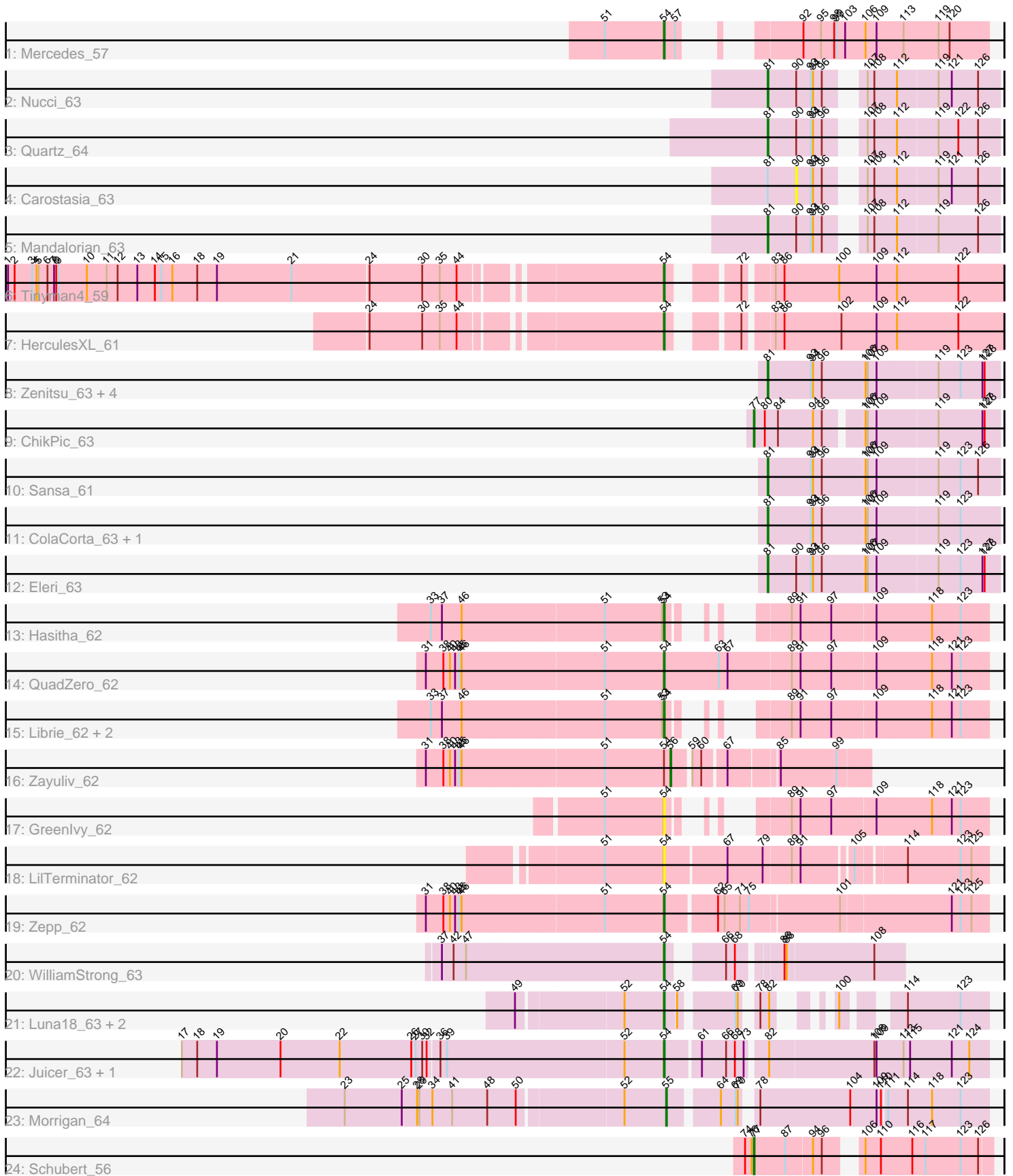


# Pham 163791



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 163791 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163791 has 34 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Mercedes\_57
- Track 2 : Nucci\_63
- Track 3 : Quartz\_64
- Track 4 : Carostasia\_63
- Track 5 : Mandalorian\_63
- Track 6 : Tinyman4\_59
- Track 7 : HerculesXL\_61
- Track 8 : Zenitsu\_63, MCubed\_63, Saratos\_63, Shamu\_63, Glamour\_62
- Track 9 : ChikPic\_63
- Track 10 : Sansa\_61
- Track 11 : ColaCorta\_63, Andromedas\_63
- Track 12 : Eleri\_63
- Track 13 : Hasitha\_62
- Track 14 : QuadZero\_62
- Track 15 : Librie\_62, CaptainRex\_62, Fulton\_62
- Track 16 : Zayuliv\_62
- Track 17 : Greenlvy\_62
- Track 18 : LilTerminator\_62
- Track 19 : Zepp\_62
- Track 20 : WilliamStrong\_63
- Track 21 : Luna18\_63, KatChan\_62, Chepli\_63
- Track 22 : Juicer\_63, Jemerald\_63
- Track 23 : Morigan\_64
- Track 24 : Schubert\_56

