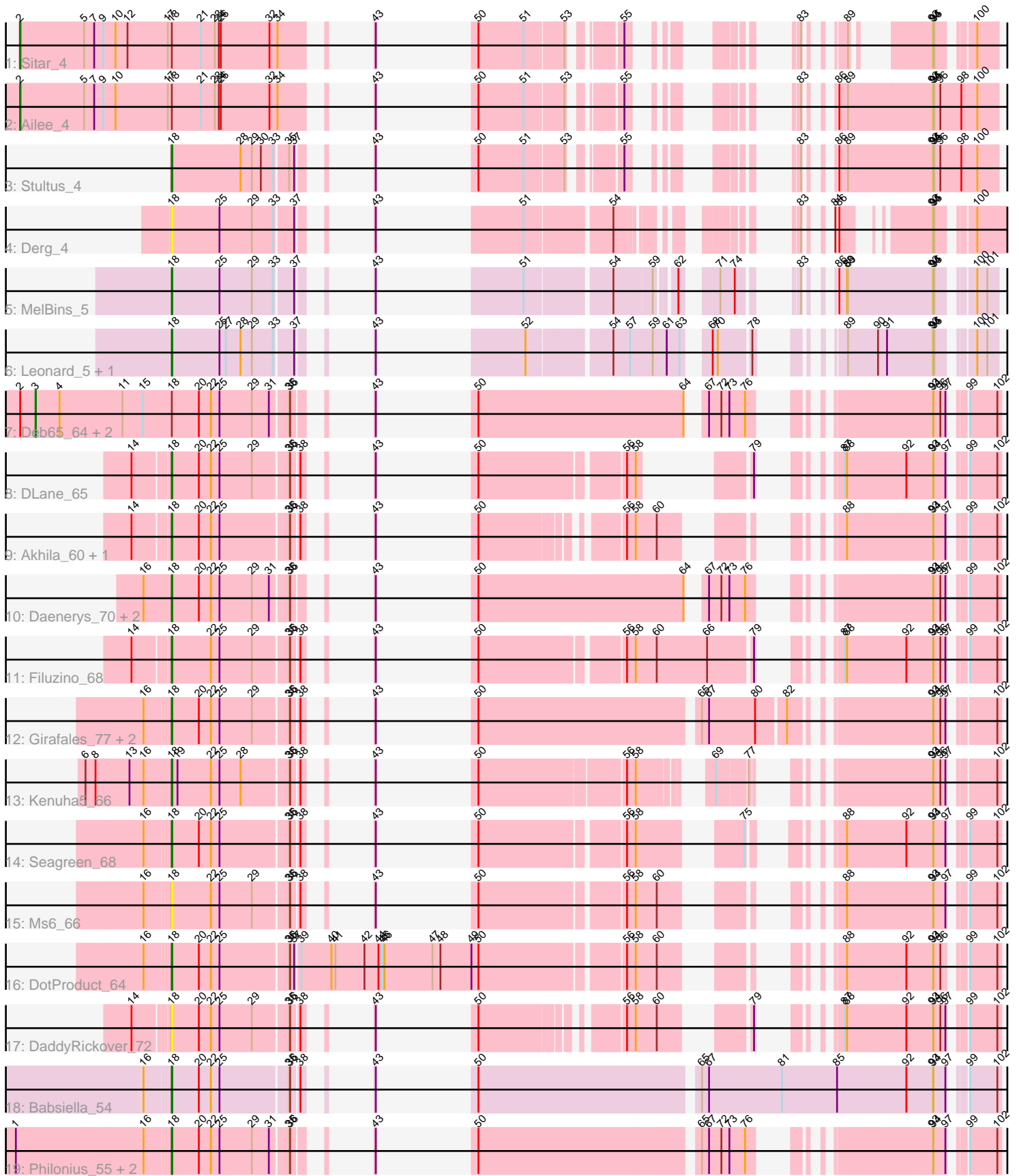


# Pham 163845



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 163845 Report

This analysis was run 05/04/24 on database version 560.

