



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 156224 Report

This analysis was run 04/22/24 on database version 561.

Pham number 156224 has 122 members, 6 are drafts.

Phages represented in each track:

- Track 1 : FireRed_149, DoctorDiddles_144, BadStone_144, DrDrey_146, Dusk_144, Simpliphy_146, Rakim_147, Murica_148, PhatBacter_149, Bask21_149, Command613_148, Kostya_145, Mindy_149, xkcd_150, 244_144
- Track 2 : Cactus_153, Goldilocks_151, Sotrice96_150, SophKB_143, Argent26_149, Holt_151, Moldemort_147, Kimchi_150, Bench_148, Lilizi_145, Gemini_150, Kanye_141, StolenFromERC_147, Adnama_149, Gage_136, GoldenSpark_149, NelitzaMV_140, Wiggin_148, Easy2Say_147
- Track 3 : Thresher_147, Czystoczon1_145, JeTaime_143
- Track 4 : Mosby_142, Terminus_148, Contagion_141, Tomaszewski_139, Sassay_140
- Track 5 : MPhalcon_147, HufflyPuff_147, Elph10_144, Lilac_141, Porky_148, NoSleep_144, Phrux_142, Emmina_147, Pumpkin_144, ChotaBhai_150
- Track 6 : Asriel_143, Balomoji_147, Barbarian_145, Traaww1_143, Flypotenuse_141
- Track 7 : Icee_145, ABCat_144
- Track 8 : Youngblood_149, Willez_143, Misfit_145
- Track 9 : YassJohnny_140
- Track 10 : ShereKhan_144, Tarkin_143, Quallification_145
- Track 11 : Rimmer_144, Petra64142_145
- Track 12 : Tuco_149
- Track 13 : IHOP_150
- Track 14 : Pharsalus_143, GooberAzure_148, Miniwave_139, TBrady12_150, Paperbeatsrock_143
- Track 15 : Filch_149
- Track 16 : Eureka_146, Nimrod_144, Lilpickle_145, Nala_148, Manda_148, Elite2014_145, ChosenOne_146, Phaux_146
- Track 17 : MISSy_146
- Track 18 : Goku_144
- Track 19 : Highbury_140, MadamMonkfish_147, Dumbo_148, Cookies_147, Bruin_142, Saints25_140
- Track 20 : Marshmallow_148, OrionPax_143, Ukulele_142
- Track 21 : Teaspoon_124
- Track 22 : Toto_142, ShamWow_144, CrystalP_145
- Track 23 : Stark_142
- Track 24 : Hopey_143
- Track 25 : RiverMonster_145, Cjw1_142
- Track 26 : Pat3_146, HanKaySha_144, Glexan_149, Harella_152, Gator_147

- Track 27 : Inca_146
- Track 28 : Murphy_147
- Track 29 : Henry_145, Myrale_145, TeardropMSU_144
- Track 30 : SirDuracell_147
- Track 31 : Phaja_150
- Track 32 : BaboJay_145
- Track 33 : Stank_148, Xandras_143
- Track 34 : BilboSwaggins_142
- Track 35 : Maxxinista_147
- Track 36 : Hoonter_147
- Track 37 : Buck_147

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

The start number called the most often in the published annotations is 31, it was called in 111 of the 116 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244_144, ABCat_144, Adnama_149, Argent26_149, Asriel_143, BaboJay_145, BadStone_144, Balomoji_147, Barbarian_145, Bask21_149, Bench_148, Bruin_142, Buck_147, Cactus_153, ChosenOne_146, ChotaBhai_150, Cjw1_142, Command613_148, Contagion_141, Cookies_147, CrystalP_145, Czyszczonek_145, DoctorDiddles_144, DrDrey_146, Dumbo_148, Dusk_144, Easy2Say_147, Elite2014_145, Elph10_144, Emmina_147, Eureka_146, Filch_149, FireRed_149, Flypotenuse_141, Gage_136, Gator_147, Gemini_150, Glexan_149, GoldenSpark_149, Goldilocks_151, GooberAzure_148, HanKaySha_144, Harella_152, Henry_145, Highbury_140, Holt_151, Hoonter_147, Hopey_143, HufflyPuff_147, IHOP_150, Icee_145, Inca_146, JeTaime_143, Kanye_141, Kimchi_150, Kostya_145, Lilac_141, Lilizi_145, Lilpickle_145, MISSy_146, MPhalcon_147, MadamMonkfish_147, Manda_148, Marshmallow_148, Maxxinista_147, Mindy_149, Miniwave_139, Moldemort_147, Mosby_142, Murica_148, Murphy_147, Myrale_145, Nala_148, NelitzaMV_140, Nimrod_144, NoSleep_144, OrionPax_143, Paperbeatsrock_143, Pat3_146, Petra64142_145, Phaja_150, Pharsalus_143, PhatBacter_149, Phaux_146, Phrux_142, Porky_148, Pumpkin_144, Quallification_145, Rakim_147, Rimmer_144, RiverMonster_145, Saints25_140, Sassay_140, ShamWow_144, ShereKhan_144, Simpliphy_146, SophKB_143, Sotrice96_150, Stark_142, StolenFromERC_147, TBrady12_150, Tarkin_143, TeardropMSU_144, Terminus_148, Thresher_147, Tomaszewski_139, Toto_142, Traaww1_143, Tuco_149, Ukulele_142, Wiggin_148, YassJohnny_140, xkcd_150,

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

- BilboSwaggins_142, Goku_144, Misfit_145, SirDuracell_147, Stank_148, Teaspoon_124, Willez_143, Xandras_143, Youngblood_149,

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

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Summary by start number:

Start 31:

- Found in 122 of 122 (100.0%) of genes in pham
- Manual Annotations of this start: 111 of 116
- Called 92.6% of time when present
- Phage (with cluster) where this start called: 244_144 (E), ABCat_144 (E), Adnama_149 (E), Argent26_149 (E), Asriel_143 (E), BaboJay_145 (E), BadStone_144 (E), Balomoji_147 (E), Barbarian_145 (E), Bask21_149 (E), Bench_148 (E), Bruin_142 (E), Buck_147 (E), Cactus_153 (E), ChosenOne_146 (E), ChotaBhai_150 (E), Cjw1_142 (E), Command613_148 (E), Contagion_141 (E), Cookies_147 (E), CrystalP_145 (E), Czyszczonek_145 (E), DoctorDiddles_144 (E), DrDrey_146 (E), Dumbo_148 (E), Dusk_144 (E), Easy2Say_147 (E), Elite2014_145 (E), Elph10_144 (E), Emmina_147 (E), Eureka_146 (E), Filch_149 (E), FireRed_149 (E), Flypotenuse_141 (E), Gage_136 (E), Gator_147 (E), Gemini_150 (E), Glexan_149 (E), GoldenSpark_149 (E), Goldilocks_151 (E), GooberAzure_148 (E), HanKaySha_144 (E), Harella_152 (E), Henry_145 (E), Highbury_140 (E), Holt_151 (E), Hoonter_147 (E), Hopey_143 (E), HufflyPuff_147 (E), IHOP_150 (E), Icee_145 (E), Inca_146 (E), JeTaime_143 (E), Kanye_141 (E), Kimchi_150 (E), Kostya_145 (E), Lilac_141 (E), Lilizi_145 (E), Lipickle_145 (E), MISSy_146 (E), MPhalcon_147 (E), MadamMonkfish_147 (E), Manda_148 (E), Marshmallow_148 (E), Maxxinista_147 (E), Mindy_149 (E), Miniwave_139 (E), Moldemort_147 (E), Mosby_142 (E), Murica_148 (E), Murphy_147 (E), Myrale_145 (E), Nala_148 (E), NelitzaMV_140 (E), Nimrod_144 (E), NoSleep_144 (E), OrionPax_143 (E), Paperbeatsrock_143 (E), Pat3_146 (E), Petra64142_145 (E), Phaja_150 (E), Pharsalus_143 (E), PhatBacter_149 (E), Phaux_146 (E), Phrux_142 (E), Porky_148 (E), Pumpkin_144 (E), Quallification_145 (E), Rakim_147 (E), Rimmer_144 (E), RiverMonster_145 (E), Saints25_140 (E), Sassay_140 (E), ShamWow_144 (E), ShereKhan_144 (E), Simpliphy_146 (E), SophKB_143 (E), Sotrice96_150 (E), Stark_142 (E), StolenFromERC_147 (E), TBrady12_150 (E), Tarkin_143 (E), TeardropMSU_144 (E), Terminus_148 (E), Thresher_147 (E), Tomaszewski_139 (E), Toto_142 (E), Traaww1_143 (E), Tuco_149 (E), Ukulele_142 (E), Wiggin_148 (E), YassJohnny_140 (E), xkcd_150 (E),

Start 32:

- Found in 111 of 122 (91.0%) of genes in pham
- Manual Annotations of this start: 5 of 116
- Called 8.1% of time when present
- Phage (with cluster) where this start called: BilboSwaggins_142 (E), Goku_144 (E), Misfit_145 (E), SirDuracell_147 (E), Stank_148 (E), Teaspoon_124 (E), Willez_143 (E), Xandras_143 (E), Youngblood_149 (E),

Summary by clusters:

There is one cluster represented in this pham: E

Info for manual annotations of cluster E:

- Start number 31 was manually annotated 111 times for cluster E.
- Start number 32 was manually annotated 5 times for cluster E.

Gene Information:

Gene: 244_144 Start: 73691, Stop: 73912, Start Num: 31

Candidate Starts for 244_144:

(Start: 31 @73691 has 111 MA's), (Start: 32 @73718 has 5 MA's), (33, 73751), (34, 73754),

Gene: ABCat_144 Start: 75339, Stop: 75560, Start Num: 31

Candidate Starts for ABCat_144:

(Start: 31 @75339 has 111 MA's), (Start: 32 @75366 has 5 MA's), (33, 75399), (34, 75402), (36, 75453),

Gene: Adnama_149 Start: 74416, Stop: 74637, Start Num: 31

Candidate Starts for Adnama_149:

(4, 73579), (9, 73627), (12, 73654), (15, 73681), (21, 73831), (24, 73897), (Start: 31 @74416 has 111 MA's), (Start: 32 @74443 has 5 MA's), (33, 74476), (34, 74479),

Gene: Argent26_149 Start: 74340, Stop: 74561, Start Num: 31

Candidate Starts for Argent26_149:

(4, 73503), (9, 73551), (12, 73578), (15, 73605), (21, 73755), (24, 73821), (Start: 31 @74340 has 111 MA's), (Start: 32 @74367 has 5 MA's), (33, 74400), (34, 74403),

Gene: Asriel_143 Start: 73805, Stop: 74023, Start Num: 31

Candidate Starts for Asriel_143:

(Start: 31 @73805 has 111 MA's), (33, 73862), (34, 73865), (35, 73880), (37, 73949),

Gene: BaboJay_145 Start: 75585, Stop: 75806, Start Num: 31

Candidate Starts for BaboJay_145:

(Start: 31 @75585 has 111 MA's), (Start: 32 @75612 has 5 MA's), (33, 75645), (34, 75648),

Gene: BadStone_144 Start: 74887, Stop: 75108, Start Num: 31

Candidate Starts for BadStone_144:

(Start: 31 @74887 has 111 MA's), (Start: 32 @74914 has 5 MA's), (33, 74947), (34, 74950),

Gene: Balomoji_147 Start: 75630, Stop: 75848, Start Num: 31

Candidate Starts for Balomoji_147:

(Start: 31 @75630 has 111 MA's), (33, 75687), (34, 75690), (35, 75705), (37, 75774),

