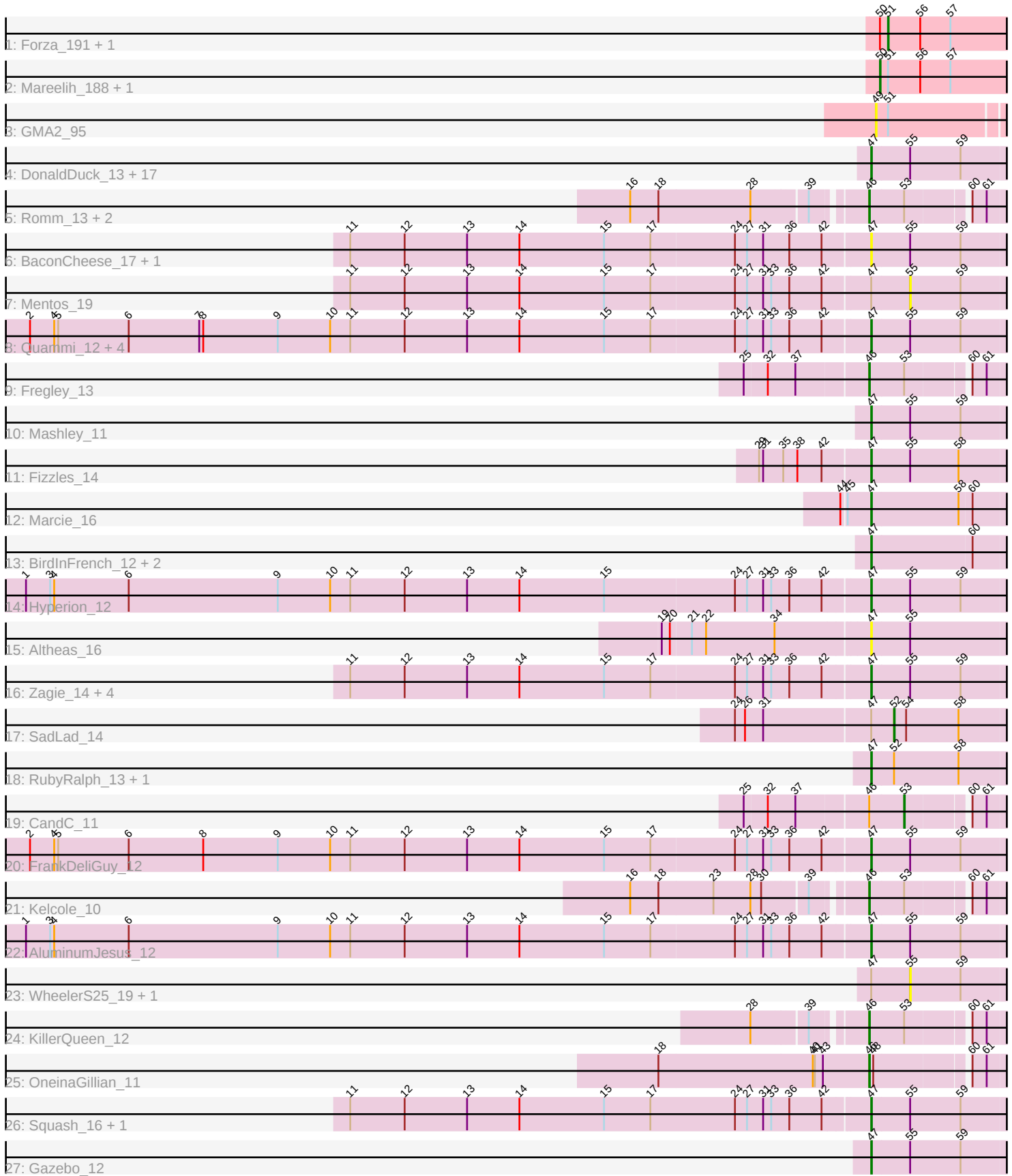




Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly 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 280447 Report

This analysis was run 02/07/26 on database version 634.

