Pham 347471


1: Mashley_2 + 1
2: Squash_6
3: Squash_5
4: Squash_4
5: Nike_5
6: Phabia_6
7: Gazebo_3
8: RubyRalph_6
9: MorlliMayhem_5
10: RubyRalph_2 + 1
11: Romm_2 + 1
12: RubyRalph_7 + 1
13: Tempo_7 + 5
14: Tempo_3
15: Mentos_5
16: Fizzles_4
17: SallyK_7
18: Marcie_12
19: Hyperion_4
20: Fransoyer_6
21: SadLad_6
22: SadLad_3
23: BabyDotz_5
24: Jehoshaphat_8 + 1
25: BaconCheese_5 + 1
26: Altheas_4
27: Spiderpig_8 + 3
28: Spiderpig_3 + 3
29: CandC_7 + 1
30: CandC_2
31: OneInaGillian_4
32: Zhalia_7 + 1
33: Zagie_6
34: KillerQueen_5
35: Marcie_4
36: Marcie_6
37: Kelcole_2
38: Fregley_4
39: Phinky_5
40: SlySloth_6 + 1
41: Blab_4
42: Leaf_28 + 1
43: Bombitas_107 + 19
44: Zellnk_114 + 4
45: Klein_116 + 2
46: Omega_125
47: Bobby_112 + 2
48: Optimus_110

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 347471 Report

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

Pham number 347471 has 96 members, 12 are drafts.

Phages represented in each track:
- Track 1 : Mashley_2, AluminumJesus_2
- Track 2 : Squash_6
- Track 3 : Squash_5
- Track 4 : Squash_4
- Track 5 : Nike_5
- Track 6 : Phabia_6
- Track 7 : Gazebo_3
- Track 8 : RubyRalph_6
- Track 9 : MorillMayhem_5
- Track 10 : RubyRalph_2, Fransoyer_2
- Track 11 : Romm_2, RobinRose_3
- Track 12 : RubyRalph_7, Fransoyer_7
- Track 13 : Tempo_7, Kelcole_6, OneinaGillian_7, RobinRose_8, KillerQueen_8, Romm_8
- Track 14 : Tempo_3
- Track 15 : Mentos_5
- Track 16 : Fizzles_4
- Track 17 : SallyK_7
- Track 18 : Marcie_12
- Track 19 : Hyperion_4
- Track 20 : Fransoyer_6
- Track 21 : SadLad_6
- Track 22 : SadLad_3
- Track 23 : BabyDotz_5
- Track 24 : Jehoshaphat_8, Teehee_8
- Track 25 : BaconCheese_5, Mila11_5
- Track 26 : Altheas_4
- Track 27 : Spiderpig_8, BirdInFrench_8, Wilca_8, Pepe25_7
- Track 28 : Spiderpig_3, BirdInFrench_3, Wilca_3, Pepe25_2
- Track 29 : CandC_7, Fregley_9
- Track 30 : CandC_2
- Track 31 : OneinaGillian_4
- Track 32 : Zhafia_7, Namago_4
- Track 33 : Zagie_6
- Track 34 : KillerQueen_5
- Track 35 : Marcie_4
- Track 36 : Marcie_6

• Track 37 : Kelcole_2
• Track 38 : Fregley_4
• Track 39 : Phinky_5
• Track 40 : SlySloth_6, Judebell_6
• Track 41 : Blab_4
• Track 42 : Leaf_28, Dewdrop_28
• Track 43 : Bombitas_107, Lucky2013_111, Shaboozey_112, HokkenD_109, BronnyJames_112, Courthouse_109, Gonephishing_108, Nekros_116, Ariel_114, Yeet_110, LittleE_119, Hannaconda_105, Schatzie_114, Nibley_107, KashFlow_111, Porcelain_114, Squint_112, Superphikiman_111, MiaZeal_114, Odette_121
• Track 44 : Zelink_114, Kalah2_111, ThreeRngTarjay_115, Wanda_119, Duke13_114
• Track 45 : Klein_116, EricMillard_111, BAKA_119
• Track 46 : Omega_125
• Track 47 : Bobby_112, Hidrated_102, Marleymoo_102
• Track 48 : Optimus_110

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

The start number called the most often in the published annotations is 68, it was called in 40 of the 84 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Ariel_114, BAKA_119, BirdInFrench_8, Bobby_112, Bombitas_107, BronnyJames_112, CandC_7, Courthouse_109, Duke13_114, EricMillard_111, Fransoyer_7, Fregley_9, Gonephishing_108, Hannaconda_105, Hidrated_102, HokkenD_109, Kalah2_111, KashFlow_111, Kelcole_6, KillerQueen_8, Klein_116, LittleE_119, Lucky2013_111, Marcie_12, Marleymoo_102, MiaZeal_114, Nekros_116, Nibley_107, Odette_121, Omega_125, OneinaGillian_7, Optimus_110, Pepe25_7, Porcelain_114, RobinRose_8, Romm_8, RubyRalph_7, SadLad_6, Schatzie_114, Shaboozey_112, Spiderpig_8, Squint_112, Superphikiman_111, Tempo_7, ThreeRngTarjay_115, Wanda_119, Wilca_8, Yeet_110, Zelink_114,