Gene: Barbarian_145 Start: 73805, Stop: 74023, Start Num: 31

Candidate Starts for Barbarian_145:

(Start: 31 @73805 has 111 MA's), (33, 73862), (34, 73865), (35, 73880), (37, 73949),

Gene: Bask21_149 Start: 74205, Stop: 74426, Start Num: 31

Candidate Starts for Bask21_149:

(Start: 31 @74205 has 111 MA's), (Start: 32 @74232 has 5 MA's), (33, 74265), (34, 74268),

Gene: Bench_148 Start: 75300, Stop: 75521, Start Num: 31

Candidate Starts for Bench_148:

(4, 74463), (9, 74511), (12, 74538), (15, 74565), (21, 74715), (24, 74781), (Start: 31 @75300 has 111 MA's), (Start: 32 @75327 has 5 MA's), (33, 75360), (34, 75363),

Gene: BilboSwaggins_142 Start: 75718, Stop: 75912, Start Num: 32

Candidate Starts for BilboSwaggins_142:

(4, 74872), (9, 74920), (12, 74947), (15, 74974), (21, 75121), (23, 75178), (Start: 31 @75691 has 111 MA's), (Start: 32 @75718 has 5 MA's), (33, 75751), (34, 75754),

Gene: Bruin_142 Start: 73418, Stop: 73639, Start Num: 31

Candidate Starts for Bruin_142:

(20, 72887), (Start: 31 @73418 has 111 MA's), (Start: 32 @73445 has 5 MA's), (33, 73478), (34, 73481),

Gene: Buck_147 Start: 75896, Stop: 76117, Start Num: 31

Candidate Starts for Buck_147:

(4, 75071), (9, 75119), (12, 75146), (15, 75173), (21, 75323), (24, 75389), (Start: 31 @75896 has 111 MA's), (Start: 32 @75923 has 5 MA's), (33, 75956), (34, 75959),

Gene: Cactus_153 Start: 74811, Stop: 75032, Start Num: 31

Candidate Starts for Cactus_153:

(4, 73974), (9, 74022), (12, 74049), (15, 74076), (21, 74226), (24, 74292), (Start: 31 @74811 has 111 MA's), (Start: 32 @74838 has 5 MA's), (33, 74871), (34, 74874),

Gene: ChosenOne_146 Start: 74178, Stop: 74399, Start Num: 31

Candidate Starts for ChosenOne_146:

(Start: 31 @74178 has 111 MA's), (Start: 32 @74205 has 5 MA's), (33, 74238), (34, 74241),

Gene: ChotaBhai_150 Start: 75353, Stop: 75574, Start Num: 31

Candidate Starts for ChotaBhai_150:

(Start: 31 @75353 has 111 MA's), (Start: 32 @75380 has 5 MA's), (33, 75413), (34, 75416),

Gene: Cjw1_142 Start: 75139, Stop: 75360, Start Num: 31

Candidate Starts for Cjw1_142:

(7, 74395), (8, 74407), (18, 74572), (21, 74620), (Start: 31 @75139 has 111 MA's), (Start: 32 @75166 has 5 MA's), (33, 75199), (34, 75202),

Gene: Command613_148 Start: 75233, Stop: 75454, Start Num: 31

Candidate Starts for Command613_148:

(Start: 31 @75233 has 111 MA's), (Start: 32 @75260 has 5 MA's), (33, 75293), (34, 75296),

Gene: Contagion_141 Start: 73741, Stop: 73962, Start Num: 31

Candidate Starts for Contagion_141:

(19, 73192), (20, 73210), (Start: 31 @73741 has 111 MA's), (Start: 32 @73768 has 5 MA's), (33, 73801), (34, 73804),

Gene: Cookies_147 Start: 75548, Stop: 75769, Start Num: 31

Candidate Starts for Cookies_147:

(20, 75017), (Start: 31 @75548 has 111 MA's), (Start: 32 @75575 has 5 MA's), (33, 75608), (34, 75611),

Gene: CrystalP_145 Start: 75691, Stop: 75912, Start Num: 31

Candidate Starts for CrystalP_145:

(4, 74872), (9, 74920), (12, 74947), (15, 74974), (21, 75121), (23, 75178), (Start: 31 @75691 has 111 MA's), (Start: 32 @75718 has 5 MA's), (33, 75751), (34, 75754),

Gene: Czyszczone1_145 Start: 74283, Stop: 74504, Start Num: 31

Candidate Starts for Czyszczone1_145:

(6, 73449), (11, 73497), (14, 73524), (17, 73551), (22, 73701), (25, 73767), (Start: 31 @74283 has 111 MA's), (Start: 32 @74310 has 5 MA's), (33, 74343), (34, 74346),

Gene: DoctorDiddles_144 Start: 74278, Stop: 74499, Start Num: 31

Candidate Starts for DoctorDiddles_144:

(Start: 31 @74278 has 111 MA's), (Start: 32 @74305 has 5 MA's), (33, 74338), (34, 74341),

Gene: DrDrey_146 Start: 76575, Stop: 76796, Start Num: 31

Candidate Starts for DrDrey_146:

(Start: 31 @76575 has 111 MA's), (Start: 32 @76602 has 5 MA's), (33, 76635), (34, 76638),

Gene: Dumbo_148 Start: 74944, Stop: 75165, Start Num: 31

Candidate Starts for Dumbo_148:

(20, 74413), (Start: 31 @74944 has 111 MA's), (Start: 32 @74971 has 5 MA's), (33, 75004), (34, 75007),

Gene: Dusk_144 Start: 74547, Stop: 74768, Start Num: 31

Candidate Starts for Dusk_144:

(Start: 31 @74547 has 111 MA's), (Start: 32 @74574 has 5 MA's), (33, 74607), (34, 74610),

