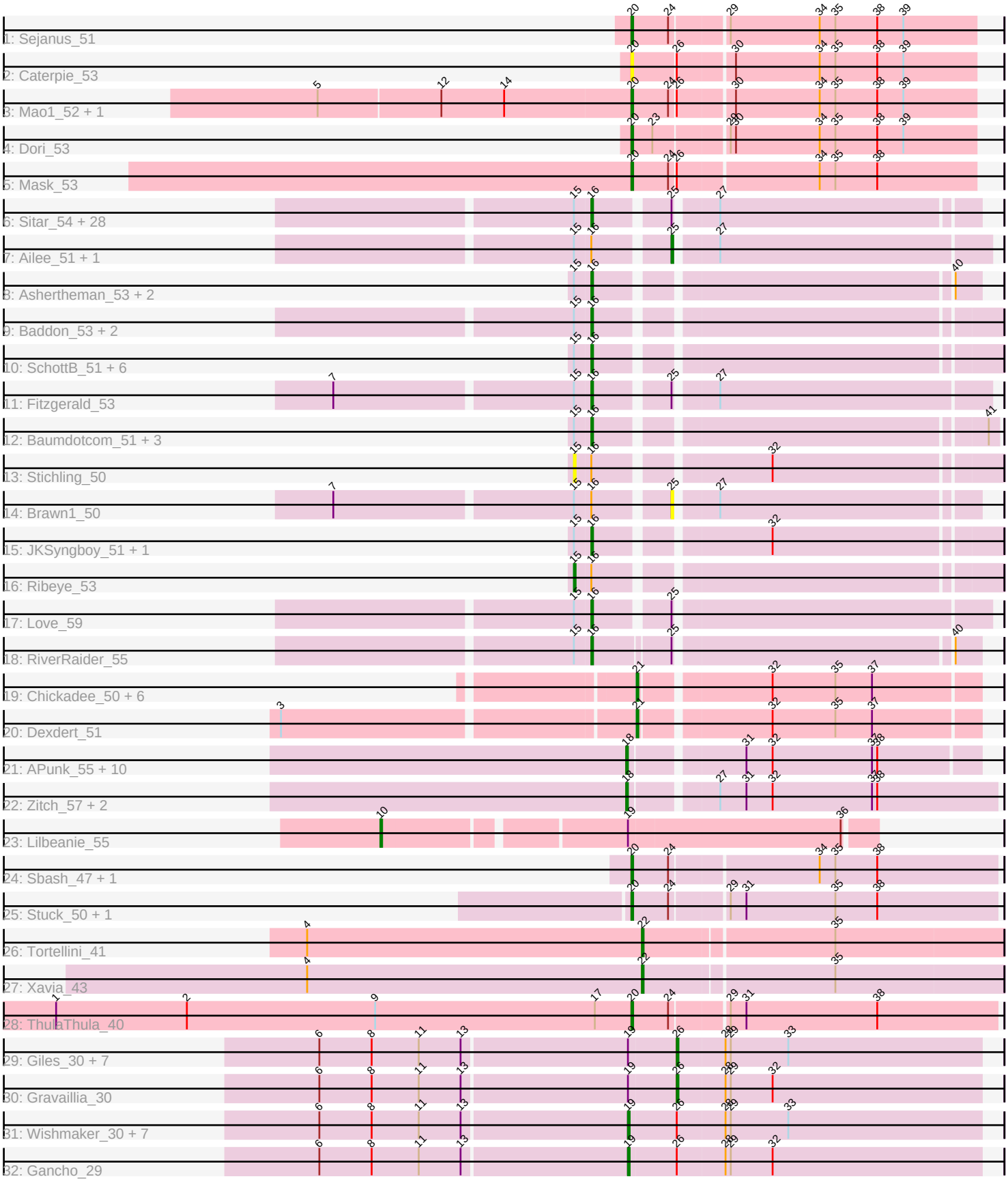
Pham 347435


1: Sejanus_51
2: Caterpie_53
3: Mao1_52 + 1
4: Dori_53
5: Mask_53
6: Sitar_54 + 28
7: Ailee_51 + 1
8: Ashertheman_53 + 2
9: Baddon_53 + 2
10: SchottB_51 + 6
11: Fitzgerald_53
12: Baumdotcom_51 + 3
13: Stichling_50
14: Brawn1_50
15: JKSyngboy_51 + 1
16: Ribeye_53
17: Love_59
18: RiverRaider_55
19: Chickadee_50 + 6
20: Dexdert_51
21: APunk_55 + 10
22: Zitch_57 + 2
23: Lilbeanie_55
24: Sbash_47 + 1
25: Stuck_50 + 1
26: Tortellini_41
27: Xavia_43
28: ThulaThula_40
29: Giles_30 + 7
30: Gravaillia_30
31: Wishmaker_30 + 7
32: Gancho_29

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 347435 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347435 has 110 members, 8 are drafts.

