



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 296977 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296977 has 20 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Huphlebuff\_43, Clarkson\_42, Blackbeetle\_41, Caprice\_38, LittleLaf\_41, JoieB\_42, GoongGoong\_40, MosMoris\_39, Beelzebub\_45, Gattaca\_40, Corazon\_39, Tesla\_40, FeliMaine\_43, RedRaider77\_41, Lilbit\_40, Raela\_41, Poise\_41, VasuNzinga\_41
- Track 2 : Pringar\_41
- Track 3 : Marvin\_39

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

The start number called the most often in the published annotations is 2, it was called in 18 of the 19 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Beelzebub\_45, Blackbeetle\_41, Caprice\_38, Clarkson\_42, Corazon\_39, FeliMaine\_43, Gattaca\_40, GoongGoong\_40, Huphlebuff\_43, JoieB\_42, Lilbit\_40, LittleLaf\_41, MosMoris\_39, Poise\_41, Pringar\_41, Raela\_41, RedRaider77\_41, Tesla\_40, VasuNzinga\_41,

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

- Marvin\_39,

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

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

Start 2:

- Found in 20 of 20 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 18 of 19
- Called 95.0% of time when present
- Phage (with cluster) where this start called: Beelzebub\_45 (S), Blackbeetle\_41 (S), Caprice\_38 (S), Clarkson\_42 (S), Corazon\_39 (S), FeliMaine\_43 (S), Gattaca\_40 (S), GoongGoong\_40 (S), Huphlebuff\_43 (S), JoieB\_42 (S), Lilbit\_40 (S), LittleLaf\_41 (S), MosMoris\_39 (S), Poise\_41 (S), Pringar\_41 (S), Raela\_41 (S), RedRaider77\_41 (S),

Tesla\_40 (S), VasuNzinga\_41 (S),

Start 3:

- Found in 20 of 20 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 1 of 19
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Marvin\_39 (S),

### Summary by clusters:

There is one cluster represented in this pham: S

Info for manual annotations of cluster S:

- Start number 2 was manually annotated 18 times for cluster S.
- Start number 3 was manually annotated 1 time for cluster S.

### Gene Information:

Gene: Beelzebub\_45 Start: 17697, Stop: 18122, Start Num: 2

Candidate Starts for Beelzebub\_45:

(1, 17694), (Start: 2 @17697 has 18 MA's), (Start: 3 @17721 has 1 MA's), (4, 17814), (5, 17880), (6, 17892), (7, 17901), (8, 17904), (9, 17973), (10, 17994), (11, 18057), (12, 18099), (13, 18105),

Gene: Blackbeetle\_41 Start: 16716, Stop: 17141, Start Num: 2

Candidate Starts for Blackbeetle\_41:

(1, 16713), (Start: 2 @16716 has 18 MA's), (Start: 3 @16740 has 1 MA's), (4, 16833), (5, 16899), (6, 16911), (7, 16920), (8, 16923), (9, 16992), (10, 17013), (11, 17076), (12, 17118), (13, 17124),

Gene: Caprice\_38 Start: 16786, Stop: 17211, Start Num: 2

Candidate Starts for Caprice\_38:

(1, 16783), (Start: 2 @16786 has 18 MA's), (Start: 3 @16810 has 1 MA's), (4, 16903), (5, 16969), (6, 16981), (7, 16990), (8, 16993), (9, 17062), (10, 17083), (11, 17146), (12, 17188), (13, 17194),

Gene: Clarkson\_42 Start: 17398, Stop: 17823, Start Num: 2

Candidate Starts for Clarkson\_42:

(1, 17395), (Start: 2 @17398 has 18 MA's), (Start: 3 @17422 has 1 MA's), (4, 17515), (5, 17581), (6, 17593), (7, 17602), (8, 17605), (9, 17674), (10, 17695), (11, 17758), (12, 17800), (13, 17806),

Gene: Corazon\_39 Start: 17351, Stop: 17776, Start Num: 2

Candidate Starts for Corazon\_39:

(1, 17348), (Start: 2 @17351 has 18 MA's), (Start: 3 @17375 has 1 MA's), (4, 17468), (5, 17534), (6, 17546), (7, 17555), (8, 17558), (9, 17627), (10, 17648), (11, 17711), (12, 17753), (13, 17759),

Gene: FeliMaine\_43 Start: 17399, Stop: 17824, Start Num: 2

Candidate Starts for FeliMaine\_43:

(1, 17396), (Start: 2 @17399 has 18 MA's), (Start: 3 @17423 has 1 MA's), (4, 17516), (5, 17582), (6, 17594), (7, 17603), (8, 17606), (9, 17675), (10, 17696), (11, 17759), (12, 17801), (13, 17807),

Gene: Gattaca\_40 Start: 16578, Stop: 17003, Start Num: 2

Candidate Starts for Gattaca\_40:

(1, 16575), (Start: 2 @16578 has 18 MA's), (Start: 3 @16602 has 1 MA's), (4, 16695), (5, 16761), (6, 16773), (7, 16782), (8, 16785), (9, 16854), (10, 16875), (11, 16938), (12, 16980), (13, 16986),

Gene: GoongGoong\_40 Start: 16618, Stop: 17043, Start Num: 2

Candidate Starts for GoongGoong\_40:

(1, 16615), (Start: 2 @16618 has 18 MA's), (Start: 3 @16642 has 1 MA's), (4, 16735), (5, 16801), (6, 16813), (7, 16822), (8, 16825), (9, 16894), (10, 16915), (11, 16978), (12, 17020), (13, 17026),

Gene: Huphleuff\_43 Start: 17203, Stop: 17628, Start Num: 2

Candidate Starts for Huphleuff\_43:

(1, 17200), (Start: 2 @17203 has 18 MA's), (Start: 3 @17227 has 1 MA's), (4, 17320), (5, 17386), (6, 17398), (7, 17407), (8, 17410), (9, 17479), (10, 17500), (11, 17563), (12, 17605), (13, 17611),

Gene: JoieB\_42 Start: 17422, Stop: 17847, Start Num: 2

Candidate Starts for JoieB\_42:

(1, 17419), (Start: 2 @17422 has 18 MA's), (Start: 3 @17446 has 1 MA's), (4, 17539), (5, 17605), (6, 17617), (7, 17626), (8, 17629), (9, 17698), (10, 17719), (11, 17782), (12, 17824), (13, 17830),

Gene: Lilbit\_40 Start: 17399, Stop: 17824, Start Num: 2

Candidate Starts for Lilbit\_40:

(1, 17396), (Start: 2 @17399 has 18 MA's), (Start: 3 @17423 has 1 MA's), (4, 17516), (5, 17582), (6, 17594), (7, 17603), (8, 17606), (9, 17675), (10, 17696), (11, 17759), (12, 17801), (13, 17807),

Gene: LittleLaf\_41 Start: 17128, Stop: 17553, Start Num: 2

Candidate Starts for LittleLaf\_41:

(1, 17125), (Start: 2 @17128 has 18 MA's), (Start: 3 @17152 has 1 MA's), (4, 17245), (5, 17311), (6, 17323), (7, 17332), (8, 17335), (9, 17404), (10, 17425), (11, 17488), (12, 17530), (13, 17536),

Gene: Marvin\_39 Start: 17422, Stop: 17823, Start Num: 3

Candidate Starts for Marvin\_39:

(1, 17395), (Start: 2 @17398 has 18 MA's), (Start: 3 @17422 has 1 MA's), (4, 17515), (5, 17581), (6, 17593), (7, 17602), (8, 17605), (9, 17674), (10, 17695), (11, 17758), (12, 17800), (13, 17806),

Gene: MosMoris\_39 Start: 16578, Stop: 17003, Start Num: 2

Candidate Starts for MosMoris\_39:

(1, 16575), (Start: 2 @16578 has 18 MA's), (Start: 3 @16602 has 1 MA's), (4, 16695), (5, 16761), (6, 16773), (7, 16782), (8, 16785), (9, 16854), (10, 16875), (11, 16938), (12, 16980), (13, 16986),

Gene: Poise\_41 Start: 16716, Stop: 17141, Start Num: 2

Candidate Starts for Poise\_41:

(1, 16713), (Start: 2 @16716 has 18 MA's), (Start: 3 @16740 has 1 MA's), (4, 16833), (5, 16899), (6, 16911), (7, 16920), (8, 16923), (9, 16992), (10, 17013), (11, 17076), (12, 17118), (13, 17124),

Gene: Pringar\_41 Start: 17028, Stop: 17453, Start Num: 2

Candidate Starts for Pringar\_41:

(1, 17025), (Start: 2 @17028 has 18 MA's), (Start: 3 @17052 has 1 MA's), (4, 17145), (6, 17223), (7, 17232), (8, 17235), (9, 17304), (10, 17325), (13, 17436),

Gene: Raela\_41 Start: 17271, Stop: 17696, Start Num: 2

Candidate Starts for Raela\_41:

(1, 17268), (Start: 2 @17271 has 18 MA's), (Start: 3 @17295 has 1 MA's), (4, 17388), (5, 17454), (6, 17466), (7, 17475), (8, 17478), (9, 17547), (10, 17568), (11, 17631), (12, 17673), (13, 17679),

Gene: RedRaider77\_41 Start: 17172, Stop: 17597, Start Num: 2

Candidate Starts for RedRaider77\_41:

(1, 17169), (Start: 2 @17172 has 18 MA's), (Start: 3 @17196 has 1 MA's), (4, 17289), (5, 17355), (6, 17367), (7, 17376), (8, 17379), (9, 17448), (10, 17469), (11, 17532), (12, 17574), (13, 17580),

Gene: Tesla\_40 Start: 17021, Stop: 17446, Start Num: 2

Candidate Starts for Tesla\_40:

(1, 17018), (Start: 2 @17021 has 18 MA's), (Start: 3 @17045 has 1 MA's), (4, 17138), (5, 17204), (6, 17216), (7, 17225), (8, 17228), (9, 17297), (10, 17318), (11, 17381), (12, 17423), (13, 17429),

Gene: VasuNzinga\_41 Start: 16605, Stop: 17030, Start Num: 2

Candidate Starts for VasuNzinga\_41:

(1, 16602), (Start: 2 @16605 has 18 MA's), (Start: 3 @16629 has 1 MA's), (4, 16722), (5, 16788), (6, 16800), (7, 16809), (8, 16812), (9, 16881), (10, 16902), (11, 16965), (12, 17007), (13, 17013),