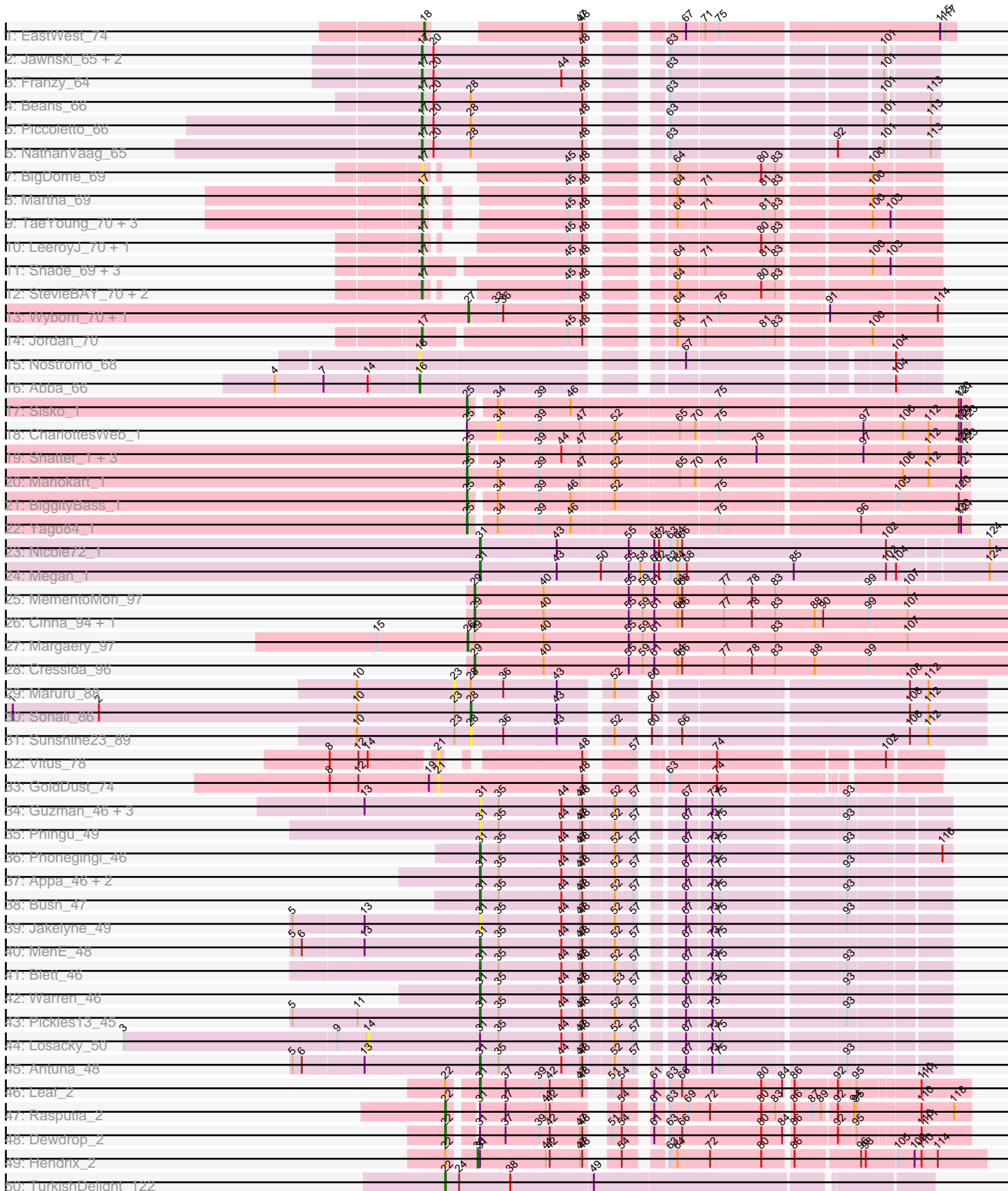
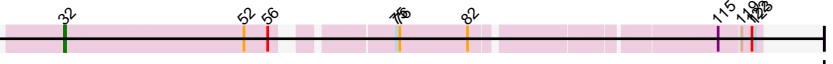


Pham 216123



51: Jace_85



A series of horizontal lines for writing, with a dashed vertical line on the right side.

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 216123 Report

This analysis was run 02/22/25 on database version 588.

Pham number 216123 has 72 members, 15 are drafts.

