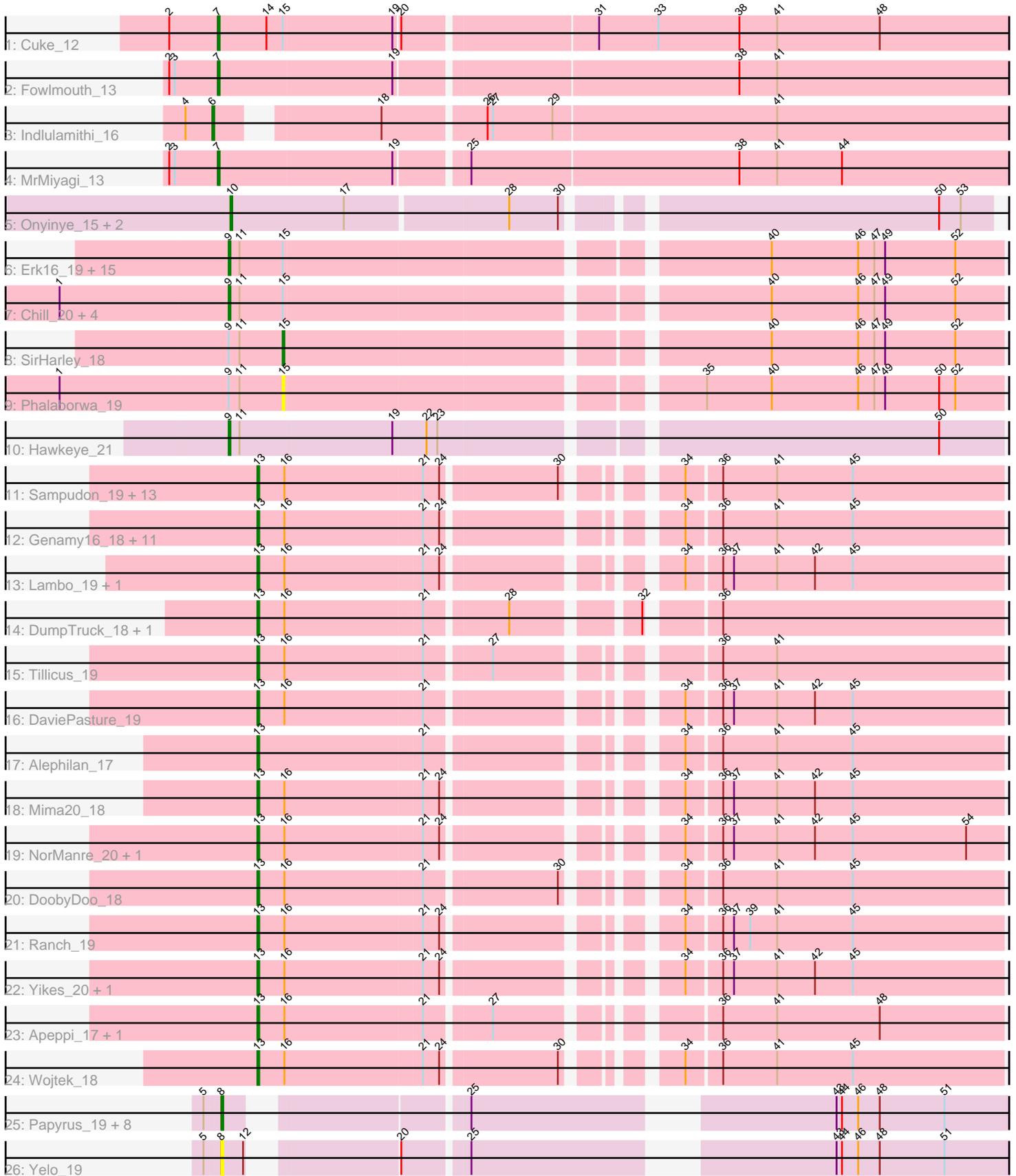


Pham 291069



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 291069 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291069 has 84 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Cuke_12
- Track 2 : Fowlmouth_13
- Track 3 : Indlulamithi_16
- Track 4 : MrMiyagi_13
- Track 5 : Onyinye_15, Aikoy_14, Leopard_14
- Track 6 : Erk16_19, Giuseppe_19, SuperheroCarly_20, Mopey_19, Visconti_19, PLOT_20, Adjutor_20, KandZ_19, Penelope2018_19, Helpful_20, Gumball_18, Thoth_19, Butterscotch_19, PBI1_20, Troll4_19, Nova_19
- Track 7 : Chill_20, WaldoWhy_20, BigMama_17, Delton_19, Prager_19
- Track 8 : SirHarley_18
- Track 9 : Phalaborwa_19
- Track 10 : Hawkeye_21
- Track 11 : Sampudon_19, OtterstedtS21_19, Jalebi_19, Rukungu_19, Gretellyn_19, Rota_18, Gibbin_20, MoiGyank_21, LavAbarElk_17, BirthdayBoy_20, GOATification_20, Fulcrum_20, Lila22_19, Sadboi_19
- Track 12 : Genamy16_18, Avian_17, Riduram_17, Jamemuya19_17, NovaSharks_18, Rumi_18, Astralis_17, Charminar_17, Stormer_17, Alyssamiracle_18, RazorC_17, Zany_18
- Track 13 : Lambo_19, Erutan_19
- Track 14 : DumpTruck_18, Xenia2_19
- Track 15 : Tillicus_19
- Track 16 : DaviePasture_19
- Track 17 : Alephilan_17
- Track 18 : Mima20_18
- Track 19 : NorManre_20, Patos_20
- Track 20 : DoobyDoo_18
- Track 21 : Ranch_19
- Track 22 : Yikes_20, ParvusTarda_19
- Track 23 : Apeppi_17, LuckyLeo_18
- Track 24 : Wojtek_18
- Track 25 : Papyrus_19, Send513_19, Rope_19, Weiss13_19, Nilo_20, Riparian_19, MontyDev_19, Candle_19, Zenon_20
- Track 26 : Yelo_19

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

The start number called the most often in the published annotations is 13, it was called in 37 of the 75 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 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, NorManre_20, NovaSharks_18, OtterstedtS21_19, ParvusTarda_19, Patos_20, Ranch_19, RazorC_17, Riduram_17, Rota_18, Rukungu_19, Rumi_18, Sadboi_19, Sampudon_19, Stormer_17, Tillicus_19, Wojtek_18, 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, Aikoy_14, BigMama_17, Butterscotch_19, Candle_19, Chill_20, Cuke_12, Delton_19, Erk16_19, Fowlmouth_13, Giuseppe_19, Gumball_18, Hawkeye_21, Helpful_20, Indlulamithi_16, KandZ_19, Leopard_14, MontyDev_19, Mopey_19, MrMiyagi_13, Nilo_20, Nova_19, Onyinye_15, PBI1_20, PLOT_20, Papyrus_19, Penelope2018_19, Phalaborwa_19, Prager_19, Riparian_19, Rope_19, Send513_19, SirHarley_18, SuperheroCarly_20, Thoth_19, Troll4_19, Visconti_19, WaldoWhy_20, Weiss13_19, Yelo_19, Zenon_20,

