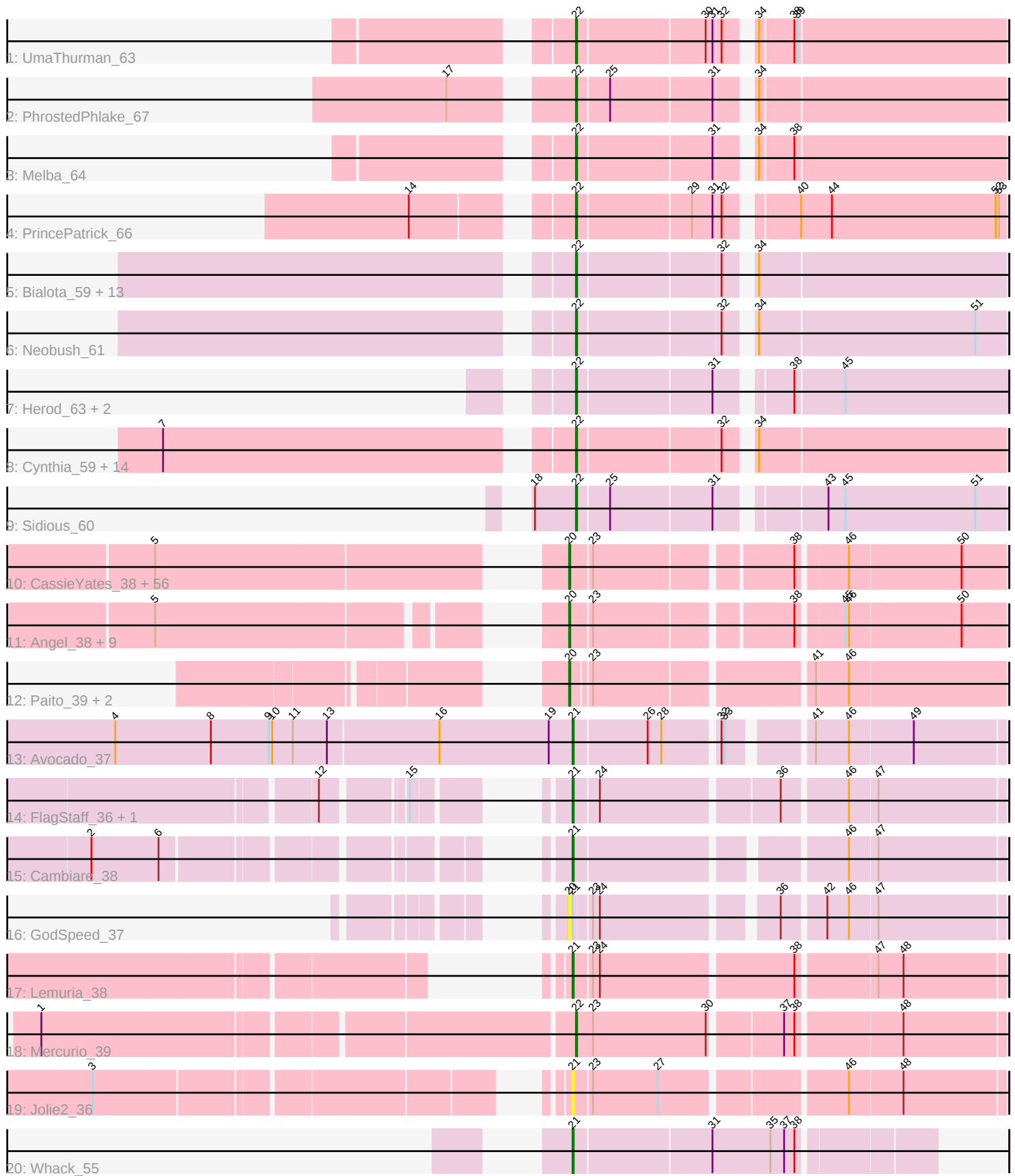


Pham 271529



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 271529 Report

This analysis was run 02/07/26 on database version 634.

Pham number 271529 has 117 members, 15 are drafts.

