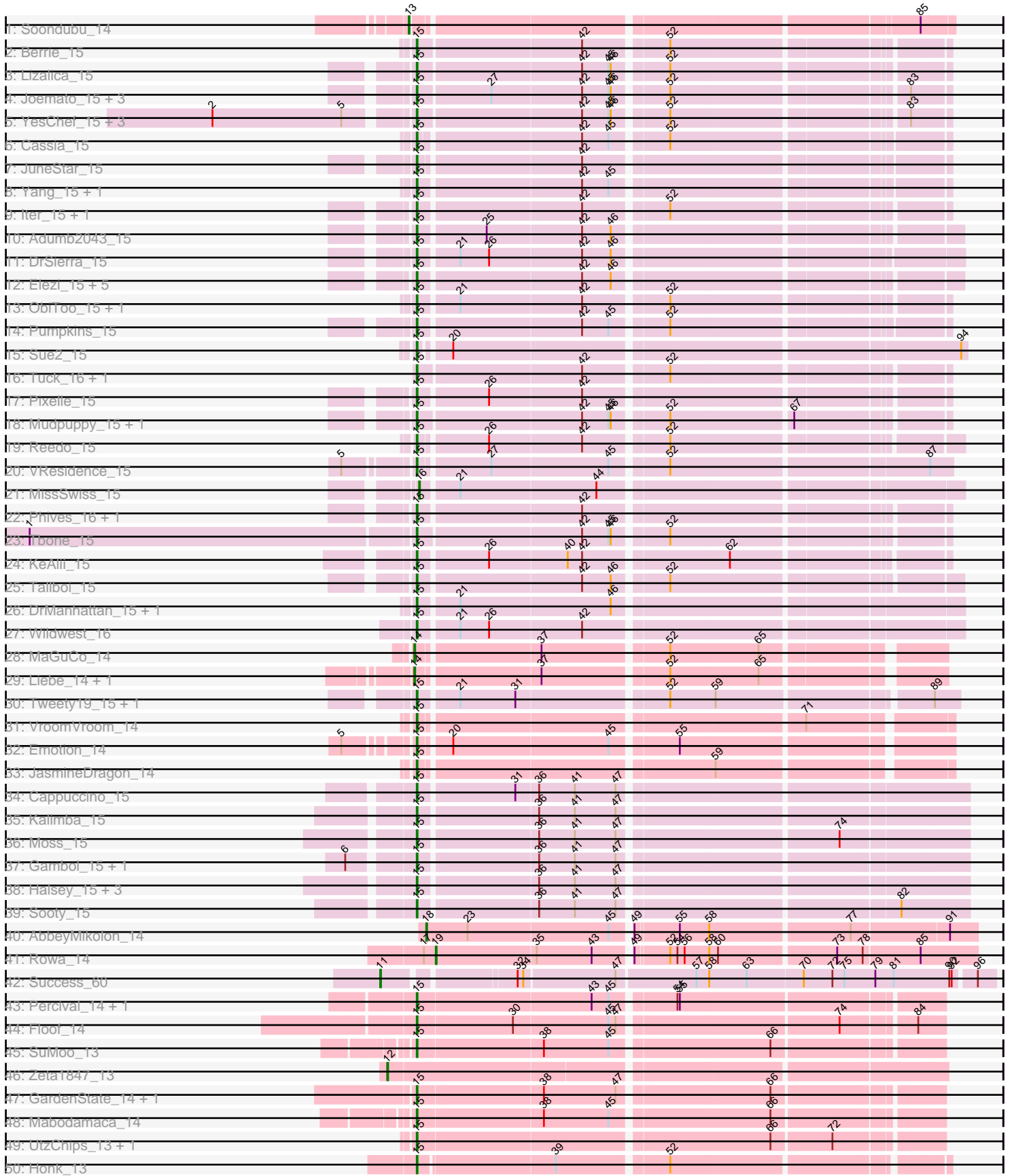


Pham 202869



Pham 202869



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 202869 Report

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

Pham number 202869 has 83 members, 0 are drafts.

