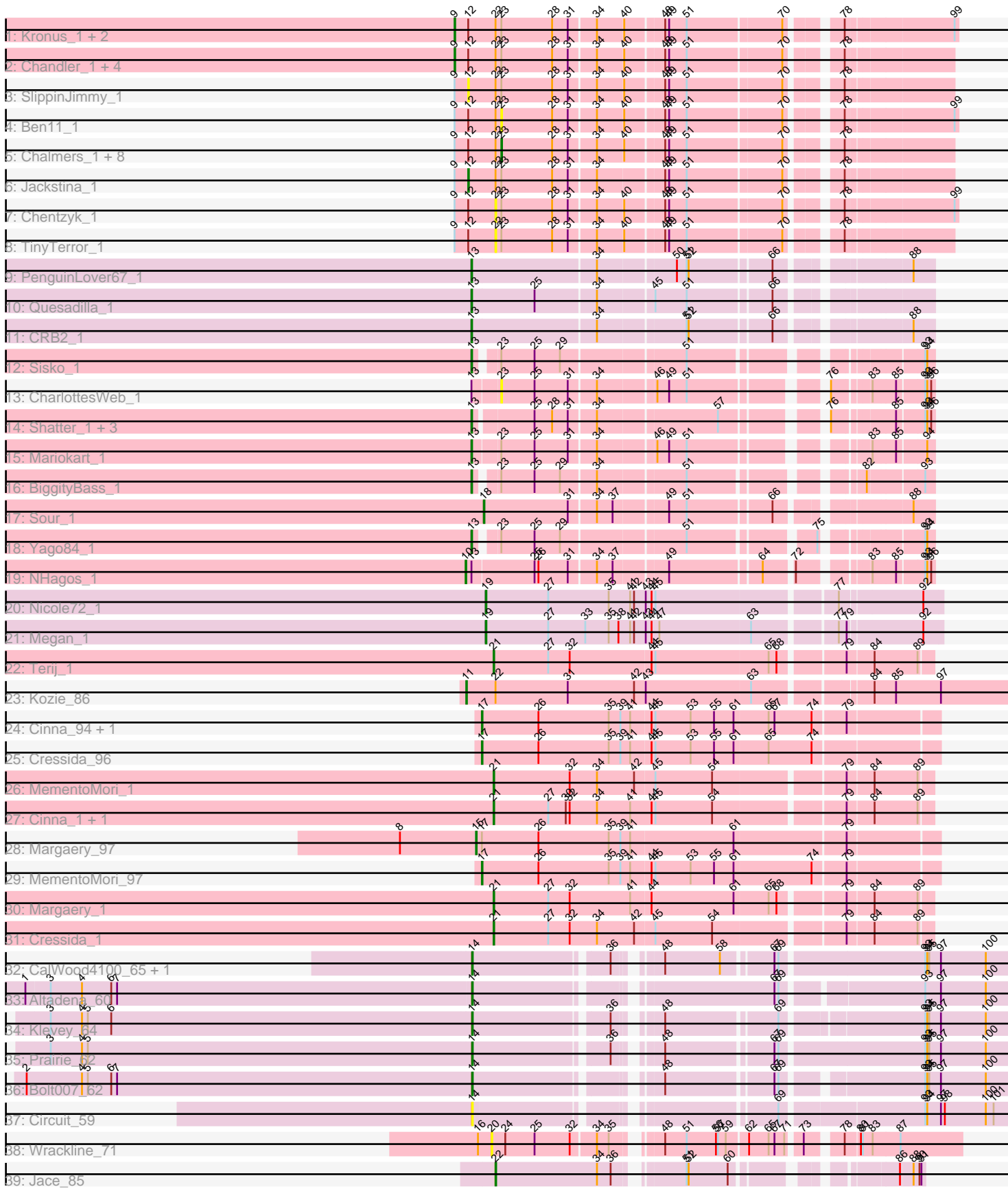


Pham 202962



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 202962 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202962 has 59 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Kronus_1, Mortcellus_1, Phayeta_1
- Track 2 : Chandler_1, Philly_1, Abinghost_1, LestyG_1, Pipefish_1
- Track 3 : SlippinJimmy_1
- Track 4 : Ben11_1
- Track 5 : Chalmers_1, Kamiyu_1, Glubnar_1, Morty007_1, Yahalom_1, Tydolla_1, SwainyDoc_1, Phaedrus_1, Bernardo_1
- Track 6 : Jackstina_1
- Track 7 : Chentzyk_1
- Track 8 : TinyTerror_1
- Track 9 : PenguinLover67_1
- Track 10 : Quesadilla_1
- Track 11 : CRB2_1
- Track 12 : Sisko_1
- Track 13 : CharlottesWeb_1
- Track 14 : Shatter_1, Fresco_1, Ligma_1, Axumite_1
- Track 15 : Mariokart_1
- Track 16 : BiggityBass_1
- Track 17 : Sour_1
- Track 18 : Yago84_1
- Track 19 : NHagos_1
- Track 20 : Nicole72_1
- Track 21 : Megan_1
- Track 22 : Terij_1
- Track 23 : Kozie_86
- Track 24 : Cinna_94, Matzah_98
- Track 25 : Cressida_96
- Track 26 : MementoMori_1
- Track 27 : Cinna_1, Matzah_1
- Track 28 : Margaery_97
- Track 29 : MementoMori_97
- Track 30 : Margaery_1
- Track 31 : Cressida_1
- Track 32 : CalWood4100_65, Lilmac1015_65
- Track 33 : Altadena_60
- Track 34 : Klevey_64
- Track 35 : Prairie_62
- Track 36 : Bolt007_62

- Track 37 : Circuit_59
- Track 38 : Wrackline_71
- Track 39 : Jace_85

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

The start number called the most often in the published annotations is 13, it was called in 11 of the 48 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Axumite_1, BiggityBass_1, CRB2_1, Fresco_1, Ligma_1, Mariokart_1, PenguinLover67_1, Quesadilla_1, Shatter_1, Sisko_1, Yago84_1,

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

- CharlottesWeb_1, NHagos_1,

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

