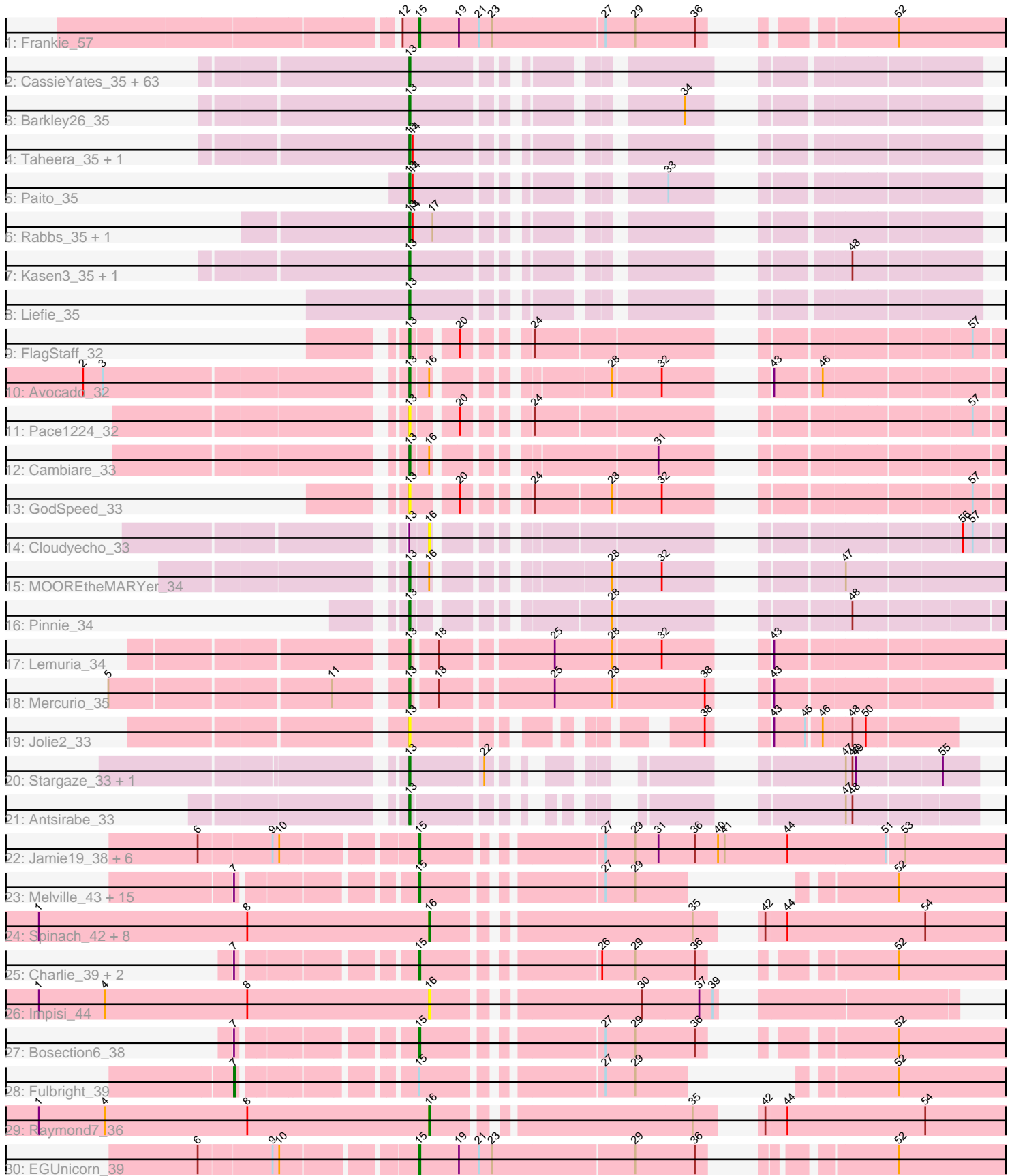


Pham 292611



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 292611 Report

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

Pham number 292611 has 128 members, 19 are drafts.

Phages represented in each track:

- Track 1 : Frankie_57
- Track 2 : CassieYates_35, Gomashi_35, Gideon_35, Angel_35, BruceB_35, Coleslaw_35, Richarlison_35, Sweets_35, Halo_35, DNAllI_0034, GoldenAsh_35, Annihilator_35, AzulaCat_35, Maliketh_35, BPs_35, Kareem_35, Phloodle_35, Jeilious_35, Frosty24_35, ShaboiShabazz_35, Cherrybomb426_35, Neoh_35, DingDing_35, Cedasite_35, LouisV14_37, Plagueis_35, Grizzly_35, Aroostook_35, TinaBug_35, Jane_35, Hope_35, Zombie_35, MZKinsey_35, Crespo_35, Darionha_35, Mowgli_35, Remy19_35, TomBrady_35, Chance64_35, ECartman_35, Phish_35, DMoney_35, Marmie_35, OctaviousRex_35, Ruriko_35, Wendigo_35, Renaissance_35, Camri_35, JorRay_35, Phreak_35, BQuat_35, CLED96_35, Periodt_35, Avrafan_35, AizenPogi_35, Jonghyun_35, ZoMa_35, Schiebel_35, PinkYoshi_35, Hotshotbaby7_35, Olga_35, Peeb_35, Jolene_35, Rattrick_35
- Track 3 : Barkley26_35
- Track 4 : Taheera_35, Terror_35
- Track 5 : Paito_35
- Track 6 : Rabbs_35, Sneeze_35
- Track 7 : Kasen3_35, Sizemore_35
- Track 8 : Liefie_35
- Track 9 : FlagStaff_32
- Track 10 : Avocado_32
- Track 11 : Pace1224_32
- Track 12 : Cambiare_33
- Track 13 : GodSpeed_33
- Track 14 : Cloudyecho_33
- Track 15 : MOOREtheMARYer_34
- Track 16 : Pinnie_34
- Track 17 : Lemuria_34
- Track 18 : Mercurio_35
- Track 19 : Jolie2_33
- Track 20 : Stargaze_33, YangYin_33
- Track 21 : Antsirabe_33
- Track 22 : Jamie19_38, Panchino_37, Shweta_38, SpongeBob_38, Andies_38, Phrann_42, Snekmaggedon_38
- Track 23 : Melville_43, Phloss_38, Schnauzer_41, Tessdabest_41, Parmesanjohn_40, Magsby_40, Tortoise12_39, Gex_40, Xerxes_40, Pipsqueaks_40, Silvafighter_41, Smurph_40, Tapioca_42, Chewbacca_42, Duplicity_40, Carcharodon_40

- Track 24 : Spinach_42, Rebel_34, Purgamenstris_42, Nенаe_42, Redi_42, Hanako_42, PhancyPhin_42, BabeRuth_43, ShrimpFriedEgg_42
- Track 25 : Charlie_39, Journey_38, Cubone_41
- Track 26 : Impisi_44
- Track 27 : Bosection6_38
- Track 28 : Fulbright_39
- Track 29 : Raymond7_36
- Track 30 : EGUnicorn_39

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

The start number called the most often in the published annotations is 13, it was called in 71 of the 109 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AizenPogi_35, Angel_35, Annihilator_35, Antsirabe_33, Aroostook_35, Avocado_32, Avrafan_35, AzulaCat_35, BPs_35, BQuat_35, Barkley26_35, BruceB_35, CLED96_35, Cambiare_33, Camri_35, CassieYates_35, Cedasite_35, Chance64_35, Cherrybomb426_35, Coleslaw_35, Crespo_35, DMoney_35, DNAlll_0034, Darionha_35, DingDing_35, ECartman_35, FlagStaff_32, Frosty24_35, Gideon_35, GodSpeed_33, GoldenAsh_35, Gomashi_35, Grizzly_35, Halo_35, Hope_35, Hotshotbaby7_35, Jane_35, Jeilious_35, Jolene_35, Jolie2_33, Jonghyun_35, JorRay_35, Kareem_35, Kasen3_35, Lemuria_34, Liefie_35, LouisV14_37, MOOREtheMARYer_34, MZKinsey_35, Maliketh_35, Marmie_35, Mercurio_35, Mowgli_35, Neoh_35, OctaviousRex_35, Olga_35, Pace1224_32, Paito_35, Peeb_35, Periodt_35, Phish_35, Phloodle_35, Phreak_35, PinkYoshi_35, Pinnie_34, Plagueis_35, Rabbs_35, Rattrick_35, Remy19_35, Renaissance_35, Richarlison_35, Ruriko_35, Schiebel_35, ShaboiShabazz_35, Sizemore_35, Sneeze_35, Stargaze_33, Sweets_35, Taheera_35, Terror_35, TinaBug_35, TomBrady_35, Wendigo_35, YangYin_33, ZoMa_35, Zombie_35,

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

- Cloudyecho_33,

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

- Andies_38, BabeRuth_43, Bosection6_38, Carcharodon_40, Charlie_39, Chewbacca_42, Cubone_41, Duplicity_40, EGUnicorn_39, Frankie_57, Fulbright_39, Gex_40, Hanako_42, Impisi_44, Jamie19_38, Journey_38, Magsby_40, Melville_43, Nенаe_42, Panchino_37, Parmesanjohn_40, PhancyPhin_42, Phloss_38, Phrann_42, Pipsqueaks_40, Purgamenstris_42, Raymond7_36, Rebel_34, Redi_42, Schnauzer_41, ShrimpFriedEgg_42, Shweta_38, Silvafighter_41, Smurph_40, Snekmaggon_38, Spinach_42, SpongeBob_38, Tapioca_42, Tessdabest_41, Tortoise12_39, Xerxes_40,

Summary by start number:

Start 7:

- Found in 21 of 128 (16.4%) of genes in pham
- Manual Annotations of this start: 1 of 109
- Called 4.8% of time when present

- Phage (with cluster) where this start called: Fulbright_39 (N),

Start 13:

- Found in 87 of 128 (68.0%) of genes in pham
- Manual Annotations of this start: 71 of 109
- Called 98.9% of time when present
- Phage (with cluster) where this start called: AizenPogi_35 (G1), Angel_35 (G1), Annihilator_35 (G1), Antsirabe_33 (G5), Aroostook_35 (G1), Avocado_32 (G2), Avrafan_35 (G1), AzulaCat_35 (G1), BPs_35 (G1), BQuat_35 (G1), Barkley26_35 (G1), BruceB_35 (G1), CLED96_35 (G1), Cambiare_33 (G2), Camri_35 (G1), CassieYates_35 (G1), Cedasite_35 (G1), Chance64_35 (G1), Cherrybomb426_35 (G1), Coleslaw_35 (G1), Crespo_35 (G1), DMoney_35 (G1), DNAIII_0034 (G1), Darionha_35 (G1), DingDing_35 (G1), ECartman_35 (G1), FlagStaff_32 (G2), Frosty24_35 (G1), Gideon_35 (G1), GodSpeed_33 (G2), GoldenAsh_35 (G1), Gomashi_35 (G1), Grizzly_35 (G1), Halo_35 (G1), Hope_35 (G1), Hotshotbaby7_35 (G1), Jane_35 (G1), Jeilious_35 (G), Jolene_35 (G1), Jolie2_33 (G4), Jonghyun_35 (G1), JorRay_35 (G1), Kareem_35 (G1), Kasen3_35 (G1), Lemuria_34 (G4), Liefie_35 (G1), LouisV14_37 (G1), MOOREtheMARRYer_34 (G3), MZKinsey_35 (G1), Maliketh_35 (G1), Marmie_35 (G1), Mercurio_35 (G4), Mowgli_35 (G1), Neoh_35 (G), OctaviousRex_35 (G1), Olga_35 (G1), Pace1224_32 (G2), Paito_35 (G1), Peeb_35 (G1), Periodt_35 (G1), Phish_35 (G1), Phloodle_35 (G1), Phreak_35 (G1), PinkYoshi_35 (G1), Pinnie_34 (G3), Plagueis_35 (G1), Rabbs_35 (G1), Rattrick_35 (G1), Remy19_35 (G1), Renaissance_35 (G1), Richarlison_35 (G1), Ruriko_35 (G1), Schiebel_35 (G1), ShaboiShabazz_35 (G1), Sizemore_35 (G1), Sneeze_35 (G1), Stargaze_33 (G5), Sweets_35 (G1), Taheera_35 (G1), Terror_35 (G1), TinaBug_35 (G1), TomBrady_35 (G1), Wendigo_35 (G1), YangYin_33 (G5), ZoMa_35 (G1), Zombie_35 (G1),

Start 15:

- Found in 30 of 128 (23.4%) of genes in pham
- Manual Annotations of this start: 27 of 109
- Called 96.7% of time when present
- Phage (with cluster) where this start called: Andies_38 (N), Bosection6_38 (N), Carcharodon_40 (N), Charlie_39 (N), Chewbacca_42 (N), Cubone_41 (N), Duplicity_40 (N), EGUunicorn_39 (N), Frankie_57 (F1), Gex_40 (N), Jamie19_38 (N), Journey_38 (N), Magsby_40 (N), Melville_43 (N), Panchino_37 (N), Parmesanjohn_40 (N), Phloss_38 (N), Phrann_42 (N), Pipsqueaks_40 (N), Schnauzer_41 (N), Shweta_38 (N), Silvafighter_41 (N), Smurph_40 (N), Snekmaggedon_38 (N), SpongeBob_38 (N), Tapioca_42 (N), Tessdabest_41 (N), Tortoise12_39 (N), Xerxes_40 (N),

Start 16:

- Found in 15 of 128 (11.7%) of genes in pham
- Manual Annotations of this start: 10 of 109
- Called 80.0% of time when present
- Phage (with cluster) where this start called: BabeRuth_43 (N), Cloudyecho_33 (G3), Hanako_42 (N), Impisi_44 (N), Nenae_42 (N), PhancyPhin_42 (N), Purgamenstris_42 (N), Raymond7_36 (N), Rebel_34 (N), Redi_42 (N), ShrimpFriedEgg_42 (N), Spinach_42 (N),

Summary by clusters:

There are 8 clusters represented in this pham: F1, G5, G4, G3, G2, G, N, G1,

Info for manual annotations of cluster F1:

- Start number 15 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster G1:

- Start number 13 was manually annotated 62 times for cluster G1.

Info for manual annotations of cluster G2:

- Start number 13 was manually annotated 3 times for cluster G2.

Info for manual annotations of cluster G3:

- Start number 13 was manually annotated 2 times for cluster G3.

Info for manual annotations of cluster G4:

- Start number 13 was manually annotated 2 times for cluster G4.

Info for manual annotations of cluster G5:

- Start number 13 was manually annotated 2 times for cluster G5.

Info for manual annotations of cluster N:

- Start number 7 was manually annotated 1 time for cluster N.
- Start number 15 was manually annotated 26 times for cluster N.
- Start number 16 was manually annotated 10 times for cluster N.