Phages represented in each track:

- Track 1 : UmaThurman_63
- Track 2 : PhrostedPhlake_67
- Track 3 : Melba_64
- Track 4 : PrincePatrick_66
- Track 5 : Bialota_59, Trumpet_61, Bosnia_60, Antonio_61, Eudoria_61, Manasvini_62, Pickett_54, Polly_58, Kita_62, EdnaModē_55, Suscepit_61, Tayonia_61, Zirinka_58, Zameen_61
- Track 6 : Neobush_61
- Track 7 : Herod_63, Hugley_61, Jalleen_60
- Track 8 : Cynthia_59, Sahara_58, Savage_59, Bjanēs7_56, Gizermo_59, Nettuno_55, Lamberg_55, GemG_59, Mocha12_59, Ebert_63, Whiteclaw_59, Haley23_59, Clap_59, TuertoX_59, Sproutie_59
- Track 9 : Sidious_60
- Track 10 : CassieYates_38, DNAIII_0037, Coleslaw_38, BruceB_38, TinaBug_38, Sweets_38, Halo_38, AzulaCat_38, Annihilator_38, Kareem_38, BPs_38, Frosty24_38, ShaboiShabazz_38, Jeilious_38, Phloodle_38, Neoh_38, Cherrybomb426_38, Cedasite_38, DingDing_38, Aroostook_38, Jane_38, Crespo_38, Darionha_38, Maliketh_38, Hope_38, Zombie_38, Mowgli_38, TomBrady_38, DMoney_38, ECartman_38, Chance64_38, Marmie_38, OctaviousRex_38, Camri_38, Wendigo_38, Ruriko_38, Gideon_38, BQuat_38, JorRay_38, Phreak_38, Liefie_38, Avrafan_38, Remy19_38, AizenPogi_38, LouisV14_40, Periodt_38, CLēD96_38, Renaissance_38, Gomashi_38, ZoMa_38, Jonghyun_38, PinkYoshi_38, Olga_38, Hotshotbaby7_38, Phish_38, Jolene_38, Rattrick_38
- Track 11 : Angel_38, Barkley26_38, Richarlison_38, GoldenAsh_38, Grizzly_38, Plagueis_38, Peeb_38, Kasen3_38, Schiebel_38, Sizemore_38
- Track 12 : Paito_39, Rabbs_39, Sneeze_39
- Track 13 : Avocado_37
- Track 14 : FlagStaff_36, Pace1224_36
- Track 15 : Cambiare_38
- Track 16 : GodSpeed_37
- Track 17 : Lemuria_38
- Track 18 : Mercurio_39
- Track 19 : Jolie2_36
- Track 20 : Whack_55

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

The start number called the most often in the published annotations is 20, it was called in 60 of the 102 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AizenPogi_38, Angel_38, Annihilator_38, Aroostook_38, Avrafan_38, AzulaCat_38, BPs_38, BQuat_38, Barkley26_38, BruceB_38, CLED96_38, Camri_38, CassieYates_38, Cedasite_38, Chance64_38, Cherrybomb426_38, Coleslaw_38, Crespo_38, DMoney_38, DNAIII_0037, Darionha_38, DingDing_38, ECartman_38, Frosty24_38, Gideon_38, GodSpeed_37, GoldenAsh_38, Gomashi_38, Grizzly_38, Halo_38, Hope_38, Hotshotbaby7_38, Jane_38, Jeilious_38, Jolene_38, Jonghyun_38, JorRay_38, Kareem_38, Kasen3_38, Liefie_38, LouisV14_40, Maliketh_38, Marmie_38, Mowgli_38, Neoh_38, OctaviousRex_38, Olga_38, Paito_39, Peeb_38, Periodt_38, Phish_38, Phloodle_38, Phreak_38, PinkYoshi_38, Plagueis_38, Rabbs_39, Rattrick_38, Remy19_38, Renaissance_38, Richarlison_38, Ruriko_38, Schiebel_38, ShaboiShabazz_38, Sizemore_38, Sneeze_39, Sweets_38, TinaBug_38, TomBrady_38, Wendigo_38, ZoMa_38, Zombie_38,

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

-

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

- Antonio_61, Avocado_37, Bialota_59, Bjaness7_56, Bosnia_60, Cambiare_38, Clap_59, Cynthia_59, Ebert_63, EdnaMode_55, Eudoria_61, FlagStaff_36, GemG_59, Gizermo_59, Haley23_59, Herod_63, Hugley_61, Jalleen_60, Jolie2_36, Kita_62, Lamberg_55, Lemuria_38, Manasvini_62, Melba_64, Mercurio_39, Mocha12_59, Neobush_61, Nettuno_55, Pace1224_36, PhrostedPhlake_67, Pickett_54, Polly_58, PrincePatrick_66, Sahara_58, Savage_59, Sidious_60, Sproutie_59, Suscepit_61, Tayonia_61, Trumpet_61, TuertoX_59, UmaThurman_63, Whack_55, Whiteclaw_59, Zameen_61, Zirinka_58,