- Abinghost_1, Altadena_60, Ben11_1, Bernardo_1, Bolt007_62, CalWood4100_65, Chalmers_1, Chandler_1, Chentzyk_1, Cinna_1, Cinna_94, Circuit_59, Cressida_1, Cressida_96, Glubnar_1, Jace_85, Jackstina_1, Kamiyu_1, Klevey_64, Kozie_86, Kronus_1, LestyG_1, Lilmac1015_65, Margaery_1, Margaery_97, Matzah_1, Matzah_98, Megan_1, MementoMori_1, MementoMori_97, Mortcellus_1, Morty007_1, Nicole72_1, Phaedrus_1, Phayeta_1, Philly_1, Pipefish_1, Prairie_62, SlippinJimmy_1, Sour_1, SwainyDoc_1, Terij_1, TinyTerror_1, Tydolla_1, Wrackline_71, Yahalom_1,

Summary by start number:

Start 9:

- Found in 22 of 59 (37.3%) of genes in pham
- Manual Annotations of this start: 8 of 48
- Called 36.4% of time when present
- Phage (with cluster) where this start called: Abinghost_1 (B3), Chandler_1 (B3), Kronus_1 (B3), LestyG_1 (B3), Mortcellus_1 (B3), Phayeta_1 (B3), Philly_1 (B3), Pipefish_1 (B3),

Start 10:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NHagos_1 (DR),

Start 11:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kozie_86 (EI),

Start 12:

- Found in 22 of 59 (37.3%) of genes in pham

- Manual Annotations of this start: 1 of 48
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Jackstina_1 (B3), SlippinJimmy_1 (B3),

Start 13:

- Found in 13 of 59 (22.0%) of genes in pham
- Manual Annotations of this start: 11 of 48
- Called 84.6% of time when present
- Phage (with cluster) where this start called: Axumite_1 (DR), BiggityBass_1 (DR), CRB2_1 (B9), Fresco_1 (DR), Ligma_1 (DR), Mariokart_1 (DR), PenguinLover67_1 (B9), Quesadilla_1 (B9), Shatter_1 (DR), Sisko_1 (DR), Yago84_1 (DR),

Start 14:

- Found in 7 of 59 (11.9%) of genes in pham
- Manual Annotations of this start: 5 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altadena_60 (FH), Bolt007_62 (FH), CalWood4100_65 (FH), Circuit_59 (FH), Klevey_64 (FH), Lilmac1015_65 (FH), Prairie_62 (FH),

Start 15:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Margaery_97 (EI),

Start 17:

- Found in 5 of 59 (8.5%) of genes in pham
- Manual Annotations of this start: 4 of 48
- 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 18:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sour_1 (DR),

Start 19:

- Found in 2 of 59 (3.4%) of genes in pham
- Manual Annotations of this start: 2 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Megan_1 (EC), Nicole72_1 (EC),

