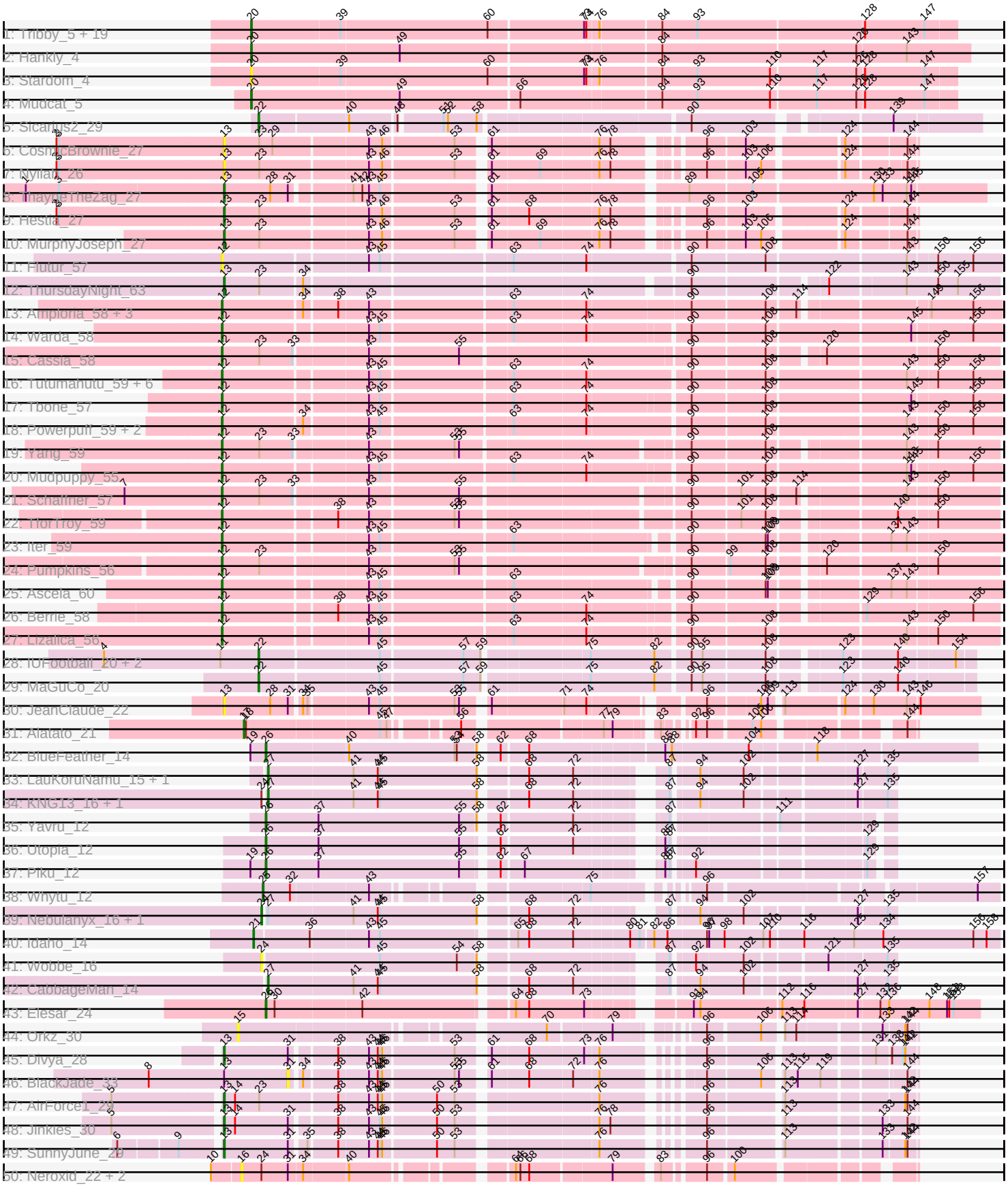
Pham 347498


1: Tribby_5 + 19
2: Hankly_4
3: Stardom_4
4: Mudcat_5
5: Sicarius2_29
6: CosmicBrownie_27
7: Nyliah_26
8: ThayneTheZag_27
9: Hestia_27
10: MurphyJoseph_27
11: Flutur_57
12: ThursdayNight_63
13: Amplonia_58 + 3
14: Warda_58
15: Cassia_58
16: Tutumanutu_59 + 6
17: Tbone_57
18: Powerpuff_59 + 2
19: Yang_59
20: Mudpuppy_55
21: Schaffner_57
22: ThorTroy_59
23: Iter_59
24: Pumpkins_56
25: Ascela_60
26: Bernie_58
27: Lizalica_56
28: 10Football_20 + 2
29: MaGuCo_20
30: JeanClaude_22
31: Alatato_21
32: BlueFeather_14
33: LauKoruNamu_15 + 1
34: KING13_16 + 1
35: Yavru_12
36: Utopia_12
37: Piku_12
38: Whytu_12
39: Nebulanyx_16 + 1
40: Idaho_14
41: Wobbe_16
42: CabbageMan_14
43: Elesar_24
44: Orkz_30
45: Divya_28
46: BlackJade_53
47: AirForce1_23
48: Jinkies_30
49: SunnyJune_29
50: Neroxid_22 + 2

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 347498 Report

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

Pham number 347498 has 87 members, 16 are drafts.

