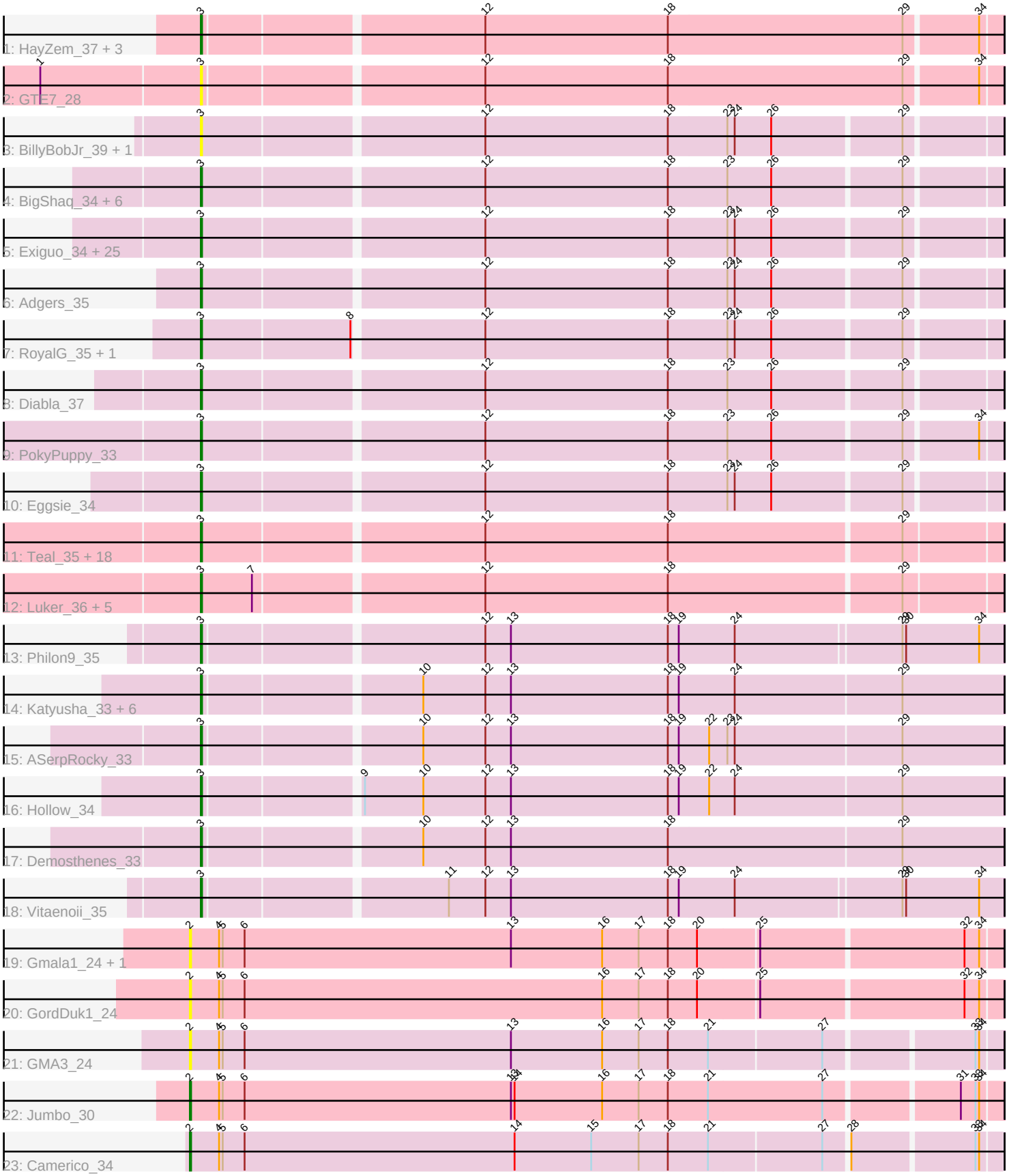
Pham 343885


1: HayZem_37 + 3
2: GTE7_28
3: BillyBobJr_39 + 1
4: BigShaq_34 + 6
5: Exiguo_34 + 25
6: Adgers_35
7: RoyalG_35 + 1
8: Diabla_37
9: PokyPuppy_33
10: Eggsie_34
11: Teal_35 + 18
12: Luker_36 + 5
13: Philon9_35
14: Katyusha_33 + 6
15: ASerpRocky_33
16: Hollow_34
17: Demosthenes_33
18: Vitaenoii_35
19: Gmala1_24 + 1
20: GordDuk1_24
21: GMA3_24
22: Jumbo_30
23: Camerico_34

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 343885 Report

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

Pham number 343885 has 89 members, 9 are drafts.

