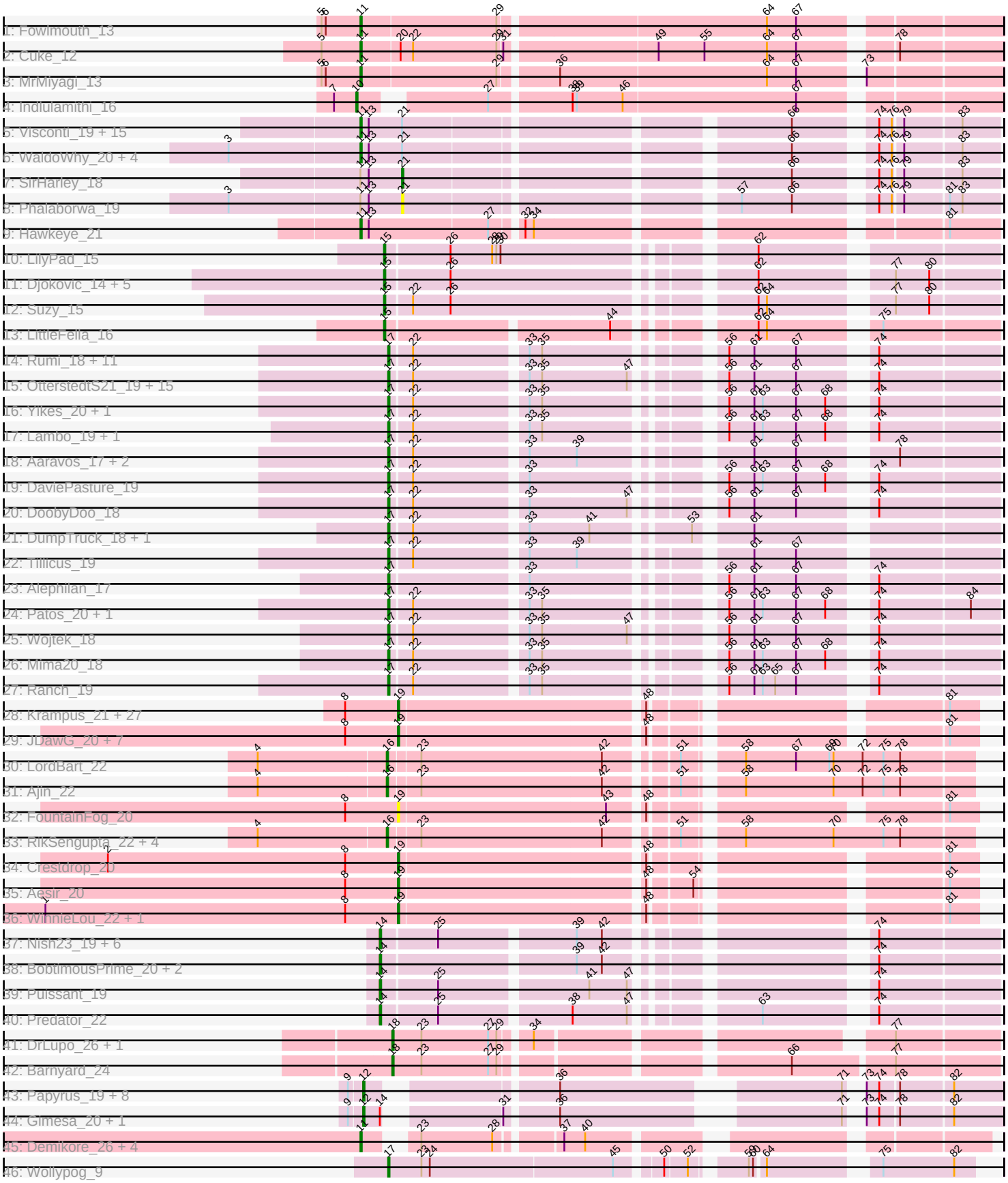
Pham 347326


1: Fowlmouth_13
2: Cuke_12
3: MrMiyagi_13
4: Indulamithi_16
5: Visconti_19 + 15
6: WaldoWhy_20 + 4
7: SirHarley_18
8: Phalaborwa_19
9: Hawkeye_21
10: LilyPad_15
11: Djokovic_14 + 5
12: Suzy_15
13: LittleFella_16
14: Rumi_18 + 11
15: OtterstedtS21_19 + 15
16: Yikes_20 + 1
17: Lambo_19 + 1
18: Aaravos_17 + 2
19: DaviePasture_19
20: DoobyDoo_18
21: DumpTruck_18 + 1
22: Tillicus_19
23: Alephilan_17
24: Patos_20 + 1
25: Wojtek_18
26: Mima20_18
27: Ranch_19
28: Krampus_21 + 27
29: JDawG_20 + 7
30: LordBart_22
31: Ajin_22
32: FountainFog_20
33: RikSengupta_22 + 4
34: Crestdrop_20
35: Aesir_20
36: WinnieLou_22 + 1
37: Nish23_19 + 6
38: BobtimousPrime_20 + 2
39: Puissant_19
40: Predator_22
41: DrLupo_26 + 1
42: Barnyard_24
43: Papyrus_19 + 8
44: Gimesa_20 + 1
45: Demikore_26 + 4
46: Woolypog_9

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 347326 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347326 has 163 members, 15 are drafts.

Phages represented in each track:
• Track 1 : Fowlmouth_13
• Track 2 : Cuke_12
• Track 3 : MrMiyagi_13
• Track 4 : Indlulamithi_16
• Track 5 : Visconti_19, Butterscotch_19, KandZ_19, Gumball_18, Thoth_19, Nova_19, Adjutor_20, Penelope2018_19, SuperheroCarly_19, PLot_20, Troll4_19, Erk16_19, Giuseppe_19, Mopey_19, Helpful_20, PBI1_20
• Track 6 : WaldoWhy_20, Chill_20, Delton_19, BigMama_17, Prager_19
• Track 7 : SirHarley_18
• Track 8 : Phalaborwa_19
• Track 9 : Hawkeye_21
• Track 10 : LilyPad_15
• Track 11 : Djokovic_14, Madi_14, Terapin_14, BiteSize_14, Sienna_14, Beyoncage_14
• Track 12 : Suzy_15
• Track 13 : LittleFella_16
• Track 14 : Rumi_18, Charminar_17, Stormer_17, Alyssamiracle_18, Genamy16_18, Riduram_17, Zany_18, NovaSharks_18, Avian_17, Jamemuya19_17, Astralis_17, RazorC_17
• Track 15 : OtterstedtS21_19, Gibbin_20, Fulcrum_20, Lila22_19, Sampudon_19, Nettle_18, GretelLyn_19, MoiGyank_21, Sadboi_19, LavAbarElk_17, Jalebi_19, BirthdayBoy_20, Pywacket_18, GOATification_20, Rota_18, Rukungu_19
• Track 16 : Yikes_20, ParvusTarda_19
• Track 17 : Lambo_19, Erutan_19
• Track 18 : Aaravos_17, LuckyLeo_18, Apeppi_17
• Track 19 : DaviePasture_19
• Track 20 : DoobyDoo_18
• Track 21 : DumpTruck_18, Xenia2_19
• Track 22 : Tillicus_19
• Track 23 : Alephilan_17
• Track 24 : Patos_20, NorManre_20
• Track 25 : Wojtek_18
• Track 26 : Mima20_18
• Track 27 : Ranch_19
• Track 28 : Krampus_21, Chivey_20, SafetyGuy_21, Hiddenleaf_20, Neptune_21, Pharpay_21, Gilda_21, Anakin_21, Rachella_21, DannyDe_20, Poultress_20, Haunter_21, Kate_21, AnnaSerena_21, CoolCookie_21, FreddieHg_20, OhDear_21,

