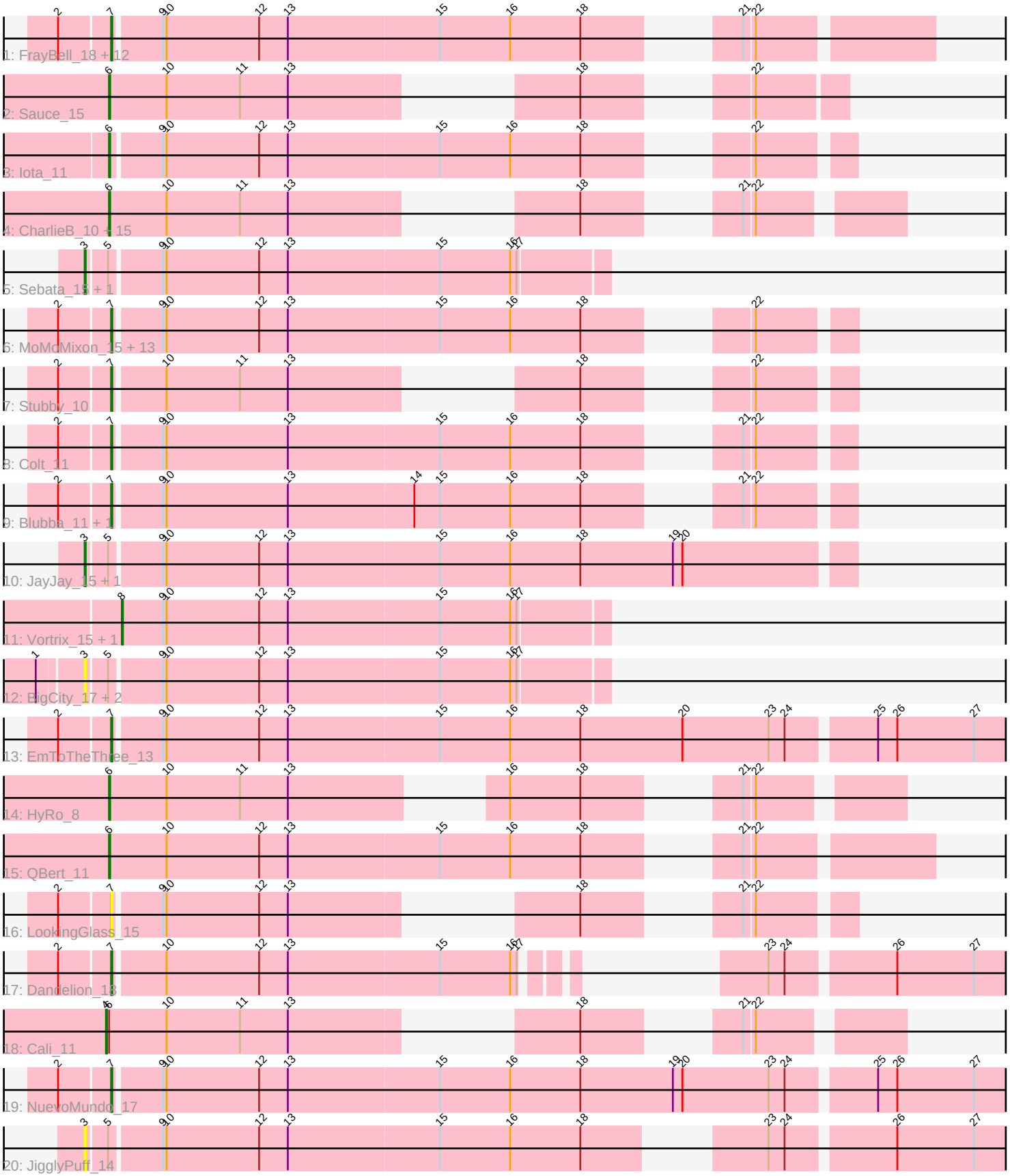
Pham 347601


1: FrayBell_18 + 12
2: Sauce_15
3: Iota_11
4: CharlieB_10 + 15
5: Sebata_15 + 1
6: MoMoMixon_15 + 13
7: Stubby_10
8: Colt_11
9: Blubba_11 + 1
10: JayJay_15 + 1
11: Vortrix_15 + 1
12: BigCity_17 + 2
13: EmToTheThree_13
14: HyRo_8
15: QBert_11
16: LookingGlass_15
17: Dandelion_13
18: Cali_11
19: NuevoMundo_17
20: JigglyPuff_14

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 347601 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347601 has 66 members, 18 are drafts.

