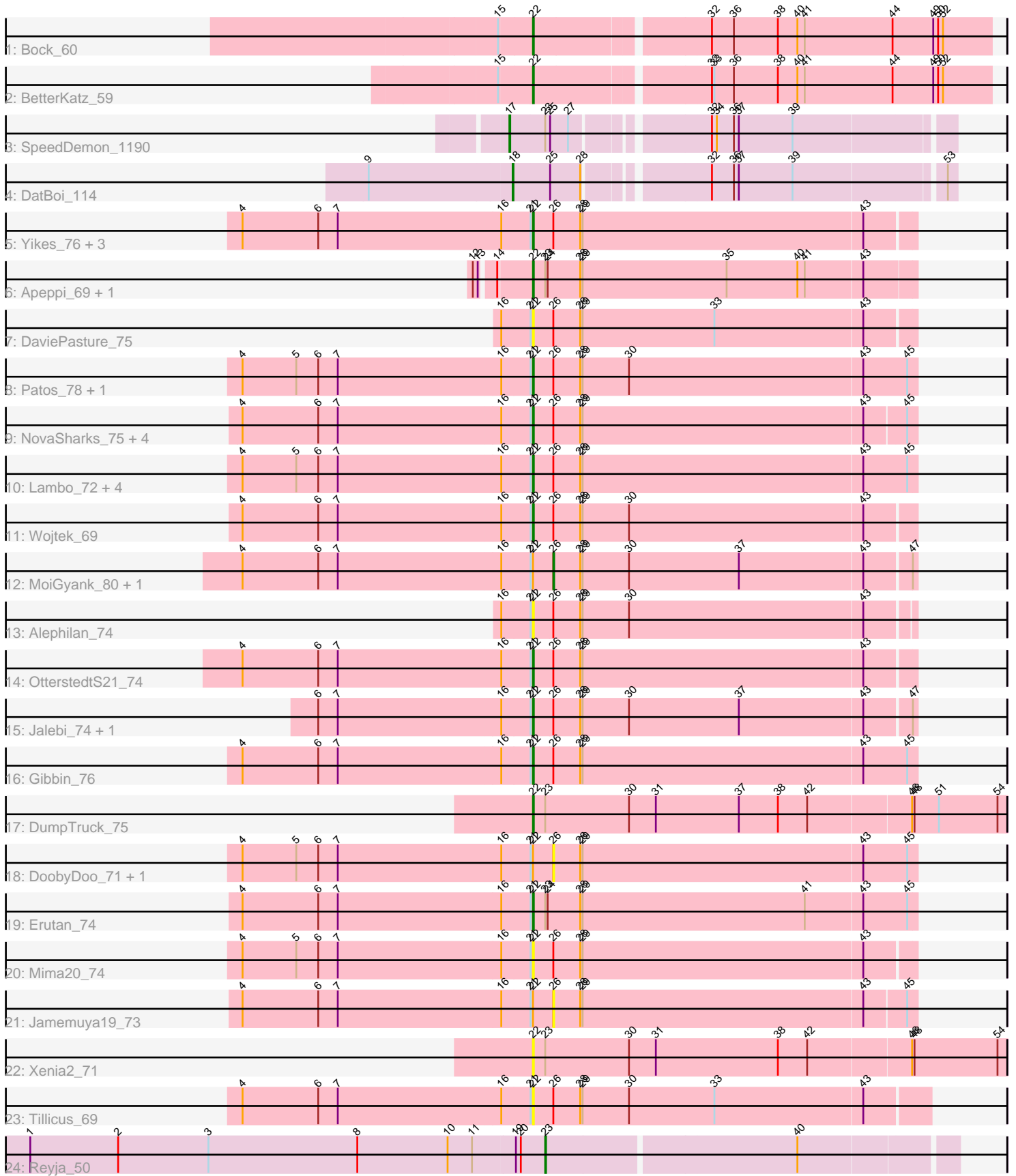


Pham 171609



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 171609 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171609 has 40 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Bock\_60
- Track 2 : BetterKatz\_59
- Track 3 : SpeedDemon\_1190
- Track 4 : DatBoi\_114
- Track 5 : Yikes\_76, Ranch\_74, Sadboi\_75, Gretellyn\_74
- Track 6 : Apeppi\_69, LuckyLeo\_71
- Track 7 : DaviePasture\_75
- Track 8 : Patos\_78, NorManre\_78
- Track 9 : NovaSharks\_75, Alyssamiracle\_76, Avian\_72, Genamy16\_76, Rumi\_74
- Track 10 : Lambo\_72, Fulcrum\_74, BirthdayBoy\_76, ParvusTarda\_73, GOATification\_74
- Track 11 : Wojtek\_69
- Track 12 : MoiGyank\_80, Zany\_72
- Track 13 : Alephilan\_74
- Track 14 : OtterstedtS21\_74
- Track 15 : Jalebi\_74, Sampudon\_75
- Track 16 : Gibbin\_76
- Track 17 : DumpTruck\_75
- Track 18 : DoobyDoo\_71, Lila22\_78
- Track 19 : Erutan\_74
- Track 20 : Mima20\_74
- Track 21 : Jamemuya19\_73
- Track 22 : Xenia2\_71
- Track 23 : Tillicus\_69
- Track 24 : Reyja\_50

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

The start number called the most often in the published annotations is 22, it was called in 25 of the 29 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alephilan\_74, Alyssamiracle\_76, Apeppi\_69, Avian\_72, BetterKatz\_59, BirthdayBoy\_76, Bock\_60, DaviePasture\_75, DumpTruck\_75, Erutan\_74,

Fulcrum\_74, GOATification\_74, Genamy16\_76, Gibbin\_76, Gretellyn\_74, Jalebi\_74, Lambo\_72, LuckyLeo\_71, Mima20\_74, NorManre\_78, NovaSharks\_75, OtterstedtS21\_74, ParvusTarda\_73, Patos\_78, Ranch\_74, Rumi\_74, Sadboi\_75, Sampudon\_75, Tillicus\_69, Wojtek\_69, Xenia2\_71, Yikes\_76,

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

