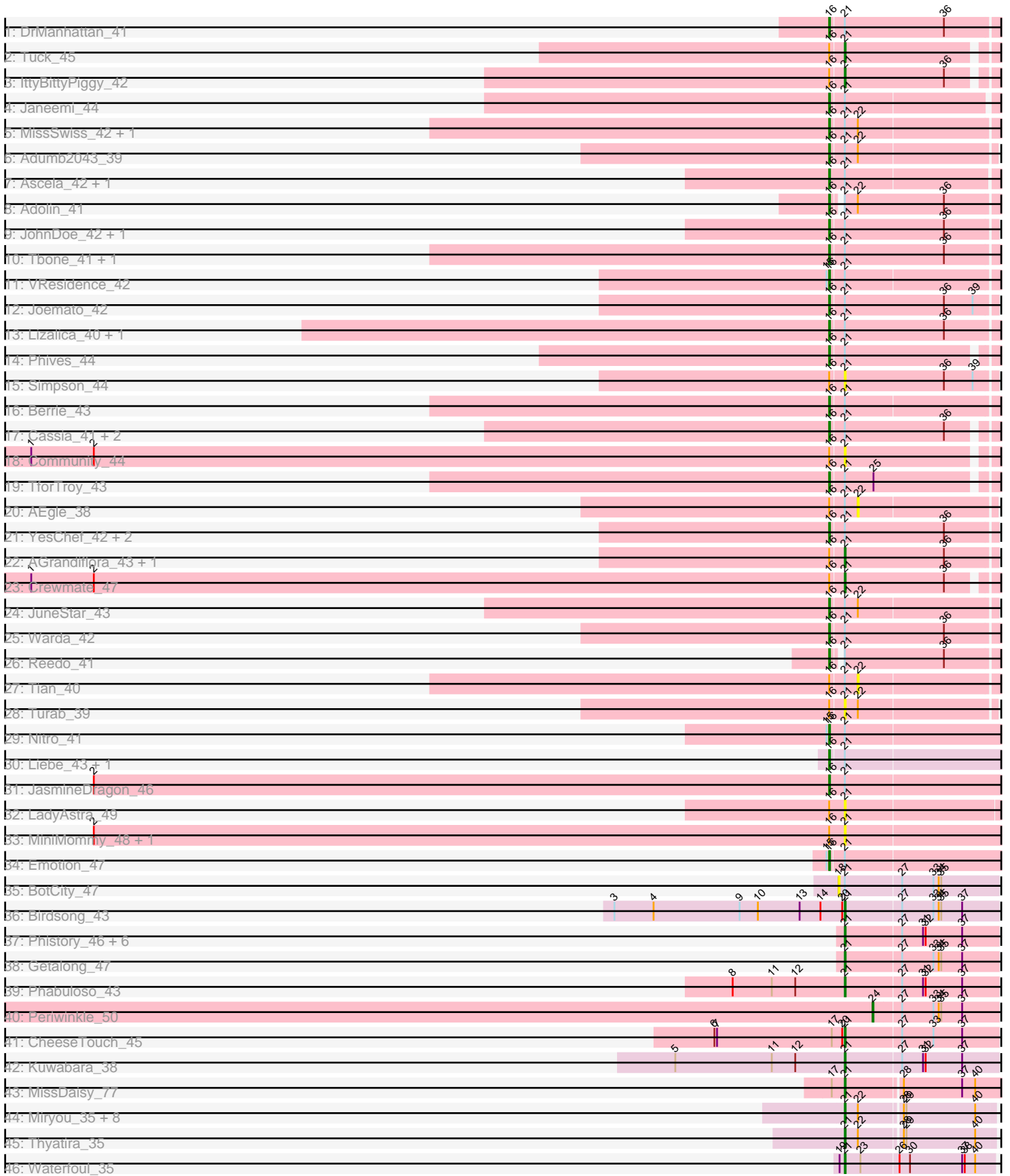


Pham 216122



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 216122 Report

This analysis was run 02/22/25 on database version 588.

Pham number 216122 has 72 members, 12 are drafts.