Phages represented in each track:
• Track 1 : FrayBell_18, LolaVinca_15, InterFolia_18, PharkleMinkus_18, I3_16, LordLeafolot_18, Puhon_18, Pupusa_18, GoldenSnow_18, Tainan_18, Bigswole_17, Nappy_14, Maguvora_19
• Track 2 : Sauce_15
• Track 3 : Iota_11
• Track 4 : CharlieB_10, Lunareta_14, BeanWater_10, Duckfeet_11, Maturis_15, BadAgartude_11, DTDevon_14, Phox_11, Halldule_11, SiwenD96_15, Shaqnato_11, FoxtrotP1_12, Koguma_11, Montpel_14, DeejaClivia_9, LRRHood_11
• Track 5 : Sebata_15, LinStu_15
• Track 6 : MoMoMixon_15, Delylah_12, ErnieJ_12, Caravan_12, Tyke_15, Lethe_15, Pio_16, Bxz1_15, Mangeria_16, Shelob_13, Naval22_16, Spud_16, Nidhogg_15, ScottMcG_12
• Track 7 : Stubby_10
• Track 8 : Colt_11
• Track 9 : Blubba_11, Cane17_11
• Track 10 : JayJay_15, Specks_16
• Track 11 : Vortrix_15, Tonenili_15
• Track 12 : BigCity_17, Grasshills_17, EggyFarm_17
• Track 13 : EmToTheThree_13
• Track 14 : HyRo_8
• Track 15 : QBert_11
• Track 16 : LookingGlass_15
• Track 17 : Dandelion_18
• Track 18 : Cali_11
• Track 19 : NuevoMundo_17
• Track 20 : JigglyPuff_14

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 29 of the 48 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Bigswole_17, Blubba_11, Bxz1_15, Cane17_11, Caravan_12, Colt_11, Dandelion_18, Delylah_12, EmToTheThree_13, ErnieJ_12, FrayBell_18, GoldenSnow_18, I3_16, InterFolia_18, Lethe_15, LolaVinca_15, LookingGlass_15, LordLeafolot_18, Maguvora_19, Mangeria_16, MoMoMixon_15, Nappy_14, Naval22_16, Nidhogg_15, NuevoMundo_17, PharkleMinkus_18, Pio_16, Puhon_18, Pupusa_18, ScottMcG_12, Shelob_13, Spud_16, Stubby_10, Tainan_18, Tyke_15,

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

Genes that do not have the "Most Annotated" start:
• BadAgartude_11, BeanWater_10, BigCity_17, Cali_11, CharlieB_10, DTDevon_14, DeejaClivia_9, Duckfeet_11, EggyFarm_17, FoxtrotP1_12, Grasshills_17, Halldule_11, HyRo_8, Iota_11, JayJay_15, JigglyPuff_14, Koguma_11, LRRHood_11, LinStu_15, Lunareta_14, Maturis_15, Montpel_14, Phox_11, QBert_11, Sauce_15, Sebata_15, Shaqnato_11, SiwenD96_15, Specks_16, Tonenili_15, Vortrix_15,

Summary by start number:

Start 3:
• Found in 8 of 66 (12.1%) of genes in pham
• Manual Annotations of this start: 4 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BigCity_17 (C1), EggyFarm_17 (C1), Grasshills_17 (C1), JayJay_15 (C1), JigglyPuff_14 (C1), LinStu_15 (C1), Sebata_15 (C1), Specks_16 (C1),

Start 4:
• Found in 1 of 66 (1.5%) of genes in pham
• Manual Annotations of this start: 1 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Cali_11 (C1),