Phages represented in each track:
• Track 1 : Tribby_5, KeaneyLin_4, Heisenberger_5, Kardesai_4, YoshiYama_4, JEGGS_5, Dynamite_5, Xenomorph_4, Arcadia_5, Mooshroom_5, Nason_5, GoCrazy_4, Circum_5, Benllo_4, NapoleonB_5, Cheesy_5, Bowling_5, BenitoAntonio_5, Correa_5, Elsa_5
• Track 2 : Hankly_4
• Track 3 : Stardom_4
• Track 4 : Mudcat_5
• Track 5 : Sicarius2_29
• Track 6 : CosmicBrownie_27
• Track 7 : Nyilah_26
• Track 8 : ThayneTheZag_27
• Track 9 : Hestia_27
• Track 10 : MurphyJoseph_27
• Track 11 : Flutur_57
• Track 12 : ThursdayNight_63
• Track 13 : Amploria_58, AEgle_55, Turab_55, Adumb2043_56
• Track 14 : Warda_58
• Track 15 : Cassia_58
• Track 16 : Tutumahutu_59, Simpson_60, Cyan_58, Lego_57, JohnDoe_58, Joemato_58, Kaylissa_59
• Track 17 : Tbone_57
• Track 18 : Powerpuff_59, AGrandiflora_59, YesChef_57
• Track 19 : Yang_59
• Track 20 : Mudpuppy_55
• Track 21 : Schaffner_57
• Track 22 : TforTroy_59
• Track 23 : Iter_59
• Track 24 : Pumpkins_56
• Track 25 : Ascela_60
• Track 26 : Berrie_58
• Track 27 : Lizalica_56
• Track 28 : IUFootball_20, Liebe_20, Maureen_20
• Track 29 : MaGuCo_20
• Track 30 : JeanClaude_22
• Track 31 : Alatato_21
• Track 32 : BlueFeather_14
• Track 33 : LauKoruNamu_15, Pauu_15

• Track 34 : KNG13_16, CheeseDanish_16
• Track 35 : Yavru_12
• Track 36 : Utopia_12
• Track 37 : Piku_12
• Track 38 : Whytu_12
• Track 39 : Nebulanyx_16, Corgi_16
• Track 40 : Idaho_14
• Track 41 : Wobbe_16
• Track 42 : CabbageMan_14
• Track 43 : Elesar_24
• Track 44 : Orkz_30
• Track 45 : Divya_28
• Track 46 : BlackJade_33
• Track 47 : AirForce1_29
• Track 48 : Jinkies_30
• Track 49 : SunnyJune_29
• Track 50 : Neroxid_22, Raya_22, Skyerus_22

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

The start number called the most often in the published annotations is 12, it was called in 23 of the 71 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AEgle_55, AGrandiflora_59, Adumb2043_56, Amploria_58, Ascela_60, Berrie_58, Cassia_58, Cyan_58, Flutur_57, Iter_59, Joemato_58, JohnDoe_58, Kaylissa_59, Lego_57, Lizalica_56, Mudpuppy_55, Powerpuff_59, Pumpkins_56, Schaffner_57, Simpson_60, Tbone_57, TforTroy_59, Turab_55, Tutumahutu_59, Warda_58, Yang_59, YesChef_57,

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

Genes that do not have the "Most Annotated" start:
• AirForce1_29, Alatato_21, Arcadia_5, BenitoAntonio_5, Benllo_4, BlackJade_33, BlueFeather_14, Bowling_5, CabbageMan_14, CheeseDanish_16, Cheesy_5, Circum_5, Corgi_16, Correa_5, CosmicBrownie_27, Divya_28, Dynamite_5, Elesar_24, Elsa_5, GoCrazy_4, Hankly_4, Heisenberger_5, Hestia_27, IUFootball_20, Idaho_14, JEGGS_5, JeanClaude_22, Jinkies_30, KNG13_16, Kardesai_4, KeaneyLin_4, LauKoruNamu_15, Liebe_20, MaGuCo_20, Maureen_20, Mooshroom_5, Mudcat_5, MurphyJoseph_27, NapoleonB_5, Nason_5, Nebulanyx_16, Neroxid_22, Nyilah_26, Orkz_30, Pauu_15, Piku_12, Raya_22, Sicarius2_29, Skyerus_22, Stardom_4, SunnyJune_29, ThayneTheZag_27, ThursdayNight_63, Tribby_5, Utopia_12, Whytu_12, Wobbe_16, Xenomorph_4, Yavru_12, YoshiYama_4,

Summary by start number:

Start 12:
• Found in 27 of 87 (31.0%) of genes in pham

• Manual Annotations of this start: 23 of 71
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AEgle_55 (AZ1), AGrandiflora_59 (AZ1), Adumb2043_56 (AZ1), Amploria_58 (AZ1), Ascela_60 (AZ1), Berrie_58 (AZ1), Cassia_58 (AZ1), Cyan_58 (AZ1), Flutur_57 (AZ), Iter_59 (AZ1), Joemato_58 (AZ1), JohnDoe_58 (AZ1), Kaylissa_59 (AZ1), Lego_57 (AZ1), Lizalica_56 (AZ1), Mudpuppy_55 (AZ1), Powerpuff_59 (AZ1), Pumpkins_56 (AZ1), Schaffner_57 (AZ1), Simpson_60 (AZ1), Tbone_57 (AZ1), TforTroy_59 (AZ1), Turab_55 (AZ1), Tutumahutu_59 (AZ1), Warda_58 (AZ1), Yang_59 (AZ1), YesChef_57 (AZ1),

