

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 200031 Report

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

Pham number 200031 has 90 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Soondubu_11
- Track 2 : AinMach_11
- Track 3 : Exile_11
- Track 4 : Joemato_12, Iter_12, AGrandiflora_12, JohnDoe_12, Lego_12, YesChef_12, Lizalica_12, Simpson_13, Kaylissa_12, Warda_12, Tutumahutu_12, Tbone_12, Powerpuff_12, Cyan_12, Ascela_12, Mudpuppy_12
- Track 5 : Cassia_12
- Track 6 : TforTroy_12, Yang_12
- Track 7 : Crewmate_13
- Track 8 : ObiToo_12
- Track 9 : Turab_12, Tallboi_12, Adumb2043_12, AEgle_12, Nitro_12
- Track 10 : MissSwiss_12
- Track 11 : Shaffner_13, IttyBittyPiggy_12, Pumpkins_12
- Track 12 : Adolin_12, DrManhattan_12
- Track 13 : VResidence_12
- Track 14 : Berrie_12
- Track 15 : Elezi_12, Jstan_12, Eraser_12, London_12, Niobe_12, Asa16_12
- Track 16 : Pixelle_12
- Track 17 : KeAlii_12
- Track 18 : Tian_12, Amyev_12, Phives_13
- Track 19 : Wildwest_13
- Track 20 : JuneStar_12
- Track 21 : Tuck_13, Community_13
- Track 22 : Sue2_12
- Track 23 : Reedo_12
- Track 24 : DrSierra_12
- Track 25 : Janeemi_13
- Track 26 : Maureen_11, Liebe_11
- Track 27 : MaGuCo_11
- Track 28 : Tweety19_12, Snek_12
- Track 29 : MiniMommy_10, JasmineDragon_11, ShakeltOph_11
- Track 30 : Emotion_11
- Track 31 : VroomVroom_11
- Track 32 : LadyAstra_11
- Track 33 : Ashes_12, SpecialK_12, Halsey_12, Moss_12
- Track 34 : Mysterium_12
- Track 35 : Kalimba_12, Cappuccino_12, Donkey_12, Gambol_12, Sooty_12

- Track 36 : Zeta1847_10
- Track 37 : Gretchen_11, Floof_11, Percival_11
- Track 38 : Honk_10
- Track 39 : Caron_10
- Track 40 : Barnstormer_10, UtzChips_10
- Track 41 : SuMoo_10
- Track 42 : IAmGroot_11, GardenState_11
- Track 43 : Mabodamaca_11
- Track 44 : Cen1621_10

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

The start number called the most often in the published annotations is 3, it was called in 37 of the 76 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AEgle_12, AGrandiflora_12, Adumb2043_12, Amyev_12, Asa16_12, Ascela_12, Berrie_12, Cassia_12, Community_13, Crewmate_13, Cyan_12, Elezi_12, Eraser_12, Iter_12, IttyBittyPiggy_12, Janeemi_13, Joemato_12, JohnDoe_12, Jstan_12, JuneStar_12, Kaylissa_12, Lego_12, Liebe_11, Lizalica_12, London_12, Maureen_11, Mudpuppy_12, Niobe_12, Nitro_12, ObiToo_12, Phives_13, Pixelle_12, Powerpuff_12, Pumpkins_12, Shaffner_13, Simpson_13, Tallboi_12, Tbone_12, TforTroy_12, Tian_12, Tuck_13, Turab_12, Tutumahutu_12, Warda_12, Yang_12, YesChef_12,

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

- AinMach_11,

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

- Adolin_12, Ashes_12, Barnstormer_10, Cappuccino_12, Caron_10, Cen1621_10, Donkey_12, DrManhattan_12, DrSierra_12, Emotion_11, Exile_11, Floof_11, Gambol_12, GardenState_11, Gretchen_11, Halsey_12, Honk_10, IAmGroot_11, JasmineDragon_11, Kalimba_12, KeAlii_12, LadyAstra_11, MaGuCo_11, Mabodamaca_11, MiniMommy_10, MissSwiss_12, Moss_12, Mysterium_12, Percival_11, Reedo_12, ShakeltOph_11, Snek_12, Soondubu_11, Sooty_12, SpecialK_12, SuMoo_10, Sue2_12, Tweety19_12, UtzChips_10, VResidence_12, VroomVroom_11, Wildwest_13, Zeta1847_10,

Summary by start number:

Start 2:

- Found in 10 of 90 (11.1%) of genes in pham
- Manual Annotations of this start: 10 of 76
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ashes_12 (AZ5), Cappuccino_12 (AZ5), Donkey_12 (AZ5), Gambol_12 (AZ5), Halsey_12 (AZ5), Kalimba_12 (AZ5), Moss_12 (AZ5), Mysterium_12 (AZ5), Sooty_12 (AZ5), SpecialK_12 (AZ5),

Start 3:

- Found in 47 of 90 (52.2%) of genes in pham

- Manual Annotations of this start: 37 of 76
- Called 97.9% of time when present
- Phage (with cluster) where this start called: AEgle_12 (AZ1), AGrandiflora_12 (AZ1), Adumb2043_12 (AZ1), Amyev_12 (AZ1), Asa16_12 (AZ1), Ascela_12 (AZ1), Berrie_12 (AZ1), Cassia_12 (AZ1), Community_13 (AZ1), Crewmate_13 (AZ1), Cyan_12 (AZ1), Elezi_12 (AZ1), Eraser_12 (AZ1), Iter_12 (AZ1), IttyBittyPiggy_12 (AZ1), Janeemi_13 (AZ1), Joemato_12 (AZ1), JohnDoe_12 (AZ1), Jstan_12 (AZ1), JuneStar_12 (AZ1), Kaylissa_12 (AZ1), Lego_12 (AZ1), Liebe_11 (AZ2), Lizalica_12 (AZ1), London_12 (AZ1), Maureen_11 (AZ2), Mudpuppy_12 (AZ1), Niobe_12 (AZ1), Nitro_12 (AZ1), ObiToo_12 (AZ1), Phives_13 (AZ1), Pixelle_12 (AZ1), Powerpuff_12 (AZ1), Pumpkins_12 (AZ1), Shaffner_13 (AZ1), Simpson_13 (AZ1), Tallboi_12 (AZ1), Tbone_12 (AZ1), TforTroy_12 (AZ1), Tian_12 (AZ1), Tuck_13 (AZ1), Turab_12 (AZ1), Tutumahutu_12 (AZ1), Warda_12 (AZ1), Yang_12 (AZ1), YesChef_12 (AZ1),

Start 4:

- Found in 1 of 90 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 76
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zeta1847_10 (EH),

Start 5:

- Found in 7 of 90 (7.8%) of genes in pham
- Manual Annotations of this start: 7 of 76
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cen1621_10 (EH), Floof_11 (EH), GardenState_11 (EH), Gretchen_11 (EH), Honk_10 (EH), IAmGroot_11 (EH), Percival_11 (EH),

Start 6:

- Found in 18 of 90 (20.0%) of genes in pham
- Manual Annotations of this start: 16 of 76
- Called 94.4% of time when present
- Phage (with cluster) where this start called: Adolin_12 (AZ1), Barnstormer_10 (EH), Caron_10 (EH), DrManhattan_12 (AZ1), DrSierra_12 (AZ1), Exile_11 (AZ), MaGuCo_11 (AZ2), Mabodamaca_11 (EH), MissSwiss_12 (AZ1), Snek_12 (AZ3), Soondubu_11 (AZ), SuMoo_10 (EH), Sue2_12 (AZ1), Tweety19_12 (AZ3), UtzChips_10 (EH), VResidence_12 (AZ1), Wildwest_13 (AZ1),

Start 7:

- Found in 5 of 90 (5.6%) of genes in pham
- Manual Annotations of this start: 2 of 76
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JasmineDragon_11 (AZ4), LadyAstra_11 (AZ4), MiniMommy_10 (AZ4), ShakeltOph_11 (AZ4), VroomVroom_11 (AZ4),

Start 8:

- Found in 2 of 90 (2.2%) of genes in pham
- Manual Annotations of this start: 2 of 76
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KeAlii_12 (AZ1), Reedo_12 (AZ1),

Start 9:

- Found in 1 of 90 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 76
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Emotion_11 (AZ4),

Start 13:

- Found in 1 of 90 (1.1%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AinMach_11 (AZ),

Summary by clusters:

There are 7 clusters represented in this pham: AZ, EH, AZ1, AZ2, AZ3, AZ4, AZ5,

Info for manual annotations of cluster AZ:

- Start number 6 was manually annotated 1 time for cluster AZ.

