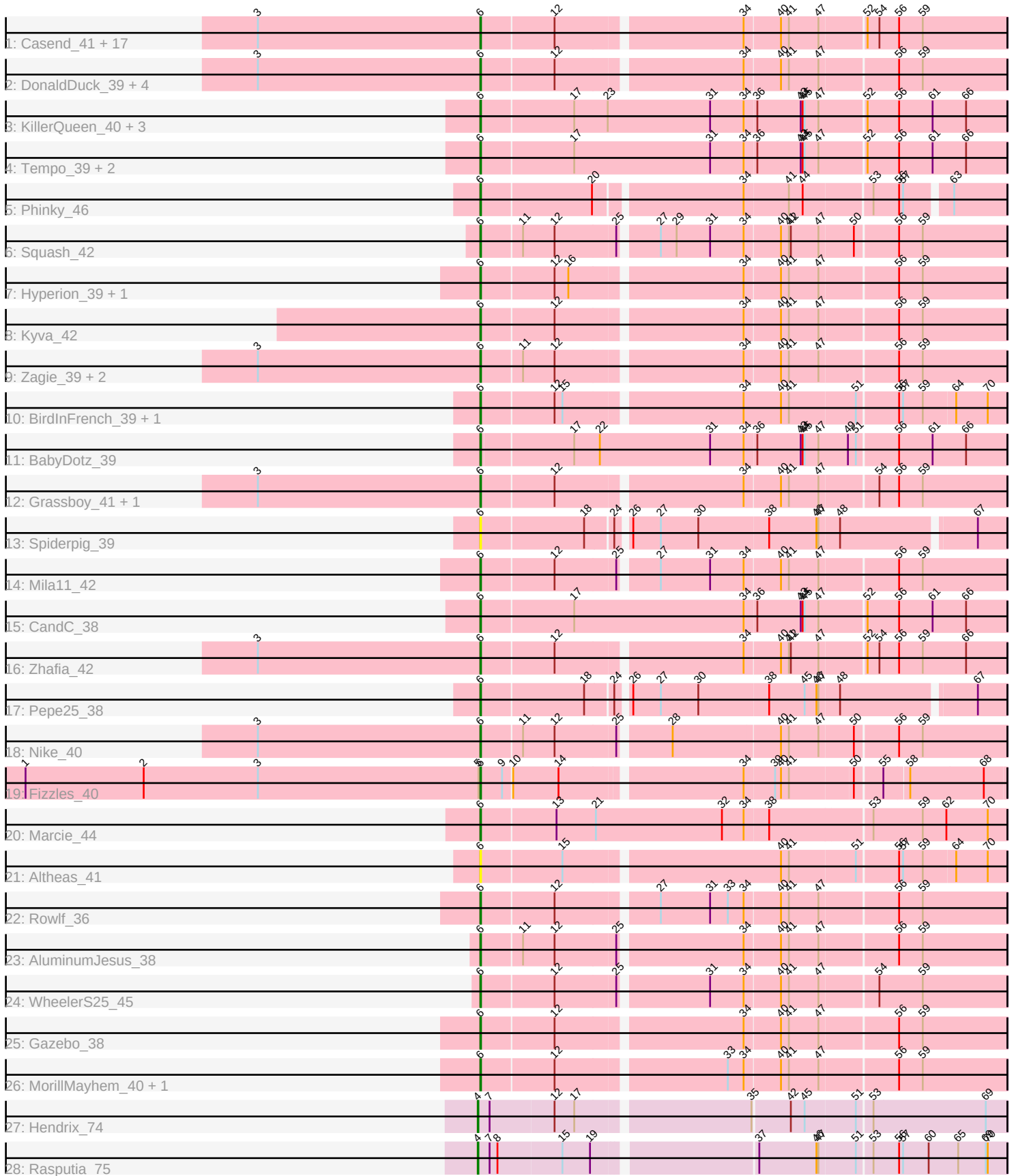


Pham 329065



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 329065 Report

This analysis was run 09/05/26 on database version 662.