Phages represented in each track:
• Track 1 : Sejanus_51
• Track 2 : Caterpie_53
• Track 3 : Mao1_52, JohnLord_56
• Track 4 : Dori_53
• Track 5 : Mask_53
• Track 6 : Sitar_54, Charming_55, Sanjuju_53, FuegoCuervo_58, Angelicage_52, MoontowerMania_54, Tangent_55, Galadriel_55, McKinley_57, Barsten_55, Kewpiedoll_55, Thing3_53, Brandonk123_56, Affeca_52, Vivi2_58, Geodirt_53, Jabberwocky_52, Fosterous_55, Stultus_52, Keitabear_54, Paries_58, Sedona_54, Kamashten_53, Shivanishola_54, Lennon_54, McCrothy_55, BobBob_53, ChadMasterC_55, Rofo_54
• Track 7 : Ailee_51, Nordenberg_50
• Track 8 : Ashertheman_53, Bibwit_52, Gaea_52
• Track 9 : Baddon_53, Bizzy_53, Derg_48
• Track 10 : SchottB_51, Gustavo_53, YorkOnyx_54, Saronaya_53, Kwobi_55, Tangerine_52, Kroos_53
• Track 11 : Fitzgerald_53
• Track 12 : Baumdotcom_51, Tycho_52, StorminNorm_52, LilHam_50
• Track 13 : Stichling_50
• Track 14 : Brawn1_50
• Track 15 : JKSyngboy_51, Flatwoods_53
• Track 16 : Ribeye_53
• Track 17 : Love_59
• Track 18 : RiverRaider_55
• Track 19 : Chickadee_50, EdmundFerry_49, RoadKill_48, Kwekel_50, Tiamoceli_51, Twonlo_48, GTE6_50
• Track 20 : Dexdert_51
• Track 21 : APunk_55, Sampson_54, Zipp_55, Delrey21_54, ViaConlectus_54, Tardus_56, DoctorFroggo_54, Scioto_55, Verity_54, Natkenzie_54, Abblin_54
• Track 22 : Zitch_57, Pumpkiney_55, BigHunkinEater_57
• Track 23 : Lilbeanie_55
• Track 24 : Sbash_47, Che9c_50
• Track 25 : Stuck_50, Bluvara_43
• Track 26 : Tortellini_41
• Track 27 : Xavia_43
• Track 28 : ThulaThula_40

• Track 29 : Giles_30, Dewey_30, Forge_30, Hail_30, HH92_30, Ubuntu_30, BloominB_30, Luna22_30
• Track 30 : Gravaillia_30
• Track 31 : Wishmaker_30, Evanesce_30, DeepSoil15_30, Amymech_30, Webster2_30, Ein37_30, OBUpride_30, Amochick_30
• Track 32 : Gancho_29

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 50 of the 102 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Affeca_52, Angelicage_52, Ashertheman_53, Baddon_53, Barsten_55, Baumdotcom_51, Bibwit_52, Bizzy_53, BobBob_53, Brandonk123_56, ChadMasterC_55, Charming_55, Derg_48, Fitzgerald_53, Flatwoods_53, Fosterous_55, FuegoCuervo_58, Gaea_52, Galadriel_55, Geodirt_53, Gustavo_53, JKSyngboy_51, Jabberwocky_52, Kamashten_53, Keitabear_54, Kewpiedoll_55, Kroos_53, Kwobi_55, Lennon_54, LilHam_50, Love_59, McCrothy_55, McKinley_57, MoontowerMania_54, Paries_58, RiverRaider_55, Rofo_54, Sanjuju_53, Saronaya_53, SchottB_51, Sedona_54, Shivanishola_54, Sitar_54, StorminNorm_52, Stultus_52, Tangent_55, Tangerine_52, Thing3_53, Tycho_52, Vivi2_58, YorkOnyx_54,

Genes that have the "Most Annotated" start but do not call it:
• Ailee_51, Brawn1_50, Nordenberg_50, Ribeye_53, Stichling_50,

Genes that do not have the "Most Annotated" start:
• APunk_55, Abblin_54, Amochick_30, Amymech_30, BigHunkinEater_57, BloominB_30, Bluvara_43, Caterpie_53, Che9c_50, Chickadee_50, DeepSoil15_30, Delrey21_54, Dewey_30, Dexdert_51, DoctorFroggo_54, Dori_53, EdmundFerry_49, Ein37_30, Evanesce_30, Forge_30, GTE6_50, Gancho_29, Giles_30, Gravaillia_30, HH92_30, Hail_30, JohnLord_56, Kwekel_50, Lilbeanie_55, Luna22_30, Mao1_52, Mask_53, Natkenzie_54, OBUpride_30, Pumpkiney_55, RoadKill_48, Sampson_54, Sbash_47, Scioto_55, Sejanus_51, Stuck_50, Tardus_56, ThulaThula_40, Tiamoceli_51, Tortellini_41, Twonlo_48, Ubuntu_30, Verity_54, ViaConlectus_54, Webster2_30, Wishmaker_30, Xavia_43, Zipp_55, Zitch_57,

Summary by start number:

Start 10:
• Found in 1 of 110 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 102
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Lilbeanie_55 (DE5),

Start 15:
• Found in 56 of 110 (50.9%) of genes in pham
• Manual Annotations of this start: 1 of 102
• Called 3.6% of time when present

• Phage (with cluster) where this start called: Ribeye_53 (DE1), Stichling_50 (DE1),