Summary by start number:

Start 6:

- Found in 1 of 84 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 75
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Indlulamithi_16 (AC),

Start 7:

- Found in 3 of 84 (3.6%) of genes in pham
- Manual Annotations of this start: 3 of 75
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cuke_12 (AC), Fowlmouth_13 (AC), MrMiyagi_13 (AC),

Start 8:

- Found in 10 of 84 (11.9%) of genes in pham
- Manual Annotations of this start: 9 of 75
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Candle_19 (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 9:

- Found in 24 of 84 (28.6%) of genes in pham
- Manual Annotations of this start: 21 of 75
- Called 91.7% of time when present

- Phage (with cluster) where this start called: Adjutor_20 (D1), BigMama_17 (D1), Butterscotch_19 (D1), Chill_20 (D1), Delton_19 (D1), Erk16_19 (D1), Giuseppe_19 (D1), Gumball_18 (D1), Hawkeye_21 (D2), Helpful_20 (D1), KandZ_19 (D1), Mopey_19 (D1), Nova_19 (D1), PBI1_20 (D1), PLOT_20 (D1), Penelope2018_19 (D1), Prager_19 (D1), SuperheroCarly_20 (D1), Thoth_19 (D1), Troll4_19 (D1), Visconti_19 (D1), WaldoWhy_20 (D1),

Start 10:

- Found in 3 of 84 (3.6%) of genes in pham
- Manual Annotations of this start: 3 of 75
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aikoy_14 (AE), Leopard_14 (AE), Onyinye_15 (AE),

Start 13:

- Found in 43 of 84 (51.2%) of genes in pham
- Manual Annotations of this start: 37 of 75
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alephlan_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), NorManre_20 (DV), NovaSharks_18 (DV), OtterstedtS21_19 (DV), ParvusTarda_19 (DV), Patos_20 (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), Xenia2_19 (DV), Yikes_20 (DV), Zany_18 (DV),

Start 15:

- Found in 24 of 84 (28.6%) of genes in pham
- Manual Annotations of this start: 1 of 75
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Phalaborwa_19 (D1), SirHarley_18 (D1),

Summary by clusters:

There are 6 clusters represented in this pham: AC, AE, R, DV, D2, D1,

Info for manual annotations of cluster AC:

- Start number 6 was manually annotated 1 time for cluster AC.
- Start number 7 was manually annotated 3 times for cluster AC.

