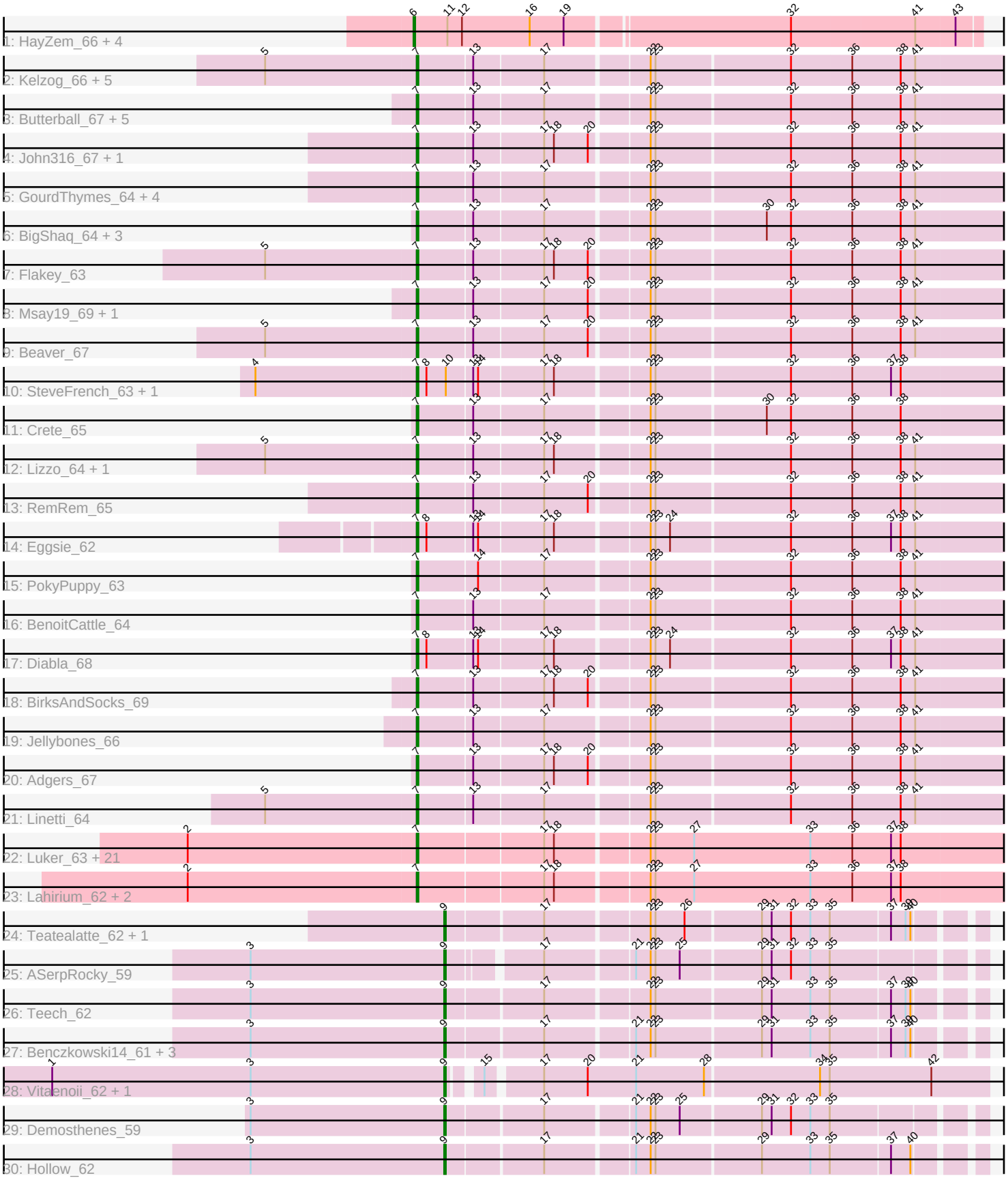
Pham 342055


1: HayZem_66 + 4
2: Kelzog_66 + 5
3: Butterball_67 + 5
4: John316_67 + 1
5: GourdThymes_64 + 4
6: BigShaq_64 + 3
7: Flakey_63
8: Msay19_69 + 1
9: Beaver_67
10: SteveFrench_63 + 1
11: Crete_65
12: Lizzo_64 + 1
13: RemRem_65
14: Eggsie_62
15: PokyPuppy_63
16: BenoitCattle_64
17: Diabla_68
18: BirksAndSocks_69
19: Jellybones_66
20: Adgers_67
21: Linetti_64
22: Luker_63 + 21
23: Lahirium_62 + 2
24: Teatealatte_62 + 1
25: ASerpRocky_59
26: Teech_62
27: Benczkowski14_61 + 3
28: Vitalenoii_62 + 1
29: Demosthenes_59
30: Hollow_62

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 342055 Report

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

Pham number 342055 has 83 members, 5 are drafts.

