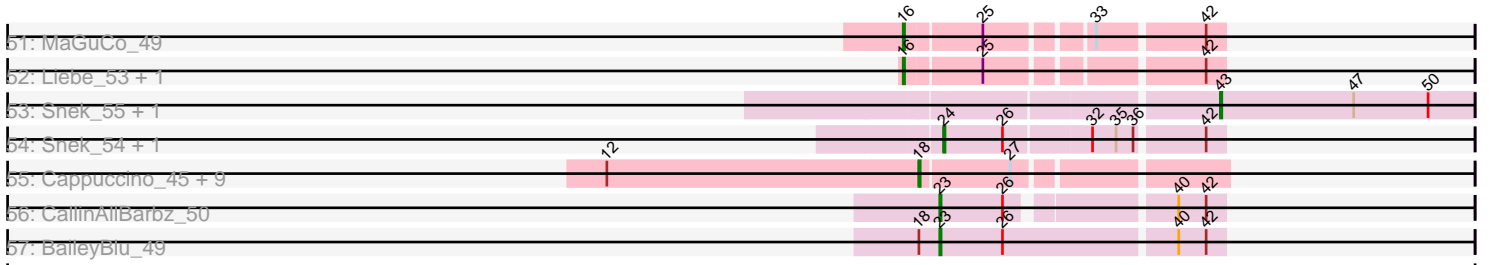


Pham 202823



Pham 202823



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 202823 Report

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

Pham number 202823 has 102 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Exile_46, Soondubu_48
- Track 2 : AinMach_51
- Track 3 : AEgle_48, Turab_49, Adumb2043_49
- Track 4 : AEgle_49, Turab_50
- Track 5 : JuneStar_54, TforTroy_53, Yang_52
- Track 6 : JuneStar_53
- Track 7 : Warda_52, Tbone_52
- Track 8 : Tallboi_52
- Track 9 : Nitro_55
- Track 10 : Tallboi_51, TforTroy_52
- Track 11 : Tian_52, Amyev_53
- Track 12 : Cyan_52, Mudpuppy_48, Lizalica_51
- Track 13 : Tutumahutu_53
- Track 14 : Reedo_52
- Track 15 : Adolin_55, DrManhattan_54
- Track 16 : Reedo_51
- Track 17 : Elezi_50, Niobe_50, Asa16_50, Jstan_52, Eraser_50, London_50
- Track 18 : Powerpuff_54, AGrandiflora_54, Joemato_52, YesChef_52, Simpson_54
- Track 19 : Community_55, Tuck_55
- Track 20 : Yang_51
- Track 21 : Niobe_51, Asa16_51, London_51
- Track 22 : DrSierra_50
- Track 23 : Ascela_55, Iter_55
- Track 24 : Janeemi_54
- Track 25 : Ascela_53, Iter_53
- Track 26 : Phives_56
- Track 27 : Amyev_54, Tian_53, Pixelle_55
- Track 28 : Cassia_50
- Track 29 : Cassia_51
- Track 30 : Lego_51, Kaylissa_53
- Track 31 : Adolin_56, DrManhattan_55
- Track 32 : Crewmate_57, ObiToo_56
- Track 33 : JohnDoe_52
- Track 34 : Pumpkins_51
- Track 35 : KeAlii_49
- Track 36 : KeAlii_51
- Track 37 : MissSwiss_54

- Track 38 : MissSwiss_55
- Track 39 : IttyBittyPiggy_51
- Track 40 : IttyBittyPiggy_52
- Track 41 : VResidence_52
- Track 42 : Wildwest_51
- Track 43 : Pumpkins_50
- Track 44 : Shaffner_50
- Track 45 : Jstan_53, Eraser_51, Elezi_51
- Track 46 : Nitro_53
- Track 47 : Pixelle_54
- Track 48 : Sue2_52
- Track 49 : Adumb2043_50
- Track 50 : Berrie_53
- Track 51 : MaGuCo_49
- Track 52 : Liebe_53, Maureen_53
- Track 53 : Snek_55, Tweety19_56
- Track 54 : Snek_54, Tweety19_55
- Track 55 : Cappuccino_45, Kalimba_45, Gambol_46, Moss_45, Sooty_45, Ashes_45, SpecialK_45, Halsey_45, Donkey_45, Mysterium_44
- Track 56 : CallinAllBarbz_50
- Track 57 : BaileyBlu_49

