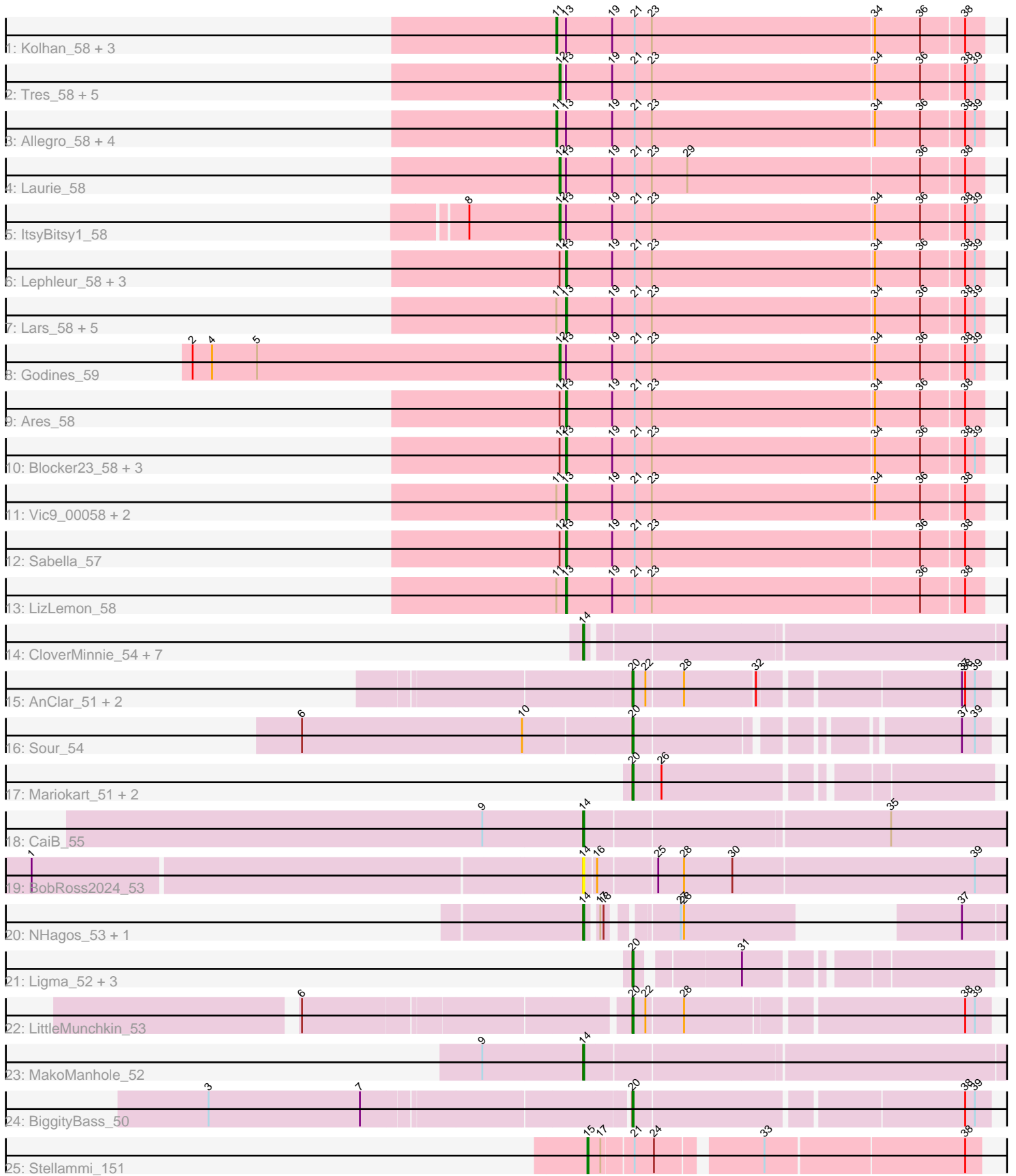


Pham 308596



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 308596 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308596 has 65 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Kolhan\_58, MasterPo\_58, Coffee\_58, LilSmirk\_58
- Track 2 : Tres\_58, Rosebush\_57, Hedgerow\_58, TA17A\_59, Rhinoforte\_58, Kaleb\_58
- Track 3 : Allegro\_58, Faze9\_57, PrinceCharming\_58, Eaglehorse\_58, Phantasmagoria\_58
- Track 4 : Laurie\_58
- Track 5 : ItsyBitsy1\_58
- Track 6 : Lephleur\_58, Tinciduntolum\_59, Brownie5\_58, West99\_58
- Track 7 : Lars\_58, Qyrzula\_53, FrenchFry\_58, Bananafish\_58, Glass\_58, Opia\_58
- Track 8 : Godines\_59
- Track 9 : Ares\_58
- Track 10 : Blocker23\_58, Boyle\_58, Kheth\_58, Arbiter\_57
- Track 11 : Vic9\_00058, Calamitous\_58, Holeinone\_58
- Track 12 : Sabella\_57
- Track 13 : LizLemon\_58
- Track 14 : CloverMinnie\_54, Blackpen\_54, TraderJ\_55, FelixTres\_54, Wooper\_55, Yeshua\_55, MossRose\_54, AnarQue\_55
- Track 15 : AnClar\_51, Sisko\_50, Yago84\_50
- Track 16 : Sour\_54
- Track 17 : Mariokart\_51, CharlottesWeb\_51, JellyBelly\_50
- Track 18 : CaiB\_55
- Track 19 : BobRoss2024\_53
- Track 20 : NHagos\_53, AksarBAT\_54
- Track 21 : Ligma\_52, Fresco\_52, Axumite\_52, Shatter\_52
- Track 22 : LittleMunchkin\_53
- Track 23 : MakoManhole\_52
- Track 24 : BiggityBass\_50
- Track 25 : Stellammi\_151

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

The start number called the most often in the published annotations is 13, it was called in 20 of the 58 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arbiter\_57, Ares\_58, Bananafish\_58, Blocker23\_58, Boyle\_58, Brownie5\_58, Calamitous\_58, FrenchFry\_58, Glass\_58, Holeinone\_58, Kheth\_58, Lars\_58, Lephleur\_58, LizLemon\_58, Opia\_58, Qyrzula\_53, Sabella\_57, Tinciduntolum\_59, Vic9\_00058, West99\_58,

