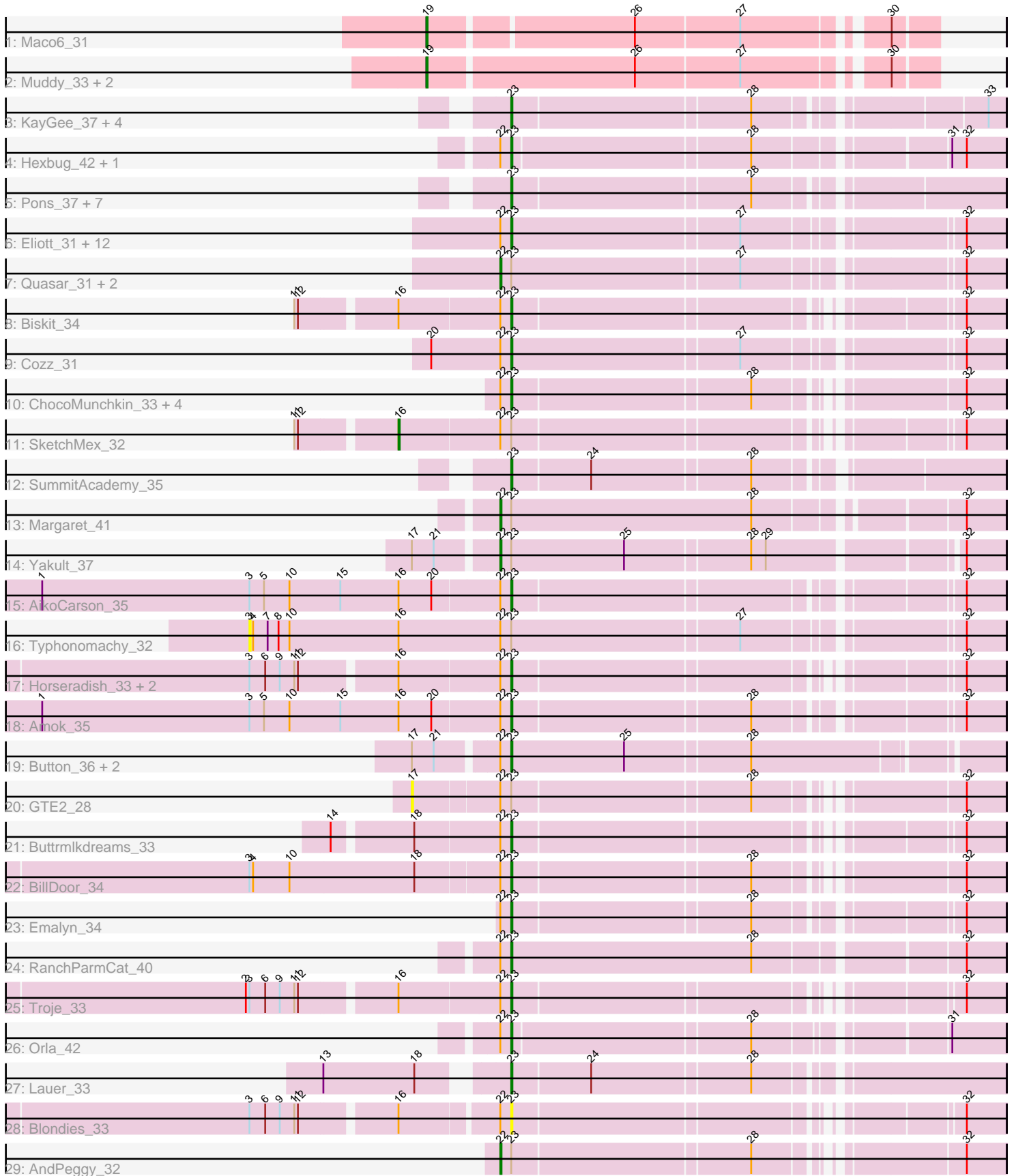


Pham 224572



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 224572 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224572 has 65 members, 18 are drafts.

