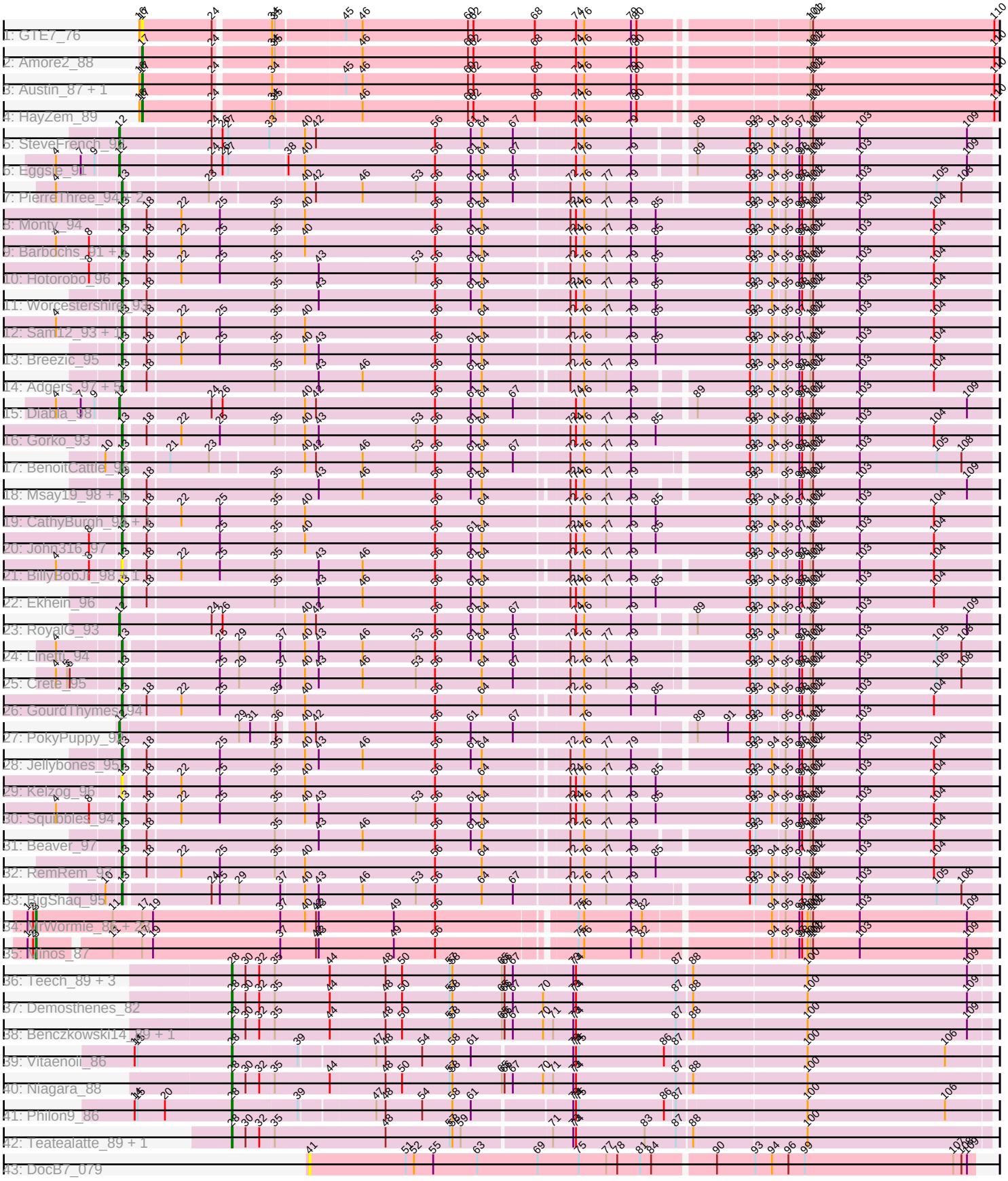
Pham 347512


1: GTE7_76
2: Amore2_88
3: Austin_87 + 1
4: HayZem_89
5: SteveFrench_95
6: Eggsie_91
7: PierreThree_94 + 2
8: Monty_94
9: Barbdchs_91 + 1
10: Hotorobot_96
11: Worcestershire_95
12: Sam12_93 + 1
13: Breezic_95
14: Adgers_97 + 5
15: Diabla_98
16: Gorko_93
17: BenoitCattle_95
18: Msay19_98 + 1
19: CathyBurgh_95 + 1
20: John316_97
21: BillyBobJr_98 + 1
22: Ekhein_96
23: RoyalG_93
24: Linem_94
25: Crete_95
26: GourdThymes_94
27: PokyPuppy_95
28: Jellybones_95
29: Kelzog_96
30: Squibbles_94
31: Beaver_97
32: RemRem_95
33: BigShaq_95
34: TheWormie_86 + 2
35: Illinos_87
36: Teech_89 + 3
37: Demosthenes_82
38: Benczkowski14_89 + 1
39: Vitaenoil_86
40: Niagara_88
41: Philon9_86
42: Teatealatte_89 + 1
43: DocB7_079

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 347512 Report

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

Pham number 347512 has 84 members, 6 are drafts.

Phages represented in each track:
• Track 1 : GTE7_76
• Track 2 : Amore2_88
• Track 3 : Austin_87, GMA7_76
• Track 4 : HayZem_89
• Track 5 : SteveFrench_92
• Track 6 : Eggsie_91
• Track 7 : PierreThree_94, Dakiti_96, Chelms_94
• Track 8 : Monty_94
• Track 9 : Barbochs_91, Flakey_95
• Track 10 : Hotorobo_96
• Track 11 : Worcestershire_93
• Track 12 : Sam12_93, Exiguo_93
• Track 13 : Breezic_95
• Track 14 : Adgers_97, BirksAndSocks_97, FelixAlejandro_97, Boneham_96, Butterball_95, Sombrero_95
• Track 15 : Diabla_98
• Track 16 : Gorko_93
• Track 17 : BenoitCattle_96
• Track 18 : Msay19_98, Poland_98
• Track 19 : CathyBurgh_94, Lizzo_94
• Track 20 : John316_97
• Track 21 : BillyBobJr_98, CinnamonToast_98
• Track 22 : Ekhein_96
• Track 23 : RoyalG_93
• Track 24 : Linetti_94
• Track 25 : Crete_95
• Track 26 : GourdThymes_94
• Track 27 : PokyPuppy_92
• Track 28 : Jellybones_95
• Track 29 : Kelzog_96
• Track 30 : Squibbles_94
• Track 31 : Beaver_97
• Track 32 : RemRem_97
• Track 33 : BigShaq_95
• Track 34 : MrWormie_86, Jormungandr_85, Jams_86, Harambe_85, Charianelly_86, Guillaume_85, Luker_87, Anamika_85, Woes_85, Damp_86, Bianmat_86, Nimi13_85, Hail2Pitt_84, GalacticEye_86, Hello_85, Neoevie_85,

Berries_86, Sticker17_86, Teal_85, Lahirium_86, Shelley_86, Kaseim_86, Newt_87, Lidong_86
• Track 35 : Minos_87
• Track 36 : Teech_89, Kvothe_88, ASerpRocky_82, Hollow_88
• Track 37 : Demosthenes_82
• Track 38 : Benczkowski14_89, Katyusha_87
• Track 39 : Vitaenoii_86
• Track 40 : Niagara_88
• Track 41 : Philon9_86
• Track 42 : Teatealatte_89, Tredge_88
• Track 43 : DocB7_079