Phages represented in each track:
• Track 1 : HayZem_66, Amore2_66, GTE7_54, Austin_65, GMA7_55
• Track 2 : Kelzog_66, Sombrero_65, Gorko_63, Squibbles_63, Sam12_63, Exiguo_63
• Track 3 : Butterball_67, FelixAlejandro_69, CinnamonToast_70, Boneham_68, Barbochs_62, BillyBobJr_70
• Track 4 : John316_67, Monty_63
• Track 5 : GourdThymes_64, Hotorobo_64, Worcestershire_63, Ekhein_64, Breezic_64
• Track 6 : BigShaq_64, Dakiti_65, PierreThree_63, Chelms_64
• Track 7 : Flakey_63
• Track 8 : Msay19_69, Poland_69
• Track 9 : Beaver_67
• Track 10 : SteveFrench_63, RoyalG_64
• Track 11 : Crete_65
• Track 12 : Lizzo_64, CathyBurgh_64
• Track 13 : RemRem_65
• Track 14 : Eggsie_62
• Track 15 : PokyPuppy_63
• Track 16 : BenoitCattle_64
• Track 17 : Diabla_68
• Track 18 : BirksAndSocks_69
• Track 19 : Jellybones_66
• Track 20 : Adgers_67
• Track 21 : Linetti_64
• Track 22 : Luker_63, Anamika_62, Jams_62, Shelley_62, Newt_63, Berries_62, Neoevie_62, MrWormie_62, Hail2Pitt_61, Charianelly_62, Harambe_62, Jormungandr_62, Bianmat_62, Lidong_62, Damp_62, GalacticEye_62, Teal_62, Kaseim_62, Woes_62, Sticker17_62, Hello_62, Minos_63
• Track 23 : Lahirium_62, Nimi13_62, Guillaume_62
• Track 24 : Teatealatte_62, Tredge_61
• Track 25 : ASerpRocky_59
• Track 26 : Teech_62
• Track 27 : Benczkowski14_61, Katyusha_61, Kvothe_60, Niagara_61
• Track 28 : Vitaenoii_62, Philon9_62
• Track 29 : Demosthenes_59
• Track 30 : Hollow_62

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

The start number called the most often in the published annotations is 7, it was called in 63 of the 78 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Adgers_67, Anamika_62, Barbochs_62, Beaver_67, BenoitCattle_64, Berries_62, Bianmat_62, BigShaq_64, BillyBobJr_70, BirksAndSocks_69, Boneham_68, Breezic_64, Butterball_67, CathyBurgh_64, Charianelly_62, Chelms_64, CinnamonToast_70, Crete_65, Dakiti_65, Damp_62, Diabla_68, Eggsie_62, Ekhein_64, Exiguo_63, FelixAlejandro_69, Flakey_63, GalacticEye_62, Gorko_63, GourdThymes_64, Guillaume_62, Hail2Pitt_61, Harambe_62, Hello_62, Hotorobo_64, Jams_62, Jellybones_66, John316_67, Jormungandr_62, Kaseim_62, Kelzog_66, Lahirium_62, Lidong_62, Linetti_64, Lizzo_64, Luker_63, Minos_63, Monty_63, MrWormie_62, Msay19_69, Neoevie_62, Newt_63, Nimi13_62, PierreThree_63, PokyPuppy_63, Poland_69, RemRem_65, RoyalG_64, Sam12_63, Shelley_62, Sombrero_65, Squibbles_63, SteveFrench_63, Sticker17_62, Teal_62, Woes_62, Worcestershire_63,

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

Genes that do not have the "Most Annotated" start:
• ASerpRocky_59, Amore2_66, Austin_65, Benczkowski14_61, Demosthenes_59, GMA7_55, GTE7_54, HayZem_66, Hollow_62, Katyusha_61, Kvothe_60, Niagara_61, Philon9_62, Teatealatte_62, Teech_62, Tredge_61, Vitaenoii_62,

Summary by start number:

Start 6:
• Found in 5 of 83 (6.0%) of genes in pham
• Manual Annotations of this start: 3 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Amore2_66 (CS1), Austin_65 (CS1), GMA7_55 (CS1), GTE7_54 (CS1), HayZem_66 (CS1),

Start 7:
• Found in 66 of 83 (79.5%) of genes in pham
• Manual Annotations of this start: 63 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Adgers_67 (CS2), Anamika_62 (CS3), Barbochs_62 (CS2), Beaver_67 (CS2), BenoitCattle_64 (CS2), Berries_62 (CS3), Bianmat_62 (CS3), BigShaq_64 (CS2), BillyBobJr_70 (CS2), BirksAndSocks_69 (CS2), Boneham_68 (CS2), Breezic_64 (CS2), Butterball_67 (CS2), CathyBurgh_64 (CS2), Charianelly_62 (CS3), Chelms_64 (CS2), CinnamonToast_70 (CS2), Crete_65 (CS2), Dakiti_65 (CS2), Damp_62 (CS3), Diabla_68 (CS2), Eggsie_62 (CS2), Ekhein_64 (CS2), Exiguo_63 (CS2), FelixAlejandro_69 (CS2), Flakey_63 (CS2), GalacticEye_62 (CS3), Gorko_63 (CS2), GourdThymes_64 (CS2), Guillaume_62 (CS3), Hail2Pitt_61 (CS3), Harambe_62 (CS3), Hello_62 (CS3), Hotorobo_64 (CS2), Jams_62 (CS3), Jellybones_66 (CS2), John316_67 (CS2), Jormungandr_62 (CS3),