Pham number 329065 has 60 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Casend_41, FrankDeliGuy_37, EverythinBagel_39, Quammi_38, StrawberryJamm_42, Statler_41, Viceroy_38, Teehee_41, Phabia_40, Lonelysoil_39, Judebell_42, Rudy_38, Tissue_40, Mentos_42, LilCahh_39, SallyK_41, Wayne3_41, ZestyBestie_38
- Track 2 : DonaldDuck_39, Sillytadpoles_40, Jehoshaphat_42, Wheelie_39, Llemily_39
- Track 3 : KillerQueen_40, OneinaGillian_39, Romm_41, RobinRose_41
- Track 4 : Tempo_39, Kelcole_38, Fregley_40
- Track 5 : Phinky_46
- Track 6 : Squash_42
- Track 7 : Hyperion_39, Mashley_38
- Track 8 : Kyva_42
- Track 9 : Zagie_39, SlySloth_42, Blab_38
- Track 10 : BirdInFrench_39, Wilca_39
- Track 11 : BabyDotz_39
- Track 12 : Grassboy_41, Namago_40
- Track 13 : Spiderpig_39
- Track 14 : Mila11_42
- Track 15 : CandC_38
- Track 16 : Zhafia_42
- Track 17 : Pepe25_38
- Track 18 : Nike_40
- Track 19 : Fizzles_40
- Track 20 : Marcie_44
- Track 21 : Altheas_41
- Track 22 : Rowlf_36
- Track 23 : AluminumJesus_38
- Track 24 : WheelerS25_45
- Track 25 : Gazebo_38
- Track 26 : MorillMayhem_40, BaconCheese_42
- Track 27 : Hendrix_74
- Track 28 : Rasputia_75

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

The start number called the most often in the published annotations is 6, it was called in 53 of the 55 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Altheas_41, AluminumJesus_38, BabyDotz_39, BaconCheese_42, BirdInFrench_39, Blab_38, CandC_38, Casend_41, DonaldDuck_39, EverythinBagel_39, Fizzles_40, FrankDeliGuy_37, Fregley_40, Gazebo_38, Grassboy_41, Hyperion_39, Jehoshaphat_42, Judebell_42, Kelcole_38, KillerQueen_40, Kyva_42, LilCahh_39, Llemily_39, Lonelysoil_39, Marcie_44, Mashley_38, Mentos_42, Mila11_42, MorillMayhem_40, Namago_40, Nike_40, OneinaGillian_39, Pepe25_38, Phabia_40, Phinky_46, Quammi_38, RobinRose_41, Romm_41, Rowlf_36, Rudy_38, SallyK_41, Sillytadpoles_40, SlySloth_42, Spiderpig_39, Squash_42, Statler_41, StrawberryJamm_42, Teehee_41, Tempo_39, Tissue_40, Viceroy_38, Wayne3_41, WheelerS25_45, Wheelie_39, Wilca_39, Zagie_39, ZestyBestie_38, Zhafia_42,

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

-

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

- Hendrix_74, Rasputia_75,

Summary by start number:

Start 4:

- Found in 2 of 60 (3.3%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hendrix_74 (GC), Rasputia_75 (GC),

Start 6:

- Found in 58 of 60 (96.7%) of genes in pham
- Manual Annotations of this start: 53 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altheas_41 (EG), AluminumJesus_38 (EG), BabyDotz_39 (EG), BaconCheese_42 (EG), BirdInFrench_39 (EG), Blab_38 (EG), CandC_38 (EG), Casend_41 (EG), DonaldDuck_39 (EG), EverythinBagel_39 (EG), Fizzles_40 (EG), FrankDeliGuy_37 (EG), Fregley_40 (EG), Gazebo_38 (EG), Grassboy_41 (EG), Hyperion_39 (EG), Jehoshaphat_42 (EG), Judebell_42 (EG), Kelcole_38 (EG), KillerQueen_40 (EG), Kyva_42 (EG), LilCahh_39 (EG), Llemily_39 (EG), Lonelysoil_39 (EG), Marcie_44 (EG), Mashley_38 (EG), Mentos_42 (EG), Mila11_42 (EG), MorillMayhem_40 (EG), Namago_40 (EG), Nike_40 (EG), OneinaGillian_39 (EG), Pepe25_38 (EG), Phabia_40 (EG), Phinky_46 (EG), Quammi_38 (EG), RobinRose_41 (EG), Romm_41 (EG), Rowlf_36 (EG), Rudy_38 (EG), SallyK_41 (EG), Sillytadpoles_40 (EG), SlySloth_42 (EG), Spiderpig_39 (EG), Squash_42 (EG), Statler_41 (EG), StrawberryJamm_42 (EG), Teehee_41 (EG), Tempo_39 (EG), Tissue_40 (EG), Viceroy_38 (EG), Wayne3_41 (EG), WheelerS25_45 (EG), Wheelie_39 (EG), Wilca_39 (EG), Zagie_39 (EG), ZestyBestie_38 (EG), Zhafia_42 (EG),

Summary by clusters:

There are 2 clusters represented in this pham: EG, GC,

Info for manual annotations of cluster EG:

- Start number 6 was manually annotated 53 times for cluster EG.