Start 13:
• Found in 12 of 87 (13.8%) of genes in pham
• Manual Annotations of this start: 8 of 71
• Called 91.7% of time when present
• Phage (with cluster) where this start called: AirForce1_29 (FL), CosmicBrownie_27 (AY), Divya_28 (FL), Hestia_27 (AY), JeanClaude_22 (FB), Jinkies_30 (FL), MurphyJoseph_27 (AY), Nyilah_26 (AY), SunnyJune_29 (FL), ThayneTheZag_27 (AY), ThursdayNight_63 (AZ),

Start 15:
• Found in 1 of 87 (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: Orkz_30 (FL),

Start 16:
• Found in 3 of 87 (3.4%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Neroxid_22 (FQ2), Raya_22 (FQ2), Skyerus_22 (FQ2),

Start 17:
• Found in 1 of 87 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 71
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alatato_21 (FB),

Start 20:
• Found in 23 of 87 (26.4%) of genes in pham
• Manual Annotations of this start: 21 of 71
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Arcadia_5 (AM), BenitoAntonio_5 (AM), Benllo_4 (AM), Bowling_5 (AM), Cheesy_5 (AM), Circum_5 (AM), Correa_5 (AM), Dynamite_5 (AM), Elsa_5 (AM), GoCrazy_4 (AM), Hankly_4 (AM), Heisenberger_5 (AM), JEGGS_5 (AM), Kardesai_4 (AM), KeaneyLin_4 (AM), Mooshroom_5 (AM), Mudcat_5 (AM), NapoleonB_5 (AM), Nason_5 (AM), Stardom_4 (AM), Tribby_5 (AM), Xenomorph_4 (AM), YoshiYama_4 (AM),

Start 21:
• Found in 1 of 87 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 71
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Idaho_14 (FE),

Start 22:
• Found in 5 of 87 (5.7%) of genes in pham
• Manual Annotations of this start: 5 of 71
• Called 100.0% of time when present
• Phage (with cluster) where this start called: IUFootball_20 (AZ2), Liebe_20 (AZ2), MaGuCo_20 (AZ2), Maureen_20 (AZ2), Sicarius2_29 (AO2),

Start 24:
• Found in 8 of 87 (9.2%) of genes in pham
• Manual Annotations of this start: 1 of 71
• Called 37.5% of time when present
• Phage (with cluster) where this start called: Corgi_16 (FE), Nebulanyx_16 (FE), Wobbe_16 (FE),

Start 25:
• Found in 1 of 87 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 71
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Whytu_12 (FE),

Start 26:
• Found in 5 of 87 (5.7%) of genes in pham
• Manual Annotations of this start: 5 of 71
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BlueFeather_14 (FE), Elesar_24 (FF), Piku_12 (FE), Utopia_12 (FE), Yavru_12 (FE),

Start 27:
• Found in 7 of 87 (8.0%) of genes in pham
• Manual Annotations of this start: 5 of 71
• Called 71.4% of time when present
• Phage (with cluster) where this start called: CabbageMan_14 (FE), CheeseDanish_16 (FE), KNG13_16 (FE), LauKoruNamu_15 (FE), Pauu_15 (FE),

Start 31:
• Found in 9 of 87 (10.3%) of genes in pham
• No Manual Annotations of this start.
• Called 11.1% of time when present
• Phage (with cluster) where this start called: BlackJade_33 (FL),

Summary by clusters:

There are 11 clusters represented in this pham: AM, AY, FB, FE, FF, FQ2, AZ1, AZ2, AZ, FL, AO2,

Info for manual annotations of cluster AM:
•Start number 20 was manually annotated 21 times for cluster AM.

Info for manual annotations of cluster AO2:
•Start number 22 was manually annotated 1 time for cluster AO2.

Info for manual annotations of cluster AY:
•Start number 13 was manually annotated 3 times for cluster AY.

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 12 was manually annotated 23 times for cluster AZ1.

Info for manual annotations of cluster AZ2:
•Start number 22 was manually annotated 4 times for cluster AZ2.

Info for manual annotations of cluster FB:
•Start number 17 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster FE:
•Start number 21 was manually annotated 1 time for cluster FE.
•Start number 24 was manually annotated 1 time for cluster FE.
•Start number 25 was manually annotated 1 time for cluster FE.
•Start number 26 was manually annotated 4 times for cluster FE.
•Start number 27 was manually annotated 5 times for cluster FE.

Info for manual annotations of cluster FF:
•Start number 26 was manually annotated 1 time for cluster FF.

Info for manual annotations of cluster FL:
•Start number 13 was manually annotated 4 times for cluster FL.

