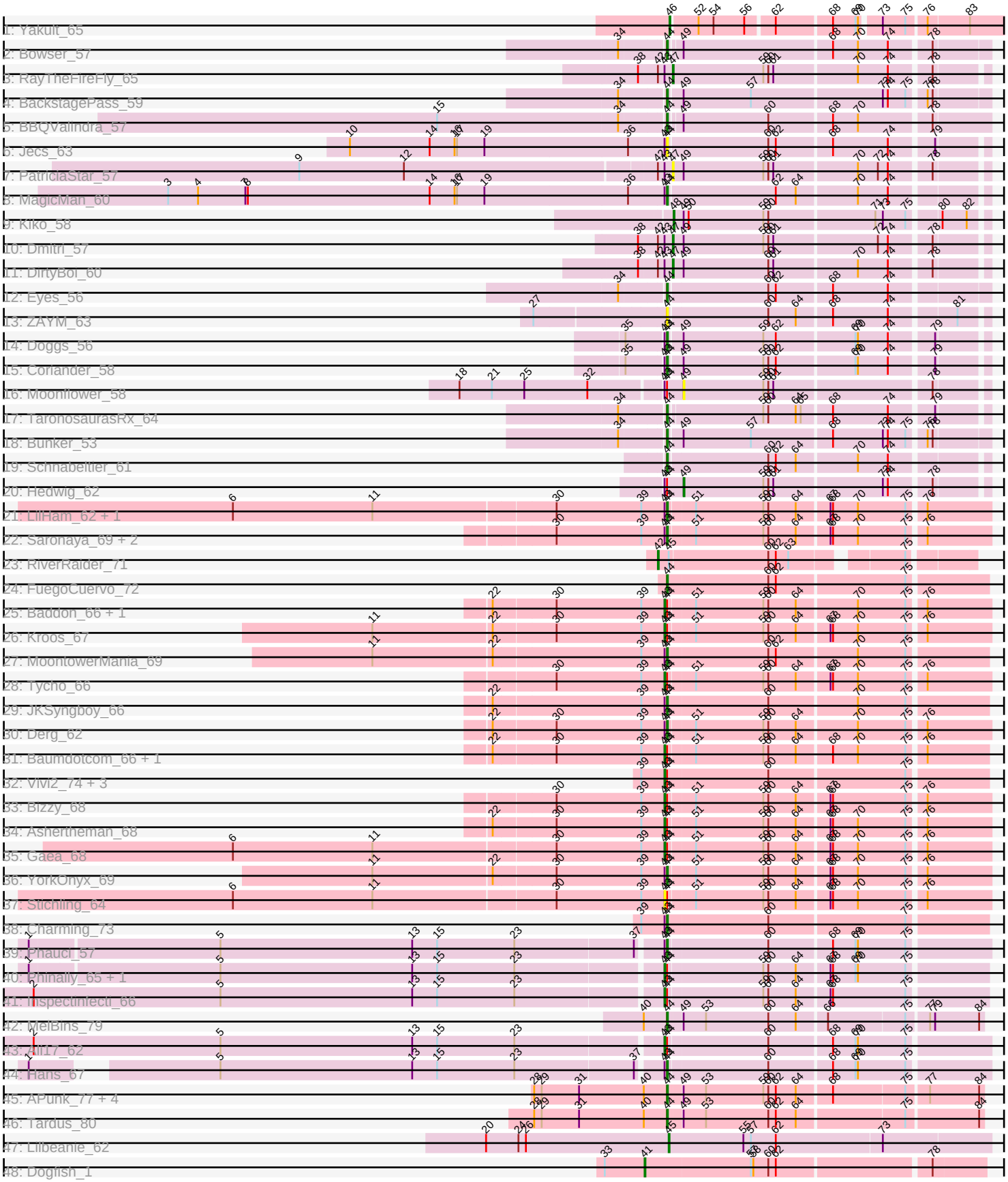
Pham 347635


1: Yakult_65
2: Bowser_57
3: RayTheFireFly_65
4: BackstagePass_59
5: BBQValindra_57
6: Jecs_63
7: PatriciaStar_57
8: MagicMan_60
9: Kiko_58
10: Dmitri_57
11: DirtyBoi_60
12: Eyes_56
13: ZAYM_63
14: Doggs_56
15: Coriander_58
16: Moonflower_58
17: TaronosaurasRx_64
18: Bunker_53
19: Schnabeltier_61
20: Hedwig_62
21: LilHam_62 + 1
22: Saronaya_69 + 2
23: RiverRaider_71
24: FuegoCuervo_72
25: Baddon_66 + 1
26: Kroos_67
27: MoontowerMania_69
28: Tycho_66
29: JKSyngboy_66
30: Derg_62
31: Baumdotcom_66 + 1
32: Vivi2_74 + 3
33: Bizzy_68
34: Ashertheman_68
35: Gaea_68
36: YorkOnyx_69
37: Stichling_64
38: Charming_73
39: Phauci_57
40: Whinally_65 + 1
41: Inspectinfecti_66
42: MelBins_79
43: Jill7_62
44: Hans_67
45: APunk_77 + 4
46: Tardus_80
47: Lilbeanie_62
48: Dogfish_1

