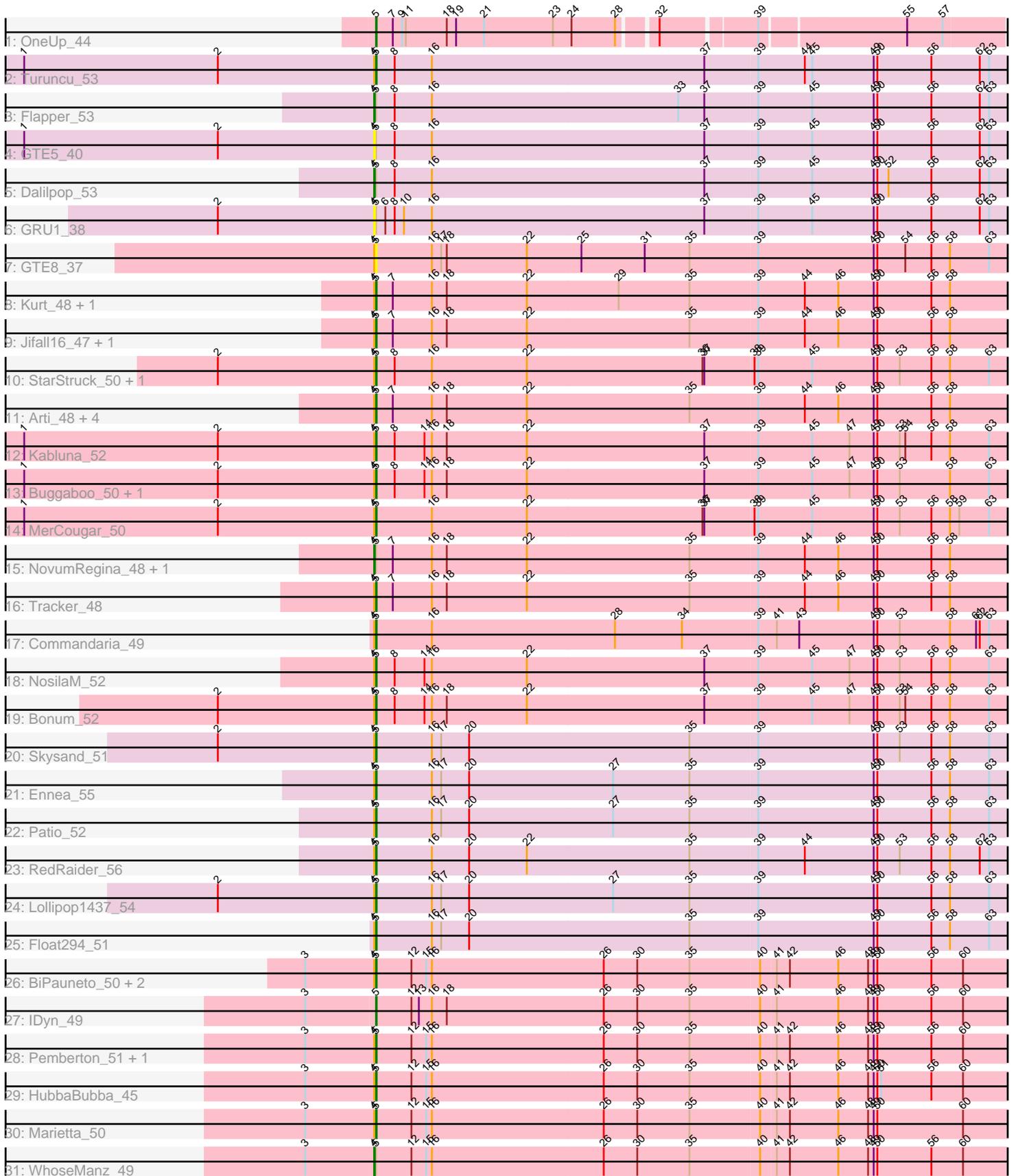# Pham 288015

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 288015 Report

This analysis was run 03/28/26 on database version 641.

Pham number 288015 has 43 members, 4 are drafts.

