

Pham 291147



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 291147 Report

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

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 291147 has 65 members, 9 are drafts.

Phages represented in each track:

- Track 1 : SPB78\_8
- Track 2 : Dalilpop\_35, Flapper\_34, GTE5\_21, GRU1\_20, Turuncu\_34
- Track 3 : GTE8\_19, KidneyBean\_30
- Track 4 : NatB6\_30, Jifall16\_29, Kurt\_30, Phomeo\_29, Tracker\_30, Emianna\_30
- Track 5 : StarStruck\_31, Outis\_31, MerCougar\_31
- Track 6 : Buggaboo\_31, Kabluna\_33, Bonum\_33, SuperSulley\_31, NosilaM\_33
- Track 7 : Wheezy\_30, NovumRegina\_30, GrootJr\_32, Arti\_30
- Track 8 : Commandaria\_32
- Track 9 : Foxboro\_31
- Track 10 : Float294\_32, Patio\_33, Skysand\_32, Lollipop1437\_35, Ennea\_36
- Track 11 : RedRaider\_37
- Track 12 : WhoseManz\_32, Marietta\_32, Pemberton\_33
- Track 13 : NadineRae\_30, BiPauneto\_33, IDyn\_31, HubbaBubba\_28, Sukkupi\_32, Yndexa\_32
- Track 14 : Fury\_39, Pleakley\_39, Scuba\_39
- Track 15 : HomeFry\_36
- Track 16 : Polyuyuki\_34, Braxoaddie\_34, Maselop\_34, Apiary\_34, CoffeeBean\_34
- Track 17 : Gagieri\_34
- Track 18 : MacGully\_38
- Track 19 : Darwin\_21, Cruella\_18, Zion\_18, Stickynote\_20, PeteyPab\_17, C3PO\_18, PotatoChip\_18, Kimchi1738\_18
- Track 20 : P1201\_33
- Track 21 : GAL1\_10
- Track 22 : ChewyVIII\_44

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

The start number called the most often in the published annotations is 4, it was called in 37 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Apiary\_34, Arti\_30, BiPauneto\_33, Braxoaddie\_34, CoffeeBean\_34, Dalilpop\_35, Emianna\_30, Ennea\_36, Flapper\_34, Float294\_32, Foxboro\_31, Fury\_39, GRU1\_20, GTE5\_21, Gagieri\_34, GrootJr\_32, HomeFry\_36, HubbaBubba\_28, IDyn\_31, Jifall16\_29, Kurt\_30, Lollipop1437\_35, MacGully\_38, Marietta\_32, Maselop\_34, NadineRae\_30, NatB6\_30, NovumRegina\_30, Patio\_33, Pemberton\_33, Phomeo\_29, Pleakley\_39, Polyuyuki\_34, RedRaider\_37, Scuba\_39, Skysand\_32, Sukkupi\_32, Tracker\_30, Turuncu\_34, Wheezy\_30, WhoseManz\_32, Yndexa\_32,

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

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

- Bonum\_33, Buggaboo\_31, C3PO\_18, ChewyVIII\_44, Commandaria\_32, Cruella\_18, Darwin\_21, GAL1\_10, GTE8\_19, Kabluna\_33, KidneyBean\_30, Kimchi1738\_18, MerCougar\_31, NosilaM\_33, Outis\_31, P1201\_33, PeteyPab\_17, PotatoChip\_18, SPB78\_8, StarStruck\_31, Stickynote\_20, SuperSulley\_31, Zion\_18,

### Summary by start number:

Start 4:

- Found in 42 of 65 ( 64.6% ) of genes in pham
- Manual Annotations of this start: 37 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apiary\_34 (CR6), Arti\_30 (CR2), BiPauneto\_33 (CR4), Braxoaddie\_34 (CR6), CoffeeBean\_34 (CR6), Dalilpop\_35 (CR1), Emianna\_30 (CR2), Ennea\_36 (CR3), Flapper\_34 (CR1), Float294\_32 (CR3), Foxboro\_31 (CR2), Fury\_39 (CR5), GRU1\_20 (CR1), GTE5\_21 (CR1), Gagieri\_34 (CR6), GrootJr\_32 (CR2), HomeFry\_36 (CR5), HubbaBubba\_28 (CR4), IDyn\_31 (CR4), Jifall16\_29 (CR2), Kurt\_30 (CR2), Lollipop1437\_35 (CR3), MacGully\_38 (CR7), Marietta\_32 (CR4), Maselop\_34 (CR6), NadineRae\_30 (CR4), NatB6\_30 (CR2), NovumRegina\_30 (CR2), Patio\_33 (CR3), Pemberton\_33 (CR4), Phomeo\_29 (CR2), Pleakley\_39 (CR5), Polyuyuki\_34 (CR6), RedRaider\_37 (CR3), Scuba\_39 (CR5), Skysand\_32 (CR3), Sukkupi\_32 (CR4), Tracker\_30 (CR2), Turuncu\_34 (CR1), Wheezy\_30 (CR2), WhoseManz\_32 (CR4), Yndexa\_32 (CR4),

Start 5:

- Found in 10 of 65 ( 15.4% ) of genes in pham
- Manual Annotations of this start: 9 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bonum\_33 (CR2), Buggaboo\_31 (CR2), GTE8\_19 (CR2), Kabluna\_33 (CR2), KidneyBean\_30 (CR2), MerCougar\_31 (CR2), NosilaM\_33 (CR2), Outis\_31 (CR2), StarStruck\_31 (CR2), SuperSulley\_31 (CR2),

Start 6:

- Found in 1 of 65 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 1 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Commandaria\_32 (CR2),

Start 9:

- Found in 1 of 65 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 1 of 56

- Called 100.0% of time when present
- Phage (with cluster) where this start called: ChewyVIII\_44 (singleton),

Start 15:

- Found in 9 of 65 ( 13.8% ) of genes in pham
- Manual Annotations of this start: 8 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: C3PO\_18 (EN), Cruella\_18 (EN), Darwin\_21 (EN), Kimchi1738\_18 (EN), P1201\_33 (singleton), PeteyPab\_17 (EN), PotatoChip\_18 (EN), Stickynote\_20 (EN), Zion\_18 (EN),

Start 22:

- Found in 2 of 65 ( 3.1% ) 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\_10 (singleton), SPB78\_8 (BA),

### **Summary by clusters:**

There are 10 clusters represented in this pham: CR2, CR3, singleton, CR1, CR6, BA, CR4, CR5, EN, CR7,

Info for manual annotations of cluster CR1:

- Start number 4 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 4 was manually annotated 11 times for cluster CR2.
- Start number 5 was manually annotated 9 times for cluster CR2.
- Start number 6 was manually annotated 1 time for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 4 was manually annotated 6 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 4 was manually annotated 8 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 4 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster CR6:

- Start number 4 was manually annotated 6 times for cluster CR6.

Info for manual annotations of cluster CR7:

- Start number 4 was manually annotated 1 time for cluster CR7.

Info for manual annotations of cluster EN:

- Start number 15 was manually annotated 8 times for cluster EN.

### **Gene Information:**

Gene: Apiary\_34 Start: 21074, Stop: 21514, Start Num: 4  
Candidate Starts for Apiary\_34:  
(Start: 4 @21074 has 37 MA's), (26, 21227), (29, 21293), (41, 21443), (42, 21455),

Gene: Arti\_30 Start: 19128, Stop: 19589, Start Num: 4  
Candidate Starts for Arti\_30:  
(Start: 4 @19128 has 37 MA's), (7, 19152), (24, 19266), (40, 19512), (42, 19530),

Gene: BiPauneto\_33 Start: 19003, Stop: 19446, Start Num: 4  
Candidate Starts for BiPauneto\_33:  
(Start: 4 @19003 has 37 MA's), (7, 19030), (16, 19102), (21, 19135), (42, 19390), (46, 19432),

Gene: Bonum\_33 Start: 19462, Stop: 19920, Start Num: 5  
Candidate Starts for Bonum\_33:  
(Start: 5 @19462 has 9 MA's), (12, 19525), (42, 19861),