Start 6:
• Found in 21 of 66 (31.8%) of genes in pham
• Manual Annotations of this start: 13 of 48
• Called 95.2% of time when present
• Phage (with cluster) where this start called: BadAgartude_11 (C1), BeanWater_10 (C1), CharlieB_10 (C1), DTDevon_14 (C1), DeejaClivia_9 (C1), Duckfeet_11 (C1), FoxtrotP1_12 (C1), Halldule_11 (C1), HyRo_8 (C1), Iota_11 (C1), Koguma_11 (C1), LRRHood_11 (C1), Lunareta_14 (C1), Maturis_15 (C1), Montpel_14 (C1), Phox_11 (C1), QBert_11 (C1), Sauce_15 (C1), Shaqnato_11 (C1), SiwenD96_15 (C1),

Start 7:
• Found in 35 of 66 (53.0%) of genes in pham
• Manual Annotations of this start: 29 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bigswole_17 (C1), Blubba_11 (C1), Bxz1_15 (C1), Cane17_11 (C1), Caravan_12 (C1), Colt_11 (C1), Dandelion_18 (C1), Delylah_12 (C1), EmToTheThree_13 (C1), ErnieJ_12 (C1), FrayBell_18 (C1), GoldenSnow_18 (C1), I3_16 (C1), InterFolia_18 (C1), Lethe_15 (C1), LolaVinca_15 (C1), LookingGlass_15 (C1), LordLeafolot_18 (C1), Maguvora_19 (C1), Mangeria_16

(C1), MoMoMixon_15 (C1), Nappy_14 (C1), Naval22_16 (C1), Nidhogg_15 (C1), NuevoMundo_17 (C1), PharkleMinkus_18 (C1), Pio_16 (C1), Puhon_18 (C1), Pupusa_18 (C1), ScottMcG_12 (C1), Shelob_13 (C1), Spud_16 (C1), Stubby_10 (C1), Tainan_18 (C1), Tyke_15 (C1),

Start 8:
• Found in 2 of 66 (3.0%) of genes in pham
• Manual Annotations of this start: 1 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Tonenili_15 (C1), Vortrix_15 (C1),

Summary by clusters:

There is one cluster represented in this pham: C1

Info for manual annotations of cluster C1:
•Start number 3 was manually annotated 4 times for cluster C1.
•Start number 4 was manually annotated 1 time for cluster C1.
•Start number 6 was manually annotated 13 times for cluster C1.
•Start number 7 was manually annotated 29 times for cluster C1.
•Start number 8 was manually annotated 1 time for cluster C1.

Gene Information:

Gene: BadAgartude_11 Start: 3618, Stop: 4166, Start Num: 6
Candidate Starts for BadAgartude_11:
(Start: 6 @3618 has 13 MA's), (10, 3672), (11, 3741), (13, 3786), (18, 3951), (21, 4038), (22, 4047),

Gene: BeanWater_10 Start: 4425, Stop: 4973, Start Num: 6
Candidate Starts for BeanWater_10:
(Start: 6 @4425 has 13 MA's), (10, 4479), (11, 4548), (13, 4593), (18, 4758), (21, 4845), (22, 4854),

Gene: BigCity_17 Start: 6116, Stop: 6589, Start Num: 3
Candidate Starts for BigCity_17:
(1, 6077), (Start: 3 @6116 has 4 MA's), (5, 6134), (9, 6179), (10, 6182), (12, 6269), (13, 6296), (15, 6437), (16, 6503), (17, 6509),

Gene: Bigswole_17 Start: 5339, Stop: 6019, Start Num: 7
Candidate Starts for Bigswole_17:
(2, 5294), (Start: 7 @5339 has 29 MA's), (9, 5381), (10, 5384), (12, 5471), (13, 5498), (15, 5639), (16, 5705), (18, 5771), (21, 5858), (22, 5867),

Gene: Blubba_11 Start: 4390, Stop: 4998, Start Num: 7
Candidate Starts for Blubba_11:
(2, 4345), (Start: 7 @4390 has 29 MA's), (9, 4432), (10, 4435), (13, 4549), (14, 4666), (15, 4690), (16, 4756), (18, 4822), (21, 4909), (22, 4918),

