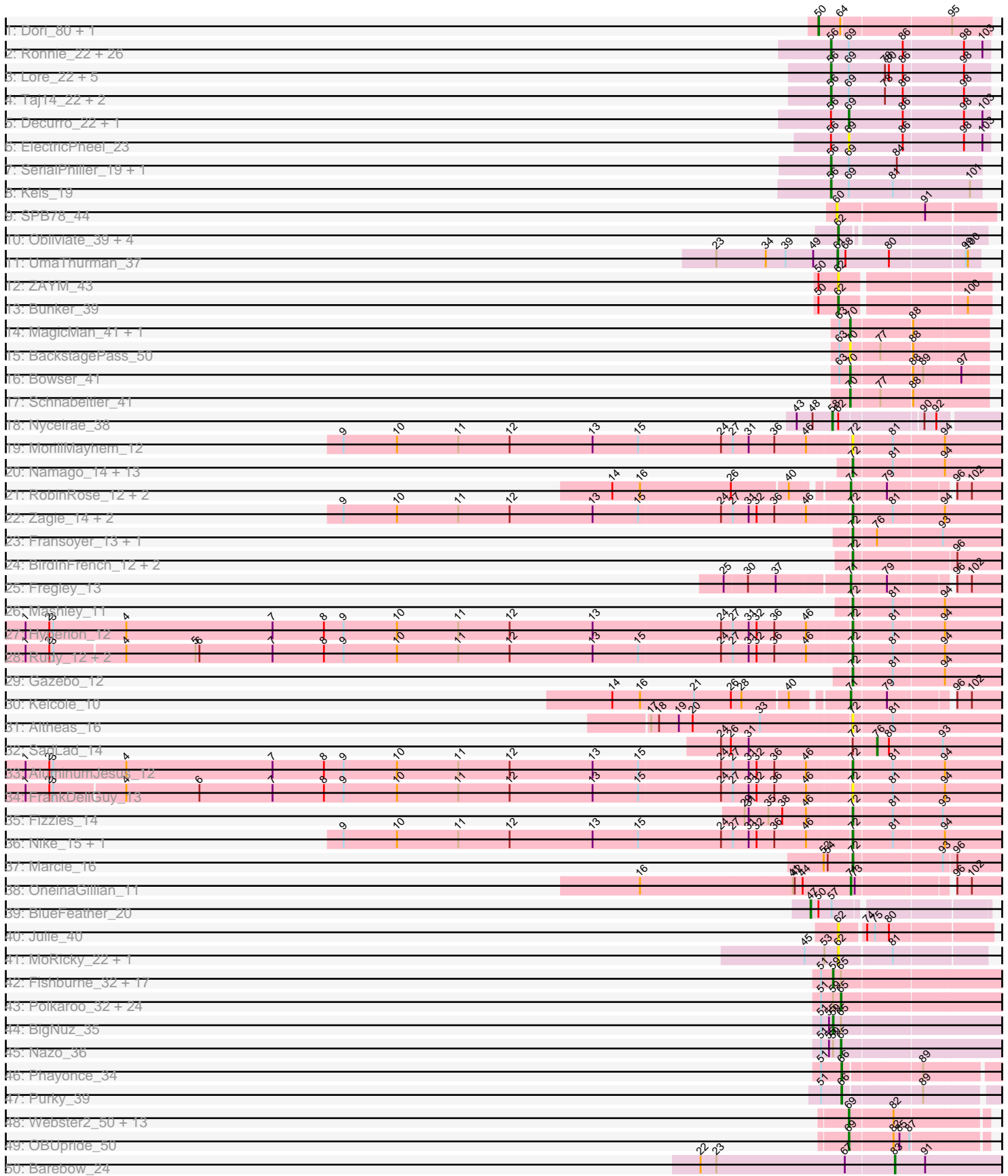


Pham 202719



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 202719 Report

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

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 202719 has 169 members, 18 are drafts.

Phages represented in each track:

- Track 1 : Dori_80, Mao1_82
- Track 2 : Ronnie_22, Azathoth_22, Inspire2_22, Mariposa_22, Guntur_22, Sandman_22, Courtney3_22, LouisXIV_22, CGermain_22, Stratus_22, Maggie_22, Copper_22, Link_22, Seume_22, Moloch_22, TymAbreu_22, Yank_22, Chestnut_22, Dewayne_22, Massimo_22, Hunnie_22, Arby_22, Prospero_22, Muttie_22, TinoCrisci_22, Toulouse_21, Sourignavong_23
- Track 3 : Lore_22, Blair_22, KylieMac_23, Laila_24, Elkhorn_22, StewieGriff_22
- Track 4 : Taj14_22, Saphira_23, Swenson_22
- Track 5 : Decurro_22, Jessica_23
- Track 6 : ElectricPheel_23
- Track 7 : SerialPhiller_19, Arielagos_19
- Track 8 : Kels_19
- Track 9 : SPB78_44
- Track 10 : Obliviate_39, Zaheer_44, QuinnAvery_44, Petra_40, Zarbodnamra_42
- Track 11 : UmaThurman_37
- Track 12 : ZAYM_43
- Track 13 : Bunker_39
- Track 14 : MagicMan_41, Eyes_39
- Track 15 : BackstagePass_50
- Track 16 : Bowser_41
- Track 17 : Schnabeltier_41
- Track 18 : Nyceirae_38
- Track 19 : MorillMayhem_12
- Track 20 : Namago_14, Jehoshaphat_16, Phabia_14, Teehee_16, Judebell_16, Wayne3_15, Wheelie_13, StrawberryJamm_16, Grassboy_15, DonaldDuck_14, BabyDotz_13, Lonelysoil_13, SallyK_15, Casend_15
- Track 21 : RobinRose_12, Tempo_11, Romm_13
- Track 22 : Zagie_14, Rowlf_10, Blab_12
- Track 23 : Fransoyer_13, RubyRalph_13
- Track 24 : BirdInFrench_12, Wilca_12, Pepe25_11
- Track 25 : Fregley_13
- Track 26 : Mashley_11
- Track 27 : Hyperion_12

- Track 28 : Rudy_12, Quammi_12, Viceroy_13
- Track 29 : Gazebo_12
- Track 30 : Kelcole_10
- Track 31 : Altheas_16
- Track 32 : SadLad_14
- Track 33 : AluminumJesus_12
- Track 34 : FrankDeliGuy_13
- Track 35 : Fizzles_14
- Track 36 : Nike_15, Squash_16
- Track 37 : Marcie_16
- Track 38 : OneinaGillian_11
- Track 39 : BlueFeather_20
- Track 40 : Julie_40
- Track 41 : MoRicky_22, Smilerella_21
- Track 42 : Fishburne_32, Kari_32, Atcoo_32, FirstPlacePfu_32, Venti_32, Willsammy_31, Langerak_32, Mangethe_32, Majeke_32, Necropolis_32, Donovan_32, StevieRay_32, Arib1_32, Juniormint_32, Bunnies_32, Thespis_32, Zilizebeth_32, Phegasus_32
- Track 43 : Polkaroo_32, Brusacoram_32, Bartholomew_31, KilKor_32, Dynamo_32, Phalm_32, HUHilltop_32, Shipwreck_34, GreaseLightnin_32, Pygmy_34, Camster_32, Vidya_32, Gavriela_32, Glaske_32, Jebeks_33, Bogie_34, Techage_32, Megiddo_32, Ksquard_32, Malithi_32, Sonah_32, CactusJack_32, StressBall_32, Phineas_32, Jung_31
- Track 44 : BigNuz_35
- Track 45 : Nazo_36
- Track 46 : Phayonce_34
- Track 47 : Purky_39
- Track 48 : Webster2_50, Luke_50, LilHazelnut_50, Evanesce_49, Hadrien_50, Amymech_50, Gancho_49, Kinbote_50, Ubuntu_50, Forge_48, Ein37_50, DeepSoil15_50, Amochick_50, Daegal_52
- Track 49 : OBUpride_50
- Track 50 : Barebow_24

