Pham 163672


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 163672 Report

This analysis was run 04/28/24 on database version 559.
Pham number 163672 has 49 members, 8 are drafts.
Phages represented in each track:
-Track 1 : Cheesy_52, Elsa_52, Correa_50, Arcadia_52, Nason_52

- Track 2 : Xenomorph 49, Tribby_53
- Track 3 : Benllo_53, JEGGS_51, Hankly_51, Heisenberger_51, Circum_54, Mudcat_49, KeaneyLin_51, Mooshroom_53, GoCrazy_51
- Track $\overline{4}$ : Dynamite_5 $\overline{2}$, NapoleonB_52
- Track 5 : BenitoAntonio_52, Kardesai_53
- Track 6 : Inked 52
- Track 7 : LilHuddy_50
- Track 8 : Giantsbane_49, Shepard_51
- Track 9 : Loretta 50, Ingrid_50
- Track 10 : Renaldo_57, Lewando_54
- Track 11 : Uzumaki_48
- Track 12 : Leathea_52
- Track 13 : GantcherGoblin_49
- Track 14 : Argan_49, Zeina_-52
- Track 15 : BarbiēDoll_55
- Track 16 : Stayer_48, Egad_48, Sloopyjoe_48, Linda_48, DoctorPepper_50, BronxBay_48, StarL̄ord_48, Shiba_47, MrA_̄ronian_48, Michelle_48, Salk_48, ProfFrink 52, Djungelskog_48, Raunak_51
- Track 17 : Sporto_49


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

The start number called the most often in the published annotations is 10 , it was called in 18 of the 41 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arcadia_52, BenitoAntonio_52, Benllo_53, Cheesy_52, Circum_54, Correa_50, Dynamite_52, Elsa_52, GoCrazy_51, Hānkly_51, Heisenberger_51, JEGGS_51, Kardesai_53, KeaneyLin_51, Mooshroom_53, Mudcat_49, NapōleonB_52, Nason_5 $\overline{2}$, Tribby_53, Xenomorph_49,

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

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

- Argan_49, BarbieDoll_55, BronxBay_48, Djungelskog_48, DoctorPepper_50, Egad_48, GantcherGoblin_49, Giantsbane_49, Ingrid_50, Inked_52, Leathea_52, Lewañdo_54, LilHuddy 50, Linda_48, Loretta_50, Michelle_48, MrAaronian_48, ProfFrink_52, Raunak_51, Renaldo_57, Salk_48, Shepard_51, Shiba_47, Sloopyjoe_48, Sporto_49, StarLord_48, Stayēr_48, Uzumāki_48, Zeina_52,


## Summary by start number:

Start 6:

- Found in 2 of 49 ( $4.1 \%$ ) of genes in pham
- No Manual Annotations of this start.
- Called $50.0 \%$ of time when present
- Phage (with cluster) where this start called: BarbieDoll_55 (AU6),

Start 8:

- Found in 21 of 49 ( $42.9 \%$ ) of genes in pham
- Manual Annotations of this start: 18 of 41
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: BronxBay_48 (AW), Djungelskog_48 (AW), DoctorPepper_50 (AW), Egad_48 (AW), Giantsbane_49 (AU2), Ingrid_50 (AU3), Inked 52 (AU), LilHuddy_50 (AU2), Linda_48 (AW), Loretta_50 (AU3), Michelle_48 (AW), MrAaronian 48 (AW), ProfFrink_ 52 (AW), Raunak 51 (AW), Salk 48 (AW), Shepard_51 (AU2), Shiba_47 (AW), Sloopyjoe_48 (AW), Sporto_49 (AW), StarLord_48 (AW), Stayer_48 (AW),

Start 9:

- Found in 8 of 49 ( $16.3 \%$ ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called $12.5 \%$ of time when present
- Phage (with cluster) where this start called: Uzumaki_48 (AU6),

Start 10:

- Found in 20 of 49 ( $40.8 \%$ ) of genes in pham
- Manual Annotations of this start: 18 of 41
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: Arcadia 52 (AM), BenitoAntonio_52
(AM), Benllo 53 (AM), Cheesy_52 (AM), Circum 54 (AM), Correa 50 (AM), Dynamite_52 (AM), Elsa_52 (AM), GoCrazy_51 (AM), Hankly 51 (AM), Heisenberger 51 (AM), JEGGS 51 (AM), Kardesai_53 (AM), KeaneyLin_ 51 (AM), Mooshroom_53 (AM), Mudcat_49 (AM), NapoleonB_52 (AM), Nason_52 (AM), Tribby_53 (А̄М), Xenomorph_4̄9 (AM),

Start 11:

- Found in 2 of 49 ( $4.1 \%$ ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called $100.0 \%$ of time when present
- Phage (with cluster) where this start called: GantcherGoblin_49 (AU6), Leathea_52 (AU6),

Start 12:

- Found in 3 of 49 ( $6.1 \%$ ) of genes in pham
- Manual Annotations of this start: 2 of 41
- Called $66.7 \%$ of time when present
- Phage (with cluster) where this start called: Argan_49 (AU6), Zeina_52 (AU6),

Start 13:

- Found in 44 of 49 ( $89.8 \%$ ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called $4.5 \%$ of time when present
- Phage (with cluster) where this start called: Lewando_54 (AU6), Renaldo_57 (AU6),


## Summary by clusters:

There are 6 clusters represented in this pham: AM, AU3, AU2, AU, AW, AU6,
Info for manual annotations of cluster AM:

- Start number 10 was manually annotated 18 times for cluster AM.

Info for manual annotations of cluster AU:

- Start number 8 was manually annotated 1 time for cluster AU.

Info for manual annotations of cluster AU2:

- Start number 8 was manually annotated 3 times for cluster AU2.

Info for manual annotations of cluster AU3:

- Start number 8 was manually annotated 2 times for cluster AU3.

Info for manual annotations of cluster AU6:

- Start number 9 was manually annotated 1 time for cluster AU6.
- Start number 11 was manually annotated 1 time for cluster AU6.
- Start number 12 was manually annotated 2 times for cluster AU6.
-Start number 13 was manually annotated 1 time for cluster AU6.
Info for manual annotations of cluster AW:
- Start number 8 was manually annotated 12 times for cluster AW.


## Gene Information:

Gene: Arcadia_52 Start: 33235, Stop: 33333, Start Num: 10
Candidate Starts for Arcadia_52:
(Start: 10 @33235 has 18 MA's), (Start: 13 @33244 has 1 MA's), (15, 33268), (16, 33274), (21, 33319),

Gene: Argan_49 Start: 33254, Stop: 33352, Start Num: 12
Candidate Starts for Argan_49:
(Start: 9 @33236 has 1 MA's), (Start: 12 @33254 has 2 MA's), (15, 33281), (21, 33332),
Gene: BarbieDoll_55 Start: 34950, Stop: 35090, Start Num: 6
Candidate Starts for BarbieDoll_55:
(5, 34947), (6, 34950), (Start: 9 @34983 has 1 MA's), (Start: 13 @35001 has 1 MA's), (15, 35025), (20, 35061), (21, 35076),

Gene: BenitoAntonio_52 Start: 32772, Stop: 32870, Start Num: 10
Candidate Starts for BenitoAntonio_52:
(Start: 10 @32772 has 18 MA's), (Start: 13 @32781 has 1 MA's), (15, 32805), (21, 32856),
Gene: Benllo_53 Start: 33450, Stop: 33548, Start Num: 10
Candidate Starts for Benllo_53:
(Start: 10 @33450 has 18 MA's), (Start: 13 @33459 has 1 MA's), (15, 33483), (16, 33489), (21, 33534),

