Pham 345509


1: Sephiroth_11 + 2
2: Octobien14_11
3: Mufasa8_32
4: Sonali_36
5: Sunshine23_36
6: Maruru_36
7: CicholasNage_116 + 11
8: Rose5_123 + 2
9: OhShagHennessy_114
10: Silverleaf_119
11: Gardann_130 + 23
12: Bazzle_127
13: Loadrie_131 + 3
14: Crossroads_133 + 1
15: ChengKai98_129
16: DHan_132
17: ZhongYanYuan_127
18: Archie_129
19: Tourach_132
20: Kingsolomon_120 + 1
21: DuncansLeg_124 + 3
22: Jubie_124 + 10
23: Nicholas_120
24: MiniMac_128
25: Lolly9_124 + 2
26: Whirlwind_124
27: Kropertea_135 + 1
28: Chaser_138
29: Quby_143
30: PYPDinur_140
31: BrainDrainer_140 + 1
32: FarmResident_141
33: ChutneyChips_141
34: Douzhi_140
35: Baudelaire_142 + 1
36: Izel_2 + 11
37: RoseMarie_2 + 1
38: TpudiCK_2 + 1
39: Bricole_2
40: Reindeer_2
41: MrMagoo_2 + 1
42: Aziz_2 + 1
43: Rey_2
44: Estes_2
45: Nanosmite_2
46: AuntGwenStacy_39 + 3
47: Kumao_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 345509 Report

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

Pham number 345509 has 126 members, 22 are drafts.

Phages represented in each track:
- Track 1 : Sephiroth_11, Kudefre_10, Syleon_11
- Track 2 : Octobien14_11
- Track 3 : Mufasa8_32
- Track 4 : Sonali_36
- Track 5 : Sunshine23_36
- Track 6 : Maruru_36
- Track 7 : CicholasNage_116, Wyatt2_122, Calm_129, LeBron_121, Appletree2_121, Zaria_126, Acquire49_122, JoeDirt_124, Wamburgrxpress_124, UPIE_121, MAckerman_123, AvadaKedavra_122
- Track 8 : Rose5_123, Halena_122, Tyson_123
- Track 9 : OhShagHennessy_114
- Track 10 : Silverleaf_119
- Track 11 : Gardann_130, BigCheese_129, Netyap_128, SoJulia_133, Kahlid_130, Finemlucis_130, Underpass_123, Wigglewiggle_131, DrSeegs_128, LilDestine_127, Hiraya_130, MkaliMitinis3_132, Miley16_130, Wilder_131, Molivier_121, Gabriela_130, Itos_130, Lynnae_131, Soap141_131, GuuelaD_128, Zakai_132, Lewan_132, Rossetti_131, Vetrix_130
- Track 12 : Bazzle_127
- Track 13 : Loadrie_131, Breezona_130, Winky_130, Faith1_128
- Track 14 : Crossroads_133, Nicholasp3_131
- Track 15 : ChengKai98_129
- Track 16 : DHan_132
- Track 17 : ZhongYanYuan_127
- Track 18 : Archie_129
- Track 19 : Tourach_132
- Track 20 : Kingsolomon_120, Moostard_117
- Track 21 : DuncansLeg_124, Ellson_122, KirDoubleO7_121, BourbonZero_124
- Track 22 : Jubie_124, Lumos_124, Clautastrophe_123, Red305_125, Snenia_123, Finnry_122, Samty_122, MsGreen_125, Bellis_124, Jobypre_124, TriFive_125
- Track 23 : Nicholas_120
- Track 24 : MiniMac_128
- Track 25 : Lolly9_124, Krypton555_126, MiniLon_128
- Track 26 : Whirlwind_124
- Track 27 : Kropertea_135, DyoEdafos_141
- Track 28 : Chaser_138
- Track 29 : Quby_143
- Track 30 : PYPDinur_140

• Track 31 : BrainDrainer_140, Sheng711_142
• Track 32 : FarmResident_141
• Track 33 : ChutneyChips_141
• Track 34 : Douzhi_140
• Track 35 : Baudelaire_142, Aegeus_142
• Track 36 : Izel_2, Auspice_2, Dulcita_2, IPhane7_2, Skinny_2, TyDawg_2, LilhomieP_2, SlimJimmy_2, Diminimus_2, Bongo_2, PegLeg_2, Glaske16_2
• Track 37 : RoseMarie_2, KleverKiS_2
• Track 38 : TpudiCK_2, FreakyGoo_2
• Track 39 : Bricole_2
• Track 40 : Reindeer_2
• Track 41 : MrMagoo_2, GardenSalsa_2
• Track 42 : Aziz_2, GenevaB15_2
• Track 43 : Rey_2
• Track 44 : Estes_2
• Track 45 : Nanosmite_2
• Track 46 : AuntGwenStacy_39, Typha_39, Faiyaz_39, Hilltopfarm_39
• Track 47 : Kumao_2

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

The start number called the most often in the published annotations is 18, it was called in 42 of the 104 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Bazzle_127, Bellis_124, BigCheese_129, BourbonZero_124, BrainDrainer_140, Chaser_138, Clautastrophe_123, DrSeegs_128, DuncansLeg_124, DyoEdafos_141, Ellson_122, FarmResident_141, Finemlucis_130, Finnry_122, Gabriela_130, Gardann_130, GuuelaD_128, Hiraya_130, Itos_130, Jobypre_124, Jubie_124, Kahlid_130, Kingsolomon_120, KirDoubleO7_121, Kropertea_135, Krypton555_126, Lewan_132, LilDestine_127, Lolly9_124, Lumos_124, Lynnae_131, Miley16_130, MiniLon_128, MiniMac_128, MkaliMitinis3_132, Molivier_121, Moostard_117, MsGreen_125, Netyap_128, Nicholas_120, OhShagHennessy_114, PYPDinur_140, Red305_125, Rossetti_131, Samty_122, Sheng711_142, Snenia_123, SoJulia_133, Soap141_131, TriFive_125, Underpass_123, Vetrix_130, Whirlwind_124, Wigglewiggle_131, Wilder_131, Zakai_132, ZhongYanYuan_127,

Genes that have the "Most Annotated" start but do not call it:
• Acquire49_122, Appletree2_121, Archie_129, AvadaKedavra_122, Breezona_130, Calm_129, ChengKai98_129, ChutneyChips_141, CicholasNage_116, Crossroads_133, DHan_132, Douzhi_140, Faith1_128, Halena_122, JoeDirt_124, LeBron_121, Loadrie_131, MAckerman_123, Nicholasp3_131, Quby_143, Rose5_123, Silverleaf_119, Tourach_132, Tyson_123, UPIE_121, Wamburgrxpress_124, Winky_130, Wyatt2_122, Zaria_126,

Genes that do not have the "Most Annotated" start:
• Aegeus_142, AuntGwenStacy_39, Auspice_2, Aziz_2, Baudelaire_142, Bongo_2, Bricole_2, Diminimus_2, Dulcita_2, Estes_2, Faiyaz_39, FreakyGoo_2, GardenSalsa_2, GenevaB15_2, Glaske16_2, Hilltopfarm_39, IPhane7_2, Izel_2, KleverKiS_2, Kudefre_10, Kumao_2, LilhomieP_2, Maruru_36, MrMagoo_2,

Mufasa8_32, Nanosmite_2, Octobien14_11, PegLeg_2, Reindeer_2, Rey_2, RoseMarie_2, Sephiroth_11, Skinny_2, SlimJimmy_2, Sonali_36, Sunshine23_36, Syleon_11, TpudiCK_2, TyDawg_2, Typha_39,

Summary by start number:

Start 7:
• Found in 2 of 126 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 104
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ChutneyChips_141 (L4), Quby_143 (L4),

Start 11:
• Found in 1 of 126 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 104
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mufasa8_32 (FG),

Start 12:
• Found in 21 of 126 (16.7%) of genes in pham
• Manual Annotations of this start: 3 of 104
• Called 14.3% of time when present
• Phage (with cluster) where this start called: Halena_122 (L1), Rose5_123 (L1), Tyson_123 (L1),

Start 13:
• Found in 31 of 126 (24.6%) of genes in pham
• Manual Annotations of this start: 4 of 104
• Called 12.9% of time when present
• Phage (with cluster) where this start called: Breezona_130 (L2), Faith1_128 (L2), Loadrie_131 (L2), Winky_130 (L2),