Gene Information:

Gene: AEgle_55 Start: 38287, Stop: 39267, Start Num: 12
Candidate Starts for AEgle_55:
(Start: 12 @38287 has 23 MA's), (34, 38392), (38, 38434), (43, 38473), (63, 38656), (74, 38752), (90, 38884), (108, 38980), (114, 39016), (149, 39172), (156, 39229),

Gene: AGrandiflora_59 Start: 39228, Stop: 40220, Start Num: 12
Candidate Starts for AGrandiflora_59:
(Start: 12 @39228 has 23 MA's), (34, 39333), (43, 39414), (45, 39429), (63, 39597), (74, 39693), (90, 39822), (108, 39918), (143, 40098), (150, 40134), (156, 40182),

Gene: Adumb2043_56 Start: 38310, Stop: 39290, Start Num: 12
Candidate Starts for Adumb2043_56:
(Start: 12 @38310 has 23 MA's), (34, 38415), (38, 38457), (43, 38496), (63, 38679), (74, 38775), (90, 38907), (108, 39003), (114, 39039), (149, 39195), (156, 39252),

Gene: AirForce1_29 Start: 21441, Stop: 22262, Start Num: 13
Candidate Starts for AirForce1_29:
(5, 21303), (Start: 13 @21441 has 8 MA's), (14, 21456), (23, 21489), (38, 21591), (43, 21630), (44, 21642), (45, 21645), (46, 21648), (50, 21717), (53, 21741), (76, 21912), (96, 22017), (113, 22104), (142, 22248), (144, 22251),

Gene: Alatato_21 Start: 16711, Stop: 17466, Start Num: 17
Candidate Starts for Alatato_21:
(Start: 17 @16711 has 1 MA's), (18, 16714), (45, 16888), (47, 16897), (56, 16972), (77, 17140), (79, 17152), (83, 17197), (92, 17221), (96, 17236), (105, 17290), (106, 17302), (144, 17455),

Gene: Amploria_58 Start: 38491, Stop: 39471, Start Num: 12
Candidate Starts for Amploria_58:
(Start: 12 @38491 has 23 MA's), (34, 38596), (38, 38638), (43, 38677), (63, 38860), (74, 38956), (90, 39088), (108, 39184), (114, 39220), (149, 39376), (156, 39433),

Gene: Arcadia_5 Start: 1896, Stop: 2822, Start Num: 20
Candidate Starts for Arcadia_5:
(Start: 20 @1896 has 21 MA's), (39, 2013), (60, 2211), (73, 2337), (74, 2340), (76, 2355), (84, 2433), (93, 2481), (128, 2700), (147, 2781),

Gene: Ascela_60 Start: 39485, Stop: 40450, Start Num: 12
Candidate Starts for Ascela_60:
(Start: 12 @39485 has 23 MA's), (43, 39671), (45, 39686), (63, 39854), (90, 40064), (108, 40160), (109, 40163), (137, 40304), (143, 40325),

Gene: BenitoAntonio_5 Start: 1504, Stop: 2430, Start Num: 20
Candidate Starts for BenitoAntonio_5:
(Start: 20 @1504 has 21 MA's), (39, 1621), (60, 1819), (73, 1945), (74, 1948), (76, 1963), (84, 2041), (93, 2089), (128, 2308), (147, 2389),

Gene: Benllo_4 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for Benllo_4:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: Berrie_58 Start: 39288, Stop: 40256, Start Num: 12
Candidate Starts for Berrie_58:
(Start: 12 @39288 has 23 MA's), (38, 39435), (43, 39474), (45, 39489), (63, 39657), (74, 39753), (90, 39876), (129, 40083), (156, 40221),

Gene: BlackJade_33 Start: 24154, Stop: 24873, Start Num: 31
Candidate Starts for BlackJade_33:
(8, 23965), (Start: 13 @24067 has 8 MA's), (31, 24154), (34, 24166), (38, 24208), (43, 24247), (44, 24259), (45, 24262), (46, 24265), (53, 24358), (55, 24364), (61, 24391), (68, 24439), (72, 24496), (76, 24529), (96, 24631), (106, 24697), (113, 24718), (115, 24733), (119, 24763), (144, 24862),

Gene: BlueFeather_14 Start: 10715, Stop: 11602, Start Num: 26
Candidate Starts for BlueFeather_14:
(19, 10694), (Start: 26 @10715 has 5 MA's), (40, 10823), (53, 10967), (54, 10970), (58, 10994), (62, 11012), (68, 11045), (85, 11213), (88, 11222), (104, 11321), (118, 11399),

Gene: Bowling_5 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for Bowling_5:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: CabbageMan_14 Start: 11695, Stop: 12432, Start Num: 27

Candidate Starts for CabbageMan_14:
(Start: 27 @11695 has 5 MA's), (41, 11809), (44, 11842), (45, 11845), (58, 11977), (68, 12028), (72, 12088), (87, 12178), (94, 12208), (102, 12262), (127, 12388), (135, 12421),

Gene: Cassia_58 Start: 39217, Stop: 40194, Start Num: 12
Candidate Starts for Cassia_58:
(Start: 12 @39217 has 23 MA's), (23, 39268), (33, 39313), (43, 39406), (55, 39523), (90, 39814), (108, 39910), (120, 39973), (150, 40111),

Gene: CheeseDanish_16 Start: 11853, Stop: 12590, Start Num: 27
Candidate Starts for CheeseDanish_16:
(Start: 24 @11850 has 1 MA's), (Start: 27 @11853 has 5 MA's), (41, 11967), (44, 12000), (45, 12003), (58, 12135), (68, 12186), (72, 12246), (87, 12336), (94, 12366), (102, 12420), (127, 12546), (135, 12579),

Gene: Cheesy_5 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for Cheesy_5:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: Circum_5 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for Circum_5:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: Corgi_16 Start: 11850, Stop: 12590, Start Num: 24
Candidate Starts for Corgi_16:
(Start: 24 @11850 has 1 MA's), (Start: 27 @11853 has 5 MA's), (41, 11967), (44, 12000), (45, 12003), (58, 12135), (68, 12186), (72, 12246), (87, 12336), (94, 12366), (102, 12420), (127, 12546), (135, 12579),