Phages represented in each track:
• Track 1 : OneUp_44
• Track 2 : Turuncu_53
• Track 3 : Flapper_53
• Track 4 : GTE5_40
• Track 5 : Dalilpop_53
• Track 6 : GRU1_38
• Track 7 : GTE8_37
• Track 8 : Kurt_48, Emianna_48
• Track 9 : Jifall16_47, Phomeo_47
• Track 10 : StarStruck_50, Outis_50
• Track 11 : Arti_48, Foxboro_49, NatB6_48, KidneyBean_48, Wheezy_48
• Track 12 : Kabluna_52
• Track 13 : Buggaboo_50, SuperSulley_50
• Track 14 : MerCougar_50
• Track 15 : NovumRegina_48, GrootJr_50
• Track 16 : Tracker_48
• Track 17 : Commandaria_49
• Track 18 : NosilaM_52
• Track 19 : Bonum_52
• Track 20 : Skysand_51
• Track 21 : Ennea_55
• Track 22 : Patio_52
• Track 23 : RedRaider_56
• Track 24 : Lollipop1437_54
• Track 25 : Float294_51
• Track 26 : BiPauneto_50, Sukkupi_49, Yndexa_49
• Track 27 : IDyn_49
• Track 28 : Pemberton_51, NadineRae_48
• Track 29 : HubbaBubba_45
• Track 30 : Marietta_50
• Track 31 : WhoseManz_49

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

The start number called the most often in the published annotations is 5, it was called in 34 of the 39 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Arti_48, BiPauneto_50, Bonum_52, Buggaboo_50, Commandaria_49, Emianna_48, Ennea_55, Float294_51, Foxboro_49, GTE8_37, HubbaBubba_45, IDyn_49, Jifall16_47, Kabluna_52, KidneyBean_48, Kurt_48, Lollipop1437_54, Marietta_50, MerCougar_50, NadineRae_48, NatB6_48, NosilaM_52, OneUp_44, Outis_50, Patio_52, Pemberton_51, Phomeo_47, RedRaider_56, Skysand_51, StarStruck_50, Sukkupi_49, SuperSulley_50, Tracker_48, Turuncu_53, Wheezy_48, Yndexa_49,

Genes that have the "Most Annotated" start but do not call it:
• Dalilpop_53, Flapper_53, GRU1_38, GTE5_40, GrootJr_50, NovumRegina_48, WhoseManz_49,

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

Summary by start number:

Start 4:
• Found in 41 of 43 (95.3%) of genes in pham
• Manual Annotations of this start: 5 of 39
• Called 17.1% of time when present
• Phage (with cluster) where this start called: Dalilpop_53 (CR1), Flapper_53 (CR1), GRU1_38 (CR1), GTE5_40 (CR1), GrootJr_50 (CR2), NovumRegina_48 (CR2), WhoseManz_49 (CR4),

Start 5:
• Found in 43 of 43 (100.0%) of genes in pham
• Manual Annotations of this start: 34 of 39
• Called 83.7% of time when present
• Phage (with cluster) where this start called: Arti_48 (CR2), BiPauneto_50 (CR4), Bonum_52 (CR2), Buggaboo_50 (CR2), Commandaria_49 (CR2), Emianna_48 (CR2), Ennea_55 (CR3), Float294_51 (CR3), Foxboro_49 (CR2), GTE8_37 (CR2), HubbaBubba_45 (CR4), IDyn_49 (CR4), Jifall16_47 (CR2), Kabluna_52 (CR2), KidneyBean_48 (CR2), Kurt_48 (CR2), Lollipop1437_54 (CR3), Marietta_50 (CR4), MerCougar_50 (CR2), NadineRae_48 (CR4), NatB6_48 (CR2), NosilaM_52 (CR2), OneUp_44 (CQ2), Outis_50 (CR2), Patio_52 (CR3), Pemberton_51 (CR4), Phomeo_47 (CR2), RedRaider_56 (CR3), Skysand_51 (CR3), StarStruck_50 (CR2), Sukkupi_49 (CR4), SuperSulley_50 (CR2), Tracker_48 (CR2), Turuncu_53 (CR1), Wheezy_48 (CR2), Yndexa_49 (CR4),

Summary by clusters:

There are 5 clusters represented in this pham: CR2, CQ2, CR1, CR4, CR3,

Info for manual annotations of cluster CQ2:
•Start number 5 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster CR1:
•Start number 4 was manually annotated 2 times for cluster CR1.
•Start number 5 was manually annotated 1 time for cluster CR1.

