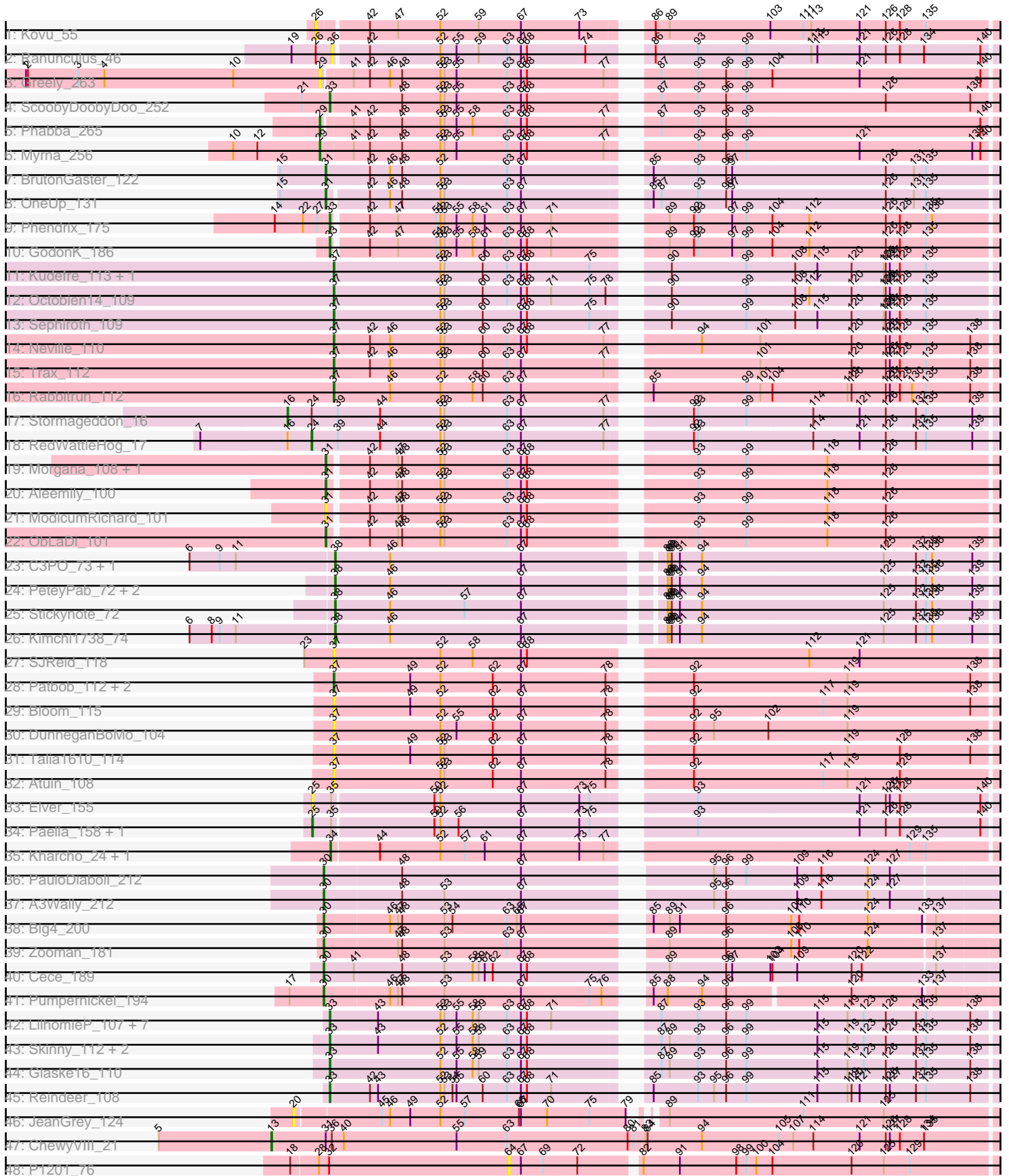


Pham 163014



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 163014 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163014 has 66 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Kovu_55
- Track 2 : Ranunculus_46
- Track 3 : Greely_263
- Track 4 : ScoobyDoobyDoo_252
- Track 5 : Phabba_265
- Track 6 : Myrna_256
- Track 7 : BrutonGaster_122
- Track 8 : OneUp_131
- Track 9 : Phendrix_175
- Track 10 : GodonK_186
- Track 11 : Kudefre_113, Syleon_114
- Track 12 : Octobien14_109
- Track 13 : Sephiroth_109
- Track 14 : Neville_110
- Track 15 : Trax_112
- Track 16 : Rabbitrun_112
- Track 17 : Stormageddon_16
- Track 18 : RedWattleHog_17
- Track 19 : Morgana_108, Cafasso_102
- Track 20 : Aleemily_100
- Track 21 : ModicumRichard_101
- Track 22 : ObLaDi_101
- Track 23 : C3PO_73, Cruella_73
- Track 24 : PeteyPab_72, PotatoChip_73, Zion_73
- Track 25 : Stickynote_72
- Track 26 : Kimchi1738_74
- Track 27 : SJReid_118
- Track 28 : Patbob_112, Racecar_112, Mimi_117
- Track 29 : Bloom_115
- Track 30 : DunneganBoMo_104
- Track 31 : Talia1610_114
- Track 32 : Atuin_108
- Track 33 : Elver_155
- Track 34 : Paella_158, Qui_158
- Track 35 : Kharcho_24, Ottawa_24
- Track 36 : PauloDiaboli_212
- Track 37 : A3Wally_212

