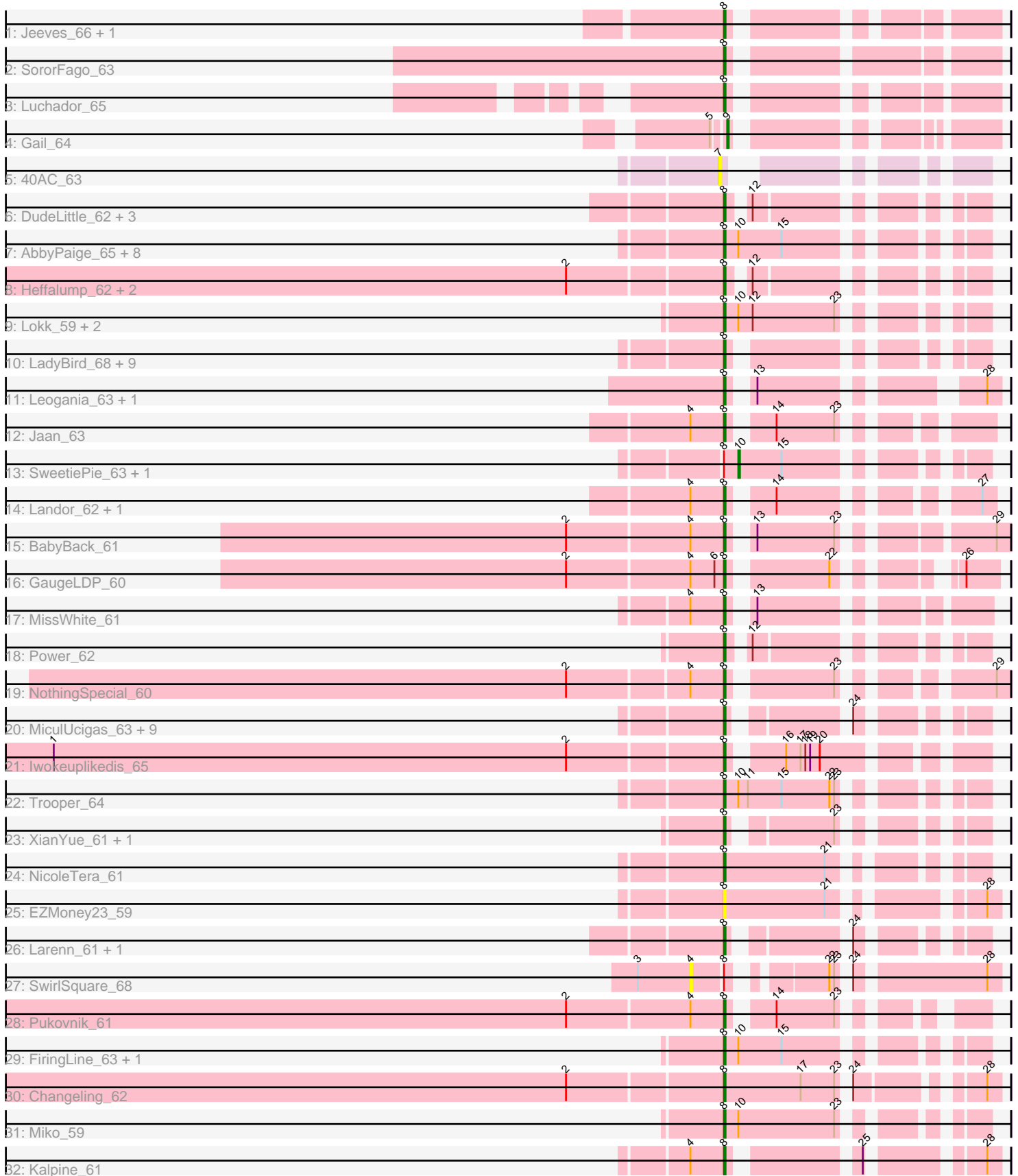


Pham 171430



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 171430 Report

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

Pham number 171430 has 72 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Jeeves\_66, Drake55\_65
- Track 2 : SororFago\_63
- Track 3 : Luchador\_65
- Track 4 : Gail\_64
- Track 5 : 40AC\_63
- Track 6 : DudeLittle\_62, Anselm\_64, Dalmatian\_64, Retro23\_64
- Track 7 : AbbyPaige\_65, Turbido\_64, Buggy\_65, Jerm\_65, Georgie2\_64, Crucio\_63, LilTurb\_64, SemperFi\_64, Agape74\_65
- Track 8 : Heffalump\_62, Fameo\_63, QueenB2\_62
- Track 9 : Lokk\_59, BobSwaget\_58, Rachaly\_61
- Track 10 : LadyBird\_68, AN3\_66, 20ES\_66, VA6\_64, Benvolio\_60, Deloris\_64, CRB1\_66, BengiVuitton\_64, Echild\_63, First\_0065
- Track 11 : Leogania\_63, BiancaTri92\_63
- Track 12 : Jaan\_63
- Track 13 : SweetiePie\_63, SnapTap\_63
- Track 14 : Landor\_62, IronMan\_62
- Track 15 : BabyBack\_61
- Track 16 : GaugeLDP\_60
- Track 17 : MissWhite\_61
- Track 18 : Power\_62
- Track 19 : NothingSpecial\_60
- Track 20 : MiculUcigas\_63, WideWale\_64, Piro94\_63, Baehexic\_62, Equemioh13\_63, NaSiaTalie\_63, Centaur\_64, Updawg\_64, Flare16\_63, HarryHoudini\_64
- Track 21 : Iwokeuplikedis\_65
- Track 22 : Trooper\_64
- Track 23 : XianYue\_61, TarsusIV\_60
- Track 24 : NicoleTera\_61
- Track 25 : EZMoney23\_59
- Track 26 : Larenn\_61, Malec\_62
- Track 27 : SwirlSquare\_68
- Track 28 : Pukovnik\_61
