



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 185882 Report

This analysis was run 11/02/24 on database version 579.

Pham number 185882 has 17 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Chop\_25, Ayotoya\_25, GrandSlam\_25, Hamood\_25
- Track 2 : Bock\_25
- Track 3 : Parada\_25, WheatThin\_25, Nadeem\_25, Mulch\_25, Brylie\_25
- Track 4 : DelRio\_26
- Track 5 : Francois\_25
- Track 6 : BetterKatz\_25
- Track 7 : NancyRae\_25
- Track 8 : Dogfish\_28
- Track 9 : Vordorf\_29
- Track 10 : P3MA\_23

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

The start number called the most often in the published annotations is 3, it was called in 14 of the 16 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ayotoya\_25, BetterKatz\_25, Bock\_25, Brylie\_25, Chop\_25, DelRio\_26, Francois\_25, GrandSlam\_25, Hamood\_25, Mulch\_25, Nadeem\_25, NancyRae\_25, Parada\_25, WheatThin\_25,

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

- 

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

- Dogfish\_28, P3MA\_23, Vordorf\_29,

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

Start 1:

- Found in 2 of 17 ( 11.8% ) of genes in pham
- Manual Annotations of this start: 1 of 16
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dogfish\_28 (DT), Vordorf\_29 (DT),

#### Start 2:

- Found in 1 of 17 ( 5.9% ) of genes in pham
- Manual Annotations of this start: 1 of 16
- Called 100.0% of time when present
- Phage (with cluster) where this start called: P3MA\_23 (singleton),

#### Start 3:

- Found in 14 of 17 ( 82.4% ) of genes in pham
- Manual Annotations of this start: 14 of 16
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ayotoya\_25 (DI), BetterKatz\_25 (DI), Bock\_25 (DI), Brylie\_25 (DI), Chop\_25 (DI), DelRio\_26 (DI), Francois\_25 (DI), GrandSlam\_25 (DI), Hamood\_25 (DI), Mulch\_25 (DI), Nadeem\_25 (DI), NancyRae\_25 (DI), Parada\_25 (DI), WheatThin\_25 (DI),

#### Summary by clusters:

There are 3 clusters represented in this pham: singleton, DT, DI,

Info for manual annotations of cluster DI:

- Start number 3 was manually annotated 14 times for cluster DI.

Info for manual annotations of cluster DT:

- Start number 1 was manually annotated 1 time for cluster DT.

#### **Gene Information:**

Gene: Ayotoya\_25 Start: 21393, Stop: 23903, Start Num: 3

Candidate Starts for Ayotoya\_25:

(Start: 3 @21393 has 14 MA's), (7, 21525), (9, 21540), (10, 21585), (11, 21603), (17, 21768), (21, 21822), (22, 21831), (27, 21909), (28, 21915), (30, 22080), (32, 22095), (34, 22131), (39, 22206), (40, 22218), (41, 22227), (43, 22245), (44, 22257), (47, 22290), (48, 22293), (50, 22329), (52, 22383), (58, 22506), (61, 22560), (63, 22581), (64, 22590), (68, 22692), (70, 22752), (71, 22800), (72, 22812), (73, 22857), (77, 22944), (78, 22983), (80, 23052), (81, 23064), (83, 23076), (91, 23364), (92, 23394), (95, 23475), (96, 23496), (98, 23523), (99, 23547), (103, 23712), (107, 23757), (111, 23856), (114, 23895),

Gene: BetterKatz\_25 Start: 20866, Stop: 23376, Start Num: 3

Candidate Starts for BetterKatz\_25:

(Start: 3 @20866 has 14 MA's), (7, 20998), (9, 21013), (10, 21058), (11, 21076), (17, 21241), (21, 21295), (22, 21304), (27, 21382), (28, 21388), (30, 21553), (32, 21568), (34, 21604), (39, 21679), (40, 21691), (41, 21700), (42, 21706), (43, 21718), (44, 21730), (45, 21745), (47, 21763), (48, 21766), (50, 21802), (52, 21856), (57, 21961), (58, 21979), (61, 22033), (63, 22054), (64, 22063), (68, 22165), (70, 22225), (71, 22273), (72, 22285), (73, 22330), (77, 22417), (78, 22456), (80, 22525), (81, 22537), (83, 22549), (91, 22837), (92, 22867), (95, 22948), (96, 22969), (98, 22996), (99, 23020), (103, 23185), (107, 23230), (111, 23329), (114, 23368),

Gene: Bock\_25 Start: 20616, Stop: 23126, Start Num: 3

Candidate Starts for Bock\_25:

(Start: 3 @20616 has 14 MA's), (7, 20748), (9, 20763), (10, 20808), (11, 20826), (17, 20991), (21, 21045), (22, 21054), (27, 21132), (28, 21138), (30, 21303), (32, 21318), (34, 21354), (39, 21429), (40,

21441), (41, 21450), (42, 21456), (43, 21468), (44, 21480), (45, 21495), (47, 21513), (48, 21516), (52, 21606), (57, 21711), (58, 21729), (61, 21783), (63, 21804), (64, 21813), (68, 21915), (70, 21975), (71, 22023), (72, 22035), (73, 22080), (77, 22167), (78, 22206), (80, 22275), (81, 22287), (83, 22299), (91, 22587), (92, 22617), (95, 22698), (96, 22719), (98, 22746), (99, 22770), (103, 22935), (107, 22980), (111, 23079), (114, 23118),

Gene: Brylie\_25 Start: 20607, Stop: 23117, Start Num: 3

Candidate Starts for Brylie\_25:

(Start: 3 @20607 has 14 MA's), (7, 20739), (9, 20754), (10, 20799), (11, 20817), (17, 20982), (21, 21036), (22, 21045), (27, 21123), (28, 21129), (30, 21294), (32, 21309), (34, 21345), (39, 21420), (40, 21432), (41, 21441), (42, 21447), (43, 21459), (44, 21471), (45, 21486), (47, 21504), (48, 21507), (50, 21543), (52, 21597), (58, 21720), (61, 21774), (63, 21795), (64, 21804), (68, 21906), (70, 21966), (71, 22014), (72, 22026), (73, 22071), (77, 22158), (78, 22197), (80, 22266), (81, 22278), (83, 22290), (91, 22578), (92, 22608), (95, 22689), (96, 22710), (98, 22737), (99, 22761), (103, 22926), (107, 22971), (111, 23070), (114, 23109),

Gene: Chop\_25 Start: 21141, Stop: 23651, Start Num: 3

Candidate Starts for Chop\_25:

(Start: 3 @21141 has 14 MA's), (7, 21273), (9, 21288), (10, 21333), (11, 21351), (17, 21516), (21, 21570), (22, 21579), (27, 21657), (28, 21663), (30, 21828), (32, 21843), (34, 21879), (39, 21954), (40, 21966), (41, 21975), (43, 21993), (44, 22005), (47, 22038), (48, 22041), (50, 22077), (52, 22131), (58, 22254), (61, 22308), (63, 22329), (64, 22338), (68, 22440), (70, 22500), (71, 22548), (72, 22560), (73, 22605), (77, 22692), (78, 22731), (80, 22800), (81, 22812), (83, 22824), (91, 23112), (92, 23142), (95, 23223), (96, 23244), (98, 23271), (99, 23295), (103, 23460), (107, 23505), (111, 23604), (114, 23643),

Gene: DelRio\_26 Start: 21615, Stop: 24125, Start Num: 3

Candidate Starts for DelRio\_26:

(Start: 3 @21615 has 14 MA's), (7, 21747), (9, 21762), (10, 21807), (11, 21825), (17, 21990), (21, 22044), (22, 22053), (27, 22131), (28, 22137), (30, 22302), (32, 22317), (34, 22353), (39, 22428), (40, 22440), (41, 22449), (43, 22467), (44, 22479), (45, 22494), (47, 22512), (48, 22515), (50, 22551), (52, 22605), (57, 22710), (58, 22728), (61, 22782), (64, 22812), (68, 22914), (70, 22974), (71, 23022), (72, 23034), (73, 23079), (77, 23166), (78, 23205), (80, 23274), (81, 23286), (89, 23520), (91, 23586), (92, 23616), (95, 23697), (99, 23769), (103, 23934), (107, 23979), (111, 24078), (114, 24117),

Gene: Dogfish\_28 Start: 23683, Stop: 26286, Start Num: 1

Candidate Starts for Dogfish\_28:

(Start: 1 @23683 has 1 MA's), (4, 23797), (5, 23806), (15, 24109), (18, 24151), (27, 24283), (29, 24418), (30, 24454), (33, 24502), (36, 24520), (37, 24544), (39, 24580), (40, 24592), (44, 24631), (45, 24646), (47, 24664), (65, 24997), (78, 25360), (79, 25402), (80, 25423), (82, 25438), (84, 25465), (86, 25591), (87, 25597), (93, 25774), (95, 25855), (97, 25894), (99, 25927), (105, 26113), (106, 26134), (114, 26278),

Gene: Francois\_25 Start: 20630, Stop: 23140, Start Num: 3

Candidate Starts for Francois\_25:

(Start: 3 @20630 has 14 MA's), (7, 20762), (9, 20777), (10, 20822), (11, 20840), (17, 21005), (21, 21059), (22, 21068), (23, 21095), (27, 21146), (28, 21152), (30, 21317), (31, 21323), (32, 21332), (35, 21371), (39, 21443), (40, 21455), (41, 21464), (42, 21470), (44, 21494), (45, 21509), (47, 21527), (48, 21530), (50, 21566), (52, 21620), (55, 21698), (58, 21743), (61, 21797), (62, 21806), (63, 21818), (64, 21827), (70, 21989), (71, 22037), (72, 22049), (73, 22094), (77, 22181), (78, 22220), (80, 22289), (81, 22301), (90, 22559), (91, 22601), (92, 22631), (95, 22712), (96, 22733), (98, 22760), (99, 22784), (103, 22949), (107, 22994), (111, 23093), (114, 23132),

Gene: GrandSlam\_25 Start: 21141, Stop: 23651, Start Num: 3

Candidate Starts for GrandSlam\_25:

(Start: 3 @21141 has 14 MA's), (7, 21273), (9, 21288), (10, 21333), (11, 21351), (17, 21516), (21, 21570), (22, 21579), (27, 21657), (28, 21663), (30, 21828), (32, 21843), (34, 21879), (39, 21954), (40, 21966), (41, 21975), (43, 21993), (44, 22005), (47, 22038), (48, 22041), (50, 22077), (52, 22131), (58, 22254), (61, 22308), (63, 22329), (64, 22338), (68, 22440), (70, 22500), (71, 22548), (72, 22560), (73, 22605), (77, 22692), (78, 22731), (80, 22800), (81, 22812), (83, 22824), (91, 23112), (92, 23142), (95, 23223), (96, 23244), (98, 23271), (99, 23295), (103, 23460), (107, 23505), (111, 23604), (114, 23643),

Gene: Hamood\_25 Start: 21141, Stop: 23651, Start Num: 3

Candidate Starts for Hamood\_25:

(Start: 3 @21141 has 14 MA's), (7, 21273), (9, 21288), (10, 21333), (11, 21351), (17, 21516), (21, 21570), (22, 21579), (27, 21657), (28, 21663), (30, 21828), (32, 21843), (34, 21879), (39, 21954), (40, 21966), (41, 21975), (43, 21993), (44, 22005), (47, 22038), (48, 22041), (50, 22077), (52, 22131), (58, 22254), (61, 22308), (63, 22329), (64, 22338), (68, 22440), (70, 22500), (71, 22548), (72, 22560), (73, 22605), (77, 22692), (78, 22731), (80, 22800), (81, 22812), (83, 22824), (91, 23112), (92, 23142), (95, 23223), (96, 23244), (98, 23271), (99, 23295), (103, 23460), (107, 23505), (111, 23604), (114, 23643),

Gene: Mulch\_25 Start: 20607, Stop: 23117, Start Num: 3

Candidate Starts for Mulch\_25:

(Start: 3 @20607 has 14 MA's), (7, 20739), (9, 20754), (10, 20799), (11, 20817), (17, 20982), (21, 21036), (22, 21045), (27, 21123), (28, 21129), (30, 21294), (32, 21309), (34, 21345), (39, 21420), (40, 21432), (41, 21441), (42, 21447), (43, 21459), (44, 21471), (45, 21486), (47, 21504), (48, 21507), (50, 21543), (52, 21597), (58, 21720), (61, 21774), (63, 21795), (64, 21804), (68, 21906), (70, 21966), (71, 22014), (72, 22026), (73, 22071), (77, 22158), (78, 22197), (80, 22266), (81, 22278), (83, 22290), (91, 22578), (92, 22608), (95, 22689), (96, 22710), (98, 22737), (99, 22761), (103, 22926), (107, 22971), (111, 23070), (114, 23109),

Gene: Nadeem\_25 Start: 20607, Stop: 23117, Start Num: 3

Candidate Starts for Nadeem\_25:

(Start: 3 @20607 has 14 MA's), (7, 20739), (9, 20754), (10, 20799), (11, 20817), (17, 20982), (21, 21036), (22, 21045), (27, 21123), (28, 21129), (30, 21294), (32, 21309), (34, 21345), (39, 21420), (40, 21432), (41, 21441), (42, 21447), (43, 21459), (44, 21471), (45, 21486), (47, 21504), (48, 21507), (50, 21543), (52, 21597), (58, 21720), (61, 21774), (63, 21795), (64, 21804), (68, 21906), (70, 21966), (71, 22014), (72, 22026), (73, 22071), (77, 22158), (78, 22197), (80, 22266), (81, 22278), (83, 22290), (91, 22578), (92, 22608), (95, 22689), (96, 22710), (98, 22737), (99, 22761), (103, 22926), (107, 22971), (111, 23070), (114, 23109),

