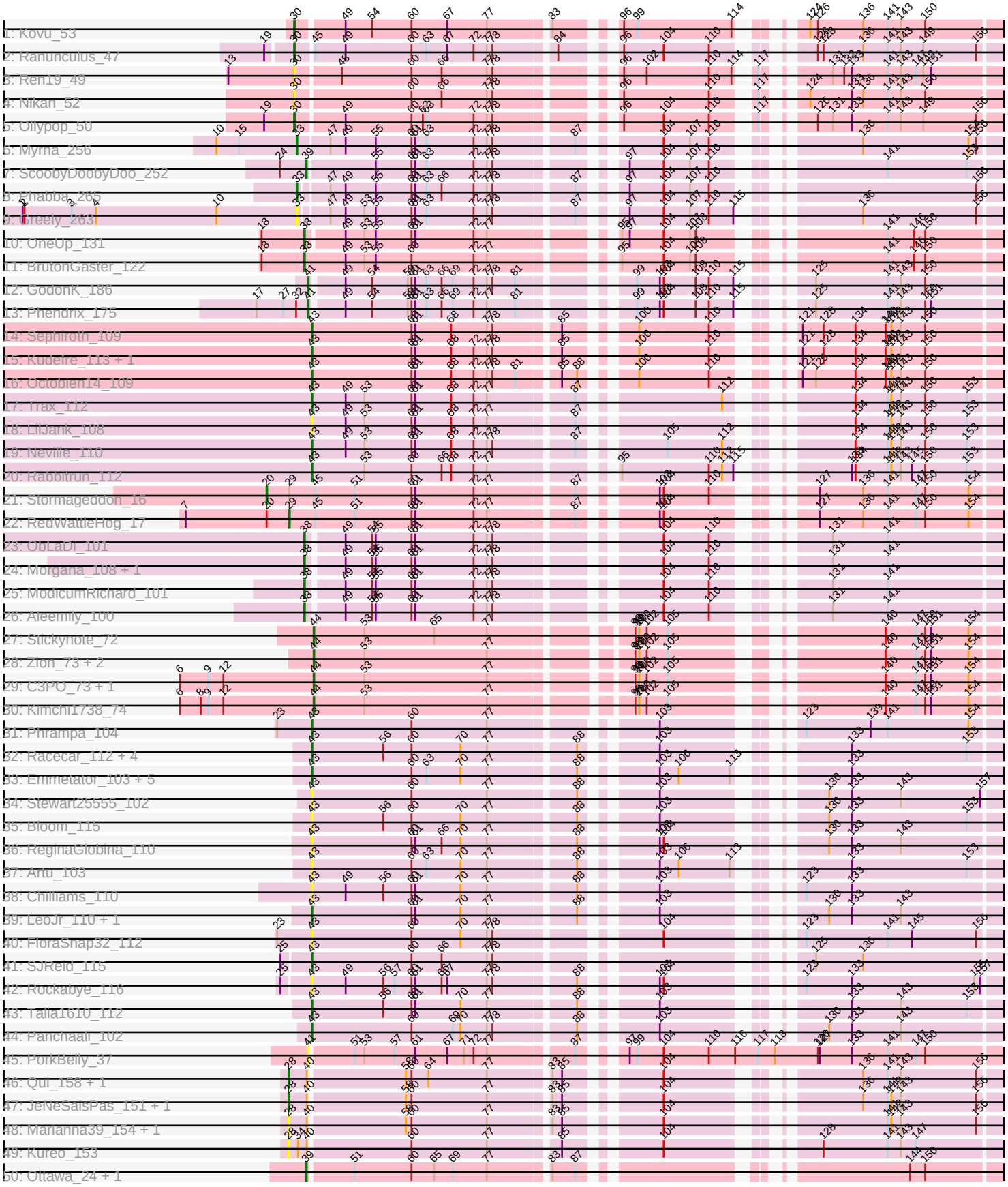
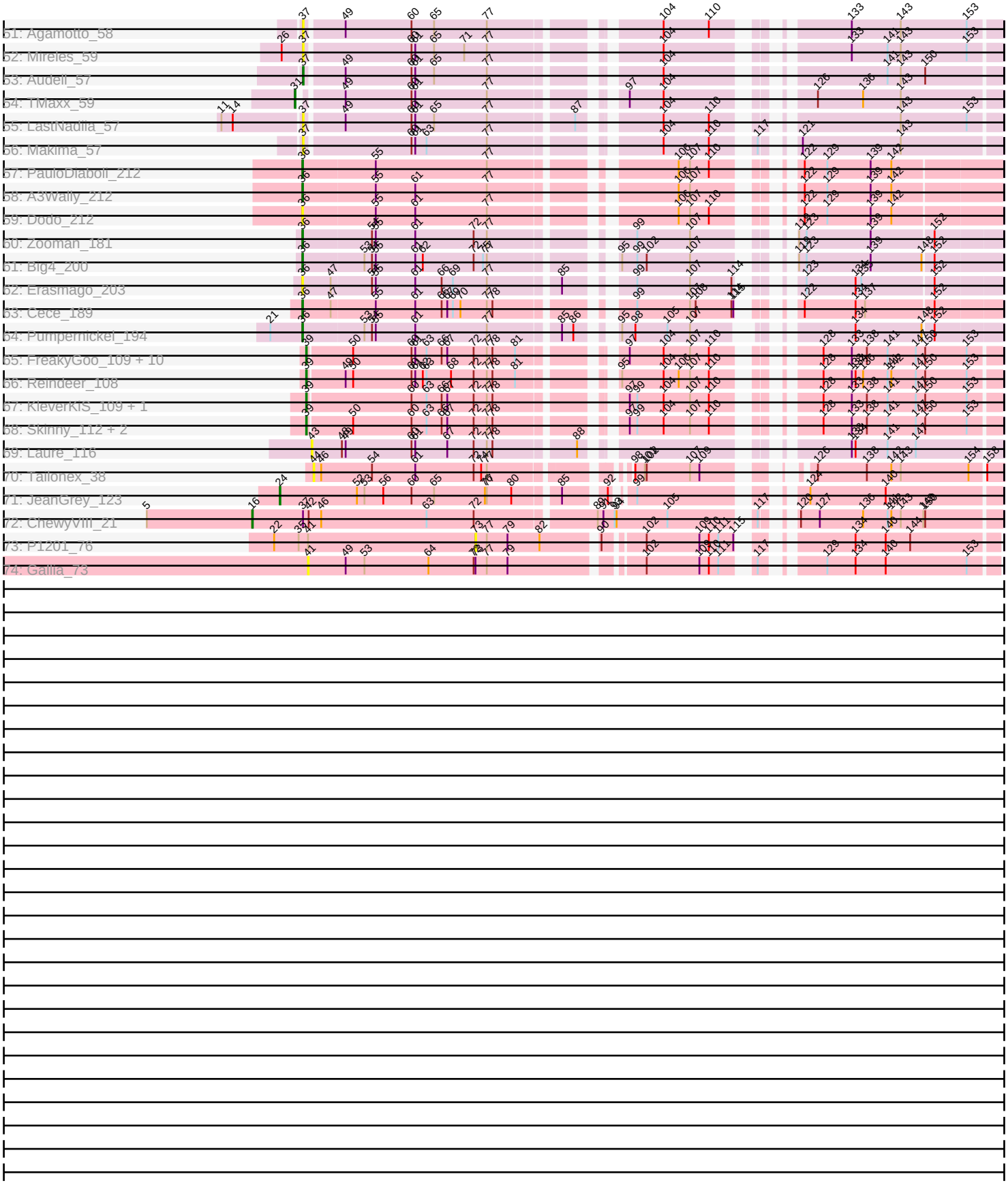
Pham 292664


1: Kovu_53
2: Ranunculus_47
3: Ren19_49
4: Nikan_52
5: Ollypop_50
6: Myrna_256
7: ScoobyDoobyDoo_252
8: Phabba_265
9: Greely_263
10: OneUp_131
11: BrutonGaster_122
12: GodonK_186
13: Phendrix_175
14: Sephiroth_109
15: Kudeire_113 + 1
16: Octobien14_109
17: Trax_112
18: LilJank_108
19: Neville_110
20: Rabbitrun_112
21: Stormageddon_16
22: RedWattleHog_17
23: ObLaDi_101
24: Morgana_108 + 1
25: ModicumRichard_101
26: Aleemily_100
27: Stickynote_72
28: Zion_73 + 2
29: C3PO_73 + 1
30: Kimchi1738_74
31: Phrampa_104
32: Racecar_112 + 4
33: Emmetator_103 + 5
34: Stewart25555_102
35: Bloom_115
36: ReginaGlobina_110
37: Artu_103
38: Chilliams_110
39: LeoJr_110 + 1
40: FloraSnap32_112
41: SJReid_115
42: Rockabye_116
43: Talia1610_112
44: Panchaali_102
45: PorkBelly_37
46: Qui_158 + 1
47: JeNeSaisPas_151 + 1
48: Marianna39_154 + 1
49: Kureo_153
50: Ottawa_24 + 1

Pham 292664


51: Agamotto_58
52: Mireles_59
53: Audell_57
54: TMaxx_59
55: LastNadila_57
56: Makima_57
57: PauloDiaboli_212
58: A3Wally_212
59: Dodo_212
60: Zooman_181
61: Big4_200
62: Erasmago_203
63: Cece_189
64: Pumpernickel_194
65: FreakyGoo_109 + 10
66: Reindeer_108
67: KleverKIS_109 + 1
68: Skinny_112 + 2
69: Laure_116
70: Tallonex_38
71: JeanGrey_123
72: ChewyVIII_21
73: P1201_76
74: Gallia_73

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 292664 Report

This analysis was run 04/18/26 on database version 643.