Gene: Correa_5 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for Correa_5:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: CosmicBrownie_27 Start: 19359, Stop: 20186, Start Num: 13
Candidate Starts for CosmicBrownie_27:
(2, 19131), (3, 19134), (Start: 13 @19359 has 8 MA's), (23, 19407), (29, 19425), (43, 19548), (46, 19566), (53, 19659), (61, 19692), (76, 19830), (78, 19845), (96, 19941), (103, 19986), (124, 20100), (144, 20175),

Gene: Cyan_58 Start: 38971, Stop: 39963, Start Num: 12
Candidate Starts for Cyan_58:
(Start: 12 @38971 has 23 MA's), (43, 39157), (45, 39172), (63, 39340), (74, 39436), (90, 39565), (108, 39661), (143, 39841), (150, 39877), (156, 39925),

Gene: Divya_28 Start: 21270, Stop: 22082, Start Num: 13
Candidate Starts for Divya_28:
(Start: 13 @21270 has 8 MA's), (31, 21357), (38, 21411), (43, 21450), (44, 21462), (45, 21465), (46, 21468), (53, 21561), (61, 21594), (68, 21642), (73, 21714), (76, 21732), (96, 21837), (131, 22032), (138, 22050), (141, 22065), (142, 22068),

Gene: Dynamite_5 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for Dynamite_5:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: Elesar_24 Start: 18815, Stop: 19690, Start Num: 26
Candidate Starts for Elesar_24:
(Start: 26 @18815 has 5 MA's), (30, 18827), (42, 18941), (64, 19127), (68, 19145), (73, 19220), (91, 19322), (94, 19331), (112, 19433), (116, 19463), (127, 19529), (132, 19556), (136, 19568), (148, 19622), (151, 19646), (152, 19649), (153, 19655),

Gene: Elsa_5 Start: 1896, Stop: 2822, Start Num: 20
Candidate Starts for Elsa_5:
(Start: 20 @1896 has 21 MA's), (39, 2013), (60, 2211), (73, 2337), (74, 2340), (76, 2355), (84, 2433), (93, 2481), (128, 2700), (147, 2781),

Gene: Flutur_57 Start: 39276, Stop: 40268, Start Num: 12
Candidate Starts for Flutur_57:
(Start: 12 @39276 has 23 MA's), (43, 39462), (45, 39477), (63, 39645), (74, 39741), (90, 39870), (108, 39966), (143, 40146), (150, 40182), (156, 40230),

Gene: GoCrazy_4 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for GoCrazy_4:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: Hankly_4 Start: 1506, Stop: 2456, Start Num: 20
Candidate Starts for Hankly_4:
(Start: 20 @1506 has 21 MA's), (49, 1704), (84, 2046), (126, 2304), (143, 2370),

Gene: Heisenberger_5 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for Heisenberger_5:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: Hestia_27 Start: 19579, Stop: 20406, Start Num: 13
Candidate Starts for Hestia_27:
(2, 19351), (3, 19354), (Start: 13 @19579 has 8 MA's), (23, 19627), (43, 19768), (46, 19786), (53, 19879), (61, 19912), (68, 19960), (76, 20050), (78, 20065), (96, 20161), (103, 20206), (124, 20320), (144, 20395),

Gene: IUFootball_20 Start: 17855, Stop: 18736, Start Num: 22
Candidate Starts for IUFootball_20:
(4, 17645), (11, 17804), (Start: 22 @17855 has 5 MA's), (45, 18011), (57, 18116), (59, 18137), (75, 18266), (82, 18353), (90, 18392), (95, 18407), (108, 18488), (123, 18572), (140, 18641), (154, 18713),

Gene: Idaho_14 Start: 11855, Stop: 12808, Start Num: 21
Candidate Starts for Idaho_14:
(Start: 21 @11855 has 1 MA's), (36, 11927), (43, 12002), (45, 12017), (65, 12182), (68, 12197), (72, 12257), (80, 12326), (81, 12338), (82, 12353), (86, 12371), (96, 12422), (97, 12425), (98, 12446), (107, 12497), (110, 12506), (116, 12545), (125, 12611), (134, 12650), (156, 12773), (158, 12791),

Gene: Iter_59 Start: 39256, Stop: 40221, Start Num: 12

Candidate Starts for Iter_59:
(Start: 12 @39256 has 23 MA's), (43, 39442), (45, 39457), (63, 39625), (90, 39835), (108, 39931), (109, 39934), (137, 40075), (143, 40096),

Gene: JEGGS_5 Start: 1508, Stop: 2434, Start Num: 20
Candidate Starts for JEGGS_5:
(Start: 20 @1508 has 21 MA's), (39, 1625), (60, 1823), (73, 1949), (74, 1952), (76, 1967), (84, 2045), (93, 2093), (128, 2312), (147, 2393),

Gene: JeanClaude_22 Start: 17290, Stop: 18198, Start Num: 13
Candidate Starts for JeanClaude_22:
(Start: 13 @17290 has 8 MA's), (28, 17353), (31, 17377), (34, 17389), (35, 17395), (43, 17470), (45, 17485), (53, 17581), (55, 17587), (61, 17614), (71, 17707), (74, 17737), (96, 17866), (106, 17932), (109, 17941), (113, 17953), (124, 18025), (130, 18058), (143, 18103), (146, 18118),