Gene Information:

Gene: AizenPogi_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for AizenPogi_35:

(Start: 13 @29752 has 71 MA's),

Gene: Andies_38 Start: 29162, Stop: 29656, Start Num: 15

Candidate Starts for Andies_38:

(6, 28985), (9, 29048), (10, 29054), (Start: 15 @29162 has 27 MA's), (27, 29300), (29, 29327), (31, 29348), (36, 29381), (40, 29402), (41, 29408), (44, 29465), (51, 29552), (53, 29567),

Gene: Angel_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Angel_35:

(Start: 13 @29752 has 71 MA's),

Gene: Annihilator_35 Start: 29743, Stop: 30141, Start Num: 13

Candidate Starts for Annihilator_35:

(Start: 13 @29743 has 71 MA's),

Gene: Antsirabe_33 Start: 29804, Stop: 30169, Start Num: 13

Candidate Starts for Antsirabe_33:

(Start: 13 @29804 has 71 MA's), (47, 30059), (48, 30065),

Gene: Aroostook_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Aroostook_35:

(Start: 13 @29752 has 71 MA's),

Gene: Avocado_32 Start: 29799, Stop: 30224, Start Num: 13

Candidate Starts for Avocado_32:

(2, 29535), (3, 29553), (Start: 13 @29799 has 71 MA's), (Start: 16 @29814 has 10 MA's), (28, 29937), (32, 29979), (43, 30036), (46, 30075),

Gene: Avrafan_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Avrafan_35:

(Start: 13 @29752 has 71 MA's),

Gene: AzulaCat_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for AzulaCat_35:

(Start: 13 @29752 has 71 MA's),

Gene: BPs_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for BPs_35:

(Start: 13 @29752 has 71 MA's),

Gene: BQuat_35 Start: 29743, Stop: 30141, Start Num: 13

Candidate Starts for BQuat_35:

(Start: 13 @29743 has 71 MA's),

Gene: BabeRuth_43 Start: 30203, Stop: 30670, Start Num: 16

Candidate Starts for BabeRuth_43:

(1, 29849), (8, 30038), (Start: 16 @30203 has 10 MA's), (35, 30413), (42, 30440), (44, 30458), (54, 30581),

Gene: Barkley26_35 Start: 29774, Stop: 30172, Start Num: 13

Candidate Starts for Barkley26_35:

(Start: 13 @29774 has 71 MA's), (34, 29966),

Gene: Bosection6_38 Start: 28647, Stop: 29075, Start Num: 15

Candidate Starts for Bosection6_38:

(Start: 7 @28515 has 1 MA's), (Start: 15 @28647 has 27 MA's), (27, 28785), (29, 28812), (36, 28866), (52, 28980),

Gene: BruceB_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for BruceB_35:

(Start: 13 @29752 has 71 MA's),

Gene: CLED96_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for CLED96_35:

(Start: 13 @29752 has 71 MA's),

Gene: Cambiare_33 Start: 30266, Stop: 30694, Start Num: 13

Candidate Starts for Cambiare_33:

(Start: 13 @30266 has 71 MA's), (Start: 16 @30281 has 10 MA's), (31, 30446),

Gene: Camri_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Camri_35:

(Start: 13 @29752 has 71 MA's),

Gene: Carcharodon_40 Start: 29955, Stop: 30341, Start Num: 15

Candidate Starts for Carcharodon_40:

(Start: 7 @29823 has 1 MA's), (Start: 15 @29955 has 27 MA's), (27, 30093), (29, 30120), (52, 30246),

Gene: CassieYates_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for CassieYates_35:

(Start: 13 @29752 has 71 MA's),

Gene: Cedasite_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Cedasite_35:

(Start: 13 @29752 has 71 MA's),

Gene: Chance64_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Chance64_35:

(Start: 13 @29752 has 71 MA's),

Gene: Charlie_39 Start: 28646, Stop: 29074, Start Num: 15

Candidate Starts for Charlie_39:

(Start: 7 @28514 has 1 MA's), (Start: 15 @28646 has 27 MA's), (26, 28781), (29, 28811), (36, 28865), (52, 28979),

Gene: Cherrybomb426_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Cherrybomb426_35:

(Start: 13 @29752 has 71 MA's),

Gene: Chewbacca_42 Start: 29955, Stop: 30341, Start Num: 15

Candidate Starts for Chewbacca_42:

(Start: 7 @29823 has 1 MA's), (Start: 15 @29955 has 27 MA's), (27, 30093), (29, 30120), (52, 30246),

Gene: Cloudyecho_33 Start: 30002, Stop: 30412, Start Num: 16

Candidate Starts for Cloudyecho_33:

(Start: 13 @29987 has 71 MA's), (Start: 16 @30002 has 10 MA's), (56, 30377), (57, 30386),

Gene: Coleslaw_35 Start: 29743, Stop: 30141, Start Num: 13

Candidate Starts for Coleslaw_35:

(Start: 13 @29743 has 71 MA's),

Gene: Crespo_35 Start: 29753, Stop: 30151, Start Num: 13

Candidate Starts for Crespo_35:

(Start: 13 @29753 has 71 MA's),

Gene: Cubone_41 Start: 28668, Stop: 29096, Start Num: 15

Candidate Starts for Cubone_41:

(Start: 7 @28536 has 1 MA's), (Start: 15 @28668 has 27 MA's), (26, 28803), (29, 28833), (36, 28887), (52, 29001),