Pham number 292664 has 106 members, 33 are drafts.

Phages represented in each track:
- Track 1 : Kovu_53
- Track 2 : Ranunculus_47
- Track 3 : Ren19_49
- Track 4 : Nikan_52
- Track 5 : Ollypop_50
- Track 6 : Myrna_256
- Track 7 : ScoobyDoobyDoo_252
- Track 8 : Phabba_265
- Track 9 : Greely_263
- Track 10 : OneUp_131
- Track 11 : BrutonGaster_122
- Track 12 : GodonK_186
- Track 13 : Phendrix_175
- Track 14 : Sephiroth_109
- Track 15 : Kudefre_113, Syleon_114
- Track 16 : Octobien14_109
- Track 17 : Trax_112
- Track 18 : LilJank_108
- Track 19 : Neville_110
- Track 20 : Rabbitrun_112
- Track 21 : Stormageddon_16
- Track 22 : RedWattleHog_17
- Track 23 : ObLaDi_101
- Track 24 : Morgana_108, Cafasso_102
- Track 25 : ModicumRichard_101
- Track 26 : Aleemily_100
- Track 27 : Stickynote_72
- Track 28 : Zion_73, PeteyPab_72, PotatoChip_73
- Track 29 : C3PO_73, Cruella_73
- Track 30 : Kimchi1738_74
- Track 31 : Phrampa_104
- Track 32 : Racecar_112, Mimi_111, Patbob_110, GoldenEssence_97, FrostedClock_114
- Track 33 : Emmetator_103, DunneganBoMo_100, WaddleDee_98, KSunshine22_105, Ellewin_99, BooTeria_107
- Track 34 : Stewart25555_102
- Track 35 : Bloom_115

• Track 36 : ReginaGlobina_110
• Track 37 : Artu_103
• Track 38 : Chilliams_110
• Track 39 : LeoJr_110, Atuin_105
• Track 40 : FloraSnap32_112
• Track 41 : SJReid_115
• Track 42 : Rockabye_116
• Track 43 : Talia1610_112
• Track 44 : Panchaali_102
• Track 45 : PorkBelly_37
• Track 46 : Qui_158, Paella_158
• Track 47 : JeNeSaisPas_151, Elver_158
• Track 48 : Marianna39_154, Gandionco_154
• Track 49 : Kureo_153
• Track 50 : Ottawa_24, Kharcho_24
• Track 51 : Agamotto_58
• Track 52 : Mireles_59
• Track 53 : Audell_57
• Track 54 : TMaxx_59
• Track 55 : LastNadiia_57
• Track 56 : Makima_57
• Track 57 : PauloDiaboli_212
• Track 58 : A3Wally_212
• Track 59 : Dodo_212
• Track 60 : Zooman_181
• Track 61 : Big4_200
• Track 62 : Erasmago_203
• Track 63 : Cece_189
• Track 64 : Pumpernickel_194
• Track 65 : FreakyGoo_109, Auspice_107, IPhane7_105, Bricole_108, Diminimus_109, Izel_109, Dulcita_109, TpudiCK_109, LilhomieP_107, TyDawg_103, Bongo_107
• Track 66 : Reindeer_108
• Track 67 : KleverKiS_109, Glaske16_110
• Track 68 : Skinny_112, PegLeg_110, SlimJimmy_109
• Track 69 : Laure_116
• Track 70 : Tailonex_38
• Track 71 : JeanGrey_123
• Track 72 : ChewyVIII_21
• Track 73 : P1201_76
• Track 74 : Gallia_73

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

The start number called the most often in the published annotations is 43, it was called in 19 of the 73 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Artu_103, Atuin_105, Bloom_115, BooTeria_107, Chilliams_110, DunneganBoMo_100, Ellewin_99, Emmetator_103, FloraSnap32_112,

FrostedClock_114, GoldenEssence_97, KSunshine22_105, Kudefre_113, Laure_116, LeoJr_110, LilJank_108, Mimi_111, Neville_110, Octobien14_109, Panchaali_102, Patbob_110, Phrampa_104, Rabbitrun_112, Racecar_112, ReginaGlobina_110, Rockabye_116, SJReid_115, Sephiroth_109, Stewart25555_102, Syleon_114, Talia1610_112, Trax_112, WaddleDee_98,

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

Genes that do not have the "Most Annotated" start:
• A3Wally_212, Agamotto_58, Aleemily_100, Audell_57, Auspice_107, Big4_200, Bongo_107, Bricole_108, BrutonGaster_122, C3PO_73, Cafasso_102, Cece_189, ChewyVIII_21, Cruella_73, Diminimus_109, Dodo_212, Dulcita_109, Elver_158, Erasmago_203, FreakyGoo_109, Gallia_73, Gandionco_154, Glaske16_110, GodonK_186, Greely_263, IPhane7_105, Izel_109, JeNeSaisPas_151, JeanGrey_123, Kharcho_24, Kimchi1738_74, KleverKiS_109, Kovu_53, Kureo_153, LastNadiia_57, LilhomieP_107, Makima_57, Marianna39_154, Mireles_59, ModicumRichard_101, Morgana_108, Myrna_256, Nikan_52, ObLaDi_101, Ollypop_50, OneUp_131, Ottawa_24, P1201_76, Paella_158, PauloDiaboli_212, PegLeg_110, PeteyPab_72, Phabba_265, Phendrix_175, PorkBelly_37, PotatoChip_73, Pumpernickel_194, Qui_158, Ranunculus_47, RedWattleHog_17, Reindeer_108, Ren19_49, ScoobyDoobyDoo_252, Skinny_112, SlimJimmy_109, Stickynote_72, Stormageddon_16, TMaxx_59, Tailonex_38, TpudiCK_109, TyDawg_103, Zion_73, Zooman_181,

Summary by start number:

Start 16:
• Found in 1 of 106 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ChewyVIII_21 (singleton),

Start 20:
• Found in 2 of 106 (1.9%) of genes in pham
• Manual Annotations of this start: 1 of 73
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Stormageddon_16 (DX),

Start 24:
• Found in 2 of 106 (1.9%) of genes in pham
• Manual Annotations of this start: 1 of 73
• Called 50.0% of time when present
• Phage (with cluster) where this start called: JeanGrey_123 (singleton),

Start 28:
• Found in 7 of 106 (6.6%) of genes in pham
• Manual Annotations of this start: 3 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Elver_158 (FK), Gandionco_154 (FK), JeNeSaisPas_151 (FK), Kureo_153 (FK), Marianna39_154 (FK), Paella_158 (FK), Qui_158 (FK),

Start 29:
• Found in 2 of 106 (1.9%) of genes in pham
• Manual Annotations of this start: 1 of 73
• Called 50.0% of time when present
• Phage (with cluster) where this start called: RedWattleHog_17 (DX),

Start 30:
• Found in 5 of 106 (4.7%) of genes in pham
• Manual Annotations of this start: 3 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kovu_53 (AL), Nikan_52 (AP2), Ollypop_50 (AP2), Ranunculus_47 (AP), Ren19_49 (AP2),

Start 31:
• Found in 1 of 106 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: TMaxx_59 (FR),

Start 33:
• Found in 3 of 106 (2.8%) of genes in pham
• Manual Annotations of this start: 2 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Greely_263 (C2), Myrna_256 (C2), Phabba_265 (C2),

