

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 308931 Report

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

Pham number 308931 has 37 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Nucci_63, Carostasia_63
- Track 2 : Quartz_64
- Track 3 : HairyMan_62
- Track 4 : Mandalorian_63
- Track 5 : Tinyman4_59
- Track 6 : Scissor2024_61
- 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 : Phanita_64
- Track 13 : Xebius_63
- Track 14 : PSirce_63
- Track 15 : Eleri_63
- Track 16 : Hasitha_62
- Track 17 : Librie_62, CaptainRex_62, Fulton_62
- Track 18 : Zayuliv_62
- Track 19 : Greenlvy_61
- Track 20 : TwoBits_61
- Track 21 : BaronJohn_62
- Track 22 : WilliamStrong_63
- Track 23 : Luna18_63, KatChan_62, Chepli_63
- Track 24 : Juicer_63, Jemerald_63
- Track 25 : Morigan_64
- Track 26 : 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 58, it was called in 15 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BaronJohn_62, CaptainRex_62, Chepli_63, Fulton_62, Greenlvy_61, Hasitha_62, HerculesXL_61, Jemerald_63, Juicer_63, KatChan_62, Librie_62, Luna18_63, Scissor2024_61, Tinyman4_59, TwoBits_61, WilliamStrong_63,

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, HairyMan_62, MCubed_63, Mandalorian_63, Morrigan_64, Nucci_63, PSirce_63, Phanita_64, Quartz_64, Sansa_61, Saratos_63, Schubert_56, Shamu_63, Xebius_63, Zenitsu_63,

Summary by start number:

Start 58:

- Found in 17 of 37 (45.9%) of genes in pham
- Manual Annotations of this start: 15 of 35
- Called 94.1% of time when present
- Phage (with cluster) where this start called: BaronJohn_62 (EA5), CaptainRex_62 (EA5), Chepli_63 (EA6), Fulton_62 (EA5), Greenlvy_61 (EA5), Hasitha_62 (EA5), HerculesXL_61 (EA11), Jemerald_63 (EA6), Juicer_63 (EA6), KatChan_62 (EA6), Librie_62 (EA5), Luna18_63 (EA6), Scissor2024_61 (EA11), Tinyman4_59 (EA11), TwoBits_61 (EA5), WilliamStrong_63 (EA6),

Start 59:

- Found in 1 of 37 (2.7%) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Morrigan_64 (EA6),

Start 62:

- Found in 1 of 37 (2.7%) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zayuliv_62 (EA5),

Start 67:

- Found in 4 of 37 (10.8%) of genes in pham
- Manual Annotations of this start: 2 of 35
- Called 75.0% of time when present
- Phage (with cluster) where this start called: ChikPic_63 (EA2), PSirce_63 (EA2), Xebius_63 (EA2),

Start 68:

- Found in 1 of 37 (2.7%) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Schubert_56 (EA8),

Start 73:

- Found in 14 of 37 (37.8%) of genes in pham
- Manual Annotations of this start: 14 of 35

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Andromedas_63 (EA2), Carostasia_63 (EA10), ColaCorta_63 (EA2), Eleri_63 (EA2), Glamour_62 (EA2), MCubed_63 (EA2), Mandalorian_63 (EA10), Nucci_63 (EA10), Phanita_64 (EA2), Quartz_64 (EA10), Sansa_61 (EA2), Saratos_63 (EA2), Shamu_63 (EA2), Zenitsu_63 (EA2),

Start 76:

- Found in 16 of 37 (43.2%) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 6.2% of time when present
- Phage (with cluster) where this start called: HairyMan_62 (EA10),

Summary by clusters:

There are 6 clusters represented in this pham: EA11, EA10, EA8, EA2, EA5, EA6,

Info for manual annotations of cluster EA10:

- Start number 73 was manually annotated 4 times for cluster EA10.
- Start number 76 was manually annotated 1 time for cluster EA10.

Info for manual annotations of cluster EA11:

- Start number 58 was manually annotated 2 times for cluster EA11.

Info for manual annotations of cluster EA2:

- Start number 67 was manually annotated 2 times for cluster EA2.
- Start number 73 was manually annotated 10 times for cluster EA2.

Info for manual annotations of cluster EA5:

- Start number 58 was manually annotated 7 times for cluster EA5.
- Start number 62 was manually annotated 1 time for cluster EA5.

Info for manual annotations of cluster EA6:

- Start number 58 was manually annotated 6 times for cluster EA6.
- Start number 59 was manually annotated 1 time for cluster EA6.

Info for manual annotations of cluster EA8:

- Start number 68 was manually annotated 1 time for cluster EA8.

