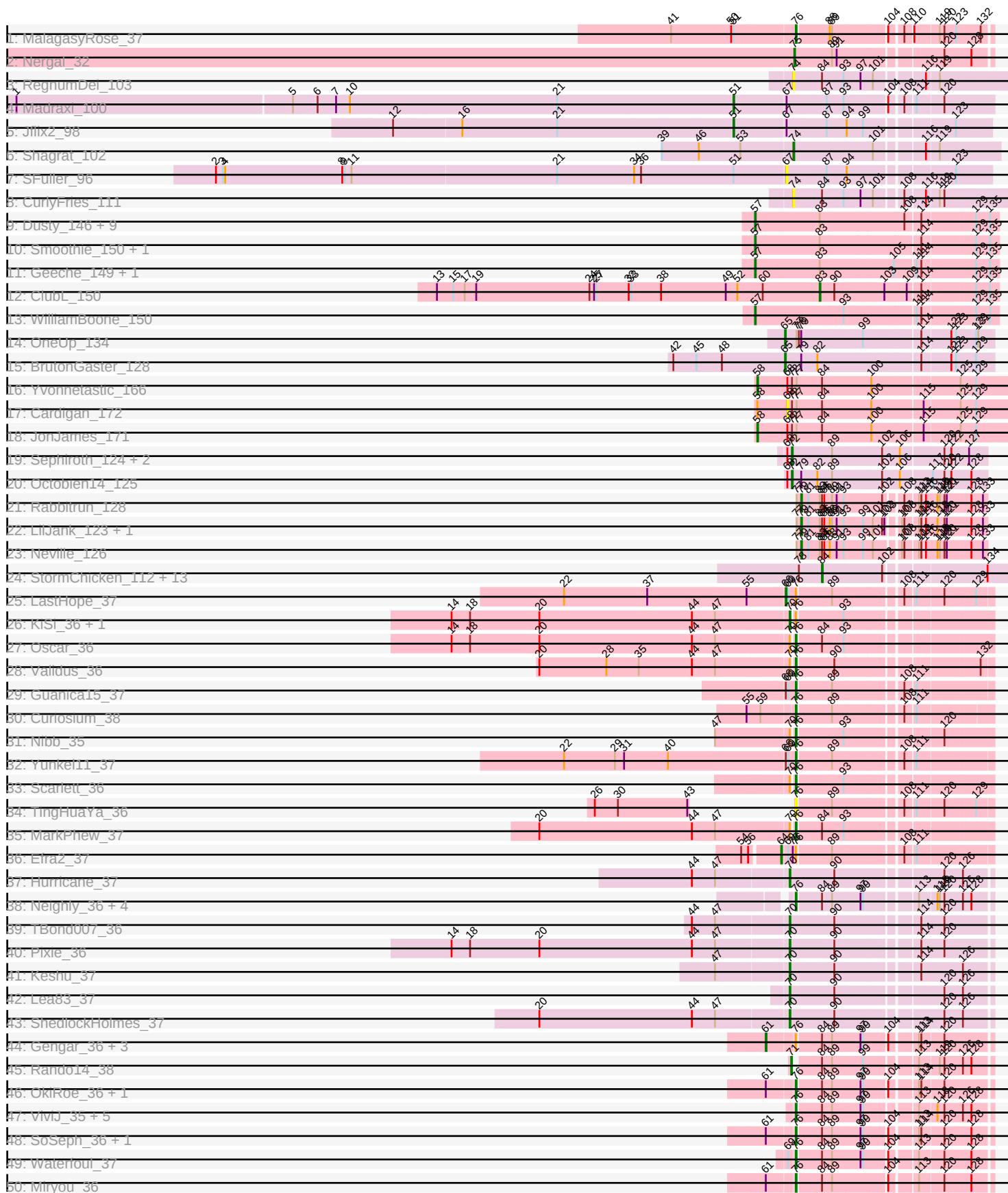
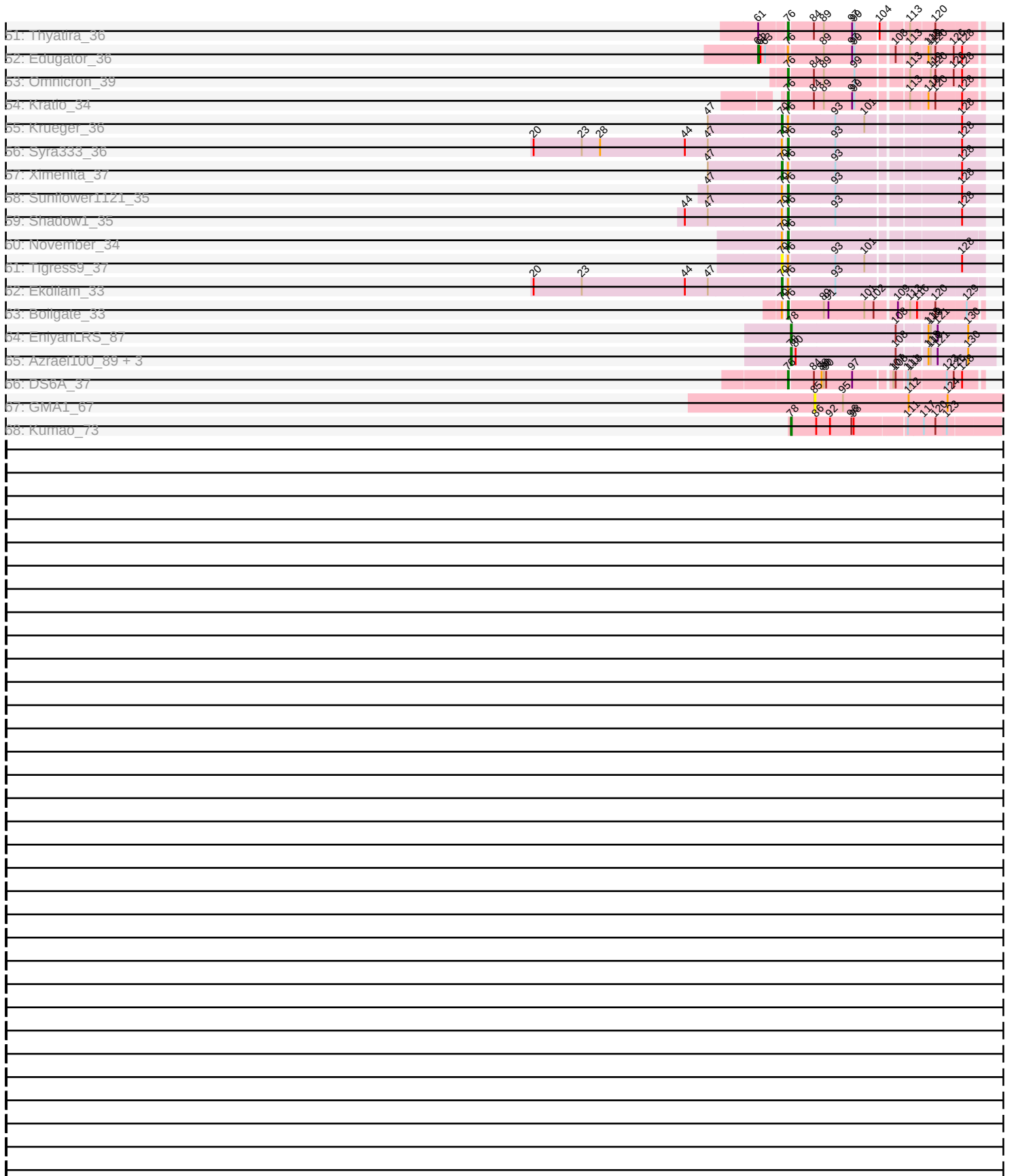


Pham 280245





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 280245 Report

This analysis was run 02/07/26 on database version 634.

