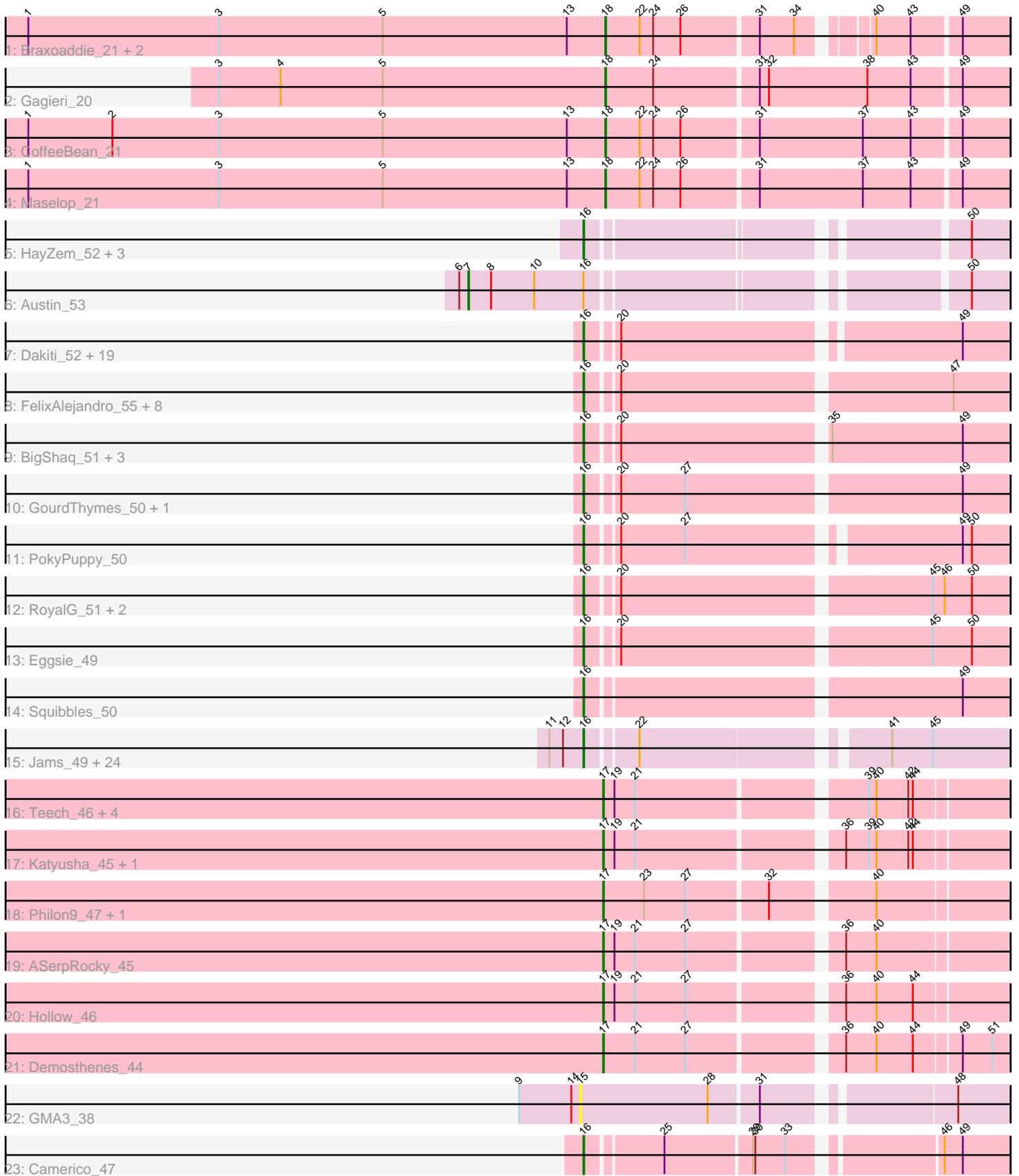# Pham 291044

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 291044 Report

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

Pham number 291044 has 91 members, 8 are drafts.