Gene: Braxoaddie\_34 Start: 21063, Stop: 21503, Start Num: 4  
Candidate Starts for Braxoaddie\_34:  
(Start: 4 @21063 has 37 MA's), (26, 21216), (29, 21282), (41, 21432), (42, 21444),

Gene: Buggaboo\_31 Start: 19947, Stop: 20405, Start Num: 5  
Candidate Starts for Buggaboo\_31:  
(Start: 5 @19947 has 9 MA's), (12, 20010), (42, 20346),

Gene: C3PO\_18 Start: 13660, Stop: 14010, Start Num: 15  
Candidate Starts for C3PO\_18:  
(Start: 15 @13660 has 8 MA's), (20, 13690), (34, 13855), (43, 13966),

Gene: ChewyVIII\_44 Start: 26668, Stop: 27093, Start Num: 9  
Candidate Starts for ChewyVIII\_44:  
(Start: 9 @26668 has 1 MA's), (36, 26932), (48, 27070),

Gene: CoffeeBean\_34 Start: 21018, Stop: 21458, Start Num: 4  
Candidate Starts for CoffeeBean\_34:  
(Start: 4 @21018 has 37 MA's), (26, 21171), (29, 21237), (41, 21387), (42, 21399),

Gene: Commandaria\_32 Start: 20461, Stop: 20910, Start Num: 6  
Candidate Starts for Commandaria\_32:  
(Start: 6 @20461 has 1 MA's), (32, 20731), (40, 20833), (42, 20851),

Gene: Cruella\_18 Start: 13660, Stop: 14010, Start Num: 15  
Candidate Starts for Cruella\_18:  
(Start: 15 @13660 has 8 MA's), (20, 13690), (34, 13855), (43, 13966),

Gene: Dalilpop\_35 Start: 21478, Stop: 21912, Start Num: 4  
Candidate Starts for Dalilpop\_35:  
(Start: 4 @21478 has 37 MA's), (7, 21505), (8, 21508), (10, 21535), (17, 21583), (35, 21766), (42, 21856),

Gene: Darwin\_21 Start: 14405, Stop: 14755, Start Num: 15  
Candidate Starts for Darwin\_21:  
(Start: 15 @14405 has 8 MA's), (20, 14435), (34, 14600), (43, 14711),

Gene: Emianna\_30 Start: 20167, Stop: 20625, Start Num: 4  
Candidate Starts for Emianna\_30:  
(Start: 4 @20167 has 37 MA's), (7, 20191), (17, 20269), (24, 20305), (40, 20548), (42, 20566),

Gene: Ennea\_36 Start: 20775, Stop: 21239, Start Num: 4  
Candidate Starts for Ennea\_36:  
(Start: 4 @20775 has 37 MA's), (7, 20799), (8, 20802), (10, 20829), (32, 21042), (40, 21168), (42, 21186),

Gene: Flapper\_34 Start: 20559, Stop: 20993, Start Num: 4  
Candidate Starts for Flapper\_34:  
(Start: 4 @20559 has 37 MA's), (7, 20586), (8, 20589), (10, 20616), (17, 20664), (35, 20847), (42, 20937),

Gene: Float294\_32 Start: 20217, Stop: 20678, Start Num: 4  
Candidate Starts for Float294\_32:  
(Start: 4 @20217 has 37 MA's), (7, 20241), (8, 20244), (10, 20271), (32, 20484), (40, 20607), (42, 20625),

Gene: Foxboro\_31 Start: 20673, Stop: 21131, Start Num: 4  
Candidate Starts for Foxboro\_31:  
(Start: 4 @20673 has 37 MA's), (7, 20697), (14, 20754), (17, 20775), (24, 20811), (40, 21054), (42, 21072),

Gene: Fury\_39 Start: 19839, Stop: 20279, Start Num: 4  
Candidate Starts for Fury\_39:  
(Start: 4 @19839 has 37 MA's), (7, 19863), (10, 19893), (18, 19944), (41, 20214), (42, 20226),