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

The start number called the most often in the published annotations is 43, it was called in 20 of the 86 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AEgle_49, Adolin_56, Adumb2043_50, Amyev_54, Asa16_51, Cassia_51, DrManhattan_55, Elezi_51, Eraser_51, IttyBittyPiggy_52, Jstan_53, JuneStar_54, London_51, MissSwiss_55, Niobe_51, Pixelle_55, Pumpkins_51, Reedo_52, Snek_55, Tallboi_52, TforTroy_53, Tian_53, Turab_50, Tweety19_56, Yang_52,

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

-

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

- AEgle_48, AGrandiflora_54, Adolin_55, Adumb2043_49, AinMach_51, Amyev_53, Asa16_50, Ascela_53, Ascela_55, Ashes_45, BaileyBlu_49, Berrie_53, CallinAllBarbz_50, Cappuccino_45, Cassia_50, Community_55, Crewmate_57, Cyan_52, Donkey_45, DrManhattan_54, DrSierra_50, Elezi_50, Eraser_50, Exile_46, Gambol_46, Halsey_45, Iter_53, Iter_55, IttyBittyPiggy_51, Janeemi_54, Joemato_52, JohnDoe_52, Jstan_52, JuneStar_53, Kalimba_45, Kaylissa_53, KeAlii_49, KeAlii_51, Lego_51, Liebe_53, Lizalica_51, London_50, MaGuCo_49, Maureen_53, MissSwiss_54, Moss_45, Mudpuppy_48, Mysterium_44, Niobe_50, Nitro_53, Nitro_55, ObiToo_56, Phives_56, Pixelle_54, Powerpuff_54, Pumpkins_50, Reedo_51, Shaffner_50, Simpson_54, Snek_54, Soondubu_48, Sooty_45, SpecialK_45, Sue2_52, Tallboi_51, Tbone_52, TforTroy_52, Tian_52, Tuck_55, Turab_49, Tutumahutu_53, Tweety19_55, VResidence_52, Warda_52, Wildwest_51, Yang_51, YesChef_52,

Summary by start number:

Start 14:

- Found in 12 of 102 (11.8%) of genes in pham
- Manual Annotations of this start: 8 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle_48 (AZ1), Adumb2043_49 (AZ1), Amyev_53 (AZ1), Berrie_53 (AZ1), Community_55 (AZ1), Janeemi_54 (AZ1), MissSwiss_54 (AZ1), Phives_56 (AZ1), Pixelle_54 (AZ1), Tian_52 (AZ1), Tuck_55 (AZ1), Turab_49 (AZ1),

Start 15:

- Found in 19 of 102 (18.6%) of genes in pham
- Manual Annotations of this start: 16 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Asa16_50 (AZ1), Ascela_53 (AZ1), Cassia_50 (AZ1), Crewmate_57 (AZ1), Elezi_50 (AZ1), Eraser_50 (AZ1), Iter_53 (AZ1), IttyBittyPiggy_51 (AZ1), Jstan_52 (AZ1), JuneStar_53 (AZ1), London_50 (AZ1), Niobe_50 (AZ1), Nitro_53 (AZ1), ObiToo_56 (AZ1), Pumpkins_50 (AZ1), Shaffner_50 (AZ1), Tallboi_51 (AZ1), TforTroy_52 (AZ1), Yang_51 (AZ1),

Start 16:

- Found in 3 of 102 (2.9%) of genes in pham
- Manual Annotations of this start: 3 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Liebe_53 (AZ2), MaGuCo_49 (AZ2), Maureen_53 (AZ2),

Start 17:

- Found in 21 of 102 (20.6%) of genes in pham
- Manual Annotations of this start: 18 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AGrandiflora_54 (AZ1), Cyan_52 (AZ1), DrSierra_50 (AZ1), Exile_46 (AZ), Joemato_52 (AZ1), JohnDoe_52 (AZ1), Kaylissa_53 (AZ1), KeAlii_49 (AZ1), Lego_51 (AZ1), Lizalica_51 (AZ1), Mudpuppy_48 (AZ1), Powerpuff_54 (AZ1), Simpson_54 (AZ1), Soondubu_48 (AZ), Sue2_52 (AZ1), Tbone_52 (AZ1), Tutumahutu_53 (AZ1), VResidence_52 (AZ1), Warda_52 (AZ1), Wildwest_51 (AZ1), YesChef_52 (AZ1),