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

The start number called the most often in the published annotations is 13, it was called in 33 of the 78 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Adgers_97, Barbochs_91, Beaver_97, BenoitCattle_96, BigShaq_95, BillyBobJr_98, BirksAndSocks_97, Boneham_96, Breezic_95, Butterball_95, CathyBurgh_94, Chelms_94, CinnamonToast_98, Crete_95, Dakiti_96, Ekhein_96, Exiguo_93, FelixAlejandro_97, Flakey_95, Gorko_93, GourdThymes_94, Hotorobo_96, Jellybones_95, John316_97, Kelzog_96, Linetti_94, Lizzo_94, Monty_94, Msay19_98, PierreThree_94, Poland_98, RemRem_97, Sam12_93, Sombrero_95, Squibbles_94, Worcestershire_93,

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

Genes that do not have the "Most Annotated" start:
• ASerpRocky_82, Amore2_88, Anamika_85, Austin_87, Benczkowski14_89, Berries_86, Bianmat_86, Charianelly_86, Damp_86, Demosthenes_82, Diabla_98, DocB7_079, Eggsie_91, GMA7_76, GTE7_76, GalacticEye_86, Guillaume_85, Hail2Pitt_84, Harambe_85, HayZem_89, Hello_85, Hollow_88, Jams_86, Jormungandr_85, Kaseim_86, Katyusha_87, Kvothe_88, Lahirium_86, Lidong_86, Luker_87, Minos_87, MrWormie_86, Neoevie_85, Newt_87, Niagara_88, Nimi13_85, Philon9_86, PokyPuppy_92, RoyalG_93, Shelley_86, SteveFrench_92, Sticker17_86, Teal_85, Teatealatte_89, Teech_89, Tredge_88, Vitaenoii_86, Woes_85,

Summary by start number:

Start 3:
• Found in 25 of 84 (29.8%) of genes in pham
• Manual Annotations of this start: 25 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Anamika_85 (CS3), Berries_86 (CS3), Bianmat_86 (CS3), Charianelly_86 (CS3), Damp_86 (CS3), GalacticEye_86 (CS3), Guillaume_85 (CS3), Hail2Pitt_84 (CS3), Harambe_85 (CS3), Hello_85 (CS3), Jams_86 (CS3), Jormungandr_85 (CS3), Kaseim_86 (CS3), Lahirium_86 (CS3), Lidong_86 (CS3), Luker_87 (CS3), Minos_87 (CS3), MrWormie_86 (CS3),

Neoevie_85 (CS3), Newt_87 (CS3), Nimi13_85 (CS3), Shelley_86 (CS3), Sticker17_86 (CS3), Teal_85 (CS3), Woes_85 (CS3),

Start 12:
• Found in 5 of 84 (6.0%) of genes in pham
• Manual Annotations of this start: 5 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Diabla_98 (CS2), Eggsie_91 (CS2), PokyPuppy_92 (CS2), RoyalG_93 (CS2), SteveFrench_92 (CS2),

Start 13:
• Found in 36 of 84 (42.9%) of genes in pham
• Manual Annotations of this start: 33 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Adgers_97 (CS2), Barbochs_91 (CS2), Beaver_97 (CS2), BenoitCattle_96 (CS2), BigShaq_95 (CS2), BillyBobJr_98 (CS2), BirksAndSocks_97 (CS2), Boneham_96 (CS2), Breezic_95 (CS2), Butterball_95 (CS2), CathyBurgh_94 (CS2), Chelms_94 (CS2), CinnamonToast_98 (CS2), Crete_95 (CS2), Dakiti_96 (CS2), Ekhein_96 (CS2), Exiguo_93 (CS2), FelixAlejandro_97 (CS2), Flakey_95 (CS2), Gorko_93 (CS2), GourdThymes_94 (CS2), Hotorobo_96 (CS2), Jellybones_95 (CS2), John316_97 (CS2), Kelzog_96 (CS2), Linetti_94 (CS2), Lizzo_94 (CS2), Monty_94 (CS2), Msay19_98 (CS2), PierreThree_94 (CS2), Poland_98 (CS2), RemRem_97 (CS2), Sam12_93 (CS2), Sombrero_95 (CS2), Squibbles_94 (CS2), Worcestershire_93 (CS2),

Start 17:
• Found in 30 of 84 (35.7%) of genes in pham
• Manual Annotations of this start: 3 of 78
• Called 16.7% of time when present
• Phage (with cluster) where this start called: Amore2_88 (CS1), Austin_87 (CS1), GMA7_76 (CS1), GTE7_76 (CS1), HayZem_89 (CS1),

Start 28:
• Found in 12 of 84 (14.3%) 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_82 (CS4), Benczkowski14_89 (CS4), Demosthenes_82 (CS4), Hollow_88 (CS4), Katyusha_87 (CS4), Kvothe_88 (CS4), Niagara_88 (CS4), Philon9_86 (CS4), Teatealatte_89 (CS4), Teech_89 (CS4), Tredge_88 (CS4), Vitaenoii_86 (CS4),

Start 41:
• Found in 1 of 84 (1.2%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DocB7_079 (singleton),

Summary by clusters:

There are 5 clusters represented in this pham: CS4, singleton, CS1, CS3, CS2,

Info for manual annotations of cluster CS1:
•Start number 17 was manually annotated 3 times for cluster CS1.

Info for manual annotations of cluster CS2:
•Start number 12 was manually annotated 5 times for cluster CS2.
•Start number 13 was manually annotated 33 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 28 was manually annotated 12 times for cluster CS4.

Gene Information:

Gene: ASerpRocky_82 Start: 68476, Stop: 67676, Start Num: 28
Candidate Starts for ASerpRocky_82:
(Start: 28 @68476 has 12 MA's), (30, 68461), (32, 68446), (35, 68431), (44, 68374), (48, 68317), (50, 68299), (57, 68248), (58, 68245), (65, 68194), (66, 68191), (67, 68182), (73, 68119), (74, 68116), (87, 68008), (88, 67993), (100, 67873), (109, 67699),

Gene: Adgers_97 Start: 70250, Stop: 69354, Start Num: 13
Candidate Starts for Adgers_97:
(Start: 13 @70250 has 33 MA's), (18, 70229), (35, 70094), (43, 70049), (46, 70001), (56, 69923), (61, 69887), (64, 69875), (72, 69791), (76, 69776), (77, 69752), (79, 69725), (92, 69611), (93, 69608), (94, 69590), (95, 69578), (97, 69563), (98, 69560), (101, 69551), (102, 69548), (103, 69497), (104, 69416),

Gene: Amore2_88 Start: 67704, Stop: 66814, Start Num: 17
Candidate Starts for Amore2_88:
(Start: 17 @67704 has 3 MA's), (24, 67629), (34, 67575), (35, 67572), (46, 67482), (60, 67371), (62, 67365), (68, 67299), (74, 67254), (76, 67245), (79, 67194), (80, 67188), (101, 67020), (102, 67017), (110, 66819),

Gene: Anamika_85 Start: 68874, Stop: 67876, Start Num: 3
Candidate Starts for Anamika_85:
(1, 68883), (2, 68877), (Start: 3 @68874 has 25 MA's), (11, 68790), (Start: 17 @68760 has 3 MA's), (19, 68748), (37, 68610), (40, 68583), (42, 68571), (43, 68568), (49, 68487), (56, 68442), (75, 68307), (76, 68301), (79, 68250), (82, 68238), (94, 68112), (95, 68100), (97, 68085), (98, 68082), (100, 68076), (101, 68073), (102, 68070), (103, 68019), (109, 67902),

