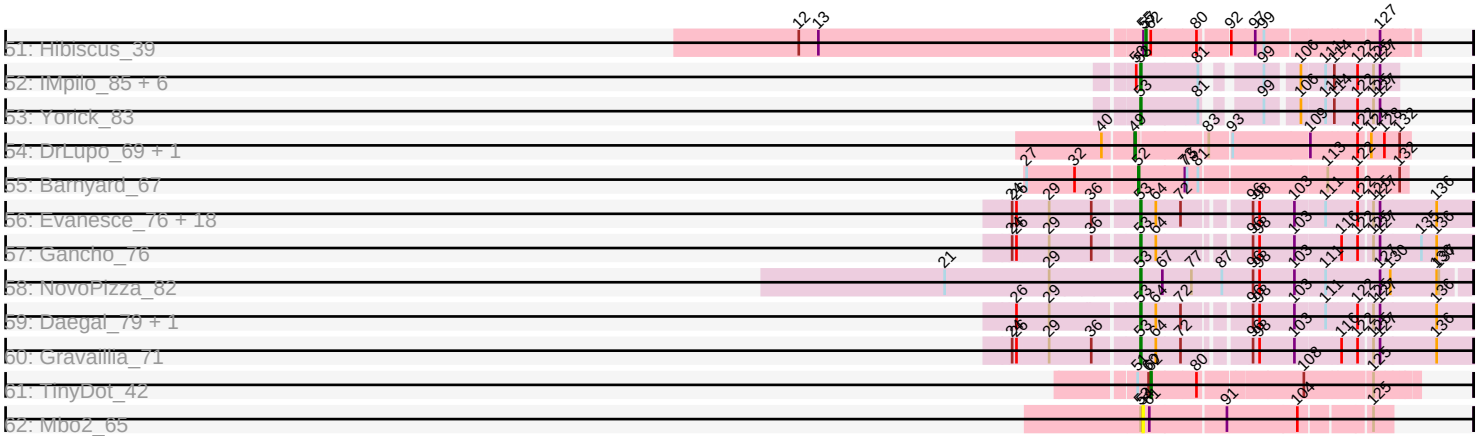
Zoomed Pham 343788



Zoomed Pham 343788



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 343788 Report

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

Pham number 343788 has 118 members, 10 are drafts.

Phages represented in each track:
- Track 1 : Turuncu_73
- Track 2 : Flapper_73
- Track 3 : GTE5_59
- Track 4 : GRU1_59
- Track 5 : Dalilpop_74
- Track 6 : KidneyBean_70, Phomeo_69, Foxboro_70, Jifall16_69
- Track 7 : MerCougar_73
- Track 8 : NosilaM_72
- Track 9 : Commandaria_70
- Track 10 : Emianna_69, Kurt_69
- Track 11 : Buggaboo_72, SuperSulley_72
- Track 12 : StarStruck_71, Outis_71
- Track 13 : Wheezy_69, Arti_68, NatB6_69
- Track 14 : GTE8_58
- Track 15 : Tracker_69
- Track 16 : GrootJr_71, NovumRegina_69
- Track 17 : Kabluna_73, Bonum_74
- Track 18 : Float294_72
- Track 19 : Skysand_73
- Track 20 : RedRaider_77, Lollipop1437_74, Patio_72, Ennea_77
- Track 21 : BiPauneto_72
- Track 22 : Scuba_79
- Track 23 : Pleakley_79, Fury_79
- Track 24 : HomeFry_76
- Track 25 : Posh_63, Wrigley_65
- Track 26 : Yeezy_60
- Track 27 : Powerball_60
- Track 28 : Paries_85
- Track 29 : Fosterous_83
- Track 30 : Lennon_81
- Track 31 : BobBob_83
- Track 32 : RiverRaider_84
- Track 33 : Nordenberg_81
- Track 34 : Tangent_84
- Track 35 : Vivi2_85, Rofo_81, Charming_84
- Track 36 : Kewpiedoll_81
- Track 37 : GMA3_40

• Track 38 : Ayotoya_61, GrandSlam_61, Hamood_61, Chop_61
• Track 39 : SussRoloMann_60, Mulch_60, Parada_60, Nadeem_60, WheatThin_59, Brylie_60
• Track 40 : NancyRae_59
• Track 41 : Bock_61
• Track 42 : BetterKatz_60
• Track 43 : Francois_60
• Track 44 : Pimento_62
• Track 45 : DelRio_61
• Track 46 : CherryTomatoes_190, SCentae_187, Pupper_188
• Track 47 : Boopy_25, Mareelih_23, BlueNGold_23, Forza_25
• Track 48 : Sixama_189
• Track 49 : Sprinklemunch_67
• Track 50 : Heinz_38
• Track 51 : Hibiscus_39
• Track 52 : IMpilo_85, PatoPoderoso_87, Phalconet_89, JalFarm20_98, KingJulian_93, Spikelee_90, DaWorst_90
• Track 53 : Yorick_83
• Track 54 : DrLupo_69, AmandaPanda_68
• Track 55 : Barnyard_67
• Track 56 : Evanesce_76, Amymech_77, Ein37_77, Kinbote_75, Luna22_70, BloominB_76, Webster2_77, OBUpride_76, Luke_74, Hadrien_74, LilHazelnut_77, Giles_70, Forge_70, Dewey_70, Ubuntu_77, Hail_70, DeepSoil15_77, HH92_76, Wishmaker_70
• Track 57 : Gancho_76
• Track 58 : NovoPizza_82
• Track 59 : Daegal_79, Amochick_78
• Track 60 : Gravaillia_71
• Track 61 : TinyDot_42
• Track 62 : Mbo2_65

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

The start number called the most often in the published annotations is 53, it was called in 30 of the 108 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Amochick_78, Amymech_77, BloominB_76, DaWorst_90, Daegal_79, DeepSoil15_77, Dewey_70, Ein37_77, Evanesce_76, Forge_70, Gancho_76, Giles_70, Gravaillia_71, HH92_76, Hadrien_74, Hail_70, IMpilo_85, JalFarm20_98, Kinbote_75, KingJulian_93, LilHazelnut_77, Luke_74, Luna22_70, NovoPizza_82, OBUpride_76, PatoPoderoso_87, Phalconet_89, Spikelee_90, Ubuntu_77, Webster2_77, Wishmaker_70, Yorick_83,