Kaseim_62 (CS3), Kelzog_66 (CS2), Lahirium_62 (CS3), Lidong_62 (CS3), Linetti_64 (CS2), Lizzo_64 (CS2), Luker_63 (CS3), Minos_63 (CS3), Monty_63 (CS2), MrWormie_62 (CS3), Msay19_69 (CS2), Neoevie_62 (CS3), Newt_63 (CS3), Nimi13_62 (CS3), PierreThree_63 (CS2), PokyPuppy_63 (CS2), Poland_69 (CS2), RemRem_65 (CS2), RoyalG_64 (CS2), Sam12_63 (CS2), Shelley_62 (CS3), Sombrero_65 (CS2), Squibbles_63 (CS2), SteveFrench_63 (CS2), Sticker17_62 (CS3), Teal_62 (CS3), Woes_62 (CS3), Worcestershire_63 (CS2),

Start 9:
• Found in 12 of 83 (14.5%) of genes in pham
• Manual Annotations of this start: 12 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ASerpRocky_59 (CS4), Benczkowski14_61 (CS4), Demosthenes_59 (CS4), Hollow_62 (CS4), Katyusha_61 (CS4), Kvothe_60 (CS4), Niagara_61 (CS4), Philon9_62 (CS4), Teatealatte_62 (CS4), Teech_62 (CS4), Tredge_61 (CS4), Vitaenoii_62 (CS4),

Summary by clusters:

There are 4 clusters represented in this pham: CS4, CS1, CS3, CS2,

Info for manual annotations of cluster CS1:
•Start number 6 was manually annotated 3 times for cluster CS1.

Info for manual annotations of cluster CS2:
•Start number 7 was manually annotated 38 times for cluster CS2.

Info for manual annotations of cluster CS3:
•Start number 7 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CS4:
•Start number 9 was manually annotated 12 times for cluster CS4.

Gene Information:

Gene: ASerpRocky_59 Start: 55252, Stop: 54950, Start Num: 9
Candidate Starts for ASerpRocky_59:
(3, 55372), (Start: 9 @55252 has 12 MA's), (17, 55201), (21, 55150), (22, 55141), (23, 55138), (25, 55123), (29, 55075), (31, 55069), (32, 55057), (33, 55045), (35, 55033),

Gene: Adgers_67 Start: 55148, Stop: 54795, Start Num: 7
Candidate Starts for Adgers_67:
(Start: 7 @55148 has 63 MA's), (13, 55115), (17, 55073), (18, 55067), (20, 55046), (22, 55013), (23, 55010), (32, 54929), (36, 54893), (38, 54863), (41, 54854),

Gene: Amore2_66 Start: 55257, Stop: 54919, Start Num: 6
Candidate Starts for Amore2_66:
(Start: 6 @55257 has 3 MA's), (11, 55236), (12, 55227), (16, 55185), (19, 55164), (32, 55032), (41, 54957), (43, 54933),

Gene: Anamika_62 Start: 55494, Stop: 55135, Start Num: 7

Candidate Starts for Anamika_62:
(2, 55635), (Start: 7 @55494 has 63 MA's), (17, 55419), (18, 55413), (22, 55359), (23, 55356), (27, 55332), (33, 55260), (36, 55236), (37, 55212), (38, 55206),

Gene: Austin_65 Start: 55255, Stop: 54917, Start Num: 6
Candidate Starts for Austin_65:
(Start: 6 @55255 has 3 MA's), (11, 55234), (12, 55225), (16, 55183), (19, 55162), (32, 55030), (41, 54955), (43, 54931),

Gene: Barbochs_62 Start: 54704, Stop: 54351, Start Num: 7
Candidate Starts for Barbochs_62:
(Start: 7 @54704 has 63 MA's), (13, 54671), (17, 54629), (22, 54569), (23, 54566), (32, 54485), (36, 54449), (38, 54419), (41, 54410),

Gene: Beaver_67 Start: 56462, Stop: 56109, Start Num: 7
Candidate Starts for Beaver_67:
(5, 56555), (Start: 7 @56462 has 63 MA's), (13, 56429), (17, 56387), (20, 56360), (22, 56327), (23, 56324), (32, 56243), (36, 56207), (38, 56177), (41, 56168),

Gene: Benczkowski14_61 Start: 55776, Stop: 55468, Start Num: 9
Candidate Starts for Benczkowski14_61:
(3, 55896), (Start: 9 @55776 has 12 MA's), (17, 55719), (21, 55668), (22, 55659), (23, 55656), (29, 55593), (31, 55587), (33, 55563), (35, 55551), (37, 55515), (39, 55506), (40, 55503),

Gene: BenoitCattle_64 Start: 55098, Stop: 54745, Start Num: 7
Candidate Starts for BenoitCattle_64:
(Start: 7 @55098 has 63 MA's), (13, 55065), (17, 55023), (22, 54963), (23, 54960), (32, 54879), (36, 54843), (38, 54813), (41, 54804),