Info for manual annotations of cluster CR2:
•Start number 4 was manually annotated 2 times for cluster CR2.
•Start number 5 was manually annotated 19 times for cluster CR2.

Info for manual annotations of cluster CR3:
•Start number 5 was manually annotated 6 times for cluster CR3.

Info for manual annotations of cluster CR4:
•Start number 4 was manually annotated 1 time for cluster CR4.
•Start number 5 was manually annotated 7 times for cluster CR4.

Gene Information:

Gene: Arti_48 Start: 37353, Stop: 38375, Start Num: 5
Candidate Starts for Arti_48:
(Start: 4 @37350 has 5 MA's), (Start: 5 @37353 has 34 MA's), (7, 37380), (16, 37443), (18, 37467), (22, 37596), (35, 37857), (39, 37965), (44, 38040), (46, 38094), (49, 38151), (50, 38157), (56, 38244), (58, 38274),

Gene: BiPauneto_50 Start: 36862, Stop: 37881, Start Num: 5
Candidate Starts for BiPauneto_50:
(3, 36748), (Start: 4 @36859 has 5 MA's), (Start: 5 @36862 has 34 MA's), (12, 36919), (15, 36943), (16, 36952), (26, 37228), (30, 37282), (35, 37366), (40, 37477), (41, 37501), (42, 37522), (46, 37600), (48, 37648), (49, 37657), (50, 37663), (56, 37750), (60, 37801),

Gene: Bonum_52 Start: 38006, Stop: 39028, Start Num: 5
Candidate Starts for Bonum_52:
(2, 37751), (Start: 4 @38003 has 5 MA's), (Start: 5 @38006 has 34 MA's), (8, 38036), (14, 38084), (16, 38096), (18, 38120), (22, 38249), (37, 38534), (39, 38618), (45, 38705), (47, 38765), (49, 38804), (50, 38810), (53, 38846), (54, 38855), (56, 38897), (58, 38927), (63, 38990),

Gene: Buggaboo_50 Start: 38485, Stop: 39507, Start Num: 5
Candidate Starts for Buggaboo_50:
(1, 37918), (2, 38230), (Start: 4 @38482 has 5 MA's), (Start: 5 @38485 has 34 MA's), (8, 38515), (14, 38563), (16, 38575), (18, 38599), (22, 38728), (37, 39013), (39, 39097), (45, 39184), (47, 39244), (49, 39283), (50, 39289), (53, 39325), (58, 39406), (63, 39469),

Gene: Commandaria_49 Start: 38469, Stop: 39491, Start Num: 5
Candidate Starts for Commandaria_49:
(Start: 4 @38466 has 5 MA's), (Start: 5 @38469 has 34 MA's), (16, 38559), (28, 38853), (34, 38961), (39, 39081), (41, 39111), (43, 39147), (49, 39267), (50, 39273), (53, 39309), (58, 39390), (61, 39432), (62, 39438), (63, 39453),

Gene: Dalilpop_53 Start: 39623, Stop: 40648, Start Num: 4
Candidate Starts for Dalilpop_53:
(Start: 4 @39623 has 5 MA's), (Start: 5 @39626 has 34 MA's), (8, 39656), (16, 39716), (37, 40154), (39, 40238), (45, 40325), (49, 40424), (50, 40430), (52, 40448), (56, 40517), (62, 40595), (63, 40610),

Gene: Emianna_48 Start: 38345, Stop: 39367, Start Num: 5
Candidate Starts for Emianna_48:

(Start: 4 @38342 has 5 MA's), (Start: 5 @38345 has 34 MA's), (7, 38372), (16, 38435), (18, 38459), (22, 38588), (29, 38735), (35, 38849), (39, 38957), (44, 39032), (46, 39086), (49, 39143), (50, 39149), (56, 39236), (58, 39266),