Start 20:

- Found in 1 of 59 (1.7%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wrackline_71 (GF),

Start 21:

- Found in 6 of 59 (10.2%) of genes in pham

- Manual Annotations of this start: 6 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cinna_1 (EI), Cressida_1 (EI), Margaery_1 (EI), Matzah_1 (EI), MementoMori_1 (EI), Terij_1 (EI),

Start 22:

- Found in 24 of 59 (40.7%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Chentzyk_1 (B3), Jace_85 (singleton), TinyTerror_1 (B3),

Start 23:

- Found in 27 of 59 (45.8%) of genes in pham
- Manual Annotations of this start: 6 of 48
- Called 40.7% of time when present
- Phage (with cluster) where this start called: Ben11_1 (B3), Bernardo_1 (B3), Chalmers_1 (B3), CharlottesWeb_1 (DR), Glubnar_1 (B3), Kamiyu_1 (B3), Morty007_1 (B3), Phaedrus_1 (B3), SwainyDoc_1 (B3), Tydolla_1 (B3), Yahalom_1 (B3),

Summary by clusters:

There are 8 clusters represented in this pham: singleton, EI, EC, GF, B3, FH, DR, B9,

Info for manual annotations of cluster B3:

- Start number 9 was manually annotated 8 times for cluster B3.
- Start number 12 was manually annotated 1 time for cluster B3.
- Start number 23 was manually annotated 6 times for cluster B3.

Info for manual annotations of cluster B9:

- Start number 13 was manually annotated 3 times for cluster B9.

Info for manual annotations of cluster DR:

- Start number 10 was manually annotated 1 time for cluster DR.
- Start number 13 was manually annotated 8 times for cluster DR.
- Start number 18 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster EC:

- Start number 19 was manually annotated 2 times for cluster EC.

Info for manual annotations of cluster EI:

- Start number 11 was manually annotated 1 time for cluster EI.
- Start number 15 was manually annotated 1 time for cluster EI.
- Start number 17 was manually annotated 4 times for cluster EI.
- Start number 21 was manually annotated 6 times for cluster EI.

Info for manual annotations of cluster FH:

- Start number 14 was manually annotated 5 times for cluster FH.

Gene Information:

Gene: Abinghost_1 Start: 1, Stop: 693, Start Num: 9

Candidate Starts for Abinghost_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: Altadena_60 Start: 38689, Stop: 39465, Start Num: 14

Candidate Starts for Altadena_60:

(1, 38008), (3, 38044), (4, 38092), (6, 38137), (7, 38146), (Start: 14 @38689 has 5 MA's), (67, 39097), (69, 39103), (93, 39301), (97, 39325), (100, 39394),

Gene: Axumite_1 Start: 1, Stop: 606, Start Num: 13

Candidate Starts for Axumite_1:

(Start: 13 @1 has 11 MA's), (25, 85), (28, 112), (31, 136), (34, 175), (57, 349), (76, 472), (85, 553), (93, 592), (94, 595), (96, 601),

Gene: Ben11_1 Start: 73, Stop: 699, Start Num: 23

Candidate Starts for Ben11_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541), (99, 694),

Gene: Bernardo_1 Start: 73, Stop: 693, Start Num: 23

Candidate Starts for Bernardo_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: BiggityBass_1 Start: 1, Stop: 600, Start Num: 13

Candidate Starts for BiggityBass_1:

(Start: 13 @1 has 11 MA's), (Start: 23 @28 has 6 MA's), (25, 79), (29, 118), (34, 169), (51, 295), (82, 508), (93, 586),

Gene: Bolt007_62 Start: 40946, Stop: 41710, Start Num: 14

Candidate Starts for Bolt007_62:

(2, 40265), (4, 40349), (5, 40358), (6, 40394), (7, 40403), (Start: 14 @40946 has 5 MA's), (48, 41186), (67, 41339), (69, 41345), (93, 41537), (94, 41540), (95, 41543), (97, 41561), (100, 41630),

Gene: CRB2_1 Start: 1, Stop: 633, Start Num: 13

Candidate Starts for CRB2_1:

(Start: 13 @1 has 11 MA's), (34, 187), (51, 313), (52, 316), (66, 433), (88, 601),

Gene: CalWood4100_65 Start: 40886, Stop: 41671, Start Num: 14

Candidate Starts for CalWood4100_65:

(Start: 14 @40886 has 5 MA's), (36, 41078), (48, 41126), (58, 41210), (67, 41279), (69, 41285), (93, 41498), (94, 41501), (95, 41504), (97, 41522), (100, 41591),

Gene: Chalmers_1 Start: 73, Stop: 693, Start Num: 23

Candidate Starts for Chalmers_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: Chandler_1 Start: 1, Stop: 693, Start Num: 9

Candidate Starts for Chandler_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: CharlottesWeb_1 Start: 40, Stop: 612, Start Num: 23

Candidate Starts for CharlottesWeb_1:

(Start: 13 @1 has 11 MA's), (Start: 23 @40 has 6 MA's), (25, 91), (31, 142), (34, 181), (46, 262), (49, 280), (51, 307), (76, 478), (83, 526), (85, 559), (93, 598), (94, 601), (96, 607),

Gene: Chentzyk_1 Start: 64, Stop: 699, Start Num: 22

Candidate Starts for Chentzyk_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541), (99, 694),

Gene: Cinna_94 Start: 54580, Stop: 55263, Start Num: 17

Candidate Starts for Cinna_94:

(Start: 17 @54580 has 4 MA's), (26, 54667), (35, 54775), (39, 54793), (41, 54808), (44, 54838), (45, 54844), (53, 54898), (55, 54934), (61, 54964), (65, 55015), (67, 55024), (74, 55081), (79, 55129),

Gene: Cinna_1 Start: 1, Stop: 648, Start Num: 21

Candidate Starts for Cinna_1:

(Start: 21 @1 has 6 MA's), (27, 85), (30, 112), (32, 118), (34, 160), (41, 211), (44, 244), (45, 250), (54, 337), (79, 523), (84, 562), (89, 628),

Gene: Circuit_59 Start: 40042, Stop: 40803, Start Num: 14

Candidate Starts for Circuit_59:

(Start: 14 @40042 has 5 MA's), (69, 40438), (93, 40645), (94, 40648), (97, 40669), (98, 40675), (100, 40738), (101, 40750),

Gene: Cressida_96 Start: 55174, Stop: 55857, Start Num: 17

Candidate Starts for Cressida_96:

(Start: 17 @55174 has 4 MA's), (26, 55261), (35, 55369), (39, 55387), (41, 55402), (44, 55432), (45, 55438), (53, 55492), (55, 55528), (61, 55558), (65, 55609), (74, 55675),

Gene: Cressida_1 Start: 1, Stop: 645, Start Num: 21

Candidate Starts for Cressida_1:

(Start: 21 @1 has 6 MA's), (27, 85), (32, 118), (34, 160), (42, 217), (45, 247), (54, 334), (79, 520), (84, 559), (89, 625),

Gene: Fresco_1 Start: 1, Stop: 606, Start Num: 13

Candidate Starts for Fresco_1:

(Start: 13 @1 has 11 MA's), (25, 85), (28, 112), (31, 136), (34, 175), (57, 349), (76, 472), (85, 553), (93, 592), (94, 595), (96, 601),

Gene: Glubnar_1 Start: 73, Stop: 693, Start Num: 23

Candidate Starts for Glubnar_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: Jace_85 Start: 47046, Stop: 47594, Start Num: 22

Candidate Starts for Jace_85:

(Start: 22 @47046 has 1 MA's), (34, 47202), (36, 47223), (51, 47304), (52, 47307), (60, 47367), (86, 47559), (88, 47577), (90, 47586), (91, 47589),

Gene: Jackstina_1 Start: 22, Stop: 693, Start Num: 12

Candidate Starts for Jackstina_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: Kamiyu_1 Start: 73, Stop: 693, Start Num: 23

Candidate Starts for Kamiyu_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: Klevey_64 Start: 40643, Stop: 41416, Start Num: 14

Candidate Starts for Klevey_64:

(3, 39998), (4, 40046), (5, 40055), (6, 40091), (Start: 14 @40643 has 5 MA's), (36, 40835), (48, 40883), (69, 41042), (93, 41243), (94, 41246), (95, 41249), (97, 41267), (100, 41336),

Gene: Kozie_86 Start: 51332, Stop: 52135, Start Num: 11

Candidate Starts for Kozie_86:

(Start: 11 @51332 has 1 MA's), (Start: 22 @51377 has 1 MA's), (31, 51488), (42, 51590), (43, 51605), (63, 51764), (84, 51926), (85, 51959), (97, 52028),

Gene: Kronus_1 Start: 1, Stop: 699, Start Num: 9

Candidate Starts for Kronus_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541), (99, 694),

