



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 291328 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291328 has 40 members, 5 are drafts.

Phages represented in each track:

- Track 1 : LilhomieP\_20, SlimJimmy\_20, KleverKiS\_21, Dulcita\_22, PegLeg\_21, TyDawg\_21, Izel\_22, Glaske16\_22, Bricole\_21, Diminimus\_22, Auspice\_21, TpudiCK\_22, IPhane7\_21, Skinny\_22, FreakyGoo\_22, Bongo\_21
- Track 2 : RoseMarie\_21
- Track 3 : Reindeer\_19
- Track 4 : Rey\_25, Aziz\_25, MrMagoo\_25, Estes\_26, GenevaB15\_25, GardenSalsa\_25
- Track 5 : Nanosmite\_25
- Track 6 : Nette\_12
- Track 7 : ZenTime222\_12, Nairb\_12, Bernal13\_12, Whitty\_12, RonRayGun\_12, Ibrahim\_12
- Track 8 : Mendokysei\_11
- Track 9 : Cosmo\_33, MaryV\_33, Azrael100\_32, Wildcat\_33, EniyanLRS\_30
- Track 10 : GAL1\_13
- Track 11 : Kumao\_20

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

The start number called the most often in the published annotations is 13, it was called in 27 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Auspice\_21, Aziz\_25, Azrael100\_32, Bongo\_21, Bricole\_21, Cosmo\_33, Diminimus\_22, Dulcita\_22, EniyanLRS\_30, Estes\_26, FreakyGoo\_22, GardenSalsa\_25, GenevaB15\_25, Glaske16\_22, IPhane7\_21, Izel\_22, KleverKiS\_21, LilhomieP\_20, MaryV\_33, MrMagoo\_25, Nanosmite\_25, PegLeg\_21, Reindeer\_19, Rey\_25, RoseMarie\_21, Skinny\_22, SlimJimmy\_20, TpudiCK\_22, TyDawg\_21, Wildcat\_33,

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

- 

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

- Bernal13\_12, GAL1\_13, Ibrahim\_12, Kumao\_20, Mendokysei\_11, Nairb\_12, Nette\_12, RonRayGun\_12, Whitty\_12, ZenTime222\_12,

### Summary by start number:

#### Start 13:

- Found in 30 of 40 ( 75.0% ) of genes in pham
- Manual Annotations of this start: 27 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Auspice\_21 (M1), Aziz\_25 (M2), Azrael100\_32 (V), Bongo\_21 (M1), Bricole\_21 (M1), Cosmo\_33 (V), Diminimus\_22 (M1), Dulcita\_22 (M1), EniyanLRS\_30 (V), Estes\_26 (M2), FreakyGoo\_22 (M1), GardenSalsa\_25 (M2), GenevaB15\_25 (M2), Glaske16\_22 (M1), IPhane7\_21 (M1), Izel\_22 (M1), KleverKiS\_21 (M1), LilhomieP\_20 (M1), MaryV\_33 (V), MrMagoo\_25 (M2), Nanosmite\_25 (M3), PegLeg\_21 (M1), Reindeer\_19 (M1), Rey\_25 (M2), RoseMarie\_21 (M1), Skinny\_22 (M1), SlimJimmy\_20 (M1), TpudiCK\_22 (M1), TyDawg\_21 (M1), Wildcat\_33 (V),

#### Start 14:

- Found in 1 of 40 ( 2.5% ) 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: Kumao\_20 (singleton),

#### Start 17:

- Found in 8 of 40 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 7 of 35
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Bernal13\_12 (T), Ibrahim\_12 (T), Mendokysei\_11 (T), Nairb\_12 (T), RonRayGun\_12 (T), Whitty\_12 (T), ZenTime222\_12 (T),

#### Start 19:

- Found in 3 of 40 ( 7.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Nette\_12 (T),

#### Start 23:

- Found in 1 of 40 ( 2.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GAL1\_13 (singleton),

### Summary by clusters:

There are 6 clusters represented in this pham: singleton, V, M1, T, M3, M2,

Info for manual annotations of cluster M1:

- Start number 13 was manually annotated 15 times for cluster M1.

Info for manual annotations of cluster M2:

- Start number 13 was manually annotated 6 times for cluster M2.

Info for manual annotations of cluster M3:

- Start number 13 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster T:

- Start number 17 was manually annotated 7 times for cluster T.