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

The start number called the most often in the published annotations is 56, it was called in 39 of the 151 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arby_22, Arielagos_19, Azathoth_22, Blair_22, CGermain_22, Chestnut_22, Copper_22, Courtney3_22, Dewayne_22, Elkhorn_22, Guntur_22, Hunnie_22, Inspire2_22, Kels_19, KylieMac_23, Laila_24, Link_22, Lore_22, LouisXIV_22, Maggie_22, Mariposa_22, Massimo_22, Moloch_22, Muttlie_22, Prospero_22, Ronnie_22, Sandman_22, Saphira_23, SerialPhiller_19, Seume_22, Sourignavong_23, StewieGriff_22, Stratus_22, Swenson_22, Taj14_22, TinoCrisci_22, Toulouse_21, TymAbreu_22, Yank_22,

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

- Decurro_22, ElectricPheel_23, Jessica_23,

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

- Altheas_16, AluminumJesus_12, Amochick_50, Amymech_50, Arib1_32, Atcoo_32, BabyDotz_13, BackstagePass_50, Barebow_24, Bartholomew_31, BigNuz_35, BirdInFrench_12, Blab_12, BlueFeather_20, Bogie_34, Bowser_41, Brusacoram_32, Bunker_39, Bunnies_32, CactusJack_32, Camster_32, Casend_15, Daegal_52, DeepSoil15_50, DonaldDuck_14, Donovan_32, Dori_80, Dynamo_32, Ein37_50, Evanesce_49, Eyes_39, FirstPlacePfu_32, Fishburne_32, Fizzles_14, Forge_48, FrankDeliGuy_13, Fransoyer_13, Fregley_13, Gancho_49, Gavriela_32, Gazebo_12, Glaske_32, Grassboy_15, GreaseLightnin_32, HUHilltop_32, Hadrien_50, Hyperion_12, Jebeks_33, Jehoshaphat_16, Judebell_16, Julie_40, Jung_31, Juniomint_32, Kari_32, Kelcole_10, KilKor_32, Kinbote_50, Ksquared_32, Langerak_32, LilHazelnut_50, Lonelysoil_13, Luke_50, MagicMan_41, Majeke_32, Malithi_32, Mangethe_32, Mao1_82, Marcie_16, Mashley_11, Megiddo_32, MoRicky_22, MorillMayhem_12, Namago_14, Nazo_36, Necropolis_32, Nike_15, Nyceirae_38, OBUpride_50, Obliviate_39, OneinaGillian_11, Pepe25_11, Petra_40, Phabia_14, Phalm_32, Phayonce_34, Phegasus_32, Phineas_32, Polkaroo_32, Purky_39, Pygmy_34, Quammi_12, QuinnAvery_44, RobinRose_12, Romm_13, Rowlf_10, RubyRalph_13, Rudy_12, SPB78_44, SadLad_14, SallyK_15, Schnabeltier_41, Shipwreck_34, Smilerella_21, Sonah_32, Squash_16, StevieRay_32, StrawberryJamm_16, StressBall_32, Techage_32, Teehee_16, Tempo_11, Thespis_32, Ubuntu_50, UmaThurman_37, Venti_32, Viceroy_13, Vidya_32, Wayne3_15, Webster2_50, Wheelie_13, Wilca_12, Willsammy_31, ZAYM_43, Zagie_14, Zaheer_44, Zarbodnamra_42, Zilizebeth_32,

Summary by start number:

Start 47:

- Found in 1 of 169 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlueFeather_20 (FE),

Start 50:

- Found in 5 of 169 (3.0%) of genes in pham
- Manual Annotations of this start: 2 of 151
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Dori_80 (AD), Mao1_82 (AD),

Start 56:

- Found in 42 of 169 (24.9%) of genes in pham
- Manual Annotations of this start: 39 of 151
- Called 92.9% of time when present
- Phage (with cluster) where this start called: Arby_22 (AN), Arielagos_19 (AN), Azathoth_22 (AN), Blair_22 (AN), CGermain_22 (AN), Chestnut_22 (AN), Copper_22 (AN), Courtney3_22 (AN), Dewayne_22 (AN), Elkhorn_22 (AN), Guntur_22 (AN), Hunnie_22 (AN), Inspire2_22 (AN), Kels_19 (AN), KylieMac_23 (AN), Laila_24 (AN), Link_22 (AN), Lore_22 (AN), LouisXIV_22 (AN), Maggie_22 (AN), Mariposa_22 (AN), Massimo_22 (AN), Moloch_22 (AN), Muttie_22 (AN), Prospero_22 (AN), Ronnie_22 (AN), Sandman_22 (AN), Saphira_23 (AN), SerialPhiller_19 (AN), Seume_22 (AN), Sourignavong_23 (AN), StewieGriff_22 (AN), Stratus_22 (AN), Swenson_22 (AN), Taj14_22 (AN), TinoCrisci_22 (AN), Toulouse_21 (AN), TymAbreu_22 (AN), Yank_22 (AN),

Start 58:

- Found in 1 of 169 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nyceirae_38 (DT),

Start 59:

- Found in 45 of 169 (26.6%) of genes in pham
- Manual Annotations of this start: 18 of 151
- Called 42.2% of time when present
- Phage (with cluster) where this start called: Arib1_32 (P1), Atcoo_32 (P1), BigNuz_35 (P4), Bunnies_32 (P1), Donovan_32 (P1), FirstPlacePfu_32 (P1), Fishburne_32 (P1), Juniormint_32 (P1), Kari_32 (P1), Langerak_32 (P1), Majeke_32 (P1), Mangethe_32 (P1), Necropolis_32 (P1), Phegasus_32 (P1), StevieRay_32 (P1), Thespis_32 (P1), Venti_32 (P1), Willsammy_31 (P1), Zilizebeth_32 (P1),

Start 60:

- Found in 1 of 169 (0.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SPB78_44 (BA),

Start 61:

- Found in 1 of 169 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: UmaThurman_37 (CV),

Start 62:

- Found in 11 of 169 (6.5%) of genes in pham
- Manual Annotations of this start: 6 of 151
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Bunker_39 (DB), Julie_40 (FF), MoRicky_22 (GH), Obliviate_39 (CV), Petra_40 (CV), QuinnAvery_44 (FF), Smilerella_21 (GH), ZAYM_43 (DB), Zaheer_44 (FF), Zarbodnamra_42 (CV),

Start 65:

- Found in 45 of 169 (26.6%) of genes in pham
- Manual Annotations of this start: 23 of 151
- Called 57.8% of time when present
- Phage (with cluster) where this start called: Bartholomew_31 (P1), Bogie_34 (P1), Brusacoram_32 (P1), CactusJack_32 (P1), Camster_32 (P1), Dynamo_32 (P1), Gavriela_32 (P1), Glaske_32 (P1), GreaseLightnin_32 (P1), HUHilltop_32 (P1), Jebeks_33 (P1), Jung_31 (P1), KilKor_32 (P1), Ksquared_32 (P1), Malithi_32 (P1), Megiddo_32 (P1), Nazo_36 (P4), Phalm_32 (P1), Phineas_32 (P1), Polkaroo_32 (P1), Pygmy_34 (P1), Shipwreck_34 (P1), Sonah_32 (P1), StressBall_32 (P1), Techage_32 (P1), Vidya_32 (P1),