SilentWarrior_20, Potty_21, Artiphact_21, Tedro_21, JingleBells_20, Cybele_21, OverHedge_21, NarutoRun_21, PhunaPhoke_21, Snakehole_22, Tiggy93_21
• Track 29 : JDawG_20, Rie18_21, Dauntless_20, MortySmith_19, Annapurna_20, Erudite_20, Karate_20, Tongui_20
• Track 30 : LordBart_22
• Track 31 : Ajin_22
• Track 32 : FountainFog_20
• Track 33 : RikSengupta_22, TinyMiny_22, Kors_22, Bramble_22, Sparcetus_22
• Track 34 : Crestdrop_20
• Track 35 : Aesir_20
• Track 36 : WinnieLou_22, Hager_22
• Track 37 : Nish23_19, Damien_18, Cborch11_19, Phreeze_18, Konstantine_23, Beckerton_18, Oaker_18
• Track 38 : BobtimousPrime_20, Megatron06_20, Thumb_18
• Track 39 : Puissant_19
• Track 40 : Predator_22
• Track 41 : DrLupo_26, AmandaPanda_25
• Track 42 : Barnyard_24
• Track 43 : Papyrus_19, MontyDev_19, Send513_19, Nilo_20, Candle_19, Weiss13_19, Riparian_19, Rope_19, Zenon_20
• Track 44 : Gimesa_20, Yelo_19
• Track 45 : Demikore_26, SuperSonics_25, Labelle_25, Madruga_24, Patience_26
• Track 46 : Wollypog_9

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

The start number called the most often in the published annotations is 17, it was called in 41 of the 148 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aaravos_17, Alephilan_17, Alyssamiracle_18, Apeppi_17, Astralis_17, Avian_17, BirthdayBoy_20, Charminar_17, DaviePasture_19, DoobyDoo_18, DumpTruck_18, Erutan_19, Fulcrum_20, GOATification_20, Genamy16_18, Gibbin_20, GretelLyn_19, Jalebi_19, Jamemuya19_17, Lambo_19, LavAbarElk_17, Lila22_19, LuckyLeo_18, Mima20_18, MoiGyank_21, Nettle_18, NorManre_20, NovaSharks_18, OtterstedtS21_19, ParvusTarda_19, Patos_20, Pywacket_18, Ranch_19, RazorC_17, Riduram_17, Rota_18, Rukungu_19, Rumi_18, Sadboi_19, Sampudon_19, Stormer_17, Tillicus_19, Wojtek_18, Wollypog_9, Xenia2_19, Yikes_20, Zany_18,

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

Genes that do not have the "Most Annotated" start:
• Adjutor_20, Aesir_20, Ajin_22, AmandaPanda_25, Anakin_21, AnnaSerena_21, Annapurna_20, Artiphact_21, Barnyard_24, Beckerton_18, Beyoncage_14, BigMama_17, BiteSize_14, BobtimousPrime_20, Bramble_22, Butterscotch_19, Candle_19, Cborch11_19, Chill_20, Chivey_20, CoolCookie_21, Crestdrop_20, Cuke_12, Cybele_21, Damien_18, DannyDe_20, Dauntless_20, Delton_19, Demikore_26, Djokovic_14, DrLupo_26, Erk16_19, Erudite_20, FountainFog_20,

Fowlmouth_13, FreddieHg_20, Gilda_21, Gimesa_20, Giuseppe_19, Gumball_18, Hager_22, Haunter_21, Hawkeye_21, Helpful_20, Hiddenleaf_20, Indlulamithi_16, JDawG_20, JingleBells_20, KandZ_19, Karate_20, Kate_21, Konstantine_23, Kors_22, Krampus_21, Labelle_25, LilyPad_15, LittleFella_16, LordBart_22, Madi_14, Madruga_24, Megatron06_20, MontyDev_19, Mopey_19, MortySmith_19, MrMiyagi_13, NarutoRun_21, Neptune_21, Nilo_20, Nish23_19, Nova_19, Oaker_18, OhDear_21, OverHedge_21, PBI1_20, PLot_20, Papyrus_19, Patience_26, Penelope2018_19, Phalaborwa_19, Pharpay_21, Phreeze_18, PhunaPhoke_21, Potty_21, Poultress_20, Prager_19, Predator_22, Puissant_19, Rachella_21, Rie18_21, RikSengupta_22, Riparian_19, Rope_19, SafetyGuy_21, Send513_19, Sienna_14, SilentWarrior_20, SirHarley_18, Snakehole_22, Sparcetus_22, SuperSonics_25, SuperheroCarly_19, Suzy_15, Tedro_21, Terapin_14, Thoth_19, Thumb_18, Tiggy93_21, TinyMiny_22, Tongui_20, Troll4_19, Visconti_19, WaldoWhy_20, Weiss13_19, WinnieLou_22, Yelo_19, Zenon_20,

Summary by start number:

Start 10:
• Found in 1 of 163 (0.6%) of genes in pham
• Manual Annotations of this start: 1 of 148
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Indlulamithi_16 (AC),

Start 11:
• Found in 32 of 163 (19.6%) of genes in pham
• Manual Annotations of this start: 29 of 148
• Called 93.8% of time when present
• Phage (with cluster) where this start called: Adjutor_20 (D1), BigMama_17 (D1), Butterscotch_19 (D1), Chill_20 (D1), Cuke_12 (AC), Delton_19 (D1), Demikore_26 (U), Erk16_19 (D1), Fowlmouth_13 (AC), Giuseppe_19 (D1), Gumball_18 (D1), Hawkeye_21 (D2), Helpful_20 (D1), KandZ_19 (D1), Labelle_25 (U), Madruga_24 (U), Mopey_19 (D1), MrMiyagi_13 (AC), Nova_19 (D1), PBI1_20 (D1), PLot_20 (D1), Patience_26 (U), Penelope2018_19 (D1), Prager_19 (D1), SuperSonics_25 (U), SuperheroCarly_19 (D1), Thoth_19 (D1), Troll4_19 (D1), Visconti_19 (D1), WaldoWhy_20 (D1),

Start 12:
• Found in 11 of 163 (6.7%) of genes in pham
• Manual Annotations of this start: 10 of 148
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Candle_19 (R), Gimesa_20 (R), MontyDev_19 (R), Nilo_20 (R), Papyrus_19 (R), Riparian_19 (R), Rope_19 (R), Send513_19 (R), Weiss13_19 (R), Yelo_19 (R), Zenon_20 (R),

Start 14:
• Found in 14 of 163 (8.6%) of genes in pham
• Manual Annotations of this start: 11 of 148
• Called 85.7% of time when present
• Phage (with cluster) where this start called: Beckerton_18 (H1), BobtimousPrime_20 (H1), Cborch11_19 (H1), Damien_18 (H1), Konstantine_23 (H1), Megatron06_20 (H1), Nish23_19 (H1), Oaker_18 (H1), Phreeze_18 (H1), Predator_22 (H1), Puissant_19 (H1), Thumb_18 (H1),

Start 15:
• Found in 9 of 163 (5.5%) of genes in pham
• Manual Annotations of this start: 9 of 148
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Beyoncage_14 (DG1), BiteSize_14 (DG1), Djokovic_14 (DG1), LilyPad_15 (DG1), LittleFella_16 (DG2), Madi_14 (DG1), Sienna_14 (DG1), Suzy_15 (DG1), Terapin_14 (DG1),

Start 16:
• Found in 7 of 163 (4.3%) of genes in pham
• Manual Annotations of this start: 7 of 148
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ajin_22 (EF), Bramble_22 (EF), Kors_22 (EF), LordBart_22 (EF), RikSengupta_22 (EF), Sparcetus_22 (EF), TinyMiny_22 (EF),

Start 17:
• Found in 47 of 163 (28.8%) of genes in pham
• Manual Annotations of this start: 41 of 148
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aaravos_17 (DV), Alephilan_17 (DV), Alyssamiracle_18 (DV), Apeppi_17 (DV), Astralis_17 (DV), Avian_17 (DV), BirthdayBoy_20 (DV), Charminar_17 (DV), DaviePasture_19 (DV), DoobyDoo_18 (DV), DumpTruck_18 (DV), Erutan_19 (DV), Fulcrum_20 (DV), GOATification_20 (DV), Genamy16_18 (DV), Gibbin_20 (DV), GretelLyn_19 (DV), Jalebi_19 (DV), Jamemuya19_17 (DV), Lambo_19 (DV), LavAbarElk_17 (DV), Lila22_19 (DV), LuckyLeo_18 (DV), Mima20_18 (DV), MoiGyank_21 (DV), Nettle_18 (DV), NorManre_20 (DV), NovaSharks_18 (DV), OtterstedtS21_19 (DV), ParvusTarda_19 (DV), Patos_20 (DV), Pywacket_18 (DV), Ranch_19 (DV), RazorC_17 (DV), Riduram_17 (DV), Rota_18 (DV), Rukungu_19 (DV), Rumi_18 (DV), Sadboi_19 (DV), Sampudon_19 (DV), Stormer_17 (DV), Tillicus_19 (DV), Wojtek_18 (DV), Wollypog_9 (singleton), Xenia2_19 (DV), Yikes_20 (DV), Zany_18 (DV),

