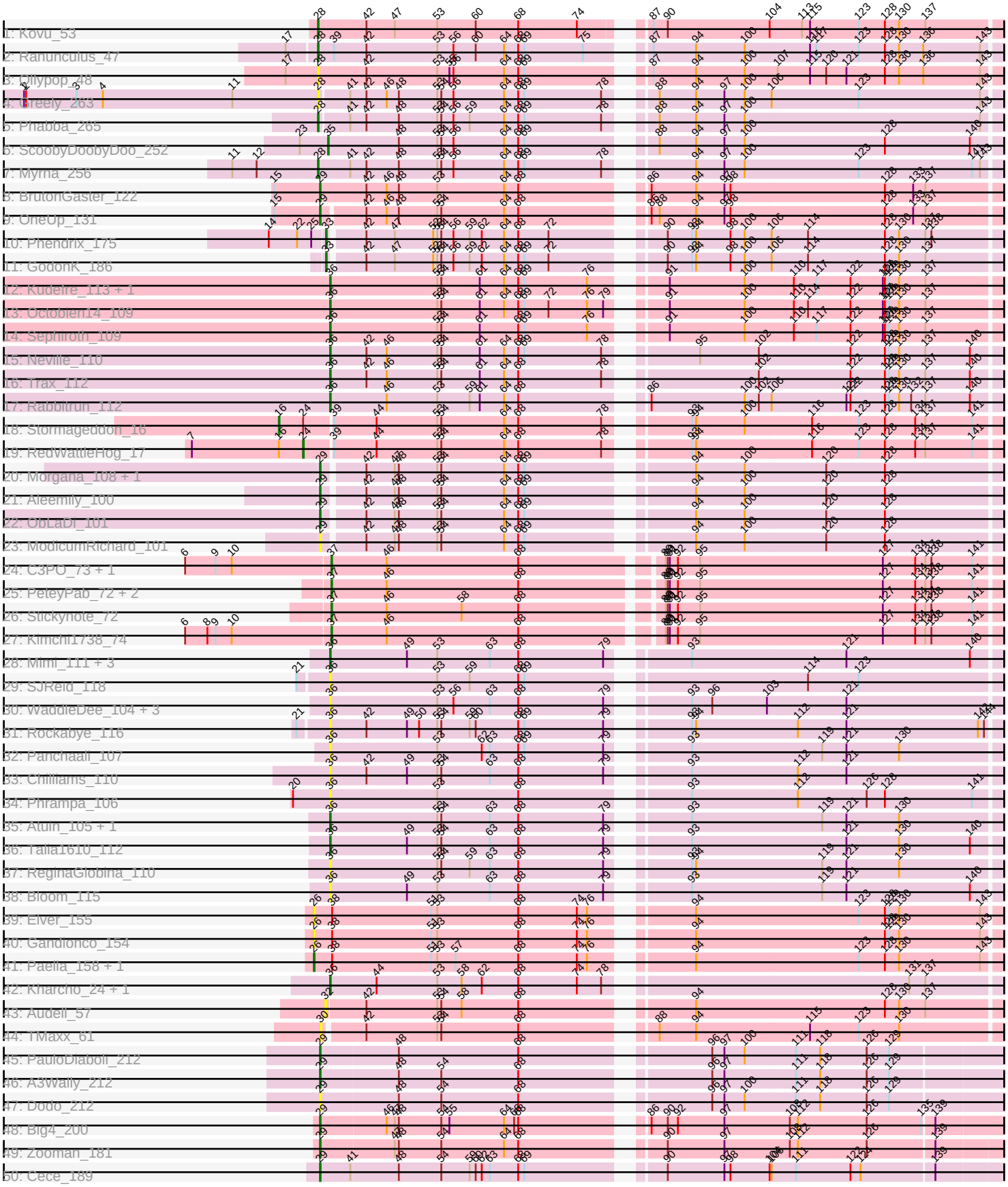
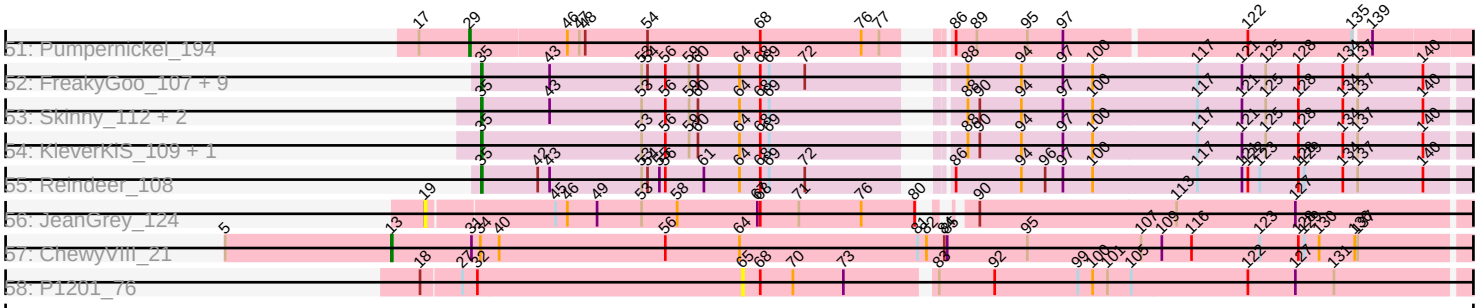
Pham 212527


1: Kovu_53
2: Ranunculus_47
3: Dilypop_48
4: Greely_263
5: Phabba_265
6: ScoobyDoobyDoo_252
7: Myrna_256
8: BrutonGaster_122
9: OneOp_131
10: Phendrix_175
11: GodonK_186
12: Kudelre_113 + 1
13: Octobien14_109
14: Sephiroth_109
15: Neville_110
16: Trax_112
17: Rabbitrun_112
18: Stormageddon_16
19: RedWattleHog_17
20: Morgana_108 + 1
21: Aleemily_100
22: ObLaDi_101
23: ModicumRichard_101
24: C3PO_73 + 1
25: PeteyPab_72 + 2
26: Stickynote_72
27: Kimchi1738_74
28: Mimi_111 + 3
29: SJReid_118
30: WaddleDee_104 + 3
31: Rockabye_116
32: Panchaali_107
33: Chilliams_110
34: Phrampa_106
35: Atulin_105 + 1
36: Talla1610_112
37: ReginaGlobina_110
38: Bloom_115
39: Elver_155
40: Gandlonco_154
41: Paella_158 + 1
42: Kharcho_24 + 1
43: Audell_57
44: TMaxx_61
45: PauloDiaboli_212
46: A3Wally_212
47: Dodo_212
48: Big4_200
49: Zooman_181
50: Cece_189

Pham 212527


51: Pumpernickel_194
52: FreakyGoo_107 + 9
53: Skinny_112 + 2
54: KleverKiS_109 + 1
55: Reindeer_108
56: JeanGrey_124
57: ChewyVMI_21
58: P1201_76

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 212527 Report

This analysis was run 02/22/25 on database version 588.