Start 66:

- Found in 2 of 169 (1.2%) of genes in pham
- Manual Annotations of this start: 2 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phayonce_34 (P5), Purky_39 (P6),

Start 69:

- Found in 57 of 169 (33.7%) of genes in pham
- Manual Annotations of this start: 17 of 151
- Called 31.6% of time when present
- Phage (with cluster) where this start called: Amochick_50 (Q), Amymech_50 (Q), Daegal_52 (Q), Decurro_22 (AN), DeepSoil15_50 (Q), Ein37_50 (Q), ElectricPheel_23 (AN), Evanesce_49 (Q), Forge_48 (Q), Gancho_49 (Q), Hadrien_50 (Q), Jessica_23 (AN), Kinbote_50 (Q), LilHazelNut_50 (Q), Luke_50 (Q), OBUpride_50 (Q), Ubuntu_50 (Q), Webster2_50 (Q),

Start 70:

- Found in 5 of 169 (3.0%) of genes in pham
- Manual Annotations of this start: 4 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BackstagePass_50 (DB), Bowser_41 (DB), Eyes_39 (DB), MagicMan_41 (DB), Schnabeltier_41 (DB),

Start 71:

- Found in 6 of 169 (3.6%) of genes in pham
- Manual Annotations of this start: 5 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fregley_13 (EG), Kelcole_10 (EG), OneinaGillian_11 (EG), RobinRose_12 (EG), Romm_13 (EG), Tempo_11 (EG),

Start 72:

- Found in 37 of 169 (21.9%) of genes in pham
- Manual Annotations of this start: 30 of 151
- Called 97.3% of time when present
- Phage (with cluster) where this start called: Altheas_16 (EG), AluminumJesus_12 (EG), BabyDotz_13 (EG), BirdInFrench_12 (EG), Blab_12 (EG), Casend_15 (EG), DonaldDuck_14 (EG), Fizzles_14 (EG), FrankDeliGuy_13 (EG), Fransoyer_13 (EG), Gazebo_12 (EG), Grassboy_15 (EG), Hyperion_12 (EG), Jehoshaphat_16 (EG), Judebell_16 (EG), Lonelysoil_13 (EG), Marcie_16 (EG), Mashley_11 (EG), MorillMayhem_12 (EG), Namago_14 (EG), Nike_15 (EG), Pepe25_11 (EG), Phabia_14 (EG), Quammi_12 (EG), Rowlf_10 (EG), RubyRalph_13 (EG), Rudy_12 (EG), SallyK_15 (EG), Squash_16 (EG), StrawberryJamm_16 (EG), Teehee_16 (EG), Viceroy_13 (EG), Wayne3_15 (EG), Wheelie_13 (EG), Wilca_12 (EG), Zagie_14 (EG),

Start 76:

- Found in 3 of 169 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 151
- Called 33.3% of time when present
- Phage (with cluster) where this start called: SadLad_14 (EG),

Start 83:

- Found in 1 of 169 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barebow_24 (singleton),

Summary by clusters:

There are 16 clusters represented in this pham: singleton, P1, P6, AD, P4, P5, EG, DB, AN, Q, FE, FF, BA, DT, CV, GH,

Info for manual annotations of cluster AD:

- Start number 50 was manually annotated 2 times for cluster AD.

Info for manual annotations of cluster AN:

- Start number 56 was manually annotated 39 times for cluster AN.
- Start number 69 was manually annotated 2 times for cluster AN.

Info for manual annotations of cluster CV:

- Start number 61 was manually annotated 1 time for cluster CV.
- Start number 62 was manually annotated 3 times for cluster CV.

Info for manual annotations of cluster DB:

- Start number 62 was manually annotated 1 time for cluster DB.
- Start number 70 was manually annotated 4 times for cluster DB.

Info for manual annotations of cluster DT:

- Start number 58 was manually annotated 1 time for cluster DT.

Info for manual annotations of cluster EG:

- Start number 71 was manually annotated 5 times for cluster EG.
- Start number 72 was manually annotated 30 times for cluster EG.
- Start number 76 was manually annotated 1 time for cluster EG.

Info for manual annotations of cluster FE:

- Start number 47 was manually annotated 1 time for cluster FE.

Info for manual annotations of cluster FF:

- Start number 62 was manually annotated 2 times for cluster FF.

Info for manual annotations of cluster P1:

- Start number 59 was manually annotated 17 times for cluster P1.
- Start number 65 was manually annotated 22 times for cluster P1.

Info for manual annotations of cluster P4:

- Start number 59 was manually annotated 1 time for cluster P4.
- Start number 65 was manually annotated 1 time for cluster P4.

Info for manual annotations of cluster P5:

- Start number 66 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:

- Start number 66 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Q:

- Start number 69 was manually annotated 15 times for cluster Q.

Gene Information:

Gene: Altheas_16 Start: 5368, Stop: 5153, Start Num: 72

Candidate Starts for Altheas_16:

(17, 5665), (18, 5653), (19, 5623), (20, 5602), (33, 5500), (Start: 72 @5368 has 30 MA's), (81, 5311),

Gene: AluminumJesus_12 Start: 4567, Stop: 4352, Start Num: 72

Candidate Starts for AluminumJesus_12:

(1, 5812), (2, 5776), (3, 5770), (4, 5659), (7, 5437), (8, 5359), (9, 5329), (10, 5248), (11, 5155), (12, 5077), (13, 4951), (15, 4882), (24, 4759), (27, 4741), (31, 4717), (32, 4705), (36, 4678), (46, 4630), (Start: 72 @4567 has 30 MA's), (81, 4510), (94, 4435),

Gene: Amochick_50 Start: 36955, Stop: 37152, Start Num: 69

Candidate Starts for Amochick_50:

(Start: 69 @36955 has 17 MA's), (82, 37018),

Gene: Amymech_50 Start: 36949, Stop: 37146, Start Num: 69

Candidate Starts for Amymech_50:

(Start: 69 @36949 has 17 MA's), (82, 37012),

Gene: Arby_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for Arby_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Arib1_32 Start: 27470, Stop: 27715, Start Num: 59

Candidate Starts for Arib1_32:

(51, 27452), (Start: 59 @27470 has 18 MA's), (Start: 65 @27482 has 23 MA's),

Gene: Arielagos_19 Start: 13063, Stop: 13281, Start Num: 56

Candidate Starts for Arielagos_19:

(Start: 56 @13063 has 39 MA's), (Start: 69 @13090 has 17 MA's), (84, 13159),

Gene: Atcoo_32 Start: 27951, Stop: 28196, Start Num: 59

Candidate Starts for Atcoo_32:

(51, 27933), (Start: 59 @27951 has 18 MA's), (Start: 65 @27963 has 23 MA's),

Gene: Azathoth_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for Azathoth_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: BabyDotz_13 Start: 5024, Stop: 4809, Start Num: 72

Candidate Starts for BabyDotz_13:

(Start: 72 @5024 has 30 MA's), (81, 4967), (94, 4892),

Gene: BackstagePass_50 Start: 34306, Stop: 34112, Start Num: 70

Candidate Starts for BackstagePass_50:

(63, 34321), (Start: 70 @34306 has 4 MA's), (77, 34267), (88, 34222),

Gene: Barebow_24 Start: 17257, Stop: 17445, Start Num: 83

Candidate Starts for Barebow_24:

(22, 16966), (23, 16990), (67, 17185), (Start: 83 @17257 has 1 MA's), (91, 17302),

Gene: Bartholomew_31 Start: 27476, Stop: 27709, Start Num: 65
Candidate Starts for Bartholomew_31:
(51, 27446), (Start: 59 @27464 has 18 MA's), (Start: 65 @27476 has 23 MA's),

Gene: BigNuz_35 Start: 29592, Stop: 29837, Start Num: 59
Candidate Starts for BigNuz_35:
(51, 29574), (55, 29586), (Start: 59 @29592 has 18 MA's), (Start: 65 @29604 has 23 MA's),

Gene: BirdInFrench_12 Start: 3464, Stop: 3252, Start Num: 72
Candidate Starts for BirdInFrench_12:
(Start: 72 @3464 has 30 MA's), (96, 3317),

Gene: Blab_12 Start: 4349, Stop: 4134, Start Num: 72
Candidate Starts for Blab_12:
(9, 5111), (10, 5030), (11, 4937), (12, 4859), (13, 4733), (15, 4664), (24, 4541), (27, 4523), (31, 4499),
(32, 4487), (36, 4460), (46, 4412), (Start: 72 @4349 has 30 MA's), (81, 4292), (94, 4217),

Gene: Blair_22 Start: 13883, Stop: 14116, Start Num: 56
Candidate Starts for Blair_22:
(Start: 56 @13883 has 39 MA's), (Start: 69 @13910 has 17 MA's), (78, 13964), (80, 13970), (86,
13991), (98, 14078),

Gene: BlueFeather_20 Start: 14165, Stop: 14407, Start Num: 47
Candidate Starts for BlueFeather_20:
(Start: 47 @14165 has 1 MA's), (Start: 50 @14177 has 2 MA's), (57, 14195),

Gene: Bogie_34 Start: 29259, Stop: 29492, Start Num: 65
Candidate Starts for Bogie_34:
(51, 29229), (Start: 59 @29247 has 18 MA's), (Start: 65 @29259 has 23 MA's),

Gene: Bowser_41 Start: 32656, Stop: 32847, Start Num: 70
Candidate Starts for Bowser_41:
(63, 32641), (Start: 70 @32656 has 4 MA's), (88, 32740), (89, 32755), (97, 32809),

Gene: Brusacoram_32 Start: 27469, Stop: 27702, Start Num: 65
Candidate Starts for Brusacoram_32:
(51, 27439), (Start: 59 @27457 has 18 MA's), (Start: 65 @27469 has 23 MA's),

Gene: Bunker_39 Start: 31881, Stop: 32090, Start Num: 62
Candidate Starts for Bunker_39:
(Start: 50 @31854 has 2 MA's), (Start: 62 @31881 has 6 MA's), (100, 32055),

Gene: Bunnies_32 Start: 27478, Stop: 27723, Start Num: 59
Candidate Starts for Bunnies_32:
(51, 27460), (Start: 59 @27478 has 18 MA's), (Start: 65 @27490 has 23 MA's),

Gene: CGermain_22 Start: 13886, Stop: 14119, Start Num: 56
Candidate Starts for CGermain_22:
(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103,
14108),

Gene: CactusJack_32 Start: 27733, Stop: 27966, Start Num: 65

Candidate Starts for CactusJack_32:

(51, 27703), (Start: 59 @27721 has 18 MA's), (Start: 65 @27733 has 23 MA's),

Gene: Camster_32 Start: 27506, Stop: 27739, Start Num: 65

Candidate Starts for Camster_32:

(51, 27476), (Start: 59 @27494 has 18 MA's), (Start: 65 @27506 has 23 MA's),

Gene: Casend_15 Start: 5321, Stop: 5106, Start Num: 72

Candidate Starts for Casend_15:

(Start: 72 @5321 has 30 MA's), (81, 5264), (94, 5189),

Gene: Chestnut_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for Chestnut_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Copper_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for Copper_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Courtney3_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for Courtney3_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Daegal_52 Start: 37533, Stop: 37730, Start Num: 69

Candidate Starts for Daegal_52:

(Start: 69 @37533 has 17 MA's), (82, 37596),

Gene: Decurro_22 Start: 13881, Stop: 14087, Start Num: 69

Candidate Starts for Decurro_22:

(Start: 56 @13854 has 39 MA's), (Start: 69 @13881 has 17 MA's), (86, 13962), (98, 14049), (103, 14076),

Gene: DeepSoil15_50 Start: 36949, Stop: 37146, Start Num: 69

Candidate Starts for DeepSoil15_50:

(Start: 69 @36949 has 17 MA's), (82, 37012),

Gene: Dewayne_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for Dewayne_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: DonaldDuck_14 Start: 4667, Stop: 4452, Start Num: 72

Candidate Starts for DonaldDuck_14:

(Start: 72 @4667 has 30 MA's), (81, 4610), (94, 4535),

Gene: Donovan_32 Start: 27486, Stop: 27731, Start Num: 59

Candidate Starts for Donovan_32:

(51, 27468), (Start: 59 @27486 has 18 MA's), (Start: 65 @27498 has 23 MA's),

Gene: Dori_80 Start: 57490, Stop: 57729, Start Num: 50

Candidate Starts for Dori_80:

(Start: 50 @57490 has 2 MA's), (64, 57523), (95, 57673),

Gene: Dynamo_32 Start: 27887, Stop: 28120, Start Num: 65

Candidate Starts for Dynamo_32:

(51, 27857), (Start: 59 @27875 has 18 MA's), (Start: 65 @27887 has 23 MA's),

Gene: Ein37_50 Start: 36949, Stop: 37146, Start Num: 69

Candidate Starts for Ein37_50:

(Start: 69 @36949 has 17 MA's), (82, 37012),

Gene: ElectricPheel_23 Start: 13954, Stop: 14160, Start Num: 69

Candidate Starts for ElectricPheel_23:

(Start: 56 @13927 has 39 MA's), (Start: 69 @13954 has 17 MA's), (86, 14035), (98, 14122), (103, 14149),

Gene: Elkhorn_22 Start: 13883, Stop: 14116, Start Num: 56

Candidate Starts for Elkhorn_22:

(Start: 56 @13883 has 39 MA's), (Start: 69 @13910 has 17 MA's), (78, 13964), (80, 13970), (86, 13991), (98, 14078),

Gene: Evanesce_49 Start: 36949, Stop: 37146, Start Num: 69

Candidate Starts for Evanesce_49:

(Start: 69 @36949 has 17 MA's), (82, 37012),

Gene: Eyes_39 Start: 32432, Stop: 32626, Start Num: 70

Candidate Starts for Eyes_39:

(63, 32417), (Start: 70 @32432 has 4 MA's), (88, 32516),

Gene: FirstPlacePfu_32 Start: 27496, Stop: 27741, Start Num: 59

Candidate Starts for FirstPlacePfu_32:

(51, 27478), (Start: 59 @27496 has 18 MA's), (Start: 65 @27508 has 23 MA's),

Gene: Fishburne_32 Start: 27464, Stop: 27709, Start Num: 59

Candidate Starts for Fishburne_32:

(51, 27446), (Start: 59 @27464 has 18 MA's), (Start: 65 @27476 has 23 MA's),

Gene: Fizzles_14 Start: 4739, Stop: 4524, Start Num: 72

Candidate Starts for Fizzles_14:

(29, 4895), (31, 4889), (35, 4859), (38, 4838), (46, 4802), (Start: 72 @4739 has 30 MA's), (81, 4682), (93, 4610),