Info for manual annotations of cluster GC:

- Start number 4 was manually annotated 2 times for cluster GC.

Gene Information:

Gene: Altheas_41 Start: 32179, Stop: 32943, Start Num: 6

Candidate Starts for Altheas_41:

(Start: 6 @32179 has 53 MA's), (15, 32299), (40, 32611), (41, 32623), (51, 32722), (56, 32782), (57, 32788), (59, 32818), (64, 32866), (70, 32914),

Gene: AluminumJesus_38 Start: 31777, Stop: 32538, Start Num: 6

Candidate Starts for AluminumJesus_38:

(Start: 6 @31777 has 53 MA's), (11, 31837), (12, 31885), (25, 31975), (34, 32152), (40, 32203), (41, 32215), (47, 32260), (56, 32374), (59, 32410),

Gene: BabyDotz_39 Start: 32546, Stop: 33331, Start Num: 6

Candidate Starts for BabyDotz_39:

(Start: 6 @32546 has 53 MA's), (17, 32681), (22, 32720), (31, 32888), (34, 32939), (36, 32957), (43, 33023), (44, 33026), (45, 33029), (47, 33050), (49, 33095), (51, 33107), (56, 33167), (61, 33218), (66, 33269),

Gene: BaconCheese_42 Start: 33163, Stop: 33924, Start Num: 6

Candidate Starts for BaconCheese_42:

(Start: 6 @33163 has 53 MA's), (12, 33271), (33, 33514), (34, 33538), (40, 33589), (41, 33601), (47, 33646), (56, 33760), (59, 33796),

Gene: BirdInFrench_39 Start: 30353, Stop: 31117, Start Num: 6

Candidate Starts for BirdInFrench_39:

(Start: 6 @30353 has 53 MA's), (12, 30461), (15, 30473), (34, 30728), (40, 30785), (41, 30797), (51, 30896), (56, 30956), (57, 30962), (59, 30992), (64, 31040), (70, 31088),

Gene: Blab_38 Start: 31690, Stop: 32451, Start Num: 6

Candidate Starts for Blab_38:

(3, 31351), (Start: 6 @31690 has 53 MA's), (11, 31750), (12, 31798), (34, 32065), (40, 32116), (41, 32128), (47, 32173), (56, 32287), (59, 32323),

Gene: CandC_38 Start: 30678, Stop: 31466, Start Num: 6

Candidate Starts for CandC_38:

(Start: 6 @30678 has 53 MA's), (17, 30816), (34, 31074), (36, 31092), (43, 31158), (44, 31161), (45, 31164), (47, 31185), (52, 31254), (56, 31302), (61, 31353), (66, 31404),

Gene: Casend_41 Start: 32329, Stop: 33090, Start Num: 6

Candidate Starts for Casend_41:

(3, 31990), (Start: 6 @32329 has 53 MA's), (12, 32437), (34, 32704), (40, 32755), (41, 32767), (47, 32812), (52, 32878), (54, 32896), (56, 32926), (59, 32962),

Gene: DonaldDuck_39 Start: 31678, Stop: 32439, Start Num: 6

Candidate Starts for DonaldDuck_39:

(3, 31339), (Start: 6 @31678 has 53 MA's), (12, 31786), (34, 32053), (40, 32104), (41, 32116), (47, 32161), (56, 32275), (59, 32311),

Gene: EverythinBagel_39 Start: 32066, Stop: 32827, Start Num: 6

Candidate Starts for EverythinBagel_39:

(3, 31727), (Start: 6 @32066 has 53 MA's), (12, 32174), (34, 32441), (40, 32492), (41, 32504), (47, 32549), (52, 32615), (54, 32633), (56, 32663), (59, 32699),

Gene: Fizzles_40 Start: 31312, Stop: 32058, Start Num: 6

Candidate Starts for Fizzles_40:

(1, 30619), (2, 30799), (3, 30973), (5, 31309), (Start: 6 @31312 has 53 MA's), (9, 31345), (10, 31357), (14, 31426), (34, 31684), (39, 31729), (40, 31738), (41, 31750), (50, 31843), (55, 31879), (58, 31915), (68, 32026),