Start 18:

- Found in 11 of 102 (10.8%) of genes in pham
- Manual Annotations of this start: 10 of 86
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Ashes_45 (AZ5), Cappuccino_45 (AZ5), Donkey_45 (AZ5), Gambol_46 (AZ5), Halsey_45 (AZ5), Kalimba_45 (AZ5), Moss_45 (AZ5), Mysterium_44 (AZ5), Sooty_45 (AZ5), SpecialK_45 (AZ5),

Start 19:

- Found in 1 of 102 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Reedo_51 (AZ1),

Start 22:

- Found in 2 of 102 (2.0%) of genes in pham
- Manual Annotations of this start: 2 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adolin_55 (AZ1), DrManhattan_54 (AZ1),

Start 23:

- Found in 5 of 102 (4.9%) of genes in pham
- Manual Annotations of this start: 4 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AinMach_51 (AZ), BaileyBlu_49 (FP), CallinAllBarbz_50 (FP), KeAlii_51 (AZ1), Nitro_55 (AZ1),

Start 24:

- Found in 6 of 102 (5.9%) of genes in pham
- Manual Annotations of this start: 4 of 86
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Ascela_55 (AZ1), Iter_55 (AZ1), Snek_54 (AZ3), Tweety19_55 (AZ3),

Start 43:

- Found in 25 of 102 (24.5%) of genes in pham
- Manual Annotations of this start: 20 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle_49 (AZ1), Adolin_56 (AZ1), Adumb2043_50 (AZ1), Amyev_54 (AZ1), Asa16_51 (AZ1), Cassia_51 (AZ1), DrManhattan_55 (AZ1), Elezi_51 (AZ1), Eraser_51 (AZ1), IttyBittyPiggy_52 (AZ1), Jstan_53 (AZ1), JuneStar_54 (AZ1), London_51 (AZ1), MissSwiss_55 (AZ1), Niobe_51 (AZ1), Pixelle_55 (AZ1), Pumpkins_51 (AZ1), Reedo_52 (AZ1), Snek_55 (AZ3), Tallboi_52 (AZ1), TforTroy_53 (AZ1), Tian_53 (AZ1), Turab_50 (AZ1), Tweety19_56 (AZ3), Yang_52 (AZ1),

Summary by clusters:

There are 6 clusters represented in this pham: FP, AZ, AZ1, AZ2, AZ3, AZ5,

Info for manual annotations of cluster AZ:

- Start number 17 was manually annotated 1 time for cluster AZ.

Info for manual annotations of cluster AZ1:

- Start number 14 was manually annotated 8 times for cluster AZ1.
- Start number 15 was manually annotated 16 times for cluster AZ1.
- Start number 17 was manually annotated 17 times for cluster AZ1.
- Start number 19 was manually annotated 1 time for cluster AZ1.
- Start number 22 was manually annotated 2 times for cluster AZ1.
- Start number 23 was manually annotated 2 times for cluster AZ1.
- Start number 24 was manually annotated 2 times for cluster AZ1.
- Start number 43 was manually annotated 18 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 16 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 24 was manually annotated 2 times for cluster AZ3.
- Start number 43 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ5:

- Start number 18 was manually annotated 10 times for cluster AZ5.

Info for manual annotations of cluster FP:

- Start number 23 was manually annotated 2 times for cluster FP.

Gene Information:

Gene: AEgle_48 Start: 36313, Stop: 36537, Start Num: 14

Candidate Starts for AEgle_48:

(Start: 14 @36313 has 8 MA's), (42, 36523),

Gene: AEgle_49 Start: 36534, Stop: 36725, Start Num: 43

Candidate Starts for AEgle_49:

(Start: 43 @36534 has 20 MA's), (52, 36711),

Gene: AGrandiflora_54 Start: 37650, Stop: 37871, Start Num: 17

Candidate Starts for AGrandiflora_54:

(Start: 17 @37650 has 18 MA's), (30, 37764), (42, 37857),

Gene: Adolin_55 Start: 36749, Stop: 36955, Start Num: 22

Candidate Starts for Adolin_55:

(Start: 22 @36749 has 2 MA's), (Start: 24 @36755 has 4 MA's), (30, 36839), (42, 36941),

Gene: Adolin_56 Start: 36952, Stop: 37143, Start Num: 43

Candidate Starts for Adolin_56:

(20, 36739), (21, 36742), (Start: 43 @36952 has 20 MA's), (46, 37027), (51, 37120), (52, 37129),

Gene: Adumb2043_50 Start: 36555, Stop: 36746, Start Num: 43

Candidate Starts for Adumb2043_50:

(Start: 43 @36555 has 20 MA's), (46, 36630), (52, 36732),

Gene: Adumb2043_49 Start: 36334, Stop: 36558, Start Num: 14

Candidate Starts for Adumb2043_49:

(Start: 14 @36334 has 8 MA's), (42, 36544),

Gene: AinMach_51 Start: 36840, Stop: 37037, Start Num: 23

Candidate Starts for AinMach_51:

(Start: 23 @36840 has 4 MA's), (29, 36918), (38, 36996), (39, 36999), (41, 37008), (42, 37023),

Gene: Amyev_54 Start: 39992, Stop: 40183, Start Num: 43

Candidate Starts for Amyev_54:

(Start: 43 @39992 has 20 MA's), (52, 40169),

Gene: Amyev_53 Start: 39795, Stop: 39995, Start Num: 14

Candidate Starts for Amyev_53:

(Start: 14 @39795 has 8 MA's), (42, 39981),

Gene: Asa16_51 Start: 38109, Stop: 38300, Start Num: 43

Candidate Starts for Asa16_51:

(Start: 43 @38109 has 20 MA's), (46, 38184), (48, 38223), (52, 38286),

Gene: Asa16_50 Start: 37882, Stop: 38112, Start Num: 15

Candidate Starts for Asa16_50:

(Start: 15 @37882 has 16 MA's), (30, 37999), (42, 38098),

Gene: Ascela_55 Start: 38387, Stop: 38578, Start Num: 24

Candidate Starts for Ascela_55:

(Start: 24 @38387 has 4 MA's), (42, 38564),

Gene: Ascela_53 Start: 37957, Stop: 38187, Start Num: 15

Candidate Starts for Ascela_53:

(Start: 15 @37957 has 16 MA's), (30, 38074), (42, 38173),

Gene: Ashes_45 Start: 33455, Stop: 33667, Start Num: 18

Candidate Starts for Ashes_45:

(12, 33218), (Start: 18 @33455 has 10 MA's), (27, 33521),

Gene: BaileyBlu_49 Start: 35978, Stop: 36187, Start Num: 23

Candidate Starts for BaileyBlu_49:

(Start: 18 @35963 has 10 MA's), (Start: 23 @35978 has 4 MA's), (26, 36026), (40, 36152), (42, 36173),

Gene: Berrie_53 Start: 38048, Stop: 38266, Start Num: 14

Candidate Starts for Berrie_53:

(Start: 14 @38048 has 8 MA's), (26, 38114), (30, 38156), (42, 38252),

Gene: CallinAllBarbz_50 Start: 36450, Stop: 36644, Start Num: 23

Candidate Starts for CallinAllBarbz_50:

(Start: 23 @36450 has 4 MA's), (26, 36498), (40, 36609), (42, 36630),

Gene: Cappuccino_45 Start: 33320, Stop: 33532, Start Num: 18

Candidate Starts for Cappuccino_45:

(12, 33083), (Start: 18 @33320 has 10 MA's), (27, 33386),

Gene: Cassia_50 Start: 37073, Stop: 37303, Start Num: 15

Candidate Starts for Cassia_50:

(Start: 15 @37073 has 16 MA's), (30, 37190), (37, 37238), (42, 37289),

Gene: Cassia_51 Start: 37300, Stop: 37491, Start Num: 43

Candidate Starts for Cassia_51:

(Start: 43 @37300 has 20 MA's), (44, 37321), (52, 37477),

Gene: Community_55 Start: 39440, Stop: 39658, Start Num: 14

Candidate Starts for Community_55:

(Start: 14 @39440 has 8 MA's), (30, 39548), (42, 39644),

Gene: Crewmate_57 Start: 38837, Stop: 39067, Start Num: 15

Candidate Starts for Crewmate_57:

(6, 38405), (Start: 15 @38837 has 16 MA's), (30, 38954), (37, 39002), (42, 39053),

Gene: Cyan_52 Start: 37207, Stop: 37428, Start Num: 17

Candidate Starts for Cyan_52:

(Start: 17 @37207 has 18 MA's), (30, 37321), (42, 37414),

Gene: Donkey_45 Start: 33310, Stop: 33522, Start Num: 18

Candidate Starts for Donkey_45:

(12, 33073), (Start: 18 @33310 has 10 MA's), (27, 33376),

Gene: DrManhattan_55 Start: 36520, Stop: 36711, Start Num: 43

Candidate Starts for DrManhattan_55:

(20, 36307), (21, 36310), (Start: 43 @36520 has 20 MA's), (46, 36595), (51, 36688), (52, 36697),

Gene: DrManhattan_54 Start: 36317, Stop: 36523, Start Num: 22

Candidate Starts for DrManhattan_54:

(Start: 22 @36317 has 2 MA's), (Start: 24 @36323 has 4 MA's), (30, 36407), (42, 36509),

Gene: DrSierra_50 Start: 36034, Stop: 36258, Start Num: 17

Candidate Starts for DrSierra_50:

(10, 35728), (Start: 17 @36034 has 18 MA's), (42, 36244),

Gene: Elezi_50 Start: 37880, Stop: 38110, Start Num: 15

Candidate Starts for Elezi_50:

(Start: 15 @37880 has 16 MA's), (30, 37997), (42, 38096),

Gene: Elezi_51 Start: 38107, Stop: 38298, Start Num: 43

Candidate Starts for Elezi_51:

(Start: 43 @38107 has 20 MA's), (46, 38182), (52, 38284),

Gene: Eraser_51 Start: 38116, Stop: 38307, Start Num: 43

Candidate Starts for Eraser_51:

(Start: 43 @38116 has 20 MA's), (46, 38191), (52, 38293),

Gene: Eraser_50 Start: 37889, Stop: 38119, Start Num: 15

Candidate Starts for Eraser_50:

(Start: 15 @37889 has 16 MA's), (30, 38006), (42, 38105),

Gene: Exile_46 Start: 39253, Stop: 39480, Start Num: 17

Candidate Starts for Exile_46:

(Start: 17 @39253 has 18 MA's), (27, 39328), (42, 39466),

Gene: Gambol_46 Start: 33329, Stop: 33541, Start Num: 18

Candidate Starts for Gambol_46:

(12, 33092), (Start: 18 @33329 has 10 MA's), (27, 33395),

Gene: Halsey_45 Start: 33457, Stop: 33669, Start Num: 18

Candidate Starts for Halsey_45:

(12, 33220), (Start: 18 @33457 has 10 MA's), (27, 33523),

Gene: Iter_53 Start: 37949, Stop: 38179, Start Num: 15

Candidate Starts for Iter_53:

(Start: 15 @37949 has 16 MA's), (30, 38066), (42, 38165),

Gene: Iter_55 Start: 38379, Stop: 38570, Start Num: 24
Candidate Starts for Iter_55:
(Start: 24 @38379 has 4 MA's), (42, 38556),

Gene: IttyBittyPiggy_51 Start: 36661, Stop: 36891, Start Num: 15
Candidate Starts for IttyBittyPiggy_51:
(Start: 15 @36661 has 16 MA's), (37, 36826), (42, 36877),

Gene: IttyBittyPiggy_52 Start: 36888, Stop: 37079, Start Num: 43
Candidate Starts for IttyBittyPiggy_52:
(13, 36570), (Start: 43 @36888 has 20 MA's), (52, 37065),

Gene: Janeemi_54 Start: 38904, Stop: 39122, Start Num: 14
Candidate Starts for Janeemi_54:
(Start: 14 @38904 has 8 MA's), (30, 39012), (42, 39108),

Gene: Joemato_52 Start: 37287, Stop: 37508, Start Num: 17
Candidate Starts for Joemato_52:
(Start: 17 @37287 has 18 MA's), (30, 37401), (42, 37494),

Gene: JohnDoe_52 Start: 37271, Stop: 37492, Start Num: 17
Candidate Starts for JohnDoe_52:
(Start: 17 @37271 has 18 MA's), (30, 37385), (42, 37478),

