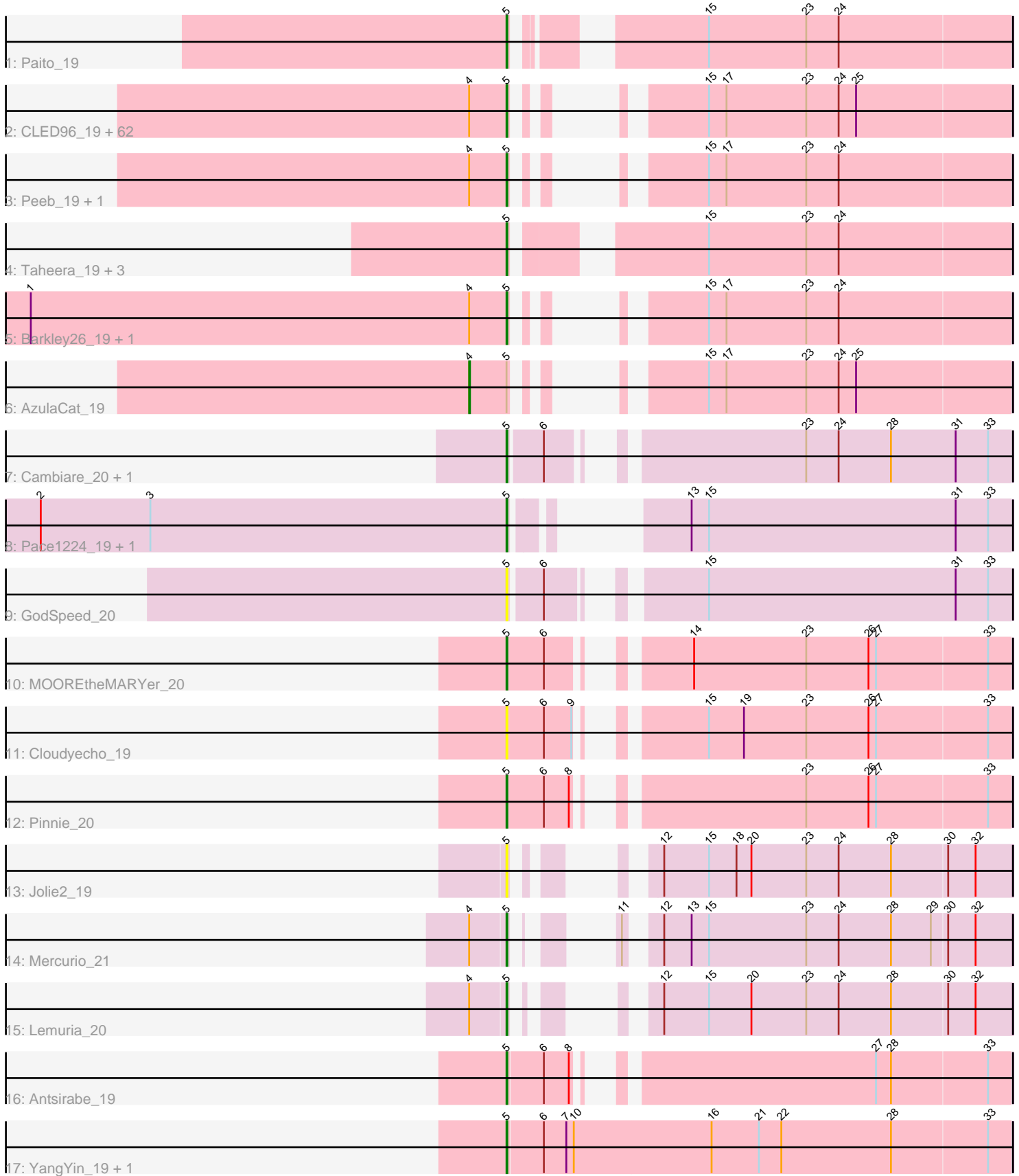


Pham 294632



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 294632 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294632 has 87 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Paito_19
- Track 2 : CLED96_19, Darionha_19, Crespo_19, PinkYoshi_19, Jeilious_19, ShaboiShabazz_19, Frosty24_19, ZoMa_19, Gomashi_19, Richarlison_19, DingDing_19, Ruriko_19, LouisV14_19, Jolene_19, Jane_19, BQuat_19, AizenPogi_19, Rattrick_19, Remy19_19, Angel_19, CassieYates_19, TomBrady_19, Coleslaw_19, Sweets_19, Kasen3_19, ECartman_19, DMoney_19, OctaviousRex_19, Halo_19, Wendigo_19, DNAllI_0019, GoldenAsh_19, Maliketh_19, Neoh_19, Phloodle_19, Periodt_19, Jonghyun_19, Avrafan_19, Gideon_19, Schiebel_19, Sizemore_19, Olga_19, Plagueis_19, Aroostook_19, Zombie_19, Hope_19, Phish_19, Hotshotbaby7_19, MZKinsey_19, Kareem_19, Mowgli_19, Chance64_19, TinaBug_19, BruceB_19, Marmie_19, Cedasite_19, Camri_19, Cherrybomb426_19, JorRay_19, Renaissance_19, Annihilator_19, Phreak_19, BPs_19
- Track 3 : Peeb_19, Liefie_19
- Track 4 : Taheera_19, Rabbs_19, Sneeze_19, Terror_19
- Track 5 : Barkley26_19, Grizzly_19
- Track 6 : AzulaCat_19
- Track 7 : Cambiare_20, Avocado_19
- Track 8 : Pace1224_19, FlagStaff_19
- Track 9 : GodSpeed_20
- Track 10 : MOOREtheMARYer_20
- Track 11 : Cloudyecho_19
- Track 12 : Pinnie_20
- Track 13 : Jolie2_19
- Track 14 : Mercurio_21
- Track 15 : Lemuria_20
- Track 16 : Antsirabe_19
- Track 17 : YangYin_19, Stargaze_19

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

