

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 157685 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157685 has 131 members, 27 are drafts.

Phages represented in each track:

- Track 1 : Baine_18, Lola20_17, Anseraureola_17, Cayde6_18
- Track 2 : BurtonThePup_17, MasterPitts_18, 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, Josuke_17, SantasSleigh_19, Picnic_17, Godfather_17, Gardevoir_17, GoldenBlanche_18, Dooby_17, Scrunchy_17, Danno_17, Eightball_17, Charbie_17, Minima_17, LemonPepper_18, ManAs_17, Aries55_17, Jerky_17, KyriosFaba_17, Maneater_18, Gillker_17, Scamander_17, Pondwater_17, Majesty_17, Sage7_19, JoBros_17, BarBear_17, Kojax4_17, Astro16_17, Cheesecake_17, TeddyBoy_17, Avvas_18, LaviMo_17, Yasuo_17, Dongwon_17, Burgy_17, DaftyDuck_18, Sara_17, Witch_17, Yubaba_17
- Track 3 : Miaurora_17, Lunatic_17, Trireme_17
- Track 4 : Snuffles_18, Stem_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, 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_18, 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_18, JooneeDee_18
- 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_18
- 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 103 of the 104 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alucard_17, Anseraureola_17, Aries55_17, Astro16_17, Avvas_18, Azizam_17, Aztec_17, Baine_18, BarBear_17, Belthelas_17, BinkBonk_17, Bintii_18, Biscayne_18, 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_18, 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_18, Josuke_17, Kaijohn_17, KayPaulus_17, Kevanna_17, KillerTomato_17, Kojax4_17, KyriosFaba_17, LaviMo_17, Leafy_17, LemonPepper_18, LionelHutz_17, Livingwater_17, Loca_17, Lola20_17, Lunatic_17, Luxx_17, Majesty_17, ManAs_17, Maneater_18, MasterPitts_18, McShie_17, MelBee03_17, Miaurora_17, Minima_17, MirimarMandM_17, MrGreen_17, Namsahir_18, NeumannU_17, Niffler_17, Nobel_17, Noelani_17, Oaklynn_18, 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_19, SantasSleigh_19, Sara_17, Scamander_17, Scrunchy_17, SeaWolves_17, Sippinontea_17, Slentz_17, Slizam_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, Stem_17, 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: 103 of 104
- Called 96.1% of time when present
- Phage (with cluster) where this start called: Alucard_17 (EE), Anseraureola_17 (EE), Aries55_17 (EE), Astro16_17 (EE), Avvas_18 (EE), Azizam_17 (EE), Aztec_17 (EE), Baine_18 (EE), BarBear_17 (EE), Belthelas_17 (EE), BinkBonk_17 (EE), Bintii_18 (EE), Biscayne_18 (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_18 (EE), Danimal_17 (EE), Danno_17 (EE), Dongwon_17 (EE), Dooby_17 (EE), Duggie_17 (EE), EdEric_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_18 (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_18 (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_18 (EE), MasterPitts_18 (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_18 (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_19 (EE), SantasSleigh_19 (EE), Sara_17 (EE), Scamander_17 (EE), Scrunchy_17 (EE), SeaWolves_17 (EE), Sippinontea_17 (EE), Slentz_17 (EE), Slizam_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 104
- 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
- No Manual Annotations of this start.
- Called 2.3% of time when present
- Phage (with cluster) where this start called: RoscoWindex_18 (EE), Snuffles_18 (EE), Stem_17 (EE),

Start 9:

- Found in 127 of 131 (96.9%) of genes in pham
- No Manual Annotations of this start.
- 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
- No Manual Annotations of this start.
- 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 102 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 103 MA's), (6, 13570), (8, 13603), (9, 13636), (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 103 MA's), (6, 13626), (8, 13659), (9, 13692), (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 103 MA's), (6, 13647), (8, 13680), (9, 13713), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: Avvas_18 Start: 13641, Stop: 14336, Start Num: 4

Candidate Starts for Avvas_18:

(Start: 4 @13641 has 103 MA's), (6, 13647), (8, 13680), (9, 13713), (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 103 MA's), (6, 13574), (8, 13607), (9, 13640), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13589), (8, 13622), (9, 13655), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (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 103 MA's), (6, 13700), (8, 13733), (9, 13766), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (12, 13800), (13, 13824), (14, 13827), (16, 13863), (17, 13902), (22, 14004), (25, 14166), (28, 14235),

Gene: Bintii_18 Start: 13650, Stop: 14345, Start Num: 4

Candidate Starts for Bintii_18:

(3, 13617), (Start: 4 @13650 has 103 MA's), (6, 13656), (8, 13689), (9, 13722), (12, 13815), (13, 13839), (14, 13842), (16, 13878), (17, 13917), (20, 13989), (22, 14019), (25, 14181), (28, 14250), (32, 14286),

Gene: Biscayne_18 Start: 13696, Stop: 14391, Start Num: 4

Candidate Starts for Biscayne_18:

(Start: 4 @13696 has 103 MA's), (6, 13702), (8, 13735), (9, 13768), (11, 13843), (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 103 MA's), (6, 13671), (8, 13704), (9, 13737), (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 103 MA's), (6, 13639), (8, 13672), (9, 13705), (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 103 MA's), (6, 13568), (8, 13601), (9, 13634), (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 103 MA's), (6, 13626), (8, 13659), (9, 13692), (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 103 MA's), (6, 13623), (8, 13656), (9, 13689), (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 103 MA's), (6, 13141), (8, 13174), (9, 13207), (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 103 MA's), (6, 13647), (8, 13680), (9, 13713), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (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 103 MA's), (6, 13589), (8, 13622), (9, 13655), (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 103 MA's), (6, 13111), (8, 13144), (9, 13177), (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 103 MA's), (6, 13624), (8, 13657), (9, 13690), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13648), (8, 13681), (9, 13714), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (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 103 MA's), (6, 13228), (8, 13261), (9, 13294), (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 103 MA's), (6, 13616), (8, 13649), (9, 13682), (12, 13775), (13, 13799), (14, 13802), (16, 13838), (17, 13874), (24, 14123), (25, 14138), (28, 14207),

Gene: DaftyDuck_18 Start: 13572, Stop: 14267, Start Num: 4

Candidate Starts for DaftyDuck_18:

(Start: 4 @13572 has 103 MA's), (6, 13578), (8, 13611), (9, 13644), (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 103 MA's), (6, 13571), (8, 13604), (9, 13637), (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 103 MA's), (6, 13647), (8, 13680), (9, 13713), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13630), (8, 13663), (9, 13696), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (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 103 MA's), (6, 13109), (8, 13142), (9, 13175), (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 103 MA's), (6, 13109), (8, 13142), (9, 13175), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13673), (8, 13706), (9, 13739), (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 103 MA's), (6, 13603), (8, 13636), (9, 13669), (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 103 MA's), (6, 13568), (8, 13601), (9, 13634), (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 103 MA's), (6, 13647), (8, 13680), (9, 13713), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (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 103 MA's), (6, 13108), (8, 13141), (9, 13174), (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 103 MA's), (6, 13673), (8, 13706), (9, 13739), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13585), (8, 13618), (9, 13651), (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 103 MA's), (6, 13572), (8, 13605), (9, 13638), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (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 103 MA's), (6, 13636), (8, 13669), (9, 13702), (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 103 MA's), (6, 13722), (8, 13755), (9, 13788), (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 103 MA's), (6, 13570), (8, 13603), (9, 13636), (12, 13729), (13, 13753), (14, 13756), (16, 13792), (17, 13831), (22, 13933), (25, 14095), (28, 14155),

Gene: JooneeDee_18 Start: 13650, Stop: 14345, Start Num: 4

Candidate Starts for JooneeDee_18:

(3, 13617), (Start: 4 @13650 has 103 MA's), (6, 13656), (8, 13689), (9, 13722), (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 103 MA's), (6, 13648), (8, 13681), (9, 13714), (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 103 MA's), (6, 13607), (8, 13640), (9, 13673), (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 103 MA's), (6, 13644), (8, 13677), (9, 13710), (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 103 MA's), (6, 13633), (8, 13666), (9, 13699), (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 103 MA's), (6, 13626), (8, 13659), (9, 13692), (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 103 MA's), (6, 13647), (8, 13680), (9, 13713), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13648), (8, 13681), (9, 13714), (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 103 MA's), (6, 13587), (8, 13620), (9, 13653), (12, 13746), (13, 13770), (14, 13773), (16, 13809), (17, 13845), (24, 14094), (25, 14109), (28, 14178), (32, 14214),

Gene: LemonPepper_18 Start: 13563, Stop: 14249, Start Num: 4

Candidate Starts for LemonPepper_18:

(Start: 4 @13563 has 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (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 103 MA's), (6, 13630), (8, 13663), (9, 13696), (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 103 MA's), (6, 13654), (8, 13687), (9, 13720), (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 103 MA's), (6, 13589), (8, 13622), (9, 13655), (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 103 MA's), (6, 13111), (8, 13144), (9, 13177), (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 103 MA's), (6, 13659), (8, 13692), (9, 13725), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (12, 13728), (13, 13752), (14, 13755), (16, 13791), (17, 13830), (22, 13932), (25, 14094), (28, 14154),