Pham number 280245 has 113 members, 22 are drafts.

Phages represented in each track:

- Track 1 : MalagasyRose_37
- Track 2 : Nergal_32
- Track 3 : RegnumDei_103
- Track 4 : Madraxi_100
- Track 5 : Jflix2_98
- Track 6 : Shagrat_102
- Track 7 : SFuller_96
- Track 8 : CurlyFries_111
- Track 9 : Dusty_146, Lozinak_149, Miskis_142, Toniann_149, Norvs_147, Engineer_151, Bachita_152, Aphelion_148, PhinkBoden_147, Cucurbita_148
- Track 10 : Smoothie_150, Culver_149
- Track 11 : Geeche_149, Abscondus_147
- Track 12 : ClubL_150
- Track 13 : WilliamBoone_150
- Track 14 : OneUp_134
- Track 15 : BrutonGaster_128
- Track 16 : Yvonnetastic_166
- Track 17 : Cardigan_172
- Track 18 : JonJames_171
- Track 19 : Sephiroth_124, Syleon_129, Kudefre_129
- Track 20 : Octobien14_125
- Track 21 : Rabbitrun_128
- Track 22 : LilJank_123, Trax_127
- Track 23 : Neville_126
- Track 24 : StormChicken_112, Greep_114, Petra64142_114, Brewer_104, Sassay_105, GoldenSpark_114, Command613_112, FairyPath_110, TeamEdward_110, Becksu_108, Ptowny_106, MISSy_111, MollyToe_104, Amao_110
- Track 25 : LastHope_37
- Track 26 : KiSi_36, LeMond_36
- Track 27 : Oscar_36
- Track 28 : Validus_36
- Track 29 : Guanica15_37
- Track 30 : Curiosium_38
- Track 31 : Nibb_35
- Track 32 : Yunkel11_37
- Track 33 : Scarlett_36

- Track 34 : TingHuaYa_36
- Track 35 : MarkPhew_37
- Track 36 : Efra2_37
- Track 37 : Hurricane_37
- Track 38 : Neighly_36, Larva_36, Psycho_36, Dadosky_36, AlleyCat_36
- Track 39 : TBond007_36
- Track 40 : Pixie_36
- Track 41 : Keshu_37
- Track 42 : Lea83_37
- Track 43 : ShedlockHolmes_37
- Track 44 : Gengar_36, Guillsminger_36, Leston_36, Paola_36
- Track 45 : Rando14_38
- Track 46 : OkiRoe_36, Feyre_36
- Track 47 : ViviJ_35, Collard_35, InvictusManeo_35, BananenDer11_35, DoubleChamp_35, Agent47_36
- Track 48 : SoSeph_36, Heftyboy_36
- Track 49 : Waterfoul_37
- Track 50 : Miryou_36
- Track 51 : Thyatira_36
- Track 52 : Edugator_36
- Track 53 : Omnicron_39
- Track 54 : Kratio_34
- Track 55 : Krueger_36
- Track 56 : Syra333_36
- Track 57 : Ximenita_37
- Track 58 : Sunflower1121_35
- Track 59 : Shadow1_35
- Track 60 : November_34
- Track 61 : Tigress9_37
- Track 62 : Ekdilam_33
- Track 63 : Boilgate_33
- Track 64 : EniyanLRS_87
- Track 65 : Azrael100_89, MaryV_91, Cosmo_90, Wildcat_91
- Track 66 : DS6A_37
- Track 67 : GMA1_67
- Track 68 : Kumao_73

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

The start number called the most often in the published annotations is 76, it was called in 32 of the 91 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Agent47_36, AlleyCat_36, BananenDer11_35, Boilgate_33, Collard_35, Curiosium_38, DS6A_37, Dadosky_36, DoubleChamp_35, Feyre_36, Guanica15_37, Heftyboy_36, InvictusManeo_35, Kratio_34, Larva_36, MalagasyRose_37, MarkPhew_37, Miryou_36, Neighly_36, Nibb_35, November_34, OkiRoe_36, Omnicron_39, Oscar_36, Psycho_36, Scarlett_36, Shadow1_35, SoSeph_36, Sunflower1121_35, Syra333_36, Thyatira_36, TingHuaYa_36, Validus_36, ViviJ_35, Waterfoul_37, Yunkel11_37,

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

- Edugator_36, Efra2_37, Ekdilam_33, Gengar_36, Guillsminger_36, KiSi_36, Krueger_36, LastHope_37, LeMond_36, Leston_36, Paola_36, Tigress9_37, Ximenita_37,

Genes that do not have the "Most Annotated" start:

- Abscondus_147, Amao_110, Aphelion_148, Azrael100_89, Bachita_152, Becksu_108, Brewer_104, BrutonGaster_128, Cardigan_172, ClubL_150, Command613_112, Cosmo_90, Cucurbita_148, Culver_149, CurlyFries_111, Dusty_146, Engineer_151, EniyanLRS_87, FairyPath_110, GMA1_67, Geeche_149, GoldenSpark_114, Greep_114, Hurricane_37, Jflix2_98, JonJames_171, Keshu_37, Kudrefre_129, Kumao_73, Lea83_37, LilJank_123, Lozinak_149, MISSy_111, Madraxi_100, MaryV_91, Miskis_142, MollyToe_104, Nergal_32, Neville_126, Norvs_147, Octobien14_125, OneUp_134, Petra64142_114, PhinkBoden_147, Pixie_36, Ptowny_106, Rabbitrun_128, Rando14_38, RegnumDei_103, SFuller_96, Sassay_105, Sephiroth_124, Shagrat_102, ShedlockHolmes_37, Smoothie_150, StormChicken_112, Syleon_129, TBond007_36, TeamEdward_110, Toniann_149, Trax_127, Wildcat_91, WilliamBoone_150, Yvonnetastic_166,

Summary by start number:

Start 51:

- Found in 4 of 113 (3.5%) of genes in pham
- Manual Annotations of this start: 2 of 91
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Jflix2_98 (CF), Madraxi_100 (CF),

Start 57:

- Found in 15 of 113 (13.3%) of genes in pham
- Manual Annotations of this start: 14 of 91
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abscondus_147 (CQ1), Aphelion_148 (CQ1), Bachita_152 (CQ1), Cucurbita_148 (CQ1), Culver_149 (CQ1), Dusty_146 (CQ1), Engineer_151 (CQ1), Geeche_149 (CQ1), Lozinak_149 (CQ1), Miskis_142 (CQ1), Norvs_147 (CQ1), PhinkBoden_147 (CQ1), Smoothie_150 (CQ1), Toniann_149 (CQ1), WilliamBoone_150 (CQ1),

Start 58:

- Found in 3 of 113 (2.7%) of genes in pham
- Manual Annotations of this start: 2 of 91
- Called 66.7% of time when present
- Phage (with cluster) where this start called: JonJames_171 (DD), Yvonnetastic_166 (DD),

Start 61:

- Found in 11 of 113 (9.7%) of genes in pham
- Manual Annotations of this start: 5 of 91
- Called 45.5% of time when present
- Phage (with cluster) where this start called: Edugator_36 (K5), Gengar_36 (K5), Guillsminger_36 (K5), Leston_36 (K5), Paola_36 (K5),

Start 64:

- Found in 1 of 113 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 91
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Efra2_37 (K1),

Start 65:

- Found in 2 of 113 (1.8%) of genes in pham
- Manual Annotations of this start: 2 of 91
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BrutonGaster_128 (CQ2), OneUp_134 (CQ2),

Start 66:

- Found in 3 of 113 (2.7%) of genes in pham
- Manual Annotations of this start: 1 of 91
- Called 33.3% of time when present
- Phage (with cluster) where this start called: LastHope_37 (K1),

Start 67:

- Found in 3 of 113 (2.7%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: SFuller_96 (CF),

Start 68:

- Found in 7 of 113 (6.2%) of genes in pham
- No Manual Annotations of this start.
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Cardigan_172 (DD),

Start 70:

- Found in 22 of 113 (19.5%) of genes in pham
- Manual Annotations of this start: 11 of 91
- Called 54.5% of time when present
- Phage (with cluster) where this start called: Ekdilam_33 (K6), Hurricane_37 (K3), Keshu_37 (K3), KiSi_36 (K1), Krueger_36 (K6), LeMond_36 (K1), Lea83_37 (K3), Pixie_36 (K3), ShedlockHolmes_37 (K3), TBond007_36 (K3), Tigress9_37 (K6), Ximenita_37 (K6),

Start 71:

- Found in 1 of 113 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 91
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rando14_38 (K5),

Start 72:

- Found in 7 of 113 (6.2%) of genes in pham
- Manual Annotations of this start: 4 of 91
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Kudrefre_129 (DU1), Octobien14_125 (DU1), Sephiroth_124 (DU1), Syleon_129 (DU1),

Start 74:

- Found in 3 of 113 (2.7%) of genes in pham
- Manual Annotations of this start: 1 of 91
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CurlyFries_111 (CF), RegnumDei_103 (CF), Shagrat_102 (CF),

Start 75:

- Found in 1 of 113 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 91
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nergal_32 (AG),

Start 76:

- Found in 49 of 113 (43.4%) of genes in pham
- Manual Annotations of this start: 32 of 91
- Called 73.5% of time when present
- Phage (with cluster) where this start called: Agent47_36 (K5), AlleyCat_36 (K5), BananenDer11_35 (K5), Boilgate_33 (K8), Collard_35 (K5), Curiosium_38 (K1), DS6A_37 (singleton), Dadosky_36 (K5), DoubleChamp_35 (K5), Feyre_36 (K5), Guanica15_37 (K1), Heftyboy_36 (K5), InvictusManeo_35 (K5), Kratio_34 (K5), Larva_36 (K5), MalagasyRose_37 (AG), MarkPhew_37 (K1), Miryou_36 (K5), Neighly_36 (K3), Nibb_35 (K1), November_34 (K6), OkiRoe_36 (K5), Omnicron_39 (K5), Oscar_36 (K1), Psycho_36 (K5), Scarlett_36 (K1), Shadow1_35 (K6), SoSeph_36 (K5), Sunflower1121_35 (K6), Syra333_36 (K6), Thyatira_36 (K5), TingHuaYa_36 (K1), Validus_36 (K1), ViviJ_35 (K5), Waterfoul_37 (K5), Yunkel11_37 (K1),

Start 78:

- Found in 21 of 113 (18.6%) of genes in pham
- Manual Annotations of this start: 6 of 91
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Azrael100_89 (V), Cosmo_90 (V), EniyanLRS_87 (V), Kumao_73 (singleton), MaryV_91 (V), Wildcat_91 (V),

Start 79:

- Found in 7 of 113 (6.2%) of genes in pham
- Manual Annotations of this start: 3 of 91
- Called 57.1% of time when present
- Phage (with cluster) where this start called: LilJank_123 (DU2), Neville_126 (DU2), Rabbitrun_128 (DU2), Trax_127 (DU2),

Start 83:

- Found in 19 of 113 (16.8%) of genes in pham
- Manual Annotations of this start: 1 of 91
- Called 5.3% of time when present
- Phage (with cluster) where this start called: ClubL_150 (CQ1),

Start 84:

- Found in 51 of 113 (45.1%) of genes in pham
- Manual Annotations of this start: 4 of 91
- Called 27.5% of time when present
- Phage (with cluster) where this start called: Amao_110 (E), Becksu_108 (E), Brewer_104 (E), Command613_112 (E), FairyPath_110 (E), GoldenSpark_114 (E),

Greep_114 (E), MISSy_111 (E), MollyToe_104 (E), Petra64142_114 (E), Ptowny_106 (E), Sassay_105 (E), StormChicken_112 (E), TeamEdward_110 (E),

Start 85:

- Found in 1 of 113 (0.9%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA1_67 (singleton),

Summary by clusters:

There are 15 clusters represented in this pham: singleton, E, CQ2, AG, DD, CF, K3, K1, K6, K5, V, DU1, CQ1, K8, DU2,

Info for manual annotations of cluster AG:

- Start number 75 was manually annotated 1 time for cluster AG.
- Start number 76 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster CF:

- Start number 51 was manually annotated 2 times for cluster CF.
- Start number 74 was manually annotated 1 time for cluster CF.

Info for manual annotations of cluster CQ1:

- Start number 57 was manually annotated 14 times for cluster CQ1.
- Start number 83 was manually annotated 1 time for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 65 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster DD:

- Start number 58 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DU1:

- Start number 72 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 79 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster E:

- Start number 84 was manually annotated 4 times for cluster E.

Info for manual annotations of cluster K1:

- Start number 64 was manually annotated 1 time for cluster K1.
- Start number 66 was manually annotated 1 time for cluster K1.
- Start number 70 was manually annotated 2 times for cluster K1.
- Start number 76 was manually annotated 8 times for cluster K1.

Info for manual annotations of cluster K3:

- Start number 70 was manually annotated 6 times for cluster K3.

Info for manual annotations of cluster K5:

- Start number 61 was manually annotated 5 times for cluster K5.
- Start number 71 was manually annotated 1 time for cluster K5.

- Start number 76 was manually annotated 17 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 70 was manually annotated 3 times for cluster K6.
- Start number 76 was manually annotated 4 times for cluster K6.

Info for manual annotations of cluster K8:

- Start number 76 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster V:

- Start number 78 was manually annotated 5 times for cluster V.