- Track 38 : Big4_200
- Track 39 : Zooman_181
- Track 40 : Cece_189
- Track 41 : Pumpernickel_194
- Track 42 : LilhomieP_107, IPhane7_105, Bongo_107, Bricole_108, Diminimus_109, Auspice_107, TyDawg_103, Dulcita_109
- Track 43 : Skinny_112, SlimJimmy_109, PegLeg_110
- Track 44 : Glaske16_110
- Track 45 : Reindeer_108
- Track 46 : JeanGrey_124
- Track 47 : ChewyVIII_21
- Track 48 : 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 33, it was called in 16 of the 52 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Auspice_107, Bongo_107, Bricole_108, Diminimus_109, Dulcita_109, Glaske16_110, GodonK_186, IPhane7_105, LilhomieP_107, PegLeg_110, Phendrix_175, 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_108, Big4_200, Bloom_115, BrutonGaster_122, C3PO_73, Cafasso_102, Cece_189, ChewyVIII_21, Cruella_73, DunneganBoMo_104, Elver_155, Greely_263, JeanGrey_124, Kharcho_24, Kimchi1738_74, Kovu_55, Kudefre_113, Mimi_117, ModicumRichard_101, Morgana_108, Myrna_256, Neville_110, ObLaDi_101, Octobien14_109, OneUp_131, Ottawa_24, P1201_76, Paella_158, Patbob_112, PauloDiaboli_212, PeteyPab_72, Phabba_265, PotatoChip_73, Pumpernickel_194, Qui_158, Rabbitrun_112, Racecar_112, Ranunculus_46, RedWattleHog_17, SJReid_118, Sephiroth_109, Stickynote_72, Stormageddon_16, Syleon_114, Talia1610_114, Trax_112, Zion_73, Zooman_181,

Summary by start number:

Start 13:

- Found in 1 of 66 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 52
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ChewyVIII_21 (singleton),

Start 16:

- Found in 2 of 66 (3.0%) of genes in pham
- Manual Annotations of this start: 1 of 52

- Called 50.0% of time when present
- Phage (with cluster) where this start called: Stormageddon_16 (DX),

Start 20:

- Found in 1 of 66 (1.5%) 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 66 (3.0%) of genes in pham
- Manual Annotations of this start: 1 of 52
- Called 50.0% of time when present
- Phage (with cluster) where this start called: RedWattleHog_17 (DX),

Start 25:

- Found in 3 of 66 (4.5%) of genes in pham
- Manual Annotations of this start: 2 of 52
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Elver_155 (FK), Paella_158 (FK), Qui_158 (FK),

Start 26:

- Found in 2 of 66 (3.0%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Kovu_55 (AL),

Start 29:

- Found in 3 of 66 (4.5%) of genes in pham
- Manual Annotations of this start: 2 of 52
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Greely_263 (C2), Myrna_256 (C2), Phabba_265 (C2),

Start 30:

- Found in 6 of 66 (9.1%) of genes in pham
- Manual Annotations of this start: 6 of 52
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally_212 (GD1), Big4_200 (GD2), Cece_189 (GD3), PauloDiaboli_212 (GD1), Pumpnickel_194 (GD4), Zooman_181 (GD2),

Start 31:

- Found in 8 of 66 (12.1%) of genes in pham
- Manual Annotations of this start: 6 of 52
- Called 87.5% 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 33:

- Found in 16 of 66 (24.2%) of genes in pham

- Manual Annotations of this start: 16 of 52
- 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), Glaske16_110 (M1), GodonK_186 (DK), IPhane7_105 (M1), LilhomieP_107 (M1), PegLeg_110 (M1), Phendrix_175 (DK), Reindeer_108 (M1), ScoobyDoobyDoo_252 (C2), Skinny_112 (M1), SlimJimmy_109 (M1), TyDawg_103 (M1),

Start 34:

- Found in 2 of 66 (3.0%) of genes in pham
- Manual Annotations of this start: 2 of 52
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kharcho_24 (FM), Ottawa_24 (FM),

Start 36:

- Found in 2 of 66 (3.0%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Ranunculus_46 (AP),

Start 37:

- Found in 15 of 66 (22.7%) of genes in pham
- Manual Annotations of this start: 8 of 52
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin_108 (FC), Bloom_115 (FC), DunneganBoMo_104 (FC), Kudrefre_113 (DU1), Mimi_117 (FC), Neville_110 (DU2), Octobien14_109 (DU1), Patbob_112 (FC), Rabbitrun_112 (DU2), Racecar_112 (FC), SJReid_118 (FC), Sephiroth_109 (DU1), Syleon_114 (DU1), Talia1610_114 (FC), Trax_112 (DU2),

Start 38:

- Found in 7 of 66 (10.6%) of genes in pham
- Manual Annotations of this start: 7 of 52
- 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 64:

- Found in 1 of 66 (1.5%) 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 19 clusters represented in this pham: GD1, singleton, EN, GD4, DK, C2, GD2, AL, DU1, AP, FC, DZ, DX, CQ2, GD3, M1, DU2, FK, FM,

Info for manual annotations of cluster C2:

- Start number 29 was manually annotated 2 times for cluster C2.