Phages represented in each track:

- Track 1 : Soondubu_14
- Track 2 : Berrie_15
- Track 3 : Lizalica_15
- Track 4 : Joemato_15, JohnDoe_15, Cyan_15, Kaylissa_15
- Track 5 : YesChef_15, Powerpuff_15, Tutumahutu_15, Lego_15
- Track 6 : Cassia_15
- Track 7 : JuneStar_15
- Track 8 : Yang_15, TforTroy_15
- Track 9 : Iter_15, Ascela_15
- Track 10 : Adumb2043_15
- Track 11 : DrSierra_15
- Track 12 : Elezi_15, Nitro_15, Niobe_15, Asa16_15, Eraser_15, London_15
- Track 13 : ObiToo_15, Crewmate_16
- Track 14 : Pumpkins_15
- Track 15 : Sue2_15
- Track 16 : Tuck_16, Janeemi_16
- Track 17 : Pixelle_15
- Track 18 : Mudpuppy_15, Warda_15
- Track 19 : Reedo_15
- Track 20 : VResidence_15
- Track 21 : MissSwiss_15
- Track 22 : Phives_16, Amyev_15
- Track 23 : Tbone_15
- Track 24 : KeAlii_15
- Track 25 : Tallboi_15
- Track 26 : DrManhattan_15, Adolin_14
- Track 27 : Wildwest_16
- Track 28 : MaGuCo_14
- Track 29 : Liebe_14, Maureen_14
- Track 30 : Tweety19_15, Snek_15
- Track 31 : VroomVroom_14
- Track 32 : Emotion_14
- Track 33 : JasmineDragon_14
- Track 34 : Cappuccino_15
- Track 35 : Kalimba_15
- Track 36 : Moss_15
- Track 37 : Gambol_15, Donkey_15

- Track 38 : Halsey_15, Ashes_15, SpecialK_15, Mysterium_15
- Track 39 : Sooty_15
- Track 40 : AbbeyMikolon_14
- Track 41 : Rowa_14
- Track 42 : Success_60
- Track 43 : Percival_14, Gretchen_14
- Track 44 : Floof_14
- Track 45 : SuMoo_13
- Track 46 : Zeta1847_13
- Track 47 : GardenState_14, IAmGroot_14
- Track 48 : Mabodamaca_14
- Track 49 : UtzChips_13, Barnstormer_13
- Track 50 : Honk_13
- Track 51 : Cen1621_13
- Track 52 : Caron_13
- Track 53 : IdentityCrisis_14
- Track 54 : Ponzi_53
- Track 55 : Ibantik_78
- Track 56 : Kromp_16

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

The start number called the most often in the published annotations is 15, it was called in 70 of the 83 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Adolin_14, Adumb2043_15, Amyev_15, Asa16_15, Ascela_15, Ashes_15, Barnstormer_13, Berrie_15, Cappuccino_15, Caron_13, Cassia_15, Cen1621_13, Crewmate_16, Cyan_15, Donkey_15, DrManhattan_15, DrSierra_15, Elezi_15, Emotion_14, Eraser_15, Floof_14, Gambol_15, GardenState_14, Gretchen_14, Halsey_15, Honk_13, IAmGroot_14, Iter_15, Janeemi_16, JasmineDragon_14, Joemato_15, JohnDoe_15, JuneStar_15, Kalimba_15, Kaylissa_15, KeAlii_15, Lego_15, Lizalica_15, London_15, Mabodamaca_14, Moss_15, Mudpuppy_15, Mysterium_15, Niobe_15, Nitro_15, ObiToo_15, Percival_14, Phives_16, Pixelle_15, Powerpuff_15, Pumpkins_15, Reedo_15, Snek_15, Sooty_15, SpecialK_15, SuMoo_13, Sue2_15, Tallboi_15, Tbone_15, TforTroy_15, Tuck_16, Tutumahutu_15, Tweety19_15, UtzChips_13, VResidence_15, VroomVroom_14, Warda_15, Wildwest_16, Yang_15, YesChef_15,

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

•

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

• AbbeyMikolon_14, Ibantik_78, IdentityCrisis_14, Kromp_16, Liebe_14, MaGuCo_14, Maureen_14, MissSwiss_15, Ponzi_53, Rowa_14, Soondubu_14, Success_60, Zeta1847_13,