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

- Allegro\_58, Coffee\_58, Eaglehorse\_58, Faze9\_57, Godines\_59, Hedgerow\_58, ItsyBitsy1\_58, Kaleb\_58, Kolhan\_58, Laurie\_58, LilSmirk\_58, MasterPo\_58, Phantasmagoria\_58, PrinceCharming\_58, Rhinoforte\_58, Rosebush\_57, TA17A\_59, Tres\_58,

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

- AksarBAT\_54, AnClar\_51, AnarQue\_55, Axumite\_52, BiggityBass\_50, Blackpen\_54, BobRoss2024\_53, CaiB\_55, CharlottesWeb\_51, CloverMinnie\_54, FelixTres\_54, Fresco\_52, JellyBelly\_50, Ligma\_52, LittleMunchkin\_53, MakoManhole\_52, Mariokart\_51, MossRose\_54, NHagos\_53, Shatter\_52, Sisko\_50, Sour\_54, Stellammi\_151, TraderJ\_55, Wooper\_55, Yago84\_50, Yeshua\_55,

### Summary by start number:

Start 11:

- Found in 19 of 65 ( 29.2% ) of genes in pham
- Manual Annotations of this start: 8 of 58
- Called 47.4% of time when present
- Phage (with cluster) where this start called: Allegro\_58 (B2), Coffee\_58 (B2), Eaglehorse\_58 (B2), Faze9\_57 (B2), Kolhan\_58 (B2), LilSmirk\_58 (B2), MasterPo\_58 (B2), Phantasmagoria\_58 (B2), PrinceCharming\_58 (B2),

Start 12:

- Found in 19 of 65 ( 29.2% ) of genes in pham
- Manual Annotations of this start: 9 of 58
- Called 47.4% of time when present
- Phage (with cluster) where this start called: Godines\_59 (B2), Hedgerow\_58 (B2), ItsyBitsy1\_58 (B2), Kaleb\_58 (B2), Laurie\_58 (B2), Rhinoforte\_58 (B2), Rosebush\_57 (B2), TA17A\_59 (B2), Tres\_58 (B2),

Start 13:

- Found in 38 of 65 ( 58.5% ) of genes in pham
- Manual Annotations of this start: 20 of 58
- Called 52.6% of time when present
- Phage (with cluster) where this start called: Arbiter\_57 (B2), Ares\_58 (B2), Bananafish\_58 (B2), Blocker23\_58 (B2), Boyle\_58 (B2), Brownie5\_58 (B2), Calamitous\_58 (B2), FrenchFry\_58 (B2), Glass\_58 (B2), Holeinone\_58 (B2), Kheth\_58 (B2), Lars\_58 (B2), Lephleur\_58 (B2), LizLemon\_58 (B2), Opia\_58 (B2), Qyrzula\_53 (B2), Sabella\_57 (B2), Tinciduntolum\_59 (B2), Vic9\_00058 (B2), West99\_58 (B2),

Start 14:

- Found in 13 of 65 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 9 of 58
- Called 100.0% of time when present

- Phage (with cluster) where this start called: AksarBAT\_54 (DR), AnarQue\_55 (DR), Blackpen\_54 (DR), BobRoss2024\_53 (DR), CaiB\_55 (DR), CloverMinnie\_54 (DR), FelixTres\_54 (DR), MakoManhole\_52 (DR), MossRose\_54 (DR), NHagos\_53 (DR), TraderJ\_55 (DR), Wooper\_55 (DR), Yeshua\_55 (DR),

#### Start 15:

- Found in 1 of 65 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 1 of 58
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Stellammi\_151 (UNK),

#### Start 20:

- Found in 13 of 65 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 11 of 58
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AnClar\_51 (DR), Axumite\_52 (DR), BiggityBass\_50 (DR), CharlottesWeb\_51 (DR), Fresco\_52 (DR), JellyBelly\_50 (DR), Ligma\_52 (DR), LittleMunchkin\_53 (DR), Mariokart\_51 (DR), Shatter\_52 (DR), Sisko\_50 (DR), Sour\_54 (DR), Yago84\_50 (DR),

### Summary by clusters:

There are 3 clusters represented in this pham: UNK, DR, B2,

#### Info for manual annotations of cluster B2:

- Start number 11 was manually annotated 8 times for cluster B2.
- Start number 12 was manually annotated 9 times for cluster B2.
- Start number 13 was manually annotated 20 times for cluster B2.

#### Info for manual annotations of cluster DR:

- Start number 14 was manually annotated 9 times for cluster DR.
- Start number 20 was manually annotated 11 times for cluster DR.

#### Info for manual annotations of cluster UNK:

- Start number 15 was manually annotated 1 time for cluster UNK.

### Gene Information:

Gene: AksarBAT\_54 Start: 47539, Stop: 47165, Start Num: 14

Candidate Starts for AksarBAT\_54:

(Start: 14 @47539 has 9 MA's), (17, 47530), (18, 47527), (27, 47476), (28, 47473), (37, 47215),

Gene: Allegro\_58 Start: 52863, Stop: 52474, Start Num: 11

Candidate Starts for Allegro\_58:

(Start: 11 @52863 has 8 MA's), (Start: 13 @52854 has 20 MA's), (19, 52812), (21, 52791), (23, 52776), (34, 52572), (36, 52530), (38, 52491), (39, 52482),

Gene: AnClar\_51 Start: 48276, Stop: 47968, Start Num: 20

Candidate Starts for AnClar\_51:

(Start: 20 @48276 has 11 MA's), (22, 48264), (28, 48231), (32, 48168), (37, 47994), (38, 47991), (39, 47982),

Gene: AnarQue\_55 Start: 48400, Stop: 48017, Start Num: 14

Candidate Starts for AnarQue\_55:

(Start: 14 @48400 has 9 MA's),

Gene: Arbiter\_57 Start: 52966, Stop: 52586, Start Num: 13

Candidate Starts for Arbiter\_57:

(Start: 12 @52972 has 9 MA's), (Start: 13 @52966 has 20 MA's), (19, 52924), (21, 52903), (23, 52888), (34, 52684), (36, 52642), (38, 52603), (39, 52594),

Gene: Ares\_58 Start: 52938, Stop: 52558, Start Num: 13

Candidate Starts for Ares\_58:

(Start: 12 @52941 has 9 MA's), (Start: 13 @52938 has 20 MA's), (19, 52896), (21, 52875), (23, 52860), (34, 52656), (36, 52614), (38, 52575),

Gene: Axumite\_52 Start: 46268, Stop: 45978, Start Num: 20

Candidate Starts for Axumite\_52:

(Start: 20 @46268 has 11 MA's), (31, 46184),

Gene: Bananafish\_58 Start: 52866, Stop: 52486, Start Num: 13

Candidate Starts for Bananafish\_58:

(Start: 11 @52875 has 8 MA's), (Start: 13 @52866 has 20 MA's), (19, 52824), (21, 52803), (23, 52788), (34, 52584), (36, 52542), (38, 52503), (39, 52494),

Gene: BiggityBass\_50 Start: 47644, Stop: 47330, Start Num: 20

Candidate Starts for BiggityBass\_50:

(3, 48016), (7, 47875), (Start: 20 @47644 has 11 MA's), (38, 47353), (39, 47344),

Gene: Blackpen\_54 Start: 47469, Stop: 47086, Start Num: 14

Candidate Starts for Blackpen\_54:

(Start: 14 @47469 has 9 MA's),

Gene: Blocker23\_58 Start: 52976, Stop: 52596, Start Num: 13

Candidate Starts for Blocker23\_58:

(Start: 12 @52982 has 9 MA's), (Start: 13 @52976 has 20 MA's), (19, 52934), (21, 52913), (23, 52898), (34, 52694), (36, 52652), (38, 52613), (39, 52604),

Gene: BobRoss2024\_53 Start: 46786, Stop: 46394, Start Num: 14

Candidate Starts for BobRoss2024\_53:

(1, 47287), (Start: 14 @46786 has 9 MA's), (16, 46777), (25, 46726), (28, 46702), (30, 46657), (39, 46435),

Gene: Boyle\_58 Start: 53005, Stop: 52625, Start Num: 13

Candidate Starts for Boyle\_58:

(Start: 12 @53011 has 9 MA's), (Start: 13 @53005 has 20 MA's), (19, 52963), (21, 52942), (23, 52927), (34, 52723), (36, 52681), (38, 52642), (39, 52633),

Gene: Brownie5\_58 Start: 53018, Stop: 52638, Start Num: 13

Candidate Starts for Brownie5\_58:

(Start: 12 @53021 has 9 MA's), (Start: 13 @53018 has 20 MA's), (19, 52976), (21, 52955), (23, 52940), (34, 52736), (36, 52694), (38, 52655), (39, 52646),

Gene: CaiB\_55 Start: 48933, Stop: 48541, Start Num: 14

Candidate Starts for CaiB\_55:

(9, 49026), (Start: 14 @48933 has 9 MA's), (35, 48660),

Gene: Calamitous\_58 Start: 52865, Stop: 52485, Start Num: 13

Candidate Starts for Calamitous\_58:

(Start: 11 @52874 has 8 MA's), (Start: 13 @52865 has 20 MA's), (19, 52823), (21, 52802), (23, 52787), (34, 52583), (36, 52541), (38, 52502),

Gene: CharlottesWeb\_51 Start: 45652, Stop: 45347, Start Num: 20

Candidate Starts for CharlottesWeb\_51:

(Start: 20 @45652 has 11 MA's), (26, 45628),

Gene: CloverMinnie\_54 Start: 47977, Stop: 47594, Start Num: 14

Candidate Starts for CloverMinnie\_54:

(Start: 14 @47977 has 9 MA's),

Gene: Coffee\_58 Start: 52986, Stop: 52597, Start Num: 11

Candidate Starts for Coffee\_58:

(Start: 11 @52986 has 8 MA's), (Start: 13 @52977 has 20 MA's), (19, 52935), (21, 52914), (23, 52899), (34, 52695), (36, 52653), (38, 52614),

Gene: Eaglehorse\_58 Start: 52924, Stop: 52535, Start Num: 11

Candidate Starts for Eaglehorse\_58:

(Start: 11 @52924 has 8 MA's), (Start: 13 @52915 has 20 MA's), (19, 52873), (21, 52852), (23, 52837), (34, 52633), (36, 52591), (38, 52552), (39, 52543),

Gene: Faze9\_57 Start: 53009, Stop: 52620, Start Num: 11

Candidate Starts for Faze9\_57:

(Start: 11 @53009 has 8 MA's), (Start: 13 @53000 has 20 MA's), (19, 52958), (21, 52937), (23, 52922), (34, 52718), (36, 52676), (38, 52637), (39, 52628),

Gene: FelixTres\_54 Start: 48015, Stop: 47632, Start Num: 14

Candidate Starts for FelixTres\_54:

(Start: 14 @48015 has 9 MA's),

Gene: FrenchFry\_58 Start: 52976, Stop: 52596, Start Num: 13

Candidate Starts for FrenchFry\_58:

(Start: 11 @52985 has 8 MA's), (Start: 13 @52976 has 20 MA's), (19, 52934), (21, 52913), (23, 52898), (34, 52694), (36, 52652), (38, 52613), (39, 52604),

Gene: Fresco\_52 Start: 46268, Stop: 45978, Start Num: 20

Candidate Starts for Fresco\_52:

(Start: 20 @46268 has 11 MA's), (31, 46184),

Gene: Glass\_58 Start: 52978, Stop: 52598, Start Num: 13

Candidate Starts for Glass\_58:

(Start: 11 @52987 has 8 MA's), (Start: 13 @52978 has 20 MA's), (19, 52936), (21, 52915), (23, 52900), (34, 52696), (36, 52654), (38, 52615), (39, 52606),

Gene: Godines\_59 Start: 53267, Stop: 52881, Start Num: 12

Candidate Starts for Godines\_59:

(2, 53609), (4, 53591), (5, 53549), (Start: 12 @53267 has 9 MA's), (Start: 13 @53261 has 20 MA's), (19, 53219), (21, 53198), (23, 53183), (34, 52979), (36, 52937), (38, 52898), (39, 52889),

Gene: Hedgerow\_58 Start: 52996, Stop: 52613, Start Num: 12

Candidate Starts for Hedgerow\_58:

(Start: 12 @52996 has 9 MA's), (Start: 13 @52993 has 20 MA's), (19, 52951), (21, 52930), (23, 52915), (34, 52711), (36, 52669), (38, 52630), (39, 52621),

Gene: Holeinone\_58 Start: 52832, Stop: 52452, Start Num: 13

Candidate Starts for Holeinone\_58:

(Start: 11 @52841 has 8 MA's), (Start: 13 @52832 has 20 MA's), (19, 52790), (21, 52769), (23, 52754), (34, 52550), (36, 52508), (38, 52469),

Gene: ItsyBitsy1\_58 Start: 52861, Stop: 52475, Start Num: 12

Candidate Starts for ItsyBitsy1\_58:

(8, 52945), (Start: 12 @52861 has 9 MA's), (Start: 13 @52855 has 20 MA's), (19, 52813), (21, 52792), (23, 52777), (34, 52573), (36, 52531), (38, 52492), (39, 52483),

Gene: JellyBelly\_50 Start: 45650, Stop: 45345, Start Num: 20

Candidate Starts for JellyBelly\_50:

(Start: 20 @45650 has 11 MA's), (26, 45626),

Gene: Kaleb\_58 Start: 53020, Stop: 52634, Start Num: 12

Candidate Starts for Kaleb\_58:

(Start: 12 @53020 has 9 MA's), (Start: 13 @53014 has 20 MA's), (19, 52972), (21, 52951), (23, 52936), (34, 52732), (36, 52690), (38, 52651), (39, 52642),

Gene: Kheth\_58 Start: 52897, Stop: 52517, Start Num: 13

Candidate Starts for Kheth\_58:

(Start: 12 @52903 has 9 MA's), (Start: 13 @52897 has 20 MA's), (19, 52855), (21, 52834), (23, 52819), (34, 52615), (36, 52573), (38, 52534), (39, 52525),

Gene: Kolhan\_58 Start: 52873, Stop: 52484, Start Num: 11

Candidate Starts for Kolhan\_58:

(Start: 11 @52873 has 8 MA's), (Start: 13 @52864 has 20 MA's), (19, 52822), (21, 52801), (23, 52786), (34, 52582), (36, 52540), (38, 52501),

Gene: Lars\_58 Start: 52962, Stop: 52582, Start Num: 13

Candidate Starts for Lars\_58:

(Start: 11 @52971 has 8 MA's), (Start: 13 @52962 has 20 MA's), (19, 52920), (21, 52899), (23, 52884), (34, 52680), (36, 52638), (38, 52599), (39, 52590),

Gene: Laurie\_58 Start: 52695, Stop: 52309, Start Num: 12

Candidate Starts for Laurie\_58:

(Start: 12 @52695 has 9 MA's), (Start: 13 @52689 has 20 MA's), (19, 52647), (21, 52626), (23, 52611), (29, 52578), (36, 52365), (38, 52326),

