Pham 291008

1: Target_19 + 3

2: Kykar_15

3: Todacoro_19 + 13

4: Clammy_18 + 27

5: BabyRay_18

6: PickleBack_15 + 27

7: Naca_15 + 5

8: ElTiger69_15 + 2

9: ForGetIt_15 + 3

10: Sheen_20 + 2

11: PP_28

12: Saintus_15 + 10

13: Phillis_15
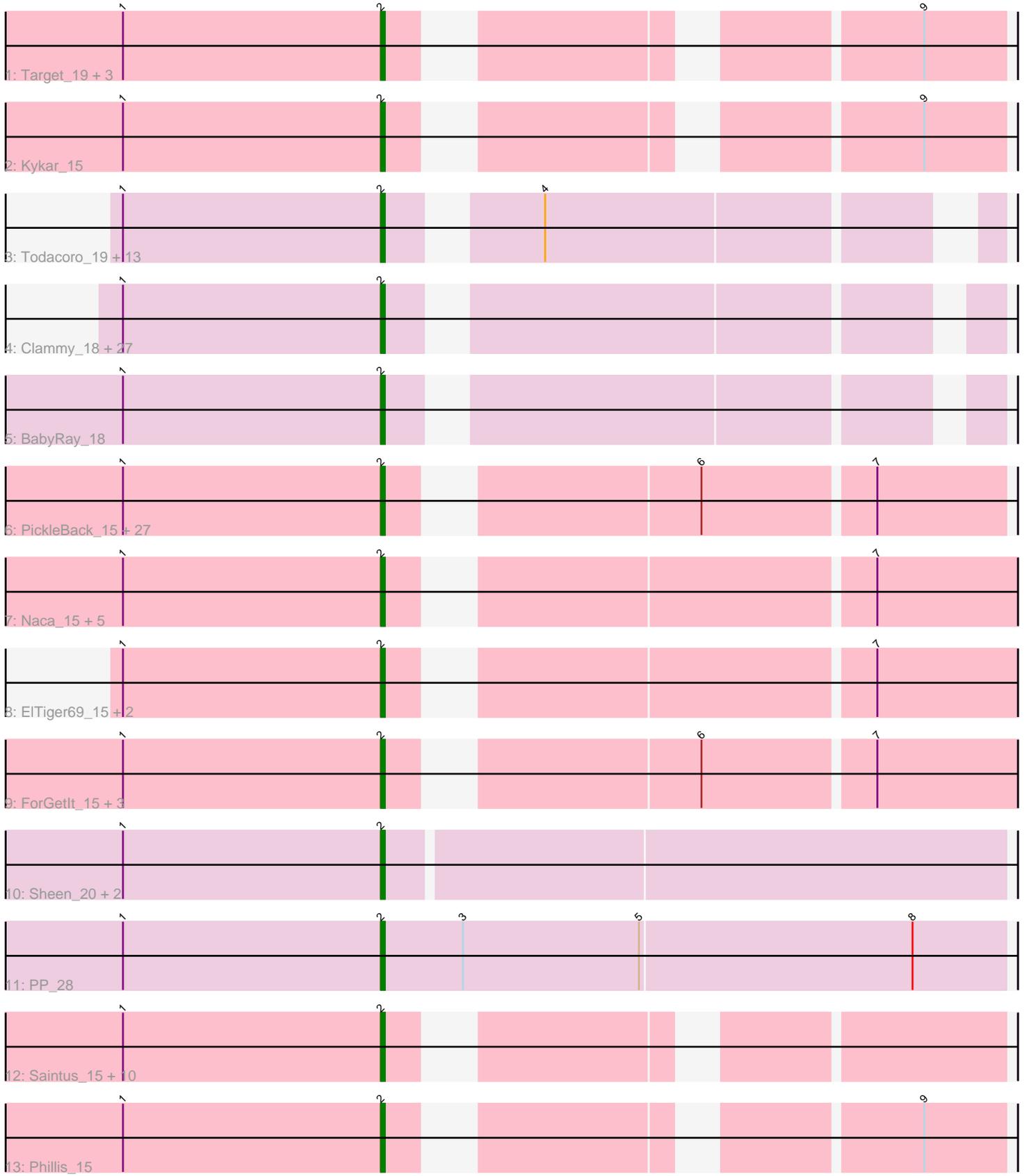
Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly 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 291008 Report

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

Pham number 291008 has 105 members, 19 are drafts.