Gene: Forge_48 Start: 36949, Stop: 37146, Start Num: 69

Candidate Starts for Forge_48:

(Start: 69 @36949 has 17 MA's), (82, 37012),

Gene: FrankDeliGuy_13 Start: 4553, Stop: 4338, Start Num: 72

Candidate Starts for FrankDeliGuy_13:

(1, 5792), (2, 5756), (3, 5750), (4, 5645), (6, 5534), (7, 5423), (8, 5345), (9, 5315), (10, 5234), (11, 5141), (12, 5063), (13, 4937), (15, 4868), (24, 4745), (27, 4727), (31, 4703), (32, 4691), (36, 4664), (46, 4616), (Start: 72 @4553 has 30 MA's), (81, 4496), (94, 4421),

Gene: Fransoyer_13 Start: 4233, Stop: 4018, Start Num: 72

Candidate Starts for Fransoyer_13:
(Start: 72 @4233 has 30 MA's), (Start: 76 @4200 has 1 MA's), (93, 4104),

Gene: Fregley_13 Start: 3754, Stop: 3554, Start Num: 71
Candidate Starts for Fregley_13:
(25, 3928), (30, 3895), (37, 3856), (Start: 71 @3754 has 5 MA's), (79, 3703), (96, 3619), (102, 3598),

Gene: Gancho_49 Start: 36672, Stop: 36869, Start Num: 69
Candidate Starts for Gancho_49:
(Start: 69 @36672 has 17 MA's), (82, 36735),

Gene: Gavriela_32 Start: 27733, Stop: 27966, Start Num: 65
Candidate Starts for Gavriela_32:
(51, 27703), (Start: 59 @27721 has 18 MA's), (Start: 65 @27733 has 23 MA's),

Gene: Gazebo_12 Start: 4574, Stop: 4359, Start Num: 72
Candidate Starts for Gazebo_12:
(Start: 72 @4574 has 30 MA's), (81, 4517), (94, 4442),

Gene: Glaske_32 Start: 27733, Stop: 27966, Start Num: 65
Candidate Starts for Glaske_32:
(51, 27703), (Start: 59 @27721 has 18 MA's), (Start: 65 @27733 has 23 MA's),

Gene: Grassboy_15 Start: 5355, Stop: 5140, Start Num: 72
Candidate Starts for Grassboy_15:
(Start: 72 @5355 has 30 MA's), (81, 5298), (94, 5223),

Gene: GreaseLightnin_32 Start: 27725, Stop: 27958, Start Num: 65
Candidate Starts for GreaseLightnin_32:
(51, 27695), (Start: 59 @27713 has 18 MA's), (Start: 65 @27725 has 23 MA's),

Gene: Guntur_22 Start: 13886, Stop: 14119, Start Num: 56
Candidate Starts for Guntur_22:
(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: HUHilltop_32 Start: 27509, Stop: 27742, Start Num: 65
Candidate Starts for HUHilltop_32:
(51, 27479), (Start: 59 @27497 has 18 MA's), (Start: 65 @27509 has 23 MA's),

Gene: Hadrien_50 Start: 36949, Stop: 37146, Start Num: 69
Candidate Starts for Hadrien_50:
(Start: 69 @36949 has 17 MA's), (82, 37012),

Gene: Hunnie_22 Start: 13886, Stop: 14119, Start Num: 56
Candidate Starts for Hunnie_22:
(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Hyperion_12 Start: 4612, Stop: 4397, Start Num: 72
Candidate Starts for Hyperion_12:
(1, 5857), (2, 5821), (3, 5815), (4, 5704), (7, 5482), (8, 5404), (9, 5374), (10, 5293), (11, 5200), (12, 5122), (13, 4996), (24, 4804), (27, 4786), (31, 4762), (32, 4750), (36, 4723), (46, 4675), (Start: 72

@4612 has 30 MA's), (81, 4555), (94, 4480),

Gene: Inspire2_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for Inspire2_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Jebeks_33 Start: 27461, Stop: 27694, Start Num: 65

Candidate Starts for Jebeks_33:

(51, 27431), (Start: 59 @27449 has 18 MA's), (Start: 65 @27461 has 23 MA's),

Gene: Jehoshaphat_16 Start: 5613, Stop: 5398, Start Num: 72

Candidate Starts for Jehoshaphat_16:

(Start: 72 @5613 has 30 MA's), (81, 5556), (94, 5481),

Gene: Jessica_23 Start: 13913, Stop: 14119, Start Num: 69

Candidate Starts for Jessica_23:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Judebell_16 Start: 5139, Stop: 4924, Start Num: 72

Candidate Starts for Judebell_16:

(Start: 72 @5139 has 30 MA's), (81, 5082), (94, 5007),

Gene: Julie_40 Start: 30591, Stop: 30806, Start Num: 62

Candidate Starts for Julie_40:

(Start: 62 @30591 has 6 MA's), (74, 30624), (75, 30636), (80, 30657),

Gene: Jung_31 Start: 27440, Stop: 27673, Start Num: 65

Candidate Starts for Jung_31:

(51, 27410), (Start: 59 @27428 has 18 MA's), (Start: 65 @27440 has 23 MA's),

Gene: Juniormint_32 Start: 27500, Stop: 27745, Start Num: 59

Candidate Starts for Juniormint_32:

(51, 27482), (Start: 59 @27500 has 18 MA's), (Start: 65 @27512 has 23 MA's),

Gene: Kari_32 Start: 27461, Stop: 27706, Start Num: 59

Candidate Starts for Kari_32:

(51, 27443), (Start: 59 @27461 has 18 MA's), (Start: 65 @27473 has 23 MA's),

Gene: Kelcole_10 Start: 3363, Stop: 3163, Start Num: 71

Candidate Starts for Kelcole_10:

(14, 3684), (16, 3642), (21, 3561), (26, 3507), (28, 3492), (40, 3432), (Start: 71 @3363 has 5 MA's), (79, 3312), (96, 3228), (102, 3207),

Gene: Kels_19 Start: 13001, Stop: 13219, Start Num: 56

Candidate Starts for Kels_19:

(Start: 56 @13001 has 39 MA's), (Start: 69 @13028 has 17 MA's), (81, 13091), (101, 13202),

Gene: KilKor_32 Start: 27733, Stop: 27966, Start Num: 65

Candidate Starts for KilKor_32:

(51, 27703), (Start: 59 @27721 has 18 MA's), (Start: 65 @27733 has 23 MA's),

Gene: Kinbote_50 Start: 36949, Stop: 37146, Start Num: 69

Candidate Starts for Kinbote_50:

(Start: 69 @36949 has 17 MA's), (82, 37012),

Gene: Ksquared_32 Start: 27490, Stop: 27723, Start Num: 65

Candidate Starts for Ksquared_32:

(51, 27460), (Start: 59 @27478 has 18 MA's), (Start: 65 @27490 has 23 MA's),

Gene: KylieMac_23 Start: 13870, Stop: 14103, Start Num: 56

Candidate Starts for KylieMac_23:

(Start: 56 @13870 has 39 MA's), (Start: 69 @13897 has 17 MA's), (78, 13951), (80, 13957), (86, 13978), (98, 14065),

Gene: Laila_24 Start: 13883, Stop: 14116, Start Num: 56

Candidate Starts for Laila_24:

(Start: 56 @13883 has 39 MA's), (Start: 69 @13910 has 17 MA's), (78, 13964), (80, 13970), (86, 13991), (98, 14078),