Summary by start number:

Start 20:

- Found in 71 of 117 (60.7%) of genes in pham
- Manual Annotations of this start: 60 of 102
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AizenPogi_38 (G1), Angel_38 (G1), Annihilator_38 (G1), Aroostook_38 (G1), Avrafan_38 (G1), AzulaCat_38 (G1), BPs_38 (G1), BQuat_38 (G1), Barkley26_38 (G1), BruceB_38 (G1), CLED96_38 (G1), Camri_38 (G1), CassieYates_38 (G1), Cedasite_38 (G1), Chance64_38 (G1), Cherrybomb426_38 (G1), Coleslaw_38 (G1), Crespo_38 (G1), DMoney_38 (G1), DNAIII_0037 (G1), Darionha_38 (G1), DingDing_38 (G1), ECartman_38 (G1), Frosty24_38 (G1), Gideon_38 (G1), GodSpeed_37 (G2), GoldenAsh_38 (G1), Gomashi_38 (G1), Grizzly_38 (G1), Halo_38 (G1), Hope_38 (G1), Hotshotbaby7_38 (G1), Jane_38 (G1), Jeilious_38 (G), Jolene_38 (G1), Jonghyun_38 (G1), JorRay_38 (G1), Kareem_38 (G1), Kasen3_38 (G1), Liefie_38 (G1), LouisV14_40 (G1), Maliketh_38 (G1), Marmie_38 (G1), Mowgli_38 (G1), Neoh_38 (G), OctaviousRex_38 (G1), Olga_38 (G1), Paito_39 (G1), Peeb_38 (G1), Periodt_38 (G1), Phish_38 (G1), Phloodle_38 (G1), Phreak_38 (G1), PinkYoshi_38 (G1), Plagueis_38 (G1), Rabbs_39 (G1), Rattrick_38 (G1), Remy19_38 (G1), Renaissance_38 (G1), Richarlison_38

(G1), Ruriko_38 (G1), Schiebel_38 (G1), ShaboiShabazz_38 (G1), Sizemore_38 (G1), Sneeze_39 (G1), Sweets_38 (G1), TinaBug_38 (G1), TomBrady_38 (G1), Wendigo_38 (G1), ZoMa_38 (G1), Zombie_38 (G1),

Start 21:

- Found in 8 of 117 (6.8%) of genes in pham
- Manual Annotations of this start: 5 of 102
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Avocado_37 (G2), Cambiare_38 (G2), FlagStaff_36 (G2), Jolie2_36 (G4), Lemuria_38 (G4), Pace1224_36 (G2), Whack_55 (singleton),

Start 22:

- Found in 39 of 117 (33.3%) of genes in pham
- Manual Annotations of this start: 37 of 102
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antonio_61 (CZ1), Bialota_59 (CZ1), Bjaness_56 (CZ2), Bosnia_60 (CZ1), Clap_59 (CZ2), Cynthia_59 (CZ2), Ebert_63 (CZ2), EdnaMode_55 (CZ2), Eudoria_61 (CZ1), GemG_59 (CZ2), Gizermo_59 (CZ2), Haley23_59 (CZ2), Herod_63 (CZ1), Hugley_61 (CZ1), Jalleen_60 (CZ2), Kita_62 (CZ1), Lamberg_55 (CZ2), Manasvini_62 (CZ1), Melba_64 (CV), Mercurio_39 (G4), Mocha12_59 (CZ2), Neobush_61 (CZ1), Nettuno_55 (CZ2), PhrostedPhlake_67 (CV), Pickett_54 (CZ2), Polly_58 (CZ1), PrincePatrick_66 (CV), Sahara_58 (CZ2), Savage_59 (CZ2), Sidious_60 (CZ7), Sproutie_59 (CZ2), Suscepit_61 (CZ1), Tayonia_61 (CZ1), Trumpet_61 (CZ1), TuertoX_59 (CZ2), UmaThurman_63 (CV), Whiteclaw_59 (CZ2), Zameen_61 (CZ1), Zirinka_58 (CZ1),

Summary by clusters:

There are 9 clusters represented in this pham: singleton, G4, G1, G, CZ2, CZ1, CZ7, CV, G2,

Info for manual annotations of cluster CV:

- Start number 22 was manually annotated 4 times for cluster CV.