Gene: Easy2Say_147 Start: 74806, Stop: 75027, Start Num: 31

Candidate Starts for Easy2Say_147:

(4, 73969), (9, 74017), (12, 74044), (15, 74071), (21, 74221), (24, 74287), (Start: 31 @74806 has 111 MA's), (Start: 32 @74833 has 5 MA's), (33, 74866), (34, 74869),

Gene: Elite2014_145 Start: 74177, Stop: 74398, Start Num: 31

Candidate Starts for Elite2014_145:

(Start: 31 @74177 has 111 MA's), (Start: 32 @74204 has 5 MA's), (33, 74237), (34, 74240),

Gene: Elph10_144 Start: 73883, Stop: 74104, Start Num: 31

Candidate Starts for Elph10_144:

(Start: 31 @73883 has 111 MA's), (Start: 32 @73910 has 5 MA's), (33, 73943), (34, 73946),

Gene: Emmina_147 Start: 74503, Stop: 74724, Start Num: 31

Candidate Starts for Emmina_147:

(Start: 31 @74503 has 111 MA's), (Start: 32 @74530 has 5 MA's), (33, 74563), (34, 74566),

Gene: Eureka_146 Start: 75382, Stop: 75603, Start Num: 31

Candidate Starts for Eureka_146:

(Start: 31 @75382 has 111 MA's), (Start: 32 @75409 has 5 MA's), (33, 75442), (34, 75445),

Gene: Filch_149 Start: 74900, Stop: 75121, Start Num: 31

Candidate Starts for Filch_149:

(Start: 31 @74900 has 111 MA's), (Start: 32 @74927 has 5 MA's), (33, 74960), (34, 74963),

Gene: FireRed_149 Start: 75425, Stop: 75646, Start Num: 31

Candidate Starts for FireRed_149:

(Start: 31 @75425 has 111 MA's), (Start: 32 @75452 has 5 MA's), (33, 75485), (34, 75488),

Gene: Flypotenuse_141 Start: 74459, Stop: 74677, Start Num: 31

Candidate Starts for Flypotenuse_141:

(Start: 31 @74459 has 111 MA's), (33, 74516), (34, 74519), (35, 74534), (37, 74603),

Gene: Gage_136 Start: 70858, Stop: 71079, Start Num: 31

Candidate Starts for Gage_136:

(4, 70021), (9, 70069), (12, 70096), (15, 70123), (21, 70273), (24, 70339), (Start: 31 @70858 has 111 MA's), (Start: 32 @70885 has 5 MA's), (33, 70918), (34, 70921),

Gene: Gator_147 Start: 75562, Stop: 75780, Start Num: 31
Candidate Starts for Gator_147:
(Start: 31 @75562 has 111 MA's), (33, 75619), (35, 75637), (37, 75706),

Gene: Gemini_150 Start: 74857, Stop: 75078, Start Num: 31
Candidate Starts for Gemini_150:
(4, 74020), (9, 74068), (12, 74095), (15, 74122), (21, 74272), (24, 74338), (Start: 31 @74857 has 111 MA's), (Start: 32 @74884 has 5 MA's), (33, 74917), (34, 74920),

Gene: Glexan_149 Start: 75709, Stop: 75927, Start Num: 31
Candidate Starts for Glexan_149:
(Start: 31 @75709 has 111 MA's), (33, 75766), (35, 75784), (37, 75853),

Gene: Goku_144 Start: 75718, Stop: 75912, Start Num: 32
Candidate Starts for Goku_144:
(Start: 31 @75691 has 111 MA's), (Start: 32 @75718 has 5 MA's), (33, 75751), (34, 75754),

Gene: GoldenSpark_149 Start: 74340, Stop: 74561, Start Num: 31
Candidate Starts for GoldenSpark_149:
(4, 73503), (9, 73551), (12, 73578), (15, 73605), (21, 73755), (24, 73821), (Start: 31 @74340 has 111 MA's), (Start: 32 @74367 has 5 MA's), (33, 74400), (34, 74403),

Gene: Goldilocks_151 Start: 74936, Stop: 75157, Start Num: 31
Candidate Starts for Goldilocks_151:
(4, 74099), (9, 74147), (12, 74174), (15, 74201), (21, 74351), (24, 74417), (Start: 31 @74936 has 111 MA's), (Start: 32 @74963 has 5 MA's), (33, 74996), (34, 74999),

Gene: GooberAzure_148 Start: 74337, Stop: 74558, Start Num: 31
Candidate Starts for GooberAzure_148:
(4, 73503), (9, 73551), (12, 73578), (15, 73605), (21, 73755), (24, 73821), (Start: 31 @74337 has 111 MA's), (Start: 32 @74364 has 5 MA's), (33, 74397), (34, 74400),

Gene: HanKaySha_144 Start: 74739, Stop: 74957, Start Num: 31
Candidate Starts for HanKaySha_144:
(Start: 31 @74739 has 111 MA's), (33, 74796), (35, 74814), (37, 74883),

Gene: Harella_152 Start: 76070, Stop: 76288, Start Num: 31
Candidate Starts for Harella_152:
(Start: 31 @76070 has 111 MA's), (33, 76127), (35, 76145), (37, 76214),

Gene: Henry_145 Start: 75257, Stop: 75478, Start Num: 31
Candidate Starts for Henry_145:
(4, 74537), (9, 74585), (12, 74612), (15, 74639), (Start: 31 @75257 has 111 MA's), (Start: 32 @75284 has 5 MA's), (33, 75317), (34, 75320),

Gene: Highbury_140 Start: 72623, Stop: 72844, Start Num: 31
Candidate Starts for Highbury_140:
(20, 72092), (Start: 31 @72623 has 111 MA's), (Start: 32 @72650 has 5 MA's), (33, 72683), (34, 72686),

Gene: Holt_151 Start: 75123, Stop: 75344, Start Num: 31
Candidate Starts for Holt_151:

(4, 74286), (9, 74334), (12, 74361), (15, 74388), (21, 74538), (24, 74604), (Start: 31 @75123 has 111 MA's), (Start: 32 @75150 has 5 MA's), (33, 75183), (34, 75186),

Gene: Hoonter_147 Start: 74478, Stop: 74696, Start Num: 31

Candidate Starts for Hoonter_147:

(5, 73635), (10, 73683), (13, 73710), (16, 73737), (21, 73887), (24, 73953), (26, 74025), (Start: 31 @74478 has 111 MA's), (33, 74535), (35, 74553), (37, 74622),

Gene: Hokey_143 Start: 74794, Stop: 75015, Start Num: 31

Candidate Starts for Hokey_143:

(27, 74575), (28, 74638), (29, 74656), (30, 74674), (Start: 31 @74794 has 111 MA's), (Start: 32 @74821 has 5 MA's), (33, 74854), (34, 74857),

Gene: HufflyPuff_147 Start: 75531, Stop: 75752, Start Num: 31

Candidate Starts for HufflyPuff_147:

(Start: 31 @75531 has 111 MA's), (Start: 32 @75558 has 5 MA's), (33, 75591), (34, 75594),

Gene: IHOP_150 Start: 74876, Stop: 75097, Start Num: 31

Candidate Starts for IHOP_150:

(1, 74081), (2, 74096), (3, 74102), (20, 74345), (Start: 31 @74876 has 111 MA's), (Start: 32 @74903 has 5 MA's), (33, 74936), (34, 74939), (36, 74990),

Gene: Icee_145 Start: 73377, Stop: 73598, Start Num: 31

Candidate Starts for Icee_145:

(Start: 31 @73377 has 111 MA's), (Start: 32 @73404 has 5 MA's), (33, 73437), (34, 73440), (36, 73491),

Gene: Inca_146 Start: 73278, Stop: 73499, Start Num: 31

Candidate Starts for Inca_146:

(20, 72747), (Start: 31 @73278 has 111 MA's), (Start: 32 @73305 has 5 MA's), (33, 73338), (34, 73341),

Gene: JeTaime_143 Start: 74307, Stop: 74528, Start Num: 31

Candidate Starts for JeTaime_143:

(6, 73473), (11, 73521), (14, 73548), (17, 73575), (22, 73725), (25, 73791), (Start: 31 @74307 has 111 MA's), (Start: 32 @74334 has 5 MA's), (33, 74367), (34, 74370),

Gene: Kanye_141 Start: 74661, Stop: 74882, Start Num: 31

Candidate Starts for Kanye_141:

(4, 73824), (9, 73872), (12, 73899), (15, 73926), (21, 74076), (24, 74142), (Start: 31 @74661 has 111 MA's), (Start: 32 @74688 has 5 MA's), (33, 74721), (34, 74724),

Gene: Kimchi_150 Start: 75037, Stop: 75258, Start Num: 31

Candidate Starts for Kimchi_150:

(4, 74200), (9, 74248), (12, 74275), (15, 74302), (21, 74452), (24, 74518), (Start: 31 @75037 has 111 MA's), (Start: 32 @75064 has 5 MA's), (33, 75097), (34, 75100),

Gene: Kostya_145 Start: 75019, Stop: 75240, Start Num: 31

Candidate Starts for Kostya_145:

(Start: 31 @75019 has 111 MA's), (Start: 32 @75046 has 5 MA's), (33, 75079), (34, 75082),

Gene: Lilac_141 Start: 75468, Stop: 75689, Start Num: 31

Candidate Starts for Lilac_141:

(Start: 31 @75468 has 111 MA's), (Start: 32 @75495 has 5 MA's), (33, 75528), (34, 75531),

Gene: Lilizi_145 Start: 74568, Stop: 74789, Start Num: 31

Candidate Starts for Lilizi_145:

(4, 73731), (9, 73779), (12, 73806), (15, 73833), (21, 73983), (24, 74049), (Start: 31 @74568 has 111 MA's), (Start: 32 @74595 has 5 MA's), (33, 74628), (34, 74631),

Gene: Lilpickle_145 Start: 74177, Stop: 74398, Start Num: 31

Candidate Starts for Lilpickle_145:

(Start: 31 @74177 has 111 MA's), (Start: 32 @74204 has 5 MA's), (33, 74237), (34, 74240),

Gene: MISSy_146 Start: 75016, Stop: 75237, Start Num: 31

Candidate Starts for MISSy_146:

(4, 74347), (9, 74395), (12, 74422), (15, 74449), (Start: 31 @75016 has 111 MA's), (Start: 32 @75043 has 5 MA's), (33, 75076), (34, 75079),

Gene: MPhalcon_147 Start: 74813, Stop: 75034, Start Num: 31

Candidate Starts for MPhalcon_147:

(Start: 31 @74813 has 111 MA's), (Start: 32 @74840 has 5 MA's), (33, 74873), (34, 74876),

Gene: MadamMonkfish_147 Start: 74762, Stop: 74983, Start Num: 31

Candidate Starts for MadamMonkfish_147:

(20, 74231), (Start: 31 @74762 has 111 MA's), (Start: 32 @74789 has 5 MA's), (33, 74822), (34, 74825),

Gene: Manda_148 Start: 75231, Stop: 75452, Start Num: 31

Candidate Starts for Manda_148:

(Start: 31 @75231 has 111 MA's), (Start: 32 @75258 has 5 MA's), (33, 75291), (34, 75294),

Gene: Marshmallow_148 Start: 75948, Stop: 76169, Start Num: 31

Candidate Starts for Marshmallow_148:

(1, 75153), (2, 75168), (3, 75174), (20, 75417), (Start: 31 @75948 has 111 MA's), (Start: 32 @75975 has 5 MA's), (33, 76008), (34, 76011),

Gene: Maxxinista_147 Start: 74423, Stop: 74644, Start Num: 31

Candidate Starts for Maxxinista_147:

(Start: 31 @74423 has 111 MA's), (Start: 32 @74450 has 5 MA's), (33, 74483), (34, 74486),

Gene: Mindy_149 Start: 75004, Stop: 75225, Start Num: 31

Candidate Starts for Mindy_149:

(Start: 31 @75004 has 111 MA's), (Start: 32 @75031 has 5 MA's), (33, 75064), (34, 75067),

Gene: Miniwave_139 Start: 74169, Stop: 74390, Start Num: 31

Candidate Starts for Miniwave_139:

(4, 73335), (9, 73383), (12, 73410), (15, 73437), (21, 73587), (24, 73653), (Start: 31 @74169 has 111 MA's), (Start: 32 @74196 has 5 MA's), (33, 74229), (34, 74232),

Gene: Misfit_145 Start: 75404, Stop: 75598, Start Num: 32

Candidate Starts for Misfit_145:

(19, 74828), (20, 74846), (Start: 31 @75377 has 111 MA's), (Start: 32 @75404 has 5 MA's), (33, 75437), (34, 75440),

Gene: Moldemort_147 Start: 74448, Stop: 74669, Start Num: 31

Candidate Starts for Moldemort_147:

(4, 73611), (9, 73659), (12, 73686), (15, 73713), (21, 73863), (24, 73929), (Start: 31 @74448 has 111 MA's), (Start: 32 @74475 has 5 MA's), (33, 74508), (34, 74511),

Gene: Mosby_142 Start: 73741, Stop: 73962, Start Num: 31

Candidate Starts for Mosby_142:

(19, 73192), (20, 73210), (Start: 31 @73741 has 111 MA's), (Start: 32 @73768 has 5 MA's), (33, 73801), (34, 73804),

Gene: Murica_148 Start: 76261, Stop: 76482, Start Num: 31

Candidate Starts for Murica_148:

(Start: 31 @76261 has 111 MA's), (Start: 32 @76288 has 5 MA's), (33, 76321), (34, 76324),

Gene: Murphy_147 Start: 75387, Stop: 75608, Start Num: 31

Candidate Starts for Murphy_147:

(Start: 31 @75387 has 111 MA's), (Start: 32 @75414 has 5 MA's), (33, 75447), (34, 75450), (36, 75501),

Gene: Myrale_145 Start: 75627, Stop: 75848, Start Num: 31

Candidate Starts for Myrale_145:

(4, 74907), (9, 74955), (12, 74982), (15, 75009), (Start: 31 @75627 has 111 MA's), (Start: 32 @75654 has 5 MA's), (33, 75687), (34, 75690),

Gene: Nala_148 Start: 75102, Stop: 75323, Start Num: 31

Candidate Starts for Nala_148:

(Start: 31 @75102 has 111 MA's), (Start: 32 @75129 has 5 MA's), (33, 75162), (34, 75165),

Gene: NelitzaMV_140 Start: 71998, Stop: 72219, Start Num: 31

Candidate Starts for NelitzaMV_140:

(4, 71161), (9, 71209), (12, 71236), (15, 71263), (21, 71413), (24, 71479), (Start: 31 @71998 has 111 MA's), (Start: 32 @72025 has 5 MA's), (33, 72058), (34, 72061),

Gene: Nimrod_144 Start: 75643, Stop: 75864, Start Num: 31

Candidate Starts for Nimrod_144:

(Start: 31 @75643 has 111 MA's), (Start: 32 @75670 has 5 MA's), (33, 75703), (34, 75706),

Gene: NoSleep_144 Start: 73863, Stop: 74084, Start Num: 31

Candidate Starts for NoSleep_144:

(Start: 31 @73863 has 111 MA's), (Start: 32 @73890 has 5 MA's), (33, 73923), (34, 73926),

Gene: OrionPax_143 Start: 74321, Stop: 74542, Start Num: 31

Candidate Starts for OrionPax_143:

(1, 73526), (2, 73541), (3, 73547), (20, 73790), (Start: 31 @74321 has 111 MA's), (Start: 32 @74348 has 5 MA's), (33, 74381), (34, 74384),

Gene: Paperbeatsrock_143 Start: 74847, Stop: 75068, Start Num: 31

Candidate Starts for Paperbeatsrock_143:

(4, 74013), (9, 74061), (12, 74088), (15, 74115), (21, 74265), (24, 74331), (Start: 31 @74847 has 111 MA's), (Start: 32 @74874 has 5 MA's), (33, 74907), (34, 74910),

Gene: Pat3_146 Start: 74886, Stop: 75104, Start Num: 31

Candidate Starts for Pat3_146:

(Start: 31 @74886 has 111 MA's), (33, 74943), (35, 74961), (37, 75030),

Gene: Petra64142_145 Start: 75050, Stop: 75271, Start Num: 31
Candidate Starts for Petra64142_145:
(4, 74231), (9, 74279), (12, 74306), (15, 74333), (21, 74480), (23, 74537), (Start: 31 @75050 has 111 MA's), (Start: 32 @75077 has 5 MA's), (33, 75110), (34, 75113),

Gene: Phaja_150 Start: 74893, Stop: 75114, Start Num: 31
Candidate Starts for Phaja_150:
(1, 74086), (2, 74101), (3, 74107), (20, 74350), (Start: 31 @74893 has 111 MA's), (Start: 32 @74920 has 5 MA's), (33, 74953), (34, 74956),

Gene: Pharsalus_143 Start: 74987, Stop: 75208, Start Num: 31
Candidate Starts for Pharsalus_143:
(4, 74153), (9, 74201), (12, 74228), (15, 74255), (21, 74405), (24, 74471), (Start: 31 @74987 has 111 MA's), (Start: 32 @75014 has 5 MA's), (33, 75047), (34, 75050),

