



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 287929 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 287929 has 58 members, 1 are drafts.

Phages represented in each track:

- Track 1 : ToastyFinz\_21
- Track 2 : Picard\_21
- Track 3 : Mojorita\_21
- Track 4 : Eddasa\_27, Izzy\_27, Jash\_27, Oliynyk\_27, BryanRecycles\_27, Rusticus\_27
- Track 5 : Caliburn\_26, Aaronocolus\_26, Hydra\_28, Legacy\_26, Unstoppable\_26, Leviticus\_26, Ozzie\_26
- Track 6 : Phettuccine\_26, Indigo\_25, Esperer\_26, Bovely\_26, BeardedLady\_27, Nerdos\_26, SunsetPointe\_26
- Track 7 : EnochSoames\_29
- Track 8 : Lannister\_28
- Track 9 : Marav\_29
- Track 10 : GirlDinner\_26, Animus\_27, Janus\_27, SqueakyClean\_27
- Track 11 : Paolo\_28
- Track 12 : Puginator\_28
- Track 13 : Axiom\_27
- Track 14 : Paedore\_26
- Track 15 : Andris\_26
- Track 16 : ELB20\_25, R4\_26
- Track 17 : Jevington\_28
- Track 18 : Hank144\_27
- Track 19 : Triumph\_28
- Track 20 : Loofah\_27
- Track 21 : Zainub\_28
- Track 22 : BroPlease\_27
- Track 23 : GreenWeasel\_28
- Track 24 : phiHau3\_28
- Track 25 : Manuel\_2
- Track 26 : Gremlin23\_2, FlowerPower\_2, Geostin\_2, Vorvolakos\_2
- Track 27 : WRightOn\_3
- Track 28 : Zeigle\_2, Kumquat\_2
- Track 29 : Fabian\_2, RetrieverFever\_2
- Track 30 : Stella\_3

- Track 31 : TurkishDelight\_35
- Track 32 : Gilgamesh\_88

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

The start number called the most often in the published annotations is 8, it was called in 44 of the 57 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aaronocolus\_26, Andris\_26, Animus\_27, Axiom\_27, BeardedLady\_27, Bovely\_26, BroPlease\_27, BryanRecycles\_27, Caliburn\_26, ELB20\_25, Eddasa\_27, EnochSoames\_29, Esperer\_26, Gilgamesh\_88, GirlDinner\_26, GreenWeasel\_28, Hank144\_27, Hydra\_28, Indigo\_25, Izzy\_27, Janus\_27, Jash\_27, Jevington\_28, Lannister\_28, Legacy\_26, Leviticus\_26, Loofah\_27, Marav\_29, Mojorita\_21, Nerdos\_26, Oliynyk\_27, Ozzie\_26, Paolo\_28, Phettuccine\_26, Picard\_21, Puginator\_28, R4\_26, Rusticus\_27, SqueakyClean\_27, SunsetPointe\_26, ToastyFinz\_21, Triumph\_28, Unstoppable\_26, Zainub\_28, phiHau3\_28,

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

- Fabian\_2, FlowerPower\_2, Geostin\_2, Gremlin23\_2, Paedore\_26, RetrieverFever\_2, Stella\_3, Vorvolakos\_2,

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

- Kumquat\_2, Manuel\_2, TurkishDelight\_35, WRightOn\_3, Zeigle\_2,

**Summary by start number:**

Start 7:

- Found in 4 of 58 ( 6.9% ) of genes in pham
- Manual Annotations of this start: 1 of 57
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Paedore\_26 (BD2),

Start 8:

- Found in 53 of 58 ( 91.4% ) of genes in pham
- Manual Annotations of this start: 44 of 57
- Called 84.9% of time when present
- Phage (with cluster) where this start called: Aaronocolus\_26 (BD1), Andris\_26 (BD2), Animus\_27 (BD2), Axiom\_27 (BD2), BeardedLady\_27 (BD1), Bovely\_26 (BD1), BroPlease\_27 (BD4), BryanRecycles\_27 (BD1), Caliburn\_26 (BD1), ELB20\_25 (BD2), Eddasa\_27 (BD1), EnochSoames\_29 (BD1), Esperer\_26 (BD1), Gilgamesh\_88 (singleton), GirlDinner\_26 (BD2), GreenWeasel\_28 (BD4), Hank144\_27 (BD2), Hydra\_28 (BD1), Indigo\_25 (BD1), Izzy\_27 (BD1), Janus\_27 (BD2), Jash\_27 (BD1), Jevington\_28 (BD2), Lannister\_28 (BD1), Legacy\_26 (BD1), Leviticus\_26 (BD1), Loofah\_27 (BD2), Marav\_29 (BD2), Mojorita\_21 (BC1), Nerdos\_26 (BD1), Oliynyk\_27 (BD1), Ozzie\_26 (BD1), Paolo\_28 (BD2), Phettuccine\_26 (BD1), Picard\_21 (BC1), Puginator\_28 (BD2), R4\_26 (BD2), Rusticus\_27 (BD1), SqueakyClean\_27 (BD2), SunsetPointe\_26 (BD1), ToastyFinz\_21 (BC1), Triumph\_28 (BD2), Unstoppable\_26 (BD1), Zainub\_28 (BD2), phiHau3\_28 (BD4),

Start 9:

- Found in 7 of 58 ( 12.1% ) of genes in pham
- Manual Annotations of this start: 4 of 57
- Called 57.1% of time when present
- Phage (with cluster) where this start called: FlowerPower\_2 (BF), Geostin\_2 (BF), Gremlin23\_2 (BF), Vorvolakos\_2 (BF),

Start 10:

- Found in 34 of 58 ( 58.6% ) of genes in pham
- Manual Annotations of this start: 7 of 57
- Called 20.6% of time when present
- Phage (with cluster) where this start called: Fabian\_2 (BF), Kumquat\_2 (BF), RetrieverFever\_2 (BF), Stella\_3 (BF), TurkishDelight\_35 (singleton), WRightOn\_3 (BF), Zeigle\_2 (BF),

Start 12:

- Found in 12 of 58 ( 20.7% ) of genes in pham
- Manual Annotations of this start: 1 of 57
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Manuel\_2 (BF),

**Summary by clusters:**

There are 6 clusters represented in this pham: BF, singleton, BD4, BD1, BD2, BC1,

Info for manual annotations of cluster BC1:

- Start number 8 was manually annotated 3 times for cluster BC1.

Info for manual annotations of cluster BD1:

- Start number 8 was manually annotated 21 times for cluster BD1.

Info for manual annotations of cluster BD2:

- Start number 7 was manually annotated 1 time for cluster BD2.
- Start number 8 was manually annotated 16 times for cluster BD2.

Info for manual annotations of cluster BD4:

- Start number 8 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BF:

- Start number 9 was manually annotated 4 times for cluster BF.
- Start number 10 was manually annotated 6 times for cluster BF.
- Start number 12 was manually annotated 1 time for cluster BF.

**Gene Information:**

Gene: Aaronocolus\_26 Start: 20975, Stop: 21928, Start Num: 8

Candidate Starts for Aaronocolus\_26:

(Start: 8 @20975 has 44 MA's), (Start: 10 @20981 has 7 MA's), (11, 21041), (16, 21116), (21, 21179), (33, 21434), (34, 21446),

Gene: Andris\_26 Start: 21446, Stop: 22519, Start Num: 8  
Candidate Starts for Andris\_26:  
(Start: 8 @21446 has 44 MA's), (33, 21905), (34, 21917), (42, 22040), (55, 22286), (56, 22313),

Gene: Animus\_27 Start: 21785, Stop: 22861, Start Num: 8  
Candidate Starts for Animus\_27:  
(Start: 8 @21785 has 44 MA's), (15, 21920), (16, 21926), (21, 21989), (33, 22244), (34, 22256), (42, 22379), (55, 22628),

