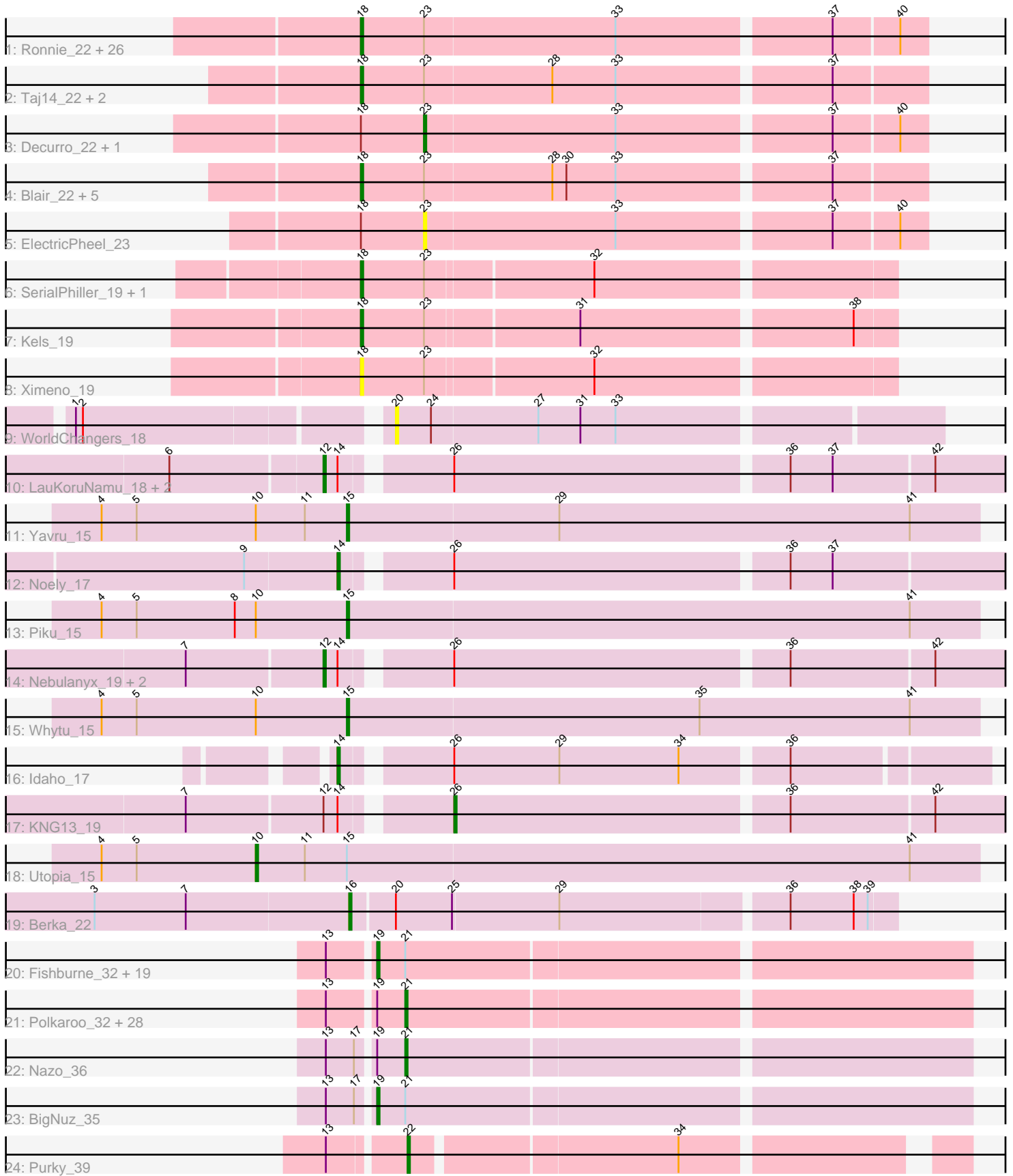


Pham 294575



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 294575 Report

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

Pham number 294575 has 110 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Ronnie_22, Inspire2_22, Guntur_22, Sandman_22, Azathoth_22, Courtney3_22, Stratus_22, Massimo_22, Maggie_22, Copper_22, Link_22, Seume_22, Toulouse_21, LouisXIV_22, Arby_22, Moloch_22, TymAbreu_22, CGermain_22, Yank_22, Chestnut_22, Dewayne_22, Hunnie_22, Prospero_22, Muttie_22, TinoCrisci_22, Mariposa_22, Sourignavong_23
- Track 2 : Taj14_22, Saphira_23, Swenson_22
- Track 3 : Decurro_22, Jessica_23
- Track 4 : Blair_22, KylieMac_23, Laila_24, Elkhorn_22, StewieGriff_22, Lore_22
- Track 5 : ElectricPheel_23
- Track 6 : SerialPhiller_19, Arielagos_19
- Track 7 : Kels_19
- Track 8 : Ximeno_19
- Track 9 : WorldChangers_18
- Track 10 : LauKoruNamu_18, Pauu_18, CabbageMan_17
- Track 11 : Yavru_15
- Track 12 : Noely_17
- Track 13 : Piku_15
- Track 14 : Nebulanyx_19, CheeseDanish_19, Corgi_19
- Track 15 : Whytu_15
- Track 16 : Idaho_17
- Track 17 : KNG13_19
- Track 18 : Utopia_15
- Track 19 : Berka_22
- Track 20 : Fishburne_32, GaloreK_32, Atcoo_32, Venti_32, Willsammy_31, Langerak_32, Mangethe_32, Majeke_32, Necropolis_32, Donovan_32, Bunnies_32, Kari_32, FirstPlacePfu_32, Arib1_32, Juniormint_32, Etoile_32, StevieRay_32, Thespis_32, Zilizebeth_32, Phegasus_32
- Track 21 : Polkaroo_32, Brusacoram_32, Bartholomew_31, Bhagsy_32, KilKor_32, Dynamo_32, Phalm_32, PeanutPie_32, BronnyJr_32, HUHilltop_32, Vidya_32, Shipwreck_34, Megiddo_32, GreaseLightnin_32, Pygmy_34, Camster_32, Gavriela_32, Chubbello_32, Glaske_32, Jebeks_33, Bogie_34, Techage_32, Ksqared_32, Malithi_32, Sonah_32, CactusJack_32, StressBall_32, Phineas_32, Jung_31
- Track 22 : Nazo_36
- Track 23 : BigNuz_35
- Track 24 : Purky_39

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

The start number called the most often in the published annotations is 18, it was called in 39 of the 97 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, Muttie_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, Ximeno_19, 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:

- Arib1_32, Atcoo_32, Bartholomew_31, Berka_22, Bhagsy_32, BigNuz_35, Bogie_34, BronnyJr_32, Brusacoram_32, Bunnies_32, CabbageMan_17, CactusJack_32, Camster_32, CheeseDanish_19, Chubbello_32, Corgi_19, Donovan_32, Dynamo_32, Etoile_32, FirstPlacePfu_32, Fishburne_32, GaloreK_32, Gavriela_32, Glaske_32, GreaseLightnin_32, HUHilltop_32, Idaho_17, Jebeks_33, Jung_31, Juniormint_32, KNG13_19, Kari_32, KilKor_32, Ksquared_32, Langerak_32, LauKoruNamu_18, Majeke_32, Malithi_32, Mangethe_32, Megiddo_32, Nazo_36, Nebulanyx_19, Necropolis_32, Noely_17, Pauu_18, PeanutPie_32, Phalm_32, Phegasus_32, Phineas_32, Piku_15, Polkaroo_32, Purky_39, Pygmy_34, Shipwreck_34, Sonah_32, StevieRay_32, StressBall_32, Techage_32, Thespis_32, Utopia_15, Venti_32, Vidya_32, Whytu_15, Willsammy_31, WorldChangers_18, Yavru_15, Zilizebeth_32,

Summary by start number:

Start 10:

- Found in 4 of 110 (3.6%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Utopia_15 (FE),

Start 12:

- Found in 7 of 110 (6.4%) of genes in pham
- Manual Annotations of this start: 2 of 97
- Called 85.7% of time when present
- Phage (with cluster) where this start called: CabbageMan_17 (FE), CheeseDanish_19 (FE), Corgi_19 (FE), LauKoruNamu_18 (FE), Nebulanyx_19 (FE), Pauu_18 (FE),

Start 14:

- Found in 9 of 110 (8.2%) of genes in pham
- Manual Annotations of this start: 2 of 97

- Called 22.2% of time when present
- Phage (with cluster) where this start called: Idaho_17 (FE), Noely_17 (FE),

Start 15:

- Found in 4 of 110 (3.6%) of genes in pham
- Manual Annotations of this start: 3 of 97
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Piku_15 (FE), Whytu_15 (FE), Yavru_15 (FE),

Start 16:

- Found in 1 of 110 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Berka_22 (FE),

Start 18:

- Found in 43 of 110 (39.1%) of genes in pham
- Manual Annotations of this start: 39 of 97
- Called 93.0% 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), Ximeno_19 (AN), Yank_22 (AN),

Start 19:

- Found in 51 of 110 (46.4%) of genes in pham
- Manual Annotations of this start: 20 of 97
- Called 41.2% 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), Etoile_32 (P1), FirstPlacePfu_32 (P1), Fishburne_32 (P1), GaloreK_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 20:

- Found in 2 of 110 (1.8%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: WorldChangers_18 (FE),

Start 21:

- Found in 51 of 110 (46.4%) of genes in pham
- Manual Annotations of this start: 25 of 97
- Called 58.8% of time when present

- Phage (with cluster) where this start called: Bartholomew_31 (P1), Bhagsy_32 (P1), Bogie_34 (P1), BronnyJr_32 (P1), Brusacoram_32 (P1), CactusJack_32 (P1), Camster_32 (P1), Chubbello_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), PeanutPie_32 (P1), 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 22:

- Found in 1 of 110 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Purky_39 (P6),

Start 23:

- Found in 43 of 110 (39.1%) of genes in pham
- Manual Annotations of this start: 2 of 97
- Called 7.0% of time when present
- Phage (with cluster) where this start called: Decurro_22 (AN), ElectricPheel_23 (AN), Jessica_23 (AN),

Start 26:

- Found in 9 of 110 (8.2%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 11.1% of time when present
- Phage (with cluster) where this start called: KNG13_19 (FE),

Summary by clusters:

There are 5 clusters represented in this pham: P1, P6, FE, P4, AN,

Info for manual annotations of cluster AN:

- Start number 18 was manually annotated 39 times for cluster AN.
- Start number 23 was manually annotated 2 times for cluster AN.

Info for manual annotations of cluster FE:

- Start number 10 was manually annotated 1 time for cluster FE.
- Start number 12 was manually annotated 2 times for cluster FE.
- Start number 14 was manually annotated 2 times for cluster FE.
- Start number 15 was manually annotated 3 times for cluster FE.
- Start number 16 was manually annotated 1 time for cluster FE.
- Start number 26 was manually annotated 1 time for cluster FE.

Info for manual annotations of cluster P1:

- Start number 19 was manually annotated 19 times for cluster P1.
- Start number 21 was manually annotated 24 times for cluster P1.

Info for manual annotations of cluster P4:

- Start number 19 was manually annotated 1 time for cluster P4.
- Start number 21 was manually annotated 1 time for cluster P4.

Info for manual annotations of cluster P6:

- Start number 22 was manually annotated 1 time for cluster P6.

Gene Information:

Gene: Arby_22 Start: 13886, Stop: 14119, Start Num: 18

Candidate Starts for Arby_22:

(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Arib1_32 Start: 27470, Stop: 27715, Start Num: 19

Candidate Starts for Arib1_32:

(13, 27452), (Start: 19 @27470 has 20 MA's), (Start: 21 @27482 has 25 MA's),

Gene: Arielagos_19 Start: 13063, Stop: 13281, Start Num: 18

Candidate Starts for Arielagos_19:

(Start: 18 @13063 has 39 MA's), (Start: 23 @13090 has 2 MA's), (32, 13159),

Gene: Atcoo_32 Start: 27951, Stop: 28196, Start Num: 19

Candidate Starts for Atcoo_32:

(13, 27933), (Start: 19 @27951 has 20 MA's), (Start: 21 @27963 has 25 MA's),

Gene: Azathoth_22 Start: 13886, Stop: 14119, Start Num: 18

Candidate Starts for Azathoth_22:

(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Bartholomew_31 Start: 27476, Stop: 27709, Start Num: 21

Candidate Starts for Bartholomew_31:

(13, 27446), (Start: 19 @27464 has 20 MA's), (Start: 21 @27476 has 25 MA's),

Gene: Berka_22 Start: 13026, Stop: 13250, Start Num: 16

Candidate Starts for Berka_22:

(3, 12918), (7, 12957), (Start: 16 @13026 has 1 MA's), (20, 13044), (25, 13068), (29, 13113), (36, 13206), (38, 13233), (39, 13239),

Gene: Bhagsy_32 Start: 27472, Stop: 27705, Start Num: 21

Candidate Starts for Bhagsy_32:

(13, 27442), (Start: 19 @27460 has 20 MA's), (Start: 21 @27472 has 25 MA's),

Gene: BigNuz_35 Start: 29592, Stop: 29837, Start Num: 19

Candidate Starts for BigNuz_35:

(13, 29574), (17, 29586), (Start: 19 @29592 has 20 MA's), (Start: 21 @29604 has 25 MA's),

Gene: Blair_22 Start: 13883, Stop: 14116, Start Num: 18

Candidate Starts for Blair_22:

(Start: 18 @13883 has 39 MA's), (Start: 23 @13910 has 2 MA's), (28, 13964), (30, 13970), (33, 13991), (37, 14078),

Gene: Bogie_34 Start: 29259, Stop: 29492, Start Num: 21

Candidate Starts for Bogie_34:

(13, 29229), (Start: 19 @29247 has 20 MA's), (Start: 21 @29259 has 25 MA's),

Gene: BronnyJr_32 Start: 27973, Stop: 28206, Start Num: 21

Candidate Starts for BronnyJr_32:

(13, 27943), (Start: 19 @27961 has 20 MA's), (Start: 21 @27973 has 25 MA's),

Gene: Brusacoram_32 Start: 27469, Stop: 27702, Start Num: 21

Candidate Starts for Brusacoram_32:

(13, 27439), (Start: 19 @27457 has 20 MA's), (Start: 21 @27469 has 25 MA's),

Gene: Bunnies_32 Start: 27478, Stop: 27723, Start Num: 19

Candidate Starts for Bunnies_32:

(13, 27460), (Start: 19 @27478 has 20 MA's), (Start: 21 @27490 has 25 MA's),

Gene: CGermain_22 Start: 13886, Stop: 14119, Start Num: 18

Candidate Starts for CGermain_22:

(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: CabbageMan_17 Start: 13096, Stop: 13374, Start Num: 12

Candidate Starts for CabbageMan_17:

(6, 13033), (Start: 12 @13096 has 2 MA's), (Start: 14 @13102 has 2 MA's), (Start: 26 @13141 has 1 MA's), (36, 13279), (37, 13297), (42, 13339),

Gene: CactusJack_32 Start: 27733, Stop: 27966, Start Num: 21

Candidate Starts for CactusJack_32:

(13, 27703), (Start: 19 @27721 has 20 MA's), (Start: 21 @27733 has 25 MA's),

Gene: Camster_32 Start: 27506, Stop: 27739, Start Num: 21

Candidate Starts for Camster_32:

(13, 27476), (Start: 19 @27494 has 20 MA's), (Start: 21 @27506 has 25 MA's),

Gene: CheeseDanish_19 Start: 13255, Stop: 13533, Start Num: 12

Candidate Starts for CheeseDanish_19:

(7, 13198), (Start: 12 @13255 has 2 MA's), (Start: 14 @13261 has 2 MA's), (Start: 26 @13300 has 1 MA's), (36, 13438), (42, 13498),

Gene: Chestnut_22 Start: 13886, Stop: 14119, Start Num: 18

Candidate Starts for Chestnut_22:

(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Chubbello_32 Start: 27475, Stop: 27708, Start Num: 21

Candidate Starts for Chubbello_32:

(13, 27445), (Start: 19 @27463 has 20 MA's), (Start: 21 @27475 has 25 MA's),

Gene: Copper_22 Start: 13886, Stop: 14119, Start Num: 18

Candidate Starts for Copper_22:

(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Corgi_19 Start: 13255, Stop: 13533, Start Num: 12

Candidate Starts for Corgi_19:

(7, 13198), (Start: 12 @13255 has 2 MA's), (Start: 14 @13261 has 2 MA's), (Start: 26 @13300 has 1 MA's), (36, 13438), (42, 13498),

Gene: Courtney3_22 Start: 13886, Stop: 14119, Start Num: 18

Candidate Starts for Courtney3_22:

(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Decurro_22 Start: 13881, Stop: 14087, Start Num: 23
Candidate Starts for Decurro_22:
(Start: 18 @13854 has 39 MA's), (Start: 23 @13881 has 2 MA's), (33, 13962), (37, 14049), (40, 14076),

Gene: Dewayne_22 Start: 13886, Stop: 14119, Start Num: 18
Candidate Starts for Dewayne_22:
(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Donovan_32 Start: 27486, Stop: 27731, Start Num: 19
Candidate Starts for Donovan_32:
(13, 27468), (Start: 19 @27486 has 20 MA's), (Start: 21 @27498 has 25 MA's),

Gene: Dynamo_32 Start: 27887, Stop: 28120, Start Num: 21
Candidate Starts for Dynamo_32:
(13, 27857), (Start: 19 @27875 has 20 MA's), (Start: 21 @27887 has 25 MA's),

Gene: ElectricPheel_23 Start: 13954, Stop: 14160, Start Num: 23
Candidate Starts for ElectricPheel_23:
(Start: 18 @13927 has 39 MA's), (Start: 23 @13954 has 2 MA's), (33, 14035), (37, 14122), (40, 14149),

Gene: Elkhorn_22 Start: 13883, Stop: 14116, Start Num: 18
Candidate Starts for Elkhorn_22:
(Start: 18 @13883 has 39 MA's), (Start: 23 @13910 has 2 MA's), (28, 13964), (30, 13970), (33, 13991),
(37, 14078),

Gene: Etoile_32 Start: 27464, Stop: 27709, Start Num: 19
Candidate Starts for Etoile_32:
(13, 27446), (Start: 19 @27464 has 20 MA's), (Start: 21 @27476 has 25 MA's),

Gene: FirstPlacePfu_32 Start: 27496, Stop: 27741, Start Num: 19
Candidate Starts for FirstPlacePfu_32:
(13, 27478), (Start: 19 @27496 has 20 MA's), (Start: 21 @27508 has 25 MA's),

