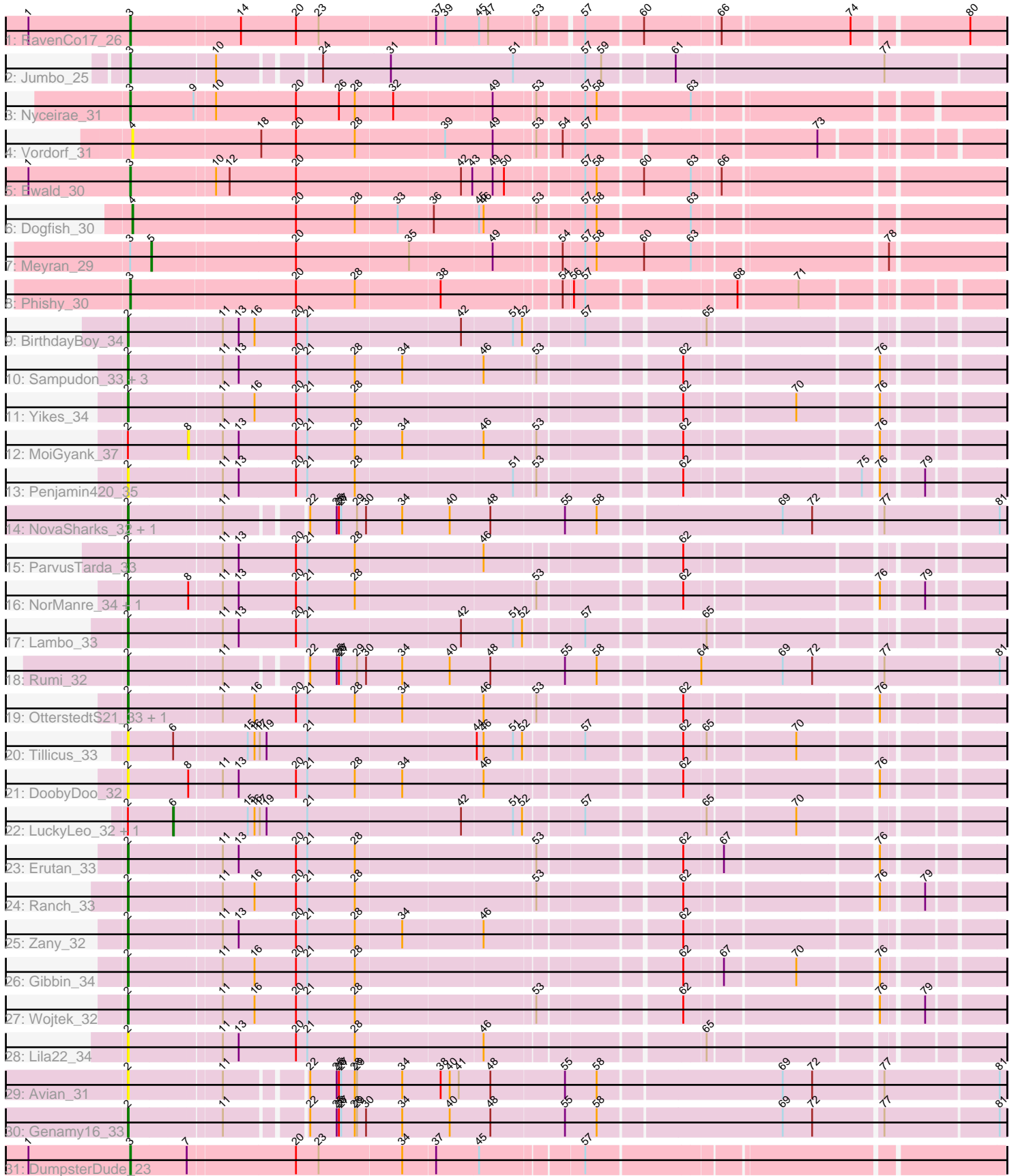


Pham 163754



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 163754 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163754 has 38 members, 8 are drafts.