Phages represented in each track:
• Track 1 : HayZem_37, GMA7_28, Amore2_38, Austin_38
• Track 2 : GTE7_28
• Track 3 : BillyBobJr_39, CinnamonToast_39
• Track 4 : BigShaq_34, PierreThree_34, Chelms_34, Linetti_35, Crete_35, BenoitCattle_34, Dakiti_34
• Track 5 : Exiguo_34, RemRem_35, Jellybones_38, John316_38, Beaver_38, Worcestershire_34, Squibbles_34, Boneham_38, Flakey_34, FelixAlejandro_39, Ekhein_34, Lizzo_34, Hotorobo_34, Breezic_34, Sombrero_34, BirksAndSocks_38, CathyBurgh_34, GourdThymes_34, Sam12_34, Barbochs_34, Msay19_39, Gorko_34, Butterball_38, Kelzog_34, Poland_39, Monty_33
• Track 6 : Adgers_35
• Track 7 : RoyalG_35, SteveFrench_34
• Track 8 : Diabla_37
• Track 9 : PokyPuppy_33
• Track 10 : Eggsie_34
• Track 11 : Teal_35, Jams_35, Woes_35, Sticker17_35, Nimi13_35, Minos_36, Shelley_35, Harambe_35, Lahirium_35, GalacticEye_35, Hello_35, Berries_35, Charianelly_35, Bianmat_35, Damp_35, MrWormie_35, Newt_36, Kaseim_35, Lidong_35
• Track 12 : Luker_36, Hail2Pitt_35, Anamika_35, Neoevie_35, Guillaume_35, Jormungandr_35
• Track 13 : Philon9_35
• Track 14 : Katyusha_33, Teech_33, Tredge_33, Teatealatte_33, Benczkowski14_33, Kvothe_33, Niagara_33
• Track 15 : ASerpRocky_33
• Track 16 : Hollow_34
• Track 17 : Demosthenes_33
• Track 18 : Vitaenoii_35
• Track 19 : Gmala1_24, GordTnk2_24
• Track 20 : GordDuk1_24
• Track 21 : GMA3_24
• Track 22 : Jumbo_30
• Track 23 : Camerico_34

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

The start number called the most often in the published annotations is 3, it was called in 78 of the 80 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ASerpRocky_33, Adgers_35, Amore2_38, Anamika_35, Austin_38, Barbochs_34, Beaver_38, Benczkowski14_33, BenoitCattle_34, Berries_35, Bianmat_35, BigShaq_34, BillyBobJr_39, BirksAndSocks_38, Boneham_38, Breezic_34, Butterball_38, CathyBurgh_34, Charianelly_35, Chelms_34, CinnamonToast_39, Crete_35, Dakiti_34, Damp_35, Demosthenes_33, Diabla_37, Eggsie_34, Ekhein_34, Exiguo_34, FelixAlejandro_39, Flakey_34, GMA7_28, GTE7_28, GalacticEye_35, Gorko_34, GourdThymes_34, Guillaume_35, Hail2Pitt_35, Harambe_35, HayZem_37, Hello_35, Hollow_34, Hotorobo_34, Jams_35, Jellybones_38, John316_38, Jormungandr_35, Kaseim_35, Katyusha_33, Kelzog_34, Kvothe_33, Lahirium_35, Lidong_35, Linetti_35, Lizzo_34, Luker_36, Minos_36, Monty_33, MrWormie_35, Msay19_39, Neoevie_35, Newt_36, Niagara_33, Nimi13_35, Philon9_35, PierreThree_34, PokyPuppy_33, Poland_39, RemRem_35, RoyalG_35, Sam12_34, Shelley_35, Sombrero_34, Squibbles_34, SteveFrench_34, Sticker17_35, Teal_35, Teatealatte_33, Teech_33, Tredge_33, Vitaenoii_35, Woes_35, Worcestershire_34,

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

Genes that do not have the "Most Annotated" start:
• Camerico_34, GMA3_24, Gmala1_24, GordDuk1_24, GordTnk2_24, Jumbo_30,

Summary by start number:

Start 2:
• Found in 6 of 89 (6.7%) of genes in pham
• Manual Annotations of this start: 2 of 80
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Camerico_34 (DF4), GMA3_24 (DF2), Gmala1_24 (DF1), GordDuk1_24 (DF1), GordTnk2_24 (DF1), Jumbo_30 (DF3),