Gene: Austin_87 Start: 67702, Stop: 66812, Start Num: 17
Candidate Starts for Austin_87:
(16, 67705), (Start: 17 @67702 has 3 MA's), (24, 67627), (34, 67573), (45, 67498), (46, 67480), (60, 67369), (62, 67363), (68, 67297), (74, 67252), (76, 67243), (79, 67192), (80, 67186), (101, 67018), (102, 67015), (110, 66817),

Gene: Barbochs_91 Start: 69441, Stop: 68524, Start Num: 13
Candidate Starts for Barbochs_91:
(4, 69507), (8, 69471), (Start: 13 @69441 has 33 MA's), (18, 69420), (22, 69387), (25, 69345), (35, 69285), (40, 69255), (56, 69114), (61, 69078), (64, 69066), (72, 68976), (74, 68970), (76, 68961), (77, 68937), (79, 68910), (85, 68883), (92, 68781), (93, 68778), (94, 68760), (95, 68748), (97, 68733), (98, 68730), (101, 68721), (102, 68718), (103, 68667), (104, 68586),

Gene: Beaver_97 Start: 71591, Stop: 70695, Start Num: 13
Candidate Starts for Beaver_97:
(Start: 13 @71591 has 33 MA's), (18, 71570), (35, 71435), (43, 71390), (46, 71342), (56, 71264), (61, 71228), (64, 71216), (72, 71132), (76, 71117), (77, 71093), (79, 71066), (92, 70952), (93, 70949), (95, 70919), (97, 70904), (98, 70901), (101, 70892), (102, 70889), (103, 70838), (104, 70757),

Gene: Benczkowski14_89 Start: 70009, Stop: 69209, Start Num: 28
Candidate Starts for Benczkowski14_89:
(Start: 28 @70009 has 12 MA's), (30, 69994), (32, 69979), (35, 69964), (44, 69907), (48, 69850), (50, 69832), (57, 69781), (58, 69778), (65, 69727), (66, 69724), (67, 69715), (70, 69682), (71, 69673), (73, 69652), (74, 69649), (87, 69541), (88, 69526), (100, 69406), (109, 69232),

Gene: BenoitCattle_96 Start: 70989, Stop: 70093, Start Num: 13
Candidate Starts for BenoitCattle_96:
(10, 71004), (Start: 13 @70989 has 33 MA's), (21, 70947), (23, 70905), (40, 70812), (42, 70800), (46, 70749), (53, 70692), (56, 70671), (61, 70635), (64, 70623), (67, 70590), (72, 70533), (76, 70518), (77, 70494), (79, 70467), (92, 70350), (93, 70347), (94, 70329), (95, 70317), (97, 70302), (98, 70299), (101, 70290), (102, 70287), (103, 70236), (105, 70152), (108, 70125),

Gene: Berries_86 Start: 68846, Stop: 67848, Start Num: 3
Candidate Starts for Berries_86:
(1, 68855), (2, 68849), (Start: 3 @68846 has 25 MA's), (11, 68762), (Start: 17 @68732 has 3 MA's), (19, 68720), (37, 68582), (40, 68555), (42, 68543), (43, 68540), (49, 68459), (56, 68414), (75, 68279), (76, 68273), (79, 68222), (82, 68210), (94, 68084), (95, 68072), (97, 68057), (98, 68054), (100, 68048), (101, 68045), (102, 68042), (103, 67991), (109, 67874),

Gene: Bianmat_86 Start: 68886, Stop: 67888, Start Num: 3
Candidate Starts for Bianmat_86:
(1, 68895), (2, 68889), (Start: 3 @68886 has 25 MA's), (11, 68802), (Start: 17 @68772 has 3 MA's), (19, 68760), (37, 68622), (40, 68595), (42, 68583), (43, 68580), (49, 68499), (56, 68454), (75, 68319), (76, 68313), (79, 68262), (82, 68250), (94, 68124), (95, 68112), (97, 68097), (98, 68094), (100, 68088), (101, 68085), (102, 68082), (103, 68031), (109, 67914),

Gene: BigShaq_95 Start: 70588, Stop: 69683, Start Num: 13
Candidate Starts for BigShaq_95:
(10, 70603), (Start: 13 @70588 has 33 MA's), (24, 70501), (25, 70492), (29, 70471), (37, 70426), (40, 70402), (43, 70387), (46, 70339), (53, 70282), (56, 70261), (64, 70213), (67, 70180), (72, 70123), (76, 70108), (77, 70084), (79, 70057), (92, 69940), (93, 69937), (94, 69919), (95, 69907), (98, 69889), (101, 69880), (102, 69877), (103, 69826), (105, 69742), (108, 69715),

Gene: BillyBobJr_98 Start: 71698, Stop: 70802, Start Num: 13
Candidate Starts for BillyBobJr_98:
(4, 71764), (8, 71728), (Start: 13 @71698 has 33 MA's), (18, 71677), (22, 71644), (25, 71602), (35, 71542), (43, 71497), (46, 71449), (56, 71371), (61, 71335), (64, 71323), (72, 71239), (76, 71224), (77, 71200), (79, 71173), (92, 71059), (93, 71056), (94, 71038), (95, 71026), (97, 71011), (98, 71008), (101, 70999), (102, 70996), (103, 70945), (104, 70864),

Gene: BirksAndSocks_97 Start: 71205, Stop: 70309, Start Num: 13
Candidate Starts for BirksAndSocks_97:
(Start: 13 @71205 has 33 MA's), (18, 71184), (35, 71049), (43, 71004), (46, 70956), (56, 70878), (61, 70842), (64, 70830), (72, 70746), (76, 70731), (77, 70707), (79, 70680), (92, 70566), (93, 70563), (94, 70545), (95, 70533), (97, 70518), (98, 70515), (101, 70506), (102, 70503), (103, 70452), (104, 70371),

Gene: Boneham_96 Start: 71130, Stop: 70234, Start Num: 13
Candidate Starts for Boneham_96:
(Start: 13 @71130 has 33 MA's), (18, 71109), (35, 70974), (43, 70929), (46, 70881), (56, 70803), (61, 70767), (64, 70755), (72, 70671), (76, 70656), (77, 70632), (79, 70605), (92, 70491), (93, 70488), (94, 70470), (95, 70458), (97, 70443), (98, 70440), (101, 70431), (102, 70428), (103, 70377), (104, 70296),

Gene: Breezic_95 Start: 70142, Stop: 69225, Start Num: 13
Candidate Starts for Breezic_95:
(Start: 13 @70142 has 33 MA's), (18, 70121), (22, 70088), (25, 70046), (35, 69986), (40, 69956), (43, 69941), (56, 69815), (61, 69779), (64, 69767), (72, 69677), (76, 69662), (79, 69611), (85, 69584), (92, 69482), (93, 69479), (94, 69461), (95, 69449), (97, 69434), (101, 69422), (102, 69419), (103, 69368), (104, 69287),

Gene: Butterball_95 Start: 71135, Stop: 70239, Start Num: 13
Candidate Starts for Butterball_95:
(Start: 13 @71135 has 33 MA's), (18, 71114), (35, 70979), (43, 70934), (46, 70886), (56, 70808), (61, 70772), (64, 70760), (72, 70676), (76, 70661), (77, 70637), (79, 70610), (92, 70496), (93, 70493), (94, 70475), (95, 70463), (97, 70448), (98, 70445), (101, 70436), (102, 70433), (103, 70382), (104, 70301),