Gene: Fishburne_32 Start: 27464, Stop: 27709, Start Num: 19
Candidate Starts for Fishburne_32:
(13, 27446), (Start: 19 @27464 has 20 MA's), (Start: 21 @27476 has 25 MA's),

Gene: GaloreK_32 Start: 27460, Stop: 27705, Start Num: 19
Candidate Starts for GaloreK_32:
(13, 27442), (Start: 19 @27460 has 20 MA's), (Start: 21 @27472 has 25 MA's),

Gene: Gavriela_32 Start: 27733, Stop: 27966, Start Num: 21
Candidate Starts for Gavriela_32:
(13, 27703), (Start: 19 @27721 has 20 MA's), (Start: 21 @27733 has 25 MA's),

Gene: Glaske_32 Start: 27733, Stop: 27966, Start Num: 21
Candidate Starts for Glaske_32:
(13, 27703), (Start: 19 @27721 has 20 MA's), (Start: 21 @27733 has 25 MA's),

Gene: GreaseLightnin_32 Start: 27725, Stop: 27958, Start Num: 21
Candidate Starts for GreaseLightnin_32:
(13, 27695), (Start: 19 @27713 has 20 MA's), (Start: 21 @27725 has 25 MA's),

Gene: Guntur_22 Start: 13886, Stop: 14119, Start Num: 18
Candidate Starts for Guntur_22:
(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: HUHilltop_32 Start: 27509, Stop: 27742, Start Num: 21
Candidate Starts for HUHilltop_32:
(13, 27479), (Start: 19 @27497 has 20 MA's), (Start: 21 @27509 has 25 MA's),

Gene: Hunnie_22 Start: 13886, Stop: 14119, Start Num: 18
Candidate Starts for Hunnie_22:
(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Idaho_17 Start: 13517, Stop: 13774, Start Num: 14
Candidate Starts for Idaho_17:
(Start: 14 @13517 has 2 MA's), (Start: 26 @13556 has 1 MA's), (29, 13601), (34, 13652), (36, 13694),

Gene: Inspire2_22 Start: 13886, Stop: 14119, Start Num: 18
Candidate Starts for Inspire2_22:
(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Jebeks_33 Start: 27461, Stop: 27694, Start Num: 21
Candidate Starts for Jebeks_33:
(13, 27431), (Start: 19 @27449 has 20 MA's), (Start: 21 @27461 has 25 MA's),

Gene: Jessica_23 Start: 13913, Stop: 14119, Start Num: 23
Candidate Starts for Jessica_23:
(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Jung_31 Start: 27440, Stop: 27673, Start Num: 21
Candidate Starts for Jung_31:
(13, 27410), (Start: 19 @27428 has 20 MA's), (Start: 21 @27440 has 25 MA's),

Gene: Juniormint_32 Start: 27500, Stop: 27745, Start Num: 19
Candidate Starts for Juniormint_32:
(13, 27482), (Start: 19 @27500 has 20 MA's), (Start: 21 @27512 has 25 MA's),

Gene: KNG13_19 Start: 13297, Stop: 13530, Start Num: 26
Candidate Starts for KNG13_19:
(7, 13195), (Start: 12 @13252 has 2 MA's), (Start: 14 @13258 has 2 MA's), (Start: 26 @13297 has 1 MA's), (36, 13435), (42, 13495),

Gene: Kari_32 Start: 27461, Stop: 27706, Start Num: 19
Candidate Starts for Kari_32:
(13, 27443), (Start: 19 @27461 has 20 MA's), (Start: 21 @27473 has 25 MA's),

Gene: Kels_19 Start: 13001, Stop: 13219, Start Num: 18
Candidate Starts for Kels_19:
(Start: 18 @13001 has 39 MA's), (Start: 23 @13028 has 2 MA's), (31, 13091), (38, 13202),

Gene: KilKor_32 Start: 27733, Stop: 27966, Start Num: 21
Candidate Starts for KilKor_32:
(13, 27703), (Start: 19 @27721 has 20 MA's), (Start: 21 @27733 has 25 MA's),

Gene: Ksquared_32 Start: 27490, Stop: 27723, Start Num: 21
Candidate Starts for Ksquared_32:
(13, 27460), (Start: 19 @27478 has 20 MA's), (Start: 21 @27490 has 25 MA's),

Gene: KylieMac_23 Start: 13870, Stop: 14103, Start Num: 18
Candidate Starts for KylieMac_23:
(Start: 18 @13870 has 39 MA's), (Start: 23 @13897 has 2 MA's), (28, 13951), (30, 13957), (33, 13978),
(37, 14065),