Phages represented in each track:

- Track 1 : RavenCo17\_26
- Track 2 : Jumbo\_25
- Track 3 : Nyceirae\_31
- Track 4 : Vordorf\_31
- Track 5 : Ewald\_30
- Track 6 : Dogfish\_30
- Track 7 : Meyran\_29
- Track 8 : Phishy\_30
- Track 9 : BirthdayBoy\_34
- Track 10 : Sampudon\_33, Jalebi\_32, GOATification\_34, Fulcrum\_34
- Track 11 : Yikes\_34
- Track 12 : MoiGyank\_37
- Track 13 : Penjamin420\_35
- Track 14 : NovaSharks\_32, Alyssamiracle\_33
- Track 15 : ParvusTarda\_33
- Track 16 : NorManre\_34, Patos\_34
- Track 17 : Lambo\_33
- Track 18 : Rumi\_32
- Track 19 : OtterstedtS21\_33, Gretellyn\_33
- Track 20 : Tillicus\_33
- Track 21 : DoobyDoo\_32
- Track 22 : LuckyLeo\_32, Apeppi\_30
- Track 23 : Erutan\_33
- Track 24 : Ranch\_33
- Track 25 : Zany\_32
- Track 26 : Gibbin\_34
- Track 27 : Wojtek\_32
- Track 28 : Lila22\_34
- Track 29 : Avian\_31
- Track 30 : Genamy16\_33
- Track 31 : DumpsterDude\_23

***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 21 of the 30 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alyssamiracle\_33, Avian\_31, BirthdayBoy\_34, DoobyDoo\_32, Erutan\_33, Fulcrum\_34, GOATification\_34, Genamy16\_33, Gibbin\_34, GretelLyn\_33, Jalebi\_32, Lambo\_33, Lila22\_34, NorManre\_34, NovaSharks\_32, OtterstedtS21\_33, ParvusTarda\_33, Patos\_34, Penjamin420\_35, Ranch\_33, Rumi\_32, Sampudon\_33, Tillicus\_33, Wojtek\_32, Yikes\_34, Zany\_32,

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

- Apeppi\_30, LuckyLeo\_32, MoiGyank\_37,

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

- Dogfish\_30, DumpsterDude\_23, Ewald\_30, Jumbo\_25, Meyran\_29, Nyceirae\_31, Phishy\_30, RavenCo17\_26, Vordorf\_31,

### Summary by start number:

Start 2:

- Found in 29 of 38 ( 76.3% ) of genes in pham
- Manual Annotations of this start: 21 of 30
- Called 89.7% of time when present
- Phage (with cluster) where this start called: Alyssamiracle\_33 (DV), Avian\_31 (DV), BirthdayBoy\_34 (DV), DoobyDoo\_32 (DV), Erutan\_33 (DV), Fulcrum\_34 (DV), GOATification\_34 (DV), Genamy16\_33 (DV), Gibbin\_34 (DV), GretelLyn\_33 (DV), Jalebi\_32 (DV), Lambo\_33 (DV), Lila22\_34 (DV), NorManre\_34 (DV), NovaSharks\_32 (DV), OtterstedtS21\_33 (DV), ParvusTarda\_33 (DV), Patos\_34 (DV), Penjamin420\_35 (DV), Ranch\_33 (DV), Rumi\_32 (DV), Sampudon\_33 (DV), Tillicus\_33 (DV), Wojtek\_32 (DV), Yikes\_34 (DV), Zany\_32 (DV),

Start 3:

- Found in 7 of 38 ( 18.4% ) of genes in pham
- Manual Annotations of this start: 6 of 30
- Called 85.7% of time when present
- Phage (with cluster) where this start called: DumpsterDude\_23 (DW), Ewald\_30 (DT), Jumbo\_25 (DF3), Nyceirae\_31 (DT), Phishy\_30 (DT), RavenCo17\_26 (CZ8),

Start 4:

- Found in 2 of 38 ( 5.3% ) of genes in pham
- Manual Annotations of this start: 1 of 30
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dogfish\_30 (DT), Vordorf\_31 (DT),

Start 5:

- Found in 1 of 38 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 1 of 30
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Meyran\_29 (DT),

Start 6:

- Found in 3 of 38 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 1 of 30

- Called 66.7% of time when present
- Phage (with cluster) where this start called: Apeppi\_30 (DV), LuckyLeo\_32 (DV),

Start 8:

- Found in 4 of 38 ( 10.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: MoiGyank\_37 (DV),

### **Summary by clusters:**

There are 5 clusters represented in this pham: DV, DW, DT, CZ8, DF3,

Info for manual annotations of cluster CZ8:

- Start number 3 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DF3:

- Start number 3 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DT:

- Start number 3 was manually annotated 3 times for cluster DT.
- Start number 4 was manually annotated 1 time for cluster DT.
- Start number 5 was manually annotated 1 time for cluster DT.

Info for manual annotations of cluster DV:

- Start number 2 was manually annotated 21 times for cluster DV.
- Start number 6 was manually annotated 1 time for cluster DV.

Info for manual annotations of cluster DW:

- Start number 3 was manually annotated 1 time for cluster DW.

### **Gene Information:**

Gene: Alyssamiracle\_33 Start: 27521, Stop: 28618, Start Num: 2

Candidate Starts for Alyssamiracle\_33:

(Start: 2 @27521 has 21 MA's), (11, 27635), (22, 27728), (25, 27761), (26, 27764), (27, 27767), (29, 27788), (30, 27800), (34, 27848), (40, 27911), (48, 27965), (55, 28061), (58, 28103), (69, 28337), (72, 28376), (77, 28463), (81, 28610),

Gene: Apeppi\_30 Start: 28919, Stop: 29908, Start Num: 6

Candidate Starts for Apeppi\_30:

(Start: 2 @28862 has 21 MA's), (Start: 6 @28919 has 1 MA's), (15, 29009), (16, 29018), (17, 29024), (19, 29033), (21, 29087), (42, 29285), (51, 29351), (52, 29363), (57, 29432), (65, 29573), (70, 29681),

Gene: Avian\_31 Start: 27503, Stop: 28600, Start Num: 2

Candidate Starts for Avian\_31:

(Start: 2 @27503 has 21 MA's), (11, 27617), (22, 27710), (25, 27743), (26, 27746), (27, 27749), (28, 27767), (29, 27770), (34, 27830), (38, 27881), (40, 27893), (41, 27905), (48, 27947), (55, 28043), (58, 28085), (69, 28319), (72, 28358), (77, 28445), (81, 28592),

Gene: BirthdayBoy\_34 Start: 29543, Stop: 30589, Start Num: 2

Candidate Starts for BirthdayBoy\_34:  
(Start: 2 @29543 has 21 MA's), (11, 29657), (13, 29678), (16, 29699), (20, 29753), (21, 29768), (42, 29966), (51, 30032), (52, 30044), (57, 30113), (65, 30254),

Gene: Dogfish\_30 Start: 26617, Stop: 27699, Start Num: 4  
Candidate Starts for Dogfish\_30:  
(Start: 4 @26617 has 1 MA's), (20, 26827), (28, 26905), (33, 26959), (36, 27004), (45, 27061), (46, 27067), (53, 27130), (57, 27187), (58, 27202), (63, 27319),

Gene: DoobyDoo\_32 Start: 28492, Stop: 29541, Start Num: 2  
Candidate Starts for DoobyDoo\_32:  
(Start: 2 @28492 has 21 MA's), (8, 28567), (11, 28606), (13, 28627), (20, 28702), (21, 28717), (28, 28780), (34, 28840), (46, 28942), (62, 29176), (76, 29404),