Start 14:
• Found in 31 of 126 (24.6%) of genes in pham
• Manual Annotations of this start: 2 of 104
• Called 6.5% of time when present
• Phage (with cluster) where this start called: Crossroads_133 (L2), Nicholasp3_131 (L2),

Start 16:
• Found in 36 of 126 (28.6%) of genes in pham
• Manual Annotations of this start: 2 of 104
• Called 11.1% of time when present
• Phage (with cluster) where this start called: Archie_129 (L2), ChengKai98_129 (L2), DHan_132 (L2), Tourach_132 (L2),

Start 17:
• Found in 19 of 126 (15.1%) of genes in pham
• Manual Annotations of this start: 13 of 104
• Called 68.4% of time when present
• Phage (with cluster) where this start called: Acquire49_122 (L1), Appletree2_121 (L1), AvadaKedavra_122 (L1), Calm_129 (L1), CicholasNage_116 (L1), JoeDirt_124 (L1), LeBron_121 (L1), MAckerman_123 (L1), Silverleaf_119 (L1), UPIE_121 (L1),

Wamburgrxpress_124 (L1), Wyatt2_122 (L1), Zaria_126 (L1),

Start 18:
• Found in 86 of 126 (68.3%) of genes in pham
• Manual Annotations of this start: 42 of 104
• Called 66.3% of time when present
• Phage (with cluster) where this start called: Bazzle_127 (L2), Bellis_124 (L3), BigCheese_129 (L2), BourbonZero_124 (L3), BrainDrainer_140 (L4), Chaser_138 (L4), Clautastrophe_123 (L3), DrSeegs_128 (L2), DuncansLeg_124 (L3), DyoEdafos_141 (L4), Ellson_122 (L3), FarmResident_141 (L4), Finemlucis_130 (L2), Finnry_122 (L3), Gabriela_130 (L2), Gardann_130 (L2), GuuelaD_128 (L2), Hiraya_130 (L2), Itos_130 (L2), Jobypre_124 (L3), Jubie_124 (L3), Kahlid_130 (L2), Kingsolomon_120 (L3), KirDoubleO7_121 (L3), Kropertea_135 (L4), Krypton555_126 (L3), Lewan_132 (L2), LilDestine_127 (L2), Lolly9_124 (L3), Lumos_124 (L3), Lynnae_131 (L2), Miley16_130 (L2), MiniLon_128 (L3), MiniMac_128 (L3), MkaliMitinis3_132 (L2), Molivier_121 (L2), Moostard_117 (L3), MsGreen_125 (L3), Netyap_128 (L2), Nicholas_120 (L3), OhShagHennessy_114 (L1), PYPDinur_140 (L4), Red305_125 (L3), Rossetti_131 (L2), Samty_122 (L3), Sheng711_142 (L4), Snenia_123 (L3), SoJulia_133 (L2), Soap141_131 (L2), TriFive_125 (L3), Underpass_123 (L2), Vetrix_130 (L2), Whirlwind_124 (L3), Wigglewiggle_131 (L2), Wilder_131 (L2), Zakai_132 (L2), ZhongYanYuan_127 (L2),

Start 19:
• Found in 29 of 126 (23.0%) of genes in pham
• Manual Annotations of this start: 25 of 104
• Called 86.2% of time when present
• Phage (with cluster) where this start called: AuntGwenStacy_39 (Y), Auspice_2 (M1), Aziz_2 (M2), Bongo_2 (M1), Bricole_2 (M1), Diminimus_2 (M1), Dulcita_2 (M1), Estes_2 (M2), Faiyaz_39 (Y), GardenSalsa_2 (M2), GenevaB15_2 (M2), Glaske16_2 (M1), Hilltopfarm_39 (Y), IPhane7_2 (M1), Izel_2 (M1), LilhomieP_2 (M1), MrMagoo_2 (M2), Nanosmite_2 (M3), PegLeg_2 (M1), Reindeer_2 (M1), Rey_2 (M2), Skinny_2 (M1), SlimJimmy_2 (M1), TyDawg_2 (M1), Typha_39 (Y),

Start 20:
• Found in 1 of 126 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 104
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kumao_2 (singleton),

Start 21:
• Found in 6 of 126 (4.8%) of genes in pham
• Manual Annotations of this start: 6 of 104
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aegeus_142 (L5), Baudelaire_142 (L5), Kudefre_10 (DU1), Octobien14_11 (DU1), Sephiroth_11 (DU1), Syleon_11 (DU1),

Start 22:
• Found in 4 of 126 (3.2%) of genes in pham
• Manual Annotations of this start: 3 of 104
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Maruru_36 (FG), Sonali_36 (FG), Sunshine23_36 (FG),

Start 27:
• Found in 6 of 126 (4.8%) of genes in pham
• No Manual Annotations of this start.
• Called 16.7% of time when present
• Phage (with cluster) where this start called: Douzhi_140 (L4),

Start 35:
• Found in 17 of 126 (13.5%) of genes in pham
• Manual Annotations of this start: 1 of 104
• Called 23.5% of time when present
• Phage (with cluster) where this start called: FreakyGoo_2 (M1), KleverKiS_2 (M1), RoseMarie_2 (M1), TpudiCK_2 (M1),

Summary by clusters:

There are 12 clusters represented in this pham: FG, singleton, M2, DU1, L4, L5, M1, L3, M3, L1, Y, L2,

Info for manual annotations of cluster DU1:
•Start number 21 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster FG:
•Start number 11 was manually annotated 1 time for cluster FG.
•Start number 22 was manually annotated 3 times for cluster FG.

Info for manual annotations of cluster L1:
•Start number 12 was manually annotated 3 times for cluster L1.
•Start number 17 was manually annotated 13 times for cluster L1.
•Start number 18 was manually annotated 1 time for cluster L1.

Info for manual annotations of cluster L2:
•Start number 13 was manually annotated 4 times for cluster L2.
•Start number 14 was manually annotated 2 times for cluster L2.
•Start number 16 was manually annotated 2 times for cluster L2.
•Start number 18 was manually annotated 19 times for cluster L2.

Info for manual annotations of cluster L3:
•Start number 18 was manually annotated 19 times for cluster L3.

Info for manual annotations of cluster L4:
•Start number 7 was manually annotated 1 time for cluster L4.
•Start number 18 was manually annotated 3 times for cluster L4.

Info for manual annotations of cluster L5:
•Start number 21 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster M1:
•Start number 19 was manually annotated 14 times for cluster M1.
•Start number 35 was manually annotated 1 time for cluster M1.

Info for manual annotations of cluster M2:
•Start number 19 was manually annotated 6 times for cluster M2.

Info for manual annotations of cluster M3:
•Start number 19 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster Y:
•Start number 19 was manually annotated 4 times for cluster Y.

Gene Information:

Gene: Acquire49_122 Start: 66709, Stop: 66329, Start Num: 17
Candidate Starts for Acquire49_122:
(Start: 12 @66739 has 3 MA's), (Start: 17 @66709 has 13 MA's), (Start: 18 @66703 has 42 MA's), (25, 66673), (42, 66577), (47, 66538), (48, 66532), (56, 66484), (70, 66421), (72, 66415), (73, 66412), (79, 66361), (82, 66349), (83, 66340),

Gene: Aegeus_142 Start: 70111, Stop: 69734, Start Num: 21
Candidate Starts for Aegeus_142:
(Start: 21 @70111 has 6 MA's), (34, 70042), (48, 69961), (64, 69877), (82, 69778), (84, 69754),

Gene: Appletree2_121 Start: 66750, Stop: 66370, Start Num: 17
Candidate Starts for Appletree2_121:
(Start: 12 @66780 has 3 MA's), (Start: 17 @66750 has 13 MA's), (Start: 18 @66744 has 42 MA's), (25, 66714), (42, 66618), (47, 66579), (48, 66573), (56, 66525), (70, 66462), (72, 66456), (73, 66453), (79, 66402), (82, 66390), (83, 66381),

