

Pham 202834



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 202834 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202834 has 97 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Target_19, BillKnuckles_18, Kugel_18
- Track 2 : Kykar_15
- Track 3 : MyraDee_16
- Track 4 : Todacoro_19, Norbert_18, Popcicle_19, Veracruz_18, Hookmount_19, Noella_19, ResDef_19, Margo_19, Lambert1_19, QuinnKiro_18, Texage_18, Caviar_19, Pocahontas_19
- Track 5 : MA5_18, Chiqui_17, Fred313_18, TNguyen7_18, Marchesa_18, B1_16, HelDan_18, Rockstar_18, Pistachio_19, Heathen_18, Puppy_19, BabyJohn_17, BlueBird_19, MK4_18, JF2_18, Isca_18, Phantastic_18, JF4_18, Scout_18, Kachowdy_18, Giroux_18, Bugatti_18, SaturnRing_18, Idleandcovert_18, DropBear_18
- Track 6 : BabyRay_18
- Track 7 : PickleBack_15, Ghoulboy_15, HuhtaEnerson15_15, Lev2_15, Coog_15, Swirley_15, AgentM_15, Zolita_14, Archetta_15, Bluefalcon_14, Micasa_15, George_14, LittleCherry_15, SydNat_15, Tarynearal_14, Aragog_15, Midas2_15, Twigg_15, Jovo_15, Dublin_14, Cuco_15, Bonamassa_15, Phlorence_15, Milcery_15, MarysWell_14
- Track 8 : Naca_15, Airmid_15, Chadwick_16, Jabiru_15, PetterN_16, Scorpia_16
- Track 9 : EITiger69_15, Benedict_15, UnionJack_15
- Track 10 : ForGetIt_15, Tiger_15, Discoknowium_15, Conspiracy_15
- Track 11 : Sheen_20, Toro_21, FlyCatcher_22
- Track 12 : PP_28
- Track 13 : Saintus_15, Groundhog_14, Expelliarmus_14, Dixon_15, Smeadley_15, Danforth_14, Stephig9_15, Roary_15, NearlyHeadless_15, Astro_15
- Track 14 : 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 3, it was called in 85 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, Caviar_19, Chadwick_16, Chiqui_17, Conspiracy_15, Coog_15, Cuco_15, Danforth_14, Discoknowium_15, Dixon_15, DropBear_18, Dublin_14, ElTiger69_15, Expelliarmus_14, FlyCatcher_22, ForGetIt_15, Fred313_18, George_14, Ghoulboy_15, Giroux_18, 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, Puppy_19, QuinnKiro_18, ResDef_19, Roary_15, Rockstar_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, Zolita_14,

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

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

- MyraDee_16,

Summary by start number:

Start 2:

- Found in 1 of 97 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MyraDee_16 (A18),

Start 3:

- Found in 96 of 97 (99.0%) of genes in pham
- Manual Annotations of this start: 85 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), Caviar_19 (A3), Chadwick_16 (A5), Chiqui_17 (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), Expelliarmus_14 (A8), FlyCatcher_22 (A7), ForGetIt_15 (A5), Fred313_18 (A3), George_14 (A5), Ghoulboy_15 (A5), Giroux_18 (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), Puppy_19 (A3), QuinnKiro_18 (A3), ResDef_19 (A3), Roary_15 (A8), Rockstar_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), Zolita_14 (A5),

Summary by clusters:

There are 6 clusters represented in this pham: A18, A1, A3, A5, A7, A8,

Info for manual annotations of cluster A1:

- Start number 3 was manually annotated 4 times for cluster A1.

Info for manual annotations of cluster A18:

- Start number 2 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A3:

- Start number 3 was manually annotated 31 times for cluster A3.

Info for manual annotations of cluster A5:

- Start number 3 was manually annotated 37 times for cluster A5.

Info for manual annotations of cluster A7:

- Start number 3 was manually annotated 2 times for cluster A7.

Info for manual annotations of cluster A8:

- Start number 3 was manually annotated 11 times for cluster A8.