The start number called the most often in the published annotations is 5, it was called in 70 of the 71 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AizenPogi_19, Angel_19, Annihilator_19, Antsirabe_19, Aroostook_19, Avocado_19, Avrafan_19, BPs_19, BQuat_19, Barkley26_19, BruceB_19, CLED96_19, Cambiare_20, Camri_19, CassieYates_19, Cedasite_19, Chance64_19, Cherrybomb426_19, Cloudyecho_19, Coleslaw_19, Crespo_19, DMoney_19, DNAIII_0019, Darionha_19, DingDing_19, ECartman_19, FlagStaff_19, Frosty24_19, Gideon_19, GodSpeed_20, GoldenAsh_19, Gomashi_19, Grizzly_19, Halo_19, Hope_19, Hotshotbaby7_19, Jane_19, Jeilious_19, Jolene_19, Jolie2_19, Jonghyun_19, JorRay_19, Kareem_19, Kasen3_19, Lemuria_20, Liefie_19, LouisV14_19, MOOREtheMARYer_20, MZKinsey_19, Maliketh_19, Marmie_19, Mercurio_21, Mowgli_19, Neoh_19, OctaviousRex_19, Olga_19, Pace1224_19, Paito_19, Peeb_19, Periodt_19, Phish_19, Phloodle_19, Phreak_19, PinkYoshi_19, Pinnie_20, Plagueis_19, Rabbs_19, Rattrick_19, Remy19_19, Renaissance_19, Richarlison_19, Ruriko_19, Schiebel_19, ShaboiShabazz_19, Sizemore_19, Sneeze_19, Stargaze_19, Sweets_19, Taheera_19, Terror_19, TinaBug_19, TomBrady_19, Wendigo_19, YangYin_19, ZoMa_19, Zombie_19,

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

- AzulaCat_19,

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

-

Summary by start number:

Start 4:

- Found in 70 of 87 (80.5%) of genes in pham
- Manual Annotations of this start: 1 of 71
- Called 1.4% of time when present
- Phage (with cluster) where this start called: AzulaCat_19 (G1),

Start 5:

- Found in 87 of 87 (100.0%) of genes in pham
- Manual Annotations of this start: 70 of 71
- Called 98.9% of time when present
- Phage (with cluster) where this start called: AizenPogi_19 (G1), Angel_19 (G1), Annihilator_19 (G1), Antsirabe_19 (G5), Aroostook_19 (G1), Avocado_19 (G2), Avrafan_19 (G1), BPs_19 (G1), BQuat_19 (G1), Barkley26_19 (G1), BruceB_19 (G1), CLED96_19 (G1), Cambiare_20 (G2), Camri_19 (G1), CassieYates_19 (G1), Cedasite_19 (G1), Chance64_19 (G1), Cherrybomb426_19 (G1), Cloudyecho_19 (G3), Coleslaw_19 (G1), Crespo_19 (G1), DMoney_19 (G1), DNAIII_0019 (G1), Darionha_19 (G1), DingDing_19 (G1), ECartman_19 (G1), FlagStaff_19 (G2), Frosty24_19 (G1), Gideon_19 (G1), GodSpeed_20 (G2), GoldenAsh_19 (G1), Gomashi_19 (G1), Grizzly_19 (G1), Halo_19 (G1), Hope_19 (G1), Hotshotbaby7_19 (G1), Jane_19 (G1), Jeilious_19 (G), Jolene_19 (G1), Jolie2_19 (G4), Jonghyun_19 (G1), JorRay_19 (G1), Kareem_19 (G1), Kasen3_19 (G1), Lemuria_20 (G4), Liefie_19 (G1), LouisV14_19 (G1), MOOREtheMARYer_20 (G3), MZKinsey_19 (G1), Maliketh_19 (G1), Marmie_19 (G1), Mercurio_21 (G4), Mowgli_19 (G1), Neoh_19 (G), OctaviousRex_19 (G1), Olga_19 (G1), Pace1224_19 (G2), Paito_19 (G1), Peeb_19 (G1), Periodt_19 (G1), Phish_19 (G1), Phloodle_19 (G1), Phreak_19 (G1), PinkYoshi_19 (G1), Pinnie_20 (G3), Plagueis_19 (G1), Rabbs_19 (G1), Rattrick_19 (G1), Remy19_19 (G1), Renaissance_19 (G1), Richarlison_19 (G1), Ruriko_19 (G1), Schiebel_19 (G1), ShaboiShabazz_19 (G1), Sizemore_19 (G1), Sneeze_19 (G1),

Stargaze_19 (G5), Sweets_19 (G1), Taheera_19 (G1), Terror_19 (G1), TinaBug_19 (G1), TomBrady_19 (G1), Wendigo_19 (G1), YangYin_19 (G5), ZoMa_19 (G1), Zombie_19 (G1),

Summary by clusters:

There are 6 clusters represented in this pham: G5, G4, G3, G1, G, G2,

Info for manual annotations of cluster G1:

- Start number 4 was manually annotated 1 time for cluster G1.
- Start number 5 was manually annotated 61 times for cluster G1.

Info for manual annotations of cluster G2:

- Start number 5 was manually annotated 3 times for cluster G2.

Info for manual annotations of cluster G3:

- Start number 5 was manually annotated 2 times for cluster G3.

Info for manual annotations of cluster G4:

- Start number 5 was manually annotated 2 times for cluster G4.

Info for manual annotations of cluster G5:

- Start number 5 was manually annotated 2 times for cluster G5.

Gene Information:

Gene: AizenPogi_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for AizenPogi_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Angel_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Angel_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Annihilator_19 Start: 18394, Stop: 18855, Start Num: 5

Candidate Starts for Annihilator_19:

(Start: 4 @18349 has 1 MA's), (Start: 5 @18394 has 70 MA's), (15, 18496), (17, 18517), (23, 18613), (24, 18652), (25, 18673),

Gene: Antsirabe_19 Start: 18709, Stop: 19239, Start Num: 5

Candidate Starts for Antsirabe_19:

(Start: 5 @18709 has 70 MA's), (6, 18751), (8, 18781), (27, 19081), (28, 19099), (33, 19213),

Gene: Aroostook_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Aroostook_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Avocado_19 Start: 18653, Stop: 19183, Start Num: 5

Candidate Starts for Avocado_19:

(Start: 5 @18653 has 70 MA's), (6, 18692), (23, 18938), (24, 18977), (28, 19040), (31, 19118), (33, 19157),

