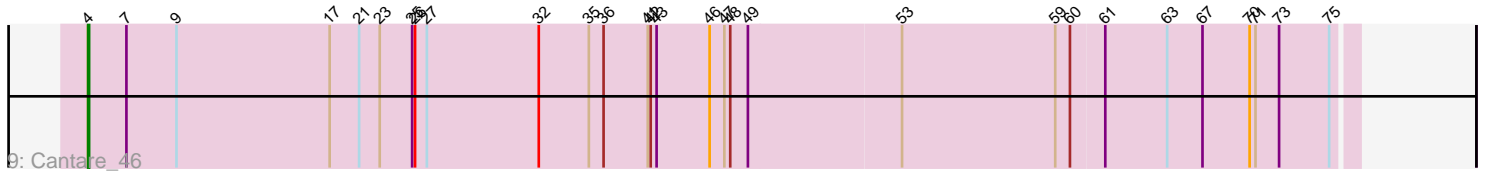
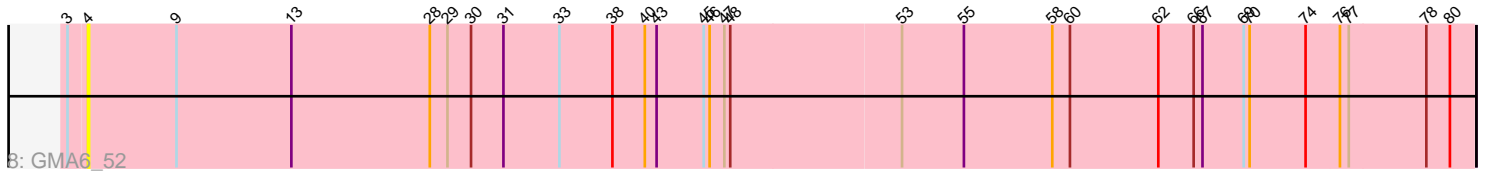
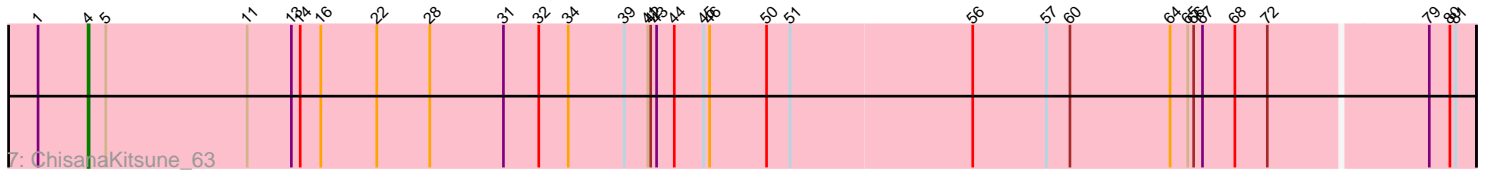
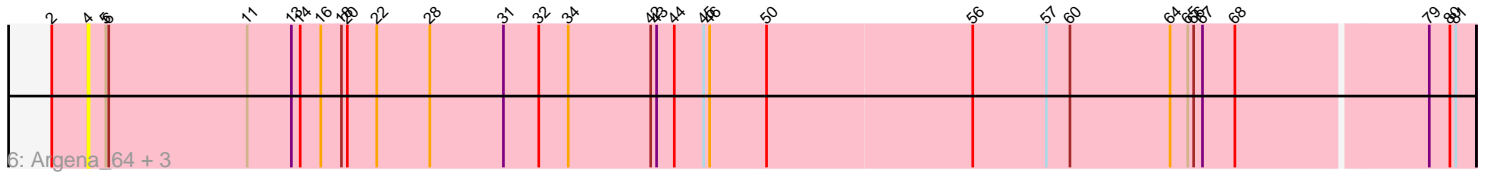
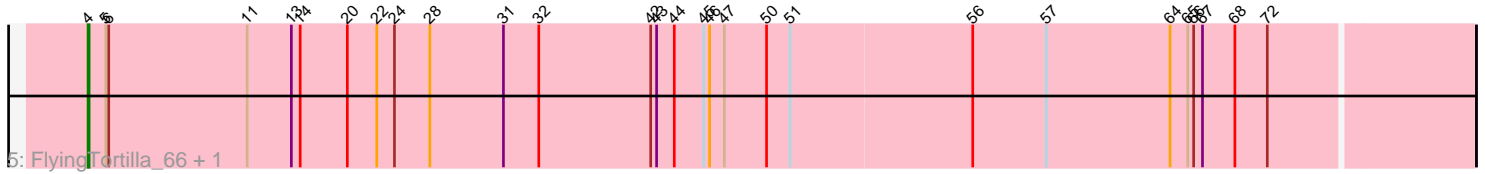