Gene: GAL1\_10 Start: 7852, Stop: 8169, Start Num: 22  
Candidate Starts for GAL1\_10:  
(22, 7852), (30, 7966), (31, 7975), (33, 7999), (39, 8068), (40, 8098), (41, 8104), (46, 8158),

Gene: GRU1\_20 Start: 12444, Stop: 12878, Start Num: 4  
Candidate Starts for GRU1\_20:  
(Start: 4 @12444 has 37 MA's), (7, 12471), (8, 12474), (10, 12501), (17, 12549), (35, 12732), (42, 12822),

Gene: GTE5\_21 Start: 13447, Stop: 13881, Start Num: 4  
Candidate Starts for GTE5\_21:  
(Start: 4 @13447 has 37 MA's), (7, 13474), (8, 13477), (10, 13504), (17, 13552), (35, 13735), (42, 13825),

Gene: GTE8\_19 Start: 13433, Stop: 13885, Start Num: 5  
Candidate Starts for GTE8\_19:  
(3, 13355), (Start: 5 @13433 has 9 MA's), (7, 13460), (24, 13574), (40, 13808), (42, 13826),

Gene: Gagieri\_34 Start: 20865, Stop: 21335, Start Num: 4  
Candidate Starts for Gagieri\_34:  
(Start: 4 @20865 has 37 MA's), (12, 20925), (13, 20946), (26, 21021), (38, 21225), (41, 21264), (42, 21276),

Gene: GrootJr\_32 Start: 19523, Stop: 19984, Start Num: 4  
Candidate Starts for GrootJr\_32:

(Start: 4 @19523 has 37 MA's), (7, 19547), (24, 19661), (40, 19907), (42, 19925),

Gene: HomeFry\_36 Start: 18511, Stop: 18942, Start Num: 4

Candidate Starts for HomeFry\_36:

(Start: 4 @18511 has 37 MA's), (7, 18535), (41, 18877), (42, 18889),

Gene: HubbaBubba\_28 Start: 16021, Stop: 16464, Start Num: 4

Candidate Starts for HubbaBubba\_28:

(Start: 4 @16021 has 37 MA's), (7, 16048), (16, 16120), (21, 16153), (42, 16408), (46, 16450),

Gene: IDyn\_31 Start: 17417, Stop: 17860, Start Num: 4

Candidate Starts for IDyn\_31:

(Start: 4 @17417 has 37 MA's), (7, 17444), (16, 17516), (21, 17549), (42, 17804), (46, 17846),

Gene: Jifall16\_29 Start: 19803, Stop: 20252, Start Num: 4

Candidate Starts for Jifall16\_29:

(Start: 4 @19803 has 37 MA's), (7, 19827), (17, 19905), (24, 19941), (40, 20175), (42, 20193),

Gene: Kabluna\_33 Start: 18862, Stop: 19320, Start Num: 5

Candidate Starts for Kabluna\_33:

(Start: 5 @18862 has 9 MA's), (12, 18925), (42, 19261),

Gene: KidneyBean\_30 Start: 19916, Stop: 20401, Start Num: 5

Candidate Starts for KidneyBean\_30:

(3, 19838), (Start: 5 @19916 has 9 MA's), (7, 19940), (24, 20054), (40, 20324), (42, 20342),

Gene: Kimchi1738\_18 Start: 13258, Stop: 13608, Start Num: 15

Candidate Starts for Kimchi1738\_18:

(Start: 15 @13258 has 8 MA's), (20, 13288), (34, 13453), (43, 13564),

Gene: Kurt\_30 Start: 20182, Stop: 20640, Start Num: 4

Candidate Starts for Kurt\_30:

(Start: 4 @20182 has 37 MA's), (7, 20206), (17, 20284), (24, 20320), (40, 20563), (42, 20581),

Gene: Lollipop1437\_35 Start: 20763, Stop: 21227, Start Num: 4

Candidate Starts for Lollipop1437\_35:

(Start: 4 @20763 has 37 MA's), (7, 20787), (8, 20790), (10, 20817), (32, 21030), (40, 21156), (42, 21174),

