

Pham 85508



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 85508 Report

This analysis was run 04/28/24 on database version 559.

Pham number 85508 has 72 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Bob3_73, Licorice_71, Parliament_71, Arlo_70, Rajelicia_72, Buttons_67, GageAP_73, Corvo_72, Marsha_70, Ohno789_73, CactusRose_73, Pinto_71, Pelly_71, KyMonks1A_76
- Track 2 : AFIS_68
- Track 3 : Acme_74, Sandaddy_68, Euphoria_71, Greg_73, Rufus_74, ShortQueendom_63, Anglerfish_72, Rhynn_67, BigPaolini_68, Zephyr_73, Sorpresa_67, Rubeus_72, Fajezeel_73, GrecoEtereo_74, Tripl3t_74
- Track 4 : Dulcie_71, BigMau_74, Arcanine_74, Jerm2_73, Scowl_71, Sumter_67, Watermelon_73, Pippin_71, Dexes_71, Altman_73, Bircsak_70, MPlant7149_72, HarryOW_71, Fascinus_67, Jorgensen_76, Barriga_73, Atkinbua_76, BPBiebs31_75, Gompeii16_70, Pari_75, Smeagol_72, ConceptII_75, Bigfoot_65, HermioneGrange_75, Rohr_74, StewieG_65, Burton_72, Lamina13_74, Carlyle_71, Kanely_72
- Track 5 : Chanagan_64
- Track 6 : PacerPaul_73, Agaliana_66, Francis47_70
- Track 7 : Forsytheast_73, Moose_73, Snazzy_70, Bethlehem_73
- Track 8 : Maroc7_71
- Track 9 : Thor_73, SarFire_73
- Track 10 : Omega_22

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

The start number called the most often in the published annotations is 3, it was called in 64 of the 65 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AFIS_68, Acme_74, Agaliana_66, Altman_73, Anglerfish_72, Arcanine_74, Arlo_70, Atkinbua_76, BPBiebs31_75, Barriga_73, Bethlehem_73, BigMau_74, BigPaolini_68, Bigfoot_65, Bircsak_70, Bob3_73, Burton_72, Buttons_67, CactusRose_73, Carlyle_71, Chanagan_64, ConceptII_75, Corvo_72, Dexes_71, Dulcie_71, Euphoria_71, Fajezeel_73, Fascinus_67, Forsytheast_73, Francis47_70, GageAP_73, Gompeii16_70, GrecoEtereo_74, Greg_73, HarryOW_71, HermioneGrange_75, Jerm2_73, Jorgensen_76, Kanely_72, KyMonks1A_76, Lamina13_74, Licorice_71, MPlant7149_72, Maroc7_71, Marsha_70, Moose_73,

Ohno789_73, PacerPaul_73, Pari_75, Parliament_71, Pelly_71, Pinto_71, Pippin_71, Rajelicia_72, Rhynn_67, Rohr_74, Rubeus_72, Rufus_74, Sandaddy_68, SarFire_73, Scowl_71, ShortQueendom_63, Smeagol_72, Snazzy_70, Sorpresa_67, StewieG_65, Sumter_67, Thor_73, Tripl3t_74, Watermelon_73, Zephyr_73,

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

-

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

- Omega_22,

Summary by start number:

Start 2:

- Found in 1 of 72 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 65
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Omega_22 (J),

Start 3:

- Found in 71 of 72 (98.6%) of genes in pham
- Manual Annotations of this start: 64 of 65
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AFIS_68 (A1), Acme_74 (A1), Agaliana_66 (A1), Altman_73 (A1), Anglerfish_72 (A1), Arcanine_74 (A1), Arlo_70 (A1), Atkinbua_76 (A1), BPBiebs31_75 (A1), Barriga_73 (A1), Bethlehem_73 (A1), BigMau_74 (A1), BigPaolini_68 (A1), Bigfoot_65 (A1), Bircsak_70 (A1), Bob3_73 (A1), Burton_72 (A1), Buttons_67 (A1), CactusRose_73 (A1), Carlyle_71 (A1), Chanagan_64 (A1), ConceptII_75 (A1), Corvo_72 (A1), Dexes_71 (A1), Dulcie_71 (A1), Euphoria_71 (A1), Fajezeel_73 (A1), Fascinus_67 (A1), Forsytheast_73 (A1), Francis47_70 (A1), GageAP_73 (A1), Gompeii16_70 (A1), GrecoEtereo_74 (A1), Greg_73 (A1), HarryOW_71 (A1), HermioneGrange_75 (A1), Jerm2_73 (A1), Jorgensen_76 (A1), Kanely_72 (A1), KyMonks1A_76 (A1), Lamina13_74 (A1), Licorice_71 (A1), MPlant7149_72 (A1), Maroc7_71 (A1), Marsha_70 (A1), Moose_73 (A1), Ohno789_73 (A1), PacerPaul_73 (A1), Pari_75 (A1), Parliament_71 (A1), Pelly_71 (A1), Pinto_71 (A1), Pippin_71 (A1), Rajelicia_72 (A1), Rhynn_67 (A1), Rohr_74 (A1), Rubeus_72 (A1), Rufus_74 (A1), Sandaddy_68 (A1), SarFire_73 (A1), Scowl_71 (A1), ShortQueendom_63 (A1), Smeagol_72 (A1), Snazzy_70 (A1), Sorpresa_67 (A1), StewieG_65 (A1), Sumter_67 (A1), Thor_73 (A1), Tripl3t_74 (A1), Watermelon_73 (A1), Zephyr_73 (A1),

Summary by clusters:

There are 2 clusters represented in this pham: A1, J,

Info for manual annotations of cluster A1:

- Start number 3 was manually annotated 64 times for cluster A1.

Info for manual annotations of cluster J:

- Start number 2 was manually annotated 1 time for cluster J.

Gene Information:

Gene: AFIS_68 Start: 45423, Stop: 44962, Start Num: 3

Candidate Starts for AFIS_68:

(Start: 3 @45423 has 64 MA's), (5, 45375), (7, 45348), (12, 45198), (13, 45189), (14, 45156), (17, 45075), (19, 45027), (20, 45015),

Gene: Acme_74 Start: 46760, Stop: 46299, Start Num: 3

Candidate Starts for Acme_74:

(Start: 3 @46760 has 64 MA's), (7, 46685), (12, 46535), (14, 46493), (17, 46412), (19, 46364), (20, 46352),

Gene: Agaliana_66 Start: 42804, Stop: 42343, Start Num: 3

Candidate Starts for Agaliana_66:

(Start: 3 @42804 has 64 MA's), (7, 42729), (12, 42579), (13, 42570), (14, 42537), (17, 42456), (19, 42408), (20, 42396),

Gene: Altman_73 Start: 45642, Stop: 45181, Start Num: 3

Candidate Starts for Altman_73:

(Start: 3 @45642 has 64 MA's), (7, 45567), (12, 45417), (13, 45408), (14, 45375), (17, 45294), (19, 45246), (20, 45234),

Gene: Anglerfish_72 Start: 45968, Stop: 45507, Start Num: 3

Candidate Starts for Anglerfish_72:

(Start: 3 @45968 has 64 MA's), (7, 45893), (12, 45743), (14, 45701), (17, 45620), (19, 45572), (20, 45560),

Gene: Arcanine_74 Start: 46693, Stop: 46232, Start Num: 3

Candidate Starts for Arcanine_74:

(Start: 3 @46693 has 64 MA's), (7, 46618), (12, 46468), (13, 46459), (14, 46426), (17, 46345), (19, 46297), (20, 46285),

Gene: Arlo_70 Start: 45471, Stop: 45010, Start Num: 3

Candidate Starts for Arlo_70:

(Start: 3 @45471 has 64 MA's), (7, 45396), (12, 45246), (13, 45237), (14, 45204), (19, 45075), (20, 45063),

Gene: Atkinbua_76 Start: 45999, Stop: 45532, Start Num: 3

Candidate Starts for Atkinbua_76:

(Start: 3 @45999 has 64 MA's), (7, 45918), (12, 45768), (13, 45759), (14, 45726), (17, 45645), (19, 45597), (20, 45585),

Gene: BPBiebs31_75 Start: 46583, Stop: 46122, Start Num: 3

Candidate Starts for BPBiebs31_75:

(Start: 3 @46583 has 64 MA's), (7, 46508), (12, 46358), (13, 46349), (14, 46316), (17, 46235), (19, 46187), (20, 46175),

Gene: Barriga_73 Start: 44296, Stop: 43832, Start Num: 3

Candidate Starts for Barriga_73:

(Start: 3 @44296 has 64 MA's), (7, 44221), (12, 44071), (13, 44062), (14, 44029), (17, 43948), (19, 43900), (20, 43888),

Gene: Bethlehem_73 Start: 47499, Stop: 47038, Start Num: 3

Candidate Starts for Bethlehem_73:

(Start: 3 @47499 has 64 MA's), (7, 47424), (12, 47274), (14, 47232), (19, 47103), (20, 47091),

Gene: BigMau_74 Start: 46391, Stop: 45930, Start Num: 3

Candidate Starts for BigMau_74:

(Start: 3 @46391 has 64 MA's), (7, 46316), (12, 46166), (13, 46157), (14, 46124), (17, 46043), (19, 45995), (20, 45983),

Gene: BigPaolini_68 Start: 43739, Stop: 43278, Start Num: 3

Candidate Starts for BigPaolini_68:

(Start: 3 @43739 has 64 MA's), (7, 43664), (12, 43514), (14, 43472), (17, 43391), (19, 43343), (20, 43331),

Gene: Bigfoot_65 Start: 44823, Stop: 44362, Start Num: 3

Candidate Starts for Bigfoot_65:

(Start: 3 @44823 has 64 MA's), (7, 44748), (12, 44598), (13, 44589), (14, 44556), (17, 44475), (19, 44427), (20, 44415),

Gene: Bircsak_70 Start: 47097, Stop: 46636, Start Num: 3

Candidate Starts for Bircsak_70:

(Start: 3 @47097 has 64 MA's), (7, 47022), (12, 46872), (13, 46863), (14, 46830), (17, 46749), (19, 46701), (20, 46689),

Gene: Bob3_73 Start: 45659, Stop: 45198, Start Num: 3

Candidate Starts for Bob3_73:

(Start: 3 @45659 has 64 MA's), (7, 45584), (12, 45434), (13, 45425), (14, 45392), (19, 45263), (20, 45251),

Gene: Burton_72 Start: 47074, Stop: 46613, Start Num: 3

Candidate Starts for Burton_72:

(Start: 3 @47074 has 64 MA's), (7, 46999), (12, 46849), (13, 46840), (14, 46807), (17, 46726), (19, 46678), (20, 46666),

Gene: Buttons_67 Start: 42788, Stop: 42327, Start Num: 3

Candidate Starts for Buttons_67:

(Start: 3 @42788 has 64 MA's), (7, 42713), (12, 42563), (13, 42554), (14, 42521), (19, 42392), (20, 42380),

Gene: CactusRose_73 Start: 45841, Stop: 45380, Start Num: 3

Candidate Starts for CactusRose_73:

(Start: 3 @45841 has 64 MA's), (7, 45766), (12, 45616), (13, 45607), (14, 45574), (19, 45445), (20, 45433),

Gene: Carlyle_71 Start: 44184, Stop: 43723, Start Num: 3

Candidate Starts for Carlyle_71:

(Start: 3 @44184 has 64 MA's), (7, 44109), (12, 43959), (13, 43950), (14, 43917), (17, 43836), (19, 43788), (20, 43776),

Gene: Chanagan_64 Start: 43057, Stop: 42596, Start Num: 3

Candidate Starts for Chanagan_64:

(Start: 3 @43057 has 64 MA's), (7, 42982), (12, 42832), (13, 42823), (14, 42790), (17, 42709), (19, 42661), (20, 42649), (21, 42643),

Gene: ConceptII_75 Start: 46872, Stop: 46411, Start Num: 3

Candidate Starts for ConceptII_75:

(Start: 3 @46872 has 64 MA's), (7, 46797), (12, 46647), (13, 46638), (14, 46605), (17, 46524), (19, 46476), (20, 46464),

Gene: Corvo_72 Start: 46506, Stop: 46045, Start Num: 3

Candidate Starts for Corvo_72:

(Start: 3 @46506 has 64 MA's), (7, 46431), (12, 46281), (13, 46272), (14, 46239), (19, 46110), (20, 46098),

Gene: Dexes_71 Start: 47121, Stop: 46660, Start Num: 3

Candidate Starts for Dexes_71:

(Start: 3 @47121 has 64 MA's), (7, 47046), (12, 46896), (13, 46887), (14, 46854), (17, 46773), (19, 46725), (20, 46713),

Gene: Dulcie_71 Start: 47007, Stop: 46546, Start Num: 3

Candidate Starts for Dulcie_71:

(Start: 3 @47007 has 64 MA's), (7, 46932), (12, 46782), (13, 46773), (14, 46740), (17, 46659), (19, 46611), (20, 46599),

Gene: Euphoria_71 Start: 45517, Stop: 45056, Start Num: 3

Candidate Starts for Euphoria_71:

(Start: 3 @45517 has 64 MA's), (7, 45442), (12, 45292), (14, 45250), (17, 45169), (19, 45121), (20, 45109),

Gene: Fajezeel_73 Start: 46050, Stop: 45589, Start Num: 3

Candidate Starts for Fajezeel_73:

(Start: 3 @46050 has 64 MA's), (7, 45975), (12, 45825), (14, 45783), (17, 45702), (19, 45654), (20, 45642),

Gene: Fascinus_67 Start: 45337, Stop: 44876, Start Num: 3

Candidate Starts for Fascinus_67:

(Start: 3 @45337 has 64 MA's), (7, 45262), (12, 45112), (13, 45103), (14, 45070), (17, 44989), (19, 44941), (20, 44929),

Gene: Forsytheast_73 Start: 45599, Stop: 45138, Start Num: 3

Candidate Starts for Forsytheast_73:

(Start: 3 @45599 has 64 MA's), (7, 45524), (12, 45374), (14, 45332), (19, 45203), (20, 45191),

Gene: Francis47_70 Start: 46648, Stop: 46187, Start Num: 3

Candidate Starts for Francis47_70:

(Start: 3 @46648 has 64 MA's), (7, 46573), (12, 46423), (13, 46414), (14, 46381), (17, 46300), (19, 46252), (20, 46240),

Gene: GageAP_73 Start: 46830, Stop: 46369, Start Num: 3

Candidate Starts for GageAP_73:

(Start: 3 @46830 has 64 MA's), (7, 46755), (12, 46605), (13, 46596), (14, 46563), (19, 46434), (20, 46422),

Gene: Gompeii16_70 Start: 47098, Stop: 46637, Start Num: 3

Candidate Starts for Gompeii16_70:

(Start: 3 @47098 has 64 MA's), (7, 47023), (12, 46873), (13, 46864), (14, 46831), (17, 46750), (19, 46702), (20, 46690),

Gene: GrecoEtereo_74 Start: 46526, Stop: 46065, Start Num: 3

Candidate Starts for GrecoEtereo_74:

(Start: 3 @46526 has 64 MA's), (7, 46451), (12, 46301), (14, 46259), (17, 46178), (19, 46130), (20, 46118),

Gene: Greg_73 Start: 46050, Stop: 45589, Start Num: 3

Candidate Starts for Greg_73:

(Start: 3 @46050 has 64 MA's), (7, 45975), (12, 45825), (14, 45783), (17, 45702), (19, 45654), (20, 45642),

Gene: HarryOW_71 Start: 46454, Stop: 45993, Start Num: 3

Candidate Starts for HarryOW_71:

(Start: 3 @46454 has 64 MA's), (7, 46379), (12, 46229), (13, 46220), (14, 46187), (17, 46106), (19, 46058), (20, 46046),

Gene: HermioneGrange_75 Start: 46885, Stop: 46424, Start Num: 3

Candidate Starts for HermioneGrange_75:

(Start: 3 @46885 has 64 MA's), (7, 46810), (12, 46660), (13, 46651), (14, 46618), (17, 46537), (19, 46489), (20, 46477),

Gene: Jerm2_73 Start: 46955, Stop: 46494, Start Num: 3

Candidate Starts for Jerm2_73:

(Start: 3 @46955 has 64 MA's), (7, 46880), (12, 46730), (13, 46721), (14, 46688), (17, 46607), (19, 46559), (20, 46547),

Gene: Jorgensen_76 Start: 46175, Stop: 45714, Start Num: 3

Candidate Starts for Jorgensen_76:

(Start: 3 @46175 has 64 MA's), (7, 46100), (12, 45950), (13, 45941), (14, 45908), (17, 45827), (19, 45779), (20, 45767),

Gene: Kanely_72 Start: 45419, Stop: 44958, Start Num: 3

Candidate Starts for Kanely_72:

(Start: 3 @45419 has 64 MA's), (7, 45344), (12, 45194), (13, 45185), (14, 45152), (17, 45071), (19, 45023), (20, 45011),

Gene: KyMonks1A_76 Start: 46045, Stop: 45584, Start Num: 3

Candidate Starts for KyMonks1A_76:

(Start: 3 @46045 has 64 MA's), (7, 45970), (12, 45820), (13, 45811), (14, 45778), (19, 45649), (20, 45637),

Gene: Lamina13_74 Start: 47192, Stop: 46731, Start Num: 3

Candidate Starts for Lamina13_74:

(Start: 3 @47192 has 64 MA's), (7, 47117), (12, 46967), (13, 46958), (14, 46925), (17, 46844), (19, 46796), (20, 46784),

Gene: Licorice_71 Start: 46738, Stop: 46277, Start Num: 3

Candidate Starts for Licorice_71:

(Start: 3 @46738 has 64 MA's), (7, 46663), (12, 46513), (13, 46504), (14, 46471), (19, 46342), (20, 46330),

Gene: MPlant7149_72 Start: 44769, Stop: 44308, Start Num: 3

Candidate Starts for MPlant7149_72:

(Start: 3 @44769 has 64 MA's), (7, 44694), (12, 44544), (13, 44535), (14, 44502), (17, 44421), (19, 44373), (20, 44361),

Gene: Maroc7_71 Start: 46325, Stop: 45864, Start Num: 3

Candidate Starts for Maroc7_71:

(Start: 3 @46325 has 64 MA's), (7, 46250), (12, 46100), (13, 46091), (14, 46058), (19, 45929), (20, 45917),

Gene: Marsha_70 Start: 46412, Stop: 45951, Start Num: 3

Candidate Starts for Marsha_70:

(Start: 3 @46412 has 64 MA's), (7, 46337), (12, 46187), (13, 46178), (14, 46145), (19, 46016), (20, 46004),

Gene: Moose_73 Start: 45599, Stop: 45138, Start Num: 3

Candidate Starts for Moose_73:

(Start: 3 @45599 has 64 MA's), (7, 45524), (12, 45374), (14, 45332), (19, 45203), (20, 45191),

Gene: Ohno789_73 Start: 46463, Stop: 46002, Start Num: 3

Candidate Starts for Ohno789_73:

(Start: 3 @46463 has 64 MA's), (7, 46388), (12, 46238), (13, 46229), (14, 46196), (19, 46067), (20, 46055),

Gene: Omega_22 Start: 16309, Stop: 15809, Start Num: 2

Candidate Starts for Omega_22:

(1, 16339), (Start: 2 @16309 has 1 MA's), (4, 16264), (6, 16225), (7, 16213), (8, 16189), (10, 16105), (11, 16081), (15, 15961), (16, 15946), (18, 15919), (20, 15862), (22, 15847),

Gene: PacerPaul_73 Start: 46015, Stop: 45554, Start Num: 3

Candidate Starts for PacerPaul_73:

(Start: 3 @46015 has 64 MA's), (7, 45940), (12, 45790), (13, 45781), (14, 45748), (17, 45667), (19, 45619), (20, 45607),

Gene: Pari_75 Start: 45202, Stop: 44741, Start Num: 3

Candidate Starts for Pari_75:

(Start: 3 @45202 has 64 MA's), (7, 45127), (12, 44977), (13, 44968), (14, 44935), (17, 44854), (19, 44806), (20, 44794),

Gene: Parliament_71 Start: 47500, Stop: 47039, Start Num: 3

Candidate Starts for Parliament_71:

(Start: 3 @47500 has 64 MA's), (7, 47425), (12, 47275), (13, 47266), (14, 47233), (19, 47104), (20, 47092),

Gene: Pelly_71 Start: 47669, Stop: 47208, Start Num: 3

Candidate Starts for Pelly_71:

(Start: 3 @47669 has 64 MA's), (7, 47594), (12, 47444), (13, 47435), (14, 47402), (19, 47273), (20, 47261),

Gene: Pinto_71 Start: 45425, Stop: 44964, Start Num: 3

Candidate Starts for Pinto_71:

(Start: 3 @45425 has 64 MA's), (7, 45350), (12, 45200), (13, 45191), (14, 45158), (19, 45029), (20, 45017),

Gene: Pippin_71 Start: 44801, Stop: 44340, Start Num: 3

Candidate Starts for Pippin_71:

(Start: 3 @44801 has 64 MA's), (7, 44726), (12, 44576), (13, 44567), (14, 44534), (17, 44453), (19, 44405), (20, 44393),

Gene: Rajelicia_72 Start: 47201, Stop: 46740, Start Num: 3

Candidate Starts for Rajelicia_72:

(Start: 3 @47201 has 64 MA's), (7, 47126), (12, 46976), (13, 46967), (14, 46934), (19, 46805), (20, 46793),

Gene: Rhynn_67 Start: 44789, Stop: 44328, Start Num: 3

Candidate Starts for Rhynn_67:

(Start: 3 @44789 has 64 MA's), (7, 44714), (12, 44564), (14, 44522), (17, 44441), (19, 44393), (20, 44381),

Gene: Rohr_74 Start: 47031, Stop: 46570, Start Num: 3

Candidate Starts for Rohr_74:

(Start: 3 @47031 has 64 MA's), (7, 46956), (12, 46806), (13, 46797), (14, 46764), (17, 46683), (19, 46635), (20, 46623),

Gene: Rubeus_72 Start: 43531, Stop: 43070, Start Num: 3

Candidate Starts for Rubeus_72:

(Start: 3 @43531 has 64 MA's), (7, 43456), (12, 43306), (14, 43264), (17, 43183), (19, 43135), (20, 43123),

Gene: Rufus_74 Start: 46220, Stop: 45759, Start Num: 3

Candidate Starts for Rufus_74:

(Start: 3 @46220 has 64 MA's), (7, 46145), (12, 45995), (14, 45953), (17, 45872), (19, 45824), (20, 45812),