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

Genes that do not have the "Most Annotated" start:
• Altheas_4, AluminumJesus_2, BabyDotz_5, BaconCheese_5, BirdInFrench_3, Blab_4, CandC_2, Dewdrop_28, Fizzles_4, Fransoyer_2, Fransoyer_6, Fregley_4, Gazebo_3, Hyperion_4, Jehoshaphat_8, Judebell_6, Kelcole_2, KillerQueen_5, Leaf_28, Marcie_4, Marcie_6, Mashley_2, Mentos_5, Mila11_5, MorillMayhem_5, Namago_4, Nike_5, OneinaGillian_4, Pepe25_2, Phabia_6, Phinky_5, RobinRose_3, Romm_2, RubyRalph_2, RubyRalph_6, SadLad_3, SallyK_7, SlySloth_6, Spiderpig_3, Squash_4, Squash_5, Squash_6, Teehee_8, Tempo_3, Wilca_3, Zagie_6, Zhafia_7,

Summary by start number:

Start 52:
• Found in 3 of 96 (3.1%) of genes in pham

• No Manual Annotations of this start.
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Altheas_4 (EG),

Start 58:
• Found in 1 of 96 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 84
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Fizzles_4 (EG),

Start 64:
• Found in 42 of 96 (43.8%) of genes in pham
• Manual Annotations of this start: 38 of 84
• Called 95.2% of time when present
• Phage (with cluster) where this start called: AluminumJesus_2 (EG), BabyDotz_5 (EG), BaconCheese_5 (EG), BirdInFrench_3 (EG), Blab_4 (EG), CandC_2 (EG), Fransoyer_2 (EG), Fregley_4 (EG), Gazebo_3 (EG), Hyperion_4 (EG), Jehoshaphat_8 (EG), Judebell_6 (EG), Kelcole_2 (EG), KillerQueen_5 (EG), Marcie_4 (EG), Marcie_6 (EG), Mashley_2 (EG), Mentos_5 (EG), Mila11_5 (EG), MorillMayhem_5 (EG), Namago_4 (EG), Nike_5 (EG), OneinaGillian_4 (EG), Pepe25_2 (EG), Phabia_6 (EG), Phinky_5 (EG), RobinRose_3 (EG), Romm_2 (EG), RubyRalph_2 (EG), SadLad_3 (EG), SallyK_7 (EG), SlySloth_6 (EG), Spiderpig_3 (EG), Squash_4 (EG), Squash_6 (EG), Teehee_8 (EG), Tempo_3 (EG), Wilca_3 (EG), Zagie_6 (EG), Zhafia_7 (EG),

Start 68:
• Found in 49 of 96 (51.0%) of genes in pham
• Manual Annotations of this start: 40 of 84
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ariel_114 (J), BAKA_119 (J), BirdInFrench_8 (EG), Bobby_112 (J), Bombitas_107 (J), BronnyJames_112 (J), CandC_7 (EG), Courthouse_109 (J), Duke13_114 (J), EricMillard_111 (J), Fransoyer_7 (EG), Fregley_9 (EG), Gonephishing_108 (J), Hannaconda_105 (J), Hidrated_102 (J), HokkenD_109 (J), Kalah2_111 (J), KashFlow_111 (J), Kelcole_6 (EG), KillerQueen_8 (EG), Klein_116 (J), LittleE_119 (J), Lucky2013_111 (J), Marcie_12 (EG), Marleymoo_102 (J), MiaZeal_114 (J), Nekros_116 (J), Nibley_107 (J), Odette_121 (J), Omega_125 (J), OneinaGillian_7 (EG), Optimus_110 (J), Pepe25_7 (EG), Porcelain_114 (J), RobinRose_8 (EG), Romm_8 (EG), RubyRalph_7 (EG), SadLad_6 (EG), Schatzie_114 (J), Shaboozey_112 (J), Spiderpig_8 (EG), Squint_112 (J), Superphikiman_111 (J), Tempo_7 (EG), ThreeRngTarjay_115 (J), Wanda_119 (J), Wilca_8 (EG), Yeet_110 (J), Zelink_114 (J),

Start 74:
• Found in 9 of 96 (9.4%) of genes in pham
• Manual Annotations of this start: 2 of 84
• Called 22.2% of time when present
• Phage (with cluster) where this start called: Dewdrop_28 (GC), Leaf_28 (GC),

Start 123:
• Found in 2 of 96 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 84
• Called 50.0% of time when present
• Phage (with cluster) where this start called: RubyRalph_6 (EG),

Start 126:
• Found in 20 of 96 (20.8%) of genes in pham
• Manual Annotations of this start: 1 of 84
• Called 5.0% of time when present
• Phage (with cluster) where this start called: Fransoyer_6 (EG),

Start 130:
• Found in 1 of 96 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 84
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Squash_5 (EG),

Summary by clusters:

There are 3 clusters represented in this pham: EG, J, GC,

Info for manual annotations of cluster EG:
•Start number 58 was manually annotated 1 time for cluster EG.
•Start number 64 was manually annotated 38 times for cluster EG.
•Start number 68 was manually annotated 14 times for cluster EG.
•Start number 123 was manually annotated 1 time for cluster EG.
•Start number 126 was manually annotated 1 time for cluster EG.
•Start number 130 was manually annotated 1 time for cluster EG.