Phages represented in each track:
• Track 1 : Target_19, BillKnuckles_18, Whitspit_18, Kugel_18
• Track 2 : Kykar_15
• Track 3 : Todacoro_19, Norbert_18, Popcicle_19, Veracruz_18, Hookmount_19, Noella_19, ResDef_19, EtoileNova_19, Margo_19, Lambert1_19, QuinnKiro_18, Texage_18, Caviar_19, Pocahontas_19
• Track 4 : Clammy_18, Giroux_19, MA5_18, Chiqui_17, Fred313_18, TNguyen7_18, Marchesa_18, B1_16, HelDan_18, Scout_18, Rockstar_18, Pistachio_19, Heathen_18, Puppy_19, BlueBird_19, MK4_18, BabyJohn_17, JF2_18, Isca_18, Zarafa_18, Phantastic_18, JF4_18, Kachowdy_18, Roimos_18, Bugatti_18, SaturnRing_18, Idleandcovert_18, DropBear_18
• Track 5 : BabyRay_18
• Track 6 : PickleBack_15, Ghoulboy_15, Prinashe11_16, Zolita_14, Lev2_15, Florence1_15, Coog_15, MarysWell_14, AgentM_15, Archetta_15, Bluefalcon_14, Micasa_15, George_14, SydNat_15, LittleCherry_15, Tarynearal_14, Aragog_15, Midas2_15, Twigg_15, Jovo_15, Dublin_14, HuhtaEnerson15_15, Cuco_15, Bonamassa_15, Florence4_16, Phlorence_15, Milcery_15, Swirley_15
• Track 7 : Naca_15, Airmid_15, Chadwick_16, Jabiru_15, PetterN_16, Scorpia_16
• Track 8 : ElTiger69_15, Benedict_15, UnionJack_15
• Track 9 : ForGetIt_15, Tiger_15, Discoknowium_15, Conspiracy_15
• Track 10 : Sheen_20, Toro_21, FlyCatcher_22
• Track 11 : PP_28
• Track 12 : Saintus_15, Groundhog_14, Expelliarmus_14, Dixon_15, Smeadley_15, Danforth_14, Stephig9_15, Caitlin_14, Roary_15, NearlyHeadless_15, Astro_15
• Track 13 : Phillis_15

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

The start number called the most often in the published annotations is 2, it was called in 86 of the 86 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AgentM_15, Airmid_15, Aragog_15, Archetta_15, Astro_15, B1_16, BabyJohn_17, BabyRay_18, Benedict_15, BillKnuckles_18, BlueBird_19, Bluefalcon_14, Bonamassa_15, Bugatti_18, Caitlin_14, Caviar_19, Chadwick_16, Chiqui_17,

Clammy_18, Conspiracy_15, Coog_15, Cuco_15, Danforth_14, Discoknowium_15, Dixon_15, DropBear_18, Dublin_14, ElTiger69_15, EtoileNova_19, Expelliarmus_14, Florence1_15, Florence4_16, FlyCatcher_22, ForGetIt_15, Fred313_18, George_14, Ghoulboy_15, Giroux_19, Groundhog_14, Heathen_18, HelDan_18, Hookmount_19, HuhtaEnerson15_15, Idleandcovert_18, Isca_18, JF2_18, JF4_18, Jabiru_15, Jovo_15, Kachowdy_18, Kugel_18, Kykar_15, Lambert1_19, Lev2_15, LittleCherry_15, MA5_18, MK4_18, Marchesa_18, Margo_19, MarysWell_14, Micasa_15, Midas2_15, Milcery_15, Naca_15, NearlyHeadless_15, Noella_19, Norbert_18, PP_28, PetterN_16, Phantastic_18, Phillis_15, Phlorence_15, PickleBack_15, Pistachio_19, Pocahontas_19, Popcicle_19, Prinashe11_16, Puppy_19, QuinnKiro_18, ResDef_19, Roary_15, Rockstar_18, Roimos_18, Saintus_15, SaturnRing_18, Scorpia_16, Scout_18, Sheen_20, Smeadley_15, Stephig9_15, Swirley_15, SydNat_15, TNguyen7_18, Target_19, Tarynearal_14, Texage_18, Tiger_15, Todacoro_19, Toro_21, Twigg_15, UnionJack_15, Veracruz_18, Whitspit_18, Zarafa_18, Zolita_14,