Info for manual annotations of cluster V:

- Start number 13 was manually annotated 5 times for cluster V.

### **Gene Information:**

Gene: Auspice\_21 Start: 11871, Stop: 12275, Start Num: 13

Candidate Starts for Auspice\_21:

(Start: 13 @11871 has 27 MA's), (22, 11964), (28, 11985), (29, 11991), (36, 12036), (43, 12096), (55, 12162),

Gene: Aziz\_25 Start: 12434, Stop: 12850, Start Num: 13

Candidate Starts for Aziz\_25:

(Start: 13 @12434 has 27 MA's), (24, 12545), (31, 12590), (32, 12593), (43, 12674), (52, 12722),

Gene: Azrael100\_32 Start: 14960, Stop: 15355, Start Num: 13

Candidate Starts for Azrael100\_32:

(3, 14858), (4, 14873), (5, 14891), (7, 14906), (10, 14927), (Start: 13 @14960 has 27 MA's), (20, 14999), (26, 15056), (29, 15068), (30, 15080), (31, 15089), (45, 15191), (48, 15203), (49, 15209), (63, 15335),

Gene: Bernal13\_12 Start: 9006, Stop: 9371, Start Num: 17

Candidate Starts for Bernal13\_12:

(11, 8949), (Start: 17 @9006 has 7 MA's), (24, 9072), (26, 9084), (36, 9141), (37, 9168), (46, 9213), (47, 9219), (62, 9345),

Gene: Bongo\_21 Start: 11871, Stop: 12275, Start Num: 13

Candidate Starts for Bongo\_21:

(Start: 13 @11871 has 27 MA's), (22, 11964), (28, 11985), (29, 11991), (36, 12036), (43, 12096), (55, 12162),

Gene: Bricole\_21 Start: 11870, Stop: 12274, Start Num: 13

Candidate Starts for Bricole\_21:

(Start: 13 @11870 has 27 MA's), (22, 11963), (28, 11984), (29, 11990), (36, 12035), (43, 12095), (55, 12161),

Gene: Cosmo\_33 Start: 14967, Stop: 15362, Start Num: 13

Candidate Starts for Cosmo\_33:

(3, 14865), (4, 14880), (5, 14898), (7, 14913), (10, 14934), (Start: 13 @14967 has 27 MA's), (20, 15006), (26, 15063), (29, 15075), (30, 15087), (31, 15096), (45, 15198), (48, 15210), (49, 15216), (63, 15342),

Gene: Diminimus\_22 Start: 11870, Stop: 12274, Start Num: 13

Candidate Starts for Diminimus\_22:

(Start: 13 @11870 has 27 MA's), (22, 11963), (28, 11984), (29, 11990), (36, 12035), (43, 12095), (55, 12161),

Gene: Dulcita\_22 Start: 11870, Stop: 12274, Start Num: 13

Candidate Starts for Dulcita\_22:

(Start: 13 @11870 has 27 MA's), (22, 11963), (28, 11984), (29, 11990), (36, 12035), (43, 12095), (55, 12161),

Gene: EniyanLRS\_30 Start: 14661, Stop: 15056, Start Num: 13

Candidate Starts for EniyanLRS\_30:

(3, 14559), (4, 14574), (5, 14592), (7, 14607), (10, 14628), (Start: 13 @14661 has 27 MA's), (20, 14700), (26, 14757), (29, 14769), (30, 14781), (31, 14790), (45, 14892), (48, 14904), (49, 14910), (63, 15036),

Gene: Estes\_26 Start: 12571, Stop: 12987, Start Num: 13

Candidate Starts for Estes\_26:

(Start: 13 @12571 has 27 MA's), (24, 12682), (31, 12727), (32, 12730), (43, 12811), (52, 12859),

Gene: FreakyGoo\_22 Start: 11871, Stop: 12275, Start Num: 13

Candidate Starts for FreakyGoo\_22:

(Start: 13 @11871 has 27 MA's), (22, 11964), (28, 11985), (29, 11991), (36, 12036), (43, 12096), (55, 12162),

Gene: GAL1\_13 Start: 8895, Stop: 9233, Start Num: 23

Candidate Starts for GAL1\_13:

(1, 8580), (2, 8646), (6, 8712), (8, 8724), (9, 8736), (15, 8793), (16, 8805), (23, 8895), (25, 8904), (27, 8910), (33, 8946), (35, 8964), (38, 9003), (39, 9006), (41, 9018), (42, 9021), (44, 9042), (52, 9099), (53, 9108), (54, 9114), (56, 9126), (57, 9129), (59, 9195), (60, 9204), (61, 9207), (63, 9213), (64, 9216),

Gene: GardenSalsa\_25 Start: 12407, Stop: 12823, Start Num: 13

Candidate Starts for GardenSalsa\_25:

(Start: 13 @12407 has 27 MA's), (24, 12518), (31, 12563), (32, 12566), (43, 12647), (52, 12695),

Gene: GenevaB15\_25 Start: 12434, Stop: 12850, Start Num: 13

Candidate Starts for GenevaB15\_25:

(Start: 13 @12434 has 27 MA's), (24, 12545), (31, 12590), (32, 12593), (43, 12674), (52, 12722),

Gene: Glaske16\_22 Start: 11870, Stop: 12274, Start Num: 13

Candidate Starts for Glaske16\_22:

(Start: 13 @11870 has 27 MA's), (22, 11963), (28, 11984), (29, 11990), (36, 12035), (43, 12095), (55, 12161),

Gene: IPhane7\_21 Start: 11871, Stop: 12275, Start Num: 13

Candidate Starts for IPhane7\_21:

(Start: 13 @11871 has 27 MA's), (22, 11964), (28, 11985), (29, 11991), (36, 12036), (43, 12096), (55, 12162),

Gene: Ibrahim\_12 Start: 9006, Stop: 9371, Start Num: 17

Candidate Starts for Ibrahim\_12:

(11, 8949), (Start: 17 @9006 has 7 MA's), (24, 9072), (26, 9084), (36, 9141), (37, 9168), (46, 9213), (47, 9219), (62, 9345),

Gene: Izel\_22 Start: 11870, Stop: 12274, Start Num: 13

Candidate Starts for Izel\_22:

(Start: 13 @11870 has 27 MA's), (22, 11963), (28, 11984), (29, 11990), (36, 12035), (43, 12095), (55, 12161),

Gene: KleverKiS\_21 Start: 11867, Stop: 12271, Start Num: 13

Candidate Starts for KleverKiS\_21:

(Start: 13 @11867 has 27 MA's), (22, 11960), (28, 11981), (29, 11987), (36, 12032), (43, 12092), (55, 12158),

Gene: Kumao\_20 Start: 11204, Stop: 11566, Start Num: 14

Candidate Starts for Kumao\_20:

(10, 11171), (Start: 14 @11204 has 1 MA's), (18, 11219), (19, 11225), (29, 11294), (36, 11339), (40, 11381), (52, 11453), (58, 11483), (61, 11537),

Gene: LilhomieP\_20 Start: 11871, Stop: 12275, Start Num: 13

Candidate Starts for LilhomieP\_20:

(Start: 13 @11871 has 27 MA's), (22, 11964), (28, 11985), (29, 11991), (36, 12036), (43, 12096), (55, 12162),

Gene: MaryV\_33 Start: 14933, Stop: 15328, Start Num: 13

Candidate Starts for MaryV\_33:

(3, 14831), (4, 14846), (5, 14864), (7, 14879), (10, 14900), (Start: 13 @14933 has 27 MA's), (20, 14972), (26, 15029), (29, 15041), (30, 15053), (31, 15062), (45, 15164), (48, 15176), (49, 15182), (63, 15308),

Gene: Mendokysei\_11 Start: 8981, Stop: 9349, Start Num: 17

Candidate Starts for Mendokysei\_11:

(11, 8924), (Start: 17 @8981 has 7 MA's), (19, 8996), (24, 9047), (26, 9059), (33, 9095), (36, 9116), (50, 9200), (62, 9323), (65, 9335),

Gene: MrMagoo\_25 Start: 12407, Stop: 12823, Start Num: 13

Candidate Starts for MrMagoo\_25:

(Start: 13 @12407 has 27 MA's), (24, 12518), (31, 12563), (32, 12566), (43, 12647), (52, 12695),

Gene: Nairb\_12 Start: 9006, Stop: 9371, Start Num: 17

Candidate Starts for Nairb\_12:

(11, 8949), (Start: 17 @9006 has 7 MA's), (24, 9072), (26, 9084), (36, 9141), (37, 9168), (46, 9213), (47, 9219), (62, 9345),