Pham number 212527 has 84 members, 27 are drafts.

Phages represented in each track:
- Track 1 : Kovu_53
- Track 2 : Ranunculus_47
- Track 3 : Ollypop_48
- Track 4 : Greely_263
- Track 5 : Phabba_265
- Track 6 : ScoobyDoobyDoo_252
- Track 7 : Myrna_256
- Track 8 : BrutonGaster_122
- Track 9 : OneUp_131
- Track 10 : Phendrix_175
- Track 11 : GodonK_186
- Track 12 : Kudefre_113, Syleon_114
- Track 13 : Octobien14_109
- Track 14 : Sephiroth_109
- Track 15 : Neville_110
- Track 16 : Trax_112
- Track 17 : Rabbitrun_112
- Track 18 : Stormageddon_16
- Track 19 : RedWattleHog_17
- Track 20 : Morgana_108, Cafasso_102
- Track 21 : Aleemily_100
- Track 22 : ObLaDi_101
- Track 23 : ModicumRichard_101
- Track 24 : C3PO_73, Cruella_73
- Track 25 : PeteyPab_72, PotatoChip_73, Zion_73
- Track 26 : Stickynote_72
- Track 27 : Kimchi1738_74
- Track 28 : Mimi_111, GoldenEssence_100, Racecar_112, Patbob_112
- Track 29 : SJReid_118
- Track 30 : WaddleDee_104, KSunshine22_105, Ellewin_102, DunneganBoMo_104
- Track 31 : Rockabye_116
- Track 32 : Panchaali_107
- Track 33 : Chilliams_110
- Track 34 : Phrampa_106
- Track 35 : Atuin_105, LeoJr_110
- Track 36 : Talia1610_112
- Track 37 : ReginaGlobina_110

• Track 38 : Bloom_115
• Track 39 : Elver_155
• Track 40 : Gandionco_154
• Track 41 : Paella_158, Qui_158
• Track 42 : Kharcho_24, Ottawa_24
• Track 43 : Audell_57
• Track 44 : TMaxx_61
• Track 45 : PauloDiaboli_212
• Track 46 : A3Wally_212
• Track 47 : Dodo_212
• Track 48 : Big4_200
• Track 49 : Zooman_181
• Track 50 : Cece_189
• Track 51 : Pumpernickel_194
• Track 52 : FreakyGoo_107, IPhane7_105, Bongo_107, Bricole_108, Diminimus_109, LilhomieP_107, TyDawg_103, Auspice_107, Izel_106, Dulcita_109
• Track 53 : Skinny_112, SlimJimmy_109, PegLeg_110
• Track 54 : KleverKiS_109, Glaske16_110
• Track 55 : Reindeer_108
• Track 56 : JeanGrey_124
• Track 57 : ChewyVIII_21
• Track 58 : P1201_76

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

The start number called the most often in the published annotations is 35, it was called in 14 of the 57 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Auspice_107, Bongo_107, Bricole_108, Diminimus_109, Dulcita_109, FreakyGoo_107, Glaske16_110, IPhane7_105, Izel_106, KleverKiS_109, LilhomieP_107, PegLeg_110, Reindeer_108, ScoobyDoobyDoo_252, Skinny_112, SlimJimmy_109, TyDawg_103,

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

Genes that do not have the "Most Annotated" start:
• A3Wally_212, Aleemily_100, Atuin_105, Audell_57, Big4_200, Bloom_115, BrutonGaster_122, C3PO_73, Cafasso_102, Cece_189, ChewyVIII_21, Chilliams_110, Cruella_73, Dodo_212, DunneganBoMo_104, Ellewin_102, Elver_155, Gandionco_154, GodonK_186, GoldenEssence_100, Greely_263, JeanGrey_124, KSunshine22_105, Kharcho_24, Kimchi1738_74, Kovu_53, Kudefre_113, LeoJr_110, Mimi_111, ModicumRichard_101, Morgana_108, Myrna_256, Neville_110, ObLaDi_101, Octobien14_109, Ollypop_48, OneUp_131, Ottawa_24, P1201_76, Paella_158, Panchaali_107, Patbob_112, PauloDiaboli_212, PeteyPab_72, Phabba_265, Phendrix_175, Phrampa_106, PotatoChip_73, Pumpernickel_194, Qui_158, Rabbitrun_112, Racecar_112, Ranunculus_47, RedWattleHog_17, ReginaGlobina_110, Rockabye_116, SJReid_118, Sephiroth_109, Stickynote_72, Stormageddon_16, Syleon_114, TMaxx_61,

Talia1610_112, Trax_112, WaddleDee_104, Zion_73, Zooman_181,

Summary by start number:

Start 13:
• Found in 1 of 84 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 57
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ChewyVIII_21 (singleton),

Start 16:
• Found in 2 of 84 (2.4%) of genes in pham
• Manual Annotations of this start: 1 of 57
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Stormageddon_16 (DX),

Start 19:
• Found in 1 of 84 (1.2%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: JeanGrey_124 (singleton),

Start 24:
• Found in 2 of 84 (2.4%) of genes in pham
• Manual Annotations of this start: 1 of 57
• Called 50.0% of time when present
• Phage (with cluster) where this start called: RedWattleHog_17 (DX),

Start 26:
• Found in 4 of 84 (4.8%) of genes in pham
• Manual Annotations of this start: 2 of 57
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Elver_155 (FK), Gandionco_154 (FK), Paella_158 (FK), Qui_158 (FK),

Start 28:
• Found in 6 of 84 (7.1%) of genes in pham
• Manual Annotations of this start: 4 of 57
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Greely_263 (C2), Kovu_53 (AL), Myrna_256 (C2), Ollypop_48 (AP2), Phabba_265 (C2), Ranunculus_47 (AP),

Start 29:
• Found in 14 of 84 (16.7%) of genes in pham
• Manual Annotations of this start: 12 of 57
• Called 100.0% of time when present
• Phage (with cluster) where this start called: A3Wally_212 (GD1), Aleemily_100 (DZ), Big4_200 (GD2), BrutonGaster_122 (CQ2), Cafasso_102 (DZ), Cece_189 (GD3), Dodo_212 (GD1), ModicumRichard_101 (DZ), Morgana_108 (DZ), ObLaDi_101 (DZ), OneUp_131 (CQ2), PauloDiaboli_212 (GD1), Pumpernickel_194 (GD4), Zooman_181 (GD2),