Gene: Axiom\_27 Start: 21619, Stop: 22686, Start Num: 8  
Candidate Starts for Axiom\_27:  
(1, 21274), (5, 21553), (Start: 8 @21619 has 44 MA's), (25, 21898), (34, 22090), (42, 22207), (49, 22384), (52, 22420), (55, 22453), (56, 22480),

Gene: BeardedLady\_27 Start: 21228, Stop: 22181, Start Num: 8  
Candidate Starts for BeardedLady\_27:  
(Start: 8 @21228 has 44 MA's), (Start: 10 @21234 has 7 MA's), (11, 21294), (16, 21369), (21, 21432), (33, 21687), (34, 21699),

Gene: Bovely\_26 Start: 20981, Stop: 21934, Start Num: 8  
Candidate Starts for Bovely\_26:  
(Start: 8 @20981 has 44 MA's), (Start: 10 @20987 has 7 MA's), (11, 21047), (16, 21122), (21, 21185), (33, 21440), (34, 21452),

Gene: BroPlease\_27 Start: 21400, Stop: 22452, Start Num: 8  
Candidate Starts for BroPlease\_27:  
(Start: 8 @21400 has 44 MA's), (21, 21604), (29, 21748), (34, 21871), (36, 21931), (39, 21946), (48, 22141), (51, 22195), (54, 22201), (59, 22270), (62, 22447),

Gene: BryanRecycles\_27 Start: 21344, Stop: 22285, Start Num: 8  
Candidate Starts for BryanRecycles\_27:  
(Start: 8 @21344 has 44 MA's), (Start: 10 @21350 has 7 MA's), (11, 21410), (16, 21485), (21, 21548), (33, 21803), (34, 21815), (40, 21887), (41, 21890),

Gene: Caliburn\_26 Start: 20958, Stop: 21911, Start Num: 8  
Candidate Starts for Caliburn\_26:  
(Start: 8 @20958 has 44 MA's), (Start: 10 @20964 has 7 MA's), (11, 21024), (16, 21099), (21, 21162), (33, 21417), (34, 21429),

Gene: ELB20\_25 Start: 21866, Stop: 22936, Start Num: 8  
Candidate Starts for ELB20\_25:  
(Start: 8 @21866 has 44 MA's), (11, 21932), (34, 22337), (36, 22391), (44, 22478), (48, 22601), (59, 22754), (60, 22769), (62, 22931),

Gene: Eddasa\_27 Start: 21344, Stop: 22285, Start Num: 8  
Candidate Starts for Eddasa\_27:  
(Start: 8 @21344 has 44 MA's), (Start: 10 @21350 has 7 MA's), (11, 21410), (16, 21485), (21, 21548), (33, 21803), (34, 21815), (40, 21887), (41, 21890),

Gene: EnochSoames\_29 Start: 21339, Stop: 22280, Start Num: 8  
Candidate Starts for EnochSoames\_29:  
(Start: 8 @21339 has 44 MA's), (Start: 10 @21345 has 7 MA's), (11, 21405), (16, 21480), (21, 21543), (33, 21798), (34, 21810), (40, 21882),

Gene: Esperer\_26 Start: 20794, Stop: 21747, Start Num: 8

Candidate Starts for Esperer\_26:

(Start: 8 @20794 has 44 MA's), (Start: 10 @20800 has 7 MA's), (11, 20860), (16, 20935), (21, 20998), (33, 21253), (34, 21265),

Gene: Fabian\_2 Start: 2609, Stop: 3376, Start Num: 10

Candidate Starts for Fabian\_2:

(Start: 8 @2600 has 44 MA's), (Start: 9 @2603 has 4 MA's), (Start: 10 @2609 has 7 MA's), (Start: 12 @2681 has 1 MA's), (14, 2735), (27, 2912), (28, 2957), (31, 2990), (33, 3077), (42, 3185), (43, 3194), (50, 3359),

