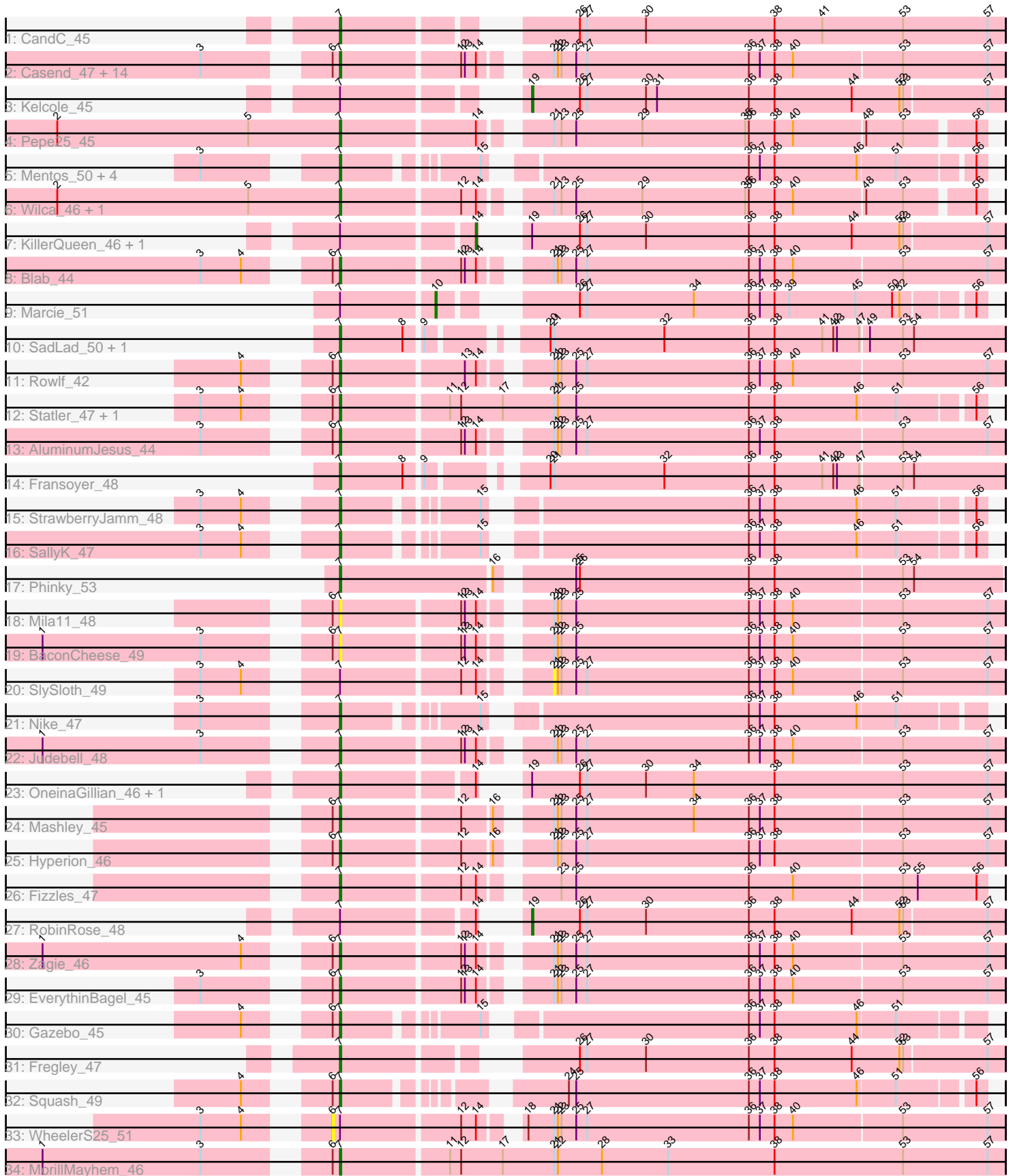


Pham 308679



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 308679 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308679 has 57 members, 6 are drafts.