Gene: Jstan_53 Start: 38111, Stop: 38302, Start Num: 43
Candidate Starts for Jstan_53:
(Start: 43 @38111 has 20 MA's), (46, 38186), (52, 38288),

Gene: Jstan_52 Start: 37884, Stop: 38114, Start Num: 15
Candidate Starts for Jstan_52:
(Start: 15 @37884 has 16 MA's), (30, 38001), (42, 38100),

Gene: JuneStar_54 Start: 40230, Stop: 40421, Start Num: 43
Candidate Starts for JuneStar_54:
(Start: 43 @40230 has 20 MA's), (52, 40407),

Gene: JuneStar_53 Start: 40003, Stop: 40233, Start Num: 15
Candidate Starts for JuneStar_53:
(Start: 15 @40003 has 16 MA's), (42, 40219),

Gene: Kalimba_45 Start: 33307, Stop: 33519, Start Num: 18
Candidate Starts for Kalimba_45:
(12, 33070), (Start: 18 @33307 has 10 MA's), (27, 33373),

Gene: Kaylissa_53 Start: 37666, Stop: 37887, Start Num: 17
Candidate Starts for Kaylissa_53:
(Start: 17 @37666 has 18 MA's), (30, 37780), (42, 37873),

Gene: KeAlii_49 Start: 36858, Stop: 37082, Start Num: 17
Candidate Starts for KeAlii_49:
(Start: 17 @36858 has 18 MA's), (26, 36930), (42, 37068),

Gene: KeAlii_51 Start: 37294, Stop: 37488, Start Num: 23

Candidate Starts for KeAlij_51:
(Start: 23 @37294 has 4 MA's), (28, 37369),

Gene: Lego_51 Start: 36986, Stop: 37207, Start Num: 17
Candidate Starts for Lego_51:
(Start: 17 @36986 has 18 MA's), (30, 37100), (42, 37193),

Gene: Liebe_53 Start: 39401, Stop: 39613, Start Num: 16
Candidate Starts for Liebe_53:
(Start: 16 @39401 has 3 MA's), (25, 39455), (42, 39599),

Gene: Lizalica_51 Start: 36731, Stop: 36952, Start Num: 17
Candidate Starts for Lizalica_51:
(Start: 17 @36731 has 18 MA's), (30, 36845), (42, 36938),

Gene: London_50 Start: 37880, Stop: 38110, Start Num: 15
Candidate Starts for London_50:
(Start: 15 @37880 has 16 MA's), (30, 37997), (42, 38096),

Gene: London_51 Start: 38107, Stop: 38298, Start Num: 43
Candidate Starts for London_51:
(Start: 43 @38107 has 20 MA's), (46, 38182), (48, 38221), (52, 38284),

Gene: MaGuCo_49 Start: 38092, Stop: 38304, Start Num: 16
Candidate Starts for MaGuCo_49:
(Start: 16 @38092 has 3 MA's), (25, 38146), (33, 38215), (42, 38290),

Gene: Maureen_53 Start: 39400, Stop: 39612, Start Num: 16
Candidate Starts for Maureen_53:
(Start: 16 @39400 has 3 MA's), (25, 39454), (42, 39598),

Gene: MissSwiss_54 Start: 36480, Stop: 36698, Start Num: 14
Candidate Starts for MissSwiss_54:
(Start: 14 @36480 has 8 MA's), (30, 36588), (42, 36684),

Gene: MissSwiss_55 Start: 36695, Stop: 36886, Start Num: 43
Candidate Starts for MissSwiss_55:
(Start: 43 @36695 has 20 MA's), (46, 36770), (49, 36842), (52, 36872),

Gene: Moss_45 Start: 33397, Stop: 33609, Start Num: 18
Candidate Starts for Moss_45:
(12, 33160), (Start: 18 @33397 has 10 MA's), (27, 33463),

Gene: Mudpuppy_48 Start: 36915, Stop: 37136, Start Num: 17
Candidate Starts for Mudpuppy_48:
(Start: 17 @36915 has 18 MA's), (30, 37029), (42, 37122),

Gene: Mysterium_44 Start: 33230, Stop: 33442, Start Num: 18
Candidate Starts for Mysterium_44:
(12, 32993), (Start: 18 @33230 has 10 MA's), (27, 33296),