Summary by start number:

Start 4:

- Found in 1 of 83 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kromp_16 (singleton),

Start 8:

- Found in 1 of 83 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ibantik_78 (singleton),

Start 9:

- Found in 1 of 83 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ponzi_53 (singleton),

Start 10:

- Found in 1 of 83 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: IdentityCrisis_14 (singleton),

Start 11:

- Found in 1 of 83 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Success_60 (BT),

Start 12:

- Found in 2 of 83 (2.4%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Zeta1847_13 (EH),

Start 13:

- Found in 1 of 83 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Soondubu_14 (AZ),

Start 14:

- Found in 3 of 83 (3.6%) of genes in pham
- Manual Annotations of this start: 3 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Liebe_14 (AZ2), MaGuCo_14 (AZ2), Maureen_14 (AZ2),

Start 15:

- Found in 70 of 83 (84.3%) of genes in pham
- Manual Annotations of this start: 70 of 83
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Adolin_14 (AZ1), Adumb2043_15 (AZ1), Amyev_15 (AZ1), Asa16_15 (AZ1), Ascela_15 (AZ1), Ashes_15 (AZ5), Barnstormer_13 (EH), Berrie_15 (AZ1), Cappuccino_15 (AZ5), Caron_13 (EH), Cassia_15 (AZ1), Cen1621_13 (EH), Crewmate_16 (AZ1), Cyan_15 (AZ1), Donkey_15 (AZ5), DrManhattan_15 (AZ1), DrSierra_15 (AZ1), Elezi_15 (AZ1), Emotion_14 (AZ4), Eraser_15 (AZ1), Floof_14 (EH), Gambol_15 (AZ5), GardenState_14 (EH), Gretchen_14 (EH), Halsey_15 (AZ5), Honk_13 (EH), IAmGroot_14 (EH), Iter_15 (AZ1), Janeemi_16 (AZ1), JasmineDragon_14 (AZ4), Joemato_15 (AZ1), JohnDoe_15 (AZ1), JuneStar_15 (AZ1), Kalimba_15 (AZ5), Kaylissa_15 (AZ1), KeAlii_15 (AZ1), Lego_15 (AZ1), Lizalica_15 (AZ1), London_15 (AZ1), Mabodamaca_14 (EH), Moss_15 (AZ5), Mudpuppy_15 (AZ1), Mysterium_15 (AZ5), Niobe_15 (AZ1), Nitro_15 (AZ1), ObiToo_15 (AZ1), Percival_14 (EH), Phives_16 (AZ1), Pixelle_15 (AZ1), Powerpuff_15 (AZ1), Pumpkins_15 (AZ1), Reedo_15 (AZ1), Sneek_15 (AZ3), Sooty_15 (AZ5), SpecialK_15 (AZ5), SuMoo_13 (EH), Sue2_15 (AZ1), Tallboi_15 (AZ1), Tbone_15 (AZ1), TforTroy_15 (AZ1), Tuck_16 (AZ1), Tutumahutu_15 (AZ1), Tweety19_15 (AZ3), UtzChips_13 (EH), VResidence_15 (AZ1), VroomVroom_14 (AZ4), Warda_15 (AZ1), Wildwest_16 (AZ1), Yang_15 (AZ1), YesChef_15 (AZ1),

Start 16:

- Found in 1 of 83 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MissSwiss_15 (AZ1),

Start 18:

- Found in 1 of 83 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbeyMikolon_14 (BL),

Start 19:

- Found in 1 of 83 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rowa_14 (BL),

Summary by clusters:

There are 10 clusters represented in this pham: singleton, AZ, EH, BL, BT, AZ1, AZ2, AZ3, AZ4, AZ5,

Info for manual annotations of cluster AZ:

- Start number 13 was manually annotated 1 time for cluster AZ.

Info for manual annotations of cluster AZ1:

- Start number 15 was manually annotated 43 times for cluster AZ1.
- Start number 16 was manually annotated 1 time for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 14 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 15 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 15 was manually annotated 3 times for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 15 was manually annotated 10 times for cluster AZ5.