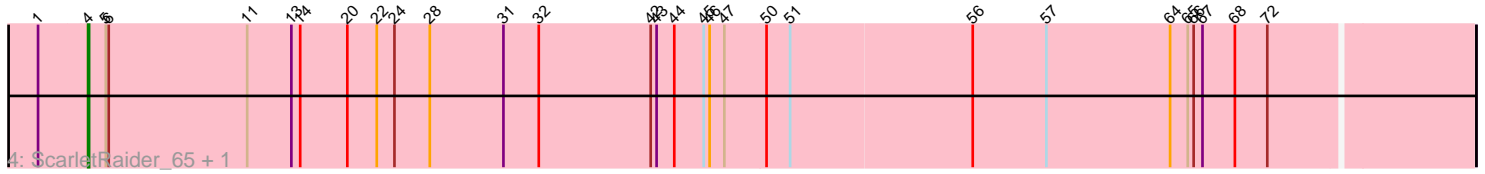
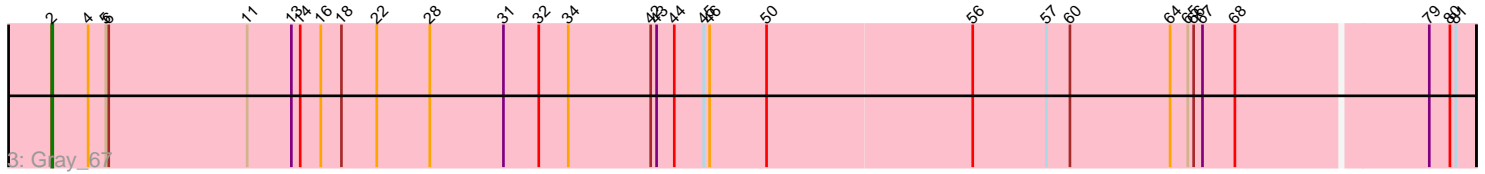
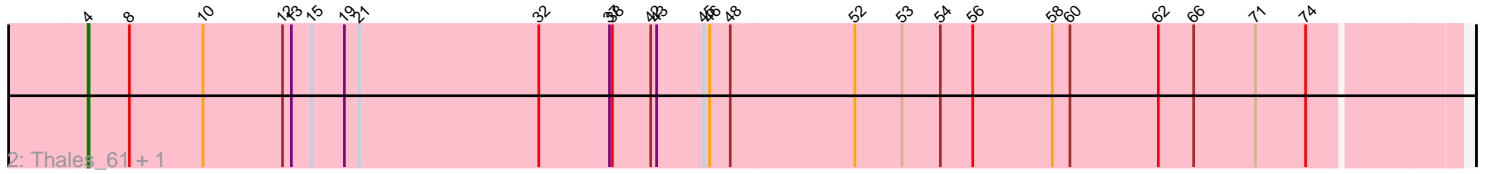
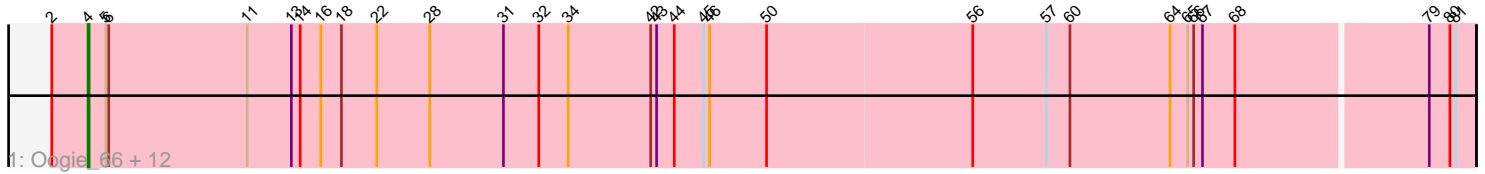


