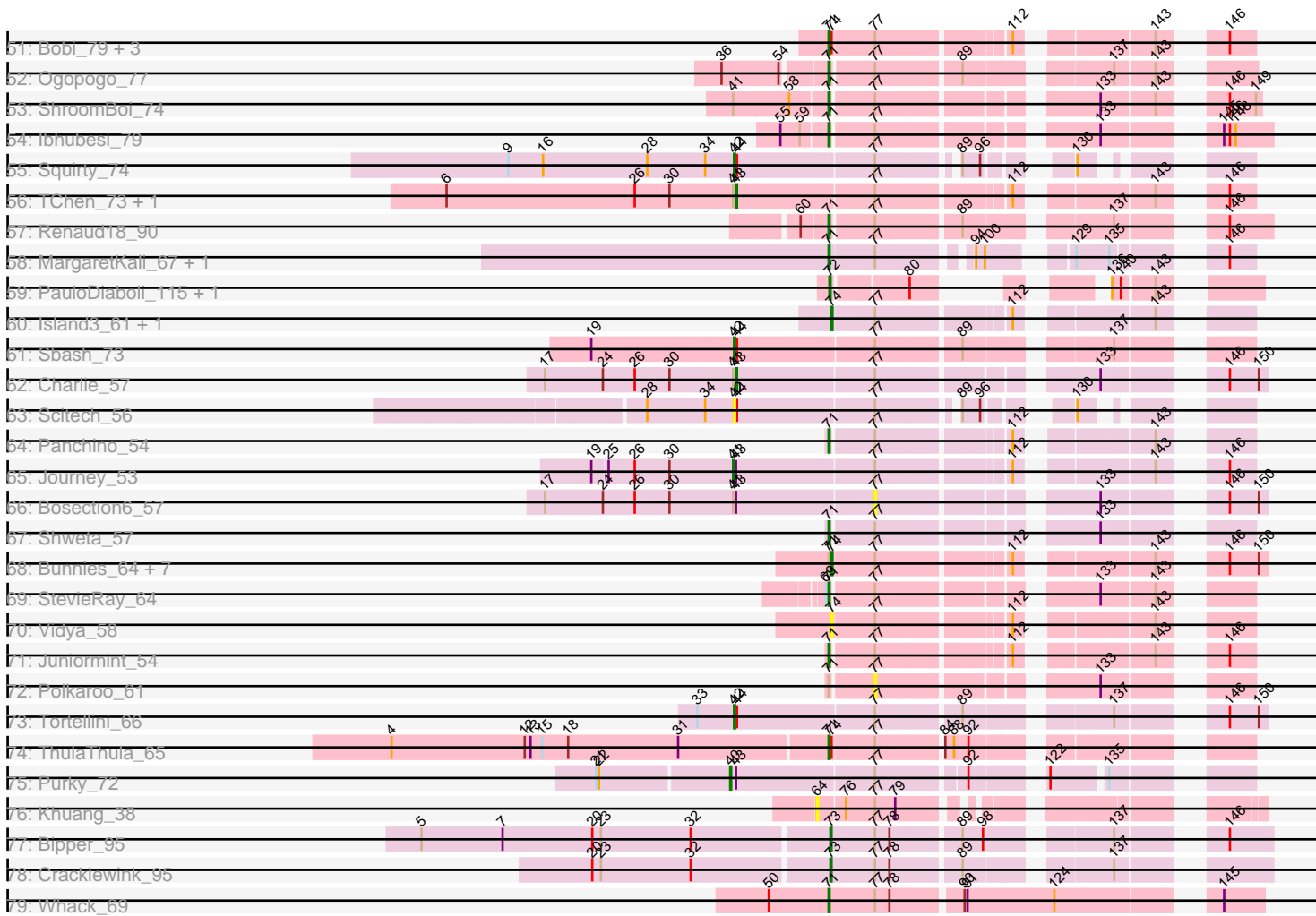




Pham 192456



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 192456 Report

This analysis was run 11/02/24 on database version 579.

Pham number 192456 has 106 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Peterson\_78
- Track 2 : Smeagol\_83
- Track 3 : Mask\_78
- Track 4 : Sejanus\_77
- Track 5 : Sparky\_78, Farewell\_79
- Track 6 : Richie\_48
- Track 7 : AbbyDaisy\_40
- Track 8 : YoungHarleezy\_46
- Track 9 : Persistence\_39
- Track 10 : Aikyam\_57
- Track 11 : Sashimi\_48
- Track 12 : Obliviate\_67
- Track 13 : Fairfaxidum\_71
- Track 14 : Delian\_72, MintFen\_69
- Track 15 : BlingBling\_64
- Track 16 : Frokostdame\_70
- Track 17 : MissRona\_72, Azula\_72
- Track 18 : PhrostedPhlake\_73
- Track 19 : Gambino\_74
- Track 20 : JuJu\_76
- Track 21 : Barco\_65
- Track 22 : Zarbodnamra\_70
- Track 23 : Pipp\_72
- Track 24 : Blueberry\_71
- Track 25 : Petra\_71
- Track 26 : CaptainKirk2\_69
- Track 27 : Confidence\_67, Hyzer\_79, Bunnybear\_62
- Track 28 : Angelique\_62
- Track 29 : Attis\_60, SoilAssassin\_60, LordFarquaad\_62
- Track 30 : BaxterFox\_70
- Track 31 : Dorito\_57
- Track 32 : WinkNick\_65, Easley\_62, Dolores\_65, Sekhmet\_64
- Track 33 : PhriskyACE\_63
- Track 34 : Powerball\_64
- Track 35 : MagicMan\_62, Opie\_65
- Track 36 : Bowser\_60, TaronosaurusRx\_68
- Track 37 : Pimento\_74