Info for manual annotations of cluster CZ1:

- Start number 22 was manually annotated 14 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 22 was manually annotated 17 times for cluster CZ2.

Info for manual annotations of cluster CZ7:

- Start number 22 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster G1:

- Start number 20 was manually annotated 60 times for cluster G1.

Info for manual annotations of cluster G2:

- Start number 21 was manually annotated 3 times for cluster G2.

Info for manual annotations of cluster G4:

- Start number 21 was manually annotated 1 time for cluster G4.

- Start number 22 was manually annotated 1 time for cluster G4.

Gene Information:

Gene: AizenPogi_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for AizenPogi_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Angel_38 Start: 30913, Stop: 31263, Start Num: 20

Candidate Starts for Angel_38:

(5, 30622), (Start: 20 @30913 has 60 MA's), (23, 30931), (38, 31090), (45, 31126), (46, 31129), (50, 31225),

Gene: Annihilator_38 Start: 30919, Stop: 31269, Start Num: 20

Candidate Starts for Annihilator_38:

(5, 30613), (Start: 20 @30919 has 60 MA's), (23, 30937), (38, 31096), (46, 31135), (50, 31231),

Gene: Antonio_61 Start: 41679, Stop: 42029, Start Num: 22

Candidate Starts for Antonio_61:

(Start: 22 @41679 has 37 MA's), (32, 41799), (34, 41817),

Gene: Aroostook_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Aroostook_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Avocado_37 Start: 31962, Stop: 32303, Start Num: 21

Candidate Starts for Avocado_37:

(4, 31563), (8, 31647), (9, 31698), (10, 31701), (11, 31719), (13, 31749), (16, 31845), (19, 31941), (Start: 21 @31962 has 5 MA's), (26, 32025), (28, 32037), (32, 32082), (33, 32085), (41, 32145), (46, 32172), (49, 32226),

Gene: Avrafan_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Avrafan_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: AzulaCat_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for AzulaCat_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: BPs_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for BPs_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: BQuat_38 Start: 30919, Stop: 31269, Start Num: 20

Candidate Starts for BQuat_38:

(5, 30613), (Start: 20 @30919 has 60 MA's), (23, 30937), (38, 31096), (46, 31135), (50, 31231),

Gene: Barkley26_38 Start: 30935, Stop: 31285, Start Num: 20

Candidate Starts for Barkley26_38:

(5, 30644), (Start: 20 @30935 has 60 MA's), (23, 30953), (38, 31112), (45, 31148), (46, 31151), (50, 31247),

Gene: Bialota_59 Start: 42311, Stop: 42661, Start Num: 22

Candidate Starts for Bialota_59:

(Start: 22 @42311 has 37 MA's), (32, 42431), (34, 42449),

Gene: Bjaner7_56 Start: 38058, Stop: 38408, Start Num: 22

Candidate Starts for Bjaner7_56:

(7, 37725), (Start: 22 @38058 has 37 MA's), (32, 38178), (34, 38196),

Gene: Bosnia_60 Start: 44024, Stop: 44377, Start Num: 22

Candidate Starts for Bosnia_60:

(Start: 22 @44024 has 37 MA's), (32, 44144), (34, 44162),

Gene: BruceB_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for BruceB_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: CLED96_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for CLED96_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Cambiare_38 Start: 32235, Stop: 32576, Start Num: 21

Candidate Starts for Cambiare_38:

(2, 31917), (6, 31974), (Start: 21 @32235 has 5 MA's), (46, 32445), (47, 32469),

Gene: Camri_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Camri_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: CassieYates_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for CassieYates_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Cedasite_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Cedasite_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Chance64_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Chance64_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Cherrybomb426_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Cherrybomb426_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Clap_59 Start: 38237, Stop: 38587, Start Num: 22

Candidate Starts for Clap_59:

(7, 37904), (Start: 22 @38237 has 37 MA's), (32, 38357), (34, 38375),

Gene: Coleslaw_38 Start: 30919, Stop: 31269, Start Num: 20

Candidate Starts for Coleslaw_38:

(5, 30613), (Start: 20 @30919 has 60 MA's), (23, 30937), (38, 31096), (46, 31135), (50, 31231),

Gene: Crespo_38 Start: 30929, Stop: 31279, Start Num: 20

Candidate Starts for Crespo_38:

(5, 30623), (Start: 20 @30929 has 60 MA's), (23, 30947), (38, 31106), (46, 31145), (50, 31241),