Genes that have the "Most Annotated" start but do not call it:
• Mbo2_65,

Genes that do not have the "Most Annotated" start:
• AmandaPanda_68, Arti_68, Ayotoya_61, Barnyard_67, BetterKatz_60, BiPauneto_72, BlueNGold_23, BobBob_83, Bock_61, Bonum_74, Boopy_25,

Brylie_60, Buggaboo_72, Charming_84, CherryTomatoes_190, Chop_61, Commandaria_70, Dalilpop_74, DelRio_61, DrLupo_69, Emianna_69, Ennea_77, Flapper_73, Float294_72, Forza_25, Fosterous_83, Foxboro_70, Francois_60, Fury_79, GMA3_40, GRU1_59, GTE5_59, GTE8_58, GrandSlam_61, GrootJr_71, Hamood_61, Heinz_38, Hibiscus_39, HomeFry_76, Jifall16_69, Kabluna_73, Kewpiedoll_81, KidneyBean_70, Kurt_69, Lennon_81, Lollipop1437_74, Mareelih_23, MerCougar_73, Mulch_60, Nadeem_60, NancyRae_59, NatB6_69, Nordenberg_81, NosilaM_72, NovumRegina_69, Outis_71, Parada_60, Paries_85, Patio_72, Phomeo_69, Pimento_62, Pleakley_79, Posh_63, Powerball_60, Pupper_188, RedRaider_77, RiverRaider_84, Rofo_81, SCentae_187, Scuba_79, Sixama_189, Skysand_73, Sprinklemunch_67, StarStruck_71, SuperSulley_72, SussRoloMann_60, Tangent_84, TinyDot_42, Tracker_69, Turuncu_73, Vivi2_85, WheatThin_59, Wheezy_69, Wrigley_65, Yeezy_60,

Summary by start number:

Start 33:
• Found in 12 of 118 (10.2%) of genes in pham
• Manual Annotations of this start: 11 of 108
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ayotoya_61 (DI), Brylie_60 (DI), Chop_61 (DI), DelRio_61 (DI), GrandSlam_61 (DI), Hamood_61 (DI), Mulch_60 (DI), Nadeem_60 (DI), Parada_60 (DI), Pimento_62 (DI), SussRoloMann_60 (DI), WheatThin_59 (DI),

Start 38:
• Found in 1 of 118 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 100.0% of time when present
• Phage (with cluster) where this start called: HomeFry_76 (CR5),

Start 39:
• Found in 7 of 118 (5.9%) of genes in pham
• Manual Annotations of this start: 7 of 108
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BiPauneto_72 (CR4), Ennea_77 (CR3), Float294_72 (CR3), Lollipop1437_74 (CR3), Patio_72 (CR3), RedRaider_77 (CR3), Skysand_73 (CR3),

Start 41:
• Found in 3 of 118 (2.5%) of genes in pham
• Manual Annotations of this start: 3 of 108
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Fury_79 (CR5), Pleakley_79 (CR5), Scuba_79 (CR5),

Start 42:
• Found in 43 of 118 (36.4%) of genes in pham
• Manual Annotations of this start: 28 of 108
• Called 72.1% of time when present
• Phage (with cluster) where this start called: Arti_68 (CR2), BlueNGold_23 (DS), Bonum_74 (CR2), Boopy_25 (DS), Buggaboo_72 (CR2), Dalilpop_74 (CR1), Emianna_69 (CR2), Flapper_73 (CR1), Forza_25 (DS), Foxboro_70 (CR2), GRU1_59

(CR1), GTE5_59 (CR1), GTE8_58 (CR2), GrootJr_71 (CR2), Jifall16_69 (CR2), Kabluna_73 (CR2), KidneyBean_70 (CR2), Kurt_69 (CR2), Mareelih_23 (DS), MerCougar_73 (CR2), NatB6_69 (CR2), NosilaM_72 (CR2), NovumRegina_69 (CR2), Outis_71 (CR2), Phomeo_69 (CR2), Sixama_189 (DS), StarStruck_71 (CR2), SuperSulley_72 (CR2), Tracker_69 (CR2), Turuncu_73 (CR1), Wheezy_69 (CR2),

Start 43:
• Found in 1 of 118 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Commandaria_70 (CR2),

Start 45:
• Found in 1 of 118 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Francois_60 (DI),

Start 47:
• Found in 13 of 118 (11.0%) of genes in pham
• Manual Annotations of this start: 3 of 108
• Called 23.1% of time when present
• Phage (with cluster) where this start called: BetterKatz_60 (DI), Bock_61 (DI), NancyRae_59 (DI),

Start 48:
• Found in 10 of 118 (8.5%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 10.0% of time when present
• Phage (with cluster) where this start called: Tangent_84 (DE1),

Start 49:
• Found in 2 of 118 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AmandaPanda_68 (H2), DrLupo_69 (H2),

Start 52:
• Found in 1 of 118 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Barnyard_67 (H2),

Start 53:
• Found in 33 of 118 (28.0%) of genes in pham
• Manual Annotations of this start: 30 of 108
• Called 97.0% of time when present
• Phage (with cluster) where this start called: Amochick_78 (Q), Amymech_77 (Q), BloominB_76 (Q), DaWorst_90 (F1), Daegal_79 (Q), DeepSoil15_77 (Q), Dewey_70 (Q), Ein37_77 (Q), Evanesce_76 (Q), Forge_70 (Q), Gancho_76 (Q), Giles_70 (Q), Gravaillia_71 (Q), HH92_76 (Q), Hadrien_74 (Q), Hail_70 (Q), IMpilo_85 (F1), JalFarm20_98 (F1), Kinbote_75 (Q), KingJulian_93 (F1), LilHazelnut_77 (Q), Luke_74

(Q), Luna22_70 (Q), NovoPizza_82 (Q), OBUpride_76 (Q), PatoPoderoso_87 (F1), Phalconet_89 (F1), Spikelee_90 (F1), Ubuntu_77 (Q), Webster2_77 (Q), Wishmaker_70 (Q), Yorick_83 (F1),

Start 54:
• Found in 1 of 118 (0.8%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mbo2_65 (singleton),

Start 55:
• Found in 4 of 118 (3.4%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Heinz_38 (DY),