- Track 29 : FiringLine\_63, QueenBeesly\_63
- Track 30 : Changeling\_62
- Track 31 : Miko\_59
- Track 32 : Kalpine\_61

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

The start number called the most often in the published annotations is 8, it was called in 62 of the 65 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES\_66, AN3\_66, AbbyPaige\_65, Agape74\_65, Anselm\_64, BabyBack\_61, Baehexic\_62, BengiVuitton\_64, Benvolio\_60, BiancaTri92\_63, BobSwaget\_58, Buggy\_65, CRB1\_66, Centaur\_64, Changeling\_62, Crucio\_63, Dalmatian\_64, Deloris\_64, Drake55\_65, DudeLittle\_62, EZMoney23\_59, Echild\_63, Equemioh13\_63, Fameo\_63, FiringLine\_63, First\_0065, Flare16\_63, GaugeLDP\_60, Georgie2\_64, HarryHoudini\_64, Heffalump\_62, IronMan\_62, Iwokeuplikedis\_65, Jaan\_63, Jeeves\_66, Jerm\_65, Kalpine\_61, LadyBird\_68, Landor\_62, Larenn\_61, Leogania\_63, LilTurb\_64, Lokk\_59, Luchador\_65, Malec\_62, MiculUcigas\_63, Miko\_59, MissWhite\_61, NaSiaTalie\_63, NicoleTera\_61, NothingSpecial\_60, Piro94\_63, Power\_62, Pukovnik\_61, QueenB2\_62, QueenBeesly\_63, Rachaly\_61, Retro23\_64, SemperFi\_64, SororFago\_63, TarsusIV\_60, Trooper\_64, Turbido\_64, Updawg\_64, VA6\_64, WideWale\_64, XianYue\_61,

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

- SnapTap\_63, SweetiePie\_63, SwirlSquare\_68,

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

- 40AC\_63, Gail\_64,

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

Start 4:

- Found in 10 of 72 ( 13.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 10.0% of time when present
- Phage (with cluster) where this start called: SwirlSquare\_68 (A2),

Start 7:

- Found in 1 of 72 ( 1.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 40AC\_63 (A17),

Start 8:

- Found in 70 of 72 ( 97.2% ) of genes in pham
- Manual Annotations of this start: 62 of 65
- Called 95.7% of time when present
- Phage (with cluster) where this start called: 20ES\_66 (A2), AN3\_66 (A2), AbbyPaige\_65 (A2), Agape74\_65 (A2), Anselm\_64 (A2), BabyBack\_61 (A2), Baehexic\_62 (A2), BengiVuitton\_64 (A2), Benvolio\_60 (A2), BiancaTri92\_63 (A2), BobSwaget\_58 (A2), Buggy\_65 (A2), CRB1\_66 (A2), Centaur\_64 (A2), Changeling\_62 (A2), Crucio\_63 (A2), Dalmatian\_64 (A2), Deloris\_64 (A2), Drake55\_65 (A2), DudeLittle\_62 (A2), EZMoney23\_59 (A2), Echild\_63 (A2), Equemioh13\_63 (A2), Fameo\_63 (A2), FiringLine\_63 (A2), First\_0065 (A2),

Flare16\_63 (A2), GaugeLDP\_60 (A2), Georgie2\_64 (A2), HarryHoudini\_64 (A2), Heffalump\_62 (A2), IronMan\_62 (A2), Iwokeuplikedis\_65 (A2), Jaan\_63 (A2), Jeeves\_66 (A14), Jerm\_65 (A2), Kalpine\_61 (A2), LadyBird\_68 (A2), Landor\_62 (A2), Larenn\_61 (A2), Leogania\_63 (A2), LiITurb\_64 (A2), Lokk\_59 (A2), Luchador\_65 (A14), Malec\_62 (A2), MiculUcigas\_63 (A2), Miko\_59 (A2), MissWhite\_61 (A2), NaSiaTalie\_63 (A2), NicoleTera\_61 (A2), NothingSpecial\_60 (A2), Piro94\_63 (A2), Power\_62 (A2), Pukovnik\_61 (A2), QueenB2\_62 (A2), QueenBeesly\_63 (A2), Rachaly\_61 (A2), Retro23\_64 (A2), SemperFi\_64 (A2), SororFago\_63 (A14), TarsusIV\_60 (A2), Trooper\_64 (A2), Turbido\_64 (A2), Updawg\_64 (A2), VA6\_64 (A2), WideWale\_64 (A2), XianYue\_61 (A2),

Start 9:

- Found in 1 of 72 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 65
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gail\_64 (A14),

Start 10:

- Found in 18 of 72 ( 25.0% ) of genes in pham
- Manual Annotations of this start: 2 of 65
- Called 11.1% of time when present
- Phage (with cluster) where this start called: SnapTap\_63 (A2), SweetiePie\_63 (A2),

### **Summary by clusters:**

There are 3 clusters represented in this pham: A14, A17, A2,

Info for manual annotations of cluster A14:

- Start number 8 was manually annotated 3 times for cluster A14.
- Start number 9 was manually annotated 1 time for cluster A14.

Info for manual annotations of cluster A2:

- Start number 8 was manually annotated 59 times for cluster A2.
- Start number 10 was manually annotated 2 times for cluster A2.