Info for manual annotations of cluster BL:

- Start number 18 was manually annotated 1 time for cluster BL.
- Start number 19 was manually annotated 1 time for cluster BL.

Info for manual annotations of cluster BT:

- Start number 11 was manually annotated 1 time for cluster BT.

Info for manual annotations of cluster EH:

- Start number 12 was manually annotated 1 time for cluster EH.
- Start number 15 was manually annotated 12 times for cluster EH.

Gene Information:

Gene: AbbeyMikolon_14 Start: 8843, Stop: 9489, Start Num: 18

Candidate Starts for AbbeyMikolon_14:

(Start: 18 @8843 has 1 MA's), (23, 8894), (45, 9068), (49, 9089), (55, 9140), (58, 9173), (77, 9338), (91, 9455),

Gene: Adolin_14 Start: 10098, Stop: 10726, Start Num: 15

Candidate Starts for Adolin_14:

(Start: 15 @10098 has 70 MA's), (21, 10143), (46, 10329),

Gene: Adumb2043_15 Start: 10120, Stop: 10736, Start Num: 15

Candidate Starts for Adumb2043_15:

(Start: 15 @10120 has 70 MA's), (25, 10198), (42, 10315), (46, 10351),

Gene: Amyev_15 Start: 10132, Stop: 10733, Start Num: 15

Candidate Starts for Amyev_15:

(Start: 15 @10132 has 70 MA's), (42, 10327),

Gene: Asa16_15 Start: 10090, Stop: 10706, Start Num: 15

Candidate Starts for Asa16_15:

(Start: 15 @10090 has 70 MA's), (42, 10285), (46, 10321),

Gene: Ascela_15 Start: 10125, Stop: 10726, Start Num: 15

Candidate Starts for Ascela_15:

(Start: 15 @10125 has 70 MA's), (42, 10320), (52, 10416),

Gene: Ashes_15 Start: 9665, Stop: 10305, Start Num: 15

Candidate Starts for Ashes_15:

(Start: 15 @9665 has 70 MA's), (36, 9806), (41, 9851), (47, 9902),

Gene: Barnstormer_13 Start: 9304, Stop: 9917, Start Num: 15

Candidate Starts for Barnstormer_13:
(Start: 15 @9304 has 70 MA's), (66, 9724), (72, 9796),

Gene: Berrie_15 Start: 10094, Stop: 10698, Start Num: 15
Candidate Starts for Berrie_15:
(Start: 15 @10094 has 70 MA's), (42, 10292), (52, 10388),

Gene: Cappuccino_15 Start: 9570, Stop: 10210, Start Num: 15
Candidate Starts for Cappuccino_15:
(Start: 15 @9570 has 70 MA's), (31, 9684), (36, 9711), (41, 9756), (47, 9807),

Gene: Caron_13 Start: 9346, Stop: 9959, Start Num: 15
Candidate Starts for Caron_13:
(Start: 15 @9346 has 70 MA's), (72, 9838),

Gene: Cassia_15 Start: 10208, Stop: 10809, Start Num: 15
Candidate Starts for Cassia_15:
(Start: 15 @10208 has 70 MA's), (42, 10400), (45, 10433), (52, 10496),

Gene: Cen1621_13 Start: 8442, Stop: 9049, Start Num: 15
Candidate Starts for Cen1621_13:
(Start: 15 @8442 has 70 MA's), (26, 8526), (46, 8676), (52, 8736), (68, 8883), (70, 8892),

Gene: Crewmate_16 Start: 10566, Stop: 11167, Start Num: 15
Candidate Starts for Crewmate_16:
(Start: 15 @10566 has 70 MA's), (21, 10611), (42, 10761), (52, 10857),

Gene: Cyan_15 Start: 10113, Stop: 10717, Start Num: 15
Candidate Starts for Cyan_15:
(Start: 15 @10113 has 70 MA's), (27, 10200), (42, 10311), (45, 10344), (46, 10347), (52, 10407), (83, 10674),

Gene: Donkey_15 Start: 9570, Stop: 10210, Start Num: 15
Candidate Starts for Donkey_15:
(6, 9507), (Start: 15 @9570 has 70 MA's), (36, 9711), (41, 9756), (47, 9807),