Info for manual annotations of cluster AE:

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

Info for manual annotations of cluster D1:

- Start number 9 was manually annotated 20 times for cluster D1.
- Start number 15 was manually annotated 1 time for cluster D1.

Info for manual annotations of cluster D2:

- Start number 9 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster DV:

•Start number 13 was manually annotated 37 times for cluster DV.

Info for manual annotations of cluster R:

•Start number 8 was manually annotated 9 times for cluster R.

Gene Information:

Gene: Adjutor_20 Start: 12729, Stop: 13136, Start Num: 9

Candidate Starts for Adjutor_20:

(Start: 9 @12729 has 21 MA's), (11, 12735), (Start: 15 @12759 has 1 MA's), (40, 13008), (46, 13056), (47, 13065), (49, 13071), (52, 13110),

Gene: Aikoy_14 Start: 5054, Stop: 5449, Start Num: 10

Candidate Starts for Aikoy_14:

(Start: 10 @5054 has 3 MA's), (17, 5117), (28, 5204), (30, 5231), (50, 5420), (53, 5432),

Gene: Alephilan_17 Start: 13251, Stop: 13628, Start Num: 13

Candidate Starts for Alephilan_17:

(Start: 13 @13251 has 37 MA's), (21, 13341), (34, 13455), (36, 13473), (41, 13503), (45, 13545),

Gene: Alyssamiracle_18 Start: 11658, Stop: 12035, Start Num: 13

Candidate Starts for Alyssamiracle_18:

(Start: 13 @11658 has 37 MA's), (16, 11673), (21, 11748), (24, 11757), (34, 11862), (36, 11880), (41, 11910), (45, 11952),

Gene: Apeppi_17 Start: 13373, Stop: 13750, Start Num: 13

Candidate Starts for Apeppi_17:

(Start: 13 @13373 has 37 MA's), (16, 13388), (21, 13463), (27, 13496), (36, 13595), (41, 13625), (48, 13682),

Gene: Astralis_17 Start: 11658, Stop: 12035, Start Num: 13

Candidate Starts for Astralis_17:

(Start: 13 @11658 has 37 MA's), (16, 11673), (21, 11748), (24, 11757), (34, 11862), (36, 11880), (41, 11910), (45, 11952),

Gene: Avian_17 Start: 11658, Stop: 12035, Start Num: 13

Candidate Starts for Avian_17:

(Start: 13 @11658 has 37 MA's), (16, 11673), (21, 11748), (24, 11757), (34, 11862), (36, 11880), (41, 11910), (45, 11952),

Gene: BigMama_17 Start: 12805, Stop: 13212, Start Num: 9

Candidate Starts for BigMama_17:

(1, 12712), (Start: 9 @12805 has 21 MA's), (11, 12811), (Start: 15 @12835 has 1 MA's), (40, 13084), (46, 13132), (47, 13141), (49, 13147), (52, 13186),

Gene: BirthdayBoy_20 Start: 14104, Stop: 14481, Start Num: 13

Candidate Starts for BirthdayBoy_20:

(Start: 13 @14104 has 37 MA's), (16, 14119), (21, 14194), (24, 14203), (30, 14263), (34, 14308), (36, 14326), (41, 14356), (45, 14398),

Gene: Butterscotch_19 Start: 12789, Stop: 13196, Start Num: 9

Candidate Starts for Butterscotch_19:

(Start: 9 @12789 has 21 MA's), (11, 12795), (Start: 15 @12819 has 1 MA's), (40, 13068), (46, 13116), (47, 13125), (49, 13131), (52, 13170),

Gene: Candle_19 Start: 13157, Stop: 13534, Start Num: 8

Candidate Starts for Candle_19:

(5, 13148), (Start: 8 @13157 has 9 MA's), (25, 13268), (43, 13439), (44, 13442), (46, 13451), (48, 13463), (51, 13499),

Gene: Charminar_17 Start: 11658, Stop: 12035, Start Num: 13

Candidate Starts for Charminar_17:

(Start: 13 @11658 has 37 MA's), (16, 11673), (21, 11748), (24, 11757), (34, 11862), (36, 11880), (41, 11910), (45, 11952),