Start 36:
• Found in 8 of 106 (7.5%) of genes in pham
• Manual Annotations of this start: 6 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: A3Wally_212 (GD1), Big4_200 (GD2), Cece_189 (GD3), Dodo_212 (GD1), Erasmago_203 (GD2), PauloDiaboli_212 (GD1), Pumpernickel_194 (GD4), Zooman_181 (GD2),

Start 37:
• Found in 6 of 106 (5.7%) of genes in pham
• Manual Annotations of this start: 1 of 73
• Called 83.3% of time when present
• Phage (with cluster) where this start called: Agamotto_58 (FR), Audell_57 (FR), LastNadiia_57 (FR), Makima_57 (FR), Mireles_59 (FR),

Start 38:
• Found in 7 of 106 (6.6%) of genes in pham
• Manual Annotations of this start: 7 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aleemily_100 (DZ), BrutonGaster_122 (CQ2), Cafasso_102 (DZ), ModicumRichard_101 (DZ), Morgana_108 (DZ), ObLaDi_101 (DZ), OneUp_131 (CQ2),

Start 39:
• Found in 20 of 106 (18.9%) of genes in pham
• Manual Annotations of this start: 18 of 73
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Auspice_107 (M1), Bongo_107 (M1), Bricole_108 (M1), Diminimus_109 (M1), Dulcita_109 (M1), FreakyGoo_109 (M1), Glaske16_110 (M1), IPhane7_105 (M1), Izel_109 (M1), Kharcho_24 (FM), KleverKiS_109 (M1), LilhomieP_107 (M1), Ottawa_24 (FM), PegLeg_110 (M1), Reindeer_108 (M1), ScoobyDoobyDoo_252 (C2), Skinny_112 (M1), SlimJimmy_109 (M1), TpudiCK_109 (M1), TyDawg_103 (M1),

Start 41:
• Found in 5 of 106 (4.7%) of genes in pham
• Manual Annotations of this start: 2 of 73
• Called 80.0% of time when present
• Phage (with cluster) where this start called: Gallia_73 (singleton), GodonK_186 (DK), Phendrix_175 (DK), PorkBelly_37 (FJ),

Start 43:
• Found in 33 of 106 (31.1%) of genes in pham
• Manual Annotations of this start: 19 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Artu_103 (FC), Atuin_105 (FC), Bloom_115 (FC), BooTeria_107 (FC), Chilliams_110 (FC), DunneganBoMo_100 (FC), Ellewin_99 (FC), Emmetator_103 (FC), FloraSnap32_112 (FC), FrostedClock_114 (FC), GoldenEssence_97 (FC), KSunshine22_105 (FC), Kudefre_113 (DU1), Laure_116 (UNK), LeoJr_110 (FC), LilJank_108 (DU2), Mimi_111 (FC), Neville_110 (DU2), Octobien14_109 (DU1), Panchaali_102 (FC), Patbob_110 (FC), Phrampa_104 (FC), Rabbitrun_112 (DU2), Racecar_112 (FC), ReginaGlobina_110 (FC), Rockabye_116 (FC), SJReid_115 (FC), Sephiroth_109 (DU1), Stewart25555_102 (FC), Syleon_114 (DU1), Talia1610_112 (FC), Trax_112 (DU2), WaddleDee_98 (FC),

Start 44:
• Found in 8 of 106 (7.5%) of genes in pham
• Manual Annotations of this start: 7 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: C3PO_73 (EN), Cruella_73 (EN), Kimchi1738_74 (EN), PeteyPab_72 (EN), PotatoChip_73 (EN), Stickynote_72 (EN), Tailonex_38 (singleton), Zion_73 (EN),

Start 73:
• Found in 2 of 106 (1.9%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: P1201_76 (singleton),

Summary by clusters:

There are 23 clusters represented in this pham: GD1, singleton, GD3, GD4, DK, AP2, FR, FC, DZ, DX, FJ, FK, FM, DU1, DU2, EN, AL, AP, CQ2, UNK, C2, M1, GD2,

Info for manual annotations of cluster AL:
•Start number 30 was manually annotated 1 time for cluster AL.

Info for manual annotations of cluster AP:
•Start number 30 was manually annotated 1 time for cluster AP.

Info for manual annotations of cluster AP2:
•Start number 30 was manually annotated 1 time for cluster AP2.

Info for manual annotations of cluster C2:
•Start number 33 was manually annotated 2 times for cluster C2.
•Start number 39 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster CQ2:
•Start number 38 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster DK:
•Start number 41 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster DU1:
•Start number 43 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster DU2:
•Start number 43 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster DX:
•Start number 20 was manually annotated 1 time for cluster DX.
•Start number 29 was manually annotated 1 time for cluster DX.

Info for manual annotations of cluster DZ:
•Start number 38 was manually annotated 5 times for cluster DZ.

Info for manual annotations of cluster EN:
•Start number 44 was manually annotated 7 times for cluster EN.

Info for manual annotations of cluster FC:
•Start number 43 was manually annotated 12 times for cluster FC.

Info for manual annotations of cluster FK:
•Start number 28 was manually annotated 3 times for cluster FK.

Info for manual annotations of cluster FM:
•Start number 39 was manually annotated 2 times for cluster FM.

Info for manual annotations of cluster FR:
•Start number 31 was manually annotated 1 time for cluster FR.
•Start number 37 was manually annotated 1 time for cluster FR.

Info for manual annotations of cluster GD1:
•Start number 36 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD2:
•Start number 36 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:
•Start number 36 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:
•Start number 36 was manually annotated 1 time for cluster GD4.

Info for manual annotations of cluster M1:
•Start number 39 was manually annotated 15 times for cluster M1.

Gene Information:

Gene: A3Wally_212 Start: 114728, Stop: 113766, Start Num: 36
Candidate Starts for A3Wally_212:
(Start: 36 @114728 has 6 MA's), (55, 114614), (61, 114551), (77, 114437), (106, 114194), (107, 114176), (122, 114071), (129, 114035), (139, 113966), (142, 113933),

Gene: Agamotto_58 Start: 38570, Stop: 37617, Start Num: 37
Candidate Starts for Agamotto_58:
(Start: 37 @38570 has 1 MA's), (49, 38513), (60, 38408), (65, 38372), (77, 38288), (104, 38069), (110, 37997), (133, 37847), (143, 37769), (153, 37664),

Gene: Aleemily_100 Start: 57787, Stop: 58737, Start Num: 38
Candidate Starts for Aleemily_100:
(Start: 38 @57787 has 7 MA's), (49, 57841), (54, 57883), (55, 57889), (60, 57946), (61, 57952), (72, 58045), (77, 58066), (78, 58075), (104, 58285), (110, 58357), (131, 58477), (141, 58564),

Gene: Artu_103 Start: 86409, Stop: 87359, Start Num: 43
Candidate Starts for Artu_103:
(Start: 43 @86409 has 19 MA's), (60, 86568), (63, 86592), (70, 86646), (77, 86688), (88, 86814), (103, 86901), (106, 86931), (113, 87012), (133, 87129), (153, 87312),

Gene: Atuin_105 Start: 89918, Stop: 90868, Start Num: 43
Candidate Starts for Atuin_105:
(Start: 43 @89918 has 19 MA's), (60, 90077), (61, 90083), (70, 90155), (77, 90197), (88, 90323), (103, 90410), (130, 90602), (133, 90638), (143, 90716),

Gene: Audell_57 Start: 38262, Stop: 37309, Start Num: 37
Candidate Starts for Audell_57:
(Start: 37 @38262 has 1 MA's), (49, 38205), (60, 38100), (61, 38094), (65, 38064), (77, 37980), (104, 37761), (141, 37482), (143, 37461), (150, 37422),

Gene: Auspice_107 Start: 58621, Stop: 59574, Start Num: 39
Candidate Starts for Auspice_107:
(Start: 39 @58621 has 18 MA's), (50, 58690), (60, 58783), (61, 58789), (63, 58807), (66, 58831), (67, 58840), (72, 58882), (77, 58903), (78, 58912), (81, 58948), (97, 59068), (104, 59122), (107, 59164), (110, 59194), (128, 59299), (133, 59344), (138, 59368), (141, 59401), (147, 59446), (150, 59461), (153, 59527),