Gene: CathyBurgh_94 Start: 70172, Stop: 69255, Start Num: 13
Candidate Starts for CathyBurgh_94:
(Start: 13 @70172 has 33 MA's), (18, 70151), (22, 70118), (25, 70076), (35, 70016), (40, 69986), (56, 69845), (64, 69797), (72, 69707), (76, 69692), (77, 69668), (79, 69641), (85, 69614), (92, 69512), (93, 69509), (94, 69491), (95, 69479), (97, 69464), (101, 69452), (102, 69449), (103, 69398), (104, 69317),

Gene: Charianelly_86 Start: 68596, Stop: 67598, Start Num: 3
Candidate Starts for Charianelly_86:
(1, 68605), (2, 68599), (Start: 3 @68596 has 25 MA's), (11, 68512), (Start: 17 @68482 has 3 MA's), (19, 68470), (37, 68332), (40, 68305), (42, 68293), (43, 68290), (49, 68209), (56, 68164), (75, 68029), (76, 68023), (79, 67972), (82, 67960), (94, 67834), (95, 67822), (97, 67807), (98, 67804), (100, 67798), (101, 67795), (102, 67792), (103, 67741), (109, 67624),

Gene: Chelms_94 Start: 70726, Stop: 69830, Start Num: 13
Candidate Starts for Chelms_94:
(4, 70792), (Start: 13 @70726 has 33 MA's), (23, 70642), (40, 70549), (42, 70537), (46, 70486), (53, 70429), (56, 70408), (61, 70372), (64, 70360), (67, 70327), (72, 70270), (76, 70255), (77, 70231), (79, 70204), (92, 70087), (93, 70084), (94, 70066), (95, 70054), (97, 70039), (98, 70036), (101, 70027), (102, 70024), (103, 69973), (105, 69889), (108, 69862),

Gene: CinnamonToast_98 Start: 71698, Stop: 70802, Start Num: 13
Candidate Starts for CinnamonToast_98:
(4, 71764), (8, 71728), (Start: 13 @71698 has 33 MA's), (18, 71677), (22, 71644), (25, 71602), (35, 71542), (43, 71497), (46, 71449), (56, 71371), (61, 71335), (64, 71323), (72, 71239), (76, 71224), (77, 71200), (79, 71173), (92, 71059), (93, 71056), (94, 71038), (95, 71026), (97, 71011), (98, 71008), (101, 70999), (102, 70996), (103, 70945), (104, 70864),

Gene: Crete_95 Start: 70771, Stop: 69866, Start Num: 13
Candidate Starts for Crete_95:
(4, 70837), (5, 70825), (6, 70822), (Start: 13 @70771 has 33 MA's), (25, 70675), (29, 70654), (37, 70609), (40, 70585), (43, 70570), (46, 70522), (53, 70465), (56, 70444), (64, 70396), (67, 70363), (72, 70306), (76, 70291), (77, 70267), (79, 70240), (92, 70123), (93, 70120), (94, 70102), (95, 70090), (97, 70075), (98, 70072), (101, 70063), (102, 70060), (103, 70009), (105, 69925), (108, 69898),

Gene: Dakiti_96 Start: 71669, Stop: 70773, Start Num: 13
Candidate Starts for Dakiti_96:
(4, 71735), (Start: 13 @71669 has 33 MA's), (23, 71585), (40, 71492), (42, 71480), (46, 71429), (53, 71372), (56, 71351), (61, 71315), (64, 71303), (67, 71270), (72, 71213), (76, 71198), (77, 71174), (79, 71147), (92, 71030), (93, 71027), (94, 71009), (95, 70997), (97, 70982), (98, 70979), (101, 70970), (102, 70967), (103, 70916), (105, 70832), (108, 70805),

Gene: Damp_86 Start: 67760, Stop: 66762, Start Num: 3
Candidate Starts for Damp_86:
(1, 67769), (2, 67763), (Start: 3 @67760 has 25 MA's), (11, 67676), (Start: 17 @67646 has 3 MA's), (19, 67634), (37, 67496), (40, 67469), (42, 67457), (43, 67454), (49, 67373), (56, 67328), (75, 67193), (76, 67187), (79, 67136), (82, 67124), (94, 66998), (95, 66986), (97, 66971), (98, 66968), (100, 66962), (101, 66959), (102, 66956), (103, 66905), (109, 66788),

Gene: Demosthenes_82 Start: 68342, Stop: 67542, Start Num: 28
Candidate Starts for Demosthenes_82:
(Start: 28 @68342 has 12 MA's), (30, 68327), (32, 68312), (35, 68297), (44, 68240), (48, 68183), (50, 68165), (57, 68114), (58, 68111), (65, 68060), (66, 68057), (67, 68048), (70, 68015), (73, 67985), (74, 67982), (87, 67874), (88, 67859), (100, 67739), (109, 67565),

Gene: Diabla_98 Start: 71134, Stop: 70223, Start Num: 12
Candidate Starts for Diabla_98:
(4, 71200), (7, 71173), (9, 71158), (Start: 12 @71134 has 5 MA's), (24, 71038), (26, 71026), (40, 70939), (42, 70927), (56, 70798), (61, 70762), (64, 70750), (67, 70717), (74, 70654), (76, 70645), (79, 70594), (89, 70537), (92, 70480), (93, 70477), (94, 70459), (95, 70447), (97, 70432), (98, 70429), (101, 70420), (102, 70417), (103, 70366), (109, 70249),

Gene: DocB7_079 Start: 60180, Stop: 59464, Start Num: 41
Candidate Starts for DocB7_079:
(41, 60180), (51, 60075), (52, 60066), (55, 60045), (63, 59997), (69, 59931), (75, 59886), (77, 59856), (78, 59844), (81, 59820), (84, 59808), (90, 59745), (93, 59703), (94, 59685), (96, 59667), (99, 59649), (107, 59487), (108, 59478), (109, 59472),

Gene: Eggsie_91 Start: 68690, Stop: 67779, Start Num: 12
Candidate Starts for Eggsie_91:
(4, 68756), (7, 68729), (9, 68714), (Start: 12 @68690 has 5 MA's), (24, 68594), (26, 68582), (27, 68576), (38, 68513), (40, 68495), (56, 68354), (61, 68318), (64, 68306), (67, 68273), (74, 68210), (76, 68201), (79, 68150), (89, 68093), (92, 68036), (93, 68033), (94, 68015), (95, 68003), (97, 67988), (98, 67985), (101, 67976), (102, 67973), (103, 67922), (109, 67805),

Gene: Ekhein_96 Start: 70186, Stop: 69269, Start Num: 13
Candidate Starts for Ekhein_96:
(Start: 13 @70186 has 33 MA's), (18, 70165), (35, 70030), (43, 69985), (46, 69937), (56, 69859), (61, 69823), (64, 69811), (72, 69721), (74, 69715), (76, 69706), (77, 69682), (79, 69655), (85, 69628), (92, 69526), (93, 69523), (94, 69505), (95, 69493), (97, 69478), (98, 69475), (101, 69466), (102, 69463), (103, 69412), (104, 69331),

Gene: Exiguo_93 Start: 69605, Stop: 68694, Start Num: 13
Candidate Starts for Exiguo_93:
(4, 69671), (Start: 13 @69605 has 33 MA's), (18, 69584), (22, 69551), (25, 69509), (35, 69449), (40, 69419), (56, 69278), (64, 69230), (72, 69146), (76, 69131), (77, 69107), (79, 69080), (85, 69053), (92, 68951), (93, 68948), (94, 68930), (95, 68918), (97, 68903), (101, 68891), (102, 68888), (103, 68837), (104, 68756),