Phages represented in each track:
• Track 1 : Braxoaddie_21, Polyyuki_21, Apiary_21
• Track 2 : Gagieri_20
• Track 3 : CoffeeBean_21
• Track 4 : Maselop_21
• Track 5 : HayZem_52, GMA7_42, GTE7_41, Amore2_53
• Track 6 : Austin_53
• Track 7 : Dakiti_52, John316_54, CathyBurgh_50, Kelzog_52, Adgers_52, Chelms_51, RemRem_51, Hotorobo_50, Barbochs_49, Flakey_50, Linetti_52, Gorko_50, BirksAndSocks_55, Ekhein_51, Lizzo_50, Breezic_50, Monty_49, Beaver_54, Exiguo_50, Sam12_50
• Track 8 : FelixAlejandro_55, Poland_55, Msay19_55, Butterball_54, CinnamonToast_56, Jellybones_53, Boneham_54, BillyBobJr_56, Sombrero_51
• Track 9 : BigShaq_51, PierreThree_51, BenoitCattle_52, Crete_52
• Track 10 : GourdThymes_50, Worcestershire_51
• Track 11 : PokyPuppy_50
• Track 12 : RoyalG_51, Diabla_54, SteveFrench_50
• Track 13 : Eggsie_49
• Track 14 : Squibbles_50
• Track 15 : Jams_49, Anamika_49, Charianelly_49, Jormungandr_49, Shelley_49, MrWormie_49, Harambe_49, Luker_50, Kaseim_49, Newt_50, GalacticEye_49, Damp_49, Nimi13_49, Teal_49, Hello_49, Berries_49, Sticker17_49, Lahirium_49, Hail2Pitt_48, Neoevie_49, Woes_49, Minos_50, Lidong_49, Bianmat_49, Guillaume_49
• Track 16 : Teech_46, Tredge_46, Niagara_45, Kvothe_45, Teatealatte_46
• Track 17 : Katyusha_45, Benczkowski14_45
• Track 18 : Philon9_47, Vitaenoii_47
• Track 19 : ASerpRocky_45
• Track 20 : Hollow_46
• Track 21 : Demosthenes_44
• Track 22 : GMA3_38
• Track 23 : Camerico_47

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

The start number called the most often in the published annotations is 16, it was called in 64 of the 83 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Adgers_52, Amore2_53, Anamika_49, Barbochs_49, Beaver_54, BenoitCattle_52, Berries_49, Bianmat_49, BigShaq_51, BillyBobJr_56, BirksAndSocks_55, Boneham_54, Breezic_50, Butterball_54, Camerico_47, CathyBurgh_50, Charianelly_49, Chelms_51, CinnamonToast_56, Crete_52, Dakiti_52, Damp_49, Diabla_54, Eggsie_49, Ekhein_51, Exiguo_50, FelixAlejandro_55, Flakey_50, GMA7_42, GTE7_41, GalacticEye_49, Gorko_50, GourdThymes_50, Guillaume_49, Hail2Pitt_48, Harambe_49, HayZem_52, Hello_49, Hotorobo_50, Jams_49, Jellybones_53, John316_54, Jormungandr_49, Kaseim_49, Kelzog_52, Lahirium_49, Lidong_49, Linetti_52, Lizzo_50, Luker_50, Minos_50, Monty_49, MrWormie_49, Msay19_55, Neoevie_49, Newt_50, Nimi13_49, PierreThree_51, PokyPuppy_50, Poland_55, RemRem_51, RoyalG_51, Sam12_50, Shelley_49, Sombrero_51, Squibbles_50, SteveFrench_50, Sticker17_49, Teal_49, Woes_49, Worcestershire_51,

Genes that have the "Most Annotated" start but do not call it:
• Austin_53,

Genes that do not have the "Most Annotated" start:
• ASerpRocky_45, Apiary_21, Benczkowski14_45, Braxoaddie_21, CoffeeBean_21, Demosthenes_44, GMA3_38, Gagieri_20, Hollow_46, Katyusha_45, Kvothe_45, Maselop_21, Niagara_45, Philon9_47, Polyyuki_21, Teatealatte_46, Teech_46, Tredge_46, Vitaenoii_47,

Summary by start number:

Start 7:
• Found in 1 of 91 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 83
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Austin_53 (CS1),

Start 15:
• Found in 1 of 91 (1.1%) 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_38 (DF2),