- Start number 33 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster CQ2:

- Start number 31 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 37 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 37 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 31 was manually annotated 4 times for cluster DZ.

Info for manual annotations of cluster EN:

- Start number 38 was manually annotated 7 times for cluster EN.

Info for manual annotations of cluster FC:

- Start number 37 was manually annotated 1 time for cluster FC.

Info for manual annotations of cluster FK:

- Start number 25 was manually annotated 2 times for cluster FK.

Info for manual annotations of cluster FM:

- Start number 34 was manually annotated 2 times for cluster FM.

Info for manual annotations of cluster GD1:

- Start number 30 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD2:

- Start number 30 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 30 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:

- Start number 30 was manually annotated 1 time for cluster GD4.

Info for manual annotations of cluster M1:

- Start number 33 was manually annotated 13 times for cluster M1.

Gene Information:

Gene: A3Wally_212 Start: 114728, Stop: 113766, Start Num: 30

Candidate Starts for A3Wally_212:

(Start: 30 @114728 has 6 MA's), (48, 114614), (53, 114551), (67, 114437), (95, 114194), (96, 114176), (109, 114071), (116, 114035), (124, 113966), (127, 113933),

Gene: Aleemily_100 Start: 57787, Stop: 58737, Start Num: 31

Candidate Starts for Aleemily_100:

(Start: 31 @57787 has 6 MA's), (42, 57841), (47, 57883), (48, 57889), (52, 57946), (53, 57952), (63, 58045), (67, 58066), (68, 58075), (93, 58285), (99, 58357), (118, 58477), (126, 58564),

Gene: Atuin_108 Start: 89918, Stop: 90868, Start Num: 37

Candidate Starts for Atuin_108:

(Start: 37 @89918 has 8 MA's), (52, 90077), (53, 90083), (62, 90155), (67, 90197), (78, 90323), (92, 90410), (117, 90602), (119, 90638), (128, 90716),

Gene: Auspice_107 Start: 58621, Stop: 59574, Start Num: 33

Candidate Starts for Auspice_107:

(Start: 33 @58621 has 16 MA's), (43, 58690), (52, 58783), (53, 58789), (55, 58807), (58, 58831), (59, 58840), (63, 58882), (67, 58903), (68, 58912), (71, 58948), (87, 59068), (93, 59122), (96, 59164), (99, 59194), (115, 59299), (119, 59344), (123, 59368), (126, 59401), (132, 59446), (135, 59461), (138, 59527),

Gene: Big4_200 Start: 111237, Stop: 110275, Start Num: 30

Candidate Starts for Big4_200:

(Start: 30 @111237 has 6 MA's), (46, 111141), (47, 111129), (48, 111123), (53, 111060), (54, 111048), (63, 110967), (65, 110952), (67, 110946), (85, 110793), (89, 110769), (91, 110754), (96, 110685), (106, 110589), (110, 110577), (124, 110475), (133, 110394), (137, 110379),

Gene: Bloom_115 Start: 89994, Stop: 90944, Start Num: 37

Candidate Starts for Bloom_115:

(Start: 37 @89994 has 8 MA's), (49, 90108), (52, 90153), (62, 90231), (67, 90273), (78, 90399), (92, 90486), (117, 90678), (119, 90714), (138, 90897),

Gene: Bongo_107 Start: 58625, Stop: 59578, Start Num: 33

Candidate Starts for Bongo_107:

(Start: 33 @58625 has 16 MA's), (43, 58694), (52, 58787), (53, 58793), (55, 58811), (58, 58835), (59, 58844), (63, 58886), (67, 58907), (68, 58916), (71, 58952), (87, 59072), (93, 59126), (96, 59168), (99, 59198), (115, 59303), (119, 59348), (123, 59372), (126, 59405), (132, 59450), (135, 59465), (138, 59531),

Gene: Bricole_108 Start: 58773, Stop: 59726, Start Num: 33

Candidate Starts for Bricole_108:

(Start: 33 @58773 has 16 MA's), (43, 58842), (52, 58935), (53, 58941), (55, 58959), (58, 58983), (59, 58992), (63, 59034), (67, 59055), (68, 59064), (71, 59100), (87, 59220), (93, 59274), (96, 59316), (99, 59346), (115, 59451), (119, 59496), (123, 59520), (126, 59553), (132, 59598), (135, 59613), (138, 59679),

Gene: BrutonGaster_122 Start: 73686, Stop: 74648, Start Num: 31

Candidate Starts for BrutonGaster_122:

(15, 73620), (Start: 31 @73686 has 6 MA's), (42, 73752), (46, 73782), (48, 73800), (52, 73857), (63, 73956), (67, 73977), (85, 74130), (93, 74196), (96, 74238), (97, 74247), (126, 74475), (131, 74517), (135, 74535),

Gene: C3PO_73 Start: 53685, Stop: 52726, Start Num: 38

Candidate Starts for C3PO_73:

(6, 53898), (9, 53853), (11, 53829), (Start: 38 @53685 has 7 MA's), (46, 53604), (67, 53409), (88, 53220), (89, 53217), (90, 53214), (91, 53202), (94, 53169), (125, 52899), (132, 52851), (135, 52836), (136, 52827), (139, 52767),

Gene: Cafasso_102 Start: 58338, Stop: 59288, Start Num: 31

Candidate Starts for Cafasso_102:

(Start: 31 @58338 has 6 MA's), (42, 58392), (47, 58434), (48, 58440), (52, 58497), (53, 58503), (63, 58596), (67, 58617), (68, 58626), (93, 58836), (99, 58908), (118, 59028), (126, 59115),

Gene: Cece_189 Start: 115210, Stop: 114251, Start Num: 30

Candidate Starts for Cece_189:

(Start: 30 @115210 has 6 MA's), (41, 115165), (48, 115096), (53, 115033), (58, 114991), (59, 114982), (61, 114973), (62, 114961), (67, 114919), (68, 114910), (89, 114742), (96, 114658), (97, 114649), (103, 114592), (104, 114589), (109, 114553), (120, 114472), (122, 114457), (137, 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), (Start: 31 @10179 has 6 MA's), (36, 10188), (40, 10206), (55, 10374), (63, 10449), (80, 10629), (81, 10638), (83, 10656), (84, 10659), (94, 10740), (105, 10854), (107, 10875), (114, 10905), (121, 10974), (126, 11013), (127, 11019), (128, 11034), (134, 11070), (135, 11073),

Gene: Cruella_73 Start: 53685, Stop: 52726, Start Num: 38

Candidate Starts for Cruella_73:

(6, 53898), (9, 53853), (11, 53829), (Start: 38 @53685 has 7 MA's), (46, 53604), (67, 53409), (88, 53220), (89, 53217), (90, 53214), (91, 53202), (94, 53169), (125, 52899), (132, 52851), (135, 52836), (136, 52827), (139, 52767),

Gene: Diminimus_109 Start: 58620, Stop: 59573, Start Num: 33

Candidate Starts for Diminimus_109:

(Start: 33 @58620 has 16 MA's), (43, 58689), (52, 58782), (53, 58788), (55, 58806), (58, 58830), (59, 58839), (63, 58881), (67, 58902), (68, 58911), (71, 58947), (87, 59067), (93, 59121), (96, 59163), (99, 59193), (115, 59298), (119, 59343), (123, 59367), (126, 59400), (132, 59445), (135, 59460), (138, 59526),

Gene: Dulcita_109 Start: 58621, Stop: 59574, Start Num: 33

Candidate Starts for Dulcita_109:

(Start: 33 @58621 has 16 MA's), (43, 58690), (52, 58783), (53, 58789), (55, 58807), (58, 58831), (59, 58840), (63, 58882), (67, 58903), (68, 58912), (71, 58948), (87, 59068), (93, 59122), (96, 59164), (99, 59194), (115, 59299), (119, 59344), (123, 59368), (126, 59401), (132, 59446), (135, 59461), (138, 59527),

Gene: DunneganBoMo_104 Start: 85794, Stop: 86744, Start Num: 37

Candidate Starts for DunneganBoMo_104:

(Start: 37 @85794 has 8 MA's), (52, 85953), (55, 85977), (62, 86031), (67, 86073), (78, 86199), (92, 86286), (95, 86316), (102, 86397), (119, 86514),

Gene: Elver_155 Start: 79480, Stop: 80454, Start Num: 25

Candidate Starts for Elver_155:

(Start: 25 @79480 has 2 MA's), (35, 79507), (50, 79654), (52, 79663), (67, 79783), (73, 79870), (75, 79885), (93, 80002), (121, 80242), (126, 80281), (127, 80287), (128, 80302), (140, 80422),

Gene: Glaske16_110 Start: 59202, Stop: 60155, Start Num: 33

Candidate Starts for Glaske16_110:

(Start: 33 @59202 has 16 MA's), (52, 59364), (55, 59388), (58, 59412), (59, 59421), (63, 59463), (67, 59484), (68, 59493), (87, 59649), (89, 59661), (93, 59703), (96, 59745), (99, 59775), (115, 59880), (119, 59925), (123, 59949), (126, 59982), (132, 60027), (135, 60042), (138, 60108),

Gene: GodonK_186 Start: 95205, Stop: 94261, Start Num: 33

Candidate Starts for GodonK_186:

(Start: 33 @95205 has 16 MA's), (42, 95157), (47, 95115), (51, 95058), (52, 95052), (53, 95046), (55, 95028), (58, 95004), (61, 94986), (63, 94953), (67, 94932), (68, 94923), (71, 94887), (89, 94755), (92, 94719), (93, 94713), (97, 94662), (99, 94641), (104, 94602), (112, 94548), (126, 94434), (128, 94413), (135, 94374),

Gene: Greely_263 Start: 155363, Stop: 156325, Start Num: 29

Candidate Starts for Greely_263:

(1, 154928), (2, 154931), (3, 155006), (4, 155045), (10, 155237), (Start: 29 @155363 has 2 MA's), (41, 155405), (42, 155429), (46, 155459), (48, 155477), (52, 155534), (53, 155540), (55, 155558), (63, 155633), (67, 155654), (68, 155663), (77, 155777), (87, 155819), (93, 155873), (96, 155915), (99, 155945), (104, 155984), (121, 156113), (140, 156293),

Gene: IPhane7_105 Start: 58625, Stop: 59578, Start Num: 33

Candidate Starts for IPhane7_105:

(Start: 33 @58625 has 16 MA's), (43, 58694), (52, 58787), (53, 58793), (55, 58811), (58, 58835), (59, 58844), (63, 58886), (67, 58907), (68, 58916), (71, 58952), (87, 59072), (93, 59126), (96, 59168), (99, 59198), (115, 59303), (119, 59348), (123, 59372), (126, 59405), (132, 59450), (135, 59465), (138, 59531),

Gene: JeanGrey_124 Start: 92133, Stop: 93134, Start Num: 20

Candidate Starts for JeanGrey_124:

(20, 92133), (45, 92256), (46, 92268), (49, 92298), (52, 92343), (57, 92379), (66, 92460), (67, 92463), (70, 92502), (75, 92565), (79, 92619), (89, 92640), (111, 92838), (125, 92958),

Gene: Kharcho_24 Start: 7684, Stop: 8634, Start Num: 34

Candidate Starts for Kharcho_24:

(Start: 34 @7684 has 2 MA's), (44, 7753), (52, 7843), (57, 7879), (61, 7909), (67, 7963), (73, 8050), (77, 8086), (129, 8497), (135, 8521),

Gene: Kimchi1738_74 Start: 53661, Stop: 52702, Start Num: 38

Candidate Starts for Kimchi1738_74:

(6, 53874), (8, 53841), (9, 53829), (11, 53805), (Start: 38 @53661 has 7 MA's), (46, 53580), (67, 53385), (88, 53196), (89, 53193), (90, 53190), (91, 53178), (94, 53145), (125, 52875), (132, 52827), (135, 52812), (136, 52803), (139, 52743),

Gene: Kovu_55 Start: 30579, Stop: 31544, Start Num: 26

Candidate Starts for Kovu_55:

(26, 30579), (42, 30648), (47, 30690), (52, 30753), (59, 30810), (67, 30873), (73, 30960), (86, 31029), (89, 31050), (103, 31200), (111, 31248), (113, 31260), (121, 31332), (126, 31371), (128, 31392), (135, 31431),

Gene: Kudfre_113 Start: 62054, Stop: 63004, Start Num: 37

Candidate Starts for Kudfre_113:

(Start: 37 @62054 has 8 MA's), (52, 62213), (53, 62219), (60, 62276), (63, 62312), (67, 62333), (68, 62342), (75, 62435), (90, 62513), (99, 62624), (108, 62696), (115, 62729), (120, 62780), (125, 62828),

(126, 62831), (127, 62837), (128, 62852), (135, 62891),

Gene: LilhomieP_107 Start: 59515, Stop: 60468, Start Num: 33

Candidate Starts for LilhomieP_107:

(Start: 33 @59515 has 16 MA's), (43, 59584), (52, 59677), (53, 59683), (55, 59701), (58, 59725), (59, 59734), (63, 59776), (67, 59797), (68, 59806), (71, 59842), (87, 59962), (93, 60016), (96, 60058), (99, 60088), (115, 60193), (119, 60238), (123, 60262), (126, 60295), (132, 60340), (135, 60355), (138, 60421),

Gene: Mimi_117 Start: 89341, Stop: 90291, Start Num: 37

Candidate Starts for Mimi_117:

(Start: 37 @89341 has 8 MA's), (49, 89455), (52, 89500), (62, 89578), (67, 89620), (78, 89746), (92, 89833), (119, 90061), (138, 90244),

Gene: ModicumRichard_101 Start: 57979, Stop: 58929, Start Num: 31

Candidate Starts for ModicumRichard_101:

(Start: 31 @57979 has 6 MA's), (42, 58033), (47, 58075), (48, 58081), (52, 58138), (53, 58144), (63, 58237), (67, 58258), (68, 58267), (93, 58477), (99, 58549), (118, 58669), (126, 58756),

Gene: Morgana_108 Start: 60190, Stop: 61140, Start Num: 31

Candidate Starts for Morgana_108:

(Start: 31 @60190 has 6 MA's), (42, 60244), (47, 60286), (48, 60292), (52, 60349), (53, 60355), (63, 60448), (67, 60469), (68, 60478), (93, 60688), (99, 60760), (118, 60880), (126, 60967),

