



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 2562 Report

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

Pham number 2562 has 34 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Kaleb\_69, TA17A\_68, Boyle\_68, Allegro\_68, Faze9\_67
- Track 2 : Calamitous\_69, Eaglehorse\_68, Coffee\_68, Brownie5\_68, West99\_68, Sabella\_68, LizLemon\_68, Rosebush\_67, MasterPo\_69, Lars\_69, Kheth\_68, Bananafish\_69, Rhinoforte\_68, Godines\_69, Ares\_68, Lephleur\_68, Laurie\_68, Tres\_68, Phantasmagoria\_67, Opia\_69, ItsyBitsy1\_67, Blocker23\_68, Holeinone\_68, Hedgerow\_68, FrenchFry\_69, Tinciduntolum\_69, Glass\_69
- Track 3 : Arbiter\_66, Qyrzula\_62

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

The start number called the most often in the published annotations is 1, it was called in 27 of the 32 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ares\_68, Bananafish\_69, Blocker23\_68, Brownie5\_68, Calamitous\_69, Coffee\_68, Eaglehorse\_68, FrenchFry\_69, Glass\_69, Godines\_69, Hedgerow\_68, Holeinone\_68, ItsyBitsy1\_67, Kheth\_68, Lars\_69, Laurie\_68, Lephleur\_68, LizLemon\_68, MasterPo\_69, Opia\_69, Phantasmagoria\_67, Rhinoforte\_68, Rosebush\_67, Sabella\_68, Tinciduntolum\_69, Tres\_68, West99\_68,

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

- Allegro\_68, Arbiter\_66, Boyle\_68, Faze9\_67, Kaleb\_69, Qyrzula\_62, TA17A\_68,

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

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

Start 1:

- Found in 34 of 34 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 27 of 32
- Called 79.4% of time when present
- Phage (with cluster) where this start called: Ares\_68 (B2), Bananafish\_69 (B2), Blocker23\_68 (B2), Brownie5\_68 (B2), Calamitous\_69 (B2), Coffee\_68 (B2),

Eaglehorse\_68 (B2), FrenchFry\_69 (B2), Glass\_69 (B2), Godines\_69 (B2), Hedgerow\_68 (B2), Holeinone\_68 (B2), ItsyBitsy1\_67 (B2), Kheth\_68 (B2), Lars\_69 (B2), Laurie\_68 (B2), Lephleur\_68 (B2), LizLemon\_68 (B2), MasterPo\_69 (B2), Opia\_69 (B2), Phantasmagoria\_67 (B2), Rhinoforte\_68 (B2), Rosebush\_67 (B2), Sabella\_68 (B2), Tinciduntolum\_69 (B2), Tres\_68 (B2), West99\_68 (B2),

#### Start 2:

- Found in 34 of 34 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 2 of 32
- Called 5.9% of time when present
- Phage (with cluster) where this start called: Arbiter\_66 (B2), Qyrzula\_62 (B2),

#### Start 3:

- Found in 34 of 34 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 3 of 32
- Called 14.7% of time when present
- Phage (with cluster) where this start called: Allegro\_68 (B2), Boyle\_68 (B2), Faze9\_67 (B2), Kaleb\_69 (B2), TA17A\_68 (B2),

### Summary by clusters:

There is one cluster represented in this pham: B2

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

- Start number 1 was manually annotated 27 times for cluster B2.
- Start number 2 was manually annotated 2 times for cluster B2.
- Start number 3 was manually annotated 3 times for cluster B2.

### Gene Information:

Gene: Allegro\_68 Start: 57471, Stop: 57776, Start Num: 3

Candidate Starts for Allegro\_68:

(Start: 1 @57393 has 27 MA's), (Start: 2 @57444 has 2 MA's), (Start: 3 @57471 has 3 MA's), (4, 57525), (5, 57549), (6, 57588), (7, 57618), (8, 57621), (9, 57627), (10, 57699), (11, 57732),

Gene: Arbiter\_66 Start: 57479, Stop: 57811, Start Num: 2

Candidate Starts for Arbiter\_66:

(Start: 1 @57428 has 27 MA's), (Start: 2 @57479 has 2 MA's), (Start: 3 @57506 has 3 MA's), (4, 57560), (5, 57584), (6, 57623), (7, 57653), (8, 57656), (9, 57662), (10, 57734), (11, 57767),

Gene: Ares\_68 Start: 57399, Stop: 57782, Start Num: 1

Candidate Starts for Ares\_68:

(Start: 1 @57399 has 27 MA's), (Start: 2 @57450 has 2 MA's), (Start: 3 @57477 has 3 MA's), (4, 57531), (5, 57555), (6, 57594), (7, 57624), (8, 57627), (9, 57633), (10, 57705), (11, 57738),

Gene: Bananafish\_69 Start: 57329, Stop: 57712, Start Num: 1

Candidate Starts for Bananafish\_69:

(Start: 1 @57329 has 27 MA's), (Start: 2 @57380 has 2 MA's), (Start: 3 @57407 has 3 MA's), (4, 57461), (5, 57485), (6, 57524), (7, 57554), (8, 57557), (9, 57563), (10, 57635), (11, 57668),

Gene: Blocker23\_68 Start: 57394, Stop: 57777, Start Num: 1

Candidate Starts for Blocker23\_68:

(Start: 1 @57394 has 27 MA's), (Start: 2 @57445 has 2 MA's), (Start: 3 @57472 has 3 MA's), (4, 57526), (5, 57550), (6, 57589), (7, 57619), (8, 57622), (9, 57628), (10, 57700), (11, 57733),

Gene: Boyle\_68 Start: 57516, Stop: 57821, Start Num: 3

Candidate Starts for Boyle\_68:

(Start: 1 @57438 has 27 MA's), (Start: 2 @57489 has 2 MA's), (Start: 3 @57516 has 3 MA's), (4, 57570), (5, 57594), (6, 57633), (7, 57663), (8, 57666), (9, 57672), (10, 57744), (11, 57777),

Gene: Brownie5\_68 Start: 57439, Stop: 57822, Start Num: 1

Candidate Starts for Brownie5\_68:

(Start: 1 @57439 has 27 MA's), (Start: 2 @57490 has 2 MA's), (Start: 3 @57517 has 3 MA's), (4, 57571), (5, 57595), (6, 57634), (7, 57664), (8, 57667), (9, 57673), (10, 57745), (11, 57778),

Gene: Calamitous\_69 Start: 57328, Stop: 57711, Start Num: 1

Candidate Starts for Calamitous\_69:

(Start: 1 @57328 has 27 MA's), (Start: 2 @57379 has 2 MA's), (Start: 3 @57406 has 3 MA's), (4, 57460), (5, 57484), (6, 57523), (7, 57553), (8, 57556), (9, 57562), (10, 57634), (11, 57667),

Gene: Coffee\_68 Start: 57432, Stop: 57815, Start Num: 1

Candidate Starts for Coffee\_68:

(Start: 1 @57432 has 27 MA's), (Start: 2 @57483 has 2 MA's), (Start: 3 @57510 has 3 MA's), (4, 57564), (5, 57588), (6, 57627), (7, 57657), (8, 57660), (9, 57666), (10, 57738), (11, 57771),

Gene: Eaglehorse\_68 Start: 57318, Stop: 57701, Start Num: 1

Candidate Starts for Eaglehorse\_68:

(Start: 1 @57318 has 27 MA's), (Start: 2 @57369 has 2 MA's), (Start: 3 @57396 has 3 MA's), (4, 57450), (5, 57474), (6, 57513), (7, 57543), (8, 57546), (9, 57552), (10, 57624), (11, 57657),

Gene: Faze9\_67 Start: 57534, Stop: 57839, Start Num: 3

Candidate Starts for Faze9\_67:

(Start: 1 @57456 has 27 MA's), (Start: 2 @57507 has 2 MA's), (Start: 3 @57534 has 3 MA's), (4, 57588), (5, 57612), (6, 57651), (7, 57681), (8, 57684), (9, 57690), (10, 57762), (11, 57795),

Gene: FrenchFry\_69 Start: 57443, Stop: 57826, Start Num: 1

Candidate Starts for FrenchFry\_69:

(Start: 1 @57443 has 27 MA's), (Start: 2 @57494 has 2 MA's), (Start: 3 @57521 has 3 MA's), (4, 57575), (5, 57599), (6, 57638), (7, 57668), (8, 57671), (9, 57677), (10, 57749), (11, 57782),

Gene: Glass\_69 Start: 57444, Stop: 57827, Start Num: 1

Candidate Starts for Glass\_69:

(Start: 1 @57444 has 27 MA's), (Start: 2 @57495 has 2 MA's), (Start: 3 @57522 has 3 MA's), (4, 57576), (5, 57600), (6, 57639), (7, 57669), (8, 57672), (9, 57678), (10, 57750), (11, 57783),