Phages represented in each track:

- Track 1 : CandC_45
- Track 2 : Casend_47, Wayne3_48, Lonelysoil_45, Jehoshaphat_48, Sillytadpoles_47, FrankDeliGuy_43, Teehee_47, Rudy_44, DonaldDuck_46, Phabia_46, Quammi_44, Viceroy_45, Zhafia_49, Llemily_46, Wheelie_46
- Track 3 : Kelcole_45
- Track 4 : Pepe25_45
- Track 5 : Mentos_50, Kyva_48, Grassboy_47, Tissue_47, Namago_46
- Track 6 : Wilca_46, BirdInFrench_46
- Track 7 : KillerQueen_46, Romm_48
- Track 8 : Blab_44
- Track 9 : Marcie_51
- Track 10 : SadLad_50, RubyRalph_48
- Track 11 : Rowlf_42
- Track 12 : Statler_47, BabyDotz_45
- Track 13 : AluminumJesus_44
- Track 14 : Fransoyer_48
- Track 15 : StrawberryJamm_48
- Track 16 : SallyK_47
- Track 17 : Phinky_53
- Track 18 : Mila11_48
- Track 19 : BaconCheese_49
- Track 20 : SlySloth_49
- Track 21 : Nike_47
- Track 22 : Judebell_48
- Track 23 : OneinaGillian_46, Tempo_46
- Track 24 : Mashley_45
- Track 25 : Hyperion_46
- Track 26 : Fizzles_47
- Track 27 : RobinRose_48
- Track 28 : Zagie_46
- Track 29 : EverythinBagel_45
- Track 30 : Gazebo_45
- Track 31 : Fregley_47
- Track 32 : Squash_49
- Track 33 : WheelerS25_51
- Track 34 : MorillMayhem_46

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

The start number called the most often in the published annotations is 7, it was called in 47 of the 51 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AluminumJesus_44, BabyDotz_45, BaconCheese_49, BirdInFrench_46, Blab_44, CandC_45, Casend_47, DonaldDuck_46, EverythinBagel_45, Fizzles_47, FrankDeliGuy_43, Fransoyer_48, Fregley_47, Gazebo_45, Grassboy_47, Hyperion_46, Jehoshaphat_48, Judebell_48, Kyva_48, Lemily_46, Lonelysoil_45, Mashley_45, Mentos_50, Mila11_48, MorillMayhem_46, Namago_46, Nike_47, OneinaGillian_46, Pepe25_45, Phabia_46, Phinky_53, Quammi_44, Rowlf_42, RubyRalph_48, Rudy_44, SadLad_50, SallyK_47, Sillytadpoles_47, Squash_49, Statler_47, StrawberryJamm_48, Teehee_47, Tempo_46, Tissue_47, Viceroy_45, Wayne3_48, Wheelie_46, Wilca_46, Zagie_46, Zhafia_49,

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

- Kelcole_45, KillerQueen_46, Marcie_51, RobinRose_48, Romm_48, SlySloth_49, WheelerS25_51,

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

-

Summary by start number:

Start 6:

- Found in 30 of 57 (52.6%) of genes in pham
- No Manual Annotations of this start.
- Called 3.3% of time when present
- Phage (with cluster) where this start called: WheelerS25_51 (EG),

Start 7:

- Found in 57 of 57 (100.0%) of genes in pham
- Manual Annotations of this start: 47 of 51
- Called 87.7% of time when present
- Phage (with cluster) where this start called: AluminumJesus_44 (EG), BabyDotz_45 (EG), BaconCheese_49 (EG), BirdInFrench_46 (EG), Blab_44 (EG), CandC_45 (EG), Casend_47 (EG), DonaldDuck_46 (EG), EverythinBagel_45 (EG), Fizzles_47 (EG), FrankDeliGuy_43 (EG), Fransoyer_48 (EG), Fregley_47 (EG), Gazebo_45 (EG), Grassboy_47 (EG), Hyperion_46 (EG), Jehoshaphat_48 (EG), Judebell_48 (EG), Kyva_48 (EG), Lemily_46 (EG), Lonelysoil_45 (EG), Mashley_45 (EG), Mentos_50 (EG), Mila11_48 (EG), MorillMayhem_46 (EG), Namago_46 (EG), Nike_47 (EG), OneinaGillian_46 (EG), Pepe25_45 (EG), Phabia_46 (EG), Phinky_53 (EG), Quammi_44 (EG), Rowlf_42 (EG), RubyRalph_48 (EG), Rudy_44 (EG), SadLad_50 (EG), SallyK_47 (EG), Sillytadpoles_47 (EG), Squash_49 (EG), Statler_47 (EG), StrawberryJamm_48 (EG), Teehee_47 (EG), Tempo_46 (EG), Tissue_47 (EG), Viceroy_45 (EG), Wayne3_48 (EG), Wheelie_46 (EG), Wilca_46 (EG), Zagie_46 (EG), Zhafia_49 (EG),