Start 16:
• Found in 72 of 91 (79.1%) of genes in pham
• Manual Annotations of this start: 64 of 83
• Called 98.6% of time when present
• Phage (with cluster) where this start called: Adgers_52 (CS2), Amore2_53 (CS1), Anamika_49 (CS3), Barbochs_49 (CS2), Beaver_54 (CS2), BenoitCattle_52 (CS2), Berries_49 (CS3), Bianmat_49 (CS3), BigShaq_51 (CS2), BillyBobJr_56 (CS2), BirksAndSocks_55 (CS2), Boneham_54 (CS2), Breezic_50 (CS2), Butterball_54 (CS2), Camerico_47 (DF4), CathyBurgh_50 (CS2), Charianelly_49 (CS3), Chelms_51 (CS2), CinnamonToast_56 (CS2), Crete_52 (CS2), Dakiti_52 (CS2), Damp_49 (CS3), Diabla_54 (CS2), Eggsie_49 (CS2), Ekhein_51 (CS2), Exiguo_50 (CS2), FelixAlejandro_55 (CS2), Flakey_50 (CS2), GMA7_42 (CS1), GTE7_41 (CS1),

GalacticEye_49 (CS3), Gorko_50 (CS2), GourdThymes_50 (CS2), Guillaume_49 (CS3), Hail2Pitt_48 (CS3), Harambe_49 (CS3), HayZem_52 (CS1), Hello_49 (CS3), Hotorobo_50 (CS2), Jams_49 (CS3), Jellybones_53 (CS2), John316_54 (CS2), Jormungandr_49 (CS3), Kaseim_49 (CS3), Kelzog_52 (CS2), Lahirium_49 (CS3), Lidong_49 (CS3), Linetti_52 (CS2), Lizzo_50 (CS2), Luker_50 (CS3), Minos_50 (CS3), Monty_49 (CS2), MrWormie_49 (CS3), Msay19_55 (CS2), Neoevie_49 (CS3), Newt_50 (CS3), Nimi13_49 (CS3), PierreThree_51 (CS2), PokyPuppy_50 (CS2), Poland_55 (CS2), RemRem_51 (CS2), RoyalG_51 (CS2), Sam12_50 (CS2), Shelley_49 (CS3), Sombrero_51 (CS2), Squibbles_50 (CS2), SteveFrench_50 (CS2), Sticker17_49 (CS3), Teal_49 (CS3), Woes_49 (CS3), Worcestershire_51 (CS2),

Start 17:
• Found in 12 of 91 (13.2%) of genes in pham
• Manual Annotations of this start: 12 of 83
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ASerpRocky_45 (CS4), Benczkowski14_45 (CS4), Demosthenes_44 (CS4), Hollow_46 (CS4), Katyusha_45 (CS4), Kvothe_45 (CS4), Niagara_45 (CS4), Philon9_47 (CS4), Teatealatte_46 (CS4), Teech_46 (CS4), Tredge_46 (CS4), Vitaenoii_47 (CS4),

Start 18:
• Found in 6 of 91 (6.6%) of genes in pham
• Manual Annotations of this start: 6 of 83
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Apiary_21 (CR6), Braxoaddie_21 (CR6), CoffeeBean_21 (CR6), Gagieri_20 (CR6), Maselop_21 (CR6), Polyyuki_21 (CR6),

Summary by clusters:

There are 7 clusters represented in this pham: CR6, DF4, DF2, CS4, CS1, CS3, CS2,

Info for manual annotations of cluster CR6:
•Start number 18 was manually annotated 6 times for cluster CR6.

Info for manual annotations of cluster CS1:
•Start number 7 was manually annotated 1 time for cluster CS1.
•Start number 16 was manually annotated 2 times for cluster CS1.

Info for manual annotations of cluster CS2:
•Start number 16 was manually annotated 36 times for cluster CS2.

Info for manual annotations of cluster CS3:
•Start number 16 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CS4:
•Start number 17 was manually annotated 12 times for cluster CS4.

Info for manual annotations of cluster DF4:
•Start number 16 was manually annotated 1 time for cluster DF4.

Gene Information:

Gene: ASerpRocky_45 Start: 46949, Stop: 46455, Start Num: 17
Candidate Starts for ASerpRocky_45:
(Start: 17 @46949 has 12 MA's), (19, 46934), (21, 46907), (27, 46841), (36, 46658), (40, 46619),

Gene: Adgers_52 Start: 46769, Stop: 46248, Start Num: 16
Candidate Starts for Adgers_52:
(Start: 16 @46769 has 64 MA's), (20, 46733), (49, 46307),

Gene: Amore2_53 Start: 47169, Stop: 46684, Start Num: 16
Candidate Starts for Amore2_53:
(Start: 16 @47169 has 64 MA's), (50, 46731),

Gene: Anamika_49 Start: 47821, Stop: 47318, Start Num: 16
Candidate Starts for Anamika_49:
(11, 47866), (12, 47848), (Start: 16 @47821 has 64 MA's), (22, 47761), (41, 47470), (45, 47416),

