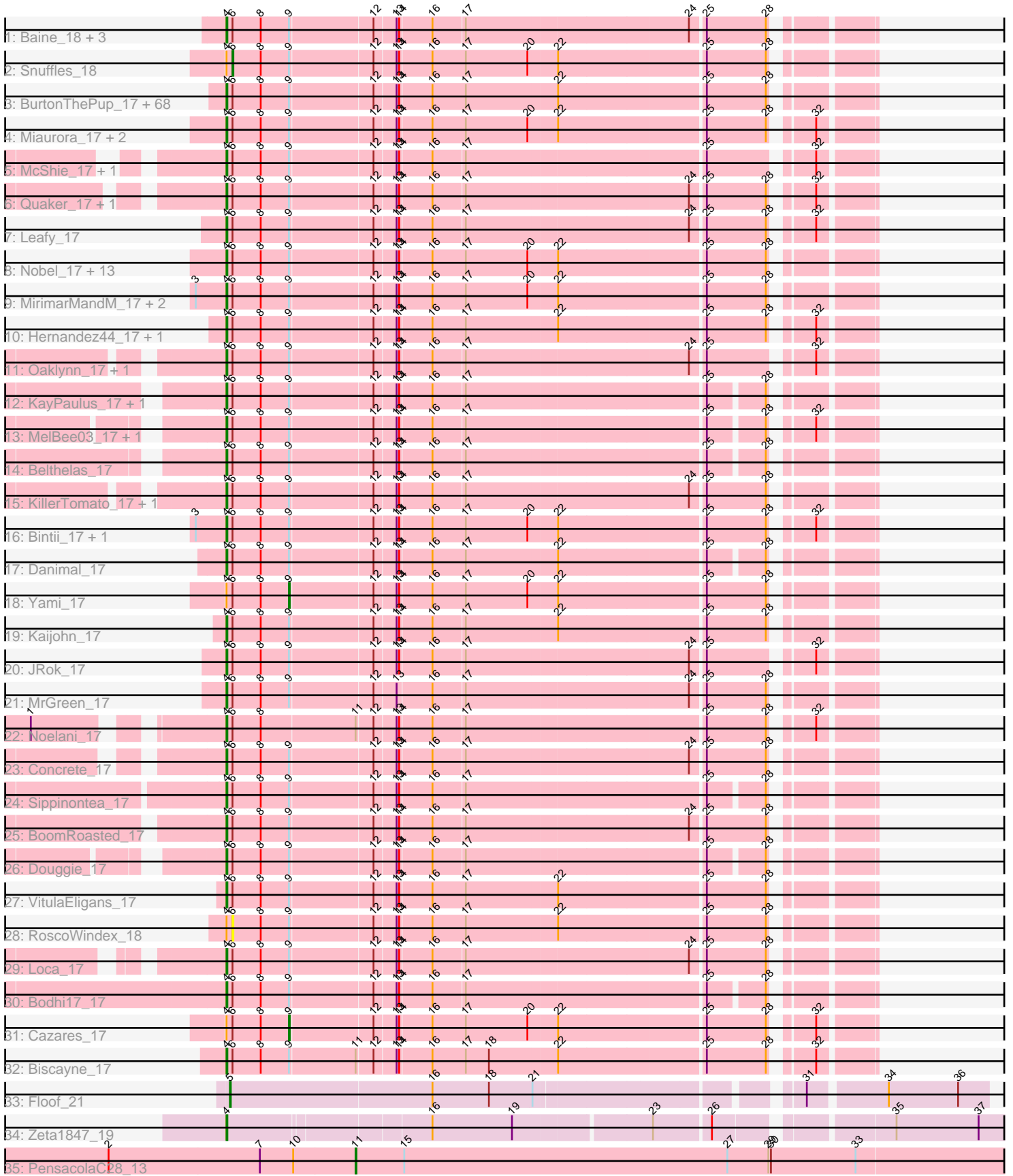


Pham 196367



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 196367 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196367 has 131 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Baine_18, Lola20_17, Anseraureola_17, Cayde6_18
- Track 2 : Snuffles_18
- Track 3 : BurtonThePup_17, MasterPitts_17, JaimeB_17, Octopus_17, Otwor_17, Goobery_17, EdElric_17, Alucard_17, YertPhresh_17, LionelHutz_17, Gabbspett_18, Puddles3_18, Jannah_17, Rhogar_17, Bradley2_17, Horacetta_17, SeaWolves_17, Owens_17, Slentz_17, Erin_17, Rhysand_17, Ciel_17, Jahseh_17, PaoPu_17, NeumannU_17, BinkBonk_17, TimoTea_17, Hulk_17, Chatham_17, Vanisius_17, Aztec_17, SantasSleigh_17, Josuke_17, Picnic_17, Godfather_17, Gardevoir_17, Eightball_17, GoldenBlanche_18, Dooby_17, Scrunchy_17, Danno_17, Charbie_17, Minima_17, LemonPepper_17, ManAs_17, Aries55_17, Jerky_17, KyriosFaba_17, Maneater_17, Gillker_17, Scamander_17, Pondwater_17, Majesty_17, Sage7_17, JoBros_17, BarBear_17, Kojax4_17, Astro16_17, Cheesecake_17, TeddyBoy_17, Avvas_17, LaviMo_17, Yasuo_17, Dongwon_17, Burgy_17, DaftyDuck_17, Sara_17, Witch_17, Yubaba_17
- Track 4 : Miaurora_17, Lunatic_17, Trireme_17
- Track 5 : McShie_17, BrokMonster_17
- Track 6 : Quaker_17, Livingwater_17
- Track 7 : Leafy_17
- Track 8 : Nobel_17, Publix_17, Namsahir_18, Stem_17, PuffyCat_17, Ekko14_17, Bullzi2019_17, TinyTruffula_17, HarperAnne_17, Clownery_17, Elspeth_17, Niffler_17, TomBrady12_17, Slizam_17
- Track 9 : MirimarMandM_17, Upsilon_17, PoRanda_17
- Track 10 : Hernandez44_17, Luxx_17
- Track 11 : Oaklynn_17, Azizam_17
- Track 12 : KayPaulus_17, Wolfpack_17
- Track 13 : MelBee03_17, Kevanna_17
- Track 14 : Belthelas_17
- Track 15 : KillerTomato_17, Bri160_17
- Track 16 : Bintii_17, JooneeDee_17
- Track 17 : Danimal_17
- Track 18 : Yami_17
- Track 19 : Kaijohn_17
- Track 20 : JRok_17
- Track 21 : MrGreen_17
- Track 22 : Noelani_17
- Track 23 : Concrete_17
- Track 24 : Sippinontea_17

- Track 25 : BoomRoasted_17
- Track 26 : Douggie_17
- Track 27 : VitulaEligans_17
- Track 28 : RoscoWindex_18
- Track 29 : Loca_17
- Track 30 : Bodhi17_17
- Track 31 : Cazares_17
- Track 32 : Biscayne_17
- Track 33 : Floof_21
- Track 34 : Zeta1847_19
- Track 35 : PensacolaC28_13