Gene: Bxz1_15 Start: 4799, Stop: 5407, Start Num: 7
Candidate Starts for Bxz1_15:
(2, 4754), (Start: 7 @4799 has 29 MA's), (9, 4841), (10, 4844), (12, 4931), (13, 4958), (15, 5099), (16, 5165), (18, 5231), (22, 5327),

Gene: Cali_11 Start: 4579, Stop: 5130, Start Num: 4
Candidate Starts for Cali_11:
(Start: 4 @4579 has 1 MA's), (Start: 6 @4582 has 13 MA's), (10, 4636), (11, 4705), (13, 4750), (18, 4915), (21, 5002), (22, 5011),

Gene: Cane17_11 Start: 4390, Stop: 4998, Start Num: 7
Candidate Starts for Cane17_11:
(2, 4345), (Start: 7 @4390 has 29 MA's), (9, 4432), (10, 4435), (13, 4549), (14, 4666), (15, 4690), (16, 4756), (18, 4822), (21, 4909), (22, 4918),

Gene: Caravan_12 Start: 3547, Stop: 4155, Start Num: 7
Candidate Starts for Caravan_12:
(2, 3502), (Start: 7 @3547 has 29 MA's), (9, 3589), (10, 3592), (12, 3679), (13, 3706), (15, 3847), (16, 3913), (18, 3979), (22, 4075),

Gene: CharlieB_10 Start: 3443, Stop: 3991, Start Num: 6
Candidate Starts for CharlieB_10:
(Start: 6 @3443 has 13 MA's), (10, 3497), (11, 3566), (13, 3611), (18, 3776), (21, 3863), (22, 3872),

Gene: Colt_11 Start: 4396, Stop: 5004, Start Num: 7
Candidate Starts for Colt_11:
(2, 4351), (Start: 7 @4396 has 29 MA's), (9, 4438), (10, 4441), (13, 4555), (15, 4696), (16, 4762), (18, 4828), (21, 4915), (22, 4924),

Gene: DTDevon_14 Start: 4459, Stop: 5028, Start Num: 6
Candidate Starts for DTDevon_14:
(Start: 6 @4459 has 13 MA's), (10, 4513), (11, 4582), (13, 4627), (18, 4792), (21, 4879), (22, 4888),

Gene: Dandelion_18 Start: 5774, Stop: 6466, Start Num: 7
Candidate Starts for Dandelion_18:
(2, 5729), (Start: 7 @5774 has 29 MA's), (10, 5819), (12, 5906), (13, 5933), (15, 6074), (16, 6140), (17, 6146), (23, 6227), (24, 6242), (26, 6335), (27, 6407),

Gene: DeejaClivia_9 Start: 2841, Stop: 3389, Start Num: 6
Candidate Starts for DeejaClivia_9:
(Start: 6 @2841 has 13 MA's), (10, 2895), (11, 2964), (13, 3009), (18, 3174), (21, 3261), (22, 3270),

Gene: Delylah_12 Start: 3547, Stop: 4155, Start Num: 7
Candidate Starts for Delylah_12:
(2, 3502), (Start: 7 @3547 has 29 MA's), (9, 3589), (10, 3592), (12, 3679), (13, 3706), (15, 3847), (16, 3913), (18, 3979), (22, 4075),

Gene: Duckfeet_11 Start: 3580, Stop: 4128, Start Num: 6
Candidate Starts for Duckfeet_11:
(Start: 6 @3580 has 13 MA's), (10, 3634), (11, 3703), (13, 3748), (18, 3913), (21, 4000), (22, 4009),

Gene: EggyFarm_17 Start: 6116, Stop: 6589, Start Num: 3
Candidate Starts for EggyFarm_17:
(1, 6077), (Start: 3 @6116 has 4 MA's), (5, 6134), (9, 6179), (10, 6182), (12, 6269), (13, 6296), (15, 6437), (16, 6503), (17, 6509),