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 347635 Report

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

Pham number 347635 has 61 members, 5 are drafts.

Phages represented in each track:
- Track 1 : Yakult_65
- Track 2 : Bowser_57
- Track 3 : RayTheFireFly_65
- Track 4 : BackstagePass_59
- Track 5 : BBQValindra_57
- Track 6 : Jecs_63
- Track 7 : PatriciaStar_57
- Track 8 : MagicMan_60
- Track 9 : Kiko_58
- Track 10 : Dmitri_57
- Track 11 : DirtyBoi_60
- Track 12 : Eyes_56
- Track 13 : ZAYM_63
- Track 14 : Doggs_56
- Track 15 : Coriander_58
- Track 16 : Moonflower_58
- Track 17 : TaronosaurasRx_64
- Track 18 : Bunker_53
- Track 19 : Schnabeltier_61
- Track 20 : Hedwig_62
- Track 21 : LilHam_62, SchottB_65
- Track 22 : Saronaya_69, Gustavo_69, StorminNorm_68
- Track 23 : RiverRaider_71
- Track 24 : FuegoCuervo_72
- Track 25 : Baddon_66, Ribeye_68
- Track 26 : Kroos_67
- Track 27 : MoontowerMania_69
- Track 28 : Tycho_66
- Track 29 : JKSyngboy_66
- Track 30 : Derg_62
- Track 31 : Baumdotcom_66, Tangerine_68
- Track 32 : Vivi2_74, Fosterous_72, Rofo_70, Tangent_72
- Track 33 : Bizzy_68
- Track 34 : Ashertheman_68
- Track 35 : Gaea_68
- Track 36 : YorkOnyx_69
- Track 37 : Stichling_64

• Track 38 : Charming_73
• Track 39 : Phauci_57
• Track 40 : Phinally_65, Leonard_65
• Track 41 : Inspectinfecti_66
• Track 42 : MelBins_79
• Track 43 : Ali17_62
• Track 44 : Hans_67
• Track 45 : APunk_77, Abblin_77, Sampson_79, Scioto_78, Natkenzie_77
• Track 46 : Tardus_80
• Track 47 : Lilbeanie_62
• Track 48 : Dogfish_1

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

The start number called the most often in the published annotations is 44, it was called in 30 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• APunk_77, Abblin_77, BBQValindra_57, BackstagePass_59, Bowser_57, Bunker_53, Charming_73, Coriander_58, Derg_62, Doggs_56, Eyes_56, FuegoCuervo_72, Gustavo_69, Hans_67, JKSyngboy_66, Jecs_63, LilHam_62, MagicMan_60, MelBins_79, MoontowerMania_69, Natkenzie_77, Phauci_57, Sampson_79, Saronaya_69, Schnabeltier_61, SchottB_65, Scioto_78, StorminNorm_68, Tardus_80, TaronosaurasRx_64, YorkOnyx_69, ZAYM_63,

Genes that have the "Most Annotated" start but do not call it:
• Ali17_62, Ashertheman_68, Baddon_66, Baumdotcom_66, Bizzy_68, Fosterous_72, Gaea_68, Hedwig_62, Inspectinfecti_66, Kroos_67, Leonard_65, Moonflower_58, Phinally_65, Ribeye_68, Rofo_70, Stichling_64, Tangent_72, Tangerine_68, Tycho_66, Vivi2_74,

Genes that do not have the "Most Annotated" start:
• DirtyBoi_60, Dmitri_57, Dogfish_1, Kiko_58, Lilbeanie_62, PatriciaStar_57, RayTheFireFly_65, RiverRaider_71, Yakult_65,

Summary by start number:

Start 41:
• Found in 1 of 61 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Dogfish_1 (DT),

Start 42:
• Found in 5 of 61 (8.2%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 20.0% of time when present
• Phage (with cluster) where this start called: RiverRaider_71 (DE1),

Start 43:

• Found in 40 of 61 (65.6%) of genes in pham
• Manual Annotations of this start: 17 of 56
• Called 45.0% of time when present
• Phage (with cluster) where this start called: Ali17_62 (DE2), Asherthеman_68 (DE1), Baddon_66 (DE1), Baumdotcom_66 (DE1), Bizzy_68 (DE1), Fosterous_72 (DE1), Gaea_68 (DE1), Inspectinfecti_66 (DE2), Kroos_67 (DE1), Leonard_65 (DE2), Phinally_65 (DE2), Ribeye_68 (DE1), Rofo_70 (DE1), Stichling_64 (DE1), Tangent_72 (DE1), Tangerine_68 (DE1), Tycho_66 (DE1), Vivi2_74 (DE1),

Start 44:
• Found in 52 of 61 (85.2%) of genes in pham
• Manual Annotations of this start: 30 of 56
• Called 61.5% of time when present
• Phage (with cluster) where this start called: APunk_77 (DE4), Abblin_77 (DE4), BBQValindra_57 (DB), BackstagePass_59 (DB), Bowser_57 (DB), Bunker_53 (DB), Charming_73 (DE1), Coriander_58 (DB), Derg_62 (DE1), Doggs_56 (DB), Eyes_56 (DB), FuegoCuervo_72 (DE1), Gustavo_69 (DE1), Hans_67 (DE2), JKSyngboy_66 (DE1), Jecs_63 (DB), LilHam_62 (DE1), MagicMan_60 (DB), MelBins_79 (DE2), MoontowerMania_69 (DE1), Natkenzie_77 (DE4), Phauci_57 (DE2), Sampson_79 (DE4), Saronaya_69 (DE1), Schnabeltier_61 (DB), SchottB_65 (DE1), Scioto_78 (DE4), StorminNorm_68 (DE1), Tardus_80 (DE4), TaronosaurasRx_64 (DB), YorkOnyx_69 (DE1), ZAYM_63 (DB),

Start 45:
• Found in 2 of 61 (3.3%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Lilbeanie_62 (DE5),

Start 46:
• Found in 1 of 61 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Yakult_65 (CT),

Start 47:
• Found in 4 of 61 (6.6%) of genes in pham
• Manual Annotations of this start: 3 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DirtyBoi_60 (DB), Dmitri_57 (DB), PatriciaStar_57 (DB), RayTheFireFly_65 (DB),

Start 48:
• Found in 1 of 61 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kiko_58 (DB),

Start 49:
• Found in 19 of 61 (31.1%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 10.5% of time when present
• Phage (with cluster) where this start called: Hedwig_62 (DB), Moonflower_58 (DB),

Summary by clusters:

There are 7 clusters represented in this pham: DE4, DE2, DB, DE5, DE1, DT, CT,

Info for manual annotations of cluster CT:
•Start number 46 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster DB:
•Start number 44 was manually annotated 10 times for cluster DB.
•Start number 47 was manually annotated 3 times for cluster DB.
•Start number 48 was manually annotated 1 time for cluster DB.
•Start number 49 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DE1:
•Start number 42 was manually annotated 1 time for cluster DE1.
•Start number 43 was manually annotated 13 times for cluster DE1.
•Start number 44 was manually annotated 11 times for cluster DE1.

Info for manual annotations of cluster DE2:
•Start number 43 was manually annotated 4 times for cluster DE2.
•Start number 44 was manually annotated 3 times for cluster DE2.

Info for manual annotations of cluster DE4:
•Start number 44 was manually annotated 6 times for cluster DE4.

Info for manual annotations of cluster DE5:
•Start number 45 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster DT:
•Start number 41 was manually annotated 1 time for cluster DT.

Gene Information:

Gene: APunk_77 Start: 54372, Stop: 54731, Start Num: 44
Candidate Starts for APunk_77:
(28, 54213), (29, 54222), (31, 54267), (40, 54345), (Start: 44 @54372 has 30 MA's), (Start: 49 @54387 has 1 MA's), (53, 54414), (59, 54483), (60, 54489), (62, 54498), (64, 54522), (68, 54561), (75, 54645), (77, 54669), (84, 54726),

Gene: Abblin_77 Start: 54530, Stop: 54889, Start Num: 44
Candidate Starts for Abblin_77:
(28, 54371), (29, 54380), (31, 54425), (40, 54503), (Start: 44 @54530 has 30 MA's), (Start: 49 @54545 has 1 MA's), (53, 54572), (59, 54641), (60, 54647), (62, 54656), (64, 54680), (68, 54719), (75, 54803), (77, 54827), (84, 54884),