Gene: Berries_62 Start: 55466, Stop: 55107, Start Num: 7
Candidate Starts for Berries_62:
(2, 55607), (Start: 7 @55466 has 63 MA's), (17, 55391), (18, 55385), (22, 55331), (23, 55328), (27, 55304), (33, 55232), (36, 55208), (37, 55184), (38, 55178),

Gene: Bianmat_62 Start: 55506, Stop: 55147, Start Num: 7
Candidate Starts for Bianmat_62:
(2, 55647), (Start: 7 @55506 has 63 MA's), (17, 55431), (18, 55425), (22, 55371), (23, 55368), (27, 55344), (33, 55272), (36, 55248), (37, 55224), (38, 55218),

Gene: BigShaq_64 Start: 55103, Stop: 54750, Start Num: 7
Candidate Starts for BigShaq_64:
(Start: 7 @55103 has 63 MA's), (13, 55070), (17, 55028), (22, 54968), (23, 54965), (30, 54899), (32, 54884), (36, 54848), (38, 54818), (41, 54809),

Gene: BillyBobJr_70 Start: 56784, Stop: 56431, Start Num: 7
Candidate Starts for BillyBobJr_70:
(Start: 7 @56784 has 63 MA's), (13, 56751), (17, 56709), (22, 56649), (23, 56646), (32, 56565), (36, 56529), (38, 56499), (41, 56490),

Gene: BirksAndSocks_69 Start: 56788, Stop: 56435, Start Num: 7
Candidate Starts for BirksAndSocks_69:
(Start: 7 @56788 has 63 MA's), (13, 56755), (17, 56713), (18, 56707), (20, 56686), (22, 56653), (23, 56650), (32, 56569), (36, 56533), (38, 56503), (41, 56494),

Gene: Boneham_68 Start: 56713, Stop: 56360, Start Num: 7
Candidate Starts for Boneham_68:
(Start: 7 @56713 has 63 MA's), (13, 56680), (17, 56638), (22, 56578), (23, 56575), (32, 56494), (36, 56458), (38, 56428), (41, 56419),

Gene: Breezic_64 Start: 54699, Stop: 54346, Start Num: 7
Candidate Starts for Breezic_64:
(Start: 7 @54699 has 63 MA's), (13, 54666), (17, 54624), (22, 54564), (23, 54561), (32, 54480), (36, 54444), (38, 54414), (41, 54405),

Gene: Butterball_67 Start: 56718, Stop: 56365, Start Num: 7
Candidate Starts for Butterball_67:
(Start: 7 @56718 has 63 MA's), (13, 56685), (17, 56643), (22, 56583), (23, 56580), (32, 56499), (36, 56463), (38, 56433), (41, 56424),

Gene: CathyBurgh_64 Start: 55294, Stop: 54941, Start Num: 7
Candidate Starts for CathyBurgh_64:
(5, 55387), (Start: 7 @55294 has 63 MA's), (13, 55261), (17, 55219), (18, 55213), (22, 55159), (23, 55156), (32, 55075), (36, 55039), (38, 55009), (41, 55000),

Gene: Charianelly_62 Start: 55216, Stop: 54857, Start Num: 7
Candidate Starts for Charianelly_62:
(2, 55357), (Start: 7 @55216 has 63 MA's), (17, 55141), (18, 55135), (22, 55081), (23, 55078), (27, 55054), (33, 54982), (36, 54958), (37, 54934), (38, 54928),

Gene: Chelms_64 Start: 55229, Stop: 54876, Start Num: 7
Candidate Starts for Chelms_64:
(Start: 7 @55229 has 63 MA's), (13, 55196), (17, 55154), (22, 55094), (23, 55091), (30, 55025), (32, 55010), (36, 54974), (38, 54944), (41, 54935),

Gene: CinnamonToast_70 Start: 56784, Stop: 56431, Start Num: 7
Candidate Starts for CinnamonToast_70:
(Start: 7 @56784 has 63 MA's), (13, 56751), (17, 56709), (22, 56649), (23, 56646), (32, 56565), (36, 56529), (38, 56499), (41, 56490),

Gene: Crete_65 Start: 55351, Stop: 54998, Start Num: 7
Candidate Starts for Crete_65:
(Start: 7 @55351 has 63 MA's), (13, 55318), (17, 55276), (22, 55216), (23, 55213), (30, 55147), (32, 55132), (36, 55096), (38, 55066),

Gene: Dakiti_65 Start: 56097, Stop: 55744, Start Num: 7
Candidate Starts for Dakiti_65:
(Start: 7 @56097 has 63 MA's), (13, 56064), (17, 56022), (22, 55962), (23, 55959), (30, 55893), (32, 55878), (36, 55842), (38, 55812), (41, 55803),

Gene: Damp_62 Start: 54380, Stop: 54021, Start Num: 7
Candidate Starts for Damp_62:
(2, 54521), (Start: 7 @54380 has 63 MA's), (17, 54305), (18, 54299), (22, 54245), (23, 54242), (27, 54218), (33, 54146), (36, 54122), (37, 54098), (38, 54092),

Gene: Demosthenes_59 Start: 55228, Stop: 54920, Start Num: 9
Candidate Starts for Demosthenes_59:

(3, 55348), (Start: 9 @55228 has 12 MA's), (17, 55171), (21, 55120), (22, 55111), (23, 55108), (25, 55093), (29, 55045), (31, 55039), (32, 55027), (33, 55015), (35, 55003),

Gene: Diabla_68 Start: 56712, Stop: 56359, Start Num: 7
Candidate Starts for Diabla_68:
(Start: 7 @56712 has 63 MA's), (8, 56706), (13, 56679), (14, 56676), (17, 56637), (18, 56631), (22, 56577), (23, 56574), (24, 56565), (32, 56493), (36, 56457), (37, 56433), (38, 56427), (41, 56418),

Gene: Eggsie_62 Start: 54516, Stop: 54163, Start Num: 7
Candidate Starts for Eggsie_62:
(Start: 7 @54516 has 63 MA's), (8, 54510), (13, 54483), (14, 54480), (17, 54441), (18, 54435), (22, 54381), (23, 54378), (24, 54369), (32, 54297), (36, 54261), (37, 54237), (38, 54231), (41, 54222),

Gene: Ekhein_64 Start: 54404, Stop: 54051, Start Num: 7
Candidate Starts for Ekhein_64:
(Start: 7 @54404 has 63 MA's), (13, 54371), (17, 54329), (22, 54269), (23, 54266), (32, 54185), (36, 54149), (38, 54119), (41, 54110),

Gene: Exiguo_63 Start: 54440, Stop: 54087, Start Num: 7
Candidate Starts for Exiguo_63:
(5, 54533), (Start: 7 @54440 has 63 MA's), (13, 54407), (17, 54365), (22, 54305), (23, 54302), (32, 54221), (36, 54185), (38, 54155), (41, 54146),

Gene: FelixAlejandro_69 Start: 57116, Stop: 56763, Start Num: 7
Candidate Starts for FelixAlejandro_69:
(Start: 7 @57116 has 63 MA's), (13, 57083), (17, 57041), (22, 56981), (23, 56978), (32, 56897), (36, 56861), (38, 56831), (41, 56822),

Gene: Flakey_63 Start: 55280, Stop: 54927, Start Num: 7
Candidate Starts for Flakey_63:
(5, 55373), (Start: 7 @55280 has 63 MA's), (13, 55247), (17, 55205), (18, 55199), (20, 55178), (22, 55145), (23, 55142), (32, 55061), (36, 55025), (38, 54995), (41, 54986),

Gene: GMA7_55 Start: 49471, Stop: 49133, Start Num: 6
Candidate Starts for GMA7_55:
(Start: 6 @49471 has 3 MA's), (11, 49450), (12, 49441), (16, 49399), (19, 49378), (32, 49246), (41, 49171), (43, 49147),

Gene: GTE7_54 Start: 49502, Stop: 49164, Start Num: 6
Candidate Starts for GTE7_54:
(Start: 6 @49502 has 3 MA's), (11, 49481), (12, 49472), (16, 49430), (19, 49409), (32, 49277), (41, 49202), (43, 49178),

Gene: GalacticEye_62 Start: 55177, Stop: 54818, Start Num: 7
Candidate Starts for GalacticEye_62:
(2, 55318), (Start: 7 @55177 has 63 MA's), (17, 55102), (18, 55096), (22, 55042), (23, 55039), (27, 55015), (33, 54943), (36, 54919), (37, 54895), (38, 54889),

Gene: Gorko_63 Start: 54426, Stop: 54073, Start Num: 7
Candidate Starts for Gorko_63:
(5, 54519), (Start: 7 @54426 has 63 MA's), (13, 54393), (17, 54351), (22, 54291), (23, 54288), (32, 54207), (36, 54171), (38, 54141), (41, 54132),

Gene: GourdThymes_64 Start: 55300, Stop: 54947, Start Num: 7
Candidate Starts for GourdThymes_64:
(Start: 7 @55300 has 63 MA's), (13, 55267), (17, 55225), (22, 55165), (23, 55162), (32, 55081), (36, 55045), (38, 55015), (41, 55006),

Gene: Guillaume_62 Start: 55227, Stop: 54868, Start Num: 7
Candidate Starts for Guillaume_62:
(2, 55368), (Start: 7 @55227 has 63 MA's), (17, 55152), (18, 55146), (22, 55092), (23, 55089), (27, 55065), (33, 54993), (36, 54969), (37, 54945), (38, 54939),

Gene: Hail2Pitt_61 Start: 55703, Stop: 55344, Start Num: 7
Candidate Starts for Hail2Pitt_61:
(2, 55844), (Start: 7 @55703 has 63 MA's), (17, 55628), (18, 55622), (22, 55568), (23, 55565), (27, 55541), (33, 55469), (36, 55445), (37, 55421), (38, 55415),

Gene: Harambe_62 Start: 55494, Stop: 55135, Start Num: 7
Candidate Starts for Harambe_62:
(2, 55635), (Start: 7 @55494 has 63 MA's), (17, 55419), (18, 55413), (22, 55359), (23, 55356), (27, 55332), (33, 55260), (36, 55236), (37, 55212), (38, 55206),