Gene: FrankDeliGuy_37 Start: 31629, Stop: 32390, Start Num: 6

Candidate Starts for FrankDeliGuy_37:

(3, 31290), (Start: 6 @31629 has 53 MA's), (12, 31737), (34, 32004), (40, 32055), (41, 32067), (47, 32112), (52, 32178), (54, 32196), (56, 32226), (59, 32262),

Gene: Fregley_40 Start: 31248, Stop: 32036, Start Num: 6

Candidate Starts for Fregley_40:

(Start: 6 @31248 has 53 MA's), (17, 31386), (31, 31593), (34, 31644), (36, 31662), (43, 31728), (44, 31731), (45, 31734), (47, 31755), (52, 31824), (56, 31872), (61, 31923), (66, 31974),

Gene: Gazebo_38 Start: 32240, Stop: 33001, Start Num: 6

Candidate Starts for Gazebo_38:

(Start: 6 @32240 has 53 MA's), (12, 32348), (34, 32615), (40, 32666), (41, 32678), (47, 32723), (56, 32837), (59, 32873),

Gene: Grassboy_41 Start: 32292, Stop: 33053, Start Num: 6

Candidate Starts for Grassboy_41:

(3, 31953), (Start: 6 @32292 has 53 MA's), (12, 32400), (34, 32667), (40, 32718), (41, 32730), (47, 32775), (54, 32859), (56, 32889), (59, 32925),

Gene: Hendrix_74 Start: 50715, Stop: 51479, Start Num: 4

Candidate Starts for Hendrix_74:

(Start: 4 @50715 has 2 MA's), (7, 50733), (12, 50829), (17, 50859), (35, 51108), (42, 51162), (45, 51183), (51, 51258), (53, 51279), (69, 51447),

Gene: Hyperion_39 Start: 32196, Stop: 32957, Start Num: 6

Candidate Starts for Hyperion_39:

(Start: 6 @32196 has 53 MA's), (12, 32304), (16, 32325), (34, 32571), (40, 32622), (41, 32634), (47, 32679), (56, 32793), (59, 32829),

Gene: Jehoshaphat_42 Start: 32597, Stop: 33358, Start Num: 6

Candidate Starts for Jehoshaphat_42:

(3, 32258), (Start: 6 @32597 has 53 MA's), (12, 32705), (34, 32972), (40, 33023), (41, 33035), (47, 33080), (56, 33194), (59, 33230),

Gene: Judebell_42 Start: 32094, Stop: 32855, Start Num: 6

Candidate Starts for Judebell_42:

(3, 31755), (Start: 6 @32094 has 53 MA's), (12, 32202), (34, 32469), (40, 32520), (41, 32532), (47, 32577), (52, 32643), (54, 32661), (56, 32691), (59, 32727),

Gene: Kelcole_38 Start: 31130, Stop: 31918, Start Num: 6

Candidate Starts for Kelcole_38:

(Start: 6 @31130 has 53 MA's), (17, 31268), (31, 31475), (34, 31526), (36, 31544), (43, 31610), (44, 31613), (45, 31616), (47, 31637), (52, 31706), (56, 31754), (61, 31805), (66, 31856),

Gene: KillerQueen_40 Start: 30925, Stop: 31713, Start Num: 6

Candidate Starts for KillerQueen_40:

(Start: 6 @30925 has 53 MA's), (17, 31063), (23, 31114), (31, 31270), (34, 31321), (36, 31339), (43, 31405), (44, 31408), (45, 31411), (47, 31432), (52, 31501), (56, 31549), (61, 31600), (66, 31651),

Gene: Kyva_42 Start: 32327, Stop: 33088, Start Num: 6

Candidate Starts for Kyva_42:

(Start: 6 @32327 has 53 MA's), (12, 32435), (34, 32702), (40, 32753), (41, 32765), (47, 32810), (56, 32924), (59, 32960),

Gene: LilCahh_39 Start: 31694, Stop: 32455, Start Num: 6

Candidate Starts for LilCahh_39:

(3, 31355), (Start: 6 @31694 has 53 MA's), (12, 31802), (34, 32069), (40, 32120), (41, 32132), (47, 32177), (52, 32243), (54, 32261), (56, 32291), (59, 32327),

Gene: Llemily_39 Start: 31373, Stop: 32134, Start Num: 6

Candidate Starts for Llemily_39:

(3, 31034), (Start: 6 @31373 has 53 MA's), (12, 31481), (34, 31748), (40, 31799), (41, 31811), (47, 31856), (56, 31970), (59, 32006),

Gene: Lonelysoil_39 Start: 31615, Stop: 32376, Start Num: 6

Candidate Starts for Lonelysoil_39:

(3, 31276), (Start: 6 @31615 has 53 MA's), (12, 31723), (34, 31990), (40, 32041), (41, 32053), (47, 32098), (52, 32164), (54, 32182), (56, 32212), (59, 32248),

Gene: Marcie_44 Start: 31789, Stop: 32574, Start Num: 6

Candidate Starts for Marcie_44:

(Start: 6 @31789 has 53 MA's), (13, 31900), (21, 31960), (32, 32152), (34, 32185), (38, 32221), (53, 32371), (59, 32446), (62, 32482), (70, 32545),

Gene: Mashley_38 Start: 32012, Stop: 32773, Start Num: 6

Candidate Starts for Mashley_38:

(Start: 6 @32012 has 53 MA's), (12, 32120), (16, 32141), (34, 32387), (40, 32438), (41, 32450), (47, 32495), (56, 32609), (59, 32645),

Gene: Mentos_42 Start: 33105, Stop: 33866, Start Num: 6

Candidate Starts for Mentos_42:

(3, 32766), (Start: 6 @33105 has 53 MA's), (12, 33213), (34, 33480), (40, 33531), (41, 33543), (47, 33588), (52, 33654), (54, 33672), (56, 33702), (59, 33738),

Gene: Mila11_42 Start: 32981, Stop: 33742, Start Num: 6

Candidate Starts for Mila11_42:

(Start: 6 @32981 has 53 MA's), (12, 33089), (25, 33179), (27, 33230), (31, 33305), (34, 33356), (40, 33407), (41, 33419), (47, 33464), (56, 33578), (59, 33614),

Gene: MorillMayhem_40 Start: 31879, Stop: 32640, Start Num: 6
Candidate Starts for MorillMayhem_40:
(Start: 6 @31879 has 53 MA's), (12, 31987), (33, 32230), (34, 32254), (40, 32305), (41, 32317), (47, 32362), (56, 32476), (59, 32512),

Gene: Namago_40 Start: 31457, Stop: 32218, Start Num: 6
Candidate Starts for Namago_40:
(3, 31118), (Start: 6 @31457 has 53 MA's), (12, 31565), (34, 31832), (40, 31883), (41, 31895), (47, 31940), (54, 32024), (56, 32054), (59, 32090),

Gene: Nike_40 Start: 32412, Stop: 33173, Start Num: 6
Candidate Starts for Nike_40:
(3, 32073), (Start: 6 @32412 has 53 MA's), (11, 32472), (12, 32520), (25, 32610), (28, 32679), (40, 32838), (41, 32850), (47, 32895), (50, 32946), (56, 33009), (59, 33045),

Gene: OneinaGillian_39 Start: 30780, Stop: 31568, Start Num: 6
Candidate Starts for OneinaGillian_39:
(Start: 6 @30780 has 53 MA's), (17, 30918), (23, 30969), (31, 31125), (34, 31176), (36, 31194), (43, 31260), (44, 31263), (45, 31266), (47, 31287), (52, 31356), (56, 31404), (61, 31455), (66, 31506),

Gene: Pepe25_38 Start: 30379, Stop: 31131, Start Num: 6
Candidate Starts for Pepe25_38:
(Start: 6 @30379 has 53 MA's), (18, 30532), (24, 30571), (26, 30586), (27, 30628), (30, 30685), (38, 30790), (45, 30844), (46, 30862), (47, 30865), (48, 30895), (67, 31087),

Gene: Phabia_40 Start: 31788, Stop: 32549, Start Num: 6
Candidate Starts for Phabia_40:
(3, 31449), (Start: 6 @31788 has 53 MA's), (12, 31896), (34, 32163), (40, 32214), (41, 32226), (47, 32271), (52, 32337), (54, 32355), (56, 32385), (59, 32421),

Gene: Phinky_46 Start: 33599, Stop: 34348, Start Num: 6
Candidate Starts for Phinky_46:
(Start: 6 @33599 has 53 MA's), (20, 33764), (34, 33974), (41, 34040), (44, 34061), (53, 34160), (56, 34199), (57, 34205), (63, 34268),