Info for manual annotations of cluster GC:
•Start number 74 was manually annotated 2 times for cluster GC.

Info for manual annotations of cluster J:
•Start number 68 was manually annotated 26 times for cluster J.

Gene Information:

Gene: Altheas_4 Start: 1637, Stop: 1335, Start Num: 52
Candidate Starts for Altheas_4:
(14, 1820), (18, 1802), (29, 1748), (49, 1646), (52, 1637), (Start: 64 @1592 has 38 MA's), (66, 1583), (70, 1562), (78, 1523), (99, 1442), (127, 1352),

Gene: AluminumJesus_2 Start: 1146, Stop: 907, Start Num: 64
Candidate Starts for AluminumJesus_2:
(Start: 64 @1146 has 38 MA's), (66, 1137), (70, 1116), (99, 1008), (100, 996),

Gene: Ariel_114 Start: 62150, Stop: 62425, Start Num: 68
Candidate Starts for Ariel_114:
(Start: 68 @62150 has 40 MA's), (87, 62249), (98, 62297), (104, 62324),

Gene: BAKA_119 Start: 66443, Stop: 66718, Start Num: 68
Candidate Starts for BAKA_119:
(21, 66242), (31, 66281), (44, 66338), (Start: 68 @66443 has 40 MA's), (71, 66467), (87, 66542), (98, 66590), (106, 66626), (110, 66635), (111, 66647), (122, 66680),

Gene: BabyDotz_5 Start: 2093, Stop: 1857, Start Num: 64
Candidate Starts for BabyDotz_5:
(Start: 64 @2093 has 38 MA's), (66, 2084), (70, 2063), (86, 2009), (96, 1970), (117, 1898), (Start: 126 @1874 has 1 MA's), (127, 1871), (128, 1868),

Gene: BaconCheese_5 Start: 1819, Stop: 1574, Start Num: 64
Candidate Starts for BaconCheese_5:
(34, 1954), (39, 1924), (61, 1828), (Start: 64 @1819 has 38 MA's), (65, 1813), (70, 1789), (99, 1669), (114, 1618), (124, 1588),

Gene: BirdInFrench_8 Start: 2337, Stop: 2095, Start Num: 68
Candidate Starts for BirdInFrench_8:
(43, 2448), (55, 2388), (60, 2364), (Start: 68 @2337 has 40 MA's), (85, 2253), (89, 2241), (101, 2181), (113, 2133),

Gene: BirdInFrench_3 Start: 1383, Stop: 1120, Start Num: 64
Candidate Starts for BirdInFrench_3:
(30, 1533), (61, 1392), (62, 1389), (Start: 64 @1383 has 38 MA's), (70, 1353), (114, 1176), (119, 1161), (121, 1155),

Gene: Blab_4 Start: 1367, Stop: 1125, Start Num: 64
Candidate Starts for Blab_4:
(4, 1802), (5, 1784), (8, 1700), (43, 1457), (45, 1451), (Start: 64 @1367 has 38 MA's), (70, 1337), (122, 1154),

Gene: Bobby_112 Start: 67871, Stop: 68146, Start Num: 68
Candidate Starts for Bobby_112:
(46, 67796), (54, 67820), (Start: 68 @67871 has 40 MA's), (71, 67895), (87, 67970), (98, 68018), (106, 68054), (110, 68063), (111, 68075), (122, 68108),

Gene: Bombitas_107 Start: 63715, Stop: 63990, Start Num: 68
Candidate Starts for Bombitas_107:
(Start: 68 @63715 has 40 MA's), (87, 63814), (98, 63862), (104, 63889),

Gene: BronnyJames_112 Start: 62639, Stop: 62914, Start Num: 68
Candidate Starts for BronnyJames_112:
(Start: 68 @62639 has 40 MA's), (87, 62738), (98, 62786), (104, 62813),

Gene: CandC_7 Start: 2104, Stop: 1862, Start Num: 68
Candidate Starts for CandC_7:
(34, 2257), (36, 2245), (60, 2131), (Start: 68 @2104 has 40 MA's), (85, 2020), (113, 1900),

Gene: CandC_2 Start: 1102, Stop: 839, Start Num: 64
Candidate Starts for CandC_2:
(6, 1486), (10, 1420), (19, 1306), (20, 1303), (34, 1237), (39, 1207), (61, 1111), (Start: 64 @1102 has 38 MA's), (66, 1093), (70, 1072), (Start: 74 @1045 has 2 MA's), (89, 994), (92, 973), (94, 970), (101, 943), (124, 868), (Start: 126 @862 has 1 MA's),

