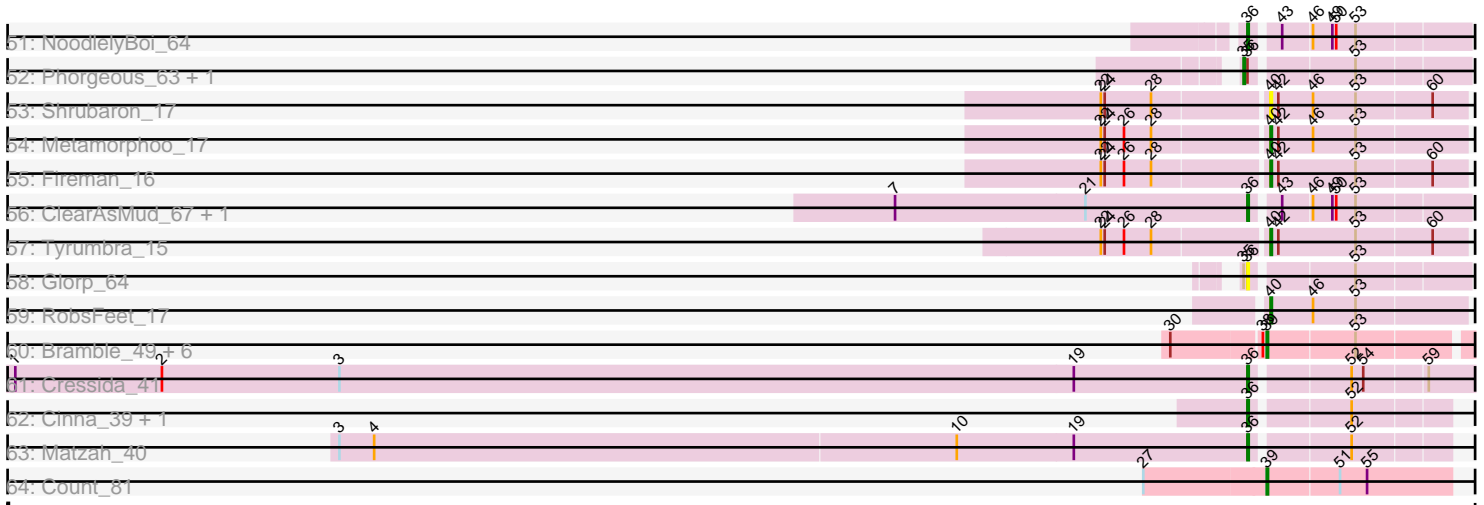


Pham 214059



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 214059 Report

This analysis was run 02/22/25 on database version 588.

Pham number 214059 has 136 members, 26 are drafts.

Phages represented in each track:

- Track 1 : Mercedes_3
- Track 2 : HerculesXL_3, Tinyman4_3, Scissor2024_3
- Track 3 : Ixel_4
- Track 4 : Ixel_3
- Track 5 : Librie_3, Wardwill_3, Zayuliv_3, Greenlvy_3, Fulton_3, Hasitha_3, BaronJohn_3, CaptainRex_3, LilTerminator_3
- Track 6 : Alakazam_3
- Track 7 : Neferthena_3
- Track 8 : QuadZero_3
- Track 9 : Nebulous_3, Clock_3
- Track 10 : Zepp_3
- Track 11 : Jemerald_3, Juicer_3
- Track 12 : Chepli_3
- Track 13 : KatChan_3, Luna18_3
- Track 14 : Sharkboy_64
- Track 15 : Doobus_63
- Track 16 : Cashington_64
- Track 17 : Finalfrontier_65, PastaFagioli_64, Slay_66
- Track 18 : BelmontSKP_64, AnnaLie_64
- Track 19 : Albright_64, PhigPhack_67, SansAfet_66, Phisb_66, Abigail_64
- Track 20 : Eula_64, Nicky22_64
- Track 21 : Stromboli_62, DirtyBubble_62
- Track 22 : Didgeridoo_70, BabyDaisy_67, IndyLu_67
- Track 23 : MsUbiquitous_65, Jabb_65, CupcakePrincess_65
- Track 24 : AvGardian_65
- Track 25 : Kate33_67
- Track 26 : SanaSana_64, Loviatar_107, Akino08_108, Stoor_62
- Track 27 : Lahqtemish_65
- Track 28 : TukTuk_66
- Track 29 : BubbaBear_64
- Track 30 : Milomuff_67, Solea_67
- Track 31 : Softsoap_66, DickRichards_63
- Track 32 : Albedo_66
- Track 33 : Jovita_63, Swervy_65
- Track 34 : Kenzers_64
- Track 35 : QMacho_66, Johnathan_64
- Track 36 : Dismas_63, Rona_62

