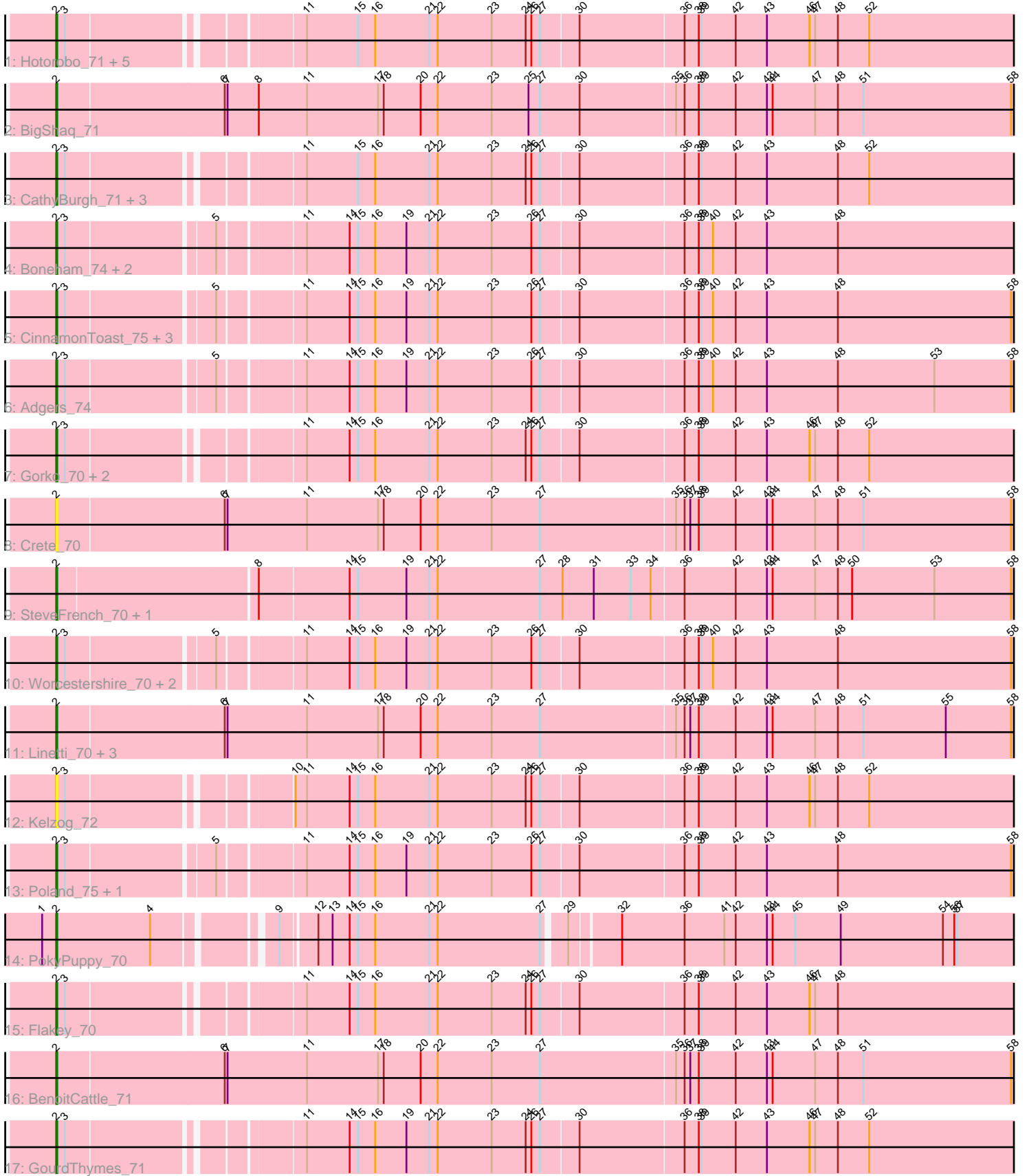


# Zoomed Pham 294891



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 294891 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294891 has 39 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Hotorobo\_71, John316\_74, Ekhein\_71, Monty\_70, Exiguo\_70, Sam12\_70
- Track 2 : BigShaq\_71
- Track 3 : CathyBurgh\_71, RemRem\_72, Breezic\_71, Lizzo\_71
- Track 4 : Boneham\_74, FelixAlejandro\_75, Butterball\_73
- Track 5 : CinnamonToast\_75, BillyBobJr\_75, Sombrero\_72, Barbochs\_68
- Track 6 : Adgers\_74
- Track 7 : Gorko\_70, Squibbles\_70, Beaver\_74
- Track 8 : Crete\_70
- Track 9 : SteveFrench\_70, RoyalG\_71
- Track 10 : Worcestershire\_70, Jellybones\_72, BirksAndSocks\_75
- Track 11 : Linetti\_70, Chelms\_70, PierreThree\_69, Dakiti\_71
- Track 12 : Kelzog\_72
- Track 13 : Poland\_75, Msay19\_75
- Track 14 : PokyPuppy\_70
- Track 15 : Flakey\_70
- Track 16 : BenoitCattle\_71
- Track 17 : GourdThymes\_71

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

The start number called the most often in the published annotations is 2, it was called in 34 of the 34 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adgers\_74, Barbochs\_68, Beaver\_74, BenoitCattle\_71, BigShaq\_71, BillyBobJr\_75, BirksAndSocks\_75, Boneham\_74, Breezic\_71, Butterball\_73, CathyBurgh\_71, Chelms\_70, CinnamonToast\_75, Crete\_70, Dakiti\_71, Ekhein\_71, Exiguo\_70, FelixAlejandro\_75, Flakey\_70, Gorko\_70, GourdThymes\_71, Hotorobo\