Gene: Laila_24 Start: 13883, Stop: 14116, Start Num: 18
Candidate Starts for Laila_24:
(Start: 18 @13883 has 39 MA's), (Start: 23 @13910 has 2 MA's), (28, 13964), (30, 13970), (33, 13991),
(37, 14078),

Gene: Langerak_32 Start: 27480, Stop: 27725, Start Num: 19
Candidate Starts for Langerak_32:
(13, 27462), (Start: 19 @27480 has 20 MA's), (Start: 21 @27492 has 25 MA's),

Gene: LauKoruNamu_18 Start: 13096, Stop: 13374, Start Num: 12
Candidate Starts for LauKoruNamu_18:
(6, 13033), (Start: 12 @13096 has 2 MA's), (Start: 14 @13102 has 2 MA's), (Start: 26 @13141 has 1
MA's), (36, 13279), (37, 13297), (42, 13339),

Gene: Link_22 Start: 13851, Stop: 14084, Start Num: 18
Candidate Starts for Link_22:
(Start: 18 @13851 has 39 MA's), (Start: 23 @13878 has 2 MA's), (33, 13959), (37, 14046), (40, 14073),

Gene: Lore_22 Start: 13883, Stop: 14116, Start Num: 18
Candidate Starts for Lore_22:
(Start: 18 @13883 has 39 MA's), (Start: 23 @13910 has 2 MA's), (28, 13964), (30, 13970), (33, 13991),
(37, 14078),

Gene: LouisXIV_22 Start: 13886, Stop: 14119, Start Num: 18
Candidate Starts for LouisXIV_22:
(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Maggie_22 Start: 13886, Stop: 14119, Start Num: 18
Candidate Starts for Maggie_22:
(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Majeke_32 Start: 27502, Stop: 27747, Start Num: 19
Candidate Starts for Majeke_32:
(13, 27484), (Start: 19 @27502 has 20 MA's), (Start: 21 @27514 has 25 MA's),

Gene: Malithi_32 Start: 27399, Stop: 27632, Start Num: 21
Candidate Starts for Malithi_32:
(13, 27369), (Start: 19 @27387 has 20 MA's), (Start: 21 @27399 has 25 MA's),

Gene: Mangethe_32 Start: 27502, Stop: 27747, Start Num: 19
Candidate Starts for Mangethe_32:
(13, 27484), (Start: 19 @27502 has 20 MA's), (Start: 21 @27514 has 25 MA's),

Gene: Mariposa_22 Start: 13886, Stop: 14119, Start Num: 18
Candidate Starts for Mariposa_22:
(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Massimo_22 Start: 13886, Stop: 14119, Start Num: 18
Candidate Starts for Massimo_22:
(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Megiddo_32 Start: 27733, Stop: 27966, Start Num: 21
Candidate Starts for Megiddo_32:
(13, 27703), (Start: 19 @27721 has 20 MA's), (Start: 21 @27733 has 25 MA's),

Gene: Moloch_22 Start: 13960, Stop: 14193, Start Num: 18
Candidate Starts for Moloch_22:
(Start: 18 @13960 has 39 MA's), (Start: 23 @13987 has 2 MA's), (33, 14068), (37, 14155), (40, 14182),

Gene: Muttlie_22 Start: 13854, Stop: 14087, Start Num: 18
Candidate Starts for Muttlie_22:
(Start: 18 @13854 has 39 MA's), (Start: 23 @13881 has 2 MA's), (33, 13962), (37, 14049), (40, 14076),

Gene: Nazo_36 Start: 29606, Stop: 29839, Start Num: 21
Candidate Starts for Nazo_36:
(13, 29576), (17, 29588), (Start: 19 @29594 has 20 MA's), (Start: 21 @29606 has 25 MA's),

Gene: Nebulanyx_19 Start: 13252, Stop: 13530, Start Num: 12
Candidate Starts for Nebulanyx_19:
(7, 13195), (Start: 12 @13252 has 2 MA's), (Start: 14 @13258 has 2 MA's), (Start: 26 @13297 has 1 MA's), (36, 13435), (42, 13495),

Gene: Necropolis_32 Start: 27461, Stop: 27706, Start Num: 19
Candidate Starts for Necropolis_32:
(13, 27443), (Start: 19 @27461 has 20 MA's), (Start: 21 @27473 has 25 MA's),

Gene: Noely_17 Start: 12627, Stop: 12899, Start Num: 14
Candidate Starts for Noely_17:
(9, 12588), (Start: 14 @12627 has 2 MA's), (Start: 26 @12666 has 1 MA's), (36, 12804), (37, 12822),

Gene: Pauu_18 Start: 13096, Stop: 13374, Start Num: 12
Candidate Starts for Pauu_18:
(6, 13033), (Start: 12 @13096 has 2 MA's), (Start: 14 @13102 has 2 MA's), (Start: 26 @13141 has 1 MA's), (36, 13279), (37, 13297), (42, 13339),