Start 3:
• Found in 83 of 89 (93.3%) of genes in pham
• Manual Annotations of this start: 78 of 80
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ASerpRocky_33 (CS4), Adgers_35 (CS2), Amore2_38 (CS1), Anamika_35 (CS3), Austin_38 (CS1), Barbochs_34 (CS2), Beaver_38 (CS2), Benczkowski14_33 (CS4), BenoitCattle_34 (CS2), Berries_35 (CS3), Bianmat_35 (CS3), BigShaq_34 (CS2), BillyBobJr_39 (CS2), BirksAndSocks_38 (CS2), Boneham_38 (CS2), Breezic_34 (CS2), Butterball_38 (CS2), CathyBurgh_34 (CS2), Charianelly_35 (CS3), Chelms_34 (CS2), CinnamonToast_39 (CS2), Crete_35 (CS2), Dakiti_34 (CS2), Damp_35 (CS3), Demosthenes_33 (CS4), Diabla_37 (CS2), Eggsie_34 (CS2), Ekhein_34 (CS2), Exiguo_34 (CS2), FelixAlejandro_39 (CS2), Flakey_34 (CS2), GMA7_28 (CS1), GTE7_28 (CS1), GalacticEye_35 (CS3), Gorko_34 (CS2), GourdThymes_34 (CS2), Guillaume_35 (CS3), Hail2Pitt_35 (CS3), Harambe_35 (CS3), HayZem_37 (CS1), Hello_35 (CS3), Hollow_34 (CS4), Hotorobo_34 (CS2), Jams_35 (CS3), Jellybones_38 (CS2), John316_38 (CS2), Jormungandr_35 (CS3), Kaseim_35 (CS3),

Katyusha_33 (CS4), Kelzog_34 (CS2), Kvothe_33 (CS4), Lahirium_35 (CS3), Lidong_35 (CS3), Linetti_35 (CS2), Lizzo_34 (CS2), Luker_36 (CS3), Minos_36 (CS3), Monty_33 (CS2), MrWormie_35 (CS3), Msay19_39 (CS2), Neoevie_35 (CS3), Newt_36 (CS3), Niagara_33 (CS4), Nimi13_35 (CS3), Philon9_35 (CS4), PierreThree_34 (CS2), PokyPuppy_33 (CS2), Poland_39 (CS2), RemRem_35 (CS2), RoyalG_35 (CS2), Sam12_34 (CS2), Shelley_35 (CS3), Sombrero_34 (CS2), Squibbles_34 (CS2), SteveFrench_34 (CS2), Sticker17_35 (CS3), Teal_35 (CS3), Teatealatte_33 (CS4), Teech_33 (CS4), Tredge_33 (CS4), Vitaenoii_35 (CS4), Woes_35 (CS3), Worcestershire_34 (CS2),

Summary by clusters:

There are 8 clusters represented in this pham: DF4, DF1, DF3, DF2, CS4, CS1, CS3, CS2,

Info for manual annotations of cluster CS1:
•Start number 3 was manually annotated 3 times for cluster CS1.

Info for manual annotations of cluster CS2:
•Start number 3 was manually annotated 38 times for cluster CS2.

Info for manual annotations of cluster CS3:
•Start number 3 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CS4:
•Start number 3 was manually annotated 12 times for cluster CS4.

Info for manual annotations of cluster DF3:
•Start number 2 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DF4:
•Start number 2 was manually annotated 1 time for cluster DF4.

Gene Information:

Gene: ASerpRocky_33 Start: 39885, Stop: 40526, Start Num: 3
Candidate Starts for ASerpRocky_33:
(Start: 3 @39885 has 78 MA's), (10, 40053), (12, 40104), (13, 40125), (18, 40254), (19, 40263), (22, 40287), (23, 40302), (24, 40308), (29, 40443),

Gene: Adgers_35 Start: 38427, Stop: 39059, Start Num: 3
Candidate Starts for Adgers_35:
(Start: 3 @38427 has 78 MA's), (12, 38649), (18, 38799), (23, 38847), (24, 38853), (26, 38883), (29, 38985),

Gene: Amore2_38 Start: 38954, Stop: 39589, Start Num: 3
Candidate Starts for Amore2_38:
(Start: 3 @38954 has 78 MA's), (12, 39173), (18, 39323), (29, 39515), (34, 39572),

Gene: Anamika_35 Start: 40800, Stop: 41435, Start Num: 3
Candidate Starts for Anamika_35:
(Start: 3 @40800 has 78 MA's), (7, 40842), (12, 41022), (18, 41172), (29, 41358),

Gene: Austin_38 Start: 38954, Stop: 39589, Start Num: 3
Candidate Starts for Austin_38:
(Start: 3 @38954 has 78 MA's), (12, 39173), (18, 39323), (29, 39515), (34, 39572),