Start 18:
• Found in 3 of 163 (1.8%) of genes in pham
• Manual Annotations of this start: 2 of 148
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AmandaPanda_25 (H2), Barnyard_24 (H2), DrLupo_26 (H2),

Start 19:
• Found in 41 of 163 (25.2%) of genes in pham
• Manual Annotations of this start: 37 of 148
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aesir_20 (EF), Anakin_21 (EF), AnnaSerena_21 (EF), Annapurna_20 (EF), Artiphact_21 (EF), Chivey_20 (EF), CoolCookie_21 (EF), Crestdrop_20 (EF), Cybele_21 (EF), DannyDe_20 (EF), Dauntless_20 (EF), Erudite_20 (EF), FountainFog_20 (EF), FreddieHg_20 (EF), Gilda_21 (EF), Hager_22 (EF), Haunter_21 (EF), Hiddenleaf_20 (EF), JDawG_20 (EF), JingleBells_20 (EF), Karate_20 (EF), Kate_21 (EF), Krampus_21 (EF), MortySmith_19 (EF), NarutoRun_21 (EF), Neptune_21 (EF), OhDear_21 (EF), OverHedge_21 (EF), Pharpay_21 (EF), PhunaPhoke_21 (EF), Potty_21 (EF), Poultress_20 (EF), Rachella_21 (EF), Rie18_21 (EF), SafetyGuy_21 (EF), SilentWarrior_20 (EF), Snakehole_22 (EF), Tedro_21 (EF), Tiggy93_21 (EF),

Tongui_20 (EF), WinnieLou_22 (EF),

Start 21:
• Found in 23 of 163 (14.1%) of genes in pham
• Manual Annotations of this start: 1 of 148
• Called 8.7% of time when present
• Phage (with cluster) where this start called: Phalaborwa_19 (D1), SirHarley_18 (D1),

Summary by clusters:

There are 12 clusters represented in this pham: AC, H1, H2, EF, singleton, DG2, DG1, U, DV, R, D2, D1,

Info for manual annotations of cluster AC:
•Start number 10 was manually annotated 1 time for cluster AC.
•Start number 11 was manually annotated 3 times for cluster AC.

Info for manual annotations of cluster D1:
•Start number 11 was manually annotated 21 times for cluster D1.
•Start number 21 was manually annotated 1 time for cluster D1.

Info for manual annotations of cluster D2:
•Start number 11 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster DG1:
•Start number 15 was manually annotated 8 times for cluster DG1.

Info for manual annotations of cluster DG2:
•Start number 15 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DV:
•Start number 17 was manually annotated 40 times for cluster DV.

Info for manual annotations of cluster EF:
•Start number 16 was manually annotated 7 times for cluster EF.
•Start number 19 was manually annotated 37 times for cluster EF.

Info for manual annotations of cluster H1:
•Start number 14 was manually annotated 11 times for cluster H1.

Info for manual annotations of cluster H2:
•Start number 18 was manually annotated 2 times for cluster H2.

Info for manual annotations of cluster R:
•Start number 12 was manually annotated 10 times for cluster R.

Info for manual annotations of cluster U:
•Start number 11 was manually annotated 4 times for cluster U.

Gene Information:

Gene: Aaravos_17 Start: 13323, Stop: 13700, Start Num: 17
Candidate Starts for Aaravos_17:
(Start: 17 @13323 has 41 MA's), (22, 13338), (33, 13413), (39, 13446), (61, 13545), (67, 13575), (78, 13632),

Gene: Adjutor_20 Start: 12729, Stop: 13136, Start Num: 11
Candidate Starts for Adjutor_20:
(Start: 11 @12729 has 29 MA's), (13, 12735), (Start: 21 @12759 has 1 MA's), (66, 13008), (74, 13056), (76, 13065), (79, 13071), (83, 13110),

Gene: Aesir_20 Start: 11440, Stop: 11808, Start Num: 19
Candidate Starts for Aesir_20:
(8, 11404), (Start: 19 @11440 has 37 MA's), (48, 11608), (54, 11635), (81, 11788),

Gene: Ajin_22 Start: 11605, Stop: 11991, Start Num: 16
Candidate Starts for Ajin_22:
(4, 11515), (Start: 16 @11605 has 7 MA's), (23, 11626), (42, 11755), (51, 11797), (58, 11830), (70, 11893), (72, 11914), (75, 11929), (78, 11941),

Gene: Alephilan_17 Start: 13251, Stop: 13628, Start Num: 17
Candidate Starts for Alephilan_17:
(Start: 17 @13251 has 41 MA's), (33, 13341), (56, 13455), (61, 13473), (67, 13503), (74, 13545),

Gene: Alyssamiracle_18 Start: 11658, Stop: 12035, Start Num: 17
Candidate Starts for Alyssamiracle_18:
(Start: 17 @11658 has 41 MA's), (22, 11673), (33, 11748), (35, 11757), (56, 11862), (61, 11880), (67, 11910), (74, 11952),

Gene: AmandaPanda_25 Start: 14684, Stop: 15067, Start Num: 18
Candidate Starts for AmandaPanda_25:
(Start: 18 @14684 has 2 MA's), (23, 14705), (27, 14753), (29, 14759), (34, 14777), (77, 14996),

Gene: Anakin_21 Start: 11650, Stop: 12018, Start Num: 19
Candidate Starts for Anakin_21:
(8, 11614), (Start: 19 @11650 has 37 MA's), (48, 11818), (81, 11998),

Gene: AnnaSerena_21 Start: 11659, Stop: 12027, Start Num: 19
Candidate Starts for AnnaSerena_21:
(8, 11623), (Start: 19 @11659 has 37 MA's), (48, 11827), (81, 12007),

Gene: Annapurna_20 Start: 10859, Stop: 11227, Start Num: 19
Candidate Starts for Annapurna_20:
(8, 10823), (Start: 19 @10859 has 37 MA's), (48, 11027), (81, 11207),

Gene: Apeppi_17 Start: 13373, Stop: 13750, Start Num: 17
Candidate Starts for Apeppi_17:
(Start: 17 @13373 has 41 MA's), (22, 13388), (33, 13463), (39, 13496), (61, 13595), (67, 13625), (78, 13682),

Gene: Artiphact_21 Start: 11651, Stop: 12019, Start Num: 19
Candidate Starts for Artiphact_21:
(8, 11615), (Start: 19 @11651 has 37 MA's), (48, 11819), (81, 11999),

Gene: Astralis_17 Start: 11658, Stop: 12035, Start Num: 17
Candidate Starts for Astralis_17:
(Start: 17 @11658 has 41 MA's), (22, 11673), (33, 11748), (35, 11757), (56, 11862), (61, 11880), (67, 11910), (74, 11952),

Gene: Avian_17 Start: 11658, Stop: 12035, Start Num: 17
Candidate Starts for Avian_17:
(Start: 17 @11658 has 41 MA's), (22, 11673), (33, 11748), (35, 11757), (56, 11862), (61, 11880), (67, 11910), (74, 11952),

Gene: Barnyard_24 Start: 14273, Stop: 14668, Start Num: 18
Candidate Starts for Barnyard_24:
(Start: 18 @14273 has 2 MA's), (23, 14294), (27, 14342), (29, 14348), (66, 14528), (77, 14597),

Gene: Beckerton_18 Start: 13163, Stop: 13546, Start Num: 14
Candidate Starts for Beckerton_18:
(Start: 14 @13163 has 11 MA's), (25, 13202), (39, 13292), (42, 13310), (74, 13463),

Gene: Beyoncage_14 Start: 9137, Stop: 9526, Start Num: 15
Candidate Starts for Beyoncage_14:
(Start: 15 @9137 has 9 MA's), (26, 9182), (62, 9374), (77, 9455), (80, 9479),

