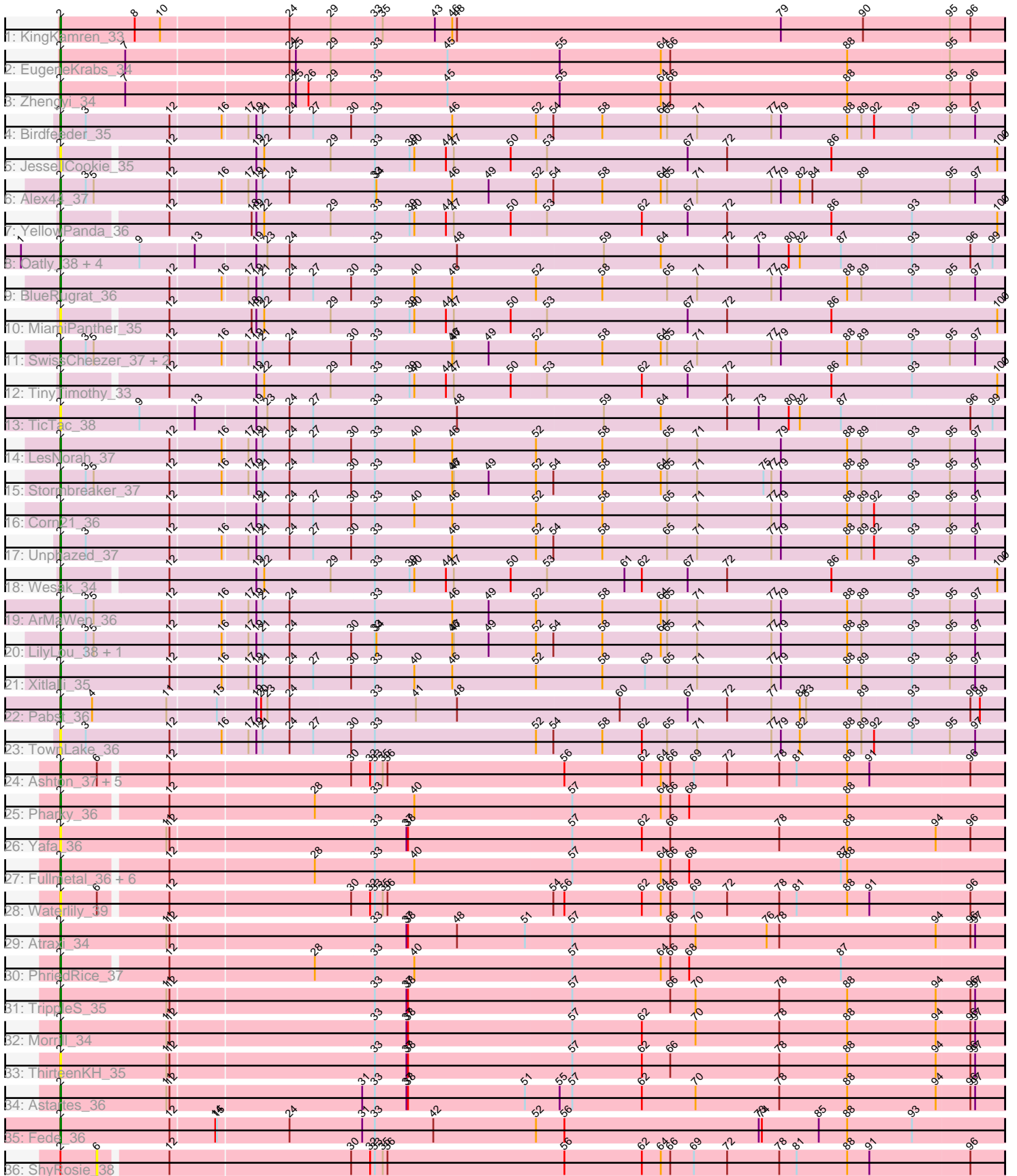


Pham 202991



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 202991 Report

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

Pham number 202991 has 54 members, 11 are drafts.