Info for manual annotations of cluster AZ1:

- Start number 3 was manually annotated 35 times for cluster AZ1.
- Start number 6 was manually annotated 7 times for cluster AZ1.
- Start number 8 was manually annotated 2 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 3 was manually annotated 2 times for cluster AZ2.
- Start number 6 was manually annotated 1 time for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 6 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 7 was manually annotated 2 times for cluster AZ4.
- Start number 9 was manually annotated 1 time for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 2 was manually annotated 10 times for cluster AZ5.

Info for manual annotations of cluster EH:

- Start number 4 was manually annotated 1 time for cluster EH.
- Start number 5 was manually annotated 7 times for cluster EH.
- Start number 6 was manually annotated 5 times for cluster EH.

Gene Information:

Gene: AEgle_12 Start: 9049, Stop: 9459, Start Num: 3

Candidate Starts for AEgle_12:

(Start: 3 @9049 has 37 MA's), (15, 9094), (17, 9118), (36, 9379), (37, 9412),

Gene: AGrandiflora_12 Start: 9036, Stop: 9449, Start Num: 3

Candidate Starts for AGrandiflora_12:

(Start: 3 @9036 has 37 MA's), (17, 9105), (27, 9255), (36, 9366), (37, 9399),

Gene: Adolin_12 Start: 9024, Stop: 9440, Start Num: 6

Candidate Starts for Adolin_12:

(Start: 6 @9024 has 16 MA's), (26, 9240),

Gene: Adumb2043_12 Start: 9048, Stop: 9458, Start Num: 3

Candidate Starts for Adumb2043_12:

(Start: 3 @9048 has 37 MA's), (15, 9093), (17, 9117), (36, 9378), (37, 9411),

Gene: AinMach_11 Start: 8183, Stop: 8566, Start Num: 13

Candidate Starts for AinMach_11:

(Start: 3 @8150 has 37 MA's), (Start: 6 @8153 has 16 MA's), (13, 8183), (15, 8195), (39, 8537),

Gene: Amyev_12 Start: 9064, Stop: 9477, Start Num: 3

Candidate Starts for Amyev_12:

(Start: 3 @9064 has 37 MA's), (15, 9109), (27, 9283), (36, 9394), (37, 9427),

Gene: Asa16_12 Start: 9018, Stop: 9428, Start Num: 3

Candidate Starts for Asa16_12:

(Start: 3 @9018 has 37 MA's), (17, 9087), (25, 9225), (27, 9237), (36, 9348), (37, 9381),

Gene: Ascela_12 Start: 9053, Stop: 9463, Start Num: 3

Candidate Starts for Ascela_12:

(Start: 3 @9053 has 37 MA's), (17, 9122), (27, 9272), (36, 9383), (37, 9416),

Gene: Ashes_12 Start: 8547, Stop: 8966, Start Num: 2

Candidate Starts for Ashes_12:

(Start: 2 @8547 has 10 MA's), (14, 8589), (34, 8871),

Gene: Barnstormer_10 Start: 8216, Stop: 8632, Start Num: 6

Candidate Starts for Barnstormer_10:

(Start: 6 @8216 has 16 MA's), (28, 8456), (33, 8513),

Gene: Berrie_12 Start: 9020, Stop: 9430, Start Num: 3

Candidate Starts for Berrie_12:

(Start: 3 @9020 has 37 MA's), (18, 9107), (27, 9239), (36, 9350), (37, 9383),

Gene: Cappuccino_12 Start: 8456, Stop: 8875, Start Num: 2

Candidate Starts for Cappuccino_12:

(Start: 2 @8456 has 10 MA's), (14, 8498), (34, 8780),

Gene: Caron_10 Start: 8244, Stop: 8660, Start Num: 6

Candidate Starts for Caron_10:

(Start: 6 @8244 has 16 MA's), (28, 8484),

Gene: Cassia_12 Start: 9139, Stop: 9552, Start Num: 3

Candidate Starts for Cassia_12:

(Start: 3 @9139 has 37 MA's), (18, 9226), (25, 9346), (27, 9358), (36, 9469), (37, 9502),

Gene: Cen1621_10 Start: 7355, Stop: 7771, Start Num: 5

Candidate Starts for Cen1621_10:

(Start: 5 @7355 has 7 MA's), (37, 7724), (39, 7745),

Gene: Community_13 Start: 10099, Stop: 10509, Start Num: 3
Candidate Starts for Community_13:
(Start: 3 @10099 has 37 MA's), (15, 10144), (27, 10318), (36, 10429), (37, 10462),

