

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 296598 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296598 has 59 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Schaffner_27
- Track 2 : Tuck_30
- Track 3 : Anedea_217
- Track 4 : JPandJE_2
- Track 5 : Manuel_3
- Track 6 : WRightOn_2
- Track 7 : Forrest_254, Jada_255
- Track 8 : SeresaTree_235
- Track 9 : TunaTartare_254
- Track 10 : DeluluLabubu_257
- Track 11 : Madraxi_29
- Track 12 : SFuller_27
- Track 13 : Jflicx2_25
- Track 14 : Toniann_41, ClubL_41, Aphelion_41, Bachita_43, Geeche_40, Norvs_42, Abscondus_40, Smoothie_42, Dusty_40, Culver_41, Cucurbita_43, Miskis_39, PhinkBoden_41, Lozinak_41, Engineer_42
- Track 15 : WilliamBoone_41
- Track 16 : BrutonGaster_29
- Track 17 : OneUp_35
- Track 18 : CherryonLim_2
- Track 19 : Tarnish_2, Vine_3
- Track 20 : Bavidard_3
- Track 21 : Cardigan_40
- Track 22 : JonJames_40, Yvonnetastic_38
- Track 23 : SpeedDemon_240
- Track 24 : Mollymur_24
- Track 25 : Bantam_23
- Track 26 : DatBoi_24
- Track 27 : Syleon_103
- Track 28 : Wolfstar_46
- Track 29 : Nicholasp3_102, Gardann_101, Rumpelstiltskin_98, Underpass_94, Kahlid_101
- Track 30 : Gabriela_68, Finemlucis_71
- Track 31 : Vetrix_100
- Track 32 : Bromden_61
- Track 33 : Bromden_104
- Track 34 : MaryV_93, Wildcat_93

- Track 35 : Gaia_18, Nebkiss_19

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

The start number called the most often in the published annotations is 22, it was called in 20 of the 54 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abscondus_40, Aphelion_41, Bachita_43, Bantam_23, BrutonGaster_29, ClubL_41, Cucurbita_43, Culver_41, Dusty_40, Engineer_42, Geeche_40, JonJames_40, Lozinak_41, Miskis_39, Norvs_42, PhinkBoden_41, Smoothie_42, SpeedDemon_240, Toniann_41, WilliamBoone_41, Yvonnestic_38,

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

- Cardigan_40, DatBoi_24, Mollymur_24, OneUp_35,

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

- Anedea_217, Bavilard_3, Bromden_104, Bromden_61, CherryonLim_2, DeluluLabubu_257, Finemlucis_71, Forrest_254, Gabriela_68, Gaia_18, Gardann_101, JPandJE_2, Jada_255, Jflix2_25, Kahlid_101, Madraxi_29, Manuel_3, MaryV_93, Nebkiss_19, Nicholasp3_102, Rumpelstiltskin_98, SFuller_27, Schaffner_27, SeresaTree_235, Syleon_103, Tarnish_2, Tuck_30, TunaTartare_254, Underpass_94, Vetrix_100, Vine_3, WRightOn_2, Wildcat_93, Wolfstar_46,

Summary by start number:

Start 18:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Manuel_3 (BF),

Start 21:

- Found in 1 of 59 (1.7%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bavilard_3 (CT),

Start 22:

- Found in 25 of 59 (42.4%) of genes in pham
- Manual Annotations of this start: 20 of 54
- Called 84.0% of time when present
- Phage (with cluster) where this start called: Abscondus_40 (CQ1), Aphelion_41 (CQ1), Bachita_43 (CQ1), Bantam_23 (DL), BrutonGaster_29 (CQ2), ClubL_41 (CQ1), Cucurbita_43 (CQ1), Culver_41 (CQ1), Dusty_40 (CQ1), Engineer_42 (CQ1), Geeche_40 (CQ1), JonJames_40 (DD), Lozinak_41 (CQ1), Miskis_39 (CQ1), Norvs_42 (CQ1), PhinkBoden_41 (CQ1), Smoothie_42 (CQ1), SpeedDemon_240 (DL), Toniann_41 (CQ1), WilliamBoone_41 (CQ1), Yvonnestic_38 (DD),