Gene: Cynthia_59 Start: 38235, Stop: 38585, Start Num: 22

Candidate Starts for Cynthia_59:

(7, 37902), (Start: 22 @38235 has 37 MA's), (32, 38355), (34, 38373),

Gene: DMoney_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for DMoney_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: DNAIII_0037 Start: 29562, Stop: 29912, Start Num: 20

Candidate Starts for DNAIII_0037:

(5, 29256), (Start: 20 @29562 has 60 MA's), (23, 29580), (38, 29739), (46, 29778), (50, 29874),

Gene: Darionha_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Darionha_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: DingDing_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for DingDing_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: ECartman_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for ECartman_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Ebert_63 Start: 38669, Stop: 39019, Start Num: 22

Candidate Starts for Ebert_63:

(7, 38336), (Start: 22 @38669 has 37 MA's), (32, 38789), (34, 38807),

Gene: EdnaMode_55 Start: 37500, Stop: 37850, Start Num: 22

Candidate Starts for EdnaMode_55:

(Start: 22 @37500 has 37 MA's), (32, 37620), (34, 37638),

Gene: Eudoria_61 Start: 41679, Stop: 42029, Start Num: 22

Candidate Starts for Eudoria_61:

(Start: 22 @41679 has 37 MA's), (32, 41799), (34, 41817),

Gene: FlagStaff_36 Start: 31381, Stop: 31731, Start Num: 21

Candidate Starts for FlagStaff_36:

(12, 31243), (15, 31306), (Start: 21 @31381 has 5 MA's), (24, 31402), (36, 31549), (46, 31600), (47, 31624),

Gene: Frosty24_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Frosty24_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: GemG_59 Start: 38241, Stop: 38591, Start Num: 22

Candidate Starts for GemG_59:

(7, 37908), (Start: 22 @38241 has 37 MA's), (32, 38361), (34, 38379),

Gene: Gideon_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Gideon_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Gizermo_59 Start: 38237, Stop: 38587, Start Num: 22

Candidate Starts for Gizermo_59:

(7, 37904), (Start: 22 @38237 has 37 MA's), (32, 38357), (34, 38375),

Gene: GodSpeed_37 Start: 31493, Stop: 31834, Start Num: 20

Candidate Starts for GodSpeed_37:

(Start: 20 @31493 has 60 MA's), (Start: 21 @31496 has 5 MA's), (23, 31508), (24, 31514), (36, 31652), (42, 31685), (46, 31703), (47, 31727),

Gene: GoldenAsh_38 Start: 30913, Stop: 31263, Start Num: 20

Candidate Starts for GoldenAsh_38:

(5, 30622), (Start: 20 @30913 has 60 MA's), (23, 30931), (38, 31090), (45, 31126), (46, 31129), (50, 31225),

Gene: Gomashi_38 Start: 30929, Stop: 31279, Start Num: 20

Candidate Starts for Gomashi_38:

(5, 30623), (Start: 20 @30929 has 60 MA's), (23, 30947), (38, 31106), (46, 31145), (50, 31241),

Gene: Grizzly_38 Start: 30913, Stop: 31263, Start Num: 20

Candidate Starts for Grizzly_38:

(5, 30622), (Start: 20 @30913 has 60 MA's), (23, 30931), (38, 31090), (45, 31126), (46, 31129), (50, 31225),

Gene: Haley23_59 Start: 38237, Stop: 38587, Start Num: 22

Candidate Starts for Haley23_59:

(7, 37904), (Start: 22 @38237 has 37 MA's), (32, 38357), (34, 38375),

Gene: Halo_38 Start: 30923, Stop: 31273, Start Num: 20

Candidate Starts for Halo_38:

(5, 30617), (Start: 20 @30923 has 60 MA's), (23, 30941), (38, 31100), (46, 31139), (50, 31235),

Gene: Herod_63 Start: 44381, Stop: 44731, Start Num: 22

Candidate Starts for Herod_63:

(Start: 22 @44381 has 37 MA's), (31, 44495), (38, 44546), (45, 44588),

Gene: Hope_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Hope_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Hotshotbaby7_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Hotshotbaby7_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Hugley_61 Start: 44361, Stop: 44711, Start Num: 22

Candidate Starts for Hugley_61:

(Start: 22 @44361 has 37 MA's), (31, 44475), (38, 44526), (45, 44568),

Gene: Jalleen_60 Start: 38199, Stop: 38549, Start Num: 22

Candidate Starts for Jalleen_60:

(Start: 22 @38199 has 37 MA's), (31, 38313), (38, 38364), (45, 38406),

Gene: Jane_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Jane_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Jeilious_38 Start: 30927, Stop: 31277, Start Num: 20

Candidate Starts for Jeilious_38:

(5, 30621), (Start: 20 @30927 has 60 MA's), (23, 30945), (38, 31104), (46, 31143), (50, 31239),

Gene: Jolene_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Jolene_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Jolie2_36 Start: 30322, Stop: 30672, Start Num: 21

Candidate Starts for Jolie2_36:

(3, 29977), (Start: 21 @30322 has 5 MA's), (23, 30337), (27, 30394), (46, 30541), (48, 30586),

Gene: Jonghyun_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Jonghyun_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: JorRay_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for JorRay_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Kareem_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Kareem_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Kasen3_38 Start: 30914, Stop: 31264, Start Num: 20

Candidate Starts for Kasen3_38:

(5, 30623), (Start: 20 @30914 has 60 MA's), (23, 30932), (38, 31091), (45, 31127), (46, 31130), (50, 31226),

Gene: Kita_62 Start: 41688, Stop: 42038, Start Num: 22

Candidate Starts for Kita_62:

(Start: 22 @41688 has 37 MA's), (32, 41808), (34, 41826),

Gene: Lamberg_55 Start: 36746, Stop: 37096, Start Num: 22

Candidate Starts for Lamberg_55:

(7, 36413), (Start: 22 @36746 has 37 MA's), (32, 36866), (34, 36884),

Gene: Lemuria_38 Start: 31664, Stop: 32017, Start Num: 21

Candidate Starts for Lemuria_38:

(Start: 21 @31664 has 5 MA's), (23, 31679), (24, 31685), (38, 31847), (47, 31910), (48, 31931),

Gene: Liefie_38 Start: 30926, Stop: 31276, Start Num: 20

Candidate Starts for Liefie_38:

(5, 30620), (Start: 20 @30926 has 60 MA's), (23, 30944), (38, 31103), (46, 31142), (50, 31238),

Gene: LouisV14_40 Start: 33193, Stop: 33543, Start Num: 20

Candidate Starts for LouisV14_40:

(5, 32887), (Start: 20 @33193 has 60 MA's), (23, 33211), (38, 33370), (46, 33409), (50, 33505),

Gene: Maliketh_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Maliketh_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Manasvini_62 Start: 41703, Stop: 42053, Start Num: 22

Candidate Starts for Manasvini_62:

(Start: 22 @41703 has 37 MA's), (32, 41823), (34, 41841),

Gene: Marmie_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Marmie_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Melba_64 Start: 40839, Stop: 41186, Start Num: 22

Candidate Starts for Melba_64:

(Start: 22 @40839 has 37 MA's), (31, 40953), (34, 40977), (38, 41004),

Gene: Mercurio_39 Start: 32164, Stop: 32514, Start Num: 22

Candidate Starts for Mercurio_39:

(1, 31726), (Start: 22 @32164 has 37 MA's), (23, 32179), (30, 32278), (37, 32335), (38, 32344), (48, 32428),

Gene: Mocha12_59 Start: 38237, Stop: 38587, Start Num: 22

Candidate Starts for Mocha12_59:

(7, 37904), (Start: 22 @38237 has 37 MA's), (32, 38357), (34, 38375),

Gene: Mowgli_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Mowgli_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Neobush_61 Start: 41673, Stop: 42023, Start Num: 22

Candidate Starts for Neobush_61:

(Start: 22 @41673 has 37 MA's), (32, 41793), (34, 41811), (51, 41997),

Gene: Neoh_38 Start: 30920, Stop: 31270, Start Num: 20

Candidate Starts for Neoh_38:

(5, 30614), (Start: 20 @30920 has 60 MA's), (23, 30938), (38, 31097), (46, 31136), (50, 31232),

Gene: Nettuno_55 Start: 36746, Stop: 37096, Start Num: 22

Candidate Starts for Nettuno_55:

(7, 36413), (Start: 22 @36746 has 37 MA's), (32, 36866), (34, 36884),

Gene: OctaviousRex_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for OctaviousRex_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Olga_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Olga_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Pace1224_36 Start: 31381, Stop: 31731, Start Num: 21

Candidate Starts for Pace1224_36:

(12, 31243), (15, 31306), (Start: 21 @31381 has 5 MA's), (24, 31402), (36, 31549), (46, 31600), (47, 31624),