Gene: Apiary_21 Start: 10881, Stop: 11363, Start Num: 18
Candidate Starts for Apiary_21:
(1, 10119), (3, 10371), (5, 10587), (13, 10830), (Start: 18 @10881 has 6 MA's), (22, 10926), (24, 10944), (26, 10980), (31, 11076), (34, 11121), (40, 11196), (43, 11241), (49, 11301),

Gene: Austin_53 Start: 47319, Stop: 46684, Start Num: 7
Candidate Starts for Austin_53:
(6, 47331), (Start: 7 @47319 has 1 MA's), (8, 47289), (10, 47232), (Start: 16 @47169 has 64 MA's), (50, 46731),

Gene: Barbochs_49 Start: 46513, Stop: 45992, Start Num: 16
Candidate Starts for Barbochs_49:
(Start: 16 @46513 has 64 MA's), (20, 46477), (49, 46051),

Gene: Beaver_54 Start: 48283, Stop: 47762, Start Num: 16
Candidate Starts for Beaver_54:
(Start: 16 @48283 has 64 MA's), (20, 48247), (49, 47821),

Gene: Benczkowski14_45 Start: 47238, Stop: 46744, Start Num: 17
Candidate Starts for Benczkowski14_45:
(Start: 17 @47238 has 12 MA's), (19, 47223), (21, 47196), (36, 46947), (39, 46917), (40, 46908), (42, 46866), (44, 46860),

Gene: BenoitCattle_52 Start: 47030, Stop: 46509, Start Num: 16
Candidate Starts for BenoitCattle_52:
(Start: 16 @47030 has 64 MA's), (20, 46994), (35, 46736), (49, 46568),

Gene: Berries_49 Start: 47793, Stop: 47290, Start Num: 16
Candidate Starts for Berries_49:
(11, 47838), (12, 47820), (Start: 16 @47793 has 64 MA's), (22, 47733), (41, 47442), (45, 47388),

Gene: Bianmat_49 Start: 47833, Stop: 47330, Start Num: 16
Candidate Starts for Bianmat_49:
(11, 47878), (12, 47860), (Start: 16 @47833 has 64 MA's), (22, 47773), (41, 47482), (45, 47428),

Gene: BigShaq_51 Start: 47035, Stop: 46514, Start Num: 16
Candidate Starts for BigShaq_51:
(Start: 16 @47035 has 64 MA's), (20, 46999), (35, 46741), (49, 46573),

Gene: BillyBobJr_56 Start: 48593, Stop: 48072, Start Num: 16
Candidate Starts for BillyBobJr_56:
(Start: 16 @48593 has 64 MA's), (20, 48557), (47, 48143),

Gene: BirksAndSocks_55 Start: 48633, Stop: 48112, Start Num: 16
Candidate Starts for BirksAndSocks_55:
(Start: 16 @48633 has 64 MA's), (20, 48597), (49, 48171),

Gene: Boneham_54 Start: 48534, Stop: 48013, Start Num: 16
Candidate Starts for Boneham_54:
(Start: 16 @48534 has 64 MA's), (20, 48498), (47, 48084),

Gene: Braxoaddie_21 Start: 10869, Stop: 11351, Start Num: 18
Candidate Starts for Braxoaddie_21:
(1, 10107), (3, 10359), (5, 10575), (13, 10818), (Start: 18 @10869 has 6 MA's), (22, 10914), (24, 10932), (26, 10968), (31, 11064), (34, 11109), (40, 11184), (43, 11229), (49, 11289),

Gene: Breezic_50 Start: 46526, Stop: 46005, Start Num: 16
Candidate Starts for Breezic_50:
(Start: 16 @46526 has 64 MA's), (20, 46490), (49, 46064),

Gene: Butterball_54 Start: 48539, Stop: 48018, Start Num: 16
Candidate Starts for Butterball_54:
(Start: 16 @48539 has 64 MA's), (20, 48503), (47, 48089),

Gene: Camerico_47 Start: 46654, Stop: 46154, Start Num: 16
Candidate Starts for Camerico_47:
(Start: 16 @46654 has 64 MA's), (25, 46561), (29, 46453), (30, 46450), (33, 46411), (46, 46240), (49, 46216),

Gene: CathyBurgh_50 Start: 47103, Stop: 46582, Start Num: 16
Candidate Starts for CathyBurgh_50:
(Start: 16 @47103 has 64 MA's), (20, 47067), (49, 46641),