Phages represented in each track:

- Track 1 : Maco6\_31
- Track 2 : Muddy\_33, 8UZL\_33, FF47\_33
- Track 3 : KayGee\_37, Bavilard\_35, Elinal\_39, Vine\_38, Yucky\_39
- Track 4 : Hexbug\_42, Nodigi\_42
- Track 5 : Pons\_37, BigChungus\_35, CherryonLim\_38, MAnor\_37, PotPie\_36, Mayweather\_39, SheckWes\_38, Feastonyeet\_35
- Track 6 : Elliott\_31, Starburst\_32, Agatha\_31, Carsonalex\_36, Socotra\_32, PsychoKiller\_31, MunkgeeRoachy\_31, SweatNTears\_33, Sopespian\_31, ChickenTender\_35, Axym\_31, GoldHunter\_32, RedBaron\_33
- Track 7 : Quasar\_31, Nina\_31, Burnsey\_31
- Track 8 : Biskit\_34
- Track 9 : Cozz\_31
- Track 10 : ChocoMunchkin\_33, Yarn\_32, SteamedHams\_35, CanesSauce\_33, Tolls\_35
- Track 11 : SketchMex\_32
- Track 12 : SummitAcademy\_35
- Track 13 : Margaret\_41
- Track 14 : Yakult\_37
- Track 15 : AikoCarson\_35
- Track 16 : Typhonomachy\_32
- Track 17 : Horseradish\_33, Yummy\_33, MScarn\_34
- Track 18 : Amok\_35
- Track 19 : Button\_36, Jamzy\_38, GiKK\_38
- Track 20 : GTE2\_28
- Track 21 : Buttrmilkdreams\_33
- Track 22 : BillDoor\_34
- Track 23 : Emalyn\_34
- Track 24 : RanchParmCat\_40
- Track 25 : Troje\_33
- Track 26 : Orla\_42
- Track 27 : Lauer\_33
- Track 28 : Blondies\_33
- Track 29 : AndPeggy\_32

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

The start number called the most often in the published annotations is 23, it was called in 38 of the 47 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha\_31, AikoCarson\_35, Amok\_35, Axym\_31, Bavidard\_35, BigChungus\_35, BillDoor\_34, Biskit\_34, Blondies\_33, Button\_36, Buttrmlkdreams\_33, CanesSauce\_33, Carsonalex\_36, CherryonLim\_38, ChickenTender\_35, ChocoMunchkin\_33, Cozz\_31, Elinal\_39, Elliott\_31, Emalyn\_34, Feastonyeet\_35, GiKK\_38, GoldHunter\_32, Hexbug\_42, Horseradish\_33, Jamzy\_38, KayGee\_37, Lauer\_33, MAnor\_37, MScarn\_34, Mayweather\_39, MunkgeeRoachy\_31, Nodigi\_42, Orla\_42, Pons\_37, PotPie\_36, PsychoKiller\_31, RanchParmCat\_40, RedBaron\_33, SheckWes\_38, Socotra\_32, Sopespian\_31, Starburst\_32, SteamedHams\_35, SummitAcademy\_35, SweatNTears\_33, Tolls\_35, Troje\_33, Vine\_38, Yarn\_32, Yucky\_39, Yummy\_33,

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

- AndPeggy\_32, Burnsey\_31, GTE2\_28, Margaret\_41, Nina\_31, Quasar\_31, SketchMex\_32, Typhonomachy\_32, Yakult\_37,

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

- 8UZL\_33, FF47\_33, Maco6\_31, Muddy\_33,

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

Start 3:

- Found in 9 of 65 ( 13.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Typhonomachy\_32 (CT),

Start 16:

- Found in 10 of 65 ( 15.4% ) of genes in pham
- Manual Annotations of this start: 1 of 47
- Called 10.0% of time when present
- Phage (with cluster) where this start called: SketchMex\_32 (CT),

Start 17:

- Found in 5 of 65 ( 7.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: GTE2\_28 (CT),

Start 19:

- Found in 4 of 65 ( 6.2% ) of genes in pham
- Manual Annotations of this start: 2 of 47
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 8UZL\_33 (AB), FF47\_33 (AB), Maco6\_31 (AB), Muddy\_33 (AB),

Start 22:

- Found in 46 of 65 ( 70.8% ) of genes in pham
- Manual Annotations of this start: 6 of 47