Gene: BronxBay_48 Start: 32581, Stop: 32706, Start Num: 8
Candidate Starts for BronxBay_48:
(Start: 8 @32581 has 18 MA's), (Start: 13 @32608 has 1 MA's), (14, 32620),
Gene: Cheesy_52 Start: 32956, Stop: 33054, Start Num: 10
Candidate Starts for Cheesy_52:
(Start: 10 @32956 has 18 MA's), (Start: 13 @32965 has 1 MA's), (15, 32989), (16, 32995), (21, 33040),

Gene: Circum_54 Start: 33641, Stop: 33739, Start Num: 10
Candidate Starts for Circum_54:
(Start: 10 @33641 has 18 MA's), (Start: 13 @33650 has 1 MA's), (15, 33674), (16, 33680), (21, 33725),

Gene: Correa_50 Start: 32102, Stop: 32200, Start Num: 10 Candidate Starts for Correa_50:
(Start: 10 @32102 has 18 MA's), (Start: 13 @32111 has 1 MA's), (15, 32135), (16, 32141), (21, 32186),

Gene: Djungelskog_48 Start: 32580, Stop: 32705, Start Num: 8
Candidate Starts for Djungelskog_48:
(Start: 8 @32580 has 18 MA's), (Start: 13 @32607 has 1 MA's), (14, 32619),
Gene: DoctorPepper_50 Start: 32285, Stop: 32410, Start Num: 8
Candidate Starts for DoctorPepper_50:
(Start: 8 @32285 has 18 MA's), (Start: 13 @32312 has 1 MA's), (14, 32324),
Gene: Dynamite_52 Start: 33165, Stop: 33263, Start Num: 10
Candidate Starts for Dynamite_52:
(Start: 10 @33165 has 18 MA's), (Start: 13 @33174 has 1 MA's), (15, 33198), (21, 33249),
Gene: Egad_48 Start: 32582, Stop: 32707, Start Num: 8
Candidate Starts for Egad_48:
(Start: 8 @32582 has 18 MA's), (Start: 13 @32609 has 1 MA's), (14, 32621),
Gene: Elsa_52 Start: 33235, Stop: 33333, Start Num: 10
Candidate Starts for Elsa_52:
(Start: 10 @33235 has 18 MA's), (Start: 13 @33244 has 1 MA's), (15, 33268), (16, 33274), (21, 33319),

Gene: GantcherGoblin_49 Start: 33332, Stop: 33430, Start Num: 11
Candidate Starts for GantcherGoblin_49:
(3, 33251), (6, 33284), (7, 33302), (Start: 9 @33317 has 1 MA's), (Start: 11 @33332 has 1 MA's), (15, 33359), (21, 33410),

Gene: Giantsbane_49 Start: 33708, Stop: 33821, Start Num: 8
Candidate Starts for Giantsbane_49:
(Start: 8 @33708 has 18 MA's), (Start: 13 @33732 has 1 MA's), (21, 33807),
Gene: GoCrazy_51 Start: 33106, Stop: 33204, Start Num: 10
Candidate Starts for GoCrazy_51:
(Start: 10 @33106 has 18 MA's), (Start: 13 @33115 has 1 MA's), (15, 33139), (16, 33145), (21, 33190),

Gene: Hankly_51 Start: 32380, Stop: 32478, Start Num: 10 Candidate Starts for Hankly_51:
(Start: 10 @32380 has 18 MA's), (Start: 13 @32389 has 1 MA's), (15, 32413), (16, 32419), (21, 32464),

Gene: Heisenberger_51 Start: 32661, Stop: 32759, Start Num: 10
Candidate Starts for Heisenberger_51:
(Start: 10 @32661 has 18 MA's), (Start: 13 @32670 has 1 MA's), (15, 32694), (16, 32700), (21, 32745),