Gene: Big4_200 Start: 111237, Stop: 110275, Start Num: 36
Candidate Starts for Big4_200:
(Start: 36 @111237 has 6 MA's), (53, 111141), (54, 111129), (55, 111123), (61, 111060), (62, 111048), (72, 110967), (75, 110952), (77, 110946), (95, 110793), (99, 110769), (102, 110754), (107, 110685), (119, 110589), (123, 110577), (139, 110475), (148, 110394), (152, 110379),

Gene: Bloom_115 Start: 89994, Stop: 90944, Start Num: 43
Candidate Starts for Bloom_115:
(Start: 43 @89994 has 19 MA's), (56, 90108), (60, 90153), (70, 90231), (77, 90273), (88, 90399), (103, 90486), (130, 90678), (133, 90714), (153, 90897),

Gene: Bongo_107 Start: 58625, Stop: 59578, Start Num: 39
Candidate Starts for Bongo_107:
(Start: 39 @58625 has 18 MA's), (50, 58694), (60, 58787), (61, 58793), (63, 58811), (66, 58835), (67, 58844), (72, 58886), (77, 58907), (78, 58916), (81, 58952), (97, 59072), (104, 59126), (107, 59168), (110, 59198), (128, 59303), (133, 59348), (138, 59372), (141, 59405), (147, 59450), (150, 59465), (153, 59531),

Gene: BooTeria_107 Start: 86525, Stop: 87475, Start Num: 43
Candidate Starts for BooTeria_107:
(Start: 43 @86525 has 19 MA's), (60, 86684), (63, 86708), (70, 86762), (77, 86804), (88, 86930), (103, 87017), (106, 87047), (113, 87128), (133, 87245),

Gene: Bricole_108 Start: 58773, Stop: 59726, Start Num: 39
Candidate Starts for Bricole_108:
(Start: 39 @58773 has 18 MA's), (50, 58842), (60, 58935), (61, 58941), (63, 58959), (66, 58983), (67, 58992), (72, 59034), (77, 59055), (78, 59064), (81, 59100), (97, 59220), (104, 59274), (107, 59316), (110, 59346), (128, 59451), (133, 59496), (138, 59520), (141, 59553), (147, 59598), (150, 59613), (153, 59679),

Gene: BrutonGaster_122 Start: 73686, Stop: 74648, Start Num: 38
Candidate Starts for BrutonGaster_122:
(18, 73620), (Start: 38 @73686 has 7 MA's), (49, 73752), (53, 73782), (55, 73800), (60, 73857), (72, 73956), (77, 73977), (95, 74130), (104, 74196), (107, 74238), (108, 74247), (141, 74475), (146, 74517), (150, 74535),

Gene: C3PO_73 Start: 53685, Stop: 52726, Start Num: 44
Candidate Starts for C3PO_73:
(6, 53898), (9, 53853), (12, 53829), (Start: 44 @53685 has 7 MA's), (53, 53604), (77, 53409), (98, 53220), (99, 53217), (100, 53214), (102, 53202), (105, 53169), (140, 52899), (147, 52851), (150, 52836), (151, 52827), (154, 52767),

Gene: Cafasso_102 Start: 58338, Stop: 59288, Start Num: 38
Candidate Starts for Cafasso_102:
(Start: 38 @58338 has 7 MA's), (49, 58392), (54, 58434), (55, 58440), (60, 58497), (61, 58503), (72, 58596), (77, 58617), (78, 58626), (104, 58836), (110, 58908), (131, 59028), (141, 59115),

Gene: Cece_189 Start: 115210, Stop: 114251, Start Num: 36
Candidate Starts for Cece_189:
(Start: 36 @115210 has 6 MA's), (47, 115165), (55, 115096), (61, 115033), (66, 114991), (67, 114982), (69, 114973), (70, 114961), (77, 114919), (78, 114910), (99, 114742), (107, 114658), (108, 114649), (114, 114592), (115, 114589), (122, 114553), (134, 114472), (137, 114457), (152, 114352),

Gene: ChewyVIII_21 Start: 10098, Stop: 11186, Start Num: 16
Candidate Starts for ChewyVIII_21:
(5, 9930), (Start: 16 @10098 has 1 MA's), (Start: 37 @10179 has 1 MA's), (42, 10188), (46, 10206), (63, 10374), (72, 10449), (89, 10629), (91, 10638), (93, 10656), (94, 10659), (105, 10740), (117, 10854), (120, 10875), (127, 10905), (136, 10974), (141, 11013), (142, 11019), (143, 11034), (149,

11070), (150, 11073),

Gene: Chilliams_110 Start: 82753, Stop: 83703, Start Num: 43
Candidate Starts for Chilliams_110:
(Start: 43 @82753 has 19 MA's), (49, 82807), (56, 82867), (60, 82912), (61, 82918), (70, 82990), (77, 83032), (88, 83158), (103, 83245), (123, 83401), (133, 83473),

Gene: Cruella_73 Start: 53685, Stop: 52726, Start Num: 44
Candidate Starts for Cruella_73:
(6, 53898), (9, 53853), (12, 53829), (Start: 44 @53685 has 7 MA's), (53, 53604), (77, 53409), (98, 53220), (99, 53217), (100, 53214), (102, 53202), (105, 53169), (140, 52899), (147, 52851), (150, 52836), (151, 52827), (154, 52767),

Gene: Diminimus_109 Start: 58620, Stop: 59573, Start Num: 39
Candidate Starts for Diminimus_109:
(Start: 39 @58620 has 18 MA's), (50, 58689), (60, 58782), (61, 58788), (63, 58806), (66, 58830), (67, 58839), (72, 58881), (77, 58902), (78, 58911), (81, 58947), (97, 59067), (104, 59121), (107, 59163), (110, 59193), (128, 59298), (133, 59343), (138, 59367), (141, 59400), (147, 59445), (150, 59460), (153, 59526),

Gene: Dodo_212 Start: 114530, Stop: 113568, Start Num: 36
Candidate Starts for Dodo_212:
(Start: 36 @114530 has 6 MA's), (55, 114416), (61, 114353), (77, 114239), (106, 113996), (107, 113978), (110, 113948), (122, 113873), (129, 113837), (139, 113768), (142, 113735),

Gene: Dulcita_109 Start: 58621, Stop: 59574, Start Num: 39
Candidate Starts for Dulcita_109:
(Start: 39 @58621 has 18 MA's), (50, 58690), (60, 58783), (61, 58789), (63, 58807), (66, 58831), (67, 58840), (72, 58882), (77, 58903), (78, 58912), (81, 58948), (97, 59068), (104, 59122), (107, 59164), (110, 59194), (128, 59299), (133, 59344), (138, 59368), (141, 59401), (147, 59446), (150, 59461), (153, 59527),

Gene: DunneganBoMo_100 Start: 85794, Stop: 86744, Start Num: 43
Candidate Starts for DunneganBoMo_100:
(Start: 43 @85794 has 19 MA's), (60, 85953), (63, 85977), (70, 86031), (77, 86073), (88, 86199), (103, 86286), (106, 86316), (113, 86397), (133, 86514),

Gene: Ellewin_99 Start: 85202, Stop: 86152, Start Num: 43
Candidate Starts for Ellewin_99:
(Start: 43 @85202 has 19 MA's), (60, 85361), (63, 85385), (70, 85439), (77, 85481), (88, 85607), (103, 85694), (106, 85724), (113, 85805), (133, 85922),

Gene: Elver_158 Start: 79480, Stop: 80454, Start Num: 28
Candidate Starts for Elver_158:
(Start: 28 @79480 has 3 MA's), (40, 79507), (58, 79654), (60, 79663), (77, 79783), (83, 79870), (85, 79885), (104, 80002), (136, 80242), (141, 80281), (142, 80287), (143, 80302), (156, 80422),

Gene: Emmetator_103 Start: 85749, Stop: 86699, Start Num: 43
Candidate Starts for Emmetator_103:
(Start: 43 @85749 has 19 MA's), (60, 85908), (63, 85932), (70, 85986), (77, 86028), (88, 86154), (103, 86241), (106, 86271), (113, 86352), (133, 86469),

Gene: Erasmago_203 Start: 109592, Stop: 108633, Start Num: 36

Candidate Starts for Erasmago_203:
(Start: 36 @109592 has 6 MA's), (47, 109547), (54, 109484), (55, 109478), (61, 109415), (66, 109373), (69, 109355), (77, 109301), (85, 109199), (99, 109124), (107, 109040), (114, 108974), (123, 108932), (134, 108854), (135, 108845), (152, 108734),

