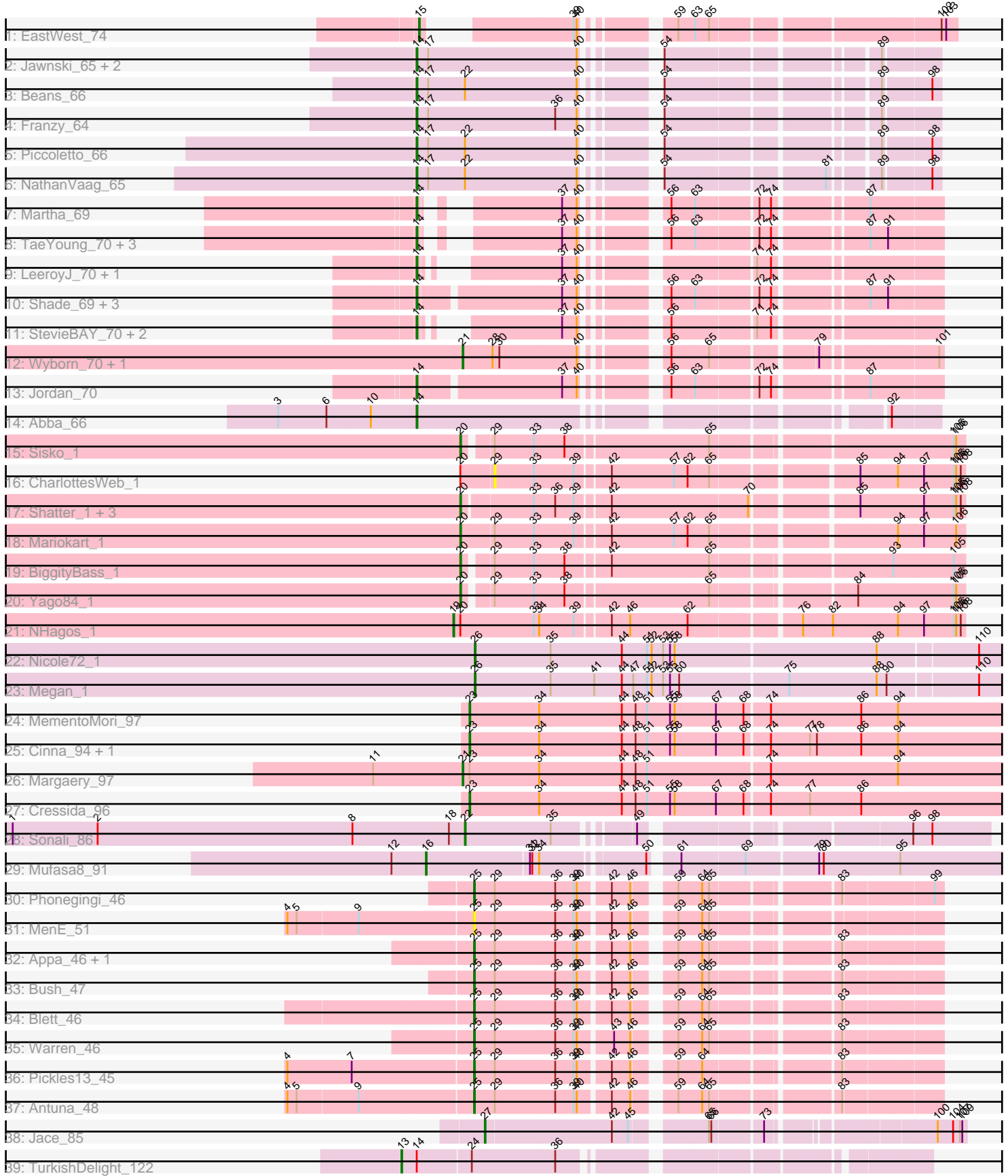


Pham 171498



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 171498 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171498 has 56 members, 3 are drafts.