Gene: Archie_129 Start: 69357, Stop: 68974, Start Num: 16
Candidate Starts for Archie_129:
(Start: 16 @69357 has 2 MA's), (Start: 17 @69354 has 13 MA's), (Start: 18 @69348 has 42 MA's), (47, 69183), (49, 69174), (52, 69150), (54, 69138), (70, 69066), (72, 69060), (73, 69057), (79, 69006), (81, 68997), (82, 68994),

Gene: AuntGwenStacy_39 Start: 32346, Stop: 32708, Start Num: 19
Candidate Starts for AuntGwenStacy_39:
(Start: 19 @32346 has 25 MA's), (23, 32355), (24, 32370), (30, 32394), (34, 32412), (39, 32442), (43, 32469), (52, 32532), (60, 32565), (64, 32589), (71, 32619),

Gene: Auspice_2 Start: 1191, Stop: 760, Start Num: 19
Candidate Starts for Auspice_2:
(Start: 19 @1191 has 25 MA's), (25, 1164), (Start: 35 @1110 has 1 MA's), (36, 1104), (41, 1080), (53, 993), (56, 978), (64, 942), (83, 834),

Gene: AvadaKedavra_122 Start: 66823, Stop: 66443, Start Num: 17
Candidate Starts for AvadaKedavra_122:
(Start: 12 @66853 has 3 MA's), (Start: 17 @66823 has 13 MA's), (Start: 18 @66817 has 42 MA's), (25, 66787), (42, 66691), (47, 66652), (48, 66646), (56, 66598), (70, 66535), (72, 66529), (73, 66526), (79, 66475), (82, 66463), (83, 66454),

Gene: Aziz_2 Start: 1206, Stop: 784, Start Num: 19
Candidate Starts for Aziz_2:
(Start: 19 @1206 has 25 MA's), (25, 1179), (56, 993), (63, 969), (64, 957), (71, 927), (79, 870), (80, 867), (83, 849),

Gene: Baudelaire_142 Start: 70111, Stop: 69734, Start Num: 21
Candidate Starts for Baudelaire_142:
(Start: 21 @70111 has 6 MA's), (34, 70042), (48, 69961), (64, 69877), (82, 69778), (84, 69754),

Gene: Bazzle_127 Start: 69522, Stop: 69151, Start Num: 18
Candidate Starts for Bazzle_127:
(Start: 16 @69531 has 2 MA's), (Start: 17 @69528 has 13 MA's), (Start: 18 @69522 has 42 MA's), (37, 69432), (39, 69420), (42, 69399), (46, 69369), (47, 69360), (52, 69327), (54, 69315), (64, 69270), (70, 69243), (72, 69237), (73, 69234), (79, 69183), (81, 69174), (82, 69171),

Gene: Bellis_124 Start: 68329, Stop: 67949, Start Num: 18
Candidate Starts for Bellis_124:
(Start: 18 @68329 has 42 MA's), (29, 68278), (39, 68224), (42, 68203), (47, 68161), (70, 68044), (72, 68038), (73, 68035), (78, 67996), (79, 67984), (81, 67975),

Gene: BigCheese_129 Start: 69304, Stop: 68930, Start Num: 18
Candidate Starts for BigCheese_129:
(Start: 13 @69331 has 4 MA's), (Start: 14 @69325 has 2 MA's), (Start: 16 @69313 has 2 MA's), (Start: 18 @69304 has 42 MA's), (42, 69178), (47, 69139), (49, 69130), (52, 69106), (54, 69094), (70, 69022), (72, 69016), (73, 69013), (79, 68962), (81, 68953), (82, 68950),

Gene: Bongo_2 Start: 1191, Stop: 760, Start Num: 19
Candidate Starts for Bongo_2:
(Start: 19 @1191 has 25 MA's), (25, 1164), (Start: 35 @1110 has 1 MA's), (36, 1104), (41, 1080), (53, 993), (56, 978), (64, 942), (83, 834),

Gene: BourbonZero_124 Start: 68597, Stop: 68217, Start Num: 18
Candidate Starts for BourbonZero_124:
(Start: 18 @68597 has 42 MA's), (39, 68492), (42, 68471), (47, 68429), (66, 68336), (70, 68312), (72, 68306), (73, 68303), (79, 68252), (81, 68243), (82, 68240),

Gene: BrainDrainer_140 Start: 71190, Stop: 70795, Start Num: 18
Candidate Starts for BrainDrainer_140:
(4, 71286), (Start: 18 @71190 has 42 MA's), (27, 71151), (30, 71133), (42, 71064), (47, 71007), (50, 70986), (52, 70974), (55, 70956), (70, 70890), (72, 70884), (73, 70881), (79, 70830), (82, 70818), (83, 70809),

Gene: Breezona_130 Start: 69666, Stop: 69265, Start Num: 13
Candidate Starts for Breezona_130:
(Start: 13 @69666 has 4 MA's), (Start: 14 @69660 has 2 MA's), (Start: 16 @69648 has 2 MA's), (Start: 18 @69639 has 42 MA's), (42, 69513), (47, 69474), (49, 69465), (52, 69441), (54, 69429), (70, 69357), (72, 69351), (73, 69348), (79, 69297), (81, 69288), (82, 69285),

Gene: Bricole_2 Start: 1190, Stop: 759, Start Num: 19
Candidate Starts for Bricole_2:
(Start: 19 @1190 has 25 MA's), (25, 1163), (Start: 35 @1109 has 1 MA's), (36, 1103), (41, 1079), (53, 992), (56, 977), (64, 941), (83, 833),

Gene: Calm_129 Start: 67924, Stop: 67544, Start Num: 17
Candidate Starts for Calm_129:
(Start: 12 @67954 has 3 MA's), (Start: 17 @67924 has 13 MA's), (Start: 18 @67918 has 42 MA's), (25, 67888), (42, 67792), (47, 67753), (48, 67747), (56, 67699), (70, 67636), (72, 67630), (73, 67627), (79, 67576), (82, 67564), (83, 67555),

Gene: Chaser_138 Start: 71035, Stop: 70649, Start Num: 18
Candidate Starts for Chaser_138:
(Start: 18 @71035 has 42 MA's), (27, 70996), (30, 70978), (42, 70909), (47, 70861), (50, 70840), (52, 70828), (55, 70810), (70, 70744), (72, 70738), (73, 70735), (79, 70684), (82, 70672),

Gene: ChengKai98_129 Start: 69264, Stop: 68881, Start Num: 16
Candidate Starts for ChengKai98_129:
(Start: 13 @69282 has 4 MA's), (Start: 14 @69276 has 2 MA's), (Start: 16 @69264 has 2 MA's), (Start: 18 @69255 has 42 MA's), (42, 69129), (47, 69090), (49, 69081), (52, 69057), (54, 69045), (70, 68973), (72, 68967), (73, 68964), (79, 68913), (81, 68904), (82, 68901),

Gene: ChutneyChips_141 Start: 71146, Stop: 70715, Start Num: 7
Candidate Starts for ChutneyChips_141:
(Start: 7 @71146 has 1 MA's), (Start: 18 @71098 has 42 MA's), (32, 71032), (37, 71005), (38, 70996), (47, 70927), (52, 70894), (55, 70876), (70, 70810), (72, 70804), (73, 70801), (79, 70750), (82, 70738),

Gene: CicholasNage_116 Start: 67054, Stop: 66674, Start Num: 17
Candidate Starts for CicholasNage_116:
(Start: 12 @67084 has 3 MA's), (Start: 17 @67054 has 13 MA's), (Start: 18 @67048 has 42 MA's), (25, 67018), (42, 66922), (47, 66883), (48, 66877), (56, 66829), (70, 66766), (72, 66760), (73, 66757), (79, 66706), (82, 66694), (83, 66685),

Gene: Clautastrophe_123 Start: 68440, Stop: 68060, Start Num: 18
Candidate Starts for Clautastrophe_123:
(Start: 18 @68440 has 42 MA's), (29, 68389), (39, 68335), (42, 68314), (47, 68272), (70, 68155), (72, 68149), (73, 68146), (78, 68107), (79, 68095), (81, 68086),

Gene: Crossroads_133 Start: 69594, Stop: 69199, Start Num: 14
Candidate Starts for Crossroads_133:
(Start: 13 @69600 has 4 MA's), (Start: 14 @69594 has 2 MA's), (Start: 16 @69582 has 2 MA's), (Start: 18 @69573 has 42 MA's), (42, 69447), (47, 69408), (49, 69399), (52, 69375), (54, 69363), (70, 69291), (72, 69285), (73, 69282), (79, 69231), (81, 69222), (82, 69219),