Start 30:

• Found in 1 of 84 (1.2%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: TMaxx_61 (FR),

Start 32:
• Found in 2 of 84 (2.4%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Audell_57 (FR),

Start 33:
• Found in 2 of 84 (2.4%) of genes in pham
• Manual Annotations of this start: 2 of 57
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GodonK_186 (DK), Phendrix_175 (DK),

Start 35:
• Found in 17 of 84 (20.2%) of genes in pham
• Manual Annotations of this start: 14 of 57
• 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_107 (M1), Glaske16_110 (M1), IPhane7_105 (M1), Izel_106 (M1), KleverKiS_109 (M1), LilhomieP_107 (M1), PegLeg_110 (M1), Reindeer_108 (M1), ScoobyDoobyDoo_252 (C2), Skinny_112 (M1), SlimJimmy_109 (M1), TyDawg_103 (M1),

Start 36:
• Found in 27 of 84 (32.1%) of genes in pham
• Manual Annotations of this start: 13 of 57
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Atuin_105 (FC), Bloom_115 (FC), Chilliams_110 (FC), DunneganBoMo_104 (FC), Ellewin_102 (FC), GoldenEssence_100 (FC), KSunshine22_105 (FC), Kharcho_24 (FM), Kudefre_113 (DU1), LeoJr_110 (FC), Mimi_111 (FC), Neville_110 (DU2), Octobien14_109 (DU1), Ottawa_24 (FM), Panchaali_107 (FC), Patbob_112 (FC), Phrampa_106 (FC), Rabbitrun_112 (DU2), Racecar_112 (FC), ReginaGlobina_110 (FC), Rockabye_116 (FC), SJReid_118 (FC), Sephiroth_109 (DU1), Syleon_114 (DU1), Talia1610_112 (FC), Trax_112 (DU2), WaddleDee_104 (FC),

Start 37:
• Found in 7 of 84 (8.3%) of genes in pham
• Manual Annotations of this start: 7 of 57
• 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), Zion_73 (EN),

Start 65:
• Found in 1 of 84 (1.2%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: P1201_76 (singleton),

Summary by clusters:

There are 21 clusters represented in this pham: GD1, singleton, EN, GD4, DK, AP2, FM, AL, GD2, CQ2, AP, FC, DZ, DX, DU1, GD3, M1, DU2, FK, FR, C2,

Info for manual annotations of cluster AL:
•Start number 28 was manually annotated 1 time for cluster AL.

Info for manual annotations of cluster AP:
•Start number 28 was manually annotated 1 time for cluster AP.

Info for manual annotations of cluster C2:
•Start number 28 was manually annotated 2 times for cluster C2.
•Start number 35 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster CQ2:
•Start number 29 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster DK:
•Start number 33 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster DU1:
•Start number 36 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster DU2:
•Start number 36 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster DX:
•Start number 16 was manually annotated 1 time for cluster DX.
•Start number 24 was manually annotated 1 time for cluster DX.

Info for manual annotations of cluster DZ:
•Start number 29 was manually annotated 4 times for cluster DZ.

Info for manual annotations of cluster EN:
•Start number 37 was manually annotated 7 times for cluster EN.

Info for manual annotations of cluster FC:
•Start number 36 was manually annotated 4 times for cluster FC.

Info for manual annotations of cluster FK:
•Start number 26 was manually annotated 2 times for cluster FK.

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

Info for manual annotations of cluster GD1:
•Start number 29 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD2:

•Start number 29 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:
•Start number 29 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:
•Start number 29 was manually annotated 1 time for cluster GD4.

Info for manual annotations of cluster M1:
•Start number 35 was manually annotated 13 times for cluster M1.

Gene Information:

Gene: A3Wally_212 Start: 114728, Stop: 113766, Start Num: 29
Candidate Starts for A3Wally_212:
(Start: 29 @114728 has 12 MA's), (48, 114614), (54, 114551), (68, 114437), (96, 114194), (97, 114176), (111, 114071), (118, 114035), (126, 113966), (129, 113933),

Gene: Aleemily_100 Start: 57787, Stop: 58737, Start Num: 29
Candidate Starts for Aleemily_100:
(Start: 29 @57787 has 12 MA's), (42, 57841), (47, 57883), (48, 57889), (53, 57946), (54, 57952), (64, 58045), (68, 58066), (69, 58075), (94, 58285), (100, 58357), (120, 58477), (128, 58564),

Gene: Atuin_105 Start: 89918, Stop: 90868, Start Num: 36
Candidate Starts for Atuin_105:
(Start: 36 @89918 has 13 MA's), (53, 90077), (54, 90083), (63, 90155), (68, 90197), (79, 90323), (93, 90410), (119, 90602), (121, 90638), (130, 90716),

Gene: Audell_57 Start: 38262, Stop: 37309, Start Num: 32
Candidate Starts for Audell_57:
(32, 38262), (42, 38205), (53, 38100), (54, 38094), (58, 38064), (68, 37980), (94, 37761), (128, 37482), (130, 37461), (137, 37422),

Gene: Auspice_107 Start: 58621, Stop: 59574, Start Num: 35
Candidate Starts for Auspice_107:
(Start: 35 @58621 has 14 MA's), (43, 58690), (53, 58783), (54, 58789), (56, 58807), (59, 58831), (60, 58840), (64, 58882), (68, 58903), (69, 58912), (72, 58948), (88, 59068), (94, 59122), (97, 59164), (100, 59194), (117, 59299), (121, 59344), (125, 59368), (128, 59401), (134, 59446), (137, 59461), (140, 59527),

Gene: Big4_200 Start: 111237, Stop: 110275, Start Num: 29
Candidate Starts for Big4_200:
(Start: 29 @111237 has 12 MA's), (46, 111141), (47, 111129), (48, 111123), (54, 111060), (55, 111048), (64, 110967), (66, 110952), (68, 110946), (86, 110793), (90, 110769), (92, 110754), (97, 110685), (108, 110589), (112, 110577), (126, 110475), (135, 110394), (139, 110379),

Gene: Bloom_115 Start: 89994, Stop: 90944, Start Num: 36
Candidate Starts for Bloom_115:
(Start: 36 @89994 has 13 MA's), (49, 90108), (53, 90153), (63, 90231), (68, 90273), (79, 90399), (93, 90486), (119, 90678), (121, 90714), (140, 90897),

Gene: Bongo_107 Start: 58625, Stop: 59578, Start Num: 35
Candidate Starts for Bongo_107:
(Start: 35 @58625 has 14 MA's), (43, 58694), (53, 58787), (54, 58793), (56, 58811), (59, 58835), (60, 58844), (64, 58886), (68, 58907), (69, 58916), (72, 58952), (88, 59072), (94, 59126), (97, 59168), (100, 59198), (117, 59303), (121, 59348), (125, 59372), (128, 59405), (134, 59450), (137, 59465), (140, 59531),