Gene: FelixAlejandro_97 Start: 71648, Stop: 70752, Start Num: 13
Candidate Starts for FelixAlejandro_97:
(Start: 13 @71648 has 33 MA's), (18, 71627), (35, 71492), (43, 71447), (46, 71399), (56, 71321), (61, 71285), (64, 71273), (72, 71189), (76, 71174), (77, 71150), (79, 71123), (92, 71009), (93, 71006), (94, 70988), (95, 70976), (97, 70961), (98, 70958), (101, 70949), (102, 70946), (103, 70895), (104, 70814),

Gene: Flakey_95 Start: 71083, Stop: 70166, Start Num: 13
Candidate Starts for Flakey_95:
(4, 71149), (8, 71113), (Start: 13 @71083 has 33 MA's), (18, 71062), (22, 71029), (25, 70987), (35, 70927), (40, 70897), (56, 70756), (61, 70720), (64, 70708), (72, 70618), (74, 70612), (76, 70603), (77, 70579), (79, 70552), (85, 70525), (92, 70423), (93, 70420), (94, 70402), (95, 70390), (97, 70375), (98, 70372), (101, 70363), (102, 70360), (103, 70309), (104, 70228),

Gene: GMA7_76 Start: 61589, Stop: 60699, Start Num: 17
Candidate Starts for GMA7_76:
(16, 61592), (Start: 17 @61589 has 3 MA's), (24, 61514), (34, 61460), (45, 61385), (46, 61367), (60, 61256), (62, 61250), (68, 61184), (74, 61139), (76, 61130), (79, 61079), (80, 61073), (101, 60905), (102, 60902), (110, 60704),

Gene: GTE7_76 Start: 62155, Stop: 61265, Start Num: 17
Candidate Starts for GTE7_76:
(16, 62158), (Start: 17 @62155 has 3 MA's), (24, 62080), (34, 62026), (35, 62023), (45, 61951), (46, 61933), (60, 61822), (62, 61816), (68, 61750), (74, 61705), (76, 61696), (79, 61645), (80, 61639), (101, 61471), (102, 61468), (110, 61270),

Gene: GalacticEye_86 Start: 68554, Stop: 67556, Start Num: 3
Candidate Starts for GalacticEye_86:
(1, 68563), (2, 68557), (Start: 3 @68554 has 25 MA's), (11, 68470), (Start: 17 @68440 has 3 MA's), (19, 68428), (37, 68290), (40, 68263), (42, 68251), (43, 68248), (49, 68167), (56, 68122), (75, 67987), (76, 67981), (79, 67930), (82, 67918), (94, 67792), (95, 67780), (97, 67765), (98, 67762), (100, 67756), (101, 67753), (102, 67750), (103, 67699), (109, 67582),

Gene: Gorko_93 Start: 69355, Stop: 68438, Start Num: 13
Candidate Starts for Gorko_93:
(Start: 13 @69355 has 33 MA's), (18, 69334), (22, 69301), (25, 69259), (35, 69199), (40, 69169), (43, 69154), (53, 69049), (56, 69028), (61, 68992), (64, 68980), (72, 68890), (74, 68884), (76, 68875), (77, 68851), (79, 68824), (85, 68797), (92, 68695), (93, 68692), (94, 68674), (95, 68662), (97, 68647), (98, 68644), (101, 68635), (102, 68632), (103, 68581), (104, 68500),

Gene: GourdThymes_94 Start: 70193, Stop: 69282, Start Num: 13
Candidate Starts for GourdThymes_94:
(Start: 13 @70193 has 33 MA's), (18, 70172), (22, 70139), (25, 70097), (35, 70037), (40, 70007), (56, 69866), (64, 69818), (72, 69734), (76, 69719), (79, 69668), (85, 69641), (92, 69539), (93, 69536), (94, 69518), (95, 69506), (97, 69491), (98, 69488), (101, 69479), (102, 69476), (103, 69425), (104, 69344),

Gene: Guillaume_85 Start: 68607, Stop: 67609, Start Num: 3
Candidate Starts for Guillaume_85:
(1, 68616), (2, 68610), (Start: 3 @68607 has 25 MA's), (11, 68523), (Start: 17 @68493 has 3 MA's), (19, 68481), (37, 68343), (40, 68316), (42, 68304), (43, 68301), (49, 68220), (56, 68175), (75, 68040), (76, 68034), (79, 67983), (82, 67971), (94, 67845), (95, 67833), (97, 67818), (98, 67815), (100, 67809), (101, 67806), (102, 67803), (103, 67752), (109, 67635),

Gene: Hail2Pitt_84 Start: 69080, Stop: 68082, Start Num: 3
Candidate Starts for Hail2Pitt_84:
(1, 69089), (2, 69083), (Start: 3 @69080 has 25 MA's), (11, 68996), (Start: 17 @68966 has 3 MA's), (19, 68954), (37, 68816), (40, 68789), (42, 68777), (43, 68774), (49, 68693), (56, 68648), (75, 68513), (76, 68507), (79, 68456), (82, 68444), (94, 68318), (95, 68306), (97, 68291), (98, 68288), (100, 68282), (101, 68279), (102, 68276), (103, 68225), (109, 68108),

Gene: Harambe_85 Start: 68874, Stop: 67876, Start Num: 3
Candidate Starts for Harambe_85:
(1, 68883), (2, 68877), (Start: 3 @68874 has 25 MA's), (11, 68790), (Start: 17 @68760 has 3 MA's), (19, 68748), (37, 68610), (40, 68583), (42, 68571), (43, 68568), (49, 68487), (56, 68442), (75, 68307), (76, 68301), (79, 68250), (82, 68238), (94, 68112), (95, 68100), (97, 68085), (98, 68082), (100, 68076), (101, 68073), (102, 68070), (103, 68019), (109, 67902),

Gene: HayZem_89 Start: 67702, Stop: 66812, Start Num: 17
Candidate Starts for HayZem_89:
(16, 67705), (Start: 17 @67702 has 3 MA's), (24, 67627), (34, 67573), (35, 67570), (46, 67480), (60, 67369), (62, 67363), (68, 67297), (74, 67252), (76, 67243), (79, 67192), (80, 67186), (101, 67018), (102, 67015), (110, 66817),

Gene: Hello_85 Start: 68836, Stop: 67838, Start Num: 3
Candidate Starts for Hello_85:
(1, 68845), (2, 68839), (Start: 3 @68836 has 25 MA's), (11, 68752), (Start: 17 @68722 has 3 MA's), (19, 68710), (37, 68572), (40, 68545), (42, 68533), (43, 68530), (49, 68449), (56, 68404), (75, 68269), (76, 68263), (79, 68212), (82, 68200), (94, 68074), (95, 68062), (97, 68047), (98, 68044), (100, 68038), (101, 68035), (102, 68032), (103, 67981), (109, 67864),

Gene: Hollow_88 Start: 69820, Stop: 69020, Start Num: 28
Candidate Starts for Hollow_88:
(Start: 28 @69820 has 12 MA's), (30, 69805), (32, 69790), (35, 69775), (44, 69718), (48, 69661), (50, 69643), (57, 69592), (58, 69589), (65, 69538), (66, 69535), (67, 69526), (73, 69463), (74, 69460), (87, 69352), (88, 69337), (100, 69217), (109, 69043),

Gene: Hotorobo_96 Start: 71054, Stop: 70143, Start Num: 13
Candidate Starts for Hotorobo_96:
(8, 71084), (Start: 13 @71054 has 33 MA's), (18, 71033), (22, 71000), (25, 70958), (35, 70898), (43, 70853), (53, 70748), (56, 70727), (61, 70691), (64, 70679), (72, 70595), (76, 70580), (77, 70556), (79, 70529), (85, 70502), (92, 70400), (93, 70397), (94, 70379), (95, 70367), (97, 70352), (98, 70349), (101, 70340), (102, 70337), (103, 70286), (104, 70205),