Phages represented in each track:

- Track 1 : EastWest_74
- Track 2 : Jawnski_65, Brent_66, King2_64
- Track 3 : Franzy_64
- Track 4 : Beans_66
- Track 5 : Piccoletto_66
- Track 6 : NathanVaag_65
- Track 7 : BigDome_69
- Track 8 : Martha_69
- Track 9 : TaeYoung_70, JKerns_69, Grekaycon_70, BossLady_71
- Track 10 : LeeroyJ_70, Timinator_70
- Track 11 : Shade_69, Sonny_69, Zartrosa_71, Pippa_70
- Track 12 : StevieBAY_70, GravityBall_69, BarretLemon_69
- Track 13 : Wyborn_70, Sicarius2_71
- Track 14 : Jordan_70
- Track 15 : Nostromo_68
- Track 16 : Abba_66
- Track 17 : Sisko_1
- Track 18 : CharlottesWeb_1
- Track 19 : Shatter_1, Axumite_1, Fresco_1, Ligma_1
- Track 20 : Mariokart_1
- Track 21 : BiggityBass_1
- Track 22 : Yago84_1
- Track 23 : Nicole72_1
- Track 24 : Megan_1
- Track 25 : MementoMori_97
- Track 26 : Cinna_94, Matzah_98
- Track 27 : Margaery_97
- Track 28 : Cressida_96
- Track 29 : Maruru_88
- Track 30 : Sonali_86
- Track 31 : Sunshine23_89
- Track 32 : Vitus_78
- Track 33 : GoldDust_74
- Track 34 : Guzman_46, Carrillo_48, CookieDog_46, Violeta_48
- Track 35 : Phingu_49
- Track 36 : Phonegingi_46
- Track 37 : Appa_46, Dropshot_46, PhillyJawn_47

- Track 38 : Bush_47
- Track 39 : Jakelyne_49
- Track 40 : MenE_48
- Track 41 : Blett_46
- Track 42 : Warren_46
- Track 43 : Pickles13_45
- Track 44 : Losacky_50
- Track 45 : Antuna_48
- Track 46 : Leaf_2
- Track 47 : Rasputia_2
- Track 48 : Dewdrop_2
- Track 49 : Hendrix_2
- Track 50 : TurkishDelight_122
- Track 51 : 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 17, it was called in 22 of the 57 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BarretLemon_69, Beans_66, BigDome_69, 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:

-

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

- Abba_66, Antuna_48, Appa_46, Axumite_1, BiggityBass_1, Blett_46, Bush_47, Carrillo_48, CharlottesWeb_1, Cinna_94, CookieDog_46, Cressida_96, Dewdrop_2, Dropshot_46, EastWest_74, Fresco_1, GoldDust_74, Guzman_46, Hendrix_2, Jace_85, Jakelyne_49, Leaf_2, Ligma_1, Losacky_50, Margaery_97, Mariokart_1, Maruru_88, Matzah_98, Megan_1, MementoMori_97, MenE_48, Nicole72_1, Nostromo_68, PhillyJawn_47, Phingu_49, Phonegingi_46, Pickles13_45, Rasputia_2, Shatter_1, Sicarius2_71, Sisko_1, Sonali_86, Sunshine23_89, TurkishDelight_122, Violeta_48, Vitus_78, Warren_46, Wyborn_70, Yago84_1,

Summary by start number:

Start 14:

- Found in 3 of 72 (4.2%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Losacky_50 (GA),

Start 16:

- Found in 2 of 72 (2.8%) of genes in pham
- Manual Annotations of this start: 1 of 57

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abba_66 (AO3), Nostromo_68 (AO3),

Start 17:

- Found in 23 of 72 (31.9%) of genes in pham
- Manual Annotations of this start: 22 of 57
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BarretLemon_69 (AO2), Beans_66 (AO1), BigDome_69 (AO2), 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 18:

- Found in 1 of 72 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 57
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EastWest_74 (AO),

Start 21:

- Found in 2 of 72 (2.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GoldDust_74 (FL), Vitus_78 (FL),

Start 22:

- Found in 5 of 72 (6.9%) of genes in pham
- Manual Annotations of this start: 3 of 57
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Dewdrop_2 (GC), Rasputia_2 (GC), TurkishDelight_122 (singleton),

Start 23:

- Found in 3 of 72 (4.2%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Maruru_88 (FG),

Start 25:

- Found in 9 of 72 (12.5%) of genes in pham
- Manual Annotations of this start: 8 of 57
- Called 88.9% 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 26:

- Found in 1 of 72 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 57
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Margaery_97 (EI),

Start 27:

- Found in 2 of 72 (2.8%) of genes in pham
- Manual Annotations of this start: 2 of 57
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sicarius2_71 (AO2), Wyborn_70 (AO2),

Start 28:

- Found in 6 of 72 (8.3%) of genes in pham
- Manual Annotations of this start: 1 of 57
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Sonali_86 (FG), Sunshine23_89 (FG),

Start 29:

- Found in 5 of 72 (6.9%) of genes in pham
- Manual Annotations of this start: 4 of 57
- 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 30:

- Found in 1 of 72 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 57
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hendrix_2 (GC),

Start 31:

- Found in 23 of 72 (31.9%) of genes in pham
- Manual Annotations of this start: 12 of 57
- Called 82.6% of time when present
- Phage (with cluster) where this start called: Antuna_48 (GA), Appa_46 (GA), Blett_46 (GA), Bush_47 (GA), Carrillo_48 (GA), CookieDog_46 (GA), Dropshot_46 (GA), Guzman_46 (GA), Jakelyne_49 (GA), Leaf_2 (GC), Megan_1 (EC), MenE_48 (GA), Nicole72_1 (EC), PhillyJawn_47 (GA), Phingu_49 (GA), Phonegingi_46 (GA), Pickles13_45 (GA), Violeta_48 (GA), Warren_46 (GA),

Start 32:

- Found in 1 of 72 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 57
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jace_85 (singleton),

Start 34:

- Found in 5 of 72 (6.9%) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: CharlottesWeb_1 (DR),

Summary by clusters:

There are 12 clusters represented in this pham: singleton, EI, GA, AO, FL, EC, GC, AO2, AO1, FG, AO3, DR,

Info for manual annotations of cluster AO:

- Start number 18 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AO1:

- Start number 17 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:

- Start number 17 was manually annotated 15 times for cluster AO2.
- Start number 27 was manually annotated 2 times for cluster AO2.

Info for manual annotations of cluster AO3:

- Start number 16 was manually annotated 1 time for cluster AO3.

Info for manual annotations of cluster DR:

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

Info for manual annotations of cluster EC:

- Start number 31 was manually annotated 2 times for cluster EC.

Info for manual annotations of cluster EI:

- Start number 26 was manually annotated 1 time for cluster EI.
- Start number 29 was manually annotated 4 times for cluster EI.

Info for manual annotations of cluster FG:

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

Info for manual annotations of cluster GA:

- Start number 31 was manually annotated 9 times for cluster GA.

Info for manual annotations of cluster GC:

- Start number 22 was manually annotated 2 times for cluster GC.
- Start number 30 was manually annotated 1 time for cluster GC.
- Start number 31 was manually annotated 1 time for cluster GC.

Gene Information:

Gene: Abba_66 Start: 41901, Stop: 42479, Start Num: 16

Candidate Starts for Abba_66:

(4, 41721), (7, 41784), (14, 41841), (Start: 16 @41901 has 1 MA's), (104, 42423),

Gene: Antuna_48 Start: 29370, Stop: 29903, Start Num: 31

Candidate Starts for Antuna_48:

(5, 29136), (6, 29148), (13, 29226), (Start: 31 @29370 has 12 MA's), (35, 29394), (44, 29472), (47, 29496), (48, 29499), (52, 29535), (57, 29559), (67, 29598), (73, 29628), (75, 29637), (93, 29784),

Gene: Appa_46 Start: 29135, Stop: 29668, Start Num: 31

Candidate Starts for Appa_46:

(Start: 31 @29135 has 12 MA's), (35, 29159), (44, 29237), (47, 29261), (48, 29264), (52, 29300), (57, 29324), (67, 29363), (73, 29393), (75, 29402), (93, 29549),

Gene: Axumite_1 Start: 1, Stop: 606, Start Num: 25

Candidate Starts for Axumite_1:

(Start: 25 @1 has 8 MA's), (39, 85), (44, 112), (47, 136), (52, 175), (79, 349), (97, 472), (112, 553), (120, 592), (121, 595), (123, 601),

Gene: BarretLemon_69 Start: 44545, Stop: 45120, Start Num: 17

Candidate Starts for BarretLemon_69:

(Start: 17 @44545 has 22 MA's), (45, 44716), (48, 44734), (64, 44809), (80, 44911), (83, 44929),

Gene: Beans_66 Start: 44464, Stop: 45042, Start Num: 17

Candidate Starts for Beans_66:

(Start: 17 @44464 has 22 MA's), (20, 44479), (Start: 28 @44527 has 1 MA's), (48, 44668), (63, 44737), (101, 44980), (113, 45031),

Gene: BigDome_69 Start: 44829, Stop: 45359, Start Num: 17

Candidate Starts for BigDome_69:

(Start: 17 @44829 has 22 MA's), (45, 44955), (48, 44973), (64, 45048), (80, 45150), (83, 45168), (100, 45276),

Gene: BiggityBass_1 Start: 1, Stop: 600, Start Num: 25

Candidate Starts for BiggityBass_1:

(Start: 25 @1 has 8 MA's), (34, 28), (39, 79), (46, 118), (52, 169), (75, 295), (105, 508), (120, 586),

Gene: Blett_46 Start: 29321, Stop: 29854, Start Num: 31

Candidate Starts for Blett_46:

(Start: 31 @29321 has 12 MA's), (35, 29345), (44, 29423), (47, 29447), (48, 29450), (52, 29486), (57, 29510), (67, 29549), (73, 29579), (75, 29588), (93, 29735),

Gene: BossLady_71 Start: 45159, Stop: 45689, Start Num: 17

Candidate Starts for BossLady_71:

(Start: 17 @45159 has 22 MA's), (45, 45285), (48, 45303), (64, 45378), (71, 45408), (81, 45483), (83, 45498), (100, 45606), (103, 45627),

Gene: Brent_66 Start: 44549, Stop: 45127, Start Num: 17

Candidate Starts for Brent_66:

(Start: 17 @44549 has 22 MA's), (20, 44564), (48, 44753), (63, 44822), (101, 45065),

Gene: Bush_47 Start: 29269, Stop: 29802, Start Num: 31

Candidate Starts for Bush_47:

(Start: 31 @29269 has 12 MA's), (35, 29293), (44, 29371), (47, 29395), (48, 29398), (52, 29434), (57, 29458), (67, 29497), (73, 29527), (75, 29536), (93, 29683),

Gene: Carrillo_48 Start: 29243, Stop: 29776, Start Num: 31

Candidate Starts for Carrillo_48:

(13, 29099), (Start: 31 @29243 has 12 MA's), (35, 29267), (44, 29345), (47, 29369), (48, 29372), (52, 29408), (57, 29432), (67, 29471), (73, 29501), (75, 29510), (93, 29657),

Gene: CharlottesWeb_1 Start: 40, Stop: 612, Start Num: 34

Candidate Starts for CharlottesWeb_1:

(Start: 25 @1 has 8 MA's), (34, 40), (39, 91), (47, 142), (52, 181), (65, 262), (70, 280), (75, 307), (97, 478), (106, 526), (112, 559), (120, 598), (121, 601), (123, 607),

Gene: Cinna_94 Start: 54580, Stop: 55263, Start Num: 29

Candidate Starts for Cinna_94:

(Start: 29 @54580 has 4 MA's), (40, 54667), (55, 54775), (59, 54793), (61, 54808), (64, 54838), (66, 54844), (77, 54898), (78, 54934), (83, 54964), (88, 55015), (90, 55024), (99, 55081), (107, 55129),

Gene: CookieDog_46 Start: 29243, Stop: 29776, Start Num: 31

Candidate Starts for CookieDog_46:

(13, 29099), (Start: 31 @29243 has 12 MA's), (35, 29267), (44, 29345), (47, 29369), (48, 29372), (52, 29408), (57, 29432), (67, 29471), (73, 29501), (75, 29510), (93, 29657),

Gene: Cressida_96 Start: 55174, Stop: 55857, Start Num: 29

Candidate Starts for Cressida_96:

(Start: 29 @55174 has 4 MA's), (40, 55261), (55, 55369), (59, 55387), (61, 55402), (64, 55432), (66, 55438), (77, 55492), (78, 55528), (83, 55558), (88, 55609), (99, 55675),

Gene: Dewdrop_2 Start: 713, Stop: 1285, Start Num: 22

Candidate Starts for Dewdrop_2:

(Start: 22 @713 has 3 MA's), (Start: 31 @740 has 12 MA's), (37, 773), (39, 815), (42, 827), (47, 866), (48, 869), (51, 881), (54, 893), (61, 917), (63, 932), (66, 947), (80, 1046), (84, 1073), (86, 1079), (92, 1127), (95, 1148), (110, 1223), (111, 1229),

