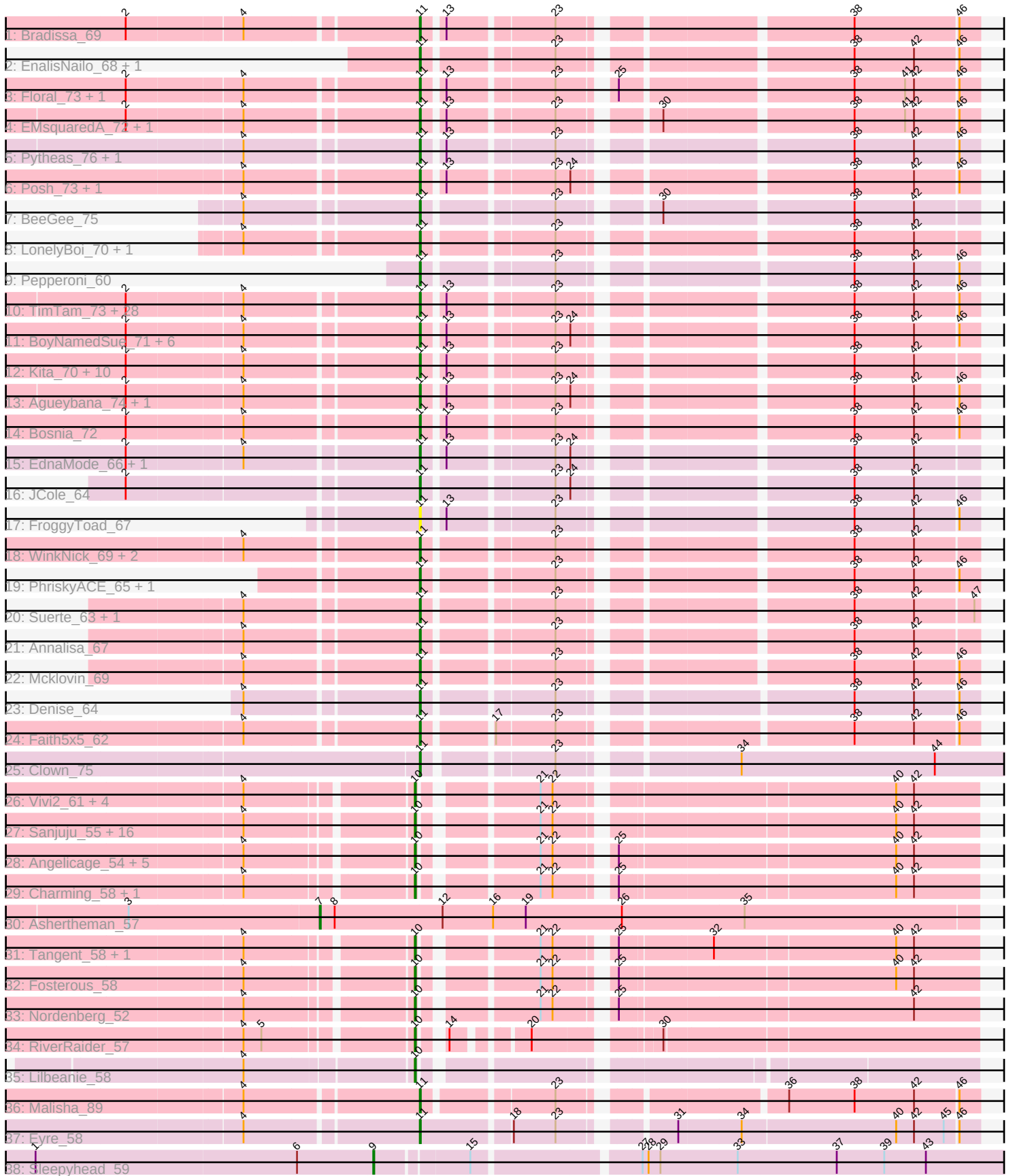


Pham 317214



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 317214 Report

This analysis was run 09/05/26 on database version 662.

Pham number 317214 has 121 members, 8 are drafts.

Phages represented in each track:

- Track 1 : Bradissa_69
- Track 2 : EnalisNaïlo_68, Lilas_69
- Track 3 : Floral_73, Pollux_75
- Track 4 : EMsquaredA_72, Marteena_71
- Track 5 : Pytheas_76, Jablanski_75
- Track 6 : Posh_73, Wrigley_75
- Track 7 : BeeGee_75
- Track 8 : LonelyBoi_70, Confidence_71
- Track 9 : Pepperoni_60
- Track 10 : TimTam_73, Herod_73, Attis_66, Sidious_70, Sahara_66, Cynthia_67, TuertoX_67, Cashline_70, PantheRoc_75, Bjanes7_64, Sproutie_67, Whiteclaw_67, Ebert_70, Clap_67, Eviarto_73, Gizermo_67, BatStarr_72, Jalleen_71, LordFarquaad_69, Mocha12_67, Nymphadora_73, SoilAssassin_66, GemG_67, Yinzer_67, Lamberg_63, Savage_67, Angelique_67, Haley23_67, Hugley_71
- Track 11 : BoyNamedSue_71, BaxterFox_75, Zirinka_67, Nettuno_64, AlumE_71, Bialota_67, Yeet412_65
- Track 12 : Kita_70, Trumpet_69, Antonio_68, Dillpickles_74, Eudoria_69, Polly_66, Suscepit_69, Manasvini_71, Tayonia_69, Neobush_71, Zameen_69
- Track 13 : Agueybana_74, Matteo_61
- Track 14 : Bosnia_72
- Track 15 : EdnaMode_66, Pickett_64
- Track 16 : JCole_64
- Track 17 : FroggyToad_67
- Track 18 : WinkNick_69, Dolores_69, Sekhmet_68
- Track 19 : PhriskyACE_65, Powerball_67
- Track 20 : Suerte_63, MakCheese_78
- Track 21 : Annalisa_67
- Track 22 : Mcklovin_69
- Track 23 : Denise_64
- Track 24 : Faith5x5_62
- Track 25 : Clown_75
- Track 26 : Vivi2_61, Sitar_57, Brawn1_53, Jabberwocky_55, Lennon_57
- Track 27 : Sanjuju_55, Shivanishola_56, Ailee_53, MoontowerMania_56, Fitzgerald_55, Galadriel_57, McKinley_59, Barsten_57, Paries_60, Geodirt_55, Keitabear_56, Love_61, Kewpiedoll_57, Sedona_56, McCrothy_57, BobBob_55, ChadMasterC_57