- Track 37 : LimaBean_64
- Track 38 : SarBear_65
- Track 39 : Avocadoman_64
- Track 40 : Elva_67
- Track 41 : Burritobowl_66
- Track 42 : BabyYoda_62, WalkingDead_65
- Track 43 : CroZenni_65
- Track 44 : Icarian_65
- Track 45 : Bengal_67
- Track 46 : Kieran_61, ChiliPepper_61
- Track 47 : Arroyo_65
- Track 48 : Lynlen_65
- Track 49 : PhedwardCullen_61, Savannah_62, Scumberland_65, Piperis_64, LittleFortune_65, Antares_63, Shotgun_63, Jollipop_64, Quhwah_67, Kowalski_62, Hermeonysus_63, Busephilis_62, Jefe_63, Ganandorf_62, Yeti_65, Cranjis_64, PiperSansNom_64, BrazzalePHS_62, Selwyn23_64, Onika_62, Pulchra_65, Ramiel05_62, Honeyfin_64, Phrancesco_63
- Track 50 : PierreOrion_63, Crisis_64, Paschalis_63, KaiHaiDragon_64, EarickHC_64
- Track 51 : NoodlelyBoi_64
- Track 52 : Phorgeous_63, CrazyRich_62
- Track 53 : Shrubaron_17
- Track 54 : Metamorphoo_17
- Track 55 : Fireman_16
- Track 56 : ClearAsMud_67, SirFrank_63
- Track 57 : Tyumbra_15
- Track 58 : Glorp_64
- Track 59 : RobsFeet_17
- Track 60 : Bramble_49, Sparcetus_48, LordBart_48, RikSengupta_48, Ajin_48, Kors_49, TinyMiny_48
- Track 61 : Cressida_41
- Track 62 : Cinna_39, MementoMori_40
- Track 63 : Matzah_40
- Track 64 : Count_81

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

The start number called the most often in the published annotations is 36, it was called in 59 of the 110 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alakazam_3, Antares_63, BaronJohn_3, BrazzalePHS_62, Busephilis_62, CaptainRex_3, Chepli_3, ChiliPepper_61, Cinna_39, ClearAsMud_67, Clock_3, Cranjis_64, Cressida_41, Crisis_64, Dismas_63, EarickHC_64, Fulton_3, Ganandorf_62, Glorp_64, Greenlvy_3, Hasitha_3, HerculesXL_3, Hermeonysus_63, Honeyfin_64, Ixel_3, Jefe_63, Jemerald_3, Jollipop_64, Juicer_3, KaiHaiDragon_64, KatChan_3, Kieran_61, Kowalski_62, Librie_3, LilTerminator_3, LittleFortune_65, Luna18_3, Matzah_40, MementoMori_40, Mercedes_3, Nebulous_3, Neferthena_3, NoodlelyBoi_64, Onika_62, Paschalis_63, PhedwardCullen_61, Phrancesco_63, PierreOrion_63, PiperSansNom_64, Piperis_64, Pulchra_65, QuadZero_3,

Quhwah_67, Ramiel05_62, Rona_62, Savannah_62, Scissor2024_3, Scumberland_65, Selwyn23_64, Sharkboy_64, Shotgun_63, SirFrank_63, Tinyman4_3, Wardwill_3, Yeti_65, Zayuliv_3, Zepp_3,

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

- CrazyRich_62, Phorgeous_63,

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

- Abigail_64, Ajin_48, Akino08_108, Albedo_66, Albright_64, AnnaLie_64, Arroyo_65, AvGardian_65, Avocadoman_64, BabyDaisy_67, BabyYoda_62, BelmontSKP_64, Bengal_67, Bramble_49, BubbaBear_64, Burritobowl_66, Cashington_64, Count_81, CroZenni_65, CupcakePrincess_65, DickRichards_63, Didgeridoo_70, DirtyBubble_62, Doobus_63, Elva_67, Eula_64, Finalfrontier_65, Fireman_16, Icarian_65, IndyLu_67, Ixel_4, Jabb_65, Johnathan_64, Jovita_63, Kate33_67, Kenzers_64, Kors_49, Lahqtemish_65, LimaBean_64, LordBart_48, Loviatar_107, Lynlen_65, Metamorphoo_17, Milomuff_67, MsUbiquitous_65, Nicky22_64, PastaFagioli_64, PhigPhack_67, Phisb_66, QMacho_66, RikSengupta_48, RobsFeet_17, SanaSana_64, SansAfet_66, SarBear_65, Shrubaron_17, Slay_66, Softsoap_66, Solea_67, Sparcetus_48, Stoor_62, Stromboli_62, Swervy_65, TinyMiny_48, TukTuk_66, Tyumbra_15, WalkingDead_65,

Summary by start number:

Start 32:

- Found in 4 of 136 (2.9%) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Bengal_67 (EB),

Start 35:

- Found in 80 of 136 (58.8%) of genes in pham
- Manual Annotations of this start: 41 of 110
- Called 67.5% of time when present
- Phage (with cluster) where this start called: Abigail_64 (EB), Akino08_108 (EB), Albedo_66 (EB), Albright_64 (EB), AnnaLie_64 (EB), Arroyo_65 (EB), AvGardian_65 (EB), Avocadoman_64 (EB), BabyDaisy_67 (EB), BabyYoda_62 (EB), BelmontSKP_64 (EB), BubbaBear_64 (EB), Burritobowl_66 (EB), Cashington_64 (EB), CrazyRich_62 (EC), CroZenni_65 (EB), CupcakePrincess_65 (EB), DickRichards_63 (EB), Didgeridoo_70 (EB), DirtyBubble_62 (EB), Doobus_63 (EB), Elva_67 (EB), Eula_64 (EB), Finalfrontier_65 (EB), Icarian_65 (EB), IndyLu_67 (EB), Jabb_65 (EB), Johnathan_64 (EB), Jovita_63 (EB), Kate33_67 (EB), Kenzers_64 (EB), Lahqtemish_65 (EB), LimaBean_64 (EB), Loviatar_107 (EB), Lynlen_65 (EB), Milomuff_67 (EB), MsUbiquitous_65 (EB), Nicky22_64 (EB), PastaFagioli_64 (EB), PhigPhack_67 (EB), Phisb_66 (EB), Phorgeous_63 (EC), QMacho_66 (EB), SanaSana_64 (EB), SansAfet_66 (EB), SarBear_65 (EB), Slay_66 (EB), Softsoap_66 (EB), Solea_67 (EB), Stoor_62 (EB), Stromboli_62 (EB), Swervy_65 (EB), TukTuk_66 (EB), WalkingDead_65 (EB),