Gene: HayZem_66 Start: 55254, Stop: 54916, Start Num: 6
Candidate Starts for HayZem_66:
(Start: 6 @55254 has 3 MA's), (11, 55233), (12, 55224), (16, 55182), (19, 55161), (32, 55029), (41, 54954), (43, 54930),

Gene: Hello_62 Start: 55456, Stop: 55097, Start Num: 7
Candidate Starts for Hello_62:
(2, 55597), (Start: 7 @55456 has 63 MA's), (17, 55381), (18, 55375), (22, 55321), (23, 55318), (27, 55294), (33, 55222), (36, 55198), (37, 55174), (38, 55168),

Gene: Hollow_62 Start: 55957, Stop: 55649, Start Num: 9
Candidate Starts for Hollow_62:
(3, 56077), (Start: 9 @55957 has 12 MA's), (17, 55900), (21, 55849), (22, 55840), (23, 55837), (29, 55774), (33, 55744), (35, 55732), (37, 55696), (40, 55684),

Gene: Hotorobo_64 Start: 55287, Stop: 54934, Start Num: 7
Candidate Starts for Hotorobo_64:
(Start: 7 @55287 has 63 MA's), (13, 55254), (17, 55212), (22, 55152), (23, 55149), (32, 55068), (36, 55032), (38, 55002), (41, 54993),

Gene: Jams_62 Start: 54666, Stop: 54307, Start Num: 7
Candidate Starts for Jams_62:
(2, 54807), (Start: 7 @54666 has 63 MA's), (17, 54591), (18, 54585), (22, 54531), (23, 54528), (27, 54504), (33, 54432), (36, 54408), (37, 54384), (38, 54378),

Gene: Jellybones_66 Start: 56400, Stop: 56047, Start Num: 7
Candidate Starts for Jellybones_66:
(Start: 7 @56400 has 63 MA's), (13, 56367), (17, 56325), (22, 56265), (23, 56262), (32, 56181), (36, 56145), (38, 56115), (41, 56106),

Gene: John316_67 Start: 56445, Stop: 56092, Start Num: 7
Candidate Starts for John316_67:

(Start: 7 @56445 has 63 MA's), (13, 56412), (17, 56370), (18, 56364), (20, 56343), (22, 56310), (23, 56307), (32, 56226), (36, 56190), (38, 56160), (41, 56151),

Gene: Jormungandr_62 Start: 55209, Stop: 54850, Start Num: 7
Candidate Starts for Jormungandr_62:
(2, 55350), (Start: 7 @55209 has 63 MA's), (17, 55134), (18, 55128), (22, 55074), (23, 55071), (27, 55047), (33, 54975), (36, 54951), (37, 54927), (38, 54921),

Gene: Kaseim_62 Start: 54651, Stop: 54292, Start Num: 7
Candidate Starts for Kaseim_62:
(2, 54792), (Start: 7 @54651 has 63 MA's), (17, 54576), (18, 54570), (22, 54516), (23, 54513), (27, 54489), (33, 54417), (36, 54393), (37, 54369), (38, 54363),

Gene: Katyusha_61 Start: 55776, Stop: 55468, Start Num: 9
Candidate Starts for Katyusha_61:
(3, 55896), (Start: 9 @55776 has 12 MA's), (17, 55719), (21, 55668), (22, 55659), (23, 55656), (29, 55593), (31, 55587), (33, 55563), (35, 55551), (37, 55515), (39, 55506), (40, 55503),

Gene: Kelzog_66 Start: 55300, Stop: 54947, Start Num: 7
Candidate Starts for Kelzog_66:
(5, 55393), (Start: 7 @55300 has 63 MA's), (13, 55267), (17, 55225), (22, 55165), (23, 55162), (32, 55081), (36, 55045), (38, 55015), (41, 55006),

Gene: Kvothe_60 Start: 55678, Stop: 55370, Start Num: 9
Candidate Starts for Kvothe_60:
(3, 55798), (Start: 9 @55678 has 12 MA's), (17, 55621), (21, 55570), (22, 55561), (23, 55558), (29, 55495), (31, 55489), (33, 55465), (35, 55453), (37, 55417), (39, 55408), (40, 55405),

Gene: Lahirium_62 Start: 55731, Stop: 55372, Start Num: 7
Candidate Starts for Lahirium_62:
(2, 55872), (Start: 7 @55731 has 63 MA's), (17, 55656), (18, 55650), (22, 55596), (23, 55593), (27, 55569), (33, 55497), (36, 55473), (37, 55449), (38, 55443),

Gene: Lidong_62 Start: 55466, Stop: 55107, Start Num: 7
Candidate Starts for Lidong_62:
(2, 55607), (Start: 7 @55466 has 63 MA's), (17, 55391), (18, 55385), (22, 55331), (23, 55328), (27, 55304), (33, 55232), (36, 55208), (37, 55184), (38, 55178),

Gene: Linetti_64 Start: 56091, Stop: 55738, Start Num: 7
Candidate Starts for Linetti_64:
(5, 56184), (Start: 7 @56091 has 63 MA's), (13, 56058), (17, 56016), (22, 55956), (23, 55953), (32, 55872), (36, 55836), (38, 55806), (41, 55797),