Gene: Courthouse_109 Start: 61750, Stop: 62025, Start Num: 68
Candidate Starts for Courthouse_109:
(Start: 68 @61750 has 40 MA's), (87, 61849), (98, 61897), (104, 61924),

Gene: Dewdrop_28 Start: 11724, Stop: 11948, Start Num: 74

Candidate Starts for Dewdrop_28:
(1, 10896), (2, 11028), (27, 11487), (41, 11547), (48, 11586), (56, 11625), (57, 11631), (Start: 74 @11724 has 2 MA's), (77, 11736), (82, 11745), (89, 11775), (93, 11799), (105, 11850), (124, 11919),

Gene: Duke13_114 Start: 64111, Stop: 64386, Start Num: 68
Candidate Starts for Duke13_114:
(31, 63949), (44, 64006), (Start: 68 @64111 has 40 MA's), (71, 64135), (87, 64210), (98, 64258), (106, 64294), (110, 64303), (111, 64315), (122, 64348),

Gene: EricMillard_111 Start: 66080, Stop: 66355, Start Num: 68
Candidate Starts for EricMillard_111:
(21, 65879), (31, 65918), (44, 65975), (Start: 68 @66080 has 40 MA's), (71, 66104), (87, 66179), (98, 66227), (106, 66263), (110, 66272), (111, 66284), (122, 66317),

Gene: Fizzles_4 Start: 1765, Stop: 1490, Start Num: 58
Candidate Starts for Fizzles_4:
(7, 2089), (32, 1894), (33, 1888), (34, 1885), (50, 1801), (Start: 58 @1765 has 1 MA's), (Start: 64 @1747 has 38 MA's), (70, 1717), (105, 1573), (128, 1501),

Gene: Fransoyer_7 Start: 2353, Stop: 2120, Start Num: 68
Candidate Starts for Fransoyer_7:
(52, 2416), (53, 2413), (67, 2356), (Start: 68 @2353 has 40 MA's), (69, 2341), (80, 2293), (84, 2275), (95, 2233), (97, 2227),

Gene: Fransoyer_6 Start: 2120, Stop: 1869, Start Num: 126
Candidate Starts for Fransoyer_6:
(75, 2306), (76, 2300), (90, 2249), (91, 2243), (109, 2177), (Start: 123 @2129 has 1 MA's), (125, 2123), (Start: 126 @2120 has 1 MA's), (129, 2099), (132, 2033), (133, 1913), (134, 1898), (135, 1895),

Gene: Fransoyer_2 Start: 1080, Stop: 841, Start Num: 64
Candidate Starts for Fransoyer_2:
(14, 1230), (25, 1173), (Start: 64 @1080 has 38 MA's), (66, 1071), (70, 1050), (110, 909), (120, 873), (125, 861), (128, 852),

Gene: Fregley_4 Start: 1640, Stop: 1377, Start Num: 64
Candidate Starts for Fregley_4:
(6, 2024), (10, 1958), (19, 1844), (20, 1841), (34, 1775), (39, 1745), (61, 1649), (Start: 64 @1640 has 38 MA's), (70, 1610), (Start: 74 @1583 has 2 MA's), (89, 1532), (92, 1511), (94, 1508), (101, 1481), (124, 1406), (Start: 126 @1400 has 1 MA's),

Gene: Fregley_9 Start: 2642, Stop: 2400, Start Num: 68
Candidate Starts for Fregley_9:
(34, 2795), (36, 2783), (60, 2669), (Start: 68 @2642 has 40 MA's), (85, 2558), (113, 2438),

Gene: Gazebo_3 Start: 1551, Stop: 1309, Start Num: 64
Candidate Starts for Gazebo_3:
(40, 1638), (43, 1629), (45, 1623), (Start: 64 @1551 has 38 MA's), (70, 1521), (122, 1338),

Gene: Gonephishing_108 Start: 61177, Stop: 61452, Start Num: 68
Candidate Starts for Gonephishing_108:
(Start: 68 @61177 has 40 MA's), (87, 61276), (98, 61324), (104, 61351),

Gene: Hannaconda_105 Start: 60123, Stop: 60398, Start Num: 68

Candidate Starts for Hannaconda_105:
(Start: 68 @60123 has 40 MA's), (87, 60222), (98, 60270), (104, 60297),

Gene: Hidrated_102 Start: 63941, Stop: 64216, Start Num: 68
Candidate Starts for Hidrated_102:
(46, 63866), (54, 63890), (Start: 68 @63941 has 40 MA's), (71, 63965), (87, 64040), (98, 64088), (106, 64124), (110, 64133), (111, 64145), (122, 64178),

Gene: HokkenD_109 Start: 65230, Stop: 65505, Start Num: 68
Candidate Starts for HokkenD_109:
(Start: 68 @65230 has 40 MA's), (87, 65329), (98, 65377), (104, 65404),