Gene: PhatBacter_149 Start: 75425, Stop: 75646, Start Num: 31
Candidate Starts for PhatBacter_149:
(Start: 31 @75425 has 111 MA's), (Start: 32 @75452 has 5 MA's), (33, 75485), (34, 75488),

Gene: Phaux_146 Start: 75687, Stop: 75908, Start Num: 31
Candidate Starts for Phaux_146:
(Start: 31 @75687 has 111 MA's), (Start: 32 @75714 has 5 MA's), (33, 75747), (34, 75750),

Gene: Phrux_142 Start: 73919, Stop: 74140, Start Num: 31
Candidate Starts for Phrux_142:
(Start: 31 @73919 has 111 MA's), (Start: 32 @73946 has 5 MA's), (33, 73979), (34, 73982),

Gene: Porky_148 Start: 75520, Stop: 75741, Start Num: 31
Candidate Starts for Porky_148:
(Start: 31 @75520 has 111 MA's), (Start: 32 @75547 has 5 MA's), (33, 75580), (34, 75583),

Gene: Pumpkin_144 Start: 73699, Stop: 73920, Start Num: 31
Candidate Starts for Pumpkin_144:
(Start: 31 @73699 has 111 MA's), (Start: 32 @73726 has 5 MA's), (33, 73759), (34, 73762),

Gene: Quallification_145 Start: 75116, Stop: 75337, Start Num: 31
Candidate Starts for Quallification_145:
(4, 74282), (9, 74330), (12, 74357), (15, 74384), (21, 74534), (24, 74600), (Start: 31 @75116 has 111 MA's), (Start: 32 @75143 has 5 MA's), (33, 75176), (34, 75179),

Gene: Rakim_147 Start: 74914, Stop: 75135, Start Num: 31
Candidate Starts for Rakim_147:
(Start: 31 @74914 has 111 MA's), (Start: 32 @74941 has 5 MA's), (33, 74974), (34, 74977),

Gene: Rimmer_144 Start: 74868, Stop: 75089, Start Num: 31
Candidate Starts for Rimmer_144:
(4, 74049), (9, 74097), (12, 74124), (15, 74151), (21, 74298), (23, 74355), (Start: 31 @74868 has 111 MA's), (Start: 32 @74895 has 5 MA's), (33, 74928), (34, 74931),

Gene: RiverMonster_145 Start: 74773, Stop: 74994, Start Num: 31
Candidate Starts for RiverMonster_145:

(7, 74029), (8, 74041), (18, 74206), (21, 74254), (Start: 31 @74773 has 111 MA's), (Start: 32 @74800 has 5 MA's), (33, 74833), (34, 74836),

Gene: Saints25_140 Start: 72623, Stop: 72844, Start Num: 31

Candidate Starts for Saints25_140:

(20, 72092), (Start: 31 @72623 has 111 MA's), (Start: 32 @72650 has 5 MA's), (33, 72683), (34, 72686),

Gene: Sassay_140 Start: 72703, Stop: 72924, Start Num: 31

Candidate Starts for Sassay_140:

(19, 72154), (20, 72172), (Start: 31 @72703 has 111 MA's), (Start: 32 @72730 has 5 MA's), (33, 72763), (34, 72766),

Gene: ShamWow_144 Start: 75141, Stop: 75362, Start Num: 31

Candidate Starts for ShamWow_144:

(4, 74322), (9, 74370), (12, 74397), (15, 74424), (21, 74571), (23, 74628), (Start: 31 @75141 has 111 MA's), (Start: 32 @75168 has 5 MA's), (33, 75201), (34, 75204),

Gene: ShereKhan_144 Start: 75341, Stop: 75562, Start Num: 31

Candidate Starts for ShereKhan_144:

(4, 74507), (9, 74555), (12, 74582), (15, 74609), (21, 74759), (24, 74825), (Start: 31 @75341 has 111 MA's), (Start: 32 @75368 has 5 MA's), (33, 75401), (34, 75404),

Gene: Simpliphy_146 Start: 74574, Stop: 74795, Start Num: 31

Candidate Starts for Simpliphy_146:

(Start: 31 @74574 has 111 MA's), (Start: 32 @74601 has 5 MA's), (33, 74634), (34, 74637),

Gene: SirDuracell_147 Start: 75208, Stop: 75402, Start Num: 32

Candidate Starts for SirDuracell_147:

(7, 74437), (8, 74449), (18, 74614), (21, 74662), (Start: 31 @75181 has 111 MA's), (Start: 32 @75208 has 5 MA's), (33, 75241), (34, 75244),

Gene: SophKB_143 Start: 74793, Stop: 75014, Start Num: 31

Candidate Starts for SophKB_143:

(4, 73956), (9, 74004), (12, 74031), (15, 74058), (21, 74208), (24, 74274), (Start: 31 @74793 has 111 MA's), (Start: 32 @74820 has 5 MA's), (33, 74853), (34, 74856),

Gene: Sotrice96_150 Start: 75507, Stop: 75728, Start Num: 31

Candidate Starts for Sotrice96_150:

(4, 74670), (9, 74718), (12, 74745), (15, 74772), (21, 74922), (24, 74988), (Start: 31 @75507 has 111 MA's), (Start: 32 @75534 has 5 MA's), (33, 75567), (34, 75570),

Gene: Stank_148 Start: 75160, Stop: 75354, Start Num: 32

Candidate Starts for Stank_148:

(4, 74296), (9, 74344), (12, 74371), (15, 74398), (21, 74548), (24, 74614), (Start: 31 @75133 has 111 MA's), (Start: 32 @75160 has 5 MA's), (33, 75193), (34, 75196),

Gene: Stark_142 Start: 73939, Stop: 74160, Start Num: 31

Candidate Starts for Stark_142:

(Start: 31 @73939 has 111 MA's), (Start: 32 @73966 has 5 MA's), (33, 73999), (34, 74002),