Gene: Barbochs_34 Start: 38266, Stop: 38898, Start Num: 3
Candidate Starts for Barbochs_34:
(Start: 3 @38266 has 78 MA's), (12, 38488), (18, 38638), (23, 38686), (24, 38692), (26, 38722), (29, 38824),

Gene: Beaver_38 Start: 40313, Stop: 40945, Start Num: 3
Candidate Starts for Beaver_38:
(Start: 3 @40313 has 78 MA's), (12, 40535), (18, 40685), (23, 40733), (24, 40739), (26, 40769), (29, 40871),

Gene: Benczkowski14_33 Start: 39924, Stop: 40565, Start Num: 3
Candidate Starts for Benczkowski14_33:
(Start: 3 @39924 has 78 MA's), (10, 40092), (12, 40143), (13, 40164), (18, 40293), (19, 40302), (24, 40347), (29, 40482),

Gene: BenoitCattle_34 Start: 38371, Stop: 39003, Start Num: 3
Candidate Starts for BenoitCattle_34:
(Start: 3 @38371 has 78 MA's), (12, 38593), (18, 38743), (23, 38791), (26, 38827), (29, 38929),

Gene: Berries_35 Start: 40771, Stop: 41406, Start Num: 3
Candidate Starts for Berries_35:
(Start: 3 @40771 has 78 MA's), (12, 40993), (18, 41143), (29, 41329),

Gene: Bianmat_35 Start: 40811, Stop: 41446, Start Num: 3
Candidate Starts for Bianmat_35:
(Start: 3 @40811 has 78 MA's), (12, 41033), (18, 41183), (29, 41369),

Gene: BigShaq_34 Start: 38376, Stop: 39008, Start Num: 3
Candidate Starts for BigShaq_34:
(Start: 3 @38376 has 78 MA's), (12, 38598), (18, 38748), (23, 38796), (26, 38832), (29, 38934),

Gene: BillyBobJr_39 Start: 40344, Stop: 40976, Start Num: 3
Candidate Starts for BillyBobJr_39:
(Start: 3 @40344 has 78 MA's), (12, 40566), (18, 40716), (23, 40764), (24, 40770), (26, 40800), (29, 40902),

Gene: BirksAndSocks_38 Start: 40291, Stop: 40923, Start Num: 3
Candidate Starts for BirksAndSocks_38:
(Start: 3 @40291 has 78 MA's), (12, 40513), (18, 40663), (23, 40711), (24, 40717), (26, 40747), (29, 40849),

Gene: Boneham_38 Start: 40290, Stop: 40922, Start Num: 3
Candidate Starts for Boneham_38:
(Start: 3 @40290 has 78 MA's), (12, 40512), (18, 40662), (23, 40710), (24, 40716), (26, 40746), (29, 40848),

Gene: Breezic_34 Start: 38279, Stop: 38911, Start Num: 3
Candidate Starts for Breezic_34:
(Start: 3 @38279 has 78 MA's), (12, 38501), (18, 38651), (23, 38699), (24, 38705), (26, 38735), (29, 38837),

Gene: Butterball_38 Start: 40290, Stop: 40922, Start Num: 3
Candidate Starts for Butterball_38:
(Start: 3 @40290 has 78 MA's), (12, 40512), (18, 40662), (23, 40710), (24, 40716), (26, 40746), (29, 40848),

Gene: Camerico_34 Start: 40664, Stop: 41311, Start Num: 2
Candidate Starts for Camerico_34:
(Start: 2 @40664 has 2 MA's), (4, 40688), (5, 40691), (6, 40709), (14, 40931), (15, 40994), (17, 41033), (18, 41057), (21, 41090), (27, 41180), (28, 41198), (33, 41294), (34, 41297),

Gene: CathyBurgh_34 Start: 39133, Stop: 39765, Start Num: 3
Candidate Starts for CathyBurgh_34:
(Start: 3 @39133 has 78 MA's), (12, 39355), (18, 39505), (23, 39553), (24, 39559), (26, 39589), (29, 39691),

Gene: Charianelly_35 Start: 40521, Stop: 41156, Start Num: 3
Candidate Starts for Charianelly_35:
(Start: 3 @40521 has 78 MA's), (12, 40743), (18, 40893), (29, 41079),

Gene: Chelms_34 Start: 38379, Stop: 39011, Start Num: 3
Candidate Starts for Chelms_34:
(Start: 3 @38379 has 78 MA's), (12, 38601), (18, 38751), (23, 38799), (26, 38835), (29, 38937),

Gene: CinnamonToast_39 Start: 40344, Stop: 40976, Start Num: 3
Candidate Starts for CinnamonToast_39:
(Start: 3 @40344 has 78 MA's), (12, 40566), (18, 40716), (23, 40764), (24, 40770), (26, 40800), (29, 40902),