Start 36:

- Found in 69 of 136 (50.7%) of genes in pham
- Manual Annotations of this start: 59 of 110
- Called 97.1% of time when present

- Phage (with cluster) where this start called: Alakazam_3 (EA5), Antares_63 (EC), BaronJohn_3 (EA5), BrazzalePHS_62 (EC), Busephilis_62 (EC), CaptainRex_3 (EA5), Chepli_3 (EA6), ChiliPepper_61 (EB), Cinna_39 (EI), ClearAsMud_67 (EC), Clock_3 (EA5), Cranjis_64 (EC), Cressida_41 (EI), Crisis_64 (EC), Dismas_63 (EB), EarickHC_64 (EC), Fulton_3 (EA5), Ganandorf_62 (EC), Glorp_64 (EC), Greenlvy_3 (EA5), Hasitha_3 (EA5), HerculesXL_3 (EA11), Hermeonysus_63 (EC), Honeyfin_64 (EC), Ixel_3 (EA11), Jefe_63 (EC), Jemerald_3 (EA6), Jollipop_64 (EC), Juicer_3 (EA6), KaiHaiDragon_64 (EC), KatChan_3 (EA6), Kieran_61 (EB), Kowalski_62 (EC), Librie_3 (EA5), LilTerminator_3 (EA5), LittleFortune_65 (EC), Luna18_3 (EA6), Matzah_40 (EI), MementoMori_40 (EI), Mercedes_3 (EA), Nebulous_3 (EA5), Neferthena_3 (EA5), NoodlelyBoi_64 (EC), Onika_62 (EC), Paschalis_63 (EC), PhedwardCullen_61 (EC), Phrancesco_63 (EC), PierreOrion_63 (EC), PiperSansNom_64 (EC), Piperis_64 (EC), Pulchra_65 (EC), QuadZero_3 (EA5), Quhwah_67 (EC), Ramiel05_62 (EC), Rona_62 (EB), Savannah_62 (EC), Scissor2024_3 (EA11), Scumberland_65 (EC), Selwyn23_64 (EC), Sharkboy_64 (EB), Shotgun_63 (EC), SirFrank_63 (EC), Tinyman4_3 (EA11), Wardwill_3 (EA5), Yeti_65 (EC), Zayuliv_3 (EA5), Zepp_3 (EA5),

Start 37:

- Found in 1 of 136 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 110
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ixel_4 (EA11),

Start 39:

- Found in 8 of 136 (5.9%) of genes in pham
- Manual Annotations of this start: 5 of 110
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ajin_48 (EF), Bramble_49 (EF), Count_81 (EL), Kors_49 (EF), LordBart_48 (EF), RikSengupta_48 (EF), Sparcetus_48 (EF), TinyMiny_48 (EF),

Start 40:

- Found in 5 of 136 (3.7%) of genes in pham
- Manual Annotations of this start: 4 of 110
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fireman_16 (EC), Metamorphoo_17 (EC), RobsFeet_17 (EC), Shrubaron_17 (EC), Tyumbra_15 (EC),

Summary by clusters:

There are 9 clusters represented in this pham: EL, EI, EF, EA, EC, EB, EA11, EA5, EA6,

Info for manual annotations of cluster EA:

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

Info for manual annotations of cluster EA11:

- Start number 36 was manually annotated 3 times for cluster EA11.
- Start number 37 was manually annotated 1 time for cluster EA11.

Info for manual annotations of cluster EA5:

- Start number 36 was manually annotated 12 times for cluster EA5.

Info for manual annotations of cluster EA6:

- Start number 36 was manually annotated 5 times for cluster EA6.

Info for manual annotations of cluster EB:

- Start number 35 was manually annotated 39 times for cluster EB.
- Start number 36 was manually annotated 5 times for cluster EB.

Info for manual annotations of cluster EC:

- Start number 35 was manually annotated 2 times for cluster EC.
- Start number 36 was manually annotated 29 times for cluster EC.
- Start number 40 was manually annotated 4 times for cluster EC.

Info for manual annotations of cluster EF:

- Start number 39 was manually annotated 4 times for cluster EF.

Info for manual annotations of cluster EI:

- Start number 36 was manually annotated 4 times for cluster EI.

Info for manual annotations of cluster EL:

- Start number 39 was manually annotated 1 time for cluster EL.

Gene Information:

Gene: Abigail_64 Start: 39315, Stop: 39497, Start Num: 35

Candidate Starts for Abigail_64:

(Start: 35 @39315 has 41 MA's), (47, 39360), (61, 39450),

Gene: Ajin_48 Start: 30967, Stop: 31113, Start Num: 39

Candidate Starts for Ajin_48:

(30, 30898), (38, 30964), (Start: 39 @30967 has 5 MA's), (53, 31033),

Gene: Akino08_108 Start: 40775, Stop: 40960, Start Num: 35

Candidate Starts for Akino08_108:

(Start: 35 @40775 has 41 MA's), (48, 40826), (57, 40886),

Gene: Alakazam_3 Start: 2071, Stop: 2229, Start Num: 36

Candidate Starts for Alakazam_3:

(34, 2065), (Start: 36 @2071 has 59 MA's), (38, 2083), (50, 2137), (53, 2152),

Gene: Albedo_66 Start: 40235, Stop: 40417, Start Num: 35

Candidate Starts for Albedo_66:

(Start: 35 @40235 has 41 MA's), (47, 40280), (61, 40370),

Gene: Albright_64 Start: 39297, Stop: 39479, Start Num: 35

Candidate Starts for Albright_64:

(Start: 35 @39297 has 41 MA's), (47, 39342), (61, 39432),

Gene: AnnaLie_64 Start: 39976, Stop: 40158, Start Num: 35

Candidate Starts for AnnaLie_64:

(Start: 35 @39976 has 41 MA's), (61, 40111),

Gene: Antares_63 Start: 40647, Stop: 40802, Start Num: 36
Candidate Starts for Antares_63:
(Start: 35 @40644 has 41 MA's), (Start: 36 @40647 has 59 MA's), (53, 40719),

Gene: Arroyo_65 Start: 40440, Stop: 40622, Start Num: 35
Candidate Starts for Arroyo_65:
(Start: 35 @40440 has 41 MA's), (44, 40470), (47, 40485), (61, 40575),

Gene: AvGardian_65 Start: 40037, Stop: 40219, Start Num: 35
Candidate Starts for AvGardian_65:
(Start: 35 @40037 has 41 MA's), (57, 40145), (58, 40148),

Gene: Avocadoman_64 Start: 39447, Stop: 39629, Start Num: 35
Candidate Starts for Avocadoman_64:
(33, 39441), (Start: 35 @39447 has 41 MA's), (44, 39477), (61, 39582),

Gene: BabyDaisy_67 Start: 40786, Stop: 40968, Start Num: 35
Candidate Starts for BabyDaisy_67:
(Start: 35 @40786 has 41 MA's), (44, 40816), (47, 40831),

Gene: BabyYoda_62 Start: 39683, Stop: 39868, Start Num: 35
Candidate Starts for BabyYoda_62:
(Start: 35 @39683 has 41 MA's), (42, 39701), (57, 39791), (61, 39818),

Gene: BaronJohn_3 Start: 1963, Stop: 2109, Start Num: 36
Candidate Starts for BaronJohn_3:
(Start: 36 @1963 has 59 MA's), (53, 2029),

Gene: BelmontSKP_64 Start: 39976, Stop: 40158, Start Num: 35
Candidate Starts for BelmontSKP_64:
(Start: 35 @39976 has 41 MA's), (61, 40111),

Gene: Bengal_67 Start: 40195, Stop: 40389, Start Num: 32
Candidate Starts for Bengal_67:
(32, 40195), (Start: 35 @40207 has 41 MA's), (61, 40342),

Gene: Bramble_49 Start: 31016, Stop: 31162, Start Num: 39
Candidate Starts for Bramble_49:
(30, 30947), (38, 31013), (Start: 39 @31016 has 5 MA's), (53, 31082),

Gene: BrazzalePHS_62 Start: 40409, Stop: 40564, Start Num: 36
Candidate Starts for BrazzalePHS_62:
(Start: 35 @40406 has 41 MA's), (Start: 36 @40409 has 59 MA's), (53, 40481),

Gene: BubbaBear_64 Start: 40228, Stop: 40410, Start Num: 35
Candidate Starts for BubbaBear_64:
(11, 40021), (Start: 35 @40228 has 41 MA's), (47, 40273), (61, 40363),

Gene: Burritobowl_66 Start: 39798, Stop: 39980, Start Num: 35
Candidate Starts for Burritobowl_66:
(Start: 35 @39798 has 41 MA's), (44, 39828), (47, 39843), (61, 39933),

Gene: Busephilis_62 Start: 40354, Stop: 40509, Start Num: 36
Candidate Starts for Busephilis_62:
(Start: 35 @40351 has 41 MA's), (Start: 36 @40354 has 59 MA's), (53, 40426),

Gene: CaptainRex_3 Start: 1963, Stop: 2109, Start Num: 36
Candidate Starts for CaptainRex_3:
(Start: 36 @1963 has 59 MA's), (53, 2029),

Gene: Cashington_64 Start: 39539, Stop: 39721, Start Num: 35
Candidate Starts for Cashington_64:
(Start: 35 @39539 has 41 MA's), (47, 39584), (61, 39674),

Gene: Chepli_3 Start: 2101, Stop: 2247, Start Num: 36
Candidate Starts for Chepli_3:
(Start: 36 @2101 has 59 MA's), (51, 2155), (53, 2167),

Gene: ChiliPepper_61 Start: 40043, Stop: 40222, Start Num: 36
Candidate Starts for ChiliPepper_61:
(5, 39632), (Start: 36 @40043 has 59 MA's), (42, 40058), (56, 40136), (57, 40148),

Gene: Cinna_39 Start: 31034, Stop: 31174, Start Num: 36
Candidate Starts for Cinna_39:
(Start: 36 @31034 has 59 MA's), (52, 31103),

Gene: ClearAsMud_67 Start: 40937, Stop: 41092, Start Num: 36
Candidate Starts for ClearAsMud_67:
(7, 40664), (21, 40811), (Start: 36 @40937 has 59 MA's), (43, 40955), (46, 40976), (49, 40991), (50, 40994), (53, 41009),

Gene: Clock_3 Start: 2104, Stop: 2262, Start Num: 36
Candidate Starts for Clock_3:
(14, 1921), (18, 1969), (Start: 36 @2104 has 59 MA's), (51, 2173), (53, 2185), (57, 2218),

Gene: Count_81 Start: 55860, Stop: 56000, Start Num: 39
Candidate Starts for Count_81:
(27, 55776), (Start: 39 @55860 has 5 MA's), (51, 55914), (55, 55935),

Gene: Cranjis_64 Start: 40602, Stop: 40757, Start Num: 36
Candidate Starts for Cranjis_64:
(Start: 35 @40599 has 41 MA's), (Start: 36 @40602 has 59 MA's), (53, 40674),