Start 56:
• Found in 1 of 118 (0.8%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GMA3_40 (DF2),

Start 57:
• Found in 2 of 118 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 108
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Hibiscus_39 (DY),

Start 58:
• Found in 12 of 118 (10.2%) of genes in pham
• Manual Annotations of this start: 11 of 108
• Called 91.7% of time when present
• Phage (with cluster) where this start called: BobBob_83 (DE1), Charming_84 (DE1), Fosterous_83 (DE1), Kewpiedoll_81 (DE1), Lennon_81 (DE1), Nordenberg_81 (DE1), Paries_85 (DE1), Powerball_60 (CZ4), RiverRaider_84 (DE1), Rofo_81 (DE1), Vivi2_85 (DE1),

Start 62:
• Found in 6 of 118 (5.1%) of genes in pham
• Manual Annotations of this start: 4 of 108
• Called 66.7% of time when present
• Phage (with cluster) where this start called: CherryTomatoes_190 (DO), Pupper_188 (DO), SCentae_187 (DO), TinyDot_42 (singleton),

Start 63:
• Found in 4 of 118 (3.4%) of genes in pham
• Manual Annotations of this start: 3 of 108
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Posh_63 (CY4), Sprinklemunch_67 (DW), Wrigley_65 (CY4), Yeezy_60 (CZ3),

Summary by clusters:

There are 19 clusters represented in this pham: CR2, F1, singleton, CR1, CR4, CR5, DI, CZ3, DE1, CY4, CZ4, DF2, Q, H2, DO, DY, DW, DS, CR3,

Info for manual annotations of cluster CR1:
•Start number 42 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:
•Start number 42 was manually annotated 20 times for cluster CR2.
•Start number 43 was manually annotated 1 time for cluster CR2.

Info for manual annotations of cluster CR3:
•Start number 39 was manually annotated 6 times for cluster CR3.

Info for manual annotations of cluster CR4:
•Start number 39 was manually annotated 1 time for cluster CR4.

Info for manual annotations of cluster CR5:
•Start number 38 was manually annotated 1 time for cluster CR5.
•Start number 41 was manually annotated 3 times for cluster CR5.

Info for manual annotations of cluster CY4:
•Start number 63 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CZ3:
•Start number 63 was manually annotated 1 time for cluster CZ3.

Info for manual annotations of cluster CZ4:
•Start number 58 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster DE1:
•Start number 48 was manually annotated 1 time for cluster DE1.
•Start number 58 was manually annotated 10 times for cluster DE1.

Info for manual annotations of cluster DI:
•Start number 33 was manually annotated 11 times for cluster DI.
•Start number 45 was manually annotated 1 time for cluster DI.
•Start number 47 was manually annotated 3 times for cluster DI.

Info for manual annotations of cluster DO:
•Start number 62 was manually annotated 3 times for cluster DO.

Info for manual annotations of cluster DS:
•Start number 42 was manually annotated 5 times for cluster DS.

Info for manual annotations of cluster DY:
•Start number 55 was manually annotated 1 time for cluster DY.
•Start number 57 was manually annotated 1 time for cluster DY.

Info for manual annotations of cluster F1:
•Start number 53 was manually annotated 6 times for cluster F1.

Info for manual annotations of cluster H2:
•Start number 49 was manually annotated 1 time for cluster H2.
•Start number 52 was manually annotated 1 time for cluster H2.

Info for manual annotations of cluster Q:
•Start number 53 was manually annotated 24 times for cluster Q.

Gene Information:

Gene: AmandaPanda_68 Start: 48593, Stop: 48937, Start Num: 49
Candidate Starts for AmandaPanda_68:
(40, 48554), (Start: 49 @48593 has 1 MA's), (83, 48683), (93, 48710), (109, 48812), (122, 48872), (124, 48884), (128, 48902), (132, 48923),

Gene: Amochick_78 Start: 50070, Stop: 50483, Start Num: 53
Candidate Starts for Amochick_78:
(26, 49917), (29, 49959), (Start: 53 @50070 has 30 MA's), (64, 50091), (72, 50124), (96, 50199), (98, 50208), (103, 50256), (111, 50295), (122, 50334), (125, 50349), (127, 50358), (136, 50433),

Gene: Amymech_77 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for Amymech_77:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: Arti_68 Start: 52883, Stop: 52554, Start Num: 42
Candidate Starts for Arti_68:
(19, 53114), (Start: 42 @52883 has 28 MA's), (89, 52751), (123, 52613), (127, 52586),

Gene: Ayotoya_61 Start: 41093, Stop: 41497, Start Num: 33
Candidate Starts for Ayotoya_61:
(Start: 33 @41093 has 11 MA's), (34, 41102), (35, 41105), (Start: 42 @41126 has 28 MA's), (Start: 47 @41153 has 3 MA's), (78, 41231), (85, 41252), (108, 41369), (109, 41375), (120, 41429), (125, 41444), (126, 41447), (127, 41453),

Gene: Barnyard_67 Start: 47457, Stop: 47798, Start Num: 52
Candidate Starts for Barnyard_67:
(27, 47310), (32, 47376), (Start: 52 @47457 has 1 MA's), (73, 47520), (75, 47523), (81, 47538), (113, 47700), (122, 47736), (132, 47787),

Gene: BetterKatz_60 Start: 40307, Stop: 40651, Start Num: 47
Candidate Starts for BetterKatz_60:
(Start: 47 @40307 has 3 MA's), (78, 40385), (109, 40529), (120, 40583), (125, 40598), (126, 40601), (127, 40607),

Gene: BiPauneto_72 Start: 52489, Stop: 52160, Start Num: 39
Candidate Starts for BiPauneto_72:
(22, 52663), (23, 52615), (Start: 39 @52489 has 7 MA's), (61, 52429), (97, 52297), (123, 52213),

Gene: BloominB_76 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for BloominB_76:

(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: BlueNGold_23 Start: 8738, Stop: 8418, Start Num: 42
Candidate Starts for BlueNGold_23:
(31, 8768), (Start: 42 @8738 has 28 MA's), (61, 8684), (71, 8645), (92, 8594), (119, 8468),