Gene: Crewmate_13 Start: 9485, Stop: 9898, Start Num: 3
Candidate Starts for Crewmate_13:
(Start: 3 @9485 has 37 MA's), (17, 9554), (27, 9704), (36, 9815), (37, 9848),

Gene: Cyan_12 Start: 9040, Stop: 9453, Start Num: 3
Candidate Starts for Cyan_12:
(Start: 3 @9040 has 37 MA's), (17, 9109), (27, 9259), (36, 9370), (37, 9403),

Gene: Donkey_12 Start: 8456, Stop: 8875, Start Num: 2
Candidate Starts for Donkey_12:
(Start: 2 @8456 has 10 MA's), (14, 8498), (34, 8780),

Gene: DrManhattan_12 Start: 9014, Stop: 9430, Start Num: 6
Candidate Starts for DrManhattan_12:
(Start: 6 @9014 has 16 MA's), (26, 9230),

Gene: DrSierra_12 Start: 9047, Stop: 9463, Start Num: 6
Candidate Starts for DrSierra_12:
(Start: 6 @9047 has 16 MA's), (19, 9143), (23, 9200), (26, 9263),

Gene: Elezi_12 Start: 9019, Stop: 9429, Start Num: 3
Candidate Starts for Elezi_12:
(Start: 3 @9019 has 37 MA's), (17, 9088), (25, 9226), (27, 9238), (36, 9349), (37, 9382),

Gene: Emotion_11 Start: 7354, Stop: 7758, Start Num: 9
Candidate Starts for Emotion_11:
(Start: 9 @7354 has 1 MA's), (25, 7555),

Gene: Eraser_12 Start: 9019, Stop: 9429, Start Num: 3
Candidate Starts for Eraser_12:
(Start: 3 @9019 has 37 MA's), (17, 9088), (25, 9226), (27, 9238), (36, 9349), (37, 9382),

Gene: Exile_11 Start: 8927, Stop: 9337, Start Num: 6
Candidate Starts for Exile_11:
(Start: 6 @8927 has 16 MA's), (37, 9290),

Gene: Floof_11 Start: 7791, Stop: 8213, Start Num: 5
Candidate Starts for Floof_11:
(Start: 5 @7791 has 7 MA's), (20, 7884), (21, 7890), (22, 7905), (25, 7995), (28, 8034), (29, 8052), (38, 8163),

Gene: Gambol_12 Start: 8456, Stop: 8875, Start Num: 2
Candidate Starts for Gambol_12:
(Start: 2 @8456 has 10 MA's), (14, 8498), (34, 8780),

Gene: GardenState_11 Start: 8458, Stop: 8877, Start Num: 5
Candidate Starts for GardenState_11:
(Start: 5 @8458 has 7 MA's), (20, 8551), (21, 8557), (25, 8662), (28, 8701),

Gene: Gretchen_11 Start: 9337, Stop: 9759, Start Num: 5

Candidate Starts for Gretchen_11:

(Start: 5 @9337 has 7 MA's), (20, 9430), (21, 9436), (22, 9451), (25, 9541), (28, 9580), (29, 9598), (38, 9709),

Gene: Halsey_12 Start: 8547, Stop: 8966, Start Num: 2

Candidate Starts for Halsey_12:

(Start: 2 @8547 has 10 MA's), (14, 8589), (34, 8871),

Gene: Honk_10 Start: 7323, Stop: 7739, Start Num: 5

Candidate Starts for Honk_10:

(Start: 5 @7323 has 7 MA's), (19, 7416), (23, 7473), (37, 7692),

Gene: IAmGroot_11 Start: 9102, Stop: 9521, Start Num: 5

Candidate Starts for IAmGroot_11:

(Start: 5 @9102 has 7 MA's), (20, 9195), (21, 9201), (25, 9306), (28, 9345),

Gene: Iter_12 Start: 9053, Stop: 9463, Start Num: 3

Candidate Starts for Iter_12:

(Start: 3 @9053 has 37 MA's), (17, 9122), (27, 9272), (36, 9383), (37, 9416),

Gene: IttyBittyPiggy_12 Start: 9041, Stop: 9454, Start Num: 3

Candidate Starts for IttyBittyPiggy_12:

(Start: 3 @9041 has 37 MA's), (17, 9110), (36, 9371), (37, 9404),

Gene: Janeemi_13 Start: 10130, Stop: 10543, Start Num: 3

Candidate Starts for Janeemi_13:

(Start: 3 @10130 has 37 MA's), (15, 10175), (25, 10337), (27, 10349), (36, 10460), (37, 10493),

Gene: JasmineDragon_11 Start: 7286, Stop: 7681, Start Num: 7

Candidate Starts for JasmineDragon_11:

(Start: 7 @7286 has 2 MA's), (25, 7478),

Gene: Joemato_12 Start: 9040, Stop: 9453, Start Num: 3

Candidate Starts for Joemato_12:

(Start: 3 @9040 has 37 MA's), (17, 9109), (27, 9259), (36, 9370), (37, 9403),

Gene: JohnDoe_12 Start: 9038, Stop: 9451, Start Num: 3

Candidate Starts for JohnDoe_12:

(Start: 3 @9038 has 37 MA's), (17, 9107), (27, 9257), (36, 9368), (37, 9401),

Gene: Jstan_12 Start: 9019, Stop: 9429, Start Num: 3

Candidate Starts for Jstan_12:

(Start: 3 @9019 has 37 MA's), (17, 9088), (25, 9226), (27, 9238), (36, 9349), (37, 9382),

Gene: JuneStar_12 Start: 9135, Stop: 9548, Start Num: 3

Candidate Starts for JuneStar_12:

(Start: 3 @9135 has 37 MA's), (36, 9465), (37, 9498),

Gene: Kalimba_12 Start: 8456, Stop: 8875, Start Num: 2

Candidate Starts for Kalimba_12:

(Start: 2 @8456 has 10 MA's), (14, 8498), (34, 8780),

Gene: Kaylissa_12 Start: 9041, Stop: 9454, Start Num: 3
Candidate Starts for Kaylissa_12:
(Start: 3 @9041 has 37 MA's), (17, 9110), (27, 9260), (36, 9371), (37, 9404),

Gene: KeAlii_12 Start: 9073, Stop: 9474, Start Num: 8
Candidate Starts for KeAlii_12:
(Start: 8 @9073 has 2 MA's), (11, 9079), (27, 9280), (31, 9340), (37, 9424),

Gene: LadyAstra_11 Start: 7283, Stop: 7678, Start Num: 7
Candidate Starts for LadyAstra_11:
(Start: 7 @7283 has 2 MA's), (25, 7475),

Gene: Lego_12 Start: 9039, Stop: 9452, Start Num: 3
Candidate Starts for Lego_12:
(Start: 3 @9039 has 37 MA's), (17, 9108), (27, 9258), (36, 9369), (37, 9402),

Gene: Liebe_11 Start: 7496, Stop: 7915, Start Num: 3
Candidate Starts for Liebe_11:
(Start: 3 @7496 has 37 MA's), (12, 7514), (20, 7601), (26, 7715), (37, 7865),

Gene: Lizalica_12 Start: 9025, Stop: 9438, Start Num: 3
Candidate Starts for Lizalica_12:
(Start: 3 @9025 has 37 MA's), (17, 9094), (27, 9244), (36, 9355), (37, 9388),

Gene: London_12 Start: 9019, Stop: 9429, Start Num: 3
Candidate Starts for London_12:
(Start: 3 @9019 has 37 MA's), (17, 9088), (25, 9226), (27, 9238), (36, 9349), (37, 9382),

Gene: MaGuCo_11 Start: 7435, Stop: 7851, Start Num: 6
Candidate Starts for MaGuCo_11:
(Start: 6 @7435 has 16 MA's), (10, 7444), (12, 7450), (14, 7474), (20, 7537), (26, 7651), (37, 7801),

Gene: Mabodamaca_11 Start: 8555, Stop: 8968, Start Num: 6
Candidate Starts for Mabodamaca_11:
(Start: 6 @8555 has 16 MA's), (23, 8696),

Gene: Maureen_11 Start: 7496, Stop: 7915, Start Num: 3
Candidate Starts for Maureen_11:
(Start: 3 @7496 has 37 MA's), (12, 7514), (20, 7601), (26, 7715), (37, 7865),

Gene: MiniMommy_10 Start: 7286, Stop: 7681, Start Num: 7
Candidate Starts for MiniMommy_10:
(Start: 7 @7286 has 2 MA's), (25, 7478),