Gene: DHan_132 Start: 69722, Stop: 69339, Start Num: 16
Candidate Starts for DHan_132:
(Start: 16 @69722 has 2 MA's), (Start: 18 @69713 has 42 MA's), (52, 69515), (54, 69503), (70, 69431), (72, 69425), (73, 69422), (79, 69371), (81, 69362), (82, 69359),

Gene: Diminimus_2 Start: 1190, Stop: 759, Start Num: 19
Candidate Starts for Diminimus_2:
(Start: 19 @1190 has 25 MA's), (25, 1163), (Start: 35 @1109 has 1 MA's), (36, 1103), (41, 1079), (53, 992), (56, 977), (64, 941), (83, 833),

Gene: Douzhi_140 Start: 71323, Stop: 70967, Start Num: 27
Candidate Starts for Douzhi_140:
(4, 71458), (Start: 18 @71362 has 42 MA's), (27, 71323), (30, 71305), (42, 71236), (47, 71179), (50, 71158), (52, 71146), (55, 71128), (70, 71062), (72, 71056), (73, 71053), (79, 71002), (82, 70990), (83, 70981),

Gene: DrSeegs_128 Start: 69639, Stop: 69265, Start Num: 18
Candidate Starts for DrSeegs_128:

(Start: 13 @69666 has 4 MA's), (Start: 14 @69660 has 2 MA's), (Start: 16 @69648 has 2 MA's), (Start: 18 @69639 has 42 MA's), (42, 69513), (47, 69474), (49, 69465), (52, 69441), (54, 69429), (70, 69357), (72, 69351), (73, 69348), (79, 69297), (81, 69288), (82, 69285),

Gene: Dulcita_2 Start: 1190, Stop: 759, Start Num: 19
Candidate Starts for Dulcita_2:
(Start: 19 @1190 has 25 MA's), (25, 1163), (Start: 35 @1109 has 1 MA's), (36, 1103), (41, 1079), (53, 992), (56, 977), (64, 941), (83, 833),

Gene: DuncansLeg_124 Start: 68623, Stop: 68243, Start Num: 18
Candidate Starts for DuncansLeg_124:
(Start: 18 @68623 has 42 MA's), (39, 68518), (42, 68497), (47, 68455), (66, 68362), (70, 68338), (72, 68332), (73, 68329), (79, 68278), (81, 68269), (82, 68266),

Gene: DyoEdafos_141 Start: 70626, Stop: 70240, Start Num: 18
Candidate Starts for DyoEdafos_141:
(Start: 18 @70626 has 42 MA's), (30, 70569), (50, 70431), (52, 70419), (55, 70401), (70, 70335), (72, 70329), (73, 70326), (79, 70275), (82, 70263), (83, 70254),

Gene: Ellson_122 Start: 68879, Stop: 68499, Start Num: 18
Candidate Starts for Ellson_122:
(Start: 18 @68879 has 42 MA's), (39, 68774), (42, 68753), (47, 68711), (66, 68618), (70, 68594), (72, 68588), (73, 68585), (79, 68534), (81, 68525), (82, 68522),

Gene: Estes_2 Start: 1217, Stop: 795, Start Num: 19
Candidate Starts for Estes_2:
(Start: 19 @1217 has 25 MA's), (25, 1190), (56, 1004), (63, 980), (64, 968), (71, 938), (79, 881), (80, 878), (83, 860),

Gene: Faith1_128 Start: 68974, Stop: 68573, Start Num: 13
Candidate Starts for Faith1_128:
(Start: 13 @68974 has 4 MA's), (Start: 14 @68968 has 2 MA's), (Start: 16 @68956 has 2 MA's), (Start: 18 @68947 has 42 MA's), (42, 68821), (47, 68782), (49, 68773), (52, 68749), (54, 68737), (70, 68665), (72, 68659), (73, 68656), (79, 68605), (81, 68596), (82, 68593),

Gene: Faiyaz_39 Start: 32346, Stop: 32708, Start Num: 19
Candidate Starts for Faiyaz_39:
(Start: 19 @32346 has 25 MA's), (23, 32355), (24, 32370), (30, 32394), (34, 32412), (39, 32442), (43, 32469), (52, 32532), (60, 32565), (64, 32589), (71, 32619),

Gene: FarmResident_141 Start: 70745, Stop: 70350, Start Num: 18
Candidate Starts for FarmResident_141:
(15, 70760), (Start: 18 @70745 has 42 MA's), (27, 70706), (30, 70688), (42, 70619), (47, 70562), (50, 70541), (52, 70529), (55, 70511), (70, 70445), (72, 70439), (73, 70436), (79, 70385), (82, 70373), (83, 70364),

Gene: Finemlucis_130 Start: 70398, Stop: 70024, Start Num: 18
Candidate Starts for Finemlucis_130:
(Start: 13 @70425 has 4 MA's), (Start: 14 @70419 has 2 MA's), (Start: 16 @70407 has 2 MA's), (Start: 18 @70398 has 42 MA's), (42, 70272), (47, 70233), (49, 70224), (52, 70200), (54, 70188), (70, 70116), (72, 70110), (73, 70107), (79, 70056), (81, 70047), (82, 70044),

Gene: Finnry_122 Start: 68677, Stop: 68297, Start Num: 18

Candidate Starts for Finnry_122:
(Start: 18 @68677 has 42 MA's), (29, 68626), (39, 68572), (42, 68551), (47, 68509), (70, 68392), (72, 68386), (73, 68383), (78, 68344), (79, 68332), (81, 68323),

Gene: FreakyGoo_2 Start: 1110, Stop: 760, Start Num: 35
Candidate Starts for FreakyGoo_2:
(Start: 19 @1191 has 25 MA's), (25, 1164), (Start: 35 @1110 has 1 MA's), (36, 1104), (41, 1080), (53, 993), (56, 978), (64, 942), (83, 834),

Gene: Gabriela_130 Start: 68735, Stop: 68361, Start Num: 18
Candidate Starts for Gabriela_130:
(Start: 13 @68762 has 4 MA's), (Start: 14 @68756 has 2 MA's), (Start: 16 @68744 has 2 MA's), (Start: 18 @68735 has 42 MA's), (42, 68609), (47, 68570), (49, 68561), (52, 68537), (54, 68525), (70, 68453), (72, 68447), (73, 68444), (79, 68393), (81, 68384), (82, 68381),

Gene: Gardann_130 Start: 69412, Stop: 69038, Start Num: 18
Candidate Starts for Gardann_130:
(Start: 13 @69439 has 4 MA's), (Start: 14 @69433 has 2 MA's), (Start: 16 @69421 has 2 MA's), (Start: 18 @69412 has 42 MA's), (42, 69286), (47, 69247), (49, 69238), (52, 69214), (54, 69202), (70, 69130), (72, 69124), (73, 69121), (79, 69070), (81, 69061), (82, 69058),

Gene: GardenSalsa_2 Start: 1217, Stop: 795, Start Num: 19
Candidate Starts for GardenSalsa_2:
(Start: 19 @1217 has 25 MA's), (25, 1190), (56, 1004), (64, 968), (71, 938), (79, 881), (80, 878), (83, 860),

Gene: GenevaB15_2 Start: 1206, Stop: 784, Start Num: 19
Candidate Starts for GenevaB15_2:
(Start: 19 @1206 has 25 MA's), (25, 1179), (56, 993), (63, 969), (64, 957), (71, 927), (79, 870), (80, 867), (83, 849),

Gene: Glaske16_2 Start: 1190, Stop: 759, Start Num: 19
Candidate Starts for Glaske16_2:
(Start: 19 @1190 has 25 MA's), (25, 1163), (Start: 35 @1109 has 1 MA's), (36, 1103), (41, 1079), (53, 992), (56, 977), (64, 941), (83, 833),

Gene: GuuelaD_128 Start: 69300, Stop: 68926, Start Num: 18
Candidate Starts for GuuelaD_128:
(Start: 13 @69327 has 4 MA's), (Start: 14 @69321 has 2 MA's), (Start: 16 @69309 has 2 MA's), (Start: 18 @69300 has 42 MA's), (42, 69174), (47, 69135), (49, 69126), (52, 69102), (54, 69090), (70, 69018), (72, 69012), (73, 69009), (79, 68958), (81, 68949), (82, 68946),