Gene: DMoney_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for DMoney_35:

(Start: 13 @29752 has 71 MA's),

Gene: DNAIII_0034 Start: 28386, Stop: 28784, Start Num: 13

Candidate Starts for DNAIII_0034:

(Start: 13 @28386 has 71 MA's),

Gene: Darionha_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Darionha_35:
(Start: 13 @29752 has 71 MA's),

Gene: DingDing_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for DingDing_35:
(Start: 13 @29752 has 71 MA's),

Gene: Duplicity_40 Start: 29964, Stop: 30350, Start Num: 15
Candidate Starts for Duplicity_40:
(Start: 7 @29832 has 1 MA's), (Start: 15 @29964 has 27 MA's), (27, 30102), (29, 30129), (52, 30255),

Gene: ECartman_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for ECartman_35:
(Start: 13 @29752 has 71 MA's),

Gene: EGUnicorn_39 Start: 28665, Stop: 29120, Start Num: 15
Candidate Starts for EGUnicorn_39:
(6, 28488), (9, 28551), (10, 28557), (Start: 15 @28665 has 27 MA's), (19, 28701), (21, 28719), (23, 28731), (29, 28857), (36, 28911), (52, 29025),

Gene: FlagStaff_32 Start: 29586, Stop: 30014, Start Num: 13
Candidate Starts for FlagStaff_32:
(Start: 13 @29586 has 71 MA's), (20, 29619), (24, 29661), (57, 29988),

Gene: Frankie_57 Start: 38804, Stop: 39259, Start Num: 15
Candidate Starts for Frankie_57:
(12, 38789), (Start: 15 @38804 has 27 MA's), (19, 38840), (21, 38858), (23, 38870), (27, 38969), (29, 38996), (36, 39050), (52, 39164),

Gene: Frosty24_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Frosty24_35:
(Start: 13 @29752 has 71 MA's),

Gene: Fulbright_39 Start: 28912, Stop: 29430, Start Num: 7
Candidate Starts for Fulbright_39:
(Start: 7 @28912 has 1 MA's), (Start: 15 @29044 has 27 MA's), (27, 29182), (29, 29209), (52, 29335),

Gene: Gex_40 Start: 29971, Stop: 30357, Start Num: 15
Candidate Starts for Gex_40:
(Start: 7 @29839 has 1 MA's), (Start: 15 @29971 has 27 MA's), (27, 30109), (29, 30136), (52, 30262),

Gene: Gideon_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Gideon_35:
(Start: 13 @29752 has 71 MA's),

Gene: GodSpeed_33 Start: 29609, Stop: 30040, Start Num: 13
Candidate Starts for GodSpeed_33:
(Start: 13 @29609 has 71 MA's), (20, 29645), (24, 29687), (28, 29753), (32, 29795), (57, 30014),

Gene: GoldenAsh_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for GoldenAsh_35:
(Start: 13 @29752 has 71 MA's),

Gene: Gomashi_35 Start: 29753, Stop: 30151, Start Num: 13
Candidate Starts for Gomashi_35:
(Start: 13 @29753 has 71 MA's),

Gene: Grizzly_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Grizzly_35:
(Start: 13 @29752 has 71 MA's),

Gene: Halo_35 Start: 29747, Stop: 30145, Start Num: 13
Candidate Starts for Halo_35:
(Start: 13 @29747 has 71 MA's),

Gene: Hanako_42 Start: 30202, Stop: 30669, Start Num: 16
Candidate Starts for Hanako_42:
(1, 29848), (8, 30037), (Start: 16 @30202 has 10 MA's), (35, 30412), (42, 30439), (44, 30457), (54, 30580),

Gene: Hope_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Hope_35:
(Start: 13 @29752 has 71 MA's),

Gene: Hotshotbaby7_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Hotshotbaby7_35:
(Start: 13 @29752 has 71 MA's),

Gene: Impisi_44 Start: 30758, Stop: 31165, Start Num: 16
Candidate Starts for Impisi_44:
(1, 30404), (4, 30464), (8, 30593), (Start: 16 @30758 has 10 MA's), (30, 30923), (37, 30974), (39, 30986),

Gene: Jamie19_38 Start: 29043, Stop: 29537, Start Num: 15
Candidate Starts for Jamie19_38:
(6, 28866), (9, 28929), (10, 28935), (Start: 15 @29043 has 27 MA's), (27, 29181), (29, 29208), (31, 29229), (36, 29262), (40, 29283), (41, 29289), (44, 29346), (51, 29433), (53, 29448),

Gene: Jane_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Jane_35:
(Start: 13 @29752 has 71 MA's),

Gene: Jeilious_35 Start: 29751, Stop: 30149, Start Num: 13
Candidate Starts for Jeilious_35:
(Start: 13 @29751 has 71 MA's),

Gene: Jolene_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Jolene_35:
(Start: 13 @29752 has 71 MA's),

Gene: Jolie2_33 Start: 28664, Stop: 29023, Start Num: 13
Candidate Starts for Jolie2_33:
(Start: 13 @28664 has 71 MA's), (38, 28853), (43, 28871), (45, 28898), (46, 28910), (48, 28934), (50, 28946),