# Pham 305238



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 305238 Report

This analysis was run 06/08/26 on database version 649.

Pham number 305238 has 27 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Oogie\_66, Alok\_64, Toneprano\_64, Beted\_66, Schomber\_65, Chidiebere\_67, EmoNemo\_64, Mikronejon\_64, MintFritos\_64, Hanem\_66, Lenoshki\_66, Kabocha\_68, Twin\_64
- Track 2 : Thales\_61, DalanDe\_62
- Track 3 : Gray\_67
- Track 4 : ScarletRaider\_65, UBSmoodge\_68
- Track 5 : FlyingTortilla\_66, FruityLoops\_64
- Track 6 : Argena\_64, Amoonguss\_64, Pakusa\_64, Farrylious\_64
- Track 7 : ChisanaKitsune\_63
- Track 8 : GMA6\_52
- Track 9 : Cantare\_46

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

The start number called the most often in the published annotations is 4, it was called in 10 of the 11 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alok\_64, Amoonguss\_64, Argena\_64, Beted\_66, Cantare\_46, Chidiebere\_67, ChisanaKitsune\_63, DalanDe\_62, EmoNemo\_64, Farrylious\_64, FlyingTortilla\_66, FruityLoops\_64, GMA6\_52, Hanem\_66, Kabocha\_68, Lenoshki\_66, Mikronejon\_64, MintFritos\_64, Oogie\_66, Pakusa\_64, ScarletRaider\_65, Schomber\_65, Thales\_61, Toneprano\_64, Twin\_64, UBSmoodge\_68,

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

- Gray\_67,

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

- 

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

Start 2:

- Found in 18 of 27 ( 66.7% ) of genes in pham

- Manual Annotations of this start: 1 of 11
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Gray\_67 (DQ),

#### Start 4:

- Found in 27 of 27 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 10 of 11
- Called 96.3% of time when present
- Phage (with cluster) where this start called: Aloki\_64 (DQ), Amoonguss\_64 (DQ), Argena\_64 (DQ), Beted\_66 (DQ), Cantare\_46 (singleton), Chidiebere\_67 (DQ), ChisanaKitsune\_63 (DQ), DalanDe\_62 (DQ), EmoNemo\_64 (DQ), Farrylous\_64 (DQ), FlyingTortilla\_66 (DQ), FruityLoops\_64 (DQ), GMA6\_52 (DQ), Hanem\_66 (DQ), Kabocha\_68 (DQ), Lenoshki\_66 (DQ), Mikronejon\_64 (DQ), MintFritos\_64 (DQ), Oogie\_66 (DQ), Pakusa\_64 (DQ), ScarletRaider\_65 (DQ), Schomber\_65 (DQ), Thales\_61 (DQ), Toneprano\_64 (DQ), Twin\_64 (DQ), UBSmoodge\_68 (DQ),

#### Summary by clusters:

There are 2 clusters represented in this pham: singleton, DQ,

Info for manual annotations of cluster DQ:

- Start number 2 was manually annotated 1 time for cluster DQ.
- Start number 4 was manually annotated 9 times for cluster DQ.