Phages represented in each track:

- Track 1 : KingKamren_33
- Track 2 : EugeneKrabs_34
- Track 3 : Zhengyi_34
- Track 4 : Birdfeeder_35
- Track 5 : JessellCookie_35
- Track 6 : Alex44_37
- Track 7 : YellowPanda_36
- Track 8 : Oatly_38, HitchHiker_39, Biozilla_38, PineapplePluto_39, CrunchyBoi_39
- Track 9 : BlueRugrat_36
- Track 10 : MiamiPanther_35
- Track 11 : SwissCheezer_37, DumpQuist_36, Dashyla_36
- Track 12 : TinyTimothy_33
- Track 13 : TicTac_38
- Track 14 : LesNorah_37
- Track 15 : Stormbreaker_37
- Track 16 : Corn21_36
- Track 17 : Unphazed_37
- Track 18 : Wesak_34
- Track 19 : ArMaWen_36
- Track 20 : LilyLou_38, Phogo_37
- Track 21 : Xitlalli_35
- Track 22 : Pabst_36
- Track 23 : TownLake_36
- Track 24 : Ashton_37, Barroma_35, AloeVera_37, JordanFarm_38, Akoni_36, Truong_36
- Track 25 : Pharky_36
- Track 26 : Yafa_36
- Track 27 : Fullmetal_36, Mazun_37, StagePhright_36, Phedro_36, Moleficient_36, RicoCaldo_36, Phracted_36
- Track 28 : Waterlily_39
- Track 29 : Atraxi_34
- Track 30 : PhriedRice_37
- Track 31 : TrippleS_35
- Track 32 : Morrill_34
- Track 33 : ThirteenKH_35
- Track 34 : Astartes_36
- Track 35 : Fede_36

- Track 36 : ShyRosie_38

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

The start number called the most often in the published annotations is 2, it was called in 43 of the 43 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akoni_36, Alex44_37, AloeVera_37, ArMaWen_36, Ashton_37, Astartes_36, Atraxi_34, Barroma_35, Biozilla_38, Birdfeeder_35, BlueRugrat_36, Corn21_36, CrunchyBoi_39, Dashyla_36, DumpQuist_36, EugeneKrabs_34, Fede_36, Fullmetal_36, HitchHiker_39, JessellCookie_35, JordanFarm_38, KingKamren_33, LesNorah_37, LilyLou_38, Mazun_37, MiamiPanther_35, Moleficent_36, Morrill_34, Oatly_38, Pabst_36, Pharky_36, Phedro_36, Phogo_37, Phracted_36, PhriedRice_37, PineapplePluto_39, RicoCaldo_36, StagePhright_36, Stormbreaker_37, SwissCheezer_37, ThirteenKH_35, TicTac_38, TinyTimothy_33, TownLake_36, TrippleS_35, Truong_36, Unphazed_37, Waterlily_39, Wesak_34, Xitlalli_35, Yafa_36, YellowPanda_36, Zhengyi_34,

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

- ShyRosie_38,

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

-

Summary by start number:

Start 2:

- Found in 54 of 54 (100.0%) of genes in pham
- Manual Annotations of this start: 43 of 43
- Called 98.1% of time when present
- Phage (with cluster) where this start called: Akoni_36 (EK2), Alex44_37 (EK1), AloeVera_37 (EK2), ArMaWen_36 (EK1), Ashton_37 (EK2), Astartes_36 (EK2), Atraxi_34 (EK2), Barroma_35 (EK2), Biozilla_38 (EK1), Birdfeeder_35 (EK1), BlueRugrat_36 (EK1), Corn21_36 (EK1), CrunchyBoi_39 (EK1), Dashyla_36 (EK1), DumpQuist_36 (EK1), EugeneKrabs_34 (EK), Fede_36 (EK2), Fullmetal_36 (EK2), HitchHiker_39 (EK1), JessellCookie_35 (EK1), JordanFarm_38 (EK2), KingKamren_33 (EK), LesNorah_37 (EK1), LilyLou_38 (EK1), Mazun_37 (EK2), MiamiPanther_35 (EK1), Moleficent_36 (EK2), Morrill_34 (EK2), Oatly_38 (EK1), Pabst_36 (EK1), Pharky_36 (EK2), Phedro_36 (EK2), Phogo_37 (EK1), Phracted_36 (EK2), PhriedRice_37 (EK2), PineapplePluto_39 (EK1), RicoCaldo_36 (EK2), StagePhright_36 (EK2), Stormbreaker_37 (EK1), SwissCheezer_37 (EK1), ThirteenKH_35 (EK2), TicTac_38 (EK1), TinyTimothy_33 (EK1), TownLake_36 (EK1), TrippleS_35 (EK2), Truong_36 (EK2), Unphazed_37 (EK1), Waterlily_39 (EK2), Wesak_34 (EK1), Xitlalli_35 (EK1), Yafa_36 (EK2), YellowPanda_36 (EK1), Zhengyi_34 (EK),

Start 6:

- Found in 8 of 54 (14.8%) of genes in pham
- No Manual Annotations of this start.