Gene: Sandaddy_68 Start: 45178, Stop: 44717, Start Num: 3

Candidate Starts for Sandaddy_68:

(Start: 3 @45178 has 64 MA's), (7, 45103), (12, 44953), (14, 44911), (17, 44830), (19, 44782), (20, 44770),

Gene: SarFire_73 Start: 46492, Stop: 46031, Start Num: 3

Candidate Starts for SarFire_73:

(Start: 3 @46492 has 64 MA's), (7, 46417), (9, 46366), (12, 46267), (13, 46258), (14, 46225), (19, 46096), (20, 46084),

Gene: Scowl_71 Start: 45023, Stop: 44562, Start Num: 3

Candidate Starts for Scowl_71:

(Start: 3 @45023 has 64 MA's), (7, 44948), (12, 44798), (13, 44789), (14, 44756), (17, 44675), (19, 44627), (20, 44615),

Gene: ShortQueendom_63 Start: 42908, Stop: 42447, Start Num: 3

Candidate Starts for ShortQueendom_63:

(Start: 3 @42908 has 64 MA's), (7, 42833), (12, 42683), (14, 42641), (17, 42560), (19, 42512), (20, 42500),

Gene: Smeagol_72 Start: 46872, Stop: 46411, Start Num: 3

Candidate Starts for Smeagol_72:

(Start: 3 @46872 has 64 MA's), (7, 46797), (12, 46647), (13, 46638), (14, 46605), (17, 46524), (19, 46476), (20, 46464),

Gene: Snazzy_70 Start: 45435, Stop: 44974, Start Num: 3

Candidate Starts for Snazzy_70:

(Start: 3 @45435 has 64 MA's), (7, 45360), (12, 45210), (14, 45168), (19, 45039), (20, 45027),

Gene: Sorpresa_67 Start: 45184, Stop: 44723, Start Num: 3

Candidate Starts for Sorpresa_67:

(Start: 3 @45184 has 64 MA's), (7, 45109), (12, 44959), (14, 44917), (17, 44836), (19, 44788), (20, 44776),

Gene: StewieG_65 Start: 41926, Stop: 41465, Start Num: 3

Candidate Starts for StewieG_65:

(Start: 3 @41926 has 64 MA's), (7, 41851), (12, 41701), (13, 41692), (14, 41659), (17, 41578), (19, 41530), (20, 41518),

Gene: Sumter_67 Start: 45529, Stop: 45068, Start Num: 3

Candidate Starts for Sumter_67:

(Start: 3 @45529 has 64 MA's), (7, 45454), (12, 45304), (13, 45295), (14, 45262), (17, 45181), (19, 45133), (20, 45121),

Gene: Thor_73 Start: 45850, Stop: 45389, Start Num: 3

Candidate Starts for Thor_73:

(Start: 3 @45850 has 64 MA's), (7, 45775), (9, 45724), (12, 45625), (13, 45616), (14, 45583), (19, 45454), (20, 45442),

Gene: Tripl3t_74 Start: 47802, Stop: 47341, Start Num: 3

Candidate Starts for Tripl3t_74:

(Start: 3 @47802 has 64 MA's), (7, 47727), (12, 47577), (14, 47535), (17, 47454), (19, 47406), (20, 47394),

Gene: Watermelon_73 Start: 46155, Stop: 45694, Start Num: 3

Candidate Starts for Watermelon_73:

(Start: 3 @46155 has 64 MA's), (7, 46080), (12, 45930), (13, 45921), (14, 45888), (17, 45807), (19, 45759), (20, 45747),

Gene: Zephyr_73 Start: 45412, Stop: 44951, Start Num: 3

Candidate Starts for Zephyr_73:

(Start: 3 @45412 has 64 MA's), (7, 45337), (12, 45187), (14, 45145), (17, 45064), (19, 45016), (20, 45004),