Phages represented in each track:

- Track 1 : EastWest_74
- Track 2 : Jawnski_65, Brent_66, King2_64
- Track 3 : Beans_66
- Track 4 : Franzy_64
- Track 5 : Piccoletto_66
- Track 6 : NathanVaag_65
- Track 7 : Martha_69
- Track 8 : TaeYoung_70, JKerns_69, Grekaycon_70, BossLady_71
- Track 9 : LeeroyJ_70, Timinator_70
- Track 10 : Shade_69, Sonny_69, Zartrosa_71, Pippa_70
- Track 11 : StevieBAY_70, GravityBall_69, BarretLemon_69
- Track 12 : Wyborn_70, Sicarius2_71
- Track 13 : Jordan_70
- Track 14 : Abba_66
- Track 15 : Sisko_1
- Track 16 : CharlottesWeb_1
- Track 17 : Shatter_1, Axumite_1, Fresco_1, Ligma_1
- Track 18 : Mariokart_1
- Track 19 : BiggityBass_1
- Track 20 : Yago84_1
- Track 21 : NHagos_1
- Track 22 : Nicole72_1
- Track 23 : Megan_1
- Track 24 : MementoMori_97
- Track 25 : Cinna_94, Matzah_98
- Track 26 : Margaery_97
- Track 27 : Cressida_96
- Track 28 : Sonali_86
- Track 29 : Mufasa8_91
- Track 30 : Phonegingi_46
- Track 31 : MenE_51
- Track 32 : Appa_46, Dropshot_46
- Track 33 : Bush_47
- Track 34 : Blett_46
- Track 35 : Warren_46
- Track 36 : Pickles13_45
- Track 37 : Antuna_48

- Track 38 : Jace_85
- Track 39 : TurkishDelight_122

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

The start number called the most often in the published annotations is 14, it was called in 22 of the 53 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abba_66, BarretLemon_69, Beans_66, BossLady_71, Brent_66, Franzy_64, GravityBall_69, Grekaycon_70, JKerns_69, Jawnski_65, Jordan_70, King2_64, LeeroyJ_70, Martha_69, NathanVaag_65, Piccoletto_66, Pippa_70, Shade_69, Sonny_69, StevieBAY_70, TaeYoung_70, Timinator_70, Zartrosa_71,

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

- TurkishDelight_122,

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

- Antuna_48, Appa_46, Axumite_1, BiggityBass_1, Blett_46, Bush_47, CharlottesWeb_1, Cinna_94, Cressida_96, Dropshot_46, EastWest_74, Fresco_1, Jace_85, Ligma_1, Margaery_97, Mariokart_1, Matzah_98, Megan_1, MementoMori_97, MenE_51, Mufasa8_91, NHagos_1, Nicole72_1, Phonegingi_46, Pickles13_45, Shatter_1, Sicarius2_71, Sisko_1, Sonali_86, Warren_46, Wyborn_70, Yago84_1,

Summary by start number:

Start 13:

- Found in 1 of 56 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TurkishDelight_122 (singleton),

Start 14:

- Found in 24 of 56 (42.9%) of genes in pham
- Manual Annotations of this start: 22 of 53
- Called 95.8% of time when present
- Phage (with cluster) where this start called: Abba_66 (AO3), BarretLemon_69 (AO2), Beans_66 (AO1), BossLady_71 (AO2), Brent_66 (AO1), Franzy_64 (AO1), GravityBall_69 (AO2), Grekaycon_70 (AO2), JKerns_69 (AO2), Jawnski_65 (AO1), Jordan_70 (AO2), King2_64 (AO1), LeeroyJ_70 (AO2), Martha_69 (AO2), NathanVaag_65 (AO1), Piccoletto_66 (AO1), Pippa_70 (AO2), Shade_69 (AO2), Sonny_69 (AO2), StevieBAY_70 (AO2), TaeYoung_70 (AO2), Timinator_70 (AO2), Zartrosa_71 (AO2),

Start 15:

- Found in 1 of 56 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EastWest_74 (AO),

Start 16:

- Found in 1 of 56 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mufasa8_91 (FG),

Start 19:

- Found in 1 of 56 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NHagos_1 (DR),

Start 20:

- Found in 10 of 56 (17.9%) of genes in pham
- Manual Annotations of this start: 8 of 53
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Axumite_1 (DR), BiggityBass_1 (DR), Fresco_1 (DR), Ligma_1 (DR), Mariokart_1 (DR), Shatter_1 (DR), Sisko_1 (DR), Yago84_1 (DR),