Gene: PeanutPie_32 Start: 27472, Stop: 27705, Start Num: 21
Candidate Starts for PeanutPie_32:
(13, 27442), (Start: 19 @27460 has 20 MA's), (Start: 21 @27472 has 25 MA's),

Gene: Phalm_32 Start: 27733, Stop: 27966, Start Num: 21
Candidate Starts for Phalm_32:
(13, 27703), (Start: 19 @27721 has 20 MA's), (Start: 21 @27733 has 25 MA's),

Gene: Phegasus_32 Start: 27469, Stop: 27714, Start Num: 19
Candidate Starts for Phegasus_32:
(13, 27451), (Start: 19 @27469 has 20 MA's), (Start: 21 @27481 has 25 MA's),

Gene: Phineas_32 Start: 27847, Stop: 28080, Start Num: 21

Candidate Starts for Phineas_32:

(13, 27817), (Start: 19 @27835 has 20 MA's), (Start: 21 @27847 has 25 MA's),

Gene: Piku_15 Start: 12477, Stop: 12746, Start Num: 15

Candidate Starts for Piku_15:

(4, 12372), (5, 12387), (8, 12429), (Start: 10 @12438 has 1 MA's), (Start: 15 @12477 has 3 MA's), (41, 12717),

Gene: Polkaroo_32 Start: 27490, Stop: 27723, Start Num: 21

Candidate Starts for Polkaroo_32:

(13, 27460), (Start: 19 @27478 has 20 MA's), (Start: 21 @27490 has 25 MA's),

Gene: Prospero_22 Start: 13886, Stop: 14119, Start Num: 18

Candidate Starts for Prospero_22:

(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Purky_39 Start: 30247, Stop: 30462, Start Num: 22

Candidate Starts for Purky_39:

(13, 30217), (Start: 22 @30247 has 1 MA's), (34, 30355),

Gene: Pygmy_34 Start: 29315, Stop: 29548, Start Num: 21

Candidate Starts for Pygmy_34:

(13, 29285), (Start: 19 @29303 has 20 MA's), (Start: 21 @29315 has 25 MA's),

Gene: Ronnie_22 Start: 13886, Stop: 14119, Start Num: 18

Candidate Starts for Ronnie_22:

(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Sandman_22 Start: 13960, Stop: 14193, Start Num: 18

Candidate Starts for Sandman_22:

(Start: 18 @13960 has 39 MA's), (Start: 23 @13987 has 2 MA's), (33, 14068), (37, 14155), (40, 14182),

Gene: Saphira_23 Start: 13885, Stop: 14118, Start Num: 18

Candidate Starts for Saphira_23:

(Start: 18 @13885 has 39 MA's), (Start: 23 @13912 has 2 MA's), (28, 13966), (33, 13993), (37, 14080),

Gene: SerialPhiller_19 Start: 13063, Stop: 13281, Start Num: 18

Candidate Starts for SerialPhiller_19:

(Start: 18 @13063 has 39 MA's), (Start: 23 @13090 has 2 MA's), (32, 13159),

Gene: Seume_22 Start: 13649, Stop: 13882, Start Num: 18

Candidate Starts for Seume_22:

(Start: 18 @13649 has 39 MA's), (Start: 23 @13676 has 2 MA's), (33, 13757), (37, 13844), (40, 13871),

Gene: Shipwreck_34 Start: 29290, Stop: 29523, Start Num: 21

Candidate Starts for Shipwreck_34:

(13, 29260), (Start: 19 @29278 has 20 MA's), (Start: 21 @29290 has 25 MA's),

Gene: Sonah_32 Start: 27462, Stop: 27695, Start Num: 21

Candidate Starts for Sonah_32:

(13, 27432), (Start: 19 @27450 has 20 MA's), (Start: 21 @27462 has 25 MA's),

Gene: Sourignavong_23 Start: 13955, Stop: 14188, Start Num: 18
Candidate Starts for Sourignavong_23:
(Start: 18 @13955 has 39 MA's), (Start: 23 @13982 has 2 MA's), (33, 14063), (37, 14150), (40, 14177),

Gene: StevieRay_32 Start: 27429, Stop: 27674, Start Num: 19
Candidate Starts for StevieRay_32:
(13, 27411), (Start: 19 @27429 has 20 MA's), (Start: 21 @27441 has 25 MA's),

Gene: StewieGriff_22 Start: 13883, Stop: 14116, Start Num: 18
Candidate Starts for StewieGriff_22:
(Start: 18 @13883 has 39 MA's), (Start: 23 @13910 has 2 MA's), (28, 13964), (30, 13970), (33, 13991),
(37, 14078),