Gene: Ali17_62 Start: 49345, Stop: 49716, Start Num: 43
Candidate Starts for Ali17_62:
(2, 48598), (5, 48823), (13, 49054), (15, 49084), (23, 49177), (Start: 43 @49345 has 17 MA's), (Start: 44 @49348 has 30 MA's), (60, 49465), (68, 49537), (69, 49564), (70, 49567), (75, 49624),

Gene: Ashertheman_68 Start: 50736, Stop: 51107, Start Num: 43
Candidate Starts for Ashertheman_68:
(22, 50535), (30, 50607), (39, 50709), (Start: 43 @50736 has 17 MA's), (Start: 44 @50739 has 30 MA's), (51, 50769), (59, 50850), (60, 50856), (64, 50889), (67, 50925), (68, 50928), (70, 50958), (75, 51015), (76, 51033),

Gene: BBQValindra_57 Start: 40661, Stop: 41023, Start Num: 44
Candidate Starts for BBQValindra_57:
(15, 40394), (34, 40610), (Start: 44 @40661 has 30 MA's), (Start: 49 @40673 has 1 MA's), (60, 40775), (68, 40847), (70, 40877), (78, 40958),

Gene: BackstagePass_59 Start: 40075, Stop: 40437, Start Num: 44
Candidate Starts for BackstagePass_59:
(34, 40024), (Start: 44 @40075 has 30 MA's), (Start: 49 @40090 has 1 MA's), (57, 40171), (73, 40324), (74, 40330), (75, 40351), (76, 40369), (78, 40375),

Gene: Baddon_66 Start: 51417, Stop: 51788, Start Num: 43
Candidate Starts for Baddon_66:
(22, 51216), (30, 51288), (39, 51390), (Start: 43 @51417 has 17 MA's), (Start: 44 @51420 has 30 MA's), (51, 51450), (59, 51531), (60, 51537), (64, 51570), (70, 51639), (75, 51696), (76, 51714),

Gene: Baumdotcom_66 Start: 50694, Stop: 51062, Start Num: 43
Candidate Starts for Baumdotcom_66:
(22, 50493), (30, 50565), (39, 50667), (Start: 43 @50694 has 17 MA's), (Start: 44 @50697 has 30 MA's), (51, 50727), (59, 50808), (60, 50814), (64, 50847), (68, 50886), (70, 50916), (75, 50973), (76, 50991),

Gene: Bizzy_68 Start: 50614, Stop: 50985, Start Num: 43
Candidate Starts for Bizzy_68:
(30, 50485), (39, 50587), (Start: 43 @50614 has 17 MA's), (Start: 44 @50617 has 30 MA's), (51, 50647), (59, 50728), (60, 50734), (64, 50767), (67, 50803), (68, 50806), (75, 50893), (76, 50911),

Gene: Bowser_57 Start: 40387, Stop: 40746, Start Num: 44
Candidate Starts for Bowser_57:
(34, 40336), (Start: 44 @40387 has 30 MA's), (Start: 49 @40399 has 1 MA's), (68, 40573), (70, 40603), (74, 40639), (78, 40684),

Gene: Bunker_53 Start: 38968, Stop: 39330, Start Num: 44
Candidate Starts for Bunker_53:
(34, 38917), (Start: 44 @38968 has 30 MA's), (Start: 49 @38983 has 1 MA's), (57, 39064), (68, 39157), (73, 39217), (74, 39223), (75, 39244), (76, 39262), (78, 39268),

Gene: Charming_73 Start: 51629, Stop: 51997, Start Num: 44
Candidate Starts for Charming_73:
(39, 51599), (Start: 43 @51626 has 17 MA's), (Start: 44 @51629 has 30 MA's), (60, 51749), (75, 51908),

Gene: Coriander_58 Start: 40264, Stop: 40620, Start Num: 44
Candidate Starts for Coriander_58:
(35, 40219), (Start: 43 @40261 has 17 MA's), (Start: 44 @40264 has 30 MA's), (Start: 49 @40279 has 1 MA's), (59, 40375), (60, 40381), (62, 40390), (69, 40480), (70, 40483), (74, 40519), (79, 40567),

Gene: Derg_62 Start: 49413, Stop: 49781, Start Num: 44

Candidate Starts for Derg_62:
(22, 49209), (30, 49281), (39, 49383), (Start: 43 @49410 has 17 MA's), (Start: 44 @49413 has 30 MA's), (51, 49443), (59, 49524), (60, 49530), (64, 49563), (70, 49632), (75, 49689), (76, 49707),