- Track 28 : Angelicage_54, Affeca_54, Thing3_55, Stultus_54, FuegoCuervo_60, Kamashten_55
- Track 29 : Charming_58, Brandonk123_59
- Track 30 : Ashertheman_57
- Track 31 : Tangent_58, Rofo_57
- Track 32 : Fosterous_58
- Track 33 : Nordenberg_52
- Track 34 : RiverRaider_57
- Track 35 : Lilbeanie_58
- Track 36 : Malisha_89
- Track 37 : Eyre_58
- Track 38 : Sleepyhead_59

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

The start number called the most often in the published annotations is 11, it was called in 77 of the 113 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agueybana_74, AlumE_71, Angelique_67, Annalisa_67, Antonio_68, Attis_66, BatStarr_72, BaxterFox_75, BeeGee_75, Bialota_67, Bjanese7_64, Bosnia_72, BoyNamedSue_71, Bradissa_69, Cashline_70, Clap_67, Clown_75, Confidence_71, Cynthia_67, Denise_64, Dillpickles_74, Dolores_69, EMSquaredA_72, Ebert_70, EdnaMode_66, EnalisNailo_68, Eudoria_69, Eviarto_73, Eyre_58, Faith5x5_62, Floral_73, FroggyToad_67, GemG_67, Gizermo_67, Haley23_67, Herod_73, Hugley_71, JCole_64, Jablanski_75, Jalleen_71, Kita_70, Lamberg_63, Lilas_69, LonelyBoi_70, LordFarquard_69, MakCheese_78, Malisha_89, Manasvini_71, Marteena_71, Matteo_61, Mcklovin_69, Mocha12_67, Neobush_71, Nettuno_64, Nymphadora_73, PantheRoc_75, Pepperoni_60, PhriskyACE_65, Pickett_64, Pollux_75, Polly_66, Posh_73, Powerball_67, Pytheas_76, Sahara_66, Savage_67, Sekhmet_68, Sidious_70, SoilAssassin_66, Sproutie_67, Suerte_63, Suscepit_69, Tayonia_69, TimTam_73, Trumpet_69, TuertoX_67, Whiteclaw_67, WinkNick_69, Wrigley_75, Yeet412_65, Yinzer_67, Zameen_69, Zirinka_67,

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

•

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

- Affeca_54, Ailee_53, Angelicage_54, Ashertheman_57, Barsten_57, BobBob_55, Brandonk123_59, Brawn1_53, ChadMasterC_57, Charming_58, Fitzgerald_55, Fosterous_58, FuegoCuervo_60, Galadriel_57, Geodirt_55, Jabberwocky_55, Kamashten_55, Keitabear_56, Kewpiedoll_57, Lennon_57, Lilbeanie_58, Love_61, McCrothy_57, McKinley_59, MoontowerMania_56, Nordenberg_52, Paries_60, RiverRaider_57, Rofo_57, Sanjuju_55, Sedona_56, Shivanishola_56, Sitar_57, Sleepyhead_59, Stultus_54, Tangent_58, Thing3_55, Vivi2_61,

Summary by start number:

Start 7:

- Found in 1 of 121 (0.8%) of genes in pham

- Manual Annotations of this start: 1 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ashertheman_57 (DE1),

Start 9:

- Found in 1 of 121 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sleepyhead_59 (singleton),

Start 10:

- Found in 36 of 121 (29.8%) of genes in pham
- Manual Annotations of this start: 34 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Affeca_54 (DE1), Ailee_53 (DE1), Angelicage_54 (DE1), Barsten_57 (DE1), BobBob_55 (DE1), Brandonk123_59 (DE1), Brawn1_53 (DE1), ChadMasterC_57 (DE1), Charming_58 (DE1), Fitzgerald_55 (DE1), Fosterous_58 (DE1), FuegoCuervo_60 (DE1), Galadriel_57 (DE1), Geodirt_55 (DE1), Jabberwocky_55 (DE1), Kamashten_55 (DE1), Keitabear_56 (DE1), Kewpiedoll_57 (DE1), Lennon_57 (DE1), Lilbeanie_58 (DE5), Love_61 (DE1), McCrothy_57 (DE1), McKinley_59 (DE1), MoontowerMania_56 (DE1), Nordenberg_52 (DE1), Paries_60 (DE1), RiverRaider_57 (DE1), Rofo_57 (DE1), Sanjuju_55 (DE1), Sedona_56 (DE1), Shivanishola_56 (DE1), Sitar_57 (DE1), Stultus_54 (DE1), Tangent_58 (DE1), Thing3_55 (DE1), Vivi2_61 (DE1),

Start 11:

- Found in 83 of 121 (68.6%) of genes in pham
- Manual Annotations of this start: 77 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agueybana_74 (CZ1), AlumE_71 (CZ1), Angelique_67 (CY1), Annalisa_67 (CZ4), Antonio_68 (CZ1), Attis_66 (CZ2), BatStarr_72 (CZ1), BaxterFox_75 (CZ3), BeeGee_75 (CY5), Bialota_67 (CZ1), Bjaness_64 (CZ2), Bosnia_72 (CZ1), BoyNamedSue_71 (CZ1), Bradissa_69 (CY1), Cashline_70 (CY6), Clap_67 (CZ2), Clown_75 (DC2), Confidence_71 (CY1), Cynthia_67 (CZ2), Denise_64 (CZ5), Dillpickles_74 (CZ1), Dolores_69 (CZ4), EMSquaredA_72 (CY1), Ebert_70 (CZ2), EdnaMode_66 (CZ2), EnalisNailo_68 (CY1), Eudoria_69 (CZ1), Eviarto_73 (CZ1), Eyre_58 (singleton), Faith5x5_62 (CZ6), Floral_73 (CY1), FroggyToad_67 (CZ2), GemG_67 (CZ2), Gizermo_67 (CZ2), Haley23_67 (CZ2), Herod_73 (CZ1), Hugley_71 (CZ1), JCole_64 (CZ2), Jablanski_75 (CY3), Jalleen_71 (CZ2), Kita_70 (CZ1), Lamberg_63 (CZ2), Lilas_69 (CY1), LonelyBoi_70 (CY7), LordFarquaad_69 (CZ2), MakCheese_78 (DW), Malisha_89 (DN), Manasvini_71 (CZ1), Marteena_71 (CY1), Matteo_61 (CZ2), Mcklovin_69 (CZ4), Mocha12_67 (CZ2), Neobush_71 (CZ1), Nettuno_64 (CZ2), Nymphadora_73 (CZ1), PantheRoc_75 (CZ3), Pepperoni_60 (CZ), PhriskyACE_65 (CZ4), Pickett_64 (CZ2), Pollux_75 (CY1), Polly_66 (CZ1), Posh_73 (CY4), Powerball_67 (CZ4), Pytheas_76 (CY3), Sahara_66 (CZ2), Savage_67 (CZ2), Sekhmet_68 (CZ4), Sidious_70 (CZ7), SoilAssassin_66 (CZ2), Sproutie_67 (CZ2), Suerte_63 (CZ4), Suscepit_69 (CZ1), Tayonia_69 (CZ1), TimTam_73 (CZ1), Trumpet_69 (CZ1), TuertoX_67 (CZ2), Whiteclaw_67 (CZ2), WinkNick_69 (CZ4), Wrigley_75 (CY4), Yeet412_65 (CZ2), Yinzer_67 (CZ2), Zameen_69 (CZ1), Zirinka_67 (CZ1),

Summary by clusters:

There are 20 clusters represented in this pham: CY1, CY3, singleton, DE5, CY7, CY6, CY5, CY4, CZ2, DE1, CZ1, CZ6, CZ7, CZ4, CZ5, CZ, CZ3, DW, DC2, DN,

Info for manual annotations of cluster CY1:

- Start number 11 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CY3:

- Start number 11 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:

- Start number 11 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CY5:

- Start number 11 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CY6:

- Start number 11 was manually annotated 1 time for cluster CY6.

Info for manual annotations of cluster CY7:

- Start number 11 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster CZ:

- Start number 11 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 11 was manually annotated 21 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 11 was manually annotated 23 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 11 was manually annotated 2 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 11 was manually annotated 8 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 11 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 11 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster CZ7:

- Start number 11 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DC2:

- Start number 11 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DE1:

- Start number 7 was manually annotated 1 time for cluster DE1.
- Start number 10 was manually annotated 33 times for cluster DE1.

Info for manual annotations of cluster DE5:

- Start number 10 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster DN:

- Start number 11 was manually annotated 1 time for cluster DN.

Gene Information:

Gene: Affeca_54 Start: 45858, Stop: 46361, Start Num: 10

Candidate Starts for Affeca_54:

(4, 45708), (Start: 10 @45858 has 34 MA's), (21, 45957), (22, 45969), (25, 46014), (40, 46278), (42, 46296),

Gene: Agueybana_74 Start: 48379, Stop: 48873, Start Num: 11

Candidate Starts for Agueybana_74:

(2, 48106), (4, 48217), (Start: 11 @48379 has 77 MA's), (13, 48397), (23, 48496), (24, 48511), (38, 48751), (42, 48811), (46, 48853),

Gene: Ailee_53 Start: 45466, Stop: 45969, Start Num: 10

Candidate Starts for Ailee_53:

(4, 45316), (Start: 10 @45466 has 34 MA's), (21, 45565), (22, 45577), (40, 45886), (42, 45904),

Gene: AlumE_71 Start: 48304, Stop: 48798, Start Num: 11

Candidate Starts for AlumE_71:

(2, 48031), (4, 48142), (Start: 11 @48304 has 77 MA's), (13, 48322), (23, 48421), (24, 48436), (38, 48676), (42, 48736), (46, 48778),

Gene: Angelicage_54 Start: 46273, Stop: 46776, Start Num: 10

Candidate Starts for Angelicage_54:

(4, 46123), (Start: 10 @46273 has 34 MA's), (21, 46372), (22, 46384), (25, 46429), (40, 46693), (42, 46711),

Gene: Angelique_67 Start: 46696, Stop: 47190, Start Num: 11

Candidate Starts for Angelique_67:

(2, 46423), (4, 46534), (Start: 11 @46696 has 77 MA's), (13, 46714), (23, 46813), (38, 47068), (42, 47128), (46, 47170),

Gene: Annalisa_67 Start: 43490, Stop: 43984, Start Num: 11

Candidate Starts for Annalisa_67:

(4, 43328), (Start: 11 @43490 has 77 MA's), (23, 43607), (38, 43862), (42, 43922),

Gene: Antonio_68 Start: 45821, Stop: 46315, Start Num: 11

Candidate Starts for Antonio_68:

(2, 45548), (4, 45659), (Start: 11 @45821 has 77 MA's), (13, 45839), (23, 45938), (38, 46193), (42, 46253),

Gene: Ashertheman_57 Start: 45729, Stop: 46388, Start Num: 7

Candidate Starts for Ashertheman_57:

(3, 45543), (Start: 7 @45729 has 1 MA's), (8, 45744), (12, 45852), (16, 45903), (19, 45936), (26, 46032), (35, 46155),

Gene: Attis_66 Start: 44538, Stop: 45032, Start Num: 11

Candidate Starts for Attis_66:

(2, 44265), (4, 44376), (Start: 11 @44538 has 77 MA's), (13, 44556), (23, 44655), (38, 44910), (42, 44970), (46, 45012),

Gene: Barsten_57 Start: 46229, Stop: 46732, Start Num: 10

Candidate Starts for Barsten_57:

(4, 46079), (Start: 10 @46229 has 34 MA's), (21, 46328), (22, 46340), (40, 46649), (42, 46667),

Gene: BatStarr_72 Start: 48783, Stop: 49277, Start Num: 11

Candidate Starts for BatStarr_72:

(2, 48510), (4, 48621), (Start: 11 @48783 has 77 MA's), (13, 48801), (23, 48900), (38, 49155), (42, 49215), (46, 49257),