- Track 38 : BetterKatz\_72
- Track 39 : Bock\_73
- Track 40 : Francois\_72
- Track 41 : Kamaru\_70
- Track 42 : Whatsapiecost\_68
- Track 43 : Phasih\_68
- Track 44 : Mozy\_80
- Track 45 : Melissauren88\_68
- Track 46 : TootsiePop\_74, Misha28\_74
- Track 47 : Rita\_78
- Track 48 : Flathead\_71
- Track 49 : DillTech15\_73
- Track 50 : MadMen\_71
- Track 51 : Bobi\_79, Atcoo\_61, Brusacoram\_61, Thespis\_61
- Track 52 : Ogopogo\_77
- Track 53 : ShroomBoi\_74
- Track 54 : lbhubesi\_79
- Track 55 : Squirty\_74
- Track 56 : TChen\_73, LunaStella\_71
- Track 57 : Renaud18\_90
- Track 58 : MargaretKali\_67, Kumotta\_71
- Track 59 : PauloDiaboli\_115, A3Wally\_115
- Track 60 : Island3\_61, Brujita\_60
- Track 61 : Sbash\_73
- Track 62 : Charlie\_57
- Track 63 : Scitech\_56
- Track 64 : Panchino\_54
- Track 65 : Journey\_53
- Track 66 : Bosection6\_57
- Track 67 : Shweta\_57
- Track 68 : Bunnies\_64, CactusJack\_59, Willsammy\_59, Glaske\_58, Ksquared\_62, KilKor\_59, Phalm\_59, StressBall\_59
- Track 69 : StevieRay\_64
- Track 70 : Vidya\_58
- Track 71 : Juniormint\_54
- Track 72 : Polkaroo\_61
- Track 73 : Tortellini\_66
- Track 74 : ThulaThula\_65
- Track 75 : Purky\_72
- Track 76 : Khuang\_38
- Track 77 : Bipper\_95
- Track 78 : Cracklewink\_95
- Track 79 : Whack\_69

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

The start number called the most often in the published annotations is 71, it was called in 27 of the 95 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbyDaisy\_40, Atcoo\_61, Bobi\_79, Brusacoram\_61, DillTech15\_73, Flathead\_71, Frokostdame\_70, Ibhubesi\_79, Juniormint\_54, Kumotta\_71, MadMen\_71, MargaretKali\_67, Melissauren88\_68, Ogopogo\_77, Panchino\_54, Persistence\_39, Petra\_71, Phasih\_68, Renaud18\_90, Rita\_78, Sejanus\_77, ShroomBoi\_74, Shweta\_57, StevieRay\_64, Thespis\_61, ThulaThula\_65, Whack\_69,

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

- Aikyam\_57, Bunnies\_64, CactusJack\_59, Glaske\_58, KilKor\_59, Ksquared\_62, Phalm\_59, Polkaroo\_61, Sashimi\_48, StressBall\_59, Willsammy\_59,

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

- A3Wally\_115, Angelique\_62, Attis\_60, Azula\_72, Barco\_65, BaxterFox\_70, BetterKatz\_72, Bipper\_95, BlingBling\_64, Blueberry\_71, Bock\_73, Bosection6\_57, Bowser\_60, Brujita\_60, Bunnybear\_62, CaptainKirk2\_69, Charlie\_57, Confidence\_67, Cracklewink\_95, Delian\_72, Dolores\_65, Dorito\_57, Easley\_62, Fairfaxidum\_71, Farewell\_79, Francois\_72, Gambino\_74, Hyzer\_79, Island3\_61, Journey\_53, JuJu\_76, Kamaru\_70, Khuang\_38, LordFarquaad\_62, LunaStella\_71, MagicMan\_62, Mask\_78, MintFen\_69, Misha28\_74, MissRona\_72, Mozy\_80, Obliviate\_67, Opie\_65, PauloDiaboli\_115, Peterson\_78, PhriskyACE\_63, PhrostedPhlake\_73, Pimento\_74, Pipp\_72, Powerball\_64, Purky\_72, Richie\_48, Sbash\_73, Scitech\_56, Sekhmet\_64, Smeagol\_83, SoilAssassin\_60, Sparky\_78, Squirty\_74, TChen\_73, TaronosaurusRx\_68, TootsiePop\_74, Tortellini\_66, Vidya\_58, Whatsapiecost\_68, WinkNick\_65, YoungHarleezy\_46, Zarbodnamra\_70,

### Summary by start number:

Start 40:

- Found in 1 of 106 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 95
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Purky\_72 (P6),

Start 41:

- Found in 10 of 106 ( 9.4% ) of genes in pham
- Manual Annotations of this start: 3 of 95
- Called 30.0% of time when present
- Phage (with cluster) where this start called: Journey\_53 (N), Misha28\_74 (F1), TootsiePop\_74 (F1),

Start 42:

- Found in 4 of 106 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 3 of 95
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sbash\_73 (I2), Scitech\_56 (N), Squirty\_74 (F3), Tortellini\_66 (P2),

Start 43:

- Found in 8 of 106 ( 7.5% ) of genes in pham
- Manual Annotations of this start: 3 of 95
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Charlie\_57 (N), LunaStella\_71 (F4), TChen\_73 (F4),

Start 62:

- Found in 1 of 106 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 95
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BaxterFox\_70 (CZ3),

Start 64:

- Found in 1 of 106 ( 0.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Khuang\_38 (UNK),

Start 65:

- Found in 12 of 106 ( 11.3% ) of genes in pham
- Manual Annotations of this start: 8 of 95
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Barco\_65 (CV), BetterKatz\_72 (DI), BlingBling\_64 (CV), Blueberry\_71 (CV), Bock\_73 (DI), Francois\_72 (DI), JuJu\_76 (CV), Pimento\_74 (DI),

Start 67:

- Found in 30 of 106 ( 28.3% ) of genes in pham
- Manual Annotations of this start: 21 of 95
- Called 76.7% of time when present
- Phage (with cluster) where this start called: Attis\_60 (CZ2), Azula\_72 (CV), Bowser\_60 (DB), Bunnybear\_62 (CZ), Confidence\_67 (CY1), Delian\_72 (CV), Dolores\_65 (CZ4), Easley\_62 (CZ4), Fairfaxidum\_71 (CV), Hyzer\_79 (CZ1), LordFarquaad\_62 (CZ2), MagicMan\_62 (DB), MintFen\_69 (CV), MissRona\_72 (CV), Obliviate\_67 (CV), Opie\_65 (DB), PhrostedPhlake\_73 (CV), Pipp\_72 (CV), Sekhmet\_64 (CZ4), SoilAssassin\_60 (CZ2), TaronosaurusRx\_68 (DB), WinkNick\_65 (CZ4), Zarbodnamra\_70 (CV),

Start 68:

- Found in 2 of 106 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 95
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Richie\_48 (AY),

Start 69:

- Found in 2 of 106 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 95
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Kamaru\_70 (DN1),

Start 70:

- Found in 5 of 106 ( 4.7% ) of genes in pham
- Manual Annotations of this start: 4 of 95
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dorito\_57 (CZ4), Peterson\_78 (A1), PhriskyACE\_63 (CZ4), Powerball\_64 (CZ4), Smeagol\_83 (A1),

Start 71:

- Found in 38 of 106 ( 35.8% ) of genes in pham

- Manual Annotations of this start: 27 of 95
- Called 71.1% of time when present
- Phage (with cluster) where this start called: AbbyDaisy\_40 (AY), Atcoo\_61 (P1), Bobi\_79 (F1), Brusacoram\_61 (P1), DillTech15\_73 (F1), Flathead\_71 (F1), Frokostdame\_70 (CV), Ibhubesi\_79 (F1), Juniormint\_54 (P1), Kumotta\_71 (FB), MadMen\_71 (F1), MargaretKali\_67 (FB), Melissauren88\_68 (F1), Ogopogo\_77 (F1), Panchino\_54 (N), Persistence\_39 (AY), Petra\_71 (CV), Phasih\_68 (F1), Renaud18\_90 (F4), Rita\_78 (F1), Sejanus\_77 (AD), ShroomBoi\_74 (F1), Shweta\_57 (N), StevieRay\_64 (P1), Thespis\_61 (P1), ThulaThula\_65 (P5), Whack\_69 (singleton),

#### Start 72:

- Found in 2 of 106 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 2 of 95
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally\_115 (GD1), PauloDiaboli\_115 (GD1),

#### Start 73:

- Found in 2 of 106 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 2 of 95
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bipper\_95 (Y), Cracklewink\_95 (Y),

#### Start 74:

- Found in 21 of 106 ( 19.8% ) of genes in pham
- Manual Annotations of this start: 14 of 95
- Called 71.4% of time when present
- Phage (with cluster) where this start called: Brujita\_60 (I1), Bunnies\_64 (P1), CactusJack\_59 (P1), Farewell\_79 (AF), Glaske\_58 (P1), Island3\_61 (I1), KilKor\_59 (P1), Ksquared\_62 (P1), Mask\_78 (AD), Mozy\_80 (F1), Phalm\_59 (P1), Sparky\_78 (AF), StressBall\_59 (P1), Vidya\_58 (P1), Willsammy\_59 (P1),

#### Start 75:

- Found in 1 of 106 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 95
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Whatsapiecost\_68 (F1),

#### Start 77:

- Found in 93 of 106 ( 87.7% ) of genes in pham
- Manual Annotations of this start: 2 of 95
- Called 7.5% of time when present
- Phage (with cluster) where this start called: Aikyam\_57 (AY), Angelique\_62 (CY1), Bosection6\_57 (N), Gambino\_74 (CV), Polkaroo\_61 (P1), Sashimi\_48 (AY), YoungHarleezy\_46 (AY),

#### Start 78:

- Found in 19 of 106 ( 17.9% ) of genes in pham
- Manual Annotations of this start: 1 of 95
- Called 5.3% of time when present
- Phage (with cluster) where this start called: CaptainKirk2\_69 (CV),

## Summary by clusters:

There are 29 clusters represented in this pham: GD1, singleton, DI, CZ2, CZ3, CZ1, DB, CZ4, Y, FB, AF, I1, I2, A1, DN1, P2, CY1, P1, P6, AD, P5, N, CZ, AY, UNK, CV, F1, F3, F4,

Info for manual annotations of cluster A1:

- Start number 70 was manually annotated 2 times for cluster A1.

Info for manual annotations of cluster AD:

- Start number 71 was manually annotated 1 time for cluster AD.
- Start number 74 was manually annotated 1 time for cluster AD.

Info for manual annotations of cluster AF:

- Start number 74 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AY:

- Start number 68 was manually annotated 1 time for cluster AY.
- Start number 71 was manually annotated 2 times for cluster AY.

Info for manual annotations of cluster CV:

- Start number 65 was manually annotated 4 times for cluster CV.
- Start number 67 was manually annotated 9 times for cluster CV.
- Start number 71 was manually annotated 2 times for cluster CV.
- Start number 77 was manually annotated 1 time for cluster CV.
- Start number 78 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CY1:

- Start number 67 was manually annotated 1 time for cluster CY1.
- Start number 77 was manually annotated 1 time for cluster CY1.

Info for manual annotations of cluster CZ:

- Start number 67 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ2:

- Start number 67 was manually annotated 3 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 62 was manually annotated 1 time for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 67 was manually annotated 4 times for cluster CZ4.
- Start number 70 was manually annotated 2 times for cluster CZ4.

Info for manual annotations of cluster DB:

- Start number 67 was manually annotated 3 times for cluster DB.

Info for manual annotations of cluster DI:

- Start number 65 was manually annotated 4 times for cluster DI.

Info for manual annotations of cluster DN1:

- Start number 69 was manually annotated 1 time for cluster DN1.



Info for manual annotations of cluster F1:

- Start number 41 was manually annotated 2 times for cluster F1.
- Start number 71 was manually annotated 10 times for cluster F1.
- Start number 74 was manually annotated 1 time for cluster F1.
- Start number 75 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F3:

- Start number 42 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 43 was manually annotated 2 times for cluster F4.
- Start number 71 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster FB:

- Start number 71 was manually annotated 2 times for cluster FB.

Info for manual annotations of cluster GD1:

- Start number 72 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster I1:

- Start number 74 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster I2:

- Start number 42 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster N:

- Start number 41 was manually annotated 1 time for cluster N.
- Start number 43 was manually annotated 1 time for cluster N.
- Start number 71 was manually annotated 2 times for cluster N.

Info for manual annotations of cluster P1:

- Start number 71 was manually annotated 5 times for cluster P1.
- Start number 74 was manually annotated 8 times for cluster P1.

Info for manual annotations of cluster P2:

- Start number 42 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P5:

- Start number 71 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:

- Start number 40 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Y:

- Start number 73 was manually annotated 2 times for cluster Y.

**Gene Information:**

Gene: A3Wally\_115 Start: 79463, Stop: 79188, Start Num: 72

Candidate Starts for A3Wally\_115:

(Start: 72 @79463 has 2 MA's), (80, 79391), (136, 79298), (140, 79289), (143, 79259),

Gene: AbbyDaisy\_40 Start: 28577, Stop: 28236, Start Num: 71

Candidate Starts for AbbyDaisy\_40:

(Start: 71 @28577 has 27 MA's), (76, 28562), (Start: 77 @28532 has 2 MA's), (81, 28475), (103, 28436), (138, 28346), (146, 28274),

Gene: Aikyam\_57 Start: 32072, Stop: 32380, Start Num: 77

Candidate Starts for Aikyam\_57:

(Start: 71 @32027 has 27 MA's), (Start: 77 @32072 has 2 MA's), (102, 32180), (110, 32198), (121, 32216), (126, 32231), (138, 32282), (146, 32354),

Gene: Angelique\_62 Start: 44919, Stop: 45251, Start Num: 77

Candidate Starts for Angelique\_62:

(Start: 67 @44877 has 21 MA's), (Start: 77 @44919 has 2 MA's), (104, 45030), (120, 45078), (146, 45216),

Gene: Atcoo\_61 Start: 41458, Stop: 41793, Start Num: 71

Candidate Starts for Atcoo\_61:

(Start: 71 @41458 has 27 MA's), (Start: 74 @41461 has 14 MA's), (Start: 77 @41503 has 2 MA's), (112, 41620), (143, 41728), (146, 41767),

Gene: Attis\_60 Start: 40973, Stop: 41338, Start Num: 67

Candidate Starts for Attis\_60:

(Start: 67 @40973 has 21 MA's), (104, 41117), (146, 41303),

Gene: Azula\_72 Start: 45840, Stop: 46205, Start Num: 67

Candidate Starts for Azula\_72:

(Start: 65 @45837 has 8 MA's), (Start: 67 @45840 has 21 MA's), (Start: 77 @45882 has 2 MA's), (Start: 78 @45897 has 1 MA's), (99, 45981), (143, 46131), (146, 46167),

Gene: Barco\_65 Start: 42185, Stop: 42556, Start Num: 65

Candidate Starts for Barco\_65:

(63, 42182), (Start: 65 @42185 has 8 MA's), (Start: 67 @42188 has 21 MA's), (Start: 77 @42230 has 2 MA's), (Start: 78 @42245 has 1 MA's), (99, 42329), (128, 42407), (143, 42479), (146, 42518),

Gene: BaxterFox\_70 Start: 47064, Stop: 47483, Start Num: 62

Candidate Starts for BaxterFox\_70:

(Start: 62 @47064 has 1 MA's), (Start: 77 @47112 has 2 MA's), (85, 47175), (116, 47256), (125, 47280), (133, 47322), (146, 47448),

Gene: BetterKatz\_72 Start: 48566, Stop: 48934, Start Num: 65

Candidate Starts for BetterKatz\_72:

(45, 48482), (46, 48488), (61, 48554), (Start: 65 @48566 has 8 MA's), (Start: 77 @48611 has 2 MA's), (82, 48671), (132, 48788), (141, 48815), (146, 48881),

Gene: Bipper\_95 Start: 60239, Stop: 60613, Start Num: 73

Candidate Starts for Bipper\_95:

(5, 59825), (7, 59909), (20, 60002), (23, 60011), (32, 60104), (Start: 73 @60239 has 2 MA's), (Start: 77 @60284 has 2 MA's), (Start: 78 @60299 has 1 MA's), (89, 60365), (98, 60386), (137, 60491), (146, 60569),

Gene: BlingBling\_64 Start: 43067, Stop: 43438, Start Num: 65

Candidate Starts for BlingBling\_64:

(63, 43064), (Start: 65 @43067 has 8 MA's), (Start: 67 @43070 has 21 MA's), (Start: 77 @43112 has 2 MA's), (Start: 78 @43127 has 1 MA's), (99, 43211), (143, 43361), (146, 43400),

Gene: Blueberry\_71 Start: 45837, Stop: 46205, Start Num: 65

Candidate Starts for Blueberry\_71:

(Start: 65 @45837 has 8 MA's), (Start: 67 @45840 has 21 MA's), (Start: 77 @45882 has 2 MA's), (Start: 78 @45897 has 1 MA's), (99, 45981), (143, 46131), (146, 46167),

Gene: Bobi\_79 Start: 48352, Stop: 48687, Start Num: 71

Candidate Starts for Bobi\_79:

(Start: 71 @48352 has 27 MA's), (Start: 74 @48355 has 14 MA's), (Start: 77 @48397 has 2 MA's), (112, 48514), (143, 48622), (146, 48661),

Gene: Bock\_73 Start: 48168, Stop: 48518, Start Num: 65

Candidate Starts for Bock\_73:

(Start: 65 @48168 has 8 MA's), (Start: 77 @48213 has 2 MA's), (Start: 78 @48228 has 1 MA's), (95, 48300), (146, 48465), (147, 48468),

Gene: Bosection6\_57 Start: 38193, Stop: 38504, Start Num: 77

Candidate Starts for Bosection6\_57:

(17, 37857), (24, 37917), (26, 37950), (30, 37986), (Start: 41 @38052 has 3 MA's), (Start: 43 @38055 has 3 MA's), (Start: 77 @38193 has 2 MA's), (133, 38376), (146, 38466), (150, 38496),

Gene: Bowser\_60 Start: 41674, Stop: 42021, Start Num: 67

Candidate Starts for Bowser\_60:

(Start: 67 @41674 has 21 MA's), (Start: 77 @41716 has 2 MA's), (105, 41812), (108, 41818), (115, 41836), (143, 41947), (146, 41986),

Gene: Brujita\_60 Start: 39319, Stop: 39651, Start Num: 74

Candidate Starts for Brujita\_60:

(Start: 74 @39319 has 14 MA's), (Start: 77 @39361 has 2 MA's), (112, 39478), (143, 39586),

Gene: Brusacoram\_61 Start: 40001, Stop: 40336, Start Num: 71

Candidate Starts for Brusacoram\_61:

(Start: 71 @40001 has 27 MA's), (Start: 74 @40004 has 14 MA's), (Start: 77 @40046 has 2 MA's), (112, 40163), (143, 40271), (146, 40310),

Gene: Bunnies\_64 Start: 41294, Stop: 41638, Start Num: 74

Candidate Starts for Bunnies\_64:

(Start: 71 @41291 has 27 MA's), (Start: 74 @41294 has 14 MA's), (Start: 77 @41336 has 2 MA's), (112, 41453), (143, 41561), (146, 41600), (150, 41630),

Gene: Bunnybear\_62 Start: 45138, Stop: 45503, Start Num: 67

Candidate Starts for Bunnybear\_62:

(Start: 67 @45138 has 21 MA's), (104, 45282), (143, 45429), (146, 45468),

Gene: CactusJack\_59 Start: 40162, Stop: 40506, Start Num: 74

Candidate Starts for CactusJack\_59:

(Start: 71 @40159 has 27 MA's), (Start: 74 @40162 has 14 MA's), (Start: 77 @40204 has 2 MA's), (112, 40321), (143, 40429), (146, 40468), (150, 40498),

Gene: CaptainKirk2\_69 Start: 41893, Stop: 42204, Start Num: 78  
Candidate Starts for CaptainKirk2\_69:  
(Start: 67 @41836 has 21 MA's), (Start: 78 @41893 has 1 MA's), (99, 41977), (128, 42055), (146, 42166),

Gene: Charlie\_57 Start: 37679, Stop: 38128, Start Num: 43  
Candidate Starts for Charlie\_57:  
(17, 37481), (24, 37541), (26, 37574), (30, 37610), (Start: 41 @37676 has 3 MA's), (Start: 43 @37679 has 3 MA's), (Start: 77 @37817 has 2 MA's), (133, 38000), (146, 38090), (150, 38120),