Pham number 280447 has 62 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Forza_191, BlueNGold_187
- Track 2 : Mareel_188, Boopy_191
- Track 3 : GMA2_95
- Track 4 : DonaldDuck_13, Phabia_14, Tissue_13, SallyK_15, Namago_14, BabyDotz_13, Casend_15, EverythinBagel_13, Wheelie_13, Wayne3_15, Kyva_16, Jehoshaphat_16, StrawberryJamm_16, Lonelysoil_13, Teehee_16, Grassboy_15, Zhafia_16, Judebell_16
- Track 5 : Romm_13, Tempo_11, RobinRose_12
- Track 6 : BaconCheese_17, MorillMayhem_12
- Track 7 : Mentos_19
- Track 8 : Quamm_12, Rudy_12, Llemily_13, Sillytadpoles_13, Viceroy_13
- Track 9 : Fregley_13
- Track 10 : Mashley_11
- Track 11 : Fizzles_14
- Track 12 : Marcie_16
- Track 13 : BirdInFrench_12, Pepe25_11, Wilca_12
- Track 14 : Hyperion_12
- Track 15 : Altheas_16
- Track 16 : Zagie_14, Mila11_16, Rowlf_10, Blab_12, Statler_14
- Track 17 : SadLad_14
- Track 18 : RubyRalph_13, Fransoyer_13
- Track 19 : CandC_11
- Track 20 : FrankDeliGuy_12
- Track 21 : Kelcole_10
- Track 22 : AluminumJesus_12
- Track 23 : WheelerS25_19, SlySloth_17
- Track 24 : KillerQueen_12
- Track 25 : OneinaGillian_11
- Track 26 : Squash_16, Nike_15
- Track 27 : Gazebo_12

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

The start number called the most often in the published annotations is 47, it was called in 41 of the 53 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Altheas_16, AluminumJesus_12, BabyDotz_13, BaconCheese_17, BirdInFrench_12, Blab_12, Casend_15, DonaldDuck_13, EverythinBagel_13, Fizzles_14, FrankDeliGuy_12, Fransoyer_13, Gazebo_12, Grassboy_15, Hyperion_12, Jehoshaphat_16, Judebell_16, Kyva_16, Llemily_13, Lonelysoil_13, Marcie_16, Mashley_11, Mila11_16, MorillMayhem_12, Namago_14, Nike_15, Pepe25_11, Phabia_14, Quammi_12, Rowlf_10, RubyRalph_13, Rudy_12, SallyK_15, Sillytadpoles_13, Squash_16, Statler_14, StrawberryJamm_16, Teehee_16, Tissue_13, Viceroy_13, Wayne3_15, Wheelie_13, Wilca_12, Zagie_14, Zhafia_16,

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

- Mentos_19, SadLad_14, SlySloth_17, WheelerS25_19,

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

- BlueNGold_187, Boopy_191, CandC_11, Forza_191, Fregley_13, GMA2_95, Kelcole_10, KillerQueen_12, Mareelih_188, OneinaGillian_11, RobinRose_12, Romm_13, Tempo_11,

Summary by start number:

Start 46:

- Found in 8 of 62 (12.9%) of genes in pham
- Manual Annotations of this start: 6 of 53
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Fregley_13 (EG), Kelcole_10 (EG), KillerQueen_12 (EG), OneinaGillian_11 (EG), RobinRose_12 (EG), Romm_13 (EG), Tempo_11 (EG),

Start 47:

- Found in 49 of 62 (79.0%) of genes in pham
- Manual Annotations of this start: 41 of 53
- Called 91.8% of time when present
- Phage (with cluster) where this start called: Altheas_16 (EG), AluminumJesus_12 (EG), BabyDotz_13 (EG), BaconCheese_17 (EG), BirdInFrench_12 (EG), Blab_12 (EG), Casend_15 (EG), DonaldDuck_13 (EG), EverythinBagel_13 (EG), Fizzles_14 (EG), FrankDeliGuy_12 (EG), Fransoyer_13 (EG), Gazebo_12 (EG), Grassboy_15 (EG), Hyperion_12 (EG), Jehoshaphat_16 (EG), Judebell_16 (EG), Kyva_16 (EG), Llemily_13 (EG), Lonelysoil_13 (EG), Marcie_16 (EG), Mashley_11 (EG), Mila11_16 (EG), MorillMayhem_12 (EG), Namago_14 (EG), Nike_15 (EG), Pepe25_11 (EG), Phabia_14 (EG), Quammi_12 (EG), Rowlf_10 (EG), RubyRalph_13 (EG), Rudy_12 (EG), SallyK_15 (EG), Sillytadpoles_13 (EG), Squash_16 (EG), Statler_14 (EG), StrawberryJamm_16 (EG), Teehee_16 (EG), Tissue_13 (EG), Viceroy_13 (EG), Wayne3_15 (EG), Wheelie_13 (EG), Wilca_12 (EG), Zagie_14 (EG), Zhafia_16 (EG),