Gene: BobBob_83 Start: 56507, Stop: 56824, Start Num: 58
Candidate Starts for BobBob_83:
(37, 56441), (Start: 48 @56489 has 1 MA's), (Start: 58 @56507 has 11 MA's), (84, 56585), (88, 56603), (99, 56648), (100, 56660), (108, 56696), (109, 56702), (124, 56777), (125, 56780), (127, 56789),

Gene: Bock_61 Start: 40336, Stop: 40695, Start Num: 47
Candidate Starts for Bock_61:
(Start: 47 @40336 has 3 MA's), (69, 40384), (76, 40408), (85, 40435), (96, 40480), (108, 40549), (109, 40555), (120, 40609), (125, 40633), (126, 40636), (127, 40642), (134, 40690),

Gene: Bonum_74 Start: 54210, Stop: 53830, Start Num: 42
Candidate Starts for Bonum_74:
(Start: 42 @54210 has 28 MA's), (66, 54141), (71, 54117), (89, 54060), (110, 53937), (112, 53934), (115, 53916), (118, 53910), (127, 53862),

Gene: Boopy_25 Start: 8750, Stop: 8430, Start Num: 42
Candidate Starts for Boopy_25:
(31, 8780), (Start: 42 @8750 has 28 MA's), (61, 8696), (71, 8657), (92, 8606), (119, 8480),

Gene: Brylie_60 Start: 40073, Stop: 40477, Start Num: 33
Candidate Starts for Brylie_60:
(Start: 33 @40073 has 11 MA's), (34, 40082), (35, 40085), (Start: 42 @40106 has 28 MA's), (Start: 47 @40133 has 3 MA's), (78, 40211), (108, 40349), (109, 40355), (120, 40409), (125, 40424), (126, 40427), (127, 40433),

Gene: Buggaboo_72 Start: 54776, Stop: 54396, Start Num: 42
Candidate Starts for Buggaboo_72:
(Start: 42 @54776 has 28 MA's), (66, 54707), (71, 54683), (89, 54626), (112, 54500), (115, 54482), (118, 54476), (127, 54428),

Gene: Charming_84 Start: 55966, Stop: 56283, Start Num: 58
Candidate Starts for Charming_84:
(37, 55900), (Start: 48 @55948 has 1 MA's), (Start: 58 @55966 has 11 MA's), (84, 56044), (88, 56062), (99, 56107), (100, 56119), (108, 56155), (109, 56161), (124, 56236), (125, 56239), (127, 56248),

Gene: CherryTomatoes_190 Start: 134141, Stop: 134506, Start Num: 62
Candidate Starts for CherryTomatoes_190:
(44, 134102), (Start: 62 @134141 has 4 MA's), (74, 134186), (85, 134216), (108, 134330),

Gene: Chop_61 Start: 40844, Stop: 41248, Start Num: 33
Candidate Starts for Chop_61:
(Start: 33 @40844 has 11 MA's), (34, 40853), (35, 40856), (Start: 42 @40877 has 28 MA's), (Start: 47 @40904 has 3 MA's), (78, 40982), (85, 41003), (108, 41120), (109, 41126), (120, 41180), (125, 41195), (126, 41198), (127, 41204),

Gene: Commandaria_70 Start: 54164, Stop: 53838, Start Num: 43
Candidate Starts for Commandaria_70:
(24, 54290), (Start: 43 @54164 has 1 MA's), (65, 54092), (92, 54008), (127, 53867), (131, 53843),

Gene: DaWorst_90 Start: 50692, Stop: 50985, Start Num: 53
Candidate Starts for DaWorst_90:
(50, 50686), (Start: 53 @50692 has 30 MA's), (81, 50767), (99, 50821), (106, 50860), (111, 50890), (114, 50902), (122, 50932), (125, 50953), (127, 50962),

Gene: Daegal_79 Start: 50629, Stop: 51042, Start Num: 53
Candidate Starts for Daegal_79:
(26, 50476), (29, 50518), (Start: 53 @50629 has 30 MA's), (64, 50650), (72, 50683), (96, 50758), (98, 50767), (103, 50815), (111, 50854), (122, 50893), (125, 50908), (127, 50917), (136, 50992),

Gene: Dalilpop_74 Start: 55412, Stop: 55041, Start Num: 42
Candidate Starts for Dalilpop_74:
(Start: 42 @55412 has 28 MA's), (71, 55319), (89, 55280), (115, 55130), (118, 55124), (127, 55076), (131, 55052),

Gene: DeepSoil15_77 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for DeepSoil15_77:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: DelRio_61 Start: 41254, Stop: 41664, Start Num: 33
Candidate Starts for DelRio_61:
(Start: 33 @41254 has 11 MA's), (35, 41266), (Start: 42 @41287 has 28 MA's), (Start: 55 @41326 has 1 MA's), (76, 41386), (92, 41434), (96, 41455), (101, 41488), (108, 41524), (109, 41530), (120, 41584), (125, 41611), (127, 41620),

Gene: Dewey_70 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for Dewey_70:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: DrLupo_69 Start: 48593, Stop: 48937, Start Num: 49
Candidate Starts for DrLupo_69:
(40, 48554), (Start: 49 @48593 has 1 MA's), (83, 48683), (93, 48710), (109, 48812), (122, 48872), (124, 48884), (128, 48902), (132, 48923),

Gene: Ein37_77 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for Ein37_77:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: Emianna_69 Start: 54094, Stop: 53786, Start Num: 42
Candidate Starts for Emianna_69:
(18, 54325), (24, 54205), (Start: 42 @54094 has 28 MA's), (127, 53806),

Gene: Ennea_77 Start: 55526, Stop: 55152, Start Num: 39

Candidate Starts for Ennea_77:
(Start: 39 @55526 has 7 MA's), (127, 55232), (129, 55220),

Gene: Evanesce_76 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for Evanesce_76:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: Flapper_73 Start: 54630, Stop: 54241, Start Num: 42
Candidate Starts for Flapper_73:
(Start: 42 @54630 has 28 MA's), (86, 54489), (89, 54474), (105, 54378), (115, 54330), (118, 54324), (127, 54276), (131, 54252),

Gene: Float294_72 Start: 55429, Stop: 55049, Start Num: 39
Candidate Starts for Float294_72:
(Start: 39 @55429 has 7 MA's), (59, 55369), (123, 55162), (127, 55135), (129, 55123), (133, 55102),

