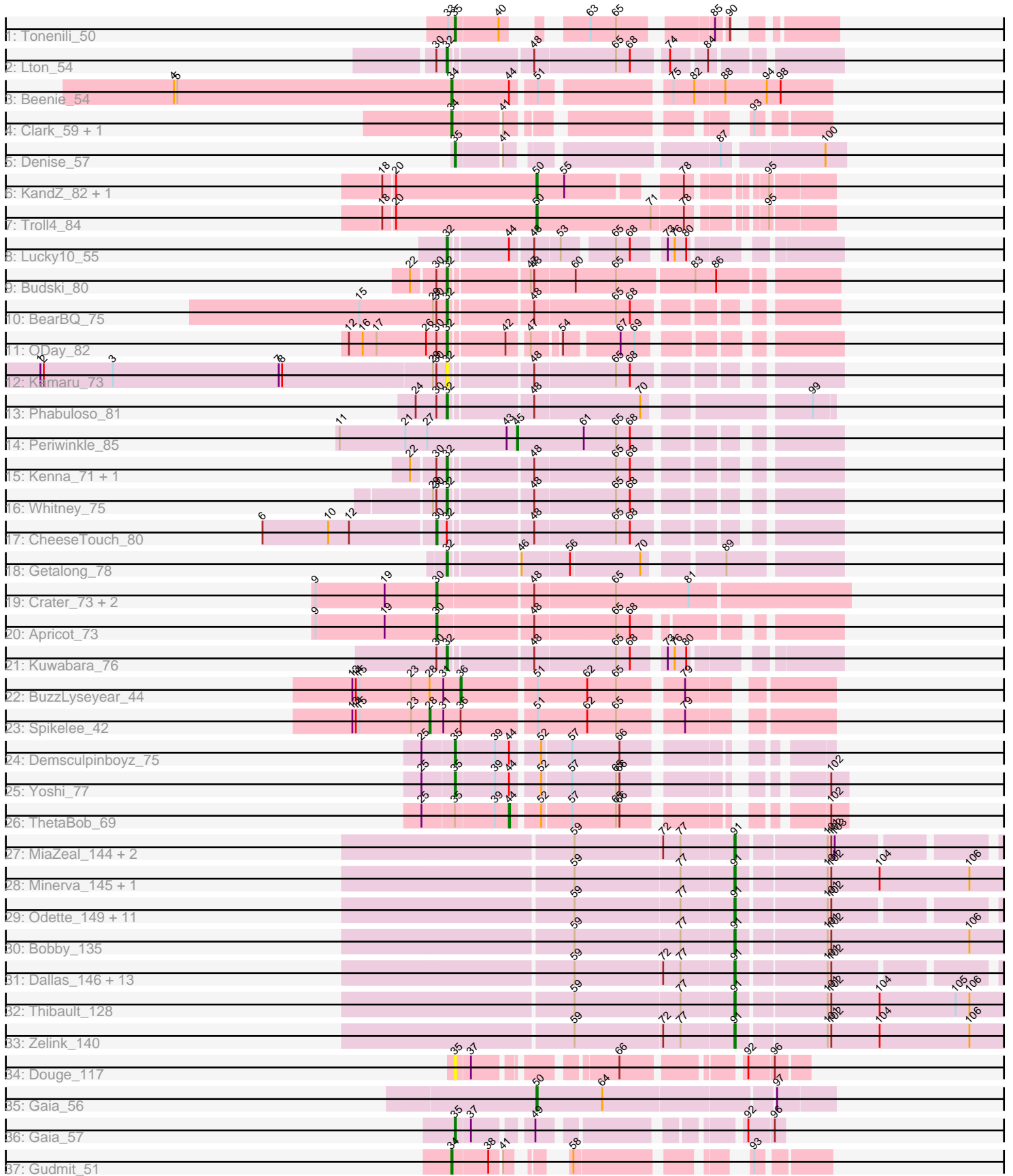


Pham 157841



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 157841 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157841 has 69 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Tonenili_50
- Track 2 : Lton_54
- Track 3 : Beenie_54
- Track 4 : Clark_59, Samman98_60
- Track 5 : Denise_57
- Track 6 : KandZ_82, Helpful_87
- Track 7 : Troll4_84
- Track 8 : Lucky10_55
- Track 9 : Budski_80
- Track 10 : BearBQ_75
- Track 11 : ODay_82
- Track 12 : Kamaru_73
- Track 13 : Phabuloso_81
- Track 14 : Periwinkle_85
- Track 15 : Kenna_71, Lutum_77
- Track 16 : Whitney_75
- Track 17 : CheeseTouch_80
- Track 18 : Getalong_78
- Track 19 : Crater_73, Horus_75, Phistory_72
- Track 20 : Apricot_73
- Track 21 : Kuwabara_76
- Track 22 : BuzzLyseyear_44
- Track 23 : Spikelee_42
- Track 24 : Demsculpinboyz_75
- Track 25 : Yoshi_77
- Track 26 : ThetaBob_69
- Track 27 : MiaZeal_144, Lucky2013_137, Porcelain_141
- Track 28 : Minerva_145, Wanda_145
- Track 29 : Odette_149, HokkenD_138, Beem_147, Kalah2_136, KashFlow_144, Redno2_140, Dove_138, JuicyJay_141, Klein_143, NihilNomen_147, Yeet_139, Bombitas_133
- Track 30 : Bobby_135
- Track 31 : Dallas_146, Optimus_136, Halley_147, EricMillard_137, BAKA_145, Ejimix_138, Hughesyang_144, Schatzie_141, Pound_137, ThreeRngTarjay_140, DmpstrDiver_146, Duke13_141, Phoebus_145, Constella_139
- Track 32 : Thibault_128
- Track 33 : Zelink_140

- Track 34 : Douge_117
- Track 35 : Gaia_56
- Track 36 : Gaia_57
- Track 37 : Gudmit_51

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