Gene: MissSwiss_12 Start: 9018, Stop: 9434, Start Num: 6
Candidate Starts for MissSwiss_12:
(Start: 6 @9018 has 16 MA's), (16, 9066), (26, 9234),

Gene: Moss_12 Start: 8547, Stop: 8966, Start Num: 2
Candidate Starts for Moss_12:
(Start: 2 @8547 has 10 MA's), (14, 8589), (34, 8871),

Gene: Mudpuppy_12 Start: 9039, Stop: 9452, Start Num: 3

Candidate Starts for Mudpuppy_12:

(Start: 3 @9039 has 37 MA's), (17, 9108), (27, 9258), (36, 9369), (37, 9402),

Gene: Mysterium_12 Start: 8548, Stop: 8967, Start Num: 2

Candidate Starts for Mysterium_12:

(Start: 2 @8548 has 10 MA's), (14, 8590), (26, 8767), (34, 8872),

Gene: Niobe_12 Start: 9019, Stop: 9429, Start Num: 3

Candidate Starts for Niobe_12:

(Start: 3 @9019 has 37 MA's), (17, 9088), (25, 9226), (27, 9238), (36, 9349), (37, 9382),

Gene: Nitro_12 Start: 9042, Stop: 9452, Start Num: 3

Candidate Starts for Nitro_12:

(Start: 3 @9042 has 37 MA's), (15, 9087), (17, 9111), (36, 9372), (37, 9405),

Gene: ObiToo_12 Start: 9222, Stop: 9635, Start Num: 3

Candidate Starts for ObiToo_12:

(Start: 3 @9222 has 37 MA's), (17, 9291), (25, 9429), (27, 9441), (36, 9552), (37, 9585),

Gene: Percival_11 Start: 9171, Stop: 9593, Start Num: 5

Candidate Starts for Percival_11:

(Start: 5 @9171 has 7 MA's), (20, 9264), (21, 9270), (22, 9285), (25, 9375), (28, 9414), (29, 9432), (38, 9543),

Gene: Phives_13 Start: 10124, Stop: 10537, Start Num: 3

Candidate Starts for Phives_13:

(Start: 3 @10124 has 37 MA's), (15, 10169), (27, 10343), (36, 10454), (37, 10487),

Gene: Pixelle_12 Start: 9067, Stop: 9480, Start Num: 3

Candidate Starts for Pixelle_12:

(Start: 3 @9067 has 37 MA's), (15, 9112), (36, 9397), (37, 9430),

Gene: Powerpuff_12 Start: 9090, Stop: 9503, Start Num: 3

Candidate Starts for Powerpuff_12:

(Start: 3 @9090 has 37 MA's), (17, 9159), (27, 9309), (36, 9420), (37, 9453),

Gene: Pumpkins_12 Start: 9144, Stop: 9557, Start Num: 3

Candidate Starts for Pumpkins_12:

(Start: 3 @9144 has 37 MA's), (17, 9213), (36, 9474), (37, 9507),

Gene: Reedo_12 Start: 9091, Stop: 9489, Start Num: 8

Candidate Starts for Reedo_12:

(Start: 8 @9091 has 2 MA's), (25, 9286), (26, 9292), (30, 9352), (37, 9442),

Gene: Shaffner_13 Start: 9132, Stop: 9545, Start Num: 3

Candidate Starts for Shaffner_13:

(Start: 3 @9132 has 37 MA's), (17, 9201), (36, 9462), (37, 9495),

Gene: ShakeltOph_11 Start: 7286, Stop: 7681, Start Num: 7

Candidate Starts for ShakeltOph_11:

(Start: 7 @7286 has 2 MA's), (25, 7478),

Gene: Simpson_13 Start: 9040, Stop: 9453, Start Num: 3

Candidate Starts for Simpson_13:
(Start: 3 @9040 has 37 MA's), (17, 9109), (27, 9259), (36, 9370), (37, 9403),

Gene: Snek_12 Start: 8127, Stop: 8540, Start Num: 6
Candidate Starts for Snek_12:
(Start: 6 @8127 has 16 MA's), (23, 8280), (40, 8523),

Gene: Soondubu_11 Start: 8928, Stop: 9338, Start Num: 6
Candidate Starts for Soondubu_11:
(Start: 6 @8928 has 16 MA's), (21, 9030), (37, 9291),

Gene: Sooty_12 Start: 8457, Stop: 8876, Start Num: 2
Candidate Starts for Sooty_12:
(Start: 2 @8457 has 10 MA's), (14, 8499), (34, 8781),