Gene: Dropshot_46 Start: 28970, Stop: 29503, Start Num: 31

Candidate Starts for Dropshot_46:

(Start: 31 @28970 has 12 MA's), (35, 28994), (44, 29072), (47, 29096), (48, 29099), (52, 29135), (57, 29159), (67, 29198), (73, 29228), (75, 29237), (93, 29384),

Gene: EastWest_74 Start: 43726, Stop: 44280, Start Num: 18

Candidate Starts for EastWest_74:

(Start: 18 @43726 has 1 MA's), (47, 43861), (48, 43864), (67, 43951), (71, 43972), (75, 43990), (115, 44260), (117, 44266),

Gene: Franzy_64 Start: 44565, Stop: 45143, Start Num: 17

Candidate Starts for Franzy_64:

(Start: 17 @44565 has 22 MA's), (20, 44580), (44, 44742), (48, 44769), (63, 44838), (101, 45081),

Gene: Fresco_1 Start: 1, Stop: 606, Start Num: 25

Candidate Starts for Fresco_1:

(Start: 25 @1 has 8 MA's), (39, 85), (44, 112), (47, 136), (52, 175), (79, 349), (97, 472), (112, 553), (120, 592), (121, 595), (123, 601),

Gene: GoldDust_74 Start: 47538, Stop: 48089, Start Num: 21

Candidate Starts for GoldDust_74:

(8, 47406), (12, 47442), (19, 47526), (21, 47538), (48, 47721), (63, 47787), (74, 47841),

Gene: GravityBall_69 Start: 44845, Stop: 45375, Start Num: 17

Candidate Starts for GravityBall_69:

(Start: 17 @44845 has 22 MA's), (45, 44971), (48, 44989), (64, 45064), (80, 45166), (83, 45184),

Gene: Grekaycon_70 Start: 45072, Stop: 45602, Start Num: 17

Candidate Starts for Grekaycon_70:

(Start: 17 @45072 has 22 MA's), (45, 45198), (48, 45216), (64, 45291), (71, 45321), (81, 45396), (83, 45411), (100, 45519), (103, 45540),

Gene: Guzman_46 Start: 29226, Stop: 29759, Start Num: 31

Candidate Starts for Guzman_46:

(13, 29082), (Start: 31 @29226 has 12 MA's), (35, 29250), (44, 29328), (47, 29352), (48, 29355), (52, 29391), (57, 29415), (67, 29454), (73, 29484), (75, 29493), (93, 29640),

Gene: Hendrix_2 Start: 803, Stop: 1378, Start Num: 30

Candidate Starts for Hendrix_2:

(Start: 22 @773 has 3 MA's), (Start: 30 @803 has 1 MA's), (Start: 31 @806 has 12 MA's), (41, 890), (42, 893), (47, 932), (48, 935), (54, 959), (63, 998), (64, 1007), (72, 1046), (80, 1112), (86, 1145), (96, 1220), (98, 1226), (105, 1265), (109, 1286), (110, 1295), (114, 1316),

Gene: JKerns_69 Start: 45051, Stop: 45626, Start Num: 17

Candidate Starts for JKerns_69:

(Start: 17 @45051 has 22 MA's), (45, 45222), (48, 45240), (64, 45315), (71, 45345), (81, 45420), (83, 45435), (100, 45543), (103, 45564),

Gene: Jace_85 Start: 47046, Stop: 47594, Start Num: 32

Candidate Starts for Jace_85:

(Start: 32 @47046 has 1 MA's), (52, 47202), (56, 47223), (75, 47304), (76, 47307), (82, 47367), (115, 47559), (119, 47577), (122, 47586), (123, 47589),

Gene: Jakelyne_49 Start: 29336, Stop: 29869, Start Num: 31

Candidate Starts for Jakelyne_49:

(5, 29102), (13, 29192), (Start: 31 @29336 has 12 MA's), (35, 29360), (44, 29438), (47, 29462), (48, 29465), (52, 29501), (57, 29525), (67, 29564), (73, 29594), (75, 29603), (93, 29750),

Gene: Jawnski_65 Start: 44074, Stop: 44652, Start Num: 17

Candidate Starts for Jawnski_65:

(Start: 17 @44074 has 22 MA's), (20, 44089), (48, 44278), (63, 44347), (101, 44590),

Gene: Jordan_70 Start: 45176, Stop: 45751, Start Num: 17

Candidate Starts for Jordan_70:

(Start: 17 @45176 has 22 MA's), (45, 45347), (48, 45365), (64, 45440), (71, 45470), (81, 45545), (83, 45560), (100, 45668),

Gene: King2_64 Start: 44610, Stop: 45188, Start Num: 17

Candidate Starts for King2_64:

(Start: 17 @44610 has 22 MA's), (20, 44625), (48, 44814), (63, 44883), (101, 45126),

Gene: Leaf_2 Start: 740, Stop: 1285, Start Num: 31

Candidate Starts for Leaf_2:

(Start: 22 @713 has 3 MA's), (Start: 31 @740 has 12 MA's), (37, 773), (39, 815), (42, 827), (47, 866), (48, 869), (51, 881), (54, 893), (61, 917), (63, 932), (66, 947), (80, 1046), (84, 1073), (86, 1079), (92, 1127), (95, 1148), (110, 1223), (111, 1229),

Gene: LeeroyJ_70 Start: 44774, Stop: 45304, Start Num: 17

Candidate Starts for LeeroyJ_70:

(Start: 17 @44774 has 22 MA's), (45, 44900), (48, 44918), (80, 45095), (83, 45113),

Gene: Ligma_1 Start: 1, Stop: 606, Start Num: 25

Candidate Starts for Ligma_1:

(Start: 25 @1 has 8 MA's), (39, 85), (44, 112), (47, 136), (52, 175), (79, 349), (97, 472), (112, 553), (120, 592), (121, 595), (123, 601),

Gene: Losacky_50 Start: 29360, Stop: 30034, Start Num: 14

Candidate Starts for Losacky_50:

(3, 29048), (9, 29321), (14, 29360), (Start: 31 @29501 has 12 MA's), (35, 29525), (44, 29603), (47, 29627), (48, 29630), (52, 29666), (57, 29690), (67, 29729), (73, 29759), (75, 29768),

Gene: Margaery_97 Start: 55238, Stop: 55930, Start Num: 26

Candidate Starts for Margaery_97:

(15, 55121), (Start: 26 @55238 has 1 MA's), (Start: 29 @55247 has 4 MA's), (40, 55334), (55, 55442), (59, 55460), (61, 55475), (83, 55631), (107, 55796),

Gene: Mariokart_1 Start: 1, Stop: 612, Start Num: 25

Candidate Starts for Mariokart_1:

(Start: 25 @1 has 8 MA's), (34, 40), (39, 91), (47, 142), (52, 181), (65, 262), (70, 280), (75, 307), (106, 526), (112, 559), (121, 601),

Gene: Martha_69 Start: 45008, Stop: 45538, Start Num: 17

Candidate Starts for Martha_69:

(Start: 17 @45008 has 22 MA's), (45, 45134), (48, 45152), (64, 45227), (71, 45257), (81, 45332), (83, 45347), (100, 45455),

Gene: Maruru_88 Start: 52810, Stop: 53424, Start Num: 23

Candidate Starts for Maruru_88:

(10, 52684), (23, 52810), (Start: 28 @52831 has 1 MA's), (36, 52873), (43, 52939), (52, 52993), (60, 53023), (108, 53326), (112, 53350),

Gene: Matzah_98 Start: 54900, Stop: 55583, Start Num: 29

Candidate Starts for Matzah_98:

(Start: 29 @54900 has 4 MA's), (40, 54987), (55, 55095), (59, 55113), (61, 55128), (64, 55158), (66, 55164), (77, 55218), (78, 55254), (83, 55284), (88, 55335), (90, 55344), (99, 55401), (107, 55449),

Gene: Megan_1 Start: 1, Stop: 666, Start Num: 31

Candidate Starts for Megan_1:

(Start: 31 @1 has 12 MA's), (43, 97), (50, 154), (55, 190), (58, 205), (61, 223), (62, 229), (63, 244), (64, 253), (68, 265), (85, 403), (102, 517), (104, 529), (124, 637),

Gene: MementoMori_97 Start: 54789, Stop: 55472, Start Num: 29

Candidate Starts for MementoMori_97:

(Start: 29 @54789 has 4 MA's), (40, 54876), (55, 54984), (59, 55002), (61, 55017), (64, 55047), (66, 55053), (77, 55107), (78, 55143), (83, 55173), (99, 55290), (107, 55338),

Gene: MenE_48 Start: 29392, Stop: 29925, Start Num: 31

Candidate Starts for MenE_48:

(5, 29158), (6, 29170), (13, 29248), (Start: 31 @29392 has 12 MA's), (35, 29416), (44, 29494), (47, 29518), (48, 29521), (52, 29557), (57, 29581), (67, 29620), (73, 29650), (75, 29659),

Gene: NathanVaag_65 Start: 44298, Stop: 44876, Start Num: 17

Candidate Starts for NathanVaag_65:

(Start: 17 @44298 has 22 MA's), (20, 44313), (Start: 28 @44361 has 1 MA's), (48, 44502), (63, 44571), (92, 44763), (101, 44814), (113, 44865),

Gene: Nicole72_1 Start: 1, Stop: 666, Start Num: 31

Candidate Starts for Nicole72_1:

(Start: 31 @1 has 12 MA's), (43, 97), (55, 190), (61, 223), (62, 229), (63, 244), (64, 253), (66, 259), (102, 517), (124, 637),

Gene: Nostromo_68 Start: 42650, Stop: 43228, Start Num: 16

Candidate Starts for Nostromo_68:

(Start: 16 @42650 has 1 MA's), (67, 42941), (104, 43172),

Gene: PhillyJawn_47 Start: 29132, Stop: 29665, Start Num: 31

Candidate Starts for PhillyJawn_47:

(Start: 31 @29132 has 12 MA's), (35, 29156), (44, 29234), (47, 29258), (48, 29261), (52, 29297), (57, 29321), (67, 29360), (73, 29390), (75, 29399), (93, 29546),

Gene: Phingu_49 Start: 29357, Stop: 29890, Start Num: 31

Candidate Starts for Phingu_49:

(Start: 31 @29357 has 12 MA's), (35, 29381), (44, 29459), (47, 29483), (48, 29486), (52, 29522), (57, 29546), (67, 29585), (73, 29615), (75, 29624), (93, 29771),

Gene: Phonegingi_46 Start: 29171, Stop: 29704, Start Num: 31

Candidate Starts for Phonegingi_46:

(Start: 31 @29171 has 12 MA's), (35, 29195), (44, 29273), (47, 29297), (48, 29300), (52, 29336), (57, 29360), (67, 29399), (73, 29429), (75, 29438), (93, 29585), (116, 29693),

Gene: Piccoletto_66 Start: 44460, Stop: 45038, Start Num: 17

Candidate Starts for Piccoletto_66:

(Start: 17 @44460 has 22 MA's), (20, 44475), (Start: 28 @44523 has 1 MA's), (48, 44664), (63, 44733), (101, 44976), (113, 45027),

Gene: Pickles13_45 Start: 29439, Stop: 29972, Start Num: 31

Candidate Starts for Pickles13_45:

(5, 29202), (11, 29286), (Start: 31 @29439 has 12 MA's), (35, 29463), (44, 29541), (47, 29565), (48, 29568), (52, 29604), (57, 29628), (67, 29667), (73, 29697), (93, 29853),

Gene: Pippa_70 Start: 45043, Stop: 45573, Start Num: 17

Candidate Starts for Pippa_70:

(Start: 17 @45043 has 22 MA's), (45, 45169), (48, 45187), (64, 45262), (71, 45292), (81, 45367), (83, 45382), (100, 45490), (103, 45511),

Gene: Rasputia_2 Start: 713, Stop: 1291, Start Num: 22

Candidate Starts for Rasputia_2:

(Start: 22 @713 has 3 MA's), (Start: 31 @740 has 12 MA's), (37, 773), (41, 824), (42, 827), (54, 893), (61, 917), (63, 932), (69, 953), (72, 980), (80, 1046), (83, 1064), (86, 1079), (87, 1100), (89, 1109), (92, 1124), (94, 1145), (95, 1148), (110, 1229), (118, 1271),

Gene: Shade_69 Start: 44814, Stop: 45389, Start Num: 17

Candidate Starts for Shade_69:

(Start: 17 @44814 has 22 MA's), (45, 44985), (48, 45003), (64, 45078), (71, 45108), (81, 45183), (83, 45198), (100, 45306), (103, 45327),

Gene: Shatter_1 Start: 1, Stop: 606, Start Num: 25

Candidate Starts for Shatter_1:

(Start: 25 @1 has 8 MA's), (39, 85), (44, 112), (47, 136), (52, 175), (79, 349), (97, 472), (112, 553), (120, 592), (121, 595), (123, 601),

Gene: Sicarius2_71 Start: 43199, Stop: 43729, Start Num: 27

Candidate Starts for Sicarius2_71:

(Start: 27 @43199 has 2 MA's), (33, 43235), (36, 43244), (48, 43343), (64, 43421), (75, 43469), (91, 43592), (114, 43724),

Gene: Sisko_1 Start: 1, Stop: 600, Start Num: 25

Candidate Starts for Sisko_1:

(Start: 25 @1 has 8 MA's), (34, 28), (39, 79), (46, 118), (75, 295), (120, 586), (121, 589),

Gene: Sonali_86 Start: 53450, Stop: 54043, Start Num: 28

Candidate Starts for Sonali_86:

(1, 52859), (2, 52970), (10, 53303), (23, 53429), (Start: 28 @53450 has 1 MA's), (43, 53558), (60, 53642), (108, 53945), (112, 53969),

Gene: Sonny_69 Start: 44737, Stop: 45312, Start Num: 17

Candidate Starts for Sonny_69:

(Start: 17 @44737 has 22 MA's), (45, 44908), (48, 44926), (64, 45001), (71, 45031), (81, 45106), (83, 45121), (100, 45229), (103, 45250),

Gene: StevieBAY_70 Start: 45067, Stop: 45597, Start Num: 17

Candidate Starts for StevieBAY_70:

(Start: 17 @45067 has 22 MA's), (45, 45193), (48, 45211), (64, 45286), (80, 45388), (83, 45406),

Gene: Sunshine23_89 Start: 53186, Stop: 53779, Start Num: 28

Candidate Starts for Sunshine23_89:

(10, 53039), (23, 53165), (Start: 28 @53186 has 1 MA's), (36, 53228), (43, 53294), (52, 53348), (60, 53378), (66, 53408), (108, 53681), (112, 53705),

Gene: TaeYoung_70 Start: 44980, Stop: 45510, Start Num: 17

Candidate Starts for TaeYoung_70:

(Start: 17 @44980 has 22 MA's), (45, 45106), (48, 45124), (64, 45199), (71, 45229), (81, 45304), (83, 45319), (100, 45427), (103, 45448),

Gene: Timinator_70 Start: 44887, Stop: 45417, Start Num: 17

Candidate Starts for Timinator_70:

(Start: 17 @44887 has 22 MA's), (45, 45013), (48, 45031), (80, 45208), (83, 45226),

Gene: TurkishDelight_122 Start: 89500, Stop: 90093, Start Num: 22

Candidate Starts for TurkishDelight_122:

(Start: 22 @89500 has 3 MA's), (24, 89518), (38, 89584), (49, 89689),

Gene: Violeta_48 Start: 29234, Stop: 29767, Start Num: 31

Candidate Starts for Violeta_48:

(13, 29090), (Start: 31 @29234 has 12 MA's), (35, 29258), (44, 29336), (47, 29360), (48, 29363), (52, 29399), (57, 29423), (67, 29462), (73, 29492), (75, 29501), (93, 29648),

Gene: Vitus_78 Start: 46317, Stop: 46829, Start Num: 21

Candidate Starts for Vitus_78:

(8, 46197), (12, 46233), (14, 46245), (21, 46317), (48, 46458), (57, 46503), (74, 46578), (102, 46764),

Gene: Warren_46 Start: 29178, Stop: 29711, Start Num: 31

Candidate Starts for Warren_46:

(Start: 31 @29178 has 12 MA's), (35, 29202), (44, 29280), (47, 29304), (48, 29307), (53, 29346), (57, 29367), (67, 29406), (73, 29436), (75, 29445), (93, 29592),

Gene: Wyborn_70 Start: 43934, Stop: 44464, Start Num: 27

Candidate Starts for Wyborn_70:

(Start: 27 @43934 has 2 MA's), (33, 43970), (36, 43979), (48, 44078), (64, 44156), (75, 44204), (91, 44327), (114, 44459),

Gene: Yago84_1 Start: 1, Stop: 600, Start Num: 25

Candidate Starts for Yago84_1:

(Start: 25 @1 has 8 MA's), (34, 28), (39, 79), (46, 118), (75, 295), (96, 463), (120, 586), (121, 589),

Gene: Zartrosa_71 Start: 45067, Stop: 45642, Start Num: 17

Candidate Starts for Zartrosa_71:

(Start: 17 @45067 has 22 MA's), (45, 45238), (48, 45256), (64, 45331), (71, 45361), (81, 45436), (83, 45451), (100, 45559), (103, 45580),