#### **Gene Information:**

Gene: Aloki\_64 Start: 54124, Stop: 52727, Start Num: 4

Candidate Starts for Aloki\_64:

(Start: 2 @54160 has 1 MA's), (Start: 4 @54124 has 10 MA's), (5, 54106), (6, 54103), (11, 53962), (13, 53917), (14, 53908), (16, 53887), (18, 53866), (22, 53830), (28, 53776), (31, 53701), (32, 53665), (34, 53635), (42, 53551), (43, 53545), (44, 53527), (45, 53497), (46, 53491), (50, 53434), (56, 53227), (57, 53152), (60, 53128), (64, 53026), (65, 53008), (66, 53002), (67, 52993), (68, 52960), (79, 52774), (80, 52753), (81, 52747),

Gene: Amoonguss\_64 Start: 54127, Stop: 52730, Start Num: 4

Candidate Starts for Amoonguss\_64:

(Start: 2 @54163 has 1 MA's), (Start: 4 @54127 has 10 MA's), (5, 54109), (6, 54106), (11, 53965), (13, 53920), (14, 53911), (16, 53890), (18, 53869), (20, 53863), (22, 53833), (28, 53779), (31, 53704), (32, 53668), (34, 53638), (42, 53554), (43, 53548), (44, 53530), (45, 53500), (46, 53494), (50, 53437), (56, 53230), (57, 53155), (60, 53131), (64, 53029), (65, 53011), (66, 53005), (67, 52996), (68, 52963), (79, 52777), (80, 52756), (81, 52750),

Gene: Argena\_64 Start: 54139, Stop: 52742, Start Num: 4

Candidate Starts for Argena\_64:

(Start: 2 @54175 has 1 MA's), (Start: 4 @54139 has 10 MA's), (5, 54121), (6, 54118), (11, 53977), (13, 53932), (14, 53923), (16, 53902), (18, 53881), (20, 53875), (22, 53845), (28, 53791), (31, 53716), (32, 53680), (34, 53650), (42, 53566), (43, 53560), (44, 53542), (45, 53512), (46, 53506), (50, 53449), (56, 53242), (57, 53167), (60, 53143), (64, 53041), (65, 53023), (66, 53017), (67, 53008), (68, 52975), (79, 52789), (80, 52768), (81, 52762),

Gene: Beted\_66 Start: 55819, Stop: 54422, Start Num: 4

Candidate Starts for Beted\_66:

(Start: 2 @55855 has 1 MA's), (Start: 4 @55819 has 10 MA's), (5, 55801), (6, 55798), (11, 55657), (13, 55612), (14, 55603), (16, 55582), (18, 55561), (22, 55525), (28, 55471), (31, 55396), (32, 55360), (34, 55330), (42, 55246), (43, 55240), (44, 55222), (45, 55192), (46, 55186), (50, 55129), (56, 54922), (57, 54847), (60, 54823), (64, 54721), (65, 54703), (66, 54697), (67, 54688), (68, 54655), (79, 54469), (80, 54448), (81, 54442),

Gene: Cantare\_46 Start: 42802, Stop: 41522, Start Num: 4

Candidate Starts for Cantare\_46:

(Start: 4 @42802 has 10 MA's), (7, 42763), (9, 42712), (17, 42556), (21, 42526), (23, 42505), (25, 42472), (26, 42469), (27, 42457), (32, 42343), (35, 42292), (36, 42277), (41, 42232), (42, 42229), (43, 42223), (46, 42169), (47, 42154), (48, 42148), (49, 42130), (53, 41977), (59, 41821), (60, 41806), (61, 41773), (63, 41710), (67, 41674), (70, 41626), (71, 41620), (73, 41596), (75, 41545),

Gene: Chidiebere\_67 Start: 54655, Stop: 53258, Start Num: 4

Candidate Starts for Chidiebere\_67:

(Start: 2 @54691 has 1 MA's), (Start: 4 @54655 has 10 MA's), (5, 54637), (6, 54634), (11, 54493), (13, 54448), (14, 54439), (16, 54418), (18, 54397), (22, 54361), (28, 54307), (31, 54232), (32, 54196), (34, 54166), (42, 54082), (43, 54076), (44, 54058), (45, 54028), (46, 54022), (50, 53965), (56, 53758), (57, 53683), (60, 53659), (64, 53557), (65, 53539), (66, 53533), (67, 53524), (68, 53491), (79, 53305), (80, 53284), (81, 53278),

Gene: ChisanaKitsune\_63 Start: 53428, Stop: 52031, Start Num: 4

Candidate Starts for ChisanaKitsune\_63:

(1, 53476), (Start: 4 @53428 has 10 MA's), (5, 53410), (11, 53266), (13, 53221), (14, 53212), (16, 53191), (22, 53134), (28, 53080), (31, 53005), (32, 52969), (34, 52939), (39, 52882), (41, 52858), (42, 52855), (43, 52849), (44, 52831), (45, 52801), (46, 52795), (50, 52738), (51, 52714), (56, 52531), (57, 52456), (60, 52432), (64, 52330), (65, 52312), (66, 52306), (67, 52297), (68, 52264), (72, 52231), (79, 52078), (80, 52057), (81, 52051),

Gene: DalanDe\_62 Start: 57305, Stop: 55923, Start Num: 4

Candidate Starts for DalanDe\_62:

(Start: 4 @57305 has 10 MA's), (8, 57263), (10, 57188), (12, 57107), (13, 57098), (15, 57077), (19, 57044), (21, 57029), (32, 56846), (37, 56774), (38, 56771), (42, 56732), (43, 56726), (45, 56678), (46, 56672), (48, 56651), (52, 56525), (53, 56477), (54, 56438), (56, 56405), (58, 56324), (60, 56306), (62, 56216), (66, 56180), (71, 56117), (74, 56066),

Gene: EmoNemo\_64 Start: 54124, Stop: 52727, Start Num: 4

Candidate Starts for EmoNemo\_64:

(Start: 2 @54160 has 1 MA's), (Start: 4 @54124 has 10 MA's), (5, 54106), (6, 54103), (11, 53962), (13, 53917), (14, 53908), (16, 53887), (18, 53866), (22, 53830), (28, 53776), (31, 53701), (32, 53665), (34, 53635), (42, 53551), (43, 53545), (44, 53527), (45, 53497), (46, 53491), (50, 53434), (56, 53227), (57, 53152), (60, 53128), (64, 53026), (65, 53008), (66, 53002), (67, 52993), (68, 52960), (79, 52774), (80, 52753), (81, 52747),

Gene: Farrylious\_64 Start: 53903, Stop: 52506, Start Num: 4

Candidate Starts for Farrylious\_64:

(Start: 2 @53939 has 1 MA's), (Start: 4 @53903 has 10 MA's), (5, 53885), (6, 53882), (11, 53741), (13, 53696), (14, 53687), (16, 53666), (18, 53645), (20, 53639), (22, 53609), (28, 53555), (31, 53480), (32, 53444), (34, 53414), (42, 53330), (43, 53324), (44, 53306), (45, 53276), (46, 53270), (50, 53213), (56, 53006), (57, 52931), (60, 52907), (64, 52805), (65, 52787), (66, 52781), (67, 52772), (68, 52739), (79, 52553), (80, 52532), (81, 52526),

Gene: FlyingTortilla\_66 Start: 57749, Stop: 56355, Start Num: 4

Candidate Starts for FlyingTortilla\_66:

(Start: 4 @57749 has 10 MA's), (5, 57731), (6, 57728), (11, 57587), (13, 57542), (14, 57533), (20, 57485), (22, 57455), (24, 57437), (28, 57401), (31, 57326), (32, 57290), (42, 57176), (43, 57170), (44, 57152), (45, 57122), (46, 57116), (47, 57101), (50, 57059), (51, 57035), (56, 56852), (57, 56777), (64, 56651), (65, 56633), (66, 56627), (67, 56618), (68, 56585), (72, 56552),