Phages represented in each track:

- Track 1 : DrManhattan_41
- Track 2 : Tuck_45
- Track 3 : IttyBittyPiggy_42
- Track 4 : Janeemi_44
- Track 5 : MissSwiss_42, Amyev_41
- Track 6 : Adumb2043_39
- Track 7 : Ascela_42, lter_42
- Track 8 : Adolin_41
- Track 9 : JohnDoe_42, ObiToo_47
- Track 10 : Tbone_41, Kaylissa_43
- Track 11 : VResidence_42
- Track 12 : Joemato_42
- Track 13 : Lizalica_40, Tallboi_41
- Track 14 : Phives_44
- Track 15 : Simpson_44
- Track 16 : Berrie_43
- Track 17 : Cassia_41, Pixelle_42, Pumpkins_41
- Track 18 : Community_44
- Track 19 : TforTroy_43
- Track 20 : AEgle_38
- Track 21 : YesChef_42, Powerpuff_44, Tutumahutu_43
- Track 22 : AGrandiflora_43, Cyan_42
- Track 23 : Crewmate_47
- Track 24 : JuneStar_43
- Track 25 : Warda_42
- Track 26 : Reedo_41
- Track 27 : Tian_40
- Track 28 : Turab_39
- Track 29 : Nitro_41
- Track 30 : Liebe_43, Maureen_43
- Track 31 : JasmineDragon_46
- Track 32 : LadyAstra_49
- Track 33 : MiniMommy_48, ShakeltOph_48
- Track 34 : Emotion_47
- Track 35 : BotCity_47
- Track 36 : Birdsong_43

- Track 37 : Phistory_46, Crater_43, Kenna_45, Lutum_46, Holliday_45, Frickyeah_46, ShawBrad_46
- Track 38 : Getalong_47
- Track 39 : Phabuloso_43
- Track 40 : Periwinkle_50
- Track 41 : CheeseTouch_45
- Track 42 : Kuwabara_38
- Track 43 : MissDaisy_77
- Track 44 : Miryou_35, Guillsminger_35, Gengar_35, SoSeph_35, OkiRoe_35, Feyre_35, Heftyboy_35, Paola_35, Leston_35
- Track 45 : Thyatira_35
- Track 46 : Waterfoul_35

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

The start number called the most often in the published annotations is 16, it was called in 33 of the 60 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adolin_41, Adumb2043_39, Amyev_41, Ascela_42, Berrie_43, Cassia_41, DrManhattan_41, Emotion_47, Iter_42, Janeemi_44, JasmineDragon_46, Joemato_42, JohnDoe_42, JuneStar_43, Kaylissa_43, Liebe_43, Lizalica_40, Maureen_43, MissSwiss_42, Nitro_41, ObiToo_47, Phives_44, Pixelle_42, Powerpuff_44, Pumpkins_41, Reedo_41, Tallboi_41, Tbone_41, TforTroy_43, Tutumahutu_43, VResidence_42, Warda_42, YesChef_42,

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

- AEgle_38, AGrandiflora_43, Community_44, Crewmate_47, Cyan_42, IttyBittyPiggy_42, LadyAstra_49, MiniMommy_48, ShakeltOph_48, Simpson_44, Tian_40, Tuck_45, Turab_39,

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

- Birdsong_43, BotCity_47, CheeseTouch_45, Crater_43, Feyre_35, Frickyeah_46, Gengar_35, Getalong_47, Guillsminger_35, Heftyboy_35, Holliday_45, Kenna_45, Kuwabara_38, Leston_35, Lutum_46, Miryou_35, MissDaisy_77, OkiRoe_35, Paola_35, Periwinkle_50, Phabuloso_43, Phistory_46, ShawBrad_46, SoSeph_35, Thyatira_35, Waterfoul_35,

Summary by start number:

Start 16:

- Found in 46 of 72 (63.9%) of genes in pham
- Manual Annotations of this start: 33 of 60
- Called 71.7% of time when present
- Phage (with cluster) where this start called: Adolin_41 (AZ1), Adumb2043_39 (AZ1), Amyev_41 (AZ1), Ascela_42 (AZ1), Berrie_43 (AZ1), Cassia_41 (AZ1), DrManhattan_41 (AZ1), Emotion_47 (AZ4), Iter_42 (AZ1), Janeemi_44 (AZ1), JasmineDragon_46 (AZ4), Joemato_42 (AZ1), JohnDoe_42 (AZ1), JuneStar_43 (AZ1), Kaylissa_43 (AZ1), Liebe_43 (AZ2), Lizalica_40 (AZ1), Maureen_43 (AZ2), MissSwiss_42 (AZ1), Nitro_41 (AZ1), ObiToo_47 (AZ1), Phives_44 (AZ1), Pixelle_42