Pham number 163845 has 29 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Sitar\_4
- Track 2 : Ailee\_4
- Track 3 : Stultus\_4
- Track 4 : Derg\_4
- Track 5 : MelBins\_5
- Track 6 : Leonard\_5, Phinally\_5
- Track 7 : Deb65\_64, Nimbo\_63, Geralt\_64
- Track 8 : DLane\_65
- Track 9 : Akhila\_60, MilanaBonita\_59
- Track 10 : Daenerys\_70, OldBen\_68, PHappiness\_71
- Track 11 : Filuzino\_68
- Track 12 : Girafales\_77, Quico\_77, Florinda\_80
- Track 13 : Kenuha5\_66
- Track 14 : Seagreen\_68
- Track 15 : Ms6\_66
- Track 16 : DotProduct\_64
- Track 17 : DaddyRickover\_72
- Track 18 : Babsiella\_54
- Track 19 : Philonius\_55, Aggie\_53, Silvy\_53

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

The start number called the most often in the published annotations is 18, it was called in 21 of the 25 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aggie\_53, Akhila\_60, Babsiella\_54, DLane\_65, DaddyRickover\_72, Daenerys\_70, Derg\_4, DotProduct\_64, Filuzino\_68, Florinda\_80, Girafales\_77, Kenuha5\_66, Leonard\_5, MelBins\_5, MilanaBonita\_59, Ms6\_66, OldBen\_68, PHappiness\_71, Philonius\_55, Phinally\_5, Quico\_77, Seagreen\_68, Silvy\_53, Stultus\_4,

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

- Ailee\_4, Deb65\_64, Geralt\_64, Nimbo\_63, Sitar\_4,

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

- 

### **Summary by start number:**

Start 2:

- Found in 5 of 29 ( 17.2% ) of genes in pham
- Manual Annotations of this start: 2 of 25
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Ailee\_4 (DE1), Sitar\_4 (DE1),

Start 3:

- Found in 3 of 29 ( 10.3% ) of genes in pham
- Manual Annotations of this start: 2 of 25
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Deb65\_64 (F1), Geralt\_64 (F1), Nimbo\_63 (F1),

Start 18:

- Found in 29 of 29 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 21 of 25
- Called 82.8% of time when present
- Phage (with cluster) where this start called: Aggie\_53 (N), Akhila\_60 (F1), Babsiella\_54 (I1), DLane\_65 (F1), DaddyRickover\_72 (F1), Daenerys\_70 (F1), Derg\_4 (DE1), DotProduct\_64 (F1), Filuzino\_68 (F1), Florinda\_80 (F1), Girafales\_77 (F1), Kenuha5\_66 (F1), Leonard\_5 (DE2), MelBins\_5 (DE2), MilanaBonita\_59 (F1), Ms6\_66 (F1), OldBen\_68 (F1), PHappiness\_71 (F1), Philonius\_55 (N), Phinally\_5 (DE2), Quico\_77 (F1), Seagreen\_68 (F1), Silvy\_53 (N), Stultus\_4 (DE1),

### **Summary by clusters:**

There are 5 clusters represented in this pham: I1, F1, DE2, DE1, N,

Info for manual annotations of cluster DE1:

- Start number 2 was manually annotated 2 times for cluster DE1.
- Start number 18 was manually annotated 1 time for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 18 was manually annotated 3 times for cluster DE2.

Info for manual annotations of cluster F1:

- Start number 3 was manually annotated 2 times for cluster F1.
- Start number 18 was manually annotated 13 times for cluster F1.

Info for manual annotations of cluster I1:

- Start number 18 was manually annotated 1 time for cluster I1.

Info for manual annotations of cluster N:

- Start number 18 was manually annotated 3 times for cluster N.