Gene: Jinkies_30 Start: 23927, Stop: 24739, Start Num: 13
Candidate Starts for Jinkies_30:
(5, 23789), (Start: 13 @23927 has 8 MA's), (14, 23942), (31, 24014), (38, 24068), (43, 24107), (45, 24122), (46, 24125), (50, 24194), (53, 24218), (76, 24389), (78, 24404), (96, 24494), (113, 24581), (133, 24698), (144, 24728),

Gene: Joemato_58 Start: 39052, Stop: 40044, Start Num: 12
Candidate Starts for Joemato_58:
(Start: 12 @39052 has 23 MA's), (43, 39238), (45, 39253), (63, 39421), (74, 39517), (90, 39646), (108, 39742), (143, 39922), (150, 39958), (156, 40006),

Gene: JohnDoe_58 Start: 39032, Stop: 40024, Start Num: 12
Candidate Starts for JohnDoe_58:
(Start: 12 @39032 has 23 MA's), (43, 39218), (45, 39233), (63, 39401), (74, 39497), (90, 39626), (108, 39722), (143, 39902), (150, 39938), (156, 39986),

Gene: KNG13_16 Start: 11850, Stop: 12587, Start Num: 27
Candidate Starts for KNG13_16:
(Start: 24 @11847 has 1 MA's), (Start: 27 @11850 has 5 MA's), (41, 11964), (44, 11997), (45, 12000), (58, 12132), (68, 12183), (72, 12243), (87, 12333), (94, 12363), (102, 12417), (127, 12543), (135, 12576),

Gene: Kardesai_4 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for Kardesai_4:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: Kaylissa_59 Start: 39430, Stop: 40422, Start Num: 12
Candidate Starts for Kaylissa_59:
(Start: 12 @39430 has 23 MA's), (43, 39616), (45, 39631), (63, 39799), (74, 39895), (90, 40024), (108, 40120), (143, 40300), (150, 40336), (156, 40384),

Gene: KeaneyLin_4 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for KeaneyLin_4:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: LauKoruNamu_15 Start: 11695, Stop: 12432, Start Num: 27

Candidate Starts for LauKoruNamu_15:
(Start: 27 @11695 has 5 MA's), (41, 11809), (44, 11842), (45, 11845), (58, 11977), (68, 12028), (72, 12088), (87, 12178), (94, 12208), (102, 12262), (127, 12388), (135, 12421),

Gene: Lego_57 Start: 38749, Stop: 39741, Start Num: 12
Candidate Starts for Lego_57:
(Start: 12 @38749 has 23 MA's), (43, 38935), (45, 38950), (63, 39118), (74, 39214), (90, 39343), (108, 39439), (143, 39619), (150, 39655), (156, 39703),

Gene: Liebe_20 Start: 17855, Stop: 18736, Start Num: 22
Candidate Starts for Liebe_20:
(4, 17645), (11, 17804), (Start: 22 @17855 has 5 MA's), (45, 18011), (57, 18116), (59, 18137), (75, 18266), (82, 18353), (90, 18392), (95, 18407), (108, 18488), (123, 18572), (140, 18641), (154, 18713),

Gene: Lizalica_56 Start: 38292, Stop: 39275, Start Num: 12
Candidate Starts for Lizalica_56:
(Start: 12 @38292 has 23 MA's), (43, 38478), (45, 38493), (63, 38661), (74, 38757), (90, 38880), (108, 38976), (143, 39156), (150, 39192),

Gene: MaGuCo_20 Start: 17788, Stop: 18669, Start Num: 22
Candidate Starts for MaGuCo_20:
(Start: 22 @17788 has 5 MA's), (45, 17944), (57, 18049), (59, 18070), (75, 18199), (82, 18286), (90, 18325), (95, 18340), (108, 18421), (123, 18505), (140, 18574),

Gene: Maureen_20 Start: 17855, Stop: 18736, Start Num: 22
Candidate Starts for Maureen_20:
(4, 17645), (11, 17804), (Start: 22 @17855 has 5 MA's), (45, 18011), (57, 18116), (59, 18137), (75, 18266), (82, 18353), (90, 18392), (95, 18407), (108, 18488), (123, 18572), (140, 18641), (154, 18713),

Gene: Mooshroom_5 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for Mooshroom_5:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: Mudcat_5 Start: 1504, Stop: 2433, Start Num: 20
Candidate Starts for Mudcat_5:
(Start: 20 @1504 has 21 MA's), (49, 1702), (66, 1861), (84, 2044), (93, 2092), (110, 2191), (117, 2248), (126, 2302), (128, 2311), (147, 2392),

Gene: Mudpuppy_55 Start: 38904, Stop: 39890, Start Num: 12
Candidate Starts for Mudpuppy_55:
(Start: 12 @38904 has 23 MA's), (43, 39090), (45, 39105), (63, 39273), (74, 39369), (90, 39492), (108, 39588), (143, 39768), (145, 39774), (156, 39852),

Gene: MurphyJoseph_27 Start: 19485, Stop: 20312, Start Num: 13
Candidate Starts for MurphyJoseph_27:
(Start: 13 @19485 has 8 MA's), (23, 19533), (43, 19674), (46, 19692), (53, 19785), (61, 19818), (69, 19881), (76, 19956), (78, 19971), (96, 20067), (103, 20112), (106, 20133), (124, 20226), (144, 20301),