Gene: SpecialK_12 Start: 8454, Stop: 8873, Start Num: 2
Candidate Starts for SpecialK_12:
(Start: 2 @8454 has 10 MA's), (14, 8496), (34, 8778),

Gene: SuMoo_10 Start: 7515, Stop: 7928, Start Num: 6
Candidate Starts for SuMoo_10:
(Start: 6 @7515 has 16 MA's),

Gene: Sue2_12 Start: 9043, Stop: 9456, Start Num: 6
Candidate Starts for Sue2_12:
(1, 9007), (Start: 6 @9043 has 16 MA's),

Gene: Tallboi_12 Start: 9050, Stop: 9463, Start Num: 3
Candidate Starts for Tallboi_12:
(Start: 3 @9050 has 37 MA's), (15, 9095), (17, 9119), (36, 9380), (37, 9413),

Gene: Tbone_12 Start: 9033, Stop: 9446, Start Num: 3
Candidate Starts for Tbone_12:
(Start: 3 @9033 has 37 MA's), (17, 9102), (27, 9252), (36, 9363), (37, 9396),

Gene: TforTroy_12 Start: 9164, Stop: 9577, Start Num: 3
Candidate Starts for TforTroy_12:
(Start: 3 @9164 has 37 MA's), (36, 9494), (37, 9527),

Gene: Tian_12 Start: 9064, Stop: 9477, Start Num: 3
Candidate Starts for Tian_12:
(Start: 3 @9064 has 37 MA's), (15, 9109), (27, 9283), (36, 9394), (37, 9427),

Gene: Tuck_13 Start: 10079, Stop: 10489, Start Num: 3
Candidate Starts for Tuck_13:
(Start: 3 @10079 has 37 MA's), (15, 10124), (27, 10298), (36, 10409), (37, 10442),

Gene: Turab_12 Start: 9048, Stop: 9458, Start Num: 3
Candidate Starts for Turab_12:
(Start: 3 @9048 has 37 MA's), (15, 9093), (17, 9117), (36, 9378), (37, 9411),

Gene: Tutumahutu_12 Start: 9090, Stop: 9503, Start Num: 3
Candidate Starts for Tutumahutu_12:

(Start: 3 @9090 has 37 MA's), (17, 9159), (27, 9309), (36, 9420), (37, 9453),

Gene: Tweety19_12 Start: 8126, Stop: 8539, Start Num: 6

Candidate Starts for Tweety19_12:

(Start: 6 @8126 has 16 MA's), (23, 8279), (40, 8522),

Gene: UtzChips_10 Start: 8204, Stop: 8620, Start Num: 6

Candidate Starts for UtzChips_10:

(Start: 6 @8204 has 16 MA's), (28, 8444), (33, 8501),

Gene: VResidence_12 Start: 9113, Stop: 9535, Start Num: 6

Candidate Starts for VResidence_12:

(Start: 6 @9113 has 16 MA's), (26, 9335), (32, 9422), (35, 9443), (36, 9452),

Gene: VroomVroom_11 Start: 7298, Stop: 7693, Start Num: 7

Candidate Starts for VroomVroom_11:

(Start: 7 @7298 has 2 MA's), (25, 7490),

Gene: Warda_12 Start: 9036, Stop: 9449, Start Num: 3

Candidate Starts for Warda_12:

(Start: 3 @9036 has 37 MA's), (17, 9105), (27, 9255), (36, 9366), (37, 9399),

Gene: Wildwest_13 Start: 9954, Stop: 10370, Start Num: 6

Candidate Starts for Wildwest_13:

(Start: 6 @9954 has 16 MA's), (23, 10107), (26, 10170), (35, 10278),

Gene: Yang_12 Start: 9134, Stop: 9547, Start Num: 3

Candidate Starts for Yang_12:

(Start: 3 @9134 has 37 MA's), (36, 9464), (37, 9497),

Gene: YesChef_12 Start: 9090, Stop: 9503, Start Num: 3

Candidate Starts for YesChef_12:

(Start: 3 @9090 has 37 MA's), (17, 9159), (27, 9309), (36, 9420), (37, 9453),

Gene: Zeta1847_10 Start: 7300, Stop: 7692, Start Num: 4

Candidate Starts for Zeta1847_10:

(Start: 4 @7300 has 1 MA's), (23, 7444), (24, 7453),