### **Gene Information:**

Gene: Aggie\_53 Start: 35734, Stop: 37386, Start Num: 18

Candidate Starts for Aggie\_53:

(1, 35296), (16, 35668), (Start: 18 @35734 has 21 MA's), (20, 35809), (22, 35845), (25, 35869), (29, 35956), (31, 36007), (35, 36055), (36, 36058), (43, 36106), (50, 36127), (65, 36757), (67, 36778), (72, 36814), (73, 36838), (76, 36883), (93, 37234), (94, 37237), (97, 37267), (99, 37294), (102, 37375),

Gene: Ailee\_4 Start: 2435, Stop: 4309, Start Num: 2

Candidate Starts for Ailee\_4:

(Start: 2 @2435 has 2 MA's), (5, 2627), (7, 2657), (9, 2684), (10, 2720), (17, 2873), (Start: 18 @2885 has 21 MA's), (21, 2972), (23, 3014), (24, 3026), (26, 3032), (32, 3176), (34, 3200), (43, 3296), (50, 3317), (51, 3452), (53, 3557), (55, 3653), (83, 3821), (86, 3842), (89, 3863), (93, 4112), (94, 4115), (95, 4118), (96, 4136), (98, 4199), (100, 4247),

Gene: Akhila\_60 Start: 39092, Stop: 40543, Start Num: 18

Candidate Starts for Akhila\_60:

(14, 39011), (Start: 18 @39092 has 21 MA's), (20, 39167), (22, 39203), (25, 39227), (35, 39413), (36, 39416), (38, 39437), (43, 39464), (50, 39485), (56, 39830), (58, 39851), (60, 39911), (88, 40151), (93, 40391), (94, 40394), (97, 40424), (99, 40451), (102, 40532),

Gene: Babsiella\_54 Start: 36714, Stop: 38561, Start Num: 18

Candidate Starts for Babsiella\_54:

(16, 36648), (Start: 18 @36714 has 21 MA's), (20, 36789), (22, 36825), (25, 36849), (35, 37035), (36, 37038), (38, 37059), (43, 37086), (50, 37107), (65, 37737), (67, 37758), (81, 37974), (85, 38139), (92, 38331), (93, 38409), (94, 38412), (97, 38442), (99, 38469), (102, 38550),

Gene: DLane\_65 Start: 42636, Stop: 44030, Start Num: 18

Candidate Starts for DLane\_65:

(14, 42555), (Start: 18 @42636 has 21 MA's), (20, 42711), (22, 42747), (25, 42771), (29, 42858), (35, 42957), (36, 42960), (38, 42981), (43, 43008), (50, 43029), (56, 43428), (58, 43449), (79, 43554), (87, 43632), (88, 43638), (92, 43800), (93, 43878), (94, 43881), (97, 43911), (99, 43938), (102, 44019),

Gene: DaddyRickover\_72 Start: 45172, Stop: 46629, Start Num: 18

Candidate Starts for DaddyRickover\_72:

(14, 45091), (Start: 18 @45172 has 21 MA's), (20, 45247), (22, 45283), (25, 45307), (29, 45394), (35, 45493), (36, 45496), (38, 45517), (43, 45544), (50, 45565), (56, 45910), (58, 45931), (60, 45991), (79, 46153), (87, 46231), (88, 46237), (92, 46399), (93, 46477), (94, 46480), (96, 46501), (97, 46510), (99, 46537), (102, 46618),

Gene: Daenerys\_70 Start: 45291, Stop: 46922, Start Num: 18

Candidate Starts for Daenerys\_70:

(16, 45210), (Start: 18 @45291 has 21 MA's), (20, 45366), (22, 45402), (25, 45426), (29, 45513), (31, 45564), (35, 45612), (36, 45615), (43, 45663), (50, 45684), (64, 46293), (67, 46314), (72, 46350), (73, 46374), (76, 46419), (93, 46770), (94, 46773), (96, 46794), (97, 46803), (99, 46830), (102, 46911),

Gene: Deb65\_64 Start: 42619, Stop: 44643, Start Num: 3

Candidate Starts for Deb65\_64:

(Start: 2 @42574 has 2 MA's), (Start: 3 @42619 has 2 MA's), (4, 42688), (11, 42871), (15, 42928), (Start: 18 @43012 has 21 MA's), (20, 43087), (22, 43123), (25, 43147), (29, 43234), (31, 43285), (35, 43333), (36, 43336), (43, 43384), (50, 43405), (64, 44014), (67, 44035), (72, 44071), (73, 44095), (76, 44140), (93, 44491), (94, 44494), (96, 44515), (97, 44524), (99, 44551), (102, 44632),