(AZ1), Powerpuff_44 (AZ1), Pumpkins_41 (AZ1), Reedo_41 (AZ1), Tallboi_41 (AZ1), Tbone_41 (AZ1), TforTroy_43 (AZ1), Tutumahutu_43 (AZ1), VResidence_42 (AZ1), Warda_42 (AZ1), YesChef_42 (AZ1),

Start 18:

- Found in 1 of 72 (1.4%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BotCity_47 (DN),

Start 21:

- Found in 71 of 72 (98.6%) of genes in pham
- Manual Annotations of this start: 26 of 60
- Called 49.3% of time when present
- Phage (with cluster) where this start called: AGrandiflora_43 (AZ1), Birdsong_43 (DN), CheeseTouch_45 (DN1), Community_44 (AZ1), Crater_43 (DN3), Crewmate_47 (AZ1), Cyan_42 (AZ1), Feyre_35 (K5), Frickyeah_46 (DN1), Gengar_35 (K5), Getalong_47 (DN1), Guillsminger_35 (K5), Heftyboy_35 (K5), Holliday_45 (DN1), IttyBittyPiggy_42 (AZ1), Kenna_45 (DN1), Kuwabara_38 (DN4), LadyAstra_49 (AZ4), Leston_35 (K5), Lutum_46 (DN1), MiniMommy_48 (AZ4), Miryou_35 (K5), MissDaisy_77 (K4), OkiRoe_35 (K5), Paola_35 (K5), Phabuloso_43 (DN1), Phistory_46 (DN1), ShakeltOph_48 (AZ4), ShawBrad_46 (DN1), Simpson_44 (AZ1), SoSeph_35 (K5), Thyatira_35 (K5), Tuck_45 (AZ1), Turab_39 (AZ1), Waterfoul_35 (K5),

Start 22:

- Found in 18 of 72 (25.0%) of genes in pham
- No Manual Annotations of this start.
- Called 11.1% of time when present
- Phage (with cluster) where this start called: AEgle_38 (AZ1), Tian_40 (AZ1),

Start 24:

- Found in 1 of 72 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 60
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Periwinkle_50 (DN1),

Summary by clusters:

There are 9 clusters represented in this pham: DN, DN3, DN4, DN1, K5, K4, AZ1, AZ2, AZ4,

Info for manual annotations of cluster AZ1:

- Start number 16 was manually annotated 29 times for cluster AZ1.
- Start number 21 was manually annotated 4 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 16 was manually annotated 2 times for cluster AZ2.

Info for manual annotations of cluster AZ4:

- Start number 16 was manually annotated 2 times for cluster AZ4.

Info for manual annotations of cluster DN:

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

Info for manual annotations of cluster DN1:

- Start number 21 was manually annotated 7 times for cluster DN1.
- Start number 24 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster DN3:

- Start number 21 was manually annotated 1 time for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 21 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster K4:

- Start number 21 was manually annotated 1 time for cluster K4.

Info for manual annotations of cluster K5:

- Start number 21 was manually annotated 11 times for cluster K5.

Gene Information:

Gene: AEgle_38 Start: 30681, Stop: 30833, Start Num: 22

Candidate Starts for AEgle_38:

(Start: 16 @30651 has 33 MA's), (Start: 21 @30666 has 26 MA's), (22, 30681),

Gene: AGrandiflora_43 Start: 31946, Stop: 32116, Start Num: 21

Candidate Starts for AGrandiflora_43:

(Start: 16 @31931 has 33 MA's), (Start: 21 @31946 has 26 MA's), (36, 32060),

Gene: Adolin_41 Start: 29698, Stop: 29877, Start Num: 16

Candidate Starts for Adolin_41:

(Start: 16 @29698 has 33 MA's), (Start: 21 @29704 has 26 MA's), (22, 29719), (36, 29818),

Gene: Adumb2043_39 Start: 30670, Stop: 30852, Start Num: 16

Candidate Starts for Adumb2043_39:

(Start: 16 @30670 has 33 MA's), (Start: 21 @30685 has 26 MA's), (22, 30700),

Gene: Amyev_41 Start: 32225, Stop: 32410, Start Num: 16

Candidate Starts for Amyev_41:

(Start: 16 @32225 has 33 MA's), (Start: 21 @32240 has 26 MA's), (22, 32255),

Gene: Ascela_42 Start: 31469, Stop: 31672, Start Num: 16

Candidate Starts for Ascela_42:

(Start: 16 @31469 has 33 MA's), (Start: 21 @31487 has 26 MA's),

Gene: Berrie_43 Start: 32374, Stop: 32559, Start Num: 16

Candidate Starts for Berrie_43:

(Start: 16 @32374 has 33 MA's), (Start: 21 @32389 has 26 MA's),

Gene: Birdsong_43 Start: 31367, Stop: 31540, Start Num: 21

Candidate Starts for Birdsong_43:

(3, 31103), (4, 31148), (9, 31247), (10, 31268), (13, 31316), (14, 31340), (20, 31364), (Start: 21 @31367 has 26 MA's), (27, 31430), (33, 31466), (34, 31472), (35, 31475), (37, 31499),

Gene: BotCity_47 Start: 31152, Stop: 31331, Start Num: 18

Candidate Starts for BotCity_47:

(18, 31152), (Start: 21 @31158 has 26 MA's), (27, 31221), (33, 31257), (34, 31263), (35, 31266),

Gene: Cassia_41 Start: 31213, Stop: 31389, Start Num: 16

Candidate Starts for Cassia_41:

(Start: 16 @31213 has 33 MA's), (Start: 21 @31228 has 26 MA's), (36, 31342),

Gene: CheeseTouch_45 Start: 28896, Stop: 29069, Start Num: 21

Candidate Starts for CheeseTouch_45:

(6, 28746), (7, 28749), (17, 28881), (20, 28893), (Start: 21 @28896 has 26 MA's), (27, 28959), (33, 28995), (37, 29028),

Gene: Community_44 Start: 33211, Stop: 33372, Start Num: 21

Candidate Starts for Community_44:

(1, 32278), (2, 32350), (Start: 16 @33196 has 33 MA's), (Start: 21 @33211 has 26 MA's),

Gene: Crater_43 Start: 30258, Stop: 30431, Start Num: 21

Candidate Starts for Crater_43:

(Start: 21 @30258 has 26 MA's), (27, 30321), (31, 30345), (32, 30348), (37, 30390),

Gene: Crewmate_47 Start: 31902, Stop: 32063, Start Num: 21

Candidate Starts for Crewmate_47:

(1, 30969), (2, 31041), (Start: 16 @31887 has 33 MA's), (Start: 21 @31902 has 26 MA's), (36, 32016),

Gene: Cyan_42 Start: 31554, Stop: 31724, Start Num: 21

Candidate Starts for Cyan_42:

(Start: 16 @31539 has 33 MA's), (Start: 21 @31554 has 26 MA's), (36, 31668),

Gene: DrManhattan_41 Start: 29689, Stop: 29880, Start Num: 16

Candidate Starts for DrManhattan_41:

(Start: 16 @29689 has 33 MA's), (Start: 21 @29704 has 26 MA's), (36, 29818),

Gene: Emotion_47 Start: 33180, Stop: 33395, Start Num: 16

Candidate Starts for Emotion_47:

(15, 33177), (Start: 16 @33180 has 33 MA's), (Start: 21 @33195 has 26 MA's),

Gene: Feyre_35 Start: 30060, Stop: 30221, Start Num: 21

Candidate Starts for Feyre_35:

(Start: 21 @30060 has 26 MA's), (22, 30075), (28, 30120), (29, 30123), (40, 30201),

Gene: Frickyeah_46 Start: 30210, Stop: 30383, Start Num: 21

Candidate Starts for Frickyeah_46:

(Start: 21 @30210 has 26 MA's), (27, 30273), (31, 30297), (32, 30300), (37, 30342),

Gene: Gengar_35 Start: 30170, Stop: 30331, Start Num: 21

Candidate Starts for Gengar_35:

(Start: 21 @30170 has 26 MA's), (22, 30185), (28, 30230), (29, 30233), (40, 30311),

Gene: Getalong_47 Start: 32994, Stop: 33167, Start Num: 21

Candidate Starts for Getalong_47:

(Start: 21 @32994 has 26 MA's), (27, 33057), (33, 33093), (34, 33099), (35, 33102), (37, 33126),

Gene: Guillsminger_35 Start: 30141, Stop: 30302, Start Num: 21

Candidate Starts for Guillsminger_35:

(Start: 21 @30141 has 26 MA's), (22, 30156), (28, 30201), (29, 30204), (40, 30282),

Gene: Heftyboy_35 Start: 30287, Stop: 30448, Start Num: 21

Candidate Starts for Heftyboy_35:

(Start: 21 @30287 has 26 MA's), (22, 30302), (28, 30347), (29, 30350), (40, 30428),

Gene: Holliday_45 Start: 30785, Stop: 30958, Start Num: 21

Candidate Starts for Holliday_45:

(Start: 21 @30785 has 26 MA's), (27, 30848), (31, 30872), (32, 30875), (37, 30917),

Gene: Iter_42 Start: 31465, Stop: 31668, Start Num: 16

Candidate Starts for Iter_42:

(Start: 16 @31465 has 33 MA's), (Start: 21 @31483 has 26 MA's),

Gene: IttyBittyPiggy_42 Start: 31021, Stop: 31182, Start Num: 21

Candidate Starts for IttyBittyPiggy_42:

(Start: 16 @31006 has 33 MA's), (Start: 21 @31021 has 26 MA's), (36, 31135),

Gene: Janeemi_44 Start: 33187, Stop: 33369, Start Num: 16

Candidate Starts for Janeemi_44:

(Start: 16 @33187 has 33 MA's), (Start: 21 @33202 has 26 MA's),

Gene: JasmineDragon_46 Start: 32416, Stop: 32613, Start Num: 16

Candidate Starts for JasmineDragon_46:

(2, 31570), (Start: 16 @32416 has 33 MA's), (Start: 21 @32434 has 26 MA's),

Gene: Joemato_42 Start: 31566, Stop: 31751, Start Num: 16

Candidate Starts for Joemato_42:

(Start: 16 @31566 has 33 MA's), (Start: 21 @31581 has 26 MA's), (36, 31695), (39, 31728),

Gene: JohnDoe_42 Start: 31562, Stop: 31747, Start Num: 16

Candidate Starts for JohnDoe_42:

(Start: 16 @31562 has 33 MA's), (Start: 21 @31577 has 26 MA's), (36, 31691),

Gene: JuneStar_43 Start: 33108, Stop: 33290, Start Num: 16

Candidate Starts for JuneStar_43:

(Start: 16 @33108 has 33 MA's), (Start: 21 @33123 has 26 MA's), (22, 33138),

Gene: Kaylissa_43 Start: 31952, Stop: 32137, Start Num: 16

Candidate Starts for Kaylissa_43:

(Start: 16 @31952 has 33 MA's), (Start: 21 @31967 has 26 MA's), (36, 32081),

Gene: Kenna_45 Start: 31121, Stop: 31294, Start Num: 21

Candidate Starts for Kenna_45:

(Start: 21 @31121 has 26 MA's), (27, 31184), (31, 31208), (32, 31211), (37, 31253),

Gene: Kuwabara_38 Start: 29852, Stop: 30025, Start Num: 21

Candidate Starts for Kuwabara_38:

(5, 29657), (11, 29768), (12, 29795), (Start: 21 @29852 has 26 MA's), (27, 29915), (31, 29939), (32, 29942), (37, 29984),

Gene: LadyAstra_49 Start: 32557, Stop: 32733, Start Num: 21
Candidate Starts for LadyAstra_49:
(Start: 16 @32539 has 33 MA's), (Start: 21 @32557 has 26 MA's),

Gene: Leston_35 Start: 30271, Stop: 30432, Start Num: 21
Candidate Starts for Leston_35:
(Start: 21 @30271 has 26 MA's), (22, 30286), (28, 30331), (29, 30334), (40, 30412),

Gene: Liebe_43 Start: 33220, Stop: 33411, Start Num: 16
Candidate Starts for Liebe_43:
(Start: 16 @33220 has 33 MA's), (Start: 21 @33235 has 26 MA's),

Gene: Lizalica_40 Start: 30647, Stop: 30835, Start Num: 16
Candidate Starts for Lizalica_40:
(Start: 16 @30647 has 33 MA's), (Start: 21 @30662 has 26 MA's), (36, 30776),