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

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

Summary by start number:

Start 2:
• Found in 105 of 105 (100.0%) of genes in pham
• Manual Annotations of this start: 86 of 86
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AgentM_15 (A5), Airmid_15 (A5), Aragog_15 (A5), Archetta_15 (A5), Astro_15 (A8), B1_16 (A3), BabyJohn_17 (A3), BabyRay_18 (A3), Benedict_15 (A5), BillKnuckles_18 (A1), BlueBird_19 (A3), Bluefalcon_14 (A5), Bonamassa_15 (A5), Bugatti_18 (A3), Caitlin_14 (A8), Caviar_19 (A3), Chadwick_16 (A5), Chiqui_17 (A3), Clammy_18 (A3), Conspiracy_15 (A5), Coog_15 (A5), Cuco_15 (A5), Danforth_14 (A8), Discoknowium_15 (A5), Dixon_15 (A8), DropBear_18 (A3), Dublin_14 (A5), ElTiger69_15 (A5), EtoileNova_19 (A3), Expelliarmus_14 (A8), Florence1_15 (A5), Florence4_16 (A5), FlyCatcher_22 (A7), ForGetIt_15 (A5), Fred313_18 (A3), George_14 (A5), Ghoulboy_15 (A5), Giroux_19 (A3), Groundhog_14 (A8), Heathen_18 (A3), HelDan_18 (A3), Hookmount_19 (A3), HuhtaEnerson15_15 (A5), Idleandcovert_18 (A3), Isca_18 (A3), JF2_18 (A3), JF4_18 (A3), Jabiru_15 (A5), Jovo_15 (A5), Kachowdy_18 (A3), Kugel_18 (A1), Kykar_15 (A1), Lambert1_19 (A3), Lev2_15 (A5), LittleCherry_15 (A5), MA5_18 (A3), MK4_18 (A3), Marchesa_18 (A3), Margo_19 (A3), MarysWell_14 (A5), Micasa_15 (A5), Midas2_15 (A5), Milcery_15 (A5), Naca_15 (A5), NearlyHeadless_15 (A8), Noella_19 (A3), Norbert_18 (A3), PP_28 (A7), PetterN_16 (A5), Phantastic_18 (A3), Phillis_15 (A8), Phlorence_15 (A5), PickleBack_15 (A5), Pistachio_19 (A3), Pocahontas_19 (A3), Popcicle_19 (A3), Prinashe11_16 (A5), Puppy_19 (A3), QuinnKiro_18 (A3), ResDef_19 (A3), Roary_15 (A8), Rockstar_18 (A3), Roimos_18 (A3), Saintus_15 (A8), SaturnRing_18 (A3), Scorpia_16 (A5), Scout_18 (A3), Sheen_20 (A7), Smeadley_15 (A8), Stephig9_15 (A8), Swirley_15 (A5), SydNat_15 (A5), TNguyen7_18 (A3), Target_19 (A1), Tarynearal_14 (A5), Texage_18 (A3), Tiger_15 (A5), Todacoro_19 (A3), Toro_21 (A7), Twigg_15 (A5), UnionJack_15 (A5), Veracruz_18 (A3), Whitspit_18 (A1), Zarafa_18 (A3), Zolita_14 (A5),

Summary by clusters:

There are 5 clusters represented in this pham: A1, A8, A3, A5, A7,

Info for manual annotations of cluster A1:
•Start number 2 was manually annotated 4 times for cluster A1.

Info for manual annotations of cluster A3:
•Start number 2 was manually annotated 32 times for cluster A3.

Info for manual annotations of cluster A5:
•Start number 2 was manually annotated 37 times for cluster A5.

Info for manual annotations of cluster A7:
•Start number 2 was manually annotated 2 times for cluster A7.

Info for manual annotations of cluster A8:
•Start number 2 was manually annotated 11 times for cluster A8.