Gene: FlowerPower\_2 Start: 2603, Stop: 3376, Start Num: 9

Candidate Starts for FlowerPower\_2:

(Start: 8 @2600 has 44 MA's), (Start: 9 @2603 has 4 MA's), (Start: 10 @2609 has 7 MA's), (Start: 12 @2681 has 1 MA's), (14, 2735), (27, 2912), (28, 2957), (31, 2990), (33, 3077), (42, 3185), (43, 3194), (50, 3359),

Gene: Geostin\_2 Start: 2603, Stop: 3376, Start Num: 9

Candidate Starts for Geostin\_2:

(Start: 8 @2600 has 44 MA's), (Start: 9 @2603 has 4 MA's), (Start: 10 @2609 has 7 MA's), (Start: 12 @2681 has 1 MA's), (14, 2735), (27, 2912), (28, 2957), (31, 2990), (33, 3077), (42, 3185), (43, 3194), (50, 3359),

Gene: Gilgamesh\_88 Start: 82382, Stop: 83437, Start Num: 8

Candidate Starts for Gilgamesh\_88:

(2, 82112), (Start: 8 @82382 has 44 MA's), (17, 82529), (20, 82574), (24, 82610), (33, 82844), (34, 82856), (42, 82985), (44, 83009),

Gene: GirlDinner\_26 Start: 21447, Stop: 22523, Start Num: 8

Candidate Starts for GirlDinner\_26:

(Start: 8 @21447 has 44 MA's), (15, 21582), (16, 21588), (21, 21651), (33, 21906), (34, 21918), (42, 22041), (55, 22290),

Gene: GreenWeasel\_28 Start: 21409, Stop: 22461, Start Num: 8

Candidate Starts for GreenWeasel\_28:

(Start: 8 @21409 has 44 MA's), (29, 21757), (34, 21880), (36, 21940), (39, 21955), (48, 22150), (54, 22210), (59, 22279), (62, 22456),

Gene: Gremlin23\_2 Start: 2603, Stop: 3376, Start Num: 9

Candidate Starts for Gremlin23\_2:

(Start: 8 @2600 has 44 MA's), (Start: 9 @2603 has 4 MA's), (Start: 10 @2609 has 7 MA's), (Start: 12 @2681 has 1 MA's), (14, 2735), (27, 2912), (28, 2957), (31, 2990), (33, 3077), (42, 3185), (43, 3194), (50, 3359),

Gene: Hank144\_27 Start: 21897, Stop: 22949, Start Num: 8

Candidate Starts for Hank144\_27:

(Start: 8 @21897 has 44 MA's), (15, 22032), (16, 22038), (21, 22101), (26, 22191), (34, 22368), (36, 22416), (59, 22767), (62, 22944),

Gene: Hydra\_28 Start: 21506, Stop: 22459, Start Num: 8

Candidate Starts for Hydra\_28:

(Start: 8 @21506 has 44 MA's), (Start: 10 @21512 has 7 MA's), (11, 21572), (16, 21647), (21, 21710), (33, 21965), (34, 21977),

Gene: Indigo\_25 Start: 20974, Stop: 21927, Start Num: 8

Candidate Starts for Indigo\_25:

(Start: 8 @20974 has 44 MA's), (Start: 10 @20980 has 7 MA's), (11, 21040), (16, 21115), (21, 21178), (33, 21433), (34, 21445),

Gene: Izzy\_27 Start: 21391, Stop: 22332, Start Num: 8

Candidate Starts for Izzy\_27:

(Start: 8 @21391 has 44 MA's), (Start: 10 @21397 has 7 MA's), (11, 21457), (16, 21532), (21, 21595), (33, 21850), (34, 21862), (40, 21934), (41, 21937),

Gene: Janus\_27 Start: 21785, Stop: 22861, Start Num: 8

Candidate Starts for Janus\_27:

(Start: 8 @21785 has 44 MA's), (15, 21920), (16, 21926), (21, 21989), (33, 22244), (34, 22256), (42, 22379), (55, 22628),

Gene: Jash\_27 Start: 21344, Stop: 22285, Start Num: 8

Candidate Starts for Jash\_27:

(Start: 8 @21344 has 44 MA's), (Start: 10 @21350 has 7 MA's), (11, 21410), (16, 21485), (21, 21548), (33, 21803), (34, 21815), (40, 21887), (41, 21890),

Gene: Jevington\_28 Start: 22132, Stop: 23196, Start Num: 8

Candidate Starts for Jevington\_28:

(Start: 8 @22132 has 44 MA's), (24, 22357), (34, 22603), (42, 22720), (46, 22801), (49, 22897), (55, 22963), (56, 22990),

Gene: Kumquat\_2 Start: 2632, Stop: 3411, Start Num: 10

Candidate Starts for Kumquat\_2:

(Start: 10 @2632 has 7 MA's), (Start: 12 @2704 has 1 MA's), (13, 2731), (18, 2803), (24, 2857), (27, 2935), (28, 2980), (33, 3100), (44, 3238),

Gene: Lannister\_28 Start: 22046, Stop: 22999, Start Num: 8

Candidate Starts for Lannister\_28:

(Start: 8 @22046 has 44 MA's), (Start: 10 @22052 has 7 MA's), (11, 22112), (21, 22250), (26, 22340), (33, 22505), (34, 22517), (40, 22586), (53, 22751), (61, 22925),

Gene: Legacy\_26 Start: 20949, Stop: 21902, Start Num: 8

Candidate Starts for Legacy\_26:

(Start: 8 @20949 has 44 MA's), (Start: 10 @20955 has 7 MA's), (11, 21015), (16, 21090), (21, 21153), (33, 21408), (34, 21420),

Gene: Leviticus\_26 Start: 20978, Stop: 21931, Start Num: 8

Candidate Starts for Leviticus\_26:

(Start: 8 @20978 has 44 MA's), (Start: 10 @20984 has 7 MA's), (11, 21044), (16, 21119), (21, 21182), (33, 21437), (34, 21449),

Gene: Loofah\_27 Start: 21786, Stop: 22841, Start Num: 8

Candidate Starts for Loofah\_27:

(Start: 7 @21765 has 1 MA's), (Start: 8 @21786 has 44 MA's), (11, 21852), (16, 21927), (34, 22257), (45, 22428), (49, 22551), (55, 22608), (56, 22635), (58, 22659),

Gene: Manuel\_2 Start: 2715, Stop: 3416, Start Num: 12

Candidate Starts for Manuel\_2:

(Start: 10 @2643 has 7 MA's), (Start: 12 @2715 has 1 MA's), (14, 2769), (18, 2814), (27, 2946), (28, 2991), (33, 3111), (35, 3144), (44, 3246), (50, 3399),

Gene: Marav\_29 Start: 22471, Stop: 23532, Start Num: 8

Candidate Starts for Marav\_29:

(Start: 8 @22471 has 44 MA's), (15, 22606), (16, 22612), (20, 22660), (23, 22693), (34, 22942), (42, 23065), (45, 23119), (49, 23242), (55, 23299), (56, 23326),

Gene: Mojerita\_21 Start: 16303, Stop: 17085, Start Num: 8

Candidate Starts for Mojerita\_21:

(Start: 7 @16285 has 1 MA's), (Start: 8 @16303 has 44 MA's), (16, 16459), (26, 16612), (32, 16717), (34, 16789), (42, 16900),

Gene: Nerdos\_26 Start: 20972, Stop: 21925, Start Num: 8

Candidate Starts for Nerdos\_26:

(Start: 8 @20972 has 44 MA's), (Start: 10 @20978 has 7 MA's), (11, 21038), (16, 21113), (21, 21176), (33, 21431), (34, 21443),

