 6822), (262, 6864), (265, 6879),

Gene: SpeedDemon\_180 Start: 11915, Stop: 12970, Start Num: 32

Candidate Starts for SpeedDemon\_180:

(Start: 32 @11915 has 136 MA's), (100, 12212), (117, 12287), (127, 12338), (134, 12386), (161, 12512), (191, 12605), (195, 12617), (196, 12620), (201, 12644), (215, 12692), (219, 12707), (220, 12713), (249, 12827), (251, 12833), (257, 12860),

Gene: SpicyFrank\_8 Start: 5950, Stop: 6990, Start Num: 32

Candidate Starts for SpicyFrank\_8:

(Start: 32 @5950 has 136 MA's), (82, 6178), (90, 6202), (107, 6274), (120, 6331), (136, 6436), (143, 6451), (152, 6502), (153, 6508), (156, 6514), (168, 6574), (248, 6844), (257, 6883), (262, 6925), (265, 6940),

Gene: Sporco\_9 Start: 5947, Stop: 6987, Start Num: 32

Candidate Starts for Sporco\_9:

(Start: 32 @5947 has 136 MA's), (82, 6175), (90, 6199), (107, 6271), (120, 6328), (136, 6433), (143, 6448), (152, 6499), (153, 6505), (156, 6511), (168, 6571), (173, 6589), (197, 6655), (220, 6733), (248, 6841), (257, 6880), (262, 6922), (265, 6937),

Gene: Squibbles\_16 Start: 15373, Stop: 16572, Start Num: 10

Candidate Starts for Squibbles\_16:

(Start: 10 @15373 has 76 MA's), (18, 15391), (30, 15457), (48, 15532), (79, 15706), (109, 15811), (123, 15871), (166, 16093), (222, 16300), (229, 16342), (235, 16360), (246, 16399), (252, 16420), (256, 16447), (261, 16486), (264, 16504), (269, 16525), (273, 16543), (274, 16549),

Gene: Srilaccoli3\_18 Start: 15145, Stop: 16353, Start Num: 9

Candidate Starts for Srilaccoli3\_18:

(Start: 9 @15145 has 2 MA's), (13, 15154), (25, 15196), (30, 15244), (36, 15271), (48, 15319), (52, 15337), (59, 15370), (85, 15511), (103, 15574), (123, 15658), (125, 15667), (149, 15799), (190, 15946), (194, 15958), (212, 16036), (269, 16306), (273, 16324),

Gene: StarStruck\_30 Start: 18690, Stop: 19757, Start Num: 32

Candidate Starts for StarStruck\_30:

(Start: 32 @18690 has 136 MA's), (38, 18726), (42, 18744), (72, 18867), (110, 19032), (151, 19230), (164, 19293), (172, 19320), (173, 19323), (187, 19359), (189, 19374), (212, 19455), (229, 19542), (239, 19572), (260, 19680), (265, 19707), (271, 19737), (273, 19743), (274, 19749),

Gene: SteveFrench\_15 Start: 14591, Stop: 15790, Start Num: 10

Candidate Starts for SteveFrench\_15:

(Start: 10 @14591 has 76 MA's), (18, 14609), (30, 14675), (48, 14750), (79, 14924), (109, 15029), (123, 15089), (157, 15272), (166, 15311), (190, 15392), (227, 15551), (235, 15578), (246, 15617), (252, 15638), (256, 15665), (261, 15704), (264, 15722), (269, 15743), (270, 15749), (273, 15761),

Gene: Sticker17\_13 Start: 15287, Stop: 16486, Start Num: 10

Candidate Starts for Sticker17\_13:

(Start: 10 @15287 has 76 MA's), (18, 15305), (30, 15371), (36, 15398), (79, 15620), (101, 15695), (123, 15785), (208, 16154), (222, 16214), (235, 16274), (246, 16313), (252, 16334), (256, 16361), (264, 16418), (269, 16439), (273, 16457),

Gene: Stickynote\_19 Start: 13371, Stop: 14435, Start Num: 31

Candidate Starts for Stickynote\_19:

(Start: 31 @13371 has 20 MA's), (68, 13539), (75, 13563), (85, 13626), (98, 13674), (162, 13968), (163, 13971), (196, 14067), (218, 14163), (228, 14220), (239, 14253), (265, 14385), (266, 14391), (267, 14394), (274, 14427),