Gene: Stratus_22 Start: 13960, Stop: 14193, Start Num: 18
Candidate Starts for Stratus_22:
(Start: 18 @13960 has 39 MA's), (Start: 23 @13987 has 2 MA's), (33, 14068), (37, 14155), (40, 14182),

Gene: StressBall_32 Start: 27733, Stop: 27966, Start Num: 21
Candidate Starts for StressBall_32:
(13, 27703), (Start: 19 @27721 has 20 MA's), (Start: 21 @27733 has 25 MA's),

Gene: Swenson_22 Start: 14007, Stop: 14240, Start Num: 18
Candidate Starts for Swenson_22:
(Start: 18 @14007 has 39 MA's), (Start: 23 @14034 has 2 MA's), (28, 14088), (33, 14115), (37, 14202),

Gene: Taj14_22 Start: 13882, Stop: 14115, Start Num: 18
Candidate Starts for Taj14_22:
(Start: 18 @13882 has 39 MA's), (Start: 23 @13909 has 2 MA's), (28, 13963), (33, 13990), (37, 14077),

Gene: Techage_32 Start: 27499, Stop: 27732, Start Num: 21
Candidate Starts for Techage_32:
(13, 27469), (Start: 19 @27487 has 20 MA's), (Start: 21 @27499 has 25 MA's),

Gene: Thespis_32 Start: 27457, Stop: 27702, Start Num: 19
Candidate Starts for Thespis_32:
(13, 27439), (Start: 19 @27457 has 20 MA's), (Start: 21 @27469 has 25 MA's),

Gene: TinoCrisci_22 Start: 13886, Stop: 14119, Start Num: 18
Candidate Starts for TinoCrisci_22:
(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Toulouse_21 Start: 13649, Stop: 13882, Start Num: 18
Candidate Starts for Toulouse_21:
(Start: 18 @13649 has 39 MA's), (Start: 23 @13676 has 2 MA's), (33, 13757), (37, 13844), (40, 13871),

Gene: TymAbreu_22 Start: 13886, Stop: 14119, Start Num: 18
Candidate Starts for TymAbreu_22:
(Start: 18 @13886 has 39 MA's), (Start: 23 @13913 has 2 MA's), (33, 13994), (37, 14081), (40, 14108),

Gene: Utopia_15 Start: 12409, Stop: 12717, Start Num: 10
Candidate Starts for Utopia_15:

(4, 12343), (5, 12358), (Start: 10 @12409 has 1 MA's), (11, 12430), (Start: 15 @12448 has 3 MA's), (41, 12688),

Gene: Venti_32 Start: 27464, Stop: 27709, Start Num: 19

Candidate Starts for Venti_32:

(13, 27446), (Start: 19 @27464 has 20 MA's), (Start: 21 @27476 has 25 MA's),

Gene: Vidya_32 Start: 27509, Stop: 27742, Start Num: 21

Candidate Starts for Vidya_32:

(13, 27479), (Start: 19 @27497 has 20 MA's), (Start: 21 @27509 has 25 MA's),

Gene: Whytu_15 Start: 12543, Stop: 12812, Start Num: 15

Candidate Starts for Whytu_15:

(4, 12438), (5, 12453), (Start: 10 @12504 has 1 MA's), (Start: 15 @12543 has 3 MA's), (35, 12693), (41, 12783),

Gene: Willsammy_31 Start: 27204, Stop: 27449, Start Num: 19

Candidate Starts for Willsammy_31:

(13, 27186), (Start: 19 @27204 has 20 MA's), (Start: 21 @27216 has 25 MA's),

Gene: WorldChangers_18 Start: 12884, Stop: 13108, Start Num: 20

Candidate Starts for WorldChangers_18:

(1, 12761), (2, 12764), (20, 12884), (24, 12899), (27, 12944), (31, 12962), (33, 12977),

Gene: Ximeno_19 Start: 13076, Stop: 13294, Start Num: 18

Candidate Starts for Ximeno_19:

(Start: 18 @13076 has 39 MA's), (Start: 23 @13103 has 2 MA's), (32, 13172),

Gene: Yank_22 Start: 13854, Stop: 14087, Start Num: 18

Candidate Starts for Yank_22:

(Start: 18 @13854 has 39 MA's), (Start: 23 @13881 has 2 MA's), (33, 13962), (37, 14049), (40, 14076),

Gene: Yavru_15 Start: 12438, Stop: 12707, Start Num: 15

Candidate Starts for Yavru_15:

(4, 12333), (5, 12348), (Start: 10 @12399 has 1 MA's), (11, 12420), (Start: 15 @12438 has 3 MA's), (29, 12528), (41, 12678),

Gene: Zilizabeth_32 Start: 27496, Stop: 27741, Start Num: 19

Candidate Starts for Zilizabeth_32:

(13, 27478), (Start: 19 @27496 has 20 MA's), (Start: 21 @27508 has 25 MA's),