Gene: Lephleur\_58 Start: 52874, Stop: 52494, Start Num: 13

Candidate Starts for Lephleur\_58:

(Start: 12 @52877 has 9 MA's), (Start: 13 @52874 has 20 MA's), (19, 52832), (21, 52811), (23, 52796), (34, 52592), (36, 52550), (38, 52511), (39, 52502),

Gene: Ligma\_52 Start: 46268, Stop: 45978, Start Num: 20

Candidate Starts for Ligma\_52:

(Start: 20 @46268 has 11 MA's), (31, 46184),

Gene: LilSmirk\_58 Start: 52874, Stop: 52485, Start Num: 11

Candidate Starts for LilSmirk\_58:

(Start: 11 @52874 has 8 MA's), (Start: 13 @52865 has 20 MA's), (19, 52823), (21, 52802), (23, 52787), (34, 52583), (36, 52541), (38, 52502),

Gene: LittleMunchkin\_53 Start: 48964, Stop: 48653, Start Num: 20

Candidate Starts for LittleMunchkin\_53:

(6, 49246), (Start: 20 @48964 has 11 MA's), (22, 48952), (28, 48919), (38, 48676), (39, 48667),

Gene: LizLemon\_58 Start: 52987, Stop: 52607, Start Num: 13

Candidate Starts for LizLemon\_58:

(Start: 11 @52996 has 8 MA's), (Start: 13 @52987 has 20 MA's), (19, 52945), (21, 52924), (23, 52909), (36, 52663), (38, 52624),

Gene: MakoManhole\_52 Start: 47472, Stop: 47083, Start Num: 14

Candidate Starts for MakoManhole\_52:

(9, 47565), (Start: 14 @47472 has 9 MA's),

Gene: Mariokart\_51 Start: 45938, Stop: 45633, Start Num: 20

Candidate Starts for Mariokart\_51:

(Start: 20 @45938 has 11 MA's), (26, 45914),

Gene: MasterPo\_58 Start: 52892, Stop: 52503, Start Num: 11

Candidate Starts for MasterPo\_58:

(Start: 11 @52892 has 8 MA's), (Start: 13 @52883 has 20 MA's), (19, 52841), (21, 52820), (23, 52805), (34, 52601), (36, 52559), (38, 52520),

Gene: MossRose\_54 Start: 48034, Stop: 47651, Start Num: 14

Candidate Starts for MossRose\_54:

(Start: 14 @48034 has 9 MA's),

Gene: NHagos\_53 Start: 46811, Stop: 46533, Start Num: 14

Candidate Starts for NHagos\_53:

(Start: 14 @46811 has 9 MA's), (17, 46802), (18, 46799), (27, 46748), (28, 46745), (37, 46583),

Gene: Opia\_58 Start: 52877, Stop: 52497, Start Num: 13

Candidate Starts for Opia\_58:

(Start: 11 @52886 has 8 MA's), (Start: 13 @52877 has 20 MA's), (19, 52835), (21, 52814), (23, 52799), (34, 52595), (36, 52553), (38, 52514), (39, 52505),

Gene: Phantasmagoria\_58 Start: 52884, Stop: 52495, Start Num: 11

Candidate Starts for Phantasmagoria\_58:

(Start: 11 @52884 has 8 MA's), (Start: 13 @52875 has 20 MA's), (19, 52833), (21, 52812), (23, 52797), (34, 52593), (36, 52551), (38, 52512), (39, 52503),

Gene: PrinceCharming\_58 Start: 52980, Stop: 52591, Start Num: 11

Candidate Starts for PrinceCharming\_58:

(Start: 11 @52980 has 8 MA's), (Start: 13 @52971 has 20 MA's), (19, 52929), (21, 52908), (23, 52893), (34, 52689), (36, 52647), (38, 52608), (39, 52599),

Gene: Qyrzula\_53 Start: 52988, Stop: 52608, Start Num: 13

Candidate Starts for Qyrzula\_53:

(Start: 11 @52997 has 8 MA's), (Start: 13 @52988 has 20 MA's), (19, 52946), (21, 52925), (23, 52910), (34, 52706), (36, 52664), (38, 52625), (39, 52616),

Gene: Rhinoforte\_58 Start: 52990, Stop: 52607, Start Num: 12

Candidate Starts for Rhinoforte\_58:

(Start: 12 @52990 has 9 MA's), (Start: 13 @52987 has 20 MA's), (19, 52945), (21, 52924), (23, 52909), (34, 52705), (36, 52663), (38, 52624), (39, 52615),