Gene: Hyperion_4 Start: 1519, Stop: 1271, Start Num: 64
Candidate Starts for Hyperion_4:
(11, 1795), (22, 1678), (Start: 64 @1519 has 38 MA's), (70, 1489), (118, 1309), (119, 1306), (Start: 126 @1288 has 1 MA's), (127, 1285), (128, 1282),

Gene: Jehoshaphat_8 Start: 2791, Stop: 2534, Start Num: 64
Candidate Starts for Jehoshaphat_8:
(41, 2881), (42, 2875), (Start: 64 @2791 has 38 MA's), (70, 2761), (78, 2722), (101, 2629), (127, 2551),

Gene: Judebell_6 Start: 2078, Stop: 1842, Start Num: 64
Candidate Starts for Judebell_6:
(Start: 64 @2078 has 38 MA's), (66, 2069), (70, 2048), (86, 1994), (96, 1955), (117, 1883), (Start: 126 @1859 has 1 MA's), (127, 1856), (128, 1853),

Gene: Kalah2_111 Start: 66306, Stop: 66581, Start Num: 68
Candidate Starts for Kalah2_111:
(31, 66144), (44, 66201), (Start: 68 @66306 has 40 MA's), (71, 66330), (87, 66405), (98, 66453), (106, 66489), (110, 66498), (111, 66510), (122, 66543),

Gene: KashFlow_111 Start: 62628, Stop: 62903, Start Num: 68
Candidate Starts for KashFlow_111:
(Start: 68 @62628 has 40 MA's), (87, 62727), (98, 62775), (104, 62802),

Gene: Kelcole_6 Start: 2251, Stop: 2009, Start Num: 68
Candidate Starts for Kelcole_6:
(Start: 68 @2251 has 40 MA's), (85, 2167), (113, 2047),

Gene: Kelcole_2 Start: 1102, Stop: 839, Start Num: 64
Candidate Starts for Kelcole_2:
(10, 1420), (19, 1306), (20, 1303), (34, 1237), (39, 1207), (61, 1111), (Start: 64 @1102 has 38 MA's), (70, 1072), (Start: 74 @1045 has 2 MA's), (89, 994), (92, 973), (94, 970), (101, 943), (124, 868), (Start: 126 @862 has 1 MA's),

Gene: KillerQueen_8 Start: 2064, Stop: 1822, Start Num: 68
Candidate Starts for KillerQueen_8:
(Start: 68 @2064 has 40 MA's), (85, 1980), (113, 1860),

Gene: KillerQueen_5 Start: 1627, Stop: 1382, Start Num: 64
Candidate Starts for KillerQueen_5:
(Start: 64 @1627 has 38 MA's), (70, 1597), (Start: 74 @1570 has 2 MA's), (118, 1420), (119, 1417),

Gene: Klein_116 Start: 64663, Stop: 64938, Start Num: 68
Candidate Starts for Klein_116:
(21, 64462), (31, 64501), (44, 64558), (Start: 68 @64663 has 40 MA's), (71, 64687), (87, 64762), (98, 64810), (106, 64846), (110, 64855), (111, 64867), (122, 64900),

Gene: Leaf_28 Start: 11724, Stop: 11948, Start Num: 74
Candidate Starts for Leaf_28:
(1, 10896), (2, 11028), (27, 11487), (41, 11547), (48, 11586), (56, 11625), (57, 11631), (Start: 74 @11724 has 2 MA's), (77, 11736), (82, 11745), (89, 11775), (93, 11799), (105, 11850), (124, 11919),

Gene: LittleE_119 Start: 66043, Stop: 66318, Start Num: 68
Candidate Starts for LittleE_119:
(Start: 68 @66043 has 40 MA's), (87, 66142), (98, 66190), (104, 66217),

Gene: Lucky2013_111 Start: 62191, Stop: 62466, Start Num: 68
Candidate Starts for Lucky2013_111:
(Start: 68 @62191 has 40 MA's), (87, 62290), (98, 62338), (104, 62365),

Gene: Marcie_12 Start: 2904, Stop: 2662, Start Num: 68
Candidate Starts for Marcie_12:
(43, 3015), (60, 2931), (Start: 68 @2904 has 40 MA's), (85, 2820), (101, 2748), (107, 2730), (113, 2700),

Gene: Marcie_4 Start: 1305, Stop: 1057, Start Num: 64
Candidate Starts for Marcie_4:
(38, 1410), (54, 1347), (Start: 64 @1305 has 38 MA's), (70, 1275), (72, 1254), (73, 1251), (95, 1191), (108, 1137), (110, 1131), (128, 1068),

Gene: Marcie_6 Start: 1750, Stop: 1493, Start Num: 64
Candidate Starts for Marcie_6:
(29, 1906), (59, 1765), (61, 1759), (62, 1756), (Start: 64 @1750 has 38 MA's), (70, 1720), (79, 1681), (81, 1678), (121, 1528),

Gene: Marleymoo_102 Start: 63617, Stop: 63892, Start Num: 68
Candidate Starts for Marleymoo_102:
(46, 63542), (54, 63566), (Start: 68 @63617 has 40 MA's), (71, 63641), (87, 63716), (98, 63764), (106, 63800), (110, 63809), (111, 63821), (122, 63854),