- Called 12.5% of time when present
- Phage (with cluster) where this start called: ShyRosie_38 (EK2),

Summary by clusters:

There are 3 clusters represented in this pham: EK, EK2, EK1,

Info for manual annotations of cluster EK:

- Start number 2 was manually annotated 3 times for cluster EK.

Info for manual annotations of cluster EK1:

- Start number 2 was manually annotated 20 times for cluster EK1.

Info for manual annotations of cluster EK2:

- Start number 2 was manually annotated 20 times for cluster EK2.

Gene Information:

Gene: Akoni_36 Start: 36388, Stop: 38151, Start Num: 2

Candidate Starts for Akoni_36:

(Start: 2 @36388 has 43 MA's), (6, 36457), (12, 36577), (30, 36916), (32, 36949), (33, 36958), (35, 36973), (36, 36982), (56, 37318), (62, 37465), (64, 37501), (66, 37519), (69, 37564), (72, 37627), (78, 37726), (81, 37759), (88, 37855), (91, 37897), (96, 38086),

Gene: Alex44_37 Start: 36459, Stop: 38234, Start Num: 2

Candidate Starts for Alex44_37:

(Start: 2 @36459 has 43 MA's), (3, 36507), (5, 36522), (12, 36666), (16, 36759), (17, 36804), (19, 36819), (21, 36831), (24, 36882), (33, 37041), (34, 37044), (46, 37188), (49, 37257), (52, 37344), (54, 37377), (58, 37470), (64, 37581), (65, 37593), (71, 37650), (77, 37791), (79, 37809), (82, 37845), (84, 37869), (89, 37962), (95, 38130), (97, 38178),

Gene: AloeVera_37 Start: 36602, Stop: 38365, Start Num: 2

Candidate Starts for AloeVera_37:

(Start: 2 @36602 has 43 MA's), (6, 36671), (12, 36791), (30, 37130), (32, 37163), (33, 37172), (35, 37187), (36, 37196), (56, 37532), (62, 37679), (64, 37715), (66, 37733), (69, 37778), (72, 37841), (78, 37940), (81, 37973), (88, 38069), (91, 38111), (96, 38300),

Gene: ArMaWen_36 Start: 36002, Stop: 37777, Start Num: 2

Candidate Starts for ArMaWen_36:

(Start: 2 @36002 has 43 MA's), (3, 36050), (5, 36065), (12, 36209), (16, 36302), (17, 36347), (19, 36362), (21, 36374), (24, 36425), (33, 36584), (46, 36731), (49, 36800), (52, 36887), (58, 37013), (64, 37124), (65, 37136), (71, 37193), (77, 37334), (79, 37352), (88, 37478), (89, 37505), (93, 37601), (95, 37673), (97, 37721),

Gene: Ashton_37 Start: 36601, Stop: 38364, Start Num: 2

Candidate Starts for Ashton_37:

(Start: 2 @36601 has 43 MA's), (6, 36670), (12, 36790), (30, 37129), (32, 37162), (33, 37171), (35, 37186), (36, 37195), (56, 37531), (62, 37678), (64, 37714), (66, 37732), (69, 37777), (72, 37840), (78, 37939), (81, 37972), (88, 38068), (91, 38110), (96, 38299),

Gene: Astartes_36 Start: 36672, Stop: 38444, Start Num: 2

Candidate Starts for Astartes_36:

(Start: 2 @36672 has 43 MA's), (11, 36873), (12, 36879), (31, 37230), (33, 37254), (37, 37314), (38, 37317), (51, 37539), (55, 37602), (57, 37626), (62, 37758), (70, 37860), (78, 38019), (88, 38148), (94, 38316), (96, 38379), (97, 38388),

Gene: Atraxi_34 Start: 36464, Stop: 38236, Start Num: 2

Candidate Starts for Atraxi_34:

(Start: 2 @36464 has 43 MA's), (11, 36665), (12, 36671), (33, 37046), (37, 37106), (38, 37109), (48, 37202), (51, 37331), (57, 37418), (66, 37604), (70, 37652), (76, 37787), (78, 37811), (94, 38108), (96, 38171), (97, 38180),

Gene: Barroma_35 Start: 36390, Stop: 38153, Start Num: 2

Candidate Starts for Barroma_35:

(Start: 2 @36390 has 43 MA's), (6, 36459), (12, 36579), (30, 36918), (32, 36951), (33, 36960), (35, 36975), (36, 36984), (56, 37320), (62, 37467), (64, 37503), (66, 37521), (69, 37566), (72, 37629), (78, 37728), (81, 37761), (88, 37857), (91, 37899), (96, 38088),

Gene: Biozilla_38 Start: 36500, Stop: 38266, Start Num: 2

Candidate Starts for Biozilla_38:

(1, 36434), (Start: 2 @36500 has 43 MA's), (9, 36650), (13, 36749), (19, 36860), (23, 36881), (24, 36923), (33, 37085), (48, 37238), (59, 37514), (64, 37622), (72, 37748), (73, 37808), (80, 37865), (82, 37886), (87, 37964), (93, 38093), (96, 38201), (99, 38243),

Gene: Birdfeeder_35 Start: 36215, Stop: 37990, Start Num: 2

Candidate Starts for Birdfeeder_35:

(Start: 2 @36215 has 43 MA's), (3, 36263), (12, 36422), (16, 36515), (17, 36560), (19, 36575), (21, 36587), (24, 36638), (27, 36683), (30, 36755), (33, 36797), (46, 36944), (52, 37100), (54, 37133), (58, 37226), (64, 37337), (65, 37349), (71, 37406), (77, 37547), (79, 37565), (88, 37691), (89, 37718), (92, 37742), (93, 37814), (95, 37886), (97, 37934),

Gene: BlueRugrat_36 Start: 36451, Stop: 38226, Start Num: 2

Candidate Starts for BlueRugrat_36:

(Start: 2 @36451 has 43 MA's), (12, 36658), (16, 36751), (17, 36796), (19, 36811), (21, 36823), (24, 36874), (27, 36919), (30, 36991), (33, 37033), (40, 37108), (46, 37180), (52, 37336), (58, 37462), (65, 37585), (71, 37642), (77, 37783), (79, 37801), (88, 37927), (89, 37954), (93, 38050), (95, 38122), (97, 38170),

Gene: Corn21_36 Start: 36529, Stop: 38304, Start Num: 2

Candidate Starts for Corn21_36:

(Start: 2 @36529 has 43 MA's), (12, 36736), (19, 36889), (21, 36901), (24, 36952), (27, 36997), (30, 37069), (33, 37111), (40, 37186), (46, 37258), (52, 37414), (58, 37540), (65, 37663), (71, 37720), (77, 37861), (79, 37879), (88, 38005), (89, 38032), (92, 38056), (93, 38128), (95, 38200), (97, 38248),

Gene: CrunchyBoi_39 Start: 36355, Stop: 38121, Start Num: 2

Candidate Starts for CrunchyBoi_39:

(1, 36289), (Start: 2 @36355 has 43 MA's), (9, 36505), (13, 36604), (19, 36715), (23, 36736), (24, 36778), (33, 36940), (48, 37093), (59, 37369), (64, 37477), (72, 37603), (73, 37663), (80, 37720), (82, 37741), (87, 37819), (93, 37948), (96, 38056), (99, 38098),

Gene: Dashyla_36 Start: 36133, Stop: 37908, Start Num: 2

Candidate Starts for Dashyla_36:

(Start: 2 @36133 has 43 MA's), (3, 36181), (5, 36196), (12, 36340), (16, 36433), (17, 36478), (19, 36493), (21, 36505), (24, 36556), (30, 36673), (33, 36715), (46, 36862), (47, 36865), (49, 36931), (52,

37018), (58, 37144), (64, 37255), (65, 37267), (71, 37324), (77, 37465), (79, 37483), (88, 37609), (89, 37636), (93, 37732), (95, 37804), (97, 37852),

Gene: DumpQuist_36 Start: 35987, Stop: 37762, Start Num: 2

Candidate Starts for DumpQuist_36:

(Start: 2 @35987 has 43 MA's), (3, 36035), (5, 36050), (12, 36194), (16, 36287), (17, 36332), (19, 36347), (21, 36359), (24, 36410), (30, 36527), (33, 36569), (46, 36716), (47, 36719), (49, 36785), (52, 36872), (58, 36998), (64, 37109), (65, 37121), (71, 37178), (77, 37319), (79, 37337), (88, 37463), (89, 37490), (93, 37586), (95, 37658), (97, 37706),

Gene: EugeneKrabs_34 Start: 36595, Stop: 38367, Start Num: 2

Candidate Starts for EugeneKrabs_34:

(Start: 2 @36595 has 43 MA's), (7, 36718), (24, 37018), (25, 37030), (29, 37096), (33, 37177), (45, 37315), (55, 37525), (64, 37717), (66, 37735), (88, 38071), (95, 38263),