Start 25:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bromden_61 (L4),

Start 26:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anedea_217 (BE1),

Start 27:

- Found in 5 of 59 (8.5%) of genes in pham
- Manual Annotations of this start: 2 of 54
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Cardigan_40 (DD), Finemlucis_71 (L2), Gabriela_68 (L2),

Start 28:

- Found in 4 of 59 (6.8%) of genes in pham
- Manual Annotations of this start: 4 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DeluluLabubu_257 (BK1), Forrest_254 (BK1), Jada_255 (BK1), TunaTartare_254 (BK1),

Start 29:

- Found in 7 of 59 (11.9%) of genes in pham
- Manual Annotations of this start: 6 of 54
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Bromden_104 (L4), Gardann_101 (L2), Kahlid_101 (L2), Nicholasp3_102 (L2), Rumpelstiltskin_98 (L2), Underpass_94 (L2),

Start 30:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Vetrix_100 (L2),

Start 31:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Schaffner_27 (AZ1),

Start 34:

- Found in 3 of 59 (5.1%) of genes in pham
- Manual Annotations of this start: 2 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jflix2_25 (CF), Madraxi_29 (CF), SFuller_27 (CF),

Start 36:

- Found in 2 of 59 (3.4%) of genes in pham

- Manual Annotations of this start: 2 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JPandJE_2 (BF), Syleon_103 (DU1),

Start 37:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tuck_30 (AZ1),

Start 38:

- Found in 2 of 59 (3.4%) of genes in pham
- Manual Annotations of this start: 2 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MaryV_93 (V), Wildcat_93 (V),

Start 40:

- Found in 1 of 59 (1.7%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SeresaTree_235 (BK1),

Start 41:

- Found in 5 of 59 (8.5%) of genes in pham
- Manual Annotations of this start: 3 of 54
- Called 60.0% of time when present
- Phage (with cluster) where this start called: CherryonLim_2 (CT), Tarnish_2 (CT), Vine_3 (CT),

Start 42:

- Found in 2 of 59 (3.4%) of genes in pham
- Manual Annotations of this start: 2 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia_18 (X), Nebkiss_19 (X),

Start 45:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: WRightOn_2 (BF),

Start 48:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wolfstar_46 (ED),

Start 49:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DatBoi_24 (DL),

Start 50:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: OneUp_35 (CQ2),

Start 54:

- Found in 1 of 59 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mollymur_24 (DL),

Summary by clusters:

There are 16 clusters represented in this pham: DL, ED, DD, CF, DU1, L4, BF, AZ1, L2, BK1, X, V, CQ2, CQ1, BE1, CT,

Info for manual annotations of cluster AZ1:

- Start number 31 was manually annotated 1 time for cluster AZ1.
- Start number 37 was manually annotated 1 time for cluster AZ1.

Info for manual annotations of cluster BE1:

- Start number 26 was manually annotated 1 time for cluster BE1.

Info for manual annotations of cluster BF:

- Start number 18 was manually annotated 1 time for cluster BF.
- Start number 36 was manually annotated 1 time for cluster BF.
- Start number 45 was manually annotated 1 time for cluster BF.

Info for manual annotations of cluster BK1:

- Start number 28 was manually annotated 4 times for cluster BK1.

Info for manual annotations of cluster CF:

- Start number 34 was manually annotated 2 times for cluster CF.

Info for manual annotations of cluster CQ1:

- Start number 22 was manually annotated 15 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 22 was manually annotated 1 time for cluster CQ2.
- Start number 50 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster CT:

- Start number 41 was manually annotated 3 times for cluster CT.