Gene: Crete_35 Start: 38642, Stop: 39274, Start Num: 3
Candidate Starts for Crete_35:
(Start: 3 @38642 has 78 MA's), (12, 38864), (18, 39014), (23, 39062), (26, 39098), (29, 39200),

Gene: Dakiti_34 Start: 39247, Stop: 39879, Start Num: 3
Candidate Starts for Dakiti_34:
(Start: 3 @39247 has 78 MA's), (12, 39469), (18, 39619), (23, 39667), (26, 39703), (29, 39805),

Gene: Damp_35 Start: 39685, Stop: 40320, Start Num: 3
Candidate Starts for Damp_35:
(Start: 3 @39685 has 78 MA's), (12, 39907), (18, 40057), (29, 40243),

Gene: Demosthenes_33 Start: 39858, Stop: 40499, Start Num: 3
Candidate Starts for Demosthenes_33:
(Start: 3 @39858 has 78 MA's), (10, 40026), (12, 40077), (13, 40098), (18, 40227), (29, 40416),

Gene: Diabla_37 Start: 40134, Stop: 40766, Start Num: 3
Candidate Starts for Diabla_37:
(Start: 3 @40134 has 78 MA's), (12, 40356), (18, 40506), (23, 40554), (26, 40590), (29, 40692),

Gene: Eggsie_34 Start: 38403, Stop: 39035, Start Num: 3
Candidate Starts for Eggsie_34:
(Start: 3 @38403 has 78 MA's), (12, 38625), (18, 38775), (23, 38823), (24, 38829), (26, 38859), (29, 38961),

Gene: Ekhein_34 Start: 38261, Stop: 38893, Start Num: 3
Candidate Starts for Ekhein_34:
(Start: 3 @38261 has 78 MA's), (12, 38483), (18, 38633), (23, 38681), (24, 38687), (26, 38717), (29, 38819),

Gene: Exiguo_34 Start: 38273, Stop: 38905, Start Num: 3
Candidate Starts for Exiguo_34:
(Start: 3 @38273 has 78 MA's), (12, 38495), (18, 38645), (23, 38693), (24, 38699), (26, 38729), (29, 38831),

Gene: FelixAlejandro_39 Start: 40488, Stop: 41120, Start Num: 3
Candidate Starts for FelixAlejandro_39:
(Start: 3 @40488 has 78 MA's), (12, 40710), (18, 40860), (23, 40908), (24, 40914), (26, 40944), (29, 41046),

Gene: Flakey_34 Start: 39137, Stop: 39769, Start Num: 3
Candidate Starts for Flakey_34:
(Start: 3 @39137 has 78 MA's), (12, 39359), (18, 39509), (23, 39557), (24, 39563), (26, 39593), (29, 39695),

Gene: GMA3_24 Start: 34939, Stop: 35589, Start Num: 2
Candidate Starts for GMA3_24:
(Start: 2 @34939 has 2 MA's), (4, 34963), (5, 34966), (6, 34984), (13, 35203), (16, 35278), (17, 35308), (18, 35332), (21, 35365), (27, 35455), (33, 35569), (34, 35572),

Gene: GMA7_28 Start: 33168, Stop: 33803, Start Num: 3
Candidate Starts for GMA7_28:
(Start: 3 @33168 has 78 MA's), (12, 33387), (18, 33537), (29, 33729), (34, 33786),

Gene: GTE7_28 Start: 33199, Stop: 33834, Start Num: 3
Candidate Starts for GTE7_28:
(1, 33070), (Start: 3 @33199 has 78 MA's), (12, 33418), (18, 33568), (29, 33760), (34, 33817),

Gene: GalacticEye_35 Start: 40483, Stop: 41118, Start Num: 3
Candidate Starts for GalacticEye_35:
(Start: 3 @40483 has 78 MA's), (12, 40705), (18, 40855), (29, 41041),

Gene: Gmala1_24 Start: 33337, Stop: 33993, Start Num: 2
Candidate Starts for Gmala1_24:
(Start: 2 @33337 has 2 MA's), (4, 33361), (5, 33364), (6, 33382), (13, 33601), (16, 33676), (17, 33706), (18, 33730), (20, 33754), (25, 33802), (32, 33964), (34, 33976),

Gene: GordDuk1_24 Start: 33277, Stop: 33933, Start Num: 2
Candidate Starts for GordDuk1_24:
(Start: 2 @33277 has 2 MA's), (4, 33301), (5, 33304), (6, 33322), (16, 33616), (17, 33646), (18, 33670), (20, 33694), (25, 33742), (32, 33904), (34, 33916),