Gene: BigMama_17 Start: 12805, Stop: 13212, Start Num: 11
Candidate Starts for BigMama_17:
(3, 12712), (Start: 11 @12805 has 29 MA's), (13, 12811), (Start: 21 @12835 has 1 MA's), (66, 13084), (74, 13132), (76, 13141), (79, 13147), (83, 13186),

Gene: BirthdayBoy_20 Start: 14104, Stop: 14481, Start Num: 17
Candidate Starts for BirthdayBoy_20:
(Start: 17 @14104 has 41 MA's), (22, 14119), (33, 14194), (35, 14203), (47, 14263), (56, 14308), (61, 14326), (67, 14356), (74, 14398),

Gene: BiteSize_14 Start: 9137, Stop: 9526, Start Num: 15
Candidate Starts for BiteSize_14:
(Start: 15 @9137 has 9 MA's), (26, 9182), (62, 9374), (77, 9455), (80, 9479),

Gene: BobtimousPrime_20 Start: 13083, Stop: 13466, Start Num: 14
Candidate Starts for BobtimousPrime_20:
(Start: 14 @13083 has 11 MA's), (39, 13212), (42, 13230), (74, 13383),

Gene: Bramble_22 Start: 11570, Stop: 11956, Start Num: 16
Candidate Starts for Bramble_22:
(4, 11480), (Start: 16 @11570 has 7 MA's), (23, 11591), (42, 11720), (51, 11762), (58, 11795), (70, 11858), (75, 11894), (78, 11906),

Gene: Butterscotch_19 Start: 12789, Stop: 13196, Start Num: 11
Candidate Starts for Butterscotch_19:
(Start: 11 @12789 has 29 MA's), (13, 12795), (Start: 21 @12819 has 1 MA's), (66, 13068), (74, 13116), (76, 13125), (79, 13131), (83, 13170),

Gene: Candle_19 Start: 13157, Stop: 13534, Start Num: 12
Candidate Starts for Candle_19:

(9, 13148), (Start: 12 @13157 has 10 MA's), (36, 13268), (71, 13439), (73, 13442), (74, 13451), (78, 13463), (82, 13499),

Gene: Cborch11_19 Start: 12626, Stop: 13009, Start Num: 14
Candidate Starts for Cborch11_19:
(Start: 14 @12626 has 11 MA's), (25, 12665), (39, 12755), (42, 12773), (74, 12926),

Gene: Charminar_17 Start: 11658, Stop: 12035, Start Num: 17
Candidate Starts for Charminar_17:
(Start: 17 @11658 has 41 MA's), (22, 11673), (33, 11748), (35, 11757), (56, 11862), (61, 11880), (67, 11910), (74, 11952),

Gene: Chill_20 Start: 12795, Stop: 13202, Start Num: 11
Candidate Starts for Chill_20:
(3, 12702), (Start: 11 @12795 has 29 MA's), (13, 12801), (Start: 21 @12825 has 1 MA's), (66, 13074), (74, 13122), (76, 13131), (79, 13137), (83, 13176),

Gene: Chivey_20 Start: 10852, Stop: 11220, Start Num: 19
Candidate Starts for Chivey_20:
(8, 10816), (Start: 19 @10852 has 37 MA's), (48, 11020), (81, 11200),

Gene: CoolCookie_21 Start: 11657, Stop: 12025, Start Num: 19
Candidate Starts for CoolCookie_21:
(8, 11621), (Start: 19 @11657 has 37 MA's), (48, 11825), (81, 12005),

Gene: Crestdrop_20 Start: 10726, Stop: 11094, Start Num: 19
Candidate Starts for Crestdrop_20:
(2, 10519), (8, 10690), (Start: 19 @10726 has 37 MA's), (48, 10894), (81, 11074),

Gene: Cuke_12 Start: 8316, Stop: 8744, Start Num: 11
Candidate Starts for Cuke_12:
(5, 8289), (Start: 11 @8316 has 29 MA's), (20, 8343), (22, 8352), (29, 8412), (31, 8415), (49, 8517), (55, 8550), (64, 8595), (67, 8616), (78, 8673),

Gene: Cybele_21 Start: 11627, Stop: 11995, Start Num: 19
Candidate Starts for Cybele_21:
(8, 11591), (Start: 19 @11627 has 37 MA's), (48, 11795), (81, 11975),

Gene: Damien_18 Start: 12625, Stop: 13008, Start Num: 14
Candidate Starts for Damien_18:
(Start: 14 @12625 has 11 MA's), (25, 12664), (39, 12754), (42, 12772), (74, 12925),

Gene: DannyDe_20 Start: 10844, Stop: 11212, Start Num: 19
Candidate Starts for DannyDe_20:
(8, 10808), (Start: 19 @10844 has 37 MA's), (48, 11012), (81, 11192),

Gene: Dauntless_20 Start: 11369, Stop: 11737, Start Num: 19
Candidate Starts for Dauntless_20:
(8, 11333), (Start: 19 @11369 has 37 MA's), (48, 11537), (81, 11717),

Gene: DaviePasture_19 Start: 13861, Stop: 14238, Start Num: 17
Candidate Starts for DaviePasture_19:

(Start: 17 @13861 has 41 MA's), (22, 13876), (33, 13951), (56, 14065), (61, 14083), (63, 14089), (67, 14113), (68, 14134), (74, 14155),

Gene: Delton_19 Start: 12801, Stop: 13208, Start Num: 11
Candidate Starts for Delton_19:
(3, 12708), (Start: 11 @12801 has 29 MA's), (13, 12807), (Start: 21 @12831 has 1 MA's), (66, 13080), (74, 13128), (76, 13137), (79, 13143), (83, 13182),

Gene: Demikore_26 Start: 15829, Stop: 16200, Start Num: 11
Candidate Starts for Demikore_26:
(Start: 11 @15829 has 29 MA's), (23, 15853), (28, 15904), (37, 15943), (40, 15958),

Gene: Djokovic_14 Start: 9137, Stop: 9526, Start Num: 15
Candidate Starts for Djokovic_14:
(Start: 15 @9137 has 9 MA's), (26, 9182), (62, 9374), (77, 9455), (80, 9479),

Gene: DoobyDoo_18 Start: 13038, Stop: 13415, Start Num: 17
Candidate Starts for DoobyDoo_18:
(Start: 17 @13038 has 41 MA's), (22, 13053), (33, 13128), (47, 13197), (56, 13242), (61, 13260), (67, 13290), (74, 13332),

Gene: DrLupo_26 Start: 14684, Stop: 15067, Start Num: 18
Candidate Starts for DrLupo_26:
(Start: 18 @14684 has 2 MA's), (23, 14705), (27, 14753), (29, 14759), (34, 14777), (77, 14996),

Gene: DumpTruck_18 Start: 13292, Stop: 13672, Start Num: 17
Candidate Starts for DumpTruck_18:
(Start: 17 @13292 has 41 MA's), (22, 13307), (33, 13382), (41, 13424), (53, 13484), (61, 13517),

Gene: Erk16_19 Start: 12792, Stop: 13199, Start Num: 11
Candidate Starts for Erk16_19:
(Start: 11 @12792 has 29 MA's), (13, 12798), (Start: 21 @12822 has 1 MA's), (66, 13071), (74, 13119), (76, 13128), (79, 13134), (83, 13173),

Gene: Erudite_20 Start: 11369, Stop: 11737, Start Num: 19
Candidate Starts for Erudite_20:
(8, 11333), (Start: 19 @11369 has 37 MA's), (48, 11537), (81, 11717),

Gene: Erutan_19 Start: 13551, Stop: 13928, Start Num: 17
Candidate Starts for Erutan_19:
(Start: 17 @13551 has 41 MA's), (22, 13566), (33, 13641), (35, 13650), (56, 13755), (61, 13773), (63, 13779), (67, 13803), (68, 13824), (74, 13845),

Gene: FountainFog_20 Start: 10978, Stop: 11346, Start Num: 19
Candidate Starts for FountainFog_20:
(8, 10942), (Start: 19 @10978 has 37 MA's), (43, 11125), (48, 11146), (81, 11326),

Gene: Fowlmouth_13 Start: 8487, Stop: 8915, Start Num: 11
Candidate Starts for Fowlmouth_13:
(5, 8460), (6, 8463), (Start: 11 @8487 has 29 MA's), (29, 8583), (64, 8766), (67, 8787),