Gene: Ennea_55 Start: 39348, Stop: 40370, Start Num: 5
Candidate Starts for Ennea_55:
(Start: 4 @39345 has 5 MA's), (Start: 5 @39348 has 34 MA's), (16, 39438), (17, 39453), (20, 39498), (27, 39729), (35, 39852), (39, 39960), (49, 40146), (50, 40152), (56, 40239), (58, 40269), (63, 40332),

Gene: Flapper_53 Start: 39054, Stop: 40079, Start Num: 4
Candidate Starts for Flapper_53:
(Start: 4 @39054 has 5 MA's), (Start: 5 @39057 has 34 MA's), (8, 39087), (16, 39147), (33, 39543), (37, 39585), (39, 39669), (45, 39756), (49, 39855), (50, 39861), (56, 39948), (62, 40026), (63, 40041),

Gene: Float294_51 Start: 38790, Stop: 39812, Start Num: 5
Candidate Starts for Float294_51:
(Start: 4 @38787 has 5 MA's), (Start: 5 @38790 has 34 MA's), (16, 38880), (17, 38895), (20, 38940), (35, 39294), (39, 39402), (49, 39588), (50, 39594), (56, 39681), (58, 39711), (63, 39774),

Gene: Foxboro_49 Start: 38851, Stop: 39873, Start Num: 5
Candidate Starts for Foxboro_49:
(Start: 4 @38848 has 5 MA's), (Start: 5 @38851 has 34 MA's), (7, 38878), (16, 38941), (18, 38965), (22, 39094), (35, 39355), (39, 39463), (44, 39538), (46, 39592), (49, 39649), (50, 39655), (56, 39742), (58, 39772),

Gene: GRU1_38 Start: 30601, Stop: 31626, Start Num: 4
Candidate Starts for GRU1_38:
(2, 30349), (Start: 4 @30601 has 5 MA's), (Start: 5 @30604 has 34 MA's), (6, 30619), (8, 30634), (10, 30649), (16, 30694), (37, 31132), (39, 31216), (45, 31303), (49, 31402), (50, 31408), (56, 31495), (62, 31573), (63, 31588),

Gene: GTE5_40 Start: 31911, Stop: 32936, Start Num: 4
Candidate Starts for GTE5_40:
(1, 31347), (2, 31659), (Start: 4 @31911 has 5 MA's), (Start: 5 @31914 has 34 MA's), (8, 31944), (16, 32004), (37, 32442), (39, 32526), (45, 32613), (49, 32712), (50, 32718), (56, 32805), (62, 32883), (63, 32898),

Gene: GTE8_37 Start: 31603, Stop: 32625, Start Num: 5
Candidate Starts for GTE8_37:
(Start: 4 @31600 has 5 MA's), (Start: 5 @31603 has 34 MA's), (16, 31693), (17, 31708), (18, 31717), (22, 31846), (25, 31933), (31, 32035), (35, 32107), (39, 32215), (49, 32401), (50, 32407), (54, 32452), (56, 32494), (58, 32524), (63, 32587),

Gene: GrootJr_50 Start: 37724, Stop: 38749, Start Num: 4
Candidate Starts for GrootJr_50:
(Start: 4 @37724 has 5 MA's), (Start: 5 @37727 has 34 MA's), (7, 37754), (16, 37817), (18, 37841), (22, 37970), (35, 38231), (39, 38339), (44, 38414), (46, 38468), (49, 38525), (50, 38531), (56, 38618), (58, 38648),

Gene: HubbaBubba_45 Start: 33880, Stop: 34899, Start Num: 5
Candidate Starts for HubbaBubba_45:
(3, 33766), (Start: 4 @33877 has 5 MA's), (Start: 5 @33880 has 34 MA's), (12, 33937), (15, 33961), (16, 33970), (26, 34246), (30, 34300), (35, 34384), (40, 34495), (41, 34519), (42, 34540), (46, 34618),

(48, 34666), (49, 34675), (50, 34681), (51, 34687), (56, 34768), (60, 34819),

Gene: IDyn_49 Start: 35306, Stop: 36325, Start Num: 5
Candidate Starts for IDyn_49:
(3, 35195), (Start: 5 @35306 has 34 MA's), (12, 35363), (13, 35375), (16, 35396), (18, 35420), (26, 35672), (30, 35726), (35, 35810), (40, 35921), (41, 35945), (46, 36044), (48, 36092), (49, 36101), (50, 36107), (56, 36194), (60, 36245),