Start 10:

- Found in 1 of 57 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Marcie_51 (EG),

Start 14:

- Found in 34 of 57 (59.6%) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 5.9% of time when present
- Phage (with cluster) where this start called: KillerQueen_46 (EG), Romm_48 (EG),

Start 19:

- Found in 6 of 57 (10.5%) of genes in pham
- Manual Annotations of this start: 2 of 51
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Kelcole_45 (EG), RobinRose_48 (EG),

Start 21:

- Found in 36 of 57 (63.2%) of genes in pham
- No Manual Annotations of this start.
- Called 2.8% of time when present
- Phage (with cluster) where this start called: SlySloth_49 (EG),

Summary by clusters:

There is one cluster represented in this pham: EG

Info for manual annotations of cluster EG:

- Start number 7 was manually annotated 47 times for cluster EG.
- Start number 10 was manually annotated 1 time for cluster EG.
- Start number 14 was manually annotated 1 time for cluster EG.
- Start number 19 was manually annotated 2 times for cluster EG.

Gene Information:

Gene: AluminumJesus_44 Start: 35756, Stop: 35244, Start Num: 7

Candidate Starts for AluminumJesus_44:

(3, 35843), (6, 35762), (Start: 7 @35756 has 47 MA's), (12, 35663), (13, 35660), (Start: 14 @35651 has 1 MA's), (21, 35609), (22, 35606), (23, 35603), (25, 35591), (27, 35582), (36, 35450), (37, 35441), (38, 35429), (53, 35327), (57, 35258),

Gene: BabyDotz_45 Start: 36547, Stop: 36038, Start Num: 7

Candidate Starts for BabyDotz_45:

(3, 36634), (4, 36601), (6, 36553), (Start: 7 @36547 has 47 MA's), (11, 36463), (12, 36454), (17, 36421), (21, 36379), (22, 36376), (25, 36361), (36, 36220), (38, 36199), (46, 36133), (51, 36103), (56, 36046),

Gene: BaconCheese_49 Start: 37141, Stop: 36629, Start Num: 7

Candidate Starts for BaconCheese_49:

(1, 37357), (3, 37228), (6, 37147), (Start: 7 @37141 has 47 MA's), (12, 37048), (13, 37045), (Start: 14 @37036 has 1 MA's), (21, 36994), (22, 36991), (23, 36988), (25, 36976), (36, 36835), (37, 36826), (38,

36814), (40, 36799), (53, 36712), (57, 36643),

Gene: BirdInFrench_46 Start: 34338, Stop: 33850, Start Num: 7

Candidate Starts for BirdInFrench_46:

(2, 34569), (5, 34413), (Start: 7 @34338 has 47 MA's), (12, 34245), (Start: 14 @34233 has 1 MA's), (21, 34191), (23, 34185), (25, 34173), (29, 34119), (35, 34035), (36, 34032), (38, 34011), (40, 33996), (48, 33939), (53, 33909), (56, 33858),

Gene: Blab_44 Start: 35669, Stop: 35157, Start Num: 7

Candidate Starts for Blab_44:

(3, 35756), (4, 35723), (6, 35675), (Start: 7 @35669 has 47 MA's), (12, 35576), (13, 35573), (Start: 14 @35564 has 1 MA's), (21, 35522), (22, 35519), (23, 35516), (25, 35504), (27, 35495), (36, 35363), (37, 35354), (38, 35342), (40, 35327), (53, 35240), (57, 35171),

Gene: CandC_45 Start: 34693, Stop: 34199, Start Num: 7

Candidate Starts for CandC_45:

(Start: 7 @34693 has 47 MA's), (26, 34546), (27, 34540), (30, 34492), (38, 34387), (41, 34348), (53, 34282), (57, 34213),

Gene: Casend_47 Start: 36305, Stop: 35793, Start Num: 7

Candidate Starts for Casend_47:

(3, 36392), (6, 36311), (Start: 7 @36305 has 47 MA's), (12, 36212), (13, 36209), (Start: 14 @36200 has 1 MA's), (21, 36158), (22, 36155), (23, 36152), (25, 36140), (27, 36131), (36, 35999), (37, 35990), (38, 35978), (40, 35963), (53, 35876), (57, 35807),

Gene: DonaldDuck_46 Start: 35654, Stop: 35142, Start Num: 7

Candidate Starts for DonaldDuck_46:

(3, 35741), (6, 35660), (Start: 7 @35654 has 47 MA's), (12, 35561), (13, 35558), (Start: 14 @35549 has 1 MA's), (21, 35507), (22, 35504), (23, 35501), (25, 35489), (27, 35480), (36, 35348), (37, 35339), (38, 35327), (40, 35312), (53, 35225), (57, 35156),

Gene: EverythinBagel_45 Start: 36042, Stop: 35530, Start Num: 7

Candidate Starts for EverythinBagel_45:

(3, 36129), (6, 36048), (Start: 7 @36042 has 47 MA's), (12, 35949), (13, 35946), (Start: 14 @35937 has 1 MA's), (21, 35895), (22, 35892), (23, 35889), (25, 35877), (27, 35868), (36, 35736), (37, 35727), (38, 35715), (40, 35700), (53, 35613), (57, 35544),

Gene: Fizzles_47 Start: 35256, Stop: 34759, Start Num: 7

Candidate Starts for Fizzles_47:

(Start: 7 @35256 has 47 MA's), (12, 35163), (Start: 14 @35151 has 1 MA's), (23, 35103), (25, 35091), (36, 34950), (40, 34914), (53, 34827), (55, 34815), (56, 34767),

Gene: FrankDeliGuy_43 Start: 35605, Stop: 35093, Start Num: 7

Candidate Starts for FrankDeliGuy_43:

(3, 35692), (6, 35611), (Start: 7 @35605 has 47 MA's), (12, 35512), (13, 35509), (Start: 14 @35500 has 1 MA's), (21, 35458), (22, 35455), (23, 35452), (25, 35440), (27, 35431), (36, 35299), (37, 35290), (38, 35278), (40, 35263), (53, 35176), (57, 35107),

Gene: Fransoyer_48 Start: 37942, Stop: 37439, Start Num: 7

Candidate Starts for Fransoyer_48:

(Start: 7 @37942 has 47 MA's), (8, 37891), (9, 37879), (20, 37807), (21, 37804), (32, 37714), (36, 37645), (38, 37624), (41, 37585), (42, 37576), (43, 37573), (47, 37555), (53, 37522), (54, 37513),

Gene: Fregley_47 Start: 35263, Stop: 34772, Start Num: 7

Candidate Starts for Fregley_47:

(Start: 7 @35263 has 47 MA's), (26, 35116), (27, 35110), (30, 35062), (36, 34978), (38, 34957), (44, 34894), (52, 34855), (53, 34852), (57, 34786),

Gene: Gazebo_45 Start: 36176, Stop: 35709, Start Num: 7

Candidate Starts for Gazebo_45:

(4, 36230), (6, 36182), (Start: 7 @36176 has 47 MA's), (15, 36083), (36, 35891), (37, 35882), (38, 35870), (46, 35804), (51, 35774),

Gene: Grassboy_47 Start: 36228, Stop: 35761, Start Num: 7

Candidate Starts for Grassboy_47:

(3, 36315), (Start: 7 @36228 has 47 MA's), (15, 36135), (36, 35943), (37, 35934), (38, 35922), (46, 35856), (51, 35826), (56, 35769),

Gene: Hyperion_46 Start: 36174, Stop: 35662, Start Num: 7

Candidate Starts for Hyperion_46:

(6, 36180), (Start: 7 @36174 has 47 MA's), (12, 36081), (16, 36060), (21, 36027), (22, 36024), (23, 36021), (25, 36009), (27, 36000), (36, 35868), (37, 35859), (38, 35847), (53, 35745), (57, 35676),

Gene: Jehoshaphat_48 Start: 36573, Stop: 36061, Start Num: 7

Candidate Starts for Jehoshaphat_48:

(3, 36660), (6, 36579), (Start: 7 @36573 has 47 MA's), (12, 36480), (13, 36477), (Start: 14 @36468 has 1 MA's), (21, 36426), (22, 36423), (23, 36420), (25, 36408), (27, 36399), (36, 36267), (37, 36258), (38, 36246), (40, 36231), (53, 36144), (57, 36075),