- Called 13.0% of time when present
- Phage (with cluster) where this start called: AndPeggy\_32 (CT), Burnsey\_31 (CT), Margaret\_41 (CT), Nina\_31 (CT), Quasar\_31 (CT), Yakult\_37 (CT),

Start 23:

- Found in 61 of 65 ( 93.8% ) of genes in pham
- Manual Annotations of this start: 38 of 47
- Called 85.2% of time when present
- Phage (with cluster) where this start called: Agatha\_31 (CT), AikoCarson\_35 (CT), Amok\_35 (CT), Axym\_31 (CT), Bavidard\_35 (CT), BigChungus\_35 (CT), BillDoor\_34 (CT), Biskit\_34 (CT), Blondies\_33 (CT), Button\_36 (CT), Buttrmlkdreams\_33 (CT), CanesSauce\_33 (CT), Carsonalex\_36 (CT), CherryonLim\_38 (CT), ChickenTender\_35 (CT), ChocoMunchkin\_33 (CT), Cozz\_31 (CT), Elinal\_39 (CT), Elliott\_31 (CT), Emalyn\_34 (CT), Feastonyeet\_35 (CT), GiKK\_38 (CT), GoldHunter\_32 (CT), Hexbug\_42 (CT), Horseradish\_33 (CT), Jamzy\_38 (CT), KayGee\_37 (CT), Lauer\_33 (CT), MAnor\_37 (CT), MScarn\_34 (CT), Mayweather\_39 (CT), MunkgeeRoachy\_31 (CT), Nodigi\_42 (CT), Orla\_42 (CT), Pons\_37 (CT), PotPie\_36 (CT), PsychoKiller\_31 (CT), RanchParmCat\_40 (CT), RedBaron\_33 (CT), SheckWes\_38 (CT), Socotra\_32 (CT), Sopespian\_31 (CT), Starburst\_32 (CT), SteamedHams\_35 (CT), SummitAcademy\_35 (CT), SweatNTears\_33 (CT), Tolls\_35 (CT), Troje\_33 (CT), Vine\_38 (CT), Yarn\_32 (CT), Yucky\_39 (CT), Yummy\_33 (CT),

### Summary by clusters:

There are 2 clusters represented in this pham: AB, CT,

Info for manual annotations of cluster AB:

- Start number 19 was manually annotated 2 times for cluster AB.

Info for manual annotations of cluster CT:

- Start number 16 was manually annotated 1 time for cluster CT.
- Start number 22 was manually annotated 6 times for cluster CT.
- Start number 23 was manually annotated 38 times for cluster CT.

### Gene Information:

Gene: 8UZL\_33 Start: 26454, Stop: 26834, Start Num: 19

Candidate Starts for 8UZL\_33:

(Start: 19 @26454 has 2 MA's), (26, 26613), (27, 26697), (30, 26799),

Gene: Agatha\_31 Start: 25290, Stop: 24916, Start Num: 23

Candidate Starts for Agatha\_31:

(Start: 22 @25299 has 6 MA's), (Start: 23 @25290 has 38 MA's), (27, 25107), (32, 24948),

Gene: AikoCarson\_35 Start: 26407, Stop: 26042, Start Num: 23

Candidate Starts for AikoCarson\_35:

(1, 26791), (3, 26620), (5, 26608), (10, 26587), (15, 26545), (Start: 16 @26497 has 1 MA's), (20, 26470), (Start: 22 @26416 has 6 MA's), (Start: 23 @26407 has 38 MA's), (32, 26074),

Gene: Amok\_35 Start: 26431, Stop: 26066, Start Num: 23

Candidate Starts for Amok\_35:

(1, 26815), (3, 26644), (5, 26632), (10, 26611), (15, 26569), (Start: 16 @26521 has 1 MA's), (20, 26494), (Start: 22 @26440 has 6 MA's), (Start: 23 @26431 has 38 MA's), (28, 26242), (32, 26098),

Gene: AndPeggy\_32 Start: 25848, Stop: 25477, Start Num: 22

Candidate Starts for AndPeggy\_32:

(Start: 22 @25848 has 6 MA's), (Start: 23 @25839 has 38 MA's), (28, 25650), (32, 25509),

Gene: Axym\_31 Start: 25269, Stop: 24895, Start Num: 23

Candidate Starts for Axym\_31:

(Start: 22 @25278 has 6 MA's), (Start: 23 @25269 has 38 MA's), (27, 25086), (32, 24927),

Gene: Bavilard\_35 Start: 27418, Stop: 27050, Start Num: 23

Candidate Starts for Bavilard\_35:

(Start: 23 @27418 has 38 MA's), (28, 27229), (33, 27064),

Gene: BigChungus\_35 Start: 27608, Stop: 27240, Start Num: 23

Candidate Starts for BigChungus\_35:

(Start: 23 @27608 has 38 MA's), (28, 27419),

Gene: BillDoor\_34 Start: 25517, Stop: 25155, Start Num: 23

Candidate Starts for BillDoor\_34:

(3, 25727), (4, 25724), (10, 25694), (18, 25592), (Start: 22 @25526 has 6 MA's), (Start: 23 @25517 has 38 MA's), (28, 25328), (32, 25187),

Gene: Biskit\_34 Start: 25615, Stop: 25259, Start Num: 23

Candidate Starts for Biskit\_34:

(11, 25780), (12, 25777), (Start: 16 @25705 has 1 MA's), (Start: 22 @25624 has 6 MA's), (Start: 23 @25615 has 38 MA's), (32, 25291),

Gene: Blondies\_33 Start: 25597, Stop: 25241, Start Num: 23

Candidate Starts for Blondies\_33:

(3, 25792), (6, 25780), (9, 25768), (11, 25756), (12, 25753), (Start: 16 @25681 has 1 MA's), (Start: 22 @25606 has 6 MA's), (Start: 23 @25597 has 38 MA's), (32, 25273),

Gene: Burnsey\_31 Start: 25291, Stop: 24908, Start Num: 22

Candidate Starts for Burnsey\_31:

(Start: 22 @25291 has 6 MA's), (Start: 23 @25282 has 38 MA's), (27, 25099), (32, 24940),

Gene: Button\_36 Start: 26534, Stop: 26151, Start Num: 23

Candidate Starts for Button\_36:

(17, 26606), (21, 26588), (Start: 22 @26543 has 6 MA's), (Start: 23 @26534 has 38 MA's), (25, 26441), (28, 26342),

Gene: Buttrmlkdreams\_33 Start: 25596, Stop: 25240, Start Num: 23

Candidate Starts for Buttrmlkdreams\_33:

(14, 25734), (18, 25674), (Start: 22 @25605 has 6 MA's), (Start: 23 @25596 has 38 MA's), (32, 25272),

Gene: CanesSauce\_33 Start: 26012, Stop: 25650, Start Num: 23

Candidate Starts for CanesSauce\_33:

(Start: 22 @26021 has 6 MA's), (Start: 23 @26012 has 38 MA's), (28, 25823), (32, 25682),

Gene: Carsonalex\_36 Start: 24592, Stop: 24966, Start Num: 23

Candidate Starts for Carsonalex\_36:

(Start: 22 @24583 has 6 MA's), (Start: 23 @24592 has 38 MA's), (27, 24775), (32, 24934),

Gene: CherryonLim\_38 Start: 28748, Stop: 28377, Start Num: 23

Candidate Starts for CherryonLim\_38:

(Start: 23 @28748 has 38 MA's), (28, 28559),

Gene: ChickenTender\_35 Start: 25824, Stop: 25450, Start Num: 23

Candidate Starts for ChickenTender\_35:

(Start: 22 @25833 has 6 MA's), (Start: 23 @25824 has 38 MA's), (27, 25641), (32, 25482),

Gene: ChocoMunchkin\_33 Start: 26012, Stop: 25650, Start Num: 23

Candidate Starts for ChocoMunchkin\_33:

(Start: 22 @26021 has 6 MA's), (Start: 23 @26012 has 38 MA's), (28, 25823), (32, 25682),

Gene: Cozz\_31 Start: 25271, Stop: 24897, Start Num: 23

Candidate Starts for Cozz\_31:

(20, 25337), (Start: 22 @25280 has 6 MA's), (Start: 23 @25271 has 38 MA's), (27, 25088), (32, 24929),

Gene: Elinal\_39 Start: 27986, Stop: 27618, Start Num: 23

Candidate Starts for Elinal\_39:

(Start: 23 @27986 has 38 MA's), (28, 27797), (33, 27632),

Gene: Elliott\_31 Start: 25290, Stop: 24916, Start Num: 23

Candidate Starts for Elliott\_31:

(Start: 22 @25299 has 6 MA's), (Start: 23 @25290 has 38 MA's), (27, 25107), (32, 24948),

Gene: Emalyn\_34 Start: 25600, Stop: 25235, Start Num: 23

Candidate Starts for Emalyn\_34:

(Start: 22 @25609 has 6 MA's), (Start: 23 @25600 has 38 MA's), (28, 25411), (32, 25267),

Gene: FF47\_33 Start: 26381, Stop: 26761, Start Num: 19

Candidate Starts for FF47\_33:

(Start: 19 @26381 has 2 MA's), (26, 26540), (27, 26624), (30, 26726),

Gene: Feastonyeet\_35 Start: 27608, Stop: 27240, Start Num: 23

Candidate Starts for Feastonyeet\_35:

(Start: 23 @27608 has 38 MA's), (28, 27419),

Gene: GTE2\_28 Start: 25921, Stop: 25481, Start Num: 17

Candidate Starts for GTE2\_28:

(17, 25921), (Start: 22 @25852 has 6 MA's), (Start: 23 @25843 has 38 MA's), (28, 25654), (32, 25513),

Gene: GiKK\_38 Start: 26864, Stop: 26481, Start Num: 23

Candidate Starts for GiKK\_38:

(17, 26936), (21, 26918), (Start: 22 @26873 has 6 MA's), (Start: 23 @26864 has 38 MA's), (25, 26771), (28, 26672),

Gene: GoldHunter\_32 Start: 25291, Stop: 24917, Start Num: 23

Candidate Starts for GoldHunter\_32:

(Start: 22 @25300 has 6 MA's), (Start: 23 @25291 has 38 MA's), (27, 25108), (32, 24949),

Gene: Hexbug\_42 Start: 28965, Stop: 28591, Start Num: 23

Candidate Starts for Hexbug\_42:

(Start: 22 @28974 has 6 MA's), (Start: 23 @28965 has 38 MA's), (28, 28776), (31, 28635), (32, 28623),

Gene: Horseradish\_33 Start: 25125, Stop: 24769, Start Num: 23

Candidate Starts for Horseradish\_33:

(3, 25326), (6, 25314), (9, 25302), (11, 25290), (12, 25287), (Start: 16 @25215 has 1 MA's), (Start: 22 @25134 has 6 MA's), (Start: 23 @25125 has 38 MA's), (32, 24801),

Gene: Jamzy\_38 Start: 26847, Stop: 26464, Start Num: 23

Candidate Starts for Jamzy\_38:

(17, 26919), (21, 26901), (Start: 22 @26856 has 6 MA's), (Start: 23 @26847 has 38 MA's), (25, 26754), (28, 26655),

Gene: KayGee\_37 Start: 27986, Stop: 27618, Start Num: 23

Candidate Starts for KayGee\_37:

(Start: 23 @27986 has 38 MA's), (28, 27797), (33, 27632),

Gene: Lauer\_33 Start: 28814, Stop: 28440, Start Num: 23

Candidate Starts for Lauer\_33:

(13, 28946), (18, 28871), (Start: 23 @28814 has 38 MA's), (24, 28751), (28, 28625),

Gene: MAnor\_37 Start: 28382, Stop: 28011, Start Num: 23

Candidate Starts for MAnor\_37:

(Start: 23 @28382 has 38 MA's), (28, 28193),

Gene: MScarn\_34 Start: 25265, Stop: 24909, Start Num: 23

Candidate Starts for MScarn\_34:

(3, 25466), (6, 25454), (9, 25442), (11, 25430), (12, 25427), (Start: 16 @25355 has 1 MA's), (Start: 22 @25274 has 6 MA's), (Start: 23 @25265 has 38 MA's), (32, 24941),