Gene: Jifall16_47 Start: 37999, Stop: 39021, Start Num: 5
Candidate Starts for Jifall16_47:
(Start: 4 @37996 has 5 MA's), (Start: 5 @37999 has 34 MA's), (7, 38026), (16, 38089), (18, 38113), (22, 38242), (35, 38503), (39, 38611), (44, 38686), (46, 38740), (49, 38797), (50, 38803), (56, 38890), (58, 38920),

Gene: Kabluna_52 Start: 37421, Stop: 38443, Start Num: 5
Candidate Starts for Kabluna_52:
(1, 36854), (2, 37166), (Start: 4 @37418 has 5 MA's), (Start: 5 @37421 has 34 MA's), (8, 37451), (14, 37499), (16, 37511), (18, 37535), (22, 37664), (37, 37949), (39, 38033), (45, 38120), (47, 38180), (49, 38219), (50, 38225), (53, 38261), (54, 38270), (56, 38312), (58, 38342), (63, 38405),

Gene: KidneyBean_48 Start: 38123, Stop: 39145, Start Num: 5
Candidate Starts for KidneyBean_48:
(Start: 4 @38120 has 5 MA's), (Start: 5 @38123 has 34 MA's), (7, 38150), (16, 38213), (18, 38237), (22, 38366), (35, 38627), (39, 38735), (44, 38810), (46, 38864), (49, 38921), (50, 38927), (56, 39014), (58, 39044),

Gene: Kurt_48 Start: 38360, Stop: 39382, Start Num: 5
Candidate Starts for Kurt_48:
(Start: 4 @38357 has 5 MA's), (Start: 5 @38360 has 34 MA's), (7, 38387), (16, 38450), (18, 38474), (22, 38603), (29, 38750), (35, 38864), (39, 38972), (44, 39047), (46, 39101), (49, 39158), (50, 39164), (56, 39251), (58, 39281),

Gene: Lollipop1437_54 Start: 39336, Stop: 40358, Start Num: 5
Candidate Starts for Lollipop1437_54:
(2, 39081), (Start: 4 @39333 has 5 MA's), (Start: 5 @39336 has 34 MA's), (16, 39426), (17, 39441), (20, 39486), (27, 39717), (35, 39840), (39, 39948), (49, 40134), (50, 40140), (56, 40227), (58, 40257), (63, 40320),

Gene: Marietta_50 Start: 35200, Stop: 36219, Start Num: 5
Candidate Starts for Marietta_50:
(3, 35086), (Start: 4 @35197 has 5 MA's), (Start: 5 @35200 has 34 MA's), (12, 35257), (15, 35281), (16, 35290), (26, 35566), (30, 35620), (35, 35704), (40, 35815), (41, 35839), (42, 35860), (46, 35938), (48, 35986), (49, 35995), (50, 36001), (60, 36139),

Gene: MerCougar_50 Start: 38623, Stop: 39645, Start Num: 5
Candidate Starts for MerCougar_50:
(1, 38056), (2, 38368), (Start: 4 @38620 has 5 MA's), (Start: 5 @38623 has 34 MA's), (16, 38713), (22, 38866), (36, 39148), (37, 39151), (38, 39229), (39, 39235), (45, 39322), (49, 39421), (50, 39427), (53, 39463), (56, 39514), (58, 39544), (59, 39559), (63, 39607),

Gene: NadineRae_48 Start: 34447, Stop: 35466, Start Num: 5
Candidate Starts for NadineRae_48:

(3, 34333), (Start: 4 @34444 has 5 MA's), (Start: 5 @34447 has 34 MA's), (12, 34504), (15, 34528), (16, 34537), (26, 34813), (30, 34867), (35, 34951), (40, 35062), (41, 35086), (42, 35107), (46, 35185), (48, 35233), (49, 35242), (50, 35248), (56, 35335), (60, 35386),