Gene Information:

Gene: AgentM_15 Start: 12249, Stop: 12389, Start Num: 3

Candidate Starts for AgentM_15:

(1, 12183), (Start: 3 @12249 has 85 MA's), (8, 12315), (10, 12357),

Gene: Airmid_15 Start: 12009, Stop: 12152, Start Num: 3

Candidate Starts for Airmid_15:

(1, 11943), (Start: 3 @12009 has 85 MA's), (10, 12117),

Gene: Aragog_15 Start: 12279, Stop: 12419, Start Num: 3

Candidate Starts for Aragog_15:

(1, 12213), (Start: 3 @12279 has 85 MA's), (8, 12345), (10, 12387),

Gene: Archetta_15 Start: 11992, Stop: 12132, Start Num: 3

Candidate Starts for Archetta_15:

(1, 11926), (Start: 3 @11992 has 85 MA's), (8, 12058), (10, 12100),

Gene: Astro_15 Start: 11769, Stop: 11897, Start Num: 3

Candidate Starts for Astro_15:

(1, 11703), (Start: 3 @11769 has 85 MA's),

Gene: B1_16 Start: 12367, Stop: 12501, Start Num: 3

Candidate Starts for B1_16:

(1, 12301), (Start: 3 @12367 has 85 MA's),

Gene: BabyJohn_17 Start: 12951, Stop: 13088, Start Num: 3
Candidate Starts for BabyJohn_17:
(1, 12885), (Start: 3 @12951 has 85 MA's),

Gene: BabyRay_18 Start: 12940, Stop: 13074, Start Num: 3
Candidate Starts for BabyRay_18:
(1, 12874), (Start: 3 @12940 has 85 MA's),

Gene: Benedict_15 Start: 12011, Stop: 12154, Start Num: 3
Candidate Starts for Benedict_15:
(1, 11945), (Start: 3 @12011 has 85 MA's), (10, 12119),

Gene: BillKnuckles_18 Start: 13921, Stop: 14049, Start Num: 3
Candidate Starts for BillKnuckles_18:
(1, 13855), (Start: 3 @13921 has 85 MA's), (12, 14029),

Gene: BlueBird_19 Start: 12714, Stop: 12848, Start Num: 3
Candidate Starts for BlueBird_19:
(1, 12648), (Start: 3 @12714 has 85 MA's),

Gene: Bluefalcon_14 Start: 12249, Stop: 12389, Start Num: 3
Candidate Starts for Bluefalcon_14:
(1, 12183), (Start: 3 @12249 has 85 MA's), (8, 12315), (10, 12357),

Gene: Bonamassa_15 Start: 12171, Stop: 12314, Start Num: 3
Candidate Starts for Bonamassa_15:
(1, 12105), (Start: 3 @12171 has 85 MA's), (8, 12237), (10, 12279),

Gene: Bugatti_18 Start: 12714, Stop: 12848, Start Num: 3
Candidate Starts for Bugatti_18:
(1, 12648), (Start: 3 @12714 has 85 MA's),

Gene: Caviar_19 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Caviar_19:
(1, 13189), (Start: 3 @13255 has 85 MA's), (5, 13285),

Gene: Chadwick_16 Start: 11979, Stop: 12122, Start Num: 3
Candidate Starts for Chadwick_16:
(1, 11913), (Start: 3 @11979 has 85 MA's), (10, 12087),

Gene: Chiqui_17 Start: 12951, Stop: 13088, Start Num: 3
Candidate Starts for Chiqui_17:
(1, 12885), (Start: 3 @12951 has 85 MA's),

Gene: Conspiracy_15 Start: 11995, Stop: 12138, Start Num: 3
Candidate Starts for Conspiracy_15:
(1, 11929), (Start: 3 @11995 has 85 MA's), (8, 12061), (10, 12103),

Gene: Coog_15 Start: 12139, Stop: 12282, Start Num: 3
Candidate Starts for Coog_15:
(1, 12073), (Start: 3 @12139 has 85 MA's), (8, 12205), (10, 12247),