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

The start number called the most often in the published annotations is 4, it was called in 120 of the 125 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alucard_17, Anseraureola_17, Aries55_17, Astro16_17, Avvas_17, Azizam_17, Aztec_17, Baine_18, BarBear_17, Belthelas_17, BinkBonk_17, Bintii_17, Biscayne_17, Bodhi17_17, BoomRoasted_17, Bradley2_17, Bri160_17, BrokMonster_17, Bullzi2019_17, Burgy_17, BurtonThePup_17, Cayde6_18, Charbie_17, Chatham_17, Cheesecake_17, Ciel_17, Clownery_17, Concrete_17, DaftyDuck_17, Danimal_17, Danno_17, Dongwon_17, Dooby_17, Douggie_17, EdElric_17, Eightball_17, Ekko14_17, Elspeth_17, Erin_17, Gabbspett_18, Gardevoir_17, Gillker_17, Godfather_17, GoldenBlanche_18, Goobery_17, HarperAnne_17, Hernandez44_17, Horacetta_17, Hulk_17, JRok_17, Jahseh_17, JaimeB_17, Jannah_17, Jerky_17, JoBros_17, JooneeDee_17, Josuke_17, Kaijohn_17, KayPaulus_17, Kevanna_17, KillerTomato_17, Kojax4_17, KyriosFaba_17, LaviMo_17, Leafy_17, LemonPepper_17, LionelHutz_17, Livingwater_17, Loca_17, Lola20_17, Lunatic_17, Luxx_17, Majesty_17, ManAs_17, Maneater_17, MasterPitts_17, McShie_17, MelBee03_17, Miaurora_17, Minima_17, MirimarMandM_17, MrGreen_17, Namsahir_18, NeumannU_17, Niffler_17, Nobel_17, Noelani_17, Oaklynn_17, Octopus_17, Otwor_17, Owens_17, PaoPu_17, Picnic_17, PoRanda_17, Pondwater_17, Publix_17, Puddles3_18, PuffyCat_17, Quaker_17, Rhogar_17, Rhysand_17, Sage7_17, SantasSleigh_17, Sara_17, Scamander_17, Scrunchy_17, SeaWolves_17, Sippinontea_17, Slentz_17, Slizam_17, Stem_17, TeddyBoy_17, TimoTea_17, TinyTruffula_17, TomBrady12_17, Trireme_17, Upsilon_17, Vanisius_17, VitulaEligans_17, Witch_17, Wolfpack_17, Yasuo_17, YertPhresh_17, Yubaba_17, Zeta1847_19,

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

- Cazares_17, RoscoWindex_18, Snuffles_18, Yami_17,

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

- Floof_21, PensacolaC28_13,

Summary by start number:

Start 4:

- Found in 129 of 131 (98.5%) of genes in pham
- Manual Annotations of this start: 120 of 125
- Called 96.9% of time when present
- Phage (with cluster) where this start called: Alucard_17 (EE), Anseraureola_17 (EE), Aries55_17 (EE), Astro16_17 (EE), Avvas_17 (EE), Azizam_17 (EE), Aztec_17 (EE), Baine_18 (EE), BarBear_17 (EE), Belthelas_17 (EE), BinkBonk_17 (EE), Bintii_17 (EE), Biscayne_17 (EE), Bodhi17_17 (EE), BoomRoasted_17 (EE), Bradley2_17 (EE), Bri160_17 (EE), BrokMonster_17 (EE), Bullzi2019_17 (EE), Burgy_17 (EE), BurtonThePup_17 (EE), Cayde6_18 (EE), Charbie_17 (EE), Chatham_17 (EE), Cheesecake_17 (EE), Ciel_17 (EE), Clownery_17 (EE), Concrete_17 (EE), DaftyDuck_17 (EE), Danimal_17 (EE), Danno_17 (EE), Dongwon_17 (EE), Dooby_17 (EE), Duggie_17 (EE), EdElric_17 (EE), Eightball_17 (EE), Ekko14_17 (EE), Elspeth_17 (EE), Erin_17 (EE), Gabbspett_18 (EE), Gardevoir_17 (EE), Gillker_17 (EE), Godfather_17 (EE), GoldenBlanche_18 (EE), Goobery_17 (EE), HarperAnne_17 (EE), Hernandez44_17 (EE), Horacetta_17 (EE), Hulk_17 (EE), JRok_17 (EE), Jahseh_17 (EE), JaimeB_17 (EE), Jannah_17 (EE), Jerky_17 (EE), JoBros_17 (EE), JooneeDee_17 (EE), Josuke_17 (EE), Kaijohn_17 (EE), KayPaulus_17 (EE), Kevanna_17 (EE), KillerTomato_17 (EE), Kojax4_17 (EE), KyriosFaba_17 (EE), LaviMo_17 (EE), Leafy_17 (EE), LemonPepper_17 (EE), LionelHutz_17 (EE), Livingwater_17 (EE), Loca_17 (EE), Lola20_17 (EE), Lunatic_17 (EE), Luxx_17 (EE), Majesty_17 (EE), ManAs_17 (EE), Maneater_17 (EE), MasterPitts_17 (EE), McShie_17 (EE), MelBee03_17 (EE), Miaurora_17 (EE), Minima_17 (EE), MirimarMandM_17 (EE), MrGreen_17 (EE), Namsahir_18 (EE), NeumannU_17 (EE), Niffler_17 (EE), Nobel_17 (EE), Noelani_17 (EE), Oaklynn_17 (EE), Octopus_17 (EE), Otwor_17 (EE), Owens_17 (EE), PaoPu_17 (EE), Picnic_17 (EE), PoRanda_17 (EE), Pondwater_17 (EE), Publix_17 (EE), Puddles3_18 (EE), PuffyCat_17 (EE), Quaker_17 (EE), Rhogar_17 (EE), Rhysand_17 (EE), Sage7_17 (EE), SantasSleigh_17 (EE), Sara_17 (EE), Scamander_17 (EE), Scrunchy_17 (EE), SeaWolves_17 (EE), Sippinontea_17 (EE), Slentz_17 (EE), Slizam_17 (EE), Stem_17 (EE), TeddyBoy_17 (EE), TimoTea_17 (EE), TinyTruffula_17 (EE), TomBrady12_17 (EE), Trireme_17 (EE), Upsilon_17 (EE), Vanisius_17 (EE), VitulaEligans_17 (EE), Witch_17 (EE), Wolfpack_17 (EE), Yasuo_17 (EE), YertPhresh_17 (EE), Yubaba_17 (EE), Zeta1847_19 (EH),

Start 5:

- Found in 1 of 131 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 125
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Floof_21 (EH),

Start 6:

- Found in 128 of 131 (97.7%) of genes in pham
- Manual Annotations of this start: 1 of 125
- Called 1.6% of time when present
- Phage (with cluster) where this start called: RoscoWindex_18 (EE), Snuffles_18 (EE),

Start 9:

- Found in 127 of 131 (96.9%) of genes in pham
- Manual Annotations of this start: 2 of 125
- Called 1.6% of time when present
- Phage (with cluster) where this start called: Cazares_17 (EE), Yami_17 (EE),

Start 11:

- Found in 3 of 131 (2.3%) of genes in pham
- Manual Annotations of this start: 1 of 125
- Called 33.3% of time when present
- Phage (with cluster) where this start called: PensacolaC28_13 (singleton),

Summary by clusters:

There are 3 clusters represented in this pham: EE, singleton, EH,

Info for manual annotations of cluster EE:

- Start number 4 was manually annotated 119 times for cluster EE.
- Start number 6 was manually annotated 1 time for cluster EE.
- Start number 9 was manually annotated 2 times for cluster EE.