Gene: DirtyBoi_60 Start: 39016, Stop: 39369, Start Num: 47
Candidate Starts for DirtyBoi_60:
(38, 38980), (Start: 42 @39001 has 1 MA's), (Start: 43 @39007 has 17 MA's), (Start: 47 @39016 has 3 MA's), (Start: 49 @39028 has 1 MA's), (60, 39130), (61, 39136), (70, 39232), (74, 39268), (78, 39313),

Gene: Dmitri_57 Start: 41500, Stop: 41853, Start Num: 47
Candidate Starts for Dmitri_57:
(38, 41464), (Start: 42 @41485 has 1 MA's), (Start: 43 @41491 has 17 MA's), (Start: 47 @41500 has 3 MA's), (Start: 49 @41512 has 1 MA's), (59, 41608), (60, 41614), (61, 41620), (72, 41740), (74, 41752), (78, 41797),

Gene: Dogfish_1 Start: 58, Stop: 447, Start Num: 41
Candidate Starts for Dogfish_1:
(33, 10), (Start: 41 @58 has 1 MA's), (57, 184), (58, 187), (60, 205), (62, 214), (78, 388),

Gene: Doggs_56 Start: 40597, Stop: 40953, Start Num: 44
Candidate Starts for Doggs_56:
(35, 40552), (Start: 43 @40594 has 17 MA's), (Start: 44 @40597 has 30 MA's), (Start: 49 @40612 has 1 MA's), (59, 40708), (62, 40723), (69, 40813), (70, 40816), (74, 40852), (79, 40900),

Gene: Eyes_56 Start: 40436, Stop: 40798, Start Num: 44
Candidate Starts for Eyes_56:
(34, 40385), (Start: 44 @40436 has 30 MA's), (60, 40553), (62, 40562), (68, 40625), (74, 40691),

Gene: Fosterous_72 Start: 52620, Stop: 52991, Start Num: 43
Candidate Starts for Fosterous_72:
(39, 52593), (Start: 43 @52620 has 17 MA's), (Start: 44 @52623 has 30 MA's), (60, 52743), (75, 52902),

Gene: FuegoCuervo_72 Start: 52007, Stop: 52375, Start Num: 44
Candidate Starts for FuegoCuervo_72:
(Start: 44 @52007 has 30 MA's), (60, 52127), (62, 52136), (75, 52286),

Gene: Gaea_68 Start: 50520, Stop: 50891, Start Num: 43
Candidate Starts for Gaea_68:
(6, 50010), (11, 50178), (30, 50391), (39, 50493), (Start: 43 @50520 has 17 MA's), (Start: 44 @50523 has 30 MA's), (51, 50553), (59, 50634), (60, 50640), (64, 50673), (67, 50709), (68, 50712), (70, 50742), (75, 50799), (76, 50817),

Gene: Gustavo_69 Start: 51496, Stop: 51864, Start Num: 44
Candidate Starts for Gustavo_69:
(30, 51364), (39, 51466), (Start: 43 @51493 has 17 MA's), (Start: 44 @51496 has 30 MA's), (51, 51526), (59, 51607), (60, 51613), (64, 51646), (67, 51682), (68, 51685), (70, 51715), (75, 51772), (76, 51790),

Gene: Hans_67 Start: 50034, Stop: 50402, Start Num: 44
Candidate Starts for Hans_67:
(1, 49326), (5, 49509), (13, 49740), (15, 49770), (23, 49863), (37, 50004), (Start: 43 @50031 has 17 MA's), (Start: 44 @50034 has 30 MA's), (60, 50151), (68, 50223), (69, 50250), (70, 50253), (75,

50310),

Gene: Hedwig_62 Start: 39946, Stop: 40287, Start Num: 49
Candidate Starts for Hedwig_62:
(Start: 43 @39925 has 17 MA's), (Start: 44 @39928 has 30 MA's), (Start: 49 @39946 has 1 MA's), (59, 40042), (60, 40048), (61, 40054), (73, 40180), (74, 40186), (78, 40231),

Gene: Inspectinfecti_66 Start: 50194, Stop: 50562, Start Num: 43
Candidate Starts for Inspectinfecti_66:
(2, 49447), (5, 49672), (13, 49903), (15, 49933), (23, 50026), (Start: 43 @50194 has 17 MA's), (Start: 44 @50197 has 30 MA's), (59, 50308), (60, 50314), (64, 50347), (67, 50383), (68, 50386), (75, 50473),