Gene: Langerak_32 Start: 27480, Stop: 27725, Start Num: 59

Candidate Starts for Langerak_32:

(51, 27462), (Start: 59 @27480 has 18 MA's), (Start: 65 @27492 has 23 MA's),

Gene: LilHazelnut_50 Start: 36949, Stop: 37146, Start Num: 69

Candidate Starts for LilHazelnut_50:

(Start: 69 @36949 has 17 MA's), (82, 37012),

Gene: Link_22 Start: 13851, Stop: 14084, Start Num: 56

Candidate Starts for Link_22:

(Start: 56 @13851 has 39 MA's), (Start: 69 @13878 has 17 MA's), (86, 13959), (98, 14046), (103, 14073),

Gene: Lonelysoil_13 Start: 4634, Stop: 4419, Start Num: 72

Candidate Starts for Lonelysoil_13:

(Start: 72 @4634 has 30 MA's), (81, 4577), (94, 4502),

Gene: Lore_22 Start: 13883, Stop: 14116, Start Num: 56

Candidate Starts for Lore_22:

(Start: 56 @13883 has 39 MA's), (Start: 69 @13910 has 17 MA's), (78, 13964), (80, 13970), (86, 13991), (98, 14078),

Gene: LouisXIV_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for LouisXIV_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Luke_50 Start: 36904, Stop: 37101, Start Num: 69

Candidate Starts for Luke_50:

(Start: 69 @36904 has 17 MA's), (82, 36967),

Gene: Maggie_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for Maggie_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: MagicMan_41 Start: 32979, Stop: 33173, Start Num: 70

Candidate Starts for MagicMan_41:

(63, 32964), (Start: 70 @32979 has 4 MA's), (88, 33063),

Gene: Majeke_32 Start: 27502, Stop: 27747, Start Num: 59

Candidate Starts for Majeke_32:

(51, 27484), (Start: 59 @27502 has 18 MA's), (Start: 65 @27514 has 23 MA's),

Gene: Malithi_32 Start: 27399, Stop: 27632, Start Num: 65

Candidate Starts for Malithi_32:

(51, 27369), (Start: 59 @27387 has 18 MA's), (Start: 65 @27399 has 23 MA's),

Gene: Mangethe_32 Start: 27502, Stop: 27747, Start Num: 59

Candidate Starts for Mangethe_32:

(51, 27484), (Start: 59 @27502 has 18 MA's), (Start: 65 @27514 has 23 MA's),

Gene: Mao1_82 Start: 56379, Stop: 56618, Start Num: 50

Candidate Starts for Mao1_82:

(Start: 50 @56379 has 2 MA's), (64, 56412), (95, 56562),

Gene: Marcie_16 Start: 4028, Stop: 3816, Start Num: 72

Candidate Starts for Marcie_16:

(52, 4067), (54, 4061), (Start: 72 @4028 has 30 MA's), (93, 3899), (96, 3881),

Gene: Mariposa_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for Mariposa_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Mashley_11 Start: 4429, Stop: 4214, Start Num: 72

Candidate Starts for Mashley_11:

(Start: 72 @4429 has 30 MA's), (81, 4372), (94, 4297),

Gene: Massimo_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for Massimo_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Megiddo_32 Start: 27733, Stop: 27966, Start Num: 65

Candidate Starts for Megiddo_32:

(51, 27703), (Start: 59 @27721 has 18 MA's), (Start: 65 @27733 has 23 MA's),

Gene: MoRicky_22 Start: 14364, Stop: 14573, Start Num: 62

Candidate Starts for MoRicky_22:

(45, 14313), (53, 14343), (Start: 62 @14364 has 6 MA's), (81, 14439),

Gene: Moloch_22 Start: 13960, Stop: 14193, Start Num: 56

Candidate Starts for Moloch_22:

(Start: 56 @13960 has 39 MA's), (Start: 69 @13987 has 17 MA's), (86, 14068), (98, 14155), (103, 14182),

Gene: MorillMayhem_12 Start: 4437, Stop: 4222, Start Num: 72

Candidate Starts for MorillMayhem_12:

(9, 5199), (10, 5118), (11, 5025), (12, 4947), (13, 4821), (15, 4752), (24, 4629), (27, 4611), (31, 4587), (36, 4548), (46, 4500), (Start: 72 @4437 has 30 MA's), (81, 4380), (94, 4305),

Gene: Muttlie_22 Start: 13854, Stop: 14087, Start Num: 56

Candidate Starts for Muttlie_22:

(Start: 56 @13854 has 39 MA's), (Start: 69 @13881 has 17 MA's), (86, 13962), (98, 14049), (103, 14076),

Gene: Namago_14 Start: 4446, Stop: 4231, Start Num: 72

Candidate Starts for Namago_14:

(Start: 72 @4446 has 30 MA's), (81, 4389), (94, 4314),

Gene: Nazo_36 Start: 29606, Stop: 29839, Start Num: 65

Candidate Starts for Nazo_36:

(51, 29576), (55, 29588), (Start: 59 @29594 has 18 MA's), (Start: 65 @29606 has 23 MA's),

Gene: Necropolis_32 Start: 27461, Stop: 27706, Start Num: 59

Candidate Starts for Necropolis_32:

(51, 27443), (Start: 59 @27461 has 18 MA's), (Start: 65 @27473 has 23 MA's),

Gene: Nike_15 Start: 5337, Stop: 5122, Start Num: 72

Candidate Starts for Nike_15:

(9, 6102), (10, 6021), (11, 5928), (12, 5850), (13, 5724), (15, 5655), (24, 5529), (27, 5511), (31, 5487), (32, 5475), (36, 5448), (46, 5400), (Start: 72 @5337 has 30 MA's), (81, 5280), (94, 5205),

Gene: Nyceirae_38 Start: 30354, Stop: 30581, Start Num: 58

Candidate Starts for Nyceirae_38:

(43, 30303), (48, 30327), (Start: 58 @30354 has 1 MA's), (Start: 62 @30363 has 6 MA's), (90, 30477), (92, 30495),

Gene: OBUpride_50 Start: 36945, Stop: 37142, Start Num: 69

Candidate Starts for OBUpride_50:

(Start: 69 @36945 has 17 MA's), (82, 37008), (85, 37017), (87, 37032),

Gene: Obliviate_39 Start: 31330, Stop: 31524, Start Num: 62

Candidate Starts for Obliviate_39:

(Start: 62 @31330 has 6 MA's),

Gene: OneinaGillian_11 Start: 3006, Stop: 2806, Start Num: 71

Candidate Starts for OneinaGillian_11:

(16, 3318), (41, 3090), (42, 3087), (44, 3075), (Start: 71 @3006 has 5 MA's), (73, 3000), (96, 2871), (102, 2850),

Gene: Pepe25_11 Start: 3464, Stop: 3252, Start Num: 72

Candidate Starts for Pepe25_11:

(Start: 72 @3464 has 30 MA's), (96, 3317),

Gene: Petra_40 Start: 31689, Stop: 31883, Start Num: 62

Candidate Starts for Petra_40:

(Start: 62 @31689 has 6 MA's),

Gene: Phabia_14 Start: 4804, Stop: 4589, Start Num: 72

Candidate Starts for Phabia_14:
(Start: 72 @4804 has 30 MA's), (81, 4747), (94, 4672),

Gene: Phalm_32 Start: 27733, Stop: 27966, Start Num: 65
Candidate Starts for Phalm_32:
(51, 27703), (Start: 59 @27721 has 18 MA's), (Start: 65 @27733 has 23 MA's),