_71, Jellybones\_72, John316\_74, Kelzog\_72, Linetti\_70, Lizzo\_71, Monty\_70, Msay19\_75, PierreThree\_69, PokyPuppy\_70, Poland\_75, RemRem\_72, RoyalG\_71, Sam12\_70, Sombrero\_72, Squibbles\_70, SteveFrench\_70, Worcestershire\_70,

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

-

Genes that do not have the "Most Annotated" start:

- 

### Summary by start number:

Start 2:

- Found in 39 of 39 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 34 of 34
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adgers\_74 (CS2), Barbochs\_68 (CS2), Beaver\_74 (CS2), BenoitCattle\_71 (CS2), BigShaq\_71 (CS2), BillyBobJr\_75 (CS2), BirksAndSocks\_75 (CS2), Boneham\_74 (CS2), Breezic\_71 (CS2), Butterball\_73 (CS2), CathyBurgh\_71 (CS2), Chelms\_70 (CS2), CinnamonToast\_75 (CS2), Crete\_70 (CS2), Dakiti\_71 (CS2), Ekhein\_71 (CS2), Exiguo\_70 (CS2), FelixAlejandro\_75 (CS2), Flakey\_70 (CS2), Gorko\_70 (CS2), GourdThymes\_71 (CS2), Hotorobo\_71 (CS2), Jellybones\_72 (CS2), John316\_74 (CS2), Kelzog\_72 (CS2), Linetti\_70 (CS2), Lizzo\_71 (CS2), Monty\_70 (CS2), Msay19\_75 (CS2), PierreThree\_69 (CS2), PokyPuppy\_70 (CS2), Poland\_75 (CS2), RemRem\_72 (CS2), RoyalG\_71 (CS2), Sam12\_70 (CS2), Sombrero\_72 (CS2), Squibbles\_70 (CS2), SteveFrench\_70 (CS2), Worcestershire\_70 (CS2),

### Summary by clusters:

There is one cluster represented in this pham: CS2

Info for manual annotations of cluster CS2:

- Start number 2 was manually annotated 34 times for cluster CS2.