Gene: Sukkupi\_31 Start: 17825, Stop: 18892, Start Num: 32

Candidate Starts for Sukkupi\_31:

(Start: 32 @17825 has 136 MA's), (38, 17861), (42, 17879), (48, 17894), (72, 18002), (80, 18059), (187, 18494), (189, 18509), (212, 18590), (216, 18611), (229, 18677), (260, 18815), (265, 18842),

Gene: SuperSulley\_30 Start: 18875, Stop: 19945, Start Num: 32

Candidate Starts for SuperSulley\_30:

(Start: 32 @18875 has 136 MA's), (38, 18911), (42, 18929), (72, 19052), (110, 19217), (148, 19403), (151, 19415), (164, 19478), (172, 19505), (185, 19535), (188, 19556), (189, 19559), (212, 19640), (216, 19661), (229, 19727), (239, 19757), (260, 19868), (265, 19895), (271, 19925), (274, 19937),

Gene: TChen\_7 Start: 5476, Stop: 6522, Start Num: 31

Candidate Starts for TChen\_7:

(Start: 29 @5470 has 19 MA's), (Start: 31 @5476 has 20 MA's), (60, 5605), (61, 5608), (81, 5713), (89, 5737), (107, 5800), (114, 5833), (118, 5848), (127, 5896), (131, 5917), (133, 5929), (135, 5959), (152, 6022), (162, 6070), (181, 6124), (191, 6157), (192, 6163), (195, 6169), (196, 6172), (197, 6181), (223, 6262), (252, 6370), (258, 6400), (271, 6484), (272, 6487),

Gene: TPA4\_8 Start: 6373, Stop: 7398, Start Num: 31

Candidate Starts for TPA4\_8:

(Start: 31 @6373 has 20 MA's), (60, 6502), (61, 6505), (107, 6697), (124, 6775), (158, 6952), (164, 6982), (166, 6988), (169, 6997), (191, 7054), (196, 7069), (223, 7159), (260, 7321), (261, 7327), (268, 7360), (271, 7378), (274, 7390),

Gene: Teal\_13 Start: 15264, Stop: 16463, Start Num: 10

Candidate Starts for Teal\_13:

(Start: 10 @15264 has 76 MA's), (18, 15282), (30, 15348), (36, 15375), (79, 15597), (101, 15672), (123, 15762), (208, 16131), (222, 16191), (235, 16251), (246, 16290), (252, 16311), (256, 16338), (264, 16395), (269, 16416), (273, 16434),

Gene: Teatealatte\_16 Start: 16998, Stop: 18212, Start Num: 10

Candidate Starts for Teatealatte\_16:

(Start: 10 @16998 has 76 MA's), (30, 17094), (Start: 31 @17097 has 20 MA's), (41, 17151), (48, 17169), (57, 17208), (83, 17355), (87, 17367), (109, 17448), (120, 17493), (123, 17508), (137, 17601), (139, 17607), (154, 17682), (159, 17706), (180, 17781), (222, 17952), (246, 18051), (247, 18054), (252, 18072), (269, 18177), (273, 18195), (274, 18201),

Gene: Teech\_16 Start: 16799, Stop: 18013, Start Num: 10

Candidate Starts for Teech\_16:

(Start: 10 @16799 has 76 MA's), (30, 16895), (Start: 31 @16898 has 20 MA's), (41, 16952), (48, 16970), (57, 17009), (83, 17156), (87, 17168), (109, 17249), (120, 17294), (123, 17309), (137, 17402), (139, 17408), (154, 17483), (159, 17507), (180, 17582), (222, 17753), (246, 17852), (247, 17855), (252, 17873), (269, 17978), (273, 17996), (274, 18002),

Gene: Tesla\_39 Start: 15870, Stop: 16940, Start Num: 29

Candidate Starts for Tesla\_39:

(Start: 29 @15870 has 19 MA's), (Start: 32 @15879 has 136 MA's), (34, 15885), (81, 16116), (91, 16146), (105, 16197), (106, 16200), (115, 16239), (161, 16482), (191, 16572), (196, 16587), (206, 16629), (220, 16671), (224, 16695), (228, 16719), (232, 16728), (255, 16815), (266, 16884), (271, 16908),

Gene: ThayneTheZag\_8 Start: 5924, Stop: 6964, Start Num: 32

Candidate Starts for ThayneTheZag\_8:

(Start: 32 @5924 has 136 MA's), (82, 6152), (90, 6176), (107, 6248), (120, 6305), (136, 6410), (143, 6425), (153, 6482), (156, 6488), (162, 6521), (168, 6548), (173, 6566), (191, 6608), (207, 6668), (248, 6818), (255, 6851), (257, 6857), (265, 6914),

Gene: ThetaBob\_7 Start: 5356, Stop: 6402, Start Num: 31

Candidate Starts for ThetaBob\_7:

(Start: 29 @5350 has 19 MA's), (Start: 31 @5356 has 20 MA's), (60, 5485), (61, 5488), (81, 5593), (107, 5680), (114, 5713), (118, 5728), (127, 5776), (131, 5797), (133, 5809), (135, 5839), (152, 5902), (162, 5950), (181, 6004), (191, 6037), (192, 6043), (195, 6049), (196, 6052), (197, 6061), (223, 6142), (258, 6280), (261, 6313), (267, 6343), (271, 6364), (272, 6367),

Gene: Tiff81\_9 Start: 6059, Stop: 7099, Start Num: 32

Candidate Starts for Tiff81\_9:

(Start: 32 @6059 has 136 MA's), (82, 6287), (90, 6311), (120, 6440), (136, 6545), (153, 6617), (161, 6653), (168, 6683), (173, 6701), (191, 6743), (197, 6767), (198, 6770), (205, 6797), (248, 6953), (257, 6992), (262, 7034), (265, 7049),

Gene: Toniann\_35 Start: 14272, Stop: 15300, Start Num: 32

Candidate Starts for Toniann\_35:

(Start: 32 @14272 has 136 MA's), (37, 14296), (84, 14506), (87, 14515), (121, 14659), (127, 14692), (129, 14698), (165, 14884), (191, 14956), (196, 14971), (211, 15028), (220, 15046), (242, 15130), (257, 15193), (271, 15280),

Gene: Toron\_7 Start: 5476, Stop: 6522, Start Num: 31

Candidate Starts for Toron\_7:

(Start: 29 @5470 has 19 MA's), (Start: 31 @5476 has 20 MA's), (60, 5605), (61, 5608), (65, 5623), (81, 5713), (107, 5800), (114, 5833), (118, 5848), (127, 5896), (131, 5917), (133, 5929), (135, 5959), (152, 6022), (162, 6070), (181, 6124), (186, 6136), (191, 6157), (192, 6163), (195, 6169), (196, 6172), (197, 6181), (223, 6262), (245, 6346), (258, 6400), (261, 6433), (267, 6463), (271, 6484), (272, 6487), (275, 6499),

Gene: Towmatter\_16 Start: 10315, Stop: 11364, Start Num: 32

Candidate Starts for Towmatter\_16:

(Start: 32 @10315 has 136 MA's), (43, 10369), (66, 10462), (100, 10612), (127, 10738), (134, 10786), (152, 10870), (161, 10912), (163, 10918), (164, 10930), (196, 11020), (201, 11044), (205, 11059), (214, 11086), (217, 11095), (225, 11134), (234, 11167), (248, 11215), (251, 11227), (257, 11254), (274, 11356),

Gene: Tracker\_29 Start: 17873, Stop: 18943, Start Num: 32

Candidate Starts for Tracker\_29:

(Start: 32 @17873 has 136 MA's), (38, 17909), (40, 17921), (42, 17927), (72, 18050), (80, 18107), (110, 18215), (143, 18368), (161, 18458), (173, 18506), (189, 18557), (212, 18638), (221, 18677), (229, 18725), (239, 18755), (260, 18866), (265, 18893), (273, 18929), (274, 18935),

Gene: Tredge\_16 Start: 16998, Stop: 18212, Start Num: 10

Candidate Starts for Tredge\_16:

(Start: 10 @16998 has 76 MA's), (30, 17094), (Start: 31 @17097 has 20 MA's), (41, 17151), (48, 17169), (57, 17208), (83, 17355), (87, 17367), (109, 17448), (120, 17493), (123, 17508), (137, 17601), (139, 17607), (154, 17682), (159, 17706), (180, 17781), (222, 17952), (246, 18051), (247, 18054), (252, 18072), (269, 18177), (273, 18195), (274, 18201),