Gene: Jonghyun_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Jonghyun_35:
(Start: 13 @29752 has 71 MA's),

Gene: JorRay_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for JorRay_35:
(Start: 13 @29752 has 71 MA's),

Gene: Journey_38 Start: 28646, Stop: 29074, Start Num: 15
Candidate Starts for Journey_38:
(Start: 7 @28514 has 1 MA's), (Start: 15 @28646 has 27 MA's), (26, 28781), (29, 28811), (36, 28865),
(52, 28979),

Gene: Kareem_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Kareem_35:
(Start: 13 @29752 has 71 MA's),

Gene: Kasen3_35 Start: 29753, Stop: 30151, Start Num: 13
Candidate Starts for Kasen3_35:
(Start: 13 @29753 has 71 MA's), (48, 30041),

Gene: Lemuria_34 Start: 29730, Stop: 30224, Start Num: 13
Candidate Starts for Lemuria_34:
(Start: 13 @29730 has 71 MA's), (18, 29748), (25, 29838), (28, 29889), (32, 29931), (43, 29988),

Gene: Liefie_35 Start: 29750, Stop: 30148, Start Num: 13
Candidate Starts for Liefie_35:
(Start: 13 @29750 has 71 MA's),

Gene: LouisV14_37 Start: 32017, Stop: 32415, Start Num: 13
Candidate Starts for LouisV14_37:
(Start: 13 @32017 has 71 MA's),

Gene: MOOREtheMARYer_34 Start: 30081, Stop: 30512, Start Num: 13
Candidate Starts for MOOREtheMARYer_34:
(Start: 13 @30081 has 71 MA's), (Start: 16 @30096 has 10 MA's), (28, 30219), (32, 30261), (47,
30375),

Gene: MZKinsey_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for MZKinsey_35:
(Start: 13 @29752 has 71 MA's),

Gene: Magsby_40 Start: 29972, Stop: 30358, Start Num: 15
Candidate Starts for Magsby_40:
(Start: 7 @29840 has 1 MA's), (Start: 15 @29972 has 27 MA's), (27, 30110), (29, 30137), (52, 30263),

Gene: Maliketh_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Maliketh_35:
(Start: 13 @29752 has 71 MA's),

Gene: Marmie_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Marmie_35:
(Start: 13 @29752 has 71 MA's),

Gene: Melville_43 Start: 29956, Stop: 30342, Start Num: 15

Candidate Starts for Melville_43:

(Start: 7 @29824 has 1 MA's), (Start: 15 @29956 has 27 MA's), (27, 30094), (29, 30121), (52, 30247),

Gene: Mercurio_35 Start: 30249, Stop: 30689, Start Num: 13

Candidate Starts for Mercurio_35:

(5, 30009), (11, 30198), (Start: 13 @30249 has 71 MA's), (18, 30267), (25, 30357), (28, 30408), (38, 30489), (43, 30507),

Gene: Mowgli_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Mowgli_35:

(Start: 13 @29752 has 71 MA's),

Gene: Nenae_42 Start: 30205, Stop: 30672, Start Num: 16

Candidate Starts for Nenae_42:

(1, 29851), (8, 30040), (Start: 16 @30205 has 10 MA's), (35, 30415), (42, 30442), (44, 30460), (54, 30583),

Gene: Neoh_35 Start: 29744, Stop: 30142, Start Num: 13

Candidate Starts for Neoh_35:

(Start: 13 @29744 has 71 MA's),

Gene: OctaviousRex_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for OctaviousRex_35:

(Start: 13 @29752 has 71 MA's),

Gene: Olga_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Olga_35:

(Start: 13 @29752 has 71 MA's),

Gene: Pace1224_32 Start: 29586, Stop: 30014, Start Num: 13

Candidate Starts for Pace1224_32:

(Start: 13 @29586 has 71 MA's), (20, 29619), (24, 29661), (57, 29988),

Gene: Paito_35 Start: 29933, Stop: 30331, Start Num: 13

Candidate Starts for Paito_35:

(Start: 13 @29933 has 71 MA's), (14, 29936), (33, 30110),

Gene: Panchino_37 Start: 30389, Stop: 30883, Start Num: 15

Candidate Starts for Panchino_37:

(6, 30212), (9, 30275), (10, 30281), (Start: 15 @30389 has 27 MA's), (27, 30527), (29, 30554), (31, 30575), (36, 30608), (40, 30629), (41, 30635), (44, 30692), (51, 30779), (53, 30794),

Gene: Parmesanjohn_40 Start: 29975, Stop: 30361, Start Num: 15

Candidate Starts for Parmesanjohn_40:

(Start: 7 @29843 has 1 MA's), (Start: 15 @29975 has 27 MA's), (27, 30113), (29, 30140), (52, 30266),

Gene: Peeb_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Peeb_35:

(Start: 13 @29752 has 71 MA's),

Gene: Periodt_35 Start: 29743, Stop: 30141, Start Num: 13

Candidate Starts for Periodt_35:
(Start: 13 @29743 has 71 MA's),

Gene: PhancyPhin_42 Start: 30199, Stop: 30666, Start Num: 16
Candidate Starts for PhancyPhin_42:
(1, 29845), (8, 30034), (Start: 16 @30199 has 10 MA's), (35, 30409), (42, 30436), (44, 30454), (54, 30577),