Gene: Ingrid_50 Start: 34682, Stop: 34798, Start Num: 8
Candidate Starts for Ingrid_50:
(Start: 8 @34682 has 18 MA's), (Start: 13 @34706 has 1 MA's), (17, 34739), (21, 34781),
Gene: Inked_52 Start: 35810, Stop: 35923, Start Num: 8
Candidate Starts for Inked_52:
(Start: 8 @35810 has 18 MA's), (Start: 13 @35834 has 1 MA's),
Gene: JEGGS_51 Start: 32716, Stop: 32814, Start Num: 10
Candidate Starts for JEGGS_51:
(Start: 10 @32716 has 18 MA's), (Start: 13 @32725 has 1 MA's), (15, 32749), (16, 32755), (21, 32800),

Gene: Kardesai_53 Start: 33350, Stop: 33448, Start Num: 10 Candidate Starts for Kardesai_53:
(Start: 10 @33350 has 18 MA's), (Start: 13 @33359 has 1 MA's), (15, 33383), (21, 33434),
Gene: KeaneyLin_51 Start: 33106, Stop: 33204, Start Num: 10
Candidate Starts for KeaneyLin_51:
(Start: 10 @33106 has 18 MA's), (Start: 13 @33115 has 1 MA's), (15, 33139), (16, 33145), (21, 33190),

Gene: Leathea_52 Start: 33428, Stop: 33523, Start Num: 11 Candidate Starts for Leathea_52:
(1, 33326), (2, 33335), (3, 33347), (4, 33353), (5, 33377), (Start: 9 @33413 has 1 MA's), (Start: 11 @33428 has 1 MA's), (15, 33455), (20, 33491), (21, 33506),

Gene: Lewando_54 Start: 35003, Stop: 35092, Start Num: 13
Candidate Starts for Lewando_54:
(Start: 9 @34985 has 1 MA's), (Start: 13 @35003 has 1 MA's), (15, 35027), (20, 35063), (21, 35078),
Gene: LilHuddy_50 Start: 34898, Stop: 35011, Start Num: 8
Candidate Starts for LilHuddy_50:
(Start: 8 @34898 has 18 MA's), (Start: 13 @34922 has 1 MA's), (17, 34955), (21, 34997),
Gene: Linda_48 Start: 32578, Stop: 32703, Start Num: 8
Candidate Starts for Linda 48:
(Start: 8 @32578 has 18 MA's), (Start: 13 @32605 has 1 MA's), (14, 32617),
Gene: Loretta_50 Start: 34682, Stop: 34798, Start Num: 8
Candidate Starts for Loretta_50:
(Start: 8 @34682 has 18 MA's), (Start: 13 @34706 has 1 MA's), (17, 34739), (21, 34781),
Gene: Michelle_48 Start: 32580, Stop: 32705, Start Num: 8
Candidate Starts for Michelle_48:
(Start: 8 @32580 has 18 MA's), (Start: 13 @32607 has 1 MA's), (14, 32619),
Gene: Mooshroom_53 Start: 33350, Stop: 33448, Start Num: 10 Candidate Starts for Mooshroom_53:
(Start: 10 @33350 has 18 MA's), (Start: 13 @33359 has 1 MA's), (15, 33383), (16, 33389), (21, 33434),

Gene: MrAaronian_48 Start: 32580, Stop: 32705, Start Num: 8
Candidate Starts for MrAaronian_48:
(Start: 8 @32580 has 18 MA's), (Start: 13 @32607 has 1 MA's), (14, 32619),
Gene: Mudcat_49 Start: 34074, Stop: 34172, Start Num: 10
Candidate Starts for Mudcat_49:
(Start: 10 @34074 has 18 MA's), (Start: 13 @34083 has 1 MA's), ( 15,34107 ), ( 16,34113 ), (21, 34158),