### Gene Information:

Gene: Adgers\_74 Start: 58397, Stop: 57150, Start Num: 2

Candidate Starts for Adgers\_74:

(Start: 2 @58397 has 34 MA's), (3, 58388), (5, 58241), (11, 58160), (14, 58115), (15, 58106), (16, 58088), (19, 58055), (21, 58031), (22, 58022), (23, 57965), (26, 57923), (27, 57914), (30, 57875), (36, 57767), (38, 57752), (39, 57749), (40, 57737), (42, 57713), (43, 57680), (48, 57605), (53, 57503), (58, 57422), (62, 57323), (64, 57233), (66, 57221), (67, 57206), (69, 57194),

Gene: Barbochs\_68 Start: 57771, Stop: 56524, Start Num: 2

Candidate Starts for Barbochs\_68:

(Start: 2 @57771 has 34 MA's), (3, 57762), (5, 57615), (11, 57534), (14, 57489), (15, 57480), (16, 57462), (19, 57429), (21, 57405), (22, 57396), (23, 57339), (26, 57297), (27, 57288), (30, 57249), (36, 57141), (38, 57126), (39, 57123), (40, 57111), (42, 57087), (43, 57054), (48, 56979), (58, 56796), (62, 56697), (66, 56595), (67, 56580), (69, 56568),

Gene: Beaver\_74 Start: 59709, Stop: 58468, Start Num: 2

Candidate Starts for Beaver\_74:

(Start: 2 @59709 has 34 MA's), (3, 59700), (11, 59478), (14, 59433), (15, 59424), (16, 59406), (21, 59349), (22, 59340), (23, 59283), (24, 59247), (26, 59241), (27, 59232), (30, 59193), (36, 59085), (38, 59070), (39, 59067), (42, 59031), (43, 58998), (46, 58953), (47, 58947), (48, 58923), (52, 58890), (62, 58641), (66, 58539), (67, 58524), (69, 58512),

Gene: BenoitCattle\_71 Start: 58376, Stop: 57102, Start Num: 2

Candidate Starts for BenoitCattle\_71:

(Start: 2 @58376 has 34 MA's), (6, 58202), (7, 58199), (11, 58115), (17, 58040), (18, 58034), (20, 57995), (22, 57977), (23, 57920), (27, 57869), (35, 57728), (36, 57719), (37, 57713), (38, 57704), (39, 57701), (42, 57665), (43, 57632), (44, 57626), (47, 57581), (48, 57557), (51, 57530), (58, 57374), (61, 57293), (62, 57275), (65, 57182),

Gene: BigShaq\_71 Start: 58381, Stop: 57107, Start Num: 2

Candidate Starts for BigShaq\_71:

(Start: 2 @58381 has 34 MA's), (6, 58207), (7, 58204), (8, 58171), (11, 58120), (17, 58045), (18, 58039), (20, 58000), (22, 57982), (23, 57925), (25, 57886), (27, 57874), (30, 57832), (35, 57733), (36, 57724), (38, 57709), (39, 57706), (42, 57670), (43, 57637), (44, 57631), (47, 57586), (48, 57562), (51, 57535), (58, 57379), (61, 57298), (62, 57280), (65, 57187),

Gene: BillyBobJr\_75 Start: 59851, Stop: 58604, Start Num: 2

Candidate Starts for BillyBobJr\_75:

(Start: 2 @59851 has 34 MA's), (3, 59842), (5, 59695), (11, 59614), (14, 59569), (15, 59560), (16, 59542), (19, 59509), (21, 59485), (22, 59476), (23, 59419), (26, 59377), (27, 59368), (30, 59329), (36, 59221), (38, 59206), (39, 59203), (40, 59191), (42, 59167), (43, 59134), (48, 59059), (58, 58876), (62, 58777), (66, 58675), (67, 58660), (69, 58648),

Gene: BirksAndSocks\_75 Start: 59855, Stop: 58608, Start Num: 2

Candidate Starts for BirksAndSocks\_75:

(Start: 2 @59855 has 34 MA's), (3, 59846), (5, 59699), (11, 59618), (14, 59573), (15, 59564), (16, 59546), (19, 59513), (21, 59489), (22, 59480), (23, 59423), (26, 59381), (27, 59372), (30, 59333), (36, 59225), (38, 59210), (39, 59207), (40, 59195), (42, 59171), (43, 59138), (48, 59063), (58, 58880), (62, 58781), (64, 58691), (66, 58679), (67, 58664), (69, 58652),

Gene: Boneham\_74 Start: 59780, Stop: 58533, Start Num: 2

Candidate Starts for Boneham\_74:

(Start: 2 @59780 has 34 MA's), (3, 59771), (5, 59624), (11, 59543), (14, 59498), (15, 59489), (16, 59471), (19, 59438), (21, 59414), (22, 59405), (23, 59348), (26, 59306), (27, 59297), (30, 59258), (36, 59150), (38, 59135), (39, 59132), (40, 59120), (42, 59096), (43, 59063), (48, 58988), (62, 58706), (66, 58604), (67, 58589), (69, 58577),

Gene: Breezic\_71 Start: 57952, Stop: 56705, Start Num: 2

Candidate Starts for Breezic\_71:

(Start: 2 @57952 has 34 MA's), (3, 57943), (11, 57715), (15, 57661), (16, 57643), (21, 57586), (22, 57577), (23, 57520), (24, 57484), (26, 57478), (27, 57469), (30, 57430), (36, 57322), (38, 57307), (39, 57304), (42, 57268), (43, 57235), (48, 57160), (52, 57127), (62, 56878), (66, 56776), (67, 56761), (69, 56749),

Gene: Butterball\_73 Start: 59785, Stop: 58538, Start Num: 2

Candidate Starts for Butterball\_73:

(Start: 2 @59785 has 34 MA's), (3, 59776), (5, 59629), (11, 59548), (14, 59503), (15, 59494), (16, 59476), (19, 59443), (21, 59419), (22, 59410), (23, 59353), (26, 59311), (27, 59302), (30, 59263), (36, 59155), (38, 59140), (39, 59137), (40, 59125), (42, 59101), (43, 59068), (48, 58993), (62, 58711), (66, 58609), (67, 58594), (69, 58582),

Gene: CathyBurgh\_71 Start: 58460, Stop: 57219, Start Num: 2

Candidate Starts for CathyBurgh\_71:

(Start: 2 @58460 has 34 MA's), (3, 58451), (11, 58229), (15, 58175), (16, 58157), (21, 58100), (22, 58091), (23, 58034), (24, 57998), (26, 57992), (27, 57983), (30, 57944), (36, 57836), (38, 57821), (39, 57818), (42, 57782), (43, 57749), (48, 57674), (52, 57641), (62, 57392), (66, 57290), (67, 57275), (69, 57263),

Gene: Chelms\_70 Start: 58320, Stop: 57046, Start Num: 2

Candidate Starts for Chelms\_70:

(Start: 2 @58320 has 34 MA's), (6, 58146), (7, 58143), (11, 58059), (17, 57984), (18, 57978), (20, 57939), (22, 57921), (23, 57864), (27, 57813), (35, 57672), (36, 57663), (37, 57657), (38, 57648), (39, 57645), (42, 57609), (43, 57576), (44, 57570), (47, 57525), (48, 57501), (51, 57474), (55, 57387), (58, 57318), (61, 57237), (62, 57219),

Gene: CinnamonToast\_75 Start: 59851, Stop: 58604, Start Num: 2

Candidate Starts for CinnamonToast\_75:

(Start: 2 @59851 has 34 MA's), (3, 59842), (5, 59695), (11, 59614), (14, 59569), (15, 59560), (16, 59542), (19, 59509), (21, 59485), (22, 59476), (23, 59419), (26, 59377), (27, 59368), (30, 59329), (36, 59221), (38, 59206), (39, 59203), (40, 59191), (42, 59167), (43, 59134), (48, 59059), (58, 58876), (62, 58777), (66, 58675), (67, 58660), (69, 58648),