Gene: NapoleonB_5 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for NapoleonB_5:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: Nason_5 Start: 1896, Stop: 2822, Start Num: 20
Candidate Starts for Nason_5:
(Start: 20 @1896 has 21 MA's), (39, 2013), (60, 2211), (73, 2337), (74, 2340), (76, 2355), (84, 2433), (93, 2481), (128, 2700), (147, 2781),

Gene: Nebulanyx_16 Start: 11847, Stop: 12587, Start Num: 24
Candidate Starts for Nebulanyx_16:
(Start: 24 @11847 has 1 MA's), (Start: 27 @11850 has 5 MA's), (41, 11964), (44, 11997), (45, 12000), (58, 12132), (68, 12183), (72, 12243), (87, 12333), (94, 12363), (102, 12417), (127, 12543), (135, 12576),

Gene: Neroxid_22 Start: 16418, Stop: 17185, Start Num: 16
Candidate Starts for Neroxid_22:
(10, 16382), (16, 16418), (Start: 24 @16445 has 1 MA's), (31, 16481), (34, 16499), (40, 16556), (64, 16733), (66, 16739), (68, 16751), (79, 16856), (83, 16907), (96, 16955), (100, 16985),

Gene: Nyilah_26 Start: 19391, Stop: 20215, Start Num: 13
Candidate Starts for Nyilah_26:
(2, 19163), (3, 19166), (Start: 13 @19391 has 8 MA's), (23, 19439), (43, 19580), (46, 19598), (53, 19691), (61, 19724), (69, 19787), (76, 19862), (78, 19877), (96, 19973), (103, 20018), (106, 20039), (124, 20132), (144, 20204),

Gene: Orkz_30 Start: 20685, Stop: 21464, Start Num: 15
Candidate Starts for Orkz_30:
(15, 20685), (70, 21051), (79, 21132), (96, 21219), (106, 21285), (113, 21306), (114, 21321), (133, 21423), (142, 21450), (144, 21453),

Gene: Pauu_15 Start: 11695, Stop: 12432, Start Num: 27
Candidate Starts for Pauu_15:
(Start: 27 @11695 has 5 MA's), (41, 11809), (44, 11842), (45, 11845), (58, 11977), (68, 12028), (72, 12088), (87, 12178), (94, 12208), (102, 12262), (127, 12388), (135, 12421),

Gene: Piku_12 Start: 11038, Stop: 11766, Start Num: 26
Candidate Starts for Piku_12:
(19, 11020), (Start: 26 @11038 has 5 MA's), (37, 11110), (55, 11302), (62, 11341), (67, 11368), (85, 11515), (87, 11521), (92, 11545), (129, 11740),

Gene: Powerpuff_59 Start: 39951, Stop: 40943, Start Num: 12
Candidate Starts for Powerpuff_59:
(Start: 12 @39951 has 23 MA's), (34, 40056), (43, 40137), (45, 40152), (63, 40320), (74, 40416), (90, 40545), (108, 40641), (143, 40821), (150, 40857), (156, 40905),

Gene: Pumpkins_56 Start: 39599, Stop: 40567, Start Num: 12
Candidate Starts for Pumpkins_56:
(Start: 12 @39599 has 23 MA's), (23, 39650), (43, 39788), (53, 39899), (55, 39905), (90, 40187), (99, 40235), (108, 40283), (120, 40346), (150, 40484),

Gene: Raya_22 Start: 16418, Stop: 17185, Start Num: 16
Candidate Starts for Raya_22:
(10, 16382), (16, 16418), (Start: 24 @16445 has 1 MA's), (31, 16481), (34, 16499), (40, 16556), (64, 16733), (66, 16739), (68, 16751), (79, 16856), (83, 16907), (96, 16955), (100, 16985),

Gene: Schaffner_57 Start: 39442, Stop: 40410, Start Num: 12
Candidate Starts for Schaffner_57:
(7, 39316), (Start: 12 @39442 has 23 MA's), (23, 39493), (33, 39538), (43, 39631), (55, 39748), (90, 40030), (101, 40093), (108, 40126), (114, 40162), (143, 40291), (150, 40327),

Gene: Sicarius2_29 Start: 24015, Stop: 24896, Start Num: 22
Candidate Starts for Sicarius2_29:
(Start: 22 @24015 has 5 MA's), (40, 24129), (48, 24189), (51, 24243), (52, 24249), (58, 24288), (90, 24549), (139, 24783),

Gene: Simpson_60 Start: 39056, Stop: 40048, Start Num: 12
Candidate Starts for Simpson_60:
(Start: 12 @39056 has 23 MA's), (43, 39242), (45, 39257), (63, 39425), (74, 39521), (90, 39650), (108, 39746), (143, 39926), (150, 39962), (156, 40010),

Gene: Skyerus_22 Start: 16418, Stop: 17185, Start Num: 16
Candidate Starts for Skyerus_22:
(10, 16382), (16, 16418), (Start: 24 @16445 has 1 MA's), (31, 16481), (34, 16499), (40, 16556), (64, 16733), (66, 16739), (68, 16751), (79, 16856), (83, 16907), (96, 16955), (100, 16985),