Gene: GordTnk2_24 Start: 33244, Stop: 33900, Start Num: 2
Candidate Starts for GordTnk2_24:
(Start: 2 @33244 has 2 MA's), (4, 33268), (5, 33271), (6, 33289), (13, 33508), (16, 33583), (17, 33613), (18, 33637), (20, 33661), (25, 33709), (32, 33871), (34, 33883),

Gene: Gorko_34 Start: 38265, Stop: 38897, Start Num: 3
Candidate Starts for Gorko_34:
(Start: 3 @38265 has 78 MA's), (12, 38487), (18, 38637), (23, 38685), (24, 38691), (26, 38721), (29, 38823),

Gene: GourdThymes_34 Start: 39139, Stop: 39771, Start Num: 3
Candidate Starts for GourdThymes_34:
(Start: 3 @39139 has 78 MA's), (12, 39361), (18, 39511), (23, 39559), (24, 39565), (26, 39595), (29, 39697),

Gene: Guillaume_35 Start: 40533, Stop: 41168, Start Num: 3
Candidate Starts for Guillaume_35:
(Start: 3 @40533 has 78 MA's), (7, 40575), (12, 40755), (18, 40905), (29, 41091),

Gene: Hail2Pitt_35 Start: 41009, Stop: 41644, Start Num: 3
Candidate Starts for Hail2Pitt_35:
(Start: 3 @41009 has 78 MA's), (7, 41051), (12, 41231), (18, 41381), (29, 41567),

Gene: Harambe_35 Start: 40800, Stop: 41435, Start Num: 3
Candidate Starts for Harambe_35:
(Start: 3 @40800 has 78 MA's), (12, 41022), (18, 41172), (29, 41358),

Gene: HayZem_37 Start: 38951, Stop: 39586, Start Num: 3
Candidate Starts for HayZem_37:
(Start: 3 @38951 has 78 MA's), (12, 39170), (18, 39320), (29, 39512), (34, 39569),

Gene: Hello_35 Start: 40762, Stop: 41397, Start Num: 3
Candidate Starts for Hello_35:
(Start: 3 @40762 has 78 MA's), (12, 40984), (18, 41134), (29, 41320),

Gene: Hollow_34 Start: 40270, Stop: 40911, Start Num: 3
Candidate Starts for Hollow_34:
(Start: 3 @40270 has 78 MA's), (9, 40390), (10, 40438), (12, 40489), (13, 40510), (18, 40639), (19, 40648), (22, 40672), (24, 40693), (29, 40828),

Gene: Hotorobo_34 Start: 39144, Stop: 39776, Start Num: 3
Candidate Starts for Hotorobo_34:
(Start: 3 @39144 has 78 MA's), (12, 39366), (18, 39516), (23, 39564), (24, 39570), (26, 39600), (29, 39702),

Gene: Jams_35 Start: 39971, Stop: 40606, Start Num: 3
Candidate Starts for Jams_35:
(Start: 3 @39971 has 78 MA's), (12, 40193), (18, 40343), (29, 40529),

Gene: Jellybones_38 Start: 40349, Stop: 40981, Start Num: 3
Candidate Starts for Jellybones_38:
(Start: 3 @40349 has 78 MA's), (12, 40571), (18, 40721), (23, 40769), (24, 40775), (26, 40805), (29, 40907),

Gene: John316_38 Start: 40302, Stop: 40934, Start Num: 3
Candidate Starts for John316_38:
(Start: 3 @40302 has 78 MA's), (12, 40524), (18, 40674), (23, 40722), (24, 40728), (26, 40758), (29, 40860),

Gene: Jormungandr_35 Start: 40515, Stop: 41150, Start Num: 3
Candidate Starts for Jormungandr_35:
(Start: 3 @40515 has 78 MA's), (7, 40557), (12, 40737), (18, 40887), (29, 41073),

Gene: Jumbo_30 Start: 39270, Stop: 39923, Start Num: 2
Candidate Starts for Jumbo_30:
(Start: 2 @39270 has 2 MA's), (4, 39294), (5, 39297), (6, 39315), (13, 39534), (14, 39537), (16, 39609), (17, 39639), (18, 39663), (21, 39696), (27, 39789), (31, 39891), (33, 39903), (34, 39906),

Gene: Kaseim_35 Start: 39956, Stop: 40591, Start Num: 3
Candidate Starts for Kaseim_35:
(Start: 3 @39956 has 78 MA's), (12, 40178), (18, 40328), (29, 40514),

Gene: Katyusha_33 Start: 39924, Stop: 40565, Start Num: 3
Candidate Starts for Katyusha_33:
(Start: 3 @39924 has 78 MA's), (10, 40092), (12, 40143), (13, 40164), (18, 40293), (19, 40302), (24, 40347), (29, 40482),