The start number called the most often in the published annotations is 91, it was called in 32 of the 65 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BAKA_145, Beem_147, Bobby_135, Bombitas_133, Constella_139, Dallas_146, DmpstrDiver_146, Dove_138, Duke13_141, Ejimix_138, EricMillard_137, Halley_147, HokkenD_138, Hughesyang_144, JuicyJay_141, Kalah2_136, KashFlow_144, Klein_143, Lucky2013_137, MiaZeal_144, Minerva_145, NihilNomen_147, Odette_149, Optimus_136, Phoebus_145, Porcelain_141, Pound_137, Redno2_140, Schatzie_141, Thibault_128, ThreeRngTarjay_140, Wanda_145, Yeet_139, Zelink_140,

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

-

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

- Apricot_73, BearBQ_75, Beenie_54, Budski_80, BuzzLyseyear_44, CheeseTouch_80, Clark_59, Crater_73, Demsculpinboyz_75, Denise_57, Douge_117, Gaia_56, Gaia_57, Getalong_78, Gudmit_51, Helpful_87, Horus_75, Kamaru_73, KandZ_82, Kenna_71, Kuwabara_76, Lton_54, Lucky10_55, Lutum_77, ODay_82, Periwinkle_85, Phabuloso_81, Phistory_72, Samman98_60, Spikelee_42, ThetaBob_69, Tonenili_50, Troll4_84, Whitney_75, Yoshi_77,

Summary by start number:

Start 28:

- Found in 2 of 69 (2.9%) of genes in pham
- Manual Annotations of this start: 1 of 65
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Spikelee_42 (F1),

Start 30:

- Found in 15 of 69 (21.7%) of genes in pham
- Manual Annotations of this start: 5 of 65
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Apricot_73 (DN3), CheeseTouch_80 (DN1), Crater_73 (DN3), Horus_75 (DN1), Phistory_72 (DN1),

Start 32:

- Found in 13 of 69 (18.8%) of genes in pham
- Manual Annotations of this start: 11 of 65
- Called 92.3% of time when present

- Phage (with cluster) where this start called: BearBQ_75 (DN), Budski_80 (DN), Getalong_78 (DN1), Kamaru_73 (DN1), Kenna_71 (DN1), Kuwabara_76 (DN4), Lton_54 (CZ), Lucky10_55 (DH), Lutum_77 (DN1), ODay_82 (DN), Phabuloso_81 (DN1), Whitney_75 (DN1),

Start 34:

- Found in 4 of 69 (5.8%) of genes in pham
- Manual Annotations of this start: 4 of 65
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beenie_54 (CZ4), Clark_59 (CZ4), Gudmit_51 (singleton), Samman98_60 (CZ4),

Start 35:

- Found in 7 of 69 (10.1%) of genes in pham
- Manual Annotations of this start: 5 of 65
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Demsculpinboyz_75 (F2), Denise_57 (CZ5), Douge_117 (L4), Gaia_57 (X), Tonenili_50 (C1), Yoshi_77 (F2),

Start 36:

- Found in 2 of 69 (2.9%) of genes in pham
- Manual Annotations of this start: 1 of 65
- Called 50.0% of time when present
- Phage (with cluster) where this start called: BuzzLyseyear_44 (F1),

Start 44:

- Found in 5 of 69 (7.2%) of genes in pham
- Manual Annotations of this start: 1 of 65
- Called 20.0% of time when present
- Phage (with cluster) where this start called: ThetaBob_69 (F4),

Start 45:

- Found in 1 of 69 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 65
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Periwinkle_85 (DN1),

Start 50:

- Found in 4 of 69 (5.8%) of genes in pham
- Manual Annotations of this start: 4 of 65
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia_56 (X), Helpful_87 (D1), KandZ_82 (D1), Troll4_84 (D1),

Start 91:

- Found in 34 of 69 (49.3%) of genes in pham
- Manual Annotations of this start: 32 of 65
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BAKA_145 (J), Beem_147 (J), Bobby_135 (J), Bombitas_133 (J), Constella_139 (J), Dallas_146 (J), DmpstrDiver_146 (J), Dove_138 (J), Duke13_141 (J), Ejimix_138 (J), EricMillard_137 (J), Halley_147 (J), HokkenD_138 (J), Hughesyang_144 (J), JuicyJay_141 (J), Kalah2_136 (J), KashFlow_144 (J), Klein_143 (J), Lucky2013_137 (J), MiaZeal_144

(J), Minerva_145 (J), NihilNomen_147 (J), Odette_149 (J), Optimus_136 (J), Phoebus_145 (J), Porcelain_141 (J), Pound_137 (J), Redno2_140 (J), Schatzie_141 (J), Thibault_128 (J), ThreeRngTarjay_140 (J), Wanda_145 (J), Yeet_139 (J), Zelink_140 (J),

Summary by clusters:

There are 17 clusters represented in this pham: DN, F1, F2, F4, DH, DN4, J, singleton, CZ4, CZ5, CZ, L4, DN1, DN3, X, C1, D1,

Info for manual annotations of cluster C1:

- Start number 35 was manually annotated 1 time for cluster C1.

Info for manual annotations of cluster CZ:

- Start number 32 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ4:

- Start number 34 was manually annotated 3 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 35 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster D1:

- Start number 50 was manually annotated 3 times for cluster D1.

Info for manual annotations of cluster DH:

- Start number 32 was manually annotated 1 time for cluster DH.

Info for manual annotations of cluster DN:

- Start number 32 was manually annotated 3 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 30 was manually annotated 3 times for cluster DN1.
- Start number 32 was manually annotated 5 times for cluster DN1.
- Start number 45 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster DN3:

- Start number 30 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 32 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster F1:

- Start number 28 was manually annotated 1 time for cluster F1.
- Start number 36 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 35 was manually annotated 2 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 44 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster J:

- Start number 91 was manually annotated 32 times for cluster J.