Gene: Stardom_4 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for Stardom_4:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (110, 2190), (117, 2247), (126, 2301), (128, 2310), (147, 2391),

Gene: SunnyJune_29 Start: 22626, Stop: 23438, Start Num: 13
Candidate Starts for SunnyJune_29:
(6, 22503), (9, 22578), (Start: 13 @22626 has 8 MA's), (31, 22713), (35, 22731), (38, 22767), (43, 22806), (44, 22818), (45, 22821), (46, 22824), (50, 22893), (53, 22917), (76, 23088), (96, 23193), (113, 23280), (133, 23397), (142, 23424), (144, 23427),

Gene: Tbone_57 Start: 39387, Stop: 40373, Start Num: 12
Candidate Starts for Tbone_57:
(Start: 12 @39387 has 23 MA's), (43, 39573), (45, 39588), (63, 39756), (74, 39852), (90, 39975), (108, 40071), (145, 40257), (156, 40335),

Gene: TforTroy_59 Start: 39527, Stop: 40492, Start Num: 12
Candidate Starts for TforTroy_59:
(Start: 12 @39527 has 23 MA's), (38, 39674), (43, 39713), (53, 39824), (55, 39830), (90, 40112), (101, 40175), (108, 40208), (140, 40361), (150, 40409),

Gene: ThayneTheZag_27 Start: 19570, Stop: 20526, Start Num: 13
Candidate Starts for ThayneTheZag_27:
(1, 19303), (3, 19348), (Start: 13 @19570 has 8 MA's), (28, 19633), (31, 19657), (41, 19729), (42, 19741), (43, 19750), (45, 19765), (61, 19894), (89, 20137), (105, 20218), (130, 20377), (133, 20389), (143, 20422), (145, 20428),

Gene: ThursdayNight_63 Start: 40518, Stop: 41483, Start Num: 13
Candidate Starts for ThursdayNight_63:
(Start: 13 @40518 has 8 MA's), (23, 40566), (34, 40620), (90, 41100), (122, 41262), (143, 41358), (150, 41400), (155, 41427),

Gene: Tribby_5 Start: 1506, Stop: 2432, Start Num: 20

Candidate Starts for Tribby_5:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: Turab_55 Start: 38331, Stop: 39311, Start Num: 12
Candidate Starts for Turab_55:
(Start: 12 @38331 has 23 MA's), (34, 38436), (38, 38478), (43, 38517), (63, 38700), (74, 38796), (90, 38928), (108, 39024), (114, 39060), (149, 39216), (156, 39273),

Gene: Tutumahutu_59 Start: 39023, Stop: 40015, Start Num: 12
Candidate Starts for Tutumahutu_59:
(Start: 12 @39023 has 23 MA's), (43, 39209), (45, 39224), (63, 39392), (74, 39488), (90, 39617), (108, 39713), (143, 39893), (150, 39929), (156, 39977),

Gene: Utopia_12 Start: 11012, Stop: 11740, Start Num: 26
Candidate Starts for Utopia_12:
(Start: 26 @11012 has 5 MA's), (37, 11084), (55, 11276), (62, 11315), (72, 11408), (85, 11489), (87, 11495), (129, 11714),

Gene: Warda_58 Start: 39113, Stop: 40099, Start Num: 12
Candidate Starts for Warda_58:
(Start: 12 @39113 has 23 MA's), (43, 39299), (45, 39314), (63, 39482), (74, 39578), (90, 39701), (108, 39797), (145, 39983), (156, 40061),

Gene: Whytu_12 Start: 10993, Stop: 11844, Start Num: 25
Candidate Starts for Whytu_12:
(Start: 25 @10993 has 1 MA's), (32, 11026), (43, 11125), (75, 11371), (96, 11482), (157, 11815),

Gene: Wobbe_16 Start: 11653, Stop: 12393, Start Num: 24
Candidate Starts for Wobbe_16:
(Start: 24 @11653 has 1 MA's), (45, 11806), (54, 11911), (58, 11935), (87, 12136), (92, 12160), (102, 12220), (121, 12313), (135, 12382),

Gene: Xenomorph_4 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for Xenomorph_4:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),

Gene: Yang_59 Start: 39529, Stop: 40497, Start Num: 12
Candidate Starts for Yang_59:
(Start: 12 @39529 has 23 MA's), (23, 39580), (33, 39625), (43, 39718), (53, 39829), (55, 39835), (90, 40117), (108, 40213), (143, 40378), (150, 40414),

Gene: Yavru_12 Start: 11017, Stop: 11745, Start Num: 26
Candidate Starts for Yavru_12:
(Start: 26 @11017 has 5 MA's), (37, 11089), (55, 11281), (58, 11302), (62, 11320), (72, 11413), (87, 11500), (111, 11620),

Gene: YesChef_57 Start: 38810, Stop: 39802, Start Num: 12
Candidate Starts for YesChef_57:
(Start: 12 @38810 has 23 MA's), (34, 38915), (43, 38996), (45, 39011), (63, 39179), (74, 39275), (90, 39404), (108, 39500), (143, 39680), (150, 39716), (156, 39764),

Gene: YoshiYama_4 Start: 1506, Stop: 2432, Start Num: 20
Candidate Starts for YoshiYama_4:
(Start: 20 @1506 has 21 MA's), (39, 1623), (60, 1821), (73, 1947), (74, 1950), (76, 1965), (84, 2043), (93, 2091), (128, 2310), (147, 2391),