Gene: Phayonce_34 Start: 29517, Stop: 29735, Start Num: 66
Candidate Starts for Phayonce_34:
(51, 29487), (Start: 66 @29517 has 2 MA's), (89, 29625),

Gene: Phegasus_32 Start: 27469, Stop: 27714, Start Num: 59
Candidate Starts for Phegasus_32:
(51, 27451), (Start: 59 @27469 has 18 MA's), (Start: 65 @27481 has 23 MA's),

Gene: Phineas_32 Start: 27847, Stop: 28080, Start Num: 65
Candidate Starts for Phineas_32:
(51, 27817), (Start: 59 @27835 has 18 MA's), (Start: 65 @27847 has 23 MA's),

Gene: Polkaroo_32 Start: 27490, Stop: 27723, Start Num: 65
Candidate Starts for Polkaroo_32:
(51, 27460), (Start: 59 @27478 has 18 MA's), (Start: 65 @27490 has 23 MA's),

Gene: Prospero_22 Start: 13886, Stop: 14119, Start Num: 56
Candidate Starts for Prospero_22:
(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Purky_39 Start: 30247, Stop: 30462, Start Num: 66
Candidate Starts for Purky_39:
(51, 30217), (Start: 66 @30247 has 2 MA's), (89, 30355),

Gene: Pygmy_34 Start: 29315, Stop: 29548, Start Num: 65
Candidate Starts for Pygmy_34:
(51, 29285), (Start: 59 @29303 has 18 MA's), (Start: 65 @29315 has 23 MA's),

Gene: Quammi_12 Start: 4378, Stop: 4163, Start Num: 72
Candidate Starts for Quammi_12:
(1, 5617), (2, 5581), (3, 5575), (4, 5470), (5, 5365), (6, 5359), (7, 5248), (8, 5170), (9, 5140), (10, 5059), (11, 4966), (12, 4888), (13, 4762), (15, 4693), (24, 4570), (27, 4552), (31, 4528), (32, 4516), (36, 4489), (46, 4441), (Start: 72 @4378 has 30 MA's), (81, 4321), (94, 4246),

Gene: QuinnAvery_44 Start: 31024, Stop: 31239, Start Num: 62
Candidate Starts for QuinnAvery_44:
(Start: 62 @31024 has 6 MA's),

Gene: RobinRose_12 Start: 3192, Stop: 2992, Start Num: 71
Candidate Starts for RobinRose_12:
(14, 3513), (16, 3471), (26, 3336), (40, 3261), (Start: 71 @3192 has 5 MA's), (79, 3141), (96, 3057), (102, 3036),

Gene: Romm_13 Start: 3192, Stop: 2992, Start Num: 71
Candidate Starts for Romm_13:

(14, 3513), (16, 3471), (26, 3336), (40, 3261), (Start: 71 @3192 has 5 MA's), (79, 3141), (96, 3057), (102, 3036),

Gene: Ronnie_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for Ronnie_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Rowlf_10 Start: 4144, Stop: 3929, Start Num: 72

Candidate Starts for Rowlf_10:

(9, 4906), (10, 4825), (11, 4732), (12, 4654), (13, 4528), (15, 4459), (24, 4336), (27, 4318), (31, 4294), (32, 4282), (36, 4255), (46, 4207), (Start: 72 @4144 has 30 MA's), (81, 4087), (94, 4012),

Gene: RubyRalph_13 Start: 4167, Stop: 3952, Start Num: 72

Candidate Starts for RubyRalph_13:

(Start: 72 @4167 has 30 MA's), (Start: 76 @4134 has 1 MA's), (93, 4038),

Gene: Rudy_12 Start: 4378, Stop: 4163, Start Num: 72

Candidate Starts for Rudy_12:

(1, 5617), (2, 5581), (3, 5575), (4, 5470), (5, 5365), (6, 5359), (7, 5248), (8, 5170), (9, 5140), (10, 5059), (11, 4966), (12, 4888), (13, 4762), (15, 4693), (24, 4570), (27, 4552), (31, 4528), (32, 4516), (36, 4489), (46, 4441), (Start: 72 @4378 has 30 MA's), (81, 4321), (94, 4246),

Gene: SPB78_44 Start: 32113, Stop: 32337, Start Num: 60

Candidate Starts for SPB78_44:

(60, 32113), (91, 32239),

Gene: SadLad_14 Start: 4551, Stop: 4369, Start Num: 76

Candidate Starts for SadLad_14:

(24, 4779), (26, 4764), (31, 4737), (Start: 72 @4584 has 30 MA's), (Start: 76 @4551 has 1 MA's), (80, 4533), (93, 4455),

Gene: SallyK_15 Start: 5539, Stop: 5324, Start Num: 72

Candidate Starts for SallyK_15:

(Start: 72 @5539 has 30 MA's), (81, 5482), (94, 5407),

Gene: Sandman_22 Start: 13960, Stop: 14193, Start Num: 56

Candidate Starts for Sandman_22:

(Start: 56 @13960 has 39 MA's), (Start: 69 @13987 has 17 MA's), (86, 14068), (98, 14155), (103, 14182),

Gene: Saphira_23 Start: 13885, Stop: 14118, Start Num: 56

Candidate Starts for Saphira_23:

(Start: 56 @13885 has 39 MA's), (Start: 69 @13912 has 17 MA's), (78, 13966), (86, 13993), (98, 14080),

Gene: Schnabeltier_41 Start: 32611, Stop: 32805, Start Num: 70

Candidate Starts for Schnabeltier_41:

(Start: 70 @32611 has 4 MA's), (77, 32650), (88, 32695),

Gene: SerialPhiller_19 Start: 13063, Stop: 13281, Start Num: 56

Candidate Starts for SerialPhiller_19:

(Start: 56 @13063 has 39 MA's), (Start: 69 @13090 has 17 MA's), (84, 13159),

Gene: Seume_22 Start: 13649, Stop: 13882, Start Num: 56
Candidate Starts for Seume_22:
(Start: 56 @13649 has 39 MA's), (Start: 69 @13676 has 17 MA's), (86, 13757), (98, 13844), (103, 13871),

Gene: Shipwreck_34 Start: 29290, Stop: 29523, Start Num: 65
Candidate Starts for Shipwreck_34:
(51, 29260), (Start: 59 @29278 has 18 MA's), (Start: 65 @29290 has 23 MA's),

Gene: Smilerella_21 Start: 14454, Stop: 14663, Start Num: 62
Candidate Starts for Smilerella_21:
(45, 14403), (53, 14433), (Start: 62 @14454 has 6 MA's), (81, 14529),

Gene: Sonah_32 Start: 27462, Stop: 27695, Start Num: 65
Candidate Starts for Sonah_32:
(51, 27432), (Start: 59 @27450 has 18 MA's), (Start: 65 @27462 has 23 MA's),

Gene: Sourignavong_23 Start: 13955, Stop: 14188, Start Num: 56
Candidate Starts for Sourignavong_23:
(Start: 56 @13955 has 39 MA's), (Start: 69 @13982 has 17 MA's), (86, 14063), (98, 14150), (103, 14177),

Gene: Squash_16 Start: 5392, Stop: 5177, Start Num: 72
Candidate Starts for Squash_16:
(9, 6157), (10, 6076), (11, 5983), (12, 5905), (13, 5779), (15, 5710), (24, 5584), (27, 5566), (31, 5542), (32, 5530), (36, 5503), (46, 5455), (Start: 72 @5392 has 30 MA's), (81, 5335), (94, 5260),