Gene: DrManhattan_15 Start: 10088, Stop: 10716, Start Num: 15
Candidate Starts for DrManhattan_15:
(Start: 15 @10088 has 70 MA's), (21, 10133), (46, 10319),

Gene: DrSierra_15 Start: 10119, Stop: 10744, Start Num: 15
Candidate Starts for DrSierra_15:
(Start: 15 @10119 has 70 MA's), (21, 10164), (26, 10200), (42, 10314), (46, 10350),

Gene: Elezi_15 Start: 10091, Stop: 10707, Start Num: 15
Candidate Starts for Elezi_15:
(Start: 15 @10091 has 70 MA's), (42, 10286), (46, 10322),

Gene: Emotion_14 Start: 8425, Stop: 9035, Start Num: 15
Candidate Starts for Emotion_14:
(5, 8359), (Start: 15 @8425 has 70 MA's), (20, 8458), (45, 8650), (55, 8725),

Gene: Eraser_15 Start: 10091, Stop: 10707, Start Num: 15

Candidate Starts for Eraser_15:
(Start: 15 @10091 has 70 MA's), (42, 10286), (46, 10322),

Gene: Floof_14 Start: 8909, Stop: 9522, Start Num: 15
Candidate Starts for Floof_14:
(Start: 15 @8909 has 70 MA's), (30, 9026), (45, 9143), (47, 9152), (74, 9410), (84, 9491),

Gene: Gambol_15 Start: 9570, Stop: 10210, Start Num: 15
Candidate Starts for Gambol_15:
(6, 9507), (Start: 15 @9570 has 70 MA's), (36, 9711), (41, 9756), (47, 9807),

Gene: GardenState_14 Start: 9573, Stop: 10186, Start Num: 15
Candidate Starts for GardenState_14:
(Start: 15 @9573 has 70 MA's), (38, 9726), (47, 9816), (66, 9993),

Gene: Gretchen_14 Start: 10435, Stop: 11048, Start Num: 15
Candidate Starts for Gretchen_14:
(Start: 15 @10435 has 70 MA's), (43, 10648), (45, 10669), (54, 10741), (55, 10744),

Gene: Halsey_15 Start: 9665, Stop: 10305, Start Num: 15
Candidate Starts for Halsey_15:
(Start: 15 @9665 has 70 MA's), (36, 9806), (41, 9851), (47, 9902),

Gene: Honk_13 Start: 8396, Stop: 9000, Start Num: 15
Candidate Starts for Honk_13:
(Start: 15 @8396 has 70 MA's), (39, 8558), (52, 8687),

Gene: IAmGroot_14 Start: 10217, Stop: 10830, Start Num: 15
Candidate Starts for IAmGroot_14:
(Start: 15 @10217 has 70 MA's), (38, 10370), (47, 10460), (66, 10637),

Gene: Ibantik_78 Start: 36465, Stop: 37210, Start Num: 8
Candidate Starts for Ibantik_78:
(Start: 8 @36465 has 1 MA's), (26, 36606), (30, 36633), (39, 36681), (48, 36759), (51, 36816), (74, 37032), (80, 37083),

Gene: IdentityCrisis_14 Start: 9415, Stop: 10118, Start Num: 10
Candidate Starts for IdentityCrisis_14:
(3, 9364), (Start: 10 @9415 has 1 MA's), (22, 9520), (29, 9571), (32, 9589), (50, 9721), (53, 9760), (64, 9850), (69, 9904), (72, 9946), (95, 10108),

Gene: Iter_15 Start: 10125, Stop: 10726, Start Num: 15
Candidate Starts for Iter_15:
(Start: 15 @10125 has 70 MA's), (42, 10320), (52, 10416),

Gene: Janeemi_16 Start: 11204, Stop: 11808, Start Num: 15
Candidate Starts for Janeemi_16:
(Start: 15 @11204 has 70 MA's), (42, 11402), (52, 11498),

Gene: JasmineDragon_14 Start: 8354, Stop: 8961, Start Num: 15
Candidate Starts for JasmineDragon_14:
(Start: 15 @8354 has 70 MA's), (59, 8696),