Start 21:

- Found in 3 of 56 (5.4%) of genes in pham
- Manual Annotations of this start: 3 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Margaery_97 (EI), Sicarius2_71 (AO2), Wyborn_70 (AO2),

Start 22:

- Found in 4 of 56 (7.1%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Sonali_86 (FG),

Start 23:

- Found in 5 of 56 (8.9%) of genes in pham
- Manual Annotations of this start: 4 of 53
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Cinna_94 (EI), Cressida_96 (EI), Matzah_98 (EI), MementoMori_97 (EI),

Start 25:

- Found in 9 of 56 (16.1%) of genes in pham
- Manual Annotations of this start: 8 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antuna_48 (GA), Appa_46 (GA), Blett_46 (GA), Bush_47 (GA), Dropshot_46 (GA), MenE_51 (GA), Phonegingi_46 (GA), Pickles13_45 (GA), Warren_46 (GA),

Start 26:

- Found in 2 of 56 (3.6%) of genes in pham
- Manual Annotations of this start: 2 of 53
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Megan_1 (EC), Nicole72_1 (EC),

Start 27:

- Found in 1 of 56 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jace_85 (singleton),

Start 29:

- Found in 14 of 56 (25.0%) of genes in pham
- No Manual Annotations of this start.
- Called 7.1% of time when present
- Phage (with cluster) where this start called: CharlottesWeb_1 (DR),

Summary by clusters:

There are 10 clusters represented in this pham: singleton, EI, GA, AO, EC, AO3, AO2, AO1, FG, DR,

Info for manual annotations of cluster AO:

- Start number 15 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AO1:

- Start number 14 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:

- Start number 14 was manually annotated 14 times for cluster AO2.
- Start number 21 was manually annotated 2 times for cluster AO2.

Info for manual annotations of cluster AO3:

- Start number 14 was manually annotated 1 time for cluster AO3.

Info for manual annotations of cluster DR:

- Start number 19 was manually annotated 1 time for cluster DR.
- Start number 20 was manually annotated 8 times for cluster DR.

Info for manual annotations of cluster EC:

- Start number 26 was manually annotated 2 times for cluster EC.

Info for manual annotations of cluster EI:

- Start number 21 was manually annotated 1 time for cluster EI.
- Start number 23 was manually annotated 4 times for cluster EI.

Info for manual annotations of cluster FG:

- Start number 16 was manually annotated 1 time for cluster FG.
- Start number 22 was manually annotated 1 time for cluster FG.

Info for manual annotations of cluster GA:

- Start number 25 was manually annotated 8 times for cluster GA.

Gene Information:

Gene: Abba_66 Start: 41901, Stop: 42479, Start Num: 14

Candidate Starts for Abba_66:

(3, 41721), (6, 41784), (10, 41841), (Start: 14 @41901 has 22 MA's), (92, 42423),

Gene: Antuna_48 Start: 29370, Stop: 29903, Start Num: 25

Candidate Starts for Antuna_48:

(4, 29136), (5, 29148), (9, 29226), (Start: 25 @29370 has 8 MA's), (29, 29394), (36, 29472), (39, 29496), (40, 29499), (42, 29535), (46, 29559), (59, 29598), (64, 29628), (65, 29637), (83, 29784),

Gene: Appa_46 Start: 29135, Stop: 29668, Start Num: 25

Candidate Starts for Appa_46:

(Start: 25 @29135 has 8 MA's), (29, 29159), (36, 29237), (39, 29261), (40, 29264), (42, 29300), (46, 29324), (59, 29363), (64, 29393), (65, 29402), (83, 29549),

Gene: Axumite_1 Start: 1, Stop: 606, Start Num: 20

Candidate Starts for Axumite_1:

(Start: 20 @1 has 8 MA's), (33, 85), (36, 112), (39, 136), (42, 175), (70, 349), (85, 472), (97, 553), (105, 592), (106, 595), (108, 601),

Gene: BarretLemon_69 Start: 44545, Stop: 45120, Start Num: 14

Candidate Starts for BarretLemon_69:

(Start: 14 @44545 has 22 MA's), (37, 44716), (40, 44734), (56, 44809), (71, 44911), (74, 44929),

Gene: Beans_66 Start: 44464, Stop: 45042, Start Num: 14

Candidate Starts for Beans_66:

(Start: 14 @44464 has 22 MA's), (17, 44479), (Start: 22 @44527 has 1 MA's), (40, 44668), (54, 44737), (89, 44980), (98, 45031),

Gene: BiggityBass_1 Start: 1, Stop: 600, Start Num: 20

Candidate Starts for BiggityBass_1:

(Start: 20 @1 has 8 MA's), (29, 28), (33, 79), (38, 118), (42, 169), (65, 295), (93, 508), (105, 586),

Gene: Blett_46 Start: 29321, Stop: 29854, Start Num: 25

Candidate Starts for Blett_46:

(Start: 25 @29321 has 8 MA's), (29, 29345), (36, 29423), (39, 29447), (40, 29450), (42, 29486), (46, 29510), (59, 29549), (64, 29579), (65, 29588), (83, 29735),

Gene: BossLady_71 Start: 45159, Stop: 45689, Start Num: 14

Candidate Starts for BossLady_71:

(Start: 14 @45159 has 22 MA's), (37, 45285), (40, 45303), (56, 45378), (63, 45408), (72, 45483), (74, 45498), (87, 45606), (91, 45627),

Gene: Brent_66 Start: 44549, Stop: 45127, Start Num: 14

Candidate Starts for Brent_66:

(Start: 14 @44549 has 22 MA's), (17, 44564), (40, 44753), (54, 44822), (89, 45065),

Gene: Bush_47 Start: 29269, Stop: 29802, Start Num: 25

Candidate Starts for Bush_47:

(Start: 25 @29269 has 8 MA's), (29, 29293), (36, 29371), (39, 29395), (40, 29398), (42, 29434), (46, 29458), (59, 29497), (64, 29527), (65, 29536), (83, 29683),

Gene: CharlottesWeb_1 Start: 40, Stop: 612, Start Num: 29

Candidate Starts for CharlottesWeb_1:

(Start: 20 @1 has 8 MA's), (29, 40), (33, 91), (39, 142), (42, 181), (57, 262), (62, 280), (65, 307), (85, 478), (94, 526), (97, 559), (105, 598), (106, 601), (108, 607),

Gene: Cinna_94 Start: 54580, Stop: 55263, Start Num: 23

Candidate Starts for Cinna_94:

(Start: 23 @54580 has 4 MA's), (34, 54667), (44, 54775), (48, 54793), (51, 54808), (55, 54838), (58, 54844), (67, 54898), (68, 54934), (74, 54964), (77, 55015), (78, 55024), (86, 55081), (94, 55129),

Gene: Cressida_96 Start: 55174, Stop: 55857, Start Num: 23

Candidate Starts for Cressida_96:

(Start: 23 @55174 has 4 MA's), (34, 55261), (44, 55369), (48, 55387), (51, 55402), (55, 55432), (58, 55438), (67, 55492), (68, 55528), (74, 55558), (77, 55609), (86, 55675),

Gene: Dropshot_46 Start: 28970, Stop: 29503, Start Num: 25

Candidate Starts for Dropshot_46:

(Start: 25 @28970 has 8 MA's), (29, 28994), (36, 29072), (39, 29096), (40, 29099), (42, 29135), (46, 29159), (59, 29198), (64, 29228), (65, 29237), (83, 29384),

Gene: EastWest_74 Start: 43726, Stop: 44280, Start Num: 15

Candidate Starts for EastWest_74:

(Start: 15 @43726 has 1 MA's), (39, 43861), (40, 43864), (59, 43951), (63, 43972), (65, 43990), (102, 44260), (103, 44266),

Gene: Franzy_64 Start: 44565, Stop: 45143, Start Num: 14

Candidate Starts for Franzy_64:

(Start: 14 @44565 has 22 MA's), (17, 44580), (36, 44742), (40, 44769), (54, 44838), (89, 45081),