Gene: Crete\_70 Start: 58439, Stop: 57165, Start Num: 2

Candidate Starts for Crete\_70:

(Start: 2 @58439 has 34 MA's), (6, 58265), (7, 58262), (11, 58178), (17, 58103), (18, 58097), (20, 58058), (22, 58040), (23, 57983), (27, 57932), (35, 57791), (36, 57782), (37, 57776), (38, 57767), (39, 57764), (42, 57728), (43, 57695), (44, 57689), (47, 57644), (48, 57620), (51, 57593), (58, 57437), (61, 57356), (62, 57338),

Gene: Dakiti\_71 Start: 59188, Stop: 57914, Start Num: 2

Candidate Starts for Dakiti\_71:

(Start: 2 @59188 has 34 MA's), (6, 59014), (7, 59011), (11, 58927), (17, 58852), (18, 58846), (20, 58807), (22, 58789), (23, 58732), (27, 58681), (35, 58540), (36, 58531), (37, 58525), (38, 58516), (39, 58513), (42, 58477), (43, 58444), (44, 58438), (47, 58393), (48, 58369), (51, 58342), (55, 58255), (58, 58186), (61, 58105), (62, 58087),

Gene: Ekhein\_71 Start: 57651, Stop: 56410, Start Num: 2

Candidate Starts for Ekhein\_71:

(Start: 2 @57651 has 34 MA's), (3, 57642), (11, 57420), (15, 57366), (16, 57348), (21, 57291), (22, 57282), (23, 57225), (24, 57189), (26, 57183), (27, 57174), (30, 57135), (36, 57027), (38, 57012), (39, 57009), (42, 56973), (43, 56940), (46, 56895), (47, 56889), (48, 56865), (52, 56832), (62, 56583), (66, 56481), (67, 56466), (69, 56454),

Gene: Exiguo\_70 Start: 57687, Stop: 56446, Start Num: 2

Candidate Starts for Exiguo\_70:

(Start: 2 @57687 has 34 MA's), (3, 57678), (11, 57456), (15, 57402), (16, 57384), (21, 57327), (22, 57318), (23, 57261), (24, 57225), (26, 57219), (27, 57210), (30, 57171), (36, 57063), (38, 57048), (39, 57045), (42, 57009), (43, 56976), (46, 56931), (47, 56925), (48, 56901), (52, 56868), (62, 56619), (66, 56517), (67, 56502), (69, 56490),

Gene: FelixAlejandro\_75 Start: 60183, Stop: 58936, Start Num: 2

Candidate Starts for FelixAlejandro\_75:

(Start: 2 @60183 has 34 MA's), (3, 60174), (5, 60027), (11, 59946), (14, 59901), (15, 59892), (16, 59874), (19, 59841), (21, 59817), (22, 59808), (23, 59751), (26, 59709), (27, 59700), (30, 59661), (36, 59553), (38, 59538), (39, 59535), (40, 59523), (42, 59499), (43, 59466), (48, 59391), (62, 59109), (66, 59007), (67, 58992), (69, 58980),

Gene: Flakey\_70 Start: 58446, Stop: 57205, Start Num: 2

Candidate Starts for Flakey\_70:

(Start: 2 @58446 has 34 MA's), (3, 58437), (11, 58215), (14, 58170), (15, 58161), (16, 58143), (21, 58086), (22, 58077), (23, 58020), (24, 57984), (26, 57978), (27, 57969), (30, 57930), (36, 57822), (38, 57807), (39, 57804), (42, 57768), (43, 57735), (46, 57690), (47, 57684), (48, 57660), (62, 57378), (66, 57276), (67, 57261), (69, 57249),

Gene: Gorko\_70 Start: 57592, Stop: 56351, Start Num: 2

Candidate Starts for Gorko\_70:

(Start: 2 @57592 has 34 MA's), (3, 57583), (11, 57361), (14, 57316), (15, 57307), (16, 57289), (21, 57232), (22, 57223), (23, 57166), (24, 57130), (26, 57124), (27, 57115), (30, 57076), (36, 56968), (38, 56953), (39, 56950), (42, 56914), (43, 56881), (46, 56836), (47, 56830), (48, 56806), (52, 56773), (62, 56524), (66, 56422), (67, 56407), (69, 56395),

Gene: GourdThymes\_71 Start: 58547, Stop: 57306, Start Num: 2

Candidate Starts for GourdThymes\_71:

(Start: 2 @58547 has 34 MA's), (3, 58538), (11, 58316), (14, 58271), (15, 58262), (16, 58244), (19, 58211), (21, 58187), (22, 58178), (23, 58121), (24, 58085), (26, 58079), (27, 58070), (30, 58031), (36, 57923), (38, 57908), (39, 57905), (42, 57869), (43, 57836), (46, 57791), (47, 57785), (48, 57761), (52, 57728), (62, 57479), (66, 57377), (67, 57362), (69, 57350),

Gene: Hotorobo\_71 Start: 58534, Stop: 57293, Start Num: 2

Candidate Starts for Hotorobo\_71:

(Start: 2 @58534 has 34 MA's), (3, 58525), (11, 58303), (15, 58249), (16, 58231), (21, 58174), (22, 58165), (23, 58108), (24, 58072), (26, 58066), (27, 58057), (30, 58018), (36, 57910), (38, 57895), (39, 57892), (42, 57856), (43, 57823), (46, 57778), (47, 57772), (48, 57748), (52, 57715), (62, 57466), (66, 57364), (67, 57349), (69, 57337),

Gene: Jellybones\_72 Start: 59468, Stop: 58221, Start Num: 2

Candidate Starts for Jellybones\_72:

(Start: 2 @59468 has 34 MA's), (3, 59459), (5, 59312), (11, 59231), (14, 59186), (15, 59177), (16, 59159), (19, 59126), (21, 59102), (22, 59093), (23, 59036), (26, 58994), (27, 58985), (30, 58946), (36, 58838), (38, 58823), (39, 58820), (40, 58808), (42, 58784), (43, 58751), (48, 58676), (58, 58493), (62, 58394), (64, 58304), (66, 58292), (67, 58277), (69, 58265),

Gene: John316\_74 Start: 59611, Stop: 58370, Start Num: 2

Candidate Starts for John316\_74:

(Start: 2 @59611 has 34 MA's), (3, 59602), (11, 59380), (15, 59326), (16, 59308), (21, 59251), (22, 59242), (23, 59185), (24, 59149), (26, 59143), (27, 59134), (30, 59095), (36, 58987), (38, 58972), (39, 58969), (42, 58933), (43, 58900), (46, 58855), (47, 58849), (48, 58825), (52, 58792), (62, 58543), (66, 58441), (67, 58426), (69, 58414),

Gene: Kelzog\_72 Start: 58423, Stop: 57182, Start Num: 2

Candidate Starts for Kelzog\_72:

(Start: 2 @58423 has 34 MA's), (3, 58414), (10, 58204), (11, 58192), (14, 58147), (15, 58138), (16, 58120), (21, 58063), (22, 58054), (23, 57997), (24, 57961), (26, 57955), (27, 57946), (30, 57907), (36, 57799), (38, 57784), (39, 57781), (42, 57745), (43, 57712), (46, 57667), (47, 57661), (48, 57637), (52, 57604), (62, 57355), (66, 57253), (67, 57238), (69, 57226),

Gene: Linetti\_70 Start: 59342, Stop: 58068, Start Num: 2

Candidate Starts for Linetti\_70:

(Start: 2 @59342 has 34 MA's), (6, 59168), (7, 59165), (11, 59081), (17, 59006), (18, 59000), (20, 58961), (22, 58943), (23, 58886), (27, 58835), (35, 58694), (36, 58685), (37, 58679), (38, 58670), (39, 58667), (42, 58631), (43, 58598), (44, 58592), (47, 58547), (48, 58523), (51, 58496), (55, 58409), (58, 58340), (61, 58259), (62, 58241),