Gene: JKSyngboy_66 Start: 51371, Stop: 51739, Start Num: 44
Candidate Starts for JKSyngboy_66:
(22, 51167), (39, 51341), (Start: 43 @51368 has 17 MA's), (Start: 44 @51371 has 30 MA's), (60, 51491), (70, 51593), (75, 51650),

Gene: Jecs_63 Start: 41546, Stop: 41902, Start Num: 44
Candidate Starts for Jecs_63:
(10, 41168), (14, 41264), (16, 41294), (17, 41297), (19, 41330), (36, 41501), (Start: 43 @41543 has 17 MA's), (Start: 44 @41546 has 30 MA's), (60, 41663), (62, 41672), (68, 41735), (74, 41801), (79, 41849),

Gene: Kiko_58 Start: 39604, Stop: 39957, Start Num: 48
Candidate Starts for Kiko_58:
(Start: 48 @39604 has 1 MA's), (Start: 49 @39616 has 1 MA's), (50, 39622), (59, 39712), (60, 39718), (71, 39841), (73, 39850), (75, 39877), (80, 39910), (82, 39937),

Gene: Kroos_67 Start: 51166, Stop: 51537, Start Num: 43
Candidate Starts for Kroos_67:
(11, 50824), (22, 50965), (30, 51037), (39, 51139), (Start: 43 @51166 has 17 MA's), (Start: 44 @51169 has 30 MA's), (51, 51199), (59, 51280), (60, 51286), (64, 51319), (67, 51355), (68, 51358), (70, 51388), (75, 51445), (76, 51463),

Gene: Leonard_65 Start: 50257, Stop: 50625, Start Num: 43
Candidate Starts for Leonard_65:
(1, 49513), (5, 49735), (13, 49966), (15, 49996), (23, 50089), (Start: 43 @50257 has 17 MA's), (Start: 44 @50260 has 30 MA's), (59, 50371), (60, 50377), (64, 50410), (67, 50446), (68, 50449), (69, 50476), (70, 50479), (75, 50536),

Gene: LilHam_62 Start: 48392, Stop: 48760, Start Num: 44
Candidate Starts for LilHam_62:
(6, 47879), (11, 48047), (30, 48260), (39, 48362), (Start: 43 @48389 has 17 MA's), (Start: 44 @48392 has 30 MA's), (51, 48422), (59, 48503), (60, 48509), (64, 48542), (67, 48578), (68, 48581), (70, 48611), (75, 48668), (76, 48686),

Gene: Lilbeanie_62 Start: 43807, Stop: 44187, Start Num: 45
Candidate Starts for Lilbeanie_62:
(20, 43588), (24, 43627), (26, 43636), (Start: 45 @43807 has 1 MA's), (55, 43897), (57, 43906), (62, 43936), (73, 44062),

Gene: MagicMan_60 Start: 41600, Stop: 41956, Start Num: 44
Candidate Starts for MagicMan_60:

(3, 41003), (4, 41039), (7, 41096), (8, 41099), (14, 41318), (16, 41348), (17, 41351), (19, 41384), (36, 41555), (Start: 43 @41597 has 17 MA's), (Start: 44 @41600 has 30 MA's), (62, 41726), (64, 41750), (70, 41819), (74, 41855),

Gene: MelBins_79 Start: 55065, Stop: 55424, Start Num: 44
Candidate Starts for MelBins_79:
(40, 55038), (Start: 44 @55065 has 30 MA's), (Start: 49 @55080 has 1 MA's), (53, 55107), (60, 55182), (64, 55215), (66, 55248), (75, 55338), (77, 55362), (79, 55368), (84, 55419),

Gene: Moonflower_58 Start: 41053, Stop: 41394, Start Num: 49
Candidate Starts for Moonflower_58:
(18, 40798), (21, 40837), (25, 40876), (32, 40951), (Start: 43 @41032 has 17 MA's), (Start: 44 @41035 has 30 MA's), (Start: 49 @41053 has 1 MA's), (59, 41149), (60, 41155), (61, 41161), (78, 41338),

Gene: MoontowerMania_69 Start: 53181, Stop: 53549, Start Num: 44
Candidate Starts for MoontowerMania_69:
(11, 52836), (22, 52977), (39, 53151), (Start: 43 @53178 has 17 MA's), (Start: 44 @53181 has 30 MA's), (60, 53301), (62, 53310), (70, 53403), (75, 53460),

Gene: Natkenzie_77 Start: 54530, Stop: 54889, Start Num: 44
Candidate Starts for Natkenzie_77:
(28, 54371), (29, 54380), (31, 54425), (40, 54503), (Start: 44 @54530 has 30 MA's), (Start: 49 @54545 has 1 MA's), (53, 54572), (59, 54641), (60, 54647), (62, 54656), (64, 54680), (68, 54719), (75, 54803), (77, 54827), (84, 54884),