Gene: Chill_20 Start: 12795, Stop: 13202, Start Num: 9

Candidate Starts for Chill_20:

(1, 12702), (Start: 9 @12795 has 21 MA's), (11, 12801), (Start: 15 @12825 has 1 MA's), (40, 13074), (46, 13122), (47, 13131), (49, 13137), (52, 13176),

Gene: Cuke_12 Start: 8316, Stop: 8744, Start Num: 7

Candidate Starts for Cuke_12:

(2, 8289), (Start: 7 @8316 has 3 MA's), (14, 8343), (Start: 15 @8352 has 1 MA's), (19, 8412), (20, 8415), (31, 8517), (33, 8550), (38, 8595), (41, 8616), (48, 8673),

Gene: DaviePasture_19 Start: 13861, Stop: 14238, Start Num: 13

Candidate Starts for DaviePasture_19:

(Start: 13 @13861 has 37 MA's), (16, 13876), (21, 13951), (34, 14065), (36, 14083), (37, 14089), (41, 14113), (42, 14134), (45, 14155),

Gene: Delton_19 Start: 12801, Stop: 13208, Start Num: 9

Candidate Starts for Delton_19:

(1, 12708), (Start: 9 @12801 has 21 MA's), (11, 12807), (Start: 15 @12831 has 1 MA's), (40, 13080), (46, 13128), (47, 13137), (49, 13143), (52, 13182),

Gene: DoobyDoo_18 Start: 13038, Stop: 13415, Start Num: 13

Candidate Starts for DoobyDoo_18:

(Start: 13 @13038 has 37 MA's), (16, 13053), (21, 13128), (30, 13197), (34, 13242), (36, 13260), (41, 13290), (45, 13332),

Gene: DumpTruck_18 Start: 13292, Stop: 13672, Start Num: 13

Candidate Starts for DumpTruck_18:

(Start: 13 @13292 has 37 MA's), (16, 13307), (21, 13382), (28, 13424), (32, 13484), (36, 13517),

Gene: Erk16_19 Start: 12792, Stop: 13199, Start Num: 9

Candidate Starts for Erk16_19:

(Start: 9 @12792 has 21 MA's), (11, 12798), (Start: 15 @12822 has 1 MA's), (40, 13071), (46, 13119), (47, 13128), (49, 13134), (52, 13173),

Gene: Erutan_19 Start: 13551, Stop: 13928, Start Num: 13

Candidate Starts for Erutan_19:

(Start: 13 @13551 has 37 MA's), (16, 13566), (21, 13641), (24, 13650), (34, 13755), (36, 13773), (37, 13779), (41, 13803), (42, 13824), (45, 13845),

Gene: Fowlmouth_13 Start: 8487, Stop: 8915, Start Num: 7

Candidate Starts for Fowlmouth_13:

(2, 8460), (3, 8463), (Start: 7 @8487 has 3 MA's), (19, 8583), (38, 8766), (41, 8787),

Gene: Fulcrum_20 Start: 14084, Stop: 14461, Start Num: 13

Candidate Starts for Fulcrum_20:

(Start: 13 @14084 has 37 MA's), (16, 14099), (21, 14174), (24, 14183), (30, 14243), (34, 14288), (36, 14306), (41, 14336), (45, 14378),

Gene: GOATification_20 Start: 14084, Stop: 14461, Start Num: 13

Candidate Starts for GOATification_20:

(Start: 13 @14084 has 37 MA's), (16, 14099), (21, 14174), (24, 14183), (30, 14243), (34, 14288), (36, 14306), (41, 14336), (45, 14378),

Gene: Genamy16_18 Start: 11658, Stop: 12035, Start Num: 13

Candidate Starts for Genamy16_18:

(Start: 13 @11658 has 37 MA's), (16, 11673), (21, 11748), (24, 11757), (34, 11862), (36, 11880), (41, 11910), (45, 11952),

Gene: Gibbin_20 Start: 14144, Stop: 14521, Start Num: 13

Candidate Starts for Gibbin_20:

(Start: 13 @14144 has 37 MA's), (16, 14159), (21, 14234), (24, 14243), (30, 14303), (34, 14348), (36, 14366), (41, 14396), (45, 14438),

Gene: Giuseppe_19 Start: 12781, Stop: 13188, Start Num: 9

Candidate Starts for Giuseppe_19:

(Start: 9 @12781 has 21 MA's), (11, 12787), (Start: 15 @12811 has 1 MA's), (40, 13060), (46, 13108), (47, 13117), (49, 13123), (52, 13162),

Gene: Gretellyn_19 Start: 14418, Stop: 14795, Start Num: 13

Candidate Starts for Gretellyn_19:

(Start: 13 @14418 has 37 MA's), (16, 14433), (21, 14508), (24, 14517), (30, 14577), (34, 14622), (36, 14640), (41, 14670), (45, 14712),

Gene: Gumball_18 Start: 12739, Stop: 13146, Start Num: 9

Candidate Starts for Gumball_18:

(Start: 9 @12739 has 21 MA's), (11, 12745), (Start: 15 @12769 has 1 MA's), (40, 13018), (46, 13066), (47, 13075), (49, 13081), (52, 13120),

Gene: Hawkeye_21 Start: 12664, Stop: 13071, Start Num: 9

Candidate Starts for Hawkeye_21:

(Start: 9 @12664 has 21 MA's), (11, 12670), (19, 12754), (22, 12772), (23, 12778), (50, 13036),

Gene: Helpful_20 Start: 12789, Stop: 13196, Start Num: 9

Candidate Starts for Helpful_20:

(Start: 9 @12789 has 21 MA's), (11, 12795), (Start: 15 @12819 has 1 MA's), (40, 13068), (46, 13116), (47, 13125), (49, 13131), (52, 13170),

Gene: Indlulamithi_16 Start: 10589, Stop: 11005, Start Num: 6

Candidate Starts for Indlulamithi_16:

(4, 10574), (Start: 6 @10589 has 1 MA's), (18, 10664), (26, 10718), (27, 10721), (29, 10754), (41, 10877),

Gene: Jalebi_19 Start: 14594, Stop: 14971, Start Num: 13

Candidate Starts for Jalebi_19:

(Start: 13 @14594 has 37 MA's), (16, 14609), (21, 14684), (24, 14693), (30, 14753), (34, 14798), (36, 14816), (41, 14846), (45, 14888),

Gene: Jamemuya19_17 Start: 11658, Stop: 12035, Start Num: 13

Candidate Starts for Jamemuya19_17:

(Start: 13 @11658 has 37 MA's), (16, 11673), (21, 11748), (24, 11757), (34, 11862), (36, 11880), (41, 11910), (45, 11952),

Gene: KandZ_19 Start: 12889, Stop: 13296, Start Num: 9

Candidate Starts for KandZ_19:

(Start: 9 @12889 has 21 MA's), (11, 12895), (Start: 15 @12919 has 1 MA's), (40, 13168), (46, 13216), (47, 13225), (49, 13231), (52, 13270),

Gene: Lambo_19 Start: 14088, Stop: 14465, Start Num: 13

Candidate Starts for Lambo_19:

(Start: 13 @14088 has 37 MA's), (16, 14103), (21, 14178), (24, 14187), (34, 14292), (36, 14310), (37, 14316), (41, 14340), (42, 14361), (45, 14382),

Gene: LavAbarElk_17 Start: 12521, Stop: 12898, Start Num: 13

Candidate Starts for LavAbarElk_17:

(Start: 13 @12521 has 37 MA's), (16, 12536), (21, 12611), (24, 12620), (30, 12680), (34, 12725), (36, 12743), (41, 12773), (45, 12815),

Gene: Leopard_14 Start: 5232, Stop: 5627, Start Num: 10

Candidate Starts for Leopard_14:

(Start: 10 @5232 has 3 MA's), (17, 5295), (28, 5382), (30, 5409), (50, 5598), (53, 5610),

Gene: Lila22_19 Start: 14042, Stop: 14419, Start Num: 13

Candidate Starts for Lila22_19:

(Start: 13 @14042 has 37 MA's), (16, 14057), (21, 14132), (24, 14141), (30, 14201), (34, 14246), (36, 14264), (41, 14294), (45, 14336),

Gene: LuckyLeo_18 Start: 13373, Stop: 13750, Start Num: 13

Candidate Starts for LuckyLeo_18:

(Start: 13 @13373 has 37 MA's), (16, 13388), (21, 13463), (27, 13496), (36, 13595), (41, 13625), (48, 13682),

Gene: Mima20_18 Start: 13771, Stop: 14148, Start Num: 13

Candidate Starts for Mima20_18:

(Start: 13 @13771 has 37 MA's), (16, 13786), (21, 13861), (24, 13870), (34, 13975), (36, 13993), (37, 13999), (41, 14023), (42, 14044), (45, 14065),

Gene: MoiGyank_21 Start: 14455, Stop: 14832, Start Num: 13

Candidate Starts for MoiGyank_21:

(Start: 13 @14455 has 37 MA's), (16, 14470), (21, 14545), (24, 14554), (30, 14614), (34, 14659), (36, 14677), (41, 14707), (45, 14749),