Info for manual annotations of cluster EH:

- Start number 4 was manually annotated 1 time for cluster EH.
- Start number 5 was manually annotated 1 time for cluster EH.

Gene Information:

Gene: Alucard_17 Start: 13564, Stop: 14250, Start Num: 4

Candidate Starts for Alucard_17:

(Start: 4 @13564 has 120 MA's), (Start: 6 @13570 has 1 MA's), (8, 13603), (Start: 9 @13636 has 2 MA's), (12, 13729), (13, 13753), (14, 13756), (16, 13792), (17, 13831), (22, 13933), (25, 14095), (28, 14155),

Gene: Anseraureola_17 Start: 13620, Stop: 14312, Start Num: 4

Candidate Starts for Anseraureola_17:

(Start: 4 @13620 has 120 MA's), (Start: 6 @13626 has 1 MA's), (8, 13659), (Start: 9 @13692 has 2 MA's), (12, 13785), (13, 13809), (14, 13812), (16, 13848), (17, 13884), (24, 14133), (25, 14148), (28, 14217),

Gene: Aries55_17 Start: 13641, Stop: 14336, Start Num: 4

Candidate Starts for Aries55_17:

(Start: 4 @13641 has 120 MA's), (Start: 6 @13647 has 1 MA's), (8, 13680), (Start: 9 @13713 has 2 MA's), (12, 13806), (13, 13830), (14, 13833), (16, 13869), (17, 13908), (22, 14010), (25, 14172), (28, 14241),

Gene: Astro16_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for Astro16_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: Avvas_17 Start: 13641, Stop: 14336, Start Num: 4

Candidate Starts for Avvas_17:

(Start: 4 @13641 has 120 MA's), (Start: 6 @13647 has 1 MA's), (8, 13680), (Start: 9 @13713 has 2 MA's), (12, 13806), (13, 13830), (14, 13833), (16, 13869), (17, 13908), (22, 14010), (25, 14172), (28, 14241),

Gene: Azizam_17 Start: 13568, Stop: 14260, Start Num: 4

Candidate Starts for Azizam_17:

(Start: 4 @13568 has 120 MA's), (Start: 6 @13574 has 1 MA's), (8, 13607), (Start: 9 @13640 has 2 MA's), (12, 13733), (13, 13757), (14, 13760), (16, 13796), (17, 13832), (24, 14081), (25, 14096), (32, 14201),

Gene: Aztec_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for Aztec_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Baine_18 Start: 13583, Stop: 14275, Start Num: 4

Candidate Starts for Baine_18:

(Start: 4 @13583 has 120 MA's), (Start: 6 @13589 has 1 MA's), (8, 13622), (Start: 9 @13655 has 2 MA's), (12, 13748), (13, 13772), (14, 13775), (16, 13811), (17, 13847), (24, 14096), (25, 14111), (28, 14180),

Gene: BarBear_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for BarBear_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: Belthelas_17 Start: 13694, Stop: 14377, Start Num: 4

Candidate Starts for Belthelas_17:

(Start: 4 @13694 has 120 MA's), (Start: 6 @13700 has 1 MA's), (8, 13733), (Start: 9 @13766 has 2 MA's), (12, 13859), (13, 13883), (14, 13886), (16, 13922), (17, 13958), (25, 14222), (28, 14282),

Gene: BinkBonk_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for BinkBonk_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: Bintii_17 Start: 13650, Stop: 14345, Start Num: 4

Candidate Starts for Bintii_17:

(3, 13617), (Start: 4 @13650 has 120 MA's), (Start: 6 @13656 has 1 MA's), (8, 13689), (Start: 9 @13722 has 2 MA's), (12, 13815), (13, 13839), (14, 13842), (16, 13878), (17, 13917), (20, 13989), (22, 14019), (25, 14181), (28, 14250), (32, 14286),

Gene: Biscayne_17 Start: 13696, Stop: 14391, Start Num: 4

Candidate Starts for Biscayne_17:

(Start: 4 @13696 has 120 MA's), (Start: 6 @13702 has 1 MA's), (8, 13735), (Start: 9 @13768 has 2 MA's), (Start: 11 @13843 has 1 MA's), (12, 13861), (13, 13885), (14, 13888), (16, 13924), (17, 13963), (18, 13990), (22, 14065), (25, 14227), (28, 14296), (32, 14332),

Gene: Bodhi17_17 Start: 13665, Stop: 14348, Start Num: 4

Candidate Starts for Bodhi17_17:

(Start: 4 @13665 has 120 MA's), (Start: 6 @13671 has 1 MA's), (8, 13704), (Start: 9 @13737 has 2 MA's), (12, 13830), (13, 13854), (14, 13857), (16, 13893), (17, 13929), (25, 14193), (28, 14253),

Gene: BoomRoasted_17 Start: 13633, Stop: 14325, Start Num: 4

Candidate Starts for BoomRoasted_17:

(Start: 4 @13633 has 120 MA's), (Start: 6 @13639 has 1 MA's), (8, 13672), (Start: 9 @13705 has 2 MA's), (12, 13798), (13, 13822), (14, 13825), (16, 13861), (17, 13897), (24, 14146), (25, 14161), (28, 14230),

Gene: Bradley2_17 Start: 13562, Stop: 14248, Start Num: 4

Candidate Starts for Bradley2_17:

(Start: 4 @13562 has 120 MA's), (Start: 6 @13568 has 1 MA's), (8, 13601), (Start: 9 @13634 has 2 MA's), (12, 13727), (13, 13751), (14, 13754), (16, 13790), (17, 13829), (22, 13931), (25, 14093), (28, 14153),

Gene: Bri160_17 Start: 13620, Stop: 14312, Start Num: 4

Candidate Starts for Bri160_17:

(Start: 4 @13620 has 120 MA's), (Start: 6 @13626 has 1 MA's), (8, 13659), (Start: 9 @13692 has 2 MA's), (12, 13785), (13, 13809), (14, 13812), (16, 13848), (17, 13884), (24, 14133), (25, 14148), (28, 14217),

Gene: BrokMonster_17 Start: 13617, Stop: 14309, Start Num: 4

Candidate Starts for BrokMonster_17:

(Start: 4 @13617 has 120 MA's), (Start: 6 @13623 has 1 MA's), (8, 13656), (Start: 9 @13689 has 2 MA's), (12, 13782), (13, 13806), (14, 13809), (16, 13845), (17, 13881), (25, 14145), (32, 14250),

Gene: Bullzi2019_17 Start: 13135, Stop: 13830, Start Num: 4

Candidate Starts for Bullzi2019_17:

(Start: 4 @13135 has 120 MA's), (Start: 6 @13141 has 1 MA's), (8, 13174), (Start: 9 @13207 has 2 MA's), (12, 13300), (13, 13324), (14, 13327), (16, 13363), (17, 13402), (20, 13474), (22, 13504), (25, 13666), (28, 13735),