Gene: Judebell_48 Start: 36070, Stop: 35558, Start Num: 7

Candidate Starts for Judebell_48:

(1, 36286), (3, 36157), (Start: 7 @36070 has 47 MA's), (12, 35977), (13, 35974), (Start: 14 @35965 has 1 MA's), (21, 35923), (22, 35920), (23, 35917), (25, 35905), (27, 35896), (36, 35764), (37, 35755), (38, 35743), (40, 35728), (53, 35641), (57, 35572),

Gene: Kelcole_45 Start: 35037, Stop: 34654, Start Num: 19

Candidate Starts for Kelcole_45:

(Start: 7 @35145 has 47 MA's), (Start: 19 @35037 has 2 MA's), (26, 34998), (27, 34992), (30, 34944), (31, 34935), (36, 34860), (38, 34839), (44, 34776), (52, 34737), (53, 34734), (57, 34668),

Gene: KillerQueen_46 Start: 34841, Stop: 34449, Start Num: 14

Candidate Starts for KillerQueen_46:

(Start: 7 @34940 has 47 MA's), (Start: 14 @34841 has 1 MA's), (Start: 19 @34832 has 2 MA's), (26, 34793), (27, 34787), (30, 34739), (36, 34655), (38, 34634), (44, 34571), (52, 34532), (53, 34529), (57, 34463),

Gene: Kyva_48 Start: 36263, Stop: 35796, Start Num: 7

Candidate Starts for Kyva_48:

(3, 36350), (Start: 7 @36263 has 47 MA's), (15, 36170), (36, 35978), (37, 35969), (38, 35957), (46, 35891), (51, 35861), (56, 35804),

Gene: Llemily_46 Start: 35349, Stop: 34837, Start Num: 7

Candidate Starts for Llemily_46:

(3, 35436), (6, 35355), (Start: 7 @35349 has 47 MA's), (12, 35256), (13, 35253), (Start: 14 @35244 has 1 MA's), (21, 35202), (22, 35199), (23, 35196), (25, 35184), (27, 35175), (36, 35043), (37, 35034), (38, 35022), (40, 35007), (53, 34920), (57, 34851),

Gene: Lonelysoil_45 Start: 35591, Stop: 35079, Start Num: 7

Candidate Starts for Lonelysoil_45:

(3, 35678), (6, 35597), (Start: 7 @35591 has 47 MA's), (12, 35498), (13, 35495), (Start: 14 @35486 has 1 MA's), (21, 35444), (22, 35441), (23, 35438), (25, 35426), (27, 35417), (36, 35285), (37, 35276), (38, 35264), (40, 35249), (53, 35162), (57, 35093),

Gene: Marcie_51 Start: 35693, Stop: 35298, Start Num: 10

Candidate Starts for Marcie_51:

(Start: 7 @35765 has 47 MA's), (Start: 10 @35693 has 1 MA's), (26, 35618), (27, 35612), (34, 35525), (36, 35480), (37, 35471), (38, 35459), (39, 35447), (45, 35393), (50, 35363), (52, 35357), (56, 35306),

Gene: Mashley_45 Start: 35989, Stop: 35477, Start Num: 7

Candidate Starts for Mashley_45:

(6, 35995), (Start: 7 @35989 has 47 MA's), (12, 35896), (16, 35875), (21, 35842), (22, 35839), (23, 35836), (25, 35824), (27, 35815), (34, 35728), (36, 35683), (37, 35674), (38, 35662), (53, 35560), (57, 35491),

Gene: Mentos_50 Start: 37044, Stop: 36577, Start Num: 7

Candidate Starts for Mentos_50:

(3, 37131), (Start: 7 @37044 has 47 MA's), (15, 36951), (36, 36759), (37, 36750), (38, 36738), (46, 36672), (51, 36642), (56, 36585),

Gene: Mila11_48 Start: 36956, Stop: 36444, Start Num: 7

Candidate Starts for Mila11_48:

(6, 36962), (Start: 7 @36956 has 47 MA's), (12, 36863), (13, 36860), (Start: 14 @36851 has 1 MA's), (21, 36809), (22, 36806), (23, 36803), (25, 36791), (36, 36650), (37, 36641), (38, 36629), (40, 36614), (53, 36527), (57, 36458),