Gene: Halena_122 Start: 66727, Stop: 66317, Start Num: 12
Candidate Starts for Halena_122:
(Start: 12 @66727 has 3 MA's), (Start: 17 @66697 has 13 MA's), (Start: 18 @66691 has 42 MA's), (25, 66661), (42, 66565), (47, 66526), (48, 66520), (56, 66472), (70, 66409), (72, 66403), (73, 66400), (79, 66349), (82, 66337), (83, 66328),

Gene: Hilltopfarm_39 Start: 32376, Stop: 32738, Start Num: 19
Candidate Starts for Hilltopfarm_39:
(Start: 19 @32376 has 25 MA's), (23, 32385), (24, 32400), (30, 32424), (34, 32442), (39, 32472), (43, 32499), (52, 32562), (60, 32595), (64, 32619), (71, 32649),

Gene: Hiraya_130 Start: 69479, Stop: 69105, Start Num: 18
Candidate Starts for Hiraya_130:
(Start: 13 @69506 has 4 MA's), (Start: 14 @69500 has 2 MA's), (Start: 16 @69488 has 2 MA's), (Start: 18 @69479 has 42 MA's), (42, 69353), (47, 69314), (49, 69305), (52, 69281), (54, 69269), (70, 69197), (72, 69191), (73, 69188), (79, 69137), (81, 69128), (82, 69125),

Gene: IPhane7_2 Start: 1191, Stop: 760, Start Num: 19
Candidate Starts for IPhane7_2:
(Start: 19 @1191 has 25 MA's), (25, 1164), (Start: 35 @1110 has 1 MA's), (36, 1104), (41, 1080), (53, 993), (56, 978), (64, 942), (83, 834),

Gene: Itos_130 Start: 67853, Stop: 67479, Start Num: 18
Candidate Starts for Itos_130:
(Start: 13 @67880 has 4 MA's), (Start: 14 @67874 has 2 MA's), (Start: 16 @67862 has 2 MA's), (Start: 18 @67853 has 42 MA's), (42, 67727), (47, 67688), (49, 67679), (52, 67655), (54, 67643), (70, 67571), (72, 67565), (73, 67562), (79, 67511), (81, 67502), (82, 67499),

Gene: Izel_2 Start: 1190, Stop: 759, Start Num: 19
Candidate Starts for Izel_2:
(Start: 19 @1190 has 25 MA's), (25, 1163), (Start: 35 @1109 has 1 MA's), (36, 1103), (41, 1079), (53, 992), (56, 977), (64, 941), (83, 833),

Gene: Jobypre_124 Start: 68438, Stop: 68058, Start Num: 18
Candidate Starts for Jobypre_124:
(Start: 18 @68438 has 42 MA's), (29, 68387), (39, 68333), (42, 68312), (47, 68270), (70, 68153), (72, 68147), (73, 68144), (78, 68105), (79, 68093), (81, 68084),

Gene: JoeDirt_124 Start: 67928, Stop: 67548, Start Num: 17
Candidate Starts for JoeDirt_124:
(Start: 12 @67958 has 3 MA's), (Start: 17 @67928 has 13 MA's), (Start: 18 @67922 has 42 MA's), (25, 67892), (42, 67796), (47, 67757), (48, 67751), (56, 67703), (70, 67640), (72, 67634), (73, 67631), (79, 67580), (82, 67568), (83, 67559),

Gene: Jubie_124 Start: 68573, Stop: 68193, Start Num: 18
Candidate Starts for Jubie_124:
(Start: 18 @68573 has 42 MA's), (29, 68522), (39, 68468), (42, 68447), (47, 68405), (70, 68288), (72, 68282), (73, 68279), (78, 68240), (79, 68228), (81, 68219),

Gene: Kahlid_130 Start: 69251, Stop: 68877, Start Num: 18
Candidate Starts for Kahlid_130:
(Start: 13 @69278 has 4 MA's), (Start: 14 @69272 has 2 MA's), (Start: 16 @69260 has 2 MA's), (Start: 18 @69251 has 42 MA's), (42, 69125), (47, 69086), (49, 69077), (52, 69053), (54, 69041), (70, 68969), (72, 68963), (73, 68960), (79, 68909), (81, 68900), (82, 68897),

Gene: Kingsolomon_120 Start: 68433, Stop: 68053, Start Num: 18
Candidate Starts for Kingsolomon_120:
(5, 68511), (10, 68472), (Start: 12 @68469 has 3 MA's), (Start: 18 @68433 has 42 MA's), (29, 68382), (39, 68328), (42, 68307), (47, 68265), (70, 68148), (72, 68142), (73, 68139), (78, 68100), (79, 68088), (81, 68079),

Gene: KirDoubleO7_121 Start: 68570, Stop: 68190, Start Num: 18
Candidate Starts for KirDoubleO7_121:

(Start: 18 @68570 has 42 MA's), (39, 68465), (42, 68444), (47, 68402), (66, 68309), (70, 68285), (72, 68279), (73, 68276), (79, 68225), (81, 68216), (82, 68213),

Gene: KleverKiS_2 Start: 1109, Stop: 759, Start Num: 35
Candidate Starts for KleverKiS_2:
(Start: 19 @1190 has 25 MA's), (25, 1163), (Start: 35 @1109 has 1 MA's), (36, 1103), (41, 1079), (53, 992), (56, 977), (64, 941), (83, 833),

Gene: Kropertea_135 Start: 70294, Stop: 69908, Start Num: 18
Candidate Starts for Kropertea_135:
(Start: 18 @70294 has 42 MA's), (30, 70237), (50, 70099), (52, 70087), (55, 70069), (70, 70003), (72, 69997), (73, 69994), (79, 69943), (82, 69931), (83, 69922),

Gene: Krypton555_126 Start: 68819, Stop: 68439, Start Num: 18
Candidate Starts for Krypton555_126:
(Start: 18 @68819 has 42 MA's), (29, 68768), (39, 68714), (46, 68660), (47, 68651), (70, 68534), (72, 68528), (73, 68525), (78, 68486), (79, 68474), (81, 68465),

Gene: Kudefre_10 Start: 4412, Stop: 4059, Start Num: 21
Candidate Starts for Kudefre_10:
(Start: 21 @4412 has 6 MA's), (33, 4355), (34, 4352), (37, 4331), (39, 4319), (65, 4196), (76, 4145),

Gene: Kumao_2 Start: 683, Stop: 321, Start Num: 20
Candidate Starts for Kumao_2:
(Start: 20 @683 has 1 MA's), (26, 653), (51, 494), (59, 458), (68, 419), (77, 365), (80, 341),

Gene: LeBron_121 Start: 66313, Stop: 65933, Start Num: 17
Candidate Starts for LeBron_121:
(Start: 12 @66343 has 3 MA's), (Start: 17 @66313 has 13 MA's), (Start: 18 @66307 has 42 MA's), (25, 66277), (42, 66181), (47, 66142), (48, 66136), (56, 66088), (70, 66025), (72, 66019), (73, 66016), (79, 65965), (82, 65953), (83, 65944),

Gene: Lewan_132 Start: 69930, Stop: 69556, Start Num: 18
Candidate Starts for Lewan_132:
(Start: 13 @69957 has 4 MA's), (Start: 14 @69951 has 2 MA's), (Start: 16 @69939 has 2 MA's), (Start: 18 @69930 has 42 MA's), (42, 69804), (47, 69765), (49, 69756), (52, 69732), (54, 69720), (70, 69648), (72, 69642), (73, 69639), (79, 69588), (81, 69579), (82, 69576),

Gene: LilDestine_127 Start: 68421, Stop: 68047, Start Num: 18
Candidate Starts for LilDestine_127:
(Start: 13 @68448 has 4 MA's), (Start: 14 @68442 has 2 MA's), (Start: 16 @68430 has 2 MA's), (Start: 18 @68421 has 42 MA's), (42, 68295), (47, 68256), (49, 68247), (52, 68223), (54, 68211), (70, 68139), (72, 68133), (73, 68130), (79, 68079), (81, 68070), (82, 68067),