Gene: StevieRay_32 Start: 27429, Stop: 27674, Start Num: 59
Candidate Starts for StevieRay_32:
(51, 27411), (Start: 59 @27429 has 18 MA's), (Start: 65 @27441 has 23 MA's),

Gene: StewieGriff_22 Start: 13883, Stop: 14116, Start Num: 56
Candidate Starts for StewieGriff_22:
(Start: 56 @13883 has 39 MA's), (Start: 69 @13910 has 17 MA's), (78, 13964), (80, 13970), (86, 13991), (98, 14078),

Gene: Stratus_22 Start: 13960, Stop: 14193, Start Num: 56
Candidate Starts for Stratus_22:
(Start: 56 @13960 has 39 MA's), (Start: 69 @13987 has 17 MA's), (86, 14068), (98, 14155), (103, 14182),

Gene: StrawberryJamm_16 Start: 4678, Stop: 4463, Start Num: 72
Candidate Starts for StrawberryJamm_16:
(Start: 72 @4678 has 30 MA's), (81, 4621), (94, 4546),

Gene: StressBall_32 Start: 27733, Stop: 27966, Start Num: 65
Candidate Starts for StressBall_32:
(51, 27703), (Start: 59 @27721 has 18 MA's), (Start: 65 @27733 has 23 MA's),

Gene: Swenson_22 Start: 14007, Stop: 14240, Start Num: 56
Candidate Starts for Swenson_22:

(Start: 56 @14007 has 39 MA's), (Start: 69 @14034 has 17 MA's), (78, 14088), (86, 14115), (98, 14202),

Gene: Taj14_22 Start: 13882, Stop: 14115, Start Num: 56

Candidate Starts for Taj14_22:

(Start: 56 @13882 has 39 MA's), (Start: 69 @13909 has 17 MA's), (78, 13963), (86, 13990), (98, 14077),

Gene: Techage_32 Start: 27499, Stop: 27732, Start Num: 65

Candidate Starts for Techage_32:

(51, 27469), (Start: 59 @27487 has 18 MA's), (Start: 65 @27499 has 23 MA's),

Gene: Teehee_16 Start: 5613, Stop: 5398, Start Num: 72

Candidate Starts for Teehee_16:

(Start: 72 @5613 has 30 MA's), (81, 5556), (94, 5481),

Gene: Tempo_11 Start: 3387, Stop: 3187, Start Num: 71

Candidate Starts for Tempo_11:

(14, 3708), (16, 3666), (26, 3531), (40, 3456), (Start: 71 @3387 has 5 MA's), (79, 3336), (96, 3252), (102, 3231),

Gene: Thespis_32 Start: 27457, Stop: 27702, Start Num: 59

Candidate Starts for Thespis_32:

(51, 27439), (Start: 59 @27457 has 18 MA's), (Start: 65 @27469 has 23 MA's),

Gene: TinoCrisci_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for TinoCrisci_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Toulouse_21 Start: 13649, Stop: 13882, Start Num: 56

Candidate Starts for Toulouse_21:

(Start: 56 @13649 has 39 MA's), (Start: 69 @13676 has 17 MA's), (86, 13757), (98, 13844), (103, 13871),

Gene: TymAbreu_22 Start: 13886, Stop: 14119, Start Num: 56

Candidate Starts for TymAbreu_22:

(Start: 56 @13886 has 39 MA's), (Start: 69 @13913 has 17 MA's), (86, 13994), (98, 14081), (103, 14108),

Gene: Ubuntu_50 Start: 36949, Stop: 37146, Start Num: 69

Candidate Starts for Ubuntu_50:

(Start: 69 @36949 has 17 MA's), (82, 37012),

Gene: UmaThurman_37 Start: 31748, Stop: 31954, Start Num: 61

Candidate Starts for UmaThurman_37:

(23, 31565), (34, 31640), (39, 31670), (49, 31712), (Start: 61 @31748 has 1 MA's), (68, 31760), (80, 31826), (99, 31934), (100, 31937),

Gene: Venti_32 Start: 27464, Stop: 27709, Start Num: 59

Candidate Starts for Venti_32:

(51, 27446), (Start: 59 @27464 has 18 MA's), (Start: 65 @27476 has 23 MA's),

Gene: Viceroy_13 Start: 4378, Stop: 4163, Start Num: 72

Candidate Starts for Viceroy_13:

(1, 5617), (2, 5581), (3, 5575), (4, 5470), (5, 5365), (6, 5359), (7, 5248), (8, 5170), (9, 5140), (10, 5059), (11, 4966), (12, 4888), (13, 4762), (15, 4693), (24, 4570), (27, 4552), (31, 4528), (32, 4516), (36, 4489), (46, 4441), (Start: 72 @4378 has 30 MA's), (81, 4321), (94, 4246),

Gene: Vidya_32 Start: 27509, Stop: 27742, Start Num: 65

Candidate Starts for Vidya_32:

(51, 27479), (Start: 59 @27497 has 18 MA's), (Start: 65 @27509 has 23 MA's),

Gene: Wayne3_15 Start: 5316, Stop: 5101, Start Num: 72

Candidate Starts for Wayne3_15:

(Start: 72 @5316 has 30 MA's), (81, 5259), (94, 5184),

Gene: Webster2_50 Start: 36949, Stop: 37146, Start Num: 69

Candidate Starts for Webster2_50:

(Start: 69 @36949 has 17 MA's), (82, 37012),

Gene: Wheelie_13 Start: 4667, Stop: 4452, Start Num: 72

Candidate Starts for Wheelie_13:

(Start: 72 @4667 has 30 MA's), (81, 4610), (94, 4535),

Gene: Wilca_12 Start: 3464, Stop: 3252, Start Num: 72

Candidate Starts for Wilca_12:

(Start: 72 @3464 has 30 MA's), (96, 3317),

Gene: Willsammy_31 Start: 27204, Stop: 27449, Start Num: 59

Candidate Starts for Willsammy_31:

(51, 27186), (Start: 59 @27204 has 18 MA's), (Start: 65 @27216 has 23 MA's),

Gene: Yank_22 Start: 13854, Stop: 14087, Start Num: 56

Candidate Starts for Yank_22:

(Start: 56 @13854 has 39 MA's), (Start: 69 @13881 has 17 MA's), (86, 13962), (98, 14049), (103, 14076),

Gene: ZAYM_43 Start: 32247, Stop: 32456, Start Num: 62

Candidate Starts for ZAYM_43:

(Start: 50 @32220 has 2 MA's), (Start: 62 @32247 has 6 MA's),

Gene: Zagie_14 Start: 4881, Stop: 4666, Start Num: 72

Candidate Starts for Zagie_14:

(9, 5643), (10, 5562), (11, 5469), (12, 5391), (13, 5265), (15, 5196), (24, 5073), (27, 5055), (31, 5031), (32, 5019), (36, 4992), (46, 4944), (Start: 72 @4881 has 30 MA's), (81, 4824), (94, 4749),

Gene: Zaheer_44 Start: 31390, Stop: 31605, Start Num: 62

Candidate Starts for Zaheer_44:

(Start: 62 @31390 has 6 MA's),

Gene: Zarbodnamra_42 Start: 32451, Stop: 32645, Start Num: 62

Candidate Starts for Zarbodnamra_42:

(Start: 62 @32451 has 6 MA's),

Gene: Zilizebeth_32 Start: 27496, Stop: 27741, Start Num: 59

Candidate Starts for Zilizebeth_32:

(51, 27478), (Start: 59 @27496 has 18 MA's), (Start: 65 @27508 has 23 MA's),