



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 293003 Report

This analysis was run 04/18/26 on database version 643.

Pham number 293003 has 34 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Alkhayr\_114, Murai\_114, FoulBall\_113, Smooch\_112, Catdawg\_115, Schuy\_114, MadKillah\_117, Imara\_110, Vagabond\_113, Winget\_114, YungJamal\_111
- Track 2 : KingPhillip3\_110, Blessica\_114, SchoolBus\_115, Idergollasper\_118, NiebruSaylor\_114, JangDynasty\_112, Shida\_114, TelAviv\_111, Familton\_116
- Track 3 : YoyoKar\_111, Krili\_116, Vorrps\_114, Mori\_114
- Track 4 : Wildflower\_110, Ashwin\_110
- Track 5 : Zakhe101\_110, Bora\_111
- Track 6 : Wogge42\_110, Dylan\_108, Zebo\_113
- Track 7 : Corndog\_110
- Track 8 : Ryadel\_119
- Track 9 : Firecracker\_114

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

The start number called the most often in the published annotations is 20, it was called in 28 of the 30 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alkhayr\_114, Blessica\_114, Bora\_111, Catdawg\_115, Corndog\_110, Dylan\_108, Familton\_116, Firecracker\_114, FoulBall\_113, Idergollasper\_118, Imara\_110, JangDynasty\_112, KingPhillip3\_110, Krili\_116, MadKillah\_117, Mori\_114, Murai\_114, NiebruSaylor\_114, Ryadel\_119, SchoolBus\_115, Schuy\_114, Shida\_114, Smooch\_112, TelAviv\_111, Vagabond\_113, Vorrps\_114, Winget\_114, Wogge42\_110, YoyoKar\_111, YungJamal\_111, Zakhe101\_110, Zebo\_113,

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

- Ashwin\_110, Wildflower\_110,

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

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

Start 17:

- 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: Ashwin\_110 (O), Wildflower\_110 (O),

Start 20:

- Found in 34 of 34 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 28 of 30
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Alkhayr\_114 (O), Blessica\_114 (O), Bora\_111 (O), Catdawg\_115 (O), Corndog\_110 (O), Dylan\_108 (O), Familton\_116 (O), Firecracker\_114 (O), FoulBall\_113 (O), Idergollasper\_118 (O), Imara\_110 (O), JangDynasty\_112 (O), KingPhillip3\_110 (O), Kriili\_116 (O), MadKillah\_117 (O), Mori\_114 (O), Murai\_114 (O), NiebruSaylor\_114 (O), Ryadel\_119 (O), SchoolBus\_115 (O), Schuy\_114 (O), Shida\_114 (O), Smooch\_112 (O), TelAviv\_111 (O), Vagabond\_113 (O), Vorrps\_114 (O), Winget\_114 (O), Wogge42\_110 (O), YoyoKar\_111 (O), YungJamal\_111 (O), Zakhe101\_110 (O), Zebo\_113 (O),

### Summary by clusters:

There is one cluster represented in this pham: O

Info for manual annotations of cluster O:

- Start number 17 was manually annotated 2 times for cluster O.
- Start number 20 was manually annotated 28 times for cluster O.

### Gene Information:

Gene: Alkhayr\_114 Start: 66256, Stop: 65741, Start Num: 20

Candidate Starts for Alkhayr\_114:

(Start: 20 @66256 has 28 MA's), (21, 66220), (22, 66211), (23, 66208), (24, 66202), (25, 66172), (26, 66145), (27, 66136), (29, 66028), (30, 65974), (32, 65851), (33, 65848), (34, 65830), (35, 65809), (37, 65767),

Gene: Ashwin\_110 Start: 65410, Stop: 64736, Start Num: 17

Candidate Starts for Ashwin\_110:

(Start: 17 @65410 has 2 MA's), (Start: 20 @65302 has 28 MA's), (21, 65266), (22, 65257), (23, 65254), (25, 65218), (26, 65191), (27, 65182), (28, 65077), (30, 64969), (32, 64846), (33, 64843), (34, 64825), (35, 64804), (37, 64762),

Gene: Blessica\_114 Start: 66987, Stop: 66472, Start Num: 20

Candidate Starts for Blessica\_114:

(Start: 20 @66987 has 28 MA's), (21, 66951), (22, 66942), (23, 66939), (25, 66903), (26, 66876), (27, 66867), (29, 66759), (30, 66705), (31, 66615), (32, 66582), (33, 66579), (34, 66561), (35, 66540), (37, 66498),