Gene: Nanosmite\_25 Start: 12625, Stop: 13041, Start Num: 13

Candidate Starts for Nanosmite\_25:

(Start: 13 @12625 has 27 MA's), (32, 12781), (34, 12793), (36, 12802), (55, 12928),

Gene: Nette\_12 Start: 9005, Stop: 9358, Start Num: 19

Candidate Starts for Nette\_12:

(11, 8933), (Start: 17 @8990 has 7 MA's), (19, 9005), (24, 9056), (26, 9068), (33, 9104), (36, 9125), (50, 9209), (62, 9332), (65, 9344),

Gene: PegLeg\_21 Start: 11870, Stop: 12274, Start Num: 13

Candidate Starts for PegLeg\_21:

(Start: 13 @11870 has 27 MA's), (22, 11963), (28, 11984), (29, 11990), (36, 12035), (43, 12095), (55, 12161),

Gene: Reindeer\_19 Start: 11723, Stop: 12127, Start Num: 13

Candidate Starts for Reindeer\_19:

(12, 11711), (Start: 13 @11723 has 27 MA's), (31, 11864), (32, 11867), (34, 11879), (41, 11936), (55, 12014),

Gene: Rey\_25 Start: 12642, Stop: 13055, Start Num: 13

Candidate Starts for Rey\_25:

(Start: 13 @12642 has 27 MA's), (24, 12750), (31, 12795), (32, 12798), (43, 12879), (52, 12927),

Gene: RonRayGun\_12 Start: 9006, Stop: 9371, Start Num: 17

Candidate Starts for RonRayGun\_12:

(11, 8949), (Start: 17 @9006 has 7 MA's), (24, 9072), (26, 9084), (36, 9141), (37, 9168), (46, 9213), (47, 9219), (62, 9345),

Gene: RoseMarie\_21 Start: 12114, Stop: 12518, Start Num: 13

Candidate Starts for RoseMarie\_21:

(12, 12102), (Start: 13 @12114 has 27 MA's), (21, 12177), (31, 12255), (34, 12270), (51, 12384),

Gene: Skinny\_22 Start: 11871, Stop: 12275, Start Num: 13

Candidate Starts for Skinny\_22:

(Start: 13 @11871 has 27 MA's), (22, 11964), (28, 11985), (29, 11991), (36, 12036), (43, 12096), (55, 12162),

Gene: SlimJimmy\_20 Start: 11870, Stop: 12274, Start Num: 13

Candidate Starts for SlimJimmy\_20:

(Start: 13 @11870 has 27 MA's), (22, 11963), (28, 11984), (29, 11990), (36, 12035), (43, 12095), (55, 12161),

Gene: TpudiCK\_22 Start: 11870, Stop: 12274, Start Num: 13

Candidate Starts for TpudiCK\_22:

(Start: 13 @11870 has 27 MA's), (22, 11963), (28, 11984), (29, 11990), (36, 12035), (43, 12095), (55, 12161),

Gene: TyDawg\_21 Start: 11871, Stop: 12275, Start Num: 13

Candidate Starts for TyDawg\_21:

(Start: 13 @11871 has 27 MA's), (22, 11964), (28, 11985), (29, 11991), (36, 12036), (43, 12096), (55, 12162),

Gene: Whitty\_12 Start: 9006, Stop: 9371, Start Num: 17

Candidate Starts for Whitty\_12:

(11, 8949), (Start: 17 @9006 has 7 MA's), (24, 9072), (26, 9084), (36, 9141), (37, 9168), (46, 9213), (47, 9219), (62, 9345),

Gene: Wildcat\_33 Start: 14943, Stop: 15338, Start Num: 13

Candidate Starts for Wildcat\_33:

(3, 14841), (4, 14856), (5, 14874), (7, 14889), (10, 14910), (Start: 13 @14943 has 27 MA's), (20, 14982), (26, 15039), (29, 15051), (30, 15063), (31, 15072), (45, 15174), (48, 15186), (49, 15192), (63, 15318),

Gene: ZenTime222\_12 Start: 9006, Stop: 9371, Start Num: 17

Candidate Starts for ZenTime222\_12:

(11, 8949), (Start: 17 @9006 has 7 MA's), (24, 9072), (26, 9084), (36, 9141), (37, 9168), (46, 9213), (47, 9219), (62, 9345),