Gene Information:

Gene: Abscondus_147 Start: 80394, Stop: 80693, Start Num: 57

Candidate Starts for Abscondus_147:

(Start: 57 @80394 has 14 MA's), (Start: 83 @80475 has 1 MA's), (105, 80568), (111, 80592), (114, 80598), (129, 80664), (135, 80682),

Gene: Agent47_36 Start: 30297, Stop: 30521, Start Num: 76

Candidate Starts for Agent47_36:

(Start: 76 @30297 has 32 MA's), (Start: 84 @30327 has 4 MA's), (89, 30339), (97, 30375), (99, 30378), (113, 30435), (118, 30456), (120, 30465), (126, 30489), (128, 30498),

Gene: AlleyCat_36 Start: 30143, Stop: 30367, Start Num: 76

Candidate Starts for AlleyCat_36:

(Start: 76 @30143 has 32 MA's), (Start: 84 @30173 has 4 MA's), (89, 30185), (97, 30221), (99, 30224), (113, 30281), (118, 30302), (119, 30305), (120, 30311), (126, 30335), (128, 30344),

Gene: Amao_110 Start: 63350, Stop: 63583, Start Num: 84

Candidate Starts for Amao_110:

(Start: 78 @63320 has 6 MA's), (Start: 84 @63350 has 4 MA's), (102, 63425), (134, 63542),

Gene: Aphelion_148 Start: 81287, Stop: 81586, Start Num: 57

Candidate Starts for Aphelion_148:

(Start: 57 @81287 has 14 MA's), (Start: 83 @81368 has 1 MA's), (108, 81473), (114, 81491), (129, 81557), (135, 81575),

Gene: Azrael100_89 Start: 54974, Stop: 55225, Start Num: 78

Candidate Starts for Azrael100_89:

(Start: 78 @54974 has 6 MA's), (80, 54980), (108, 55106), (118, 55139), (119, 55142), (121, 55151), (130, 55190),

Gene: Bachita_152 Start: 81434, Stop: 81733, Start Num: 57

Candidate Starts for Bachita_152:

(Start: 57 @81434 has 14 MA's), (Start: 83 @81515 has 1 MA's), (108, 81620), (114, 81638), (129, 81704), (135, 81722),

Gene: BananenDer11_35 Start: 30258, Stop: 30482, Start Num: 76

Candidate Starts for BananenDer11_35:

(Start: 76 @30258 has 32 MA's), (Start: 84 @30288 has 4 MA's), (89, 30300), (97, 30336), (99, 30339), (113, 30396), (118, 30417), (120, 30426), (126, 30450), (128, 30459),

Gene: Becksu_108 Start: 63389, Stop: 63622, Start Num: 84

Candidate Starts for Becksu_108:

(Start: 78 @63359 has 6 MA's), (Start: 84 @63389 has 4 MA's), (102, 63464), (134, 63581),

Gene: Boilgate_33 Start: 31436, Stop: 31663, Start Num: 76

Candidate Starts for Boilgate_33:

(Start: 70 @31433 has 11 MA's), (Start: 76 @31436 has 32 MA's), (89, 31478), (91, 31484), (101, 31529), (102, 31541), (109, 31565), (113, 31577), (116, 31586), (120, 31607), (129, 31646),

Gene: Brewer_104 Start: 61913, Stop: 62146, Start Num: 84

Candidate Starts for Brewer_104:

(Start: 78 @61883 has 6 MA's), (Start: 84 @61913 has 4 MA's), (102, 61988), (134, 62105),

Gene: BrutonGaster_128 Start: 76649, Stop: 76906, Start Num: 65

Candidate Starts for BrutonGaster_128:

(42, 76505), (45, 76535), (48, 76568), (Start: 65 @76649 has 2 MA's), (Start: 79 @76670 has 3 MA's), (82, 76691), (114, 76817), (122, 76853), (123, 76859), (129, 76883),

Gene: Cardigan_172 Start: 88613, Stop: 88891, Start Num: 68

Candidate Starts for Cardigan_172:

(Start: 58 @88574 has 2 MA's), (68, 88613), (Start: 72 @88619 has 4 MA's), (77, 88625), (Start: 84 @88658 has 4 MA's), (100, 88721), (115, 88784), (125, 88829), (129, 88847),

Gene: ClubL_150 Start: 80767, Stop: 80985, Start Num: 83

Candidate Starts for ClubL_150:

(13, 80272), (15, 80293), (17, 80308), (19, 80323), (24, 80470), (25, 80476), (27, 80479), (32, 80521), (33, 80524), (38, 80563), (49, 80647), (52, 80662), (60, 80695), (Start: 83 @80767 has 1 MA's), (90, 80785), (103, 80848), (109, 80875), (114, 80890), (129, 80956), (135, 80974),

Gene: Collard_35 Start: 30258, Stop: 30482, Start Num: 76

Candidate Starts for Collard_35:

(Start: 76 @30258 has 32 MA's), (Start: 84 @30288 has 4 MA's), (89, 30300), (97, 30336), (99, 30339), (113, 30396), (118, 30417), (120, 30426), (126, 30450), (128, 30459),

Gene: Command613_112 Start: 63309, Stop: 63542, Start Num: 84

Candidate Starts for Command613_112:

(Start: 78 @63279 has 6 MA's), (Start: 84 @63309 has 4 MA's), (102, 63384), (134, 63501),

Gene: Cosmo_90 Start: 54975, Stop: 55226, Start Num: 78

Candidate Starts for Cosmo_90:

(Start: 78 @54975 has 6 MA's), (80, 54981), (108, 55107), (118, 55140), (119, 55143), (121, 55152), (130, 55191),

Gene: Cucurbita_148 Start: 81747, Stop: 82046, Start Num: 57

Candidate Starts for Cucurbita_148:

(Start: 57 @81747 has 14 MA's), (Start: 83 @81828 has 1 MA's), (108, 81933), (114, 81951), (129, 82017), (135, 82035),

Gene: Culver_149 Start: 80011, Stop: 80310, Start Num: 57

Candidate Starts for Culver_149:

(Start: 57 @80011 has 14 MA's), (Start: 83 @80092 has 1 MA's), (114, 80215), (129, 80281), (135, 80299),

Gene: Curiosium_38 Start: 29582, Stop: 29809, Start Num: 76

Candidate Starts for Curiosium_38:

(55, 29525), (59, 29543), (Start: 76 @29582 has 32 MA's), (89, 29624), (108, 29705), (111, 29717),

Gene: CurlyFries_111 Start: 54587, Stop: 54838, Start Num: 74

Candidate Starts for CurlyFries_111:

(Start: 74 @54587 has 1 MA's), (Start: 84 @54623 has 4 MA's), (93, 54650), (97, 54671), (101, 54686), (108, 54716), (116, 54740), (119, 54755), (120, 54761),

Gene: DS6A_37 Start: 31428, Stop: 31652, Start Num: 76

Candidate Starts for DS6A_37:

(Start: 76 @31428 has 32 MA's), (Start: 84 @31458 has 4 MA's), (88, 31467), (89, 31470), (90, 31473), (97, 31506), (107, 31548), (108, 31551), (111, 31563), (113, 31566), (123, 31611), (126, 31620), (128, 31629),

Gene: Dadosky_36 Start: 30144, Stop: 30368, Start Num: 76

Candidate Starts for Dadosky_36:

(Start: 76 @30144 has 32 MA's), (Start: 84 @30174 has 4 MA's), (89, 30186), (97, 30222), (99, 30225), (113, 30282), (118, 30303), (119, 30306), (120, 30312), (126, 30336), (128, 30345),

Gene: DoubleChamp_35 Start: 30258, Stop: 30482, Start Num: 76

Candidate Starts for DoubleChamp_35:

(Start: 76 @30258 has 32 MA's), (Start: 84 @30288 has 4 MA's), (89, 30300), (97, 30336), (99, 30339), (113, 30396), (118, 30417), (120, 30426), (126, 30450), (128, 30459),

Gene: Dusty_146 Start: 80222, Stop: 80521, Start Num: 57

Candidate Starts for Dusty_146:

(Start: 57 @80222 has 14 MA's), (Start: 83 @80303 has 1 MA's), (108, 80408), (114, 80426), (129, 80492), (135, 80510),

Gene: Edugator_36 Start: 30537, Stop: 30794, Start Num: 61

Candidate Starts for Edugator_36:

(Start: 61 @30537 has 5 MA's), (62, 30540), (63, 30546), (Start: 76 @30570 has 32 MA's), (89, 30612), (97, 30648), (99, 30651), (108, 30693), (113, 30708), (118, 30729), (119, 30732), (120, 30738), (126, 30762), (128, 30771),

Gene: Efra2_37 Start: 29012, Stop: 29254, Start Num: 64

Candidate Starts for Efra2_37:

(54, 28967), (56, 28976), (Start: 64 @29012 has 1 MA's), (69, 29018), (73, 29024), (Start: 76 @29027 has 32 MA's), (89, 29069), (108, 29150), (111, 29162),

Gene: Ekdilam_33 Start: 29562, Stop: 29792, Start Num: 70

Candidate Starts for Ekdilam_33:

(20, 29244), (23, 29307), (44, 29442), (47, 29472), (Start: 70 @29562 has 11 MA's), (Start: 76 @29565 has 32 MA's), (93, 29622),

Gene: Engineer_151 Start: 81270, Stop: 81569, Start Num: 57

Candidate Starts for Engineer_151:

(Start: 57 @81270 has 14 MA's), (Start: 83 @81351 has 1 MA's), (108, 81456), (114, 81474), (129, 81540), (135, 81558),

Gene: EniyanLRS_87 Start: 54969, Stop: 55220, Start Num: 78

Candidate Starts for EniyanLRS_87:

(Start: 78 @54969 has 6 MA's), (108, 55101), (118, 55134), (119, 55137), (121, 55146), (130, 55185),

Gene: FairyPath_110 Start: 63911, Stop: 64144, Start Num: 84

Candidate Starts for FairyPath_110:

(Start: 78 @63881 has 6 MA's), (Start: 84 @63911 has 4 MA's), (102, 63986), (134, 64103),

Gene: Feyre_36 Start: 30208, Stop: 30432, Start Num: 76

Candidate Starts for Feyre_36:

(Start: 61 @30175 has 5 MA's), (Start: 76 @30208 has 32 MA's), (Start: 84 @30238 has 4 MA's), (89, 30250), (97, 30286), (99, 30289), (104, 30316), (113, 30346), (114, 30349), (120, 30376),

Gene: GMA1_67 Start: 40045, Stop: 40320, Start Num: 85

Candidate Starts for GMA1_67:

(85, 40045), (95, 40081), (112, 40165), (124, 40216),

Gene: Geeche_149 Start: 80647, Stop: 80946, Start Num: 57

Candidate Starts for Geeche_149:

(Start: 57 @80647 has 14 MA's), (Start: 83 @80728 has 1 MA's), (105, 80821), (111, 80845), (114, 80851), (129, 80917), (135, 80935),

Gene: Gengar_36 Start: 30285, Stop: 30542, Start Num: 61

Candidate Starts for Gengar_36:

(Start: 61 @30285 has 5 MA's), (Start: 76 @30318 has 32 MA's), (Start: 84 @30348 has 4 MA's), (89, 30360), (97, 30396), (99, 30399), (104, 30426), (113, 30456), (114, 30459), (120, 30486),

Gene: GoldenSpark_114 Start: 63000, Stop: 63233, Start Num: 84

Candidate Starts for GoldenSpark_114:

(Start: 78 @62970 has 6 MA's), (Start: 84 @63000 has 4 MA's), (102, 63075), (134, 63192),

Gene: Greep_114 Start: 64572, Stop: 64805, Start Num: 84

Candidate Starts for Greep_114:

(Start: 78 @64542 has 6 MA's), (Start: 84 @64572 has 4 MA's), (102, 64647), (134, 64764),

Gene: Guanica15_37 Start: 28984, Stop: 29211, Start Num: 76

Candidate Starts for Guanica15_37:

(Start: 66 @28972 has 1 MA's), (69, 28975), (Start: 76 @28984 has 32 MA's), (89, 29026), (108, 29107), (111, 29119),

Gene: Guillsminger_36 Start: 30256, Stop: 30513, Start Num: 61

Candidate Starts for Guillsminger_36:

(Start: 61 @30256 has 5 MA's), (Start: 76 @30289 has 32 MA's), (Start: 84 @30319 has 4 MA's), (89, 30331), (97, 30367), (99, 30370), (104, 30397), (113, 30427), (114, 30430), (120, 30457),

Gene: Heftyboy_36 Start: 30435, Stop: 30659, Start Num: 76

Candidate Starts for Heftyboy_36:

(Start: 61 @30402 has 5 MA's), (Start: 76 @30435 has 32 MA's), (Start: 84 @30465 has 4 MA's), (89, 30477), (97, 30513), (99, 30516), (104, 30543), (113, 30573), (114, 30576), (120, 30603), (128, 30636),

Gene: Hurricane_37 Start: 30347, Stop: 30586, Start Num: 70

Candidate Starts for Hurricane_37:

(44, 30227), (47, 30257), (Start: 70 @30347 has 11 MA's), (90, 30404), (120, 30530), (126, 30554),

Gene: InvictusManeo_35 Start: 30301, Stop: 30525, Start Num: 76

Candidate Starts for InvictusManeo_35:

(Start: 76 @30301 has 32 MA's), (Start: 84 @30331 has 4 MA's), (89, 30343), (97, 30379), (99, 30382), (113, 30439), (118, 30460), (120, 30469), (126, 30493), (128, 30502),

Gene: Jflix2_98 Start: 56001, Stop: 56309, Start Num: 51

Candidate Starts for Jflix2_98:

(12, 55566), (16, 55650), (21, 55773), (Start: 51 @56001 has 2 MA's), (67, 56067), (87, 56118), (94, 56142), (99, 56163), (123, 56265),

Gene: JonJames_171 Start: 90387, Stop: 90704, Start Num: 58

Candidate Starts for JonJames_171:

(Start: 58 @90387 has 2 MA's), (68, 90426), (Start: 72 @90432 has 4 MA's), (77, 90438), (Start: 84 @90471 has 4 MA's), (100, 90534), (115, 90597), (125, 90642), (129, 90660),

Gene: Keshu_37 Start: 30338, Stop: 30577, Start Num: 70

Candidate Starts for Keshu_37:

(47, 30248), (Start: 70 @30338 has 11 MA's), (90, 30395), (114, 30491), (126, 30545),

Gene: KiSi_36 Start: 29106, Stop: 29339, Start Num: 70

Candidate Starts for KiSi_36:

(14, 28674), (18, 28698), (20, 28788), (44, 28986), (47, 29016), (Start: 70 @29106 has 11 MA's), (Start: 76 @29109 has 32 MA's), (93, 29166),

Gene: Kratio_34 Start: 29847, Stop: 30071, Start Num: 76

Candidate Starts for Kratio_34:

(Start: 76 @29847 has 32 MA's), (Start: 84 @29877 has 4 MA's), (89, 29889), (97, 29925), (99, 29928), (113, 29985), (118, 30006), (120, 30015), (128, 30048),

Gene: Krueger_36 Start: 28751, Stop: 28984, Start Num: 70

Candidate Starts for Krueger_36:

(47, 28661), (Start: 70 @28751 has 11 MA's), (Start: 76 @28754 has 32 MA's), (93, 28811), (101, 28847), (128, 28955),

Gene: Kudfre_129 Start: 69576, Stop: 69818, Start Num: 72

Candidate Starts for Kudfre_129:

(68, 69570), (Start: 72 @69576 has 4 MA's), (89, 69627), (102, 69690), (106, 69711), (120, 69765), (122, 69774), (127, 69795),

Gene: Kumao_73 Start: 50178, Stop: 50432, Start Num: 78

Candidate Starts for Kumao_73:

(Start: 78 @50178 has 6 MA's), (86, 50211), (92, 50229), (96, 50256), (98, 50259), (111, 50319), (117, 50337), (120, 50352), (123, 50367),

Gene: Larva_36 Start: 30011, Stop: 30235, Start Num: 76

Candidate Starts for Larva_36:

(Start: 76 @30011 has 32 MA's), (Start: 84 @30041 has 4 MA's), (89, 30053), (97, 30089), (99, 30092), (113, 30149), (118, 30170), (119, 30173), (120, 30179), (126, 30203), (128, 30212),

Gene: LastHope_37 Start: 28857, Stop: 29096, Start Num: 66

Candidate Starts for LastHope_37:

(22, 28575), (37, 28683), (55, 28812), (Start: 66 @28857 has 1 MA's), (69, 28860), (Start: 76 @28869 has 32 MA's), (89, 28911), (108, 28992), (111, 29004), (120, 29037), (129, 29076),

Gene: LeMond_36 Start: 29177, Stop: 29410, Start Num: 70

Candidate Starts for LeMond_36:

(14, 28745), (18, 28769), (20, 28859), (44, 29057), (47, 29087), (Start: 70 @29177 has 11 MA's), (Start: 76 @29180 has 32 MA's), (93, 29237),

Gene: Lea83_37 Start: 30405, Stop: 30644, Start Num: 70

Candidate Starts for Lea83_37:

(Start: 70 @30405 has 11 MA's), (90, 30462), (120, 30588), (126, 30612),

Gene: Leston_36 Start: 30386, Stop: 30643, Start Num: 61

Candidate Starts for Leston_36:

(Start: 61 @30386 has 5 MA's), (Start: 76 @30419 has 32 MA's), (Start: 84 @30449 has 4 MA's), (89, 30461), (97, 30497), (99, 30500), (104, 30527), (113, 30557), (114, 30560), (120, 30587),

Gene: LilJank_123 Start: 71338, Stop: 71556, Start Num: 79

Candidate Starts for LilJank_123:

(77, 71332), (Start: 79 @71338 has 3 MA's), (81, 71347), (Start: 83 @71362 has 1 MA's), (Start: 84 @71365 has 4 MA's), (86, 71368), (88, 71374), (89, 71377), (91, 71383), (93, 71392), (99, 71416), (101, 71428), (102, 71440), (103, 71443), (107, 71455), (108, 71458), (113, 71473), (114, 71476), (116, 71479), (118, 71494), (120, 71503), (121, 71506), (128, 71536), (133, 71551),

Gene: Lozinak_149 Start: 81275, Stop: 81574, Start Num: 57

Candidate Starts for Lozinak_149:

(Start: 57 @81275 has 14 MA's), (Start: 83 @81356 has 1 MA's), (108, 81461), (114, 81479), (129, 81545), (135, 81563),

Gene: MISSy_111 Start: 63925, Stop: 64158, Start Num: 84

Candidate Starts for MISSy_111:

(Start: 78 @63895 has 6 MA's), (Start: 84 @63925 has 4 MA's), (102, 64000), (134, 64117),

Gene: Madraxi_100 Start: 58159, Stop: 58470, Start Num: 51

Candidate Starts for Madraxi_100:

(1, 57238), (5, 57592), (6, 57622), (7, 57646), (10, 57664), (21, 57931), (Start: 51 @58159 has 2 MA's), (67, 58225), (87, 58276), (93, 58297), (104, 58348), (108, 58363), (111, 58375), (120, 58408),

Gene: MalagasyRose_37 Start: 29428, Stop: 29652, Start Num: 76

Candidate Starts for MalagasyRose_37:

(41, 29272), (50, 29350), (Start: 51 @29353 has 2 MA's), (Start: 76 @29428 has 32 MA's), (88, 29467), (89, 29470), (104, 29536), (108, 29551), (110, 29560), (119, 29590), (120, 29596), (123, 29611), (132, 29641),

Gene: MarkPhew_37 Start: 29081, Stop: 29311, Start Num: 76

Candidate Starts for MarkPhew_37:

(20, 28760), (44, 28958), (47, 28988), (Start: 70 @29078 has 11 MA's), (Start: 76 @29081 has 32 MA's), (Start: 84 @29111 has 4 MA's), (93, 29138),

Gene: MaryV_91 Start: 55039, Stop: 55290, Start Num: 78

Candidate Starts for MaryV_91:

(Start: 78 @55039 has 6 MA's), (80, 55045), (108, 55171), (118, 55204), (119, 55207), (121, 55216), (130, 55255),

Gene: Miryou_36 Start: 30274, Stop: 30498, Start Num: 76

Candidate Starts for Miryou_36:

(Start: 61 @30241 has 5 MA's), (Start: 76 @30274 has 32 MA's), (Start: 84 @30304 has 4 MA's), (89, 30316), (104, 30382), (113, 30412), (120, 30442), (128, 30475),

Gene: Miskis_142 Start: 80036, Stop: 80335, Start Num: 57

Candidate Starts for Miskis_142:

(Start: 57 @80036 has 14 MA's), (Start: 83 @80117 has 1 MA's), (108, 80222), (114, 80240), (129, 80306), (135, 80324),

Gene: MollyToe_104 Start: 61216, Stop: 61449, Start Num: 84

Candidate Starts for MollyToe_104:

(Start: 78 @61186 has 6 MA's), (Start: 84 @61216 has 4 MA's), (102, 61291), (134, 61408),

Gene: Neighly_36 Start: 30010, Stop: 30234, Start Num: 76

Candidate Starts for Neighly_36:

(Start: 76 @30010 has 32 MA's), (Start: 84 @30040 has 4 MA's), (89, 30052), (97, 30088), (99, 30091), (113, 30148), (118, 30169), (119, 30172), (120, 30178), (126, 30202), (128, 30211),

Gene: Nergal_32 Start: 27271, Stop: 27504, Start Num: 75

Candidate Starts for Nergal_32:

(Start: 75 @27271 has 1 MA's), (89, 27319), (91, 27325), (120, 27448), (128, 27481),

Gene: Neville_126 Start: 70558, Stop: 70776, Start Num: 79

Candidate Starts for Neville_126:

(77, 70552), (Start: 79 @70558 has 3 MA's), (81, 70567), (Start: 83 @70582 has 1 MA's), (Start: 84 @70585 has 4 MA's), (86, 70588), (88, 70594), (91, 70603), (93, 70612), (99, 70636), (101, 70648), (107, 70675), (108, 70678), (113, 70693), (114, 70696), (116, 70699), (118, 70714), (119, 70717), (120, 70723), (121, 70726), (128, 70756), (133, 70771),

Gene: Nibb_35 Start: 28648, Stop: 28878, Start Num: 76

Candidate Starts for Nibb_35:

(47, 28555), (Start: 70 @28645 has 11 MA's), (Start: 76 @28648 has 32 MA's), (93, 28705), (120, 28816),

Gene: Norvs_147 Start: 80466, Stop: 80765, Start Num: 57

Candidate Starts for Norvs_147:

(Start: 57 @80466 has 14 MA's), (Start: 83 @80547 has 1 MA's), (108, 80652), (114, 80670), (129, 80736), (135, 80754),

Gene: November_34 Start: 29729, Stop: 29956, Start Num: 76

Candidate Starts for November_34:

(Start: 70 @29726 has 11 MA's), (Start: 76 @29729 has 32 MA's),

Gene: Octobien14_125 Start: 68110, Stop: 68352, Start Num: 72

Candidate Starts for Octobien14_125:

(68, 68104), (Start: 72 @68110 has 4 MA's), (Start: 79 @68122 has 3 MA's), (82, 68143), (89, 68161), (102, 68224), (106, 68245), (117, 68284), (120, 68299), (122, 68308), (128, 68332),

Gene: OkiRoe_36 Start: 30291, Stop: 30515, Start Num: 76

Candidate Starts for OkiRoe_36:

(Start: 61 @30258 has 5 MA's), (Start: 76 @30291 has 32 MA's), (Start: 84 @30321 has 4 MA's), (89, 30333), (97, 30369), (99, 30372), (104, 30399), (113, 30429), (114, 30432), (120, 30459),

Gene: Omnicron_39 Start: 29782, Stop: 30006, Start Num: 76

Candidate Starts for Omnicron_39:

(Start: 76 @29782 has 32 MA's), (Start: 84 @29812 has 4 MA's), (89, 29824), (99, 29863), (113, 29920), (119, 29944), (120, 29950), (126, 29974), (128, 29983),

Gene: OneUp_134 Start: 80067, Stop: 80324, Start Num: 65

Candidate Starts for OneUp_134:

(Start: 65 @80067 has 2 MA's), (77, 80082), (Start: 78 @80085 has 6 MA's), (Start: 79 @80088 has 3 MA's), (99, 80166), (114, 80235), (122, 80271), (123, 80277), (129, 80301), (131, 80304),

Gene: Oscar_36 Start: 29182, Stop: 29412, Start Num: 76

Candidate Starts for Oscar_36:

(14, 28747), (18, 28771), (20, 28861), (44, 29059), (47, 29089), (Start: 70 @29179 has 11 MA's), (Start: 76 @29182 has 32 MA's), (Start: 84 @29212 has 4 MA's), (93, 29239),

Gene: Paola_36 Start: 30256, Stop: 30513, Start Num: 61

Candidate Starts for Paola_36:

(Start: 61 @30256 has 5 MA's), (Start: 76 @30289 has 32 MA's), (Start: 84 @30319 has 4 MA's), (89, 30331), (97, 30367), (99, 30370), (104, 30397), (113, 30427), (114, 30430), (120, 30457),

Gene: Petra64142_114 Start: 63982, Stop: 64215, Start Num: 84

Candidate Starts for Petra64142_114:

(Start: 78 @63952 has 6 MA's), (Start: 84 @63982 has 4 MA's), (102, 64057), (134, 64174),

Gene: PhinkBoden_147 Start: 80864, Stop: 81163, Start Num: 57

Candidate Starts for PhinkBoden_147:

(Start: 57 @80864 has 14 MA's), (Start: 83 @80945 has 1 MA's), (108, 81050), (114, 81068), (129, 81134), (135, 81152),

Gene: Pixie_36 Start: 29889, Stop: 30128, Start Num: 70

Candidate Starts for Pixie_36:

(14, 29457), (18, 29481), (20, 29571), (44, 29769), (47, 29799), (Start: 70 @29889 has 11 MA's), (90, 29946), (114, 30042), (120, 30072),

Gene: Psycho_36 Start: 30141, Stop: 30365, Start Num: 76

Candidate Starts for Psycho_36:

(Start: 76 @30141 has 32 MA's), (Start: 84 @30171 has 4 MA's), (89, 30183), (97, 30219), (99, 30222), (113, 30279), (118, 30300), (119, 30303), (120, 30309), (126, 30333), (128, 30342),

Gene: Ptowny_106 Start: 61554, Stop: 61787, Start Num: 84

Candidate Starts for Ptowny_106:

(Start: 78 @61524 has 6 MA's), (Start: 84 @61554 has 4 MA's), (102, 61629), (134, 61746),

Gene: Rabbitrun_128 Start: 72178, Stop: 72396, Start Num: 79

Candidate Starts for Rabbitrun_128:

(77, 72172), (Start: 79 @72178 has 3 MA's), (81, 72187), (Start: 83 @72202 has 1 MA's), (Start: 84 @72205 has 4 MA's), (86, 72208), (89, 72217), (91, 72223), (93, 72232), (102, 72280), (108, 72298), (113, 72313), (114, 72316), (116, 72319), (118, 72334), (119, 72337), (120, 72343), (121, 72346), (128, 72376), (133, 72391),

Gene: Rando14_38 Start: 29354, Stop: 29578, Start Num: 71

Candidate Starts for Rando14_38:

(Start: 71 @29354 has 1 MA's), (Start: 84 @29384 has 4 MA's), (89, 29396), (99, 29435), (113, 29492), (119, 29516), (120, 29522), (126, 29546), (128, 29555),

Gene: RegnumDei_103 Start: 55213, Stop: 55470, Start Num: 74

Candidate Starts for RegnumDei_103:

(Start: 74 @55213 has 1 MA's), (Start: 84 @55249 has 4 MA's), (93, 55276), (97, 55297), (101, 55312), (116, 55366), (119, 55381),

Gene: SFuller_96 Start: 56122, Stop: 56364, Start Num: 67

Candidate Starts for SFuller_96:

(2, 55393), (3, 55402), (4, 55405), (8, 55555), (9, 55558), (11, 55567), (21, 55828), (34, 55927), (36, 55936), (Start: 51 @56056 has 2 MA's), (67, 56122), (87, 56173), (94, 56197), (123, 56320),

Gene: Sassay_105 Start: 61765, Stop: 61998, Start Num: 84

Candidate Starts for Sassay_105:

(Start: 78 @61735 has 6 MA's), (Start: 84 @61765 has 4 MA's), (102, 61840), (134, 61957),

Gene: Scarlett_36 Start: 29182, Stop: 29412, Start Num: 76

Candidate Starts for Scarlett_36:

(Start: 70 @29179 has 11 MA's), (Start: 76 @29182 has 32 MA's), (93, 29239),

Gene: Sephiroth_124 Start: 69346, Stop: 69588, Start Num: 72

Candidate Starts for Sephiroth_124:

(68, 69340), (Start: 72 @69346 has 4 MA's), (89, 69397), (102, 69460), (106, 69481), (120, 69535), (122, 69544), (127, 69565),

Gene: Shadow1_35 Start: 28661, Stop: 28891, Start Num: 76

Candidate Starts for Shadow1_35:

(44, 28538), (47, 28568), (Start: 70 @28658 has 11 MA's), (Start: 76 @28661 has 32 MA's), (93, 28718), (128, 28862),

Gene: Shagrat_102 Start: 54294, Stop: 54536, Start Num: 74

Candidate Starts for Shagrat_102:

(39, 54126), (46, 54174), (53, 54228), (Start: 74 @54294 has 1 MA's), (101, 54393), (116, 54447), (119, 54462),

Gene: ShedlockHolmes_37 Start: 30411, Stop: 30650, Start Num: 70

Candidate Starts for ShedlockHolmes_37:

(20, 30093), (44, 30291), (47, 30321), (Start: 70 @30411 has 11 MA's), (90, 30468), (120, 30594), (126, 30618),

Gene: Smoothie_150 Start: 80851, Stop: 81150, Start Num: 57

Candidate Starts for Smoothie_150:

(Start: 57 @80851 has 14 MA's), (Start: 83 @80932 has 1 MA's), (114, 81055), (129, 81121), (135, 81139),

Gene: SoSeph_36 Start: 30435, Stop: 30659, Start Num: 76

Candidate Starts for SoSeph_36:

(Start: 61 @30402 has 5 MA's), (Start: 76 @30435 has 32 MA's), (Start: 84 @30465 has 4 MA's), (89, 30477), (97, 30513), (99, 30516), (104, 30543), (113, 30573), (114, 30576), (120, 30603), (128,

30636),

Gene: StormChicken_112 Start: 63483, Stop: 63716, Start Num: 84

Candidate Starts for StormChicken_112:

(Start: 78 @63453 has 6 MA's), (Start: 84 @63483 has 4 MA's), (102, 63558), (134, 63675),

Gene: Sunflower1121_35 Start: 28754, Stop: 28984, Start Num: 76

Candidate Starts for Sunflower1121_35:

(47, 28661), (Start: 70 @28751 has 11 MA's), (Start: 76 @28754 has 32 MA's), (93, 28811), (128, 28955),

Gene: Syleon_129 Start: 70097, Stop: 70339, Start Num: 72

Candidate Starts for Syleon_129:

(68, 70091), (Start: 72 @70097 has 4 MA's), (89, 70148), (102, 70211), (106, 70232), (120, 70286), (122, 70295), (127, 70316),

Gene: Syra333_36 Start: 28680, Stop: 28910, Start Num: 76

Candidate Starts for Syra333_36:

(20, 28359), (23, 28422), (28, 28446), (44, 28557), (47, 28587), (Start: 70 @28677 has 11 MA's), (Start: 76 @28680 has 32 MA's), (93, 28737), (128, 28881),

Gene: TBond007_36 Start: 29888, Stop: 30127, Start Num: 70

Candidate Starts for TBond007_36:

(44, 29768), (47, 29798), (Start: 70 @29888 has 11 MA's), (90, 29945), (114, 30041), (120, 30071),

Gene: TeamEdward_110 Start: 63680, Stop: 63913, Start Num: 84

Candidate Starts for TeamEdward_110:

(Start: 78 @63650 has 6 MA's), (Start: 84 @63680 has 4 MA's), (102, 63755), (134, 63872),

Gene: Thyatira_36 Start: 30289, Stop: 30513, Start Num: 76

Candidate Starts for Thyatira_36:

(Start: 61 @30256 has 5 MA's), (Start: 76 @30289 has 32 MA's), (Start: 84 @30319 has 4 MA's), (89, 30331), (97, 30367), (99, 30370), (104, 30397), (113, 30427), (120, 30457),

Gene: Tigress9_37 Start: 28751, Stop: 28984, Start Num: 70

Candidate Starts for Tigress9_37:

(Start: 70 @28751 has 11 MA's), (Start: 76 @28754 has 32 MA's), (93, 28811), (101, 28847), (128, 28955),

Gene: TingHuaYa_36 Start: 28723, Stop: 28950, Start Num: 76

Candidate Starts for TingHuaYa_36:

(26, 28600), (30, 28630), (43, 28720), (Start: 76 @28723 has 32 MA's), (89, 28765), (108, 28846), (111, 28858), (120, 28891), (129, 28930),

Gene: Toniann_149 Start: 80607, Stop: 80906, Start Num: 57

Candidate Starts for Toniann_149:

(Start: 57 @80607 has 14 MA's), (Start: 83 @80688 has 1 MA's), (108, 80793), (114, 80811), (129, 80877), (135, 80895),

Gene: Trax_127 Start: 71378, Stop: 71596, Start Num: 79

Candidate Starts for Trax_127:

(77, 71372), (Start: 79 @71378 has 3 MA's), (81, 71387), (Start: 83 @71402 has 1 MA's), (Start: 84 @71405 has 4 MA's), (86, 71408), (88, 71414), (89, 71417), (91, 71423), (93, 71432), (99, 71456),

(101, 71468), (102, 71480), (103, 71483), (107, 71495), (108, 71498), (113, 71513), (114, 71516), (116, 71519), (118, 71534), (120, 71543), (121, 71546), (128, 71576), (133, 71591),

Gene: Validus_36 Start: 28742, Stop: 28969, Start Num: 76

Candidate Starts for Validus_36:

(20, 28421), (28, 28508), (35, 28550), (44, 28619), (47, 28649), (Start: 70 @28739 has 11 MA's), (Start: 76 @28742 has 32 MA's), (90, 28787), (132, 28955),

Gene: ViviJ_35 Start: 30058, Stop: 30282, Start Num: 76

Candidate Starts for ViviJ_35:

(Start: 76 @30058 has 32 MA's), (Start: 84 @30088 has 4 MA's), (89, 30100), (97, 30136), (99, 30139), (113, 30196), (118, 30217), (120, 30226), (126, 30250), (128, 30259),

Gene: Waterfoul_37 Start: 30530, Stop: 30754, Start Num: 76

Candidate Starts for Waterfoul_37:

(69, 30524), (Start: 76 @30530 has 32 MA's), (Start: 84 @30560 has 4 MA's), (89, 30572), (97, 30608), (99, 30611), (104, 30638), (113, 30668), (120, 30698), (128, 30731),

Gene: Wildcat_91 Start: 55049, Stop: 55300, Start Num: 78

Candidate Starts for Wildcat_91:

(Start: 78 @55049 has 6 MA's), (80, 55055), (108, 55181), (118, 55214), (119, 55217), (121, 55226), (130, 55265),

Gene: WilliamBoone_150 Start: 78865, Stop: 79164, Start Num: 57

Candidate Starts for WilliamBoone_150:

(Start: 57 @78865 has 14 MA's), (93, 78976), (111, 79063), (114, 79069), (129, 79135), (135, 79153),

Gene: Ximenita_37 Start: 28862, Stop: 29095, Start Num: 70

Candidate Starts for Ximenita_37:

(47, 28772), (Start: 70 @28862 has 11 MA's), (Start: 76 @28865 has 32 MA's), (93, 28922), (128, 29066),

Gene: Yunkel11_37 Start: 28983, Stop: 29210, Start Num: 76

Candidate Starts for Yunkel11_37:

(22, 28689), (29, 28755), (31, 28767), (40, 28824), (Start: 66 @28971 has 1 MA's), (69, 28974), (Start: 76 @28983 has 32 MA's), (89, 29025), (108, 29106), (111, 29118),

Gene: Yvonnetastic_166 Start: 86474, Stop: 86791, Start Num: 58

Candidate Starts for Yvonnetastic_166:

(Start: 58 @86474 has 2 MA's), (68, 86513), (Start: 72 @86519 has 4 MA's), (77, 86525), (Start: 84 @86558 has 4 MA's), (100, 86621), (125, 86729), (129, 86747),