Gene Information:
Gene: AgentM_15 Start: 12249, Stop: 12389, Start Num: 2
Candidate Starts for AgentM_15:
(1, 12183), (Start: 2 @12249 has 86 MA's), (6, 12315), (7, 12357),

Gene: Airmid_15 Start: 12009, Stop: 12152, Start Num: 2
Candidate Starts for Airmid_15:
(1, 11943), (Start: 2 @12009 has 86 MA's), (7, 12117),

Gene: Aragog_15 Start: 12279, Stop: 12419, Start Num: 2
Candidate Starts for Aragog_15:
(1, 12213), (Start: 2 @12279 has 86 MA's), (6, 12345), (7, 12387),

Gene: Archetta_15 Start: 11992, Stop: 12132, Start Num: 2
Candidate Starts for Archetta_15:
(1, 11926), (Start: 2 @11992 has 86 MA's), (6, 12058), (7, 12100),

Gene: Astro_15 Start: 11769, Stop: 11897, Start Num: 2
Candidate Starts for Astro_15:
(1, 11703), (Start: 2 @11769 has 86 MA's),

Gene: B1_16 Start: 12367, Stop: 12501, Start Num: 2
Candidate Starts for B1_16:
(1, 12301), (Start: 2 @12367 has 86 MA's),

Gene: BabyJohn_17 Start: 12951, Stop: 13088, Start Num: 2
Candidate Starts for BabyJohn_17:
(1, 12885), (Start: 2 @12951 has 86 MA's),

Gene: BabyRay_18 Start: 12940, Stop: 13074, Start Num: 2
Candidate Starts for BabyRay_18:

(1, 12874), (Start: 2 @12940 has 86 MA's),

Gene: Benedict_15 Start: 12011, Stop: 12154, Start Num: 2
Candidate Starts for Benedict_15:
(1, 11945), (Start: 2 @12011 has 86 MA's), (7, 12119),

Gene: BillKnuckles_18 Start: 13921, Stop: 14049, Start Num: 2
Candidate Starts for BillKnuckles_18:
(1, 13855), (Start: 2 @13921 has 86 MA's), (9, 14029),

Gene: BlueBird_19 Start: 12714, Stop: 12848, Start Num: 2
Candidate Starts for BlueBird_19:
(1, 12648), (Start: 2 @12714 has 86 MA's),

Gene: Bluefalcon_14 Start: 12249, Stop: 12389, Start Num: 2
Candidate Starts for Bluefalcon_14:
(1, 12183), (Start: 2 @12249 has 86 MA's), (6, 12315), (7, 12357),

Gene: Bonamassa_15 Start: 12171, Stop: 12314, Start Num: 2
Candidate Starts for Bonamassa_15:
(1, 12105), (Start: 2 @12171 has 86 MA's), (6, 12237), (7, 12279),

Gene: Bugatti_18 Start: 12714, Stop: 12848, Start Num: 2
Candidate Starts for Bugatti_18:
(1, 12648), (Start: 2 @12714 has 86 MA's),

Gene: Caitlin_14 Start: 11766, Stop: 11894, Start Num: 2
Candidate Starts for Caitlin_14:
(1, 11700), (Start: 2 @11766 has 86 MA's),

Gene: Caviar_19 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for Caviar_19:
(1, 13189), (Start: 2 @13255 has 86 MA's), (4, 13285),

Gene: Chadwick_16 Start: 11979, Stop: 12122, Start Num: 2
Candidate Starts for Chadwick_16:
(1, 11913), (Start: 2 @11979 has 86 MA's), (7, 12087),

Gene: Chiqui_17 Start: 12951, Stop: 13088, Start Num: 2
Candidate Starts for Chiqui_17:
(1, 12885), (Start: 2 @12951 has 86 MA's),

Gene: Clammy_18 Start: 12714, Stop: 12848, Start Num: 2
Candidate Starts for Clammy_18:
(1, 12648), (Start: 2 @12714 has 86 MA's),

Gene: Conspiracy_15 Start: 11995, Stop: 12138, Start Num: 2
Candidate Starts for Conspiracy_15:
(1, 11929), (Start: 2 @11995 has 86 MA's), (6, 12061), (7, 12103),

Gene: Coog_15 Start: 12139, Stop: 12282, Start Num: 2
Candidate Starts for Coog_15:
(1, 12073), (Start: 2 @12139 has 86 MA's), (6, 12205), (7, 12247),