Gene: CrazyRich_62 Start: 40408, Stop: 40566, Start Num: 35
Candidate Starts for CrazyRich_62:
(Start: 35 @40408 has 41 MA's), (Start: 36 @40411 has 59 MA's), (53, 40483),

Gene: Cressida_41 Start: 30483, Stop: 30641, Start Num: 36
Candidate Starts for Cressida_41:
(1, 29526), (2, 29640), (3, 29778), (19, 30348), (Start: 36 @30483 has 59 MA's), (52, 30552), (54, 30561), (59, 30606),

Gene: Crisis_64 Start: 40417, Stop: 40572, Start Num: 36
Candidate Starts for Crisis_64:
(7, 40159), (15, 40258), (20, 40303), (Start: 36 @40417 has 59 MA's), (53, 40489),

Gene: CroZenni_65 Start: 39783, Stop: 39965, Start Num: 35

Candidate Starts for CroZenni_65:

(9, 39564), (13, 39594), (Start: 35 @39783 has 41 MA's), (47, 39828), (61, 39918),

Gene: CupcakePrincess_65 Start: 39785, Stop: 39967, Start Num: 35

Candidate Starts for CupcakePrincess_65:

(16, 39659), (23, 39698), (31, 39752), (Start: 35 @39785 has 41 MA's), (47, 39830), (61, 39920),

Gene: DickRichards_63 Start: 39754, Stop: 39936, Start Num: 35

Candidate Starts for DickRichards_63:

(Start: 35 @39754 has 41 MA's), (44, 39784), (47, 39799), (61, 39889),

Gene: Didgeridoo_70 Start: 40896, Stop: 41078, Start Num: 35

Candidate Starts for Didgeridoo_70:

(Start: 35 @40896 has 41 MA's), (44, 40926), (47, 40941),

Gene: DirtyBubble_62 Start: 39722, Stop: 39907, Start Num: 35

Candidate Starts for DirtyBubble_62:

(Start: 35 @39722 has 41 MA's), (42, 39740), (57, 39830), (61, 39857),

Gene: Dismas_63 Start: 40180, Stop: 40359, Start Num: 36

Candidate Starts for Dismas_63:

(Start: 36 @40180 has 59 MA's), (42, 40195), (56, 40273), (57, 40285),

Gene: Doobus_63 Start: 39609, Stop: 39791, Start Num: 35

Candidate Starts for Doobus_63:

(Start: 35 @39609 has 41 MA's), (44, 39639), (61, 39744),

Gene: EarickHC_64 Start: 40339, Stop: 40494, Start Num: 36

Candidate Starts for EarickHC_64:

(7, 40081), (15, 40180), (20, 40225), (Start: 36 @40339 has 59 MA's), (53, 40411),

Gene: Elva_67 Start: 40561, Stop: 40749, Start Num: 35

Candidate Starts for Elva_67:

(Start: 35 @40561 has 41 MA's), (57, 40672), (61, 40699),

Gene: Eula_64 Start: 39518, Stop: 39700, Start Num: 35

Candidate Starts for Eula_64:

(Start: 35 @39518 has 41 MA's), (47, 39563), (61, 39653),

Gene: Finalfrontier_65 Start: 40502, Stop: 40684, Start Num: 35

Candidate Starts for Finalfrontier_65:

(Start: 35 @40502 has 41 MA's), (47, 40547), (61, 40637),

Gene: Fireman_16 Start: 6897, Stop: 7046, Start Num: 40

Candidate Starts for Fireman_16:

(22, 6774), (24, 6777), (26, 6792), (28, 6813), (Start: 40 @6897 has 4 MA's), (42, 6903), (53, 6963), (60, 7020),

Gene: Fulton_3 Start: 1963, Stop: 2109, Start Num: 36

Candidate Starts for Fulton_3:

(Start: 36 @1963 has 59 MA's), (53, 2029),

Gene: Ganandorf_62 Start: 40435, Stop: 40590, Start Num: 36
Candidate Starts for Ganandorf_62:
(Start: 35 @40432 has 41 MA's), (Start: 36 @40435 has 59 MA's), (53, 40507),

Gene: Glorp_64 Start: 40402, Stop: 40557, Start Num: 36
Candidate Starts for Glorp_64:
(Start: 35 @40399 has 41 MA's), (Start: 36 @40402 has 59 MA's), (53, 40474),

Gene: Greenlvy_3 Start: 1963, Stop: 2109, Start Num: 36
Candidate Starts for Greenlvy_3:
(Start: 36 @1963 has 59 MA's), (53, 2029),

Gene: Hasitha_3 Start: 1963, Stop: 2109, Start Num: 36
Candidate Starts for Hasitha_3:
(Start: 36 @1963 has 59 MA's), (53, 2029),

Gene: HerculesXL_3 Start: 1952, Stop: 2107, Start Num: 36
Candidate Starts for HerculesXL_3:
(Start: 36 @1952 has 59 MA's), (53, 2018),

Gene: Hermeonysus_63 Start: 40330, Stop: 40485, Start Num: 36
Candidate Starts for Hermeonysus_63:
(Start: 35 @40327 has 41 MA's), (Start: 36 @40330 has 59 MA's), (53, 40402),

Gene: Honeyfin_64 Start: 40590, Stop: 40745, Start Num: 36
Candidate Starts for Honeyfin_64:
(Start: 35 @40587 has 41 MA's), (Start: 36 @40590 has 59 MA's), (53, 40662),

Gene: Icarian_65 Start: 40372, Stop: 40557, Start Num: 35
Candidate Starts for Icarian_65:
(Start: 35 @40372 has 41 MA's), (48, 40423), (57, 40483),