Gene: Myrna_256 Start: 155905, Stop: 156873, Start Num: 29

Candidate Starts for Myrna_256:

(10, 155779), (12, 155815), (Start: 29 @155905 has 2 MA's), (41, 155953), (42, 155977), (48, 156025), (52, 156082), (53, 156088), (55, 156106), (63, 156181), (67, 156202), (68, 156211), (77, 156325), (93, 156421), (96, 156463), (99, 156493), (121, 156661), (139, 156829), (140, 156841),

Gene: Neville_110 Start: 62934, Stop: 63884, Start Num: 37

Candidate Starts for Neville_110:

(Start: 37 @62934 has 8 MA's), (42, 62988), (46, 63018), (52, 63093), (53, 63099), (60, 63156), (63, 63192), (67, 63213), (68, 63222), (77, 63336), (94, 63438), (101, 63525), (120, 63660), (126, 63711), (127, 63717), (128, 63732), (135, 63771), (138, 63837),

Gene: ObLaDi_101 Start: 58022, Stop: 58972, Start Num: 31

Candidate Starts for ObLaDi_101:

(Start: 31 @58022 has 6 MA's), (42, 58076), (47, 58118), (48, 58124), (52, 58181), (53, 58187), (63, 58280), (67, 58301), (68, 58310), (93, 58520), (99, 58592), (118, 58712), (126, 58799),

Gene: Octobien14_109 Start: 60846, Stop: 61796, Start Num: 37

Candidate Starts for Octobien14_109:

(Start: 37 @60846 has 8 MA's), (52, 61005), (53, 61011), (60, 61068), (63, 61104), (67, 61125), (68, 61134), (71, 61170), (75, 61227), (78, 61251), (90, 61305), (99, 61416), (108, 61488), (112, 61509), (120, 61572), (125, 61620), (126, 61623), (127, 61629), (128, 61644), (135, 61683),

Gene: OneUp_131 Start: 78206, Stop: 79159, Start Num: 31

Candidate Starts for OneUp_131:

(15, 78140), (Start: 31 @78206 has 6 MA's), (42, 78263), (46, 78293), (48, 78311), (52, 78368), (53, 78374), (63, 78467), (67, 78488), (85, 78641), (87, 78653), (93, 78707), (96, 78749), (97, 78758), (126, 78986), (131, 79028), (135, 79046),

Gene: Ottawa_24 Start: 7684, Stop: 8634, Start Num: 34

Candidate Starts for Ottawa_24:

(Start: 34 @7684 has 2 MA's), (44, 7753), (52, 7843), (57, 7879), (61, 7909), (67, 7963), (73, 8050), (77, 8086), (129, 8497), (135, 8521),

Gene: P1201_76 Start: 57750, Stop: 57037, Start Num: 64

Candidate Starts for P1201_76:

(18, 58071), (28, 58032), (32, 58017), (64, 57750), (67, 57732), (69, 57699), (72, 57648), (82, 57567), (91, 57513), (98, 57429), (99, 57414), (100, 57399), (104, 57375), (120, 57258), (125, 57210), (129, 57171),

Gene: Paella_158 Start: 80347, Stop: 81321, Start Num: 25

Candidate Starts for Paella_158:

(Start: 25 @80347 has 2 MA's), (35, 80374), (50, 80521), (52, 80530), (56, 80557), (67, 80650), (73, 80737), (75, 80752), (93, 80869), (121, 81109), (126, 81148), (128, 81169), (140, 81289),

Gene: Patbob_112 Start: 90076, Stop: 91026, Start Num: 37

Candidate Starts for Patbob_112:

(Start: 37 @90076 has 8 MA's), (49, 90190), (52, 90235), (62, 90313), (67, 90355), (78, 90481), (92, 90568), (119, 90796), (138, 90979),

Gene: PauloDiaboli_212 Start: 112941, Stop: 111979, Start Num: 30

Candidate Starts for PauloDiaboli_212:

(Start: 30 @112941 has 6 MA's), (48, 112827), (67, 112650), (95, 112407), (96, 112389), (99, 112359), (109, 112284), (116, 112248), (124, 112179), (127, 112146),

Gene: PegLeg_110 Start: 59251, Stop: 60204, Start Num: 33

Candidate Starts for PegLeg_110:

(Start: 33 @59251 has 16 MA's), (43, 59320), (52, 59413), (55, 59437), (58, 59461), (59, 59470), (63, 59512), (67, 59533), (68, 59542), (87, 59698), (89, 59710), (93, 59752), (96, 59794), (99, 59824), (115, 59929), (119, 59974), (123, 59998), (126, 60031), (132, 60076), (135, 60091), (138, 60157),

Gene: PeteyPab_72 Start: 53470, Stop: 52511, Start Num: 38

Candidate Starts for PeteyPab_72:

(Start: 38 @53470 has 7 MA's), (46, 53389), (67, 53194), (88, 53005), (89, 53002), (90, 52999), (91, 52987), (94, 52954), (125, 52684), (132, 52636), (135, 52621), (136, 52612), (139, 52552),