Gene: Kelzog_34 Start: 39151, Stop: 39783, Start Num: 3
Candidate Starts for Kelzog_34:
(Start: 3 @39151 has 78 MA's), (12, 39373), (18, 39523), (23, 39571), (24, 39577), (26, 39607), (29, 39709),

Gene: Kvothe_33 Start: 39823, Stop: 40464, Start Num: 3
Candidate Starts for Kvothe_33:
(Start: 3 @39823 has 78 MA's), (10, 39991), (12, 40042), (13, 40063), (18, 40192), (19, 40201), (24, 40246), (29, 40381),

Gene: Lahirium_35 Start: 41037, Stop: 41672, Start Num: 3
Candidate Starts for Lahirium_35:
(Start: 3 @41037 has 78 MA's), (12, 41259), (18, 41409), (29, 41595),

Gene: Lidong_35 Start: 40771, Stop: 41406, Start Num: 3
Candidate Starts for Lidong_35:
(Start: 3 @40771 has 78 MA's), (12, 40993), (18, 41143), (29, 41329),

Gene: Linetti_35 Start: 39373, Stop: 40005, Start Num: 3
Candidate Starts for Linetti_35:
(Start: 3 @39373 has 78 MA's), (12, 39595), (18, 39745), (23, 39793), (26, 39829), (29, 39931),

Gene: Lizzo_34 Start: 39133, Stop: 39765, Start Num: 3
Candidate Starts for Lizzo_34:
(Start: 3 @39133 has 78 MA's), (12, 39355), (18, 39505), (23, 39553), (24, 39559), (26, 39589), (29, 39691),

Gene: Luker_36 Start: 40990, Stop: 41625, Start Num: 3
Candidate Starts for Luker_36:

(Start: 3 @40990 has 78 MA's), (7, 41032), (12, 41212), (18, 41362), (29, 41548),

Gene: Minos_36 Start: 40513, Stop: 41148, Start Num: 3
Candidate Starts for Minos_36:
(Start: 3 @40513 has 78 MA's), (12, 40735), (18, 40885), (29, 41071),

Gene: Monty_33 Start: 38283, Stop: 38915, Start Num: 3
Candidate Starts for Monty_33:
(Start: 3 @38283 has 78 MA's), (12, 38505), (18, 38655), (23, 38703), (24, 38709), (26, 38739), (29, 38841),

Gene: MrWormie_35 Start: 39674, Stop: 40309, Start Num: 3
Candidate Starts for MrWormie_35:
(Start: 3 @39674 has 78 MA's), (12, 39896), (18, 40046), (29, 40232),

Gene: Msay19_39 Start: 40479, Stop: 41111, Start Num: 3
Candidate Starts for Msay19_39:
(Start: 3 @40479 has 78 MA's), (12, 40701), (18, 40851), (23, 40899), (24, 40905), (26, 40935), (29, 41037),

Gene: Neoevie_35 Start: 40776, Stop: 41411, Start Num: 3
Candidate Starts for Neoevie_35:
(Start: 3 @40776 has 78 MA's), (7, 40818), (12, 40998), (18, 41148), (29, 41334),

Gene: Newt_36 Start: 41004, Stop: 41639, Start Num: 3
Candidate Starts for Newt_36:
(Start: 3 @41004 has 78 MA's), (12, 41226), (18, 41376), (29, 41562),

Gene: Niagara_33 Start: 39881, Stop: 40522, Start Num: 3
Candidate Starts for Niagara_33:
(Start: 3 @39881 has 78 MA's), (10, 40049), (12, 40100), (13, 40121), (18, 40250), (19, 40259), (24, 40304), (29, 40439),

Gene: Nimi13_35 Start: 40522, Stop: 41157, Start Num: 3
Candidate Starts for Nimi13_35:
(Start: 3 @40522 has 78 MA's), (12, 40744), (18, 40894), (29, 41080),

Gene: Philon9_35 Start: 41097, Stop: 41735, Start Num: 3
Candidate Starts for Philon9_35:
(Start: 3 @41097 has 78 MA's), (12, 41316), (13, 41337), (18, 41466), (19, 41475), (24, 41520), (29, 41652), (30, 41655), (34, 41715),

Gene: PierreThree_34 Start: 39244, Stop: 39876, Start Num: 3
Candidate Starts for PierreThree_34:
(Start: 3 @39244 has 78 MA's), (12, 39466), (18, 39616), (23, 39664), (26, 39700), (29, 39802),