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

The start number called the most often in the published annotations is 54, it was called in 14 of the 30 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- CaptainRex\_62, Chepli\_63, Fulton\_62, Greenlvy\_62, Hasitha\_62, HerculesXL\_61, Jemerald\_63, Juicer\_63, KatChan\_62, Librie\_62, LilTerminator\_62, Luna18\_63, Mercedes\_57, QuadZero\_62, Tinyman4\_59, WilliamStrong\_63, Zepp\_62,

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

- Zayuliv\_62,

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

- Andromedas\_63, Carostasia\_63, ChikPic\_63, ColaCorta\_63, Eleri\_63, Glamour\_62, MCubed\_63, Mandalorian\_63, Morrigan\_64, Nucci\_63, Quartz\_64, Sansa\_61, Saratos\_63, Schubert\_56, Shamu\_63, Zenitsu\_63,

### Summary by start number:

Start 54:

- Found in 18 of 34 ( 52.9% ) of genes in pham
- Manual Annotations of this start: 14 of 30
- Called 94.4% of time when present
- Phage (with cluster) where this start called: CaptainRex\_62 (EA5), Chepli\_63 (EA6), Fulton\_62 (EA5), Greenlvy\_62 (EA5), Hasitha\_62 (EA5), HerculesXL\_61 (EA11), Jemerald\_63 (EA6), Juicer\_63 (EA6), KatChan\_62 (EA6), Librie\_62 (EA5), LilTerminator\_62 (EA5), Luna18\_63 (EA6), Mercedes\_57 (EA), QuadZero\_62 (EA5), Tinyman4\_59 (EA11), WilliamStrong\_63 (EA6), Zepp\_62 (EA5),

Start 55:

- Found in 1 of 34 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 1 of 30
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Morrigan\_64 (EA6),

Start 56:

- Found in 1 of 34 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 1 of 30
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zayuliv\_62 (EA5),

Start 77:

- Found in 2 of 34 ( 5.9% ) of genes in pham
- Manual Annotations of this start: 2 of 30
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ChikPic\_63 (EA2), Schubert\_56 (EA8),

Start 81:

- Found in 13 of 34 ( 38.2% ) of genes in pham
- Manual Annotations of this start: 12 of 30
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Andromedas\_63 (EA2), ColaCorta\_63 (EA2), Eleri\_63 (EA2), Glamour\_62 (EA2), MCubed\_63 (EA2), Mandalorian\_63 (EA10), Nucci\_63 (EA10), Quartz\_64 (EA10), Sansa\_61 (EA2), Saratos\_63 (EA2), Shamu\_63 (EA2), Zenitsu\_63 (EA2),

Start 90:

- Found in 5 of 34 ( 14.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Carostasia\_63 (EA10),

## Summary by clusters:

There are 7 clusters represented in this pham: EA11, EA10, EA, EA8, EA2, EA5, EA6,

Info for manual annotations of cluster EA:

- Start number 54 was manually annotated 1 time for cluster EA.

Info for manual annotations of cluster EA10:

- Start number 81 was manually annotated 3 times for cluster EA10.

Info for manual annotations of cluster EA11:

- Start number 54 was manually annotated 2 times for cluster EA11.

Info for manual annotations of cluster EA2:

- Start number 77 was manually annotated 1 time for cluster EA2.
- Start number 81 was manually annotated 9 times for cluster EA2.

Info for manual annotations of cluster EA5:

- Start number 54 was manually annotated 5 times for cluster EA5.
- Start number 56 was manually annotated 1 time for cluster EA5.

Info for manual annotations of cluster EA6:

- Start number 54 was manually annotated 6 times for cluster EA6.
- Start number 55 was manually annotated 1 time for cluster EA6.

Info for manual annotations of cluster EA8:

- Start number 77 was manually annotated 1 time for cluster EA8.