Gene: Forge_70 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for Forge_70:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: Forza_25 Start: 8790, Stop: 8470, Start Num: 42
Candidate Starts for Forza_25:
(31, 8820), (Start: 42 @8790 has 28 MA's), (61, 8736), (71, 8697), (92, 8646), (119, 8520),

Gene: Fosterous_83 Start: 56959, Stop: 57276, Start Num: 58
Candidate Starts for Fosterous_83:
(37, 56893), (Start: 48 @56941 has 1 MA's), (Start: 58 @56959 has 11 MA's), (84, 57037), (88, 57055), (99, 57100), (100, 57112), (108, 57148), (109, 57154), (124, 57229), (125, 57232), (127, 57241),

Gene: Foxboro_70 Start: 54622, Stop: 54311, Start Num: 42
Candidate Starts for Foxboro_70:
(9, 55240), (10, 55183), (Start: 42 @54622 has 28 MA's), (68, 54538), (127, 54331),

Gene: Francois_60 Start: 40340, Stop: 40705, Start Num: 45
Candidate Starts for Francois_60:
(Start: 45 @40340 has 1 MA's), (69, 40403), (76, 40427), (85, 40454), (96, 40499), (108, 40568), (109, 40574), (120, 40628), (125, 40652), (126, 40655), (127, 40661),

Gene: Fury_79 Start: 53744, Stop: 53415, Start Num: 41
Candidate Starts for Fury_79:
(30, 53798), (Start: 41 @53744 has 3 MA's), (46, 53714), (90, 53612), (97, 53579), (123, 53468), (131, 53426),

Gene: GMA3_40 Start: 41542, Stop: 41240, Start Num: 56
Candidate Starts for GMA3_40:
(56, 41542), (121, 41305), (125, 41284),

Gene: GRU1_59 Start: 46466, Stop: 46095, Start Num: 42
Candidate Starts for GRU1_59:

(Start: 42 @46466 has 28 MA's), (71, 46373), (89, 46334), (115, 46184), (118, 46178), (127, 46130), (131, 46106),

Gene: GTE5_59 Start: 47643, Stop: 47281, Start Num: 42
Candidate Starts for GTE5_59:
(7, 48852), (8, 48621), (20, 47865), (Start: 42 @47643 has 28 MA's), (89, 47514), (105, 47418), (115, 47370), (118, 47364), (127, 47316), (131, 47292),

Gene: GTE8_58 Start: 47388, Stop: 47053, Start Num: 42
Candidate Starts for GTE8_58:
(15, 47703), (24, 47514), (28, 47475), (Start: 42 @47388 has 28 MA's), (71, 47292), (89, 47256), (117, 47142), (123, 47118), (127, 47091), (131, 47067),

Gene: Gancho_76 Start: 49298, Stop: 49711, Start Num: 53
Candidate Starts for Gancho_76:
(24, 49139), (26, 49145), (29, 49187), (36, 49244), (Start: 53 @49298 has 30 MA's), (64, 49319), (96, 49427), (98, 49436), (103, 49484), (116, 49541), (122, 49562), (125, 49577), (127, 49586), (135, 49640), (136, 49661),

Gene: Giles_70 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for Giles_70:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: GrandSlam_61 Start: 40844, Stop: 41248, Start Num: 33
Candidate Starts for GrandSlam_61:
(Start: 33 @40844 has 11 MA's), (34, 40853), (35, 40856), (Start: 42 @40877 has 28 MA's), (Start: 47 @40904 has 3 MA's), (78, 40982), (85, 41003), (108, 41120), (109, 41126), (120, 41180), (125, 41195), (126, 41198), (127, 41204),

Gene: Gravaillia_71 Start: 49579, Stop: 49992, Start Num: 53
Candidate Starts for Gravaillia_71:
(24, 49420), (26, 49426), (29, 49468), (36, 49525), (Start: 53 @49579 has 30 MA's), (64, 49600), (72, 49633), (96, 49708), (98, 49717), (103, 49765), (116, 49822), (122, 49843), (125, 49858), (127, 49867), (136, 49942),

Gene: GrootJr_71 Start: 53488, Stop: 53180, Start Num: 42
Candidate Starts for GrootJr_71:
(18, 53719), (Start: 42 @53488 has 28 MA's), (127, 53200),

Gene: HH92_76 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for HH92_76:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: Hadrien_74 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for Hadrien_74:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: Hail_70 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for Hail_70:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: Hamood_61 Start: 40844, Stop: 41248, Start Num: 33
Candidate Starts for Hamood_61:
(Start: 33 @40844 has 11 MA's), (34, 40853), (35, 40856), (Start: 42 @40877 has 28 MA's), (Start: 47 @40904 has 3 MA's), (78, 40982), (85, 41003), (108, 41120), (109, 41126), (120, 41180), (125, 41195), (126, 41198), (127, 41204),

Gene: Heinz_38 Start: 26794, Stop: 27120, Start Num: 55
Candidate Starts for Heinz_38:
(12, 26335), (13, 26362), (Start: 55 @26794 has 1 MA's), (Start: 57 @26797 has 1 MA's), (Start: 62 @26803 has 4 MA's), (80, 26863), (92, 26899), (97, 26926), (99, 26938), (127, 27079),

Gene: Hibiscus_39 Start: 26746, Stop: 27069, Start Num: 57
Candidate Starts for Hibiscus_39:
(12, 26284), (13, 26311), (Start: 55 @26743 has 1 MA's), (Start: 57 @26746 has 1 MA's), (Start: 62 @26752 has 4 MA's), (80, 26812), (92, 26848), (97, 26875), (99, 26887), (127, 27028),

Gene: HomeFry_76 Start: 52561, Stop: 52211, Start Num: 38
Candidate Starts for HomeFry_76:
(25, 52672), (Start: 38 @52561 has 1 MA's), (46, 52525), (90, 52408), (97, 52375), (131, 52222),

Gene: IMpilo_85 Start: 49064, Stop: 49357, Start Num: 53
Candidate Starts for IMpilo_85:
(50, 49058), (Start: 53 @49064 has 30 MA's), (81, 49139), (99, 49193), (106, 49232), (111, 49262), (114, 49274), (122, 49304), (125, 49325), (127, 49334),

