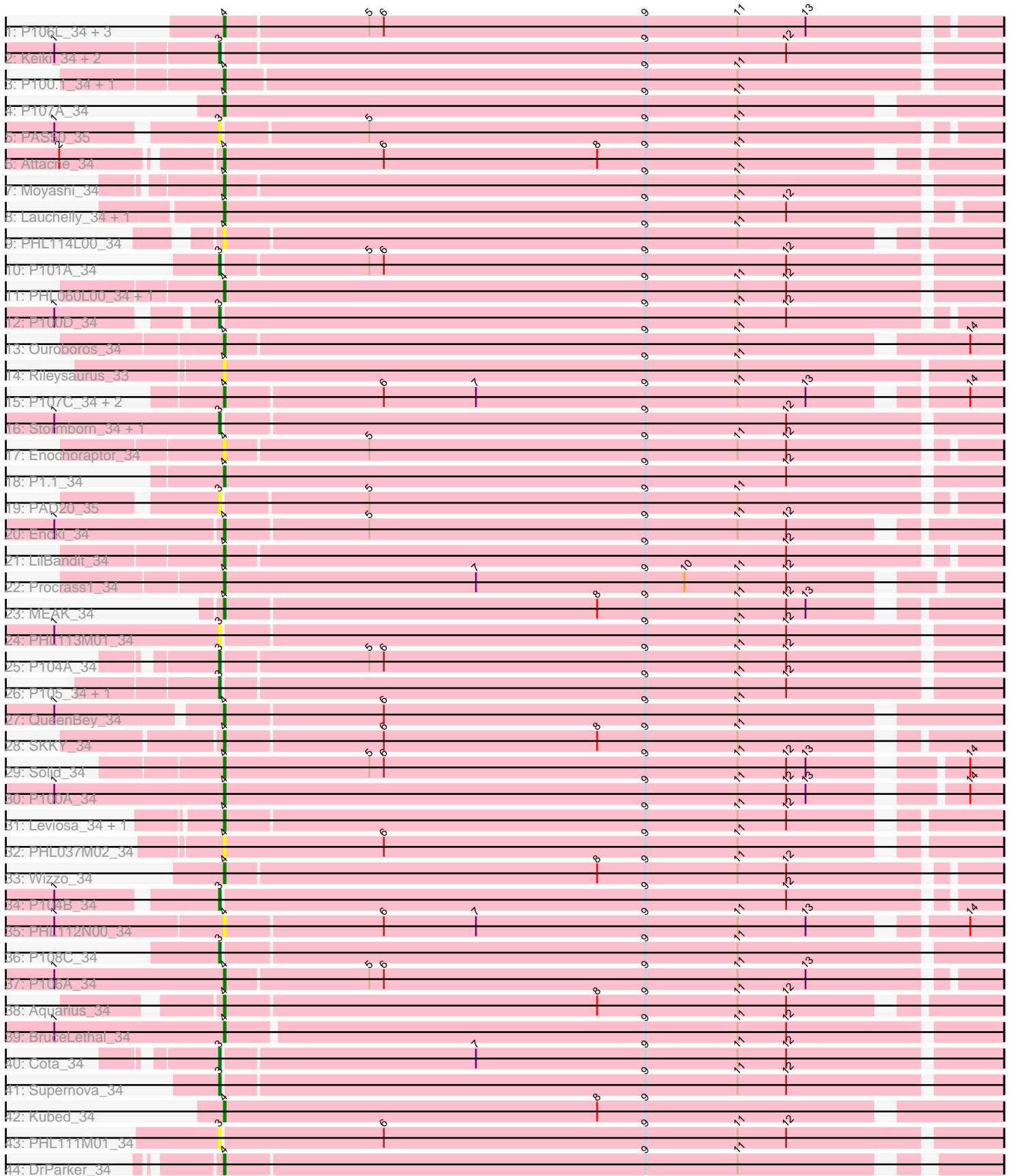


Pham 157889



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 157889 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157889 has 57 members, 14 are drafts.