Gene: BaxterFox_75 Start: 49367, Stop: 49861, Start Num: 11

Candidate Starts for BaxterFox_75:

(2, 49094), (4, 49205), (Start: 11 @49367 has 77 MA's), (13, 49385), (23, 49484), (24, 49499), (38, 49739), (42, 49799), (46, 49841),

Gene: BeeGee_75 Start: 47888, Stop: 48382, Start Num: 11

Candidate Starts for BeeGee_75:

(4, 47726), (Start: 11 @47888 has 77 MA's), (23, 48005), (30, 48083), (38, 48260), (42, 48320),

Gene: Bialota_67 Start: 47495, Stop: 47989, Start Num: 11

Candidate Starts for Bialota_67:

(2, 47222), (4, 47333), (Start: 11 @47495 has 77 MA's), (13, 47513), (23, 47612), (24, 47627), (38, 47867), (42, 47927), (46, 47969),

Gene: Bjaner7_64 Start: 42163, Stop: 42657, Start Num: 11

Candidate Starts for Bjaner7_64:

(2, 41890), (4, 42001), (Start: 11 @42163 has 77 MA's), (13, 42181), (23, 42280), (38, 42535), (42, 42595), (46, 42637),

Gene: BobBob_55 Start: 45456, Stop: 45959, Start Num: 10

Candidate Starts for BobBob_55:

(4, 45306), (Start: 10 @45456 has 34 MA's), (21, 45555), (22, 45567), (40, 45876), (42, 45894),

Gene: Bosnia_72 Start: 50148, Stop: 50642, Start Num: 11

Candidate Starts for Bosnia_72:

(2, 49875), (4, 49986), (Start: 11 @50148 has 77 MA's), (13, 50166), (23, 50265), (38, 50520), (42, 50580), (46, 50622),

Gene: BoyNamedSue_71 Start: 48304, Stop: 48798, Start Num: 11

Candidate Starts for BoyNamedSue_71:

(2, 48031), (4, 48142), (Start: 11 @48304 has 77 MA's), (13, 48322), (23, 48421), (24, 48436), (38, 48676), (42, 48736), (46, 48778),

Gene: Bradissa_69 Start: 48225, Stop: 48719, Start Num: 11

Candidate Starts for Bradissa_69:

(2, 47952), (4, 48063), (Start: 11 @48225 has 77 MA's), (13, 48243), (23, 48342), (38, 48597), (46, 48699),

Gene: Brandonk123_59 Start: 46650, Stop: 47153, Start Num: 10
Candidate Starts for Brandonk123_59:
(4, 46500), (Start: 10 @46650 has 34 MA's), (21, 46749), (22, 46761), (25, 46806), (40, 47070), (42, 47088),

Gene: Brawn1_53 Start: 45543, Stop: 46049, Start Num: 10
Candidate Starts for Brawn1_53:
(4, 45393), (Start: 10 @45543 has 34 MA's), (21, 45642), (22, 45654), (40, 45963), (42, 45981),

Gene: Cashline_70 Start: 48920, Stop: 49414, Start Num: 11
Candidate Starts for Cashline_70:
(2, 48647), (4, 48758), (Start: 11 @48920 has 77 MA's), (13, 48938), (23, 49037), (38, 49292), (42, 49352), (46, 49394),

Gene: ChadMasterC_57 Start: 47628, Stop: 48131, Start Num: 10
Candidate Starts for ChadMasterC_57:
(4, 47478), (Start: 10 @47628 has 34 MA's), (21, 47727), (22, 47739), (40, 48048), (42, 48066),

Gene: Charming_58 Start: 46144, Stop: 46647, Start Num: 10
Candidate Starts for Charming_58:
(4, 45994), (Start: 10 @46144 has 34 MA's), (21, 46243), (22, 46255), (25, 46300), (40, 46564), (42, 46582),

Gene: Clap_67 Start: 42342, Stop: 42836, Start Num: 11
Candidate Starts for Clap_67:
(2, 42069), (4, 42180), (Start: 11 @42342 has 77 MA's), (13, 42360), (23, 42459), (38, 42714), (42, 42774), (46, 42816),

Gene: Clown_75 Start: 50685, Stop: 51260, Start Num: 11
Candidate Starts for Clown_75:
(Start: 11 @50685 has 77 MA's), (23, 50799), (34, 50952), (44, 51147),

Gene: Confidence_71 Start: 46288, Stop: 46782, Start Num: 11
Candidate Starts for Confidence_71:
(4, 46126), (Start: 11 @46288 has 77 MA's), (23, 46405), (38, 46660), (42, 46720),

Gene: Cynthia_67 Start: 42340, Stop: 42834, Start Num: 11
Candidate Starts for Cynthia_67:
(2, 42067), (4, 42178), (Start: 11 @42340 has 77 MA's), (13, 42358), (23, 42457), (38, 42712), (42, 42772), (46, 42814),

Gene: Denise_64 Start: 39130, Stop: 39627, Start Num: 11
Candidate Starts for Denise_64:
(4, 38968), (Start: 11 @39130 has 77 MA's), (23, 39247), (38, 39505), (42, 39565), (46, 39607),

Gene: Dillpickles_74 Start: 45865, Stop: 46359, Start Num: 11
Candidate Starts for Dillpickles_74:
(2, 45592), (4, 45703), (Start: 11 @45865 has 77 MA's), (13, 45883), (23, 45982), (38, 46237), (42, 46297),

Gene: Dolores_69 Start: 43025, Stop: 43519, Start Num: 11
Candidate Starts for Dolores_69:
(4, 42863), (Start: 11 @43025 has 77 MA's), (23, 43142), (38, 43397), (42, 43457),

Gene: EMSquaredA_72 Start: 47264, Stop: 47758, Start Num: 11

Candidate Starts for EMSquaredA_72:

(2, 46991), (4, 47102), (Start: 11 @47264 has 77 MA's), (13, 47282), (23, 47381), (30, 47459), (38, 47636), (41, 47687), (42, 47696), (46, 47738),

Gene: Ebert_70 Start: 42774, Stop: 43268, Start Num: 11

Candidate Starts for Ebert_70:

(2, 42501), (4, 42612), (Start: 11 @42774 has 77 MA's), (13, 42792), (23, 42891), (38, 43146), (42, 43206), (46, 43248),