Start 16:
• Found in 56 of 110 (50.9%) of genes in pham
• Manual Annotations of this start: 50 of 102
• Called 91.1% of time when present
• Phage (with cluster) where this start called: Affeca_52 (DE1), Angelicage_52 (DE1), Ashertheman_53 (DE1), Baddon_53 (DE1), Barsten_55 (DE1), Baumdotcom_51 (DE1), Bibwit_52 (DE1), Bizzy_53 (DE1), BobBob_53 (DE1), Brandonk123_56 (DE1), ChadMasterC_55 (DE1), Charming_55 (DE1), Derg_48 (DE1), Fitzgerald_53 (DE1), Flatwoods_53 (DE1), Fosterous_55 (DE1), FuegoCuervo_58 (DE1), Gaea_52 (DE1), Galadriel_55 (DE1), Geodirt_53 (DE1), Gustavo_53 (DE1), JKSyngboy_51 (DE1), Jabberwocky_52 (DE1), Kamashten_53 (DE1), Keitabear_54 (DE1), Kewpiedoll_55 (DE1), Kroos_53 (DE1), Kwobi_55 (DE1), Lennon_54 (DE1), LilHam_50 (DE1), Love_59 (DE1), McCrothy_55 (DE1), McKinley_57 (DE1), MoontowerMania_54 (DE1), Paries_58 (DE1), RiverRaider_55 (DE1), Rofo_54 (DE1), Sanjuju_53 (DE1), Saronaya_53 (DE1), SchottB_51 (DE1), Sedona_54 (DE1), Shivanishola_54 (DE1), Sitar_54 (DE1), StorminNorm_52 (DE1), Stultus_52 (DE1), Tangent_55 (DE1), Tangerine_52 (DE1), Thing3_53 (DE1), Tycho_52 (DE1), Vivi2_58 (DE1), YorkOnyx_54 (DE1),

Start 18:
• Found in 14 of 110 (12.7%) of genes in pham
• Manual Annotations of this start: 13 of 102
• Called 100.0% of time when present
• Phage (with cluster) where this start called: APunk_55 (DE4), Abblin_54 (DE4), BigHunkinEater_57 (DE4), Delrey21_54 (DE4), DoctorFroggo_54 (DE4), Natkenzie_54 (DE4), Pumpkiney_55 (DE4), Sampson_54 (DE4), Scioto_55 (DE4), Tardus_56 (DE4), Verity_54 (DE4), ViaConlectus_54 (DE4), Zipp_55 (DE4), Zitch_57 (DE4),

Start 19:
• Found in 19 of 110 (17.3%) of genes in pham
• Manual Annotations of this start: 9 of 102
• Called 47.4% of time when present
• Phage (with cluster) where this start called: Amochick_30 (Q), Amymech_30 (Q), DeepSoil15_30 (Q), Ein37_30 (Q), Evanesce_30 (Q), Gancho_29 (Q), OBUpride_30 (Q), Webster2_30 (Q), Wishmaker_30 (Q),

Start 20:
• Found in 11 of 110 (10.0%) of genes in pham
• Manual Annotations of this start: 8 of 102
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bluvara_43 (I3), Caterpie_53 (AD), Che9c_50 (I2), Dori_53 (AD), JohnLord_56 (AD), Mao1_52 (AD), Mask_53 (AD), Sbash_47 (I2), Sejanus_51 (AD), Stuck_50 (I2), ThulaThula_40 (P5),

Start 21:
• Found in 8 of 110 (7.3%) of genes in pham
• Manual Annotations of this start: 7 of 102
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Chickadee_50 (DE3), Dexdert_51 (DE3), EdmundFerry_49 (DE3), GTE6_50 (DE3), Kwekel_50 (DE3), RoadKill_48 (DE3),

Tiamoceli_51 (DE3), Twonlo_48 (DE3),

Start 22:
• Found in 2 of 110 (1.8%) of genes in pham
• Manual Annotations of this start: 2 of 102
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Tortellini_41 (P2), Xavia_43 (P3),

Start 25:
• Found in 35 of 110 (31.8%) of genes in pham
• Manual Annotations of this start: 2 of 102
• Called 8.6% of time when present
• Phage (with cluster) where this start called: Ailee_51 (DE1), Brawn1_50 (DE1), Nordenberg_50 (DE1),

Start 26:
• Found in 22 of 110 (20.0%) of genes in pham
• Manual Annotations of this start: 9 of 102
• Called 40.9% of time when present
• Phage (with cluster) where this start called: BloominB_30 (Q), Dewey_30 (Q), Forge_30 (Q), Giles_30 (Q), Gravaillia_30 (Q), HH92_30 (Q), Hail_30 (Q), Luna22_30 (Q), Ubuntu_30 (Q),

Summary by clusters:

There are 11 clusters represented in this pham: P2, P3, I2, AD, P5, DE1, I3, DE3, DE4, DE5, Q,

Info for manual annotations of cluster AD:
•Start number 20 was manually annotated 4 times for cluster AD.

Info for manual annotations of cluster DE1:
•Start number 15 was manually annotated 1 time for cluster DE1.
•Start number 16 was manually annotated 50 times for cluster DE1.
•Start number 25 was manually annotated 2 times for cluster DE1.

Info for manual annotations of cluster DE3:
•Start number 21 was manually annotated 7 times for cluster DE3.

Info for manual annotations of cluster DE4:
•Start number 18 was manually annotated 13 times for cluster DE4.

Info for manual annotations of cluster DE5:
•Start number 10 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster I2:
•Start number 20 was manually annotated 3 times for cluster I2.

Info for manual annotations of cluster P2:
•Start number 22 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

•Start number 22 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P5:
•Start number 20 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster Q:
•Start number 19 was manually annotated 9 times for cluster Q.
•Start number 26 was manually annotated 9 times for cluster Q.