Gene: PatriciaStar_57 Start: 41137, Stop: 41490, Start Num: 47
Candidate Starts for PatriciaStar_57:
(9, 40702), (12, 40828), (Start: 42 @41122 has 1 MA's), (Start: 43 @41128 has 17 MA's), (Start: 47 @41137 has 3 MA's), (Start: 49 @41149 has 1 MA's), (59, 41245), (60, 41251), (61, 41257), (70, 41353), (72, 41377), (74, 41389), (78, 41434),

Gene: Phauci_57 Start: 47112, Stop: 47480, Start Num: 44
Candidate Starts for Phauci_57:
(1, 46365), (5, 46587), (13, 46818), (15, 46848), (23, 46941), (37, 47082), (Start: 43 @47109 has 17 MA's), (Start: 44 @47112 has 30 MA's), (60, 47229), (68, 47301), (69, 47328), (70, 47331), (75, 47388),

Gene: Phinally_65 Start: 50254, Stop: 50622, Start Num: 43
Candidate Starts for Phinally_65:
(1, 49510), (5, 49732), (13, 49963), (15, 49993), (23, 50086), (Start: 43 @50254 has 17 MA's), (Start: 44 @50257 has 30 MA's), (59, 50368), (60, 50374), (64, 50407), (67, 50443), (68, 50446), (69, 50473), (70, 50476), (75, 50533),

Gene: RayTheFireFly_65 Start: 41391, Stop: 41744, Start Num: 47
Candidate Starts for RayTheFireFly_65:
(38, 41355), (Start: 42 @41376 has 1 MA's), (Start: 43 @41382 has 17 MA's), (Start: 47 @41391 has 3 MA's), (59, 41499), (60, 41505), (61, 41511), (70, 41607), (74, 41643), (78, 41688),

Gene: Ribeye_68 Start: 50649, Stop: 51020, Start Num: 43
Candidate Starts for Ribeye_68:
(22, 50448), (30, 50520), (39, 50622), (Start: 43 @50649 has 17 MA's), (Start: 44 @50652 has 30 MA's), (51, 50682), (59, 50763), (60, 50769), (64, 50802), (70, 50871), (75, 50928), (76, 50946),

Gene: RiverRaider_71 Start: 50465, Stop: 50803, Start Num: 42
Candidate Starts for RiverRaider_71:
(Start: 42 @50465 has 1 MA's), (Start: 45 @50477 has 1 MA's), (60, 50594), (62, 50603), (63, 50618), (75, 50732),

Gene: Rofo_70 Start: 52202, Stop: 52573, Start Num: 43
Candidate Starts for Rofo_70:
(39, 52175), (Start: 43 @52202 has 17 MA's), (Start: 44 @52205 has 30 MA's), (60, 52325), (75, 52484),

Gene: Sampson_79 Start: 54681, Stop: 55040, Start Num: 44
Candidate Starts for Sampson_79:
(28, 54522), (29, 54531), (31, 54576), (40, 54654), (Start: 44 @54681 has 30 MA's), (Start: 49 @54696 has 1 MA's), (53, 54723), (59, 54792), (60, 54798), (62, 54807), (64, 54831), (68, 54870), (75, 54954), (77, 54978), (84, 55035),

Gene: Saronaya_69 Start: 51496, Stop: 51864, Start Num: 44
Candidate Starts for Saronaya_69:
(30, 51364), (39, 51466), (Start: 43 @51493 has 17 MA's), (Start: 44 @51496 has 30 MA's), (51, 51526), (59, 51607), (60, 51613), (64, 51646), (67, 51682), (68, 51685), (70, 51715), (75, 51772), (76, 51790),

Gene: Schnabeltier_61 Start: 41019, Stop: 41375, Start Num: 44
Candidate Starts for Schnabeltier_61:
(Start: 44 @41019 has 30 MA's), (60, 41136), (62, 41145), (64, 41169), (70, 41238), (74, 41274),

Gene: SchottB_65 Start: 51109, Stop: 51477, Start Num: 44
Candidate Starts for SchottB_65:
(6, 50596), (11, 50764), (30, 50977), (39, 51079), (Start: 43 @51106 has 17 MA's), (Start: 44 @51109 has 30 MA's), (51, 51139), (59, 51220), (60, 51226), (64, 51259), (67, 51295), (68, 51298), (70, 51328), (75, 51385), (76, 51403),