Gene: Fede_36 Start: 35924, Stop: 37696, Start Num: 2

Candidate Starts for Fede_36:

(Start: 2 @35924 has 43 MA's), (12, 36131), (14, 36212), (15, 36215), (24, 36347), (31, 36482), (33, 36506), (42, 36617), (52, 36809), (56, 36863), (73, 37232), (74, 37238), (85, 37346), (88, 37400), (93, 37523),

Gene: Fullmetal_36 Start: 36532, Stop: 38292, Start Num: 2

Candidate Starts for Fullmetal_36:

(Start: 2 @36532 has 43 MA's), (12, 36721), (28, 36991), (33, 37102), (40, 37177), (57, 37474), (64, 37642), (66, 37660), (68, 37696), (87, 37984), (88, 37996),

Gene: HitchHiker_39 Start: 36500, Stop: 38266, Start Num: 2

Candidate Starts for HitchHiker_39:

(1, 36434), (Start: 2 @36500 has 43 MA's), (9, 36650), (13, 36749), (19, 36860), (23, 36881), (24, 36923), (33, 37085), (48, 37238), (59, 37514), (64, 37622), (72, 37748), (73, 37808), (80, 37865), (82, 37886), (87, 37964), (93, 38093), (96, 38201), (99, 38243),

Gene: JessellCookie_35 Start: 35526, Stop: 37295, Start Num: 2

Candidate Starts for JessellCookie_35:

(Start: 2 @35526 has 43 MA's), (12, 35715), (19, 35880), (22, 35895), (29, 36021), (33, 36102), (39, 36168), (40, 36177), (44, 36237), (47, 36252), (50, 36360), (53, 36426), (67, 36693), (72, 36768), (86, 36966), (100, 37281),

Gene: JordanFarm_38 Start: 36602, Stop: 38365, Start Num: 2

Candidate Starts for JordanFarm_38:

(Start: 2 @36602 has 43 MA's), (6, 36671), (12, 36791), (30, 37130), (32, 37163), (33, 37172), (35, 37187), (36, 37196), (56, 37532), (62, 37679), (64, 37715), (66, 37733), (69, 37778), (72, 37841), (78, 37940), (81, 37973), (88, 38069), (91, 38111), (96, 38300),

Gene: KingKamren_33 Start: 36556, Stop: 38328, Start Num: 2

Candidate Starts for KingKamren_33:

(Start: 2 @36556 has 43 MA's), (8, 36697), (10, 36745), (24, 36979), (29, 37057), (33, 37138), (35, 37153), (43, 37252), (46, 37285), (48, 37294), (79, 37906), (90, 38062), (95, 38224), (96, 38263),

Gene: LesNorah_37 Start: 36848, Stop: 38623, Start Num: 2

Candidate Starts for LesNorah_37:

(Start: 2 @36848 has 43 MA's), (12, 37055), (16, 37148), (17, 37193), (19, 37208), (21, 37220), (24, 37271), (27, 37316), (30, 37388), (33, 37430), (40, 37505), (46, 37577), (52, 37733), (58, 37859), (65,

37982), (71, 38039), (79, 38198), (88, 38324), (89, 38351), (93, 38447), (95, 38519), (97, 38567),

Gene: LilyLou_38 Start: 36451, Stop: 38226, Start Num: 2

Candidate Starts for LilyLou_38:

(Start: 2 @36451 has 43 MA's), (3, 36499), (5, 36514), (12, 36658), (16, 36751), (17, 36796), (19, 36811), (21, 36823), (24, 36874), (30, 36991), (33, 37033), (34, 37036), (46, 37180), (47, 37183), (49, 37249), (52, 37336), (54, 37369), (58, 37462), (64, 37573), (65, 37585), (71, 37642), (77, 37783), (79, 37801), (88, 37927), (89, 37954), (93, 38050), (95, 38122), (97, 38170),

Gene: Mazun_37 Start: 36854, Stop: 38614, Start Num: 2

Candidate Starts for Mazun_37:

(Start: 2 @36854 has 43 MA's), (12, 37043), (28, 37313), (33, 37424), (40, 37499), (57, 37796), (64, 37964), (66, 37982), (68, 38018), (87, 38306), (88, 38318),

Gene: MiamiPanther_35 Start: 35526, Stop: 37295, Start Num: 2

Candidate Starts for MiamiPanther_35:

(Start: 2 @35526 has 43 MA's), (12, 35715), (18, 35871), (19, 35880), (22, 35895), (29, 36021), (33, 36102), (39, 36168), (40, 36177), (44, 36237), (47, 36252), (50, 36360), (53, 36426), (67, 36693), (72, 36768), (86, 36966), (100, 37281),

Gene: Moleficient_36 Start: 36539, Stop: 38299, Start Num: 2

Candidate Starts for Moleficient_36:

(Start: 2 @36539 has 43 MA's), (12, 36728), (28, 36998), (33, 37109), (40, 37184), (57, 37481), (64, 37649), (66, 37667), (68, 37703), (87, 37991), (88, 38003),

Gene: Morrill_34 Start: 36445, Stop: 38217, Start Num: 2

Candidate Starts for Morrill_34:

(Start: 2 @36445 has 43 MA's), (11, 36646), (12, 36652), (33, 37027), (37, 37087), (38, 37090), (57, 37399), (62, 37531), (70, 37633), (78, 37792), (88, 37921), (94, 38089), (96, 38152), (97, 38161),

Gene: Oatly_38 Start: 36060, Stop: 37826, Start Num: 2

Candidate Starts for Oatly_38:

(1, 35994), (Start: 2 @36060 has 43 MA's), (9, 36210), (13, 36309), (19, 36420), (23, 36441), (24, 36483), (33, 36645), (48, 36798), (59, 37074), (64, 37182), (72, 37308), (73, 37368), (80, 37425), (82, 37446), (87, 37524), (93, 37653), (96, 37761), (99, 37803),

Gene: Pabst_36 Start: 36130, Stop: 37893, Start Num: 2

Candidate Starts for Pabst_36:

(Start: 2 @36130 has 43 MA's), (4, 36190), (11, 36331), (15, 36421), (19, 36490), (20, 36499), (23, 36511), (24, 36553), (33, 36712), (41, 36787), (48, 36865), (60, 37171), (67, 37300), (72, 37375), (77, 37459), (82, 37513), (83, 37525), (89, 37630), (93, 37720), (96, 37828), (98, 37846),

Gene: Pharky_36 Start: 36535, Stop: 38295, Start Num: 2

Candidate Starts for Pharky_36:

(Start: 2 @36535 has 43 MA's), (12, 36724), (28, 36994), (33, 37105), (40, 37180), (57, 37477), (64, 37645), (66, 37663), (68, 37699), (88, 37999),

Gene: Phedro_36 Start: 36535, Stop: 38295, Start Num: 2

Candidate Starts for Phedro_36:

(Start: 2 @36535 has 43 MA's), (12, 36724), (28, 36994), (33, 37105), (40, 37180), (57, 37477), (64, 37645), (66, 37663), (68, 37699), (87, 37987), (88, 37999),

Gene: Phogo_37 Start: 36273, Stop: 38048, Start Num: 2

Candidate Starts for Phogo_37:

(Start: 2 @36273 has 43 MA's), (3, 36321), (5, 36336), (12, 36480), (16, 36573), (17, 36618), (19, 36633), (21, 36645), (24, 36696), (30, 36813), (33, 36855), (34, 36858), (46, 37002), (47, 37005), (49, 37071), (52, 37158), (54, 37191), (58, 37284), (64, 37395), (65, 37407), (71, 37464), (77, 37605), (79, 37623), (88, 37749), (89, 37776), (93, 37872), (95, 37944), (97, 37992),

Gene: Phractured_36 Start: 36535, Stop: 38295, Start Num: 2

Candidate Starts for Phractured_36:

(Start: 2 @36535 has 43 MA's), (12, 36724), (28, 36994), (33, 37105), (40, 37180), (57, 37477), (64, 37645), (66, 37663), (68, 37699), (87, 37987), (88, 37999),

Gene: PhriedRice_37 Start: 36639, Stop: 38399, Start Num: 2

Candidate Starts for PhriedRice_37:

(Start: 2 @36639 has 43 MA's), (12, 36828), (28, 37098), (33, 37209), (40, 37284), (57, 37581), (64, 37749), (66, 37767), (68, 37803), (87, 38091),

Gene: PineapplePluto_39 Start: 36422, Stop: 38188, Start Num: 2

Candidate Starts for PineapplePluto_39:

(1, 36356), (Start: 2 @36422 has 43 MA's), (9, 36572), (13, 36671), (19, 36782), (23, 36803), (24, 36845), (33, 37007), (48, 37160), (59, 37436), (64, 37544), (72, 37670), (73, 37730), (80, 37787), (82, 37808), (87, 37886), (93, 38015), (96, 38123), (99, 38165),