Gene Information:

Gene: APunk_55 Start: 44818, Stop: 45009, Start Num: 18
Candidate Starts for APunk_55:
(Start: 18 @44818 has 13 MA's), (31, 44878), (32, 44893), (37, 44950), (38, 44953),

Gene: Abblin_54 Start: 45304, Stop: 45495, Start Num: 18
Candidate Starts for Abblin_54:
(Start: 18 @45304 has 13 MA's), (31, 45364), (32, 45379), (37, 45436), (38, 45439),

Gene: Affeca_52 Start: 44537, Stop: 44749, Start Num: 16
Candidate Starts for Affeca_52:
(Start: 15 @44528 has 1 MA's), (Start: 16 @44537 has 50 MA's), (Start: 25 @44576 has 2 MA's), (27, 44597),

Gene: Ailee_51 Start: 44184, Stop: 44357, Start Num: 25
Candidate Starts for Ailee_51:
(Start: 15 @44136 has 1 MA's), (Start: 16 @44145 has 50 MA's), (Start: 25 @44184 has 2 MA's), (27, 44205),

Gene: Amochick_30 Start: 26628, Stop: 26828, Start Num: 19
Candidate Starts for Amochick_30:
(6, 26454), (8, 26484), (11, 26511), (13, 26535), (Start: 19 @26628 has 9 MA's), (Start: 26 @26655 has 9 MA's), (28, 26682), (29, 26685), (33, 26718),

Gene: Amymech_30 Start: 26622, Stop: 26822, Start Num: 19
Candidate Starts for Amymech_30:
(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: Angelicage_52 Start: 44952, Stop: 45164, Start Num: 16
Candidate Starts for Angelicage_52:
(Start: 15 @44943 has 1 MA's), (Start: 16 @44952 has 50 MA's), (Start: 25 @44991 has 2 MA's), (27, 45012),

Gene: Ashertheman_53 Start: 44252, Stop: 44455, Start Num: 16
Candidate Starts for Ashertheman_53:
(Start: 15 @44243 has 1 MA's), (Start: 16 @44252 has 50 MA's), (40, 44441),

Gene: Baddon_53 Start: 45240, Stop: 45455, Start Num: 16
Candidate Starts for Baddon_53:
(Start: 15 @45231 has 1 MA's), (Start: 16 @45240 has 50 MA's),

Gene: Barsten_55 Start: 44908, Stop: 45120, Start Num: 16
Candidate Starts for Barsten_55:
(Start: 15 @44899 has 1 MA's), (Start: 16 @44908 has 50 MA's), (Start: 25 @44947 has 2 MA's), (27, 44968),

Gene: Baumdotcom_51 Start: 43667, Stop: 43879, Start Num: 16
Candidate Starts for Baumdotcom_51:
(Start: 15 @43658 has 1 MA's), (Start: 16 @43667 has 50 MA's), (41, 43874),

Gene: Bibwit_52 Start: 43778, Stop: 43969, Start Num: 16
Candidate Starts for Bibwit_52:
(Start: 15 @43769 has 1 MA's), (Start: 16 @43778 has 50 MA's), (40, 43955),

Gene: BigHunkinEater_57 Start: 44564, Stop: 44767, Start Num: 18
Candidate Starts for BigHunkinEater_57:
(Start: 18 @44564 has 13 MA's), (27, 44609), (31, 44624), (32, 44639), (37, 44696), (38, 44699),

Gene: Bizzy_53 Start: 43955, Stop: 44170, Start Num: 16
Candidate Starts for Bizzy_53:
(Start: 15 @43946 has 1 MA's), (Start: 16 @43955 has 50 MA's),

Gene: BloominB_30 Start: 26649, Stop: 26822, Start Num: 26
Candidate Starts for BloominB_30:
(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: Bluvara_43 Start: 34561, Stop: 34764, Start Num: 20
Candidate Starts for Bluvara_43:
(Start: 20 @34561 has 8 MA's), (24, 34582), (29, 34612), (31, 34621), (35, 34672), (38, 34696),

Gene: BobBob_53 Start: 44135, Stop: 44347, Start Num: 16
Candidate Starts for BobBob_53:
(Start: 15 @44126 has 1 MA's), (Start: 16 @44135 has 50 MA's), (Start: 25 @44174 has 2 MA's), (27, 44195),

Gene: Brandonk123_56 Start: 45095, Stop: 45298, Start Num: 16
Candidate Starts for Brandonk123_56:
(Start: 15 @45086 has 1 MA's), (Start: 16 @45095 has 50 MA's), (Start: 25 @45134 has 2 MA's), (27, 45155),

Gene: Brawn1_50 Start: 44027, Stop: 44191, Start Num: 25
Candidate Starts for Brawn1_50:
(7, 43847), (Start: 15 @43979 has 1 MA's), (Start: 16 @43988 has 50 MA's), (Start: 25 @44027 has 2 MA's), (27, 44048),

Gene: Caterpie_53 Start: 44845, Stop: 45036, Start Num: 20
Candidate Starts for Caterpie_53:
(Start: 20 @44845 has 8 MA's), (Start: 26 @44869 has 9 MA's), (30, 44899), (34, 44947), (35, 44956), (38, 44980), (39, 44995),

Gene: ChadMasterC_55 Start: 46307, Stop: 46519, Start Num: 16
Candidate Starts for ChadMasterC_55:

(Start: 15 @46298 has 1 MA's), (Start: 16 @46307 has 50 MA's), (Start: 25 @46346 has 2 MA's), (27, 46367),

Gene: Charming_55 Start: 44589, Stop: 44792, Start Num: 16
Candidate Starts for Charming_55:
(Start: 15 @44580 has 1 MA's), (Start: 16 @44589 has 50 MA's), (Start: 25 @44628 has 2 MA's), (27, 44649),

Gene: Che9c_50 Start: 39879, Stop: 40082, Start Num: 20
Candidate Starts for Che9c_50:
(Start: 20 @39879 has 8 MA's), (24, 39900), (34, 39981), (35, 39990), (38, 40014),