Gene: NatB6_48 Start: 37417, Stop: 38439, Start Num: 5
Candidate Starts for NatB6_48:
(Start: 4 @37414 has 5 MA's), (Start: 5 @37417 has 34 MA's), (7, 37444), (16, 37507), (18, 37531), (22, 37660), (35, 37921), (39, 38029), (44, 38104), (46, 38158), (49, 38215), (50, 38221), (56, 38308), (58, 38338),

Gene: NosilaM_52 Start: 38318, Stop: 39340, Start Num: 5
Candidate Starts for NosilaM_52:
(Start: 4 @38315 has 5 MA's), (Start: 5 @38318 has 34 MA's), (8, 38348), (14, 38396), (16, 38408), (22, 38561), (37, 38846), (39, 38930), (45, 39017), (47, 39077), (49, 39116), (50, 39122), (53, 39158), (56, 39209), (58, 39239), (63, 39302),

Gene: NovumRegina_48 Start: 37723, Stop: 38748, Start Num: 4
Candidate Starts for NovumRegina_48:
(Start: 4 @37723 has 5 MA's), (Start: 5 @37726 has 34 MA's), (7, 37753), (16, 37816), (18, 37840), (22, 37969), (35, 38230), (39, 38338), (44, 38413), (46, 38467), (49, 38524), (50, 38530), (56, 38617), (58, 38647),

Gene: OneUp_44 Start: 29381, Stop: 30328, Start Num: 5
Candidate Starts for OneUp_44:
(Start: 5 @29381 has 34 MA's), (7, 29408), (9, 29420), (11, 29426), (18, 29492), (19, 29507), (21, 29552), (23, 29663), (24, 29693), (28, 29762), (32, 29813), (39, 29957), (55, 30179), (57, 30233),

Gene: Outis_50 Start: 38317, Stop: 39339, Start Num: 5
Candidate Starts for Outis_50:
(2, 38062), (Start: 4 @38314 has 5 MA's), (Start: 5 @38317 has 34 MA's), (8, 38347), (16, 38407), (22, 38560), (36, 38842), (37, 38845), (38, 38923), (39, 38929), (45, 39016), (49, 39115), (50, 39121), (53, 39157), (56, 39208), (58, 39238), (63, 39301),

Gene: Patio_52 Start: 38572, Stop: 39594, Start Num: 5
Candidate Starts for Patio_52:
(Start: 4 @38569 has 5 MA's), (Start: 5 @38572 has 34 MA's), (16, 38662), (17, 38677), (20, 38722), (27, 38953), (35, 39076), (39, 39184), (49, 39370), (50, 39376), (56, 39463), (58, 39493), (63, 39556),

Gene: Pemberton_51 Start: 35179, Stop: 36198, Start Num: 5
Candidate Starts for Pemberton_51:
(3, 35065), (Start: 4 @35176 has 5 MA's), (Start: 5 @35179 has 34 MA's), (12, 35236), (15, 35260), (16, 35269), (26, 35545), (30, 35599), (35, 35683), (40, 35794), (41, 35818), (42, 35839), (46, 35917), (48, 35965), (49, 35974), (50, 35980), (56, 36067), (60, 36118),

Gene: Phomeo_47 Start: 37995, Stop: 39017, Start Num: 5
Candidate Starts for Phomeo_47:
(Start: 4 @37992 has 5 MA's), (Start: 5 @37995 has 34 MA's), (7, 38022), (16, 38085), (18, 38109), (22, 38238), (35, 38499), (39, 38607), (44, 38682), (46, 38736), (49, 38793), (50, 38799), (56, 38886), (58, 38916),

Gene: RedRaider_56 Start: 40594, Stop: 41616, Start Num: 5
Candidate Starts for RedRaider_56:

(Start: 4 @40591 has 5 MA's), (Start: 5 @40594 has 34 MA's), (16, 40684), (20, 40744), (22, 40837), (35, 41098), (39, 41206), (44, 41281), (49, 41392), (50, 41398), (53, 41434), (56, 41485), (58, 41515), (62, 41563), (63, 41578),