Gene: Burgy_17 Start: 13641, Stop: 14336, Start Num: 4

Candidate Starts for Burgy_17:

(Start: 4 @13641 has 120 MA's), (Start: 6 @13647 has 1 MA's), (8, 13680), (Start: 9 @13713 has 2 MA's), (12, 13806), (13, 13830), (14, 13833), (16, 13869), (17, 13908), (22, 14010), (25, 14172), (28, 14241),

Gene: BurtonThePup_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for BurtonThePup_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: Cayde6_18 Start: 13583, Stop: 14275, Start Num: 4

Candidate Starts for Cayde6_18:

(Start: 4 @13583 has 120 MA's), (Start: 6 @13589 has 1 MA's), (8, 13622), (Start: 9 @13655 has 2 MA's), (12, 13748), (13, 13772), (14, 13775), (16, 13811), (17, 13847), (24, 14096), (25, 14111), (28, 14180),

Gene: Cazares_17 Start: 13177, Stop: 13800, Start Num: 9

Candidate Starts for Cazares_17:

(Start: 4 @13105 has 120 MA's), (Start: 6 @13111 has 1 MA's), (8, 13144), (Start: 9 @13177 has 2 MA's), (12, 13270), (13, 13294), (14, 13297), (16, 13333), (17, 13372), (20, 13444), (22, 13474), (25, 13636), (28, 13705), (32, 13741),

Gene: Charbie_17 Start: 13618, Stop: 14313, Start Num: 4

Candidate Starts for Charbie_17:

(Start: 4 @13618 has 120 MA's), (Start: 6 @13624 has 1 MA's), (8, 13657), (Start: 9 @13690 has 2 MA's), (12, 13783), (13, 13807), (14, 13810), (16, 13846), (17, 13885), (22, 13987), (25, 14149), (28, 14218),

Gene: Chatham_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for Chatham_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Cheesecake_17 Start: 13642, Stop: 14337, Start Num: 4

Candidate Starts for Cheesecake_17:

(Start: 4 @13642 has 120 MA's), (Start: 6 @13648 has 1 MA's), (8, 13681), (Start: 9 @13714 has 2 MA's), (12, 13807), (13, 13831), (14, 13834), (16, 13870), (17, 13909), (22, 14011), (25, 14173), (28, 14242),

Gene: Ciel_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for Ciel_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: Clownery_17 Start: 13222, Stop: 13917, Start Num: 4

Candidate Starts for Clownery_17:

(Start: 4 @13222 has 120 MA's), (Start: 6 @13228 has 1 MA's), (8, 13261), (Start: 9 @13294 has 2 MA's), (12, 13387), (13, 13411), (14, 13414), (16, 13450), (17, 13489), (20, 13561), (22, 13591), (25, 13753), (28, 13822),

Gene: Concrete_17 Start: 13610, Stop: 14302, Start Num: 4

Candidate Starts for Concrete_17:

(Start: 4 @13610 has 120 MA's), (Start: 6 @13616 has 1 MA's), (8, 13649), (Start: 9 @13682 has 2 MA's), (12, 13775), (13, 13799), (14, 13802), (16, 13838), (17, 13874), (24, 14123), (25, 14138), (28, 14207),

Gene: DaftyDuck_17 Start: 13572, Stop: 14267, Start Num: 4

Candidate Starts for DaftyDuck_17:

(Start: 4 @13572 has 120 MA's), (Start: 6 @13578 has 1 MA's), (8, 13611), (Start: 9 @13644 has 2 MA's), (12, 13737), (13, 13761), (14, 13764), (16, 13800), (17, 13839), (22, 13941), (25, 14103), (28, 14172),

Gene: Danimal_17 Start: 13565, Stop: 14251, Start Num: 4

Candidate Starts for Danimal_17:

(Start: 4 @13565 has 120 MA's), (Start: 6 @13571 has 1 MA's), (8, 13604), (Start: 9 @13637 has 2 MA's), (12, 13730), (13, 13754), (14, 13757), (16, 13793), (17, 13832), (22, 13934), (25, 14096), (28, 14156),

Gene: Danno_17 Start: 13641, Stop: 14336, Start Num: 4

Candidate Starts for Danno_17:

(Start: 4 @13641 has 120 MA's), (Start: 6 @13647 has 1 MA's), (8, 13680), (Start: 9 @13713 has 2 MA's), (12, 13806), (13, 13830), (14, 13833), (16, 13869), (17, 13908), (22, 14010), (25, 14172), (28, 14241),

Gene: Dongwon_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for Dongwon_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Dooby_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for Dooby_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Douggie_17 Start: 13624, Stop: 14307, Start Num: 4

Candidate Starts for Douggie_17:

(Start: 4 @13624 has 120 MA's), (Start: 6 @13630 has 1 MA's), (8, 13663), (Start: 9 @13696 has 2 MA's), (12, 13789), (13, 13813), (14, 13816), (16, 13852), (17, 13888), (25, 14152), (28, 14212),

Gene: EdElric_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for EdElric_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Eightball_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for Eightball_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: Ekko14_17 Start: 13103, Stop: 13798, Start Num: 4

Candidate Starts for Ekko14_17:

(Start: 4 @13103 has 120 MA's), (Start: 6 @13109 has 1 MA's), (8, 13142), (Start: 9 @13175 has 2 MA's), (12, 13268), (13, 13292), (14, 13295), (16, 13331), (17, 13370), (20, 13442), (22, 13472), (25, 13634), (28, 13703),

Gene: Elspeth_17 Start: 13103, Stop: 13798, Start Num: 4

Candidate Starts for Elspeth_17:

(Start: 4 @13103 has 120 MA's), (Start: 6 @13109 has 1 MA's), (8, 13142), (Start: 9 @13175 has 2 MA's), (12, 13268), (13, 13292), (14, 13295), (16, 13331), (17, 13370), (20, 13442), (22, 13472), (25, 13634), (28, 13703),

Gene: Erin_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for Erin_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Floof_21 Start: 17890, Stop: 18708, Start Num: 5

Candidate Starts for Floof_21:

(Start: 5 @17890 has 1 MA's), (16, 18124), (18, 18190), (21, 18238), (31, 18508), (34, 18592), (36, 18673),

Gene: Gabbspett_18 Start: 13667, Stop: 14362, Start Num: 4

Candidate Starts for Gabbspett_18:

(Start: 4 @13667 has 120 MA's), (Start: 6 @13673 has 1 MA's), (8, 13706), (Start: 9 @13739 has 2 MA's), (12, 13832), (13, 13856), (14, 13859), (16, 13895), (17, 13934), (22, 14036), (25, 14198), (28, 14267),

Gene: Gardevoir_17 Start: 13597, Stop: 14283, Start Num: 4

Candidate Starts for Gardevoir_17:

(Start: 4 @13597 has 120 MA's), (Start: 6 @13603 has 1 MA's), (8, 13636), (Start: 9 @13669 has 2 MA's), (12, 13762), (13, 13786), (14, 13789), (16, 13825), (17, 13864), (22, 13966), (25, 14128), (28, 14188),

Gene: Gillker_17 Start: 13562, Stop: 14248, Start Num: 4

Candidate Starts for Gillker_17:

(Start: 4 @13562 has 120 MA's), (Start: 6 @13568 has 1 MA's), (8, 13601), (Start: 9 @13634 has 2 MA's), (12, 13727), (13, 13751), (14, 13754), (16, 13790), (17, 13829), (22, 13931), (25, 14093), (28, 14153),

Gene: Godfather_17 Start: 13641, Stop: 14336, Start Num: 4

Candidate Starts for Godfather_17:

(Start: 4 @13641 has 120 MA's), (Start: 6 @13647 has 1 MA's), (8, 13680), (Start: 9 @13713 has 2 MA's), (12, 13806), (13, 13830), (14, 13833), (16, 13869), (17, 13908), (22, 14010), (25, 14172), (28, 14241),

Gene: GoldenBlanche_18 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for GoldenBlanche_18:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Goobery_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for Goobery_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: HarperAnne_17 Start: 13102, Stop: 13797, Start Num: 4

Candidate Starts for HarperAnne_17:

(Start: 4 @13102 has 120 MA's), (Start: 6 @13108 has 1 MA's), (8, 13141), (Start: 9 @13174 has 2 MA's), (12, 13267), (13, 13291), (14, 13294), (16, 13330), (17, 13369), (20, 13441), (22, 13471), (25, 13633), (28, 13702),

Gene: Hernandez44_17 Start: 13667, Stop: 14362, Start Num: 4

Candidate Starts for Hernandez44_17:

(Start: 4 @13667 has 120 MA's), (Start: 6 @13673 has 1 MA's), (8, 13706), (Start: 9 @13739 has 2 MA's), (12, 13832), (13, 13856), (14, 13859), (16, 13895), (17, 13934), (22, 14036), (25, 14198), (28, 14267), (32, 14303),

Gene: Horacetta_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for Horacetta_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Hulk_17 Start: 13579, Stop: 14274, Start Num: 4

Candidate Starts for Hulk_17:

(Start: 4 @13579 has 120 MA's), (Start: 6 @13585 has 1 MA's), (8, 13618), (Start: 9 @13651 has 2 MA's), (12, 13744), (13, 13768), (14, 13771), (16, 13807), (17, 13846), (22, 13948), (25, 14110), (28, 14179),

Gene: JRok_17 Start: 13566, Stop: 14258, Start Num: 4

Candidate Starts for JRok_17:

(Start: 4 @13566 has 120 MA's), (Start: 6 @13572 has 1 MA's), (8, 13605), (Start: 9 @13638 has 2 MA's), (12, 13731), (13, 13755), (14, 13758), (16, 13794), (17, 13830), (24, 14079), (25, 14094), (32, 14199),

Gene: Jahseh_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for Jahseh_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: JaimeB_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for JaimeB_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: Jannah_17 Start: 13630, Stop: 14316, Start Num: 4

Candidate Starts for Jannah_17:

(Start: 4 @13630 has 120 MA's), (Start: 6 @13636 has 1 MA's), (8, 13669), (Start: 9 @13702 has 2 MA's), (12, 13795), (13, 13819), (14, 13822), (16, 13858), (17, 13897), (22, 13999), (25, 14161), (28, 14221),

Gene: Jerky_17 Start: 13716, Stop: 14411, Start Num: 4

Candidate Starts for Jerky_17:

(Start: 4 @13716 has 120 MA's), (Start: 6 @13722 has 1 MA's), (8, 13755), (Start: 9 @13788 has 2 MA's), (12, 13881), (13, 13905), (14, 13908), (16, 13944), (17, 13983), (22, 14085), (25, 14247), (28, 14316),

Gene: JoBros_17 Start: 13564, Stop: 14250, Start Num: 4

Candidate Starts for JoBros_17:

(Start: 4 @13564 has 120 MA's), (Start: 6 @13570 has 1 MA's), (8, 13603), (Start: 9 @13636 has 2 MA's), (12, 13729), (13, 13753), (14, 13756), (16, 13792), (17, 13831), (22, 13933), (25, 14095), (28, 14155),

Gene: JooneeDee_17 Start: 13650, Stop: 14345, Start Num: 4

Candidate Starts for JooneeDee_17:

(3, 13617), (Start: 4 @13650 has 120 MA's), (Start: 6 @13656 has 1 MA's), (8, 13689), (Start: 9 @13722 has 2 MA's), (12, 13815), (13, 13839), (14, 13842), (16, 13878), (17, 13917), (20, 13989), (22, 14019), (25, 14181), (28, 14250), (32, 14286),

Gene: Josuke_17 Start: 13642, Stop: 14337, Start Num: 4

Candidate Starts for Josuke_17:

(Start: 4 @13642 has 120 MA's), (Start: 6 @13648 has 1 MA's), (8, 13681), (Start: 9 @13714 has 2 MA's), (12, 13807), (13, 13831), (14, 13834), (16, 13870), (17, 13909), (22, 14011), (25, 14173), (28, 14242),

Gene: Kaijohn_17 Start: 13601, Stop: 14293, Start Num: 4

Candidate Starts for Kaijohn_17:

(Start: 4 @13601 has 120 MA's), (Start: 6 @13607 has 1 MA's), (8, 13640), (Start: 9 @13673 has 2 MA's), (12, 13766), (13, 13790), (14, 13793), (16, 13829), (17, 13865), (22, 13967), (25, 14129), (28, 14198),

Gene: KayPaulus_17 Start: 13638, Stop: 14321, Start Num: 4

Candidate Starts for KayPaulus_17:

(Start: 4 @13638 has 120 MA's), (Start: 6 @13644 has 1 MA's), (8, 13677), (Start: 9 @13710 has 2 MA's), (12, 13803), (13, 13827), (14, 13830), (16, 13866), (17, 13902), (25, 14166), (28, 14226),

Gene: Kevanna_17 Start: 13627, Stop: 14310, Start Num: 4

Candidate Starts for Kevanna_17:

(Start: 4 @13627 has 120 MA's), (Start: 6 @13633 has 1 MA's), (8, 13666), (Start: 9 @13699 has 2 MA's), (12, 13792), (13, 13816), (14, 13819), (16, 13855), (17, 13891), (25, 14155), (28, 14215), (32, 14251),

Gene: KillerTomato_17 Start: 13620, Stop: 14312, Start Num: 4

Candidate Starts for KillerTomato_17:

(Start: 4 @13620 has 120 MA's), (Start: 6 @13626 has 1 MA's), (8, 13659), (Start: 9 @13692 has 2 MA's), (12, 13785), (13, 13809), (14, 13812), (16, 13848), (17, 13884), (24, 14133), (25, 14148), (28, 14217),

Gene: Kojax4_17 Start: 13641, Stop: 14336, Start Num: 4

Candidate Starts for Kojax4_17:

(Start: 4 @13641 has 120 MA's), (Start: 6 @13647 has 1 MA's), (8, 13680), (Start: 9 @13713 has 2 MA's), (12, 13806), (13, 13830), (14, 13833), (16, 13869), (17, 13908), (22, 14010), (25, 14172), (28, 14241),

Gene: KyriosFaba_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for KyriosFaba_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: LaviMo_17 Start: 13642, Stop: 14337, Start Num: 4

Candidate Starts for LaviMo_17:

(Start: 4 @13642 has 120 MA's), (Start: 6 @13648 has 1 MA's), (8, 13681), (Start: 9 @13714 has 2 MA's), (12, 13807), (13, 13831), (14, 13834), (16, 13870), (17, 13909), (22, 14011), (25, 14173), (28, 14242),

Gene: Leafy_17 Start: 13581, Stop: 14273, Start Num: 4

Candidate Starts for Leafy_17:

(Start: 4 @13581 has 120 MA's), (Start: 6 @13587 has 1 MA's), (8, 13620), (Start: 9 @13653 has 2 MA's), (12, 13746), (13, 13770), (14, 13773), (16, 13809), (17, 13845), (24, 14094), (25, 14109), (28, 14178), (32, 14214),

Gene: LemonPepper_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for LemonPepper_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: LionelHutz_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for LionelHutz_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: Livingwater_17 Start: 13624, Stop: 14316, Start Num: 4

Candidate Starts for Livingwater_17:

(Start: 4 @13624 has 120 MA's), (Start: 6 @13630 has 1 MA's), (8, 13663), (Start: 9 @13696 has 2 MA's), (12, 13789), (13, 13813), (14, 13816), (16, 13852), (17, 13888), (24, 14137), (25, 14152), (28, 14221), (32, 14257),

Gene: Loca_17 Start: 13648, Stop: 14340, Start Num: 4

Candidate Starts for Loca_17:

(Start: 4 @13648 has 120 MA's), (Start: 6 @13654 has 1 MA's), (8, 13687), (Start: 9 @13720 has 2 MA's), (12, 13813), (13, 13837), (14, 13840), (16, 13876), (17, 13912), (24, 14161), (25, 14176), (28, 14245),

Gene: Lola20_17 Start: 13583, Stop: 14275, Start Num: 4

Candidate Starts for Lola20_17:

(Start: 4 @13583 has 120 MA's), (Start: 6 @13589 has 1 MA's), (8, 13622), (Start: 9 @13655 has 2 MA's), (12, 13748), (13, 13772), (14, 13775), (16, 13811), (17, 13847), (24, 14096), (25, 14111), (28, 14180),

Gene: Lunatic_17 Start: 13105, Stop: 13800, Start Num: 4

Candidate Starts for Lunatic_17:

(Start: 4 @13105 has 120 MA's), (Start: 6 @13111 has 1 MA's), (8, 13144), (Start: 9 @13177 has 2 MA's), (12, 13270), (13, 13294), (14, 13297), (16, 13333), (17, 13372), (20, 13444), (22, 13474), (25, 13636), (28, 13705), (32, 13741),

Gene: Luxx_17 Start: 13653, Stop: 14348, Start Num: 4

Candidate Starts for Luxx_17:

(Start: 4 @13653 has 120 MA's), (Start: 6 @13659 has 1 MA's), (8, 13692), (Start: 9 @13725 has 2 MA's), (12, 13818), (13, 13842), (14, 13845), (16, 13881), (17, 13920), (22, 14022), (25, 14184), (28, 14253), (32, 14289),

Gene: Majesty_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for Majesty_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: ManAs_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for ManAs_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Maneater_17 Start: 13617, Stop: 14312, Start Num: 4

Candidate Starts for Maneater_17:

(Start: 4 @13617 has 120 MA's), (Start: 6 @13623 has 1 MA's), (8, 13656), (Start: 9 @13689 has 2 MA's), (12, 13782), (13, 13806), (14, 13809), (16, 13845), (17, 13884), (22, 13986), (25, 14148), (28,

14217),

Gene: MasterPitts_17 Start: 13572, Stop: 14267, Start Num: 4

Candidate Starts for MasterPitts_17:

(Start: 4 @13572 has 120 MA's), (Start: 6 @13578 has 1 MA's), (8, 13611), (Start: 9 @13644 has 2 MA's), (12, 13737), (13, 13761), (14, 13764), (16, 13800), (17, 13839), (22, 13941), (25, 14103), (28, 14172),

Gene: McShie_17 Start: 13618, Stop: 14310, Start Num: 4

Candidate Starts for McShie_17:

(Start: 4 @13618 has 120 MA's), (Start: 6 @13624 has 1 MA's), (8, 13657), (Start: 9 @13690 has 2 MA's), (12, 13783), (13, 13807), (14, 13810), (16, 13846), (17, 13882), (25, 14146), (32, 14251),

Gene: MelBee03_17 Start: 13627, Stop: 14310, Start Num: 4

Candidate Starts for MelBee03_17:

(Start: 4 @13627 has 120 MA's), (Start: 6 @13633 has 1 MA's), (8, 13666), (Start: 9 @13699 has 2 MA's), (12, 13792), (13, 13816), (14, 13819), (16, 13855), (17, 13891), (25, 14155), (28, 14215), (32, 14251),

Gene: Miaurora_17 Start: 13222, Stop: 13917, Start Num: 4

Candidate Starts for Miaurora_17:

(Start: 4 @13222 has 120 MA's), (Start: 6 @13228 has 1 MA's), (8, 13261), (Start: 9 @13294 has 2 MA's), (12, 13387), (13, 13411), (14, 13414), (16, 13450), (17, 13489), (20, 13561), (22, 13591), (25, 13753), (28, 13822), (32, 13858),

Gene: Minima_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for Minima_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: MirimarMandM_17 Start: 13693, Stop: 14388, Start Num: 4

Candidate Starts for MirimarMandM_17:

(3, 13660), (Start: 4 @13693 has 120 MA's), (Start: 6 @13699 has 1 MA's), (8, 13732), (Start: 9 @13765 has 2 MA's), (12, 13858), (13, 13882), (14, 13885), (16, 13921), (17, 13960), (20, 14032), (22, 14062), (25, 14224), (28, 14293),

Gene: MrGreen_17 Start: 13591, Stop: 14283, Start Num: 4

Candidate Starts for MrGreen_17:

(Start: 4 @13591 has 120 MA's), (Start: 6 @13597 has 1 MA's), (8, 13630), (Start: 9 @13663 has 2 MA's), (12, 13756), (13, 13780), (16, 13819), (17, 13855), (24, 14104), (25, 14119), (28, 14188),

Gene: Namsahir_18 Start: 13177, Stop: 13872, Start Num: 4

Candidate Starts for Namsahir_18:

(Start: 4 @13177 has 120 MA's), (Start: 6 @13183 has 1 MA's), (8, 13216), (Start: 9 @13249 has 2 MA's), (12, 13342), (13, 13366), (14, 13369), (16, 13405), (17, 13444), (20, 13516), (22, 13546), (25, 13708), (28, 13777),

Gene: NeumannU_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for NeumannU_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: Niffler_17 Start: 13195, Stop: 13890, Start Num: 4

Candidate Starts for Niffler_17:

(Start: 4 @13195 has 120 MA's), (Start: 6 @13201 has 1 MA's), (8, 13234), (Start: 9 @13267 has 2 MA's), (12, 13360), (13, 13384), (14, 13387), (16, 13423), (17, 13462), (20, 13534), (22, 13564), (25, 13726), (28, 13795),

Gene: Nobel_17 Start: 13222, Stop: 13917, Start Num: 4

Candidate Starts for Nobel_17:

(Start: 4 @13222 has 120 MA's), (Start: 6 @13228 has 1 MA's), (8, 13261), (Start: 9 @13294 has 2 MA's), (12, 13387), (13, 13411), (14, 13414), (16, 13450), (17, 13489), (20, 13561), (22, 13591), (25, 13753), (28, 13822),

Gene: Noelani_17 Start: 13525, Stop: 14217, Start Num: 4

Candidate Starts for Noelani_17:

(1, 13351), (Start: 4 @13525 has 120 MA's), (Start: 6 @13531 has 1 MA's), (8, 13564), (Start: 11 @13672 has 1 MA's), (12, 13690), (13, 13714), (14, 13717), (16, 13753), (17, 13789), (25, 14053), (28, 14122), (32, 14158),

Gene: Oaklynn_17 Start: 13568, Stop: 14260, Start Num: 4

Candidate Starts for Oaklynn_17:

(Start: 4 @13568 has 120 MA's), (Start: 6 @13574 has 1 MA's), (8, 13607), (Start: 9 @13640 has 2 MA's), (12, 13733), (13, 13757), (14, 13760), (16, 13796), (17, 13832), (24, 14081), (25, 14096), (32, 14201),

Gene: Octopus_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for Octopus_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Otwor_17 Start: 13643, Stop: 14338, Start Num: 4

Candidate Starts for Otwor_17:

(Start: 4 @13643 has 120 MA's), (Start: 6 @13649 has 1 MA's), (8, 13682), (Start: 9 @13715 has 2 MA's), (12, 13808), (13, 13832), (14, 13835), (16, 13871), (17, 13910), (22, 14012), (25, 14174), (28, 14243),

Gene: Owens_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for Owens_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: PaoPu_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for PaoPu_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: PensacolaC28_13 Start: 11328, Stop: 12149, Start Num: 11

Candidate Starts for PensacolaC28_13:

(2, 11043), (7, 11217), (10, 11256), (Start: 11 @11328 has 1 MA's), (15, 11385), (27, 11763), (29, 11811), (30, 11814), (33, 11913),

Gene: Picnic_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for Picnic_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: PoRanda_17 Start: 13693, Stop: 14388, Start Num: 4

Candidate Starts for PoRanda_17:

(3, 13660), (Start: 4 @13693 has 120 MA's), (Start: 6 @13699 has 1 MA's), (8, 13732), (Start: 9 @13765 has 2 MA's), (12, 13858), (13, 13882), (14, 13885), (16, 13921), (17, 13960), (20, 14032), (22, 14062), (25, 14224), (28, 14293),

Gene: Pondwater_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for Pondwater_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Publix_17 Start: 13177, Stop: 13872, Start Num: 4

Candidate Starts for Publix_17:

(Start: 4 @13177 has 120 MA's), (Start: 6 @13183 has 1 MA's), (8, 13216), (Start: 9 @13249 has 2 MA's), (12, 13342), (13, 13366), (14, 13369), (16, 13405), (17, 13444), (20, 13516), (22, 13546), (25, 13708), (28, 13777),

Gene: Puddles3_18 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for Puddles3_18:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: PuffyCat_17 Start: 13147, Stop: 13842, Start Num: 4

Candidate Starts for PuffyCat_17:

(Start: 4 @13147 has 120 MA's), (Start: 6 @13153 has 1 MA's), (8, 13186), (Start: 9 @13219 has 2 MA's), (12, 13312), (13, 13336), (14, 13339), (16, 13375), (17, 13414), (20, 13486), (22, 13516), (25, 13678), (28, 13747),

Gene: Quaker_17 Start: 13624, Stop: 14316, Start Num: 4

Candidate Starts for Quaker_17:

(Start: 4 @13624 has 120 MA's), (Start: 6 @13630 has 1 MA's), (8, 13663), (Start: 9 @13696 has 2 MA's), (12, 13789), (13, 13813), (14, 13816), (16, 13852), (17, 13888), (24, 14137), (25, 14152), (28, 14221), (32, 14257),

Gene: Rhogar_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for Rhogar_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: Rhysand_17 Start: 13642, Stop: 14337, Start Num: 4

Candidate Starts for Rhysand_17:

(Start: 4 @13642 has 120 MA's), (Start: 6 @13648 has 1 MA's), (8, 13681), (Start: 9 @13714 has 2 MA's), (12, 13807), (13, 13831), (14, 13834), (16, 13870), (17, 13909), (22, 14011), (25, 14173), (28,

14242),

Gene: RoscoWindex_18 Start: 13648, Stop: 14337, Start Num: 6

Candidate Starts for RoscoWindex_18:

(Start: 4 @13642 has 120 MA's), (Start: 6 @13648 has 1 MA's), (8, 13681), (Start: 9 @13714 has 2 MA's), (12, 13807), (13, 13831), (14, 13834), (16, 13870), (17, 13909), (22, 14011), (25, 14173), (28, 14242),

Gene: Sage7_17 Start: 13641, Stop: 14336, Start Num: 4

Candidate Starts for Sage7_17:

(Start: 4 @13641 has 120 MA's), (Start: 6 @13647 has 1 MA's), (8, 13680), (Start: 9 @13713 has 2 MA's), (12, 13806), (13, 13830), (14, 13833), (16, 13869), (17, 13908), (22, 14010), (25, 14172), (28, 14241),

Gene: SantasSleigh_17 Start: 13665, Stop: 14360, Start Num: 4

Candidate Starts for SantasSleigh_17:

(Start: 4 @13665 has 120 MA's), (Start: 6 @13671 has 1 MA's), (8, 13704), (Start: 9 @13737 has 2 MA's), (12, 13830), (13, 13854), (14, 13857), (16, 13893), (17, 13932), (22, 14034), (25, 14196), (28, 14265),

Gene: Sara_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for Sara_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Scamander_17 Start: 13641, Stop: 14336, Start Num: 4

Candidate Starts for Scamander_17:

(Start: 4 @13641 has 120 MA's), (Start: 6 @13647 has 1 MA's), (8, 13680), (Start: 9 @13713 has 2 MA's), (12, 13806), (13, 13830), (14, 13833), (16, 13869), (17, 13908), (22, 14010), (25, 14172), (28, 14241),

Gene: Scrunchy_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for Scrunchy_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: SeaWolves_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for SeaWolves_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Sippinontea_17 Start: 13656, Stop: 14339, Start Num: 4

Candidate Starts for Sippinontea_17:

(Start: 4 @13656 has 120 MA's), (Start: 6 @13662 has 1 MA's), (8, 13695), (Start: 9 @13728 has 2 MA's), (12, 13821), (13, 13845), (14, 13848), (16, 13884), (17, 13920), (25, 14184), (28, 14244),

Gene: Slentz_17 Start: 13635, Stop: 14330, Start Num: 4

Candidate Starts for Slentz_17:

(Start: 4 @13635 has 120 MA's), (Start: 6 @13641 has 1 MA's), (8, 13674), (Start: 9 @13707 has 2 MA's), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28,

14235),

Gene: Slizam_17 Start: 13153, Stop: 13848, Start Num: 4

Candidate Starts for Slizam_17:

(Start: 4 @13153 has 120 MA's), (Start: 6 @13159 has 1 MA's), (8, 13192), (Start: 9 @13225 has 2 MA's), (12, 13318), (13, 13342), (14, 13345), (16, 13381), (17, 13420), (20, 13492), (22, 13522), (25, 13684), (28, 13753),