Info for manual annotations of cluster DD:

- Start number 22 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DL:

- Start number 22 was manually annotated 2 times for cluster DL.
- Start number 49 was manually annotated 1 time for cluster DL.
- Start number 54 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster DU1:

- Start number 36 was manually annotated 1 time for cluster DU1.

Info for manual annotations of cluster ED:

- Start number 48 was manually annotated 1 time for cluster ED.

Info for manual annotations of cluster L2:

- Start number 27 was manually annotated 2 times for cluster L2.
- Start number 29 was manually annotated 5 times for cluster L2.
- Start number 30 was manually annotated 1 time for cluster L2.

Info for manual annotations of cluster L4:

- Start number 25 was manually annotated 1 time for cluster L4.
- Start number 29 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster V:

- Start number 38 was manually annotated 2 times for cluster V.

Info for manual annotations of cluster X:

- Start number 42 was manually annotated 2 times for cluster X.

Gene Information:

Gene: Abscondus_40 Start: 17135, Stop: 17593, Start Num: 22

Candidate Starts for Abscondus_40:

(Start: 22 @17135 has 20 MA's),

Gene: Anedea_217 Start: 106294, Stop: 106719, Start Num: 26

Candidate Starts for Anedea_217:

(Start: 26 @106294 has 1 MA's), (81, 106618), (83, 106627), (88, 106654), (91, 106666), (94, 106675), (102, 106711), (103, 106714),

Gene: Aphelion_41 Start: 17404, Stop: 17862, Start Num: 22

Candidate Starts for Aphelion_41:

(Start: 22 @17404 has 20 MA's),

Gene: Bachita_43 Start: 17837, Stop: 18295, Start Num: 22

Candidate Starts for Bachita_43:

(Start: 22 @17837 has 20 MA's),

Gene: Bantam_23 Start: 14778, Stop: 15239, Start Num: 22

Candidate Starts for Bantam_23:

(14, 14694), (Start: 22 @14778 has 20 MA's), (76, 15099), (96, 15198),

Gene: Bavilard_3 Start: 956, Stop: 1408, Start Num: 21

Candidate Starts for Bavilard_3:

(10, 791), (13, 872), (21, 956), (Start: 41 @1043 has 3 MA's), (58, 1151), (59, 1154), (75, 1277), (77, 1283), (80, 1310), (81, 1319),

Gene: Bromden_61 Start: 43963, Stop: 44400, Start Num: 25

Candidate Starts for Bromden_61:

(24, 43960), (Start: 25 @43963 has 1 MA's), (32, 43996), (44, 44038), (51, 44083), (61, 44158), (63, 44164), (93, 44353),

Gene: Bromden_104 Start: 63270, Stop: 63686, Start Num: 29
Candidate Starts for Bromden_104:
(Start: 29 @63270 has 6 MA's), (86, 63612),

Gene: BrutonGaster_29 Start: 14029, Stop: 14475, Start Num: 22
Candidate Starts for BrutonGaster_29:
(Start: 22 @14029 has 20 MA's), (91, 14428),

Gene: Cardigan_40 Start: 19035, Stop: 19475, Start Num: 27
Candidate Starts for Cardigan_40:
(Start: 22 @19023 has 20 MA's), (Start: 27 @19035 has 2 MA's), (46, 19110), (60, 19218),

Gene: CherryonLim_2 Start: 640, Stop: 990, Start Num: 41
Candidate Starts for CherryonLim_2:
(Start: 41 @640 has 3 MA's), (58, 748), (59, 751), (75, 874), (77, 880), (80, 907), (81, 916), (89, 949), (90, 952), (95, 970),

Gene: ClubL_41 Start: 17326, Stop: 17784, Start Num: 22
Candidate Starts for ClubL_41:
(Start: 22 @17326 has 20 MA's),

Gene: Cucurbita_43 Start: 18696, Stop: 19154, Start Num: 22
Candidate Starts for Cucurbita_43:
(Start: 22 @18696 has 20 MA's),