- DoobyDoo\_71, Jamemuya19\_73, Lila22\_78, MoiGyank\_80, Zany\_72,

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

- DatBoi\_114, Reyja\_50, SpeedDemon\_1190,

### Summary by start number:

Start 17:

- Found in 1 of 40 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SpeedDemon\_1190 (DL),

Start 18:

- Found in 1 of 40 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DatBoi\_114 (DL),

Start 22:

- Found in 37 of 40 ( 92.5% ) of genes in pham
- Manual Annotations of this start: 25 of 29
- Called 86.5% of time when present
- Phage (with cluster) where this start called: Alephilan\_74 (DV), Alyssamiracle\_76 (DV), Apeppi\_69 (DV), Avian\_72 (DV), BetterKatz\_59 (DI), BirthdayBoy\_76 (DV), Bock\_60 (DI), DaviePasture\_75 (DV), DumpTruck\_75 (DV), Erutan\_74 (DV), Fulcrum\_74 (DV), GOATification\_74 (DV), Genamy16\_76 (DV), Gibbin\_76 (DV), Gretellyn\_74 (DV), Jalebi\_74 (DV), Lambo\_72 (DV), LuckyLeo\_71 (DV), Mima20\_74 (DV), NorManre\_78 (DV), NovaSharks\_75 (DV), OtterstedtS21\_74 (DV), ParvusTarda\_73 (DV), Patos\_78 (DV), Ranch\_74 (DV), Rumi\_74 (DV), Sadboi\_75 (DV), Sampudon\_75 (DV), Tillicus\_69 (DV), Wojtek\_69 (DV), Xenia2\_71 (DV), Yikes\_76 (DV),

Start 23:

- Found in 7 of 40 ( 17.5% ) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Reyja\_50 (DY),

Start 26:

- Found in 30 of 40 ( 75.0% ) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 16.7% of time when present
- Phage (with cluster) where this start called: DoobyDoo\_71 (DV), Jamemuya19\_73 (DV), Lila22\_78 (DV), MoiGyank\_80 (DV), Zany\_72 (DV),

### Summary by clusters:

There are 4 clusters represented in this pham: DV, DL, DY, DI,

Info for manual annotations of cluster DI:

- Start number 22 was manually annotated 2 times for cluster DI.