Gene: Charianelly_49 Start: 47543, Stop: 47040, Start Num: 16
Candidate Starts for Charianelly_49:
(11, 47588), (12, 47570), (Start: 16 @47543 has 64 MA's), (22, 47483), (41, 47192), (45, 47138),

Gene: Chelms_51 Start: 47023, Stop: 46514, Start Num: 16
Candidate Starts for Chelms_51:
(Start: 16 @47023 has 64 MA's), (20, 46987), (49, 46573),

Gene: CinnamonToast_56 Start: 48593, Stop: 48072, Start Num: 16
Candidate Starts for CinnamonToast_56:
(Start: 16 @48593 has 64 MA's), (20, 48557), (47, 48143),

Gene: CoffeeBean_21 Start: 10806, Stop: 11321, Start Num: 18
Candidate Starts for CoffeeBean_21:

(1, 10044), (2, 10155), (3, 10296), (5, 10512), (13, 10755), (Start: 18 @10806 has 6 MA's), (22, 10851), (24, 10869), (26, 10905), (31, 11001), (37, 11136), (43, 11199), (49, 11259),

Gene: Crete_52 Start: 47301, Stop: 46780, Start Num: 16
Candidate Starts for Crete_52:
(Start: 16 @47301 has 64 MA's), (20, 47265), (35, 47007), (49, 46839),

Gene: Dakiti_52 Start: 47891, Stop: 47382, Start Num: 16
Candidate Starts for Dakiti_52:
(Start: 16 @47891 has 64 MA's), (20, 47855), (49, 47441),

Gene: Damp_49 Start: 46707, Stop: 46204, Start Num: 16
Candidate Starts for Damp_49:
(11, 46752), (12, 46734), (Start: 16 @46707 has 64 MA's), (22, 46647), (41, 46356), (45, 46302),

Gene: Demosthenes_44 Start: 46925, Stop: 46431, Start Num: 17
Candidate Starts for Demosthenes_44:
(Start: 17 @46925 has 12 MA's), (21, 46883), (27, 46817), (36, 46634), (40, 46595), (44, 46547), (49, 46490), (51, 46451),

Gene: Diabla_54 Start: 48464, Stop: 47943, Start Num: 16
Candidate Starts for Diabla_54:
(Start: 16 @48464 has 64 MA's), (20, 48428), (45, 48041), (46, 48026), (50, 47990),

Gene: Eggsie_49 Start: 46426, Stop: 45905, Start Num: 16
Candidate Starts for Eggsie_49:
(Start: 16 @46426 has 64 MA's), (20, 46390), (45, 46003), (50, 45952),

Gene: Ekhein_51 Start: 46231, Stop: 45710, Start Num: 16
Candidate Starts for Ekhein_51:
(Start: 16 @46231 has 64 MA's), (20, 46195), (49, 45769),

Gene: Exiguo_50 Start: 46243, Stop: 45722, Start Num: 16
Candidate Starts for Exiguo_50:
(Start: 16 @46243 has 64 MA's), (20, 46207), (49, 45781),

Gene: FelixAlejandro_55 Start: 48737, Stop: 48216, Start Num: 16
Candidate Starts for FelixAlejandro_55:
(Start: 16 @48737 has 64 MA's), (20, 48701), (47, 48287),

Gene: Flakey_50 Start: 47107, Stop: 46586, Start Num: 16
Candidate Starts for Flakey_50:
(Start: 16 @47107 has 64 MA's), (20, 47071), (49, 46645),

Gene: GMA3_38 Start: 40837, Stop: 40325, Start Num: 15
Candidate Starts for GMA3_38:
(9, 40918), (14, 40849), (15, 40837), (28, 40669), (31, 40609), (48, 40390),

Gene: GMA7_42 Start: 41383, Stop: 40898, Start Num: 16
Candidate Starts for GMA7_42:
(Start: 16 @41383 has 64 MA's), (50, 40945),

Gene: GTE7_41 Start: 41414, Stop: 40929, Start Num: 16

Candidate Starts for GTE7_41:
(Start: 16 @41414 has 64 MA's), (50, 40976),

Gene: Gagieri_20 Start: 10423, Stop: 10938, Start Num: 18
Candidate Starts for Gagieri_20:
(3, 9913), (4, 9994), (5, 10129), (Start: 18 @10423 has 6 MA's), (24, 10486), (31, 10618), (32, 10630), (38, 10759), (43, 10816), (49, 10876),