Gene: FruityLoops\_64 Start: 57054, Stop: 55660, Start Num: 4

Candidate Starts for FruityLoops\_64:

(Start: 4 @57054 has 10 MA's), (5, 57036), (6, 57033), (11, 56892), (13, 56847), (14, 56838), (20, 56790), (22, 56760), (24, 56742), (28, 56706), (31, 56631), (32, 56595), (42, 56481), (43, 56475), (44, 56457), (45, 56427), (46, 56421), (47, 56406), (50, 56364), (51, 56340), (56, 56157), (57, 56082), (64, 55956), (65, 55938), (66, 55932), (67, 55923), (68, 55890), (72, 55857),

Gene: GMA6\_52 Start: 46011, Stop: 44611, Start Num: 4

Candidate Starts for GMA6\_52:

(3, 46029), (Start: 4 @46011 has 10 MA's), (9, 45921), (13, 45804), (28, 45663), (29, 45645), (30, 45621), (31, 45588), (33, 45531), (38, 45477), (40, 45444), (43, 45432), (45, 45384), (46, 45378), (47, 45363), (48, 45357), (53, 45186), (55, 45123), (58, 45033), (60, 45015), (62, 44925), (66, 44889), (67, 44880), (69, 44838), (70, 44832), (74, 44775), (76, 44742), (77, 44733), (78, 44655), (80, 44631),

Gene: Gray\_67 Start: 54691, Stop: 53258, Start Num: 2

Candidate Starts for Gray\_67:

(Start: 2 @54691 has 1 MA's), (Start: 4 @54655 has 10 MA's), (5, 54637), (6, 54634), (11, 54493), (13, 54448), (14, 54439), (16, 54418), (18, 54397), (22, 54361), (28, 54307), (31, 54232), (32, 54196), (34, 54166), (42, 54082), (43, 54076), (44, 54058), (45, 54028), (46, 54022), (50, 53965), (56, 53758), (57, 53683), (60, 53659), (64, 53557), (65, 53539), (66, 53533), (67, 53524), (68, 53491), (79, 53305), (80, 53284), (81, 53278),

Gene: Hanem\_66 Start: 54124, Stop: 52727, Start Num: 4

Candidate Starts for Hanem\_66:

(Start: 2 @54160 has 1 MA's), (Start: 4 @54124 has 10 MA's), (5, 54106), (6, 54103), (11, 53962), (13, 53917), (14, 53908), (16, 53887), (18, 53866), (22, 53830), (28, 53776), (31, 53701), (32, 53665), (34, 53635), (42, 53551), (43, 53545), (44, 53527), (45, 53497), (46, 53491), (50, 53434), (56, 53227), (57, 53152), (60, 53128), (64, 53026), (65, 53008), (66, 53002), (67, 52993), (68, 52960), (79, 52774), (80, 52753), (81, 52747),

Gene: Kabocha\_68 Start: 55467, Stop: 54070, Start Num: 4

Candidate Starts for Kabocha\_68:

(Start: 2 @55503 has 1 MA's), (Start: 4 @55467 has 10 MA's), (5, 55449), (6, 55446), (11, 55305), (13, 55260), (14, 55251), (16, 55230), (18, 55209), (22, 55173), (28, 55119), (31, 55044), (32, 55008), (34, 54978), (42, 54894), (43, 54888), (44, 54870), (45, 54840), (46, 54834), (50, 54777), (56, 54570), (57, 54495), (60, 54471), (64, 54369), (65, 54351), (66, 54345), (67, 54336), (68, 54303), (79, 54117), (80, 54096), (81, 54090),

Gene: Lenoshki\_66 Start: 55819, Stop: 54422, Start Num: 4

Candidate Starts for Lenoshki\_66:

(Start: 2 @55855 has 1 MA's), (Start: 4 @55819 has 10 MA's), (5, 55801), (6, 55798), (11, 55657), (13, 55612), (14, 55603), (16, 55582), (18, 55561), (22, 55525), (28, 55471), (31, 55396), (32, 55360), (34, 55330), (42, 55246), (43, 55240), (44, 55222), (45, 55192), (46, 55186), (50, 55129), (56, 54922), (57, 54847), (60, 54823), (64, 54721), (65, 54703), (66, 54697), (67, 54688), (68, 54655), (79, 54469), (80, 54448), (81, 54442),

Gene: Mikronejon\_64 Start: 54124, Stop: 52727, Start Num: 4

Candidate Starts for Mikronejon\_64:

(Start: 2 @54160 has 1 MA's), (Start: 4 @54124 has 10 MA's), (5, 54106), (6, 54103), (11, 53962), (13, 53917), (14, 53908), (16, 53887), (18, 53866), (22, 53830), (28, 53776), (31, 53701), (32, 53665), (34, 53635), (42, 53551), (43, 53545), (44, 53527), (45, 53497), (46, 53491), (50, 53434), (56, 53227), (57, 53152), (60, 53128), (64, 53026), (65, 53008), (66, 53002), (67, 52993), (68, 52960), (79, 52774), (80, 52753), (81, 52747),

Gene: MintFritos\_64 Start: 54125, Stop: 52728, Start Num: 4

Candidate Starts for MintFritos\_64:

(Start: 2 @54161 has 1 MA's), (Start: 4 @54125 has 10 MA's), (5, 54107), (6, 54104), (11, 53963), (13, 53918), (14, 53909), (16, 53888), (18, 53867), (22, 53831), (28, 53777), (31, 53702), (32, 53666), (34, 53636), (42, 53552), (43, 53546), (44, 53528), (45, 53498), (46, 53492), (50, 53435), (56, 53228), (57, 53153), (60, 53129), (64, 53027), (65, 53009), (66, 53003), (67, 52994), (68, 52961), (79, 52775), (80, 52754), (81, 52748),

Gene: Oogie\_66 Start: 55845, Stop: 54448, Start Num: 4

Candidate Starts for Oogie\_66:

(Start: 2 @55881 has 1 MA's), (Start: 4 @55845 has 10 MA's), (5, 55827), (6, 55824), (11, 55683), (13, 55638), (14, 55629), (16, 55608), (18, 55587), (22, 55551), (28, 55497), (31, 55422), (32, 55386), (34, 55356), (42, 55272), (43, 55266), (44, 55248), (45, 55218), (46, 55212), (50, 55155), (56, 54948), (57, 54873), (60, 54849), (64, 54747), (65, 54729), (66, 54723), (67, 54714), (68, 54681), (79, 54495), (80, 54474), (81, 54468),

Gene: Pakusa\_64 Start: 53866, Stop: 52469, Start Num: 4

Candidate Starts for Pakusa\_64:

(Start: 2 @53902 has 1 MA's), (Start: 4 @53866 has 10 MA's), (5, 53848), (6, 53845), (11, 53704), (13, 53659), (14, 53650), (16, 53629), (18, 53608), (20, 53602), (22, 53572), (28, 53518), (31, 53443), (32, 53407), (34, 53377), (42, 53293), (43, 53287), (44, 53269), (45, 53239), (46, 53233), (50, 53176), (56, 52969), (57, 52894), (60, 52870), (64, 52768), (65, 52750), (66, 52744), (67, 52735), (68, 52702), (79, 52516), (80, 52495), (81, 52489),

Gene: ScarletRaider\_65 Start: 57036, Stop: 55642, Start Num: 4

Candidate Starts for ScarletRaider\_65:

(1, 57084), (Start: 4 @57036 has 10 MA's), (5, 57018), (6, 57015), (11, 56874), (13, 56829), (14, 56820), (20, 56772), (22, 56742), (24, 56724), (28, 56688), (31, 56613), (32, 56577), (42, 56463), (43, 56457), (44, 56439), (45, 56409), (46, 56403), (47, 56388), (50, 56346), (51, 56322), (56, 56139), (57, 56064), (64, 55938), (65, 55920), (66, 55914), (67, 55905), (68, 55872), (72, 55839),

Gene: Schomber\_65 Start: 53874, Stop: 52477, Start Num: 4

Candidate Starts for Schomber\_65:

(Start: 2 @53910 has 1 MA's), (Start: 4 @53874 has 10 MA's), (5, 53856), (6, 53853), (11, 53712), (13, 53667), (14, 53658), (16, 53637), (18, 53616), (22, 53580), (28, 53526), (31, 53451), (32, 53415), (34, 53385), (42, 53301), (43, 53295), (44, 53277), (45, 53247), (46, 53241), (50, 53184), (56, 52977), (57, 52902), (60, 52878), (64, 52776), (65, 52758), (66, 52752), (67, 52743), (68, 52710), (79, 52524), (80, 52503), (81, 52497),

Gene: Thales\_61 Start: 56220, Stop: 54838, Start Num: 4

Candidate Starts for Thales\_61:

(Start: 4 @56220 has 10 MA's), (8, 56178), (10, 56103), (12, 56022), (13, 56013), (15, 55992), (19, 55959), (21, 55944), (32, 55761), (37, 55689), (38, 55686), (42, 55647), (43, 55641), (45, 55593), (46, 55587), (48, 55566), (52, 55440), (53, 55392), (54, 55353), (56, 55320), (58, 55239), (60, 55221), (62, 55131), (66, 55095), (71, 55032), (74, 54981),

Gene: Toneprano\_64 Start: 54139, Stop: 52742, Start Num: 4

Candidate Starts for Toneprano\_64:

(Start: 2 @54175 has 1 MA's), (Start: 4 @54139 has 10 MA's), (5, 54121), (6, 54118), (11, 53977), (13, 53932), (14, 53923), (16, 53902), (18, 53881), (22, 53845), (28, 53791), (31, 53716), (32, 53680), (34, 53650), (42, 53566), (43, 53560), (44, 53542), (45, 53512), (46, 53506), (50, 53449), (56, 53242), (57, 53167), (60, 53143), (64, 53041), (65, 53023), (66, 53017), (67, 53008), (68, 52975), (79, 52789), (80, 52768), (81, 52762),

Gene: Twin\_64 Start: 54124, Stop: 52727, Start Num: 4

Candidate Starts for Twin\_64:

(Start: 2 @54160 has 1 MA's), (Start: 4 @54124 has 10 MA's), (5, 54106), (6, 54103), (11, 53962), (13, 53917), (14, 53908), (16, 53887), (18, 53866), (22, 53830), (28, 53776), (31, 53701), (32, 53665), (34, 53635), (42, 53551), (43, 53545), (44, 53527), (45, 53497), (46, 53491), (50, 53434), (56, 53227), (57, 53152), (60, 53128), (64, 53026), (65, 53008), (66, 53002), (67, 52993), (68, 52960), (79, 52774), (80, 52753), (81, 52747),

Gene: UBSmoodge\_68 Start: 57518, Stop: 56124, Start Num: 4

Candidate Starts for UBSmoodge\_68:

(1, 57566), (Start: 4 @57518 has 10 MA's), (5, 57500), (6, 57497), (11, 57356), (13, 57311), (14, 57302), (20, 57254), (22, 57224), (24, 57206), (28, 57170), (31, 57095), (32, 57059), (42, 56945), (43, 56939), (44, 56921), (45, 56891), (46, 56885), (47, 56870), (50, 56828), (51, 56804), (56, 56621), (57, 56546), (64, 56420), (65, 56402), (66, 56396), (67, 56387), (68, 56354), (72, 56321),