Gene: Lizzo\_71 Start: 58460, Stop: 57219, Start Num: 2

Candidate Starts for Lizzo\_71:

(Start: 2 @58460 has 34 MA's), (3, 58451), (11, 58229), (15, 58175), (16, 58157), (21, 58100), (22, 58091), (23, 58034), (24, 57998), (26, 57992), (27, 57983), (30, 57944), (36, 57836), (38, 57821), (39, 57818), (42, 57782), (43, 57749), (48, 57674), (52, 57641), (62, 57392), (66, 57290), (67, 57275), (69, 57263),

Gene: Monty\_70 Start: 57673, Stop: 56432, Start Num: 2

Candidate Starts for Monty\_70:

(Start: 2 @57673 has 34 MA's), (3, 57664), (11, 57442), (15, 57388), (16, 57370), (21, 57313), (22, 57304), (23, 57247), (24, 57211), (26, 57205), (27, 57196), (30, 57157), (36, 57049), (38, 57034), (39, 57031), (42, 56995), (43, 56962), (46, 56917), (47, 56911), (48, 56887), (52, 56854), (62, 56605), (66, 56503), (67, 56488), (69, 56476),

Gene: Msay19\_75 Start: 60069, Stop: 58822, Start Num: 2

Candidate Starts for Msay19\_75:

(Start: 2 @60069 has 34 MA's), (3, 60060), (5, 59913), (11, 59832), (14, 59787), (15, 59778), (16, 59760), (19, 59727), (21, 59703), (22, 59694), (23, 59637), (26, 59595), (27, 59586), (30, 59547), (36, 59439), (38, 59424), (39, 59421), (42, 59385), (43, 59352), (48, 59277), (58, 59094), (62, 58995), (66, 58893), (67, 58878), (69, 58866),

Gene: PierreThree\_69 Start: 58819, Stop: 57545, Start Num: 2

Candidate Starts for PierreThree\_69:

(Start: 2 @58819 has 34 MA's), (6, 58645), (7, 58642), (11, 58558), (17, 58483), (18, 58477), (20, 58438), (22, 58420), (23, 58363), (27, 58312), (35, 58171), (36, 58162), (37, 58156), (38, 58147), (39, 58144), (42, 58108), (43, 58075), (44, 58069), (47, 58024), (48, 58000), (51, 57973), (55, 57886), (58, 57817), (61, 57736), (62, 57718),

Gene: PokyPuppy\_70 Start: 58809, Stop: 57583, Start Num: 2

Candidate Starts for PokyPuppy\_70:

(1, 58824), (Start: 2 @58809 has 34 MA's), (4, 58710), (9, 58602), (12, 58569), (13, 58554), (14, 58536), (15, 58527), (16, 58509), (21, 58452), (22, 58443), (27, 58335), (29, 58314), (32, 58266), (36, 58200), (41, 58158), (42, 58146), (43, 58113), (44, 58107), (45, 58083), (49, 58035), (54, 57927), (56, 57915), (57, 57912), (59, 57804), (60, 57792), (62, 57756), (63, 57684),

Gene: Poland\_75 Start: 60048, Stop: 58801, Start Num: 2

Candidate Starts for Poland\_75:

(Start: 2 @60048 has 34 MA's), (3, 60039), (5, 59892), (11, 59811), (14, 59766), (15, 59757), (16, 59739), (19, 59706), (21, 59682), (22, 59673), (23, 59616), (26, 59574), (27, 59565), (30, 59526), (36, 59418), (38, 59403), (39, 59400), (42, 59364), (43, 59331), (48, 59256), (58, 59073), (62, 58974), (66, 58872), (67, 58857), (69, 58845),

Gene: RemRem\_72 Start: 57663, Stop: 56422, Start Num: 2

Candidate Starts for RemRem\_72:

(Start: 2 @57663 has 34 MA's), (3, 57654), (11, 57432), (15, 57378), (16, 57360), (21, 57303), (22, 57294), (23, 57237), (24, 57201), (26, 57195), (27, 57186), (30, 57147), (36, 57039), (38, 57024), (39, 57021), (42, 56985), (43, 56952), (48, 56877), (52, 56844), (62, 56595), (66, 56493), (67, 56478), (69, 56466),

Gene: RoyalG\_71 Start: 58320, Stop: 57055, Start Num: 2

Candidate Starts for RoyalG\_71:

(Start: 2 @58320 has 34 MA's), (8, 58116), (14, 58023), (15, 58014), (19, 57963), (21, 57939), (22, 57930), (27, 57822), (28, 57798), (31, 57765), (33, 57726), (34, 57705), (36, 57672), (42, 57618), (43, 57585), (44, 57579), (47, 57534), (48, 57510), (50, 57495), (53, 57408), (58, 57327), (62, 57228), (65, 57135), (68, 57105),

Gene: Sam12\_70 Start: 57687, Stop: 56446, Start Num: 2

Candidate Starts for Sam12\_70:

(Start: 2 @57687 has 34 MA's), (3, 57678), (11, 57456), (15, 57402), (16, 57384), (21, 57327), (22, 57318), (23, 57261), (24, 57225), (26, 57219), (27, 57210), (30, 57171), (36, 57063), (38, 57048), (39, 57045), (42, 57009), (43, 56976), (46, 56931), (47, 56925), (48, 56901), (52, 56868), (62, 56619), (66, 56517), (67, 56502), (69, 56490),

Gene: Sombrero\_72 Start: 58260, Stop: 57013, Start Num: 2

Candidate Starts for Sombrero\_72:

(Start: 2 @58260 has 34 MA's), (3, 58251), (5, 58104), (11, 58023), (14, 57978), (15, 57969), (16, 57951), (19, 57918), (21, 57894), (22, 57885), (23, 57828), (26, 57786), (27, 57777), (30, 57738), (36, 57630), (38, 57615), (39, 57612), (40, 57600), (42, 57576), (43, 57543), (48, 57468), (58, 57285), (62, 57186), (66, 57084), (67, 57069), (69, 57057),

Gene: Squibbles\_70 Start: 58526, Stop: 57285, Start Num: 2

Candidate Starts for Squibbles\_70:

(Start: 2 @58526 has 34 MA's), (3, 58517), (11, 58295), (14, 58250), (15, 58241), (16, 58223), (21, 58166), (22, 58157), (23, 58100), (24, 58064), (26, 58058), (27, 58049), (30, 58010), (36, 57902), (38, 57887), (39, 57884), (42, 57848), (43, 57815), (46, 57770), (47, 57764), (48, 57740), (52, 57707), (62, 57458), (66, 57356), (67, 57341), (69, 57329),

Gene: SteveFrench\_70 Start: 58560, Stop: 57295, Start Num: 2

Candidate Starts for SteveFrench\_70:

(Start: 2 @58560 has 34 MA's), (8, 58356), (14, 58263), (15, 58254), (19, 58203), (21, 58179), (22, 58170), (27, 58062), (28, 58038), (31, 58005), (33, 57966), (34, 57945), (36, 57912), (42, 57858), (43, 57825), (44, 57819), (47, 57774), (48, 57750), (50, 57735), (53, 57648), (58, 57567), (62, 57468), (65, 57375), (68, 57345),

Gene: Worcestershire\_70 Start: 57671, Stop: 56424, Start Num: 2

Candidate Starts for Worcestershire\_70:

(Start: 2 @57671 has 34 MA's), (3, 57662), (5, 57515), (11, 57434), (14, 57389), (15, 57380), (16, 57362), (19, 57329), (21, 57305), (22, 57296), (23, 57239), (26, 57197), (27, 57188), (30, 57149), (36, 57041), (38, 57026), (39, 57023), (40, 57011), (42, 56987), (43, 56954), (48, 56879), (58, 56696), (62, 56597), (64, 56507), (66, 56495), (67, 56480), (69, 56468),