Gene: Skysand_51 Start: 38792, Stop: 39814, Start Num: 5
Candidate Starts for Skysand_51:
(2, 38537), (Start: 4 @38789 has 5 MA's), (Start: 5 @38792 has 34 MA's), (16, 38882), (17, 38897), (20, 38942), (35, 39296), (39, 39404), (49, 39590), (50, 39596), (53, 39632), (56, 39683), (58, 39713), (63, 39776),

Gene: StarStruck_50 Start: 38317, Stop: 39339, Start Num: 5
Candidate Starts for StarStruck_50:
(2, 38062), (Start: 4 @38314 has 5 MA's), (Start: 5 @38317 has 34 MA's), (8, 38347), (16, 38407), (22, 38560), (36, 38842), (37, 38845), (38, 38923), (39, 38929), (45, 39016), (49, 39115), (50, 39121), (53, 39157), (56, 39208), (58, 39238), (63, 39301),

Gene: Sukkupi_49 Start: 36753, Stop: 37772, Start Num: 5
Candidate Starts for Sukkupi_49:
(3, 36639), (Start: 4 @36750 has 5 MA's), (Start: 5 @36753 has 34 MA's), (12, 36810), (15, 36834), (16, 36843), (26, 37119), (30, 37173), (35, 37257), (40, 37368), (41, 37392), (42, 37413), (46, 37491), (48, 37539), (49, 37548), (50, 37554), (56, 37641), (60, 37692),

Gene: SuperSulley_50 Start: 38485, Stop: 39507, Start Num: 5
Candidate Starts for SuperSulley_50:
(1, 37918), (2, 38230), (Start: 4 @38482 has 5 MA's), (Start: 5 @38485 has 34 MA's), (8, 38515), (14, 38563), (16, 38575), (18, 38599), (22, 38728), (37, 39013), (39, 39097), (45, 39184), (47, 39244), (49, 39283), (50, 39289), (53, 39325), (58, 39406), (63, 39469),

Gene: Tracker_48 Start: 37144, Stop: 38166, Start Num: 5
Candidate Starts for Tracker_48:
(Start: 4 @37141 has 5 MA's), (Start: 5 @37144 has 34 MA's), (7, 37171), (16, 37234), (18, 37258), (22, 37387), (35, 37648), (39, 37756), (44, 37831), (46, 37885), (49, 37942), (50, 37948), (56, 38035), (58, 38065),

Gene: Turuncu_53 Start: 38719, Stop: 39741, Start Num: 5
Candidate Starts for Turuncu_53:
(1, 38152), (2, 38464), (Start: 4 @38716 has 5 MA's), (Start: 5 @38719 has 34 MA's), (8, 38749), (16, 38809), (37, 39247), (39, 39331), (44, 39406), (45, 39418), (49, 39517), (50, 39523), (56, 39610), (62, 39688), (63, 39703),

Gene: Wheezy_48 Start: 37349, Stop: 38371, Start Num: 5
Candidate Starts for Wheezy_48:
(Start: 4 @37346 has 5 MA's), (Start: 5 @37349 has 34 MA's), (7, 37376), (16, 37439), (18, 37463), (22, 37592), (35, 37853), (39, 37961), (44, 38036), (46, 38090), (49, 38147), (50, 38153), (56, 38240), (58, 38270),

Gene: WhoseManz_49 Start: 34810, Stop: 35832, Start Num: 4
Candidate Starts for WhoseManz_49:
(3, 34699), (Start: 4 @34810 has 5 MA's), (Start: 5 @34813 has 34 MA's), (12, 34870), (15, 34894), (16, 34903), (26, 35179), (30, 35233), (35, 35317), (40, 35428), (41, 35452), (42, 35473), (46, 35551), (48, 35599), (49, 35608), (50, 35614), (56, 35701), (60, 35752),

Gene: Yndexa_49 Start: 36753, Stop: 37772, Start Num: 5

Candidate Starts for Yndexa_49:
(3, 36639), (Start: 4 @36750 has 5 MA's), (Start: 5 @36753 has 34 MA's), (12, 36810), (15, 36834), (16, 36843), (26, 37119), (30, 37173), (35, 37257), (40, 37368), (41, 37392), (42, 37413), (46, 37491), (48, 37539), (49, 37548), (50, 37554), (56, 37641), (60, 37692),