Gene: JalFarm20_98 Start: 52287, Stop: 52580, Start Num: 53
Candidate Starts for JalFarm20_98:
(50, 52281), (Start: 53 @52287 has 30 MA's), (81, 52362), (99, 52416), (106, 52455), (111, 52485), (114, 52497), (122, 52527), (125, 52548), (127, 52557),

Gene: Jifall16_69 Start: 54115, Stop: 53807, Start Num: 42
Candidate Starts for Jifall16_69:
(9, 54733), (10, 54676), (Start: 42 @54115 has 28 MA's), (68, 54031), (127, 53827),

Gene: Kabluna_73 Start: 53539, Stop: 53159, Start Num: 42
Candidate Starts for Kabluna_73:
(Start: 42 @53539 has 28 MA's), (66, 53470), (71, 53446), (89, 53389), (110, 53266), (112, 53263), (115, 53245), (118, 53239), (127, 53191),

Gene: Kewpiedoll_81 Start: 57152, Stop: 57469, Start Num: 58
Candidate Starts for Kewpiedoll_81:
(37, 57086), (Start: 48 @57134 has 1 MA's), (Start: 58 @57152 has 11 MA's), (84, 57230), (109, 57347), (124, 57422), (125, 57425), (127, 57434),

Gene: KidneyBean_70 Start: 54239, Stop: 53931, Start Num: 42
Candidate Starts for KidneyBean_70:
(9, 54857), (10, 54800), (Start: 42 @54239 has 28 MA's), (68, 54155), (127, 53951),

Gene: Kinbote_75 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for Kinbote_75:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: KingJulian_93 Start: 52334, Stop: 52627, Start Num: 53
Candidate Starts for KingJulian_93:
(50, 52328), (Start: 53 @52334 has 30 MA's), (81, 52409), (99, 52463), (106, 52502), (111, 52532), (114, 52544), (122, 52574), (125, 52595), (127, 52604),

Gene: Kurt_69 Start: 54109, Stop: 53801, Start Num: 42
Candidate Starts for Kurt_69:
(18, 54340), (24, 54220), (Start: 42 @54109 has 28 MA's), (127, 53821),

Gene: Lennon_81 Start: 58019, Stop: 58336, Start Num: 58
Candidate Starts for Lennon_81:
(37, 57953), (Start: 48 @58001 has 1 MA's), (Start: 58 @58019 has 11 MA's), (84, 58097), (88, 58115), (99, 58160), (100, 58172), (108, 58208), (109, 58214), (124, 58289), (125, 58292), (127, 58301),

Gene: LilHazelnut_77 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for LilHazelnut_77:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: Lollipop1437_74 Start: 55206, Stop: 54832, Start Num: 39
Candidate Starts for Lollipop1437_74:
(Start: 39 @55206 has 7 MA's), (127, 54912), (129, 54900),

Gene: Luke_74 Start: 49478, Stop: 49891, Start Num: 53
Candidate Starts for Luke_74:
(24, 49319), (26, 49325), (29, 49367), (36, 49424), (Start: 53 @49478 has 30 MA's), (64, 49499), (72, 49532), (96, 49607), (98, 49616), (103, 49664), (111, 49703), (122, 49742), (125, 49757), (127, 49766), (136, 49841),

Gene: Luna22_70 Start: 49507, Stop: 49920, Start Num: 53
Candidate Starts for Luna22_70:
(24, 49348), (26, 49354), (29, 49396), (36, 49453), (Start: 53 @49507 has 30 MA's), (64, 49528), (72, 49561), (96, 49636), (98, 49645), (103, 49693), (111, 49732), (122, 49771), (125, 49786), (127, 49795), (136, 49870),

Gene: Mareelih_23 Start: 8195, Stop: 7875, Start Num: 42
Candidate Starts for Mareelih_23:
(31, 8225), (Start: 42 @8195 has 28 MA's), (61, 8141), (71, 8102), (92, 8051), (119, 7925),

Gene: Mbo2_65 Start: 49843, Stop: 49532, Start Num: 54
Candidate Starts for Mbo2_65:
(Start: 53 @49846 has 30 MA's), (54, 49843), (61, 49834), (91, 49735), (104, 49642), (125, 49558),

Gene: MerCougar_73 Start: 55255, Stop: 54872, Start Num: 42
Candidate Starts for MerCougar_73:

(Start: 42 @55255 has 28 MA's), (66, 55186), (71, 55162), (81, 55138), (89, 55102), (94, 55075), (110, 54979), (112, 54976), (118, 54952), (127, 54904),

Gene: Mulch_60 Start: 40073, Stop: 40477, Start Num: 33
Candidate Starts for Mulch_60:
(Start: 33 @40073 has 11 MA's), (34, 40082), (35, 40085), (Start: 42 @40106 has 28 MA's), (Start: 47 @40133 has 3 MA's), (78, 40211), (108, 40349), (109, 40355), (120, 40409), (125, 40424), (126, 40427), (127, 40433),

Gene: Nadeem_60 Start: 40061, Stop: 40465, Start Num: 33
Candidate Starts for Nadeem_60:
(Start: 33 @40061 has 11 MA's), (34, 40070), (35, 40073), (Start: 42 @40094 has 28 MA's), (Start: 47 @40121 has 3 MA's), (78, 40199), (108, 40337), (109, 40343), (120, 40397), (125, 40412), (126, 40415), (127, 40421),

Gene: NancyRae_59 Start: 40071, Stop: 40415, Start Num: 47
Candidate Starts for NancyRae_59:
(Start: 47 @40071 has 3 MA's), (78, 40149), (108, 40287), (109, 40293), (120, 40347), (125, 40362), (126, 40365), (127, 40371),

Gene: NatB6_69 Start: 53199, Stop: 52870, Start Num: 42
Candidate Starts for NatB6_69:
(19, 53430), (Start: 42 @53199 has 28 MA's), (89, 53067), (123, 52929), (127, 52902),

Gene: Nordenberg_81 Start: 55813, Stop: 56130, Start Num: 58
Candidate Starts for Nordenberg_81:
(37, 55747), (Start: 48 @55795 has 1 MA's), (Start: 58 @55813 has 11 MA's), (84, 55891), (88, 55909), (100, 55966), (108, 56002), (109, 56008), (124, 56083), (125, 56086), (127, 56095),