Gene: RicoCaldo_36 Start: 36617, Stop: 38377, Start Num: 2

Candidate Starts for RicoCaldo_36:

(Start: 2 @36617 has 43 MA's), (12, 36806), (28, 37076), (33, 37187), (40, 37262), (57, 37559), (64, 37727), (66, 37745), (68, 37781), (87, 38069), (88, 38081),

Gene: ShyRosie_38 Start: 36679, Stop: 38373, Start Num: 6

Candidate Starts for ShyRosie_38:

(Start: 2 @36610 has 43 MA's), (6, 36679), (12, 36799), (30, 37138), (32, 37171), (33, 37180), (35, 37195), (36, 37204), (56, 37540), (62, 37687), (64, 37723), (66, 37741), (69, 37786), (72, 37849), (78, 37948), (81, 37981), (88, 38077), (91, 38119), (96, 38308),

Gene: StagePhright_36 Start: 36535, Stop: 38295, Start Num: 2

Candidate Starts for StagePhright_36:

(Start: 2 @36535 has 43 MA's), (12, 36724), (28, 36994), (33, 37105), (40, 37180), (57, 37477), (64, 37645), (66, 37663), (68, 37699), (87, 37987), (88, 37999),

Gene: Stormbreaker_37 Start: 36367, Stop: 38142, Start Num: 2

Candidate Starts for Stormbreaker_37:

(Start: 2 @36367 has 43 MA's), (3, 36415), (5, 36430), (12, 36574), (16, 36667), (17, 36712), (19, 36727), (21, 36739), (24, 36790), (30, 36907), (33, 36949), (46, 37096), (47, 37099), (49, 37165), (52, 37252), (54, 37285), (58, 37378), (64, 37489), (65, 37501), (71, 37558), (75, 37684), (77, 37699), (79, 37717), (88, 37843), (89, 37870), (93, 37966), (95, 38038), (97, 38086),

Gene: SwissCheezer_37 Start: 36013, Stop: 37788, Start Num: 2

Candidate Starts for SwissCheezer_37:

(Start: 2 @36013 has 43 MA's), (3, 36061), (5, 36076), (12, 36220), (16, 36313), (17, 36358), (19, 36373), (21, 36385), (24, 36436), (30, 36553), (33, 36595), (46, 36742), (47, 36745), (49, 36811), (52, 36898), (58, 37024), (64, 37135), (65, 37147), (71, 37204), (77, 37345), (79, 37363), (88, 37489), (89, 37516), (93, 37612), (95, 37684), (97, 37732),

Gene: ThirteenKH_35 Start: 36455, Stop: 38227, Start Num: 2

Candidate Starts for ThirteenKH_35:

(Start: 2 @36455 has 43 MA's), (11, 36656), (12, 36662), (33, 37037), (37, 37097), (38, 37100), (57, 37409), (62, 37541), (66, 37595), (78, 37802), (88, 37931), (94, 38099), (96, 38162), (97, 38171),

Gene: TicTac_38 Start: 36421, Stop: 38187, Start Num: 2

Candidate Starts for TicTac_38:

(Start: 2 @36421 has 43 MA's), (9, 36571), (13, 36670), (19, 36781), (23, 36802), (24, 36844), (27, 36889), (33, 37006), (48, 37159), (59, 37435), (64, 37543), (72, 37669), (73, 37729), (80, 37786), (82, 37807), (87, 37885), (96, 38122), (99, 38164),

Gene: TinyTimothy_33 Start: 35526, Stop: 37295, Start Num: 2

Candidate Starts for TinyTimothy_33:

(Start: 2 @35526 has 43 MA's), (12, 35715), (19, 35880), (22, 35895), (29, 36021), (33, 36102), (39, 36168), (40, 36177), (44, 36237), (47, 36252), (50, 36360), (53, 36426), (62, 36606), (67, 36693), (72, 36768), (86, 36966), (93, 37119), (100, 37281),

Gene: TownLake_36 Start: 36138, Stop: 37913, Start Num: 2

Candidate Starts for TownLake_36:

(Start: 2 @36138 has 43 MA's), (3, 36186), (12, 36345), (16, 36438), (17, 36483), (19, 36498), (21, 36510), (24, 36561), (27, 36606), (30, 36678), (33, 36720), (52, 37023), (54, 37056), (58, 37149), (62, 37224), (65, 37272), (71, 37329), (77, 37470), (79, 37488), (82, 37524), (88, 37614), (89, 37641), (92, 37665), (93, 37737), (95, 37809), (97, 37857),