Gene: Derg\_4 Start: 2405, Stop: 3790, Start Num: 18

Candidate Starts for Derg\_4:

(Start: 18 @2405 has 21 MA's), (25, 2540), (29, 2627), (33, 2690), (37, 2741), (43, 2777), (51, 2933), (54, 3158), (83, 3425), (84, 3443), (86, 3446), (93, 3617), (94, 3620), (95, 3623), (100, 3701),

Gene: DotProduct\_64 Start: 41819, Stop: 43810, Start Num: 18

Candidate Starts for DotProduct\_64:

(16, 41753), (Start: 18 @41819 has 21 MA's), (20, 41894), (22, 41930), (25, 41954), (35, 42140), (36, 42143), (37, 42155), (39, 42167), (40, 42257), (41, 42269), (42, 42356), (44, 42398), (45, 42410), (46, 42416), (47, 42560), (48, 42584), (49, 42677), (50, 42698), (56, 43097), (58, 43118), (60, 43178), (88, 43418), (92, 43580), (93, 43658), (94, 43661), (96, 43682), (99, 43718), (102, 43799),

Gene: Filuzino\_68 Start: 42971, Stop: 44581, Start Num: 18

Candidate Starts for Filuzino\_68:

(14, 42890), (Start: 18 @42971 has 21 MA's), (22, 43082), (25, 43106), (29, 43193), (35, 43292), (36, 43295), (38, 43316), (43, 43343), (50, 43364), (56, 43763), (58, 43784), (60, 43844), (66, 43994), (79, 44105), (87, 44183), (88, 44189), (92, 44351), (93, 44429), (94, 44432), (96, 44453), (97, 44462), (99, 44489), (102, 44570),

Gene: Florinda\_80 Start: 44991, Stop: 46736, Start Num: 18

Candidate Starts for Florinda\_80:

(16, 44925), (Start: 18 @44991 has 21 MA's), (20, 45066), (22, 45102), (25, 45126), (29, 45213), (35, 45312), (36, 45315), (38, 45336), (43, 45363), (50, 45384), (65, 46014), (67, 46035), (80, 46170), (82, 46251), (93, 46584), (94, 46587), (96, 46608), (97, 46617), (102, 46725),

Gene: Geralt\_64 Start: 42618, Stop: 44642, Start Num: 3

Candidate Starts for Geralt\_64:

(Start: 2 @42573 has 2 MA's), (Start: 3 @42618 has 2 MA's), (4, 42687), (11, 42870), (15, 42927), (Start: 18 @43011 has 21 MA's), (20, 43086), (22, 43122), (25, 43146), (29, 43233), (31, 43284), (35, 43332), (36, 43335), (43, 43383), (50, 43404), (64, 44013), (67, 44034), (72, 44070), (73, 44094), (76, 44139), (93, 44490), (94, 44493), (96, 44514), (97, 44523), (99, 44550), (102, 44631),

Gene: Girafales\_77 Start: 44782, Stop: 46527, Start Num: 18

Candidate Starts for Girafales\_77:

(16, 44716), (Start: 18 @44782 has 21 MA's), (20, 44857), (22, 44893), (25, 44917), (29, 45004), (35, 45103), (36, 45106), (38, 45127), (43, 45154), (50, 45175), (65, 45805), (67, 45826), (80, 45961), (82, 46042), (93, 46375), (94, 46378), (96, 46399), (97, 46408), (102, 46516),

Gene: Kenuha5\_66 Start: 44310, Stop: 45839, Start Num: 18

Candidate Starts for Kenuha5\_66:

(6, 44061), (8, 44091), (13, 44187), (16, 44229), (Start: 18 @44310 has 21 MA's), (19, 44325), (22, 44421), (25, 44445), (28, 44502), (35, 44631), (36, 44634), (38, 44655), (43, 44682), (50, 44703), (56, 45117), (58, 45138), (69, 45273), (77, 45354), (93, 45687), (94, 45690), (96, 45711), (97, 45720), (102, 45828),

Gene: Leonard\_5 Start: 2785, Stop: 4344, Start Num: 18

Candidate Starts for Leonard\_5:

(Start: 18 @2785 has 21 MA's), (25, 2920), (27, 2938), (28, 2977), (29, 3007), (33, 3070), (37, 3121), (43, 3157), (52, 3319), (54, 3538), (57, 3580), (59, 3643), (61, 3679), (63, 3715), (68, 3760), (70, 3775), (78, 3862), (89, 3952), (90, 4039), (91, 4066), (93, 4198), (94, 4201), (95, 4204), (100, 4282), (101, 4312),

Gene: MelBins\_5 Start: 2786, Stop: 4273, Start Num: 18

Candidate Starts for MelBins\_5:

(Start: 18 @2786 has 21 MA's), (25, 2921), (29, 3008), (33, 3071), (37, 3122), (43, 3158), (51, 3314), (54, 3539), (59, 3632), (62, 3674), (71, 3737), (74, 3773), (83, 3836), (86, 3857), (88, 3875), (89, 3878), (93, 4127), (94, 4130), (95, 4133), (100, 4211), (101, 4241),

Gene: MilanaBonita\_59 Start: 39092, Stop: 40543, Start Num: 18

Candidate Starts for MilanaBonita\_59:

(14, 39011), (Start: 18 @39092 has 21 MA's), (20, 39167), (22, 39203), (25, 39227), (35, 39413), (36, 39416), (38, 39437), (43, 39464), (50, 39485), (56, 39830), (58, 39851), (60, 39911), (88, 40151), (93, 40391), (94, 40394), (97, 40424), (99, 40451), (102, 40532),

Gene: Ms6\_66 Start: 38754, Stop: 40259, Start Num: 18

Candidate Starts for Ms6\_66:

(16, 38688), (Start: 18 @38754 has 21 MA's), (22, 38865), (25, 38889), (29, 38976), (35, 39075), (36, 39078), (38, 39099), (43, 39126), (50, 39147), (56, 39546), (58, 39567), (60, 39627), (88, 39867), (93, 40107), (94, 40110), (97, 40140), (99, 40167), (102, 40248),

Gene: Nimbo\_63 Start: 42621, Stop: 44645, Start Num: 3

Candidate Starts for Nimbo\_63:

(Start: 2 @42576 has 2 MA's), (Start: 3 @42621 has 2 MA's), (4, 42690), (11, 42873), (15, 42930), (Start: 18 @43014 has 21 MA's), (20, 43089), (22, 43125), (25, 43149), (29, 43236), (31, 43287), (35, 43335), (36, 43338), (43, 43386), (50, 43407), (64, 44016), (67, 44037), (72, 44073), (73, 44097), (76, 44142), (93, 44493), (94, 44496), (96, 44517), (97, 44526), (99, 44553), (102, 44634),

Gene: OldBen\_68 Start: 44406, Stop: 46037, Start Num: 18

Candidate Starts for OldBen\_68:

(16, 44325), (Start: 18 @44406 has 21 MA's), (20, 44481), (22, 44517), (25, 44541), (29, 44628), (31, 44679), (35, 44727), (36, 44730), (43, 44778), (50, 44799), (64, 45408), (67, 45429), (72, 45465), (73, 45489), (76, 45534), (93, 45885), (94, 45888), (96, 45909), (97, 45918), (99, 45945), (102, 46026),

Gene: PHappiness\_71 Start: 45235, Stop: 46866, Start Num: 18

Candidate Starts for PHappiness\_71:

(16, 45154), (Start: 18 @45235 has 21 MA's), (20, 45310), (22, 45346), (25, 45370), (29, 45457), (31, 45508), (35, 45556), (36, 45559), (43, 45607), (50, 45628), (64, 46237), (67, 46258), (72, 46294), (73, 46318), (76, 46363), (93, 46714), (94, 46717), (96, 46738), (97, 46747), (99, 46774), (102, 46855),