Gene: Chickadee_50 Start: 41096, Stop: 41281, Start Num: 21
Candidate Starts for Chickadee_50:
(Start: 21 @41096 has 7 MA's), (32, 41165), (35, 41201), (37, 41222),

Gene: DeepSoil15_30 Start: 26622, Stop: 26822, Start Num: 19
Candidate Starts for DeepSoil15_30:
(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: Delrey21_54 Start: 46075, Stop: 46278, Start Num: 18
Candidate Starts for Delrey21_54:
(Start: 18 @46075 has 13 MA's), (31, 46135), (32, 46150), (37, 46207), (38, 46210),

Gene: Derg_48 Start: 43547, Stop: 43762, Start Num: 16
Candidate Starts for Derg_48:
(Start: 15 @43538 has 1 MA's), (Start: 16 @43547 has 50 MA's),

Gene: Dewey_30 Start: 26649, Stop: 26822, Start Num: 26
Candidate Starts for Dewey_30:
(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: Dexdert_51 Start: 41380, Stop: 41565, Start Num: 21
Candidate Starts for Dexdert_51:
(3, 41188), (Start: 21 @41380 has 7 MA's), (32, 41449), (35, 41485), (37, 41506),

Gene: DoctorFroggo_54 Start: 46075, Stop: 46278, Start Num: 18
Candidate Starts for DoctorFroggo_54:
(Start: 18 @46075 has 13 MA's), (31, 46135), (32, 46150), (37, 46207), (38, 46210),

Gene: Dori_53 Start: 45995, Stop: 46186, Start Num: 20
Candidate Starts for Dori_53:
(Start: 20 @45995 has 8 MA's), (23, 46007), (29, 46046), (30, 46049), (34, 46097), (35, 46106), (38, 46130), (39, 46145),

Gene: EdmundFerry_49 Start: 41164, Stop: 41349, Start Num: 21
Candidate Starts for EdmundFerry_49:
(Start: 21 @41164 has 7 MA's), (32, 41233), (35, 41269), (37, 41290),

Gene: Ein37_30 Start: 26622, Stop: 26822, Start Num: 19
Candidate Starts for Ein37_30:

(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: Evanesce_30 Start: 26622, Stop: 26822, Start Num: 19
Candidate Starts for Evanesce_30:
(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: Fitzgerald_53 Start: 45574, Stop: 45786, Start Num: 16
Candidate Starts for Fitzgerald_53:
(7, 45433), (Start: 15 @45565 has 1 MA's), (Start: 16 @45574 has 50 MA's), (Start: 25 @45613 has 2 MA's), (27, 45634),

Gene: Flatwoods_53 Start: 43896, Stop: 44111, Start Num: 16
Candidate Starts for Flatwoods_53:
(Start: 15 @43887 has 1 MA's), (Start: 16 @43896 has 50 MA's), (32, 43986),

Gene: Forge_30 Start: 26649, Stop: 26822, Start Num: 26
Candidate Starts for Forge_30:
(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: Fosterous_55 Start: 45041, Stop: 45244, Start Num: 16
Candidate Starts for Fosterous_55:
(Start: 15 @45032 has 1 MA's), (Start: 16 @45041 has 50 MA's), (Start: 25 @45080 has 2 MA's), (27, 45101),

Gene: FuegoCuervo_58 Start: 44178, Stop: 44390, Start Num: 16
Candidate Starts for FuegoCuervo_58:
(Start: 15 @44169 has 1 MA's), (Start: 16 @44178 has 50 MA's), (Start: 25 @44217 has 2 MA's), (27, 44238),

Gene: GTE6_50 Start: 41632, Stop: 41817, Start Num: 21
Candidate Starts for GTE6_50:
(Start: 21 @41632 has 7 MA's), (32, 41701), (35, 41737), (37, 41758),

Gene: Gaea_52 Start: 43552, Stop: 43755, Start Num: 16
Candidate Starts for Gaea_52:
(Start: 15 @43543 has 1 MA's), (Start: 16 @43552 has 50 MA's), (40, 43741),

Gene: Galadriel_55 Start: 45037, Stop: 45249, Start Num: 16
Candidate Starts for Galadriel_55:
(Start: 15 @45028 has 1 MA's), (Start: 16 @45037 has 50 MA's), (Start: 25 @45076 has 2 MA's), (27, 45097),

Gene: Gancho_29 Start: 26345, Stop: 26545, Start Num: 19
Candidate Starts for Gancho_29:
(6, 26171), (8, 26201), (11, 26228), (13, 26252), (Start: 19 @26345 has 9 MA's), (Start: 26 @26372 has 9 MA's), (28, 26399), (29, 26402), (32, 26426),

Gene: Geodirt_53 Start: 45656, Stop: 45868, Start Num: 16
Candidate Starts for Geodirt_53:

(Start: 15 @45647 has 1 MA's), (Start: 16 @45656 has 50 MA's), (Start: 25 @45695 has 2 MA's), (27, 45716),

Gene: Giles_30 Start: 26649, Stop: 26822, Start Num: 26
Candidate Starts for Giles_30:
(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: Gravaillia_30 Start: 26378, Stop: 26551, Start Num: 26
Candidate Starts for Gravaillia_30:
(6, 26177), (8, 26207), (11, 26234), (13, 26258), (Start: 19 @26351 has 9 MA's), (Start: 26 @26378 has 9 MA's), (28, 26405), (29, 26408), (32, 26432),