Info for manual annotations of cluster DL:

- Start number 17 was manually annotated 1 time for cluster DL.
- Start number 18 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster DV:

- Start number 22 was manually annotated 23 times for cluster DV.
- Start number 26 was manually annotated 1 time for cluster DV.

Info for manual annotations of cluster DY:

- Start number 23 was manually annotated 1 time for cluster DY.

### **Gene Information:**

Gene: Alephilan\_74 Start: 50462, Stop: 50920, Start Num: 22

Candidate Starts for Alephilan\_74:

(16, 50426), (21, 50459), (Start: 22 @50462 has 25 MA's), (Start: 26 @50486 has 1 MA's), (28, 50519), (29, 50522), (30, 50579), (43, 50864),

Gene: Alyssamiracle\_76 Start: 49100, Stop: 49561, Start Num: 22

Candidate Starts for Alyssamiracle\_76:

(4, 48749), (6, 48842), (7, 48866), (16, 49064), (21, 49097), (Start: 22 @49100 has 25 MA's), (Start: 26 @49124 has 1 MA's), (28, 49157), (29, 49160), (43, 49502), (45, 49550),

Gene: Apeppi\_69 Start: 49601, Stop: 50065, Start Num: 22

Candidate Starts for Apeppi\_69:

(12, 49541), (13, 49547), (14, 49562), (Start: 22 @49601 has 25 MA's), (Start: 23 @49616 has 1 MA's), (24, 49619), (28, 49658), (29, 49661), (35, 49838), (40, 49925), (41, 49934), (43, 50003),

Gene: Avian\_72 Start: 48828, Stop: 49289, Start Num: 22

Candidate Starts for Avian\_72:

(4, 48477), (6, 48570), (7, 48594), (16, 48792), (21, 48825), (Start: 22 @48828 has 25 MA's), (Start: 26 @48852 has 1 MA's), (28, 48885), (29, 48888), (43, 49230), (45, 49278),

Gene: BetterKatz\_59 Start: 39771, Stop: 40310, Start Num: 22

Candidate Starts for BetterKatz\_59:

(15, 39732), (Start: 22 @39771 has 25 MA's), (32, 39969), (33, 39972), (36, 39996), (38, 40050), (40, 40074), (41, 40083), (44, 40191), (49, 40239), (50, 40245), (52, 40251),

Gene: BirthdayBoy\_76 Start: 50736, Stop: 51203, Start Num: 22

Candidate Starts for BirthdayBoy\_76:

(4, 50385), (5, 50451), (6, 50478), (7, 50502), (16, 50700), (21, 50733), (Start: 22 @50736 has 25 MA's), (Start: 26 @50760 has 1 MA's), (28, 50793), (29, 50796), (43, 51138), (45, 51192),

Gene: Bock\_60 Start: 39800, Stop: 40339, Start Num: 22

Candidate Starts for Bock\_60:

(15, 39761), (Start: 22 @39800 has 25 MA's), (32, 39998), (36, 40025), (38, 40079), (40, 40103), (41, 40112), (44, 40220), (49, 40268), (50, 40274), (52, 40280),

Gene: DatBoi\_114 Start: 72473, Stop: 72970, Start Num: 18

Candidate Starts for DatBoi\_114:

(9, 72302), (Start: 18 @72473 has 1 MA's), (25, 72518), (28, 72554), (32, 72686), (36, 72713), (37, 72719), (39, 72785), (53, 72959),

Gene: DaviePasture\_75 Start: 50326, Stop: 50787, Start Num: 22

Candidate Starts for DaviePasture\_75:

(16, 50290), (21, 50323), (Start: 22 @50326 has 25 MA's), (Start: 26 @50350 has 1 MA's), (28, 50383), (29, 50386), (33, 50548), (43, 50728),

Gene: DoobyDoo\_71 Start: 49108, Stop: 49551, Start Num: 26

Candidate Starts for DoobyDoo\_71:

(4, 48733), (5, 48799), (6, 48826), (7, 48850), (16, 49048), (21, 49081), (Start: 22 @49084 has 25 MA's), (Start: 26 @49108 has 1 MA's), (28, 49141), (29, 49144), (43, 49486), (45, 49540),

Gene: DumpTruck\_75 Start: 49735, Stop: 50310, Start Num: 22

Candidate Starts for DumpTruck\_75:

(Start: 22 @49735 has 25 MA's), (Start: 23 @49750 has 1 MA's), (30, 49852), (31, 49885), (37, 49987), (38, 50035), (42, 50071), (46, 50194), (48, 50197), (51, 50227), (54, 50299),

Gene: Erutan\_74 Start: 49851, Stop: 50318, Start Num: 22

Candidate Starts for Erutan\_74:

(4, 49500), (6, 49593), (7, 49617), (16, 49815), (21, 49848), (Start: 22 @49851 has 25 MA's), (Start: 23 @49866 has 1 MA's), (24, 49869), (28, 49908), (29, 49911), (41, 50184), (43, 50253), (45, 50307),

Gene: Fulcrum\_74 Start: 50089, Stop: 50556, Start Num: 22

Candidate Starts for Fulcrum\_74:

(4, 49738), (5, 49804), (6, 49831), (7, 49855), (16, 50053), (21, 50086), (Start: 22 @50089 has 25 MA's), (Start: 26 @50113 has 1 MA's), (28, 50146), (29, 50149), (43, 50491), (45, 50545),

Gene: GOATification\_74 Start: 50089, Stop: 50556, Start Num: 22

Candidate Starts for GOATification\_74:

(4, 49738), (5, 49804), (6, 49831), (7, 49855), (16, 50053), (21, 50086), (Start: 22 @50089 has 25 MA's), (Start: 26 @50113 has 1 MA's), (28, 50146), (29, 50149), (43, 50491), (45, 50545),

Gene: Genamy16\_76 Start: 49086, Stop: 49547, Start Num: 22

Candidate Starts for Genamy16\_76:

(4, 48735), (6, 48828), (7, 48852), (16, 49050), (21, 49083), (Start: 22 @49086 has 25 MA's), (Start: 26 @49110 has 1 MA's), (28, 49143), (29, 49146), (43, 49488), (45, 49536),

Gene: Gibbin\_76 Start: 50894, Stop: 51361, Start Num: 22

Candidate Starts for Gibbin\_76:

(4, 50543), (6, 50636), (7, 50660), (16, 50858), (21, 50891), (Start: 22 @50894 has 25 MA's), (Start: 26 @50918 has 1 MA's), (28, 50951), (29, 50954), (43, 51296), (45, 51350),

Gene: Gretellyn\_74 Start: 50729, Stop: 51190, Start Num: 22

Candidate Starts for Gretellyn\_74:

(4, 50378), (6, 50471), (7, 50495), (16, 50693), (21, 50726), (Start: 22 @50729 has 25 MA's), (Start: 26 @50753 has 1 MA's), (28, 50786), (29, 50789), (43, 51131),

Gene: Jalebi\_74 Start: 51322, Stop: 51783, Start Num: 22

Candidate Starts for Jalebi\_74:

(6, 51064), (7, 51088), (16, 51286), (21, 51319), (Start: 22 @51322 has 25 MA's), (Start: 26 @51346 has 1 MA's), (28, 51379), (29, 51382), (30, 51439), (37, 51574), (43, 51724), (47, 51778),

Gene: Jamemuya19\_73 Start: 48715, Stop: 49152, Start Num: 26

Candidate Starts for Jamemuya19\_73:

(4, 48340), (6, 48433), (7, 48457), (16, 48655), (21, 48688), (Start: 22 @48691 has 25 MA's), (Start: 26 @48715 has 1 MA's), (28, 48748), (29, 48751), (43, 49093), (45, 49141),

Gene: Lambo\_72 Start: 49886, Stop: 50353, Start Num: 22

Candidate Starts for Lambo\_72:

(4, 49535), (5, 49601), (6, 49628), (7, 49652), (16, 49850), (21, 49883), (Start: 22 @49886 has 25 MA's), (Start: 26 @49910 has 1 MA's), (28, 49943), (29, 49946), (43, 50288), (45, 50342),

Gene: Lila22\_78 Start: 50818, Stop: 51261, Start Num: 26

Candidate Starts for Lila22\_78:

(4, 50443), (5, 50509), (6, 50536), (7, 50560), (16, 50758), (21, 50791), (Start: 22 @50794 has 25 MA's), (Start: 26 @50818 has 1 MA's), (28, 50851), (29, 50854), (43, 51196), (45, 51250),

Gene: LuckyLeo\_71 Start: 49601, Stop: 50065, Start Num: 22

Candidate Starts for LuckyLeo\_71:

(12, 49541), (13, 49547), (14, 49562), (Start: 22 @49601 has 25 MA's), (Start: 23 @49616 has 1 MA's), (24, 49619), (28, 49658), (29, 49661), (35, 49838), (40, 49925), (41, 49934), (43, 50003),

Gene: Mima20\_74 Start: 50272, Stop: 50733, Start Num: 22

Candidate Starts for Mima20\_74:

(4, 49921), (5, 49987), (6, 50014), (7, 50038), (16, 50236), (21, 50269), (Start: 22 @50272 has 25 MA's), (Start: 26 @50296 has 1 MA's), (28, 50329), (29, 50332), (43, 50674),

Gene: MoiGyank\_80 Start: 50900, Stop: 51337, Start Num: 26

Candidate Starts for MoiGyank\_80:

(4, 50525), (6, 50618), (7, 50642), (16, 50840), (21, 50873), (Start: 22 @50876 has 25 MA's), (Start: 26 @50900 has 1 MA's), (28, 50933), (29, 50936), (30, 50993), (37, 51128), (43, 51278), (47, 51332),

Gene: NorManre\_78 Start: 51151, Stop: 51618, Start Num: 22

Candidate Starts for NorManre\_78:

(4, 50800), (5, 50866), (6, 50893), (7, 50917), (16, 51115), (21, 51148), (Start: 22 @51151 has 25 MA's), (Start: 26 @51175 has 1 MA's), (28, 51208), (29, 51211), (30, 51268), (43, 51553), (45, 51607),

Gene: NovaSharks\_75 Start: 48677, Stop: 49138, Start Num: 22

Candidate Starts for NovaSharks\_75:

(4, 48326), (6, 48419), (7, 48443), (16, 48641), (21, 48674), (Start: 22 @48677 has 25 MA's), (Start: 26 @48701 has 1 MA's), (28, 48734), (29, 48737), (43, 49079), (45, 49127),

Gene: OtterstedtS21\_74 Start: 50175, Stop: 50636, Start Num: 22

Candidate Starts for OtterstedtS21\_74:

(4, 49824), (6, 49917), (7, 49941), (16, 50139), (21, 50172), (Start: 22 @50175 has 25 MA's), (Start: 26 @50199 has 1 MA's), (28, 50232), (29, 50235), (43, 50577),

Gene: ParvusTarda\_73 Start: 49565, Stop: 50032, Start Num: 22

Candidate Starts for ParvusTarda\_73:

(4, 49214), (5, 49280), (6, 49307), (7, 49331), (16, 49529), (21, 49562), (Start: 22 @49565 has 25 MA's), (Start: 26 @49589 has 1 MA's), (28, 49622), (29, 49625), (43, 49967), (45, 50021),

Gene: Patos\_78 Start: 51150, Stop: 51617, Start Num: 22

Candidate Starts for Patos\_78:

(4, 50799), (5, 50865), (6, 50892), (7, 50916), (16, 51114), (21, 51147), (Start: 22 @51150 has 25 MA's), (Start: 26 @51174 has 1 MA's), (28, 51207), (29, 51210), (30, 51267), (43, 51552), (45, 51606),

Gene: Ranch\_74 Start: 48903, Stop: 49370, Start Num: 22

Candidate Starts for Ranch\_74:

(4, 48552), (6, 48645), (7, 48669), (16, 48867), (21, 48900), (Start: 22 @48903 has 25 MA's), (Start: 26 @48927 has 1 MA's), (28, 48960), (29, 48963), (43, 49305),

Gene: Reyja\_50 Start: 33061, Stop: 33540, Start Num: 23

Candidate Starts for Reyja\_50:

(1, 32431), (2, 32539), (3, 32650), (8, 32833), (10, 32944), (11, 32974), (19, 33025), (20, 33031), (Start: 23 @33061 has 1 MA's), (40, 33358),

Gene: Rumi\_74 Start: 48374, Stop: 48835, Start Num: 22

Candidate Starts for Rumi\_74:

(4, 48023), (6, 48116), (7, 48140), (16, 48338), (21, 48371), (Start: 22 @48374 has 25 MA's), (Start: 26 @48398 has 1 MA's), (28, 48431), (29, 48434), (43, 48776), (45, 48824),

Gene: Sadboi\_75 Start: 50730, Stop: 51191, Start Num: 22

Candidate Starts for Sadboi\_75:

(4, 50379), (6, 50472), (7, 50496), (16, 50694), (21, 50727), (Start: 22 @50730 has 25 MA's), (Start: 26 @50754 has 1 MA's), (28, 50787), (29, 50790), (43, 51132),

Gene: Sampudon\_75 Start: 51322, Stop: 51783, Start Num: 22

Candidate Starts for Sampudon\_75:

(6, 51064), (7, 51088), (16, 51286), (21, 51319), (Start: 22 @51322 has 25 MA's), (Start: 26 @51346 has 1 MA's), (28, 51379), (29, 51382), (30, 51439), (37, 51574), (43, 51724), (47, 51778),

Gene: SpeedDemon\_1190 Start: 76290, Stop: 76790, Start Num: 17

Candidate Starts for SpeedDemon\_1190:

(Start: 17 @76290 has 1 MA's), (Start: 23 @76332 has 1 MA's), (25, 76338), (27, 76359), (32, 76506), (34, 76512), (36, 76533), (37, 76539), (39, 76605),

Gene: Tillicus\_69 Start: 49535, Stop: 50014, Start Num: 22

Candidate Starts for Tillicus\_69:

(4, 49184), (6, 49277), (7, 49301), (16, 49499), (21, 49532), (Start: 22 @49535 has 25 MA's), (Start: 26 @49559 has 1 MA's), (28, 49592), (29, 49595), (30, 49652), (33, 49757), (43, 49937),

Gene: Wojtek\_69 Start: 49317, Stop: 49778, Start Num: 22

Candidate Starts for Wojtek\_69:

(4, 48966), (6, 49059), (7, 49083), (16, 49281), (21, 49314), (Start: 22 @49317 has 25 MA's), (Start: 26 @49341 has 1 MA's), (28, 49374), (29, 49377), (30, 49434), (43, 49719),

Gene: Xenia2\_71 Start: 49619, Stop: 50194, Start Num: 22

Candidate Starts for Xenia2\_71:

(Start: 22 @49619 has 25 MA's), (Start: 23 @49634 has 1 MA's), (30, 49736), (31, 49769), (38, 49919), (42, 49955), (46, 50078), (48, 50081), (54, 50183),

Gene: Yikes\_76 Start: 51176, Stop: 51637, Start Num: 22

Candidate Starts for Yikes\_76:

(4, 50825), (6, 50918), (7, 50942), (16, 51140), (21, 51173), (Start: 22 @51176 has 25 MA's), (Start: 26 @51200 has 1 MA's), (28, 51233), (29, 51236), (43, 51578),

Gene: Zany\_72 Start: 50659, Stop: 51096, Start Num: 26

Candidate Starts for Zany\_72:

(4, 50284), (6, 50377), (7, 50401), (16, 50599), (21, 50632), (Start: 22 @50635 has 25 MA's), (Start: 26 @50659 has 1 MA's), (28, 50692), (29, 50695), (30, 50752), (37, 50887), (43, 51037), (47, 51091),