Gene: EdnaMode_66 Start: 42450, Stop: 42944, Start Num: 11

Candidate Starts for EdnaMode_66:

(2, 42177), (4, 42288), (Start: 11 @42450 has 77 MA's), (13, 42468), (23, 42567), (24, 42582), (38, 42822), (42, 42882),

Gene: EnalisNailo_68 Start: 47756, Stop: 48250, Start Num: 11

Candidate Starts for EnalisNailo_68:

(Start: 11 @47756 has 77 MA's), (23, 47873), (38, 48128), (42, 48188), (46, 48230),

Gene: Eudoria_69 Start: 45821, Stop: 46315, Start Num: 11

Candidate Starts for Eudoria_69:

(2, 45548), (4, 45659), (Start: 11 @45821 has 77 MA's), (13, 45839), (23, 45938), (38, 46193), (42, 46253),

Gene: Eviarto_73 Start: 48758, Stop: 49252, Start Num: 11

Candidate Starts for Eviarto_73:

(2, 48485), (4, 48596), (Start: 11 @48758 has 77 MA's), (13, 48776), (23, 48875), (38, 49130), (42, 49190), (46, 49232),

Gene: Eyre_58 Start: 38119, Stop: 38631, Start Num: 11

Candidate Starts for Eyre_58:

(4, 37954), (Start: 11 @38119 has 77 MA's), (18, 38203), (23, 38245), (31, 38338), (34, 38398), (40, 38551), (42, 38569), (45, 38599), (46, 38611),

Gene: Faith5x5_62 Start: 37579, Stop: 38076, Start Num: 11

Candidate Starts for Faith5x5_62:

(4, 37417), (Start: 11 @37579 has 77 MA's), (17, 37639), (23, 37696), (38, 37954), (42, 38014), (46, 38056),

Gene: Fitzgerald_55 Start: 46895, Stop: 47398, Start Num: 10

Candidate Starts for Fitzgerald_55:

(4, 46745), (Start: 10 @46895 has 34 MA's), (21, 46994), (22, 47006), (40, 47315), (42, 47333),

Gene: Floral_73 Start: 49221, Stop: 49715, Start Num: 11

Candidate Starts for Floral_73:

(2, 48948), (4, 49059), (Start: 11 @49221 has 77 MA's), (13, 49239), (23, 49338), (25, 49380), (38, 49593), (41, 49644), (42, 49653), (46, 49695),

Gene: Fosterous_58 Start: 46583, Stop: 47086, Start Num: 10

Candidate Starts for Fosterous_58:

(4, 46433), (Start: 10 @46583 has 34 MA's), (21, 46682), (22, 46694), (25, 46739), (40, 47003), (42, 47021),

Gene: FroggyToad_67 Start: 43624, Stop: 44118, Start Num: 11

Candidate Starts for FroggyToad_67:

(Start: 11 @43624 has 77 MA's), (13, 43642), (23, 43741), (38, 43996), (42, 44056), (46, 44098),

Gene: FuegoCuervo_60 Start: 45499, Stop: 46002, Start Num: 10

Candidate Starts for FuegoCuervo_60:

(4, 45349), (Start: 10 @45499 has 34 MA's), (21, 45598), (22, 45610), (25, 45655), (40, 45919), (42, 45937),

Gene: Galadriel_57 Start: 46358, Stop: 46861, Start Num: 10

Candidate Starts for Galadriel_57:

(4, 46208), (Start: 10 @46358 has 34 MA's), (21, 46457), (22, 46469), (40, 46778), (42, 46796),

Gene: GemG_67 Start: 42346, Stop: 42840, Start Num: 11

Candidate Starts for GemG_67:

(2, 42073), (4, 42184), (Start: 11 @42346 has 77 MA's), (13, 42364), (23, 42463), (38, 42718), (42, 42778), (46, 42820),

Gene: Geodirt_55 Start: 46977, Stop: 47480, Start Num: 10

Candidate Starts for Geodirt_55:

(4, 46827), (Start: 10 @46977 has 34 MA's), (21, 47076), (22, 47088), (40, 47397), (42, 47415),

Gene: Gizermo_67 Start: 42342, Stop: 42836, Start Num: 11

Candidate Starts for Gizermo_67:

(2, 42069), (4, 42180), (Start: 11 @42342 has 77 MA's), (13, 42360), (23, 42459), (38, 42714), (42, 42774), (46, 42816),

Gene: Haley23_67 Start: 42342, Stop: 42836, Start Num: 11

Candidate Starts for Haley23_67:

(2, 42069), (4, 42180), (Start: 11 @42342 has 77 MA's), (13, 42360), (23, 42459), (38, 42714), (42, 42774), (46, 42816),

Gene: Herod_73 Start: 49177, Stop: 49671, Start Num: 11

Candidate Starts for Herod_73:

(2, 48904), (4, 49015), (Start: 11 @49177 has 77 MA's), (13, 49195), (23, 49294), (38, 49549), (42, 49609), (46, 49651),

Gene: Hugley_71 Start: 49157, Stop: 49651, Start Num: 11

Candidate Starts for Hugley_71:

(2, 48884), (4, 48995), (Start: 11 @49157 has 77 MA's), (13, 49175), (23, 49274), (38, 49529), (42, 49589), (46, 49631),

Gene: JCole_64 Start: 41012, Stop: 41506, Start Num: 11

Candidate Starts for JCole_64:

(2, 40739), (Start: 11 @41012 has 77 MA's), (23, 41129), (24, 41144), (38, 41384), (42, 41444),

Gene: Jabberwocky_55 Start: 47271, Stop: 47774, Start Num: 10

Candidate Starts for Jabberwocky_55:

(4, 47121), (Start: 10 @47271 has 34 MA's), (21, 47370), (22, 47382), (40, 47691), (42, 47709),

Gene: Jablanski_75 Start: 50299, Stop: 50793, Start Num: 11

Candidate Starts for Jablanski_75:

(4, 50137), (Start: 11 @50299 has 77 MA's), (13, 50317), (23, 50416), (38, 50671), (42, 50731), (46, 50773),

Gene: Jalleen_71 Start: 43069, Stop: 43563, Start Num: 11

Candidate Starts for Jalleen_71:

(2, 42796), (4, 42907), (Start: 11 @43069 has 77 MA's), (13, 43087), (23, 43186), (38, 43441), (42, 43501), (46, 43543),

Gene: Kamashten_55 Start: 45569, Stop: 46072, Start Num: 10

Candidate Starts for Kamashten_55:

(4, 45419), (Start: 10 @45569 has 34 MA's), (21, 45668), (22, 45680), (25, 45725), (40, 45989), (42, 46007),

Gene: Keitabear_56 Start: 47088, Stop: 47591, Start Num: 10

Candidate Starts for Keitabear_56:

(4, 46938), (Start: 10 @47088 has 34 MA's), (21, 47187), (22, 47199), (40, 47508), (42, 47526),

Gene: Kewpiedoll_57 Start: 46520, Stop: 47023, Start Num: 10

Candidate Starts for Kewpiedoll_57:

(4, 46370), (Start: 10 @46520 has 34 MA's), (21, 46619), (22, 46631), (40, 46940), (42, 46958),

Gene: Kita_70 Start: 45830, Stop: 46324, Start Num: 11

Candidate Starts for Kita_70:

(2, 45557), (4, 45668), (Start: 11 @45830 has 77 MA's), (13, 45848), (23, 45947), (38, 46202), (42, 46262),

Gene: Lamberg_63 Start: 40851, Stop: 41345, Start Num: 11

Candidate Starts for Lamberg_63:

(2, 40578), (4, 40689), (Start: 11 @40851 has 77 MA's), (13, 40869), (23, 40968), (38, 41223), (42, 41283), (46, 41325),

Gene: Lennon_57 Start: 47426, Stop: 47929, Start Num: 10

Candidate Starts for Lennon_57:

(4, 47276), (Start: 10 @47426 has 34 MA's), (21, 47525), (22, 47537), (40, 47846), (42, 47864),

Gene: Lilas_69 Start: 49294, Stop: 49788, Start Num: 11

Candidate Starts for Lilas_69:

(Start: 11 @49294 has 77 MA's), (23, 49411), (38, 49666), (42, 49726), (46, 49768),

Gene: Lilbeanie_58 Start: 42333, Stop: 42830, Start Num: 10

Candidate Starts for Lilbeanie_58:

(4, 42174), (Start: 10 @42333 has 34 MA's),

Gene: LonelyBoi_70 Start: 49387, Stop: 49881, Start Num: 11

Candidate Starts for LonelyBoi_70:

(4, 49225), (Start: 11 @49387 has 77 MA's), (23, 49504), (38, 49759), (42, 49819),

Gene: LordFarquaad_69 Start: 44519, Stop: 45013, Start Num: 11

Candidate Starts for LordFarquaad_69:

(2, 44246), (4, 44357), (Start: 11 @44519 has 77 MA's), (13, 44537), (23, 44636), (38, 44891), (42, 44951), (46, 44993),

Gene: Love_61 Start: 47798, Stop: 48301, Start Num: 10

Candidate Starts for Love_61:

(4, 47648), (Start: 10 @47798 has 34 MA's), (21, 47897), (22, 47909), (40, 48218), (42, 48236),

Gene: MakCheese_78 Start: 48973, Stop: 49467, Start Num: 11

Candidate Starts for MakCheese_78:

(4, 48811), (Start: 11 @48973 has 77 MA's), (23, 49090), (38, 49345), (42, 49405), (47, 49462),

Gene: Malisha_89 Start: 52302, Stop: 52799, Start Num: 11

Candidate Starts for Malisha_89:

(4, 52140), (Start: 11 @52302 has 77 MA's), (23, 52419), (36, 52611), (38, 52677), (42, 52737), (46, 52779),

Gene: Manasvini_71 Start: 45845, Stop: 46339, Start Num: 11

Candidate Starts for Manasvini_71:

(2, 45572), (4, 45683), (Start: 11 @45845 has 77 MA's), (13, 45863), (23, 45962), (38, 46217), (42, 46277),

Gene: Marteena_71 Start: 47264, Stop: 47758, Start Num: 11

Candidate Starts for Marteena_71:

(2, 46991), (4, 47102), (Start: 11 @47264 has 77 MA's), (13, 47282), (23, 47381), (30, 47459), (38, 47636), (41, 47687), (42, 47696), (46, 47738),

Gene: Matteo_61 Start: 40883, Stop: 41377, Start Num: 11

Candidate Starts for Matteo_61:

(2, 40610), (4, 40721), (Start: 11 @40883 has 77 MA's), (13, 40901), (23, 41000), (24, 41015), (38, 41255), (42, 41315), (46, 41357),

Gene: McCrothy_57 Start: 46928, Stop: 47431, Start Num: 10

Candidate Starts for McCrothy_57:

(4, 46778), (Start: 10 @46928 has 34 MA's), (21, 47027), (22, 47039), (40, 47348), (42, 47366),

Gene: McKinley_59 Start: 46926, Stop: 47432, Start Num: 10

Candidate Starts for McKinley_59:

(4, 46776), (Start: 10 @46926 has 34 MA's), (21, 47025), (22, 47037), (40, 47346), (42, 47364),

Gene: Mcklovin_69 Start: 49599, Stop: 50093, Start Num: 11

Candidate Starts for Mcklovin_69:

(4, 49437), (Start: 11 @49599 has 77 MA's), (23, 49716), (38, 49971), (42, 50031), (46, 50073),

Gene: Mocha12_67 Start: 42342, Stop: 42836, Start Num: 11

Candidate Starts for Mocha12_67:

(2, 42069), (4, 42180), (Start: 11 @42342 has 77 MA's), (13, 42360), (23, 42459), (38, 42714), (42, 42774), (46, 42816),

Gene: MoontowerMania_56 Start: 46803, Stop: 47309, Start Num: 10

Candidate Starts for MoontowerMania_56:

(4, 46653), (Start: 10 @46803 has 34 MA's), (21, 46902), (22, 46914), (40, 47223), (42, 47241),

Gene: Neobush_71 Start: 46389, Stop: 46883, Start Num: 11

Candidate Starts for Neobush_71:

(2, 46116), (4, 46227), (Start: 11 @46389 has 77 MA's), (13, 46407), (23, 46506), (38, 46761), (42, 46821),