Gene: Cuco_15 Start: 12170, Stop: 12313, Start Num: 2
Candidate Starts for Cuco_15:
(1, 12104), (Start: 2 @12170 has 86 MA's), (6, 12236), (7, 12278),

Gene: Danforth_14 Start: 11748, Stop: 11876, Start Num: 2
Candidate Starts for Danforth_14:
(1, 11682), (Start: 2 @11748 has 86 MA's),

Gene: Discoknowium_15 Start: 12285, Stop: 12428, Start Num: 2
Candidate Starts for Discoknowium_15:
(1, 12219), (Start: 2 @12285 has 86 MA's), (6, 12351), (7, 12393),

Gene: Dixon_15 Start: 11767, Stop: 11895, Start Num: 2
Candidate Starts for Dixon_15:
(1, 11701), (Start: 2 @11767 has 86 MA's),

Gene: DropBear_18 Start: 12774, Stop: 12908, Start Num: 2
Candidate Starts for DropBear_18:
(1, 12708), (Start: 2 @12774 has 86 MA's),

Gene: Dublin_14 Start: 12138, Stop: 12281, Start Num: 2
Candidate Starts for Dublin_14:
(1, 12072), (Start: 2 @12138 has 86 MA's), (6, 12204), (7, 12246),

Gene: ElTiger69_15 Start: 12009, Stop: 12152, Start Num: 2
Candidate Starts for ElTiger69_15:
(1, 11943), (Start: 2 @12009 has 86 MA's), (7, 12117),

Gene: EtoileNova_19 Start: 13258, Stop: 13389, Start Num: 2
Candidate Starts for EtoileNova_19:
(1, 13192), (Start: 2 @13258 has 86 MA's), (4, 13288),

Gene: Expelliarmus_14 Start: 11734, Stop: 11862, Start Num: 2
Candidate Starts for Expelliarmus_14:
(1, 11668), (Start: 2 @11734 has 86 MA's),

Gene: Florence1_15 Start: 11959, Stop: 12102, Start Num: 2
Candidate Starts for Florence1_15:
(1, 11893), (Start: 2 @11959 has 86 MA's), (6, 12025), (7, 12067),

Gene: Florence4_16 Start: 11959, Stop: 12102, Start Num: 2
Candidate Starts for Florence4_16:
(1, 11893), (Start: 2 @11959 has 86 MA's), (6, 12025), (7, 12067),

Gene: FlyCatcher_22 Start: 14707, Stop: 14862, Start Num: 2
Candidate Starts for FlyCatcher_22:
(1, 14641), (Start: 2 @14707 has 86 MA's),

Gene: ForGetIt_15 Start: 12021, Stop: 12164, Start Num: 2
Candidate Starts for ForGetIt_15:
(1, 11955), (Start: 2 @12021 has 86 MA's), (6, 12087), (7, 12129),

Gene: Fred313_18 Start: 12432, Stop: 12566, Start Num: 2
Candidate Starts for Fred313_18:
(1, 12366), (Start: 2 @12432 has 86 MA's),

Gene: George_14 Start: 12171, Stop: 12314, Start Num: 2
Candidate Starts for George_14:
(1, 12105), (Start: 2 @12171 has 86 MA's), (6, 12237), (7, 12279),

Gene: Ghoulboy_15 Start: 12248, Stop: 12388, Start Num: 2
Candidate Starts for Ghoulboy_15:
(1, 12182), (Start: 2 @12248 has 86 MA's), (6, 12314), (7, 12356),

Gene: Giroux_19 Start: 12714, Stop: 12848, Start Num: 2
Candidate Starts for Giroux_19:
(1, 12648), (Start: 2 @12714 has 86 MA's),

Gene: Groundhog_14 Start: 11735, Stop: 11863, Start Num: 2
Candidate Starts for Groundhog_14:
(1, 11669), (Start: 2 @11735 has 86 MA's),

Gene: Heathen_18 Start: 12515, Stop: 12649, Start Num: 2
Candidate Starts for Heathen_18:
(1, 12449), (Start: 2 @12515 has 86 MA's),

Gene: HelDan_18 Start: 12767, Stop: 12901, Start Num: 2
Candidate Starts for HelDan_18:
(1, 12701), (Start: 2 @12767 has 86 MA's),

Gene: Hookmount_19 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for Hookmount_19:
(1, 13189), (Start: 2 @13255 has 86 MA's), (4, 13285),