Gene: GalacticEye_49 Start: 47504, Stop: 47001, Start Num: 16
Candidate Starts for GalacticEye_49:
(11, 47549), (12, 47531), (Start: 16 @47504 has 64 MA's), (22, 47444), (41, 47153), (45, 47099),

Gene: Gorko_50 Start: 46235, Stop: 45714, Start Num: 16
Candidate Starts for Gorko_50:
(Start: 16 @46235 has 64 MA's), (20, 46199), (49, 45773),

Gene: GourdThymes_50 Start: 47109, Stop: 46588, Start Num: 16
Candidate Starts for GourdThymes_50:
(Start: 16 @47109 has 64 MA's), (20, 47073), (27, 46989), (49, 46647),

Gene: Guillaume_49 Start: 47554, Stop: 47051, Start Num: 16
Candidate Starts for Guillaume_49:
(11, 47599), (12, 47581), (Start: 16 @47554 has 64 MA's), (22, 47494), (41, 47203), (45, 47149),

Gene: Hail2Pitt_48 Start: 48030, Stop: 47527, Start Num: 16
Candidate Starts for Hail2Pitt_48:
(11, 48075), (12, 48057), (Start: 16 @48030 has 64 MA's), (22, 47970), (41, 47679), (45, 47625),

Gene: Harambe_49 Start: 47821, Stop: 47318, Start Num: 16
Candidate Starts for Harambe_49:
(11, 47866), (12, 47848), (Start: 16 @47821 has 64 MA's), (22, 47761), (41, 47470), (45, 47416),

Gene: HayZem_52 Start: 47166, Stop: 46681, Start Num: 16
Candidate Starts for HayZem_52:
(Start: 16 @47166 has 64 MA's), (50, 46728),

Gene: Hello_49 Start: 47783, Stop: 47280, Start Num: 16
Candidate Starts for Hello_49:
(11, 47828), (12, 47810), (Start: 16 @47783 has 64 MA's), (22, 47723), (41, 47432), (45, 47378),

Gene: Hollow_46 Start: 47574, Stop: 47080, Start Num: 17
Candidate Starts for Hollow_46:
(Start: 17 @47574 has 12 MA's), (19, 47559), (21, 47532), (27, 47466), (36, 47283), (40, 47244), (44, 47196),

Gene: Hotorobo_50 Start: 47114, Stop: 46593, Start Num: 16
Candidate Starts for Hotorobo_50:
(Start: 16 @47114 has 64 MA's), (20, 47078), (49, 46652),

Gene: Jams_49 Start: 46993, Stop: 46490, Start Num: 16
Candidate Starts for Jams_49:
(11, 47038), (12, 47020), (Start: 16 @46993 has 64 MA's), (22, 46933), (41, 46642), (45, 46588),

Gene: Jellybones_53 Start: 48215, Stop: 47694, Start Num: 16
Candidate Starts for Jellybones_53:
(Start: 16 @48215 has 64 MA's), (20, 48179), (47, 47765),

Gene: John316_54 Start: 48272, Stop: 47751, Start Num: 16
Candidate Starts for John316_54:
(Start: 16 @48272 has 64 MA's), (20, 48236), (49, 47810),

Gene: Jormungandr_49 Start: 47536, Stop: 47033, Start Num: 16
Candidate Starts for Jormungandr_49:
(11, 47581), (12, 47563), (Start: 16 @47536 has 64 MA's), (22, 47476), (41, 47185), (45, 47131),

Gene: Kaseim_49 Start: 46978, Stop: 46475, Start Num: 16
Candidate Starts for Kaseim_49:
(11, 47023), (12, 47005), (Start: 16 @46978 has 64 MA's), (22, 46918), (41, 46627), (45, 46573),

Gene: Katyusha_45 Start: 47238, Stop: 46744, Start Num: 17
Candidate Starts for Katyusha_45:
(Start: 17 @47238 has 12 MA's), (19, 47223), (21, 47196), (36, 46947), (39, 46917), (40, 46908), (42, 46866), (44, 46860),

Gene: Kelzog_52 Start: 47121, Stop: 46600, Start Num: 16
Candidate Starts for Kelzog_52:
(Start: 16 @47121 has 64 MA's), (20, 47085), (49, 46659),