Gene: Culver_41 Start: 17135, Stop: 17593, Start Num: 22
Candidate Starts for Culver_41:
(Start: 22 @17135 has 20 MA's),

Gene: DatBoi_24 Start: 15695, Stop: 16030, Start Num: 49
Candidate Starts for DatBoi_24:
(Start: 22 @15569 has 20 MA's), (Start: 49 @15695 has 1 MA's), (76, 15890), (96, 15989),

Gene: DeluluLabubu_257 Start: 121131, Stop: 121556, Start Num: 28
Candidate Starts for DeluluLabubu_257:
(Start: 28 @121131 has 4 MA's), (52, 121248), (63, 121329), (65, 121338), (79, 121437), (81, 121455), (88, 121491), (101, 121545),

Gene: Dusty_40 Start: 17135, Stop: 17593, Start Num: 22
Candidate Starts for Dusty_40:
(Start: 22 @17135 has 20 MA's),

Gene: Engineer_42 Start: 17352, Stop: 17810, Start Num: 22
Candidate Starts for Engineer_42:
(Start: 22 @17352 has 20 MA's),

Gene: Finemlucis_71 Start: 49120, Stop: 49566, Start Num: 27
Candidate Starts for Finemlucis_71:
(20, 49093), (23, 49108), (Start: 27 @49120 has 2 MA's), (64, 49336), (66, 49354), (82, 49468), (97, 49531), (99, 49543),

Gene: Forrest_254 Start: 120939, Stop: 121364, Start Num: 28
Candidate Starts for Forrest_254:
(Start: 28 @120939 has 4 MA's), (52, 121056), (63, 121137), (65, 121146), (81, 121263), (88, 121299),
(101, 121353),

Gene: Gabriela_68 Start: 47246, Stop: 47692, Start Num: 27
Candidate Starts for Gabriela_68:
(20, 47219), (23, 47234), (Start: 27 @47246 has 2 MA's), (64, 47462), (66, 47480), (82, 47594), (97,
47657), (99, 47669),

Gene: Gaia_18 Start: 17322, Stop: 17690, Start Num: 42
Candidate Starts for Gaia_18:
(Start: 42 @17322 has 2 MA's), (84, 17610),

Gene: Gardann_101 Start: 61924, Stop: 62331, Start Num: 29
Candidate Starts for Gardann_101:
(Start: 29 @61924 has 6 MA's), (51, 62029), (52, 62038), (72, 62173), (86, 62266), (94, 62296),

Gene: Geeche_40 Start: 17226, Stop: 17684, Start Num: 22
Candidate Starts for Geeche_40:
(Start: 22 @17226 has 20 MA's),

Gene: JPandJE_2 Start: 2649, Stop: 3017, Start Num: 36
Candidate Starts for JPandJE_2:
(8, 2298), (Start: 36 @2649 has 2 MA's), (39, 2658), (55, 2760), (62, 2796), (67, 2820), (69, 2832), (75,
2883),

Gene: Jada_255 Start: 120179, Stop: 120604, Start Num: 28
Candidate Starts for Jada_255:
(Start: 28 @120179 has 4 MA's), (52, 120296), (63, 120377), (65, 120386), (81, 120503), (88, 120539),
(101, 120593),

Gene: Jflix2_25 Start: 25439, Stop: 25867, Start Num: 34
Candidate Starts for Jflix2_25:
(4, 24707), (6, 24917), (Start: 34 @25439 has 2 MA's), (57, 25574), (65, 25619), (84, 25760), (93,
25793),

Gene: JonJames_40 Start: 21238, Stop: 21690, Start Num: 22
Candidate Starts for JonJames_40:
(Start: 22 @21238 has 20 MA's), (Start: 27 @21250 has 2 MA's), (46, 21325), (60, 21433),

Gene: Kahlid_101 Start: 61842, Stop: 62249, Start Num: 29
Candidate Starts for Kahlid_101:
(Start: 29 @61842 has 6 MA's), (51, 61947), (52, 61956), (72, 62091), (86, 62184), (94, 62214),