Phages represented in each track:

- Track 1 : P106L\_34, P106M\_34, P106I\_34, P106C\_35
- Track 2 : Keiki\_34, PHL071N05\_34, Pirate\_34
- Track 3 : P100.1\_34, PA6\_35
- Track 4 : P107A\_34
- Track 5 : PAS50\_35
- Track 6 : Attacne\_34
- Track 7 : Moyashi\_34
- Track 8 : Lauchelly\_34, P9.1\_34
- Track 9 : PHL114L00\_34
- Track 10 : P101A\_34
- Track 11 : PHL060L00\_34, P14.4\_34
- Track 12 : P100D\_34
- Track 13 : Ouroboros\_34
- Track 14 : Rileysaurus\_33
- Track 15 : P107C\_34, ATCC29399BT\_34, ATCC29399BC\_34
- Track 16 : Stormborn\_34, MrAK\_34
- Track 17 : Enochoraptor\_34
- Track 18 : P1.1\_34
- Track 19 : PAD20\_35
- Track 20 : Enoki\_34
- Track 21 : LilBandit\_34
- Track 22 : Procrass1\_34
- Track 23 : MEAK\_34
- Track 24 : PHL113M01\_34
- Track 25 : P104A\_34
- Track 26 : P105\_34, PHL067M10\_34
- Track 27 : QueenBey\_34
- Track 28 : SKKY\_34
- Track 29 : Solid\_34
- Track 30 : P100A\_34
- Track 31 : Leviosa\_34, PHL010M04\_34
- Track 32 : PHL037M02\_34
- Track 33 : Wizzo\_34
- Track 34 : P104B\_34
- Track 35 : PHL112N00\_34
- Track 36 : P108C\_34
- Track 37 : P106A\_34

- Track 38 : Aquarius\_34
- Track 39 : BruceLethal\_34
- Track 40 : Cota\_34
- Track 41 : Supernova\_34
- Track 42 : Kubed\_34
- Track 43 : PHL111M01\_34
- Track 44 : DrParker\_34

**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 31 of the 43 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ATCC29399BC\_34, ATCC29399BT\_34, Aquarius\_34, Attacne\_34, BruceLethal\_34, DrParker\_34, Enochoraptor\_34, Enoki\_34, Kubed\_34, Lauchelly\_34, Leviosa\_34, LilBandit\_34, MEAK\_34, Moyashi\_34, Ouroboros\_34, P1.1\_34, P100.1\_34, P100A\_34, P106A\_34, P106C\_35, P106I\_34, P106L\_34, P106M\_34, P107A\_34, P107C\_34, P14.4\_34, P9.1\_34, PA6\_35, PHL010M04\_34, PHL037M02\_34, PHL060L00\_34, PHL112N00\_34, PHL114L00\_34, Procrass1\_34, QueenBey\_34, Rileysaurus\_33, SKKY\_34, Solid\_34, Wizzo\_34,

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

- 

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

- Cota\_34, Keiki\_34, MrAK\_34, P100D\_34, P101A\_34, P104A\_34, P104B\_34, P105\_34, P108C\_34, PAD20\_35, PAS50\_35, PHL067M10\_34, PHL071N05\_34, PHL111M01\_34, PHL113M01\_34, Pirate\_34, Stormborn\_34, Supernova\_34,

**Summary by start number:**

Start 3:

- Found in 18 of 57 ( 31.6% ) of genes in pham
- Manual Annotations of this start: 12 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cota\_34 (BU), Keiki\_34 (BU), MrAK\_34 (BU), P100D\_34 (BU), P101A\_34 (BU), P104A\_34 (BU), P104B\_34 (BU), P105\_34 (BU), P108C\_34 (BU), PAD20\_35 (BU), PAS50\_35 (BU), PHL067M10\_34 (BU), PHL071N05\_34 (BU), PHL111M01\_34 (BU), PHL113M01\_34 (BU), Pirate\_34 (BU), Stormborn\_34 (BU), Supernova\_34 (BU),

Start 4:

- Found in 39 of 57 ( 68.4% ) of genes in pham
- Manual Annotations of this start: 31 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ATCC29399BC\_34 (BU), ATCC29399BT\_34 (BU), Aquarius\_34 (BU), Attacne\_34 (BU), BruceLethal\_34 (BU), DrParker\_34 (BU), Enochoraptor\_34 (BU), Enoki\_34 (BU), Kubed\_34 (BU), Lauchelly\_34 (BU), Leviosa\_34 (BU), LilBandit\_34 (BU), MEAK\_34 (BU), Moyashi\_34

(BU), Ouroboros\_34 (BU), P1.1\_34 (BU), P100.1\_34 (BU), P100A\_34 (BU), P106A\_34 (BU), P106C\_35 (BU), P106I\_34 (BU), P106L\_34 (BU), P106M\_34 (BU), P107A\_34 (BU), P107C\_34 (BU), P14.4\_34 (BU), P9.1\_34 (BU), PA6\_35 (BU), PHL010M04\_34 (BU), PHL037M02\_34 (BU), PHL060L00\_34 (BU), PHL112N00\_34 (BU), PHL114L00\_34 (BU), Procrass1\_34 (BU), QueenBey\_34 (BU), Rileysaurus\_33 (BU), SKKY\_34 (BU), Solid\_34 (BU), Wizzo\_34 (BU),

### **Summary by clusters:**

There is one cluster represented in this pham: BU

Info for manual annotations of cluster BU:

- Start number 3 was manually annotated 12 times for cluster BU.
- Start number 4 was manually annotated 31 times for cluster BU.

### **Gene Information:**

Gene: ATCC29399BC\_34 Start: 23243, Stop: 22785, Start Num: 4

Candidate Starts for ATCC29399BC\_34:

(Start: 4 @23243 has 31 MA's), (6, 23147), (7, 23090), (9, 22985), (11, 22928), (13, 22886), (14, 22805),

Gene: ATCC29399BT\_34 Start: 23243, Stop: 22785, Start Num: 4

Candidate Starts for ATCC29399BT\_34:

(Start: 4 @23243 has 31 MA's), (6, 23147), (7, 23090), (9, 22985), (11, 22928), (13, 22886), (14, 22805),

Gene: Aquarius\_34 Start: 22714, Stop: 22256, Start Num: 4

Candidate Starts for Aquarius\_34:

(Start: 4 @22714 has 31 MA's), (8, 22486), (9, 22456), (11, 22399), (12, 22369),

Gene: Attacne\_34 Start: 22739, Stop: 22278, Start Num: 4

Candidate Starts for Attacne\_34:

(2, 22826), (Start: 4 @22739 has 31 MA's), (6, 22640), (8, 22508), (9, 22478), (11, 22421),

Gene: BruceLethal\_34 Start: 23258, Stop: 22791, Start Num: 4

Candidate Starts for BruceLethal\_34:

(1, 23363), (Start: 4 @23258 has 31 MA's), (9, 23003), (11, 22946), (12, 22916),

Gene: Cota\_34 Start: 23305, Stop: 22835, Start Num: 3

Candidate Starts for Cota\_34:

(Start: 3 @23305 has 12 MA's), (7, 23152), (9, 23047), (11, 22990), (12, 22960),

Gene: DrParker\_34 Start: 23332, Stop: 22880, Start Num: 4

Candidate Starts for DrParker\_34:

(Start: 4 @23332 has 31 MA's), (9, 23074), (11, 23017),

Gene: Enochoraptor\_34 Start: 23268, Stop: 22804, Start Num: 4

Candidate Starts for Enochoraptor\_34:

(Start: 4 @23268 has 31 MA's), (5, 23181), (9, 23010), (11, 22953), (12, 22923),

Gene: Enoki\_34 Start: 23278, Stop: 22820, Start Num: 4  
Candidate Starts for Enoki\_34:  
(1, 23380), (Start: 4 @23278 has 31 MA's), (5, 23191), (9, 23020), (11, 22963), (12, 22933),