Gene: FreddieHg_20 Start: 10868, Stop: 11236, Start Num: 19
Candidate Starts for FreddieHg_20:

(8, 10832), (Start: 19 @10868 has 37 MA's), (48, 11036), (81, 11216),

Gene: Fulcrum_20 Start: 14084, Stop: 14461, Start Num: 17
Candidate Starts for Fulcrum_20:
(Start: 17 @14084 has 41 MA's), (22, 14099), (33, 14174), (35, 14183), (47, 14243), (56, 14288), (61, 14306), (67, 14336), (74, 14378),

Gene: GOATification_20 Start: 14084, Stop: 14461, Start Num: 17
Candidate Starts for GOATification_20:
(Start: 17 @14084 has 41 MA's), (22, 14099), (33, 14174), (35, 14183), (47, 14243), (56, 14288), (61, 14306), (67, 14336), (74, 14378),

Gene: Genamy16_18 Start: 11658, Stop: 12035, Start Num: 17
Candidate Starts for Genamy16_18:
(Start: 17 @11658 has 41 MA's), (22, 11673), (33, 11748), (35, 11757), (56, 11862), (61, 11880), (67, 11910), (74, 11952),

Gene: Gibbin_20 Start: 14144, Stop: 14521, Start Num: 17
Candidate Starts for Gibbin_20:
(Start: 17 @14144 has 41 MA's), (22, 14159), (33, 14234), (35, 14243), (47, 14303), (56, 14348), (61, 14366), (67, 14396), (74, 14438),

Gene: Gilda_21 Start: 11651, Stop: 12019, Start Num: 19
Candidate Starts for Gilda_21:
(8, 11615), (Start: 19 @11651 has 37 MA's), (48, 11819), (81, 11999),

Gene: Gimesa_20 Start: 12967, Stop: 13344, Start Num: 12
Candidate Starts for Gimesa_20:
(9, 12958), (Start: 12 @12967 has 10 MA's), (Start: 14 @12979 has 11 MA's), (31, 13045), (36, 13078), (71, 13249), (73, 13252), (74, 13261), (78, 13273), (82, 13309),

Gene: Giuseppe_19 Start: 12781, Stop: 13188, Start Num: 11
Candidate Starts for Giuseppe_19:
(Start: 11 @12781 has 29 MA's), (13, 12787), (Start: 21 @12811 has 1 MA's), (66, 13060), (74, 13108), (76, 13117), (79, 13123), (83, 13162),

Gene: GretelLyn_19 Start: 14418, Stop: 14795, Start Num: 17
Candidate Starts for GretelLyn_19:
(Start: 17 @14418 has 41 MA's), (22, 14433), (33, 14508), (35, 14517), (47, 14577), (56, 14622), (61, 14640), (67, 14670), (74, 14712),

Gene: Gumball_18 Start: 12739, Stop: 13146, Start Num: 11
Candidate Starts for Gumball_18:
(Start: 11 @12739 has 29 MA's), (13, 12745), (Start: 21 @12769 has 1 MA's), (66, 13018), (74, 13066), (76, 13075), (79, 13081), (83, 13120),

Gene: Hager_22 Start: 11222, Stop: 11590, Start Num: 19
Candidate Starts for Hager_22:
(1, 10970), (8, 11186), (Start: 19 @11222 has 37 MA's), (48, 11390), (81, 11570),

Gene: Haunter_21 Start: 11064, Stop: 11432, Start Num: 19
Candidate Starts for Haunter_21:
(8, 11028), (Start: 19 @11064 has 37 MA's), (48, 11232), (81, 11412),

Gene: Hawkeye_21 Start: 12664, Stop: 13071, Start Num: 11
Candidate Starts for Hawkeye_21:
(Start: 11 @12664 has 29 MA's), (13, 12670), (27, 12754), (32, 12772), (34, 12778), (81, 13036),

Gene: Helpful_20 Start: 12789, Stop: 13196, Start Num: 11
Candidate Starts for Helpful_20:
(Start: 11 @12789 has 29 MA's), (13, 12795), (Start: 21 @12819 has 1 MA's), (66, 13068), (74, 13116), (76, 13125), (79, 13131), (83, 13170),

Gene: Hiddenleaf_20 Start: 10852, Stop: 11220, Start Num: 19
Candidate Starts for Hiddenleaf_20:
(8, 10816), (Start: 19 @10852 has 37 MA's), (48, 11020), (81, 11200),

Gene: Indlulamithi_16 Start: 10589, Stop: 11005, Start Num: 10
Candidate Starts for Indlulamithi_16:
(7, 10574), (Start: 10 @10589 has 1 MA's), (27, 10664), (38, 10718), (39, 10721), (46, 10754), (67, 10877),

Gene: JDawG_20 Start: 11434, Stop: 11802, Start Num: 19
Candidate Starts for JDawG_20:
(8, 11398), (Start: 19 @11434 has 37 MA's), (48, 11602), (81, 11782),

Gene: Jalebi_19 Start: 14594, Stop: 14971, Start Num: 17
Candidate Starts for Jalebi_19:
(Start: 17 @14594 has 41 MA's), (22, 14609), (33, 14684), (35, 14693), (47, 14753), (56, 14798), (61, 14816), (67, 14846), (74, 14888),

Gene: Jamemuya19_17 Start: 11658, Stop: 12035, Start Num: 17
Candidate Starts for Jamemuya19_17:
(Start: 17 @11658 has 41 MA's), (22, 11673), (33, 11748), (35, 11757), (56, 11862), (61, 11880), (67, 11910), (74, 11952),

Gene: JingleBells_20 Start: 10933, Stop: 11301, Start Num: 19
Candidate Starts for JingleBells_20:
(8, 10897), (Start: 19 @10933 has 37 MA's), (48, 11101), (81, 11281),

Gene: KandZ_19 Start: 12889, Stop: 13296, Start Num: 11
Candidate Starts for KandZ_19:
(Start: 11 @12889 has 29 MA's), (13, 12895), (Start: 21 @12919 has 1 MA's), (66, 13168), (74, 13216), (76, 13225), (79, 13231), (83, 13270),

Gene: Karate_20 Start: 11072, Stop: 11440, Start Num: 19
Candidate Starts for Karate_20:
(8, 11036), (Start: 19 @11072 has 37 MA's), (48, 11240), (81, 11420),

Gene: Kate_21 Start: 11659, Stop: 12027, Start Num: 19
Candidate Starts for Kate_21:
(8, 11623), (Start: 19 @11659 has 37 MA's), (48, 11827), (81, 12007),

Gene: Konstantine_23 Start: 13827, Stop: 14210, Start Num: 14
Candidate Starts for Konstantine_23:
(Start: 14 @13827 has 11 MA's), (25, 13866), (39, 13956), (42, 13974), (74, 14127),

Gene: Kors_22 Start: 11651, Stop: 12037, Start Num: 16
Candidate Starts for Kors_22:
(4, 11561), (Start: 16 @11651 has 7 MA's), (23, 11672), (42, 11801), (51, 11843), (58, 11876), (70, 11939), (75, 11975), (78, 11987),

Gene: Krampus_21 Start: 11657, Stop: 12025, Start Num: 19
Candidate Starts for Krampus_21:
(8, 11621), (Start: 19 @11657 has 37 MA's), (48, 11825), (81, 12005),

Gene: Labelle_25 Start: 15831, Stop: 16202, Start Num: 11
Candidate Starts for Labelle_25:
(Start: 11 @15831 has 29 MA's), (23, 15855), (28, 15906), (37, 15945), (40, 15960),

Gene: Lambo_19 Start: 14088, Stop: 14465, Start Num: 17
Candidate Starts for Lambo_19:
(Start: 17 @14088 has 41 MA's), (22, 14103), (33, 14178), (35, 14187), (56, 14292), (61, 14310), (63, 14316), (67, 14340), (68, 14361), (74, 14382),

Gene: LavAbarElk_17 Start: 12521, Stop: 12898, Start Num: 17
Candidate Starts for LavAbarElk_17:
(Start: 17 @12521 has 41 MA's), (22, 12536), (33, 12611), (35, 12620), (47, 12680), (56, 12725), (61, 12743), (67, 12773), (74, 12815),