Gene: Paito_39 Start: 31261, Stop: 31614, Start Num: 20

Candidate Starts for Paito_39:

(Start: 20 @31261 has 60 MA's), (23, 31276), (41, 31453), (46, 31480),

Gene: Peeb_38 Start: 30913, Stop: 31263, Start Num: 20

Candidate Starts for Peeb_38:

(5, 30622), (Start: 20 @30913 has 60 MA's), (23, 30931), (38, 31090), (45, 31126), (46, 31129), (50, 31225),

Gene: Periodt_38 Start: 30919, Stop: 31269, Start Num: 20

Candidate Starts for Periodt_38:

(5, 30613), (Start: 20 @30919 has 60 MA's), (23, 30937), (38, 31096), (46, 31135), (50, 31231),

Gene: Phish_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Phish_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Phloodle_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Phloodle_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Phreak_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Phreak_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: PhrostedPhlake_67 Start: 41454, Stop: 41801, Start Num: 22

Candidate Starts for PhrostedPhlake_67:

(17, 41370), (Start: 22 @41454 has 37 MA's), (25, 41481), (31, 41568), (34, 41592),

Gene: Pickett_54 Start: 35976, Stop: 36326, Start Num: 22

Candidate Starts for Pickett_54:

(Start: 22 @35976 has 37 MA's), (32, 36096), (34, 36114),

Gene: PinkYoshi_38 Start: 30919, Stop: 31269, Start Num: 20

Candidate Starts for PinkYoshi_38:

(5, 30613), (Start: 20 @30919 has 60 MA's), (23, 30937), (38, 31096), (46, 31135), (50, 31231),

Gene: Plagueis_38 Start: 30748, Stop: 31098, Start Num: 20

Candidate Starts for Plagueis_38:

(5, 30457), (Start: 20 @30748 has 60 MA's), (23, 30766), (38, 30925), (45, 30961), (46, 30964), (50, 31060),

Gene: Polly_58 Start: 41122, Stop: 41472, Start Num: 22

Candidate Starts for Polly_58:

(Start: 22 @41122 has 37 MA's), (32, 41242), (34, 41260),

Gene: PrincePatrick_66 Start: 41403, Stop: 41753, Start Num: 22

Candidate Starts for PrincePatrick_66:

(14, 41289), (Start: 22 @41403 has 37 MA's), (29, 41499), (31, 41517), (32, 41523), (40, 41574), (44, 41601), (52, 41745), (53, 41748),

Gene: Rabbs_39 Start: 31163, Stop: 31516, Start Num: 20
Candidate Starts for Rabbs_39:
(Start: 20 @31163 has 60 MA's), (23, 31178), (41, 31355), (46, 31382),

Gene: Rattrick_38 Start: 30919, Stop: 31269, Start Num: 20
Candidate Starts for Rattrick_38:
(5, 30613), (Start: 20 @30919 has 60 MA's), (23, 30937), (38, 31096), (46, 31135), (50, 31231),

Gene: Remy19_38 Start: 30928, Stop: 31278, Start Num: 20
Candidate Starts for Remy19_38:
(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Renaissance_38 Start: 30928, Stop: 31278, Start Num: 20
Candidate Starts for Renaissance_38:
(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Richarlison_38 Start: 30913, Stop: 31263, Start Num: 20
Candidate Starts for Richarlison_38:
(5, 30622), (Start: 20 @30913 has 60 MA's), (23, 30931), (38, 31090), (45, 31126), (46, 31129), (50, 31225),

Gene: Ruriko_38 Start: 30928, Stop: 31278, Start Num: 20
Candidate Starts for Ruriko_38:
(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Sahara_58 Start: 37984, Stop: 38334, Start Num: 22
Candidate Starts for Sahara_58:
(7, 37651), (Start: 22 @37984 has 37 MA's), (32, 38104), (34, 38122),

Gene: Savage_59 Start: 38237, Stop: 38587, Start Num: 22
Candidate Starts for Savage_59:
(7, 37904), (Start: 22 @38237 has 37 MA's), (32, 38357), (34, 38375),

Gene: Schiebel_38 Start: 30913, Stop: 31263, Start Num: 20
Candidate Starts for Schiebel_38:
(5, 30622), (Start: 20 @30913 has 60 MA's), (23, 30931), (38, 31090), (45, 31126), (46, 31129), (50, 31225),