Gene: Keiki\_34 Start: 23206, Stop: 22736, Start Num: 3  
Candidate Starts for Keiki\_34:  
(1, 23302), (Start: 3 @23206 has 12 MA's), (9, 22948), (12, 22861),

Gene: Kubed\_34 Start: 23258, Stop: 22791, Start Num: 4  
Candidate Starts for Kubed\_34:  
(Start: 4 @23258 has 31 MA's), (8, 23027), (9, 22997),

Gene: Lauchelly\_34 Start: 23298, Stop: 22831, Start Num: 4  
Candidate Starts for Lauchelly\_34:  
(Start: 4 @23298 has 31 MA's), (9, 23037), (11, 22980), (12, 22950),

Gene: Leviosa\_34 Start: 23289, Stop: 22831, Start Num: 4  
Candidate Starts for Leviosa\_34:  
(Start: 4 @23289 has 31 MA's), (9, 23031), (11, 22974), (12, 22944),

Gene: LilBandit\_34 Start: 23088, Stop: 22624, Start Num: 4  
Candidate Starts for LilBandit\_34:  
(Start: 4 @23088 has 31 MA's), (9, 22830), (12, 22743),

Gene: MEAK\_34 Start: 22951, Stop: 22493, Start Num: 4  
Candidate Starts for MEAK\_34:  
(Start: 4 @22951 has 31 MA's), (8, 22723), (9, 22693), (11, 22636), (12, 22606), (13, 22594),

Gene: Moyashi\_34 Start: 23073, Stop: 22603, Start Num: 4  
Candidate Starts for Moyashi\_34:  
(Start: 4 @23073 has 31 MA's), (9, 22815), (11, 22758),

Gene: MrAK\_34 Start: 23078, Stop: 22608, Start Num: 3  
Candidate Starts for MrAK\_34:  
(1, 23180), (Start: 3 @23078 has 12 MA's), (9, 22820), (12, 22733),

Gene: Ouroboros\_34 Start: 23273, Stop: 22809, Start Num: 4  
Candidate Starts for Ouroboros\_34:  
(Start: 4 @23273 has 31 MA's), (9, 23015), (11, 22958), (14, 22829),

Gene: P1.1\_34 Start: 23309, Stop: 22836, Start Num: 4  
Candidate Starts for P1.1\_34:  
(Start: 4 @23309 has 31 MA's), (9, 23048), (12, 22961),

Gene: P100.1\_34 Start: 23345, Stop: 22875, Start Num: 4  
Candidate Starts for P100.1\_34:  
(Start: 4 @23345 has 31 MA's), (9, 23087), (11, 23030),

Gene: P100A\_34 Start: 23284, Stop: 22823, Start Num: 4  
Candidate Starts for P100A\_34:  
(1, 23389), (Start: 4 @23284 has 31 MA's), (9, 23023), (11, 22966), (12, 22936), (13, 22924), (14, 22843),

Gene: P100D\_34 Start: 23278, Stop: 22811, Start Num: 3  
Candidate Starts for P100D\_34:  
(1, 23362), (Start: 3 @23278 has 12 MA's), (9, 23017), (11, 22960), (12, 22930),

Gene: P101A\_34 Start: 23307, Stop: 22837, Start Num: 3  
Candidate Starts for P101A\_34:  
(Start: 3 @23307 has 12 MA's), (5, 23220), (6, 23211), (9, 23049), (12, 22962),

Gene: P104A\_34 Start: 23080, Stop: 22610, Start Num: 3  
Candidate Starts for P104A\_34:  
(Start: 3 @23080 has 12 MA's), (5, 22993), (6, 22984), (9, 22822), (11, 22765), (12, 22735),

Gene: P104B\_34 Start: 23273, Stop: 22806, Start Num: 3  
Candidate Starts for P104B\_34:  
(1, 23363), (Start: 3 @23273 has 12 MA's), (9, 23012), (12, 22925),