Gene: Lila22_19 Start: 14042, Stop: 14419, Start Num: 17
Candidate Starts for Lila22_19:
(Start: 17 @14042 has 41 MA's), (22, 14057), (33, 14132), (35, 14141), (47, 14201), (56, 14246), (61, 14264), (67, 14294), (74, 14336),

Gene: LilyPad_15 Start: 9856, Stop: 10245, Start Num: 15
Candidate Starts for LilyPad_15:
(Start: 15 @9856 has 9 MA's), (26, 9901), (28, 9931), (29, 9934), (30, 9937), (62, 10093),

Gene: LittleFella_16 Start: 11757, Stop: 12137, Start Num: 15
Candidate Starts for LittleFella_16:
(Start: 15 @11757 has 9 MA's), (44, 11907), (62, 11985), (64, 11991), (75, 12057),

Gene: LordBart_22 Start: 11567, Stop: 11953, Start Num: 16
Candidate Starts for LordBart_22:
(4, 11477), (Start: 16 @11567 has 7 MA's), (23, 11588), (42, 11717), (51, 11759), (58, 11792), (67, 11828), (69, 11852), (70, 11855), (72, 11876), (75, 11891), (78, 11903),

Gene: LuckyLeo_18 Start: 13373, Stop: 13750, Start Num: 17
Candidate Starts for LuckyLeo_18:
(Start: 17 @13373 has 41 MA's), (22, 13388), (33, 13463), (39, 13496), (61, 13595), (67, 13625), (78, 13682),

Gene: Madi_14 Start: 9137, Stop: 9526, Start Num: 15
Candidate Starts for Madi_14:
(Start: 15 @9137 has 9 MA's), (26, 9182), (62, 9374), (77, 9455), (80, 9479),

Gene: Madruga_24 Start: 15500, Stop: 15871, Start Num: 11
Candidate Starts for Madruga_24:

(Start: 11 @15500 has 29 MA's), (23, 15524), (28, 15575), (37, 15614), (40, 15629),

Gene: Megatron06_20 Start: 13160, Stop: 13543, Start Num: 14
Candidate Starts for Megatron06_20:
(Start: 14 @13160 has 11 MA's), (39, 13289), (42, 13307), (74, 13460),

Gene: Mima20_18 Start: 13771, Stop: 14148, Start Num: 17
Candidate Starts for Mima20_18:
(Start: 17 @13771 has 41 MA's), (22, 13786), (33, 13861), (35, 13870), (56, 13975), (61, 13993), (63, 13999), (67, 14023), (68, 14044), (74, 14065),

Gene: MoiGyank_21 Start: 14455, Stop: 14832, Start Num: 17
Candidate Starts for MoiGyank_21:
(Start: 17 @14455 has 41 MA's), (22, 14470), (33, 14545), (35, 14554), (47, 14614), (56, 14659), (61, 14677), (67, 14707), (74, 14749),

Gene: MontyDev_19 Start: 12815, Stop: 13192, Start Num: 12
Candidate Starts for MontyDev_19:
(9, 12806), (Start: 12 @12815 has 10 MA's), (36, 12926), (71, 13097), (73, 13100), (74, 13109), (78, 13121), (82, 13157),

Gene: Mopey_19 Start: 12789, Stop: 13196, Start Num: 11
Candidate Starts for Mopey_19:
(Start: 11 @12789 has 29 MA's), (13, 12795), (Start: 21 @12819 has 1 MA's), (66, 13068), (74, 13116), (76, 13125), (79, 13131), (83, 13170),

Gene: MortySmith_19 Start: 10831, Stop: 11199, Start Num: 19
Candidate Starts for MortySmith_19:
(8, 10795), (Start: 19 @10831 has 37 MA's), (48, 10999), (81, 11179),

Gene: MrMiyagi_13 Start: 8487, Stop: 8915, Start Num: 11
Candidate Starts for MrMiyagi_13:
(5, 8460), (6, 8463), (Start: 11 @8487 has 29 MA's), (29, 8583), (36, 8619), (64, 8766), (67, 8787), (73, 8823),

Gene: NarutoRun_21 Start: 11650, Stop: 12018, Start Num: 19
Candidate Starts for NarutoRun_21:
(8, 11614), (Start: 19 @11650 has 37 MA's), (48, 11818), (81, 11998),

Gene: Neptune_21 Start: 11627, Stop: 11995, Start Num: 19
Candidate Starts for Neptune_21:
(8, 11591), (Start: 19 @11627 has 37 MA's), (48, 11795), (81, 11975),

Gene: Nettle_18 Start: 14318, Stop: 14695, Start Num: 17
Candidate Starts for Nettle_18:
(Start: 17 @14318 has 41 MA's), (22, 14333), (33, 14408), (35, 14417), (47, 14477), (56, 14522), (61, 14540), (67, 14570), (74, 14612),

Gene: Nilo_20 Start: 13154, Stop: 13531, Start Num: 12
Candidate Starts for Nilo_20:
(9, 13145), (Start: 12 @13154 has 10 MA's), (36, 13265), (71, 13436), (73, 13439), (74, 13448), (78, 13460), (82, 13496),

Gene: Nish23_19 Start: 12626, Stop: 13009, Start Num: 14
Candidate Starts for Nish23_19:
(Start: 14 @12626 has 11 MA's), (25, 12665), (39, 12755), (42, 12773), (74, 12926),

Gene: NorManre_20 Start: 13650, Stop: 14027, Start Num: 17
Candidate Starts for NorManre_20:
(Start: 17 @13650 has 41 MA's), (22, 13665), (33, 13740), (35, 13749), (56, 13854), (61, 13872), (63, 13878), (67, 13902), (68, 13923), (74, 13944), (84, 14007),

Gene: Nova_19 Start: 13216, Stop: 13623, Start Num: 11
Candidate Starts for Nova_19:
(Start: 11 @13216 has 29 MA's), (13, 13222), (Start: 21 @13246 has 1 MA's), (66, 13495), (74, 13543), (76, 13552), (79, 13558), (83, 13597),

Gene: NovaSharks_18 Start: 11658, Stop: 12035, Start Num: 17
Candidate Starts for NovaSharks_18:
(Start: 17 @11658 has 41 MA's), (22, 11673), (33, 11748), (35, 11757), (56, 11862), (61, 11880), (67, 11910), (74, 11952),

Gene: Oaker_18 Start: 12884, Stop: 13267, Start Num: 14
Candidate Starts for Oaker_18:
(Start: 14 @12884 has 11 MA's), (25, 12923), (39, 13013), (42, 13031), (74, 13184),

Gene: OhDear_21 Start: 11656, Stop: 12024, Start Num: 19
Candidate Starts for OhDear_21:
(8, 11620), (Start: 19 @11656 has 37 MA's), (48, 11824), (81, 12004),

Gene: OtterstedtS21_19 Start: 13740, Stop: 14117, Start Num: 17
Candidate Starts for OtterstedtS21_19:
(Start: 17 @13740 has 41 MA's), (22, 13755), (33, 13830), (35, 13839), (47, 13899), (56, 13944), (61, 13962), (67, 13992), (74, 14034),

Gene: OverHedge_21 Start: 11624, Stop: 11992, Start Num: 19
Candidate Starts for OverHedge_21:
(8, 11588), (Start: 19 @11624 has 37 MA's), (48, 11792), (81, 11972),

Gene: PBI1_20 Start: 12720, Stop: 13127, Start Num: 11
Candidate Starts for PBI1_20:
(Start: 11 @12720 has 29 MA's), (13, 12726), (Start: 21 @12750 has 1 MA's), (66, 12999), (74, 13047), (76, 13056), (79, 13062), (83, 13101),

Gene: PLot_20 Start: 12792, Stop: 13199, Start Num: 11
Candidate Starts for PLot_20:
(Start: 11 @12792 has 29 MA's), (13, 12798), (Start: 21 @12822 has 1 MA's), (66, 13071), (74, 13119), (76, 13128), (79, 13134), (83, 13173),

Gene: Papyrus_19 Start: 12816, Stop: 13193, Start Num: 12
Candidate Starts for Papyrus_19:
(9, 12807), (Start: 12 @12816 has 10 MA's), (36, 12927), (71, 13098), (73, 13101), (74, 13110), (78, 13122), (82, 13158),

Gene: ParvusTarda_19 Start: 13222, Stop: 13599, Start Num: 17
Candidate Starts for ParvusTarda_19:

(Start: 17 @13222 has 41 MA's), (22, 13237), (33, 13312), (35, 13321), (56, 13426), (61, 13444), (63, 13450), (67, 13474), (68, 13495), (74, 13516),

Gene: Patience_26 Start: 16390, Stop: 16761, Start Num: 11
Candidate Starts for Patience_26:
(Start: 11 @16390 has 29 MA's), (23, 16414), (28, 16465), (37, 16504), (40, 16519),

Gene: Patos_20 Start: 13650, Stop: 14027, Start Num: 17
Candidate Starts for Patos_20:
(Start: 17 @13650 has 41 MA's), (22, 13665), (33, 13740), (35, 13749), (56, 13854), (61, 13872), (63, 13878), (67, 13902), (68, 13923), (74, 13944), (84, 14007),

Gene: Penelope2018_19 Start: 12789, Stop: 13196, Start Num: 11
Candidate Starts for Penelope2018_19:
(Start: 11 @12789 has 29 MA's), (13, 12795), (Start: 21 @12819 has 1 MA's), (66, 13068), (74, 13116), (76, 13125), (79, 13131), (83, 13170),

Gene: Phalaborwa_19 Start: 12852, Stop: 13229, Start Num: 21
Candidate Starts for Phalaborwa_19:
(3, 12729), (Start: 11 @12822 has 29 MA's), (13, 12828), (Start: 21 @12852 has 1 MA's), (57, 13065), (66, 13101), (74, 13149), (76, 13158), (79, 13164), (81, 13194), (83, 13203),

Gene: Pharpay_21 Start: 11672, Stop: 12040, Start Num: 19
Candidate Starts for Pharpay_21:
(8, 11636), (Start: 19 @11672 has 37 MA's), (48, 11840), (81, 12020),

Gene: Phreeze_18 Start: 12625, Stop: 13008, Start Num: 14
Candidate Starts for Phreeze_18:
(Start: 14 @12625 has 11 MA's), (25, 12664), (39, 12754), (42, 12772), (74, 12925),

Gene: PhunaPhoke_21 Start: 11645, Stop: 12013, Start Num: 19
Candidate Starts for PhunaPhoke_21:
(8, 11609), (Start: 19 @11645 has 37 MA's), (48, 11813), (81, 11993),

Gene: Potty_21 Start: 11650, Stop: 12018, Start Num: 19
Candidate Starts for Potty_21:
(8, 11614), (Start: 19 @11650 has 37 MA's), (48, 11818), (81, 11998),

Gene: Poultress_20 Start: 11423, Stop: 11791, Start Num: 19
Candidate Starts for Poultress_20:
(8, 11387), (Start: 19 @11423 has 37 MA's), (48, 11591), (81, 11771),

Gene: Prager_19 Start: 12801, Stop: 13208, Start Num: 11
Candidate Starts for Prager_19:
(3, 12708), (Start: 11 @12801 has 29 MA's), (13, 12807), (Start: 21 @12831 has 1 MA's), (66, 13080), (74, 13128), (76, 13137), (79, 13143), (83, 13182),

Gene: Predator_22 Start: 14150, Stop: 14533, Start Num: 14
Candidate Starts for Predator_22:
(Start: 14 @14150 has 11 MA's), (25, 14189), (38, 14276), (47, 14315), (63, 14384), (74, 14450),

Gene: Puissant_19 Start: 13081, Stop: 13464, Start Num: 14
Candidate Starts for Puissant_19:

(Start: 14 @13081 has 11 MA's), (25, 13120), (41, 13219), (47, 13246), (74, 13381),

Gene: Pywacket_18 Start: 14579, Stop: 14956, Start Num: 17
Candidate Starts for Pywacket_18:
(Start: 17 @14579 has 41 MA's), (22, 14594), (33, 14669), (35, 14678), (47, 14738), (56, 14783), (61, 14801), (67, 14831), (74, 14873),

Gene: Rachella_21 Start: 11653, Stop: 12021, Start Num: 19
Candidate Starts for Rachella_21:
(8, 11617), (Start: 19 @11653 has 37 MA's), (48, 11821), (81, 12001),

Gene: Ranch_19 Start: 12588, Stop: 12965, Start Num: 17
Candidate Starts for Ranch_19:
(Start: 17 @12588 has 41 MA's), (22, 12603), (33, 12678), (35, 12687), (56, 12792), (61, 12810), (63, 12816), (65, 12825), (67, 12840), (74, 12882),

Gene: RazorC_17 Start: 11658, Stop: 12035, Start Num: 17
Candidate Starts for RazorC_17:
(Start: 17 @11658 has 41 MA's), (22, 11673), (33, 11748), (35, 11757), (56, 11862), (61, 11880), (67, 11910), (74, 11952),

Gene: Riduram_17 Start: 11628, Stop: 12005, Start Num: 17
Candidate Starts for Riduram_17:
(Start: 17 @11628 has 41 MA's), (22, 11643), (33, 11718), (35, 11727), (56, 11832), (61, 11850), (67, 11880), (74, 11922),

Gene: Rie18_21 Start: 11004, Stop: 11372, Start Num: 19
Candidate Starts for Rie18_21:
(8, 10968), (Start: 19 @11004 has 37 MA's), (48, 11172), (81, 11352),

Gene: RikSengupta_22 Start: 11688, Stop: 12074, Start Num: 16
Candidate Starts for RikSengupta_22:
(4, 11598), (Start: 16 @11688 has 7 MA's), (23, 11709), (42, 11838), (51, 11880), (58, 11913), (70, 11976), (75, 12012), (78, 12024),

Gene: Riparian_19 Start: 12615, Stop: 12992, Start Num: 12
Candidate Starts for Riparian_19:
(9, 12606), (Start: 12 @12615 has 10 MA's), (36, 12726), (71, 12897), (73, 12900), (74, 12909), (78, 12921), (82, 12957),

Gene: Rope_19 Start: 12807, Stop: 13184, Start Num: 12
Candidate Starts for Rope_19:
(9, 12798), (Start: 12 @12807 has 10 MA's), (36, 12918), (71, 13089), (73, 13092), (74, 13101), (78, 13113), (82, 13149),

Gene: Rota_18 Start: 13546, Stop: 13923, Start Num: 17
Candidate Starts for Rota_18:
(Start: 17 @13546 has 41 MA's), (22, 13561), (33, 13636), (35, 13645), (47, 13705), (56, 13750), (61, 13768), (67, 13798), (74, 13840),

Gene: Rukungu_19 Start: 14287, Stop: 14664, Start Num: 17
Candidate Starts for Rukungu_19:

(Start: 17 @14287 has 41 MA's), (22, 14302), (33, 14377), (35, 14386), (47, 14446), (56, 14491), (61, 14509), (67, 14539), (74, 14581),

Gene: Rumi_18 Start: 11658, Stop: 12035, Start Num: 17
Candidate Starts for Rumi_18:
(Start: 17 @11658 has 41 MA's), (22, 11673), (33, 11748), (35, 11757), (56, 11862), (61, 11880), (67, 11910), (74, 11952),

Gene: Sadboi_19 Start: 14418, Stop: 14795, Start Num: 17
Candidate Starts for Sadboi_19:
(Start: 17 @14418 has 41 MA's), (22, 14433), (33, 14508), (35, 14517), (47, 14577), (56, 14622), (61, 14640), (67, 14670), (74, 14712),

Gene: SafetyGuy_21 Start: 11656, Stop: 12024, Start Num: 19
Candidate Starts for SafetyGuy_21:
(8, 11620), (Start: 19 @11656 has 37 MA's), (48, 11824), (81, 12004),

Gene: Sampudon_19 Start: 14594, Stop: 14971, Start Num: 17
Candidate Starts for Sampudon_19:
(Start: 17 @14594 has 41 MA's), (22, 14609), (33, 14684), (35, 14693), (47, 14753), (56, 14798), (61, 14816), (67, 14846), (74, 14888),

Gene: Send513_19 Start: 13157, Stop: 13534, Start Num: 12
Candidate Starts for Send513_19:
(9, 13148), (Start: 12 @13157 has 10 MA's), (36, 13268), (71, 13439), (73, 13442), (74, 13451), (78, 13463), (82, 13499),