Gene: Oliynyk\_27 Start: 21344, Stop: 22285, Start Num: 8

Candidate Starts for Oliynyk\_27:

(Start: 8 @21344 has 44 MA's), (Start: 10 @21350 has 7 MA's), (11, 21410), (16, 21485), (21, 21548), (33, 21803), (34, 21815), (40, 21887), (41, 21890),

Gene: Ozzie\_26 Start: 20958, Stop: 21911, Start Num: 8

Candidate Starts for Ozzie\_26:

(Start: 8 @20958 has 44 MA's), (Start: 10 @20964 has 7 MA's), (11, 21024), (16, 21099), (21, 21162), (33, 21417), (34, 21429),

Gene: Paedore\_26 Start: 21765, Stop: 22841, Start Num: 7

Candidate Starts for Paedore\_26:

(Start: 7 @21765 has 1 MA's), (Start: 8 @21786 has 44 MA's), (11, 21852), (16, 21927), (34, 22257), (45, 22428), (49, 22551), (55, 22608), (56, 22635), (58, 22659),

Gene: Paolo\_28 Start: 22134, Stop: 23195, Start Num: 8

Candidate Starts for Paolo\_28:

(Start: 8 @22134 has 44 MA's), (15, 22269), (16, 22275), (20, 22323), (23, 22356), (25, 22413), (34, 22605), (42, 22728), (45, 22782), (49, 22905), (55, 22962), (56, 22989),

Gene: Phettuccine\_26 Start: 20974, Stop: 21927, Start Num: 8

Candidate Starts for Phettuccine\_26:

(Start: 8 @20974 has 44 MA's), (Start: 10 @20980 has 7 MA's), (11, 21040), (16, 21115), (21, 21178), (33, 21433), (34, 21445),

Gene: Picard\_21 Start: 16297, Stop: 17079, Start Num: 8

Candidate Starts for Picard\_21:

(Start: 7 @16279 has 1 MA's), (Start: 8 @16297 has 44 MA's), (16, 16453), (26, 16606), (32, 16711), (34, 16783), (42, 16894), (47, 16990),

Gene: Puginator\_28 Start: 22149, Stop: 23210, Start Num: 8

Candidate Starts for Puginator\_28:

(Start: 8 @22149 has 44 MA's), (15, 22284), (16, 22290), (23, 22371), (26, 22443), (34, 22620), (42, 22743), (46, 22824), (49, 22920), (55, 22977), (56, 23004),

Gene: R4\_26 Start: 21877, Stop: 22947, Start Num: 8

Candidate Starts for R4\_26:

(Start: 8 @21877 has 44 MA's), (11, 21943), (34, 22348), (36, 22402), (44, 22489), (48, 22612), (59, 22765), (60, 22780), (62, 22942),

Gene: RetrieverFever\_2 Start: 2609, Stop: 3376, Start Num: 10

Candidate Starts for RetrieverFever\_2:

(Start: 8 @2600 has 44 MA's), (Start: 9 @2603 has 4 MA's), (Start: 10 @2609 has 7 MA's), (Start: 12 @2681 has 1 MA's), (14, 2735), (27, 2912), (28, 2957), (31, 2990), (33, 3077), (42, 3185), (43, 3194), (50, 3359),

Gene: Rusticus\_27 Start: 21344, Stop: 22285, Start Num: 8

Candidate Starts for Rusticus\_27:

(Start: 8 @21344 has 44 MA's), (Start: 10 @21350 has 7 MA's), (11, 21410), (16, 21485), (21, 21548), (33, 21803), (34, 21815), (40, 21887), (41, 21890),

Gene: SqueakyClean\_27 Start: 21711, Stop: 22787, Start Num: 8

Candidate Starts for SqueakyClean\_27:

(Start: 8 @21711 has 44 MA's), (15, 21846), (16, 21852), (21, 21915), (33, 22170), (34, 22182), (42, 22305), (55, 22554),