Gene: Kvothe_45 Start: 47137, Stop: 46643, Start Num: 17
Candidate Starts for Kvothe_45:
(Start: 17 @47137 has 12 MA's), (19, 47122), (21, 47095), (39, 46816), (40, 46807), (42, 46765), (44, 46759),

Gene: Lahirium_49 Start: 48058, Stop: 47555, Start Num: 16
Candidate Starts for Lahirium_49:
(11, 48103), (12, 48085), (Start: 16 @48058 has 64 MA's), (22, 47998), (41, 47707), (45, 47653),

Gene: Lidong_49 Start: 47793, Stop: 47290, Start Num: 16
Candidate Starts for Lidong_49:
(11, 47838), (12, 47820), (Start: 16 @47793 has 64 MA's), (22, 47733), (41, 47442), (45, 47388),

Gene: Linetti_52 Start: 48032, Stop: 47523, Start Num: 16
Candidate Starts for Linetti_52:
(Start: 16 @48032 has 64 MA's), (20, 47996), (49, 47582),

Gene: Lizzo_50 Start: 47103, Stop: 46582, Start Num: 16
Candidate Starts for Lizzo_50:
(Start: 16 @47103 has 64 MA's), (20, 47067), (49, 46641),

Gene: Luker_50 Start: 48011, Stop: 47508, Start Num: 16
Candidate Starts for Luker_50:
(11, 48056), (12, 48038), (Start: 16 @48011 has 64 MA's), (22, 47951), (41, 47660), (45, 47606),

Gene: Maselop_21 Start: 10882, Stop: 11397, Start Num: 18
Candidate Starts for Maselop_21:

(1, 10120), (3, 10372), (5, 10588), (13, 10831), (Start: 18 @10882 has 6 MA's), (22, 10927), (24, 10945), (26, 10981), (31, 11077), (37, 11212), (43, 11275), (49, 11335),

Gene: Minos_50 Start: 47535, Stop: 47032, Start Num: 16
Candidate Starts for Minos_50:
(11, 47580), (12, 47562), (Start: 16 @47535 has 64 MA's), (22, 47475), (41, 47184), (45, 47130),

Gene: Monty_49 Start: 46253, Stop: 45732, Start Num: 16
Candidate Starts for Monty_49:
(Start: 16 @46253 has 64 MA's), (20, 46217), (49, 45791),

Gene: MrWormie_49 Start: 46696, Stop: 46193, Start Num: 16
Candidate Starts for MrWormie_49:
(11, 46741), (12, 46723), (Start: 16 @46696 has 64 MA's), (22, 46636), (41, 46345), (45, 46291),

Gene: Msay19_55 Start: 48726, Stop: 48205, Start Num: 16
Candidate Starts for Msay19_55:
(Start: 16 @48726 has 64 MA's), (20, 48690), (47, 48276),

Gene: Neoevie_49 Start: 47797, Stop: 47294, Start Num: 16
Candidate Starts for Neoevie_49:
(11, 47842), (12, 47824), (Start: 16 @47797 has 64 MA's), (22, 47737), (41, 47446), (45, 47392),

Gene: Newt_50 Start: 48025, Stop: 47522, Start Num: 16
Candidate Starts for Newt_50:
(11, 48070), (12, 48052), (Start: 16 @48025 has 64 MA's), (22, 47965), (41, 47674), (45, 47620),

Gene: Niagara_45 Start: 47216, Stop: 46722, Start Num: 17
Candidate Starts for Niagara_45:
(Start: 17 @47216 has 12 MA's), (19, 47201), (21, 47174), (39, 46895), (40, 46886), (42, 46844), (44, 46838),

Gene: Nimi13_49 Start: 47544, Stop: 47041, Start Num: 16
Candidate Starts for Nimi13_49:
(11, 47589), (12, 47571), (Start: 16 @47544 has 64 MA's), (22, 47484), (41, 47193), (45, 47139),

Gene: Philon9_47 Start: 48247, Stop: 47753, Start Num: 17
Candidate Starts for Philon9_47:
(Start: 17 @48247 has 12 MA's), (23, 48193), (27, 48139), (32, 48037), (40, 47917),

Gene: PierreThree_51 Start: 47781, Stop: 47260, Start Num: 16
Candidate Starts for PierreThree_51:
(Start: 16 @47781 has 64 MA's), (20, 47745), (35, 47487), (49, 47319),

Gene: PokyPuppy_50 Start: 47715, Stop: 47209, Start Num: 16
Candidate Starts for PokyPuppy_50:
(Start: 16 @47715 has 64 MA's), (20, 47679), (27, 47595), (49, 47268), (50, 47256),