Gene: Bricole_108 Start: 58773, Stop: 59726, Start Num: 35
Candidate Starts for Bricole_108:
(Start: 35 @58773 has 14 MA's), (43, 58842), (53, 58935), (54, 58941), (56, 58959), (59, 58983), (60, 58992), (64, 59034), (68, 59055), (69, 59064), (72, 59100), (88, 59220), (94, 59274), (97, 59316), (100, 59346), (117, 59451), (121, 59496), (125, 59520), (128, 59553), (134, 59598), (137, 59613), (140, 59679),

Gene: BrutonGaster_122 Start: 73686, Stop: 74648, Start Num: 29
Candidate Starts for BrutonGaster_122:
(15, 73620), (Start: 29 @73686 has 12 MA's), (42, 73752), (46, 73782), (48, 73800), (53, 73857), (64, 73956), (68, 73977), (86, 74130), (94, 74196), (97, 74238), (98, 74247), (128, 74475), (133, 74517), (137, 74535),

Gene: C3PO_73 Start: 53685, Stop: 52726, Start Num: 37
Candidate Starts for C3PO_73:
(6, 53898), (9, 53853), (10, 53829), (Start: 37 @53685 has 7 MA's), (46, 53604), (68, 53409), (89, 53220), (90, 53217), (91, 53214), (92, 53202), (95, 53169), (127, 52899), (134, 52851), (137, 52836), (138, 52827), (141, 52767),

Gene: Cafasso_102 Start: 58338, Stop: 59288, Start Num: 29
Candidate Starts for Cafasso_102:
(Start: 29 @58338 has 12 MA's), (42, 58392), (47, 58434), (48, 58440), (53, 58497), (54, 58503), (64, 58596), (68, 58617), (69, 58626), (94, 58836), (100, 58908), (120, 59028), (128, 59115),

Gene: Cece_189 Start: 115210, Stop: 114251, Start Num: 29
Candidate Starts for Cece_189:
(Start: 29 @115210 has 12 MA's), (41, 115165), (48, 115096), (54, 115033), (59, 114991), (60, 114982), (62, 114973), (63, 114961), (68, 114919), (69, 114910), (90, 114742), (97, 114658), (98, 114649), (104, 114592), (106, 114589), (111, 114553), (122, 114472), (124, 114457), (139, 114352),

Gene: ChewyVIII_21 Start: 10098, Stop: 11186, Start Num: 13
Candidate Starts for ChewyVIII_21:
(5, 9930), (Start: 13 @10098 has 1 MA's), (31, 10179), (34, 10188), (40, 10206), (56, 10374), (64, 10449), (81, 10629), (82, 10638), (84, 10656), (85, 10659), (95, 10740), (107, 10854), (109, 10875), (116, 10905), (123, 10974), (128, 11013), (129, 11019), (130, 11034), (136, 11070), (137, 11073),

Gene: Chilliams_110 Start: 82753, Stop: 83703, Start Num: 36
Candidate Starts for Chilliams_110:
(Start: 36 @82753 has 13 MA's), (42, 82807), (49, 82867), (53, 82912), (54, 82918), (63, 82990), (68, 83032), (79, 83158), (93, 83245), (112, 83401), (121, 83473),

Gene: Cruella_73 Start: 53685, Stop: 52726, Start Num: 37
Candidate Starts for Cruella_73:
(6, 53898), (9, 53853), (10, 53829), (Start: 37 @53685 has 7 MA's), (46, 53604), (68, 53409), (89, 53220), (90, 53217), (91, 53214), (92, 53202), (95, 53169), (127, 52899), (134, 52851), (137, 52836), (138, 52827), (141, 52767),

Gene: Diminimus_109 Start: 58620, Stop: 59573, Start Num: 35
Candidate Starts for Diminimus_109:
(Start: 35 @58620 has 14 MA's), (43, 58689), (53, 58782), (54, 58788), (56, 58806), (59, 58830), (60, 58839), (64, 58881), (68, 58902), (69, 58911), (72, 58947), (88, 59067), (94, 59121), (97, 59163), (100, 59193), (117, 59298), (121, 59343), (125, 59367), (128, 59400), (134, 59445), (137, 59460), (140, 59526),

Gene: Dodo_212 Start: 114530, Stop: 113568, Start Num: 29
Candidate Starts for Dodo_212:
(Start: 29 @114530 has 12 MA's), (48, 114416), (54, 114353), (68, 114239), (96, 113996), (97, 113978), (100, 113948), (111, 113873), (118, 113837), (126, 113768), (129, 113735),

Gene: Dulcita_109 Start: 58621, Stop: 59574, Start Num: 35
Candidate Starts for Dulcita_109:
(Start: 35 @58621 has 14 MA's), (43, 58690), (53, 58783), (54, 58789), (56, 58807), (59, 58831), (60, 58840), (64, 58882), (68, 58903), (69, 58912), (72, 58948), (88, 59068), (94, 59122), (97, 59164), (100, 59194), (117, 59299), (121, 59344), (125, 59368), (128, 59401), (134, 59446), (137, 59461), (140, 59527),

Gene: DunneganBoMo_104 Start: 85794, Stop: 86744, Start Num: 36
Candidate Starts for DunneganBoMo_104:
(Start: 36 @85794 has 13 MA's), (53, 85953), (56, 85977), (63, 86031), (68, 86073), (79, 86199), (93, 86286), (96, 86316), (103, 86397), (121, 86514),

Gene: Ellewin_102 Start: 85202, Stop: 86152, Start Num: 36
Candidate Starts for Ellewin_102:
(Start: 36 @85202 has 13 MA's), (53, 85361), (56, 85385), (63, 85439), (68, 85481), (79, 85607), (93, 85694), (96, 85724), (103, 85805), (121, 85922),

Gene: Elver_155 Start: 79480, Stop: 80454, Start Num: 26
Candidate Starts for Elver_155:
(Start: 26 @79480 has 2 MA's), (38, 79507), (51, 79654), (53, 79663), (68, 79783), (74, 79870), (76, 79885), (94, 80002), (123, 80242), (128, 80281), (129, 80287), (130, 80302), (143, 80422),

Gene: FreakyGoo_107 Start: 59100, Stop: 60053, Start Num: 35
Candidate Starts for FreakyGoo_107:
(Start: 35 @59100 has 14 MA's), (43, 59169), (53, 59262), (54, 59268), (56, 59286), (59, 59310), (60, 59319), (64, 59361), (68, 59382), (69, 59391), (72, 59427), (88, 59547), (94, 59601), (97, 59643), (100, 59673), (117, 59778), (121, 59823), (125, 59847), (128, 59880), (134, 59925), (137, 59940), (140, 60006),