Gene: Joemato_15 Start: 10113, Stop: 10717, Start Num: 15
Candidate Starts for Joemato_15:
(Start: 15 @10113 has 70 MA's), (27, 10200), (42, 10311), (45, 10344), (46, 10347), (52, 10407), (83, 10674),

Gene: JohnDoe_15 Start: 10108, Stop: 10712, Start Num: 15
Candidate Starts for JohnDoe_15:
(Start: 15 @10108 has 70 MA's), (27, 10195), (42, 10306), (45, 10339), (46, 10342), (52, 10402), (83, 10669),

Gene: JuneStar_15 Start: 10206, Stop: 10807, Start Num: 15
Candidate Starts for JuneStar_15:
(Start: 15 @10206 has 70 MA's), (42, 10398),

Gene: Kalimba_15 Start: 9571, Stop: 10211, Start Num: 15
Candidate Starts for Kalimba_15:
(Start: 15 @9571 has 70 MA's), (36, 9712), (41, 9757), (47, 9808),

Gene: Kaylissa_15 Start: 10114, Stop: 10718, Start Num: 15
Candidate Starts for Kaylissa_15:
(Start: 15 @10114 has 70 MA's), (27, 10201), (42, 10312), (45, 10345), (46, 10348), (52, 10408), (83, 10675),

Gene: KeAlii_15 Start: 10157, Stop: 10758, Start Num: 15
Candidate Starts for KeAlii_15:
(Start: 15 @10157 has 70 MA's), (26, 10238), (40, 10334), (42, 10352), (62, 10520),

Gene: Kromp_16 Start: 10416, Stop: 11236, Start Num: 4
Candidate Starts for Kromp_16:
(Start: 4 @10416 has 1 MA's), (Start: 12 @10476 has 1 MA's), (24, 10590), (28, 10611), (56, 10836), (76, 11040), (97, 11211),

Gene: Lego_15 Start: 10113, Stop: 10717, Start Num: 15
Candidate Starts for Lego_15:
(2, 9882), (5, 10044), (Start: 15 @10113 has 70 MA's), (42, 10311), (45, 10344), (46, 10347), (52, 10407), (83, 10674),

Gene: Liebe_14 Start: 8595, Stop: 9193, Start Num: 14
Candidate Starts for Liebe_14:
(Start: 14 @8595 has 3 MA's), (37, 8739), (52, 8886), (65, 8994),

Gene: Lizalica_15 Start: 10098, Stop: 10702, Start Num: 15
Candidate Starts for Lizalica_15:
(Start: 15 @10098 has 70 MA's), (42, 10296), (45, 10329), (46, 10332), (52, 10392),

Gene: London_15 Start: 10091, Stop: 10707, Start Num: 15
Candidate Starts for London_15:
(Start: 15 @10091 has 70 MA's), (42, 10286), (46, 10322),

Gene: MaGuCo_14 Start: 8529, Stop: 9127, Start Num: 14
Candidate Starts for MaGuCo_14:
(Start: 14 @8529 has 3 MA's), (37, 8673), (52, 8820), (65, 8928),

Gene: Mabodamaca_14 Start: 9642, Stop: 10255, Start Num: 15
Candidate Starts for Mabodamaca_14:
(Start: 15 @9642 has 70 MA's), (38, 9795), (45, 9876), (66, 10062),

Gene: Maureen_14 Start: 8595, Stop: 9193, Start Num: 14
Candidate Starts for Maureen_14:
(Start: 14 @8595 has 3 MA's), (37, 8739), (52, 8886), (65, 8994),

Gene: MissSwiss_15 Start: 10094, Stop: 10716, Start Num: 16
Candidate Starts for MissSwiss_15:
(Start: 16 @10094 has 1 MA's), (21, 10136), (44, 10304),

Gene: Moss_15 Start: 9665, Stop: 10305, Start Num: 15
Candidate Starts for Moss_15:
(Start: 15 @9665 has 70 MA's), (36, 9806), (41, 9851), (47, 9902), (74, 10157),

Gene: Mudpuppy_15 Start: 10112, Stop: 10716, Start Num: 15
Candidate Starts for Mudpuppy_15:
(Start: 15 @10112 has 70 MA's), (42, 10310), (45, 10343), (46, 10346), (52, 10406), (67, 10550),