Gene: EmToTheThree_13 Start: 4694, Stop: 5542, Start Num: 7

Candidate Starts for EmToTheThree_13:
(2, 4649), (Start: 7 @4694 has 29 MA's), (9, 4736), (10, 4739), (12, 4826), (13, 4853), (15, 4994), (16, 5060), (18, 5126), (20, 5222), (23, 5303), (24, 5318), (25, 5393), (26, 5411), (27, 5483),

Gene: ErnieJ_12 Start: 3611, Stop: 4219, Start Num: 7
Candidate Starts for ErnieJ_12:
(2, 3566), (Start: 7 @3611 has 29 MA's), (9, 3653), (10, 3656), (12, 3743), (13, 3770), (15, 3911), (16, 3977), (18, 4043), (22, 4139),

Gene: FoxtrotP1_12 Start: 4489, Stop: 5037, Start Num: 6
Candidate Starts for FoxtrotP1_12:
(Start: 6 @4489 has 13 MA's), (10, 4543), (11, 4612), (13, 4657), (18, 4822), (21, 4909), (22, 4918),

Gene: FrayBell_18 Start: 5596, Stop: 6276, Start Num: 7
Candidate Starts for FrayBell_18:
(2, 5551), (Start: 7 @5596 has 29 MA's), (9, 5638), (10, 5641), (12, 5728), (13, 5755), (15, 5896), (16, 5962), (18, 6028), (21, 6115), (22, 6124),

Gene: GoldenSnow_18 Start: 5595, Stop: 6275, Start Num: 7
Candidate Starts for GoldenSnow_18:
(2, 5550), (Start: 7 @5595 has 29 MA's), (9, 5637), (10, 5640), (12, 5727), (13, 5754), (15, 5895), (16, 5961), (18, 6027), (21, 6114), (22, 6123),

Gene: Grasshills_17 Start: 6116, Stop: 6589, Start Num: 3
Candidate Starts for Grasshills_17:
(1, 6077), (Start: 3 @6116 has 4 MA's), (5, 6134), (9, 6179), (10, 6182), (12, 6269), (13, 6296), (15, 6437), (16, 6503), (17, 6509),

Gene: Halldule_11 Start: 3597, Stop: 4145, Start Num: 6
Candidate Starts for Halldule_11:
(Start: 6 @3597 has 13 MA's), (10, 3651), (11, 3720), (13, 3765), (18, 3930), (21, 4017), (22, 4026),

Gene: HyRo_8 Start: 3742, Stop: 4320, Start Num: 6
Candidate Starts for HyRo_8:
(Start: 6 @3742 has 13 MA's), (10, 3796), (11, 3865), (13, 3910), (16, 4039), (18, 4105), (21, 4192), (22, 4201),

Gene: I3_16 Start: 5476, Stop: 6084, Start Num: 7
Candidate Starts for I3_16:
(2, 5431), (Start: 7 @5476 has 29 MA's), (9, 5518), (10, 5521), (12, 5608), (13, 5635), (15, 5776), (16, 5842), (18, 5908), (21, 5995), (22, 6004),

Gene: InterFolia_18 Start: 5593, Stop: 6273, Start Num: 7
Candidate Starts for InterFolia_18:
(2, 5548), (Start: 7 @5593 has 29 MA's), (9, 5635), (10, 5638), (12, 5725), (13, 5752), (15, 5893), (16, 5959), (18, 6025), (21, 6112), (22, 6121),

Gene: Iota_11 Start: 4332, Stop: 4943, Start Num: 6
Candidate Starts for Iota_11:
(Start: 6 @4332 has 13 MA's), (9, 4377), (10, 4380), (12, 4467), (13, 4494), (15, 4635), (16, 4701), (18, 4767), (22, 4863),

Gene: JayJay_15 Start: 4243, Stop: 4944, Start Num: 3

Candidate Starts for JayJay_15:
(Start: 3 @4243 has 4 MA's), (5, 4261), (9, 4306), (10, 4309), (12, 4396), (13, 4423), (15, 4564), (16, 4630), (18, 4696), (19, 4783), (20, 4792),