Gene: LilhomieP_2 Start: 1191, Stop: 760, Start Num: 19
Candidate Starts for LilhomieP_2:
(Start: 19 @1191 has 25 MA's), (25, 1164), (Start: 35 @1110 has 1 MA's), (36, 1104), (41, 1080), (53, 993), (56, 978), (64, 942), (83, 834),

Gene: Loadrie_131 Start: 69990, Stop: 69589, Start Num: 13
Candidate Starts for Loadrie_131:
(Start: 13 @69990 has 4 MA's), (Start: 14 @69984 has 2 MA's), (Start: 16 @69972 has 2 MA's), (Start: 18 @69963 has 42 MA's), (42, 69837), (47, 69798), (49, 69789), (52, 69765), (54, 69753), (70, 69681),

(72, 69675), (73, 69672), (79, 69621), (81, 69612), (82, 69609),

Gene: Lolly9_124 Start: 68974, Stop: 68594, Start Num: 18
Candidate Starts for Lolly9_124:
(Start: 18 @68974 has 42 MA's), (29, 68923), (39, 68869), (46, 68815), (47, 68806), (70, 68689), (72, 68683), (73, 68680), (78, 68641), (79, 68629), (81, 68620),

Gene: Lumos_124 Start: 68435, Stop: 68055, Start Num: 18
Candidate Starts for Lumos_124:
(Start: 18 @68435 has 42 MA's), (29, 68384), (39, 68330), (42, 68309), (47, 68267), (70, 68150), (72, 68144), (73, 68141), (78, 68102), (79, 68090), (81, 68081),

Gene: Lynnae_131 Start: 69064, Stop: 68690, Start Num: 18
Candidate Starts for Lynnae_131:
(Start: 13 @69091 has 4 MA's), (Start: 14 @69085 has 2 MA's), (Start: 16 @69073 has 2 MA's), (Start: 18 @69064 has 42 MA's), (42, 68938), (47, 68899), (49, 68890), (52, 68866), (54, 68854), (70, 68782), (72, 68776), (73, 68773), (79, 68722), (81, 68713), (82, 68710),

Gene: MAckerman_123 Start: 66690, Stop: 66310, Start Num: 17
Candidate Starts for MAckerman_123:
(Start: 12 @66720 has 3 MA's), (Start: 17 @66690 has 13 MA's), (Start: 18 @66684 has 42 MA's), (25, 66654), (42, 66558), (47, 66519), (48, 66513), (56, 66465), (70, 66402), (72, 66396), (73, 66393), (79, 66342), (82, 66330), (83, 66321),

Gene: Maruru_36 Start: 31228, Stop: 30860, Start Num: 22
Candidate Starts for Maruru_36:
(1, 32053), (3, 31402), (Start: 22 @31228 has 3 MA's), (29, 31189), (71, 30973),

Gene: Miley16_130 Start: 69639, Stop: 69265, Start Num: 18
Candidate Starts for Miley16_130:
(Start: 13 @69666 has 4 MA's), (Start: 14 @69660 has 2 MA's), (Start: 16 @69648 has 2 MA's), (Start: 18 @69639 has 42 MA's), (42, 69513), (47, 69474), (49, 69465), (52, 69441), (54, 69429), (70, 69357), (72, 69351), (73, 69348), (79, 69297), (81, 69288), (82, 69285),

Gene: MiniLon_128 Start: 68975, Stop: 68595, Start Num: 18
Candidate Starts for MiniLon_128:
(Start: 18 @68975 has 42 MA's), (29, 68924), (39, 68870), (46, 68816), (47, 68807), (70, 68690), (72, 68684), (73, 68681), (78, 68642), (79, 68630), (81, 68621),

Gene: MiniMac_128 Start: 68977, Stop: 68597, Start Num: 18
Candidate Starts for MiniMac_128:
(10, 69016), (Start: 12 @69013 has 3 MA's), (Start: 18 @68977 has 42 MA's), (29, 68926), (39, 68872), (46, 68818), (47, 68809), (70, 68692), (72, 68686), (73, 68683), (78, 68644), (79, 68632), (81, 68623),

Gene: MkaliMitinis3_132 Start: 69336, Stop: 68962, Start Num: 18
Candidate Starts for MkaliMitinis3_132:
(Start: 13 @69363 has 4 MA's), (Start: 14 @69357 has 2 MA's), (Start: 16 @69345 has 2 MA's), (Start: 18 @69336 has 42 MA's), (42, 69210), (47, 69171), (49, 69162), (52, 69138), (54, 69126), (70, 69054), (72, 69048), (73, 69045), (79, 68994), (81, 68985), (82, 68982),

Gene: Molivier_121 Start: 64532, Stop: 64158, Start Num: 18
Candidate Starts for Molivier_121:

(Start: 13 @64559 has 4 MA's), (Start: 14 @64553 has 2 MA's), (Start: 16 @64541 has 2 MA's), (Start: 18 @64532 has 42 MA's), (42, 64406), (47, 64367), (49, 64358), (52, 64334), (54, 64322), (70, 64250), (72, 64244), (73, 64241), (79, 64190), (81, 64181), (82, 64178),

Gene: Moostard_117 Start: 68428, Stop: 68048, Start Num: 18
Candidate Starts for Moostard_117:
(5, 68506), (10, 68467), (Start: 12 @68464 has 3 MA's), (Start: 18 @68428 has 42 MA's), (29, 68377), (39, 68323), (42, 68302), (47, 68260), (70, 68143), (72, 68137), (73, 68134), (78, 68095), (79, 68083), (81, 68074),

Gene: MrMagoo_2 Start: 1217, Stop: 795, Start Num: 19
Candidate Starts for MrMagoo_2:
(Start: 19 @1217 has 25 MA's), (25, 1190), (56, 1004), (64, 968), (71, 938), (79, 881), (80, 878), (83, 860),

Gene: MsGreen_125 Start: 68437, Stop: 68057, Start Num: 18
Candidate Starts for MsGreen_125:
(Start: 18 @68437 has 42 MA's), (29, 68386), (39, 68332), (42, 68311), (47, 68269), (70, 68152), (72, 68146), (73, 68143), (78, 68104), (79, 68092), (81, 68083),

Gene: Mufasa8_32 Start: 28225, Stop: 27818, Start Num: 11
Candidate Starts for Mufasa8_32:
(2, 28660), (9, 28228), (Start: 11 @28225 has 1 MA's), (Start: 22 @28177 has 3 MA's), (61, 27964), (69, 27934),

Gene: Nanosmite_2 Start: 1155, Stop: 733, Start Num: 19
Candidate Starts for Nanosmite_2:
(Start: 19 @1155 has 25 MA's), (25, 1128), (28, 1110), (40, 1047), (64, 906), (67, 897), (69, 891), (73, 870), (79, 819), (83, 798),

Gene: Netyap_128 Start: 69353, Stop: 68979, Start Num: 18
Candidate Starts for Netyap_128:
(Start: 13 @69380 has 4 MA's), (Start: 14 @69374 has 2 MA's), (Start: 16 @69362 has 2 MA's), (Start: 18 @69353 has 42 MA's), (42, 69227), (47, 69188), (49, 69179), (52, 69155), (54, 69143), (70, 69071), (72, 69065), (73, 69062), (79, 69011), (81, 69002), (82, 68999),

Gene: Nicholas_120 Start: 68433, Stop: 68053, Start Num: 18
Candidate Starts for Nicholas_120:
(10, 68472), (Start: 12 @68469 has 3 MA's), (Start: 18 @68433 has 42 MA's), (29, 68382), (39, 68328), (42, 68307), (47, 68265), (70, 68148), (72, 68142), (73, 68139), (78, 68100), (79, 68088), (81, 68079),

Gene: Nicholasp3_131 Start: 69433, Stop: 69038, Start Num: 14
Candidate Starts for Nicholasp3_131:
(Start: 13 @69439 has 4 MA's), (Start: 14 @69433 has 2 MA's), (Start: 16 @69421 has 2 MA's), (Start: 18 @69412 has 42 MA's), (42, 69286), (47, 69247), (49, 69238), (52, 69214), (54, 69202), (70, 69130), (72, 69124), (73, 69121), (79, 69070), (81, 69061), (82, 69058),