Gene: Gustavo_53 Start: 44178, Stop: 44393, Start Num: 16
Candidate Starts for Gustavo_53:
(Start: 15 @44169 has 1 MA's), (Start: 16 @44178 has 50 MA's),

Gene: HH92_30 Start: 26649, Stop: 26822, Start Num: 26
Candidate Starts for HH92_30:
(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: Hail_30 Start: 26649, Stop: 26822, Start Num: 26
Candidate Starts for Hail_30:
(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: JKSyngboy_51 Start: 44771, Stop: 44986, Start Num: 16
Candidate Starts for JKSyngboy_51:
(Start: 15 @44762 has 1 MA's), (Start: 16 @44771 has 50 MA's), (32, 44861),

Gene: Jabberwocky_52 Start: 45716, Stop: 45919, Start Num: 16
Candidate Starts for Jabberwocky_52:
(Start: 15 @45707 has 1 MA's), (Start: 16 @45716 has 50 MA's), (Start: 25 @45755 has 2 MA's), (27, 45776),

Gene: JohnLord_56 Start: 45281, Stop: 45472, Start Num: 20
Candidate Starts for JohnLord_56:
(5, 45104), (12, 45173), (14, 45209), (Start: 20 @45281 has 8 MA's), (24, 45302), (Start: 26 @45305 has 9 MA's), (30, 45335), (34, 45383), (35, 45392), (38, 45416), (39, 45431),

Gene: Kamashten_53 Start: 44248, Stop: 44460, Start Num: 16
Candidate Starts for Kamashten_53:
(Start: 15 @44239 has 1 MA's), (Start: 16 @44248 has 50 MA's), (Start: 25 @44287 has 2 MA's), (27, 44308),

Gene: Keitabear_54 Start: 45767, Stop: 45979, Start Num: 16
Candidate Starts for Keitabear_54:
(Start: 15 @45758 has 1 MA's), (Start: 16 @45767 has 50 MA's), (Start: 25 @45806 has 2 MA's), (27, 45827),

Gene: Kewpiedoll_55 Start: 45199, Stop: 45411, Start Num: 16
Candidate Starts for Kewpiedoll_55:

(Start: 15 @45190 has 1 MA's), (Start: 16 @45199 has 50 MA's), (Start: 25 @45238 has 2 MA's), (27, 45259),

Gene: Kroos_53 Start: 44455, Stop: 44670, Start Num: 16
Candidate Starts for Kroos_53:
(Start: 15 @44446 has 1 MA's), (Start: 16 @44455 has 50 MA's),

Gene: Kwekel_50 Start: 41057, Stop: 41242, Start Num: 21
Candidate Starts for Kwekel_50:
(Start: 21 @41057 has 7 MA's), (32, 41126), (35, 41162), (37, 41183),

Gene: Kwobi_55 Start: 44881, Stop: 45096, Start Num: 16
Candidate Starts for Kwobi_55:
(Start: 15 @44872 has 1 MA's), (Start: 16 @44881 has 50 MA's),

Gene: Lennon_54 Start: 45871, Stop: 46074, Start Num: 16
Candidate Starts for Lennon_54:
(Start: 15 @45862 has 1 MA's), (Start: 16 @45871 has 50 MA's), (Start: 25 @45910 has 2 MA's), (27, 45931),

Gene: LilHam_50 Start: 43066, Stop: 43278, Start Num: 16
Candidate Starts for LilHam_50:
(Start: 15 @43057 has 1 MA's), (Start: 16 @43066 has 50 MA's), (41, 43273),

Gene: Lilbeanie_55 Start: 40602, Stop: 40868, Start Num: 10
Candidate Starts for Lilbeanie_55:
(Start: 10 @40602 has 1 MA's), (Start: 19 @40731 has 9 MA's), (36, 40851),

Gene: Love_59 Start: 46477, Stop: 46689, Start Num: 16
Candidate Starts for Love_59:
(Start: 15 @46468 has 1 MA's), (Start: 16 @46477 has 50 MA's), (Start: 25 @46516 has 2 MA's),

Gene: Luna22_30 Start: 26649, Stop: 26822, Start Num: 26
Candidate Starts for Luna22_30:
(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: Mao1_52 Start: 44284, Stop: 44475, Start Num: 20
Candidate Starts for Mao1_52:
(5, 44107), (12, 44176), (14, 44212), (Start: 20 @44284 has 8 MA's), (24, 44305), (Start: 26 @44308 has 9 MA's), (30, 44338), (34, 44386), (35, 44395), (38, 44419), (39, 44434),

Gene: Mask_53 Start: 46842, Stop: 47033, Start Num: 20
Candidate Starts for Mask_53:
(Start: 20 @46842 has 8 MA's), (24, 46863), (Start: 26 @46866 has 9 MA's), (34, 46944), (35, 46953), (38, 46977),

Gene: McCrothy_55 Start: 45607, Stop: 45819, Start Num: 16
Candidate Starts for McCrothy_55:
(Start: 15 @45598 has 1 MA's), (Start: 16 @45607 has 50 MA's), (Start: 25 @45646 has 2 MA's), (27, 45667),

Gene: McKinley_57 Start: 45605, Stop: 45817, Start Num: 16

Candidate Starts for McKinley_57:
(Start: 15 @45596 has 1 MA's), (Start: 16 @45605 has 50 MA's), (Start: 25 @45644 has 2 MA's), (27, 45665),