Gene: FloraSnap32_112 Start: 88874, Stop: 89824, Start Num: 43
Candidate Starts for FloraSnap32_112:
(23, 88820), (Start: 43 @88874 has 19 MA's), (60, 89033), (70, 89111), (77, 89153), (78, 89162), (104, 89372), (123, 89522), (141, 89651), (145, 89690), (156, 89792),

Gene: FreakyGoo_109 Start: 59100, Stop: 60053, Start Num: 39
Candidate Starts for FreakyGoo_109:
(Start: 39 @59100 has 18 MA's), (50, 59169), (60, 59262), (61, 59268), (63, 59286), (66, 59310), (67, 59319), (72, 59361), (77, 59382), (78, 59391), (81, 59427), (97, 59547), (104, 59601), (107, 59643), (110, 59673), (128, 59778), (133, 59823), (138, 59847), (141, 59880), (147, 59925), (150, 59940), (153, 60006),

Gene: FrostedClock_114 Start: 90191, Stop: 91141, Start Num: 43
Candidate Starts for FrostedClock_114:
(Start: 43 @90191 has 19 MA's), (56, 90305), (60, 90350), (70, 90428), (77, 90470), (88, 90596), (103, 90683), (133, 90911), (153, 91094),

Gene: Gallia_73 Start: 57686, Stop: 56706, Start Num: 41
Candidate Starts for Gallia_73:
(Start: 41 @57686 has 2 MA's), (49, 57626), (53, 57596), (64, 57494), (72, 57422), (73, 57419), (77, 57401), (79, 57368), (102, 57182), (109, 57098), (110, 57083), (111, 57068), (117, 57035), (129, 56972), (134, 56927), (140, 56879), (153, 56750),

Gene: Gandionco_154 Start: 78560, Stop: 79534, Start Num: 28
Candidate Starts for Gandionco_154:
(Start: 28 @78560 has 3 MA's), (40, 78587), (58, 78734), (60, 78743), (77, 78863), (83, 78950), (85, 78965), (104, 79082), (141, 79361), (142, 79367), (143, 79382), (156, 79502),

Gene: Glaske16_110 Start: 59202, Stop: 60155, Start Num: 39
Candidate Starts for Glaske16_110:
(Start: 39 @59202 has 18 MA's), (60, 59364), (63, 59388), (66, 59412), (67, 59421), (72, 59463), (77, 59484), (78, 59493), (97, 59649), (99, 59661), (104, 59703), (107, 59745), (110, 59775), (128, 59880), (133, 59925), (138, 59949), (141, 59982), (147, 60027), (150, 60042), (153, 60108),

Gene: GodonK_186 Start: 95205, Stop: 94261, Start Num: 41
Candidate Starts for GodonK_186:
(Start: 41 @95205 has 2 MA's), (49, 95157), (54, 95115), (59, 95058), (60, 95052), (61, 95046), (63, 95028), (66, 95004), (69, 94986), (72, 94953), (77, 94932), (78, 94923), (81, 94887), (99, 94755), (103, 94719), (104, 94713), (108, 94662), (110, 94641), (115, 94602), (125, 94548), (141, 94434), (143, 94413), (150, 94374),

Gene: GoldenEssence_97 Start: 83786, Stop: 84736, Start Num: 43
Candidate Starts for GoldenEssence_97:
(Start: 43 @83786 has 19 MA's), (56, 83900), (60, 83945), (70, 84023), (77, 84065), (88, 84191), (103, 84278), (133, 84506), (153, 84689),

Gene: Greely_263 Start: 155363, Stop: 156325, Start Num: 33
Candidate Starts for Greely_263:

(1, 154928), (2, 154931), (3, 155006), (4, 155045), (10, 155237), (Start: 33 @155363 has 2 MA's), (47, 155405), (49, 155429), (53, 155459), (55, 155477), (60, 155534), (61, 155540), (63, 155558), (72, 155633), (77, 155654), (78, 155663), (87, 155777), (97, 155819), (104, 155873), (107, 155915), (110, 155945), (115, 155984), (136, 156113), (156, 156293),

Gene: IPhane7_105 Start: 58625, Stop: 59578, Start Num: 39
Candidate Starts for IPhane7_105:
(Start: 39 @58625 has 18 MA's), (50, 58694), (60, 58787), (61, 58793), (63, 58811), (66, 58835), (67, 58844), (72, 58886), (77, 58907), (78, 58916), (81, 58952), (97, 59072), (104, 59126), (107, 59168), (110, 59198), (128, 59303), (133, 59348), (138, 59372), (141, 59405), (147, 59450), (150, 59465), (153, 59531),

Gene: Izel_109 Start: 58620, Stop: 59573, Start Num: 39
Candidate Starts for Izel_109:
(Start: 39 @58620 has 18 MA's), (50, 58689), (60, 58782), (61, 58788), (63, 58806), (66, 58830), (67, 58839), (72, 58881), (77, 58902), (78, 58911), (81, 58947), (97, 59067), (104, 59121), (107, 59163), (110, 59193), (128, 59298), (133, 59343), (138, 59367), (141, 59400), (147, 59445), (150, 59460), (153, 59526),

Gene: JeNeSaisPas_151 Start: 79156, Stop: 80130, Start Num: 28
Candidate Starts for JeNeSaisPas_151:
(Start: 28 @79156 has 3 MA's), (40, 79183), (58, 79330), (60, 79339), (77, 79459), (83, 79546), (85, 79561), (104, 79678), (136, 79918), (141, 79957), (142, 79963), (143, 79978), (156, 80098),

Gene: JeanGrey_123 Start: 92133, Stop: 93134, Start Num: 24
Candidate Starts for JeanGrey_123:
(Start: 24 @92133 has 1 MA's), (52, 92256), (53, 92268), (56, 92298), (60, 92343), (65, 92379), (76, 92460), (77, 92463), (80, 92502), (85, 92565), (92, 92619), (99, 92640), (124, 92838), (140, 92958),

Gene: KSunshine22_105 Start: 86806, Stop: 87756, Start Num: 43
Candidate Starts for KSunshine22_105:
(Start: 43 @86806 has 19 MA's), (60, 86965), (63, 86989), (70, 87043), (77, 87085), (88, 87211), (103, 87298), (106, 87328), (113, 87409), (133, 87526),

Gene: Kharcho_24 Start: 7684, Stop: 8634, Start Num: 39
Candidate Starts for Kharcho_24:
(Start: 39 @7684 has 18 MA's), (51, 7753), (60, 7843), (65, 7879), (69, 7909), (77, 7963), (83, 8050), (87, 8086), (144, 8497), (150, 8521),

Gene: Kimchi1738_74 Start: 53661, Stop: 52702, Start Num: 44
Candidate Starts for Kimchi1738_74:
(6, 53874), (8, 53841), (9, 53829), (12, 53805), (Start: 44 @53661 has 7 MA's), (53, 53580), (77, 53385), (98, 53196), (99, 53193), (100, 53190), (102, 53178), (105, 53145), (140, 52875), (147, 52827), (150, 52812), (151, 52803), (154, 52743),

Gene: KleverKiS_109 Start: 59574, Stop: 60527, Start Num: 39
Candidate Starts for KleverKiS_109:
(Start: 39 @59574 has 18 MA's), (60, 59736), (63, 59760), (66, 59784), (67, 59793), (72, 59835), (77, 59856), (78, 59865), (97, 60021), (99, 60033), (104, 60075), (107, 60117), (110, 60147), (128, 60252), (133, 60297), (138, 60321), (141, 60354), (147, 60399), (150, 60414), (153, 60480),

Gene: Kovu_53 Start: 30579, Stop: 31544, Start Num: 30
Candidate Starts for Kovu_53:

(Start: 30 @30579 has 3 MA's), (49, 30648), (54, 30690), (60, 30753), (67, 30810), (77, 30873), (83, 30960), (96, 31029), (99, 31050), (114, 31200), (124, 31248), (126, 31260), (136, 31332), (141, 31371), (143, 31392), (150, 31431),

Gene: Kudefre_113 Start: 62054, Stop: 63004, Start Num: 43
Candidate Starts for Kudefre_113:
(Start: 43 @62054 has 19 MA's), (60, 62213), (61, 62219), (68, 62276), (72, 62312), (77, 62333), (78, 62342), (85, 62435), (100, 62513), (110, 62624), (121, 62696), (128, 62729), (134, 62780), (140, 62828), (141, 62831), (142, 62837), (143, 62852), (150, 62891),