Gene: Phish_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Phish_35:
(Start: 13 @29752 has 71 MA's),

Gene: Phloodle_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Phloodle_35:
(Start: 13 @29752 has 71 MA's),

Gene: Phloss_38 Start: 29382, Stop: 29768, Start Num: 15
Candidate Starts for Phloss_38:
(Start: 7 @29250 has 1 MA's), (Start: 15 @29382 has 27 MA's), (27, 29520), (29, 29547), (52, 29673),

Gene: Phrann_42 Start: 31069, Stop: 31563, Start Num: 15
Candidate Starts for Phrann_42:
(6, 30892), (9, 30955), (10, 30961), (Start: 15 @31069 has 27 MA's), (27, 31207), (29, 31234), (31, 31255), (36, 31288), (40, 31309), (41, 31315), (44, 31372), (51, 31459), (53, 31474),

Gene: Phreak_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Phreak_35:
(Start: 13 @29752 has 71 MA's),

Gene: PinkYoshi_35 Start: 29743, Stop: 30141, Start Num: 13
Candidate Starts for PinkYoshi_35:
(Start: 13 @29743 has 71 MA's),

Gene: Pinnie_34 Start: 30452, Stop: 30880, Start Num: 13
Candidate Starts for Pinnie_34:
(Start: 13 @30452 has 71 MA's), (28, 30593), (48, 30755),

Gene: Pipsqueaks_40 Start: 29952, Stop: 30338, Start Num: 15
Candidate Starts for Pipsqueaks_40:
(Start: 7 @29820 has 1 MA's), (Start: 15 @29952 has 27 MA's), (27, 30090), (29, 30117), (52, 30243),

Gene: Plagueis_35 Start: 29587, Stop: 29985, Start Num: 13
Candidate Starts for Plagueis_35:
(Start: 13 @29587 has 71 MA's),

Gene: Purgamenstris_42 Start: 30203, Stop: 30670, Start Num: 16
Candidate Starts for Purgamenstris_42:
(1, 29849), (8, 30038), (Start: 16 @30203 has 10 MA's), (35, 30413), (42, 30440), (44, 30458), (54, 30581),

Gene: Rabbs_35 Start: 29835, Stop: 30233, Start Num: 13
Candidate Starts for Rabbs_35:
(Start: 13 @29835 has 71 MA's), (14, 29838), (17, 29856),

Gene: Rattrick_35 Start: 29743, Stop: 30141, Start Num: 13

Candidate Starts for Rattrick_35:

(Start: 13 @29743 has 71 MA's),

Gene: Raymond7_36 Start: 30015, Stop: 30482, Start Num: 16

Candidate Starts for Raymond7_36:

(1, 29661), (4, 29721), (8, 29850), (Start: 16 @30015 has 10 MA's), (35, 30225), (42, 30252), (44, 30270), (54, 30393),

Gene: Rebel_34 Start: 26333, Stop: 26800, Start Num: 16

Candidate Starts for Rebel_34:

(1, 25979), (8, 26168), (Start: 16 @26333 has 10 MA's), (35, 26543), (42, 26570), (44, 26588), (54, 26711),

Gene: Redi_42 Start: 30202, Stop: 30669, Start Num: 16

Candidate Starts for Redi_42:

(1, 29848), (8, 30037), (Start: 16 @30202 has 10 MA's), (35, 30412), (42, 30439), (44, 30457), (54, 30580),

Gene: Remy19_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Remy19_35:

(Start: 13 @29752 has 71 MA's),

Gene: Renaissance_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Renaissance_35:

(Start: 13 @29752 has 71 MA's),

Gene: Richarlison_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Richarlison_35:

(Start: 13 @29752 has 71 MA's),

Gene: Ruriko_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Ruriko_35:

(Start: 13 @29752 has 71 MA's),

Gene: Schiebel_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for Schiebel_35:

(Start: 13 @29752 has 71 MA's),

Gene: Schnauzer_41 Start: 29975, Stop: 30361, Start Num: 15

Candidate Starts for Schnauzer_41:

(Start: 7 @29843 has 1 MA's), (Start: 15 @29975 has 27 MA's), (27, 30113), (29, 30140), (52, 30266),

Gene: ShaboiShabazz_35 Start: 29752, Stop: 30150, Start Num: 13

Candidate Starts for ShaboiShabazz_35:

(Start: 13 @29752 has 71 MA's),

Gene: ShrimpFriedEgg_42 Start: 30202, Stop: 30669, Start Num: 16

Candidate Starts for ShrimpFriedEgg_42:

(1, 29848), (8, 30037), (Start: 16 @30202 has 10 MA's), (35, 30412), (42, 30439), (44, 30457), (54, 30580),

Gene: Shweta_38 Start: 29173, Stop: 29667, Start Num: 15

Candidate Starts for Shweta_38:

(6, 28996), (9, 29059), (10, 29065), (Start: 15 @29173 has 27 MA's), (27, 29311), (29, 29338), (31, 29359), (36, 29392), (40, 29413), (41, 29419), (44, 29476), (51, 29563), (53, 29578),