Gene: Mysterium_15 Start: 9666, Stop: 10306, Start Num: 15
Candidate Starts for Mysterium_15:
(Start: 15 @9666 has 70 MA's), (36, 9807), (41, 9852), (47, 9903),

Gene: Niobe_15 Start: 10091, Stop: 10707, Start Num: 15
Candidate Starts for Niobe_15:
(Start: 15 @10091 has 70 MA's), (42, 10286), (46, 10322),

Gene: Nitro_15 Start: 10114, Stop: 10715, Start Num: 15
Candidate Starts for Nitro_15:
(Start: 15 @10114 has 70 MA's), (42, 10309), (46, 10345),

Gene: ObiToo_15 Start: 10303, Stop: 10904, Start Num: 15
Candidate Starts for ObiToo_15:
(Start: 15 @10303 has 70 MA's), (21, 10348), (42, 10498), (52, 10594),

Gene: Percival_14 Start: 10269, Stop: 10882, Start Num: 15
Candidate Starts for Percival_14:
(Start: 15 @10269 has 70 MA's), (43, 10482), (45, 10503), (54, 10575), (55, 10578),

Gene: Phives_16 Start: 11192, Stop: 11793, Start Num: 15
Candidate Starts for Phives_16:
(Start: 15 @11192 has 70 MA's), (42, 11387),

Gene: Pixelle_15 Start: 10135, Stop: 10736, Start Num: 15
Candidate Starts for Pixelle_15:
(Start: 15 @10135 has 70 MA's), (26, 10216), (42, 10330),

Gene: Ponzi_53 Start: 29867, Stop: 30597, Start Num: 9
Candidate Starts for Ponzi_53:
(7, 29849), (Start: 9 @29867 has 1 MA's), (29, 30020), (32, 30038), (33, 30041), (61, 30269), (75, 30413), (79, 30452), (86, 30512), (88, 30518), (93, 30545),

Gene: Powerpuff_15 Start: 10164, Stop: 10768, Start Num: 15
Candidate Starts for Powerpuff_15:
(2, 9933), (5, 10095), (Start: 15 @10164 has 70 MA's), (42, 10362), (45, 10395), (46, 10398), (52, 10458), (83, 10725),

Gene: Pumpkins_15 Start: 10215, Stop: 10819, Start Num: 15
Candidate Starts for Pumpkins_15:
(Start: 15 @10215 has 70 MA's), (42, 10410), (45, 10443), (52, 10506),

Gene: Reedo_15 Start: 10171, Stop: 10784, Start Num: 15
Candidate Starts for Reedo_15:
(Start: 15 @10171 has 70 MA's), (26, 10249), (42, 10363), (52, 10459),

Gene: Rowa_14 Start: 8677, Stop: 9314, Start Num: 19
Candidate Starts for Rowa_14:
(17, 8662), (Start: 19 @8677 has 1 MA's), (35, 8800), (43, 8869), (49, 8911), (52, 8950), (54, 8959), (56, 8968), (58, 8995), (60, 9004), (73, 9145), (78, 9175), (85, 9244),

Gene: Snek_15 Start: 9207, Stop: 9826, Start Num: 15
Candidate Starts for Snek_15:
(Start: 15 @9207 has 70 MA's), (21, 9252), (31, 9321), (52, 9498), (59, 9552), (89, 9795),

Gene: Soondubu_14 Start: 10020, Stop: 10639, Start Num: 13
Candidate Starts for Soondubu_14:
(Start: 13 @10020 has 1 MA's), (85, 10602),

Gene: Sooty_15 Start: 9572, Stop: 10212, Start Num: 15
Candidate Starts for Sooty_15:
(Start: 15 @9572 has 70 MA's), (36, 9713), (41, 9758), (47, 9809), (82, 10130),

Gene: SpecialK_15 Start: 9572, Stop: 10212, Start Num: 15
Candidate Starts for SpecialK_15:
(Start: 15 @9572 has 70 MA's), (36, 9713), (41, 9758), (47, 9809),