Gene: Confidence\_67 Start: 44239, Stop: 44604, Start Num: 67  
Candidate Starts for Confidence\_67:  
(Start: 67 @44239 has 21 MA's), (104, 44383), (143, 44530), (146, 44569),

Gene: Cracklewink\_95 Start: 59474, Stop: 59848, Start Num: 73  
Candidate Starts for Cracklewink\_95:  
(20, 59237), (23, 59246), (32, 59339), (Start: 73 @59474 has 2 MA's), (Start: 77 @59519 has 2 MA's), (Start: 78 @59534 has 1 MA's), (89, 59600), (137, 59726),

Gene: Delian\_72 Start: 41834, Stop: 42202, Start Num: 67  
Candidate Starts for Delian\_72:  
(Start: 67 @41834 has 21 MA's), (Start: 78 @41891 has 1 MA's), (99, 41975), (128, 42053), (146, 42164),

Gene: DillTech15\_73 Start: 44178, Stop: 44531, Start Num: 71  
Candidate Starts for DillTech15\_73:  
(52, 44133), (54, 44139), (Start: 71 @44178 has 27 MA's), (Start: 77 @44220 has 2 MA's), (89, 44301), (137, 44427), (143, 44466),

Gene: Dolores\_65 Start: 41484, Stop: 41837, Start Num: 67  
Candidate Starts for Dolores\_65:  
(Start: 67 @41484 has 21 MA's), (Start: 77 @41526 has 2 MA's), (111, 41631), (117, 41652), (127, 41679), (146, 41802),

Gene: Dorito\_57 Start: 39050, Stop: 39421, Start Num: 70  
Candidate Starts for Dorito\_57:  
(32, 38909), (Start: 70 @39050 has 4 MA's), (Start: 77 @39098 has 2 MA's), (97, 39197), (103, 39209), (106, 39215), (146, 39386),

Gene: Easley\_62 Start: 40977, Stop: 41312, Start Num: 67  
Candidate Starts for Easley\_62:  
(Start: 67 @40977 has 21 MA's), (Start: 77 @41019 has 2 MA's), (111, 41124), (117, 41145), (127, 41172), (146, 41277),

Gene: Fairfaxidum\_71 Start: 44423, Stop: 44767, Start Num: 67  
Candidate Starts for Fairfaxidum\_71:  
(Start: 65 @44420 has 8 MA's), (Start: 67 @44423 has 21 MA's), (Start: 77 @44465 has 2 MA's), (82, 44522), (104, 44576), (106, 44582),

Gene: Farewell\_79 Start: 52056, Stop: 52409, Start Num: 74  
Candidate Starts for Farewell\_79:  
(66, 52047), (Start: 74 @52056 has 14 MA's), (Start: 77 @52098 has 2 MA's), (83, 52164), (93, 52182), (127, 52251), (131, 52272), (134, 52290), (143, 52338),

Gene: Flathead\_71 Start: 44823, Stop: 45164, Start Num: 71

Candidate Starts for Flathead\_71:

(Start: 41 @44730 has 3 MA's), (58, 44787), (Start: 71 @44823 has 27 MA's), (Start: 77 @44865 has 2 MA's), (133, 45048), (143, 45099),

Gene: Francois\_72 Start: 48407, Stop: 48832, Start Num: 65

Candidate Starts for Francois\_72:

(35, 48302), (39, 48317), (48, 48341), (Start: 65 @48407 has 8 MA's), (Start: 77 @48452 has 2 MA's), (103, 48566), (109, 48578), (127, 48635), (144, 48758),

Gene: Frokostdame\_70 Start: 45207, Stop: 45515, Start Num: 71

Candidate Starts for Frokostdame\_70:

(Start: 71 @45207 has 27 MA's), (Start: 77 @45249 has 2 MA's), (89, 45318), (96, 45336), (130, 45390), (142, 45420), (146, 45477),

Gene: Gambino\_74 Start: 45882, Stop: 46205, Start Num: 77

Candidate Starts for Gambino\_74:

(Start: 65 @45837 has 8 MA's), (Start: 67 @45840 has 21 MA's), (Start: 77 @45882 has 2 MA's), (Start: 78 @45897 has 1 MA's), (99, 45981), (143, 46131), (146, 46167),

Gene: Glaske\_58 Start: 40162, Stop: 40506, Start Num: 74

Candidate Starts for Glaske\_58:

(Start: 71 @40159 has 27 MA's), (Start: 74 @40162 has 14 MA's), (Start: 77 @40204 has 2 MA's), (112, 40321), (143, 40429), (146, 40468), (150, 40498),

Gene: Hyzer\_79 Start: 52741, Stop: 53109, Start Num: 67

Candidate Starts for Hyzer\_79:

(Start: 67 @52741 has 21 MA's), (104, 52885), (143, 53032), (146, 53071),

Gene: Ibhubesi\_79 Start: 46556, Stop: 46915, Start Num: 71

Candidate Starts for Ibhubesi\_79:

(55, 46514), (59, 46532), (Start: 71 @46556 has 27 MA's), (Start: 77 @46598 has 2 MA's), (133, 46781), (145, 46865), (146, 46871), (148, 46877),

Gene: Island3\_61 Start: 39319, Stop: 39651, Start Num: 74

Candidate Starts for Island3\_61:

(Start: 74 @39319 has 14 MA's), (Start: 77 @39361 has 2 MA's), (112, 39478), (143, 39586),

Gene: Journey\_53 Start: 35411, Stop: 35842, Start Num: 41

Candidate Starts for Journey\_53:

(19, 35267), (25, 35282), (26, 35309), (30, 35345), (Start: 41 @35411 has 3 MA's), (Start: 43 @35414 has 3 MA's), (Start: 77 @35552 has 2 MA's), (112, 35669), (143, 35777), (146, 35816),

Gene: JuJu\_76 Start: 47574, Stop: 47936, Start Num: 65

Candidate Starts for JuJu\_76:

(Start: 65 @47574 has 8 MA's), (Start: 67 @47577 has 21 MA's), (Start: 77 @47619 has 2 MA's), (Start: 78 @47634 has 1 MA's), (86, 47682), (95, 47700), (109, 47718), (127, 47772), (139, 47820), (146, 47898),

Gene: Juniormint\_54 Start: 36223, Stop: 36555, Start Num: 71

Candidate Starts for Juniormint\_54:

(Start: 71 @36223 has 27 MA's), (Start: 77 @36265 has 2 MA's), (112, 36382), (143, 36490), (146, 36529),

Gene: Kamaru\_70 Start: 42911, Stop: 43327, Start Num: 69

Candidate Starts for Kamaru\_70:

(38, 42809), (Start: 41 @42815 has 3 MA's), (56, 42866), (Start: 69 @42911 has 1 MA's), (80, 42995), (101, 43073), (119, 43130), (123, 43142), (132, 43187), (142, 43226), (146, 43283),

Gene: Khuang\_38 Start: 25760, Stop: 25416, Start Num: 64

Candidate Starts for Khuang\_38:

(64, 25760), (76, 25736), (Start: 77 @25706 has 2 MA's), (79, 25685),

Gene: KilKor\_59 Start: 40855, Stop: 41199, Start Num: 74

Candidate Starts for KilKor\_59:

(Start: 71 @40852 has 27 MA's), (Start: 74 @40855 has 14 MA's), (Start: 77 @40897 has 2 MA's), (112, 41014), (143, 41122), (146, 41161), (150, 41191),

Gene: Ksquared\_62 Start: 41294, Stop: 41638, Start Num: 74

Candidate Starts for Ksquared\_62:

(Start: 71 @41291 has 27 MA's), (Start: 74 @41294 has 14 MA's), (Start: 77 @41336 has 2 MA's), (112, 41453), (143, 41561), (146, 41600), (150, 41630),

Gene: Kumotta\_71 Start: 37919, Stop: 38248, Start Num: 71

Candidate Starts for Kumotta\_71:

(Start: 71 @37919 has 27 MA's), (Start: 77 @37964 has 2 MA's), (94, 38042), (100, 38051), (129, 38111), (135, 38144), (146, 38222),

Gene: LordFarquaad\_62 Start: 40954, Stop: 41319, Start Num: 67

Candidate Starts for LordFarquaad\_62:

(Start: 67 @40954 has 21 MA's), (104, 41098), (146, 41284),

Gene: LunaStella\_71 Start: 45366, Stop: 45794, Start Num: 43

Candidate Starts for LunaStella\_71:

(6, 45066), (26, 45261), (30, 45297), (Start: 41 @45363 has 3 MA's), (Start: 43 @45366 has 3 MA's), (Start: 77 @45504 has 2 MA's), (112, 45621), (143, 45729), (146, 45768),

Gene: MadMen\_71 Start: 44891, Stop: 45229, Start Num: 71

Candidate Starts for MadMen\_71:

(51, 44849), (54, 44855), (Start: 71 @44891 has 27 MA's), (Start: 77 @44933 has 2 MA's), (112, 45050), (143, 45158), (146, 45197), (149, 45224),

Gene: MagicMan\_62 Start: 42714, Stop: 43088, Start Num: 67

Candidate Starts for MagicMan\_62:

(Start: 67 @42714 has 21 MA's), (Start: 77 @42756 has 2 MA's), (104, 42867), (113, 42888), (120, 42915),

Gene: MargaretKali\_67 Start: 36537, Stop: 36866, Start Num: 71

Candidate Starts for MargaretKali\_67:

(Start: 71 @36537 has 27 MA's), (Start: 77 @36582 has 2 MA's), (94, 36660), (100, 36669), (129, 36729), (135, 36762), (146, 36840),

Gene: Mask\_78 Start: 57551, Stop: 57895, Start Num: 74

Candidate Starts for Mask\_78:

(10, 57227), (14, 57245), (29, 57371), (57, 57506), (Start: 74 @57551 has 14 MA's), (Start: 77 @57593 has 2 MA's), (92, 57674), (122, 57728), (135, 57779),

Gene: Melissauren88\_68 Start: 43644, Stop: 43991, Start Num: 71

Candidate Starts for Melissauren88\_68:

(Start: 71 @43644 has 27 MA's), (Start: 77 @43686 has 2 MA's), (133, 43869), (143, 43920), (146, 43959), (149, 43986),

Gene: MintFen\_69 Start: 42450, Stop: 42818, Start Num: 67

Candidate Starts for MintFen\_69:

(Start: 67 @42450 has 21 MA's), (Start: 78 @42507 has 1 MA's), (99, 42591), (128, 42669), (146, 42780),

Gene: Misha28\_74 Start: 45990, Stop: 46421, Start Num: 41

Candidate Starts for Misha28\_74:

(26, 45888), (30, 45924), (Start: 41 @45990 has 3 MA's), (Start: 43 @45993 has 3 MA's), (Start: 77 @46131 has 2 MA's), (112, 46248), (143, 46356), (146, 46395),

Gene: MissRona\_72 Start: 45841, Stop: 46206, Start Num: 67

Candidate Starts for MissRona\_72:

(Start: 65 @45838 has 8 MA's), (Start: 67 @45841 has 21 MA's), (Start: 77 @45883 has 2 MA's), (Start: 78 @45898 has 1 MA's), (99, 45982), (143, 46132), (146, 46168),

Gene: Mozy\_80 Start: 45738, Stop: 46079, Start Num: 74

Candidate Starts for Mozy\_80:

(37, 45645), (57, 45702), (Start: 74 @45738 has 14 MA's), (Start: 77 @45780 has 2 MA's), (92, 45861), (122, 45915), (135, 45966), (146, 46047), (149, 46074),

Gene: Obliviate\_67 Start: 42359, Stop: 42727, Start Num: 67

Candidate Starts for Obliviate\_67:

(Start: 67 @42359 has 21 MA's), (Start: 77 @42401 has 2 MA's), (Start: 78 @42416 has 1 MA's), (99, 42500), (128, 42578), (143, 42650), (146, 42689),

Gene: Ogopogo\_77 Start: 45102, Stop: 45455, Start Num: 71

Candidate Starts for Ogopogo\_77:

(36, 45006), (54, 45063), (Start: 71 @45102 has 27 MA's), (Start: 77 @45144 has 2 MA's), (89, 45225), (137, 45351), (143, 45390),

Gene: Opie\_65 Start: 42832, Stop: 43206, Start Num: 67

Candidate Starts for Opie\_65:

(Start: 67 @42832 has 21 MA's), (Start: 77 @42874 has 2 MA's), (104, 42985), (113, 43006), (120, 43033),

Gene: Panchino\_54 Start: 38226, Stop: 38558, Start Num: 71

Candidate Starts for Panchino\_54:

(Start: 71 @38226 has 27 MA's), (Start: 77 @38268 has 2 MA's), (112, 38385), (143, 38493),

Gene: PauloDiaboli\_115 Start: 78808, Stop: 78533, Start Num: 72

Candidate Starts for PauloDiaboli\_115:

(Start: 72 @78808 has 2 MA's), (80, 78736), (136, 78643), (140, 78634), (143, 78604),

Gene: Persistence\_39 Start: 27398, Stop: 27057, Start Num: 71

Candidate Starts for Persistence\_39:

(Start: 71 @27398 has 27 MA's), (76, 27383), (Start: 77 @27353 has 2 MA's), (81, 27296), (100, 27266), (103, 27257), (138, 27167), (146, 27095),

Gene: Peterson\_78 Start: 48630, Stop: 48289, Start Num: 70

Candidate Starts for Peterson\_78:

(60, 48654), (Start: 70 @48630 has 4 MA's), (Start: 77 @48588 has 2 MA's), (90, 48516), (118, 48462), (146, 48333), (148, 48327),

Gene: Petra\_71 Start: 43963, Stop: 44358, Start Num: 71

Candidate Starts for Petra\_71:

(49, 43900), (60, 43939), (Start: 71 @43963 has 27 MA's), (Start: 74 @43966 has 14 MA's), (Start: 77 @44008 has 2 MA's), (87, 44077), (136, 44239), (143, 44281), (146, 44320),

Gene: Phalm\_59 Start: 40162, Stop: 40506, Start Num: 74

Candidate Starts for Phalm\_59:

(Start: 71 @40159 has 27 MA's), (Start: 74 @40162 has 14 MA's), (Start: 77 @40204 has 2 MA's), (112, 40321), (143, 40429), (146, 40468), (150, 40498),

Gene: Phasih\_68 Start: 44413, Stop: 44874, Start Num: 71

Candidate Starts for Phasih\_68:

(51, 44371), (54, 44377), (Start: 71 @44413 has 27 MA's), (Start: 77 @44455 has 2 MA's), (112, 44572), (143, 44680), (149, 44746), (151, 44785),

Gene: PhriskyACE\_63 Start: 42055, Stop: 42390, Start Num: 70

Candidate Starts for PhriskyACE\_63:

(1, 41236), (2, 41281), (3, 41332), (32, 41914), (Start: 70 @42055 has 4 MA's), (Start: 77 @42103 has 2 MA's), (95, 42190), (146, 42355),

Gene: PhrostedPhlake\_73 Start: 44238, Stop: 44606, Start Num: 67

Candidate Starts for PhrostedPhlake\_73:

(Start: 67 @44238 has 21 MA's), (Start: 77 @44280 has 2 MA's), (Start: 78 @44295 has 1 MA's), (86, 44346), (99, 44379), (143, 44529),

Gene: Pimento\_74 Start: 47870, Stop: 48292, Start Num: 65

Candidate Starts for Pimento\_74:

(Start: 65 @47870 has 8 MA's), (Start: 77 @47915 has 2 MA's), (103, 48029), (114, 48053), (127, 48098), (144, 48221), (146, 48239),

Gene: Pipp\_72 Start: 44407, Stop: 44775, Start Num: 67

Candidate Starts for Pipp\_72:

(Start: 67 @44407 has 21 MA's), (99, 44548), (128, 44626), (143, 44698), (146, 44737),

Gene: Polkaroo\_61 Start: 40802, Stop: 41101, Start Num: 77

Candidate Starts for Polkaroo\_61:

(Start: 71 @40760 has 27 MA's), (Start: 77 @40802 has 2 MA's), (133, 40985),

Gene: Powerball\_64 Start: 42164, Stop: 42493, Start Num: 70

Candidate Starts for Powerball\_64:

(1, 41345), (2, 41390), (3, 41441), (32, 42023), (Start: 70 @42164 has 4 MA's), (Start: 77 @42212 has 2 MA's), (95, 42299), (146, 42458),

Gene: Purky\_72 Start: 44925, Stop: 45359, Start Num: 40

Candidate Starts for Purky\_72:



(21, 44793), (22, 44796), (Start: 40 @44925 has 1 MA's), (Start: 43 @44928 has 3 MA's), (Start: 77 @45066 has 2 MA's), (92, 45147), (122, 45201), (135, 45252),

Gene: Renaud18\_90 Start: 49824, Stop: 50195, Start Num: 71

Candidate Starts for Renaud18\_90:

(60, 49800), (Start: 71 @49824 has 27 MA's), (Start: 77 @49866 has 2 MA's), (89, 49947), (137, 50073), (146, 50151),

Gene: Richie\_48 Start: 30189, Stop: 30533, Start Num: 68

Candidate Starts for Richie\_48:

(Start: 68 @30189 has 1 MA's), (Start: 77 @30237 has 2 MA's), (Start: 78 @30252 has 1 MA's), (100, 30318), (107, 30333), (121, 30360), (142, 30441), (146, 30498),

Gene: Rita\_78 Start: 47814, Stop: 48281, Start Num: 71

Candidate Starts for Rita\_78:

(51, 47766), (54, 47772), (Start: 71 @47814 has 27 MA's), (Start: 77 @47856 has 2 MA's), (112, 47973), (143, 48081), (149, 48147), (151, 48186),

Gene: Sashimi\_48 Start: 31181, Stop: 31513, Start Num: 77

Candidate Starts for Sashimi\_48:

(Start: 71 @31136 has 27 MA's), (Start: 77 @31181 has 2 MA's), (91, 31274), (115, 31328),

Gene: Sbash\_73 Start: 47394, Stop: 47846, Start Num: 42

Candidate Starts for Sbash\_73:

(19, 47247), (Start: 42 @47394 has 3 MA's), (44, 47397), (Start: 77 @47535 has 2 MA's), (89, 47616), (137, 47742),

Gene: Scitech\_56 Start: 38238, Stop: 38633, Start Num: 42

Candidate Starts for Scitech\_56:

(28, 38148), (34, 38208), (Start: 42 @38238 has 3 MA's), (44, 38241), (Start: 77 @38379 has 2 MA's), (89, 38448), (96, 38466), (130, 38520),

Gene: Sejanus\_77 Start: 56012, Stop: 56353, Start Num: 71

Candidate Starts for Sejanus\_77:

(8, 55688), (11, 55706), (27, 55832), (53, 55967), (Start: 71 @56012 has 27 MA's), (Start: 77 @56054 has 2 MA's), (133, 56237),

Gene: Sekhmet\_64 Start: 41883, Stop: 42236, Start Num: 67

Candidate Starts for Sekhmet\_64:

(Start: 67 @41883 has 21 MA's), (Start: 77 @41925 has 2 MA's), (111, 42030), (117, 42051), (127, 42078), (146, 42201),

Gene: ShroomBoi\_74 Start: 46463, Stop: 46810, Start Num: 71

Candidate Starts for ShroomBoi\_74:

(Start: 41 @46370 has 3 MA's), (58, 46427), (Start: 71 @46463 has 27 MA's), (Start: 77 @46505 has 2 MA's), (133, 46688), (143, 46739), (146, 46778), (149, 46805),