Gene: MontyDev_19 Start: 12815, Stop: 13192, Start Num: 8

Candidate Starts for MontyDev_19:

(5, 12806), (Start: 8 @12815 has 9 MA's), (25, 12926), (43, 13097), (44, 13100), (46, 13109), (48, 13121), (51, 13157),

Gene: Mopey_19 Start: 12789, Stop: 13196, Start Num: 9

Candidate Starts for Mopey_19:

(Start: 9 @12789 has 21 MA's), (11, 12795), (Start: 15 @12819 has 1 MA's), (40, 13068), (46, 13116), (47, 13125), (49, 13131), (52, 13170),

Gene: MrMiyagi_13 Start: 8487, Stop: 8915, Start Num: 7

Candidate Starts for MrMiyagi_13:

(2, 8460), (3, 8463), (Start: 7 @8487 has 3 MA's), (19, 8583), (25, 8619), (38, 8766), (41, 8787), (44, 8823),

Gene: Nilo_20 Start: 13154, Stop: 13531, Start Num: 8

Candidate Starts for Nilo_20:

(5, 13145), (Start: 8 @13154 has 9 MA's), (25, 13265), (43, 13436), (44, 13439), (46, 13448), (48, 13460), (51, 13496),

Gene: NorManre_20 Start: 13650, Stop: 14027, Start Num: 13

Candidate Starts for NorManre_20:

(Start: 13 @13650 has 37 MA's), (16, 13665), (21, 13740), (24, 13749), (34, 13854), (36, 13872), (37, 13878), (41, 13902), (42, 13923), (45, 13944), (54, 14007),

Gene: Nova_19 Start: 13216, Stop: 13623, Start Num: 9

Candidate Starts for Nova_19:

(Start: 9 @13216 has 21 MA's), (11, 13222), (Start: 15 @13246 has 1 MA's), (40, 13495), (46, 13543), (47, 13552), (49, 13558), (52, 13597),

Gene: NovaSharks_18 Start: 11658, Stop: 12035, Start Num: 13

Candidate Starts for NovaSharks_18:

(Start: 13 @11658 has 37 MA's), (16, 11673), (21, 11748), (24, 11757), (34, 11862), (36, 11880), (41, 11910), (45, 11952),

Gene: Onyinye_15 Start: 5220, Stop: 5615, Start Num: 10

Candidate Starts for Onyinye_15:

(Start: 10 @5220 has 3 MA's), (17, 5283), (28, 5370), (30, 5397), (50, 5586), (53, 5598),

Gene: OtterstedtS21_19 Start: 13740, Stop: 14117, Start Num: 13

Candidate Starts for OtterstedtS21_19:

(Start: 13 @13740 has 37 MA's), (16, 13755), (21, 13830), (24, 13839), (30, 13899), (34, 13944), (36, 13962), (41, 13992), (45, 14034),

Gene: PBI1_20 Start: 12720, Stop: 13127, Start Num: 9

Candidate Starts for PBI1_20:

(Start: 9 @12720 has 21 MA's), (11, 12726), (Start: 15 @12750 has 1 MA's), (40, 12999), (46, 13047), (47, 13056), (49, 13062), (52, 13101),

Gene: PLOT_20 Start: 12792, Stop: 13199, Start Num: 9

Candidate Starts for PLOT_20:

(Start: 9 @12792 has 21 MA's), (11, 12798), (Start: 15 @12822 has 1 MA's), (40, 13071), (46, 13119), (47, 13128), (49, 13134), (52, 13173),

Gene: Papyrus_19 Start: 12816, Stop: 13193, Start Num: 8

Candidate Starts for Papyrus_19:

(5, 12807), (Start: 8 @12816 has 9 MA's), (25, 12927), (43, 13098), (44, 13101), (46, 13110), (48, 13122), (51, 13158),

Gene: ParvusTarda_19 Start: 13222, Stop: 13599, Start Num: 13

Candidate Starts for ParvusTarda_19:

(Start: 13 @13222 has 37 MA's), (16, 13237), (21, 13312), (24, 13321), (34, 13426), (36, 13444), (37, 13450), (41, 13474), (42, 13495), (45, 13516),

Gene: Patos_20 Start: 13650, Stop: 14027, Start Num: 13

Candidate Starts for Patos_20:

(Start: 13 @13650 has 37 MA's), (16, 13665), (21, 13740), (24, 13749), (34, 13854), (36, 13872), (37, 13878), (41, 13902), (42, 13923), (45, 13944), (54, 14007),