Gene: NapoleonB_52 Start: 33165, Stop: 33263, Start Num: 10
Candidate Starts for NapoleonB_52:
(Start: 10 @33165 has 18 MA's), (Start: 13 @33174 has 1 MA's), (15, 33198), (21, 33249),
Gene: Nason_52 Start: 33235, Stop: 33333, Start Num: 10
Candidate Starts for Nason_52:
(Start: 10 @33235 has 18 MA's), (Start: 13 @33244 has 1 MA's), (15, 33268), (16, 33274), (21, 33319),

Gene: ProfFrink_52 Start: 32581, Stop: 32706, Start Num: 8 Candidate Starts for ProfFrink_52:
(Start: 8 @32581 has 18 MA's), (Start: 13 @32608 has 1 MA's), (14, 32620),
Gene: Raunak_51 Start: 32278, Stop: 32403, Start Num: 8
Candidate Starts for Raunak 51:
(Start: 8 @32278 has 18 MA's), (Start: 13 @32305 has 1 MA's), (14, 32317),
Gene: Renaldo_57 Start: 35312, Stop: 35401, Start Num: 13
Candidate Starts for Renaldo_57:
(Start: 9 @35294 has 1 MA's), (Start: 13 @35312 has 1 MA's), (15, 35336), (20, 35372), (21, 35387),
Gene: Salk_48 Start: 32578, Stop: 32703, Start Num: 8
Candidate Starts for Salk_48:
(Start: 8 @32578 has 18 MA's), (Start: 13 @32605 has 1 MA's), (14, 32617),

Gene: Shepard_51 Start: 34739, Stop: 34852, Start Num: 8
Candidate Starts for Shepard_51:
(Start: 8 @34739 has 18 MA's), (Start: 13 @34763 has 1 MA's), (21, 34838),
Gene: Shiba_47 Start: 32278, Stop: 32403, Start Num: 8
Candidate Starts for Shiba_47:
(Start: 8 @32278 has 18 MA's), (Start: 13 @32305 has 1 MA's), (14, 32317),
Gene: Sloopyjoe_48 Start: 32582, Stop: 32707, Start Num: 8
Candidate Starts for Sloopyjoe_48:
(Start: 8 @32582 has 18 MA's), (Start: 13 @32609 has 1 MA's), (14, 32621),
Gene: Sporto_49 Start: 34042, Stop: 34167, Start Num: 8
Candidate Starts for Sporto_49:
(Start: 8 @34042 has 18 MA's), (Start: 13 @34069 has 1 MA's), (14, 34081), (18, 34120),
Gene: StarLord_48 Start: 32581, Stop: 32706, Start Num: 8 Candidate Starts for StarLord_48:
(Start: 8 @32581 has 18 MA's), (Start: 13 @32608 has 1 MA's), (14, 32620),
Gene: Stayer_48 Start: 32578, Stop: 32703, Start Num: 8
Candidate Starts for Stayer_48:
(Start: 8 @32578 has 18 MA's), (Start: 13 @32605 has 1 MA's), (14, 32617),
Gene: Tribby_53 Start: 33173, Stop: 33274, Start Num: 10
Candidate Starts for Tribby_53:
(Start: 10 @33173 has 18 MA's), (Start: 13 @33182 has 1 MA's), (15, 33206), (16, 33212), (19, 33236), (21, 33257),

Gene: Uzumaki_48 Start: 33429, Stop: 33545, Start Num: 9
Candidate Starts for Uzumaki_48:
(Start: 9 @33429 has 1 MA's), (Start: 12 @33447 has 2 MA's), (15, 33474), (21, 33525),
Gene: Xenomorph_49 Start: 32906, Stop: 33004, Start Num: 10
Candidate Starts for Xenomorph_49:
(Start: 10 @32906 has 18 MA's), (Start: 13 @32915 has 1 MA's), (15, 32939), (16, 32945), (19, 32969), (21, 32990),

Gene: Zeina_52 Start: 33997, Stop: 34095, Start Num: 12
Candidate Starts for Zeina_52:
(Start: 9 @33979 has 1 MA's), (Start: 12 @33997 has 2 MA's), (15, 34024), (21, 34075),