Gene: DumpsterDude\_23 Start: 21990, Stop: 23072, Start Num: 3  
Candidate Starts for DumpsterDude\_23:  
(1, 21855), (Start: 3 @21990 has 6 MA's), (7, 22062), (20, 22200), (23, 22230), (34, 22338), (37, 22380), (45, 22434), (57, 22560),

Gene: Erutan\_33 Start: 29002, Stop: 30048, Start Num: 2  
Candidate Starts for Erutan\_33:  
(Start: 2 @29002 has 21 MA's), (11, 29116), (13, 29137), (20, 29212), (21, 29227), (28, 29290), (53, 29515), (62, 29686), (67, 29731), (76, 29914),

Gene: Ewald\_30 Start: 26639, Stop: 27724, Start Num: 3  
Candidate Starts for Ewald\_30:  
(1, 26504), (Start: 3 @26639 has 6 MA's), (10, 26744), (12, 26762), (20, 26849), (42, 27062), (43, 27077), (49, 27104), (50, 27119), (57, 27212), (58, 27227), (60, 27284), (63, 27344), (66, 27377),

Gene: Fulcrum\_34 Start: 29520, Stop: 30569, Start Num: 2  
Candidate Starts for Fulcrum\_34:  
(Start: 2 @29520 has 21 MA's), (11, 29634), (13, 29655), (20, 29730), (21, 29745), (28, 29808), (34, 29868), (46, 29970), (53, 30033), (62, 30204), (76, 30432),

Gene: GOATification\_34 Start: 29520, Stop: 30569, Start Num: 2  
Candidate Starts for GOATification\_34:  
(Start: 2 @29520 has 21 MA's), (11, 29634), (13, 29655), (20, 29730), (21, 29745), (28, 29808), (34, 29868), (46, 29970), (53, 30033), (62, 30204), (76, 30432),

Gene: Genamy16\_33 Start: 27521, Stop: 28618, Start Num: 2  
Candidate Starts for Genamy16\_33:  
(Start: 2 @27521 has 21 MA's), (11, 27635), (22, 27728), (25, 27761), (26, 27764), (27, 27767), (28, 27785), (29, 27788), (30, 27800), (34, 27848), (40, 27911), (48, 27965), (55, 28061), (58, 28103), (69, 28337), (72, 28376), (77, 28463), (81, 28610),

Gene: Gibbin\_34 Start: 29619, Stop: 30668, Start Num: 2  
Candidate Starts for Gibbin\_34:  
(Start: 2 @29619 has 21 MA's), (11, 29733), (16, 29775), (20, 29829), (21, 29844), (28, 29907), (62, 30303), (67, 30348), (70, 30438), (76, 30531),

Gene: Gretellyn\_33 Start: 29878, Stop: 30933, Start Num: 2  
Candidate Starts for Gretellyn\_33:

(Start: 2 @29878 has 21 MA's), (11, 29992), (16, 30034), (20, 30088), (21, 30103), (28, 30166), (34, 30226), (46, 30328), (53, 30391), (62, 30562), (76, 30796),

Gene: Jalebi\_32 Start: 30054, Stop: 31103, Start Num: 2

Candidate Starts for Jalebi\_32:

(Start: 2 @30054 has 21 MA's), (11, 30168), (13, 30189), (20, 30264), (21, 30279), (28, 30342), (34, 30402), (46, 30504), (53, 30567), (62, 30738), (76, 30966),

Gene: Jumbo\_25 Start: 36377, Stop: 37471, Start Num: 3

Candidate Starts for Jumbo\_25:

(Start: 3 @36377 has 6 MA's), (10, 36485), (24, 36602), (31, 36689), (51, 36851), (57, 36944), (59, 36965), (61, 37052), (77, 37319),

Gene: Lambo\_33 Start: 29541, Stop: 30587, Start Num: 2

Candidate Starts for Lambo\_33:

(Start: 2 @29541 has 21 MA's), (11, 29655), (13, 29676), (20, 29751), (21, 29766), (42, 29964), (51, 30030), (52, 30042), (57, 30111), (65, 30252),