Gene: Maneater_18 Start: 13617, Stop: 14312, Start Num: 4

Candidate Starts for Maneater_18:

(Start: 4 @13617 has 103 MA's), (6, 13623), (8, 13656), (9, 13689), (12, 13782), (13, 13806), (14, 13809), (16, 13845), (17, 13884), (22, 13986), (25, 14148), (28, 14217),

Gene: MasterPitts_18 Start: 13572, Stop: 14267, Start Num: 4

Candidate Starts for MasterPitts_18:

(Start: 4 @13572 has 103 MA's), (6, 13578), (8, 13611), (9, 13644), (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 103 MA's), (6, 13624), (8, 13657), (9, 13690), (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 103 MA's), (6, 13633), (8, 13666), (9, 13699), (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 103 MA's), (6, 13228), (8, 13261), (9, 13294), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13699), (8, 13732), (9, 13765), (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 103 MA's), (6, 13597), (8, 13630), (9, 13663), (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 103 MA's), (6, 13183), (8, 13216), (9, 13249), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (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 103 MA's), (6, 13201), (8, 13234), (9, 13267), (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 103 MA's), (6, 13228), (8, 13261), (9, 13294), (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 103 MA's), (6, 13531), (8, 13564), (11, 13672), (12, 13690), (13, 13714), (14, 13717), (16, 13753), (17, 13789), (25, 14053), (28, 14122), (32, 14158),

Gene: Oaklynn_18 Start: 13568, Stop: 14260, Start Num: 4

Candidate Starts for Oaklynn_18:

(Start: 4 @13568 has 103 MA's), (6, 13574), (8, 13607), (9, 13640), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13649), (8, 13682), (9, 13715), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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), (11, 11328), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13699), (8, 13732), (9, 13765), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13183), (8, 13216), (9, 13249), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13153), (8, 13186), (9, 13219), (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 103 MA's), (6, 13630), (8, 13663), (9, 13696), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (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 103 MA's), (6, 13648), (8, 13681), (9, 13714), (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 103 MA's), (6, 13648), (8, 13681), (9, 13714), (12, 13807), (13, 13831), (14, 13834), (16, 13870), (17, 13909), (22, 14011), (25, 14173), (28, 14242),

Gene: Sage7_19 Start: 13641, Stop: 14336, Start Num: 4

Candidate Starts for Sage7_19:

(Start: 4 @13641 has 103 MA's), (6, 13647), (8, 13680), (9, 13713), (12, 13806), (13, 13830), (14, 13833), (16, 13869), (17, 13908), (22, 14010), (25, 14172), (28, 14241),

Gene: SantasSleigh_19 Start: 13665, Stop: 14360, Start Num: 4

Candidate Starts for SantasSleigh_19:

(Start: 4 @13665 has 103 MA's), (6, 13671), (8, 13704), (9, 13737), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13647), (8, 13680), (9, 13713), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13662), (8, 13695), (9, 13728), (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 103 MA's), (6, 13641), (8, 13674), (9, 13707), (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 103 MA's), (6, 13159), (8, 13192), (9, 13225), (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 103 MA's), (6, 13331), (8, 13364), (9, 13397), (12, 13490), (13, 13514), (14, 13517), (16, 13553), (17, 13592), (20, 13664), (22, 13694), (25, 13856), (28, 13925),

Gene: Stem_17 Start: 13159, Stop: 13848, Start Num: 6

Candidate Starts for Stem_17:

(Start: 4 @13153 has 103 MA's), (6, 13159), (8, 13192), (9, 13225), (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 103 MA's), (6, 13642), (8, 13675), (9, 13708), (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 103 MA's), (6, 13623), (8, 13656), (9, 13689), (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 103 MA's), (6, 13228), (8, 13261), (9, 13294), (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 103 MA's), (6, 13160), (8, 13193), (9, 13226), (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 103 MA's), (6, 13226), (8, 13259), (9, 13292), (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 103 MA's), (6, 13699), (8, 13732), (9, 13765), (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 103 MA's), (6, 13648), (8, 13681), (9, 13714), (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 103 MA's), (6, 13729), (8, 13762), (9, 13795), (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 103 MA's), (6, 13570), (8, 13603), (9, 13636), (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 103 MA's), (6, 13644), (8, 13677), (9, 13710), (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 103 MA's), (6, 13111), (8, 13144), (9, 13177), (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 103 MA's), (6, 13632), (8, 13665), (9, 13698), (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 103 MA's), (6, 13569), (8, 13602), (9, 13635), (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 103 MA's), (6, 13603), (8, 13636), (9, 13669), (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 103 MA's), (16, 17979), (19, 18072), (23, 18222), (26, 18285), (35, 18465), (37, 18561),