Gene: Kureo_153 Start: 78655, Stop: 79629, Start Num: 28
Candidate Starts for Kureo_153:
(Start: 28 @78655 has 3 MA's), (34, 78670), (40, 78682), (60, 78838), (77, 78958), (85, 79060), (104, 79177), (128, 79354), (141, 79456), (143, 79477), (147, 79501),

Gene: LastNadiia_57 Start: 37904, Stop: 36951, Start Num: 37
Candidate Starts for LastNadiia_57:
(11, 38027), (14, 38009), (Start: 37 @37904 has 1 MA's), (49, 37847), (60, 37742), (61, 37736), (65, 37706), (77, 37622), (87, 37499), (104, 37403), (110, 37331), (143, 37103), (153, 36998),

Gene: Laure_116 Start: 82694, Stop: 83644, Start Num: 43
Candidate Starts for Laure_116:
(Start: 43 @82694 has 19 MA's), (48, 82742), (49, 82748), (60, 82853), (61, 82859), (67, 82910), (72, 82952), (77, 82973), (78, 82982), (88, 83099), (133, 83414), (134, 83420), (141, 83471), (147, 83516),

Gene: LeoJr_110 Start: 90154, Stop: 91104, Start Num: 43
Candidate Starts for LeoJr_110:
(Start: 43 @90154 has 19 MA's), (60, 90313), (61, 90319), (70, 90391), (77, 90433), (88, 90559), (103, 90646), (130, 90838), (133, 90874), (143, 90952),

Gene: LilJank_108 Start: 64311, Stop: 65261, Start Num: 43
Candidate Starts for LilJank_108:
(Start: 43 @64311 has 19 MA's), (49, 64365), (53, 64395), (60, 64470), (61, 64476), (68, 64533), (72, 64569), (77, 64590), (87, 64713), (134, 65037), (141, 65088), (142, 65094), (143, 65109), (150, 65148), (153, 65214),

Gene: LilhomieP_107 Start: 59515, Stop: 60468, Start Num: 39
Candidate Starts for LilhomieP_107:
(Start: 39 @59515 has 18 MA's), (50, 59584), (60, 59677), (61, 59683), (63, 59701), (66, 59725), (67, 59734), (72, 59776), (77, 59797), (78, 59806), (81, 59842), (97, 59962), (104, 60016), (107, 60058), (110, 60088), (128, 60193), (133, 60238), (138, 60262), (141, 60295), (147, 60340), (150, 60355), (153, 60421),

Gene: Makima_57 Start: 37321, Stop: 36368, Start Num: 37
Candidate Starts for Makima_57:
(Start: 37 @37321 has 1 MA's), (60, 37159), (61, 37153), (63, 37135), (77, 37039), (104, 36820), (110, 36748), (117, 36700), (121, 36676), (143, 36520),

Gene: Marianna39_154 Start: 79165, Stop: 80139, Start Num: 28
Candidate Starts for Marianna39_154:
(Start: 28 @79165 has 3 MA's), (40, 79192), (58, 79339), (60, 79348), (77, 79468), (83, 79555), (85, 79570), (104, 79687), (141, 79966), (142, 79972), (143, 79987), (156, 80107),

Gene: Mimi_111 Start: 89341, Stop: 90291, Start Num: 43
Candidate Starts for Mimi_111:
(Start: 43 @89341 has 19 MA's), (56, 89455), (60, 89500), (70, 89578), (77, 89620), (88, 89746), (103, 89833), (133, 90061), (153, 90244),

Gene: Mireles_59 Start: 37050, Stop: 36097, Start Num: 37
Candidate Starts for Mireles_59:
(26, 37083), (Start: 37 @37050 has 1 MA's), (60, 36888), (61, 36882), (65, 36852), (71, 36804), (77, 36768), (104, 36549), (133, 36327), (141, 36270), (143, 36249), (153, 36144),

Gene: ModicumRichard_101 Start: 57979, Stop: 58929, Start Num: 38
Candidate Starts for ModicumRichard_101:
(Start: 38 @57979 has 7 MA's), (49, 58033), (54, 58075), (55, 58081), (60, 58138), (61, 58144), (72, 58237), (77, 58258), (78, 58267), (104, 58477), (110, 58549), (131, 58669), (141, 58756),

Gene: Morgana_108 Start: 60190, Stop: 61140, Start Num: 38
Candidate Starts for Morgana_108:
(Start: 38 @60190 has 7 MA's), (49, 60244), (54, 60286), (55, 60292), (60, 60349), (61, 60355), (72, 60448), (77, 60469), (78, 60478), (104, 60688), (110, 60760), (131, 60880), (141, 60967),

Gene: Myrna_256 Start: 155905, Stop: 156873, Start Num: 33
Candidate Starts for Myrna_256:
(10, 155779), (15, 155815), (Start: 33 @155905 has 2 MA's), (47, 155953), (49, 155977), (55, 156025), (60, 156082), (61, 156088), (63, 156106), (72, 156181), (77, 156202), (78, 156211), (87, 156325), (104, 156421), (107, 156463), (110, 156493), (136, 156661), (154, 156829), (156, 156841),

Gene: Neville_110 Start: 62934, Stop: 63884, Start Num: 43
Candidate Starts for Neville_110:
(Start: 43 @62934 has 19 MA's), (49, 62988), (53, 63018), (60, 63093), (61, 63099), (68, 63156), (72, 63192), (77, 63213), (78, 63222), (87, 63336), (105, 63438), (112, 63525), (134, 63660), (141, 63711), (142, 63717), (143, 63732), (150, 63771), (153, 63837),

Gene: Nikan_52 Start: 38754, Stop: 37783, Start Num: 30
Candidate Starts for Nikan_52:
(Start: 30 @38754 has 3 MA's), (60, 38577), (66, 38529), (77, 38457), (78, 38448), (96, 38298), (110, 38163), (117, 38115), (124, 38079), (133, 38013), (136, 37995), (141, 37956), (143, 37935), (150, 37896),

Gene: ObLaDi_101 Start: 58022, Stop: 58972, Start Num: 38
Candidate Starts for ObLaDi_101:
(Start: 38 @58022 has 7 MA's), (49, 58076), (54, 58118), (55, 58124), (60, 58181), (61, 58187), (72, 58280), (77, 58301), (78, 58310), (104, 58520), (110, 58592), (131, 58712), (141, 58799),

Gene: Octobien14_109 Start: 60846, Stop: 61796, Start Num: 43
Candidate Starts for Octobien14_109:
(Start: 43 @60846 has 19 MA's), (60, 61005), (61, 61011), (68, 61068), (72, 61104), (77, 61125), (78, 61134), (81, 61170), (85, 61227), (88, 61251), (100, 61305), (110, 61416), (121, 61488), (125, 61509), (134, 61572), (140, 61620), (141, 61623), (142, 61629), (143, 61644), (150, 61683),

Gene: Ollypop_50 Start: 39249, Stop: 38275, Start Num: 30
Candidate Starts for Ollypop_50:
(19, 39297), (Start: 30 @39249 has 3 MA's), (49, 39177), (60, 39072), (62, 39054), (63, 39048), (72, 38973), (77, 38952), (78, 38943), (96, 38793), (104, 38730), (110, 38658), (117, 38610), (126, 38562),

(131, 38538), (133, 38508), (141, 38451), (143, 38430), (149, 38394), (156, 38310),

Gene: OneUp_131 Start: 78206, Stop: 79159, Start Num: 38
Candidate Starts for OneUp_131:
(18, 78140), (Start: 38 @78206 has 7 MA's), (49, 78263), (53, 78293), (55, 78311), (60, 78368), (61, 78374), (72, 78467), (77, 78488), (95, 78641), (97, 78653), (104, 78707), (107, 78749), (108, 78758), (141, 78986), (146, 79028), (150, 79046),

Gene: Ottawa_24 Start: 7684, Stop: 8634, Start Num: 39
Candidate Starts for Ottawa_24:
(Start: 39 @7684 has 18 MA's), (51, 7753), (60, 7843), (65, 7879), (69, 7909), (77, 7963), (83, 8050), (87, 8086), (144, 8497), (150, 8521),

Gene: P1201_76 Start: 57750, Stop: 57037, Start Num: 73
Candidate Starts for P1201_76:
(22, 58071), (35, 58032), (Start: 41 @58017 has 2 MA's), (73, 57750), (77, 57732), (79, 57699), (82, 57648), (90, 57567), (102, 57513), (109, 57429), (110, 57414), (111, 57399), (115, 57375), (134, 57258), (140, 57210), (144, 57171),