Gene: Lizzo_64 Start: 55294, Stop: 54941, Start Num: 7
Candidate Starts for Lizzo_64:
(5, 55387), (Start: 7 @55294 has 63 MA's), (13, 55261), (17, 55219), (18, 55213), (22, 55159), (23, 55156), (32, 55075), (36, 55039), (38, 55009), (41, 55000),

Gene: Luker_63 Start: 55684, Stop: 55325, Start Num: 7
Candidate Starts for Luker_63:
(2, 55825), (Start: 7 @55684 has 63 MA's), (17, 55609), (18, 55603), (22, 55549), (23, 55546), (27, 55522), (33, 55450), (36, 55426), (37, 55402), (38, 55396),

Gene: Minos_63 Start: 55208, Stop: 54849, Start Num: 7
Candidate Starts for Minos_63:
(2, 55349), (Start: 7 @55208 has 63 MA's), (17, 55133), (18, 55127), (22, 55073), (23, 55070), (27, 55046), (33, 54974), (36, 54950), (37, 54926), (38, 54920),

Gene: Monty_63 Start: 54426, Stop: 54073, Start Num: 7
Candidate Starts for Monty_63:
(Start: 7 @54426 has 63 MA's), (13, 54393), (17, 54351), (18, 54345), (20, 54324), (22, 54291), (23, 54288), (32, 54207), (36, 54171), (38, 54141), (41, 54132),

Gene: MrWormie_62 Start: 54369, Stop: 54010, Start Num: 7
Candidate Starts for MrWormie_62:
(2, 54510), (Start: 7 @54369 has 63 MA's), (17, 54294), (18, 54288), (22, 54234), (23, 54231), (27, 54207), (33, 54135), (36, 54111), (37, 54087), (38, 54081),

Gene: Msay19_69 Start: 57002, Stop: 56649, Start Num: 7
Candidate Starts for Msay19_69:
(Start: 7 @57002 has 63 MA's), (13, 56969), (17, 56927), (20, 56900), (22, 56867), (23, 56864), (32, 56783), (36, 56747), (38, 56717), (41, 56708),

Gene: Neoevie_62 Start: 55470, Stop: 55111, Start Num: 7
Candidate Starts for Neoevie_62:
(2, 55611), (Start: 7 @55470 has 63 MA's), (17, 55395), (18, 55389), (22, 55335), (23, 55332), (27, 55308), (33, 55236), (36, 55212), (37, 55188), (38, 55182),

Gene: Newt_63 Start: 55698, Stop: 55339, Start Num: 7
Candidate Starts for Newt_63:
(2, 55839), (Start: 7 @55698 has 63 MA's), (17, 55623), (18, 55617), (22, 55563), (23, 55560), (27, 55536), (33, 55464), (36, 55440), (37, 55416), (38, 55410),

Gene: Niagara_61 Start: 55769, Stop: 55461, Start Num: 9
Candidate Starts for Niagara_61:
(3, 55889), (Start: 9 @55769 has 12 MA's), (17, 55712), (21, 55661), (22, 55652), (23, 55649), (29, 55586), (31, 55580), (33, 55556), (35, 55544), (37, 55508), (39, 55499), (40, 55496),

Gene: Nimi13_62 Start: 55217, Stop: 54858, Start Num: 7
Candidate Starts for Nimi13_62:
(2, 55358), (Start: 7 @55217 has 63 MA's), (17, 55142), (18, 55136), (22, 55082), (23, 55079), (27, 55055), (33, 54983), (36, 54959), (37, 54935), (38, 54929),

Gene: Philon9_62 Start: 56889, Stop: 56572, Start Num: 9
Candidate Starts for Philon9_62:
(1, 57132), (3, 57009), (Start: 9 @56889 has 12 MA's), (15, 56874), (17, 56844), (20, 56817), (21, 56787), (28, 56745), (34, 56676), (35, 56670), (42, 56607),

Gene: PierreThree_63 Start: 55728, Stop: 55375, Start Num: 7
Candidate Starts for PierreThree_63:
(Start: 7 @55728 has 63 MA's), (13, 55695), (17, 55653), (22, 55593), (23, 55590), (30, 55524), (32, 55509), (36, 55473), (38, 55443), (41, 55434),

Gene: PokyPuppy_63 Start: 55665, Stop: 55312, Start Num: 7
Candidate Starts for PokyPuppy_63:

(Start: 7 @55665 has 63 MA's), (14, 55629), (17, 55590), (22, 55530), (23, 55527), (32, 55446), (36, 55410), (38, 55380), (41, 55371),

Gene: Poland_69 Start: 56981, Stop: 56628, Start Num: 7
Candidate Starts for Poland_69:
(Start: 7 @56981 has 63 MA's), (13, 56948), (17, 56906), (20, 56879), (22, 56846), (23, 56843), (32, 56762), (36, 56726), (38, 56696), (41, 56687),

Gene: RemRem_65 Start: 54416, Stop: 54063, Start Num: 7
Candidate Starts for RemRem_65:
(Start: 7 @54416 has 63 MA's), (13, 54383), (17, 54341), (20, 54314), (22, 54281), (23, 54278), (32, 54197), (36, 54161), (38, 54131), (41, 54122),