Gene: JigglyPuff_14 Start: 4228, Stop: 5028, Start Num: 3
Candidate Starts for JigglyPuff_14:
(Start: 3 @4228 has 4 MA's), (5, 4246), (9, 4291), (10, 4294), (12, 4381), (13, 4408), (15, 4549), (16, 4615), (18, 4681), (23, 4789), (24, 4804), (26, 4897), (27, 4969),

Gene: Koguma_11 Start: 3597, Stop: 4145, Start Num: 6
Candidate Starts for Koguma_11:
(Start: 6 @3597 has 13 MA's), (10, 3651), (11, 3720), (13, 3765), (18, 3930), (21, 4017), (22, 4026),

Gene: LRRHood_11 Start: 4582, Stop: 5130, Start Num: 6
Candidate Starts for LRRHood_11:
(Start: 6 @4582 has 13 MA's), (10, 4636), (11, 4705), (13, 4750), (18, 4915), (21, 5002), (22, 5011),

Gene: Lethe_15 Start: 4695, Stop: 5303, Start Num: 7
Candidate Starts for Lethe_15:
(2, 4650), (Start: 7 @4695 has 29 MA's), (9, 4737), (10, 4740), (12, 4827), (13, 4854), (15, 4995), (16, 5061), (18, 5127), (22, 5223),

Gene: LinStu_15 Start: 5242, Stop: 5715, Start Num: 3
Candidate Starts for LinStu_15:
(Start: 3 @5242 has 4 MA's), (5, 5260), (9, 5305), (10, 5308), (12, 5395), (13, 5422), (15, 5563), (16, 5629), (17, 5635),

Gene: LolaVinca_15 Start: 4699, Stop: 5379, Start Num: 7
Candidate Starts for LolaVinca_15:
(2, 4654), (Start: 7 @4699 has 29 MA's), (9, 4741), (10, 4744), (12, 4831), (13, 4858), (15, 4999), (16, 5065), (18, 5131), (21, 5218), (22, 5227),

Gene: LookingGlass_15 Start: 4754, Stop: 5254, Start Num: 7
Candidate Starts for LookingGlass_15:
(2, 4709), (Start: 7 @4754 has 29 MA's), (9, 4796), (10, 4799), (12, 4886), (13, 4913), (18, 5078), (21, 5165), (22, 5174),

Gene: LordLeafolot_18 Start: 5595, Stop: 6275, Start Num: 7
Candidate Starts for LordLeafolot_18:
(2, 5550), (Start: 7 @5595 has 29 MA's), (9, 5637), (10, 5640), (12, 5727), (13, 5754), (15, 5895), (16, 5961), (18, 6027), (21, 6114), (22, 6123),

Gene: Lunareta_14 Start: 4690, Stop: 5238, Start Num: 6
Candidate Starts for Lunareta_14:
(Start: 6 @4690 has 13 MA's), (10, 4744), (11, 4813), (13, 4858), (18, 5023), (21, 5110), (22, 5119),

Gene: Maguvora_19 Start: 5597, Stop: 6277, Start Num: 7
Candidate Starts for Maguvora_19:
(2, 5552), (Start: 7 @5597 has 29 MA's), (9, 5639), (10, 5642), (12, 5729), (13, 5756), (15, 5897), (16, 5963), (18, 6029), (21, 6116), (22, 6125),

Gene: Mangeria_16 Start: 5186, Stop: 5794, Start Num: 7
Candidate Starts for Mangeria_16:

(2, 5141), (Start: 7 @5186 has 29 MA's), (9, 5228), (10, 5231), (12, 5318), (13, 5345), (15, 5486), (16, 5552), (18, 5618), (22, 5714),

Gene: Maturis_15 Start: 4570, Stop: 5118, Start Num: 6
Candidate Starts for Maturis_15:
(Start: 6 @4570 has 13 MA's), (10, 4624), (11, 4693), (13, 4738), (18, 4903), (21, 4990), (22, 4999),