Gene: Maco6\_31 Start: 25722, Stop: 26102, Start Num: 19

Candidate Starts for Maco6\_31:

(Start: 19 @25722 has 2 MA's), (26, 25881), (27, 25965), (30, 26067),

Gene: Margaret\_41 Start: 27905, Stop: 27516, Start Num: 22

Candidate Starts for Margaret\_41:

(Start: 22 @27905 has 6 MA's), (Start: 23 @27896 has 38 MA's), (28, 27698), (32, 27548),

Gene: Mayweather\_39 Start: 28607, Stop: 28236, Start Num: 23

Candidate Starts for Mayweather\_39:

(Start: 23 @28607 has 38 MA's), (28, 28418),

Gene: Muddy\_33 Start: 26662, Stop: 27048, Start Num: 19

Candidate Starts for Muddy\_33:

(Start: 19 @26662 has 2 MA's), (26, 26827), (27, 26911), (30, 27013),

Gene: MunkgeeRoachy\_31 Start: 25145, Stop: 24774, Start Num: 23

Candidate Starts for MunkgeeRoachy\_31:

(Start: 22 @25154 has 6 MA's), (Start: 23 @25145 has 38 MA's), (27, 24965), (32, 24806),

Gene: Nina\_31 Start: 25816, Stop: 25433, Start Num: 22

Candidate Starts for Nina\_31:

(Start: 22 @25816 has 6 MA's), (Start: 23 @25807 has 38 MA's), (27, 25624), (32, 25465),

Gene: Nodigi\_42 Start: 28954, Stop: 28577, Start Num: 23  
Candidate Starts for Nodigi\_42:  
(Start: 22 @28963 has 6 MA's), (Start: 23 @28954 has 38 MA's), (28, 28765), (31, 28621), (32, 28609),

Gene: Orla\_42 Start: 28927, Stop: 28556, Start Num: 23  
Candidate Starts for Orla\_42:  
(Start: 22 @28936 has 6 MA's), (Start: 23 @28927 has 38 MA's), (28, 28738), (31, 28600),

Gene: Pons\_37 Start: 27958, Stop: 27587, Start Num: 23  
Candidate Starts for Pons\_37:  
(Start: 23 @27958 has 38 MA's), (28, 27769),

Gene: PotPie\_36 Start: 28899, Stop: 28531, Start Num: 23  
Candidate Starts for PotPie\_36:  
(Start: 23 @28899 has 38 MA's), (28, 28710),

Gene: PsychoKiller\_31 Start: 25290, Stop: 24916, Start Num: 23  
Candidate Starts for PsychoKiller\_31:  
(Start: 22 @25299 has 6 MA's), (Start: 23 @25290 has 38 MA's), (27, 25107), (32, 24948),

Gene: Quasar\_31 Start: 25902, Stop: 25519, Start Num: 22  
Candidate Starts for Quasar\_31:  
(Start: 22 @25902 has 6 MA's), (Start: 23 @25893 has 38 MA's), (27, 25710), (32, 25551),

Gene: RanchParmCat\_40 Start: 28046, Stop: 27660, Start Num: 23  
Candidate Starts for RanchParmCat\_40:  
(Start: 22 @28055 has 6 MA's), (Start: 23 @28046 has 38 MA's), (28, 27848), (32, 27692),

Gene: RedBaron\_33 Start: 25526, Stop: 25152, Start Num: 23  
Candidate Starts for RedBaron\_33:  
(Start: 22 @25535 has 6 MA's), (Start: 23 @25526 has 38 MA's), (27, 25343), (32, 25184),

Gene: SheckWes\_38 Start: 27479, Stop: 27111, Start Num: 23  
Candidate Starts for SheckWes\_38:  
(Start: 23 @27479 has 38 MA's), (28, 27290),

Gene: SketchMex\_32 Start: 25705, Stop: 25259, Start Num: 16  
Candidate Starts for SketchMex\_32:  
(11, 25780), (12, 25777), (Start: 16 @25705 has 1 MA's), (Start: 22 @25624 has 6 MA's), (Start: 23 @25615 has 38 MA's), (32, 25291),