Info for manual annotations of cluster X:

- Start number 35 was manually annotated 1 time for cluster X.
- Start number 50 was manually annotated 1 time for cluster X.

Gene Information:

Gene: Apricot_73 Start: 42951, Stop: 43250, Start Num: 30

Candidate Starts for Apricot_73:

(9, 42846), (19, 42906), (Start: 30 @42951 has 5 MA's), (48, 43029), (65, 43095), (68, 43107),

Gene: BAKA_145 Start: 76447, Stop: 76692, Start Num: 91

Candidate Starts for BAKA_145:

(59, 76312), (72, 76387), (77, 76402), (Start: 91 @76447 has 32 MA's), (101, 76519), (102, 76522),

Gene: BearBQ_75 Start: 45677, Stop: 45961, Start Num: 32

Candidate Starts for BearBQ_75:

(15, 45602), (29, 45665), (Start: 30 @45668 has 5 MA's), (Start: 32 @45677 has 11 MA's), (48, 45743), (65, 45809), (68, 45821),

Gene: Beem_147 Start: 78045, Stop: 78290, Start Num: 91

Candidate Starts for Beem_147:

(59, 77910), (77, 78000), (Start: 91 @78045 has 32 MA's), (101, 78117), (102, 78120),

Gene: Beenie_54 Start: 39845, Stop: 40141, Start Num: 34

Candidate Starts for Beenie_54:

(4, 39605), (5, 39608), (Start: 34 @39845 has 4 MA's), (Start: 44 @39893 has 1 MA's), (51, 39911), (75, 40007), (82, 40025), (88, 40049), (94, 40085), (98, 40097),

Gene: Bobby_135 Start: 77882, Stop: 78160, Start Num: 91

Candidate Starts for Bobby_135:

(59, 77747), (77, 77837), (Start: 91 @77882 has 32 MA's), (101, 77954), (102, 77957), (106, 78077),

Gene: Bombitas_133 Start: 75456, Stop: 75701, Start Num: 91

Candidate Starts for Bombitas_133:

(59, 75321), (77, 75411), (Start: 91 @75456 has 32 MA's), (101, 75528), (102, 75531),

Gene: Budski_80 Start: 45490, Stop: 45795, Start Num: 32

Candidate Starts for Budski_80:

(22, 45463), (Start: 30 @45481 has 5 MA's), (Start: 32 @45490 has 11 MA's), (47, 45553), (48, 45556), (60, 45589), (65, 45622), (83, 45685), (86, 45703),

Gene: BuzzLyseyear_44 Start: 32289, Stop: 32008, Start Num: 36

Candidate Starts for BuzzLyseyear_44:

(13, 32382), (14, 32379), (15, 32376), (23, 32331), (Start: 28 @32316 has 1 MA's), (31, 32304), (Start: 36 @32289 has 1 MA's), (51, 32229), (62, 32187), (65, 32163), (79, 32115),

Gene: CheeseTouch_80 Start: 40886, Stop: 41182, Start Num: 30

Candidate Starts for CheeseTouch_80:

(6, 40742), (10, 40799), (12, 40817), (Start: 30 @40886 has 5 MA's), (Start: 32 @40895 has 11 MA's), (48, 40961), (65, 41027), (68, 41039),

Gene: Clark_59 Start: 39693, Stop: 39938, Start Num: 34
Candidate Starts for Clark_59:
(Start: 34 @39693 has 4 MA's), (41, 39732), (93, 39882),

Gene: Constella_139 Start: 76698, Stop: 76943, Start Num: 91
Candidate Starts for Constella_139:
(59, 76563), (72, 76638), (77, 76653), (Start: 91 @76698 has 32 MA's), (101, 76770), (102, 76773),

Gene: Crater_73 Start: 43346, Stop: 43687, Start Num: 30
Candidate Starts for Crater_73:
(9, 43241), (19, 43301), (Start: 30 @43346 has 5 MA's), (48, 43424), (65, 43490), (81, 43553),