### **Gene Information:**

Gene: 20ES\_66 Start: 40354, Stop: 40241, Start Num: 8

Candidate Starts for 20ES\_66:  
(Start: 8 @40354 has 62 MA's),

Gene: 40AC\_63 Start: 41089, Stop: 40973, Start Num: 7

Candidate Starts for 40AC\_63:  
(7, 41089),

Gene: AN3\_66 Start: 39069, Stop: 38956, Start Num: 8

Candidate Starts for AN3\_66:  
(Start: 8 @39069 has 62 MA's),

Gene: AbbyPaige\_65 Start: 40341, Stop: 40210, Start Num: 8

Candidate Starts for AbbyPaige\_65:  
(Start: 8 @40341 has 62 MA's), (Start: 10 @40332 has 2 MA's), (15, 40305),

Gene: Agape74\_65 Start: 40335, Stop: 40204, Start Num: 8  
Candidate Starts for Agape74\_65:  
(Start: 8 @40335 has 62 MA's), (Start: 10 @40326 has 2 MA's), (15, 40299),

Gene: Anselm\_64 Start: 40239, Stop: 40120, Start Num: 8  
Candidate Starts for Anselm\_64:  
(Start: 8 @40239 has 62 MA's), (12, 40230),

Gene: BabyBack\_61 Start: 40331, Stop: 40191, Start Num: 8  
Candidate Starts for BabyBack\_61:  
(2, 40424), (4, 40349), (Start: 8 @40331 has 62 MA's), (13, 40322), (23, 40274), (29, 40199),

Gene: Baehexic\_62 Start: 39801, Stop: 39685, Start Num: 8  
Candidate Starts for Baehexic\_62:  
(Start: 8 @39801 has 62 MA's), (24, 39744),

Gene: BengiVuitton\_64 Start: 40331, Stop: 40212, Start Num: 8  
Candidate Starts for BengiVuitton\_64:  
(Start: 8 @40331 has 62 MA's),

Gene: Benvolio\_60 Start: 39343, Stop: 39227, Start Num: 8  
Candidate Starts for Benvolio\_60:  
(Start: 8 @39343 has 62 MA's),

Gene: BiancaTri92\_63 Start: 40390, Stop: 40262, Start Num: 8  
Candidate Starts for BiancaTri92\_63:  
(Start: 8 @40390 has 62 MA's), (13, 40381), (28, 40270),

Gene: BobSwaget\_58 Start: 38604, Stop: 38473, Start Num: 8  
Candidate Starts for BobSwaget\_58:  
(Start: 8 @38604 has 62 MA's), (Start: 10 @38595 has 2 MA's), (12, 38586), (23, 38535),

Gene: Buggy\_65 Start: 40392, Stop: 40261, Start Num: 8  
Candidate Starts for Buggy\_65:  
(Start: 8 @40392 has 62 MA's), (Start: 10 @40383 has 2 MA's), (15, 40356),

Gene: CRB1\_66 Start: 40877, Stop: 40758, Start Num: 8  
Candidate Starts for CRB1\_66:  
(Start: 8 @40877 has 62 MA's),

Gene: Centaur\_64 Start: 40015, Stop: 39899, Start Num: 8  
Candidate Starts for Centaur\_64:  
(Start: 8 @40015 has 62 MA's), (24, 39958),

Gene: Changeling\_62 Start: 40439, Stop: 40296, Start Num: 8  
Candidate Starts for Changeling\_62:  
(2, 40529), (Start: 8 @40439 has 62 MA's), (17, 40391), (23, 40370), (24, 40367), (28, 40304),

Gene: Crucio\_63 Start: 40018, Stop: 39887, Start Num: 8  
Candidate Starts for Crucio\_63:

(Start: 8 @40018 has 62 MA's), (Start: 10 @40009 has 2 MA's), (15, 39982),

Gene: Dalmatian\_64 Start: 40212, Stop: 40093, Start Num: 8

Candidate Starts for Dalmatian\_64:

(Start: 8 @40212 has 62 MA's), (12, 40203),

Gene: Deloris\_64 Start: 40027, Stop: 39908, Start Num: 8

Candidate Starts for Deloris\_64:

(Start: 8 @40027 has 62 MA's),

Gene: Drake55\_65 Start: 40115, Stop: 39984, Start Num: 8

Candidate Starts for Drake55\_65:

(Start: 8 @40115 has 62 MA's),

Gene: DudeLittle\_62 Start: 39978, Stop: 39859, Start Num: 8

Candidate Starts for DudeLittle\_62:

(Start: 8 @39978 has 62 MA's), (12, 39969),

Gene: EZMoney23\_59 Start: 39508, Stop: 39365, Start Num: 8

Candidate Starts for EZMoney23\_59:

(Start: 8 @39508 has 62 MA's), (21, 39445), (28, 39373),

Gene: Echild\_63 Start: 39367, Stop: 39251, Start Num: 8

Candidate Starts for Echild\_63:

(Start: 8 @39367 has 62 MA's),

Gene: Equemioh13\_63 Start: 39920, Stop: 39804, Start Num: 8

Candidate Starts for Equemioh13\_63:

(Start: 8 @39920 has 62 MA's), (24, 39863),

Gene: Fameo\_63 Start: 40337, Stop: 40218, Start Num: 8

Candidate Starts for Fameo\_63:

(2, 40430), (Start: 8 @40337 has 62 MA's), (12, 40328),

Gene: FiringLine\_63 Start: 39999, Stop: 39868, Start Num: 8

Candidate Starts for FiringLine\_63:

(Start: 8 @39999 has 62 MA's), (Start: 10 @39990 has 2 MA's), (15, 39963),

Gene: First\_0065 Start: 40254, Stop: 40141, Start Num: 8

Candidate Starts for First\_0065:

(Start: 8 @40254 has 62 MA's),

Gene: Flare16\_63 Start: 39676, Stop: 39560, Start Num: 8

Candidate Starts for Flare16\_63:

(Start: 8 @39676 has 62 MA's), (24, 39619),

Gene: Gail\_64 Start: 40781, Stop: 40653, Start Num: 9

Candidate Starts for Gail\_64:

(5, 40787), (Start: 9 @40781 has 1 MA's),

Gene: GaugeLDP\_60 Start: 39857, Stop: 39732, Start Num: 8

Candidate Starts for GaugeLDP\_60:

(2, 39950), (4, 39875), (6, 39860), (Start: 8 @39857 has 62 MA's), (22, 39803), (26, 39752),

Gene: Georgie2\_64 Start: 40044, Stop: 39913, Start Num: 8  
Candidate Starts for Georgie2\_64:  
(Start: 8 @40044 has 62 MA's), (Start: 10 @40035 has 2 MA's), (15, 40008),

Gene: HarryHoudini\_64 Start: 40119, Stop: 40003, Start Num: 8  
Candidate Starts for HarryHoudini\_64:  
(Start: 8 @40119 has 62 MA's), (24, 40062),

Gene: Heffalump\_62 Start: 40805, Stop: 40686, Start Num: 8  
Candidate Starts for Heffalump\_62:  
(2, 40898), (Start: 8 @40805 has 62 MA's), (12, 40796),

Gene: IronMan\_62 Start: 40812, Stop: 40687, Start Num: 8  
Candidate Starts for IronMan\_62:  
(4, 40830), (Start: 8 @40812 has 62 MA's), (14, 40791), (27, 40695),

Gene: Iwokeuplikedis\_65 Start: 39836, Stop: 39705, Start Num: 8  
Candidate Starts for Iwokeuplikedis\_65:  
(1, 40247), (2, 39926), (Start: 8 @39836 has 62 MA's), (16, 39809), (17, 39800), (18, 39797), (19, 39794), (20, 39788),

Gene: Jaan\_63 Start: 40984, Stop: 40859, Start Num: 8  
Candidate Starts for Jaan\_63:  
(4, 41002), (Start: 8 @40984 has 62 MA's), (14, 40963), (23, 40927),

Gene: Jeeves\_66 Start: 39766, Stop: 39632, Start Num: 8  
Candidate Starts for Jeeves\_66:  
(Start: 8 @39766 has 62 MA's),

Gene: Jerm\_65 Start: 40407, Stop: 40276, Start Num: 8  
Candidate Starts for Jerm\_65:  
(Start: 8 @40407 has 62 MA's), (Start: 10 @40398 has 2 MA's), (15, 40371),