Gene: MacGully\_38 Start: 21048, Stop: 21485, Start Num: 4

Candidate Starts for MacGully\_38:

(Start: 4 @21048 has 37 MA's), (26, 21201), (29, 21267), (42, 21423), (46, 21465),

Gene: Marietta\_32 Start: 17337, Stop: 17777, Start Num: 4

Candidate Starts for Marietta\_32:

(Start: 4 @17337 has 37 MA's), (7, 17364), (16, 17436), (42, 17724), (46, 17766),

Gene: Maselop\_34 Start: 21094, Stop: 21534, Start Num: 4

Candidate Starts for Maselop\_34:

(Start: 4 @21094 has 37 MA's), (26, 21247), (29, 21313), (41, 21463), (42, 21475),

Gene: MerCougar\_31 Start: 20066, Stop: 20527, Start Num: 5

Candidate Starts for MerCougar\_31:

(1, 19880), (2, 19913), (3, 19988), (Start: 5 @20066 has 9 MA's), (12, 20129), (42, 20465),

Gene: NadineRae\_30 Start: 16583, Stop: 17023, Start Num: 4

Candidate Starts for NadineRae\_30:

(Start: 4 @16583 has 37 MA's), (7, 16610), (16, 16682), (21, 16715), (42, 16970), (46, 17012),

Gene: NatB6\_30 Start: 19191, Stop: 19649, Start Num: 4

Candidate Starts for NatB6\_30:

(Start: 4 @19191 has 37 MA's), (7, 19215), (17, 19293), (24, 19329), (40, 19572), (42, 19590),

Gene: NosilaM\_33 Start: 19759, Stop: 20217, Start Num: 5

Candidate Starts for NosilaM\_33:

(Start: 5 @19759 has 9 MA's), (12, 19822), (42, 20158),

Gene: NovumRegina\_30 Start: 19522, Stop: 19983, Start Num: 4

Candidate Starts for NovumRegina\_30:

(Start: 4 @19522 has 37 MA's), (7, 19546), (24, 19660), (40, 19906), (42, 19924),

Gene: Outis\_31 Start: 19760, Stop: 20221, Start Num: 5

Candidate Starts for Outis\_31:

(1, 19574), (2, 19607), (3, 19682), (Start: 5 @19760 has 9 MA's), (12, 19823), (42, 20159),

Gene: P1201\_33 Start: 20622, Stop: 20984, Start Num: 15

Candidate Starts for P1201\_33:

(Start: 15 @20622 has 8 MA's), (19, 20646), (25, 20673), (37, 20835), (45, 20946),

Gene: Patio\_33 Start: 19999, Stop: 20463, Start Num: 4

Candidate Starts for Patio\_33:

(Start: 4 @19999 has 37 MA's), (7, 20023), (8, 20026), (10, 20053), (32, 20266), (40, 20392), (42, 20410),

Gene: Pemberton\_33 Start: 17320, Stop: 17763, Start Num: 4

Candidate Starts for Pemberton\_33:

(Start: 4 @17320 has 37 MA's), (7, 17347), (16, 17419), (42, 17707), (46, 17749),

Gene: PeteyPab\_17 Start: 13625, Stop: 13975, Start Num: 15

Candidate Starts for PeteyPab\_17:

(Start: 15 @13625 has 8 MA's), (20, 13655), (34, 13820), (43, 13931),

Gene: Phomeo\_29 Start: 19817, Stop: 20275, Start Num: 4

Candidate Starts for Phomeo\_29:

(Start: 4 @19817 has 37 MA's), (7, 19841), (17, 19919), (24, 19955), (40, 20198), (42, 20216),

Gene: Pleakley\_39 Start: 19840, Stop: 20280, Start Num: 4

Candidate Starts for Pleakley\_39:

(Start: 4 @19840 has 37 MA's), (7, 19864), (10, 19894), (18, 19945), (41, 20215), (42, 20227),

Gene: Polyzuki\_34 Start: 21086, Stop: 21526, Start Num: 4

Candidate Starts for Polyzuki\_34:

(Start: 4 @21086 has 37 MA's), (26, 21239), (29, 21305), (41, 21455), (42, 21467),

Gene: PotatoChip\_18 Start: 13627, Stop: 13977, Start Num: 15

Candidate Starts for PotatoChip\_18:

(Start: 15 @13627 has 8 MA's), (20, 13657), (34, 13822), (43, 13933),

Gene: RedRaider\_37 Start: 22003, Stop: 22467, Start Num: 4

Candidate Starts for RedRaider\_37:

(Start: 4 @22003 has 37 MA's), (7, 22027), (8, 22030), (10, 22057), (23, 22138), (32, 22270), (40, 22396), (42, 22414),

Gene: SPB78\_8 Start: 6623, Stop: 6946, Start Num: 22

Candidate Starts for SPB78\_8:

(11, 6548), (22, 6623), (27, 6650), (28, 6689), (41, 6872), (44, 6899), (47, 6941),

Gene: Scuba\_39 Start: 19933, Stop: 20373, Start Num: 4

Candidate Starts for Scuba\_39:

(Start: 4 @19933 has 37 MA's), (7, 19957), (10, 19987), (18, 20038), (41, 20308), (42, 20320),

Gene: Skysand\_32 Start: 20219, Stop: 20680, Start Num: 4

Candidate Starts for Skysand\_32:

(Start: 4 @20219 has 37 MA's), (7, 20243), (8, 20246), (10, 20273), (32, 20486), (40, 20609), (42, 20627),

Gene: StarStruck\_31 Start: 19760, Stop: 20221, Start Num: 5

Candidate Starts for StarStruck\_31:

(1, 19574), (2, 19607), (3, 19682), (Start: 5 @19760 has 9 MA's), (12, 19823), (42, 20159),

Gene: Stickynote\_20 Start: 14437, Stop: 14787, Start Num: 15

Candidate Starts for Stickynote\_20:

(Start: 15 @14437 has 8 MA's), (20, 14467), (34, 14632), (43, 14743),

Gene: Sukkupi\_32 Start: 18894, Stop: 19337, Start Num: 4

Candidate Starts for Sukkupi\_32:

(Start: 4 @18894 has 37 MA's), (7, 18921), (16, 18993), (21, 19026), (42, 19281), (46, 19323),

Gene: SuperSulley\_31 Start: 19947, Stop: 20405, Start Num: 5

Candidate Starts for SuperSulley\_31:

(Start: 5 @19947 has 9 MA's), (12, 20010), (42, 20346),

Gene: Tracker\_30 Start: 18945, Stop: 19403, Start Num: 4

Candidate Starts for Tracker\_30:

(Start: 4 @18945 has 37 MA's), (7, 18969), (17, 19047), (24, 19083), (40, 19326), (42, 19344),

Gene: Turuncu\_34 Start: 20252, Stop: 20686, Start Num: 4

Candidate Starts for Turuncu\_34:

(Start: 4 @20252 has 37 MA's), (7, 20279), (8, 20282), (10, 20309), (17, 20357), (35, 20540), (42, 20630),

Gene: Wheezy\_30 Start: 19148, Stop: 19609, Start Num: 4

Candidate Starts for Wheezy\_30:

(Start: 4 @19148 has 37 MA's), (7, 19172), (24, 19286), (40, 19532), (42, 19550),

Gene: WhoseManz\_32 Start: 16948, Stop: 17388, Start Num: 4

Candidate Starts for WhoseManz\_32:

(Start: 4 @16948 has 37 MA's), (7, 16975), (16, 17047), (42, 17335), (46, 17377),

Gene: Yndexa\_32 Start: 18894, Stop: 19337, Start Num: 4

Candidate Starts for Yndexa\_32:

(Start: 4 @18894 has 37 MA's), (7, 18921), (16, 18993), (21, 19026), (42, 19281), (46, 19323),

Gene: Zion\_18 Start: 13625, Stop: 13975, Start Num: 15

Candidate Starts for Zion\_18:

(Start: 15 @13625 has 8 MA's), (20, 13655), (34, 13820), (43, 13931),