Gene: Lozinak_41 Start: 17407, Stop: 17865, Start Num: 22
Candidate Starts for Lozinak_41:
(Start: 22 @17407 has 20 MA's),

Gene: Madraxi_29 Start: 27630, Stop: 28058, Start Num: 34
Candidate Starts for Madraxi_29:

(Start: 34 @27630 has 2 MA's), (57, 27765), (63, 27801), (65, 27810), (66, 27822), (84, 27951), (93, 27984),

Gene: Manuel_3 Start: 3413, Stop: 3811, Start Num: 18

Candidate Starts for Manuel_3:

(16, 3383), (Start: 18 @3413 has 1 MA's), (63, 3590),

Gene: MaryV_93 Start: 56140, Stop: 56508, Start Num: 38

Candidate Starts for MaryV_93:

(Start: 38 @56140 has 2 MA's), (63, 56281), (80, 56398), (86, 56434), (92, 56458), (94, 56464), (100, 56485),

Gene: Miskis_39 Start: 17170, Stop: 17628, Start Num: 22

Candidate Starts for Miskis_39:

(Start: 22 @17170 has 20 MA's),

Gene: Mollymur_24 Start: 15771, Stop: 16076, Start Num: 54

Candidate Starts for Mollymur_24:

(Start: 22 @15615 has 20 MA's), (Start: 54 @15771 has 1 MA's), (69, 15873), (74, 15915),

Gene: Nebkiss_19 Start: 17323, Stop: 17691, Start Num: 42

Candidate Starts for Nebkiss_19:

(Start: 42 @17323 has 2 MA's), (84, 17611),

Gene: Nicholasp3_102 Start: 61924, Stop: 62331, Start Num: 29

Candidate Starts for Nicholasp3_102:

(Start: 29 @61924 has 6 MA's), (51, 62029), (52, 62038), (72, 62173), (86, 62266), (94, 62296),

Gene: Norvs_42 Start: 17409, Stop: 17867, Start Num: 22

Candidate Starts for Norvs_42:

(Start: 22 @17409 has 20 MA's),

Gene: OneUp_35 Start: 15247, Stop: 15564, Start Num: 50

Candidate Starts for OneUp_35:

(Start: 22 @15118 has 20 MA's), (Start: 50 @15247 has 1 MA's), (91, 15517),

Gene: PhinkBoden_41 Start: 17790, Stop: 18248, Start Num: 22

Candidate Starts for PhinkBoden_41:

(Start: 22 @17790 has 20 MA's),

Gene: Rumpelstiltskin_98 Start: 61717, Stop: 62124, Start Num: 29

Candidate Starts for Rumpelstiltskin_98:

(Start: 29 @61717 has 6 MA's), (51, 61822), (52, 61831), (72, 61966), (86, 62059), (94, 62089),

Gene: SFuller_27 Start: 26032, Stop: 26460, Start Num: 34

Candidate Starts for SFuller_27:

(Start: 34 @26032 has 2 MA's), (57, 26167), (63, 26203), (65, 26212), (66, 26224), (84, 26353), (93, 26386),

Gene: Schaffner_27 Start: 23138, Stop: 23539, Start Num: 31

Candidate Starts for Schaffner_27:

(7, 22853), (9, 22994), (Start: 31 @23138 has 1 MA's), (56, 23255), (63, 23300), (70, 23369), (71, 23372), (78, 23414), (81, 23444), (83, 23453), (87, 23477),

Gene: SeresaTree_235 Start: 114238, Stop: 114606, Start Num: 40
Candidate Starts for SeresaTree_235:
(40, 114238), (53, 114316), (60, 114370), (61, 114376), (68, 114415), (69, 114418), (87, 114550), (98, 114583),

Gene: Smoothie_42 Start: 17407, Stop: 17865, Start Num: 22
Candidate Starts for Smoothie_42:
(Start: 22 @17407 has 20 MA's),