Gene: Jams_86 Start: 67884, Stop: 66886, Start Num: 3
Candidate Starts for Jams_86:
(1, 67893), (2, 67887), (Start: 3 @67884 has 25 MA's), (11, 67800), (Start: 17 @67770 has 3 MA's), (19, 67758), (37, 67620), (40, 67593), (42, 67581), (43, 67578), (49, 67497), (56, 67452), (75, 67317), (76, 67311), (79, 67260), (82, 67248), (94, 67122), (95, 67110), (97, 67095), (98, 67092), (100, 67086), (101, 67083), (102, 67080), (103, 67029), (109, 66912),

Gene: Jellybones_95 Start: 71336, Stop: 70440, Start Num: 13
Candidate Starts for Jellybones_95:
(Start: 13 @71336 has 33 MA's), (18, 71315), (25, 71240), (35, 71180), (40, 71150), (43, 71135), (46, 71087), (56, 71009), (61, 70973), (64, 70961), (72, 70877), (76, 70862), (77, 70838), (79, 70811), (92, 70697), (93, 70694), (94, 70676), (95, 70664), (97, 70649), (98, 70646), (101, 70637), (102, 70634), (103, 70583), (104, 70502),

Gene: John316_97 Start: 71313, Stop: 70396, Start Num: 13
Candidate Starts for John316_97:
(8, 71343), (Start: 13 @71313 has 33 MA's), (18, 71292), (25, 71217), (35, 71157), (40, 71127), (56, 70986), (61, 70950), (64, 70938), (72, 70848), (74, 70842), (76, 70833), (77, 70809), (79, 70782), (85, 70755), (92, 70653), (93, 70650), (94, 70632), (95, 70620), (97, 70605), (101, 70593), (102, 70590), (103, 70539), (104, 70458),

Gene: Jormungandr_85 Start: 68589, Stop: 67591, Start Num: 3
Candidate Starts for Jormungandr_85:
(1, 68598), (2, 68592), (Start: 3 @68589 has 25 MA's), (11, 68505), (Start: 17 @68475 has 3 MA's), (19, 68463), (37, 68325), (40, 68298), (42, 68286), (43, 68283), (49, 68202), (56, 68157), (75, 68022), (76, 68016), (79, 67965), (82, 67953), (94, 67827), (95, 67815), (97, 67800), (98, 67797), (100, 67791), (101, 67788), (102, 67785), (103, 67734), (109, 67617),

Gene: Kaseim_86 Start: 68031, Stop: 67033, Start Num: 3
Candidate Starts for Kaseim_86:
(1, 68040), (2, 68034), (Start: 3 @68031 has 25 MA's), (11, 67947), (Start: 17 @67917 has 3 MA's), (19, 67905), (37, 67767), (40, 67740), (42, 67728), (43, 67725), (49, 67644), (56, 67599), (75, 67464), (76, 67458), (79, 67407), (82, 67395), (94, 67269), (95, 67257), (97, 67242), (98, 67239), (100, 67233), (101, 67230), (102, 67227), (103, 67176), (109, 67059),

Gene: Katyusha_87 Start: 70009, Stop: 69209, Start Num: 28
Candidate Starts for Katyusha_87:
(Start: 28 @70009 has 12 MA's), (30, 69994), (32, 69979), (35, 69964), (44, 69907), (48, 69850), (50, 69832), (57, 69781), (58, 69778), (65, 69727), (66, 69724), (67, 69715), (70, 69682), (71, 69673), (73, 69652), (74, 69649), (87, 69541), (88, 69526), (100, 69406), (109, 69232),

Gene: Kelzog_96 Start: 70580, Stop: 69669, Start Num: 13
Candidate Starts for Kelzog_96:
(Start: 13 @70580 has 33 MA's), (18, 70559), (22, 70526), (25, 70484), (35, 70424), (40, 70394), (56, 70253), (64, 70205), (72, 70121), (74, 70115), (76, 70106), (77, 70082), (79, 70055), (85, 70028), (92, 69926), (93, 69923), (94, 69905), (95, 69893), (97, 69878), (98, 69875), (101, 69866), (102, 69863), (103, 69812), (104, 69731),

Gene: Kvothe_88 Start: 70018, Stop: 69218, Start Num: 28
Candidate Starts for Kvothe_88:
(Start: 28 @70018 has 12 MA's), (30, 70003), (32, 69988), (35, 69973), (44, 69916), (48, 69859), (50, 69841), (57, 69790), (58, 69787), (65, 69736), (66, 69733), (67, 69724), (73, 69661), (74, 69658), (87, 69550), (88, 69535), (100, 69415), (109, 69241),

Gene: Lahirium_86 Start: 69625, Stop: 68627, Start Num: 3
Candidate Starts for Lahirium_86:
(1, 69634), (2, 69628), (Start: 3 @69625 has 25 MA's), (11, 69541), (Start: 17 @69511 has 3 MA's), (19, 69499), (37, 69361), (40, 69334), (42, 69322), (43, 69319), (49, 69238), (56, 69193), (75, 69058), (76, 69052), (79, 69001), (82, 68989), (94, 68863), (95, 68851), (97, 68836), (98, 68833), (100, 68827), (101, 68824), (102, 68821), (103, 68770), (109, 68653),

Gene: Lidong_86 Start: 68846, Stop: 67848, Start Num: 3
Candidate Starts for Lidong_86:
(1, 68855), (2, 68849), (Start: 3 @68846 has 25 MA's), (11, 68762), (Start: 17 @68732 has 3 MA's), (19, 68720), (37, 68582), (40, 68555), (42, 68543), (43, 68540), (49, 68459), (56, 68414), (75, 68279), (76, 68273), (79, 68222), (82, 68210), (94, 68084), (95, 68072), (97, 68057), (98, 68054), (100, 68048),

(101, 68045), (102, 68042), (103, 67991), (109, 67874),

Gene: Linetti_94 Start: 71695, Stop: 70790, Start Num: 13
Candidate Starts for Linetti_94:
(4, 71761), (Start: 13 @71695 has 33 MA's), (25, 71599), (29, 71578), (37, 71533), (40, 71509), (43, 71494), (46, 71446), (53, 71389), (56, 71368), (61, 71332), (64, 71320), (67, 71287), (72, 71230), (76, 71215), (77, 71191), (79, 71164), (92, 71047), (93, 71044), (94, 71026), (97, 70999), (98, 70996), (101, 70987), (102, 70984), (103, 70933), (105, 70849), (108, 70822),

Gene: Lizzo_94 Start: 70172, Stop: 69255, Start Num: 13
Candidate Starts for Lizzo_94:
(Start: 13 @70172 has 33 MA's), (18, 70151), (22, 70118), (25, 70076), (35, 70016), (40, 69986), (56, 69845), (64, 69797), (72, 69707), (76, 69692), (77, 69668), (79, 69641), (85, 69614), (92, 69512), (93, 69509), (94, 69491), (95, 69479), (97, 69464), (101, 69452), (102, 69449), (103, 69398), (104, 69317),

Gene: Luker_87 Start: 68899, Stop: 67901, Start Num: 3
Candidate Starts for Luker_87:
(1, 68908), (2, 68902), (Start: 3 @68899 has 25 MA's), (11, 68815), (Start: 17 @68785 has 3 MA's), (19, 68773), (37, 68635), (40, 68608), (42, 68596), (43, 68593), (49, 68512), (56, 68467), (75, 68332), (76, 68326), (79, 68275), (82, 68263), (94, 68137), (95, 68125), (97, 68110), (98, 68107), (100, 68101), (101, 68098), (102, 68095), (103, 68044), (109, 67927),