Gene: HuhtaEnerson15_15 Start: 12171, Stop: 12314, Start Num: 2
Candidate Starts for HuhtaEnerson15_15:
(1, 12105), (Start: 2 @12171 has 86 MA's), (6, 12237), (7, 12279),

Gene: Idleandcovert_18 Start: 12714, Stop: 12848, Start Num: 2
Candidate Starts for Idleandcovert_18:
(1, 12648), (Start: 2 @12714 has 86 MA's),

Gene: Isca_18 Start: 12602, Stop: 12736, Start Num: 2
Candidate Starts for Isca_18:
(1, 12536), (Start: 2 @12602 has 86 MA's),

Gene: JF2_18 Start: 12367, Stop: 12501, Start Num: 2
Candidate Starts for JF2_18:
(1, 12301), (Start: 2 @12367 has 86 MA's),

Gene: JF4_18 Start: 12367, Stop: 12501, Start Num: 2
Candidate Starts for JF4_18:
(1, 12301), (Start: 2 @12367 has 86 MA's),

Gene: Jabiru_15 Start: 12060, Stop: 12203, Start Num: 2

Candidate Starts for Jabiru_15:
(1, 11994), (Start: 2 @12060 has 86 MA's), (7, 12168),

Gene: Jovo_15 Start: 12280, Stop: 12420, Start Num: 2
Candidate Starts for Jovo_15:
(1, 12214), (Start: 2 @12280 has 86 MA's), (6, 12346), (7, 12388),

Gene: Kachowdy_18 Start: 12767, Stop: 12901, Start Num: 2
Candidate Starts for Kachowdy_18:
(1, 12701), (Start: 2 @12767 has 86 MA's),

Gene: Kugel_18 Start: 13308, Stop: 13436, Start Num: 2
Candidate Starts for Kugel_18:
(1, 13242), (Start: 2 @13308 has 86 MA's), (9, 13416),

Gene: Kykar_15 Start: 12805, Stop: 12933, Start Num: 2
Candidate Starts for Kykar_15:
(1, 12739), (Start: 2 @12805 has 86 MA's), (9, 12913),

Gene: Lambert1_19 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for Lambert1_19:
(1, 13189), (Start: 2 @13255 has 86 MA's), (4, 13285),

Gene: Lev2_15 Start: 11992, Stop: 12132, Start Num: 2
Candidate Starts for Lev2_15:
(1, 11926), (Start: 2 @11992 has 86 MA's), (6, 12058), (7, 12100),

Gene: LittleCherry_15 Start: 12172, Stop: 12315, Start Num: 2
Candidate Starts for LittleCherry_15:
(1, 12106), (Start: 2 @12172 has 86 MA's), (6, 12238), (7, 12280),

Gene: MA5_18 Start: 12311, Stop: 12445, Start Num: 2
Candidate Starts for MA5_18:
(1, 12245), (Start: 2 @12311 has 86 MA's),

Gene: MK4_18 Start: 12601, Stop: 12735, Start Num: 2
Candidate Starts for MK4_18:
(1, 12535), (Start: 2 @12601 has 86 MA's),

Gene: Marchesa_18 Start: 12765, Stop: 12899, Start Num: 2
Candidate Starts for Marchesa_18:
(1, 12699), (Start: 2 @12765 has 86 MA's),

Gene: Margo_19 Start: 13280, Stop: 13411, Start Num: 2
Candidate Starts for Margo_19:
(1, 13214), (Start: 2 @13280 has 86 MA's), (4, 13310),

Gene: MarysWell_14 Start: 12139, Stop: 12282, Start Num: 2
Candidate Starts for MarysWell_14:
(1, 12073), (Start: 2 @12139 has 86 MA's), (6, 12205), (7, 12247),

Gene: Micasa_15 Start: 12140, Stop: 12283, Start Num: 2
Candidate Starts for Micasa_15:

(1, 12074), (Start: 2 @12140 has 86 MA's), (6, 12206), (7, 12248),

Gene: Midas2_15 Start: 12139, Stop: 12282, Start Num: 2
Candidate Starts for Midas2_15:
(1, 12073), (Start: 2 @12139 has 86 MA's), (6, 12205), (7, 12247),