Gene: SpeedDemon_240 Start: 15094, Stop: 15555, Start Num: 22
Candidate Starts for SpeedDemon_240:
(Start: 22 @15094 has 20 MA's), (77, 15418), (81, 15454), (96, 15514),

Gene: Syleon_103 Start: 59026, Stop: 59409, Start Num: 36
Candidate Starts for Syleon_103:
(35, 59023), (Start: 36 @59026 has 2 MA's), (80, 59308), (82, 59320),

Gene: Tarnish_2 Start: 640, Stop: 1005, Start Num: 41
Candidate Starts for Tarnish_2:
(Start: 41 @640 has 3 MA's), (58, 748), (59, 751), (75, 874), (77, 880), (80, 907), (81, 916),

Gene: Toniann_41 Start: 17352, Stop: 17810, Start Num: 22
Candidate Starts for Toniann_41:
(Start: 22 @17352 has 20 MA's),

Gene: Tuck_30 Start: 24609, Stop: 25010, Start Num: 37
Candidate Starts for Tuck_30:
(Start: 37 @24609 has 1 MA's), (56, 24726), (63, 24771), (72, 24849), (81, 24915), (83, 24924),

Gene: TunaTartare_254 Start: 124119, Stop: 124544, Start Num: 28
Candidate Starts for TunaTartare_254:
(Start: 28 @124119 has 4 MA's), (52, 124236), (63, 124317), (65, 124326), (81, 124443), (84, 124464), (88, 124479), (101, 124533),

Gene: Underpass_94 Start: 56960, Stop: 57367, Start Num: 29
Candidate Starts for Underpass_94:
(Start: 29 @56960 has 6 MA's), (51, 57065), (52, 57074), (72, 57209), (86, 57302), (94, 57332),

Gene: Vetrix_100 Start: 61960, Stop: 62376, Start Num: 30
Candidate Starts for Vetrix_100:
(Start: 29 @61957 has 6 MA's), (Start: 30 @61960 has 1 MA's), (33, 61978), (86, 62299),

Gene: Vine_3 Start: 1265, Stop: 1630, Start Num: 41
Candidate Starts for Vine_3:
(Start: 41 @1265 has 3 MA's), (58, 1373), (59, 1376), (75, 1499), (77, 1505), (80, 1532), (81, 1541),

Gene: WRightOn_2 Start: 2629, Stop: 2976, Start Num: 45
Candidate Starts for WRightOn_2:
(43, 2626), (Start: 45 @2629 has 1 MA's), (55, 2707), (59, 2731), (67, 2776), (69, 2788), (85, 2905), (88, 2914), (101, 2968),

Gene: Wildcat_93 Start: 56150, Stop: 56518, Start Num: 38

Candidate Starts for Wildcat_93:

(Start: 38 @56150 has 2 MA's), (63, 56291), (80, 56408), (86, 56444), (92, 56468), (94, 56474), (100, 56495),

Gene: WilliamBoone_41 Start: 16716, Stop: 17174, Start Num: 22

Candidate Starts for WilliamBoone_41:

(Start: 22 @16716 has 20 MA's),

Gene: Wolfstar_46 Start: 22950, Stop: 22588, Start Num: 48

Candidate Starts for Wolfstar_46:

(1, 25128), (2, 24834), (3, 24786), (5, 23553), (11, 23208), (12, 23199), (15, 23154), (17, 23139), (19, 23100), (35, 23016), (Start: 41 @22992 has 3 MA's), (47, 22968), (Start: 48 @22950 has 1 MA's), (73, 22752), (88, 22653),

Gene: Yvonnetastic_38 Start: 18787, Stop: 19239, Start Num: 22

Candidate Starts for Yvonnetastic_38:

(Start: 22 @18787 has 20 MA's), (Start: 27 @18799 has 2 MA's), (46, 18874), (60, 18982),