Gene: Minos_87 Start: 68573, Stop: 67587, Start Num: 3
Candidate Starts for Minos_87:
(1, 68582), (2, 68576), (Start: 3 @68573 has 25 MA's), (11, 68501), (Start: 17 @68471 has 3 MA's), (19, 68459), (37, 68321), (42, 68282), (43, 68279), (49, 68198), (56, 68153), (75, 68018), (76, 68012), (79, 67961), (82, 67949), (94, 67823), (95, 67811), (97, 67796), (98, 67793), (100, 67787), (101, 67784), (102, 67781), (103, 67730), (109, 67613),

Gene: Monty_94 Start: 69874, Stop: 68957, Start Num: 13
Candidate Starts for Monty_94:
(Start: 13 @69874 has 33 MA's), (18, 69853), (22, 69820), (25, 69778), (35, 69718), (40, 69688), (56, 69547), (61, 69511), (64, 69499), (72, 69409), (74, 69403), (76, 69394), (77, 69370), (79, 69343), (85, 69316), (92, 69214), (93, 69211), (94, 69193), (95, 69181), (97, 69166), (98, 69163), (101, 69154), (102, 69151), (103, 69100), (104, 69019),

Gene: MrWormie_86 Start: 67587, Stop: 66589, Start Num: 3
Candidate Starts for MrWormie_86:
(1, 67596), (2, 67590), (Start: 3 @67587 has 25 MA's), (11, 67503), (Start: 17 @67473 has 3 MA's), (19, 67461), (37, 67323), (40, 67296), (42, 67284), (43, 67281), (49, 67200), (56, 67155), (75, 67020), (76, 67014), (79, 66963), (82, 66951), (94, 66825), (95, 66813), (97, 66798), (98, 66795), (100, 66789), (101, 66786), (102, 66783), (103, 66732), (109, 66615),

Gene: Msay19_98 Start: 71931, Stop: 71035, Start Num: 13
Candidate Starts for Msay19_98:
(Start: 13 @71931 has 33 MA's), (18, 71910), (35, 71775), (43, 71730), (46, 71682), (56, 71604), (61, 71568), (64, 71556), (72, 71472), (74, 71466), (76, 71457), (77, 71433), (79, 71406), (92, 71292), (93, 71289), (95, 71259), (97, 71244), (98, 71241), (101, 71232), (102, 71229), (103, 71178), (109, 71061),

Gene: Neoevie_85 Start: 68847, Stop: 67849, Start Num: 3
Candidate Starts for Neoevie_85:
(1, 68856), (2, 68850), (Start: 3 @68847 has 25 MA's), (11, 68763), (Start: 17 @68733 has 3 MA's), (19, 68721), (37, 68583), (40, 68556), (42, 68544), (43, 68541), (49, 68460), (56, 68415), (75, 68280),

(76, 68274), (79, 68223), (82, 68211), (94, 68085), (95, 68073), (97, 68058), (98, 68055), (100, 68049), (101, 68046), (102, 68043), (103, 67992), (109, 67875),

Gene: Newt_87 Start: 68916, Stop: 67918, Start Num: 3
Candidate Starts for Newt_87:
(1, 68925), (2, 68919), (Start: 3 @68916 has 25 MA's), (11, 68832), (Start: 17 @68802 has 3 MA's), (19, 68790), (37, 68652), (40, 68625), (42, 68613), (43, 68610), (49, 68529), (56, 68484), (75, 68349), (76, 68343), (79, 68292), (82, 68280), (94, 68154), (95, 68142), (97, 68127), (98, 68124), (100, 68118), (101, 68115), (102, 68112), (103, 68061), (109, 67944),

Gene: Niagara_88 Start: 69942, Stop: 69142, Start Num: 28
Candidate Starts for Niagara_88:
(Start: 28 @69942 has 12 MA's), (30, 69927), (32, 69912), (35, 69897), (44, 69840), (48, 69783), (50, 69765), (57, 69714), (58, 69711), (65, 69660), (66, 69657), (67, 69648), (70, 69615), (71, 69606), (73, 69585), (74, 69582), (87, 69474), (88, 69459), (100, 69339),

Gene: Nimi13_85 Start: 68597, Stop: 67599, Start Num: 3
Candidate Starts for Nimi13_85:
(1, 68606), (2, 68600), (Start: 3 @68597 has 25 MA's), (11, 68513), (Start: 17 @68483 has 3 MA's), (19, 68471), (37, 68333), (40, 68306), (42, 68294), (43, 68291), (49, 68210), (56, 68165), (75, 68030), (76, 68024), (79, 67973), (82, 67961), (94, 67835), (95, 67823), (97, 67808), (98, 67805), (100, 67799), (101, 67796), (102, 67793), (103, 67742), (109, 67625),

Gene: Philon9_86 Start: 69943, Stop: 69161, Start Num: 28
Candidate Starts for Philon9_86:
(14, 70048), (15, 70045), (20, 70015), (Start: 28 @69943 has 12 MA's), (39, 69874), (47, 69799), (48, 69790), (54, 69751), (58, 69718), (61, 69700), (73, 69601), (74, 69598), (75, 69595), (86, 69502), (87, 69493), (100, 69358), (106, 69208),

Gene: PierreThree_94 Start: 71300, Stop: 70404, Start Num: 13
Candidate Starts for PierreThree_94:
(4, 71366), (Start: 13 @71300 has 33 MA's), (23, 71216), (40, 71123), (42, 71111), (46, 71060), (53, 71003), (56, 70982), (61, 70946), (64, 70934), (67, 70901), (72, 70844), (76, 70829), (77, 70805), (79, 70778), (92, 70661), (93, 70658), (94, 70640), (95, 70628), (97, 70613), (98, 70610), (101, 70601), (102, 70598), (103, 70547), (105, 70463), (108, 70436),

Gene: PokyPuppy_92 Start: 70572, Stop: 69670, Start Num: 12
Candidate Starts for PokyPuppy_92:
(Start: 12 @70572 has 5 MA's), (29, 70449), (31, 70437), (36, 70413), (40, 70389), (42, 70377), (56, 70248), (61, 70212), (67, 70167), (76, 70095), (89, 69984), (91, 69951), (92, 69927), (93, 69924), (95, 69894), (97, 69879), (101, 69867), (102, 69864), (103, 69813),

Gene: Poland_98 Start: 71913, Stop: 71017, Start Num: 13
Candidate Starts for Poland_98:
(Start: 13 @71913 has 33 MA's), (18, 71892), (35, 71757), (43, 71712), (46, 71664), (56, 71586), (61, 71550), (64, 71538), (72, 71454), (74, 71448), (76, 71439), (77, 71415), (79, 71388), (92, 71274), (93, 71271), (95, 71241), (97, 71226), (98, 71223), (101, 71214), (102, 71211), (103, 71160), (109, 71043),

Gene: RemRem_97 Start: 70163, Stop: 69252, Start Num: 13
Candidate Starts for RemRem_97:
(Start: 13 @70163 has 33 MA's), (18, 70142), (22, 70109), (25, 70067), (35, 70007), (40, 69977), (56, 69836), (64, 69788), (72, 69704), (76, 69689), (77, 69665), (79, 69638), (85, 69611), (92, 69509), (93, 69506), (94, 69488), (95, 69476), (97, 69461), (101, 69449), (102, 69446), (103, 69395), (104, 69314),