Gene: Lutum_46 Start: 31121, Stop: 31294, Start Num: 21
Candidate Starts for Lutum_46:
(Start: 21 @31121 has 26 MA's), (27, 31184), (31, 31208), (32, 31211), (37, 31253),

Gene: Maureen_43 Start: 33220, Stop: 33411, Start Num: 16
Candidate Starts for Maureen_43:
(Start: 16 @33220 has 33 MA's), (Start: 21 @33235 has 26 MA's),

Gene: MiniMommy_48 Start: 32435, Stop: 32614, Start Num: 21
Candidate Starts for MiniMommy_48:
(2, 31571), (Start: 16 @32417 has 33 MA's), (Start: 21 @32435 has 26 MA's),

Gene: Miryou_35 Start: 30126, Stop: 30287, Start Num: 21
Candidate Starts for Miryou_35:
(Start: 21 @30126 has 26 MA's), (22, 30141), (28, 30186), (29, 30189), (40, 30267),

Gene: MissDaisy_77 Start: 48998, Stop: 49168, Start Num: 21
Candidate Starts for MissDaisy_77:
(17, 48983), (Start: 21 @48998 has 26 MA's), (28, 49058), (37, 49124), (40, 49139),

Gene: MissSwiss_42 Start: 30190, Stop: 30375, Start Num: 16
Candidate Starts for MissSwiss_42:
(Start: 16 @30190 has 33 MA's), (Start: 21 @30205 has 26 MA's), (22, 30220),

Gene: Nitro_41 Start: 32074, Stop: 32274, Start Num: 16
Candidate Starts for Nitro_41:
(15, 32071), (Start: 16 @32074 has 33 MA's), (Start: 21 @32089 has 26 MA's),

Gene: ObiToo_47 Start: 32330, Stop: 32506, Start Num: 16
Candidate Starts for ObiToo_47:
(Start: 16 @32330 has 33 MA's), (Start: 21 @32345 has 26 MA's), (36, 32459),

Gene: OkiRoe_35 Start: 30143, Stop: 30304, Start Num: 21
Candidate Starts for OkiRoe_35:

(Start: 21 @30143 has 26 MA's), (22, 30158), (28, 30203), (29, 30206), (40, 30284),

Gene: Paola_35 Start: 30141, Stop: 30302, Start Num: 21

Candidate Starts for Paola_35:

(Start: 21 @30141 has 26 MA's), (22, 30156), (28, 30201), (29, 30204), (40, 30282),

Gene: Periwinkle_50 Start: 33020, Stop: 33160, Start Num: 24

Candidate Starts for Periwinkle_50:

(Start: 24 @33020 has 1 MA's), (27, 33050), (33, 33086), (34, 33092), (35, 33095), (37, 33119),

Gene: Phabuloso_43 Start: 30837, Stop: 31010, Start Num: 21

Candidate Starts for Phabuloso_43:

(8, 30708), (11, 30753), (12, 30780), (Start: 21 @30837 has 26 MA's), (27, 30900), (31, 30924), (32, 30927), (37, 30969),

Gene: Phistory_46 Start: 31472, Stop: 31645, Start Num: 21

Candidate Starts for Phistory_46:

(Start: 21 @31472 has 26 MA's), (27, 31535), (31, 31559), (32, 31562), (37, 31604),

Gene: Phives_44 Start: 33024, Stop: 33200, Start Num: 16

Candidate Starts for Phives_44:

(Start: 16 @33024 has 33 MA's), (Start: 21 @33039 has 26 MA's),

Gene: Pixelle_42 Start: 32248, Stop: 32436, Start Num: 16

Candidate Starts for Pixelle_42:

(Start: 16 @32248 has 33 MA's), (Start: 21 @32263 has 26 MA's), (36, 32377),

Gene: Powerpuff_44 Start: 32654, Stop: 32839, Start Num: 16

Candidate Starts for Powerpuff_44:

(Start: 16 @32654 has 33 MA's), (Start: 21 @32669 has 26 MA's), (36, 32783),

Gene: Pumpkins_41 Start: 31677, Stop: 31853, Start Num: 16

Candidate Starts for Pumpkins_41:

(Start: 16 @31677 has 33 MA's), (Start: 21 @31692 has 26 MA's), (36, 31806),

Gene: Reedo_41 Start: 29794, Stop: 29988, Start Num: 16

Candidate Starts for Reedo_41:

(Start: 16 @29794 has 33 MA's), (Start: 21 @29800 has 26 MA's), (36, 29914),

Gene: ShakeltOph_48 Start: 32434, Stop: 32613, Start Num: 21

Candidate Starts for ShakeltOph_48:

(2, 31570), (Start: 16 @32416 has 33 MA's), (Start: 21 @32434 has 26 MA's),

Gene: ShawBrad_46 Start: 30695, Stop: 30868, Start Num: 21

Candidate Starts for ShawBrad_46:

(Start: 21 @30695 has 26 MA's), (27, 30758), (31, 30782), (32, 30785), (37, 30827),

Gene: Simpson_44 Start: 31585, Stop: 31755, Start Num: 21

Candidate Starts for Simpson_44:

(Start: 16 @31570 has 33 MA's), (Start: 21 @31585 has 26 MA's), (36, 31699), (39, 31732),

Gene: SoSeph_35 Start: 30287, Stop: 30448, Start Num: 21

Candidate Starts for SoSeph_35:

(Start: 21 @30287 has 26 MA's), (22, 30302), (28, 30347), (29, 30350), (40, 30428),

Gene: Tallboi_41 Start: 32404, Stop: 32592, Start Num: 16

Candidate Starts for Tallboi_41:

(Start: 16 @32404 has 33 MA's), (Start: 21 @32419 has 26 MA's), (36, 32533),

Gene: Tbone_41 Start: 31365, Stop: 31553, Start Num: 16

Candidate Starts for Tbone_41:

(Start: 16 @31365 has 33 MA's), (Start: 21 @31380 has 26 MA's), (36, 31494),

Gene: TforTroy_43 Start: 31539, Stop: 31715, Start Num: 16

Candidate Starts for TforTroy_43:

(Start: 16 @31539 has 33 MA's), (Start: 21 @31554 has 26 MA's), (25, 31587),

Gene: Thyatira_35 Start: 30141, Stop: 30302, Start Num: 21

Candidate Starts for Thyatira_35:

(Start: 21 @30141 has 26 MA's), (22, 30156), (28, 30201), (29, 30204), (40, 30282),

Gene: Tian_40 Start: 32255, Stop: 32410, Start Num: 22

Candidate Starts for Tian_40:

(Start: 16 @32225 has 33 MA's), (Start: 21 @32240 has 26 MA's), (22, 32255),

Gene: Tuck_45 Start: 33591, Stop: 33752, Start Num: 21

Candidate Starts for Tuck_45:

(Start: 16 @33576 has 33 MA's), (Start: 21 @33591 has 26 MA's),

Gene: Turab_39 Start: 30685, Stop: 30852, Start Num: 21

Candidate Starts for Turab_39:

(Start: 16 @30670 has 33 MA's), (Start: 21 @30685 has 26 MA's), (22, 30700),

Gene: Tutumahutu_43 Start: 31537, Stop: 31722, Start Num: 16

Candidate Starts for Tutumahutu_43:

(Start: 16 @31537 has 33 MA's), (Start: 21 @31552 has 26 MA's), (36, 31666),

Gene: VResidence_42 Start: 31016, Stop: 31201, Start Num: 16

Candidate Starts for VResidence_42:

(15, 31013), (Start: 16 @31016 has 33 MA's), (Start: 21 @31031 has 26 MA's),

Gene: Warda_42 Start: 31541, Stop: 31729, Start Num: 16

Candidate Starts for Warda_42:

(Start: 16 @31541 has 33 MA's), (Start: 21 @31556 has 26 MA's), (36, 31670),

Gene: Waterfoul_35 Start: 30197, Stop: 30364, Start Num: 21

Candidate Starts for Waterfoul_35:

(19, 30191), (Start: 21 @30197 has 26 MA's), (23, 30215), (26, 30257), (30, 30269), (37, 30329), (38, 30332), (40, 30344),

Gene: YesChef_42 Start: 31513, Stop: 31698, Start Num: 16

Candidate Starts for YesChef_42:

(Start: 16 @31513 has 33 MA's), (Start: 21 @31528 has 26 MA's), (36, 31642),