Gene: Paella_158 Start: 80347, Stop: 81321, Start Num: 28
Candidate Starts for Paella_158:
(Start: 28 @80347 has 3 MA's), (40, 80374), (58, 80521), (60, 80530), (64, 80557), (77, 80650), (83, 80737), (85, 80752), (104, 80869), (136, 81109), (141, 81148), (143, 81169), (156, 81289),

Gene: Panchaali_102 Start: 86777, Stop: 87727, Start Num: 43
Candidate Starts for Panchaali_102:
(Start: 43 @86777 has 19 MA's), (60, 86936), (69, 87002), (70, 87014), (77, 87056), (78, 87065), (88, 87182), (103, 87269), (130, 87461), (133, 87497), (143, 87575),

Gene: Patbob_110 Start: 90076, Stop: 91026, Start Num: 43
Candidate Starts for Patbob_110:
(Start: 43 @90076 has 19 MA's), (56, 90190), (60, 90235), (70, 90313), (77, 90355), (88, 90481), (103, 90568), (133, 90796), (153, 90979),

Gene: PauloDiaboli_212 Start: 112941, Stop: 111979, Start Num: 36
Candidate Starts for PauloDiaboli_212:
(Start: 36 @112941 has 6 MA's), (55, 112827), (77, 112650), (106, 112407), (107, 112389), (110, 112359), (122, 112284), (129, 112248), (139, 112179), (142, 112146),

Gene: PegLeg_110 Start: 59251, Stop: 60204, Start Num: 39
Candidate Starts for PegLeg_110:
(Start: 39 @59251 has 18 MA's), (50, 59320), (60, 59413), (63, 59437), (66, 59461), (67, 59470), (72, 59512), (77, 59533), (78, 59542), (97, 59698), (99, 59710), (104, 59752), (107, 59794), (110, 59824), (128, 59929), (133, 59974), (138, 59998), (141, 60031), (147, 60076), (150, 60091), (153, 60157),

Gene: PeteyPab_72 Start: 53470, Stop: 52511, Start Num: 44
Candidate Starts for PeteyPab_72:
(Start: 44 @53470 has 7 MA's), (53, 53389), (77, 53194), (98, 53005), (99, 53002), (100, 52999), (102, 52987), (105, 52954), (140, 52684), (147, 52636), (150, 52621), (151, 52612), (154, 52552),

Gene: Phabba_265 Start: 154752, Stop: 155714, Start Num: 33
Candidate Starts for Phabba_265:

(Start: 33 @154752 has 2 MA's), (47, 154794), (49, 154818), (55, 154866), (60, 154923), (61, 154929), (63, 154947), (66, 154971), (72, 155022), (77, 155043), (78, 155052), (87, 155166), (97, 155208), (104, 155262), (107, 155304), (110, 155334), (156, 155682),

Gene: Phendrix_175 Start: 94333, Stop: 93389, Start Num: 41
Candidate Starts for Phendrix_175:
(17, 94411), (27, 94369), (32, 94348), (Start: 41 @94333 has 2 MA's), (49, 94285), (54, 94243), (59, 94186), (60, 94180), (61, 94174), (63, 94156), (66, 94132), (69, 94114), (72, 94081), (77, 94060), (81, 94015), (99, 93883), (103, 93847), (104, 93841), (108, 93790), (110, 93769), (115, 93730), (125, 93676), (141, 93562), (143, 93541), (150, 93502), (151, 93493),

Gene: Phrampa_104 Start: 91460, Stop: 92410, Start Num: 43
Candidate Starts for Phrampa_104:
(23, 91406), (Start: 43 @91460 has 19 MA's), (60, 91619), (77, 91739), (103, 91952), (123, 92108), (139, 92210), (141, 92237), (154, 92366),

Gene: PorkBelly_37 Start: 29196, Stop: 28171, Start Num: 41
Candidate Starts for PorkBelly_37:
(Start: 41 @29196 has 2 MA's), (51, 29130), (53, 29115), (57, 29067), (61, 29034), (67, 28983), (71, 28956), (72, 28941), (77, 28920), (87, 28797), (97, 28755), (99, 28743), (104, 28701), (110, 28629), (116, 28587), (117, 28551), (118, 28524), (126, 28455), (127, 28452), (133, 28401), (141, 28344), (147, 28299), (150, 28284),

Gene: PotatoChip_73 Start: 53472, Stop: 52513, Start Num: 44
Candidate Starts for PotatoChip_73:
(Start: 44 @53472 has 7 MA's), (53, 53391), (77, 53196), (98, 53007), (99, 53004), (100, 53001), (102, 52989), (105, 52956), (140, 52686), (147, 52638), (150, 52623), (151, 52614), (154, 52554),

Gene: Pumpernickel_194 Start: 111571, Stop: 110621, Start Num: 36
Candidate Starts for Pumpernickel_194:
(21, 111622), (Start: 36 @111571 has 6 MA's), (53, 111475), (54, 111463), (55, 111457), (61, 111394), (77, 111280), (85, 111178), (86, 111160), (95, 111127), (98, 111106), (105, 111055), (107, 111019), (134, 110842), (148, 110737), (152, 110722),

Gene: Qui_158 Start: 80347, Stop: 81321, Start Num: 28
Candidate Starts for Qui_158:
(Start: 28 @80347 has 3 MA's), (40, 80374), (58, 80521), (60, 80530), (64, 80557), (77, 80650), (83, 80737), (85, 80752), (104, 80869), (136, 81109), (141, 81148), (143, 81169), (156, 81289),

Gene: Rabbitrun_112 Start: 64014, Stop: 64964, Start Num: 43
Candidate Starts for Rabbitrun_112:
(Start: 43 @64014 has 19 MA's), (53, 64098), (60, 64173), (66, 64221), (68, 64236), (72, 64272), (77, 64293), (95, 64446), (110, 64584), (112, 64605), (115, 64623), (133, 64734), (134, 64740), (141, 64791), (142, 64797), (143, 64812), (145, 64830), (150, 64851), (153, 64917),

Gene: Racecar_112 Start: 89994, Stop: 90944, Start Num: 43
Candidate Starts for Racecar_112:
(Start: 43 @89994 has 19 MA's), (56, 90108), (60, 90153), (70, 90231), (77, 90273), (88, 90399), (103, 90486), (133, 90714), (153, 90897),

Gene: Ranunculus_47 Start: 41478, Stop: 40504, Start Num: 30
Candidate Starts for Ranunculus_47:

(19, 41514), (Start: 30 @41478 has 3 MA's), (45, 41454), (49, 41406), (60, 41301), (63, 41277), (67, 41244), (72, 41202), (77, 41181), (78, 41172), (84, 41085), (96, 41022), (104, 40959), (110, 40887), (126, 40791), (128, 40782), (136, 40719), (141, 40680), (143, 40659), (149, 40623), (156, 40539),

Gene: RedWattleHog_17 Start: 20861, Stop: 21844, Start Num: 29
Candidate Starts for RedWattleHog_17:
(7, 20696), (Start: 20 @20825 has 1 MA's), (Start: 29 @20861 has 1 MA's), (45, 20900), (51, 20963), (60, 21053), (61, 21059), (72, 21152), (77, 21173), (87, 21296), (103, 21386), (104, 21392), (127, 21563), (136, 21632), (141, 21671), (147, 21716), (150, 21731), (154, 21800),

Gene: ReginaGlobina_110 Start: 89720, Stop: 90670, Start Num: 43
Candidate Starts for ReginaGlobina_110:
(Start: 43 @89720 has 19 MA's), (60, 89879), (61, 89885), (66, 89927), (70, 89957), (77, 89999), (88, 90125), (103, 90212), (104, 90218), (130, 90404), (133, 90440), (143, 90518),

Gene: Reindeer_108 Start: 60129, Stop: 61082, Start Num: 39
Candidate Starts for Reindeer_108:
(Start: 39 @60129 has 18 MA's), (49, 60186), (50, 60198), (60, 60291), (61, 60297), (62, 60309), (63, 60315), (68, 60354), (72, 60390), (77, 60411), (78, 60420), (81, 60456), (95, 60564), (104, 60630), (106, 60654), (107, 60672), (110, 60702), (128, 60807), (133, 60852), (134, 60858), (136, 60870), (141, 60909), (142, 60915), (147, 60954), (150, 60969), (153, 61035),