Gene: Dallas_146 Start: 77512, Stop: 77757, Start Num: 91
Candidate Starts for Dallas_146:
(59, 77377), (72, 77452), (77, 77467), (Start: 91 @77512 has 32 MA's), (101, 77584), (102, 77587),

Gene: Demsculpinboyz_75 Start: 41100, Stop: 41363, Start Num: 35
Candidate Starts for Demsculpinboyz_75:
(25, 41073), (Start: 35 @41100 has 5 MA's), (39, 41133), (Start: 44 @41145 has 1 MA's), (52, 41166), (57, 41190), (66, 41229),

Gene: Denise_57 Start: 36623, Stop: 36913, Start Num: 35
Candidate Starts for Denise_57:
(Start: 35 @36623 has 5 MA's), (41, 36659), (87, 36815), (100, 36896),

Gene: DmpstrDiver_146 Start: 77431, Stop: 77676, Start Num: 91
Candidate Starts for DmpstrDiver_146:
(59, 77296), (72, 77371), (77, 77386), (Start: 91 @77431 has 32 MA's), (101, 77503), (102, 77506),

Gene: Douge_117 Start: 64670, Stop: 64912, Start Num: 35
Candidate Starts for Douge_117:
(Start: 35 @64670 has 5 MA's), (37, 64682), (66, 64778), (92, 64865), (96, 64886),

Gene: Dove_138 Start: 73030, Stop: 73275, Start Num: 91
Candidate Starts for Dove_138:
(59, 72895), (77, 72985), (Start: 91 @73030 has 32 MA's), (101, 73102), (102, 73105),

Gene: Duke13_141 Start: 74732, Stop: 74977, Start Num: 91
Candidate Starts for Duke13_141:
(59, 74597), (72, 74672), (77, 74687), (Start: 91 @74732 has 32 MA's), (101, 74804), (102, 74807),

Gene: Ejimix_138 Start: 77580, Stop: 77825, Start Num: 91
Candidate Starts for Ejimix_138:
(59, 77445), (72, 77520), (77, 77535), (Start: 91 @77580 has 32 MA's), (101, 77652), (102, 77655),

Gene: EricMillard_137 Start: 76084, Stop: 76329, Start Num: 91
Candidate Starts for EricMillard_137:
(59, 75949), (72, 76024), (77, 76039), (Start: 91 @76084 has 32 MA's), (101, 76156), (102, 76159),

Gene: Gaia_56 Start: 40287, Stop: 40042, Start Num: 50

Candidate Starts for Gaia_56:

(Start: 50 @40287 has 4 MA's), (64, 40230), (97, 40089),

Gene: Gaia_57 Start: 40635, Stop: 40414, Start Num: 35

Candidate Starts for Gaia_57:

(Start: 35 @40635 has 5 MA's), (37, 40623), (49, 40581), (92, 40443), (96, 40422),

Gene: Getalong_78 Start: 45864, Stop: 46163, Start Num: 32

Candidate Starts for Getalong_78:

(Start: 32 @45864 has 11 MA's), (46, 45918), (56, 45957), (70, 46014), (89, 46071),

Gene: Gudmit_51 Start: 32451, Stop: 32681, Start Num: 34

Candidate Starts for Gudmit_51:

(Start: 34 @32451 has 4 MA's), (38, 32481), (41, 32490), (58, 32514), (93, 32625),

Gene: Halley_147 Start: 77896, Stop: 78141, Start Num: 91

Candidate Starts for Halley_147:

(59, 77761), (72, 77836), (77, 77851), (Start: 91 @77896 has 32 MA's), (101, 77968), (102, 77971),

Gene: Helpful_87 Start: 60143, Stop: 60346, Start Num: 50

Candidate Starts for Helpful_87:

(18, 60017), (20, 60026), (Start: 50 @60143 has 4 MA's), (55, 60167), (78, 60245), (95, 60296),