Gene: Quammi_38 Start: 31488, Stop: 32249, Start Num: 6
Candidate Starts for Quammi_38:
(3, 31149), (Start: 6 @31488 has 53 MA's), (12, 31596), (34, 31863), (40, 31914), (41, 31926), (47, 31971), (52, 32037), (54, 32055), (56, 32085), (59, 32121),

Gene: Rasputia_75 Start: 50672, Stop: 51436, Start Num: 4
Candidate Starts for Rasputia_75:
(Start: 4 @50672 has 2 MA's), (7, 50690), (8, 50702), (15, 50798), (19, 50840), (37, 51068), (46, 51155), (47, 51158), (51, 51212), (53, 51233), (56, 51272), (57, 51278), (60, 51317), (65, 51362), (69, 51404), (70, 51407),

Gene: RobinRose_41 Start: 31281, Stop: 32069, Start Num: 6
Candidate Starts for RobinRose_41:
(Start: 6 @31281 has 53 MA's), (17, 31419), (23, 31470), (31, 31626), (34, 31677), (36, 31695), (43, 31761), (44, 31764), (45, 31767), (47, 31788), (52, 31857), (56, 31905), (61, 31956), (66, 32007),

Gene: Romm_41 Start: 31281, Stop: 32069, Start Num: 6
Candidate Starts for Romm_41:

(Start: 6 @31281 has 53 MA's), (17, 31419), (23, 31470), (31, 31626), (34, 31677), (36, 31695), (43, 31761), (44, 31764), (45, 31767), (47, 31788), (52, 31857), (56, 31905), (61, 31956), (66, 32007),

Gene: Rowlf_36 Start: 31660, Stop: 32421, Start Num: 6

Candidate Starts for Rowlf_36:

(Start: 6 @31660 has 53 MA's), (12, 31768), (27, 31909), (31, 31984), (33, 32011), (34, 32035), (40, 32086), (41, 32098), (47, 32143), (56, 32257), (59, 32293),

Gene: Rudy_38 Start: 31521, Stop: 32282, Start Num: 6

Candidate Starts for Rudy_38:

(3, 31182), (Start: 6 @31521 has 53 MA's), (12, 31629), (34, 31896), (40, 31947), (41, 31959), (47, 32004), (52, 32070), (54, 32088), (56, 32118), (59, 32154),

Gene: SallyK_41 Start: 32471, Stop: 33232, Start Num: 6

Candidate Starts for SallyK_41:

(3, 32132), (Start: 6 @32471 has 53 MA's), (12, 32579), (34, 32846), (40, 32897), (41, 32909), (47, 32954), (52, 33020), (54, 33038), (56, 33068), (59, 33104),

Gene: Sillytadpoles_40 Start: 31361, Stop: 32122, Start Num: 6

Candidate Starts for Sillytadpoles_40:

(3, 31022), (Start: 6 @31361 has 53 MA's), (12, 31469), (34, 31736), (40, 31787), (41, 31799), (47, 31844), (56, 31958), (59, 31994),

Gene: SlySloth_42 Start: 32357, Stop: 33118, Start Num: 6

Candidate Starts for SlySloth_42:

(3, 32018), (Start: 6 @32357 has 53 MA's), (11, 32417), (12, 32465), (34, 32732), (40, 32783), (41, 32795), (47, 32840), (56, 32954), (59, 32990),

Gene: Spiderpig_39 Start: 30362, Stop: 31114, Start Num: 6

Candidate Starts for Spiderpig_39:

(Start: 6 @30362 has 53 MA's), (18, 30515), (24, 30554), (26, 30569), (27, 30611), (30, 30668), (38, 30773), (46, 30845), (47, 30848), (48, 30878), (67, 31070),

Gene: Squash_42 Start: 32423, Stop: 33184, Start Num: 6

Candidate Starts for Squash_42:

(Start: 6 @32423 has 53 MA's), (11, 32483), (12, 32531), (25, 32621), (27, 32672), (29, 32696), (31, 32747), (34, 32798), (40, 32849), (41, 32861), (42, 32864), (47, 32906), (50, 32957), (56, 33020), (59, 33056),

Gene: Statler_41 Start: 32274, Stop: 33035, Start Num: 6

Candidate Starts for Statler_41:

(3, 31935), (Start: 6 @32274 has 53 MA's), (12, 32382), (34, 32649), (40, 32700), (41, 32712), (47, 32757), (52, 32823), (54, 32841), (56, 32871), (59, 32907),