Gene: Fresco_1 Start: 1, Stop: 606, Start Num: 20

Candidate Starts for Fresco_1:

(Start: 20 @1 has 8 MA's), (33, 85), (36, 112), (39, 136), (42, 175), (70, 349), (85, 472), (97, 553), (105, 592), (106, 595), (108, 601),

Gene: GravityBall_69 Start: 44845, Stop: 45375, Start Num: 14

Candidate Starts for GravityBall_69:

(Start: 14 @44845 has 22 MA's), (37, 44971), (40, 44989), (56, 45064), (71, 45166), (74, 45184),

Gene: Grekaycon_70 Start: 45072, Stop: 45602, Start Num: 14

Candidate Starts for Grekaycon_70:

(Start: 14 @45072 has 22 MA's), (37, 45198), (40, 45216), (56, 45291), (63, 45321), (72, 45396), (74, 45411), (87, 45519), (91, 45540),

Gene: JKerns_69 Start: 45051, Stop: 45626, Start Num: 14

Candidate Starts for JKerns_69:

(Start: 14 @45051 has 22 MA's), (37, 45222), (40, 45240), (56, 45315), (63, 45345), (72, 45420), (74, 45435), (87, 45543), (91, 45564),

Gene: Jace_85 Start: 47046, Stop: 47594, Start Num: 27

Candidate Starts for Jace_85:

(Start: 27 @47046 has 1 MA's), (42, 47202), (45, 47223), (65, 47304), (66, 47307), (73, 47367), (100, 47559), (104, 47577), (107, 47586), (109, 47589),

Gene: Jawnski_65 Start: 44074, Stop: 44652, Start Num: 14

Candidate Starts for Jawnski_65:

(Start: 14 @44074 has 22 MA's), (17, 44089), (40, 44278), (54, 44347), (89, 44590),

Gene: Jordan_70 Start: 45176, Stop: 45751, Start Num: 14

Candidate Starts for Jordan_70:

(Start: 14 @45176 has 22 MA's), (37, 45347), (40, 45365), (56, 45440), (63, 45470), (72, 45545), (74, 45560), (87, 45668),

Gene: King2_64 Start: 44610, Stop: 45188, Start Num: 14

Candidate Starts for King2_64:

(Start: 14 @44610 has 22 MA's), (17, 44625), (40, 44814), (54, 44883), (89, 45126),

Gene: LeeroyJ_70 Start: 44774, Stop: 45304, Start Num: 14

Candidate Starts for LeeroyJ_70:

(Start: 14 @44774 has 22 MA's), (37, 44900), (40, 44918), (71, 45095), (74, 45113),

Gene: Ligma_1 Start: 1, Stop: 606, Start Num: 20

Candidate Starts for Ligma_1:

(Start: 20 @1 has 8 MA's), (33, 85), (36, 112), (39, 136), (42, 175), (70, 349), (85, 472), (97, 553), (105, 592), (106, 595), (108, 601),

Gene: Margaery_97 Start: 55238, Stop: 55930, Start Num: 21

Candidate Starts for Margaery_97:

(11, 55121), (Start: 21 @55238 has 3 MA's), (Start: 23 @55247 has 4 MA's), (34, 55334), (44, 55442), (48, 55460), (51, 55475), (74, 55631), (94, 55796),

Gene: Mariokart_1 Start: 1, Stop: 612, Start Num: 20

Candidate Starts for Mariokart_1:

(Start: 20 @1 has 8 MA's), (29, 40), (33, 91), (39, 142), (42, 181), (57, 262), (62, 280), (65, 307), (94, 526), (97, 559), (106, 601),

Gene: Martha_69 Start: 45008, Stop: 45538, Start Num: 14

Candidate Starts for Martha_69:

(Start: 14 @45008 has 22 MA's), (37, 45134), (40, 45152), (56, 45227), (63, 45257), (72, 45332), (74, 45347), (87, 45455),

Gene: Matzah_98 Start: 54900, Stop: 55583, Start Num: 23

Candidate Starts for Matzah_98:

(Start: 23 @54900 has 4 MA's), (34, 54987), (44, 55095), (48, 55113), (51, 55128), (55, 55158), (58, 55164), (67, 55218), (68, 55254), (74, 55284), (77, 55335), (78, 55344), (86, 55401), (94, 55449),