Gene: Milcery_15 Start: 12176, Stop: 12319, Start Num: 2
Candidate Starts for Milcery_15:
(1, 12110), (Start: 2 @12176 has 86 MA's), (6, 12242), (7, 12284),

Gene: Naca_15 Start: 12093, Stop: 12236, Start Num: 2
Candidate Starts for Naca_15:
(1, 12027), (Start: 2 @12093 has 86 MA's), (7, 12201),

Gene: NearlyHeadless_15 Start: 11784, Stop: 11912, Start Num: 2
Candidate Starts for NearlyHeadless_15:
(1, 11718), (Start: 2 @11784 has 86 MA's),

Gene: Noella_19 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for Noella_19:
(1, 13189), (Start: 2 @13255 has 86 MA's), (4, 13285),

Gene: Norbert_18 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for Norbert_18:
(1, 13189), (Start: 2 @13255 has 86 MA's), (4, 13285),

Gene: PP_28 Start: 18919, Stop: 19077, Start Num: 2
Candidate Starts for PP_28:
(1, 18853), (Start: 2 @18919 has 86 MA's), (3, 18940), (5, 18985), (8, 19054),

Gene: PetterN_16 Start: 11980, Stop: 12123, Start Num: 2
Candidate Starts for PetterN_16:
(1, 11914), (Start: 2 @11980 has 86 MA's), (7, 12088),

Gene: Phantastic_18 Start: 12680, Stop: 12814, Start Num: 2
Candidate Starts for Phantastic_18:
(1, 12614), (Start: 2 @12680 has 86 MA's),

Gene: Phillis_15 Start: 11742, Stop: 11870, Start Num: 2
Candidate Starts for Phillis_15:
(1, 11676), (Start: 2 @11742 has 86 MA's), (9, 11850),

Gene: Phlorence_15 Start: 12279, Stop: 12419, Start Num: 2
Candidate Starts for Phlorence_15:
(1, 12213), (Start: 2 @12279 has 86 MA's), (6, 12345), (7, 12387),

Gene: PickleBack_15 Start: 11993, Stop: 12133, Start Num: 2
Candidate Starts for PickleBack_15:
(1, 11927), (Start: 2 @11993 has 86 MA's), (6, 12059), (7, 12101),

Gene: Pistachio_19 Start: 12261, Stop: 12395, Start Num: 2
Candidate Starts for Pistachio_19:
(1, 12195), (Start: 2 @12261 has 86 MA's),

Gene: Pocahontas_19 Start: 13252, Stop: 13383, Start Num: 2
Candidate Starts for Pocahontas_19:
(1, 13186), (Start: 2 @13252 has 86 MA's), (4, 13282),

Gene: Popcicle_19 Start: 13252, Stop: 13383, Start Num: 2
Candidate Starts for Popcicle_19:
(1, 13186), (Start: 2 @13252 has 86 MA's), (4, 13282),

Gene: Prinashe11_16 Start: 12139, Stop: 12282, Start Num: 2
Candidate Starts for Prinashe11_16:
(1, 12073), (Start: 2 @12139 has 86 MA's), (6, 12205), (7, 12247),

Gene: Puppy_19 Start: 12333, Stop: 12467, Start Num: 2
Candidate Starts for Puppy_19:
(1, 12267), (Start: 2 @12333 has 86 MA's),

Gene: QuinnKiro_18 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for QuinnKiro_18:
(1, 13189), (Start: 2 @13255 has 86 MA's), (4, 13285),

Gene: ResDef_19 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for ResDef_19:
(1, 13189), (Start: 2 @13255 has 86 MA's), (4, 13285),

Gene: Roary_15 Start: 11733, Stop: 11861, Start Num: 2
Candidate Starts for Roary_15:
(1, 11667), (Start: 2 @11733 has 86 MA's),

Gene: Rockstar_18 Start: 12607, Stop: 12741, Start Num: 2
Candidate Starts for Rockstar_18:
(1, 12541), (Start: 2 @12607 has 86 MA's),

Gene: Roimos_18 Start: 12683, Stop: 12817, Start Num: 2
Candidate Starts for Roimos_18:
(1, 12617), (Start: 2 @12683 has 86 MA's),

Gene: Saintus_15 Start: 11748, Stop: 11876, Start Num: 2
Candidate Starts for Saintus_15:
(1, 11682), (Start: 2 @11748 has 86 MA's),