Gene: Scioto_78 Start: 54531, Stop: 54890, Start Num: 44
Candidate Starts for Scioto_78:
(28, 54372), (29, 54381), (31, 54426), (40, 54504), (Start: 44 @54531 has 30 MA's), (Start: 49 @54546 has 1 MA's), (53, 54573), (59, 54642), (60, 54648), (62, 54657), (64, 54681), (68, 54720), (75, 54804), (77, 54828), (84, 54885),

Gene: Stichling_64 Start: 50165, Stop: 50536, Start Num: 43
Candidate Starts for Stichling_64:
(6, 49655), (11, 49823), (30, 50036), (39, 50138), (Start: 43 @50165 has 17 MA's), (Start: 44 @50168 has 30 MA's), (51, 50198), (59, 50279), (60, 50285), (64, 50318), (67, 50354), (68, 50357), (70, 50387), (75, 50444), (76, 50462),

Gene: StorminNorm_68 Start: 51280, Stop: 51648, Start Num: 44
Candidate Starts for StorminNorm_68:
(30, 51148), (39, 51250), (Start: 43 @51277 has 17 MA's), (Start: 44 @51280 has 30 MA's), (51, 51310), (59, 51391), (60, 51397), (64, 51430), (67, 51466), (68, 51469), (70, 51499), (75, 51556), (76, 51574),

Gene: Tangent_72 Start: 51907, Stop: 52278, Start Num: 43
Candidate Starts for Tangent_72:

(39, 51880), (Start: 43 @51907 has 17 MA's), (Start: 44 @51910 has 30 MA's), (60, 52030), (75, 52189),

Gene: Tangerine_68 Start: 50786, Stop: 51157, Start Num: 43
Candidate Starts for Tangerine_68:
(22, 50585), (30, 50657), (39, 50759), (Start: 43 @50786 has 17 MA's), (Start: 44 @50789 has 30 MA's), (51, 50819), (59, 50900), (60, 50906), (64, 50939), (68, 50978), (70, 51008), (75, 51065), (76, 51083),

Gene: Tardus_80 Start: 55265, Stop: 55624, Start Num: 44
Candidate Starts for Tardus_80:
(28, 55106), (29, 55115), (31, 55160), (40, 55238), (Start: 44 @55265 has 30 MA's), (Start: 49 @55280 has 1 MA's), (53, 55307), (60, 55382), (62, 55391), (64, 55415), (75, 55538), (84, 55619),

Gene: TaronosaurasRx_64 Start: 41019, Stop: 41372, Start Num: 44
Candidate Starts for TaronosaurasRx_64:
(34, 40968), (Start: 44 @41019 has 30 MA's), (59, 41127), (60, 41133), (64, 41166), (65, 41172), (68, 41205), (74, 41271), (79, 41319),

Gene: Tycho_66 Start: 50602, Stop: 50973, Start Num: 43
Candidate Starts for Tycho_66:
(30, 50473), (39, 50575), (Start: 43 @50602 has 17 MA's), (Start: 44 @50605 has 30 MA's), (51, 50635), (59, 50716), (60, 50722), (64, 50755), (67, 50791), (68, 50794), (70, 50824), (75, 50881), (76, 50899),

Gene: Vivi2_74 Start: 52962, Stop: 53333, Start Num: 43
Candidate Starts for Vivi2_74:
(39, 52935), (Start: 43 @52962 has 17 MA's), (Start: 44 @52965 has 30 MA's), (60, 53085), (75, 53244),

Gene: Yakult_65 Start: 44489, Stop: 44863, Start Num: 46
Candidate Starts for Yakult_65:
(Start: 46 @44489 has 1 MA's), (52, 44519), (54, 44537), (56, 44573), (62, 44603), (68, 44666), (69, 44693), (70, 44696), (73, 44717), (75, 44744), (76, 44765), (83, 44813),

Gene: YorkOnyx_69 Start: 50785, Stop: 51153, Start Num: 44
Candidate Starts for YorkOnyx_69:
(11, 50440), (22, 50581), (30, 50653), (39, 50755), (Start: 43 @50782 has 17 MA's), (Start: 44 @50785 has 30 MA's), (51, 50815), (59, 50896), (60, 50902), (64, 50935), (67, 50971), (68, 50974), (70, 51004), (75, 51061), (76, 51079),

Gene: ZAYM_63 Start: 41061, Stop: 41417, Start Num: 44
Candidate Starts for ZAYM_63:
(27, 40911), (Start: 44 @41061 has 30 MA's), (60, 41178), (64, 41211), (68, 41250), (74, 41316), (81, 41388),