Gene: Philonius\_55 Start: 35263, Stop: 36915, Start Num: 18

Candidate Starts for Philonius\_55:

(1, 34825), (16, 35197), (Start: 18 @35263 has 21 MA's), (20, 35338), (22, 35374), (25, 35398), (29, 35485), (31, 35536), (35, 35584), (36, 35587), (43, 35635), (50, 35656), (65, 36286), (67, 36307), (72, 36343), (73, 36367), (76, 36412), (93, 36763), (94, 36766), (97, 36796), (99, 36823), (102, 36904),

Gene: Phinally\_5 Start: 2785, Stop: 4341, Start Num: 18

Candidate Starts for Phinally\_5:

(Start: 18 @2785 has 21 MA's), (25, 2920), (27, 2938), (28, 2977), (29, 3007), (33, 3070), (37, 3121), (43, 3157), (52, 3319), (54, 3538), (57, 3580), (59, 3643), (61, 3679), (63, 3715), (68, 3760), (70, 3775), (78, 3862), (89, 3952), (90, 4036), (91, 4063), (93, 4195), (94, 4198), (95, 4201), (100, 4279), (101, 4309),

Gene: Quico\_77 Start: 44811, Stop: 46556, Start Num: 18

Candidate Starts for Quico\_77:

(16, 44745), (Start: 18 @44811 has 21 MA's), (20, 44886), (22, 44922), (25, 44946), (29, 45033), (35, 45132), (36, 45135), (38, 45156), (43, 45183), (50, 45204), (65, 45834), (67, 45855), (80, 45990), (82, 46071), (93, 46404), (94, 46407), (96, 46428), (97, 46437), (102, 46545),

Gene: Seagreen\_68 Start: 42620, Stop: 44155, Start Num: 18

Candidate Starts for Seagreen\_68:

(16, 42554), (Start: 18 @42620 has 21 MA's), (20, 42695), (22, 42731), (25, 42755), (35, 42941), (36, 42944), (38, 42965), (43, 42992), (50, 43013), (56, 43412), (58, 43433), (75, 43649), (88, 43754), (92, 43925), (93, 44003), (94, 44006), (97, 44036), (99, 44063), (102, 44144),

Gene: Silvy\_53 Start: 35734, Stop: 37386, Start Num: 18

Candidate Starts for Silvy\_53:

(1, 35296), (16, 35668), (Start: 18 @35734 has 21 MA's), (20, 35809), (22, 35845), (25, 35869), (29, 35956), (31, 36007), (35, 36055), (36, 36058), (43, 36106), (50, 36127), (65, 36757), (67, 36778), (72, 36814), (73, 36838), (76, 36883), (93, 37234), (94, 37237), (97, 37267), (99, 37294), (102, 37375),

Gene: Sitar\_4 Start: 2434, Stop: 4143, Start Num: 2

Candidate Starts for Sitar\_4:

(Start: 2 @2434 has 2 MA's), (5, 2626), (7, 2656), (9, 2683), (10, 2719), (12, 2755), (17, 2872), (Start: 18 @2884 has 21 MA's), (21, 2971), (23, 3013), (24, 3025), (26, 3031), (32, 3175), (34, 3199), (43, 3295), (50, 3316), (51, 3451), (53, 3556), (55, 3652), (83, 3820), (89, 3862), (93, 3997), (94, 4000), (95, 4003), (100, 4081),

Gene: Stultus\_4 Start: 2433, Stop: 3818, Start Num: 18

Candidate Starts for Stultus\_4:

(Start: 18 @2433 has 21 MA's), (28, 2625), (29, 2655), (30, 2682), (33, 2718), (35, 2754), (37, 2769), (43, 2805), (50, 2826), (51, 2961), (53, 3066), (55, 3162), (83, 3330), (86, 3351), (89, 3372), (93, 3621), (94, 3624), (95, 3627), (96, 3645), (98, 3708), (100, 3756),