Gene: IndyLu_67 Start: 40517, Stop: 40699, Start Num: 35
Candidate Starts for IndyLu_67:
(Start: 35 @40517 has 41 MA's), (44, 40547), (47, 40562),

Gene: Ixel_4 Start: 2216, Stop: 2365, Start Num: 37
Candidate Starts for Ixel_4:
(Start: 37 @2216 has 1 MA's), (48, 2261), (56, 2309),

Gene: Ixel_3 Start: 2066, Stop: 2212, Start Num: 36
Candidate Starts for Ixel_3:
(Start: 36 @2066 has 59 MA's), (41, 2072), (53, 2132),

Gene: Jabb_65 Start: 39785, Stop: 39967, Start Num: 35
Candidate Starts for Jabb_65:
(16, 39659), (23, 39698), (31, 39752), (Start: 35 @39785 has 41 MA's), (47, 39830), (61, 39920),

Gene: Jefe_63 Start: 40388, Stop: 40543, Start Num: 36
Candidate Starts for Jefe_63:
(Start: 35 @40385 has 41 MA's), (Start: 36 @40388 has 59 MA's), (53, 40460),

Gene: Jemerald_3 Start: 2077, Stop: 2223, Start Num: 36
Candidate Starts for Jemerald_3:
(6, 1798), (16, 1930), (17, 1933), (25, 1981), (29, 2014), (Start: 36 @2077 has 59 MA's), (43, 2089),
(45, 2107), (53, 2143),

Gene: Johnathan_64 Start: 39298, Stop: 39480, Start Num: 35
Candidate Starts for Johnathan_64:
(Start: 35 @39298 has 41 MA's), (61, 39433),

Gene: Jollipop_64 Start: 40770, Stop: 40925, Start Num: 36
Candidate Starts for Jollipop_64:
(Start: 35 @40767 has 41 MA's), (Start: 36 @40770 has 59 MA's), (53, 40842),

Gene: Jovita_63 Start: 39286, Stop: 39468, Start Num: 35
Candidate Starts for Jovita_63:
(Start: 35 @39286 has 41 MA's), (47, 39331), (61, 39421),

Gene: Juicer_3 Start: 2077, Stop: 2223, Start Num: 36
Candidate Starts for Juicer_3:
(6, 1798), (16, 1930), (17, 1933), (25, 1981), (29, 2014), (Start: 36 @2077 has 59 MA's), (43, 2089),
(45, 2107), (53, 2143),

Gene: KaiHaiDragon_64 Start: 40339, Stop: 40494, Start Num: 36
Candidate Starts for KaiHaiDragon_64:
(7, 40081), (15, 40180), (20, 40225), (Start: 36 @40339 has 59 MA's), (53, 40411),

Gene: KatChan_3 Start: 2101, Stop: 2247, Start Num: 36
Candidate Starts for KatChan_3:
(Start: 36 @2101 has 59 MA's), (53, 2167),

Gene: Kate33_67 Start: 40247, Stop: 40429, Start Num: 35
Candidate Starts for Kate33_67:
(Start: 35 @40247 has 41 MA's), (44, 40277), (47, 40292),

Gene: Kenzers_64 Start: 39369, Stop: 39551, Start Num: 35
Candidate Starts for Kenzers_64:
(8, 39138), (32, 39357), (Start: 35 @39369 has 41 MA's), (47, 39414), (61, 39504),

Gene: Kieran_61 Start: 40005, Stop: 40184, Start Num: 36
Candidate Starts for Kieran_61:
(5, 39594), (Start: 36 @40005 has 59 MA's), (42, 40020), (56, 40098), (57, 40110),

Gene: Kors_49 Start: 31044, Stop: 31190, Start Num: 39
Candidate Starts for Kors_49:
(30, 30975), (38, 31041), (Start: 39 @31044 has 5 MA's), (53, 31110),

Gene: Kowalski_62 Start: 40404, Stop: 40559, Start Num: 36
Candidate Starts for Kowalski_62:
(Start: 35 @40401 has 41 MA's), (Start: 36 @40404 has 59 MA's), (53, 40476),

Gene: Lahqtemish_65 Start: 40719, Stop: 40901, Start Num: 35
Candidate Starts for Lahqtemish_65:
(Start: 35 @40719 has 41 MA's), (44, 40749), (47, 40764), (61, 40854),

Gene: Librie_3 Start: 1963, Stop: 2109, Start Num: 36

Candidate Starts for Librie_3:

(Start: 36 @1963 has 59 MA's), (53, 2029),

Gene: LilTerminator_3 Start: 1963, Stop: 2109, Start Num: 36

Candidate Starts for LilTerminator_3:

(Start: 36 @1963 has 59 MA's), (53, 2029),

Gene: LimaBean_64 Start: 39192, Stop: 39374, Start Num: 35

Candidate Starts for LimaBean_64:

(Start: 35 @39192 has 41 MA's), (44, 39222), (61, 39327),

Gene: LittleFortune_65 Start: 40695, Stop: 40850, Start Num: 36

Candidate Starts for LittleFortune_65:

(Start: 35 @40692 has 41 MA's), (Start: 36 @40695 has 59 MA's), (53, 40767),

Gene: LordBart_48 Start: 30953, Stop: 31099, Start Num: 39

Candidate Starts for LordBart_48:

(30, 30884), (38, 30950), (Start: 39 @30953 has 5 MA's), (53, 31019),

Gene: Loviatar_107 Start: 40790, Stop: 40975, Start Num: 35

Candidate Starts for Loviatar_107:

(Start: 35 @40790 has 41 MA's), (48, 40841), (57, 40901),

Gene: Luna18_3 Start: 2101, Stop: 2247, Start Num: 36

Candidate Starts for Luna18_3:

(Start: 36 @2101 has 59 MA's), (53, 2167),

Gene: Lynlen_65 Start: 39522, Stop: 39704, Start Num: 35

Candidate Starts for Lynlen_65:

(32, 39510), (Start: 35 @39522 has 41 MA's), (47, 39567), (61, 39657),

Gene: Matzah_40 Start: 30974, Stop: 31114, Start Num: 36

Candidate Starts for Matzah_40:

(3, 30272), (4, 30299), (10, 30749), (19, 30839), (Start: 36 @30974 has 59 MA's), (52, 31043),

Gene: MementoMori_40 Start: 30722, Stop: 30862, Start Num: 36

Candidate Starts for MementoMori_40:

(Start: 36 @30722 has 59 MA's), (52, 30791),

Gene: Mercedes_3 Start: 1955, Stop: 2101, Start Num: 36

Candidate Starts for Mercedes_3:

(Start: 36 @1955 has 59 MA's), (53, 2021), (56, 2042), (58, 2057), (61, 2081),

Gene: Metamorphoo_17 Start: 7070, Stop: 7219, Start Num: 40

Candidate Starts for Metamorphoo_17:

(22, 6947), (24, 6950), (26, 6965), (28, 6986), (Start: 40 @7070 has 4 MA's), (42, 7076), (46, 7103), (53, 7136),

Gene: Milomuff_67 Start: 40067, Stop: 40249, Start Num: 35

Candidate Starts for Milomuff_67:

(Start: 35 @40067 has 41 MA's), (61, 40202),

Gene: MsUbiquitous_65 Start: 39785, Stop: 39967, Start Num: 35
Candidate Starts for MsUbiquitous_65:
(16, 39659), (23, 39698), (31, 39752), (Start: 35 @39785 has 41 MA's), (47, 39830), (61, 39920),

Gene: Nebulous_3 Start: 2113, Stop: 2271, Start Num: 36
Candidate Starts for Nebulous_3:
(14, 1930), (18, 1978), (Start: 36 @2113 has 59 MA's), (51, 2182), (53, 2194), (57, 2227),

Gene: Neferthena_3 Start: 2107, Stop: 2265, Start Num: 36
Candidate Starts for Neferthena_3:
(12, 1906), (14, 1924), (18, 1972), (Start: 36 @2107 has 59 MA's), (51, 2176), (53, 2188), (57, 2221),

Gene: Nicky22_64 Start: 39961, Stop: 40143, Start Num: 35
Candidate Starts for Nicky22_64:
(Start: 35 @39961 has 41 MA's), (47, 40006), (61, 40096),

Gene: NoodlelyBoi_64 Start: 41186, Stop: 41341, Start Num: 36
Candidate Starts for NoodlelyBoi_64:
(Start: 36 @41186 has 59 MA's), (43, 41204), (46, 41225), (49, 41240), (50, 41243), (53, 41258),

Gene: Onika_62 Start: 40413, Stop: 40568, Start Num: 36
Candidate Starts for Onika_62:
(Start: 35 @40410 has 41 MA's), (Start: 36 @40413 has 59 MA's), (53, 40485),

Gene: Paschalis_63 Start: 40435, Stop: 40590, Start Num: 36
Candidate Starts for Paschalis_63:
(7, 40177), (15, 40276), (20, 40321), (Start: 36 @40435 has 59 MA's), (53, 40507),

Gene: PastaFagioli_64 Start: 40470, Stop: 40652, Start Num: 35
Candidate Starts for PastaFagioli_64:
(Start: 35 @40470 has 41 MA's), (47, 40515), (61, 40605),

Gene: PhedwardCullen_61 Start: 40158, Stop: 40313, Start Num: 36
Candidate Starts for PhedwardCullen_61:
(Start: 35 @40155 has 41 MA's), (Start: 36 @40158 has 59 MA's), (53, 40230),

Gene: PhigPhack_67 Start: 39894, Stop: 40076, Start Num: 35
Candidate Starts for PhigPhack_67:
(Start: 35 @39894 has 41 MA's), (47, 39939), (61, 40029),

Gene: Phisb_66 Start: 39867, Stop: 40049, Start Num: 35
Candidate Starts for Phisb_66:
(Start: 35 @39867 has 41 MA's), (47, 39912), (61, 40002),

Gene: Phorgeous_63 Start: 40218, Stop: 40376, Start Num: 35
Candidate Starts for Phorgeous_63:
(Start: 35 @40218 has 41 MA's), (Start: 36 @40221 has 59 MA's), (53, 40293),

Gene: Phrancesco_63 Start: 40544, Stop: 40699, Start Num: 36
Candidate Starts for Phrancesco_63:
(Start: 35 @40541 has 41 MA's), (Start: 36 @40544 has 59 MA's), (53, 40616),

Gene: PierreOrion_63 Start: 40644, Stop: 40799, Start Num: 36
Candidate Starts for PierreOrion_63:
(7, 40386), (15, 40485), (20, 40530), (Start: 36 @40644 has 59 MA's), (53, 40716),

Gene: PiperSansNom_64 Start: 40726, Stop: 40881, Start Num: 36
Candidate Starts for PiperSansNom_64:
(Start: 35 @40723 has 41 MA's), (Start: 36 @40726 has 59 MA's), (53, 40798),

Gene: Piperis_64 Start: 40346, Stop: 40501, Start Num: 36
Candidate Starts for Piperis_64:
(Start: 35 @40343 has 41 MA's), (Start: 36 @40346 has 59 MA's), (53, 40418),