Gene: Rosebush\_57 Start: 53017, Stop: 52634, Start Num: 12

Candidate Starts for Rosebush\_57:

(Start: 12 @53017 has 9 MA's), (Start: 13 @53014 has 20 MA's), (19, 52972), (21, 52951), (23, 52936), (34, 52732), (36, 52690), (38, 52651), (39, 52642),

Gene: Sabella\_57 Start: 52859, Stop: 52479, Start Num: 13

Candidate Starts for Sabella\_57:

(Start: 12 @52862 has 9 MA's), (Start: 13 @52859 has 20 MA's), (19, 52817), (21, 52796), (23, 52781), (36, 52535), (38, 52496),

Gene: Shatter\_52 Start: 46268, Stop: 45978, Start Num: 20

Candidate Starts for Shatter\_52:

(Start: 20 @46268 has 11 MA's), (31, 46184),

Gene: Sisko\_50 Start: 46279, Stop: 45971, Start Num: 20

Candidate Starts for Sisko\_50:

(Start: 20 @46279 has 11 MA's), (22, 46267), (28, 46234), (32, 46171), (37, 45997), (38, 45994), (39, 45985),

Gene: Sour\_54 Start: 49450, Stop: 49163, Start Num: 20

Candidate Starts for Sour\_54:

(6, 49750), (10, 49546), (Start: 20 @49450 has 11 MA's), (37, 49189), (39, 49177),

Gene: Stellammi\_151 Start: 69852, Stop: 70190, Start Num: 15

Candidate Starts for Stellammi\_151:

(Start: 15 @69852 has 1 MA's), (17, 69864), (21, 69891), (24, 69909), (33, 69996), (38, 70176),

Gene: TA17A\_59 Start: 52867, Stop: 52481, Start Num: 12

Candidate Starts for TA17A\_59:

(Start: 12 @52867 has 9 MA's), (Start: 13 @52861 has 20 MA's), (19, 52819), (21, 52798), (23, 52783), (34, 52579), (36, 52537), (38, 52498), (39, 52489),

Gene: Tinciduntolum\_59 Start: 53017, Stop: 52637, Start Num: 13

Candidate Starts for Tinciduntolum\_59:

(Start: 12 @53020 has 9 MA's), (Start: 13 @53017 has 20 MA's), (19, 52975), (21, 52954), (23, 52939), (34, 52735), (36, 52693), (38, 52654), (39, 52645),

Gene: TraderJ\_55 Start: 48357, Stop: 47974, Start Num: 14

Candidate Starts for TraderJ\_55:

(Start: 14 @48357 has 9 MA's),

Gene: Tres\_58 Start: 52874, Stop: 52491, Start Num: 12

Candidate Starts for Tres\_58:

(Start: 12 @52874 has 9 MA's), (Start: 13 @52871 has 20 MA's), (19, 52829), (21, 52808), (23, 52793), (34, 52589), (36, 52547), (38, 52508), (39, 52499),

Gene: Vic9\_00058 Start: 53713, Stop: 53333, Start Num: 13

Candidate Starts for Vic9\_00058:

(Start: 11 @53722 has 8 MA's), (Start: 13 @53713 has 20 MA's), (19, 53671), (21, 53650), (23, 53635), (34, 53431), (36, 53389), (38, 53350),

Gene: West99\_58 Start: 53014, Stop: 52634, Start Num: 13

Candidate Starts for West99\_58:

(Start: 12 @53017 has 9 MA's), (Start: 13 @53014 has 20 MA's), (19, 52972), (21, 52951), (23, 52936), (34, 52732), (36, 52690), (38, 52651), (39, 52642),

Gene: Wooper\_55 Start: 48366, Stop: 47983, Start Num: 14

Candidate Starts for Wooper\_55:

(Start: 14 @48366 has 9 MA's),

Gene: Yago84\_50 Start: 46354, Stop: 46046, Start Num: 20

Candidate Starts for Yago84\_50:

(Start: 20 @46354 has 11 MA's), (22, 46342), (28, 46309), (32, 46246), (37, 46072), (38, 46069), (39, 46060),

Gene: Yeshua\_55 Start: 48343, Stop: 47960, Start Num: 14

Candidate Starts for Yeshua\_55:

(Start: 14 @48343 has 9 MA's),