Gene: Bora\_111 Start: 66940, Stop: 66425, Start Num: 20

Candidate Starts for Bora\_111:

(Start: 20 @66940 has 28 MA's), (21, 66904), (22, 66895), (23, 66892), (25, 66856), (26, 66829), (27, 66820), (30, 66658), (32, 66535), (33, 66532), (34, 66514), (35, 66493), (37, 66451),

Gene: Catdawg\_115 Start: 67576, Stop: 67061, Start Num: 20

Candidate Starts for Catdawg\_115:

(Start: 20 @67576 has 28 MA's), (21, 67540), (22, 67531), (23, 67528), (24, 67522), (25, 67492), (26, 67465), (27, 67456), (29, 67348), (30, 67294), (32, 67171), (33, 67168), (34, 67150), (35, 67129), (37, 67087),

Gene: Corndog\_110 Start: 65213, Stop: 64647, Start Num: 20

Candidate Starts for Corndog\_110:

(1, 65786), (2, 65684), (4, 65621), (5, 65561), (6, 65549), (8, 65522), (12, 65393), (14, 65384), (15, 65330), (16, 65324), (18, 65297), (19, 65291), (Start: 20 @65213 has 28 MA's), (21, 65177), (22, 65168), (23, 65165), (25, 65129), (26, 65102), (27, 65093), (28, 64988), (30, 64880), (32, 64757), (33, 64754), (34, 64736), (35, 64715), (37, 64673),

Gene: Dylan\_108 Start: 65404, Stop: 64838, Start Num: 20

Candidate Starts for Dylan\_108:

(Start: 20 @65404 has 28 MA's), (21, 65368), (22, 65359), (23, 65356), (25, 65320), (26, 65293), (27, 65284), (28, 65179), (30, 65071), (32, 64948), (33, 64945), (34, 64927), (35, 64906), (37, 64864),

Gene: Familton\_116 Start: 67348, Stop: 66833, Start Num: 20

Candidate Starts for Familton\_116:

(Start: 20 @67348 has 28 MA's), (21, 67312), (22, 67303), (23, 67300), (25, 67264), (26, 67237), (27, 67228), (29, 67120), (30, 67066), (31, 66976), (32, 66943), (33, 66940), (34, 66922), (35, 66901), (37, 66859),

Gene: Firecracker\_114 Start: 66931, Stop: 66365, Start Num: 20

Candidate Starts for Firecracker\_114:

(3, 67366), (7, 67264), (9, 67201), (10, 67141), (11, 67129), (13, 67102), (Start: 20 @66931 has 28 MA's), (21, 66895), (22, 66886), (23, 66883), (25, 66847), (26, 66820), (27, 66811), (28, 66706), (30, 66598), (32, 66475), (33, 66472), (34, 66454), (35, 66433), (37, 66391),

Gene: FoulBall\_113 Start: 66539, Stop: 66024, Start Num: 20

Candidate Starts for FoulBall\_113:

(Start: 20 @66539 has 28 MA's), (21, 66503), (22, 66494), (23, 66491), (24, 66485), (25, 66455), (26, 66428), (27, 66419), (29, 66311), (30, 66257), (32, 66134), (33, 66131), (34, 66113), (35, 66092), (37, 66050),

Gene: Idergollasper\_118 Start: 68059, Stop: 67544, Start Num: 20

Candidate Starts for Idergollasper\_118:

(Start: 20 @68059 has 28 MA's), (21, 68023), (22, 68014), (23, 68011), (25, 67975), (26, 67948), (27, 67939), (29, 67831), (30, 67777), (31, 67687), (32, 67654), (33, 67651), (34, 67633), (35, 67612), (37, 67570),

Gene: Imara\_110 Start: 66342, Stop: 65827, Start Num: 20

Candidate Starts for Imara\_110:

(Start: 20 @66342 has 28 MA's), (21, 66306), (22, 66297), (23, 66294), (24, 66288), (25, 66258), (26, 66231), (27, 66222), (29, 66114), (30, 66060), (32, 65937), (33, 65934), (34, 65916), (35, 65895), (37, 65853),

Gene: JangDynasty\_112 Start: 66409, Stop: 65894, Start Num: 20

Candidate Starts for JangDynasty\_112:

(Start: 20 @66409 has 28 MA's), (21, 66373), (22, 66364), (23, 66361), (25, 66325), (26, 66298), (27, 66289), (29, 66181), (30, 66127), (31, 66037), (32, 66004), (33, 66001), (34, 65983), (35, 65962), (37,