Gene: P105\_34 Start: 22941, Stop: 22471, Start Num: 3  
Candidate Starts for P105\_34:  
(Start: 3 @22941 has 12 MA's), (9, 22683), (11, 22626), (12, 22596),

Gene: P106A\_34 Start: 23357, Stop: 22893, Start Num: 4  
Candidate Starts for P106A\_34:  
(1, 23462), (Start: 4 @23357 has 31 MA's), (5, 23270), (6, 23261), (9, 23099), (11, 23042), (13, 23000),

Gene: P106C\_35 Start: 23295, Stop: 22831, Start Num: 4  
Candidate Starts for P106C\_35:  
(Start: 4 @23295 has 31 MA's), (5, 23208), (6, 23199), (9, 23037), (11, 22980), (13, 22938),

Gene: P106I\_34 Start: 23124, Stop: 22660, Start Num: 4  
Candidate Starts for P106I\_34:  
(Start: 4 @23124 has 31 MA's), (5, 23037), (6, 23028), (9, 22866), (11, 22809), (13, 22767),

Gene: P106L\_34 Start: 23295, Stop: 22831, Start Num: 4  
Candidate Starts for P106L\_34:  
(Start: 4 @23295 has 31 MA's), (5, 23208), (6, 23199), (9, 23037), (11, 22980), (13, 22938),

Gene: P106M\_34 Start: 23295, Stop: 22831, Start Num: 4  
Candidate Starts for P106M\_34:  
(Start: 4 @23295 has 31 MA's), (5, 23208), (6, 23199), (9, 23037), (11, 22980), (13, 22938),

Gene: P107A\_34 Start: 23308, Stop: 22841, Start Num: 4  
Candidate Starts for P107A\_34:  
(Start: 4 @23308 has 31 MA's), (9, 23047), (11, 22990),

Gene: P107C\_34 Start: 23243, Stop: 22785, Start Num: 4  
Candidate Starts for P107C\_34:  
(Start: 4 @23243 has 31 MA's), (6, 23147), (7, 23090), (9, 22985), (11, 22928), (13, 22886), (14, 22805),

Gene: P108C\_34 Start: 23267, Stop: 22797, Start Num: 3  
Candidate Starts for P108C\_34:  
(Start: 3 @23267 has 12 MA's), (9, 23009), (11, 22952),

Gene: P14.4\_34 Start: 23271, Stop: 22798, Start Num: 4  
Candidate Starts for P14.4\_34:  
(Start: 4 @23271 has 31 MA's), (9, 23010), (11, 22953), (12, 22923),

Gene: P9.1\_34 Start: 23296, Stop: 22832, Start Num: 4  
Candidate Starts for P9.1\_34:  
(Start: 4 @23296 has 31 MA's), (9, 23038), (11, 22981), (12, 22951),

Gene: PA6\_35 Start: 23261, Stop: 22791, Start Num: 4  
Candidate Starts for PA6\_35:  
(Start: 4 @23261 has 31 MA's), (9, 23003), (11, 22946),

Gene: PAD20\_35 Start: 23036, Stop: 22572, Start Num: 3  
Candidate Starts for PAD20\_35:  
(Start: 3 @23036 has 12 MA's), (5, 22949), (9, 22778), (11, 22721),

Gene: PAS50\_35 Start: 23201, Stop: 22737, Start Num: 3  
Candidate Starts for PAS50\_35:  
(1, 23291), (Start: 3 @23201 has 12 MA's), (5, 23114), (9, 22943), (11, 22886),

Gene: PHL010M04\_34 Start: 23275, Stop: 22805, Start Num: 4  
Candidate Starts for PHL010M04\_34:  
(Start: 4 @23275 has 31 MA's), (9, 23017), (11, 22960), (12, 22930),

Gene: PHL037M02\_34 Start: 23263, Stop: 22802, Start Num: 4  
Candidate Starts for PHL037M02\_34:  
(Start: 4 @23263 has 31 MA's), (6, 23164), (9, 23002), (11, 22945),