Gene: SaturnRing_18 Start: 12714, Stop: 12848, Start Num: 2
Candidate Starts for SaturnRing_18:
(1, 12648), (Start: 2 @12714 has 86 MA's),

Gene: Scorpia_16 Start: 11981, Stop: 12124, Start Num: 2
Candidate Starts for Scorpia_16:
(1, 11915), (Start: 2 @11981 has 86 MA's), (7, 12089),

Gene: Scout_18 Start: 12014, Stop: 12148, Start Num: 2
Candidate Starts for Scout_18:
(1, 11948), (Start: 2 @12014 has 86 MA's),

Gene: Sheen_20 Start: 14765, Stop: 14920, Start Num: 2
Candidate Starts for Sheen_20:
(1, 14699), (Start: 2 @14765 has 86 MA's),

Gene: Smeadley_15 Start: 11766, Stop: 11894, Start Num: 2
Candidate Starts for Smeadley_15:
(1, 11700), (Start: 2 @11766 has 86 MA's),

Gene: Stephig9_15 Start: 11747, Stop: 11875, Start Num: 2
Candidate Starts for Stephig9_15:
(1, 11681), (Start: 2 @11747 has 86 MA's),

Gene: Swirley_15 Start: 12141, Stop: 12284, Start Num: 2
Candidate Starts for Swirley_15:
(1, 12075), (Start: 2 @12141 has 86 MA's), (6, 12207), (7, 12249),

Gene: SydNat_15 Start: 12248, Stop: 12388, Start Num: 2
Candidate Starts for SydNat_15:
(1, 12182), (Start: 2 @12248 has 86 MA's), (6, 12314), (7, 12356),

Gene: TNguyen7_18 Start: 12684, Stop: 12818, Start Num: 2
Candidate Starts for TNguyen7_18:
(1, 12618), (Start: 2 @12684 has 86 MA's),

Gene: Target_19 Start: 14028, Stop: 14156, Start Num: 2
Candidate Starts for Target_19:
(1, 13962), (Start: 2 @14028 has 86 MA's), (9, 14136),

Gene: Tarynearal_14 Start: 12168, Stop: 12311, Start Num: 2
Candidate Starts for Tarynearal_14:
(1, 12102), (Start: 2 @12168 has 86 MA's), (6, 12234), (7, 12276),

Gene: Texage_18 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for Texage_18:
(1, 13189), (Start: 2 @13255 has 86 MA's), (4, 13285),

Gene: Tiger_15 Start: 11994, Stop: 12137, Start Num: 2
Candidate Starts for Tiger_15:
(1, 11928), (Start: 2 @11994 has 86 MA's), (6, 12060), (7, 12102),

Gene: Todacoro_19 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for Todacoro_19:
(1, 13189), (Start: 2 @13255 has 86 MA's), (4, 13285),

Gene: Toro_21 Start: 14707, Stop: 14862, Start Num: 2
Candidate Starts for Toro_21:
(1, 14641), (Start: 2 @14707 has 86 MA's),

Gene: Twigg_15 Start: 12140, Stop: 12283, Start Num: 2
Candidate Starts for Twigg_15:
(1, 12074), (Start: 2 @12140 has 86 MA's), (6, 12206), (7, 12248),

Gene: UnionJack_15 Start: 11720, Stop: 11863, Start Num: 2

Candidate Starts for UnionJack_15:
(1, 11654), (Start: 2 @11720 has 86 MA's), (7, 11828),

Gene: Veracruz_18 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for Veracruz_18:
(1, 13189), (Start: 2 @13255 has 86 MA's), (4, 13285),

Gene: Whitspit_18 Start: 13870, Stop: 13998, Start Num: 2
Candidate Starts for Whitspit_18:
(1, 13804), (Start: 2 @13870 has 86 MA's), (9, 13978),

Gene: Zarafa_18 Start: 12776, Stop: 12910, Start Num: 2
Candidate Starts for Zarafa_18:
(1, 12710), (Start: 2 @12776 has 86 MA's),

Gene: Zolita_14 Start: 12249, Stop: 12389, Start Num: 2
Candidate Starts for Zolita_14:
(1, 12183), (Start: 2 @12249 has 86 MA's), (6, 12315), (7, 12357),