Gene: ShaboiShabazz_38 Start: 30928, Stop: 31278, Start Num: 20
Candidate Starts for ShaboiShabazz_38:
(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Sidious_60 Start: 42842, Stop: 43189, Start Num: 22
Candidate Starts for Sidious_60:
(18, 42806), (Start: 22 @42842 has 37 MA's), (25, 42869), (31, 42956), (43, 43034), (45, 43049), (51, 43163),

Gene: Sizemore_38 Start: 30914, Stop: 31264, Start Num: 20
Candidate Starts for Sizemore_38:
(5, 30623), (Start: 20 @30914 has 60 MA's), (23, 30932), (38, 31091), (45, 31127), (46, 31130), (50, 31226),

Gene: Sneeze_39 Start: 31162, Stop: 31515, Start Num: 20
Candidate Starts for Sneeze_39:
(Start: 20 @31162 has 60 MA's), (23, 31177), (41, 31354), (46, 31381),

Gene: Sproutie_59 Start: 38237, Stop: 38587, Start Num: 22
Candidate Starts for Sproutie_59:
(7, 37904), (Start: 22 @38237 has 37 MA's), (32, 38357), (34, 38375),

Gene: Suscepit_61 Start: 41680, Stop: 42030, Start Num: 22
Candidate Starts for Suscepit_61:
(Start: 22 @41680 has 37 MA's), (32, 41800), (34, 41818),

Gene: Sweets_38 Start: 30923, Stop: 31273, Start Num: 20
Candidate Starts for Sweets_38:
(5, 30617), (Start: 20 @30923 has 60 MA's), (23, 30941), (38, 31100), (46, 31139), (50, 31235),

Gene: Tayonia_61 Start: 41679, Stop: 42029, Start Num: 22
Candidate Starts for Tayonia_61:
(Start: 22 @41679 has 37 MA's), (32, 41799), (34, 41817),

Gene: TinaBug_38 Start: 30923, Stop: 31273, Start Num: 20
Candidate Starts for TinaBug_38:
(5, 30617), (Start: 20 @30923 has 60 MA's), (23, 30941), (38, 31100), (46, 31139), (50, 31235),

Gene: TomBrady_38 Start: 30929, Stop: 31279, Start Num: 20
Candidate Starts for TomBrady_38:
(5, 30623), (Start: 20 @30929 has 60 MA's), (23, 30947), (38, 31106), (46, 31145), (50, 31241),

Gene: Trumpet_61 Start: 41680, Stop: 42030, Start Num: 22
Candidate Starts for Trumpet_61:
(Start: 22 @41680 has 37 MA's), (32, 41800), (34, 41818),

Gene: TuertoX_59 Start: 38237, Stop: 38587, Start Num: 22
Candidate Starts for TuertoX_59:
(7, 37904), (Start: 22 @38237 has 37 MA's), (32, 38357), (34, 38375),

Gene: UmaThurman_63 Start: 41482, Stop: 41829, Start Num: 22
Candidate Starts for UmaThurman_63:
(Start: 22 @41482 has 37 MA's), (30, 41590), (31, 41596), (32, 41602), (34, 41620), (38, 41647), (39, 41650),

Gene: Wendigo_38 Start: 30928, Stop: 31278, Start Num: 20
Candidate Starts for Wendigo_38:
(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Whack_55 Start: 38005, Stop: 38304, Start Num: 21
Candidate Starts for Whack_55:
(Start: 21 @38005 has 5 MA's), (31, 38122), (35, 38173), (37, 38185), (38, 38194),

Gene: Whiteclaw_59 Start: 38237, Stop: 38587, Start Num: 22
Candidate Starts for Whiteclaw_59:
(7, 37904), (Start: 22 @38237 has 37 MA's), (32, 38357), (34, 38375),

Gene: Zameen_61 Start: 41679, Stop: 42029, Start Num: 22

Candidate Starts for Zameen_61:

(Start: 22 @41679 has 37 MA's), (32, 41799), (34, 41817),

Gene: Zirinka_58 Start: 42299, Stop: 42649, Start Num: 22

Candidate Starts for Zirinka_58:

(Start: 22 @42299 has 37 MA's), (32, 42419), (34, 42437),

Gene: ZoMa_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for ZoMa_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),

Gene: Zombie_38 Start: 30928, Stop: 31278, Start Num: 20

Candidate Starts for Zombie_38:

(5, 30622), (Start: 20 @30928 has 60 MA's), (23, 30946), (38, 31105), (46, 31144), (50, 31240),