Gene: SuMoo_13 Start: 8599, Stop: 9212, Start Num: 15
Candidate Starts for SuMoo_13:
(Start: 15 @8599 has 70 MA's), (38, 8752), (45, 8833), (66, 9019),

Gene: Success_60 Start: 32884, Stop: 33602, Start Num: 11
Candidate Starts for Success_60:
(Start: 11 @32884 has 1 MA's), (32, 33031), (34, 33037), (47, 33148), (57, 33244), (58, 33259), (63, 33304), (70, 33373), (72, 33409), (75, 33424), (79, 33463), (81, 33484), (90, 33553), (92, 33556), (96, 33580),

Gene: Sue2_15 Start: 10128, Stop: 10759, Start Num: 15
Candidate Starts for Sue2_15:
(Start: 15 @10128 has 70 MA's), (20, 10158), (94, 10752),

Gene: Tallboi_15 Start: 10118, Stop: 10734, Start Num: 15
Candidate Starts for Tallboi_15:
(Start: 15 @10118 has 70 MA's), (42, 10313), (46, 10349), (52, 10409),

Gene: Tbone_15 Start: 10117, Stop: 10721, Start Num: 15

Candidate Starts for Tbone_15:

(1, 9646), (Start: 15 @10117 has 70 MA's), (42, 10315), (45, 10348), (46, 10351), (52, 10411),

Gene: TforTroy_15 Start: 10233, Stop: 10837, Start Num: 15

Candidate Starts for TforTroy_15:

(Start: 15 @10233 has 70 MA's), (42, 10428), (45, 10461),

Gene: Tuck_16 Start: 11156, Stop: 11760, Start Num: 15

Candidate Starts for Tuck_16:

(Start: 15 @11156 has 70 MA's), (42, 11354), (52, 11450),

Gene: Tutumahutu_15 Start: 10164, Stop: 10768, Start Num: 15

Candidate Starts for Tutumahutu_15:

(2, 9933), (5, 10095), (Start: 15 @10164 has 70 MA's), (42, 10362), (45, 10395), (46, 10398), (52, 10458), (83, 10725),

Gene: Tweety19_15 Start: 9206, Stop: 9825, Start Num: 15

Candidate Starts for Tweety19_15:

(Start: 15 @9206 has 70 MA's), (21, 9251), (31, 9320), (52, 9497), (59, 9551), (89, 9794),

Gene: UtzChips_13 Start: 9292, Stop: 9905, Start Num: 15

Candidate Starts for UtzChips_13:

(Start: 15 @9292 has 70 MA's), (66, 9712), (72, 9784),

Gene: VResidence_15 Start: 10200, Stop: 10816, Start Num: 15

Candidate Starts for VResidence_15:

(5, 10125), (Start: 15 @10200 has 70 MA's), (27, 10281), (45, 10425), (52, 10488), (87, 10788),

Gene: VroomVroom_14 Start: 8366, Stop: 8973, Start Num: 15

Candidate Starts for VroomVroom_14:

(Start: 15 @8366 has 70 MA's), (71, 8813),

Gene: Warda_15 Start: 10109, Stop: 10713, Start Num: 15

Candidate Starts for Warda_15:

(Start: 15 @10109 has 70 MA's), (42, 10307), (45, 10340), (46, 10343), (52, 10403), (67, 10547),

Gene: Wildwest_16 Start: 11039, Stop: 11667, Start Num: 15

Candidate Starts for Wildwest_16:

(Start: 15 @11039 has 70 MA's), (21, 11084), (26, 11120), (42, 11234),

Gene: Yang_15 Start: 10203, Stop: 10807, Start Num: 15

Candidate Starts for Yang_15:

(Start: 15 @10203 has 70 MA's), (42, 10398), (45, 10431),

Gene: YesChef_15 Start: 10164, Stop: 10768, Start Num: 15

Candidate Starts for YesChef_15:

(2, 9933), (5, 10095), (Start: 15 @10164 has 70 MA's), (42, 10362), (45, 10395), (46, 10398), (52, 10458), (83, 10725),

Gene: Zeta1847_13 Start: 8400, Stop: 9055, Start Num: 12

Candidate Starts for Zeta1847_13:

(Start: 12 @8400 has 1 MA's),