Gene: Mashley_2 Start: 1146, Stop: 907, Start Num: 64
Candidate Starts for Mashley_2:
(Start: 64 @1146 has 38 MA's), (66, 1137), (70, 1116), (99, 1008), (100, 996),

Gene: Mentos_5 Start: 1855, Stop: 1607, Start Num: 64
Candidate Starts for Mentos_5:
(9, 2161), (22, 2014), (Start: 64 @1855 has 38 MA's), (70, 1825), (118, 1645), (119, 1642), (Start: 126 @1624 has 1 MA's), (127, 1621), (128, 1618),

Gene: MiaZeal_114 Start: 62822, Stop: 63097, Start Num: 68
Candidate Starts for MiaZeal_114:
(Start: 68 @62822 has 40 MA's), (87, 62921), (98, 62969), (104, 62996),

Gene: Mila11_5 Start: 1804, Stop: 1559, Start Num: 64
Candidate Starts for Mila11_5:

(34, 1939), (39, 1909), (61, 1813), (Start: 64 @1804 has 38 MA's), (65, 1798), (70, 1774), (99, 1654), (114, 1603), (124, 1573),

Gene: MorillMayhem_5 Start: 1824, Stop: 1576, Start Num: 64
Candidate Starts for MorillMayhem_5:
(34, 1947), (Start: 64 @1824 has 38 MA's), (66, 1815), (70, 1794), (118, 1614), (119, 1611), (Start: 126 @1593 has 1 MA's), (127, 1590), (128, 1587),

Gene: Namago_4 Start: 1406, Stop: 1170, Start Num: 64
Candidate Starts for Namago_4:
(Start: 64 @1406 has 38 MA's), (86, 1322), (96, 1283), (117, 1211), (Start: 126 @1187 has 1 MA's), (127, 1184), (128, 1181),

Gene: Nekros_116 Start: 65348, Stop: 65623, Start Num: 68
Candidate Starts for Nekros_116:
(Start: 68 @65348 has 40 MA's), (87, 65447), (98, 65495), (104, 65522),

Gene: Nibley_107 Start: 62216, Stop: 62491, Start Num: 68
Candidate Starts for Nibley_107:
(Start: 68 @62216 has 40 MA's), (87, 62315), (98, 62363), (104, 62390),

Gene: Nike_5 Start: 1873, Stop: 1625, Start Num: 64
Candidate Starts for Nike_5:
(12, 2116), (22, 2032), (Start: 64 @1873 has 38 MA's), (66, 1864), (70, 1843), (118, 1663), (119, 1660), (Start: 126 @1642 has 1 MA's), (127, 1639), (128, 1636),

Gene: Odette_121 Start: 66774, Stop: 67049, Start Num: 68
Candidate Starts for Odette_121:
(Start: 68 @66774 has 40 MA's), (87, 66873), (98, 66921), (104, 66948),

Gene: Omega_125 Start: 67192, Stop: 67467, Start Num: 68
Candidate Starts for Omega_125:
(Start: 68 @67192 has 40 MA's), (87, 67291), (104, 67366),

Gene: OneinaGillian_4 Start: 1454, Stop: 1191, Start Num: 64
Candidate Starts for OneinaGillian_4:
(Start: 64 @1454 has 38 MA's), (70, 1424), (Start: 74 @1397 has 2 MA's), (89, 1346), (92, 1325), (94, 1322), (101, 1295), (124, 1220), (Start: 126 @1214 has 1 MA's),

Gene: OneinaGillian_7 Start: 1891, Stop: 1649, Start Num: 68
Candidate Starts for OneinaGillian_7:
(Start: 68 @1891 has 40 MA's), (85, 1807), (113, 1687),

Gene: Optimus_110 Start: 64614, Stop: 64889, Start Num: 68
Candidate Starts for Optimus_110:
(Start: 68 @64614 has 40 MA's), (71, 64638), (87, 64713), (98, 64761), (106, 64797), (110, 64806), (111, 64818), (122, 64851),

Gene: Pepe25_2 Start: 1383, Stop: 1120, Start Num: 64
Candidate Starts for Pepe25_2:
(30, 1533), (61, 1392), (62, 1389), (Start: 64 @1383 has 38 MA's), (70, 1353), (114, 1176), (119, 1161), (121, 1155),

Gene: Pepe25_7 Start: 2337, Stop: 2095, Start Num: 68
Candidate Starts for Pepe25_7:
(43, 2448), (55, 2388), (60, 2364), (Start: 68 @2337 has 40 MA's), (85, 2253), (89, 2241), (101, 2181), (113, 2133),

Gene: Phabia_6 Start: 1993, Stop: 1736, Start Num: 64
Candidate Starts for Phabia_6:
(Start: 64 @1993 has 38 MA's), (70, 1963), (78, 1924), (101, 1831), (127, 1753),