Gene: TrippleS_35 Start: 36603, Stop: 38375, Start Num: 2

Candidate Starts for TrippleS_35:

(Start: 2 @36603 has 43 MA's), (11, 36804), (12, 36810), (33, 37185), (37, 37245), (38, 37248), (57, 37557), (66, 37743), (70, 37791), (78, 37950), (88, 38079), (94, 38247), (96, 38310), (97, 38319),

Gene: Truong_36 Start: 36390, Stop: 38153, Start Num: 2

Candidate Starts for Truong_36:

(Start: 2 @36390 has 43 MA's), (6, 36459), (12, 36579), (30, 36918), (32, 36951), (33, 36960), (35, 36975), (36, 36984), (56, 37320), (62, 37467), (64, 37503), (66, 37521), (69, 37566), (72, 37629), (78, 37728), (81, 37761), (88, 37857), (91, 37899), (96, 38088),

Gene: Unphazed_37 Start: 36243, Stop: 38018, Start Num: 2

Candidate Starts for Unphazed_37:

(Start: 2 @36243 has 43 MA's), (3, 36291), (12, 36450), (16, 36543), (17, 36588), (19, 36603), (21, 36615), (24, 36666), (27, 36711), (30, 36783), (33, 36825), (46, 36972), (52, 37128), (54, 37161), (58, 37254), (65, 37377), (71, 37434), (77, 37575), (79, 37593), (88, 37719), (89, 37746), (92, 37770), (93, 37842), (95, 37914), (97, 37962),

Gene: Waterlily_39 Start: 36644, Stop: 38407, Start Num: 2

Candidate Starts for Waterlily_39:

(Start: 2 @36644 has 43 MA's), (6, 36713), (12, 36833), (30, 37172), (32, 37205), (33, 37214), (35, 37229), (36, 37238), (54, 37553), (56, 37574), (62, 37721), (64, 37757), (66, 37775), (69, 37820), (72, 37883), (78, 37982), (81, 38015), (88, 38111), (91, 38153), (96, 38342),

Gene: Wesak_34 Start: 35368, Stop: 37137, Start Num: 2

Candidate Starts for Wesak_34:

(Start: 2 @35368 has 43 MA's), (12, 35557), (19, 35722), (22, 35737), (29, 35863), (33, 35944), (39, 36010), (40, 36019), (44, 36079), (47, 36094), (50, 36202), (53, 36268), (61, 36415), (62, 36448), (67, 36535), (72, 36610), (86, 36808), (93, 36961), (100, 37123),

Gene: Xitlalli_35 Start: 36235, Stop: 38010, Start Num: 2

Candidate Starts for Xitlalli_35:

(Start: 2 @36235 has 43 MA's), (12, 36442), (16, 36535), (17, 36580), (19, 36595), (21, 36607), (24, 36658), (27, 36703), (30, 36775), (33, 36817), (40, 36892), (46, 36964), (52, 37120), (58, 37246), (63, 37327), (65, 37369), (71, 37426), (77, 37567), (79, 37585), (88, 37711), (89, 37738), (93, 37834), (95, 37906), (97, 37954),

Gene: Yafa_36 Start: 36359, Stop: 38131, Start Num: 2

Candidate Starts for Yafa_36:

(Start: 2 @36359 has 43 MA's), (11, 36560), (12, 36566), (33, 36941), (37, 37001), (38, 37004), (57, 37313), (62, 37445), (66, 37499), (78, 37706), (88, 37835), (94, 38003), (96, 38066),

Gene: YellowPanda_36 Start: 35249, Stop: 37018, Start Num: 2

Candidate Starts for YellowPanda_36:

(Start: 2 @35249 has 43 MA's), (12, 35438), (18, 35594), (19, 35603), (22, 35618), (29, 35744), (33, 35825), (39, 35891), (40, 35900), (44, 35960), (47, 35975), (50, 36083), (53, 36149), (62, 36329), (67, 36416), (72, 36491), (86, 36689), (93, 36842), (100, 37004),

Gene: Zhengyi_34 Start: 36644, Stop: 38416, Start Num: 2

Candidate Starts for Zhengyi_34:

(Start: 2 @36644 has 43 MA's), (7, 36767), (24, 37067), (25, 37079), (26, 37103), (29, 37145), (33, 37226), (45, 37364), (55, 37574), (64, 37766), (66, 37784), (88, 38120), (95, 38312), (96, 38351),