Gene: Lila22\_34 Start: 29496, Stop: 30542, Start Num: 2

Candidate Starts for Lila22\_34:

(Start: 2 @29496 has 21 MA's), (11, 29610), (13, 29631), (20, 29706), (21, 29721), (28, 29784), (46, 29946), (65, 30207),

Gene: LuckyLeo\_32 Start: 28919, Stop: 29908, Start Num: 6

Candidate Starts for LuckyLeo\_32:

(Start: 2 @28862 has 21 MA's), (Start: 6 @28919 has 1 MA's), (15, 29009), (16, 29018), (17, 29024), (19, 29033), (21, 29087), (42, 29285), (51, 29351), (52, 29363), (57, 29432), (65, 29573), (70, 29681),

Gene: Meyran\_29 Start: 27126, Stop: 28187, Start Num: 5

Candidate Starts for Meyran\_29:

(Start: 3 @27099 has 6 MA's), (Start: 5 @27126 has 1 MA's), (20, 27309), (35, 27456), (49, 27561), (54, 27642), (57, 27669), (58, 27684), (60, 27747), (63, 27807), (78, 28044),

Gene: MoiGyank\_37 Start: 29999, Stop: 30973, Start Num: 8

Candidate Starts for MoiGyank\_37:

(Start: 2 @29924 has 21 MA's), (8, 29999), (11, 30038), (13, 30059), (20, 30134), (21, 30149), (28, 30212), (34, 30272), (46, 30374), (53, 30437), (62, 30608), (76, 30836),

Gene: NorManre\_34 Start: 29125, Stop: 30174, Start Num: 2

Candidate Starts for NorManre\_34:

(Start: 2 @29125 has 21 MA's), (8, 29200), (11, 29239), (13, 29260), (20, 29335), (21, 29350), (28, 29413), (53, 29638), (62, 29809), (76, 30037), (79, 30082),

Gene: NovaSharks\_32 Start: 27111, Stop: 28208, Start Num: 2

Candidate Starts for NovaSharks\_32:

(Start: 2 @27111 has 21 MA's), (11, 27225), (22, 27318), (25, 27351), (26, 27354), (27, 27357), (29, 27378), (30, 27390), (34, 27438), (40, 27501), (48, 27555), (55, 27651), (58, 27693), (69, 27927), (72, 27966), (77, 28053), (81, 28200),

Gene: Nyceirae\_31 Start: 26839, Stop: 27909, Start Num: 3

Candidate Starts for Nyceirae\_31:

(Start: 3 @26839 has 6 MA's), (9, 26920), (10, 26944), (20, 27049), (26, 27106), (28, 27127), (32, 27175), (49, 27301), (53, 27352), (57, 27409), (58, 27424), (63, 27541),

Gene: OtterstedtS21\_33 Start: 29200, Stop: 30249, Start Num: 2

Candidate Starts for OtterstedtS21\_33:

(Start: 2 @29200 has 21 MA's), (11, 29314), (16, 29356), (20, 29410), (21, 29425), (28, 29488), (34, 29548), (46, 29650), (53, 29713), (62, 29884), (76, 30112),

Gene: ParvusTarda\_33 Start: 28670, Stop: 29716, Start Num: 2

Candidate Starts for ParvusTarda\_33:

(Start: 2 @28670 has 21 MA's), (11, 28784), (13, 28805), (20, 28880), (21, 28895), (28, 28958), (46, 29120), (62, 29354),

Gene: Patos\_34 Start: 29125, Stop: 30174, Start Num: 2

Candidate Starts for Patos\_34:

(Start: 2 @29125 has 21 MA's), (8, 29200), (11, 29239), (13, 29260), (20, 29335), (21, 29350), (28, 29413), (53, 29638), (62, 29809), (76, 30037), (79, 30082),

Gene: Penjamin420\_35 Start: 29342, Stop: 30391, Start Num: 2

Candidate Starts for Penjamin420\_35:

(Start: 2 @29342 has 21 MA's), (11, 29456), (13, 29477), (20, 29552), (21, 29567), (28, 29630), (51, 29831), (53, 29855), (62, 30026), (75, 30239), (76, 30254), (79, 30299),

Gene: Phishy\_30 Start: 26793, Stop: 27842, Start Num: 3

Candidate Starts for Phishy\_30:

(Start: 3 @26793 has 6 MA's), (20, 27003), (28, 27081), (38, 27189), (54, 27339), (56, 27351), (57, 27366), (68, 27543), (71, 27618),

Gene: Ranch\_33 Start: 28024, Stop: 29073, Start Num: 2

Candidate Starts for Ranch\_33:

(Start: 2 @28024 has 21 MA's), (11, 28138), (16, 28180), (20, 28234), (21, 28249), (28, 28312), (53, 28537), (62, 28708), (76, 28936), (79, 28981),

Gene: RavenCo17\_26 Start: 23835, Stop: 24911, Start Num: 3

Candidate Starts for RavenCo17\_26:

(1, 23700), (Start: 3 @23835 has 6 MA's), (14, 23973), (20, 24045), (23, 24075), (37, 24225), (39, 24237), (45, 24279), (47, 24291), (53, 24348), (57, 24399), (60, 24471), (66, 24564), (74, 24726), (80, 24867),

Gene: Rumi\_32 Start: 27114, Stop: 28211, Start Num: 2

Candidate Starts for Rumi\_32:

(Start: 2 @27114 has 21 MA's), (11, 27228), (22, 27321), (25, 27354), (26, 27357), (27, 27360), (29, 27381), (30, 27393), (34, 27441), (40, 27504), (48, 27558), (55, 27654), (58, 27696), (64, 27822), (69, 27930), (72, 27969), (77, 28056), (81, 28203),

Gene: Sampudon\_33 Start: 30054, Stop: 31103, Start Num: 2

Candidate Starts for Sampudon\_33:

(Start: 2 @30054 has 21 MA's), (11, 30168), (13, 30189), (20, 30264), (21, 30279), (28, 30342), (34, 30402), (46, 30504), (53, 30567), (62, 30738), (76, 30966),

Gene: Tillicus\_33 Start: 28456, Stop: 29502, Start Num: 2

Candidate Starts for Tillicus\_33:

(Start: 2 @28456 has 21 MA's), (Start: 6 @28513 has 1 MA's), (15, 28603), (16, 28612), (17, 28618), (19, 28627), (21, 28681), (44, 28897), (46, 28906), (51, 28945), (52, 28957), (57, 29026), (62, 29140), (65, 29167), (70, 29275),

Gene: Vordorf\_31 Start: 26927, Stop: 27976, Start Num: 4

Candidate Starts for Vordorf\_31:

(Start: 4 @26927 has 1 MA's), (18, 27092), (20, 27137), (28, 27215), (39, 27329), (49, 27392), (53, 27443), (54, 27473), (57, 27500), (73, 27776),

Gene: Wojtek\_32 Start: 28749, Stop: 29798, Start Num: 2

Candidate Starts for Wojtek\_32:

(Start: 2 @28749 has 21 MA's), (11, 28863), (16, 28905), (20, 28959), (21, 28974), (28, 29037), (53, 29262), (62, 29433), (76, 29661), (79, 29706),

Gene: Yikes\_34 Start: 30133, Stop: 31182, Start Num: 2

Candidate Starts for Yikes\_34:

(Start: 2 @30133 has 21 MA's), (11, 30247), (16, 30289), (20, 30343), (21, 30358), (28, 30421), (62, 30817), (70, 30952), (76, 31045),

Gene: Zany\_32 Start: 29660, Stop: 30706, Start Num: 2

Candidate Starts for Zany\_32:

(Start: 2 @29660 has 21 MA's), (11, 29774), (13, 29795), (20, 29870), (21, 29885), (28, 29948), (34, 30008), (46, 30110), (62, 30344),