Gene: MorillMayhem_46 Start: 35887, Stop: 35351, Start Num: 7

Candidate Starts for MorillMayhem_46:

(1, 36103), (3, 35974), (6, 35893), (Start: 7 @35887 has 47 MA's), (11, 35803), (12, 35794), (17, 35761), (21, 35719), (22, 35716), (28, 35680), (33, 35626), (38, 35539), (53, 35434), (57, 35365),

Gene: Namago_46 Start: 35393, Stop: 34926, Start Num: 7

Candidate Starts for Namago_46:

(3, 35480), (Start: 7 @35393 has 47 MA's), (15, 35300), (36, 35108), (37, 35099), (38, 35087), (46, 35021), (51, 34991), (56, 34934),

Gene: Nike_47 Start: 36348, Stop: 35881, Start Num: 7

Candidate Starts for Nike_47:

(3, 36435), (Start: 7 @36348 has 47 MA's), (15, 36255), (36, 36063), (37, 36054), (38, 36042), (46, 35976), (51, 35946),

Gene: OneinaGillian_46 Start: 34799, Stop: 34305, Start Num: 7

Candidate Starts for OneinaGillian_46:

(Start: 7 @34799 has 47 MA's), (Start: 14 @34700 has 1 MA's), (Start: 19 @34691 has 2 MA's), (26, 34652), (27, 34646), (30, 34598), (34, 34559), (38, 34493), (53, 34388), (57, 34319),

Gene: Pepe25_45 Start: 34344, Stop: 33856, Start Num: 7

Candidate Starts for Pepe25_45:

(2, 34575), (5, 34419), (Start: 7 @34344 has 47 MA's), (Start: 14 @34239 has 1 MA's), (21, 34197), (23, 34191), (25, 34179), (29, 34125), (35, 34041), (36, 34038), (38, 34017), (40, 34002), (48, 33945),

(53, 33915), (56, 33864),

Gene: Phabia_46 Start: 35764, Stop: 35252, Start Num: 7

Candidate Starts for Phabia_46:

(3, 35851), (6, 35770), (Start: 7 @35764 has 47 MA's), (12, 35671), (13, 35668), (Start: 14 @35659 has 1 MA's), (21, 35617), (22, 35614), (23, 35611), (25, 35599), (27, 35590), (36, 35458), (37, 35449), (38, 35437), (40, 35422), (53, 35335), (57, 35266),

Gene: Phinky_53 Start: 37581, Stop: 37066, Start Num: 7

Candidate Starts for Phinky_53:

(Start: 7 @37581 has 47 MA's), (16, 37461), (25, 37410), (26, 37407), (36, 37269), (38, 37248), (53, 37146), (54, 37137),

Gene: Quammi_44 Start: 35464, Stop: 34952, Start Num: 7

Candidate Starts for Quammi_44:

(3, 35551), (6, 35470), (Start: 7 @35464 has 47 MA's), (12, 35371), (13, 35368), (Start: 14 @35359 has 1 MA's), (21, 35317), (22, 35314), (23, 35311), (25, 35299), (27, 35290), (36, 35158), (37, 35149), (38, 35137), (40, 35122), (53, 35035), (57, 34966),

Gene: RobinRose_48 Start: 35191, Stop: 34808, Start Num: 19

Candidate Starts for RobinRose_48:

(Start: 7 @35299 has 47 MA's), (Start: 14 @35200 has 1 MA's), (Start: 19 @35191 has 2 MA's), (26, 35152), (27, 35146), (30, 35098), (36, 35014), (38, 34993), (44, 34930), (52, 34891), (53, 34888), (57, 34822),

Gene: Romm_48 Start: 35200, Stop: 34808, Start Num: 14

Candidate Starts for Romm_48:

(Start: 7 @35299 has 47 MA's), (Start: 14 @35200 has 1 MA's), (Start: 19 @35191 has 2 MA's), (26, 35152), (27, 35146), (30, 35098), (36, 35014), (38, 34993), (44, 34930), (52, 34891), (53, 34888), (57, 34822),

Gene: Rowlf_42 Start: 35437, Stop: 34925, Start Num: 7

Candidate Starts for Rowlf_42:

(4, 35491), (6, 35443), (Start: 7 @35437 has 47 MA's), (13, 35341), (Start: 14 @35332 has 1 MA's), (21, 35290), (22, 35287), (23, 35284), (25, 35272), (27, 35263), (36, 35131), (37, 35122), (38, 35110), (40, 35095), (53, 35008), (57, 34939),

Gene: RubyRalph_48 Start: 37871, Stop: 37368, Start Num: 7

Candidate Starts for RubyRalph_48:

(Start: 7 @37871 has 47 MA's), (8, 37820), (9, 37808), (20, 37736), (21, 37733), (32, 37643), (36, 37574), (38, 37553), (41, 37514), (42, 37505), (43, 37502), (47, 37484), (49, 37478), (53, 37451), (54, 37442),

Gene: Rudy_44 Start: 35497, Stop: 34985, Start Num: 7

Candidate Starts for Rudy_44:

(3, 35584), (6, 35503), (Start: 7 @35497 has 47 MA's), (12, 35404), (13, 35401), (Start: 14 @35392 has 1 MA's), (21, 35350), (22, 35347), (23, 35344), (25, 35332), (27, 35323), (36, 35191), (37, 35182), (38, 35170), (40, 35155), (53, 35068), (57, 34999),

Gene: SadLad_50 Start: 38814, Stop: 38311, Start Num: 7

Candidate Starts for SadLad_50:

(Start: 7 @38814 has 47 MA's), (8, 38763), (9, 38751), (20, 38679), (21, 38676), (32, 38586), (36, 38517), (38, 38496), (41, 38457), (42, 38448), (43, 38445), (47, 38427), (49, 38421), (53, 38394), (54,

38385),

Gene: SallyK_47 Start: 36407, Stop: 35940, Start Num: 7

Candidate Starts for SallyK_47:

(3, 36494), (4, 36461), (Start: 7 @36407 has 47 MA's), (15, 36314), (36, 36122), (37, 36113), (38, 36101), (46, 36035), (51, 36005), (56, 35948),

Gene: Sillytadpoles_47 Start: 35337, Stop: 34825, Start Num: 7

Candidate Starts for Sillytadpoles_47:

(3, 35424), (6, 35343), (Start: 7 @35337 has 47 MA's), (12, 35244), (13, 35241), (Start: 14 @35232 has 1 MA's), (21, 35190), (22, 35187), (23, 35184), (25, 35172), (27, 35163), (36, 35031), (37, 35022), (38, 35010), (40, 34995), (53, 34908), (57, 34839),

Gene: SlySloth_49 Start: 35987, Stop: 35622, Start Num: 21

Candidate Starts for SlySloth_49:

(3, 36221), (4, 36188), (Start: 7 @36134 has 47 MA's), (12, 36041), (Start: 14 @36029 has 1 MA's), (21, 35987), (22, 35984), (23, 35981), (25, 35969), (27, 35960), (36, 35828), (37, 35819), (38, 35807), (40, 35792), (53, 35705), (57, 35636),

Gene: Squash_49 Start: 36359, Stop: 35892, Start Num: 7

Candidate Starts for Squash_49:

(4, 36413), (6, 36365), (Start: 7 @36359 has 47 MA's), (24, 36221), (25, 36215), (36, 36074), (37, 36065), (38, 36053), (46, 35987), (51, 35957), (56, 35900),

Gene: Statler_47 Start: 36255, Stop: 35746, Start Num: 7

Candidate Starts for Statler_47:

(3, 36342), (4, 36309), (6, 36261), (Start: 7 @36255 has 47 MA's), (11, 36171), (12, 36162), (17, 36129), (21, 36087), (22, 36084), (25, 36069), (36, 35928), (38, 35907), (46, 35841), (51, 35811), (56, 35754),

Gene: StrawberryJamm_48 Start: 35661, Stop: 35194, Start Num: 7

Candidate Starts for StrawberryJamm_48:

(3, 35748), (4, 35715), (Start: 7 @35661 has 47 MA's), (15, 35568), (36, 35376), (37, 35367), (38, 35355), (46, 35289), (51, 35259), (56, 35202),

Gene: Teehee_47 Start: 36570, Stop: 36058, Start Num: 7

Candidate Starts for Teehee_47:

(3, 36657), (6, 36576), (Start: 7 @36570 has 47 MA's), (12, 36477), (13, 36474), (Start: 14 @36465 has 1 MA's), (21, 36423), (22, 36420), (23, 36417), (25, 36405), (27, 36396), (36, 36264), (37, 36255), (38, 36243), (40, 36228), (53, 36141), (57, 36072),