Gene: Kalpine\_61 Start: 40096, Stop: 39965, Start Num: 8  
Candidate Starts for Kalpine\_61:  
(4, 40117), (Start: 8 @40096 has 62 MA's), (25, 40030), (28, 39973),

Gene: LadyBird\_68 Start: 40839, Stop: 40720, Start Num: 8  
Candidate Starts for LadyBird\_68:  
(Start: 8 @40839 has 62 MA's),

Gene: Landor\_62 Start: 40890, Stop: 40765, Start Num: 8  
Candidate Starts for Landor\_62:  
(4, 40908), (Start: 8 @40890 has 62 MA's), (14, 40869), (27, 40773),

Gene: Larenn\_61 Start: 39953, Stop: 39837, Start Num: 8  
Candidate Starts for Larenn\_61:  
(Start: 8 @39953 has 62 MA's), (24, 39896),

Gene: Leogania\_63 Start: 40768, Stop: 40640, Start Num: 8  
Candidate Starts for Leogania\_63:  
(Start: 8 @40768 has 62 MA's), (13, 40759), (28, 40648),

Gene: LilTurb\_64 Start: 40289, Stop: 40158, Start Num: 8

Candidate Starts for LilTurb\_64:

(Start: 8 @40289 has 62 MA's), (Start: 10 @40280 has 2 MA's), (15, 40253),

Gene: Lokk\_59 Start: 39228, Stop: 39097, Start Num: 8

Candidate Starts for Lokk\_59:

(Start: 8 @39228 has 62 MA's), (Start: 10 @39219 has 2 MA's), (12, 39210), (23, 39159),

Gene: Luchador\_65 Start: 41349, Stop: 41215, Start Num: 8

Candidate Starts for Luchador\_65:

(Start: 8 @41349 has 62 MA's),

Gene: Malec\_62 Start: 40520, Stop: 40404, Start Num: 8

Candidate Starts for Malec\_62:

(Start: 8 @40520 has 62 MA's), (24, 40463),

Gene: MiculUcigas\_63 Start: 39579, Stop: 39463, Start Num: 8

Candidate Starts for MiculUcigas\_63:

(Start: 8 @39579 has 62 MA's), (24, 39522),

Gene: Miko\_59 Start: 40006, Stop: 39875, Start Num: 8

Candidate Starts for Miko\_59:

(Start: 8 @40006 has 62 MA's), (Start: 10 @39997 has 2 MA's), (23, 39937),

Gene: MissWhite\_61 Start: 38488, Stop: 38360, Start Num: 8

Candidate Starts for MissWhite\_61:

(4, 38506), (Start: 8 @38488 has 62 MA's), (13, 38479),

Gene: NaSiaTalie\_63 Start: 39673, Stop: 39557, Start Num: 8

Candidate Starts for NaSiaTalie\_63:

(Start: 8 @39673 has 62 MA's), (24, 39616),

Gene: NicoleTera\_61 Start: 39996, Stop: 39865, Start Num: 8

Candidate Starts for NicoleTera\_61:

(Start: 8 @39996 has 62 MA's), (21, 39933),

Gene: NothingSpecial\_60 Start: 40211, Stop: 40077, Start Num: 8

Candidate Starts for NothingSpecial\_60:

(2, 40301), (4, 40229), (Start: 8 @40211 has 62 MA's), (23, 40154), (29, 40085),

Gene: Piro94\_63 Start: 40026, Stop: 39910, Start Num: 8

Candidate Starts for Piro94\_63:

(Start: 8 @40026 has 62 MA's), (24, 39969),

Gene: Power\_62 Start: 40040, Stop: 39921, Start Num: 8

Candidate Starts for Power\_62:

(Start: 8 @40040 has 62 MA's), (12, 40031),

Gene: Pukovnik\_61 Start: 40533, Stop: 40414, Start Num: 8

Candidate Starts for Pukovnik\_61:

(2, 40626), (4, 40551), (Start: 8 @40533 has 62 MA's), (14, 40512), (23, 40476),



Gene: QueenB2\_62 Start: 40018, Stop: 39899, Start Num: 8

Candidate Starts for QueenB2\_62:

(2, 40111), (Start: 8 @40018 has 62 MA's), (12, 40009),

Gene: QueenBeesly\_63 Start: 39999, Stop: 39868, Start Num: 8

Candidate Starts for QueenBeesly\_63:

(Start: 8 @39999 has 62 MA's), (Start: 10 @39990 has 2 MA's), (15, 39963),

Gene: Rachaly\_61 Start: 40151, Stop: 40020, Start Num: 8

Candidate Starts for Rachaly\_61:

(Start: 8 @40151 has 62 MA's), (Start: 10 @40142 has 2 MA's), (12, 40133), (23, 40082),

Gene: Retro23\_64 Start: 40232, Stop: 40113, Start Num: 8

Candidate Starts for Retro23\_64:

(Start: 8 @40232 has 62 MA's), (12, 40223),

Gene: SemperFi\_64 Start: 40267, Stop: 40136, Start Num: 8

Candidate Starts for SemperFi\_64:

(Start: 8 @40267 has 62 MA's), (Start: 10 @40258 has 2 MA's), (15, 40231),

Gene: SnapTap\_63 Start: 40069, Stop: 39947, Start Num: 10

Candidate Starts for SnapTap\_63:

(Start: 8 @40078 has 62 MA's), (Start: 10 @40069 has 2 MA's), (15, 40042),

Gene: SororFago\_63 Start: 40687, Stop: 40544, Start Num: 8

Candidate Starts for SororFago\_63:

(Start: 8 @40687 has 62 MA's),

Gene: SweetiePie\_63 Start: 40201, Stop: 40079, Start Num: 10

Candidate Starts for SweetiePie\_63:

(Start: 8 @40210 has 62 MA's), (Start: 10 @40201 has 2 MA's), (15, 40174),

Gene: SwirlSquare\_68 Start: 39598, Stop: 39446, Start Num: 4

Candidate Starts for SwirlSquare\_68:

(3, 39631), (4, 39598), (Start: 8 @39580 has 62 MA's), (22, 39535), (23, 39532), (24, 39529), (28, 39454),

Gene: TarsusIV\_60 Start: 39672, Stop: 39541, Start Num: 8

Candidate Starts for TarsusIV\_60:

(Start: 8 @39672 has 62 MA's), (23, 39603),

Gene: Trooper\_64 Start: 40399, Stop: 40268, Start Num: 8

Candidate Starts for Trooper\_64:

(Start: 8 @40399 has 62 MA's), (Start: 10 @40390 has 2 MA's), (11, 40384), (15, 40363), (22, 40333), (23, 40330),

Gene: Turbido\_64 Start: 40285, Stop: 40154, Start Num: 8

Candidate Starts for Turbido\_64:

(Start: 8 @40285 has 62 MA's), (Start: 10 @40276 has 2 MA's), (15, 40249),

Gene: Updawg\_64 Start: 39920, Stop: 39804, Start Num: 8

Candidate Starts for Updawg\_64:

(Start: 8 @39920 has 62 MA's), (24, 39863),

Gene: VA6\_64 Start: 40247, Stop: 40134, Start Num: 8  
Candidate Starts for VA6\_64:  
(Start: 8 @40247 has 62 MA's),

Gene: WideWale\_64 Start: 39920, Stop: 39804, Start Num: 8  
Candidate Starts for WideWale\_64:  
(Start: 8 @39920 has 62 MA's), (24, 39863),

Gene: XianYue\_61 Start: 39423, Stop: 39307, Start Num: 8  
Candidate Starts for XianYue\_61:  
(Start: 8 @39423 has 62 MA's), (23, 39369),