Gene: MoontowerMania_54 Start: 45482, Stop: 45694, Start Num: 16
Candidate Starts for MoontowerMania_54:
(Start: 15 @45473 has 1 MA's), (Start: 16 @45482 has 50 MA's), (Start: 25 @45521 has 2 MA's), (27, 45542),

Gene: Natkenzie_54 Start: 45304, Stop: 45495, Start Num: 18
Candidate Starts for Natkenzie_54:
(Start: 18 @45304 has 13 MA's), (31, 45364), (32, 45379), (37, 45436), (38, 45439),

Gene: Nordenberg_50 Start: 44426, Stop: 44599, Start Num: 25
Candidate Starts for Nordenberg_50:
(Start: 15 @44378 has 1 MA's), (Start: 16 @44387 has 50 MA's), (Start: 25 @44426 has 2 MA's), (27, 44447),

Gene: OBUpride_30 Start: 26616, Stop: 26816, Start Num: 19
Candidate Starts for OBUpride_30:
(6, 26442), (8, 26472), (11, 26499), (13, 26523), (Start: 19 @26616 has 9 MA's), (Start: 26 @26643 has 9 MA's), (28, 26670), (29, 26673), (33, 26706),

Gene: Paries_58 Start: 45864, Stop: 46076, Start Num: 16
Candidate Starts for Paries_58:
(Start: 15 @45855 has 1 MA's), (Start: 16 @45864 has 50 MA's), (Start: 25 @45903 has 2 MA's), (27, 45924),

Gene: Pumpkiney_55 Start: 42641, Stop: 42844, Start Num: 18
Candidate Starts for Pumpkiney_55:
(Start: 18 @42641 has 13 MA's), (27, 42686), (31, 42701), (32, 42716), (37, 42773), (38, 42776),

Gene: Ribeye_53 Start: 44870, Stop: 45094, Start Num: 15
Candidate Starts for Ribeye_53:
(Start: 15 @44870 has 1 MA's), (Start: 16 @44879 has 50 MA's),

Gene: RiverRaider_55 Start: 43578, Stop: 43784, Start Num: 16
Candidate Starts for RiverRaider_55:
(Start: 15 @43569 has 1 MA's), (Start: 16 @43578 has 50 MA's), (Start: 25 @43620 has 2 MA's), (40, 43770),

Gene: RoadKill_48 Start: 40662, Stop: 40847, Start Num: 21
Candidate Starts for RoadKill_48:
(Start: 21 @40662 has 7 MA's), (32, 40731), (35, 40767), (37, 40788),

Gene: Rofo_54 Start: 44978, Stop: 45181, Start Num: 16
Candidate Starts for Rofo_54:
(Start: 15 @44969 has 1 MA's), (Start: 16 @44978 has 50 MA's), (Start: 25 @45017 has 2 MA's), (27, 45038),

Gene: Sampson_54 Start: 45249, Stop: 45440, Start Num: 18
Candidate Starts for Sampson_54:
(Start: 18 @45249 has 13 MA's), (31, 45309), (32, 45324), (37, 45381), (38, 45384),

Gene: Sanjuju_53 Start: 45707, Stop: 45919, Start Num: 16
Candidate Starts for Sanjuju_53:
(Start: 15 @45698 has 1 MA's), (Start: 16 @45707 has 50 MA's), (Start: 25 @45746 has 2 MA's), (27, 45767),

Gene: Saronaya_53 Start: 44178, Stop: 44393, Start Num: 16
Candidate Starts for Saronaya_53:
(Start: 15 @44169 has 1 MA's), (Start: 16 @44178 has 50 MA's),

Gene: Sbash_47 Start: 37583, Stop: 37786, Start Num: 20
Candidate Starts for Sbash_47:
(Start: 20 @37583 has 8 MA's), (24, 37604), (34, 37685), (35, 37694), (38, 37718),

Gene: SchottB_51 Start: 44715, Stop: 44930, Start Num: 16
Candidate Starts for SchottB_51:
(Start: 15 @44706 has 1 MA's), (Start: 16 @44715 has 50 MA's),

Gene: Scioto_55 Start: 45305, Stop: 45496, Start Num: 18
Candidate Starts for Scioto_55:
(Start: 18 @45305 has 13 MA's), (31, 45365), (32, 45380), (37, 45437), (38, 45440),

Gene: Sedona_54 Start: 45447, Stop: 45659, Start Num: 16
Candidate Starts for Sedona_54:
(Start: 15 @45438 has 1 MA's), (Start: 16 @45447 has 50 MA's), (Start: 25 @45486 has 2 MA's), (27, 45507),

Gene: Sejanus_51 Start: 45773, Stop: 45964, Start Num: 20
Candidate Starts for Sejanus_51:
(Start: 20 @45773 has 8 MA's), (24, 45794), (29, 45824), (34, 45875), (35, 45884), (38, 45908), (39, 45923),

Gene: Shivanishola_54 Start: 44168, Stop: 44380, Start Num: 16
Candidate Starts for Shivanishola_54:
(Start: 15 @44159 has 1 MA's), (Start: 16 @44168 has 50 MA's), (Start: 25 @44207 has 2 MA's), (27, 44228),

Gene: Sitar_54 Start: 45871, Stop: 46074, Start Num: 16
Candidate Starts for Sitar_54:
(Start: 15 @45862 has 1 MA's), (Start: 16 @45871 has 50 MA's), (Start: 25 @45910 has 2 MA's), (27, 45931),

Gene: Stichling_50 Start: 43226, Stop: 43450, Start Num: 15
Candidate Starts for Stichling_50:
(Start: 15 @43226 has 1 MA's), (Start: 16 @43235 has 50 MA's), (32, 43325),