Gene: NosilaM_72 Start: 54191, Stop: 53805, Start Num: 42
Candidate Starts for NosilaM_72:
(1, 55988), (2, 55640), (3, 55559), (4, 55523), (5, 55451), (6, 55448), (7, 55412), (8, 55181), (11, 54728), (14, 54575), (Start: 42 @54191 has 28 MA's), (86, 54050), (89, 54035), (105, 53939), (115, 53891), (118, 53885), (127, 53837),

Gene: NovoPizza_82 Start: 51793, Stop: 52224, Start Num: 53
Candidate Starts for NovoPizza_82:
(21, 51529), (29, 51673), (Start: 53 @51793 has 30 MA's), (67, 51823), (77, 51862), (87, 51904), (96, 51946), (98, 51955), (103, 52003), (111, 52042), (127, 52111), (130, 52123), (136, 52186), (137, 52189),

Gene: NovumRegina_69 Start: 53487, Stop: 53179, Start Num: 42
Candidate Starts for NovumRegina_69:
(18, 53718), (Start: 42 @53487 has 28 MA's), (127, 53199),

Gene: OBUpride_76 Start: 49567, Stop: 49980, Start Num: 53
Candidate Starts for OBUpride_76:
(24, 49408), (26, 49414), (29, 49456), (36, 49513), (Start: 53 @49567 has 30 MA's), (64, 49588), (72, 49621), (96, 49696), (98, 49705), (103, 49753), (111, 49792), (122, 49831), (125, 49846), (127, 49855), (136, 49930),

Gene: Outis_71 Start: 54347, Stop: 53991, Start Num: 42
Candidate Starts for Outis_71:

(Start: 42 @54347 has 28 MA's), (89, 54221), (94, 54194), (105, 54125), (110, 54098), (127, 54023),

Gene: Parada_60 Start: 40073, Stop: 40477, Start Num: 33
Candidate Starts for Parada_60:
(Start: 33 @40073 has 11 MA's), (34, 40082), (35, 40085), (Start: 42 @40106 has 28 MA's), (Start: 47 @40133 has 3 MA's), (78, 40211), (108, 40349), (109, 40355), (120, 40409), (125, 40424), (126, 40427), (127, 40433),

Gene: Paries_85 Start: 58101, Stop: 58418, Start Num: 58
Candidate Starts for Paries_85:
(37, 58035), (Start: 48 @58083 has 1 MA's), (Start: 58 @58101 has 11 MA's), (84, 58179), (88, 58197), (100, 58254), (108, 58290), (109, 58296), (124, 58371), (125, 58374), (127, 58383),

Gene: Patio_72 Start: 54263, Stop: 53889, Start Num: 39
Candidate Starts for Patio_72:
(Start: 39 @54263 has 7 MA's), (127, 53969), (129, 53957),

Gene: PatoPoderoso_87 Start: 52334, Stop: 52627, Start Num: 53
Candidate Starts for PatoPoderoso_87:
(50, 52328), (Start: 53 @52334 has 30 MA's), (81, 52409), (99, 52463), (106, 52502), (111, 52532), (114, 52544), (122, 52574), (125, 52595), (127, 52604),

Gene: Phalconet_89 Start: 50694, Stop: 50987, Start Num: 53
Candidate Starts for Phalconet_89:
(50, 50688), (Start: 53 @50694 has 30 MA's), (81, 50769), (99, 50823), (106, 50862), (111, 50892), (114, 50904), (122, 50934), (125, 50955), (127, 50964),

Gene: Phomeo_69 Start: 54111, Stop: 53803, Start Num: 42
Candidate Starts for Phomeo_69:
(9, 54729), (10, 54672), (Start: 42 @54111 has 28 MA's), (68, 54027), (127, 53823),

Gene: Pimento_62 Start: 39983, Stop: 40393, Start Num: 33
Candidate Starts for Pimento_62:
(Start: 33 @39983 has 11 MA's), (34, 39992), (35, 39995), (Start: 42 @40016 has 28 MA's), (Start: 55 @40055 has 1 MA's), (76, 40115), (92, 40163), (96, 40184), (101, 40217), (108, 40253), (109, 40259), (120, 40313), (125, 40340), (127, 40349),

Gene: Pleakley_79 Start: 53745, Stop: 53416, Start Num: 41
Candidate Starts for Pleakley_79:
(30, 53799), (Start: 41 @53745 has 3 MA's), (46, 53715), (90, 53613), (97, 53580), (123, 53469), (131, 53427),

Gene: Posh_63 Start: 44207, Stop: 44524, Start Num: 63
Candidate Starts for Posh_63:
(Start: 63 @44207 has 3 MA's), (79, 44267), (82, 44273), (85, 44285), (102, 44384), (107, 44402), (125, 44477), (127, 44486),

Gene: Powerball_60 Start: 40758, Stop: 41087, Start Num: 58
Candidate Starts for Powerball_60:
(Start: 58 @40758 has 11 MA's), (70, 40794), (74, 40809), (95, 40881), (99, 40899), (111, 40971), (120, 41007), (125, 41028), (127, 41037),

Gene: Pupper_188 Start: 134003, Stop: 134368, Start Num: 62

Candidate Starts for Pupper_188:
(44, 133964), (Start: 62 @134003 has 4 MA's), (74, 134048), (85, 134078), (108, 134192),

Gene: RedRaider_77 Start: 56564, Stop: 56193, Start Num: 39
Candidate Starts for RedRaider_77:
(Start: 39 @56564 has 7 MA's), (127, 56273), (129, 56261),

Gene: RiverRaider_84 Start: 55160, Stop: 55474, Start Num: 58
Candidate Starts for RiverRaider_84:
(Start: 58 @55160 has 11 MA's), (84, 55235), (97, 55286), (99, 55298), (100, 55310), (108, 55346), (124, 55427), (125, 55430), (127, 55439),

Gene: Rofo_81 Start: 56542, Stop: 56859, Start Num: 58
Candidate Starts for Rofo_81:
(37, 56476), (Start: 48 @56524 has 1 MA's), (Start: 58 @56542 has 11 MA's), (84, 56620), (88, 56638), (99, 56683), (100, 56695), (108, 56731), (109, 56737), (124, 56812), (125, 56815), (127, 56824),