Gene: Octobien14_11 Start: 5485, Stop: 5117, Start Num: 21
Candidate Starts for Octobien14_11:
(6, 5554), (8, 5536), (Start: 21 @5485 has 6 MA's), (34, 5425), (37, 5404), (39, 5392), (57, 5290), (58, 5287), (61, 5275), (62, 5272), (65, 5254), (74, 5218), (76, 5203),

Gene: OhShagHennessy_114 Start: 65469, Stop: 65095, Start Num: 18

Candidate Starts for OhShagHennessy_114:
(Start: 12 @65505 has 3 MA's), (Start: 17 @65475 has 13 MA's), (Start: 18 @65469 has 42 MA's), (25, 65439), (42, 65343), (47, 65304), (48, 65298), (56, 65250), (70, 65187), (72, 65181), (73, 65178), (79, 65127), (82, 65115), (83, 65106),

Gene: PYPDinur_140 Start: 71174, Stop: 70788, Start Num: 18
Candidate Starts for PYPDinur_140:
(Start: 18 @71174 has 42 MA's), (27, 71135), (30, 71117), (42, 71048), (47, 71000), (50, 70979), (52, 70967), (55, 70949), (70, 70883), (72, 70877), (73, 70874), (79, 70823), (82, 70811), (83, 70802),

Gene: PegLeg_2 Start: 1190, Stop: 759, Start Num: 19
Candidate Starts for PegLeg_2:
(Start: 19 @1190 has 25 MA's), (25, 1163), (Start: 35 @1109 has 1 MA's), (36, 1103), (41, 1079), (53, 992), (56, 977), (64, 941), (83, 833),

Gene: Quby_143 Start: 71209, Stop: 70775, Start Num: 7
Candidate Starts for Quby_143:
(Start: 7 @71209 has 1 MA's), (Start: 18 @71161 has 42 MA's), (30, 71104), (32, 71095), (37, 71068), (42, 71035), (47, 70987), (50, 70966), (52, 70954), (55, 70936), (70, 70870), (72, 70864), (73, 70861), (79, 70810), (82, 70798), (83, 70789),

Gene: Red305_125 Start: 68438, Stop: 68058, Start Num: 18
Candidate Starts for Red305_125:
(Start: 18 @68438 has 42 MA's), (29, 68387), (39, 68333), (42, 68312), (47, 68270), (70, 68153), (72, 68147), (73, 68144), (78, 68105), (79, 68093), (81, 68084),

Gene: Reindeer_2 Start: 1201, Stop: 770, Start Num: 19
Candidate Starts for Reindeer_2:
(Start: 19 @1201 has 25 MA's), (25, 1174), (36, 1114), (41, 1090), (53, 1003), (56, 988), (64, 952), (83, 844),

Gene: Rey_2 Start: 1222, Stop: 800, Start Num: 19
Candidate Starts for Rey_2:
(Start: 19 @1222 has 25 MA's), (25, 1195), (44, 1090), (56, 1009), (64, 973), (71, 943), (75, 928), (80, 883), (83, 865),

Gene: Rose5_123 Start: 67017, Stop: 66607, Start Num: 12
Candidate Starts for Rose5_123:
(Start: 12 @67017 has 3 MA's), (Start: 17 @66987 has 13 MA's), (Start: 18 @66981 has 42 MA's), (25, 66951), (42, 66855), (47, 66816), (48, 66810), (56, 66762), (70, 66699), (72, 66693), (73, 66690), (79, 66639), (82, 66627), (83, 66618),

Gene: RoseMarie_2 Start: 1109, Stop: 759, Start Num: 35
Candidate Starts for RoseMarie_2:
(Start: 19 @1190 has 25 MA's), (25, 1163), (Start: 35 @1109 has 1 MA's), (36, 1103), (41, 1079), (53, 992), (56, 977), (64, 941), (83, 833),

Gene: Rossetti_131 Start: 69588, Stop: 69214, Start Num: 18
Candidate Starts for Rossetti_131:
(Start: 13 @69615 has 4 MA's), (Start: 14 @69609 has 2 MA's), (Start: 16 @69597 has 2 MA's), (Start: 18 @69588 has 42 MA's), (42, 69462), (47, 69423), (49, 69414), (52, 69390), (54, 69378), (70, 69306), (72, 69300), (73, 69297), (79, 69246), (81, 69237), (82, 69234),

Gene: Samty_122 Start: 68420, Stop: 68040, Start Num: 18
Candidate Starts for Samty_122:
(Start: 18 @68420 has 42 MA's), (29, 68369), (39, 68315), (42, 68294), (47, 68252), (70, 68135), (72, 68129), (73, 68126), (78, 68087), (79, 68075), (81, 68066),

Gene: Sephiroth_11 Start: 4584, Stop: 4231, Start Num: 21
Candidate Starts for Sephiroth_11:
(Start: 21 @4584 has 6 MA's), (33, 4527), (34, 4524), (37, 4503), (39, 4491), (65, 4368), (76, 4317),

Gene: Sheng711_142 Start: 70786, Stop: 70391, Start Num: 18
Candidate Starts for Sheng711_142:
(4, 70882), (Start: 18 @70786 has 42 MA's), (27, 70747), (30, 70729), (42, 70660), (47, 70603), (50, 70582), (52, 70570), (55, 70552), (70, 70486), (72, 70480), (73, 70477), (79, 70426), (82, 70414), (83, 70405),

Gene: Silverleaf_119 Start: 66288, Stop: 65905, Start Num: 17
Candidate Starts for Silverleaf_119:
(Start: 12 @66318 has 3 MA's), (Start: 17 @66288 has 13 MA's), (Start: 18 @66282 has 42 MA's), (42, 66153), (47, 66114), (48, 66108), (56, 66060), (64, 66024), (70, 65997), (72, 65991), (73, 65988), (79, 65937), (81, 65928), (82, 65925), (83, 65916),

Gene: Skinny_2 Start: 1190, Stop: 759, Start Num: 19
Candidate Starts for Skinny_2:
(Start: 19 @1190 has 25 MA's), (25, 1163), (Start: 35 @1109 has 1 MA's), (36, 1103), (41, 1079), (53, 992), (56, 977), (64, 941), (83, 833),

Gene: SlimJimmy_2 Start: 1190, Stop: 759, Start Num: 19
Candidate Starts for SlimJimmy_2:
(Start: 19 @1190 has 25 MA's), (25, 1163), (Start: 35 @1109 has 1 MA's), (36, 1103), (41, 1079), (53, 992), (56, 977), (64, 941), (83, 833),

Gene: Snenia_123 Start: 68439, Stop: 68059, Start Num: 18
Candidate Starts for Snenia_123:
(Start: 18 @68439 has 42 MA's), (29, 68388), (39, 68334), (42, 68313), (47, 68271), (70, 68154), (72, 68148), (73, 68145), (78, 68106), (79, 68094), (81, 68085),

Gene: SoJulia_133 Start: 71415, Stop: 71041, Start Num: 18
Candidate Starts for SoJulia_133:
(Start: 13 @71442 has 4 MA's), (Start: 14 @71436 has 2 MA's), (Start: 16 @71424 has 2 MA's), (Start: 18 @71415 has 42 MA's), (42, 71289), (47, 71250), (49, 71241), (52, 71217), (54, 71205), (70, 71133), (72, 71127), (73, 71124), (79, 71073), (81, 71064), (82, 71061),

Gene: Soap141_131 Start: 70308, Stop: 69934, Start Num: 18
Candidate Starts for Soap141_131:
(Start: 13 @70335 has 4 MA's), (Start: 14 @70329 has 2 MA's), (Start: 16 @70317 has 2 MA's), (Start: 18 @70308 has 42 MA's), (42, 70182), (47, 70143), (49, 70134), (52, 70110), (54, 70098), (70, 70026), (72, 70020), (73, 70017), (79, 69966), (81, 69957), (82, 69954),

Gene: Sonali_36 Start: 31695, Stop: 31327, Start Num: 22
Candidate Starts for Sonali_36:
(Start: 22 @31695 has 3 MA's), (71, 31440), (79, 31386),

Gene: Sunshine23_36 Start: 31568, Stop: 31200, Start Num: 22

Candidate Starts for Sunshine23_36:
(Start: 22 @31568 has 3 MA's), (71, 31313), (79, 31259),