Gene: Gandionco_154 Start: 78560, Stop: 79534, Start Num: 26
Candidate Starts for Gandionco_154:
(Start: 26 @78560 has 2 MA's), (38, 78587), (51, 78734), (53, 78743), (68, 78863), (74, 78950), (76, 78965), (94, 79082), (128, 79361), (129, 79367), (130, 79382), (143, 79502),

Gene: Glaske16_110 Start: 59202, Stop: 60155, Start Num: 35
Candidate Starts for Glaske16_110:
(Start: 35 @59202 has 14 MA's), (53, 59364), (56, 59388), (59, 59412), (60, 59421), (64, 59463), (68, 59484), (69, 59493), (88, 59649), (90, 59661), (94, 59703), (97, 59745), (100, 59775), (117, 59880), (121, 59925), (125, 59949), (128, 59982), (134, 60027), (137, 60042), (140, 60108),

Gene: GodonK_186 Start: 95205, Stop: 94261, Start Num: 33
Candidate Starts for GodonK_186:
(Start: 33 @95205 has 2 MA's), (42, 95157), (47, 95115), (52, 95058), (53, 95052), (54, 95046), (56, 95028), (59, 95004), (62, 94986), (64, 94953), (68, 94932), (69, 94923), (72, 94887), (90, 94755), (93, 94719), (94, 94713), (98, 94662), (100, 94641), (106, 94602), (114, 94548), (128, 94434), (130, 94413), (137, 94374),

Gene: GoldenEssence_100 Start: 83786, Stop: 84736, Start Num: 36
Candidate Starts for GoldenEssence_100:
(Start: 36 @83786 has 13 MA's), (49, 83900), (53, 83945), (63, 84023), (68, 84065), (79, 84191), (93, 84278), (121, 84506), (140, 84689),

Gene: Greely_263 Start: 155363, Stop: 156325, Start Num: 28
Candidate Starts for Greely_263:
(1, 154928), (2, 154931), (3, 155006), (4, 155045), (11, 155237), (Start: 28 @155363 has 4 MA's), (41, 155405), (42, 155429), (46, 155459), (48, 155477), (53, 155534), (54, 155540), (56, 155558), (64, 155633), (68, 155654), (69, 155663), (78, 155777), (88, 155819), (94, 155873), (97, 155915), (100, 155945), (106, 155984), (123, 156113), (143, 156293),

Gene: IPhane7_105 Start: 58625, Stop: 59578, Start Num: 35
Candidate Starts for IPhane7_105:
(Start: 35 @58625 has 14 MA's), (43, 58694), (53, 58787), (54, 58793), (56, 58811), (59, 58835), (60, 58844), (64, 58886), (68, 58907), (69, 58916), (72, 58952), (88, 59072), (94, 59126), (97, 59168), (100, 59198), (117, 59303), (121, 59348), (125, 59372), (128, 59405), (134, 59450), (137, 59465), (140, 59531),

Gene: Izel_106 Start: 58620, Stop: 59573, Start Num: 35
Candidate Starts for Izel_106:
(Start: 35 @58620 has 14 MA's), (43, 58689), (53, 58782), (54, 58788), (56, 58806), (59, 58830), (60, 58839), (64, 58881), (68, 58902), (69, 58911), (72, 58947), (88, 59067), (94, 59121), (97, 59163), (100, 59193), (117, 59298), (121, 59343), (125, 59367), (128, 59400), (134, 59445), (137, 59460), (140, 59526),

Gene: JeanGrey_124 Start: 92133, Stop: 93134, Start Num: 19
Candidate Starts for JeanGrey_124:
(19, 92133), (45, 92256), (46, 92268), (49, 92298), (53, 92343), (58, 92379), (67, 92460), (68, 92463), (71, 92502), (76, 92565), (80, 92619), (90, 92640), (113, 92838), (127, 92958),

Gene: KSunshine22_105 Start: 86806, Stop: 87756, Start Num: 36
Candidate Starts for KSunshine22_105:
(Start: 36 @86806 has 13 MA's), (53, 86965), (56, 86989), (63, 87043), (68, 87085), (79, 87211), (93, 87298), (96, 87328), (103, 87409), (121, 87526),

Gene: Kharcho_24 Start: 7684, Stop: 8634, Start Num: 36
Candidate Starts for Kharcho_24:
(Start: 36 @7684 has 13 MA's), (44, 7753), (53, 7843), (58, 7879), (62, 7909), (68, 7963), (74, 8050), (78, 8086), (131, 8497), (137, 8521),

Gene: Kimchi1738_74 Start: 53661, Stop: 52702, Start Num: 37
Candidate Starts for Kimchi1738_74:
(6, 53874), (8, 53841), (9, 53829), (10, 53805), (Start: 37 @53661 has 7 MA's), (46, 53580), (68, 53385), (89, 53196), (90, 53193), (91, 53190), (92, 53178), (95, 53145), (127, 52875), (134, 52827), (137, 52812), (138, 52803), (141, 52743),

Gene: KleverKiS_109 Start: 59574, Stop: 60527, Start Num: 35
Candidate Starts for KleverKiS_109:
(Start: 35 @59574 has 14 MA's), (53, 59736), (56, 59760), (59, 59784), (60, 59793), (64, 59835), (68, 59856), (69, 59865), (88, 60021), (90, 60033), (94, 60075), (97, 60117), (100, 60147), (117, 60252), (121, 60297), (125, 60321), (128, 60354), (134, 60399), (137, 60414), (140, 60480),

Gene: Kovu_53 Start: 30579, Stop: 31544, Start Num: 28
Candidate Starts for Kovu_53:
(Start: 28 @30579 has 4 MA's), (42, 30648), (47, 30690), (53, 30753), (60, 30810), (68, 30873), (74, 30960), (87, 31029), (90, 31050), (104, 31200), (113, 31248), (115, 31260), (123, 31332), (128, 31371), (130, 31392), (137, 31431),

Gene: Kudefre_113 Start: 62054, Stop: 63004, Start Num: 36
Candidate Starts for Kudefre_113:
(Start: 36 @62054 has 13 MA's), (53, 62213), (54, 62219), (61, 62276), (64, 62312), (68, 62333), (69, 62342), (76, 62435), (91, 62513), (100, 62624), (110, 62696), (117, 62729), (122, 62780), (127, 62828), (128, 62831), (129, 62837), (130, 62852), (137, 62891),