Gene: Phinky_5 Start: 1686, Stop: 1426, Start Num: 64
Candidate Starts for Phinky_5:
(17, 1902), (25, 1860), (50, 1740), (53, 1731), (Start: 64 @1686 has 38 MA's), (66, 1677), (70, 1656), (101, 1518), (102, 1515), (103, 1512), (119, 1464),

Gene: Porcelain_114 Start: 63137, Stop: 63412, Start Num: 68
Candidate Starts for Porcelain_114:
(Start: 68 @63137 has 40 MA's), (87, 63236), (98, 63284), (104, 63311),

Gene: RobinRose_8 Start: 2080, Stop: 1838, Start Num: 68
Candidate Starts for RobinRose_8:
(Start: 68 @2080 has 40 MA's), (85, 1996), (113, 1876),

Gene: RobinRose_3 Start: 1102, Stop: 839, Start Num: 64
Candidate Starts for RobinRose_3:
(3, 1555), (6, 1462), (10, 1396), (34, 1237), (39, 1207), (61, 1111), (Start: 64 @1102 has 38 MA's), (70, 1072), (Start: 74 @1045 has 2 MA's), (89, 994), (92, 973), (94, 970), (101, 943), (124, 868), (Start: 126 @862 has 1 MA's),

Gene: Romm_2 Start: 1102, Stop: 839, Start Num: 64
Candidate Starts for Romm_2:
(3, 1555), (6, 1462), (10, 1396), (34, 1237), (39, 1207), (61, 1111), (Start: 64 @1102 has 38 MA's), (70, 1072), (Start: 74 @1045 has 2 MA's), (89, 994), (92, 973), (94, 970), (101, 943), (124, 868), (Start: 126 @862 has 1 MA's),

Gene: Romm_8 Start: 2080, Stop: 1838, Start Num: 68
Candidate Starts for Romm_8:
(Start: 68 @2080 has 40 MA's), (85, 1996), (113, 1876),

Gene: RubyRalph_6 Start: 2129, Stop: 1869, Start Num: 123
Candidate Starts for RubyRalph_6:
(75, 2306), (76, 2300), (90, 2249), (91, 2243), (109, 2177), (Start: 123 @2129 has 1 MA's), (125, 2123), (Start: 126 @2120 has 1 MA's), (129, 2099), (132, 2033), (133, 1913), (134, 1898), (135, 1895),

Gene: RubyRalph_2 Start: 1080, Stop: 841, Start Num: 64
Candidate Starts for RubyRalph_2:
(14, 1230), (25, 1173), (Start: 64 @1080 has 38 MA's), (66, 1071), (70, 1050), (110, 909), (120, 873), (125, 861), (128, 852),

Gene: RubyRalph_7 Start: 2353, Stop: 2120, Start Num: 68
Candidate Starts for RubyRalph_7:
(52, 2416), (53, 2413), (67, 2356), (Start: 68 @2353 has 40 MA's), (69, 2341), (80, 2293), (84, 2275), (95, 2233), (97, 2227),

Gene: SadLad_6 Start: 2142, Stop: 1909, Start Num: 68
Candidate Starts for SadLad_6:
(28, 2304), (63, 2160), (Start: 68 @2142 has 40 MA's), (69, 2130), (80, 2082), (89, 2049), (95, 2022), (97, 2016),

Gene: SadLad_3 Start: 1311, Stop: 1072, Start Num: 64
Candidate Starts for SadLad_3:
(14, 1542), (24, 1488), (47, 1377), (56, 1338), (Start: 64 @1311 has 38 MA's), (66, 1302), (70, 1281), (110, 1140), (116, 1119), (Start: 126 @1089 has 1 MA's), (127, 1086),

Gene: SallyK_7 Start: 2695, Stop: 2438, Start Num: 64
Candidate Starts for SallyK_7:
(16, 2902), (35, 2818), (Start: 64 @2695 has 38 MA's), (70, 2665), (101, 2533), (127, 2455),

Gene: Schatzie_114 Start: 65656, Stop: 65931, Start Num: 68
Candidate Starts for Schatzie_114:
(Start: 68 @65656 has 40 MA's), (87, 65755), (98, 65803), (104, 65830),

Gene: Shaboozey_112 Start: 62660, Stop: 62935, Start Num: 68
Candidate Starts for Shaboozey_112:
(Start: 68 @62660 has 40 MA's), (87, 62759), (98, 62807), (104, 62834),

Gene: SlySloth_6 Start: 2096, Stop: 1860, Start Num: 64
Candidate Starts for SlySloth_6:
(Start: 64 @2096 has 38 MA's), (66, 2087), (70, 2066), (86, 2012), (96, 1973), (117, 1901), (Start: 126 @1877 has 1 MA's), (127, 1874), (128, 1871),

Gene: Spiderpig_8 Start: 2337, Stop: 2095, Start Num: 68
Candidate Starts for Spiderpig_8:
(43, 2448), (55, 2388), (60, 2364), (Start: 68 @2337 has 40 MA's), (85, 2253), (89, 2241), (101, 2181), (113, 2133),