Gene: Trogglehumper\_34 Start: 21825, Stop: 23036, Start Num: 9

Candidate Starts for Trogglehumper\_34:

(Start: 9 @21825 has 2 MA's), (15, 21840), (17, 21846), (28, 21915), (36, 21954), (44, 21993), (55, 22029), (59, 22053), (99, 22245), (102, 22251), (113, 22296), (119, 22317), (123, 22338), (175, 22593), (178, 22599), (203, 22680), (246, 22857), (250, 22875), (266, 22974), (269, 22986), (273, 23004),

Gene: Turuncu\_33 Start: 19189, Stop: 20250, Start Num: 32

Candidate Starts for Turuncu\_33:

(Start: 32 @19189 has 136 MA's), (42, 19243), (72, 19366), (80, 19423), (94, 19465), (133, 19639), (181, 19837), (260, 20173), (265, 20200), (266, 20206), (274, 20242),

Gene: VWB\_7 Start: 5635, Stop: 6681, Start Num: 30

Candidate Starts for VWB\_7:

(30, 5635), (50, 5716), (80, 5872), (81, 5875), (126, 6043), (127, 6055), (136, 6115), (140, 6124), (144, 6136), (163, 6226), (165, 6241), (168, 6250), (173, 6268), (179, 6280), (189, 6313), (191, 6316), (200, 6352), (206, 6373), (217, 6403), (274, 6670),

Gene: VasuNzinga\_40 Start: 15454, Stop: 16524, Start Num: 29

Candidate Starts for VasuNzinga\_40:

(Start: 29 @15454 has 19 MA's), (Start: 32 @15463 has 136 MA's), (34, 15469), (81, 15700), (91, 15730), (105, 15781), (106, 15784), (115, 15823), (161, 16066), (191, 16156), (196, 16171), (206, 16213), (220, 16255), (224, 16279), (228, 16303), (232, 16312), (255, 16399), (266, 16468), (271, 16492),

Gene: Vitaenoi\_17 Start: 18915, Stop: 20129, Start Num: 10

Candidate Starts for Vitaenoi\_17:

(4, 18804), (Start: 10 @18915 has 76 MA's), (12, 18921), (30, 19011), (48, 19086), (79, 19260), (83, 19272), (87, 19284), (123, 19425), (133, 19482), (154, 19599), (159, 19623), (180, 19698), (193, 19749), (222, 19869), (246, 19968), (247, 19971), (252, 19989), (269, 20094), (270, 20100), (273, 20112),

Gene: Vopal\_9 Start: 5959, Stop: 6999, Start Num: 32

Candidate Starts for Vopal\_9:

(Start: 32 @5959 has 136 MA's), (82, 6187), (90, 6211), (107, 6283), (120, 6340), (136, 6445), (143, 6460), (152, 6511), (153, 6517), (156, 6523), (168, 6583), (173, 6601), (197, 6667), (220, 6745), (248, 6853), (257, 6892), (262, 6934), (265, 6949),

Gene: Wheezy\_29 Start: 18076, Stop: 19146, Start Num: 32

Candidate Starts for Wheezy\_29:

(Start: 32 @18076 has 136 MA's), (38, 18112), (40, 18124), (42, 18130), (72, 18253), (80, 18310), (110, 18418), (161, 18661), (173, 18709), (189, 18760), (212, 18841), (221, 18880), (229, 18928), (239, 18958), (260, 19069), (265, 19096), (273, 19132), (274, 19138),

Gene: WhoseManz\_31 Start: 15879, Stop: 16946, Start Num: 32

Candidate Starts for WhoseManz\_31:

(Start: 32 @15879 has 136 MA's), (38, 15915), (42, 15933), (72, 16056), (80, 16113), (187, 16548), (189, 16563), (212, 16644), (216, 16665), (229, 16731), (260, 16869), (265, 16896),

Gene: WilliamBoone\_35 Start: 13661, Stop: 14689, Start Num: 32

Candidate Starts for WilliamBoone\_35:

(Start: 32 @13661 has 136 MA's), (37, 13685), (84, 13895), (87, 13904), (121, 14048), (127, 14081), (129, 14087), (165, 14273), (191, 14345), (211, 14417), (220, 14435), (242, 14519), (257, 14582), (271, 14669),

Gene: Windest\_9 Start: 5959, Stop: 6999, Start Num: 32

Candidate Starts for Windest\_9:

(Start: 32 @5959 has 136 MA's), (82, 6187), (90, 6211), (107, 6283), (120, 6340), (134, 6427), (136, 6445), (143, 6460), (152, 6511), (153, 6517), (156, 6523), (168, 6583), (173, 6601), (197, 6667), (220, 6745), (248, 6853), (257, 6892), (262, 6934), (265, 6949),

Gene: Woes\_13 Start: 15816, Stop: 17015, Start Num: 10

Candidate Starts for Woes\_13:

(Start: 10 @15816 has 76 MA's), (18, 15834), (30, 15900), (36, 15927), (79, 16149), (101, 16224), (123, 16314), (208, 16683), (222, 16743), (235, 16803), (246, 16842), (252, 16863), (256, 16890), (264, 16947), (269, 16968), (273, 16986),

Gene: Worcestershire\_16 Start: 14515, Stop: 15714, Start Num: 10

Candidate Starts for Worcestershire\_16:

(Start: 10 @14515 has 76 MA's), (18, 14533), (30, 14599), (48, 14674), (59, 14725), (79, 14848), (109, 14953), (123, 15013), (166, 15235), (222, 15442), (229, 15484), (235, 15502), (246, 15541), (252, 15562), (256, 15589), (264, 15646), (269, 15667), (273, 15685), (274, 15691),

Gene: Wrigley\_7 Start: 5550, Stop: 6590, Start Num: 32

Candidate Starts for Wrigley\_7:

(Start: 32 @5550 has 136 MA's), (40, 5598), (44, 5610), (56, 5646), (93, 5820), (98, 5844), (144, 6054), (155, 6105), (163, 6144), (196, 6243), (205, 6282), (206, 6285), (218, 6318), (223, 6345), (245, 6432), (254, 6474), (260, 6513),

Gene: Yndexa\_31 Start: 17825, Stop: 18892, Start Num: 32

Candidate Starts for Yndexa\_31:

(Start: 32 @17825 has 136 MA's), (38, 17861), (42, 17879), (48, 17894), (72, 18002), (80, 18059), (187, 18494), (189, 18509), (212, 18590), (216, 18611), (229, 18677), (260, 18815), (265, 18842),

Gene: YoungHarleezy\_8 Start: 5900, Stop: 6940, Start Num: 32

Candidate Starts for YoungHarleezy\_8:

(Start: 32 @5900 has 136 MA's), (82, 6128), (90, 6152), (107, 6224), (120, 6281), (136, 6386), (143, 6401), (152, 6452), (153, 6458), (156, 6464), (168, 6524), (173, 6542), (197, 6608), (220, 6686), (248, 6794), (257, 6833), (262, 6875), (265, 6890),

Gene: Yvonnetastic\_33 Start: 16045, Stop: 17094, Start Num: 32

Candidate Starts for Yvonnetastic\_33:

(Start: 32 @16045 has 136 MA's), (36, 16066), (37, 16075), (53, 16132), (63, 16183), (67, 16198), (161, 16642), (163, 16648), (183, 16708), (195, 16747), (242, 16909), (276, 17077),

Gene: Zion\_17 Start: 12559, Stop: 13623, Start Num: 31

Candidate Starts for Zion\_17:

(Start: 31 @12559 has 20 MA's), (68, 12727), (75, 12751), (85, 12814), (98, 12862), (162, 13156), (163, 13159), (172, 13198), (196, 13255), (218, 13351), (228, 13408), (239, 13441), (265, 13573), (267, 13582), (274, 13615),

Gene: Zucker\_8 Start: 5626, Stop: 6645, Start Num: 32

Candidate Starts for Zucker\_8:

(Start: 32 @5626 has 136 MA's), (59, 5743), (64, 5767), (78, 5842), (84, 5869), (97, 5914), (105, 5941), (131, 6061), (152, 6166), (162, 6214), (164, 6229), (184, 6274), (199, 6325), (220, 6382), (228, 6430), (256, 6532), (266, 6601),

Gene: pZL12\_63c Start: 50504, Stop: 49452, Start Num: 32

Candidate Starts for pZL12\_63c:

(Start: 32 @50504 has 136 MA's), (65, 50357), (80, 50276), (95, 50225), (189, 49820), (210, 49751), (224, 49691), (265, 49508),