Gene: Snuffles_18 Start: 13331, Stop: 14020, Start Num: 6

Candidate Starts for Snuffles_18:

(Start: 4 @13325 has 120 MA's), (Start: 6 @13331 has 1 MA's), (8, 13364), (Start: 9 @13397 has 2 MA's), (12, 13490), (13, 13514), (14, 13517), (16, 13553), (17, 13592), (20, 13664), (22, 13694), (25, 13856), (28, 13925),

Gene: Stem_17 Start: 13153, Stop: 13848, Start Num: 4

Candidate Starts for Stem_17:

(Start: 4 @13153 has 120 MA's), (Start: 6 @13159 has 1 MA's), (8, 13192), (Start: 9 @13225 has 2 MA's), (12, 13318), (13, 13342), (14, 13345), (16, 13381), (17, 13420), (20, 13492), (22, 13522), (25, 13684), (28, 13753),

Gene: TeddyBoy_17 Start: 13636, Stop: 14331, Start Num: 4

Candidate Starts for TeddyBoy_17:

(Start: 4 @13636 has 120 MA's), (Start: 6 @13642 has 1 MA's), (8, 13675), (Start: 9 @13708 has 2 MA's), (12, 13801), (13, 13825), (14, 13828), (16, 13864), (17, 13903), (22, 14005), (25, 14167), (28, 14236),

Gene: TimoTea_17 Start: 13617, Stop: 14312, Start Num: 4

Candidate Starts for TimoTea_17:

(Start: 4 @13617 has 120 MA's), (Start: 6 @13623 has 1 MA's), (8, 13656), (Start: 9 @13689 has 2 MA's), (12, 13782), (13, 13806), (14, 13809), (16, 13845), (17, 13884), (22, 13986), (25, 14148), (28, 14217),

Gene: TinyTruffula_17 Start: 13222, Stop: 13917, Start Num: 4

Candidate Starts for TinyTruffula_17:

(Start: 4 @13222 has 120 MA's), (Start: 6 @13228 has 1 MA's), (8, 13261), (Start: 9 @13294 has 2 MA's), (12, 13387), (13, 13411), (14, 13414), (16, 13450), (17, 13489), (20, 13561), (22, 13591), (25, 13753), (28, 13822),

Gene: TomBrady12_17 Start: 13154, Stop: 13849, Start Num: 4

Candidate Starts for TomBrady12_17:

(Start: 4 @13154 has 120 MA's), (Start: 6 @13160 has 1 MA's), (8, 13193), (Start: 9 @13226 has 2 MA's), (12, 13319), (13, 13343), (14, 13346), (16, 13382), (17, 13421), (20, 13493), (22, 13523), (25, 13685), (28, 13754),

Gene: Trireme_17 Start: 13220, Stop: 13915, Start Num: 4

Candidate Starts for Trireme_17:

(Start: 4 @13220 has 120 MA's), (Start: 6 @13226 has 1 MA's), (8, 13259), (Start: 9 @13292 has 2 MA's), (12, 13385), (13, 13409), (14, 13412), (16, 13448), (17, 13487), (20, 13559), (22, 13589), (25, 13751), (28, 13820), (32, 13856),

Gene: Upsilon_17 Start: 13693, Stop: 14388, Start Num: 4

Candidate Starts for Upsilon_17:

(3, 13660), (Start: 4 @13693 has 120 MA's), (Start: 6 @13699 has 1 MA's), (8, 13732), (Start: 9 @13765 has 2 MA's), (12, 13858), (13, 13882), (14, 13885), (16, 13921), (17, 13960), (20, 14032), (22, 14062), (25, 14224), (28, 14293),

Gene: Vanisius_17 Start: 13642, Stop: 14337, Start Num: 4

Candidate Starts for Vanisius_17:

(Start: 4 @13642 has 120 MA's), (Start: 6 @13648 has 1 MA's), (8, 13681), (Start: 9 @13714 has 2 MA's), (12, 13807), (13, 13831), (14, 13834), (16, 13870), (17, 13909), (22, 14011), (25, 14173), (28, 14242),

Gene: VitulaEligans_17 Start: 13723, Stop: 14418, Start Num: 4

Candidate Starts for VitulaEligans_17:

(Start: 4 @13723 has 120 MA's), (Start: 6 @13729 has 1 MA's), (8, 13762), (Start: 9 @13795 has 2 MA's), (12, 13888), (13, 13912), (14, 13915), (16, 13951), (17, 13990), (22, 14092), (25, 14254), (28, 14323),

Gene: Witch_17 Start: 13564, Stop: 14250, Start Num: 4

Candidate Starts for Witch_17:

(Start: 4 @13564 has 120 MA's), (Start: 6 @13570 has 1 MA's), (8, 13603), (Start: 9 @13636 has 2 MA's), (12, 13729), (13, 13753), (14, 13756), (16, 13792), (17, 13831), (22, 13933), (25, 14095), (28, 14155),

Gene: Wolfpack_17 Start: 13638, Stop: 14321, Start Num: 4

Candidate Starts for Wolfpack_17:

(Start: 4 @13638 has 120 MA's), (Start: 6 @13644 has 1 MA's), (8, 13677), (Start: 9 @13710 has 2 MA's), (12, 13803), (13, 13827), (14, 13830), (16, 13866), (17, 13902), (25, 14166), (28, 14226),

Gene: Yami_17 Start: 13177, Stop: 13800, Start Num: 9

Candidate Starts for Yami_17:

(Start: 4 @13105 has 120 MA's), (Start: 6 @13111 has 1 MA's), (8, 13144), (Start: 9 @13177 has 2 MA's), (12, 13270), (13, 13294), (14, 13297), (16, 13333), (17, 13372), (20, 13444), (22, 13474), (25, 13636), (28, 13705),

Gene: Yasuo_17 Start: 13626, Stop: 14321, Start Num: 4

Candidate Starts for Yasuo_17:

(Start: 4 @13626 has 120 MA's), (Start: 6 @13632 has 1 MA's), (8, 13665), (Start: 9 @13698 has 2 MA's), (12, 13791), (13, 13815), (14, 13818), (16, 13854), (17, 13893), (22, 13995), (25, 14157), (28, 14226),

Gene: YertPhresh_17 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for YertPhresh_17:

(Start: 4 @13563 has 120 MA's), (Start: 6 @13569 has 1 MA's), (8, 13602), (Start: 9 @13635 has 2 MA's), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Yubaba_17 Start: 13597, Stop: 14283, Start Num: 4

Candidate Starts for Yubaba_17:

(Start: 4 @13597 has 120 MA's), (Start: 6 @13603 has 1 MA's), (8, 13636), (Start: 9 @13669 has 2 MA's), (12, 13762), (13, 13786), (14, 13789), (16, 13825), (17, 13864), (22, 13966), (25, 14128), (28, 14188),

Gene: Zeta1847_19 Start: 17757, Stop: 18641, Start Num: 4

Candidate Starts for Zeta1847_19:

(Start: 4 @17757 has 120 MA's), (16, 17979), (19, 18072), (23, 18222), (26, 18285), (35, 18465), (37, 18561),