Gene: LeoJr_110 Start: 90154, Stop: 91104, Start Num: 36
Candidate Starts for LeoJr_110:
(Start: 36 @90154 has 13 MA's), (53, 90313), (54, 90319), (63, 90391), (68, 90433), (79, 90559), (93, 90646), (119, 90838), (121, 90874), (130, 90952),

Gene: LilhomieP_107 Start: 59515, Stop: 60468, Start Num: 35
Candidate Starts for LilhomieP_107:
(Start: 35 @59515 has 14 MA's), (43, 59584), (53, 59677), (54, 59683), (56, 59701), (59, 59725), (60, 59734), (64, 59776), (68, 59797), (69, 59806), (72, 59842), (88, 59962), (94, 60016), (97, 60058), (100, 60088), (117, 60193), (121, 60238), (125, 60262), (128, 60295), (134, 60340), (137, 60355), (140, 60421),

Gene: Mimi_111 Start: 89341, Stop: 90291, Start Num: 36
Candidate Starts for Mimi_111:
(Start: 36 @89341 has 13 MA's), (49, 89455), (53, 89500), (63, 89578), (68, 89620), (79, 89746), (93, 89833), (121, 90061), (140, 90244),

Gene: ModicumRichard_101 Start: 57979, Stop: 58929, Start Num: 29
Candidate Starts for ModicumRichard_101:
(Start: 29 @57979 has 12 MA's), (42, 58033), (47, 58075), (48, 58081), (53, 58138), (54, 58144), (64, 58237), (68, 58258), (69, 58267), (94, 58477), (100, 58549), (120, 58669), (128, 58756),

Gene: Morgana_108 Start: 60190, Stop: 61140, Start Num: 29
Candidate Starts for Morgana_108:
(Start: 29 @60190 has 12 MA's), (42, 60244), (47, 60286), (48, 60292), (53, 60349), (54, 60355), (64, 60448), (68, 60469), (69, 60478), (94, 60688), (100, 60760), (120, 60880), (128, 60967),

Gene: Myrna_256 Start: 155905, Stop: 156873, Start Num: 28
Candidate Starts for Myrna_256:
(11, 155779), (12, 155815), (Start: 28 @155905 has 4 MA's), (41, 155953), (42, 155977), (48, 156025), (53, 156082), (54, 156088), (56, 156106), (64, 156181), (68, 156202), (69, 156211), (78, 156325), (94, 156421), (97, 156463), (100, 156493), (123, 156661), (141, 156829), (143, 156841),

Gene: Neville_110 Start: 62934, Stop: 63884, Start Num: 36

Candidate Starts for Neville_110:
(Start: 36 @62934 has 13 MA's), (42, 62988), (46, 63018), (53, 63093), (54, 63099), (61, 63156), (64, 63192), (68, 63213), (69, 63222), (78, 63336), (95, 63438), (102, 63525), (122, 63660), (128, 63711), (129, 63717), (130, 63732), (137, 63771), (140, 63837),

Gene: ObLaDi_101 Start: 58022, Stop: 58972, Start Num: 29
Candidate Starts for ObLaDi_101:
(Start: 29 @58022 has 12 MA's), (42, 58076), (47, 58118), (48, 58124), (53, 58181), (54, 58187), (64, 58280), (68, 58301), (69, 58310), (94, 58520), (100, 58592), (120, 58712), (128, 58799),

Gene: Octobien14_109 Start: 60846, Stop: 61796, Start Num: 36
Candidate Starts for Octobien14_109:
(Start: 36 @60846 has 13 MA's), (53, 61005), (54, 61011), (61, 61068), (64, 61104), (68, 61125), (69, 61134), (72, 61170), (76, 61227), (79, 61251), (91, 61305), (100, 61416), (110, 61488), (114, 61509), (122, 61572), (127, 61620), (128, 61623), (129, 61629), (130, 61644), (137, 61683),

Gene: Ollypop_48 Start: 39249, Stop: 38275, Start Num: 28
Candidate Starts for Ollypop_48:
(17, 39297), (Start: 28 @39249 has 4 MA's), (42, 39177), (53, 39072), (55, 39054), (56, 39048), (64, 38973), (68, 38952), (69, 38943), (87, 38793), (94, 38730), (100, 38658), (107, 38610), (115, 38562), (120, 38538), (121, 38508), (128, 38451), (130, 38430), (136, 38394), (143, 38310),

Gene: OneUp_131 Start: 78206, Stop: 79159, Start Num: 29
Candidate Starts for OneUp_131:
(15, 78140), (Start: 29 @78206 has 12 MA's), (42, 78263), (46, 78293), (48, 78311), (53, 78368), (54, 78374), (64, 78467), (68, 78488), (86, 78641), (88, 78653), (94, 78707), (97, 78749), (98, 78758), (128, 78986), (133, 79028), (137, 79046),

Gene: Ottawa_24 Start: 7684, Stop: 8634, Start Num: 36
Candidate Starts for Ottawa_24:
(Start: 36 @7684 has 13 MA's), (44, 7753), (53, 7843), (58, 7879), (62, 7909), (68, 7963), (74, 8050), (78, 8086), (131, 8497), (137, 8521),

Gene: P1201_76 Start: 57750, Stop: 57037, Start Num: 65
Candidate Starts for P1201_76:
(18, 58071), (27, 58032), (32, 58017), (65, 57750), (68, 57732), (70, 57699), (73, 57648), (83, 57567), (92, 57513), (99, 57429), (100, 57414), (101, 57399), (105, 57375), (122, 57258), (127, 57210), (131, 57171),

Gene: Paella_158 Start: 80347, Stop: 81321, Start Num: 26
Candidate Starts for Paella_158:
(Start: 26 @80347 has 2 MA's), (38, 80374), (51, 80521), (53, 80530), (57, 80557), (68, 80650), (74, 80737), (76, 80752), (94, 80869), (123, 81109), (128, 81148), (130, 81169), (143, 81289),

Gene: Panchaali_107 Start: 86777, Stop: 87727, Start Num: 36
Candidate Starts for Panchaali_107:
(Start: 36 @86777 has 13 MA's), (53, 86936), (62, 87002), (63, 87014), (68, 87056), (69, 87065), (79, 87182), (93, 87269), (119, 87461), (121, 87497), (130, 87575),

Gene: Patbob_112 Start: 90076, Stop: 91026, Start Num: 36
Candidate Starts for Patbob_112:
(Start: 36 @90076 has 13 MA's), (49, 90190), (53, 90235), (63, 90313), (68, 90355), (79, 90481), (93, 90568), (121, 90796), (140, 90979),

Gene: PauloDiaboli_212 Start: 112941, Stop: 111979, Start Num: 29
Candidate Starts for PauloDiaboli_212:
(Start: 29 @112941 has 12 MA's), (48, 112827), (68, 112650), (96, 112407), (97, 112389), (100, 112359), (111, 112284), (118, 112248), (126, 112179), (129, 112146),