Gene: Ren19_49 Start: 38555, Stop: 37587, Start Num: 30
Candidate Starts for Ren19_49:
(13, 38660), (Start: 30 @38555 has 3 MA's), (48, 38489), (60, 38378), (66, 38330), (77, 38258), (78, 38249), (96, 38102), (102, 38066), (110, 37967), (114, 37931), (117, 37919), (131, 37847), (132, 37829), (133, 37817), (141, 37760), (143, 37739), (147, 37715), (149, 37703), (151, 37691),

Gene: Rockabye_116 Start: 83878, Stop: 84828, Start Num: 43
Candidate Starts for Rockabye_116:
(25, 83836), (Start: 43 @83878 has 19 MA's), (49, 83932), (56, 83992), (57, 84010), (60, 84037), (61, 84043), (66, 84085), (67, 84094), (77, 84157), (78, 84166), (88, 84283), (103, 84370), (104, 84376), (123, 84526), (133, 84598), (155, 84793), (157, 84802),

Gene: SJReid_115 Start: 82220, Stop: 83170, Start Num: 43
Candidate Starts for SJReid_115:
(25, 82178), (Start: 43 @82220 has 19 MA's), (60, 82379), (66, 82427), (77, 82499), (78, 82508), (125, 82883), (136, 82958),

Gene: ScoobyDoobyDoo_252 Start: 151751, Stop: 152704, Start Num: 39
Candidate Starts for ScoobyDoobyDoo_252:
(Start: 24 @151709 has 1 MA's), (Start: 39 @151751 has 18 MA's), (55, 151856), (60, 151913), (61, 151919), (63, 151937), (72, 152012), (77, 152033), (78, 152042), (97, 152198), (104, 152252), (107, 152294), (110, 152324), (141, 152531), (153, 152657),

Gene: Sephiroth_109 Start: 61809, Stop: 62759, Start Num: 43
Candidate Starts for Sephiroth_109:
(Start: 43 @61809 has 19 MA's), (60, 61968), (61, 61974), (68, 62031), (77, 62088), (78, 62097), (85, 62190), (100, 62268), (110, 62379), (121, 62451), (128, 62484), (134, 62535), (140, 62583), (141, 62586), (142, 62592), (143, 62607), (150, 62646),

Gene: Skinny_112 Start: 59970, Stop: 60923, Start Num: 39
Candidate Starts for Skinny_112:

(Start: 39 @59970 has 18 MA's), (50, 60039), (60, 60132), (63, 60156), (66, 60180), (67, 60189), (72, 60231), (77, 60252), (78, 60261), (97, 60417), (99, 60429), (104, 60471), (107, 60513), (110, 60543), (128, 60648), (133, 60693), (138, 60717), (141, 60750), (147, 60795), (150, 60810), (153, 60876),

Gene: SlimJimmy_109 Start: 60181, Stop: 61134, Start Num: 39
Candidate Starts for SlimJimmy_109:
(Start: 39 @60181 has 18 MA's), (50, 60250), (60, 60343), (63, 60367), (66, 60391), (67, 60400), (72, 60442), (77, 60463), (78, 60472), (97, 60628), (99, 60640), (104, 60682), (107, 60724), (110, 60754), (128, 60859), (133, 60904), (138, 60928), (141, 60961), (147, 61006), (150, 61021), (153, 61087),

Gene: Stewart25555_102 Start: 86525, Stop: 87475, Start Num: 43
Candidate Starts for Stewart25555_102:
(Start: 43 @86525 has 19 MA's), (60, 86684), (77, 86804), (88, 86930), (103, 87017), (130, 87209), (133, 87245), (143, 87323), (157, 87449),

Gene: Stickynote_72 Start: 53673, Stop: 52714, Start Num: 44
Candidate Starts for Stickynote_72:
(Start: 44 @53673 has 7 MA's), (53, 53592), (65, 53481), (77, 53397), (98, 53208), (99, 53205), (100, 53202), (102, 53190), (105, 53157), (140, 52887), (147, 52839), (150, 52824), (151, 52815), (154, 52755),

Gene: Stormageddon_16 Start: 20070, Stop: 21089, Start Num: 20
Candidate Starts for Stormageddon_16:
(Start: 20 @20070 has 1 MA's), (Start: 29 @20106 has 1 MA's), (45, 20145), (51, 20208), (60, 20298), (61, 20304), (72, 20397), (77, 20418), (87, 20541), (103, 20631), (104, 20637), (110, 20709), (127, 20808), (136, 20877), (141, 20916), (147, 20961), (150, 20976), (154, 21045),

Gene: Syleon_114 Start: 62591, Stop: 63541, Start Num: 43
Candidate Starts for Syleon_114:
(Start: 43 @62591 has 19 MA's), (60, 62750), (61, 62756), (68, 62813), (72, 62849), (77, 62870), (78, 62879), (85, 62972), (100, 63050), (110, 63161), (121, 63233), (128, 63266), (134, 63317), (140, 63365), (141, 63368), (142, 63374), (143, 63389), (150, 63428),

Gene: TMaxx_59 Start: 36737, Stop: 35784, Start Num: 31
Candidate Starts for TMaxx_59:
(Start: 31 @36737 has 1 MA's), (49, 36680), (60, 36575), (61, 36569), (77, 36455), (97, 36290), (104, 36236), (126, 36068), (136, 35996), (143, 35936),

Gene: Tailonex_38 Start: 32630, Stop: 31698, Start Num: 44
Candidate Starts for Tailonex_38:
(Start: 44 @32630 has 7 MA's), (46, 32618), (54, 32537), (61, 32468), (72, 32375), (74, 32363), (77, 32354), (98, 32180), (101, 32165), (102, 32162), (107, 32093), (109, 32078), (126, 31985), (138, 31907), (142, 31868), (143, 31853), (154, 31745), (158, 31724),

Gene: Talia1610_112 Start: 89968, Stop: 90918, Start Num: 43
Candidate Starts for Talia1610_112:
(Start: 43 @89968 has 19 MA's), (56, 90082), (60, 90127), (61, 90133), (70, 90205), (77, 90247), (88, 90373), (103, 90460), (133, 90688), (143, 90766), (153, 90871),

Gene: TpudiCK_109 Start: 58625, Stop: 59578, Start Num: 39
Candidate Starts for TpudiCK_109:
(Start: 39 @58625 has 18 MA's), (50, 58694), (60, 58787), (61, 58793), (63, 58811), (66, 58835), (67, 58844), (72, 58886), (77, 58907), (78, 58916), (81, 58952), (97, 59072), (104, 59126), (107, 59168),

(110, 59198), (128, 59303), (133, 59348), (138, 59372), (141, 59405), (147, 59450), (150, 59465), (153, 59531),

Gene: Trax_112 Start: 63929, Stop: 64879, Start Num: 43
Candidate Starts for Trax_112:
(Start: 43 @63929 has 19 MA's), (49, 63983), (53, 64013), (60, 64088), (61, 64094), (68, 64151), (72, 64187), (77, 64208), (87, 64331), (112, 64520), (134, 64655), (141, 64706), (142, 64712), (143, 64727), (150, 64766), (153, 64832),

Gene: TyDawg_103 Start: 58628, Stop: 59581, Start Num: 39
Candidate Starts for TyDawg_103:
(Start: 39 @58628 has 18 MA's), (50, 58697), (60, 58790), (61, 58796), (63, 58814), (66, 58838), (67, 58847), (72, 58889), (77, 58910), (78, 58919), (81, 58955), (97, 59075), (104, 59129), (107, 59171), (110, 59201), (128, 59306), (133, 59351), (138, 59375), (141, 59408), (147, 59453), (150, 59468), (153, 59534),

Gene: WaddleDee_98 Start: 84980, Stop: 85930, Start Num: 43
Candidate Starts for WaddleDee_98:
(Start: 43 @84980 has 19 MA's), (60, 85139), (63, 85163), (70, 85217), (77, 85259), (88, 85385), (103, 85472), (106, 85502), (113, 85583), (133, 85700),

Gene: Zion_73 Start: 53470, Stop: 52511, Start Num: 44
Candidate Starts for Zion_73:
(Start: 44 @53470 has 7 MA's), (53, 53389), (77, 53194), (98, 53005), (99, 53002), (100, 52999), (102, 52987), (105, 52954), (140, 52684), (147, 52636), (150, 52621), (151, 52612), (154, 52552),

Gene: Zooman_181 Start: 107460, Stop: 106501, Start Num: 36
Candidate Starts for Zooman_181:
(Start: 36 @107460 has 6 MA's), (54, 107352), (55, 107346), (61, 107283), (72, 107190), (77, 107169), (99, 106992), (107, 106908), (119, 106812), (123, 106800), (139, 106698), (152, 106602),