Gene: Megan_1 Start: 1, Stop: 666, Start Num: 26

Candidate Starts for Megan_1:

(Start: 26 @1 has 2 MA's), (35, 97), (41, 154), (44, 190), (47, 205), (51, 223), (52, 229), (53, 244), (55, 253), (60, 265), (75, 403), (88, 517), (90, 529), (110, 637),

Gene: MementoMori_97 Start: 54789, Stop: 55472, Start Num: 23

Candidate Starts for MementoMori_97:

(Start: 23 @54789 has 4 MA's), (34, 54876), (44, 54984), (48, 55002), (51, 55017), (55, 55047), (58, 55053), (67, 55107), (68, 55143), (74, 55173), (86, 55290), (94, 55338),

Gene: MenE_51 Start: 29392, Stop: 29925, Start Num: 25

Candidate Starts for MenE_51:

(4, 29158), (5, 29170), (9, 29248), (Start: 25 @29392 has 8 MA's), (29, 29416), (36, 29494), (39, 29518), (40, 29521), (42, 29557), (46, 29581), (59, 29620), (64, 29650), (65, 29659),

Gene: Mufasa8_91 Start: 53065, Stop: 53769, Start Num: 16

Candidate Starts for Mufasa8_91:

(12, 53020), (Start: 16 @53065 has 1 MA's), (31, 53197), (32, 53200), (34, 53209), (50, 53332), (61, 53359), (69, 53440), (79, 53530), (80, 53536), (95, 53635),

Gene: NHagos_1 Start: 1, Stop: 633, Start Num: 19

Candidate Starts for NHagos_1:

(Start: 19 @1 has 1 MA's), (Start: 20 @10 has 8 MA's), (33, 103), (34, 109), (39, 154), (42, 193), (46, 217), (62, 292), (76, 424), (82, 463), (94, 547), (97, 580), (105, 619), (106, 622), (108, 628),

Gene: NathanVaag_65 Start: 44298, Stop: 44876, Start Num: 14

Candidate Starts for NathanVaag_65:

(Start: 14 @44298 has 22 MA's), (17, 44313), (Start: 22 @44361 has 1 MA's), (40, 44502), (54, 44571), (81, 44763), (89, 44814), (98, 44865),

Gene: Nicole72_1 Start: 1, Stop: 666, Start Num: 26

Candidate Starts for Nicole72_1:

(Start: 26 @1 has 2 MA's), (35, 97), (44, 190), (51, 223), (52, 229), (53, 244), (55, 253), (58, 259), (88, 517), (110, 637),

Gene: Phonegingi_46 Start: 29171, Stop: 29704, Start Num: 25

Candidate Starts for Phonegingi_46:

(Start: 25 @29171 has 8 MA's), (29, 29195), (36, 29273), (39, 29297), (40, 29300), (42, 29336), (46, 29360), (59, 29399), (64, 29429), (65, 29438), (83, 29585), (99, 29693),

Gene: Piccoletto_66 Start: 44460, Stop: 45038, Start Num: 14

Candidate Starts for Piccoletto_66:

(Start: 14 @44460 has 22 MA's), (17, 44475), (Start: 22 @44523 has 1 MA's), (40, 44664), (54, 44733), (89, 44976), (98, 45027),

Gene: Pickles13_45 Start: 29439, Stop: 29972, Start Num: 25

Candidate Starts for Pickles13_45:

(4, 29202), (7, 29286), (Start: 25 @29439 has 8 MA's), (29, 29463), (36, 29541), (39, 29565), (40, 29568), (42, 29604), (46, 29628), (59, 29667), (64, 29697), (83, 29853),

Gene: Pippa_70 Start: 45043, Stop: 45573, Start Num: 14

Candidate Starts for Pippa_70:

(Start: 14 @45043 has 22 MA's), (37, 45169), (40, 45187), (56, 45262), (63, 45292), (72, 45367), (74, 45382), (87, 45490), (91, 45511),

Gene: Shade_69 Start: 44814, Stop: 45389, Start Num: 14

Candidate Starts for Shade_69:

(Start: 14 @44814 has 22 MA's), (37, 44985), (40, 45003), (56, 45078), (63, 45108), (72, 45183), (74, 45198), (87, 45306), (91, 45327),

Gene: Shatter_1 Start: 1, Stop: 606, Start Num: 20

Candidate Starts for Shatter_1:

(Start: 20 @1 has 8 MA's), (33, 85), (36, 112), (39, 136), (42, 175), (70, 349), (85, 472), (97, 553), (105, 592), (106, 595), (108, 601),

Gene: Sicarius2_71 Start: 43199, Stop: 43729, Start Num: 21

Candidate Starts for Sicarius2_71:

(Start: 21 @43199 has 3 MA's), (28, 43235), (30, 43244), (40, 43343), (56, 43421), (65, 43469), (79, 43592), (101, 43724),

Gene: Sisko_1 Start: 1, Stop: 600, Start Num: 20

Candidate Starts for Sisko_1:

(Start: 20 @1 has 8 MA's), (29, 28), (33, 79), (38, 118), (65, 295), (105, 586), (106, 589),

Gene: Sonali_86 Start: 53450, Stop: 54043, Start Num: 22

Candidate Starts for Sonali_86:

(1, 52859), (2, 52970), (8, 53303), (18, 53429), (Start: 22 @53450 has 1 MA's), (35, 53558), (49, 53642), (96, 53945), (98, 53969),

Gene: Sonny_69 Start: 44737, Stop: 45312, Start Num: 14

Candidate Starts for Sonny_69:

(Start: 14 @44737 has 22 MA's), (37, 44908), (40, 44926), (56, 45001), (63, 45031), (72, 45106), (74, 45121), (87, 45229), (91, 45250),

Gene: StevieBAY_70 Start: 45067, Stop: 45597, Start Num: 14

Candidate Starts for StevieBAY_70:

(Start: 14 @45067 has 22 MA's), (37, 45193), (40, 45211), (56, 45286), (71, 45388), (74, 45406),

Gene: TaeYoung_70 Start: 44980, Stop: 45510, Start Num: 14

Candidate Starts for TaeYoung_70:

(Start: 14 @44980 has 22 MA's), (37, 45106), (40, 45124), (56, 45199), (63, 45229), (72, 45304), (74, 45319), (87, 45427), (91, 45448),

Gene: Timinator_70 Start: 44887, Stop: 45417, Start Num: 14

Candidate Starts for Timinator_70:

(Start: 14 @44887 has 22 MA's), (37, 45013), (40, 45031), (71, 45208), (74, 45226),

Gene: TurkishDelight_122 Start: 89500, Stop: 90093, Start Num: 13

Candidate Starts for TurkishDelight_122:

(Start: 13 @89500 has 1 MA's), (Start: 14 @89518 has 22 MA's), (24, 89584), (36, 89689),

Gene: Warren_46 Start: 29178, Stop: 29711, Start Num: 25

Candidate Starts for Warren_46:

(Start: 25 @29178 has 8 MA's), (29, 29202), (36, 29280), (39, 29304), (40, 29307), (43, 29346), (46, 29367), (59, 29406), (64, 29436), (65, 29445), (83, 29592),

Gene: Wyborn_70 Start: 43934, Stop: 44464, Start Num: 21

Candidate Starts for Wyborn_70:

(Start: 21 @43934 has 3 MA's), (28, 43970), (30, 43979), (40, 44078), (56, 44156), (65, 44204), (79, 44327), (101, 44459),

Gene: Yago84_1 Start: 1, Stop: 600, Start Num: 20

Candidate Starts for Yago84_1:

(Start: 20 @1 has 8 MA's), (29, 28), (33, 79), (38, 118), (65, 295), (84, 463), (105, 586), (106, 589),

Gene: Zartrosa_71 Start: 45067, Stop: 45642, Start Num: 14

Candidate Starts for Zartrosa_71:

(Start: 14 @45067 has 22 MA's), (37, 45238), (40, 45256), (56, 45331), (63, 45361), (72, 45436), (74, 45451), (87, 45559), (91, 45580),