Gene: StrawberryJamm_42 Start: 31722, Stop: 32483, Start Num: 6

Candidate Starts for StrawberryJamm_42:

(3, 31383), (Start: 6 @31722 has 53 MA's), (12, 31830), (34, 32097), (40, 32148), (41, 32160), (47, 32205), (52, 32271), (54, 32289), (56, 32319), (59, 32355),

Gene: Teehee_41 Start: 32594, Stop: 33355, Start Num: 6

Candidate Starts for Teehee_41:

(3, 32255), (Start: 6 @32594 has 53 MA's), (12, 32702), (34, 32969), (40, 33020), (41, 33032), (47, 33077), (52, 33143), (54, 33161), (56, 33191), (59, 33227),

Gene: Tempo_39 Start: 31157, Stop: 31945, Start Num: 6

Candidate Starts for Tempo_39:

(Start: 6 @31157 has 53 MA's), (17, 31295), (31, 31502), (34, 31553), (36, 31571), (43, 31637), (44, 31640), (45, 31643), (47, 31664), (52, 31733), (56, 31781), (61, 31832), (66, 31883),

Gene: Tissue_40 Start: 32099, Stop: 32860, Start Num: 6

Candidate Starts for Tissue_40:

(3, 31760), (Start: 6 @32099 has 53 MA's), (12, 32207), (34, 32474), (40, 32525), (41, 32537), (47, 32582), (52, 32648), (54, 32666), (56, 32696), (59, 32732),

Gene: Viceroy_38 Start: 31491, Stop: 32252, Start Num: 6

Candidate Starts for Viceroy_38:

(3, 31152), (Start: 6 @31491 has 53 MA's), (12, 31599), (34, 31866), (40, 31917), (41, 31929), (47, 31974), (52, 32040), (54, 32058), (56, 32088), (59, 32124),

Gene: Wayne3_41 Start: 32357, Stop: 33118, Start Num: 6

Candidate Starts for Wayne3_41:

(3, 32018), (Start: 6 @32357 has 53 MA's), (12, 32465), (34, 32732), (40, 32783), (41, 32795), (47, 32840), (52, 32906), (54, 32924), (56, 32954), (59, 32990),

Gene: WheelerS25_45 Start: 33117, Stop: 33878, Start Num: 6

Candidate Starts for WheelerS25_45:

(Start: 6 @33117 has 53 MA's), (12, 33225), (25, 33315), (31, 33441), (34, 33492), (40, 33543), (41, 33555), (47, 33600), (54, 33684), (59, 33750),

Gene: Wheelie_39 Start: 31678, Stop: 32439, Start Num: 6

Candidate Starts for Wheelie_39:

(3, 31339), (Start: 6 @31678 has 53 MA's), (12, 31786), (34, 32053), (40, 32104), (41, 32116), (47, 32161), (56, 32275), (59, 32311),

Gene: Wilca_39 Start: 30353, Stop: 31117, Start Num: 6

Candidate Starts for Wilca_39:

(Start: 6 @30353 has 53 MA's), (12, 30461), (15, 30473), (34, 30728), (40, 30785), (41, 30797), (51, 30896), (56, 30956), (57, 30962), (59, 30992), (64, 31040), (70, 31088),

Gene: Zagie_39 Start: 31926, Stop: 32687, Start Num: 6

Candidate Starts for Zagie_39:

(3, 31587), (Start: 6 @31926 has 53 MA's), (11, 31986), (12, 32034), (34, 32301), (40, 32352), (41, 32364), (47, 32409), (56, 32523), (59, 32559),

Gene: ZestyBestie_38 Start: 31624, Stop: 32385, Start Num: 6

Candidate Starts for ZestyBestie_38:

(3, 31285), (Start: 6 @31624 has 53 MA's), (12, 31732), (34, 31999), (40, 32050), (41, 32062), (47, 32107), (52, 32173), (54, 32191), (56, 32221), (59, 32257),

Gene: Zhafia_42 Start: 32156, Stop: 32917, Start Num: 6

Candidate Starts for Zhafia_42:

(3, 31817), (Start: 6 @32156 has 53 MA's), (12, 32264), (34, 32531), (40, 32582), (41, 32594), (42, 32597), (47, 32639), (52, 32705), (54, 32723), (56, 32753), (59, 32789), (66, 32855),