Start 49:

- Found in 1 of 62 (1.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA2_95 (DS),

Start 50:

- Found in 4 of 62 (6.5%) of genes in pham
- Manual Annotations of this start: 2 of 53
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Boopy_191 (DS), Mareelih_188 (DS),

Start 51:

- Found in 5 of 62 (8.1%) of genes in pham
- Manual Annotations of this start: 2 of 53
- Called 40.0% of time when present
- Phage (with cluster) where this start called: BlueNGold_187 (DS), Forza_191 (DS),

Start 52:

- Found in 3 of 62 (4.8%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 33.3% of time when present
- Phage (with cluster) where this start called: SadLad_14 (EG),

Start 53:

- Found in 7 of 62 (11.3%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 14.3% of time when present
- Phage (with cluster) where this start called: CandC_11 (EG),

Start 55:

- Found in 42 of 62 (67.7%) of genes in pham
- No Manual Annotations of this start.
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Mentos_19 (EG), SlySloth_17 (EG), WheelerS25_19 (EG),

Summary by clusters:

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

Info for manual annotations of cluster DS:

- Start number 50 was manually annotated 2 times for cluster DS.
- Start number 51 was manually annotated 2 times for cluster DS.

Info for manual annotations of cluster EG:

- Start number 46 was manually annotated 6 times for cluster EG.
- Start number 47 was manually annotated 41 times for cluster EG.
- Start number 52 was manually annotated 1 time for cluster EG.
- Start number 53 was manually annotated 1 time for cluster EG.

Gene Information:

Gene: Altheas_16 Start: 5368, Stop: 5153, Start Num: 47

Candidate Starts for Altheas_16:

(19, 5665), (20, 5653), (21, 5623), (22, 5602), (34, 5500), (Start: 47 @5368 has 41 MA's), (55, 5311),

Gene: AluminumJesus_12 Start: 4567, Stop: 4352, Start Num: 47

Candidate Starts for AluminumJesus_12:

(1, 5812), (3, 5776), (4, 5770), (6, 5659), (9, 5437), (10, 5359), (11, 5329), (12, 5248), (13, 5155), (14, 5077), (15, 4951), (17, 4882), (24, 4759), (27, 4741), (31, 4717), (33, 4705), (36, 4678), (42, 4630), (Start: 47 @4567 has 41 MA's), (55, 4510), (59, 4435),

Gene: BabyDotz_13 Start: 5024, Stop: 4809, Start Num: 47

Candidate Starts for BabyDotz_13:

(Start: 47 @5024 has 41 MA's), (55, 4967), (59, 4892),

Gene: BaconCheese_17 Start: 5721, Stop: 5506, Start Num: 47

Candidate Starts for BaconCheese_17:

(11, 6483), (12, 6402), (13, 6309), (14, 6231), (15, 6105), (17, 6036), (24, 5913), (27, 5895), (31, 5871), (36, 5832), (42, 5784), (Start: 47 @5721 has 41 MA's), (55, 5664), (59, 5589),

Gene: BirdInFrench_12 Start: 3464, Stop: 3252, Start Num: 47

Candidate Starts for BirdInFrench_12:

(Start: 47 @3464 has 41 MA's), (60, 3317),

Gene: Blab_12 Start: 4349, Stop: 4134, Start Num: 47

Candidate Starts for Blab_12:

(11, 5111), (12, 5030), (13, 4937), (14, 4859), (15, 4733), (17, 4664), (24, 4541), (27, 4523), (31, 4499), (33, 4487), (36, 4460), (42, 4412), (Start: 47 @4349 has 41 MA's), (55, 4292), (59, 4217),

Gene: BlueNGold_187 Start: 109354, Stop: 109548, Start Num: 51

Candidate Starts for BlueNGold_187:

(Start: 50 @109342 has 2 MA's), (Start: 51 @109354 has 2 MA's), (56, 109402), (57, 109447),