Gene: Cuco_15 Start: 12170, Stop: 12313, Start Num: 3
Candidate Starts for Cuco_15:
(1, 12104), (Start: 3 @12170 has 85 MA's), (8, 12236), (10, 12278),

Gene: Danforth_14 Start: 11748, Stop: 11876, Start Num: 3
Candidate Starts for Danforth_14:
(1, 11682), (Start: 3 @11748 has 85 MA's),

Gene: Discoknowium_15 Start: 12285, Stop: 12428, Start Num: 3
Candidate Starts for Discoknowium_15:
(1, 12219), (Start: 3 @12285 has 85 MA's), (8, 12351), (10, 12393),

Gene: Dixon_15 Start: 11767, Stop: 11895, Start Num: 3
Candidate Starts for Dixon_15:
(1, 11701), (Start: 3 @11767 has 85 MA's),

Gene: DropBear_18 Start: 12774, Stop: 12908, Start Num: 3
Candidate Starts for DropBear_18:
(1, 12708), (Start: 3 @12774 has 85 MA's),

Gene: Dublin_14 Start: 12138, Stop: 12281, Start Num: 3
Candidate Starts for Dublin_14:
(1, 12072), (Start: 3 @12138 has 85 MA's), (8, 12204), (10, 12246),

Gene: EITiger69_15 Start: 12009, Stop: 12152, Start Num: 3
Candidate Starts for EITiger69_15:
(1, 11943), (Start: 3 @12009 has 85 MA's), (10, 12117),

Gene: Expelliarmus_14 Start: 11734, Stop: 11862, Start Num: 3
Candidate Starts for Expelliarmus_14:
(1, 11668), (Start: 3 @11734 has 85 MA's),

Gene: FlyCatcher_22 Start: 14707, Stop: 14862, Start Num: 3
Candidate Starts for FlyCatcher_22:
(1, 14641), (Start: 3 @14707 has 85 MA's),

Gene: ForGetIt_15 Start: 12021, Stop: 12164, Start Num: 3
Candidate Starts for ForGetIt_15:
(1, 11955), (Start: 3 @12021 has 85 MA's), (8, 12087), (10, 12129),

Gene: Fred313_18 Start: 12432, Stop: 12566, Start Num: 3
Candidate Starts for Fred313_18:
(1, 12366), (Start: 3 @12432 has 85 MA's),

Gene: George_14 Start: 12171, Stop: 12314, Start Num: 3
Candidate Starts for George_14:
(1, 12105), (Start: 3 @12171 has 85 MA's), (8, 12237), (10, 12279),

Gene: Ghouboy_15 Start: 12248, Stop: 12388, Start Num: 3
Candidate Starts for Ghouboy_15:
(1, 12182), (Start: 3 @12248 has 85 MA's), (8, 12314), (10, 12356),

Gene: Giroux_18 Start: 12714, Stop: 12848, Start Num: 3

Candidate Starts for Giroux_18:
(1, 12648), (Start: 3 @12714 has 85 MA's),

Gene: Groundhog_14 Start: 11735, Stop: 11863, Start Num: 3
Candidate Starts for Groundhog_14:
(1, 11669), (Start: 3 @11735 has 85 MA's),

Gene: Heathen_18 Start: 12515, Stop: 12649, Start Num: 3
Candidate Starts for Heathen_18:
(1, 12449), (Start: 3 @12515 has 85 MA's),

Gene: HelDan_18 Start: 12767, Stop: 12901, Start Num: 3
Candidate Starts for HelDan_18:
(1, 12701), (Start: 3 @12767 has 85 MA's),

Gene: Hookmount_19 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Hookmount_19:
(1, 13189), (Start: 3 @13255 has 85 MA's), (5, 13285),

Gene: HuhtaEnerson15_15 Start: 12171, Stop: 12314, Start Num: 3
Candidate Starts for HuhtaEnerson15_15:
(1, 12105), (Start: 3 @12171 has 85 MA's), (8, 12237), (10, 12279),