Gene: HokkenD_138 Start: 77055, Stop: 77300, Start Num: 91

Candidate Starts for HokkenD_138:

(59, 76920), (77, 77010), (Start: 91 @77055 has 32 MA's), (101, 77127), (102, 77130),

Gene: Horus_75 Start: 45413, Stop: 45754, Start Num: 30

Candidate Starts for Horus_75:

(9, 45308), (19, 45368), (Start: 30 @45413 has 5 MA's), (48, 45491), (65, 45557), (81, 45620),

Gene: Hughesyang_144 Start: 77666, Stop: 77911, Start Num: 91

Candidate Starts for Hughesyang_144:

(59, 77531), (72, 77606), (77, 77621), (Start: 91 @77666 has 32 MA's), (101, 77738), (102, 77741),

Gene: JuicyJay_141 Start: 79181, Stop: 79426, Start Num: 91

Candidate Starts for JuicyJay_141:

(59, 79046), (77, 79136), (Start: 91 @79181 has 32 MA's), (101, 79253), (102, 79256),

Gene: Kalah2_136 Start: 76787, Stop: 77032, Start Num: 91

Candidate Starts for Kalah2_136:

(59, 76652), (77, 76742), (Start: 91 @76787 has 32 MA's), (101, 76859), (102, 76862),

Gene: Kamaru_73 Start: 43317, Stop: 43604, Start Num: 32

Candidate Starts for Kamaru_73:

(1, 42969), (2, 42972), (3, 43032), (7, 43176), (8, 43179), (29, 43305), (Start: 30 @43308 has 5 MA's),
(Start: 32 @43317 has 11 MA's), (48, 43383), (65, 43449), (68, 43461),

Gene: KandZ_82 Start: 59971, Stop: 60174, Start Num: 50

Candidate Starts for KandZ_82:

(18, 59845), (20, 59854), (Start: 50 @59971 has 4 MA's), (55, 59995), (78, 60073), (95, 60124),

Gene: KashFlow_144 Start: 76087, Stop: 76332, Start Num: 91

Candidate Starts for KashFlow_144:

(59, 75952), (77, 76042), (Start: 91 @76087 has 32 MA's), (101, 76159), (102, 76162),

Gene: Kenna_71 Start: 43390, Stop: 43677, Start Num: 32

Candidate Starts for Kenna_71:

(22, 43363), (Start: 30 @43381 has 5 MA's), (Start: 32 @43390 has 11 MA's), (48, 43456), (65, 43522), (68, 43534),

Gene: Klein_143 Start: 75389, Stop: 75634, Start Num: 91

Candidate Starts for Klein_143:

(59, 75254), (77, 75344), (Start: 91 @75389 has 32 MA's), (101, 75461), (102, 75464),

Gene: Kuwabara_76 Start: 45678, Stop: 45968, Start Num: 32

Candidate Starts for Kuwabara_76:

(Start: 30 @45669 has 5 MA's), (Start: 32 @45678 has 11 MA's), (48, 45744), (65, 45810), (68, 45822), (73, 45843), (76, 45849), (80, 45858),

Gene: Lton_54 Start: 33162, Stop: 33458, Start Num: 32

Candidate Starts for Lton_54:

(Start: 30 @33153 has 5 MA's), (Start: 32 @33162 has 11 MA's), (48, 33228), (65, 33294), (68, 33306), (74, 33333), (84, 33360),

Gene: Lucky10_55 Start: 35945, Stop: 36226, Start Num: 32

Candidate Starts for Lucky10_55:

(Start: 32 @35945 has 11 MA's), (Start: 44 @35993 has 1 MA's), (48, 36011), (53, 36032), (65, 36068), (68, 36080), (73, 36101), (76, 36107), (80, 36116),

Gene: Lucky2013_137 Start: 73141, Stop: 73386, Start Num: 91

Candidate Starts for Lucky2013_137:

(59, 73006), (72, 73081), (77, 73096), (Start: 91 @73141 has 32 MA's), (101, 73213), (102, 73216), (103, 73219),

Gene: Lutum_77 Start: 44553, Stop: 44840, Start Num: 32

Candidate Starts for Lutum_77:

(22, 44526), (Start: 30 @44544 has 5 MA's), (Start: 32 @44553 has 11 MA's), (48, 44619), (65, 44685), (68, 44697),

Gene: MiaZeal_144 Start: 74280, Stop: 74525, Start Num: 91

Candidate Starts for MiaZeal_144:

(59, 74145), (72, 74220), (77, 74235), (Start: 91 @74280 has 32 MA's), (101, 74352), (102, 74355), (103, 74358),

Gene: Minerva_145 Start: 76838, Stop: 77116, Start Num: 91

Candidate Starts for Minerva_145:

(59, 76703), (77, 76793), (Start: 91 @76838 has 32 MA's), (101, 76910), (102, 76913), (104, 76955), (106, 77033),

Gene: NihilNomen_147 Start: 77126, Stop: 77371, Start Num: 91

Candidate Starts for NihilNomen_147:

(59, 76991), (77, 77081), (Start: 91 @77126 has 32 MA's), (101, 77198), (102, 77201),

Gene: ODay_82 Start: 46976, Stop: 47251, Start Num: 32

Candidate Starts for ODay_82:

(12, 46892), (16, 46904), (17, 46916), (26, 46958), (Start: 30 @46967 has 5 MA's), (Start: 32 @46976 has 11 MA's), (42, 47021), (47, 47036), (54, 47057), (67, 47099), (69, 47111),

Gene: Odette_149 Start: 79269, Stop: 79514, Start Num: 91

Candidate Starts for Odette_149:

(59, 79134), (77, 79224), (Start: 91 @79269 has 32 MA's), (101, 79341), (102, 79344),

Gene: Optimus_136 Start: 74406, Stop: 74651, Start Num: 91

Candidate Starts for Optimus_136:

(59, 74271), (72, 74346), (77, 74361), (Start: 91 @74406 has 32 MA's), (101, 74478), (102, 74481),

Gene: Periwinkle_85 Start: 46796, Stop: 47035, Start Num: 45

Candidate Starts for Periwinkle_85:

(11, 46643), (21, 46700), (27, 46718), (43, 46787), (Start: 45 @46796 has 1 MA's), (61, 46853), (65, 46880), (68, 46892),

Gene: Phabuloso_81 Start: 45523, Stop: 45816, Start Num: 32

Candidate Starts for Phabuloso_81:

(24, 45496), (Start: 30 @45514 has 5 MA's), (Start: 32 @45523 has 11 MA's), (48, 45589), (70, 45676), (99, 45799),

Gene: Phistory_72 Start: 42511, Stop: 42852, Start Num: 30

Candidate Starts for Phistory_72:

(9, 42406), (19, 42466), (Start: 30 @42511 has 5 MA's), (48, 42589), (65, 42655), (81, 42718),

Gene: Phoebus_145 Start: 79020, Stop: 79265, Start Num: 91

Candidate Starts for Phoebus_145:

(59, 78885), (72, 78960), (77, 78975), (Start: 91 @79020 has 32 MA's), (101, 79092), (102, 79095),

Gene: Porcelain_141 Start: 74087, Stop: 74332, Start Num: 91

Candidate Starts for Porcelain_141:

(59, 73952), (72, 74027), (77, 74042), (Start: 91 @74087 has 32 MA's), (101, 74159), (102, 74162), (103, 74165),

Gene: Pound_137 Start: 76839, Stop: 77084, Start Num: 91

Candidate Starts for Pound_137:

(59, 76704), (72, 76779), (77, 76794), (Start: 91 @76839 has 32 MA's), (101, 76911), (102, 76914),

Gene: Redno2_140 Start: 75128, Stop: 75373, Start Num: 91

Candidate Starts for Redno2_140:

(59, 74993), (77, 75083), (Start: 91 @75128 has 32 MA's), (101, 75200), (102, 75203),

Gene: Samman98_60 Start: 39796, Stop: 40041, Start Num: 34

Candidate Starts for Samman98_60:

(Start: 34 @39796 has 4 MA's), (41, 39835), (93, 39985),

Gene: Schatzie_141 Start: 77688, Stop: 77933, Start Num: 91

Candidate Starts for Schatzie_141:

(59, 77553), (72, 77628), (77, 77643), (Start: 91 @77688 has 32 MA's), (101, 77760), (102, 77763),

Gene: Spikelee_42 Start: 31774, Stop: 31466, Start Num: 28

Candidate Starts for Spikelee_42:

(13, 31840), (14, 31837), (15, 31834), (23, 31789), (Start: 28 @31774 has 1 MA's), (31, 31762), (Start: 36 @31747 has 1 MA's), (51, 31687), (62, 31645), (65, 31621), (79, 31573),

Gene: ThetaBob_69 Start: 42635, Stop: 42865, Start Num: 44

Candidate Starts for ThetaBob_69:

(25, 42563), (Start: 35 @42590 has 5 MA's), (39, 42623), (Start: 44 @42635 has 1 MA's), (52, 42656), (57, 42680), (65, 42716), (66, 42719), (102, 42851),

Gene: Thibault_128 Start: 74023, Stop: 74301, Start Num: 91

Candidate Starts for Thibault_128:

(59, 73888), (77, 73978), (Start: 91 @74023 has 32 MA's), (101, 74095), (102, 74098), (104, 74140), (105, 74206), (106, 74218),

Gene: ThreeRngTarjay_140 Start: 77611, Stop: 77856, Start Num: 91

Candidate Starts for ThreeRngTarjay_140:

(59, 77476), (72, 77551), (77, 77566), (Start: 91 @77611 has 32 MA's), (101, 77683), (102, 77686),

Gene: Tonenili_50 Start: 15803, Stop: 16036, Start Num: 35

Candidate Starts for Tonenili_50:

(33, 15797), (Start: 35 @15803 has 5 MA's), (40, 15839), (63, 15875), (65, 15896), (85, 15962), (90, 15971),

Gene: Troll4_84 Start: 59937, Stop: 60161, Start Num: 50

Candidate Starts for Troll4_84:

(18, 59811), (20, 59820), (Start: 50 @59937 has 4 MA's), (71, 60033), (78, 60060), (95, 60111),

Gene: Wanda_145 Start: 75318, Stop: 75596, Start Num: 91

Candidate Starts for Wanda_145:

(59, 75183), (77, 75273), (Start: 91 @75318 has 32 MA's), (101, 75390), (102, 75393), (104, 75435), (106, 75513),

Gene: Whitney_75 Start: 45513, Stop: 45800, Start Num: 32

Candidate Starts for Whitney_75:

(29, 45501), (Start: 30 @45504 has 5 MA's), (Start: 32 @45513 has 11 MA's), (48, 45579), (65, 45645), (68, 45657),

Gene: Yeet_139 Start: 77084, Stop: 77329, Start Num: 91

Candidate Starts for Yeet_139:

(59, 76949), (77, 77039), (Start: 91 @77084 has 32 MA's), (101, 77156), (102, 77159),

Gene: Yoshi_77 Start: 42854, Stop: 43129, Start Num: 35

Candidate Starts for Yoshi_77:

(25, 42827), (Start: 35 @42854 has 5 MA's), (39, 42887), (Start: 44 @42899 has 1 MA's), (52, 42920), (57, 42944), (65, 42980), (66, 42983), (102, 43115),

Gene: Zelink_140 Start: 78130, Stop: 78408, Start Num: 91

Candidate Starts for Zelink_140:

(59, 77995), (72, 78070), (77, 78085), (Start: 91 @78130 has 32 MA's), (101, 78202), (102, 78205), (104, 78247), (106, 78325),