Gene: Avrafan_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Avrafan_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: AzulaCat_19 Start: 18358, Stop: 18864, Start Num: 4

Candidate Starts for AzulaCat_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: BPs_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for BPs_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: BQuat_19 Start: 18394, Stop: 18855, Start Num: 5

Candidate Starts for BQuat_19:

(Start: 4 @18349 has 1 MA's), (Start: 5 @18394 has 70 MA's), (15, 18496), (17, 18517), (23, 18613), (24, 18652), (25, 18673),

Gene: Barkley26_19 Start: 18406, Stop: 18867, Start Num: 5

Candidate Starts for Barkley26_19:

(1, 17833), (Start: 4 @18361 has 1 MA's), (Start: 5 @18406 has 70 MA's), (15, 18508), (17, 18529), (23, 18625), (24, 18664),

Gene: BruceB_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for BruceB_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: CLED96_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for CLED96_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Cambiare_20 Start: 19118, Stop: 19648, Start Num: 5

Candidate Starts for Cambiare_20:

(Start: 5 @19118 has 70 MA's), (6, 19157), (23, 19403), (24, 19442), (28, 19505), (31, 19583), (33, 19622),

Gene: Camri_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Camri_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: CassieYates_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for CassieYates_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Cedasite_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Cedasite_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Chance64_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Chance64_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Cherrybomb426_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Cherrybomb426_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Cloudyecho_19 Start: 18558, Stop: 19091, Start Num: 5

Candidate Starts for Cloudyecho_19:

(Start: 5 @18558 has 70 MA's), (6, 18603), (9, 18636), (15, 18732), (19, 18774), (23, 18849), (26, 18924), (27, 18933), (33, 19065),

Gene: Coleslaw_19 Start: 18394, Stop: 18855, Start Num: 5

Candidate Starts for Coleslaw_19:

(Start: 4 @18349 has 1 MA's), (Start: 5 @18394 has 70 MA's), (15, 18496), (17, 18517), (23, 18613), (24, 18652), (25, 18673),

Gene: Crespo_19 Start: 18404, Stop: 18865, Start Num: 5

Candidate Starts for Crespo_19:

(Start: 4 @18359 has 1 MA's), (Start: 5 @18404 has 70 MA's), (15, 18506), (17, 18527), (23, 18623), (24, 18662), (25, 18683),

Gene: DMoney_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for DMoney_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: DNAIII_0019 Start: 18412, Stop: 18873, Start Num: 5

Candidate Starts for DNAIII_0019:

(Start: 4 @18367 has 1 MA's), (Start: 5 @18412 has 70 MA's), (15, 18514), (17, 18535), (23, 18631), (24, 18670), (25, 18691),

Gene: Darionha_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Darionha_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: DingDing_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for DingDing_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: ECartman_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for ECartman_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: FlagStaff_19 Start: 18575, Stop: 19054, Start Num: 5
Candidate Starts for FlagStaff_19:
(2, 18014), (3, 18146), (Start: 5 @18575 has 70 MA's), (13, 18671), (15, 18692), (31, 18989), (33,
19028),

Gene: Frosty24_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for Frosty24_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: Gideon_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for Gideon_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: GodSpeed_20 Start: 18557, Stop: 19087, Start Num: 5
Candidate Starts for GodSpeed_20:
(Start: 5 @18557 has 70 MA's), (6, 18593), (15, 18725), (31, 19022), (33, 19061),

Gene: GoldenAsh_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for GoldenAsh_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: Gomashi_19 Start: 18404, Stop: 18865, Start Num: 5
Candidate Starts for Gomashi_19:
(Start: 4 @18359 has 1 MA's), (Start: 5 @18404 has 70 MA's), (15, 18506), (17, 18527), (23, 18623),
(24, 18662), (25, 18683),

Gene: Grizzly_19 Start: 18406, Stop: 18867, Start Num: 5
Candidate Starts for Grizzly_19:
(1, 17833), (Start: 4 @18361 has 1 MA's), (Start: 5 @18406 has 70 MA's), (15, 18508), (17, 18529),
(23, 18625), (24, 18664),