Gene: PHL060L00\_34 Start: 23119, Stop: 22646, Start Num: 4  
Candidate Starts for PHL060L00\_34:  
(Start: 4 @23119 has 31 MA's), (9, 22858), (11, 22801), (12, 22771),

Gene: PHL067M10\_34 Start: 23228, Stop: 22761, Start Num: 3  
Candidate Starts for PHL067M10\_34:  
(Start: 3 @23228 has 12 MA's), (9, 22973), (11, 22916), (12, 22886),

Gene: PHL071N05\_34 Start: 23295, Stop: 22825, Start Num: 3  
Candidate Starts for PHL071N05\_34:  
(1, 23391), (Start: 3 @23295 has 12 MA's), (9, 23037), (12, 22950),

Gene: PHL111M01\_34 Start: 22996, Stop: 22523, Start Num: 3  
Candidate Starts for PHL111M01\_34:  
(Start: 3 @22996 has 12 MA's), (6, 22897), (9, 22735), (11, 22678), (12, 22648),

Gene: PHL112N00\_34 Start: 23288, Stop: 22830, Start Num: 4  
Candidate Starts for PHL112N00\_34:  
(1, 23390), (Start: 4 @23288 has 31 MA's), (6, 23192), (7, 23135), (9, 23030), (11, 22973), (13, 22931), (14, 22850),

Gene: PHL113M01\_34 Start: 23042, Stop: 22572, Start Num: 3  
Candidate Starts for PHL113M01\_34:  
(1, 23144), (Start: 3 @23042 has 12 MA's), (9, 22784), (11, 22727), (12, 22697),

Gene: PHL114L00\_34 Start: 23244, Stop: 22786, Start Num: 4

Candidate Starts for PHL114L00\_34:

(Start: 4 @23244 has 31 MA's), (9, 22986), (11, 22929),

Gene: Pirate\_34 Start: 23191, Stop: 22721, Start Num: 3

Candidate Starts for Pirate\_34:

(1, 23287), (Start: 3 @23191 has 12 MA's), (9, 22933), (12, 22846),

Gene: Procrass1\_34 Start: 23257, Stop: 22796, Start Num: 4

Candidate Starts for Procrass1\_34:

(Start: 4 @23257 has 31 MA's), (7, 23101), (9, 22996), (10, 22972), (11, 22939), (12, 22909),

Gene: QueenBey\_34 Start: 23243, Stop: 22779, Start Num: 4

Candidate Starts for QueenBey\_34:

(1, 23339), (Start: 4 @23243 has 31 MA's), (6, 23147), (9, 22985), (11, 22928),

Gene: Rileysaurus\_33 Start: 23292, Stop: 22816, Start Num: 4

Candidate Starts for Rileysaurus\_33:

(Start: 4 @23292 has 31 MA's), (9, 23031), (11, 22974),

Gene: SKKY\_34 Start: 23028, Stop: 22570, Start Num: 4

Candidate Starts for SKKY\_34:

(Start: 4 @23028 has 31 MA's), (6, 22932), (8, 22800), (9, 22770), (11, 22713),

Gene: Solid\_34 Start: 23262, Stop: 22801, Start Num: 4

Candidate Starts for Solid\_34:

(Start: 4 @23262 has 31 MA's), (5, 23172), (6, 23163), (9, 23001), (11, 22944), (12, 22914), (13, 22902), (14, 22821),

Gene: Stormborn\_34 Start: 22885, Stop: 22415, Start Num: 3

Candidate Starts for Stormborn\_34:

(1, 22987), (Start: 3 @22885 has 12 MA's), (9, 22627), (12, 22540),

Gene: Supernova\_34 Start: 23049, Stop: 22579, Start Num: 3

Candidate Starts for Supernova\_34:

(Start: 3 @23049 has 12 MA's), (9, 22791), (11, 22734), (12, 22704),

Gene: Wizzo\_34 Start: 22762, Stop: 22298, Start Num: 4

Candidate Starts for Wizzo\_34:

(Start: 4 @22762 has 31 MA's), (8, 22534), (9, 22504), (11, 22447), (12, 22417),