Gene: Penelope2018_19 Start: 12789, Stop: 13196, Start Num: 9

Candidate Starts for Penelope2018_19:

(Start: 9 @12789 has 21 MA's), (11, 12795), (Start: 15 @12819 has 1 MA's), (40, 13068), (46, 13116), (47, 13125), (49, 13131), (52, 13170),

Gene: Phalaborwa_19 Start: 12852, Stop: 13229, Start Num: 15

Candidate Starts for Phalaborwa_19:

(1, 12729), (Start: 9 @12822 has 21 MA's), (11, 12828), (Start: 15 @12852 has 1 MA's), (35, 13065), (40, 13101), (46, 13149), (47, 13158), (49, 13164), (50, 13194), (52, 13203),

Gene: Prager_19 Start: 12801, Stop: 13208, Start Num: 9

Candidate Starts for Prager_19:

(1, 12708), (Start: 9 @12801 has 21 MA's), (11, 12807), (Start: 15 @12831 has 1 MA's), (40, 13080), (46, 13128), (47, 13137), (49, 13143), (52, 13182),

Gene: Ranch_19 Start: 12588, Stop: 12965, Start Num: 13

Candidate Starts for Ranch_19:

(Start: 13 @12588 has 37 MA's), (16, 12603), (21, 12678), (24, 12687), (34, 12792), (36, 12810), (37, 12816), (39, 12825), (41, 12840), (45, 12882),

Gene: RazorC_17 Start: 11658, Stop: 12035, Start Num: 13

Candidate Starts for RazorC_17:

(Start: 13 @11658 has 37 MA's), (16, 11673), (21, 11748), (24, 11757), (34, 11862), (36, 11880), (41, 11910), (45, 11952),

Gene: Riduram_17 Start: 11628, Stop: 12005, Start Num: 13

Candidate Starts for Riduram_17:

(Start: 13 @11628 has 37 MA's), (16, 11643), (21, 11718), (24, 11727), (34, 11832), (36, 11850), (41, 11880), (45, 11922),

Gene: Riparian_19 Start: 12615, Stop: 12992, Start Num: 8

Candidate Starts for Riparian_19:

(5, 12606), (Start: 8 @12615 has 9 MA's), (25, 12726), (43, 12897), (44, 12900), (46, 12909), (48, 12921), (51, 12957),

Gene: Rope_19 Start: 12807, Stop: 13184, Start Num: 8

Candidate Starts for Rope_19:

(5, 12798), (Start: 8 @12807 has 9 MA's), (25, 12918), (43, 13089), (44, 13092), (46, 13101), (48, 13113), (51, 13149),

Gene: Rota_18 Start: 13546, Stop: 13923, Start Num: 13

Candidate Starts for Rota_18:

(Start: 13 @13546 has 37 MA's), (16, 13561), (21, 13636), (24, 13645), (30, 13705), (34, 13750), (36, 13768), (41, 13798), (45, 13840),

Gene: Rukungu_19 Start: 14287, Stop: 14664, Start Num: 13

Candidate Starts for Rukungu_19:

(Start: 13 @14287 has 37 MA's), (16, 14302), (21, 14377), (24, 14386), (30, 14446), (34, 14491), (36, 14509), (41, 14539), (45, 14581),

Gene: Rumi_18 Start: 11658, Stop: 12035, Start Num: 13

Candidate Starts for Rumi_18:

(Start: 13 @11658 has 37 MA's), (16, 11673), (21, 11748), (24, 11757), (34, 11862), (36, 11880), (41, 11910), (45, 11952),

Gene: Sadboi_19 Start: 14418, Stop: 14795, Start Num: 13

Candidate Starts for Sadboi_19:

(Start: 13 @14418 has 37 MA's), (16, 14433), (21, 14508), (24, 14517), (30, 14577), (34, 14622), (36, 14640), (41, 14670), (45, 14712),

Gene: Sampudon_19 Start: 14594, Stop: 14971, Start Num: 13

Candidate Starts for Sampudon_19:

(Start: 13 @14594 has 37 MA's), (16, 14609), (21, 14684), (24, 14693), (30, 14753), (34, 14798), (36, 14816), (41, 14846), (45, 14888),

Gene: Send513_19 Start: 13157, Stop: 13534, Start Num: 8

Candidate Starts for Send513_19:

(5, 13148), (Start: 8 @13157 has 9 MA's), (25, 13268), (43, 13439), (44, 13442), (46, 13451), (48, 13463), (51, 13499),

Gene: SirHarley_18 Start: 12751, Stop: 13128, Start Num: 15

Candidate Starts for SirHarley_18:

(Start: 9 @12721 has 21 MA's), (11, 12727), (Start: 15 @12751 has 1 MA's), (40, 13000), (46, 13048), (47, 13057), (49, 13063), (52, 13102),

Gene: Stormer_17 Start: 11658, Stop: 12035, Start Num: 13

Candidate Starts for Stormer_17:

(Start: 13 @11658 has 37 MA's), (16, 11673), (21, 11748), (24, 11757), (34, 11862), (36, 11880), (41, 11910), (45, 11952),

Gene: SuperheroCarly_20 Start: 12651, Stop: 13058, Start Num: 9

Candidate Starts for SuperheroCarly_20:

(Start: 9 @12651 has 21 MA's), (11, 12657), (Start: 15 @12681 has 1 MA's), (40, 12930), (46, 12978), (47, 12987), (49, 12993), (52, 13032),

Gene: Thoth_19 Start: 12786, Stop: 13193, Start Num: 9

Candidate Starts for Thoth_19:

(Start: 9 @12786 has 21 MA's), (11, 12792), (Start: 15 @12816 has 1 MA's), (40, 13065), (46, 13113), (47, 13122), (49, 13128), (52, 13167),

Gene: Tillicus_19 Start: 12967, Stop: 13344, Start Num: 13

Candidate Starts for Tillicus_19:

(Start: 13 @12967 has 37 MA's), (16, 12982), (21, 13057), (27, 13090), (36, 13189), (41, 13219),

Gene: Troll4_19 Start: 12790, Stop: 13197, Start Num: 9

Candidate Starts for Troll4_19:

(Start: 9 @12790 has 21 MA's), (11, 12796), (Start: 15 @12820 has 1 MA's), (40, 13069), (46, 13117), (47, 13126), (49, 13132), (52, 13171),

Gene: Visconti_19 Start: 12799, Stop: 13206, Start Num: 9

Candidate Starts for Visconti_19:

(Start: 9 @12799 has 21 MA's), (11, 12805), (Start: 15 @12829 has 1 MA's), (40, 13078), (46, 13126), (47, 13135), (49, 13141), (52, 13180),

Gene: WaldoWhy_20 Start: 12795, Stop: 13202, Start Num: 9

Candidate Starts for WaldoWhy_20:

(1, 12702), (Start: 9 @12795 has 21 MA's), (11, 12801), (Start: 15 @12825 has 1 MA's), (40, 13074), (46, 13122), (47, 13131), (49, 13137), (52, 13176),

Gene: Weiss13_19 Start: 12847, Stop: 13224, Start Num: 8

Candidate Starts for Weiss13_19:

(5, 12838), (Start: 8 @12847 has 9 MA's), (25, 12958), (43, 13129), (44, 13132), (46, 13141), (48, 13153), (51, 13189),

Gene: Wojtek_18 Start: 13295, Stop: 13672, Start Num: 13

Candidate Starts for Wojtek_18:

(Start: 13 @13295 has 37 MA's), (16, 13310), (21, 13385), (24, 13394), (30, 13454), (34, 13499), (36, 13517), (41, 13547), (45, 13589),

Gene: Xenia2_19 Start: 13334, Stop: 13714, Start Num: 13

Candidate Starts for Xenia2_19:

(Start: 13 @13334 has 37 MA's), (16, 13349), (21, 13424), (28, 13466), (32, 13526), (36, 13559),

Gene: Yelo_19 Start: 13157, Stop: 13534, Start Num: 8

Candidate Starts for Yelo_19:

(5, 13148), (Start: 8 @13157 has 9 MA's), (12, 13169), (20, 13235), (25, 13268), (43, 13439), (44, 13442), (46, 13451), (48, 13463), (51, 13499),

Gene: Yikes_20 Start: 14679, Stop: 15056, Start Num: 13

Candidate Starts for Yikes_20:

(Start: 13 @14679 has 37 MA's), (16, 14694), (21, 14769), (24, 14778), (34, 14883), (36, 14901), (37, 14907), (41, 14931), (42, 14952), (45, 14973),

Gene: Zany_18 Start: 13808, Stop: 14185, Start Num: 13

Candidate Starts for Zany_18:

(Start: 13 @13808 has 37 MA's), (16, 13823), (21, 13898), (24, 13907), (34, 14012), (36, 14030), (41, 14060), (45, 14102),

Gene: Zenon_20 Start: 13159, Stop: 13536, Start Num: 8

Candidate Starts for Zenon_20:

(5, 13150), (Start: 8 @13159 has 9 MA's), (25, 13270), (43, 13441), (44, 13444), (46, 13453), (48, 13465), (51, 13501),