Gene: MoMoMixon_15 Start: 5028, Stop: 5636, Start Num: 7
Candidate Starts for MoMoMixon_15:
(2, 4983), (Start: 7 @5028 has 29 MA's), (9, 5070), (10, 5073), (12, 5160), (13, 5187), (15, 5328), (16, 5394), (18, 5460), (22, 5556),

Gene: Montpel_14 Start: 4690, Stop: 5238, Start Num: 6
Candidate Starts for Montpel_14:
(Start: 6 @4690 has 13 MA's), (10, 4744), (11, 4813), (13, 4858), (18, 5023), (21, 5110), (22, 5119),

Gene: Nappy_14 Start: 4422, Stop: 5102, Start Num: 7
Candidate Starts for Nappy_14:
(2, 4377), (Start: 7 @4422 has 29 MA's), (9, 4464), (10, 4467), (12, 4554), (13, 4581), (15, 4722), (16, 4788), (18, 4854), (21, 4941), (22, 4950),

Gene: Naval22_16 Start: 5028, Stop: 5636, Start Num: 7
Candidate Starts for Naval22_16:
(2, 4983), (Start: 7 @5028 has 29 MA's), (9, 5070), (10, 5073), (12, 5160), (13, 5187), (15, 5328), (16, 5394), (18, 5460), (22, 5556),

Gene: Nidhogg_15 Start: 5028, Stop: 5636, Start Num: 7
Candidate Starts for Nidhogg_15:
(2, 4983), (Start: 7 @5028 has 29 MA's), (9, 5070), (10, 5073), (12, 5160), (13, 5187), (15, 5328), (16, 5394), (18, 5460), (22, 5556),

Gene: NuevoMundo_17 Start: 5451, Stop: 6299, Start Num: 7
Candidate Starts for NuevoMundo_17:
(2, 5406), (Start: 7 @5451 has 29 MA's), (9, 5493), (10, 5496), (12, 5583), (13, 5610), (15, 5751), (16, 5817), (18, 5883), (19, 5970), (20, 5979), (23, 6060), (24, 6075), (25, 6150), (26, 6168), (27, 6240),

Gene: PharkleMinkus_18 Start: 5596, Stop: 6276, Start Num: 7
Candidate Starts for PharkleMinkus_18:
(2, 5551), (Start: 7 @5596 has 29 MA's), (9, 5638), (10, 5641), (12, 5728), (13, 5755), (15, 5896), (16, 5962), (18, 6028), (21, 6115), (22, 6124),

Gene: Phox_11 Start: 4579, Stop: 5127, Start Num: 6
Candidate Starts for Phox_11:
(Start: 6 @4579 has 13 MA's), (10, 4633), (11, 4702), (13, 4747), (18, 4912), (21, 4999), (22, 5008),

Gene: Pio_16 Start: 5188, Stop: 5796, Start Num: 7
Candidate Starts for Pio_16:
(2, 5143), (Start: 7 @5188 has 29 MA's), (9, 5230), (10, 5233), (12, 5320), (13, 5347), (15, 5488), (16, 5554), (18, 5620), (22, 5716),

Gene: Puhon_18 Start: 5595, Stop: 6275, Start Num: 7
Candidate Starts for Puhon_18:

(2, 5550), (Start: 7 @5595 has 29 MA's), (9, 5637), (10, 5640), (12, 5727), (13, 5754), (15, 5895), (16, 5961), (18, 6027), (21, 6114), (22, 6123),

Gene: Pupusa_18 Start: 5595, Stop: 6275, Start Num: 7
Candidate Starts for Pupusa_18:
(2, 5550), (Start: 7 @5595 has 29 MA's), (9, 5637), (10, 5640), (12, 5727), (13, 5754), (15, 5895), (16, 5961), (18, 6027), (21, 6114), (22, 6123),

Gene: QBert_11 Start: 4454, Stop: 5143, Start Num: 6
Candidate Starts for QBert_11:
(Start: 6 @4454 has 13 MA's), (10, 4508), (12, 4595), (13, 4622), (15, 4763), (16, 4829), (18, 4895), (21, 4982), (22, 4991),