Gene: SCentae_187 Start: 134195, Stop: 134560, Start Num: 62
Candidate Starts for SCentae_187:
(44, 134156), (Start: 62 @134195 has 4 MA's), (74, 134240), (85, 134270), (108, 134384),

Gene: Scuba_79 Start: 53800, Stop: 53471, Start Num: 41
Candidate Starts for Scuba_79:
(30, 53854), (Start: 41 @53800 has 3 MA's), (90, 53668), (97, 53635), (123, 53524), (131, 53482),

Gene: Sixama_189 Start: 108945, Stop: 108553, Start Num: 42
Candidate Starts for Sixama_189:
(Start: 42 @108945 has 28 MA's),

Gene: Skysand_73 Start: 54926, Stop: 54546, Start Num: 39
Candidate Starts for Skysand_73:
(Start: 39 @54926 has 7 MA's), (123, 54659), (127, 54632), (129, 54620), (133, 54599),

Gene: Spikelee_90 Start: 52392, Stop: 52685, Start Num: 53
Candidate Starts for Spikelee_90:
(50, 52386), (Start: 53 @52392 has 30 MA's), (81, 52467), (99, 52521), (106, 52560), (111, 52590), (114, 52602), (122, 52632), (125, 52653), (127, 52662),

Gene: Sprinklemunch_67 Start: 45346, Stop: 45660, Start Num: 63
Candidate Starts for Sprinklemunch_67:
(14, 44893), (16, 44977), (17, 44989), (20, 45055), (Start: 63 @45346 has 3 MA's), (82, 45409), (85, 45421), (99, 45484), (102, 45520), (107, 45538), (125, 45613),

Gene: StarStruck_71 Start: 54347, Stop: 53991, Start Num: 42
Candidate Starts for StarStruck_71:
(Start: 42 @54347 has 28 MA's), (89, 54221), (94, 54194), (105, 54125), (110, 54098), (127, 54023),

Gene: SuperSulley_72 Start: 54776, Stop: 54396, Start Num: 42
Candidate Starts for SuperSulley_72:
(Start: 42 @54776 has 28 MA's), (66, 54707), (71, 54683), (89, 54626), (112, 54500), (115, 54482), (118, 54476), (127, 54428),

Gene: SussRoloMann_60 Start: 40073, Stop: 40477, Start Num: 33

Candidate Starts for SussRoloMann_60:
(Start: 33 @40073 has 11 MA's), (34, 40082), (35, 40085), (Start: 42 @40106 has 28 MA's), (Start: 47 @40133 has 3 MA's), (78, 40211), (108, 40349), (109, 40355), (120, 40409), (125, 40424), (126, 40427), (127, 40433),

Gene: Tangent_84 Start: 56229, Stop: 56564, Start Num: 48
Candidate Starts for Tangent_84:
(37, 56181), (Start: 48 @56229 has 1 MA's), (Start: 58 @56247 has 11 MA's), (84, 56325), (88, 56343), (99, 56388), (100, 56400), (108, 56436), (109, 56442), (124, 56517), (125, 56520), (127, 56529),

Gene: TinyDot_42 Start: 29467, Stop: 29790, Start Num: 62
Candidate Starts for TinyDot_42:
(51, 29455), (60, 29464), (Start: 62 @29467 has 4 MA's), (80, 29527), (108, 29653), (125, 29737),

Gene: Tracker_69 Start: 52943, Stop: 52614, Start Num: 42
Candidate Starts for Tracker_69:
(Start: 42 @52943 has 28 MA's), (89, 52811), (123, 52673), (127, 52646),

Gene: Turuncu_73 Start: 54452, Stop: 54084, Start Num: 42
Candidate Starts for Turuncu_73:
(Start: 42 @54452 has 28 MA's), (71, 54359), (89, 54326), (115, 54173), (118, 54167), (127, 54119), (131, 54095),

Gene: Ubuntu_77 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for Ubuntu_77:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: Vivi2_85 Start: 57303, Stop: 57620, Start Num: 58
Candidate Starts for Vivi2_85:
(37, 57237), (Start: 48 @57285 has 1 MA's), (Start: 58 @57303 has 11 MA's), (84, 57381), (88, 57399), (99, 57444), (100, 57456), (108, 57492), (109, 57498), (124, 57573), (125, 57576), (127, 57585),

Gene: Webster2_77 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for Webster2_77:
(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: WheatThin_59 Start: 40061, Stop: 40465, Start Num: 33
Candidate Starts for WheatThin_59:
(Start: 33 @40061 has 11 MA's), (34, 40070), (35, 40073), (Start: 42 @40094 has 28 MA's), (Start: 47 @40121 has 3 MA's), (78, 40199), (108, 40337), (109, 40343), (120, 40397), (125, 40412), (126, 40415), (127, 40421),

Gene: Wheezy_69 Start: 53157, Stop: 52828, Start Num: 42
Candidate Starts for Wheezy_69:
(19, 53388), (Start: 42 @53157 has 28 MA's), (89, 53025), (123, 52887), (127, 52860),

Gene: Wishmaker_70 Start: 49523, Stop: 49936, Start Num: 53
Candidate Starts for Wishmaker_70:

(24, 49364), (26, 49370), (29, 49412), (36, 49469), (Start: 53 @49523 has 30 MA's), (64, 49544), (72, 49577), (96, 49652), (98, 49661), (103, 49709), (111, 49748), (122, 49787), (125, 49802), (127, 49811), (136, 49886),

Gene: Wrigley_65 Start: 43790, Stop: 44107, Start Num: 63
Candidate Starts for Wrigley_65:
(Start: 63 @43790 has 3 MA's), (79, 43850), (82, 43856), (85, 43868), (102, 43967), (107, 43985), (125, 44060), (127, 44069),

Gene: Yeezy_60 Start: 40768, Stop: 41082, Start Num: 63
Candidate Starts for Yeezy_60:
(Start: 63 @40768 has 3 MA's), (79, 40825), (85, 40843), (102, 40942), (107, 40960), (127, 41044),

Gene: Yorick_83 Start: 51376, Stop: 51669, Start Num: 53
Candidate Starts for Yorick_83:
(Start: 53 @51376 has 30 MA's), (81, 51451), (99, 51505), (106, 51544), (111, 51574), (114, 51586), (122, 51616), (125, 51637), (127, 51646),