Gene: Boopy_191 Start: 109353, Stop: 109559, Start Num: 50

Candidate Starts for Boopy_191:

(Start: 50 @109353 has 2 MA's), (Start: 51 @109365 has 2 MA's), (56, 109413), (57, 109458),

Gene: CandC_11 Start: 3165, Stop: 3016, Start Num: 53

Candidate Starts for CandC_11:

(25, 3390), (32, 3357), (37, 3318), (Start: 46 @3216 has 6 MA's), (Start: 53 @3165 has 1 MA's), (60, 3081), (61, 3060),

Gene: Casend_15 Start: 5321, Stop: 5106, Start Num: 47

Candidate Starts for Casend_15:

(Start: 47 @5321 has 41 MA's), (55, 5264), (59, 5189),

Gene: DonaldDuck_13 Start: 4667, Stop: 4452, Start Num: 47

Candidate Starts for DonaldDuck_13:

(Start: 47 @4667 has 41 MA's), (55, 4610), (59, 4535),

Gene: EverythinBagel_13 Start: 5095, Stop: 4880, Start Num: 47

Candidate Starts for EverythinBagel_13:

(Start: 47 @5095 has 41 MA's), (55, 5038), (59, 4963),

Gene: Fizzles_14 Start: 4739, Stop: 4524, Start Num: 47

Candidate Starts for Fizzles_14:

(29, 4895), (31, 4889), (35, 4859), (38, 4838), (42, 4802), (Start: 47 @4739 has 41 MA's), (55, 4682), (58, 4610),

Gene: Forza_191 Start: 109282, Stop: 109476, Start Num: 51

Candidate Starts for Forza_191:

(Start: 50 @109270 has 2 MA's), (Start: 51 @109282 has 2 MA's), (56, 109330), (57, 109375),

Gene: FrankDeliGuy_12 Start: 4553, Stop: 4338, Start Num: 47

Candidate Starts for FrankDeliGuy_12:

(2, 5792), (4, 5756), (5, 5750), (6, 5645), (8, 5534), (9, 5423), (10, 5345), (11, 5315), (12, 5234), (13, 5141), (14, 5063), (15, 4937), (17, 4868), (24, 4745), (27, 4727), (31, 4703), (33, 4691), (36, 4664), (42, 4616), (Start: 47 @4553 has 41 MA's), (55, 4496), (59, 4421),

Gene: Fransoyer_13 Start: 4233, Stop: 4018, Start Num: 47

Candidate Starts for Fransoyer_13:

(Start: 47 @4233 has 41 MA's), (Start: 52 @4200 has 1 MA's), (58, 4104),

Gene: Fregley_13 Start: 3754, Stop: 3554, Start Num: 46

Candidate Starts for Fregley_13:

(25, 3928), (32, 3895), (37, 3856), (Start: 46 @3754 has 6 MA's), (Start: 53 @3703 has 1 MA's), (60, 3619), (61, 3598),

Gene: GMA2_95 Start: 87367, Stop: 87170, Start Num: 49

Candidate Starts for GMA2_95:

(49, 87367), (Start: 51 @87349 has 2 MA's),

Gene: Gazebo_12 Start: 4574, Stop: 4359, Start Num: 47

Candidate Starts for Gazebo_12:

(Start: 47 @4574 has 41 MA's), (55, 4517), (59, 4442),

Gene: Grassboy_15 Start: 5355, Stop: 5140, Start Num: 47

Candidate Starts for Grassboy_15:

(Start: 47 @5355 has 41 MA's), (55, 5298), (59, 5223),

Gene: Hyperion_12 Start: 4612, Stop: 4397, Start Num: 47

Candidate Starts for Hyperion_12:

(1, 5857), (3, 5821), (4, 5815), (6, 5704), (9, 5482), (10, 5404), (11, 5374), (12, 5293), (13, 5200), (14, 5122), (15, 4996), (24, 4804), (27, 4786), (31, 4762), (33, 4750), (36, 4723), (42, 4675), (Start: 47 @4612 has 41 MA's), (55, 4555), (59, 4480),

Gene: Jehoshaphat_16 Start: 5613, Stop: 5398, Start Num: 47

Candidate Starts for Jehoshaphat_16:

(Start: 47 @5613 has 41 MA's), (55, 5556), (59, 5481),

Gene: Judebell_16 Start: 5139, Stop: 4924, Start Num: 47

Candidate Starts for Judebell_16:

(Start: 47 @5139 has 41 MA's), (55, 5082), (59, 5007),

Gene: Kelcole_10 Start: 3363, Stop: 3163, Start Num: 46

Candidate Starts for Kelcole_10:

(16, 3684), (18, 3642), (23, 3561), (28, 3507), (30, 3492), (39, 3432), (Start: 46 @3363 has 6 MA's), (Start: 53 @3312 has 1 MA's), (60, 3228), (61, 3207),

Gene: KillerQueen_12 Start: 3176, Stop: 2976, Start Num: 46

Candidate Starts for KillerQueen_12:

(28, 3320), (39, 3245), (Start: 46 @3176 has 6 MA's), (Start: 53 @3125 has 1 MA's), (60, 3041), (61, 3020),

Gene: Kyva_16 Start: 5390, Stop: 5175, Start Num: 47

Candidate Starts for Kyva_16:

(Start: 47 @5390 has 41 MA's), (55, 5333), (59, 5258),

Gene: Llemily_13 Start: 4389, Stop: 4174, Start Num: 47

Candidate Starts for Llemily_13:

(2, 5628), (4, 5592), (5, 5586), (6, 5481), (7, 5376), (8, 5370), (9, 5259), (10, 5181), (11, 5151), (12, 5070), (13, 4977), (14, 4899), (15, 4773), (17, 4704), (24, 4581), (27, 4563), (31, 4539), (33, 4527), (36, 4500), (42, 4452), (Start: 47 @4389 has 41 MA's), (55, 4332), (59, 4257),

Gene: Lonelysoil_13 Start: 4634, Stop: 4419, Start Num: 47

Candidate Starts for Lonelysoil_13:

(Start: 47 @4634 has 41 MA's), (55, 4577), (59, 4502),

Gene: Marcie_16 Start: 4028, Stop: 3816, Start Num: 47

Candidate Starts for Marcie_16:

(44, 4067), (45, 4061), (Start: 47 @4028 has 41 MA's), (58, 3899), (60, 3881),

Gene: Mareelih_188 Start: 108788, Stop: 108994, Start Num: 50

Candidate Starts for Mareelih_188:

(Start: 50 @108788 has 2 MA's), (Start: 51 @108800 has 2 MA's), (56, 108848), (57, 108893),

Gene: Mashley_11 Start: 4429, Stop: 4214, Start Num: 47

Candidate Starts for Mashley_11:

(Start: 47 @4429 has 41 MA's), (55, 4372), (59, 4297),

Gene: Mentos_19 Start: 5911, Stop: 5753, Start Num: 55

Candidate Starts for Mentos_19:

(11, 6730), (12, 6649), (13, 6556), (14, 6478), (15, 6352), (17, 6283), (24, 6160), (27, 6142), (31, 6118), (33, 6106), (36, 6079), (42, 6031), (Start: 47 @5968 has 41 MA's), (55, 5911), (59, 5836),

Gene: Mila11_16 Start: 5504, Stop: 5289, Start Num: 47

Candidate Starts for Mila11_16:

(11, 6266), (12, 6185), (13, 6092), (14, 6014), (15, 5888), (17, 5819), (24, 5696), (27, 5678), (31, 5654), (33, 5642), (36, 5615), (42, 5567), (Start: 47 @5504 has 41 MA's), (55, 5447), (59, 5372),

Gene: MorillMayhem_12 Start: 4437, Stop: 4222, Start Num: 47

Candidate Starts for MorillMayhem_12:

(11, 5199), (12, 5118), (13, 5025), (14, 4947), (15, 4821), (17, 4752), (24, 4629), (27, 4611), (31, 4587), (36, 4548), (42, 4500), (Start: 47 @4437 has 41 MA's), (55, 4380), (59, 4305),

Gene: Namago_14 Start: 4446, Stop: 4231, Start Num: 47

Candidate Starts for Namago_14:

(Start: 47 @4446 has 41 MA's), (55, 4389), (59, 4314),

Gene: Nike_15 Start: 5337, Stop: 5122, Start Num: 47

Candidate Starts for Nike_15:

(11, 6102), (12, 6021), (13, 5928), (14, 5850), (15, 5724), (17, 5655), (24, 5529), (27, 5511), (31, 5487), (33, 5475), (36, 5448), (42, 5400), (Start: 47 @5337 has 41 MA's), (55, 5280), (59, 5205),

Gene: OneinaGillian_11 Start: 3006, Stop: 2806, Start Num: 46

Candidate Starts for OneinaGillian_11:

(18, 3318), (40, 3090), (41, 3087), (43, 3075), (Start: 46 @3006 has 6 MA's), (48, 3000), (60, 2871), (61, 2850),

Gene: Pepe25_11 Start: 3464, Stop: 3252, Start Num: 47

Candidate Starts for Pepe25_11:

(Start: 47 @3464 has 41 MA's), (60, 3317),

Gene: Phabia_14 Start: 4804, Stop: 4589, Start Num: 47

Candidate Starts for Phabia_14:

(Start: 47 @4804 has 41 MA's), (55, 4747), (59, 4672),

Gene: Quammi_12 Start: 4378, Stop: 4163, Start Num: 47

Candidate Starts for Quammi_12:

(2, 5617), (4, 5581), (5, 5575), (6, 5470), (7, 5365), (8, 5359), (9, 5248), (10, 5170), (11, 5140), (12, 5059), (13, 4966), (14, 4888), (15, 4762), (17, 4693), (24, 4570), (27, 4552), (31, 4528), (33, 4516), (36, 4489), (42, 4441), (Start: 47 @4378 has 41 MA's), (55, 4321), (59, 4246),

Gene: RobinRose_12 Start: 3192, Stop: 2992, Start Num: 46

Candidate Starts for RobinRose_12:

(16, 3513), (18, 3471), (28, 3336), (39, 3261), (Start: 46 @3192 has 6 MA's), (Start: 53 @3141 has 1 MA's), (60, 3057), (61, 3036),

Gene: Romm_13 Start: 3192, Stop: 2992, Start Num: 46

Candidate Starts for Romm_13:

(16, 3513), (18, 3471), (28, 3336), (39, 3261), (Start: 46 @3192 has 6 MA's), (Start: 53 @3141 has 1 MA's), (60, 3057), (61, 3036),

Gene: Rowlf_10 Start: 4144, Stop: 3929, Start Num: 47

Candidate Starts for Rowlf_10:

(11, 4906), (12, 4825), (13, 4732), (14, 4654), (15, 4528), (17, 4459), (24, 4336), (27, 4318), (31, 4294), (33, 4282), (36, 4255), (42, 4207), (Start: 47 @4144 has 41 MA's), (55, 4087), (59, 4012),

Gene: RubyRalph_13 Start: 4167, Stop: 3952, Start Num: 47

Candidate Starts for RubyRalph_13:

(Start: 47 @4167 has 41 MA's), (Start: 52 @4134 has 1 MA's), (58, 4038),

Gene: Rudy_12 Start: 4378, Stop: 4163, Start Num: 47

Candidate Starts for Rudy_12:

(2, 5617), (4, 5581), (5, 5575), (6, 5470), (7, 5365), (8, 5359), (9, 5248), (10, 5170), (11, 5140), (12, 5059), (13, 4966), (14, 4888), (15, 4762), (17, 4693), (24, 4570), (27, 4552), (31, 4528), (33, 4516), (36, 4489), (42, 4441), (Start: 47 @4378 has 41 MA's), (55, 4321), (59, 4246),

Gene: SadLad_14 Start: 4551, Stop: 4369, Start Num: 52

Candidate Starts for SadLad_14:

(24, 4779), (26, 4764), (31, 4737), (Start: 47 @4584 has 41 MA's), (Start: 52 @4551 has 1 MA's), (54, 4533), (58, 4455),

Gene: SallyK_15 Start: 5539, Stop: 5324, Start Num: 47

Candidate Starts for SallyK_15:

(Start: 47 @5539 has 41 MA's), (55, 5482), (59, 5407),

Gene: Sillytadpoles_13 Start: 4376, Stop: 4161, Start Num: 47

Candidate Starts for Sillytadpoles_13:

(2, 5615), (4, 5579), (5, 5573), (6, 5468), (7, 5363), (8, 5357), (9, 5246), (10, 5168), (11, 5138), (12, 5057), (13, 4964), (14, 4886), (15, 4760), (17, 4691), (24, 4568), (27, 4550), (31, 4526), (33, 4514), (36, 4487), (42, 4439), (Start: 47 @4376 has 41 MA's), (55, 4319), (59, 4244),