Gene: RoyalG_64 Start: 55137, Stop: 54784, Start Num: 7
Candidate Starts for RoyalG_64:
(4, 55236), (Start: 7 @55137 has 63 MA's), (8, 55131), (10, 55119), (13, 55104), (14, 55101), (17, 55062), (18, 55056), (22, 55002), (23, 54999), (32, 54918), (36, 54882), (37, 54858), (38, 54852),

Gene: Sam12_63 Start: 54440, Stop: 54087, Start Num: 7
Candidate Starts for Sam12_63:
(5, 54533), (Start: 7 @54440 has 63 MA's), (13, 54407), (17, 54365), (22, 54305), (23, 54302), (32, 54221), (36, 54185), (38, 54155), (41, 54146),

Gene: Shelley_62 Start: 54693, Stop: 54334, Start Num: 7
Candidate Starts for Shelley_62:
(2, 54834), (Start: 7 @54693 has 63 MA's), (17, 54618), (18, 54612), (22, 54558), (23, 54555), (27, 54531), (33, 54459), (36, 54435), (37, 54411), (38, 54405),

Gene: Sombrero_65 Start: 55007, Stop: 54654, Start Num: 7
Candidate Starts for Sombrero_65:
(5, 55100), (Start: 7 @55007 has 63 MA's), (13, 54974), (17, 54932), (22, 54872), (23, 54869), (32, 54788), (36, 54752), (38, 54722), (41, 54713),

Gene: Squibbles_63 Start: 55279, Stop: 54926, Start Num: 7
Candidate Starts for Squibbles_63:
(5, 55372), (Start: 7 @55279 has 63 MA's), (13, 55246), (17, 55204), (22, 55144), (23, 55141), (32, 55060), (36, 55024), (38, 54994), (41, 54985),

Gene: SteveFrench_63 Start: 55377, Stop: 55024, Start Num: 7
Candidate Starts for SteveFrench_63:
(4, 55476), (Start: 7 @55377 has 63 MA's), (8, 55371), (10, 55359), (13, 55344), (14, 55341), (17, 55302), (18, 55296), (22, 55242), (23, 55239), (32, 55158), (36, 55122), (37, 55098), (38, 55092),

Gene: Sticker17_62 Start: 55181, Stop: 54822, Start Num: 7
Candidate Starts for Sticker17_62:
(2, 55322), (Start: 7 @55181 has 63 MA's), (17, 55106), (18, 55100), (22, 55046), (23, 55043), (27, 55019), (33, 54947), (36, 54923), (37, 54899), (38, 54893),

Gene: Teal_62 Start: 55675, Stop: 55316, Start Num: 7
Candidate Starts for Teal_62:
(2, 55816), (Start: 7 @55675 has 63 MA's), (17, 55600), (18, 55594), (22, 55540), (23, 55537), (27, 55513), (33, 55441), (36, 55417), (37, 55393), (38, 55387),

Gene: Teatealatte_62 Start: 55666, Stop: 55358, Start Num: 9
Candidate Starts for Teatealatte_62:
(Start: 9 @55666 has 12 MA's), (17, 55609), (22, 55549), (23, 55546), (26, 55528), (29, 55483), (31, 55477), (32, 55465), (33, 55453), (35, 55441), (37, 55405), (39, 55396), (40, 55393),

Gene: Teech_62 Start: 55482, Stop: 55174, Start Num: 9
Candidate Starts for Teech_62:
(3, 55602), (Start: 9 @55482 has 12 MA's), (17, 55425), (22, 55365), (23, 55362), (29, 55299), (31, 55293), (33, 55269), (35, 55257), (37, 55221), (39, 55212), (40, 55209),

Gene: Tredge_61 Start: 55666, Stop: 55358, Start Num: 9
Candidate Starts for Tredge_61:
(Start: 9 @55666 has 12 MA's), (17, 55609), (22, 55549), (23, 55546), (26, 55528), (29, 55483), (31, 55477), (32, 55465), (33, 55453), (35, 55441), (37, 55405), (39, 55396), (40, 55393),

Gene: Vitaenoii_62 Start: 56873, Stop: 56556, Start Num: 9
Candidate Starts for Vitaenoii_62:
(1, 57116), (3, 56993), (Start: 9 @56873 has 12 MA's), (15, 56858), (17, 56828), (20, 56801), (21, 56771), (28, 56729), (34, 56660), (35, 56654), (42, 56591),

Gene: Woes_62 Start: 55726, Stop: 55367, Start Num: 7
Candidate Starts for Woes_62:
(2, 55867), (Start: 7 @55726 has 63 MA's), (17, 55651), (18, 55645), (22, 55591), (23, 55588), (27, 55564), (33, 55492), (36, 55468), (37, 55444), (38, 55438),

Gene: Worcestershire_63 Start: 54418, Stop: 54065, Start Num: 7
Candidate Starts for Worcestershire_63:
(Start: 7 @54418 has 63 MA's), (13, 54385), (17, 54343), (22, 54283), (23, 54280), (32, 54199), (36, 54163), (38, 54133), (41, 54124),