Gene: Socotra\_32 Start: 25290, Stop: 24916, Start Num: 23  
Candidate Starts for Socotra\_32:  
(Start: 22 @25299 has 6 MA's), (Start: 23 @25290 has 38 MA's), (27, 25107), (32, 24948),

Gene: Sopespian\_31 Start: 25291, Stop: 24917, Start Num: 23  
Candidate Starts for Sopespian\_31:  
(Start: 22 @25300 has 6 MA's), (Start: 23 @25291 has 38 MA's), (27, 25108), (32, 24949),

Gene: Starburst\_32 Start: 25285, Stop: 24911, Start Num: 23  
Candidate Starts for Starburst\_32:  
(Start: 22 @25294 has 6 MA's), (Start: 23 @25285 has 38 MA's), (27, 25102), (32, 24943),



Gene: SteamedHams\_35 Start: 25985, Stop: 25623, Start Num: 23  
Candidate Starts for SteamedHams\_35:  
(Start: 22 @25994 has 6 MA's), (Start: 23 @25985 has 38 MA's), (28, 25796), (32, 25655),

Gene: SummitAcademy\_35 Start: 27528, Stop: 27160, Start Num: 23  
Candidate Starts for SummitAcademy\_35:  
(Start: 23 @27528 has 38 MA's), (24, 27465), (28, 27339),

Gene: SweatNTears\_33 Start: 25188, Stop: 24814, Start Num: 23  
Candidate Starts for SweatNTears\_33:  
(Start: 22 @25197 has 6 MA's), (Start: 23 @25188 has 38 MA's), (27, 25005), (32, 24846),

Gene: Tolls\_35 Start: 26084, Stop: 25722, Start Num: 23  
Candidate Starts for Tolls\_35:  
(Start: 22 @26093 has 6 MA's), (Start: 23 @26084 has 38 MA's), (28, 25895), (32, 25754),

Gene: Troje\_33 Start: 25622, Stop: 25266, Start Num: 23  
Candidate Starts for Troje\_33:  
(2, 25826), (3, 25823), (6, 25811), (9, 25799), (11, 25787), (12, 25784), (Start: 16 @25712 has 1 MA's),  
(Start: 22 @25631 has 6 MA's), (Start: 23 @25622 has 38 MA's), (32, 25298),

Gene: Typhonomachy\_32 Start: 25518, Stop: 24928, Start Num: 3  
Candidate Starts for Typhonomachy\_32:  
(3, 25518), (4, 25515), (7, 25503), (8, 25494), (10, 25485), (Start: 16 @25395 has 1 MA's), (Start: 22  
@25311 has 6 MA's), (Start: 23 @25302 has 38 MA's), (27, 25119), (32, 24960),

Gene: Vine\_38 Start: 28260, Stop: 27898, Start Num: 23  
Candidate Starts for Vine\_38:  
(Start: 23 @28260 has 38 MA's), (28, 28071), (33, 27912),

Gene: Yakult\_37 Start: 27033, Stop: 26644, Start Num: 22  
Candidate Starts for Yakult\_37:  
(17, 27096), (21, 27078), (Start: 22 @27033 has 6 MA's), (Start: 23 @27024 has 38 MA's), (25, 26931),  
(28, 26832), (29, 26820), (32, 26676),

Gene: Yarn\_32 Start: 25844, Stop: 25482, Start Num: 23  
Candidate Starts for Yarn\_32:  
(Start: 22 @25853 has 6 MA's), (Start: 23 @25844 has 38 MA's), (28, 25655), (32, 25514),

Gene: Yucky\_39 Start: 28200, Stop: 27829, Start Num: 23  
Candidate Starts for Yucky\_39:  
(Start: 23 @28200 has 38 MA's), (28, 28011), (33, 27843),

Gene: Yummy\_33 Start: 25239, Stop: 24883, Start Num: 23  
Candidate Starts for Yummy\_33:  
(3, 25440), (6, 25428), (9, 25416), (11, 25404), (12, 25401), (Start: 16 @25329 has 1 MA's), (Start: 22  
@25248 has 6 MA's), (Start: 23 @25239 has 38 MA's), (32, 24915),