## Gene Information:

Gene: Andromedas\_63 Start: 39976, Stop: 40287, Start Num: 81

Candidate Starts for Andromedas\_63:

(Start: 81 @39976 has 12 MA's), (93, 40033), (94, 40036), (96, 40048), (106, 40108), (107, 40111), (109, 40123), (119, 40204), (123, 40234),

Gene: CaptainRex\_62 Start: 39228, Stop: 39563, Start Num: 54

Candidate Starts for CaptainRex\_62:

(33, 38916), (37, 38931), (46, 38958), (51, 39147), (53, 39225), (Start: 54 @39228 has 14 MA's), (89, 39300), (91, 39312), (97, 39354), (109, 39411), (118, 39486), (121, 39513), (123, 39525),

Gene: Carostasia\_63 Start: 40062, Stop: 40301, Start Num: 90

Candidate Starts for Carostasia\_63:

(Start: 81 @40023 has 12 MA's), (90, 40062), (93, 40080), (94, 40083), (96, 40095), (107, 40125), (108, 40134), (112, 40164), (119, 40218), (121, 40236), (126, 40272),

Gene: Chepli\_63 Start: 39731, Stop: 40042, Start Num: 54

Candidate Starts for Chepli\_63:

(49, 39542), (52, 39677), (Start: 54 @39731 has 14 MA's), (58, 39746), (69, 39809), (70, 39812), (78, 39824), (82, 39836), (100, 39872), (114, 39932), (123, 40004),

Gene: ChikPic\_63 Start: 39809, Stop: 40126, Start Num: 77

Candidate Starts for ChikPic\_63:

(Start: 77 @39809 has 2 MA's), (80, 39824), (84, 39842), (94, 39890), (96, 39902), (106, 39947), (107, 39950), (109, 39962), (119, 40043), (127, 40103), (128, 40106),

Gene: ColaCorta\_63 Start: 39976, Stop: 40287, Start Num: 81

Candidate Starts for ColaCorta\_63:

(Start: 81 @39976 has 12 MA's), (93, 40033), (94, 40036), (96, 40048), (106, 40108), (107, 40111), (109, 40123), (119, 40204), (123, 40234),

Gene: Eleri\_63 Start: 39848, Stop: 40159, Start Num: 81

Candidate Starts for Eleri\_63:

(Start: 81 @39848 has 12 MA's), (90, 39887), (93, 39905), (94, 39908), (96, 39920), (106, 39980), (107, 39983), (109, 39995), (119, 40076), (123, 40106), (127, 40136), (128, 40139),

Gene: Fulton\_62 Start: 39229, Stop: 39564, Start Num: 54

Candidate Starts for Fulton\_62:

(33, 38917), (37, 38932), (46, 38959), (51, 39148), (53, 39226), (Start: 54 @39229 has 14 MA's), (89, 39301), (91, 39313), (97, 39355), (109, 39412), (118, 39487), (121, 39514), (123, 39526),

Gene: Glamour\_62 Start: 39706, Stop: 40017, Start Num: 81

Candidate Starts for Glamour\_62:

(Start: 81 @39706 has 12 MA's), (93, 39763), (94, 39766), (96, 39778), (106, 39838), (107, 39841), (109, 39853), (119, 39934), (123, 39964), (127, 39994), (128, 39997),

Gene: Greenlvy\_62 Start: 39603, Stop: 39938, Start Num: 54

Candidate Starts for Greenlvy\_62:

(51, 39522), (Start: 54 @39603 has 14 MA's), (89, 39675), (91, 39687), (97, 39729), (109, 39786), (118, 39861), (121, 39888), (123, 39900),

Gene: Hasitha\_62 Start: 39239, Stop: 39574, Start Num: 54

Candidate Starts for Hasitha\_62:

(33, 38927), (37, 38942), (46, 38969), (51, 39158), (53, 39236), (Start: 54 @39239 has 14 MA's), (89, 39311), (91, 39323), (97, 39365), (109, 39422), (118, 39497), (123, 39536),

Gene: HerculesXL\_61 Start: 38678, Stop: 39088, Start Num: 54

Candidate Starts for HerculesXL\_61:

(24, 38312), (30, 38384), (35, 38408), (44, 38429), (Start: 54 @38678 has 14 MA's), (72, 38744), (83, 38777), (86, 38789), (102, 38867), (109, 38915), (112, 38942), (122, 39026),

Gene: Jemerald\_63 Start: 40506, Stop: 40928, Start Num: 54

Candidate Starts for Jemerald\_63:

(17, 39861), (18, 39882), (19, 39909), (20, 39996), (22, 40077), (26, 40173), (27, 40179), (30, 40188), (32, 40194), (36, 40209), (39, 40218), (52, 40452), (Start: 54 @40506 has 14 MA's), (61, 40551), (66, 40584), (68, 40596), (73, 40608), (82, 40632), (108, 40773), (109, 40776), (113, 40812), (115, 40821), (121, 40878), (124, 40902),

Gene: Juicer\_63 Start: 40506, Stop: 40928, Start Num: 54

Candidate Starts for Juicer\_63:

(17, 39861), (18, 39882), (19, 39909), (20, 39996), (22, 40077), (26, 40173), (27, 40179), (30, 40188), (32, 40194), (36, 40209), (39, 40218), (52, 40452), (Start: 54 @40506 has 14 MA's), (61, 40551), (66, 40584), (68, 40596), (73, 40608), (82, 40632), (108, 40773), (109, 40776), (113, 40812), (115, 40821),

(121, 40878), (124, 40902),

Gene: KatChan\_62 Start: 39748, Stop: 40059, Start Num: 54

Candidate Starts for KatChan\_62:

(49, 39559), (52, 39694), (Start: 54 @39748 has 14 MA's), (58, 39763), (69, 39826), (70, 39829), (78, 39841), (82, 39853), (100, 39889), (114, 39949), (123, 40021),

Gene: Librie\_62 Start: 39228, Stop: 39563, Start Num: 54

Candidate Starts for Librie\_62:

(33, 38916), (37, 38931), (46, 38958), (51, 39147), (53, 39225), (Start: 54 @39228 has 14 MA's), (89, 39300), (91, 39312), (97, 39354), (109, 39411), (118, 39486), (121, 39513), (123, 39525),

Gene: LilTerminator\_62 Start: 39240, Stop: 39647, Start Num: 54

Candidate Starts for LilTerminator\_62:

(51, 39159), (Start: 54 @39240 has 14 MA's), (67, 39321), (79, 39369), (89, 39405), (91, 39417), (105, 39477), (114, 39537), (123, 39609), (125, 39624),

Gene: Luna18\_63 Start: 39748, Stop: 40059, Start Num: 54

Candidate Starts for Luna18\_63:

(49, 39559), (52, 39694), (Start: 54 @39748 has 14 MA's), (58, 39763), (69, 39826), (70, 39829), (78, 39841), (82, 39853), (100, 39889), (114, 39949), (123, 40021),

Gene: MCubed\_63 Start: 39863, Stop: 40174, Start Num: 81

Candidate Starts for MCubed\_63:

(Start: 81 @39863 has 12 MA's), (93, 39920), (94, 39923), (96, 39935), (106, 39995), (107, 39998), (109, 40010), (119, 40091), (123, 40121), (127, 40151), (128, 40154),

Gene: Mandalorian\_63 Start: 40034, Stop: 40312, Start Num: 81

Candidate Starts for Mandalorian\_63:

(Start: 81 @40034 has 12 MA's), (90, 40073), (93, 40091), (94, 40094), (96, 40106), (107, 40136), (108, 40145), (112, 40175), (119, 40229), (126, 40283),

Gene: Mercedes\_57 Start: 39485, Stop: 39826, Start Num: 54

Candidate Starts for Mercedes\_57:

(51, 39404), (Start: 54 @39485 has 14 MA's), (57, 39500), (92, 39575), (95, 39599), (98, 39617), (99, 39620), (103, 39632), (106, 39659), (109, 39674), (113, 39710), (119, 39758), (120, 39773),

Gene: Morrigan\_64 Start: 39803, Stop: 40204, Start Num: 55

Candidate Starts for Morrigan\_64:

(23, 39377), (25, 39455), (28, 39476), (29, 39479), (34, 39497), (41, 39524), (48, 39572), (50, 39611), (52, 39746), (Start: 55 @39803 has 1 MA's), (64, 39863), (69, 39881), (70, 39884), (78, 39896), (104, 40019), (109, 40055), (110, 40061), (111, 40067), (114, 40094), (118, 40127), (123, 40166),

Gene: Nucci\_63 Start: 40003, Stop: 40281, Start Num: 81

Candidate Starts for Nucci\_63:

(Start: 81 @40003 has 12 MA's), (90, 40042), (93, 40060), (94, 40063), (96, 40075), (107, 40105), (108, 40114), (112, 40144), (119, 40198), (121, 40216), (126, 40252),

Gene: QuadZero\_62 Start: 39331, Stop: 39765, Start Num: 54

Candidate Starts for QuadZero\_62:

(31, 39013), (38, 39037), (40, 39046), (43, 39052), (45, 39058), (46, 39061), (51, 39250), (Start: 54 @39331 has 14 MA's), (63, 39406), (67, 39418), (89, 39502), (91, 39514), (97, 39556), (109, 39613), (118, 39688), (121, 39715), (123, 39727),

Gene: Quartz\_64 Start: 40147, Stop: 40425, Start Num: 81

Candidate Starts for Quartz\_64:

(Start: 81 @40147 has 12 MA's), (90, 40186), (93, 40204), (94, 40207), (96, 40219), (107, 40249), (108, 40258), (112, 40288), (119, 40342), (122, 40369), (126, 40396),

Gene: Sansa\_61 Start: 39788, Stop: 40099, Start Num: 81

Candidate Starts for Sansa\_61:

(Start: 81 @39788 has 12 MA's), (93, 39845), (94, 39848), (96, 39860), (106, 39920), (107, 39923), (109, 39935), (119, 40016), (123, 40046), (126, 40070),

Gene: Saratos\_63 Start: 39832, Stop: 40143, Start Num: 81

Candidate Starts for Saratos\_63:

(Start: 81 @39832 has 12 MA's), (93, 39889), (94, 39892), (96, 39904), (106, 39964), (107, 39967), (109, 39979), (119, 40060), (123, 40090), (127, 40120), (128, 40123),

Gene: Schubert\_56 Start: 38451, Stop: 38738, Start Num: 77

Candidate Starts for Schubert\_56:

(74, 38439), (76, 38448), (Start: 77 @38451 has 2 MA's), (87, 38493), (94, 38526), (96, 38538), (106, 38568), (110, 38589), (116, 38631), (117, 38649), (123, 38697), (126, 38721),

Gene: Shamu\_63 Start: 39721, Stop: 40032, Start Num: 81

Candidate Starts for Shamu\_63:

(Start: 81 @39721 has 12 MA's), (93, 39778), (94, 39781), (96, 39793), (106, 39853), (107, 39856), (109, 39868), (119, 39949), (123, 39979), (127, 40009), (128, 40012),

Gene: Tinyman4\_59 Start: 38673, Stop: 39083, Start Num: 54

Candidate Starts for Tinyman4\_59:

(1, 37818), (2, 37827), (3, 37851), (4, 37857), (5, 37860), (6, 37872), (7, 37881), (8, 37884), (9, 37887), (10, 37926), (11, 37953), (12, 37968), (13, 37995), (14, 38019), (15, 38028), (16, 38043), (18, 38076), (19, 38103), (21, 38205), (24, 38307), (30, 38379), (35, 38403), (44, 38424), (Start: 54 @38673 has 14 MA's), (72, 38739), (83, 38772), (86, 38784), (100, 38859), (109, 38910), (112, 38937), (122, 39021),

Gene: WilliamStrong\_63 Start: 40172, Stop: 40447, Start Num: 54

Candidate Starts for WilliamStrong\_63:

(37, 39875), (42, 39890), (47, 39905), (Start: 54 @40172 has 14 MA's), (66, 40229), (68, 40241), (86, 40292), (88, 40295), (108, 40406),

Gene: Zayuliv\_62 Start: 39911, Stop: 40141, Start Num: 56

Candidate Starts for Zayuliv\_62:

(31, 39584), (38, 39608), (40, 39617), (43, 39623), (45, 39629), (46, 39632), (51, 39821), (Start: 54 @39902 has 14 MA's), (Start: 56 @39911 has 1 MA's), (59, 39932), (60, 39944), (67, 39971), (85, 40031), (99, 40103),

Gene: Zenitsu\_63 Start: 39868, Stop: 40179, Start Num: 81

Candidate Starts for Zenitsu\_63:

(Start: 81 @39868 has 12 MA's), (93, 39925), (94, 39928), (96, 39940), (106, 40000), (107, 40003), (109, 40015), (119, 40096), (123, 40126), (127, 40156), (128, 40159),

Gene: Zepp\_62 Start: 39460, Stop: 39873, Start Num: 54

Candidate Starts for Zepp\_62:

(31, 39142), (38, 39166), (40, 39175), (43, 39181), (45, 39187), (46, 39190), (51, 39379), (Start: 54  
@39460 has 14 MA's), (62, 39526), (65, 39535), (71, 39556), (75, 39568), (101, 39679), (121, 39823),  
(123, 39835), (125, 39850),