Gene: Niobe_50 Start: 37883, Stop: 38113, Start Num: 15
Candidate Starts for Niobe_50:

(Start: 15 @37883 has 16 MA's), (30, 38000), (42, 38099),

Gene: Niobe_51 Start: 38110, Stop: 38301, Start Num: 43

Candidate Starts for Niobe_51:

(Start: 43 @38110 has 20 MA's), (46, 38185), (48, 38224), (52, 38287),

Gene: Nitro_55 Start: 39409, Stop: 39600, Start Num: 23

Candidate Starts for Nitro_55:

(Start: 23 @39409 has 4 MA's), (28, 39484), (34, 39523), (42, 39586),

Gene: Nitro_53 Start: 38988, Stop: 39218, Start Num: 15

Candidate Starts for Nitro_53:

(11, 38691), (Start: 15 @38988 has 16 MA's), (30, 39105), (42, 39204),

Gene: ObiToo_56 Start: 38231, Stop: 38461, Start Num: 15

Candidate Starts for ObiToo_56:

(6, 37799), (Start: 15 @38231 has 16 MA's), (30, 38348), (37, 38396), (42, 38447),

Gene: Phives_56 Start: 39558, Stop: 39776, Start Num: 14

Candidate Starts for Phives_56:

(3, 38994), (7, 39162), (Start: 14 @39558 has 8 MA's), (30, 39666), (42, 39762),

Gene: Pixelle_54 Start: 40140, Stop: 40340, Start Num: 14

Candidate Starts for Pixelle_54:

(Start: 14 @40140 has 8 MA's), (42, 40326),

Gene: Pixelle_55 Start: 40337, Stop: 40528, Start Num: 43

Candidate Starts for Pixelle_55:

(Start: 43 @40337 has 20 MA's), (52, 40514),

Gene: Powerpuff_54 Start: 38373, Stop: 38594, Start Num: 17

Candidate Starts for Powerpuff_54:

(Start: 17 @38373 has 18 MA's), (30, 38487), (42, 38580),

Gene: Pumpkins_51 Start: 37973, Stop: 38164, Start Num: 43

Candidate Starts for Pumpkins_51:

(Start: 43 @37973 has 20 MA's), (52, 38150),

Gene: Pumpkins_50 Start: 37746, Stop: 37976, Start Num: 15

Candidate Starts for Pumpkins_50:

(8, 37368), (Start: 15 @37746 has 16 MA's), (42, 37962),

Gene: Reedo_52 Start: 35933, Stop: 36109, Start Num: 43

Candidate Starts for Reedo_52:

(Start: 43 @35933 has 20 MA's), (45, 35984),

Gene: Reedo_51 Start: 35724, Stop: 35936, Start Num: 19

Candidate Starts for Reedo_51:

(Start: 19 @35724 has 1 MA's), (26, 35784), (42, 35922),

Gene: Shaffner_50 Start: 37680, Stop: 37910, Start Num: 15

Candidate Starts for Shaffner_50:

(Start: 15 @37680 has 16 MA's), (42, 37896),

Gene: Simpson_54 Start: 37291, Stop: 37512, Start Num: 17
Candidate Starts for Simpson_54:

(Start: 17 @37291 has 18 MA's), (30, 37405), (42, 37498),

Gene: Snek_55 Start: 37054, Stop: 37248, Start Num: 43

Candidate Starts for Snek_55:

(Start: 43 @37054 has 20 MA's), (47, 37156), (50, 37213),

Gene: Snek_54 Start: 36857, Stop: 37057, Start Num: 24

Candidate Starts for Snek_54:

(Start: 24 @36857 has 4 MA's), (26, 36902), (32, 36965), (35, 36983), (36, 36995), (42, 37043),

Gene: Soondubu_48 Start: 39736, Stop: 39963, Start Num: 17

Candidate Starts for Soondubu_48:

(Start: 17 @39736 has 18 MA's), (27, 39811), (42, 39949),

Gene: Sooty_45 Start: 33322, Stop: 33534, Start Num: 18

Candidate Starts for Sooty_45:

(12, 33085), (Start: 18 @33322 has 10 MA's), (27, 33388),

Gene: SpecialK_45 Start: 33306, Stop: 33518, Start Num: 18

Candidate Starts for SpecialK_45:

(12, 33069), (Start: 18 @33306 has 10 MA's), (27, 33372),

Gene: Sue2_52 Start: 37060, Stop: 37284, Start Num: 17

Candidate Starts for Sue2_52:

(1, 36403), (2, 36421), (4, 36535), (5, 36604), (9, 36670), (Start: 17 @37060 has 18 MA's), (42, 37270),

Gene: Tallboi_52 Start: 38465, Stop: 38656, Start Num: 43

Candidate Starts for Tallboi_52:

(Start: 43 @38465 has 20 MA's), (46, 38540), (52, 38642),

Gene: Tallboi_51 Start: 38238, Stop: 38468, Start Num: 15

Candidate Starts for Tallboi_51:

(Start: 15 @38238 has 16 MA's), (30, 38355), (42, 38454),

Gene: Tbone_52 Start: 37857, Stop: 38078, Start Num: 17

Candidate Starts for Tbone_52:

(Start: 17 @37857 has 18 MA's), (30, 37971), (42, 38064),

Gene: TforTroy_53 Start: 37830, Stop: 38021, Start Num: 43

Candidate Starts for TforTroy_53:

(Start: 43 @37830 has 20 MA's), (52, 38007),

Gene: TforTroy_52 Start: 37603, Stop: 37833, Start Num: 15

Candidate Starts for TforTroy_52:

(Start: 15 @37603 has 16 MA's), (30, 37720), (42, 37819),

Gene: Tian_52 Start: 39795, Stop: 39995, Start Num: 14

Candidate Starts for Tian_52:

(Start: 14 @39795 has 8 MA's), (42, 39981),

Gene: Tian_53 Start: 39992, Stop: 40183, Start Num: 43
Candidate Starts for Tian_53:
(Start: 43 @39992 has 20 MA's), (52, 40169),

Gene: Tuck_55 Start: 39348, Stop: 39566, Start Num: 14
Candidate Starts for Tuck_55:
(Start: 14 @39348 has 8 MA's), (30, 39456), (42, 39552),

Gene: Turab_50 Start: 36578, Stop: 36769, Start Num: 43
Candidate Starts for Turab_50:
(Start: 43 @36578 has 20 MA's), (52, 36755),

Gene: Turab_49 Start: 36357, Stop: 36581, Start Num: 14
Candidate Starts for Turab_49:
(Start: 14 @36357 has 8 MA's), (42, 36567),

Gene: Tutumahutu_53 Start: 37244, Stop: 37465, Start Num: 17
Candidate Starts for Tutumahutu_53:
(Start: 17 @37244 has 18 MA's), (30, 37358), (42, 37451),

Gene: Tweety19_55 Start: 36857, Stop: 37057, Start Num: 24
Candidate Starts for Tweety19_55:
(Start: 24 @36857 has 4 MA's), (26, 36902), (32, 36965), (35, 36983), (36, 36995), (42, 37043),

Gene: Tweety19_56 Start: 37054, Stop: 37248, Start Num: 43
Candidate Starts for Tweety19_56:
(Start: 43 @37054 has 20 MA's), (47, 37156), (50, 37213),

Gene: VResidence_52 Start: 36790, Stop: 37014, Start Num: 17
Candidate Starts for VResidence_52:
(Start: 17 @36790 has 18 MA's), (26, 36856), (31, 36901), (42, 37000),

Gene: Warda_52 Start: 37355, Stop: 37576, Start Num: 17
Candidate Starts for Warda_52:
(Start: 17 @37355 has 18 MA's), (30, 37469), (42, 37562),

Gene: Wildwest_51 Start: 37289, Stop: 37513, Start Num: 17
Candidate Starts for Wildwest_51:
(Start: 17 @37289 has 18 MA's), (42, 37499),

Gene: Yang_51 Start: 37412, Stop: 37642, Start Num: 15
Candidate Starts for Yang_51:
(Start: 15 @37412 has 16 MA's), (30, 37529), (37, 37577), (42, 37628),

Gene: Yang_52 Start: 37639, Stop: 37830, Start Num: 43
Candidate Starts for Yang_52:
(Start: 43 @37639 has 20 MA's), (52, 37816),

Gene: YesChef_52 Start: 37232, Stop: 37453, Start Num: 17
Candidate Starts for YesChef_52:
(Start: 17 @37232 has 18 MA's), (30, 37346), (42, 37439),