Gene: PokyPuppy_33 Start: 39187, Stop: 39819, Start Num: 3
Candidate Starts for PokyPuppy_33:
(Start: 3 @39187 has 78 MA's), (12, 39409), (18, 39559), (23, 39607), (26, 39643), (29, 39745), (34, 39802),

Gene: Poland_39 Start: 40458, Stop: 41090, Start Num: 3
Candidate Starts for Poland_39:

(Start: 3 @40458 has 78 MA's), (12, 40680), (18, 40830), (23, 40878), (24, 40884), (26, 40914), (29, 41016),

Gene: RemRem_35 Start: 38273, Stop: 38905, Start Num: 3
Candidate Starts for RemRem_35:
(Start: 3 @38273 has 78 MA's), (12, 38495), (18, 38645), (23, 38693), (24, 38699), (26, 38729), (29, 38831),

Gene: RoyalG_35 Start: 38746, Stop: 39378, Start Num: 3
Candidate Starts for RoyalG_35:
(Start: 3 @38746 has 78 MA's), (8, 38866), (12, 38968), (18, 39118), (23, 39166), (24, 39172), (26, 39202), (29, 39304),

Gene: Sam12_34 Start: 38273, Stop: 38905, Start Num: 3
Candidate Starts for Sam12_34:
(Start: 3 @38273 has 78 MA's), (12, 38495), (18, 38645), (23, 38693), (24, 38699), (26, 38729), (29, 38831),

Gene: Shelley_35 Start: 39998, Stop: 40633, Start Num: 3
Candidate Starts for Shelley_35:
(Start: 3 @39998 has 78 MA's), (12, 40220), (18, 40370), (29, 40556),

Gene: Sombrero_34 Start: 38275, Stop: 38907, Start Num: 3
Candidate Starts for Sombrero_34:
(Start: 3 @38275 has 78 MA's), (12, 38497), (18, 38647), (23, 38695), (24, 38701), (26, 38731), (29, 38833),

Gene: Squibbles_34 Start: 39136, Stop: 39768, Start Num: 3
Candidate Starts for Squibbles_34:
(Start: 3 @39136 has 78 MA's), (12, 39358), (18, 39508), (23, 39556), (24, 39562), (26, 39592), (29, 39694),

Gene: SteveFrench_34 Start: 38986, Stop: 39618, Start Num: 3
Candidate Starts for SteveFrench_34:
(Start: 3 @38986 has 78 MA's), (8, 39106), (12, 39208), (18, 39358), (23, 39406), (24, 39412), (26, 39442), (29, 39544),

Gene: Sticker17_35 Start: 40513, Stop: 41148, Start Num: 3
Candidate Starts for Sticker17_35:
(Start: 3 @40513 has 78 MA's), (12, 40735), (18, 40885), (29, 41071),

Gene: Teal_35 Start: 40981, Stop: 41616, Start Num: 3
Candidate Starts for Teal_35:
(Start: 3 @40981 has 78 MA's), (12, 41203), (18, 41353), (29, 41539),

Gene: Teatealatte_33 Start: 39826, Stop: 40467, Start Num: 3
Candidate Starts for Teatealatte_33:
(Start: 3 @39826 has 78 MA's), (10, 39994), (12, 40045), (13, 40066), (18, 40195), (19, 40204), (24, 40249), (29, 40384),

Gene: Teech_33 Start: 39627, Stop: 40268, Start Num: 3
Candidate Starts for Teech_33:

(Start: 3 @39627 has 78 MA's), (10, 39795), (12, 39846), (13, 39867), (18, 39996), (19, 40005), (24, 40050), (29, 40185),

Gene: Tredge_33 Start: 39826, Stop: 40467, Start Num: 3
Candidate Starts for Tredge_33:
(Start: 3 @39826 has 78 MA's), (10, 39994), (12, 40045), (13, 40066), (18, 40195), (19, 40204), (24, 40249), (29, 40384),

Gene: Vitaenoii_35 Start: 41096, Stop: 41734, Start Num: 3
Candidate Starts for Vitaenoii_35:
(Start: 3 @41096 has 78 MA's), (11, 41285), (12, 41315), (13, 41336), (18, 41465), (19, 41474), (24, 41519), (29, 41651), (30, 41654), (34, 41714),

Gene: Woes_35 Start: 41032, Stop: 41667, Start Num: 3
Candidate Starts for Woes_35:
(Start: 3 @41032 has 78 MA's), (12, 41254), (18, 41404), (29, 41590),

Gene: Worcestershire_34 Start: 38275, Stop: 38907, Start Num: 3
Candidate Starts for Worcestershire_34:
(Start: 3 @38275 has 78 MA's), (12, 38497), (18, 38647), (23, 38695), (24, 38701), (26, 38731), (29, 38833),