Gene: Silvafighter_41 Start: 29948, Stop: 30334, Start Num: 15

Candidate Starts for Silvafighter_41:

(Start: 7 @29816 has 1 MA's), (Start: 15 @29948 has 27 MA's), (27, 30086), (29, 30113), (52, 30239),

Gene: Sizemore_35 Start: 29753, Stop: 30151, Start Num: 13

Candidate Starts for Sizemore_35:

(Start: 13 @29753 has 71 MA's), (48, 30041),

Gene: Smurph_40 Start: 29975, Stop: 30361, Start Num: 15

Candidate Starts for Smurph_40:

(Start: 7 @29843 has 1 MA's), (Start: 15 @29975 has 27 MA's), (27, 30113), (29, 30140), (52, 30266),

Gene: Sneeze_35 Start: 29834, Stop: 30232, Start Num: 13

Candidate Starts for Sneeze_35:

(Start: 13 @29834 has 71 MA's), (14, 29837), (17, 29855),

Gene: Snekmaggedon_38 Start: 29043, Stop: 29537, Start Num: 15

Candidate Starts for Snekmaggedon_38:

(6, 28866), (9, 28929), (10, 28935), (Start: 15 @29043 has 27 MA's), (27, 29181), (29, 29208), (31, 29229), (36, 29262), (40, 29283), (41, 29289), (44, 29346), (51, 29433), (53, 29448),

Gene: Spinach_42 Start: 30202, Stop: 30669, Start Num: 16

Candidate Starts for Spinach_42:

(1, 29848), (8, 30037), (Start: 16 @30202 has 10 MA's), (35, 30412), (42, 30439), (44, 30457), (54, 30580),

Gene: SpongeBob_38 Start: 29043, Stop: 29537, Start Num: 15

Candidate Starts for SpongeBob_38:

(6, 28866), (9, 28929), (10, 28935), (Start: 15 @29043 has 27 MA's), (27, 29181), (29, 29208), (31, 29229), (36, 29262), (40, 29283), (41, 29289), (44, 29346), (51, 29433), (53, 29448),

Gene: Stargaze_33 Start: 29835, Stop: 30212, Start Num: 13

Candidate Starts for Stargaze_33:

(Start: 13 @29835 has 71 MA's), (22, 29895), (47, 30099), (48, 30105), (49, 30108), (55, 30180),

Gene: Sweets_35 Start: 29747, Stop: 30145, Start Num: 13

Candidate Starts for Sweets_35:

(Start: 13 @29747 has 71 MA's),

Gene: Taheera_35 Start: 29870, Stop: 30268, Start Num: 13

Candidate Starts for Taheera_35:

(Start: 13 @29870 has 71 MA's), (14, 29873),

Gene: Tapioca_42 Start: 29941, Stop: 30327, Start Num: 15

Candidate Starts for Tapioca_42:

(Start: 7 @29809 has 1 MA's), (Start: 15 @29941 has 27 MA's), (27, 30079), (29, 30106), (52, 30232),

Gene: Terror_35 Start: 29870, Stop: 30268, Start Num: 13

Candidate Starts for Terror_35:
(Start: 13 @29870 has 71 MA's), (14, 29873),

Gene: Tessdabest_41 Start: 29972, Stop: 30358, Start Num: 15
Candidate Starts for Tessdabest_41:
(Start: 7 @29840 has 1 MA's), (Start: 15 @29972 has 27 MA's), (27, 30110), (29, 30137), (52, 30263),

Gene: TinaBug_35 Start: 29747, Stop: 30145, Start Num: 13
Candidate Starts for TinaBug_35:
(Start: 13 @29747 has 71 MA's),

Gene: TomBrady_35 Start: 29753, Stop: 30151, Start Num: 13
Candidate Starts for TomBrady_35:
(Start: 13 @29753 has 71 MA's),

Gene: Tortoise12_39 Start: 28658, Stop: 29044, Start Num: 15
Candidate Starts for Tortoise12_39:
(Start: 7 @28526 has 1 MA's), (Start: 15 @28658 has 27 MA's), (27, 28796), (29, 28823), (52, 28949),

Gene: Wendigo_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Wendigo_35:
(Start: 13 @29752 has 71 MA's),

Gene: Xerxes_40 Start: 29972, Stop: 30358, Start Num: 15
Candidate Starts for Xerxes_40:
(Start: 7 @29840 has 1 MA's), (Start: 15 @29972 has 27 MA's), (27, 30110), (29, 30137), (52, 30263),

Gene: YangYin_33 Start: 29861, Stop: 30238, Start Num: 13
Candidate Starts for YangYin_33:
(Start: 13 @29861 has 71 MA's), (22, 29921), (47, 30125), (48, 30131), (49, 30134), (55, 30206),

Gene: ZoMa_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for ZoMa_35:
(Start: 13 @29752 has 71 MA's),

Gene: Zombie_35 Start: 29752, Stop: 30150, Start Num: 13
Candidate Starts for Zombie_35:
(Start: 13 @29752 has 71 MA's),