Gene Information:

Gene: Andromedas_63 Start: 39976, Stop: 40287, Start Num: 73

Candidate Starts for Andromedas_63:

(Start: 73 @39976 has 14 MA's), (82, 40033), (83, 40036), (86, 40048), (93, 40108), (94, 40111), (99, 40123), (111, 40204), (115, 40234),

Gene: BaronJohn_62 Start: 39818, Stop: 40186, Start Num: 58

Candidate Starts for BaronJohn_62:

(55, 39737), (Start: 58 @39818 has 15 MA's), (Start: 76 @39890 has 1 MA's), (78, 39902), (86, 39944), (93, 40019), (99, 40034), (109, 40109), (113, 40136), (115, 40148),

Gene: CaptainRex_62 Start: 39228, Stop: 39563, Start Num: 58

Candidate Starts for CaptainRex_62:

(33, 38916), (36, 38931), (45, 38958), (55, 39147), (57, 39225), (Start: 58 @39228 has 15 MA's), (Start: 76 @39300 has 1 MA's), (78, 39312), (86, 39354), (99, 39411), (109, 39486), (113, 39513), (115, 39525),

Gene: Carostasia_63 Start: 40023, Stop: 40301, Start Num: 73

Candidate Starts for Carostasia_63:

(Start: 73 @40023 has 14 MA's), (81, 40062), (82, 40080), (83, 40083), (86, 40095), (94, 40125), (98, 40134), (103, 40164), (111, 40218), (113, 40236), (118, 40272),

Gene: Chepli_63 Start: 39731, Stop: 40042, Start Num: 58

Candidate Starts for Chepli_63:

(53, 39542), (56, 39677), (Start: 58 @39731 has 15 MA's), (60, 39746), (74, 39809), (Start: 76 @39812 has 1 MA's), (78, 39824), (80, 39836), (89, 39872), (105, 39932), (115, 40004),

Gene: ChikPic_63 Start: 39809, Stop: 40126, Start Num: 67

Candidate Starts for ChikPic_63:

(Start: 67 @39809 has 2 MA's), (72, 39824), (77, 39842), (83, 39890), (86, 39902), (93, 39947), (94, 39950), (99, 39962), (111, 40043), (119, 40103), (120, 40106),

Gene: ColaCorta_63 Start: 39976, Stop: 40287, Start Num: 73

Candidate Starts for ColaCorta_63:

(Start: 73 @39976 has 14 MA's), (82, 40033), (83, 40036), (86, 40048), (93, 40108), (94, 40111), (99, 40123), (111, 40204), (115, 40234),

Gene: Eleri_63 Start: 39848, Stop: 40159, Start Num: 73

Candidate Starts for Eleri_63:

(Start: 73 @39848 has 14 MA's), (81, 39887), (82, 39905), (83, 39908), (86, 39920), (93, 39980), (94, 39983), (99, 39995), (111, 40076), (115, 40106), (119, 40136), (120, 40139),

Gene: Fulton_62 Start: 39229, Stop: 39564, Start Num: 58

Candidate Starts for Fulton_62:

(33, 38917), (36, 38932), (45, 38959), (55, 39148), (57, 39226), (Start: 58 @39229 has 15 MA's), (Start: 76 @39301 has 1 MA's), (78, 39313), (86, 39355), (99, 39412), (109, 39487), (113, 39514), (115, 39526),

Gene: Glamour_62 Start: 39706, Stop: 40017, Start Num: 73

Candidate Starts for Glamour_62:

(Start: 73 @39706 has 14 MA's), (82, 39763), (83, 39766), (86, 39778), (93, 39838), (94, 39841), (99, 39853), (111, 39934), (115, 39964), (119, 39994), (120, 39997),

Gene: Greenlvy_61 Start: 39603, Stop: 39938, Start Num: 58

Candidate Starts for Greenlvy_61:

(55, 39522), (Start: 58 @39603 has 15 MA's), (Start: 76 @39675 has 1 MA's), (78, 39687), (86, 39729), (99, 39786), (109, 39861), (113, 39888), (115, 39900),

Gene: HairyMan_62 Start: 40887, Stop: 41183, Start Num: 76

Candidate Starts for HairyMan_62:

(63, 40839), (Start: 76 @40887 has 1 MA's), (78, 40899), (83, 40929), (86, 40941), (87, 40962), (88, 40974), (91, 40986), (94, 41016), (110, 41109), (113, 41133), (117, 41160),

Gene: Hasitha_62 Start: 39239, Stop: 39574, Start Num: 58

Candidate Starts for Hasitha_62:

(33, 38927), (36, 38942), (45, 38969), (55, 39158), (57, 39236), (Start: 58 @39239 has 15 MA's), (Start: 76 @39311 has 1 MA's), (78, 39323), (86, 39365), (99, 39422), (109, 39497), (115, 39536),

Gene: HerculesXL_61 Start: 38678, Stop: 39088, Start Num: 58

Candidate Starts for HerculesXL_61:

(26, 38312), (39, 38384), (47, 38408), (50, 38429), (Start: 58 @38678 has 15 MA's), (66, 38744), (Start: 76 @38777 has 1 MA's), (78, 38789), (90, 38867), (99, 38915), (103, 38942), (114, 39026),

Gene: Jemerald_63 Start: 40506, Stop: 40928, Start Num: 58

Candidate Starts for Jemerald_63:

(16, 39861), (18, 39882), (20, 39909), (22, 39996), (24, 40077), (28, 40173), (30, 40179), (34, 40188), (35, 40194), (39, 40209), (41, 40218), (56, 40452), (Start: 58 @40506 has 15 MA's), (61, 40551), (63, 40584), (65, 40596), (70, 40608), (75, 40632), (98, 40773), (99, 40776), (104, 40812), (106, 40821), (113, 40878), (116, 40902),

Gene: Juicer_63 Start: 40506, Stop: 40928, Start Num: 58

Candidate Starts for Juicer_63:

(16, 39861), (18, 39882), (20, 39909), (22, 39996), (24, 40077), (28, 40173), (30, 40179), (34, 40188), (35, 40194), (39, 40209), (41, 40218), (56, 40452), (Start: 58 @40506 has 15 MA's), (61, 40551), (63, 40584), (65, 40596), (70, 40608), (75, 40632), (98, 40773), (99, 40776), (104, 40812), (106, 40821), (113, 40878), (116, 40902),

Gene: KatChan_62 Start: 39748, Stop: 40059, Start Num: 58

Candidate Starts for KatChan_62:

(53, 39559), (56, 39694), (Start: 58 @39748 has 15 MA's), (60, 39763), (74, 39826), (Start: 76 @39829 has 1 MA's), (78, 39841), (80, 39853), (89, 39889), (105, 39949), (115, 40021),

Gene: Librie_62 Start: 39228, Stop: 39563, Start Num: 58

Candidate Starts for Librie_62:

(33, 38916), (36, 38931), (45, 38958), (55, 39147), (57, 39225), (Start: 58 @39228 has 15 MA's), (Start: 76 @39300 has 1 MA's), (78, 39312), (86, 39354), (99, 39411), (109, 39486), (113, 39513), (115, 39525),

Gene: Luna18_63 Start: 39748, Stop: 40059, Start Num: 58

Candidate Starts for Luna18_63:

(53, 39559), (56, 39694), (Start: 58 @39748 has 15 MA's), (60, 39763), (74, 39826), (Start: 76 @39829 has 1 MA's), (78, 39841), (80, 39853), (89, 39889), (105, 39949), (115, 40021),

Gene: MCubed_63 Start: 39863, Stop: 40174, Start Num: 73

Candidate Starts for MCubed_63:

(Start: 73 @39863 has 14 MA's), (82, 39920), (83, 39923), (86, 39935), (93, 39995), (94, 39998), (99, 40010), (111, 40091), (115, 40121), (119, 40151), (120, 40154),

Gene: Mandalorian_63 Start: 40034, Stop: 40312, Start Num: 73

Candidate Starts for Mandalorian_63:

(Start: 73 @40034 has 14 MA's), (81, 40073), (82, 40091), (83, 40094), (86, 40106), (94, 40136), (98, 40145), (103, 40175), (111, 40229), (118, 40283),

Gene: Morrigan_64 Start: 39803, Stop: 40204, Start Num: 59

Candidate Starts for Morrigan_64:

(25, 39377), (27, 39455), (31, 39476), (32, 39479), (37, 39497), (46, 39524), (52, 39572), (54, 39611), (56, 39746), (Start: 59 @39803 has 1 MA's), (71, 39863), (74, 39881), (Start: 76 @39884 has 1 MA's), (78, 39896), (92, 40019), (99, 40055), (101, 40061), (102, 40067), (105, 40094), (109, 40127), (115,

40166),

Gene: Nucci_63 Start: 40003, Stop: 40281, Start Num: 73

Candidate Starts for Nucci_63:

(Start: 73 @40003 has 14 MA's), (81, 40042), (82, 40060), (83, 40063), (86, 40075), (94, 40105), (98, 40114), (103, 40144), (111, 40198), (113, 40216), (118, 40252),

Gene: PSirce_63 Start: 40001, Stop: 40318, Start Num: 67

Candidate Starts for PSirce_63:

(66, 39998), (Start: 67 @40001 has 2 MA's), (72, 40016), (77, 40034), (83, 40082), (86, 40094), (93, 40139), (94, 40142), (99, 40154), (111, 40235), (115, 40265), (118, 40289),

Gene: Phanita_64 Start: 39773, Stop: 40084, Start Num: 73

Candidate Starts for Phanita_64:

(Start: 73 @39773 has 14 MA's), (81, 39812), (82, 39830), (83, 39833), (86, 39845), (93, 39905), (94, 39908), (97, 39914), (99, 39920), (111, 40001), (115, 40031), (119, 40061), (120, 40064),

Gene: Quartz_64 Start: 40147, Stop: 40425, Start Num: 73

Candidate Starts for Quartz_64:

(Start: 73 @40147 has 14 MA's), (81, 40186), (82, 40204), (83, 40207), (86, 40219), (94, 40249), (98, 40258), (103, 40288), (111, 40342), (114, 40369), (118, 40396),

Gene: Sansa_61 Start: 39788, Stop: 40099, Start Num: 73

Candidate Starts for Sansa_61:

(Start: 73 @39788 has 14 MA's), (82, 39845), (83, 39848), (86, 39860), (93, 39920), (94, 39923), (99, 39935), (111, 40016), (115, 40046), (118, 40070),

Gene: Saratos_63 Start: 39832, Stop: 40143, Start Num: 73

Candidate Starts for Saratos_63:

(Start: 73 @39832 has 14 MA's), (82, 39889), (83, 39892), (86, 39904), (93, 39964), (94, 39967), (99, 39979), (111, 40060), (115, 40090), (119, 40120), (120, 40123),

Gene: Schubert_56 Start: 38451, Stop: 38738, Start Num: 68

Candidate Starts for Schubert_56:

(64, 38439), (Start: 67 @38448 has 2 MA's), (Start: 68 @38451 has 1 MA's), (79, 38493), (83, 38526), (86, 38538), (93, 38568), (100, 38589), (107, 38631), (108, 38649), (115, 38697), (118, 38721),

Gene: Scissor2024_61 Start: 38650, Stop: 39051, Start Num: 58

Candidate Starts for Scissor2024_61:

(44, 38365), (49, 38389), (51, 38398), (Start: 58 @38650 has 15 MA's), (66, 38716), (Start: 76 @38749 has 1 MA's), (78, 38761), (85, 38797), (89, 38836), (90, 38839), (98, 38884), (112, 38992), (114, 39004), (115, 39007),

Gene: Shamu_63 Start: 39721, Stop: 40032, Start Num: 73

Candidate Starts for Shamu_63:

(Start: 73 @39721 has 14 MA's), (82, 39778), (83, 39781), (86, 39793), (93, 39853), (94, 39856), (99, 39868), (111, 39949), (115, 39979), (119, 40009), (120, 40012),

Gene: Tinyman4_59 Start: 38673, Stop: 39083, Start Num: 58

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), (17, 38043), (19, 38076), (21, 38103), (23, 38205), (26, 38307), (39, 38379), (47, 38403), (50, 38424), (Start: 58 @38673 has 15

MA's), (66, 38739), (Start: 76 @38772 has 1 MA's), (78, 38784), (89, 38859), (99, 38910), (103, 38937), (114, 39021),

Gene: TwoBits_61 Start: 39613, Stop: 39975, Start Num: 58

Candidate Starts for TwoBits_61:

(55, 39532), (Start: 58 @39613 has 15 MA's), (Start: 76 @39685 has 1 MA's), (78, 39697), (84, 39724), (98, 39820), (99, 39823), (109, 39898), (113, 39925),

Gene: WilliamStrong_63 Start: 40172, Stop: 40447, Start Num: 58

Candidate Starts for WilliamStrong_63:

(38, 39875), (42, 39890), (48, 39905), (Start: 58 @40172 has 15 MA's), (Start: 76 @40229 has 1 MA's), (78, 40241), (95, 40292), (96, 40295), (114, 40406),

Gene: Xebius_63 Start: 39832, Stop: 40149, Start Num: 67

Candidate Starts for Xebius_63:

(Start: 67 @39832 has 2 MA's), (72, 39847), (77, 39865), (83, 39913), (86, 39925), (93, 39970), (94, 39973), (99, 39985), (111, 40066), (115, 40096), (119, 40126), (120, 40129),

Gene: Zayuliv_62 Start: 39911, Stop: 40141, Start Num: 62

Candidate Starts for Zayuliv_62:

(29, 39584), (37, 39608), (40, 39617), (41, 39623), (43, 39629), (45, 39632), (55, 39821), (Start: 58 @39902 has 15 MA's), (Start: 62 @39911 has 1 MA's), (69, 39932), (78, 39944), (86, 39971), (105, 40031), (115, 40103),

Gene: Zenitsu_63 Start: 39868, Stop: 40179, Start Num: 73

Candidate Starts for Zenitsu_63:

(Start: 73 @39868 has 14 MA's), (82, 39925), (83, 39928), (86, 39940), (93, 40000), (94, 40003), (99, 40015), (111, 40096), (115, 40126), (119, 40156), (120, 40159),