Gene: StorminNorm_52 Start: 43806, Stop: 44018, Start Num: 16
Candidate Starts for StorminNorm_52:
(Start: 15 @43797 has 1 MA's), (Start: 16 @43806 has 50 MA's), (41, 44013),

Gene: Stuck_50 Start: 39414, Stop: 39617, Start Num: 20
Candidate Starts for Stuck_50:
(Start: 20 @39414 has 8 MA's), (24, 39435), (29, 39465), (31, 39474), (35, 39525), (38, 39549),

Gene: Stultus_52 Start: 44348, Stop: 44560, Start Num: 16
Candidate Starts for Stultus_52:
(Start: 15 @44339 has 1 MA's), (Start: 16 @44348 has 50 MA's), (Start: 25 @44387 has 2 MA's), (27, 44408),

Gene: Tangent_55 Start: 44601, Stop: 44804, Start Num: 16
Candidate Starts for Tangent_55:
(Start: 15 @44592 has 1 MA's), (Start: 16 @44601 has 50 MA's), (Start: 25 @44640 has 2 MA's), (27, 44661),

Gene: Tangerine_52 Start: 43590, Stop: 43805, Start Num: 16
Candidate Starts for Tangerine_52:
(Start: 15 @43581 has 1 MA's), (Start: 16 @43590 has 50 MA's),

Gene: Tardus_56 Start: 45006, Stop: 45197, Start Num: 18
Candidate Starts for Tardus_56:
(Start: 18 @45006 has 13 MA's), (31, 45066), (32, 45081), (37, 45138), (38, 45141),

Gene: Thing3_53 Start: 44248, Stop: 44460, Start Num: 16
Candidate Starts for Thing3_53:
(Start: 15 @44239 has 1 MA's), (Start: 16 @44248 has 50 MA's), (Start: 25 @44287 has 2 MA's), (27, 44308),

Gene: ThulaThula_40 Start: 32667, Stop: 32870, Start Num: 20
Candidate Starts for ThulaThula_40:
(1, 32337), (2, 32412), (9, 32520), (17, 32646), (Start: 20 @32667 has 8 MA's), (24, 32688), (29, 32718), (31, 32727), (38, 32802),

Gene: Tiamoceli_51 Start: 41953, Stop: 42138, Start Num: 21
Candidate Starts for Tiamoceli_51:
(Start: 21 @41953 has 7 MA's), (32, 42022), (35, 42058), (37, 42079),

Gene: Tortellini_41 Start: 35256, Stop: 35456, Start Num: 22
Candidate Starts for Tortellini_41:
(4, 35064), (Start: 22 @35256 has 2 MA's), (35, 35361),

Gene: Twonlo_48 Start: 40583, Stop: 40768, Start Num: 21
Candidate Starts for Twonlo_48:
(Start: 21 @40583 has 7 MA's), (32, 40652), (35, 40688), (37, 40709),

Gene: Tycho_52 Start: 43674, Stop: 43886, Start Num: 16
Candidate Starts for Tycho_52:
(Start: 15 @43665 has 1 MA's), (Start: 16 @43674 has 50 MA's), (41, 43881),

Gene: Ubuntu_30 Start: 26649, Stop: 26822, Start Num: 26
Candidate Starts for Ubuntu_30:
(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: Verity_54 Start: 46075, Stop: 46278, Start Num: 18
Candidate Starts for Verity_54:
(Start: 18 @46075 has 13 MA's), (31, 46135), (32, 46150), (37, 46207), (38, 46210),

Gene: ViaConlectus_54 Start: 43958, Stop: 44149, Start Num: 18
Candidate Starts for ViaConlectus_54:
(Start: 18 @43958 has 13 MA's), (31, 44018), (32, 44033), (37, 44090), (38, 44093),

Gene: Vivi2_58 Start: 46078, Stop: 46281, Start Num: 16
Candidate Starts for Vivi2_58:
(Start: 15 @46069 has 1 MA's), (Start: 16 @46078 has 50 MA's), (Start: 25 @46117 has 2 MA's), (27, 46138),

Gene: Webster2_30 Start: 26622, Stop: 26822, Start Num: 19
Candidate Starts for Webster2_30:
(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: Wishmaker_30 Start: 26622, Stop: 26822, Start Num: 19
Candidate Starts for Wishmaker_30:
(6, 26448), (8, 26478), (11, 26505), (13, 26529), (Start: 19 @26622 has 9 MA's), (Start: 26 @26649 has 9 MA's), (28, 26676), (29, 26679), (33, 26712),

Gene: Xavia_43 Start: 35839, Stop: 36039, Start Num: 22
Candidate Starts for Xavia_43:
(4, 35647), (Start: 22 @35839 has 2 MA's), (35, 35944),

Gene: YorkOnyx_54 Start: 44370, Stop: 44585, Start Num: 16
Candidate Starts for YorkOnyx_54:
(Start: 15 @44361 has 1 MA's), (Start: 16 @44370 has 50 MA's),

Gene: Zipp_55 Start: 45990, Stop: 46193, Start Num: 18
Candidate Starts for Zipp_55:
(Start: 18 @45990 has 13 MA's), (31, 46050), (32, 46065), (37, 46122), (38, 46125),

Gene: Zitch_57 Start: 44113, Stop: 44316, Start Num: 18
Candidate Starts for Zitch_57:
(Start: 18 @44113 has 13 MA's), (27, 44158), (31, 44173), (32, 44188), (37, 44245), (38, 44248),