Gene: Nettuno_64 Start: 41296, Stop: 41790, Start Num: 11

Candidate Starts for Nettuno_64:

(2, 41023), (4, 41134), (Start: 11 @41296 has 77 MA's), (13, 41314), (23, 41413), (24, 41428), (38, 41668), (42, 41728), (46, 41770),

Gene: Nordenberg_52 Start: 45708, Stop: 46211, Start Num: 10

Candidate Starts for Nordenberg_52:

(4, 45558), (Start: 10 @45708 has 34 MA's), (21, 45807), (22, 45819), (25, 45864), (42, 46146),

Gene: Nymphadora_73 Start: 48782, Stop: 49276, Start Num: 11

Candidate Starts for Nymphadora_73:

(2, 48509), (4, 48620), (Start: 11 @48782 has 77 MA's), (13, 48800), (23, 48899), (38, 49154), (42, 49214), (46, 49256),

Gene: PantheRoc_75 Start: 48476, Stop: 48970, Start Num: 11

Candidate Starts for PantheRoc_75:

(2, 48203), (4, 48314), (Start: 11 @48476 has 77 MA's), (13, 48494), (23, 48593), (38, 48848), (42, 48908), (46, 48950),

Gene: Paries_60 Start: 47185, Stop: 47688, Start Num: 10

Candidate Starts for Paries_60:

(4, 47035), (Start: 10 @47185 has 34 MA's), (21, 47284), (22, 47296), (40, 47605), (42, 47623),

Gene: Pepperoni_60 Start: 37588, Stop: 38085, Start Num: 11

Candidate Starts for Pepperoni_60:

(Start: 11 @37588 has 77 MA's), (23, 37705), (38, 37963), (42, 38023), (46, 38065),

Gene: PhriskyACE_65 Start: 43638, Stop: 44132, Start Num: 11

Candidate Starts for PhriskyACE_65:

(Start: 11 @43638 has 77 MA's), (23, 43755), (38, 44010), (42, 44070), (46, 44112),

Gene: Pickett_64 Start: 41055, Stop: 41549, Start Num: 11

Candidate Starts for Pickett_64:

(2, 40782), (4, 40893), (Start: 11 @41055 has 77 MA's), (13, 41073), (23, 41172), (24, 41187), (38, 41427), (42, 41487),

Gene: Pollux_75 Start: 49221, Stop: 49715, Start Num: 11

Candidate Starts for Pollux_75:

(2, 48948), (4, 49059), (Start: 11 @49221 has 77 MA's), (13, 49239), (23, 49338), (25, 49380), (38, 49593), (41, 49644), (42, 49653), (46, 49695),

Gene: Polly_66 Start: 45264, Stop: 45758, Start Num: 11

Candidate Starts for Polly_66:

(2, 44991), (4, 45102), (Start: 11 @45264 has 77 MA's), (13, 45282), (23, 45381), (38, 45636), (42, 45696),

Gene: Posh_73 Start: 49095, Stop: 49589, Start Num: 11

Candidate Starts for Posh_73:

(4, 48933), (Start: 11 @49095 has 77 MA's), (13, 49113), (23, 49212), (24, 49227), (38, 49467), (42, 49527), (46, 49569),

Gene: Powerball_67 Start: 43741, Stop: 44235, Start Num: 11

Candidate Starts for Powerball_67:

(Start: 11 @43741 has 77 MA's), (23, 43858), (38, 44113), (42, 44173), (46, 44215),

Gene: Pytheas_76 Start: 50298, Stop: 50792, Start Num: 11

Candidate Starts for Pytheas_76:

(4, 50136), (Start: 11 @50298 has 77 MA's), (13, 50316), (23, 50415), (38, 50670), (42, 50730), (46, 50772),

Gene: RiverRaider_57 Start: 44819, Stop: 45298, Start Num: 10

Candidate Starts for RiverRaider_57:

(4, 44669), (5, 44687), (Start: 10 @44819 has 34 MA's), (14, 44834), (20, 44891), (30, 44993),

Gene: Rofo_57 Start: 46533, Stop: 47036, Start Num: 10

Candidate Starts for Rofo_57:

(4, 46383), (Start: 10 @46533 has 34 MA's), (21, 46632), (22, 46644), (25, 46689), (32, 46776), (40, 46953), (42, 46971),

Gene: Sahara_66 Start: 42163, Stop: 42657, Start Num: 11

Candidate Starts for Sahara_66:

(2, 41890), (4, 42001), (Start: 11 @42163 has 77 MA's), (13, 42181), (23, 42280), (38, 42535), (42, 42595), (46, 42637),

Gene: Sanjuju_55 Start: 47028, Stop: 47531, Start Num: 10

Candidate Starts for Sanjuju_55:

(4, 46878), (Start: 10 @47028 has 34 MA's), (21, 47127), (22, 47139), (40, 47448), (42, 47466),

Gene: Savage_67 Start: 42342, Stop: 42836, Start Num: 11

Candidate Starts for Savage_67:

(2, 42069), (4, 42180), (Start: 11 @42342 has 77 MA's), (13, 42360), (23, 42459), (38, 42714), (42, 42774), (46, 42816),

Gene: Sedona_56 Start: 46768, Stop: 47271, Start Num: 10

Candidate Starts for Sedona_56:

(4, 46618), (Start: 10 @46768 has 34 MA's), (21, 46867), (22, 46879), (40, 47188), (42, 47206),

Gene: Sekhmet_68 Start: 43424, Stop: 43918, Start Num: 11

Candidate Starts for Sekhmet_68:

(4, 43262), (Start: 11 @43424 has 77 MA's), (23, 43541), (38, 43796), (42, 43856),

Gene: Shivanishola_56 Start: 45489, Stop: 45995, Start Num: 10

Candidate Starts for Shivanishola_56:

(4, 45339), (Start: 10 @45489 has 34 MA's), (21, 45588), (22, 45600), (40, 45909), (42, 45927),

Gene: Sidious_70 Start: 48063, Stop: 48557, Start Num: 11

Candidate Starts for Sidious_70:

(2, 47790), (4, 47901), (Start: 11 @48063 has 77 MA's), (13, 48081), (23, 48180), (38, 48435), (42, 48495), (46, 48537),