Gene: Halo_19 Start: 18398, Stop: 18859, Start Num: 5
Candidate Starts for Halo_19:
(Start: 4 @18353 has 1 MA's), (Start: 5 @18398 has 70 MA's), (15, 18500), (17, 18521), (23, 18617),
(24, 18656), (25, 18677),

Gene: Hope_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for Hope_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: Hotshotbaby7_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for Hotshotbaby7_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: Jane_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Jane_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Jeilious_19 Start: 18402, Stop: 18863, Start Num: 5

Candidate Starts for Jeilious_19:

(Start: 4 @18357 has 1 MA's), (Start: 5 @18402 has 70 MA's), (15, 18504), (17, 18525), (23, 18621), (24, 18660), (25, 18681),

Gene: Jolene_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Jolene_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Jolie2_19 Start: 17715, Stop: 18197, Start Num: 5

Candidate Starts for Jolie2_19:

(Start: 5 @17715 has 70 MA's), (12, 17781), (15, 17835), (18, 17868), (20, 17886), (23, 17952), (24, 17991), (28, 18054), (30, 18120), (32, 18153),

Gene: Jonghyun_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Jonghyun_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: JorRay_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for JorRay_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Kareem_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Kareem_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Kasen3_19 Start: 18404, Stop: 18865, Start Num: 5

Candidate Starts for Kasen3_19:

(Start: 4 @18359 has 1 MA's), (Start: 5 @18404 has 70 MA's), (15, 18506), (17, 18527), (23, 18623), (24, 18662), (25, 18683),

Gene: Lemuria_20 Start: 18526, Stop: 19005, Start Num: 5

Candidate Starts for Lemuria_20:

(Start: 4 @18484 has 1 MA's), (Start: 5 @18526 has 70 MA's), (12, 18589), (15, 18643), (20, 18694), (23, 18760), (24, 18799), (28, 18862), (30, 18928), (32, 18961),

Gene: Liefie_19 Start: 18402, Stop: 18863, Start Num: 5

Candidate Starts for Liefie_19:

(Start: 4 @18357 has 1 MA's), (Start: 5 @18402 has 70 MA's), (15, 18504), (17, 18525), (23, 18621), (24, 18660),

Gene: LouisV14_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for LouisV14_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: MOOREtheMARYer_20 Start: 18675, Stop: 19208, Start Num: 5

Candidate Starts for MOOREtheMARYer_20:

(Start: 5 @18675 has 70 MA's), (6, 18720), (14, 18831), (23, 18966), (26, 19041), (27, 19050), (33, 19182),

Gene: MZKinsey_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for MZKinsey_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Maliketh_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Maliketh_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Marmie_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Marmie_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Mercurio_21 Start: 19148, Stop: 19627, Start Num: 5

Candidate Starts for Mercurio_21:

(Start: 4 @19106 has 1 MA's), (Start: 5 @19148 has 70 MA's), (11, 19187), (12, 19211), (13, 19244), (15, 19265), (23, 19382), (24, 19421), (28, 19484), (29, 19532), (30, 19550), (32, 19583),

Gene: Mowgli_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Mowgli_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Neoh_19 Start: 18395, Stop: 18856, Start Num: 5

Candidate Starts for Neoh_19:

(Start: 4 @18350 has 1 MA's), (Start: 5 @18395 has 70 MA's), (15, 18497), (17, 18518), (23, 18614), (24, 18653), (25, 18674),

Gene: OctaviousRex_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for OctaviousRex_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Olga_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Olga_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Pace1224_19 Start: 18575, Stop: 19054, Start Num: 5

Candidate Starts for Pace1224_19:

(2, 18014), (3, 18146), (Start: 5 @18575 has 70 MA's), (13, 18671), (15, 18692), (31, 18989), (33, 19028),

Gene: Paito_19 Start: 18536, Stop: 19066, Start Num: 5
Candidate Starts for Paito_19:
(Start: 5 @18536 has 70 MA's), (15, 18707), (23, 18824), (24, 18863),

Gene: Peeb_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for Peeb_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661),

Gene: Periodt_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for Periodt_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: Phish_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for Phish_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: Phloodle_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for Phloodle_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: Phreak_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for Phreak_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: PinkYoshi_19 Start: 18394, Stop: 18855, Start Num: 5
Candidate Starts for PinkYoshi_19:
(Start: 4 @18349 has 1 MA's), (Start: 5 @18394 has 70 MA's), (15, 18496), (17, 18517), (23, 18613),
(24, 18652), (25, 18673),