Gene: SlySloth_17 Start: 5273, Stop: 5115, Start Num: 55

Candidate Starts for SlySloth_17:

(Start: 47 @5330 has 41 MA's), (55, 5273), (59, 5198),

Gene: Squash_16 Start: 5392, Stop: 5177, Start Num: 47

Candidate Starts for Squash_16:

(11, 6157), (12, 6076), (13, 5983), (14, 5905), (15, 5779), (17, 5710), (24, 5584), (27, 5566), (31, 5542), (33, 5530), (36, 5503), (42, 5455), (Start: 47 @5392 has 41 MA's), (55, 5335), (59, 5260),

Gene: Statler_14 Start: 4912, Stop: 4697, Start Num: 47

Candidate Starts for Statler_14:

(11, 5674), (12, 5593), (13, 5500), (14, 5422), (15, 5296), (17, 5227), (24, 5104), (27, 5086), (31, 5062), (33, 5050), (36, 5023), (42, 4975), (Start: 47 @4912 has 41 MA's), (55, 4855), (59, 4780),

Gene: StrawberryJamm_16 Start: 4678, Stop: 4463, Start Num: 47

Candidate Starts for StrawberryJamm_16:

(Start: 47 @4678 has 41 MA's), (55, 4621), (59, 4546),

Gene: Teehee_16 Start: 5613, Stop: 5398, Start Num: 47

Candidate Starts for Teehee_16:

(Start: 47 @5613 has 41 MA's), (55, 5556), (59, 5481),

Gene: Tempo_11 Start: 3387, Stop: 3187, Start Num: 46

Candidate Starts for Tempo_11:

(16, 3708), (18, 3666), (28, 3531), (39, 3456), (Start: 46 @3387 has 6 MA's), (Start: 53 @3336 has 1 MA's), (60, 3252), (61, 3231),

Gene: Tissue_13 Start: 4744, Stop: 4529, Start Num: 47

Candidate Starts for Tissue_13:

(Start: 47 @4744 has 41 MA's), (55, 4687), (59, 4612),

Gene: Viceroy_13 Start: 4378, Stop: 4163, Start Num: 47

Candidate Starts for Viceroy_13:

(2, 5617), (4, 5581), (5, 5575), (6, 5470), (7, 5365), (8, 5359), (9, 5248), (10, 5170), (11, 5140), (12, 5059), (13, 4966), (14, 4888), (15, 4762), (17, 4693), (24, 4570), (27, 4552), (31, 4528), (33, 4516), (36, 4489), (42, 4441), (Start: 47 @4378 has 41 MA's), (55, 4321), (59, 4246),

Gene: Wayne3_15 Start: 5316, Stop: 5101, Start Num: 47

Candidate Starts for Wayne3_15:

(Start: 47 @5316 has 41 MA's), (55, 5259), (59, 5184),

Gene: WheelerS25_19 Start: 6060, Stop: 5902, Start Num: 55

Candidate Starts for WheelerS25_19:

(Start: 47 @6117 has 41 MA's), (55, 6060), (59, 5985),

Gene: Wheelie_13 Start: 4667, Stop: 4452, Start Num: 47

Candidate Starts for Wheelie_13:

(Start: 47 @4667 has 41 MA's), (55, 4610), (59, 4535),

Gene: Wilca_12 Start: 3464, Stop: 3252, Start Num: 47

Candidate Starts for Wilca_12:

(Start: 47 @3464 has 41 MA's), (60, 3317),

Gene: Zagie_14 Start: 4881, Stop: 4666, Start Num: 47

Candidate Starts for Zagie_14:

(11, 5643), (12, 5562), (13, 5469), (14, 5391), (15, 5265), (17, 5196), (24, 5073), (27, 5055), (31, 5031),
(33, 5019), (36, 4992), (42, 4944), (Start: 47 @4881 has 41 MA's), (55, 4824), (59, 4749),

Gene: Zhafia_16 Start: 5116, Stop: 4901, Start Num: 47

Candidate Starts for Zhafia_16:

(Start: 47 @5116 has 41 MA's), (55, 5059), (59, 4984),