Gene: Poland_55 Start: 48705, Stop: 48184, Start Num: 16
Candidate Starts for Poland_55:
(Start: 16 @48705 has 64 MA's), (20, 48669), (47, 48255),

Gene: Polyyuki_21 Start: 10892, Stop: 11374, Start Num: 18

Candidate Starts for Polyyuki_21:
(1, 10130), (3, 10382), (5, 10598), (13, 10841), (Start: 18 @10892 has 6 MA's), (22, 10937), (24, 10955), (26, 10991), (31, 11087), (34, 11132), (40, 11207), (43, 11252), (49, 11312),

Gene: RemRem_51 Start: 46243, Stop: 45722, Start Num: 16
Candidate Starts for RemRem_51:
(Start: 16 @46243 has 64 MA's), (20, 46207), (49, 45781),

Gene: RoyalG_51 Start: 47075, Stop: 46554, Start Num: 16
Candidate Starts for RoyalG_51:
(Start: 16 @47075 has 64 MA's), (20, 47039), (45, 46652), (46, 46637), (50, 46601),

Gene: Sam12_50 Start: 46243, Stop: 45722, Start Num: 16
Candidate Starts for Sam12_50:
(Start: 16 @46243 has 64 MA's), (20, 46207), (49, 45781),

Gene: Shelley_49 Start: 47020, Stop: 46517, Start Num: 16
Candidate Starts for Shelley_49:
(11, 47065), (12, 47047), (Start: 16 @47020 has 64 MA's), (22, 46960), (41, 46669), (45, 46615),

Gene: Sombrero_51 Start: 46616, Stop: 46095, Start Num: 16
Candidate Starts for Sombrero_51:
(Start: 16 @46616 has 64 MA's), (20, 46580), (47, 46166),

Gene: Squibbles_50 Start: 47106, Stop: 46585, Start Num: 16
Candidate Starts for Squibbles_50:
(Start: 16 @47106 has 64 MA's), (49, 46644),

Gene: SteveFrench_50 Start: 47315, Stop: 46794, Start Num: 16
Candidate Starts for SteveFrench_50:
(Start: 16 @47315 has 64 MA's), (20, 47279), (45, 46892), (46, 46877), (50, 46841),

Gene: Sticker17_49 Start: 47535, Stop: 47032, Start Num: 16
Candidate Starts for Sticker17_49:
(11, 47580), (12, 47562), (Start: 16 @47535 has 64 MA's), (22, 47475), (41, 47184), (45, 47130),

Gene: Teal_49 Start: 48002, Stop: 47499, Start Num: 16
Candidate Starts for Teal_49:
(11, 48047), (12, 48029), (Start: 16 @48002 has 64 MA's), (22, 47942), (41, 47651), (45, 47597),

Gene: Teatealatte_46 Start: 47140, Stop: 46646, Start Num: 17
Candidate Starts for Teatealatte_46:
(Start: 17 @47140 has 12 MA's), (19, 47125), (21, 47098), (39, 46819), (40, 46810), (42, 46768), (44, 46762),

Gene: Teech_46 Start: 46941, Stop: 46447, Start Num: 17
Candidate Starts for Teech_46:
(Start: 17 @46941 has 12 MA's), (19, 46926), (21, 46899), (39, 46620), (40, 46611), (42, 46569), (44, 46563),

Gene: Tredge_46 Start: 47140, Stop: 46646, Start Num: 17
Candidate Starts for Tredge_46:

(Start: 17 @47140 has 12 MA's), (19, 47125), (21, 47098), (39, 46819), (40, 46810), (42, 46768), (44, 46762),

Gene: Vitaenoii_47 Start: 48246, Stop: 47752, Start Num: 17
Candidate Starts for Vitaenoii_47:
(Start: 17 @48246 has 12 MA's), (23, 48192), (27, 48138), (32, 48036), (40, 47916),

Gene: Woes_49 Start: 48053, Stop: 47550, Start Num: 16
Candidate Starts for Woes_49:
(11, 48098), (12, 48080), (Start: 16 @48053 has 64 MA's), (22, 47993), (41, 47702), (45, 47648),

Gene: Worcestershire_51 Start: 46245, Stop: 45724, Start Num: 16
Candidate Starts for Worcestershire_51:
(Start: 16 @46245 has 64 MA's), (20, 46209), (27, 46125), (49, 45783),