Gene: Pinnie_20 Start: 19082, Stop: 19615, Start Num: 5
Candidate Starts for Pinnie_20:
(Start: 5 @19082 has 70 MA's), (6, 19127), (8, 19157), (23, 19373), (26, 19448), (27, 19457), (33,
19589),

Gene: Plagueis_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for Plagueis_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: Rabbs_19 Start: 18411, Stop: 18950, Start Num: 5
Candidate Starts for Rabbs_19:
(Start: 5 @18411 has 70 MA's), (15, 18591), (23, 18708), (24, 18747),

Gene: Rattrick_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for Rattrick_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: Remy19_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Remy19_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Renaissance_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Renaissance_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Richarlison_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Richarlison_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Ruriko_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Ruriko_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Schiebel_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for Schiebel_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: ShaboiShabazz_19 Start: 18403, Stop: 18864, Start Num: 5

Candidate Starts for ShaboiShabazz_19:

(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622), (24, 18661), (25, 18682),

Gene: Sizemore_19 Start: 18404, Stop: 18865, Start Num: 5

Candidate Starts for Sizemore_19:

(Start: 4 @18359 has 1 MA's), (Start: 5 @18404 has 70 MA's), (15, 18506), (17, 18527), (23, 18623), (24, 18662), (25, 18683),

Gene: Sneeze_19 Start: 18410, Stop: 18949, Start Num: 5

Candidate Starts for Sneeze_19:

(Start: 5 @18410 has 70 MA's), (15, 18590), (23, 18707), (24, 18746),

Gene: Stargaze_19 Start: 18702, Stop: 19301, Start Num: 5

Candidate Starts for Stargaze_19:

(Start: 5 @18702 has 70 MA's), (6, 18744), (7, 18771), (10, 18780), (16, 18945), (21, 19002), (22, 19029), (28, 19161), (33, 19275),

Gene: Sweets_19 Start: 18398, Stop: 18859, Start Num: 5

Candidate Starts for Sweets_19:

(Start: 4 @18353 has 1 MA's), (Start: 5 @18398 has 70 MA's), (15, 18500), (17, 18521), (23, 18617), (24, 18656), (25, 18677),

Gene: Taheera_19 Start: 18420, Stop: 18959, Start Num: 5

Candidate Starts for Taheera_19:

(Start: 5 @18420 has 70 MA's), (15, 18600), (23, 18717), (24, 18756),

Gene: Terror_19 Start: 18420, Stop: 18959, Start Num: 5
Candidate Starts for Terror_19:
(Start: 5 @18420 has 70 MA's), (15, 18600), (23, 18717), (24, 18756),

Gene: TinaBug_19 Start: 18398, Stop: 18859, Start Num: 5
Candidate Starts for TinaBug_19:
(Start: 4 @18353 has 1 MA's), (Start: 5 @18398 has 70 MA's), (15, 18500), (17, 18521), (23, 18617),
(24, 18656), (25, 18677),

Gene: TomBrady_19 Start: 18404, Stop: 18865, Start Num: 5
Candidate Starts for TomBrady_19:
(Start: 4 @18359 has 1 MA's), (Start: 5 @18404 has 70 MA's), (15, 18506), (17, 18527), (23, 18623),
(24, 18662), (25, 18683),

Gene: Wendigo_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for Wendigo_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: YangYin_19 Start: 18726, Stop: 19325, Start Num: 5
Candidate Starts for YangYin_19:
(Start: 5 @18726 has 70 MA's), (6, 18768), (7, 18795), (10, 18804), (16, 18969), (21, 19026), (22,
19053), (28, 19185), (33, 19299),

Gene: ZoMa_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for ZoMa_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),

Gene: Zombie_19 Start: 18403, Stop: 18864, Start Num: 5
Candidate Starts for Zombie_19:
(Start: 4 @18358 has 1 MA's), (Start: 5 @18403 has 70 MA's), (15, 18505), (17, 18526), (23, 18622),
(24, 18661), (25, 18682),