65920),

Gene: KingPhillip3\_110 Start: 66915, Stop: 66400, Start Num: 20

Candidate Starts for KingPhillip3\_110:

(Start: 20 @66915 has 28 MA's), (21, 66879), (22, 66870), (23, 66867), (25, 66831), (26, 66804), (27, 66795), (29, 66687), (30, 66633), (31, 66543), (32, 66510), (33, 66507), (34, 66489), (35, 66468), (37, 66426),

Gene: Krili\_116 Start: 67134, Stop: 66619, Start Num: 20

Candidate Starts for Krili\_116:

(Start: 20 @67134 has 28 MA's), (21, 67098), (22, 67089), (23, 67086), (25, 67050), (26, 67023), (27, 67014), (29, 66906), (30, 66852), (32, 66729), (33, 66726), (34, 66708), (35, 66687), (37, 66645),

Gene: MadKillah\_117 Start: 66609, Stop: 66094, Start Num: 20

Candidate Starts for MadKillah\_117:

(Start: 20 @66609 has 28 MA's), (21, 66573), (22, 66564), (23, 66561), (24, 66555), (25, 66525), (26, 66498), (27, 66489), (29, 66381), (30, 66327), (32, 66204), (33, 66201), (34, 66183), (35, 66162), (37, 66120),

Gene: Mori\_114 Start: 67159, Stop: 66644, Start Num: 20

Candidate Starts for Mori\_114:

(Start: 20 @67159 has 28 MA's), (21, 67123), (22, 67114), (23, 67111), (25, 67075), (26, 67048), (27, 67039), (29, 66931), (30, 66877), (32, 66754), (33, 66751), (34, 66733), (35, 66712), (37, 66670),

Gene: Murai\_114 Start: 66977, Stop: 66462, Start Num: 20

Candidate Starts for Murai\_114:

(Start: 20 @66977 has 28 MA's), (21, 66941), (22, 66932), (23, 66929), (24, 66923), (25, 66893), (26, 66866), (27, 66857), (29, 66749), (30, 66695), (32, 66572), (33, 66569), (34, 66551), (35, 66530), (37, 66488),

Gene: NiebruSaylor\_114 Start: 66273, Stop: 65758, Start Num: 20

Candidate Starts for NiebruSaylor\_114:

(Start: 20 @66273 has 28 MA's), (21, 66237), (22, 66228), (23, 66225), (25, 66189), (26, 66162), (27, 66153), (29, 66045), (30, 65991), (31, 65901), (32, 65868), (33, 65865), (34, 65847), (35, 65826), (37, 65784),

Gene: Ryadel\_119 Start: 68125, Stop: 67610, Start Num: 20

Candidate Starts for Ryadel\_119:

(Start: 20 @68125 has 28 MA's), (21, 68089), (22, 68080), (23, 68077), (25, 68041), (26, 68014), (27, 68005), (29, 67897), (30, 67843), (32, 67720), (33, 67717), (34, 67699), (35, 67678), (36, 67648), (37, 67636),

Gene: SchoolBus\_115 Start: 67224, Stop: 66709, Start Num: 20

Candidate Starts for SchoolBus\_115:

(Start: 20 @67224 has 28 MA's), (21, 67188), (22, 67179), (23, 67176), (25, 67140), (26, 67113), (27, 67104), (29, 66996), (30, 66942), (31, 66852), (32, 66819), (33, 66816), (34, 66798), (35, 66777), (37, 66735),

Gene: Schuy\_114 Start: 66324, Stop: 65809, Start Num: 20

Candidate Starts for Schuy\_114:

(Start: 20 @66324 has 28 MA's), (21, 66288), (22, 66279), (23, 66276), (24, 66270), (25, 66240), (26, 66213), (27, 66204), (29, 66096), (30, 66042), (32, 65919), (33, 65916), (34, 65898), (35, 65877), (37, 65835),

Gene: Shida\_114 Start: 66885, Stop: 66370, Start Num: 20

Candidate Starts for Shida\_114:

(Start: 20 @66885 has 28 MA's), (21, 66849), (22, 66840), (23, 66837), (25, 66801), (26, 66774), (27, 66765), (29, 66657), (30, 66603), (31, 66513), (32, 66480), (33, 66477), (34, 66459), (35, 66438), (37, 66396),

Gene: Smooch\_112 Start: 66857, Stop: 66342, Start Num: 20

Candidate Starts for Smooch\_112:

(Start: 20 @66857 has 28 MA's), (21, 66821), (22, 66812), (23, 66809), (24, 66803), (25, 66773), (26, 66746), (27, 66737), (29, 66629), (30, 66575), (32, 66452), (33, 66449), (34, 66431), (35, 66410), (37, 66368),

Gene: TelAviv\_111 Start: 66957, Stop: 66442, Start Num: 20

Candidate Starts for TelAviv\_111:

(Start: 20 @66957 has 28 MA's), (21, 66921), (22, 66912), (23, 66909), (25, 66873), (26, 66846), (27, 66837), (29, 66729), (30, 66675), (31, 66585), (32, 66552), (33, 66549), (34, 66531), (35, 66510), (37, 66468),

Gene: Vagabond\_113 Start: 66372, Stop: 65857, Start Num: 20

Candidate Starts for Vagabond\_113:

(Start: 20 @66372 has 28 MA's), (21, 66336), (22, 66327), (23, 66324), (24, 66318), (25, 66288), (26, 66261), (27, 66252), (29, 66144), (30, 66090), (32, 65967), (33, 65964), (34, 65946), (35, 65925), (37, 65883),

Gene: Vorrrps\_114 Start: 67160, Stop: 66645, Start Num: 20

Candidate Starts for Vorrrps\_114:

(Start: 20 @67160 has 28 MA's), (21, 67124), (22, 67115), (23, 67112), (25, 67076), (26, 67049), (27, 67040), (29, 66932), (30, 66878), (32, 66755), (33, 66752), (34, 66734), (35, 66713), (37, 66671),

Gene: Wildflower\_110 Start: 65042, Stop: 64368, Start Num: 17

Candidate Starts for Wildflower\_110:

(Start: 17 @65042 has 2 MA's), (Start: 20 @64934 has 28 MA's), (21, 64898), (22, 64889), (23, 64886), (25, 64850), (26, 64823), (27, 64814), (28, 64709), (30, 64601), (32, 64478), (33, 64475), (34, 64457), (35, 64436), (37, 64394),

Gene: Winget\_114 Start: 67009, Stop: 66494, Start Num: 20

Candidate Starts for Winget\_114:

(Start: 20 @67009 has 28 MA's), (21, 66973), (22, 66964), (23, 66961), (24, 66955), (25, 66925), (26, 66898), (27, 66889), (29, 66781), (30, 66727), (32, 66604), (33, 66601), (34, 66583), (35, 66562), (37, 66520),

Gene: Wogge42\_110 Start: 66342, Stop: 65776, Start Num: 20

Candidate Starts for Wogge42\_110:

(Start: 20 @66342 has 28 MA's), (21, 66306), (22, 66297), (23, 66294), (25, 66258), (26, 66231), (27, 66222), (28, 66117), (30, 66009), (32, 65886), (33, 65883), (34, 65865), (35, 65844), (37, 65802),

Gene: YoyoKar\_111 Start: 66432, Stop: 65917, Start Num: 20

Candidate Starts for YoyoKar\_111:

(Start: 20 @66432 has 28 MA's), (21, 66396), (22, 66387), (23, 66384), (25, 66348), (26, 66321), (27, 66312), (29, 66204), (30, 66150), (32, 66027), (33, 66024), (34, 66006), (35, 65985), (37, 65943),

Gene: YungJamal\_111 Start: 65646, Stop: 65131, Start Num: 20

Candidate Starts for YungJamal\_111:

(Start: 20 @65646 has 28 MA's), (21, 65610), (22, 65601), (23, 65598), (24, 65592), (25, 65562), (26, 65535), (27, 65526), (29, 65418), (30, 65364), (32, 65241), (33, 65238), (34, 65220), (35, 65199), (37, 65157),

Gene: Zakhe101\_110 Start: 65243, Stop: 64728, Start Num: 20

Candidate Starts for Zakhe101\_110:

(Start: 20 @65243 has 28 MA's), (21, 65207), (22, 65198), (23, 65195), (25, 65159), (26, 65132), (27, 65123), (30, 64961), (32, 64838), (33, 64835), (34, 64817), (35, 64796), (37, 64754),

Gene: Zebo\_113 Start: 66792, Stop: 66226, Start Num: 20

Candidate Starts for Zebo\_113:

(Start: 20 @66792 has 28 MA's), (21, 66756), (22, 66747), (23, 66744), (25, 66708), (26, 66681), (27, 66672), (28, 66567), (30, 66459), (32, 66336), (33, 66333), (34, 66315), (35, 66294), (37, 66252),