Gene: StolenFromERC_147 Start: 74478, Stop: 74699, Start Num: 31

Candidate Starts for StolenFromERC_147:

(4, 73641), (9, 73689), (12, 73716), (15, 73743), (21, 73893), (24, 73959), (Start: 31 @74478 has 111 MA's), (Start: 32 @74505 has 5 MA's), (33, 74538), (34, 74541),

Gene: TBrady12_150 Start: 74567, Stop: 74788, Start Num: 31
Candidate Starts for TBrady12_150:

(4, 73733), (9, 73781), (12, 73808), (15, 73835), (21, 73985), (24, 74051), (Start: 31 @74567 has 111 MA's), (Start: 32 @74594 has 5 MA's), (33, 74627), (34, 74630),

Gene: Tarkin_143 Start: 75206, Stop: 75427, Start Num: 31
Candidate Starts for Tarkin_143:

(4, 74372), (9, 74420), (12, 74447), (15, 74474), (21, 74624), (24, 74690), (Start: 31 @75206 has 111 MA's), (Start: 32 @75233 has 5 MA's), (33, 75266), (34, 75269),

Gene: TeardropMSU_144 Start: 74104, Stop: 74325, Start Num: 31
Candidate Starts for TeardropMSU_144:

(4, 73384), (9, 73432), (12, 73459), (15, 73486), (Start: 31 @74104 has 111 MA's), (Start: 32 @74131 has 5 MA's), (33, 74164), (34, 74167),

Gene: Teaspoon_124 Start: 70177, Stop: 70371, Start Num: 32
Candidate Starts for Teaspoon_124:

(4, 69313), (9, 69361), (12, 69388), (15, 69415), (21, 69565), (24, 69631), (Start: 31 @70150 has 111 MA's), (Start: 32 @70177 has 5 MA's), (33, 70210), (34, 70213),

Gene: Terminus_148 Start: 75377, Stop: 75598, Start Num: 31
Candidate Starts for Terminus_148:

(19, 74828), (20, 74846), (Start: 31 @75377 has 111 MA's), (Start: 32 @75404 has 5 MA's), (33, 75437), (34, 75440),

Gene: Thresher_147 Start: 75400, Stop: 75621, Start Num: 31
Candidate Starts for Thresher_147:

(6, 74566), (11, 74614), (14, 74641), (17, 74668), (22, 74818), (25, 74884), (Start: 31 @75400 has 111 MA's), (Start: 32 @75427 has 5 MA's), (33, 75460), (34, 75463),

Gene: Tomaszewski_139 Start: 73915, Stop: 74136, Start Num: 31
Candidate Starts for Tomaszewski_139:

(19, 73366), (20, 73384), (Start: 31 @73915 has 111 MA's), (Start: 32 @73942 has 5 MA's), (33, 73975), (34, 73978),

Gene: Toto_142 Start: 75141, Stop: 75362, Start Num: 31
Candidate Starts for Toto_142:

(4, 74322), (9, 74370), (12, 74397), (15, 74424), (21, 74571), (23, 74628), (Start: 31 @75141 has 111 MA's), (Start: 32 @75168 has 5 MA's), (33, 75201), (34, 75204),

Gene: Traaww1_143 Start: 74634, Stop: 74852, Start Num: 31
Candidate Starts for Traaww1_143:

(Start: 31 @74634 has 111 MA's), (33, 74691), (34, 74694), (35, 74709), (37, 74778),

Gene: Tuco_149 Start: 76152, Stop: 76373, Start Num: 31
Candidate Starts for Tuco_149:

(Start: 31 @76152 has 111 MA's), (Start: 32 @76179 has 5 MA's), (33, 76212), (34, 76215),

Gene: Ukulele_142 Start: 74322, Stop: 74543, Start Num: 31
Candidate Starts for Ukulele_142:

(1, 73527), (2, 73542), (3, 73548), (20, 73791), (Start: 31 @74322 has 111 MA's), (Start: 32 @74349 has 5 MA's), (33, 74382), (34, 74385),

Gene: Wiggin_148 Start: 74111, Stop: 74332, Start Num: 31

Candidate Starts for Wiggin_148:

(4, 73274), (9, 73322), (12, 73349), (15, 73376), (21, 73526), (24, 73592), (Start: 31 @74111 has 111 MA's), (Start: 32 @74138 has 5 MA's), (33, 74171), (34, 74174),

Gene: Willez_143 Start: 73811, Stop: 74005, Start Num: 32

Candidate Starts for Willez_143:

(19, 73235), (20, 73253), (Start: 31 @73784 has 111 MA's), (Start: 32 @73811 has 5 MA's), (33, 73844), (34, 73847),

Gene: Xandras_143 Start: 74414, Stop: 74608, Start Num: 32

Candidate Starts for Xandras_143:

(4, 73550), (9, 73598), (12, 73625), (15, 73652), (21, 73802), (24, 73868), (Start: 31 @74387 has 111 MA's), (Start: 32 @74414 has 5 MA's), (33, 74447), (34, 74450),

Gene: YassJohnny_140 Start: 72905, Stop: 73126, Start Num: 31

Candidate Starts for YassJohnny_140:

(4, 72215), (9, 72263), (12, 72290), (15, 72317), (Start: 31 @72905 has 111 MA's), (Start: 32 @72932 has 5 MA's), (33, 72965), (34, 72968),

Gene: Youngblood_149 Start: 75131, Stop: 75325, Start Num: 32

Candidate Starts for Youngblood_149:

(19, 74555), (20, 74573), (Start: 31 @75104 has 111 MA's), (Start: 32 @75131 has 5 MA's), (33, 75164), (34, 75167),

Gene: xkcd_150 Start: 76123, Stop: 76344, Start Num: 31

Candidate Starts for xkcd_150:

(Start: 31 @76123 has 111 MA's), (Start: 32 @76150 has 5 MA's), (33, 76183), (34, 76186),