Gene: Shweta\_57 Start: 37933, Stop: 38274, Start Num: 71

Candidate Starts for Shweta\_57:

(Start: 71 @37933 has 27 MA's), (Start: 77 @37975 has 2 MA's), (133, 38158),

Gene: Smeagol\_83 Start: 50364, Stop: 50023, Start Num: 70

Candidate Starts for Smeagol\_83:

(Start: 70 @50364 has 4 MA's), (Start: 77 @50322 has 2 MA's), (90, 50250), (118, 50196), (146, 50067), (148, 50061),

Gene: SoilAssassin\_60 Start: 40972, Stop: 41337, Start Num: 67

Candidate Starts for SoilAssassin\_60:

(Start: 67 @40972 has 21 MA's), (104, 41116), (146, 41302),

Gene: Sparky\_78 Start: 53650, Stop: 54003, Start Num: 74

Candidate Starts for Sparky\_78:

(66, 53641), (Start: 74 @53650 has 14 MA's), (Start: 77 @53692 has 2 MA's), (83, 53758), (93, 53776), (127, 53845), (131, 53866), (134, 53884), (143, 53932),

Gene: Squirty\_74 Start: 49246, Stop: 49641, Start Num: 42

Candidate Starts for Squirty\_74:

(9, 49012), (16, 49048), (28, 49156), (34, 49216), (Start: 42 @49246 has 3 MA's), (44, 49249), (Start: 77 @49387 has 2 MA's), (89, 49456), (96, 49474), (130, 49528),

Gene: StevieRay\_64 Start: 41228, Stop: 41569, Start Num: 71

Candidate Starts for StevieRay\_64:

(Start: 69 @41225 has 1 MA's), (Start: 71 @41228 has 27 MA's), (Start: 77 @41270 has 2 MA's), (133, 41453), (143, 41504),

Gene: StressBall\_59 Start: 40162, Stop: 40506, Start Num: 74

Candidate Starts for StressBall\_59:

(Start: 71 @40159 has 27 MA's), (Start: 74 @40162 has 14 MA's), (Start: 77 @40204 has 2 MA's), (112, 40321), (143, 40429), (146, 40468), (150, 40498),

Gene: TChen\_73 Start: 47317, Stop: 47745, Start Num: 43

Candidate Starts for TChen\_73:

(6, 47017), (26, 47212), (30, 47248), (Start: 41 @47314 has 3 MA's), (Start: 43 @47317 has 3 MA's), (Start: 77 @47455 has 2 MA's), (112, 47572), (143, 47680), (146, 47719),

Gene: TaronosaurusRx\_68 Start: 42279, Stop: 42626, Start Num: 67

Candidate Starts for TaronosaurusRx\_68:

(Start: 67 @42279 has 21 MA's), (Start: 77 @42321 has 2 MA's), (105, 42417), (108, 42423), (115, 42441), (143, 42552), (146, 42591),

Gene: Thespis\_61 Start: 40001, Stop: 40336, Start Num: 71

Candidate Starts for Thespis\_61:

(Start: 71 @40001 has 27 MA's), (Start: 74 @40004 has 14 MA's), (Start: 77 @40046 has 2 MA's), (112, 40163), (143, 40271), (146, 40310),

Gene: ThulaThula\_65 Start: 43845, Stop: 44189, Start Num: 71

Candidate Starts for ThulaThula\_65:

(4, 43398), (12, 43536), (13, 43542), (15, 43554), (18, 43581), (31, 43695), (Start: 71 @43845 has 27 MA's), (Start: 74 @43848 has 14 MA's), (Start: 77 @43890 has 2 MA's), (84, 43953), (88, 43962), (92, 43977),

Gene: TootsiePop\_74 Start: 45990, Stop: 46421, Start Num: 41

Candidate Starts for TootsiePop\_74:

(26, 45888), (30, 45924), (Start: 41 @45990 has 3 MA's), (Start: 43 @45993 has 3 MA's), (Start: 77 @46131 has 2 MA's), (112, 46248), (143, 46356), (146, 46395),

Gene: Tortellini\_66 Start: 44536, Stop: 45000, Start Num: 42

Candidate Starts for Tortellini\_66:

(33, 44500), (Start: 42 @44536 has 3 MA's), (44, 44539), (Start: 77 @44677 has 2 MA's), (89, 44758), (137, 44884), (146, 44962), (150, 44992),

Gene: Vidya\_58 Start: 38673, Stop: 39005, Start Num: 74

Candidate Starts for Vidya\_58:

(Start: 74 @38673 has 14 MA's), (Start: 77 @38715 has 2 MA's), (112, 38832), (143, 38940),

Gene: Whack\_69 Start: 45414, Stop: 45812, Start Num: 71

Candidate Starts for Whack\_69:

(50, 45354), (Start: 71 @45414 has 27 MA's), (Start: 77 @45462 has 2 MA's), (Start: 78 @45477 has 1 MA's), (90, 45543), (91, 45546), (124, 45636), (145, 45771),

Gene: Whatsapiecost\_68 Start: 41989, Stop: 42354, Start Num: 75

Candidate Starts for Whatsapiecost\_68:

(47, 41896), (59, 41953), (Start: 75 @41989 has 1 MA's), (Start: 77 @42031 has 2 MA's), (91, 42115), (136, 42244), (146, 42322), (149, 42349),

Gene: Willsammy\_59 Start: 40338, Stop: 40682, Start Num: 74

Candidate Starts for Willsammy\_59:

(Start: 71 @40335 has 27 MA's), (Start: 74 @40338 has 14 MA's), (Start: 77 @40380 has 2 MA's), (112, 40497), (143, 40605), (146, 40644), (150, 40674),

Gene: WinkNick\_65 Start: 41407, Stop: 41760, Start Num: 67

Candidate Starts for WinkNick\_65:

(Start: 67 @41407 has 21 MA's), (Start: 77 @41449 has 2 MA's), (111, 41554), (117, 41575), (127, 41602), (146, 41725),

Gene: YoungHarleezy\_46 Start: 29842, Stop: 30138, Start Num: 77

Candidate Starts for YoungHarleezy\_46:

(Start: 68 @29794 has 1 MA's), (Start: 77 @29842 has 2 MA's), (Start: 78 @29857 has 1 MA's), (100, 29923), (107, 29938), (121, 29965), (142, 30046), (146, 30103),

Gene: Zarbodnamra\_70 Start: 42931, Stop: 43299, Start Num: 67

Candidate Starts for Zarbodnamra\_70:

(Start: 67 @42931 has 21 MA's), (Start: 77 @42973 has 2 MA's), (Start: 78 @42988 has 1 MA's), (99, 43072), (128, 43150), (143, 43222), (146, 43261),