Gene: RoyalG_93 Start: 69881, Stop: 68970, Start Num: 12
Candidate Starts for RoyalG_93:
(Start: 12 @69881 has 5 MA's), (24, 69785), (26, 69773), (40, 69686), (42, 69674), (56, 69545), (61, 69509), (64, 69497), (67, 69464), (74, 69401), (76, 69392), (79, 69341), (89, 69284), (92, 69227), (93, 69224), (94, 69206), (95, 69194), (97, 69179), (101, 69167), (102, 69164), (103, 69113), (109, 68996),

Gene: Sam12_93 Start: 69602, Stop: 68691, Start Num: 13
Candidate Starts for Sam12_93:
(4, 69668), (Start: 13 @69602 has 33 MA's), (18, 69581), (22, 69548), (25, 69506), (35, 69446), (40, 69416), (56, 69275), (64, 69227), (72, 69143), (76, 69128), (77, 69104), (79, 69077), (85, 69050), (92, 68948), (93, 68945), (94, 68927), (95, 68915), (97, 68900), (101, 68888), (102, 68885), (103, 68834), (104, 68753),

Gene: Shelley_86 Start: 68073, Stop: 67075, Start Num: 3
Candidate Starts for Shelley_86:
(1, 68082), (2, 68076), (Start: 3 @68073 has 25 MA's), (11, 67989), (Start: 17 @67959 has 3 MA's), (19, 67947), (37, 67809), (40, 67782), (42, 67770), (43, 67767), (49, 67686), (56, 67641), (75, 67506), (76, 67500), (79, 67449), (82, 67437), (94, 67311), (95, 67299), (97, 67284), (98, 67281), (100, 67275), (101, 67272), (102, 67269), (103, 67218), (109, 67101),

Gene: Sombrero_95 Start: 70215, Stop: 69319, Start Num: 13
Candidate Starts for Sombrero_95:
(Start: 13 @70215 has 33 MA's), (18, 70194), (35, 70059), (43, 70014), (46, 69966), (56, 69888), (61, 69852), (64, 69840), (72, 69756), (76, 69741), (77, 69717), (79, 69690), (92, 69576), (93, 69573), (94, 69555), (95, 69543), (97, 69528), (98, 69525), (101, 69516), (102, 69513), (103, 69462), (104, 69381),

Gene: Squibbles_94 Start: 70689, Stop: 69772, Start Num: 13
Candidate Starts for Squibbles_94:
(4, 70755), (8, 70719), (Start: 13 @70689 has 33 MA's), (18, 70668), (22, 70635), (25, 70593), (35, 70533), (40, 70503), (43, 70488), (53, 70383), (56, 70362), (61, 70326), (64, 70314), (72, 70224), (74, 70218), (76, 70209), (77, 70185), (79, 70158), (85, 70131), (92, 70029), (93, 70026), (94, 70008), (95, 69996), (97, 69981), (98, 69978), (101, 69969), (102, 69966), (103, 69915), (104, 69834),

Gene: SteveFrench_92 Start: 70121, Stop: 69210, Start Num: 12
Candidate Starts for SteveFrench_92:
(Start: 12 @70121 has 5 MA's), (24, 70025), (26, 70013), (27, 70007), (33, 69962), (40, 69926), (42, 69914), (56, 69785), (61, 69749), (64, 69737), (67, 69704), (74, 69641), (76, 69632), (79, 69581), (89, 69524), (92, 69467), (93, 69464), (94, 69446), (95, 69434), (97, 69419), (101, 69407), (102, 69404), (103, 69353), (109, 69236),

Gene: Sticker17_86 Start: 68561, Stop: 67563, Start Num: 3
Candidate Starts for Sticker17_86:
(1, 68570), (2, 68564), (Start: 3 @68561 has 25 MA's), (11, 68477), (Start: 17 @68447 has 3 MA's), (19, 68435), (37, 68297), (40, 68270), (42, 68258), (43, 68255), (49, 68174), (56, 68129), (75, 67994), (76, 67988), (79, 67937), (82, 67925), (94, 67799), (95, 67787), (97, 67772), (98, 67769), (100, 67763), (101, 67760), (102, 67757), (103, 67706), (109, 67589),

Gene: Teal_85 Start: 69052, Stop: 68054, Start Num: 3
Candidate Starts for Teal_85:
(1, 69061), (2, 69055), (Start: 3 @69052 has 25 MA's), (11, 68968), (Start: 17 @68938 has 3 MA's), (19, 68926), (37, 68788), (40, 68761), (42, 68749), (43, 68746), (49, 68665), (56, 68620), (75, 68485), (76, 68479), (79, 68428), (82, 68416), (94, 68290), (95, 68278), (97, 68263), (98, 68260), (100, 68254),

(101, 68251), (102, 68248), (103, 68197), (109, 68080),

Gene: Teatealatte_89 Start: 70022, Stop: 69225, Start Num: 28
Candidate Starts for Teatealatte_89:
(Start: 28 @70022 has 12 MA's), (30, 70007), (32, 69992), (35, 69977), (48, 69860), (57, 69791), (58, 69788), (59, 69779), (71, 69689), (73, 69668), (74, 69665), (83, 69590), (87, 69557), (88, 69542), (100, 69422),

Gene: Teech_89 Start: 69655, Stop: 68855, Start Num: 28
Candidate Starts for Teech_89:
(Start: 28 @69655 has 12 MA's), (30, 69640), (32, 69625), (35, 69610), (44, 69553), (48, 69496), (50, 69478), (57, 69427), (58, 69424), (65, 69373), (66, 69370), (67, 69361), (73, 69298), (74, 69295), (87, 69187), (88, 69172), (100, 69052), (109, 68878),

Gene: Tredge_88 Start: 70022, Stop: 69225, Start Num: 28
Candidate Starts for Tredge_88:
(Start: 28 @70022 has 12 MA's), (30, 70007), (32, 69992), (35, 69977), (48, 69860), (57, 69791), (58, 69788), (59, 69779), (71, 69689), (73, 69668), (74, 69665), (83, 69590), (87, 69557), (88, 69542), (100, 69422),

Gene: Vitaenoii_86 Start: 69927, Stop: 69145, Start Num: 28
Candidate Starts for Vitaenoii_86:
(14, 70032), (15, 70029), (Start: 28 @69927 has 12 MA's), (39, 69858), (47, 69783), (48, 69774), (54, 69735), (58, 69702), (61, 69684), (73, 69585), (74, 69582), (75, 69579), (86, 69486), (87, 69477), (100, 69342), (106, 69192),

Gene: Woes_85 Start: 69103, Stop: 68105, Start Num: 3
Candidate Starts for Woes_85:
(1, 69112), (2, 69106), (Start: 3 @69103 has 25 MA's), (11, 69019), (Start: 17 @68989 has 3 MA's), (19, 68977), (37, 68839), (40, 68812), (42, 68800), (43, 68797), (49, 68716), (56, 68671), (75, 68536), (76, 68530), (79, 68479), (82, 68467), (94, 68341), (95, 68329), (97, 68314), (98, 68311), (100, 68305), (101, 68302), (102, 68299), (103, 68248), (109, 68131),

Gene: Worcestershire_93 Start: 69594, Stop: 68677, Start Num: 13
Candidate Starts for Worcestershire_93:
(Start: 13 @69594 has 33 MA's), (18, 69573), (35, 69438), (43, 69393), (56, 69267), (61, 69231), (64, 69219), (72, 69129), (74, 69123), (76, 69114), (77, 69090), (79, 69063), (85, 69036), (92, 68934), (93, 68931), (94, 68913), (95, 68901), (97, 68886), (98, 68883), (101, 68874), (102, 68871), (103, 68820), (104, 68739),