Gene: Sitar_57 Start: 47426, Stop: 47929, Start Num: 10

Candidate Starts for Sitar_57:

(4, 47276), (Start: 10 @47426 has 34 MA's), (21, 47525), (22, 47537), (40, 47846), (42, 47864),

Gene: Sleepyhead_59 Start: 39006, Stop: 39626, Start Num: 9

Candidate Starts for Sleepyhead_59:

(1, 38670), (6, 38931), (Start: 9 @39006 has 1 MA's), (15, 39093), (27, 39246), (28, 39252), (29, 39264), (33, 39342), (37, 39441), (39, 39489), (43, 39531),

Gene: SoilAssassin_66 Start: 44537, Stop: 45031, Start Num: 11

Candidate Starts for SoilAssassin_66:

(2, 44264), (4, 44375), (Start: 11 @44537 has 77 MA's), (13, 44555), (23, 44654), (38, 44909), (42, 44969), (46, 45011),

Gene: Sproutie_67 Start: 42342, Stop: 42836, Start Num: 11

Candidate Starts for Sproutie_67:

(2, 42069), (4, 42180), (Start: 11 @42342 has 77 MA's), (13, 42360), (23, 42459), (38, 42714), (42, 42774), (46, 42816),

Gene: Stultus_54 Start: 45669, Stop: 46175, Start Num: 10

Candidate Starts for Stultus_54:

(4, 45519), (Start: 10 @45669 has 34 MA's), (21, 45768), (22, 45780), (25, 45825), (40, 46089), (42, 46107),

Gene: Suerte_63 Start: 43039, Stop: 43533, Start Num: 11

Candidate Starts for Suerte_63:

(4, 42877), (Start: 11 @43039 has 77 MA's), (23, 43156), (38, 43411), (42, 43471), (47, 43528),

Gene: Suscepit_69 Start: 45822, Stop: 46316, Start Num: 11

Candidate Starts for Suscepit_69:

(2, 45549), (4, 45660), (Start: 11 @45822 has 77 MA's), (13, 45840), (23, 45939), (38, 46194), (42, 46254),

Gene: Tangent_58 Start: 46156, Stop: 46659, Start Num: 10

Candidate Starts for Tangent_58:

(4, 46006), (Start: 10 @46156 has 34 MA's), (21, 46255), (22, 46267), (25, 46312), (32, 46399), (40, 46576), (42, 46594),

Gene: Tayonia_69 Start: 45821, Stop: 46315, Start Num: 11

Candidate Starts for Tayonia_69:

(2, 45548), (4, 45659), (Start: 11 @45821 has 77 MA's), (13, 45839), (23, 45938), (38, 46193), (42, 46253),

Gene: Thing3_55 Start: 45569, Stop: 46072, Start Num: 10

Candidate Starts for Thing3_55:

(4, 45419), (Start: 10 @45569 has 34 MA's), (21, 45668), (22, 45680), (25, 45725), (40, 45989), (42, 46007),

Gene: TimTam_73 Start: 48782, Stop: 49276, Start Num: 11

Candidate Starts for TimTam_73:

(2, 48509), (4, 48620), (Start: 11 @48782 has 77 MA's), (13, 48800), (23, 48899), (38, 49154), (42, 49214), (46, 49256),

Gene: Trumpet_69 Start: 45822, Stop: 46316, Start Num: 11

Candidate Starts for Trumpet_69:

(2, 45549), (4, 45660), (Start: 11 @45822 has 77 MA's), (13, 45840), (23, 45939), (38, 46194), (42, 46254),

Gene: TuertoX_67 Start: 42342, Stop: 42836, Start Num: 11

Candidate Starts for TuertoX_67:

(2, 42069), (4, 42180), (Start: 11 @42342 has 77 MA's), (13, 42360), (23, 42459), (38, 42714), (42, 42774), (46, 42816),

Gene: Vivi2_61 Start: 47633, Stop: 48136, Start Num: 10

Candidate Starts for Vivi2_61:

(4, 47483), (Start: 10 @47633 has 34 MA's), (21, 47732), (22, 47744), (40, 48053), (42, 48071),

Gene: Whiteclaw_67 Start: 42342, Stop: 42836, Start Num: 11

Candidate Starts for Whiteclaw_67:

(2, 42069), (4, 42180), (Start: 11 @42342 has 77 MA's), (13, 42360), (23, 42459), (38, 42714), (42, 42774), (46, 42816),

Gene: WinkNick_69 Start: 42948, Stop: 43442, Start Num: 11

Candidate Starts for WinkNick_69:

(4, 42786), (Start: 11 @42948 has 77 MA's), (23, 43065), (38, 43320), (42, 43380),

Gene: Wrigley_75 Start: 48678, Stop: 49172, Start Num: 11

Candidate Starts for Wrigley_75:

(4, 48516), (Start: 11 @48678 has 77 MA's), (13, 48696), (23, 48795), (24, 48810), (38, 49050), (42, 49110), (46, 49152),

Gene: Yeet412_65 Start: 43341, Stop: 43835, Start Num: 11

Candidate Starts for Yeet412_65:

(2, 43068), (4, 43179), (Start: 11 @43341 has 77 MA's), (13, 43359), (23, 43458), (24, 43473), (38, 43713), (42, 43773), (46, 43815),

Gene: Yinzer_67 Start: 42342, Stop: 42836, Start Num: 11

Candidate Starts for Yinzer_67:

(2, 42069), (4, 42180), (Start: 11 @42342 has 77 MA's), (13, 42360), (23, 42459), (38, 42714), (42, 42774), (46, 42816),

Gene: Zameen_69 Start: 45821, Stop: 46315, Start Num: 11

Candidate Starts for Zameen_69:

(2, 45548), (4, 45659), (Start: 11 @45821 has 77 MA's), (13, 45839), (23, 45938), (38, 46193), (42, 46253),

Gene: Zirinka_67 Start: 47483, Stop: 47977, Start Num: 11

Candidate Starts for Zirinka_67:

(2, 47210), (4, 47321), (Start: 11 @47483 has 77 MA's), (13, 47501), (23, 47600), (24, 47615), (38, 47855), (42, 47915), (46, 47957),