Gene: Sauce_15 Start: 4833, Stop: 5342, Start Num: 6
Candidate Starts for Sauce_15:
(Start: 6 @4833 has 13 MA's), (10, 4887), (11, 4956), (13, 5001), (18, 5166), (22, 5262),

Gene: ScottMcG_12 Start: 3987, Stop: 4634, Start Num: 7
Candidate Starts for ScottMcG_12:
(2, 3942), (Start: 7 @3987 has 29 MA's), (9, 4029), (10, 4032), (12, 4119), (13, 4146), (15, 4287), (16, 4353), (18, 4419), (22, 4515),

Gene: Sebata_15 Start: 5242, Stop: 5715, Start Num: 3
Candidate Starts for Sebata_15:
(Start: 3 @5242 has 4 MA's), (5, 5260), (9, 5305), (10, 5308), (12, 5395), (13, 5422), (15, 5563), (16, 5629), (17, 5635),

Gene: Shaqnato_11 Start: 3597, Stop: 4145, Start Num: 6
Candidate Starts for Shaqnato_11:
(Start: 6 @3597 has 13 MA's), (10, 3651), (11, 3720), (13, 3765), (18, 3930), (21, 4017), (22, 4026),

Gene: Shelob_13 Start: 4694, Stop: 5302, Start Num: 7
Candidate Starts for Shelob_13:
(2, 4649), (Start: 7 @4694 has 29 MA's), (9, 4736), (10, 4739), (12, 4826), (13, 4853), (15, 4994), (16, 5060), (18, 5126), (22, 5222),

Gene: SiwenD96_15 Start: 5097, Stop: 5645, Start Num: 6
Candidate Starts for SiwenD96_15:
(Start: 6 @5097 has 13 MA's), (10, 5151), (11, 5220), (13, 5265), (18, 5430), (21, 5517), (22, 5526),

Gene: Specks_16 Start: 4755, Stop: 5456, Start Num: 3
Candidate Starts for Specks_16:
(Start: 3 @4755 has 4 MA's), (5, 4773), (9, 4818), (10, 4821), (12, 4908), (13, 4935), (15, 5076), (16, 5142), (18, 5208), (19, 5295), (20, 5304),

Gene: Spud_16 Start: 5188, Stop: 5796, Start Num: 7
Candidate Starts for Spud_16:
(2, 5143), (Start: 7 @5188 has 29 MA's), (9, 5230), (10, 5233), (12, 5320), (13, 5347), (15, 5488), (16, 5554), (18, 5620), (22, 5716),

Gene: Stubby_10 Start: 4034, Stop: 4534, Start Num: 7
Candidate Starts for Stubby_10:
(2, 3989), (Start: 7 @4034 has 29 MA's), (10, 4079), (11, 4148), (13, 4193), (18, 4358), (22, 4454),

Gene: Tainan_18 Start: 5595, Stop: 6275, Start Num: 7
Candidate Starts for Tainan_18:
(2, 5550), (Start: 7 @5595 has 29 MA's), (9, 5637), (10, 5640), (12, 5727), (13, 5754), (15, 5895), (16, 5961), (18, 6027), (21, 6114), (22, 6123),

Gene: Tonenili_15 Start: 4513, Stop: 4962, Start Num: 8
Candidate Starts for Tonenili_15:
(Start: 8 @4513 has 1 MA's), (9, 4552), (10, 4555), (12, 4642), (13, 4669), (15, 4810), (16, 4876), (17, 4882),

Gene: Tyke_15 Start: 4664, Stop: 5272, Start Num: 7
Candidate Starts for Tyke_15:
(2, 4619), (Start: 7 @4664 has 29 MA's), (9, 4706), (10, 4709), (12, 4796), (13, 4823), (15, 4964), (16, 5030), (18, 5096), (22, 5192),

Gene: Vortrix_15 Start: 4547, Stop: 4996, Start Num: 8
Candidate Starts for Vortrix_15:
(Start: 8 @4547 has 1 MA's), (9, 4586), (10, 4589), (12, 4676), (13, 4703), (15, 4844), (16, 4910), (17, 4916),