Gene: PegLeg_110 Start: 59251, Stop: 60204, Start Num: 35
Candidate Starts for PegLeg_110:
(Start: 35 @59251 has 14 MA's), (43, 59320), (53, 59413), (56, 59437), (59, 59461), (60, 59470), (64, 59512), (68, 59533), (69, 59542), (88, 59698), (90, 59710), (94, 59752), (97, 59794), (100, 59824), (117, 59929), (121, 59974), (125, 59998), (128, 60031), (134, 60076), (137, 60091), (140, 60157),

Gene: PeteyPab_72 Start: 53470, Stop: 52511, Start Num: 37
Candidate Starts for PeteyPab_72:
(Start: 37 @53470 has 7 MA's), (46, 53389), (68, 53194), (89, 53005), (90, 53002), (91, 52999), (92, 52987), (95, 52954), (127, 52684), (134, 52636), (137, 52621), (138, 52612), (141, 52552),

Gene: Phabba_265 Start: 154752, Stop: 155714, Start Num: 28
Candidate Starts for Phabba_265:
(Start: 28 @154752 has 4 MA's), (41, 154794), (42, 154818), (48, 154866), (53, 154923), (54, 154929), (56, 154947), (59, 154971), (64, 155022), (68, 155043), (69, 155052), (78, 155166), (88, 155208), (94, 155262), (97, 155304), (100, 155334), (143, 155682),

Gene: Phendrix_175 Start: 94333, Stop: 93389, Start Num: 33
Candidate Starts for Phendrix_175:
(14, 94411), (22, 94369), (25, 94348), (Start: 33 @94333 has 2 MA's), (42, 94285), (47, 94243), (52, 94186), (53, 94180), (54, 94174), (56, 94156), (59, 94132), (62, 94114), (64, 94081), (68, 94060), (72, 94015), (90, 93883), (93, 93847), (94, 93841), (98, 93790), (100, 93769), (106, 93730), (114, 93676), (128, 93562), (130, 93541), (137, 93502), (138, 93493),

Gene: Phrampa_106 Start: 91460, Stop: 92410, Start Num: 36
Candidate Starts for Phrampa_106:
(20, 91406), (Start: 36 @91460 has 13 MA's), (53, 91619), (68, 91739), (93, 91952), (112, 92108), (126, 92210), (128, 92237), (141, 92366),

Gene: PotatoChip_73 Start: 53472, Stop: 52513, Start Num: 37
Candidate Starts for PotatoChip_73:
(Start: 37 @53472 has 7 MA's), (46, 53391), (68, 53196), (89, 53007), (90, 53004), (91, 53001), (92, 52989), (95, 52956), (127, 52686), (134, 52638), (137, 52623), (138, 52614), (141, 52554),

Gene: Pumpernickel_194 Start: 111571, Stop: 110621, Start Num: 29
Candidate Starts for Pumpernickel_194:
(17, 111622), (Start: 29 @111571 has 12 MA's), (46, 111475), (47, 111463), (48, 111457), (54, 111394), (68, 111280), (76, 111178), (77, 111160), (86, 111127), (89, 111106), (95, 111055), (97, 111019), (122, 110842), (135, 110737), (139, 110722),

Gene: Qui_158 Start: 80347, Stop: 81321, Start Num: 26
Candidate Starts for Qui_158:
(Start: 26 @80347 has 2 MA's), (38, 80374), (51, 80521), (53, 80530), (57, 80557), (68, 80650), (74, 80737), (76, 80752), (94, 80869), (123, 81109), (128, 81148), (130, 81169), (143, 81289),

Gene: Rabbitrun_112 Start: 64014, Stop: 64964, Start Num: 36
Candidate Starts for Rabbitrun_112:

(Start: 36 @64014 has 13 MA's), (46, 64098), (53, 64173), (59, 64221), (61, 64236), (64, 64272), (68, 64293), (86, 64446), (100, 64584), (102, 64605), (106, 64623), (121, 64734), (122, 64740), (128, 64791), (129, 64797), (130, 64812), (132, 64830), (137, 64851), (140, 64917),

Gene: Racecar_112 Start: 89994, Stop: 90944, Start Num: 36
Candidate Starts for Racecar_112:
(Start: 36 @89994 has 13 MA's), (49, 90108), (53, 90153), (63, 90231), (68, 90273), (79, 90399), (93, 90486), (121, 90714), (140, 90897),

Gene: Ranunculus_47 Start: 41478, Stop: 40504, Start Num: 28
Candidate Starts for Ranunculus_47:
(17, 41514), (Start: 28 @41478 has 4 MA's), (39, 41454), (42, 41406), (53, 41301), (56, 41277), (60, 41244), (64, 41202), (68, 41181), (69, 41172), (75, 41085), (87, 41022), (94, 40959), (100, 40887), (115, 40791), (117, 40782), (123, 40719), (128, 40680), (130, 40659), (136, 40623), (143, 40539),

Gene: RedWattleHog_17 Start: 20861, Stop: 21844, Start Num: 24
Candidate Starts for RedWattleHog_17:
(7, 20696), (Start: 16 @20825 has 1 MA's), (Start: 24 @20861 has 1 MA's), (39, 20900), (44, 20963), (53, 21053), (54, 21059), (64, 21152), (68, 21173), (78, 21296), (93, 21386), (94, 21392), (116, 21563), (123, 21632), (128, 21671), (134, 21716), (137, 21731), (141, 21800),

Gene: ReginaGlobina_110 Start: 89720, Stop: 90670, Start Num: 36
Candidate Starts for ReginaGlobina_110:
(Start: 36 @89720 has 13 MA's), (53, 89879), (54, 89885), (59, 89927), (63, 89957), (68, 89999), (79, 90125), (93, 90212), (94, 90218), (119, 90404), (121, 90440), (130, 90518),

Gene: Reindeer_108 Start: 60129, Stop: 61082, Start Num: 35
Candidate Starts for Reindeer_108:
(Start: 35 @60129 has 14 MA's), (42, 60186), (43, 60198), (53, 60291), (54, 60297), (55, 60309), (56, 60315), (61, 60354), (64, 60390), (68, 60411), (69, 60420), (72, 60456), (86, 60564), (94, 60630), (96, 60654), (97, 60672), (100, 60702), (117, 60807), (121, 60852), (122, 60858), (123, 60870), (128, 60909), (129, 60915), (134, 60954), (137, 60969), (140, 61035),