Gene: LestyG_1 Start: 1, Stop: 693, Start Num: 9

Candidate Starts for LestyG_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: Ligma_1 Start: 1, Stop: 606, Start Num: 13

Candidate Starts for Ligma_1:

(Start: 13 @1 has 11 MA's), (25, 85), (28, 112), (31, 136), (34, 175), (57, 349), (76, 472), (85, 553), (93, 592), (94, 595), (96, 601),

Gene: Lilmac1015_65 Start: 40886, Stop: 41671, Start Num: 14

Candidate Starts for Lilmac1015_65:

(Start: 14 @40886 has 5 MA's), (36, 41078), (48, 41126), (58, 41210), (67, 41279), (69, 41285), (93, 41498), (94, 41501), (95, 41504), (97, 41522), (100, 41591),

Gene: Margaery_97 Start: 55238, Stop: 55930, Start Num: 15

Candidate Starts for Margaery_97:

(8, 55121), (Start: 15 @55238 has 1 MA's), (Start: 17 @55247 has 4 MA's), (26, 55334), (35, 55442), (39, 55460), (41, 55475), (61, 55631), (79, 55796),

Gene: Margaery_1 Start: 1, Stop: 645, Start Num: 21

Candidate Starts for Margaery_1:

(Start: 21 @1 has 6 MA's), (27, 85), (32, 118), (41, 211), (44, 241), (61, 367), (65, 418), (68, 430), (79, 520), (84, 559), (89, 625),

Gene: Mariokart_1 Start: 1, Stop: 612, Start Num: 13

Candidate Starts for Mariokart_1:

(Start: 13 @1 has 11 MA's), (Start: 23 @40 has 6 MA's), (25, 91), (31, 142), (34, 181), (46, 262), (49, 280), (51, 307), (83, 526), (85, 559), (94, 601),

Gene: Matzah_98 Start: 54900, Stop: 55583, Start Num: 17

Candidate Starts for Matzah_98:

(Start: 17 @54900 has 4 MA's), (26, 54987), (35, 55095), (39, 55113), (41, 55128), (44, 55158), (45, 55164), (53, 55218), (55, 55254), (61, 55284), (65, 55335), (67, 55344), (74, 55401), (79, 55449),

Gene: Matzah_1 Start: 1, Stop: 648, Start Num: 21

Candidate Starts for Matzah_1:

(Start: 21 @1 has 6 MA's), (27, 85), (30, 112), (32, 118), (34, 160), (41, 211), (44, 244), (45, 250), (54, 337), (79, 523), (84, 562), (89, 628),

Gene: Megan_1 Start: 1, Stop: 666, Start Num: 19

Candidate Starts for Megan_1:

(Start: 19 @1 has 2 MA's), (27, 97), (33, 154), (35, 190), (38, 205), (41, 223), (42, 229), (43, 244), (44, 253), (47, 265), (63, 403), (77, 517), (79, 529), (92, 637),

Gene: MementoMori_1 Start: 1, Stop: 645, Start Num: 21

Candidate Starts for MementoMori_1:

(Start: 21 @1 has 6 MA's), (32, 118), (34, 160), (42, 217), (45, 247), (54, 334), (79, 520), (84, 559), (89, 625),

Gene: MementoMori_97 Start: 54789, Stop: 55472, Start Num: 17

Candidate Starts for MementoMori_97:

(Start: 17 @54789 has 4 MA's), (26, 54876), (35, 54984), (39, 55002), (41, 55017), (44, 55047), (45, 55053), (53, 55107), (55, 55143), (61, 55173), (74, 55290), (79, 55338),

Gene: Mortcellus_1 Start: 1, Stop: 699, Start Num: 9

Candidate Starts for Mortcellus_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541), (99, 694),

Gene: Morty007_1 Start: 73, Stop: 693, Start Num: 23

Candidate Starts for Morty007_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: NHagos_1 Start: 1, Stop: 633, Start Num: 10

Candidate Starts for NHagos_1:

(Start: 10 @1 has 1 MA's), (Start: 13 @10 has 11 MA's), (25, 103), (26, 109), (31, 154), (34, 193), (37, 217), (49, 292), (64, 424), (72, 463), (83, 547), (85, 580), (93, 619), (94, 622), (96, 628),

Gene: Nicole72_1 Start: 1, Stop: 666, Start Num: 19

Candidate Starts for Nicole72_1:

(Start: 19 @1 has 2 MA's), (27, 97), (35, 190), (41, 223), (42, 229), (43, 244), (44, 253), (45, 259), (77, 517), (92, 637),

Gene: PenguinLover67_1 Start: 1, Stop: 633, Start Num: 13

Candidate Starts for PenguinLover67_1:

(Start: 13 @1 has 11 MA's), (34, 187), (50, 298), (51, 313), (52, 316), (66, 433), (88, 601),

Gene: Phaedrus_1 Start: 73, Stop: 693, Start Num: 23

Candidate Starts for Phaedrus_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: Phayeta_1 Start: 1, Stop: 699, Start Num: 9

Candidate Starts for Phayeta_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541), (99, 694),

Gene: Philly_1 Start: 1, Stop: 693, Start Num: 9

Candidate Starts for Philly_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: Pipefish_1 Start: 1, Stop: 693, Start Num: 9

Candidate Starts for Pipefish_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: Prairie_62 Start: 40182, Stop: 40967, Start Num: 14

Candidate Starts for Prairie_62:

(3, 39537), (4, 39585), (5, 39594), (Start: 14 @40182 has 5 MA's), (36, 40374), (48, 40422), (67, 40575), (69, 40581), (93, 40794), (94, 40797), (95, 40800), (97, 40818), (100, 40887),

Gene: Quesadilla_1 Start: 1, Stop: 633, Start Num: 13

Candidate Starts for Quesadilla_1:

(Start: 13 @1 has 11 MA's), (25, 97), (34, 187), (45, 265), (51, 313), (66, 433),

Gene: Shatter_1 Start: 1, Stop: 606, Start Num: 13

Candidate Starts for Shatter_1:

(Start: 13 @1 has 11 MA's), (25, 85), (28, 112), (31, 136), (34, 175), (57, 349), (76, 472), (85, 553), (93, 592), (94, 595), (96, 601),

Gene: Sisko_1 Start: 1, Stop: 600, Start Num: 13

Candidate Starts for Sisko_1:

(Start: 13 @1 has 11 MA's), (Start: 23 @28 has 6 MA's), (25, 79), (29, 118), (51, 295), (93, 586), (94, 589),

Gene: SlippinJimmy_1 Start: 22, Stop: 693, Start Num: 12

Candidate Starts for SlippinJimmy_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: Sour_1 Start: 1, Stop: 615, Start Num: 18

Candidate Starts for Sour_1:

(Start: 18 @1 has 1 MA's), (31, 130), (34, 169), (37, 193), (49, 268), (51, 295), (66, 415), (88, 583),

Gene: SwainyDoc_1 Start: 73, Stop: 693, Start Num: 23

Candidate Starts for SwainyDoc_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: Terij_1 Start: 1, Stop: 645, Start Num: 21

Candidate Starts for Terij_1:

(Start: 21 @1 has 6 MA's), (27, 85), (32, 118), (44, 241), (45, 247), (65, 418), (68, 430), (79, 520), (84, 559), (89, 625),

Gene: TinyTerror_1 Start: 64, Stop: 693, Start Num: 22

Candidate Starts for TinyTerror_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: Tydolla_1 Start: 73, Stop: 693, Start Num: 23

Candidate Starts for Tydolla_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),

Gene: Wrackline_71 Start: 37846, Stop: 38481, Start Num: 20

Candidate Starts for Wrackline_71:

(16, 37825), (20, 37846), (24, 37867), (25, 37912), (32, 37966), (34, 38002), (35, 38020), (48, 38071), (51, 38104), (56, 38149), (57, 38152), (59, 38164), (62, 38191), (65, 38221), (67, 38230), (71, 38245), (73, 38263), (78, 38308), (80, 38329), (81, 38332), (83, 38347), (87, 38389),

Gene: Yago84_1 Start: 1, Stop: 600, Start Num: 13

Candidate Starts for Yago84_1:

(Start: 13 @1 has 11 MA's), (Start: 23 @28 has 6 MA's), (25, 79), (29, 118), (51, 295), (75, 463), (93, 586), (94, 589),

Gene: Yahalom_1 Start: 73, Stop: 693, Start Num: 23

Candidate Starts for Yahalom_1:

(Start: 9 @1 has 8 MA's), (Start: 12 @22 has 1 MA's), (Start: 22 @64 has 1 MA's), (Start: 23 @73 has 6 MA's), (28, 151), (31, 175), (34, 214), (40, 253), (48, 307), (49, 313), (51, 340), (70, 478), (78, 541),