Gene: Spiderpig_3 Start: 1383, Stop: 1120, Start Num: 64
Candidate Starts for Spiderpig_3:
(30, 1533), (61, 1392), (62, 1389), (Start: 64 @1383 has 38 MA's), (70, 1353), (114, 1176), (119, 1161), (121, 1155),

Gene: Squash_6 Start: 1928, Stop: 1671, Start Num: 64
Candidate Starts for Squash_6:
(13, 2171), (26, 2087), (Start: 64 @1928 has 38 MA's), (66, 1919), (70, 1898), (101, 1766), (127, 1688),

Gene: Squash_5 Start: 1671, Stop: 1429, Start Num: 130
Candidate Starts for Squash_5:
(15, 2142), (75, 1869), (83, 1842), (88, 1824), (90, 1812), (91, 1806), (92, 1800), (112, 1734), (115, 1725), (Start: 130 @1671 has 1 MA's), (131, 1641), (136, 1458),

Gene: Squash_4 Start: 1432, Stop: 1184, Start Num: 64
Candidate Starts for Squash_4:
(23, 1597), (34, 1555), (51, 1483), (Start: 64 @1432 has 38 MA's), (66, 1423), (70, 1402), (118, 1222), (119, 1219), (Start: 126 @1201 has 1 MA's), (127, 1198), (128, 1195),

Gene: Squint_112 Start: 62941, Stop: 63216, Start Num: 68
Candidate Starts for Squint_112:

(Start: 68 @62941 has 40 MA's), (87, 63040), (98, 63088), (104, 63115),

Gene: Superphikiman_111 Start: 62032, Stop: 62307, Start Num: 68
Candidate Starts for Superphikiman_111:
(Start: 68 @62032 has 40 MA's), (87, 62131), (98, 62179), (104, 62206),

Gene: Teehee_8 Start: 2791, Stop: 2534, Start Num: 64
Candidate Starts for Teehee_8:
(41, 2881), (42, 2875), (Start: 64 @2791 has 38 MA's), (70, 2761), (78, 2722), (101, 2629), (127, 2551),

Gene: Tempo_7 Start: 2272, Stop: 2030, Start Num: 68
Candidate Starts for Tempo_7:
(Start: 68 @2272 has 40 MA's), (85, 2188), (113, 2068),

Gene: Tempo_3 Start: 1126, Stop: 878, Start Num: 64
Candidate Starts for Tempo_3:
(38, 1210), (Start: 64 @1126 has 38 MA's), (70, 1096), (118, 916), (119, 913), (Start: 126 @895 has 1 MA's), (127, 892), (128, 889),

Gene: ThreeRngTarjay_115 Start: 67538, Stop: 67813, Start Num: 68
Candidate Starts for ThreeRngTarjay_115:
(31, 67376), (44, 67433), (Start: 68 @67538 has 40 MA's), (71, 67562), (87, 67637), (98, 67685), (106, 67721), (110, 67730), (111, 67742), (122, 67775),

Gene: Wanda_119 Start: 64940, Stop: 65215, Start Num: 68
Candidate Starts for Wanda_119:
(31, 64778), (44, 64835), (Start: 68 @64940 has 40 MA's), (71, 64964), (87, 65039), (98, 65087), (106, 65123), (110, 65132), (111, 65144), (122, 65177),

Gene: Wilca_3 Start: 1383, Stop: 1120, Start Num: 64
Candidate Starts for Wilca_3:
(30, 1533), (61, 1392), (62, 1389), (Start: 64 @1383 has 38 MA's), (70, 1353), (114, 1176), (119, 1161), (121, 1155),

Gene: Wilca_8 Start: 2337, Stop: 2095, Start Num: 68
Candidate Starts for Wilca_8:
(43, 2448), (55, 2388), (60, 2364), (Start: 68 @2337 has 40 MA's), (85, 2253), (89, 2241), (101, 2181), (113, 2133),

Gene: Yeet_110 Start: 64594, Stop: 64869, Start Num: 68
Candidate Starts for Yeet_110:
(Start: 68 @64594 has 40 MA's), (87, 64693), (98, 64741), (104, 64768),

Gene: Zagie_6 Start: 2057, Stop: 1818, Start Num: 64
Candidate Starts for Zagie_6:
(37, 2180), (Start: 64 @2057 has 38 MA's), (66, 2048), (70, 2027), (99, 1919), (100, 1907),

Gene: Zelink_114 Start: 67485, Stop: 67760, Start Num: 68
Candidate Starts for Zelink_114:
(31, 67323), (44, 67380), (Start: 68 @67485 has 40 MA's), (71, 67509), (87, 67584), (98, 67632), (106, 67668), (110, 67677), (111, 67689), (122, 67722),

Gene: Zhafia_7 Start: 2076, Stop: 1840, Start Num: 64

Candidate Starts for Zhafia_7:
(Start: 64 @2076 has 38 MA's), (86, 1992), (96, 1953), (117, 1881), (Start: 126 @1857 has 1 MA's), (127, 1854), (128, 1851),