Gene: Godines\_69 Start: 57697, Stop: 58080, Start Num: 1

Candidate Starts for Godines\_69:

(Start: 1 @57697 has 27 MA's), (Start: 2 @57748 has 2 MA's), (Start: 3 @57775 has 3 MA's), (4, 57829), (5, 57853), (6, 57892), (7, 57922), (8, 57925), (9, 57931), (10, 58003), (11, 58036),

Gene: Hedgerow\_68 Start: 57394, Stop: 57777, Start Num: 1

Candidate Starts for Hedgerow\_68:

(Start: 1 @57394 has 27 MA's), (Start: 2 @57445 has 2 MA's), (Start: 3 @57472 has 3 MA's), (4, 57526), (5, 57550), (6, 57589), (7, 57619), (8, 57622), (9, 57628), (10, 57700), (11, 57733),

Gene: Holeinone\_68 Start: 57299, Stop: 57682, Start Num: 1

Candidate Starts for Holeinone\_68:

(Start: 1 @57299 has 27 MA's), (Start: 2 @57350 has 2 MA's), (Start: 3 @57377 has 3 MA's), (4, 57431), (5, 57455), (6, 57494), (7, 57524), (8, 57527), (9, 57533), (10, 57605), (11, 57638),

Gene: ItsyBitsy1\_67 Start: 57535, Stop: 57918, Start Num: 1

Candidate Starts for ItsyBitsy1\_67:

(Start: 1 @57535 has 27 MA's), (Start: 2 @57586 has 2 MA's), (Start: 3 @57613 has 3 MA's), (4, 57667), (5, 57691), (6, 57730), (7, 57760), (8, 57763), (9, 57769), (10, 57841), (11, 57874),

Gene: Kaleb\_69 Start: 57528, Stop: 57833, Start Num: 3

Candidate Starts for Kaleb\_69:

(Start: 1 @57450 has 27 MA's), (Start: 2 @57501 has 2 MA's), (Start: 3 @57528 has 3 MA's), (4, 57582), (5, 57606), (6, 57645), (7, 57675), (8, 57678), (9, 57684), (10, 57756), (11, 57789),

Gene: Kheth\_68 Start: 57361, Stop: 57744, Start Num: 1

Candidate Starts for Kheth\_68:

(Start: 1 @57361 has 27 MA's), (Start: 2 @57412 has 2 MA's), (Start: 3 @57439 has 3 MA's), (4, 57493), (5, 57517), (6, 57556), (7, 57586), (8, 57589), (9, 57595), (10, 57667), (11, 57700),

Gene: Lars\_69 Start: 57422, Stop: 57805, Start Num: 1

Candidate Starts for Lars\_69:

(Start: 1 @57422 has 27 MA's), (Start: 2 @57473 has 2 MA's), (Start: 3 @57500 has 3 MA's), (4, 57554), (5, 57578), (6, 57617), (7, 57647), (8, 57650), (9, 57656), (10, 57728), (11, 57761),

Gene: Laurie\_68 Start: 57099, Stop: 57482, Start Num: 1

Candidate Starts for Laurie\_68:

(Start: 1 @57099 has 27 MA's), (Start: 2 @57150 has 2 MA's), (Start: 3 @57177 has 3 MA's), (4, 57231), (5, 57255), (6, 57294), (7, 57324), (8, 57327), (9, 57333), (10, 57405), (11, 57438),

Gene: Lephleur\_68 Start: 57284, Stop: 57667, Start Num: 1

Candidate Starts for Lephleur\_68:

(Start: 1 @57284 has 27 MA's), (Start: 2 @57335 has 2 MA's), (Start: 3 @57362 has 3 MA's), (4, 57416), (5, 57440), (6, 57479), (7, 57509), (8, 57512), (9, 57518), (10, 57590), (11, 57623),

Gene: LizLemon\_68 Start: 57449, Stop: 57832, Start Num: 1

Candidate Starts for LizLemon\_68:

(Start: 1 @57449 has 27 MA's), (Start: 2 @57500 has 2 MA's), (Start: 3 @57527 has 3 MA's), (4, 57581), (5, 57605), (6, 57644), (7, 57674), (8, 57677), (9, 57683), (10, 57755), (11, 57788),

Gene: MasterPo\_69 Start: 57316, Stop: 57699, Start Num: 1

Candidate Starts for MasterPo\_69:

(Start: 1 @57316 has 27 MA's), (Start: 2 @57367 has 2 MA's), (Start: 3 @57394 has 3 MA's), (4, 57448), (5, 57472), (6, 57511), (7, 57541), (8, 57544), (9, 57550), (10, 57622), (11, 57655),

Gene: Opia\_69 Start: 57342, Stop: 57725, Start Num: 1

Candidate Starts for Opia\_69:

(Start: 1 @57342 has 27 MA's), (Start: 2 @57393 has 2 MA's), (Start: 3 @57420 has 3 MA's), (4, 57474), (5, 57498), (6, 57537), (7, 57567), (8, 57570), (9, 57576), (10, 57648), (11, 57681),

Gene: Phantasmagoria\_67 Start: 57331, Stop: 57714, Start Num: 1

Candidate Starts for Phantasmagoria\_67:

(Start: 1 @57331 has 27 MA's), (Start: 2 @57382 has 2 MA's), (Start: 3 @57409 has 3 MA's), (4, 57463), (5, 57487), (6, 57526), (7, 57556), (8, 57559), (9, 57565), (10, 57637), (11, 57670),

Gene: Qyrzula\_62 Start: 57508, Stop: 57840, Start Num: 2

Candidate Starts for Qyrzula\_62:

(Start: 1 @57457 has 27 MA's), (Start: 2 @57508 has 2 MA's), (Start: 3 @57535 has 3 MA's), (4, 57589), (5, 57613), (6, 57652), (7, 57682), (8, 57685), (9, 57691), (10, 57763), (11, 57796),

Gene: Rhinoforte\_68 Start: 57369, Stop: 57752, Start Num: 1

Candidate Starts for Rhinoforte\_68:

(Start: 1 @57369 has 27 MA's), (Start: 2 @57420 has 2 MA's), (Start: 3 @57447 has 3 MA's), (4, 57501), (5, 57525), (6, 57564), (7, 57594), (8, 57597), (9, 57603), (10, 57675), (11, 57708),

Gene: Rosebush\_67 Start: 57436, Stop: 57819, Start Num: 1

Candidate Starts for Rosebush\_67:

(Start: 1 @57436 has 27 MA's), (Start: 2 @57487 has 2 MA's), (Start: 3 @57514 has 3 MA's), (4, 57568), (5, 57592), (6, 57631), (7, 57661), (8, 57664), (9, 57670), (10, 57742), (11, 57775),

Gene: Sabella\_68 Start: 57271, Stop: 57654, Start Num: 1

Candidate Starts for Sabella\_68:

(Start: 1 @57271 has 27 MA's), (Start: 2 @57322 has 2 MA's), (Start: 3 @57349 has 3 MA's), (4, 57403), (5, 57427), (6, 57466), (7, 57496), (8, 57499), (9, 57505), (10, 57577), (11, 57610),

Gene: TA17A\_68 Start: 57357, Stop: 57662, Start Num: 3

Candidate Starts for TA17A\_68:

(Start: 1 @57279 has 27 MA's), (Start: 2 @57330 has 2 MA's), (Start: 3 @57357 has 3 MA's), (4, 57411), (5, 57435), (6, 57474), (7, 57504), (8, 57507), (9, 57513), (10, 57585), (11, 57618),

Gene: Tinciduntolum\_69 Start: 57438, Stop: 57821, Start Num: 1

Candidate Starts for Tinciduntolum\_69:

(Start: 1 @57438 has 27 MA's), (Start: 2 @57489 has 2 MA's), (Start: 3 @57516 has 3 MA's), (4, 57570), (5, 57594), (6, 57633), (7, 57663), (8, 57666), (9, 57672), (10, 57744), (11, 57777),

Gene: Tres\_68 Start: 57292, Stop: 57675, Start Num: 1

Candidate Starts for Tres\_68:

(Start: 1 @57292 has 27 MA's), (Start: 2 @57343 has 2 MA's), (Start: 3 @57370 has 3 MA's), (4, 57424), (5, 57448), (6, 57487), (7, 57517), (8, 57520), (9, 57526), (10, 57598), (11, 57631),

Gene: West99\_68 Start: 57469, Stop: 57852, Start Num: 1

Candidate Starts for West99\_68:

(Start: 1 @57469 has 27 MA's), (Start: 2 @57520 has 2 MA's), (Start: 3 @57547 has 3 MA's), (4, 57601), (5, 57625), (6, 57664), (7, 57694), (8, 57697), (9, 57703), (10, 57775), (11, 57808),