Gene: Syleon_11 Start: 4506, Stop: 4153, Start Num: 21
Candidate Starts for Syleon_11:
(Start: 21 @4506 has 6 MA's), (33, 4449), (34, 4446), (37, 4425), (39, 4413), (65, 4290), (76, 4239),

Gene: Tourach_132 Start: 70836, Stop: 70456, Start Num: 16
Candidate Starts for Tourach_132:
(Start: 16 @70836 has 2 MA's), (Start: 18 @70827 has 42 MA's), (31, 70770), (32, 70764), (37, 70737), (39, 70725), (45, 70680), (52, 70632), (54, 70620), (63, 70587), (64, 70575), (70, 70548), (72, 70542), (73, 70539), (79, 70488), (81, 70479), (82, 70476),

Gene: TpudiCK_2 Start: 1109, Stop: 759, Start Num: 35
Candidate Starts for TpudiCK_2:
(Start: 19 @1190 has 25 MA's), (25, 1163), (Start: 35 @1109 has 1 MA's), (36, 1103), (41, 1079), (53, 992), (56, 977), (64, 941), (83, 833),

Gene: TriFive_125 Start: 68551, Stop: 68171, Start Num: 18
Candidate Starts for TriFive_125:
(Start: 18 @68551 has 42 MA's), (29, 68500), (39, 68446), (42, 68425), (47, 68383), (70, 68266), (72, 68260), (73, 68257), (78, 68218), (79, 68206), (81, 68197),

Gene: TyDawg_2 Start: 1191, Stop: 760, Start Num: 19
Candidate Starts for TyDawg_2:
(Start: 19 @1191 has 25 MA's), (25, 1164), (Start: 35 @1110 has 1 MA's), (36, 1104), (41, 1080), (53, 993), (56, 978), (64, 942), (83, 834),

Gene: Typha_39 Start: 32346, Stop: 32708, Start Num: 19
Candidate Starts for Typha_39:
(Start: 19 @32346 has 25 MA's), (23, 32355), (24, 32370), (30, 32394), (34, 32412), (39, 32442), (43, 32469), (52, 32532), (60, 32565), (64, 32589), (71, 32619),

Gene: Tyson_123 Start: 67447, Stop: 67037, Start Num: 12
Candidate Starts for Tyson_123:
(Start: 12 @67447 has 3 MA's), (Start: 17 @67417 has 13 MA's), (Start: 18 @67411 has 42 MA's), (25, 67381), (42, 67285), (47, 67246), (48, 67240), (56, 67192), (70, 67129), (72, 67123), (73, 67120), (79, 67069), (82, 67057), (83, 67048),

Gene: UPIE_121 Start: 66654, Stop: 66274, Start Num: 17
Candidate Starts for UPIE_121:
(Start: 12 @66684 has 3 MA's), (Start: 17 @66654 has 13 MA's), (Start: 18 @66648 has 42 MA's), (25, 66618), (42, 66522), (47, 66483), (48, 66477), (56, 66429), (70, 66366), (72, 66360), (73, 66357), (79, 66306), (82, 66294), (83, 66285),

Gene: Underpass_123 Start: 64452, Stop: 64078, Start Num: 18
Candidate Starts for Underpass_123:
(Start: 13 @64479 has 4 MA's), (Start: 14 @64473 has 2 MA's), (Start: 16 @64461 has 2 MA's), (Start: 18 @64452 has 42 MA's), (42, 64326), (47, 64287), (49, 64278), (52, 64254), (54, 64242), (70, 64170), (72, 64164), (73, 64161), (79, 64110), (81, 64101), (82, 64098),

Gene: Vetrix_130 Start: 69949, Stop: 69575, Start Num: 18
Candidate Starts for Vetrix_130:

(Start: 13 @69976 has 4 MA's), (Start: 14 @69970 has 2 MA's), (Start: 16 @69958 has 2 MA's), (Start: 18 @69949 has 42 MA's), (42, 69823), (47, 69784), (49, 69775), (52, 69751), (54, 69739), (70, 69667), (72, 69661), (73, 69658), (79, 69607), (81, 69598), (82, 69595),

Gene: Wamburgrxpress_124 Start: 67320, Stop: 66940, Start Num: 17
Candidate Starts for Wamburgrxpress_124:
(Start: 12 @67350 has 3 MA's), (Start: 17 @67320 has 13 MA's), (Start: 18 @67314 has 42 MA's), (25, 67284), (42, 67188), (47, 67149), (48, 67143), (56, 67095), (70, 67032), (72, 67026), (73, 67023), (79, 66972), (82, 66960), (83, 66951),

Gene: Whirlwind_124 Start: 68695, Stop: 68315, Start Num: 18
Candidate Starts for Whirlwind_124:
(Start: 18 @68695 has 42 MA's), (29, 68644), (39, 68590), (47, 68527), (66, 68434), (70, 68410), (72, 68404), (73, 68401), (78, 68362), (79, 68350), (81, 68341),

Gene: Wigglewiggle_131 Start: 69545, Stop: 69171, Start Num: 18
Candidate Starts for Wigglewiggle_131:
(Start: 13 @69572 has 4 MA's), (Start: 14 @69566 has 2 MA's), (Start: 16 @69554 has 2 MA's), (Start: 18 @69545 has 42 MA's), (42, 69419), (47, 69380), (49, 69371), (52, 69347), (54, 69335), (70, 69263), (72, 69257), (73, 69254), (79, 69203), (81, 69194), (82, 69191),

Gene: Wilder_131 Start: 69105, Stop: 68731, Start Num: 18
Candidate Starts for Wilder_131:
(Start: 13 @69132 has 4 MA's), (Start: 14 @69126 has 2 MA's), (Start: 16 @69114 has 2 MA's), (Start: 18 @69105 has 42 MA's), (42, 68979), (47, 68940), (49, 68931), (52, 68907), (54, 68895), (70, 68823), (72, 68817), (73, 68814), (79, 68763), (81, 68754), (82, 68751),

Gene: Winky_130 Start: 69667, Stop: 69266, Start Num: 13
Candidate Starts for Winky_130:
(Start: 13 @69667 has 4 MA's), (Start: 14 @69661 has 2 MA's), (Start: 16 @69649 has 2 MA's), (Start: 18 @69640 has 42 MA's), (42, 69514), (47, 69475), (49, 69466), (52, 69442), (54, 69430), (70, 69358), (72, 69352), (73, 69349), (79, 69298), (81, 69289), (82, 69286),

Gene: Wyatt2_122 Start: 67080, Stop: 66700, Start Num: 17
Candidate Starts for Wyatt2_122:
(Start: 12 @67110 has 3 MA's), (Start: 17 @67080 has 13 MA's), (Start: 18 @67074 has 42 MA's), (25, 67044), (42, 66948), (47, 66909), (48, 66903), (56, 66855), (70, 66792), (72, 66786), (73, 66783), (79, 66732), (82, 66720), (83, 66711),

Gene: Zakai_132 Start: 69350, Stop: 68976, Start Num: 18
Candidate Starts for Zakai_132:
(Start: 13 @69377 has 4 MA's), (Start: 14 @69371 has 2 MA's), (Start: 16 @69359 has 2 MA's), (Start: 18 @69350 has 42 MA's), (42, 69224), (47, 69185), (49, 69176), (52, 69152), (54, 69140), (70, 69068), (72, 69062), (73, 69059), (79, 69008), (81, 68999), (82, 68996),

Gene: Zaria_126 Start: 67389, Stop: 67009, Start Num: 17
Candidate Starts for Zaria_126:
(Start: 12 @67419 has 3 MA's), (Start: 17 @67389 has 13 MA's), (Start: 18 @67383 has 42 MA's), (25, 67353), (42, 67257), (47, 67218), (48, 67212), (56, 67164), (70, 67101), (72, 67095), (73, 67092), (79, 67041), (82, 67029), (83, 67020),

Gene: ZhongYanYuan_127 Start: 68833, Stop: 68459, Start Num: 18
Candidate Starts for ZhongYanYuan_127:

(Start: 16 @68842 has 2 MA's), (Start: 18 @68833 has 42 MA's), (52, 68635), (54, 68623), (70, 68551), (72, 68545), (73, 68542), (79, 68491), (81, 68482), (82, 68479),