Gene: NancyRae\_25 Start: 20613, Stop: 23123, Start Num: 3

Candidate Starts for NancyRae\_25:

(Start: 3 @20613 has 14 MA's), (7, 20745), (9, 20760), (10, 20805), (11, 20823), (17, 20988), (21, 21042), (22, 21051), (27, 21129), (28, 21135), (30, 21300), (32, 21315), (34, 21351), (39, 21426), (40, 21438), (41, 21447), (42, 21453), (43, 21465), (44, 21477), (45, 21492), (47, 21510), (48, 21513), (50, 21549), (52, 21603), (57, 21708), (58, 21726), (61, 21780), (63, 21801), (64, 21810), (68, 21912), (70, 21972), (71, 22020), (72, 22032), (73, 22077), (75, 22095), (77, 22164), (78, 22203), (80, 22272), (81, 22284), (83, 22296), (91, 22584), (92, 22614), (95, 22695), (99, 22767), (103, 22932), (107, 22977), (111, 23076), (114, 23115),

Gene: P3MA\_23 Start: 18041, Stop: 20566, Start Num: 2

Candidate Starts for P3MA\_23:

(Start: 2 @18041 has 1 MA's), (6, 18179), (8, 18212), (12, 18338), (13, 18374), (14, 18422), (15, 18449), (16, 18461), (19, 18500), (20, 18533), (21, 18536), (24, 18593), (25, 18596), (26, 18617), (33, 18854), (38, 18935), (41, 18956), (46, 19013), (51, 19094), (53, 19145), (54, 19169), (56, 19196), (59, 19238), (60, 19271), (64, 19313), (65, 19343), (72, 19517), (78, 19700), (85, 19856), (87, 19940), (88,

20015), (91, 20081), (94, 20117), (99, 20267), (100, 20273), (109, 20468), (112, 20525), (113, 20534),

Gene: Parada\_25 Start: 20607, Stop: 23117, Start Num: 3

Candidate Starts for Parada\_25:

(Start: 3 @20607 has 14 MA's), (7, 20739), (9, 20754), (10, 20799), (11, 20817), (17, 20982), (21, 21036), (22, 21045), (27, 21123), (28, 21129), (30, 21294), (32, 21309), (34, 21345), (39, 21420), (40, 21432), (41, 21441), (42, 21447), (43, 21459), (44, 21471), (45, 21486), (47, 21504), (48, 21507), (50, 21543), (52, 21597), (58, 21720), (61, 21774), (63, 21795), (64, 21804), (68, 21906), (70, 21966), (71, 22014), (72, 22026), (73, 22071), (77, 22158), (78, 22197), (80, 22266), (81, 22278), (83, 22290), (91, 22578), (92, 22608), (95, 22689), (96, 22710), (98, 22737), (99, 22761), (103, 22926), (107, 22971), (111, 23070), (114, 23109),

Gene: Vordorf\_29 Start: 24001, Stop: 26601, Start Num: 1

Candidate Starts for Vordorf\_29:

(Start: 1 @24001 has 1 MA's), (4, 24115), (5, 24124), (27, 24601), (29, 24736), (30, 24772), (34, 24823), (35, 24826), (39, 24898), (44, 24949), (45, 24964), (47, 24982), (49, 25006), (66, 25336), (67, 25348), (69, 25420), (74, 25567), (76, 25597), (78, 25678), (79, 25720), (84, 25783), (86, 25909), (93, 26092), (95, 26173), (101, 26296), (102, 26371), (104, 26425), (108, 26485), (110, 26497),

Gene: WheatThin\_25 Start: 20607, Stop: 23117, Start Num: 3

Candidate Starts for WheatThin\_25:

(Start: 3 @20607 has 14 MA's), (7, 20739), (9, 20754), (10, 20799), (11, 20817), (17, 20982), (21, 21036), (22, 21045), (27, 21123), (28, 21129), (30, 21294), (32, 21309), (34, 21345), (39, 21420), (40, 21432), (41, 21441), (42, 21447), (43, 21459), (44, 21471), (45, 21486), (47, 21504), (48, 21507), (50, 21543), (52, 21597), (58, 21720), (61, 21774), (63, 21795), (64, 21804), (68, 21906), (70, 21966), (71, 22014), (72, 22026), (73, 22071), (77, 22158), (78, 22197), (80, 22266), (81, 22278), (83, 22290), (91, 22578), (92, 22608), (95, 22689), (96, 22710), (98, 22737), (99, 22761), (103, 22926), (107, 22971), (111, 23070), (114, 23109),