Gene: Sienna_14 Start: 9137, Stop: 9526, Start Num: 15
Candidate Starts for Sienna_14:
(Start: 15 @9137 has 9 MA's), (26, 9182), (62, 9374), (77, 9455), (80, 9479),

Gene: SilentWarrior_20 Start: 10860, Stop: 11228, Start Num: 19
Candidate Starts for SilentWarrior_20:
(8, 10824), (Start: 19 @10860 has 37 MA's), (48, 11028), (81, 11208),

Gene: SirHarley_18 Start: 12751, Stop: 13128, Start Num: 21
Candidate Starts for SirHarley_18:
(Start: 11 @12721 has 29 MA's), (13, 12727), (Start: 21 @12751 has 1 MA's), (66, 13000), (74, 13048), (76, 13057), (79, 13063), (83, 13102),

Gene: Snakehole_22 Start: 10949, Stop: 11317, Start Num: 19
Candidate Starts for Snakehole_22:
(8, 10913), (Start: 19 @10949 has 37 MA's), (48, 11117), (81, 11297),

Gene: Sparcetus_22 Start: 11567, Stop: 11953, Start Num: 16
Candidate Starts for Sparcetus_22:
(4, 11477), (Start: 16 @11567 has 7 MA's), (23, 11588), (42, 11717), (51, 11759), (58, 11792), (70, 11855), (75, 11891), (78, 11903),

Gene: Stormer_17 Start: 11658, Stop: 12035, Start Num: 17
Candidate Starts for Stormer_17:
(Start: 17 @11658 has 41 MA's), (22, 11673), (33, 11748), (35, 11757), (56, 11862), (61, 11880), (67, 11910), (74, 11952),

Gene: SuperSonics_25 Start: 15557, Stop: 15928, Start Num: 11
Candidate Starts for SuperSonics_25:
(Start: 11 @15557 has 29 MA's), (23, 15581), (28, 15632), (37, 15671), (40, 15686),

Gene: SuperheroCarly_19 Start: 12651, Stop: 13058, Start Num: 11
Candidate Starts for SuperheroCarly_19:
(Start: 11 @12651 has 29 MA's), (13, 12657), (Start: 21 @12681 has 1 MA's), (66, 12930), (74, 12978), (76, 12987), (79, 12993), (83, 13032),

Gene: Suzy_15 Start: 10365, Stop: 10754, Start Num: 15
Candidate Starts for Suzy_15:
(Start: 15 @10365 has 9 MA's), (22, 10383), (26, 10410), (62, 10602), (64, 10608), (77, 10683), (80, 10707),

Gene: Tedro_21 Start: 11123, Stop: 11491, Start Num: 19
Candidate Starts for Tedro_21:
(8, 11087), (Start: 19 @11123 has 37 MA's), (48, 11291), (81, 11471),

Gene: Terapin_14 Start: 9137, Stop: 9526, Start Num: 15
Candidate Starts for Terapin_14:
(Start: 15 @9137 has 9 MA's), (26, 9182), (62, 9374), (77, 9455), (80, 9479),

Gene: Thoth_19 Start: 12786, Stop: 13193, Start Num: 11
Candidate Starts for Thoth_19:
(Start: 11 @12786 has 29 MA's), (13, 12792), (Start: 21 @12816 has 1 MA's), (66, 13065), (74, 13113), (76, 13122), (79, 13128), (83, 13167),

Gene: Thumb_18 Start: 12626, Stop: 13009, Start Num: 14
Candidate Starts for Thumb_18:
(Start: 14 @12626 has 11 MA's), (39, 12755), (42, 12773), (74, 12926),

Gene: Tiggy93_21 Start: 11656, Stop: 12024, Start Num: 19
Candidate Starts for Tiggy93_21:
(8, 11620), (Start: 19 @11656 has 37 MA's), (48, 11824), (81, 12004),

Gene: Tillicus_19 Start: 12967, Stop: 13344, Start Num: 17
Candidate Starts for Tillicus_19:
(Start: 17 @12967 has 41 MA's), (22, 12982), (33, 13057), (39, 13090), (61, 13189), (67, 13219),

Gene: TinyMiny_22 Start: 11586, Stop: 11972, Start Num: 16
Candidate Starts for TinyMiny_22:
(4, 11496), (Start: 16 @11586 has 7 MA's), (23, 11607), (42, 11736), (51, 11778), (58, 11811), (70, 11874), (75, 11910), (78, 11922),

Gene: Tongui_20 Start: 10996, Stop: 11364, Start Num: 19
Candidate Starts for Tongui_20:
(8, 10960), (Start: 19 @10996 has 37 MA's), (48, 11164), (81, 11344),

Gene: Troll4_19 Start: 12790, Stop: 13197, Start Num: 11
Candidate Starts for Troll4_19:
(Start: 11 @12790 has 29 MA's), (13, 12796), (Start: 21 @12820 has 1 MA's), (66, 13069), (74, 13117), (76, 13126), (79, 13132), (83, 13171),

Gene: Visconti_19 Start: 12799, Stop: 13206, Start Num: 11
Candidate Starts for Visconti_19:
(Start: 11 @12799 has 29 MA's), (13, 12805), (Start: 21 @12829 has 1 MA's), (66, 13078), (74, 13126), (76, 13135), (79, 13141), (83, 13180),

Gene: WaldoWhy_20 Start: 12795, Stop: 13202, Start Num: 11
Candidate Starts for WaldoWhy_20:
(3, 12702), (Start: 11 @12795 has 29 MA's), (13, 12801), (Start: 21 @12825 has 1 MA's), (66, 13074), (74, 13122), (76, 13131), (79, 13137), (83, 13176),

Gene: Weiss13_19 Start: 12847, Stop: 13224, Start Num: 12
Candidate Starts for Weiss13_19:
(9, 12838), (Start: 12 @12847 has 10 MA's), (36, 12958), (71, 13129), (73, 13132), (74, 13141), (78, 13153), (82, 13189),

Gene: WinnieLou_22 Start: 11291, Stop: 11659, Start Num: 19
Candidate Starts for WinnieLou_22:
(1, 11039), (8, 11255), (Start: 19 @11291 has 37 MA's), (48, 11459), (81, 11639),

Gene: Wojtek_18 Start: 13295, Stop: 13672, Start Num: 17
Candidate Starts for Wojtek_18:
(Start: 17 @13295 has 41 MA's), (22, 13310), (33, 13385), (35, 13394), (47, 13454), (56, 13499), (61, 13517), (67, 13547), (74, 13589),

Gene: Wollypog_9 Start: 8239, Stop: 8610, Start Num: 17
Candidate Starts for Wollypog_9:
(Start: 17 @8239 has 41 MA's), (23, 8263), (24, 8269), (45, 8398), (50, 8425), (52, 8440), (59, 8470), (60, 8473), (64, 8479), (75, 8545), (82, 8596),

Gene: Xenia2_19 Start: 13334, Stop: 13714, Start Num: 17
Candidate Starts for Xenia2_19:
(Start: 17 @13334 has 41 MA's), (22, 13349), (33, 13424), (41, 13466), (53, 13526), (61, 13559),

Gene: Yelo_19 Start: 13157, Stop: 13534, Start Num: 12
Candidate Starts for Yelo_19:
(9, 13148), (Start: 12 @13157 has 10 MA's), (Start: 14 @13169 has 11 MA's), (31, 13235), (36, 13268), (71, 13439), (73, 13442), (74, 13451), (78, 13463), (82, 13499),

Gene: Yikes_20 Start: 14679, Stop: 15056, Start Num: 17
Candidate Starts for Yikes_20:
(Start: 17 @14679 has 41 MA's), (22, 14694), (33, 14769), (35, 14778), (56, 14883), (61, 14901), (63, 14907), (67, 14931), (68, 14952), (74, 14973),

Gene: Zany_18 Start: 13808, Stop: 14185, Start Num: 17
Candidate Starts for Zany_18:
(Start: 17 @13808 has 41 MA's), (22, 13823), (33, 13898), (35, 13907), (56, 14012), (61, 14030), (67, 14060), (74, 14102),

Gene: Zenon_20 Start: 13159, Stop: 13536, Start Num: 12
Candidate Starts for Zenon_20:
(9, 13150), (Start: 12 @13159 has 10 MA's), (36, 13270), (71, 13441), (73, 13444), (74, 13453), (78, 13465), (82, 13501),