Gene: Tempo_46 Start: 35178, Stop: 34684, Start Num: 7

Candidate Starts for Tempo_46:

(Start: 7 @35178 has 47 MA's), (Start: 14 @35079 has 1 MA's), (Start: 19 @35070 has 2 MA's), (26, 35031), (27, 35025), (30, 34977), (34, 34938), (38, 34872), (53, 34767), (57, 34698),

Gene: Tissue_47 Start: 36036, Stop: 35569, Start Num: 7

Candidate Starts for Tissue_47:

(3, 36123), (Start: 7 @36036 has 47 MA's), (15, 35943), (36, 35751), (37, 35742), (38, 35730), (46, 35664), (51, 35634), (56, 35577),

Gene: Viceroy_45 Start: 35467, Stop: 34955, Start Num: 7

Candidate Starts for Viceroy_45:

(3, 35554), (6, 35473), (Start: 7 @35467 has 47 MA's), (12, 35374), (13, 35371), (Start: 14 @35362 has 1 MA's), (21, 35320), (22, 35317), (23, 35314), (25, 35302), (27, 35293), (36, 35161), (37, 35152), (38, 35140), (40, 35125), (53, 35038), (57, 34969),

Gene: Wayne3_48 Start: 36333, Stop: 35821, Start Num: 7

Candidate Starts for Wayne3_48:

(3, 36420), (6, 36339), (Start: 7 @36333 has 47 MA's), (12, 36240), (13, 36237), (Start: 14 @36228 has 1 MA's), (21, 36186), (22, 36183), (23, 36180), (25, 36168), (27, 36159), (36, 36027), (37, 36018), (38, 36006), (40, 35991), (53, 35904), (57, 35835),

Gene: WheelerS25_51 Start: 36903, Stop: 36385, Start Num: 6

Candidate Starts for WheelerS25_51:

(3, 36984), (4, 36951), (6, 36903), (Start: 7 @36897 has 47 MA's), (12, 36804), (Start: 14 @36792 has 1 MA's), (18, 36771), (21, 36750), (22, 36747), (23, 36744), (25, 36732), (27, 36723), (36, 36591), (37, 36582), (38, 36570), (40, 36555), (53, 36468), (57, 36399),

Gene: Wheelie_46 Start: 35654, Stop: 35142, Start Num: 7

Candidate Starts for Wheelie_46:

(3, 35741), (6, 35660), (Start: 7 @35654 has 47 MA's), (12, 35561), (13, 35558), (Start: 14 @35549 has 1 MA's), (21, 35507), (22, 35504), (23, 35501), (25, 35489), (27, 35480), (36, 35348), (37, 35339), (38, 35327), (40, 35312), (53, 35225), (57, 35156),

Gene: Wilca_46 Start: 34338, Stop: 33850, Start Num: 7

Candidate Starts for Wilca_46:

(2, 34569), (5, 34413), (Start: 7 @34338 has 47 MA's), (12, 34245), (Start: 14 @34233 has 1 MA's), (21, 34191), (23, 34185), (25, 34173), (29, 34119), (35, 34035), (36, 34032), (38, 34011), (40, 33996), (48, 33939), (53, 33909), (56, 33858),

Gene: Zagie_46 Start: 35902, Stop: 35390, Start Num: 7

Candidate Starts for Zagie_46:

(1, 36118), (4, 35956), (6, 35908), (Start: 7 @35902 has 47 MA's), (12, 35809), (13, 35806), (Start: 14 @35797 has 1 MA's), (21, 35755), (22, 35752), (23, 35749), (25, 35737), (27, 35728), (36, 35596), (37, 35587), (38, 35575), (40, 35560), (53, 35473), (57, 35404),

Gene: Zhafia_49 Start: 36134, Stop: 35622, Start Num: 7

Candidate Starts for Zhafia_49:

(3, 36221), (6, 36140), (Start: 7 @36134 has 47 MA's), (12, 36041), (13, 36038), (Start: 14 @36029 has 1 MA's), (21, 35987), (22, 35984), (23, 35981), (25, 35969), (27, 35960), (36, 35828), (37, 35819), (38, 35807), (40, 35792), (53, 35705), (57, 35636),