Gene: Stella\_3 Start: 2613, Stop: 3389, Start Num: 10

Candidate Starts for Stella\_3:

(Start: 8 @2601 has 44 MA's), (Start: 9 @2604 has 4 MA's), (Start: 10 @2613 has 7 MA's), (Start: 12 @2685 has 1 MA's), (27, 2916), (28, 2961), (33, 3081), (43, 3204),

Gene: SunsetPointe\_26 Start: 20965, Stop: 21918, Start Num: 8

Candidate Starts for SunsetPointe\_26:

(Start: 8 @20965 has 44 MA's), (Start: 10 @20971 has 7 MA's), (11, 21031), (16, 21106), (21, 21169), (33, 21424), (34, 21436),

Gene: ToastyFinz\_21 Start: 17938, Stop: 19005, Start Num: 8

Candidate Starts for ToastyFinz\_21:

(Start: 8 @17938 has 44 MA's), (34, 18424), (37, 18487), (42, 18535), (48, 18682), (57, 18820),

Gene: Triumph\_28 Start: 21635, Stop: 22702, Start Num: 8

Candidate Starts for Triumph\_28:

(Start: 8 @21635 has 44 MA's), (25, 21914), (34, 22106), (42, 22223), (49, 22400), (55, 22469), (56, 22496),

Gene: TurkishDelight\_35 Start: 33300, Stop: 34241, Start Num: 10

Candidate Starts for TurkishDelight\_35:

(Start: 10 @33300 has 7 MA's), (Start: 12 @33375 has 1 MA's), (15, 33438), (19, 33486), (20, 33492), (22, 33510), (24, 33528), (26, 33603), (28, 33651), (30, 33666), (38, 33837), (39, 33840), (50, 34074),

Gene: Unstoppable\_26 Start: 20969, Stop: 21922, Start Num: 8

Candidate Starts for Unstoppable\_26:

(Start: 8 @20969 has 44 MA's), (Start: 10 @20975 has 7 MA's), (11, 21035), (16, 21110), (21, 21173), (33, 21428), (34, 21440),

Gene: Vorvolakos\_2 Start: 2602, Stop: 3375, Start Num: 9

Candidate Starts for Vorvolakos\_2:

(Start: 8 @2599 has 44 MA's), (Start: 9 @2602 has 4 MA's), (Start: 10 @2608 has 7 MA's), (Start: 12 @2680 has 1 MA's), (14, 2734), (27, 2911), (28, 2956), (31, 2989), (33, 3076), (42, 3184), (43, 3193), (50, 3358),

Gene: WRightOn\_3 Start: 2976, Stop: 3755, Start Num: 10

Candidate Starts for WRightOn\_3:

(3, 2811), (4, 2886), (6, 2895), (Start: 10 @2976 has 7 MA's), (Start: 12 @3048 has 1 MA's), (14, 3102), (18, 3147), (27, 3279), (28, 3324), (33, 3444), (44, 3582),

Gene: Zainub\_28 Start: 22098, Stop: 23159, Start Num: 8

Candidate Starts for Zainub\_28:

(Start: 8 @22098 has 44 MA's), (15, 22233), (16, 22239), (20, 22287), (23, 22320), (25, 22377), (34, 22569), (42, 22692), (45, 22746), (49, 22869), (55, 22926), (56, 22953),

Gene: Zeigle\_2 Start: 2632, Stop: 3411, Start Num: 10

Candidate Starts for Zeigle\_2:

(Start: 10 @2632 has 7 MA's), (Start: 12 @2704 has 1 MA's), (13, 2731), (18, 2803), (24, 2857), (27, 2935), (28, 2980), (33, 3100), (44, 3238),

Gene: phiHau3\_28 Start: 21373, Stop: 22425, Start Num: 8

Candidate Starts for phiHau3\_28:

(Start: 8 @21373 has 44 MA's), (34, 21844), (36, 21904), (39, 21919), (48, 22114), (54, 22174), (59, 22243), (62, 22420),