Gene: Idleandcovert_18 Start: 12714, Stop: 12848, Start Num: 3
Candidate Starts for Idleandcovert_18:
(1, 12648), (Start: 3 @12714 has 85 MA's),

Gene: Isca_18 Start: 12602, Stop: 12736, Start Num: 3
Candidate Starts for Isca_18:
(1, 12536), (Start: 3 @12602 has 85 MA's),

Gene: JF2_18 Start: 12367, Stop: 12501, Start Num: 3
Candidate Starts for JF2_18:
(1, 12301), (Start: 3 @12367 has 85 MA's),

Gene: JF4_18 Start: 12367, Stop: 12501, Start Num: 3
Candidate Starts for JF4_18:
(1, 12301), (Start: 3 @12367 has 85 MA's),

Gene: Jabiru_15 Start: 12060, Stop: 12203, Start Num: 3
Candidate Starts for Jabiru_15:
(1, 11994), (Start: 3 @12060 has 85 MA's), (10, 12168),

Gene: Jovo_15 Start: 12280, Stop: 12420, Start Num: 3
Candidate Starts for Jovo_15:
(1, 12214), (Start: 3 @12280 has 85 MA's), (8, 12346), (10, 12388),

Gene: Kachowdy_18 Start: 12767, Stop: 12901, Start Num: 3
Candidate Starts for Kachowdy_18:
(1, 12701), (Start: 3 @12767 has 85 MA's),

Gene: Kugel_18 Start: 13308, Stop: 13436, Start Num: 3
Candidate Starts for Kugel_18:

(1, 13242), (Start: 3 @13308 has 85 MA's), (12, 13416),

Gene: Kykar_15 Start: 12805, Stop: 12933, Start Num: 3

Candidate Starts for Kykar_15:

(1, 12739), (Start: 3 @12805 has 85 MA's), (12, 12913),

Gene: Lambert1_19 Start: 13255, Stop: 13386, Start Num: 3

Candidate Starts for Lambert1_19:

(1, 13189), (Start: 3 @13255 has 85 MA's), (5, 13285),

Gene: Lev2_15 Start: 11992, Stop: 12132, Start Num: 3

Candidate Starts for Lev2_15:

(1, 11926), (Start: 3 @11992 has 85 MA's), (8, 12058), (10, 12100),

Gene: LittleCherry_15 Start: 12172, Stop: 12315, Start Num: 3

Candidate Starts for LittleCherry_15:

(1, 12106), (Start: 3 @12172 has 85 MA's), (8, 12238), (10, 12280),

Gene: MA5_18 Start: 12311, Stop: 12445, Start Num: 3

Candidate Starts for MA5_18:

(1, 12245), (Start: 3 @12311 has 85 MA's),

Gene: MK4_18 Start: 12601, Stop: 12735, Start Num: 3

Candidate Starts for MK4_18:

(1, 12535), (Start: 3 @12601 has 85 MA's),

Gene: Marchesa_18 Start: 12765, Stop: 12899, Start Num: 3

Candidate Starts for Marchesa_18:

(1, 12699), (Start: 3 @12765 has 85 MA's),

Gene: Margo_19 Start: 13280, Stop: 13411, Start Num: 3

Candidate Starts for Margo_19:

(1, 13214), (Start: 3 @13280 has 85 MA's), (5, 13310),

Gene: MarysWell_14 Start: 12139, Stop: 12282, Start Num: 3

Candidate Starts for MarysWell_14:

(1, 12073), (Start: 3 @12139 has 85 MA's), (8, 12205), (10, 12247),

Gene: Micasa_15 Start: 12140, Stop: 12283, Start Num: 3

Candidate Starts for Micasa_15:

(1, 12074), (Start: 3 @12140 has 85 MA's), (8, 12206), (10, 12248),

Gene: Midas2_15 Start: 12139, Stop: 12282, Start Num: 3

Candidate Starts for Midas2_15:

(1, 12073), (Start: 3 @12139 has 85 MA's), (8, 12205), (10, 12247),

Gene: Milcery_15 Start: 12176, Stop: 12319, Start Num: 3

Candidate Starts for Milcery_15:

(1, 12110), (Start: 3 @12176 has 85 MA's), (8, 12242), (10, 12284),

Gene: MyraDee_16 Start: 11265, Stop: 11429, Start Num: 2

Candidate Starts for MyraDee_16:

(Start: 2 @11265 has 1 MA's), (7, 11352), (9, 11394),

Gene: Naca_15 Start: 12093, Stop: 12236, Start Num: 3
Candidate Starts for Naca_15:
(1, 12027), (Start: 3 @12093 has 85 MA's), (10, 12201),

Gene: NearlyHeadless_15 Start: 11784, Stop: 11912, Start Num: 3
Candidate Starts for NearlyHeadless_15:
(1, 11718), (Start: 3 @11784 has 85 MA's),

Gene: Noella_19 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Noella_19:
(1, 13189), (Start: 3 @13255 has 85 MA's), (5, 13285),

Gene: Norbert_18 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Norbert_18:
(1, 13189), (Start: 3 @13255 has 85 MA's), (5, 13285),

Gene: PP_28 Start: 18919, Stop: 19077, Start Num: 3
Candidate Starts for PP_28:
(1, 18853), (Start: 3 @18919 has 85 MA's), (4, 18940), (6, 18985), (11, 19054),

Gene: PetterN_16 Start: 11980, Stop: 12123, Start Num: 3
Candidate Starts for PetterN_16:
(1, 11914), (Start: 3 @11980 has 85 MA's), (10, 12088),

Gene: Phantastic_18 Start: 12680, Stop: 12814, Start Num: 3
Candidate Starts for Phantastic_18:
(1, 12614), (Start: 3 @12680 has 85 MA's),

Gene: Phillis_15 Start: 11742, Stop: 11870, Start Num: 3
Candidate Starts for Phillis_15:
(1, 11676), (Start: 3 @11742 has 85 MA's), (12, 11850),

Gene: Phlorence_15 Start: 12279, Stop: 12419, Start Num: 3
Candidate Starts for Phlorence_15:
(1, 12213), (Start: 3 @12279 has 85 MA's), (8, 12345), (10, 12387),

Gene: PickleBack_15 Start: 11993, Stop: 12133, Start Num: 3
Candidate Starts for PickleBack_15:
(1, 11927), (Start: 3 @11993 has 85 MA's), (8, 12059), (10, 12101),

Gene: Pistachio_19 Start: 12261, Stop: 12395, Start Num: 3
Candidate Starts for Pistachio_19:
(1, 12195), (Start: 3 @12261 has 85 MA's),

Gene: Pocahontas_19 Start: 13252, Stop: 13383, Start Num: 3
Candidate Starts for Pocahontas_19:
(1, 13186), (Start: 3 @13252 has 85 MA's), (5, 13282),

Gene: Popcicle_19 Start: 13252, Stop: 13383, Start Num: 3
Candidate Starts for Popcicle_19:
(1, 13186), (Start: 3 @13252 has 85 MA's), (5, 13282),

Gene: Puppy_19 Start: 12333, Stop: 12467, Start Num: 3
Candidate Starts for Puppy_19:
(1, 12267), (Start: 3 @12333 has 85 MA's),

Gene: QuinnKiro_18 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for QuinnKiro_18:
(1, 13189), (Start: 3 @13255 has 85 MA's), (5, 13285),

Gene: ResDef_19 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for ResDef_19:
(1, 13189), (Start: 3 @13255 has 85 MA's), (5, 13285),

Gene: Roary_15 Start: 11733, Stop: 11861, Start Num: 3
Candidate Starts for Roary_15:
(1, 11667), (Start: 3 @11733 has 85 MA's),

Gene: Rockstar_18 Start: 12607, Stop: 12741, Start Num: 3
Candidate Starts for Rockstar_18:
(1, 12541), (Start: 3 @12607 has 85 MA's),