Gene: Rockabye_116 Start: 83878, Stop: 84828, Start Num: 36
Candidate Starts for Rockabye_116:
(21, 83836), (Start: 36 @83878 has 13 MA's), (42, 83932), (49, 83992), (50, 84010), (53, 84037), (54, 84043), (59, 84085), (60, 84094), (68, 84157), (69, 84166), (79, 84283), (93, 84370), (94, 84376), (112, 84526), (121, 84598), (142, 84793), (144, 84802),

Gene: SJReid_118 Start: 82220, Stop: 83170, Start Num: 36
Candidate Starts for SJReid_118:
(21, 82178), (Start: 36 @82220 has 13 MA's), (53, 82379), (59, 82427), (68, 82499), (69, 82508), (114, 82883), (123, 82958),

Gene: ScoobyDoobyDoo_252 Start: 151751, Stop: 152704, Start Num: 35
Candidate Starts for ScoobyDoobyDoo_252:
(23, 151709), (Start: 35 @151751 has 14 MA's), (48, 151856), (53, 151913), (54, 151919), (56, 151937), (64, 152012), (68, 152033), (69, 152042), (88, 152198), (94, 152252), (97, 152294), (100, 152324), (128, 152531), (140, 152657),

Gene: Sephiroth_109 Start: 61809, Stop: 62759, Start Num: 36
Candidate Starts for Sephiroth_109:

(Start: 36 @61809 has 13 MA's), (53, 61968), (54, 61974), (61, 62031), (68, 62088), (69, 62097), (76, 62190), (91, 62268), (100, 62379), (110, 62451), (117, 62484), (122, 62535), (127, 62583), (128, 62586), (129, 62592), (130, 62607), (137, 62646),

Gene: Skinny_112 Start: 59970, Stop: 60923, Start Num: 35
Candidate Starts for Skinny_112:
(Start: 35 @59970 has 14 MA's), (43, 60039), (53, 60132), (56, 60156), (59, 60180), (60, 60189), (64, 60231), (68, 60252), (69, 60261), (88, 60417), (90, 60429), (94, 60471), (97, 60513), (100, 60543), (117, 60648), (121, 60693), (125, 60717), (128, 60750), (134, 60795), (137, 60810), (140, 60876),

Gene: SlimJimmy_109 Start: 60181, Stop: 61134, Start Num: 35
Candidate Starts for SlimJimmy_109:
(Start: 35 @60181 has 14 MA's), (43, 60250), (53, 60343), (56, 60367), (59, 60391), (60, 60400), (64, 60442), (68, 60463), (69, 60472), (88, 60628), (90, 60640), (94, 60682), (97, 60724), (100, 60754), (117, 60859), (121, 60904), (125, 60928), (128, 60961), (134, 61006), (137, 61021), (140, 61087),

Gene: Stickynote_72 Start: 53673, Stop: 52714, Start Num: 37
Candidate Starts for Stickynote_72:
(Start: 37 @53673 has 7 MA's), (46, 53592), (58, 53481), (68, 53397), (89, 53208), (90, 53205), (91, 53202), (92, 53190), (95, 53157), (127, 52887), (134, 52839), (137, 52824), (138, 52815), (141, 52755),

Gene: Stormageddon_16 Start: 20070, Stop: 21089, Start Num: 16
Candidate Starts for Stormageddon_16:
(Start: 16 @20070 has 1 MA's), (Start: 24 @20106 has 1 MA's), (39, 20145), (44, 20208), (53, 20298), (54, 20304), (64, 20397), (68, 20418), (78, 20541), (93, 20631), (94, 20637), (100, 20709), (116, 20808), (123, 20877), (128, 20916), (134, 20961), (137, 20976), (141, 21045),

Gene: Syleon_114 Start: 62591, Stop: 63541, Start Num: 36
Candidate Starts for Syleon_114:
(Start: 36 @62591 has 13 MA's), (53, 62750), (54, 62756), (61, 62813), (64, 62849), (68, 62870), (69, 62879), (76, 62972), (91, 63050), (100, 63161), (110, 63233), (117, 63266), (122, 63317), (127, 63365), (128, 63368), (129, 63374), (130, 63389), (137, 63428),

Gene: TMaxx_61 Start: 36737, Stop: 35784, Start Num: 30
Candidate Starts for TMaxx_61:
(30, 36737), (42, 36680), (53, 36575), (54, 36569), (68, 36455), (88, 36290), (94, 36236), (115, 36068), (123, 35996), (130, 35936),

Gene: Talia1610_112 Start: 89968, Stop: 90918, Start Num: 36
Candidate Starts for Talia1610_112:
(Start: 36 @89968 has 13 MA's), (49, 90082), (53, 90127), (54, 90133), (63, 90205), (68, 90247), (79, 90373), (93, 90460), (121, 90688), (130, 90766), (140, 90871),

Gene: Trax_112 Start: 63929, Stop: 64879, Start Num: 36
Candidate Starts for Trax_112:
(Start: 36 @63929 has 13 MA's), (42, 63983), (46, 64013), (53, 64088), (54, 64094), (61, 64151), (64, 64187), (68, 64208), (78, 64331), (102, 64520), (122, 64655), (128, 64706), (129, 64712), (130, 64727), (137, 64766), (140, 64832),

Gene: TyDawg_103 Start: 58628, Stop: 59581, Start Num: 35
Candidate Starts for TyDawg_103:

(Start: 35 @58628 has 14 MA's), (43, 58697), (53, 58790), (54, 58796), (56, 58814), (59, 58838), (60, 58847), (64, 58889), (68, 58910), (69, 58919), (72, 58955), (88, 59075), (94, 59129), (97, 59171), (100, 59201), (117, 59306), (121, 59351), (125, 59375), (128, 59408), (134, 59453), (137, 59468), (140, 59534),

Gene: WaddleDee_104 Start: 84980, Stop: 85930, Start Num: 36
Candidate Starts for WaddleDee_104:
(Start: 36 @84980 has 13 MA's), (53, 85139), (56, 85163), (63, 85217), (68, 85259), (79, 85385), (93, 85472), (96, 85502), (103, 85583), (121, 85700),

Gene: Zion_73 Start: 53470, Stop: 52511, Start Num: 37
Candidate Starts for Zion_73:
(Start: 37 @53470 has 7 MA's), (46, 53389), (68, 53194), (89, 53005), (90, 53002), (91, 52999), (92, 52987), (95, 52954), (127, 52684), (134, 52636), (137, 52621), (138, 52612), (141, 52552),

Gene: Zooman_181 Start: 107460, Stop: 106501, Start Num: 29
Candidate Starts for Zooman_181:
(Start: 29 @107460 has 12 MA's), (47, 107352), (48, 107346), (54, 107283), (64, 107190), (68, 107169), (90, 106992), (97, 106908), (108, 106812), (112, 106800), (126, 106698), (139, 106602),