Gene: Phabba_265 Start: 154752, Stop: 155714, Start Num: 29

Candidate Starts for Phabba_265:

(Start: 29 @154752 has 2 MA's), (41, 154794), (42, 154818), (48, 154866), (52, 154923), (53, 154929), (55, 154947), (58, 154971), (63, 155022), (67, 155043), (68, 155052), (77, 155166), (87, 155208), (93, 155262), (96, 155304), (99, 155334), (140, 155682),

Gene: Phendrix_175 Start: 94333, Stop: 93389, Start Num: 33

Candidate Starts for Phendrix_175:

(14, 94411), (22, 94369), (27, 94348), (Start: 33 @94333 has 16 MA's), (42, 94285), (47, 94243), (51, 94186), (52, 94180), (53, 94174), (55, 94156), (58, 94132), (61, 94114), (63, 94081), (67, 94060), (71, 94015), (89, 93883), (92, 93847), (93, 93841), (97, 93790), (99, 93769), (104, 93730), (112, 93676), (126, 93562), (128, 93541), (135, 93502), (136, 93493),

Gene: PotatoChip_73 Start: 53472, Stop: 52513, Start Num: 38

Candidate Starts for PotatoChip_73:

(Start: 38 @53472 has 7 MA's), (46, 53391), (67, 53196), (88, 53007), (89, 53004), (90, 53001), (91, 52989), (94, 52956), (125, 52686), (132, 52638), (135, 52623), (136, 52614), (139, 52554),

Gene: Pumpernickel_194 Start: 111571, Stop: 110621, Start Num: 30

Candidate Starts for Pumpernickel_194:

(17, 111622), (Start: 30 @111571 has 6 MA's), (46, 111475), (47, 111463), (48, 111457), (53, 111394), (67, 111280), (75, 111178), (76, 111160), (85, 111127), (88, 111106), (94, 111055), (96, 111019), (120, 110842), (133, 110737), (137, 110722),

Gene: Qui_158 Start: 80347, Stop: 81321, Start Num: 25

Candidate Starts for Qui_158:

(Start: 25 @80347 has 2 MA's), (35, 80374), (50, 80521), (52, 80530), (56, 80557), (67, 80650), (73, 80737), (75, 80752), (93, 80869), (121, 81109), (126, 81148), (128, 81169), (140, 81289),

Gene: Rabbitrun_112 Start: 64014, Stop: 64964, Start Num: 37

Candidate Starts for Rabbitrun_112:

(Start: 37 @64014 has 8 MA's), (46, 64098), (52, 64173), (58, 64221), (60, 64236), (63, 64272), (67, 64293), (85, 64446), (99, 64584), (101, 64605), (104, 64623), (119, 64734), (120, 64740), (126, 64791), (127, 64797), (128, 64812), (130, 64830), (135, 64851), (138, 64917),

Gene: Racecar_112 Start: 89994, Stop: 90944, Start Num: 37

Candidate Starts for Racecar_112:

(Start: 37 @89994 has 8 MA's), (49, 90108), (52, 90153), (62, 90231), (67, 90273), (78, 90399), (92, 90486), (119, 90714), (138, 90897),

Gene: Ranunculus_46 Start: 41454, Stop: 40504, Start Num: 36

Candidate Starts for Ranunculus_46:

(19, 41514), (26, 41478), (36, 41454), (42, 41406), (52, 41301), (55, 41277), (59, 41244), (63, 41202), (67, 41181), (68, 41172), (74, 41085), (86, 41022), (93, 40959), (99, 40887), (113, 40791), (115, 40782), (121, 40719), (126, 40680), (128, 40659), (134, 40623), (140, 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), (52, 21053), (53, 21059), (63, 21152), (67, 21173), (77, 21296), (92, 21386), (93, 21392), (114, 21563), (121, 21632), (126, 21671), (132, 21716), (135, 21731), (139, 21800),

Gene: Reindeer_108 Start: 60129, Stop: 61082, Start Num: 33

Candidate Starts for Reindeer_108:

(Start: 33 @60129 has 16 MA's), (42, 60186), (43, 60198), (52, 60291), (53, 60297), (54, 60309), (55, 60315), (60, 60354), (63, 60390), (67, 60411), (68, 60420), (71, 60456), (85, 60564), (93, 60630), (95, 60654), (96, 60672), (99, 60702), (115, 60807), (119, 60852), (120, 60858), (121, 60870), (126, 60909), (127, 60915), (132, 60954), (135, 60969), (138, 61035),

Gene: SJReid_118 Start: 82220, Stop: 83170, Start Num: 37

Candidate Starts for SJReid_118:

(23, 82178), (Start: 37 @82220 has 8 MA's), (52, 82379), (58, 82427), (67, 82499), (68, 82508), (112, 82883), (121, 82958),

Gene: ScoobyDoobyDoo_252 Start: 151751, Stop: 152704, Start Num: 33

Candidate Starts for ScoobyDoobyDoo_252:

(21, 151709), (Start: 33 @151751 has 16 MA's), (48, 151856), (52, 151913), (53, 151919), (55, 151937), (63, 152012), (67, 152033), (68, 152042), (87, 152198), (93, 152252), (96, 152294), (99,

152324), (126, 152531), (138, 152657),

Gene: Sephiroth_109 Start: 61809, Stop: 62759, Start Num: 37

Candidate Starts for Sephiroth_109:

(Start: 37 @61809 has 8 MA's), (52, 61968), (53, 61974), (60, 62031), (67, 62088), (68, 62097), (75, 62190), (90, 62268), (99, 62379), (108, 62451), (115, 62484), (120, 62535), (125, 62583), (126, 62586), (127, 62592), (128, 62607), (135, 62646),

Gene: Skinny_112 Start: 59970, Stop: 60923, Start Num: 33

Candidate Starts for Skinny_112:

(Start: 33 @59970 has 16 MA's), (43, 60039), (52, 60132), (55, 60156), (58, 60180), (59, 60189), (63, 60231), (67, 60252), (68, 60261), (87, 60417), (89, 60429), (93, 60471), (96, 60513), (99, 60543), (115, 60648), (119, 60693), (123, 60717), (126, 60750), (132, 60795), (135, 60810), (138, 60876),

Gene: SlimJimmy_109 Start: 60181, Stop: 61134, Start Num: 33

Candidate Starts for SlimJimmy_109:

(Start: 33 @60181 has 16 MA's), (43, 60250), (52, 60343), (55, 60367), (58, 60391), (59, 60400), (63, 60442), (67, 60463), (68, 60472), (87, 60628), (89, 60640), (93, 60682), (96, 60724), (99, 60754), (115, 60859), (119, 60904), (123, 60928), (126, 60961), (132, 61006), (135, 61021), (138, 61087),

Gene: Stickynote_72 Start: 53673, Stop: 52714, Start Num: 38

Candidate Starts for Stickynote_72:

(Start: 38 @53673 has 7 MA's), (46, 53592), (57, 53481), (67, 53397), (88, 53208), (89, 53205), (90, 53202), (91, 53190), (94, 53157), (125, 52887), (132, 52839), (135, 52824), (136, 52815), (139, 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), (52, 20298), (53, 20304), (63, 20397), (67, 20418), (77, 20541), (92, 20631), (93, 20637), (99, 20709), (114, 20808), (121, 20877), (126, 20916), (132, 20961), (135, 20976), (139, 21045),

Gene: Syleon_114 Start: 62591, Stop: 63541, Start Num: 37

Candidate Starts for Syleon_114:

(Start: 37 @62591 has 8 MA's), (52, 62750), (53, 62756), (60, 62813), (63, 62849), (67, 62870), (68, 62879), (75, 62972), (90, 63050), (99, 63161), (108, 63233), (115, 63266), (120, 63317), (125, 63365), (126, 63368), (127, 63374), (128, 63389), (135, 63428),

Gene: Talia1610_114 Start: 89968, Stop: 90918, Start Num: 37

Candidate Starts for Talia1610_114:

(Start: 37 @89968 has 8 MA's), (49, 90082), (52, 90127), (53, 90133), (62, 90205), (67, 90247), (78, 90373), (92, 90460), (119, 90688), (128, 90766), (138, 90871),

Gene: Trax_112 Start: 63929, Stop: 64879, Start Num: 37

Candidate Starts for Trax_112:

(Start: 37 @63929 has 8 MA's), (42, 63983), (46, 64013), (52, 64088), (53, 64094), (60, 64151), (63, 64187), (67, 64208), (77, 64331), (101, 64520), (120, 64655), (126, 64706), (127, 64712), (128, 64727), (135, 64766), (138, 64832),

Gene: TyDawg_103 Start: 58628, Stop: 59581, Start Num: 33

Candidate Starts for TyDawg_103:

(Start: 33 @58628 has 16 MA's), (43, 58697), (52, 58790), (53, 58796), (55, 58814), (58, 58838), (59, 58847), (63, 58889), (67, 58910), (68, 58919), (71, 58955), (87, 59075), (93, 59129), (96, 59171), (99,

59201), (115, 59306), (119, 59351), (123, 59375), (126, 59408), (132, 59453), (135, 59468), (138, 59534),

Gene: Zion_73 Start: 53470, Stop: 52511, Start Num: 38

Candidate Starts for Zion_73:

(Start: 38 @53470 has 7 MA's), (46, 53389), (67, 53194), (88, 53005), (89, 53002), (90, 52999), (91, 52987), (94, 52954), (125, 52684), (132, 52636), (135, 52621), (136, 52612), (139, 52552),

Gene: Zooman_181 Start: 107460, Stop: 106501, Start Num: 30

Candidate Starts for Zooman_181:

(Start: 30 @107460 has 6 MA's), (47, 107352), (48, 107346), (53, 107283), (63, 107190), (67, 107169), (89, 106992), (96, 106908), (106, 106812), (110, 106800), (124, 106698), (137, 106602),