Gene: Saintus_15 Start: 11748, Stop: 11876, Start Num: 3
Candidate Starts for Saintus_15:
(1, 11682), (Start: 3 @11748 has 85 MA's),

Gene: SaturnRing_18 Start: 12714, Stop: 12848, Start Num: 3
Candidate Starts for SaturnRing_18:
(1, 12648), (Start: 3 @12714 has 85 MA's),

Gene: Scorpia_16 Start: 11981, Stop: 12124, Start Num: 3
Candidate Starts for Scorpia_16:
(1, 11915), (Start: 3 @11981 has 85 MA's), (10, 12089),

Gene: Scout_18 Start: 12014, Stop: 12148, Start Num: 3
Candidate Starts for Scout_18:
(1, 11948), (Start: 3 @12014 has 85 MA's),

Gene: Sheen_20 Start: 14765, Stop: 14920, Start Num: 3
Candidate Starts for Sheen_20:
(1, 14699), (Start: 3 @14765 has 85 MA's),

Gene: Smeadley_15 Start: 11766, Stop: 11894, Start Num: 3
Candidate Starts for Smeadley_15:
(1, 11700), (Start: 3 @11766 has 85 MA's),

Gene: Stephig9_15 Start: 11747, Stop: 11875, Start Num: 3
Candidate Starts for Stephig9_15:
(1, 11681), (Start: 3 @11747 has 85 MA's),

Gene: Swirley_15 Start: 12141, Stop: 12284, Start Num: 3
Candidate Starts for Swirley_15:
(1, 12075), (Start: 3 @12141 has 85 MA's), (8, 12207), (10, 12249),

Gene: SydNat_15 Start: 12248, Stop: 12388, Start Num: 3

Candidate Starts for SydNat_15:
(1, 12182), (Start: 3 @12248 has 85 MA's), (8, 12314), (10, 12356),

Gene: TNguyen7_18 Start: 12684, Stop: 12818, Start Num: 3
Candidate Starts for TNguyen7_18:
(1, 12618), (Start: 3 @12684 has 85 MA's),

Gene: Target_19 Start: 14028, Stop: 14156, Start Num: 3
Candidate Starts for Target_19:
(1, 13962), (Start: 3 @14028 has 85 MA's), (12, 14136),

Gene: Tarynearal_14 Start: 12168, Stop: 12311, Start Num: 3
Candidate Starts for Tarynearal_14:
(1, 12102), (Start: 3 @12168 has 85 MA's), (8, 12234), (10, 12276),

Gene: Texage_18 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Texage_18:
(1, 13189), (Start: 3 @13255 has 85 MA's), (5, 13285),

Gene: Tiger_15 Start: 11994, Stop: 12137, Start Num: 3
Candidate Starts for Tiger_15:
(1, 11928), (Start: 3 @11994 has 85 MA's), (8, 12060), (10, 12102),

Gene: Todacoro_19 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Todacoro_19:
(1, 13189), (Start: 3 @13255 has 85 MA's), (5, 13285),

Gene: Toro_21 Start: 14707, Stop: 14862, Start Num: 3
Candidate Starts for Toro_21:
(1, 14641), (Start: 3 @14707 has 85 MA's),

Gene: Twigg_15 Start: 12140, Stop: 12283, Start Num: 3
Candidate Starts for Twigg_15:
(1, 12074), (Start: 3 @12140 has 85 MA's), (8, 12206), (10, 12248),

Gene: UnionJack_15 Start: 11720, Stop: 11863, Start Num: 3
Candidate Starts for UnionJack_15:
(1, 11654), (Start: 3 @11720 has 85 MA's), (10, 11828),

Gene: Veracruz_18 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Veracruz_18:
(1, 13189), (Start: 3 @13255 has 85 MA's), (5, 13285),

Gene: Zolita_14 Start: 12249, Stop: 12389, Start Num: 3
Candidate Starts for Zolita_14:
(1, 12183), (Start: 3 @12249 has 85 MA's), (8, 12315), (10, 12357),