Gene: Pulchra_65 Start: 40742, Stop: 40897, Start Num: 36
Candidate Starts for Pulchra_65:
(Start: 35 @40739 has 41 MA's), (Start: 36 @40742 has 59 MA's), (53, 40814),

Gene: QMacho_66 Start: 39998, Stop: 40180, Start Num: 35
Candidate Starts for QMacho_66:
(Start: 35 @39998 has 41 MA's), (61, 40133),

Gene: QuadZero_3 Start: 1963, Stop: 2109, Start Num: 36
Candidate Starts for QuadZero_3:
(Start: 36 @1963 has 59 MA's), (53, 2029),

Gene: Quhwah_67 Start: 41034, Stop: 41189, Start Num: 36
Candidate Starts for Quhwah_67:
(Start: 35 @41031 has 41 MA's), (Start: 36 @41034 has 59 MA's), (53, 41106),

Gene: Ramiel05_62 Start: 40404, Stop: 40559, Start Num: 36
Candidate Starts for Ramiel05_62:
(Start: 35 @40401 has 41 MA's), (Start: 36 @40404 has 59 MA's), (53, 40476),

Gene: RikSengupta_48 Start: 31081, Stop: 31227, Start Num: 39
Candidate Starts for RikSengupta_48:
(30, 31012), (38, 31078), (Start: 39 @31081 has 5 MA's), (53, 31147),

Gene: RobsFeet_17 Start: 6912, Stop: 7061, Start Num: 40
Candidate Starts for RobsFeet_17:
(Start: 40 @6912 has 4 MA's), (46, 6945), (53, 6978),

Gene: Rona_62 Start: 40171, Stop: 40350, Start Num: 36
Candidate Starts for Rona_62:
(Start: 36 @40171 has 59 MA's), (42, 40186), (56, 40264), (57, 40276),

Gene: SanaSana_64 Start: 40133, Stop: 40318, Start Num: 35
Candidate Starts for SanaSana_64:
(Start: 35 @40133 has 41 MA's), (48, 40184), (57, 40244),

Gene: SansAfet_66 Start: 39843, Stop: 40025, Start Num: 35
Candidate Starts for SansAfet_66:
(Start: 35 @39843 has 41 MA's), (47, 39888), (61, 39978),

Gene: SarBear_65 Start: 39611, Stop: 39793, Start Num: 35

Candidate Starts for SarBear_65:
(10, 39398), (Start: 35 @39611 has 41 MA's), (47, 39656), (61, 39746),

Gene: Savannah_62 Start: 40464, Stop: 40619, Start Num: 36
Candidate Starts for Savannah_62:
(Start: 35 @40461 has 41 MA's), (Start: 36 @40464 has 59 MA's), (53, 40536),

Gene: Scissor2024_3 Start: 1952, Stop: 2107, Start Num: 36
Candidate Starts for Scissor2024_3:
(Start: 36 @1952 has 59 MA's), (53, 2018),

Gene: Scumberland_65 Start: 40659, Stop: 40814, Start Num: 36
Candidate Starts for Scumberland_65:
(Start: 35 @40656 has 41 MA's), (Start: 36 @40659 has 59 MA's), (53, 40731),

Gene: Selwyn23_64 Start: 40576, Stop: 40731, Start Num: 36
Candidate Starts for Selwyn23_64:
(Start: 35 @40573 has 41 MA's), (Start: 36 @40576 has 59 MA's), (53, 40648),

Gene: Sharkboy_64 Start: 40536, Stop: 40715, Start Num: 36
Candidate Starts for Sharkboy_64:
(Start: 36 @40536 has 59 MA's), (42, 40551), (56, 40629), (57, 40641),

Gene: Shotgun_63 Start: 40340, Stop: 40495, Start Num: 36
Candidate Starts for Shotgun_63:
(Start: 35 @40337 has 41 MA's), (Start: 36 @40340 has 59 MA's), (53, 40412),

Gene: Shrubaron_17 Start: 6959, Stop: 7108, Start Num: 40
Candidate Starts for Shrubaron_17:
(22, 6836), (24, 6839), (28, 6875), (Start: 40 @6959 has 4 MA's), (42, 6965), (46, 6992), (53, 7025),
(60, 7082),

Gene: SirFrank_63 Start: 40632, Stop: 40787, Start Num: 36
Candidate Starts for SirFrank_63:
(7, 40359), (21, 40506), (Start: 36 @40632 has 59 MA's), (43, 40650), (46, 40671), (49, 40686), (50,
40689), (53, 40704),

Gene: Slay_66 Start: 40377, Stop: 40559, Start Num: 35
Candidate Starts for Slay_66:
(Start: 35 @40377 has 41 MA's), (47, 40422), (61, 40512),

Gene: Softsoap_66 Start: 40066, Stop: 40248, Start Num: 35
Candidate Starts for Softsoap_66:
(Start: 35 @40066 has 41 MA's), (44, 40096), (47, 40111), (61, 40201),

Gene: Solea_67 Start: 40066, Stop: 40248, Start Num: 35
Candidate Starts for Solea_67:
(Start: 35 @40066 has 41 MA's), (61, 40201),

Gene: Sparcetus_48 Start: 30958, Stop: 31104, Start Num: 39
Candidate Starts for Sparcetus_48:
(30, 30889), (38, 30955), (Start: 39 @30958 has 5 MA's), (53, 31024),

Gene: Stoor_62 Start: 39920, Stop: 40105, Start Num: 35
Candidate Starts for Stoor_62:
(Start: 35 @39920 has 41 MA's), (48, 39971), (57, 40031),

Gene: Stromboli_62 Start: 39721, Stop: 39906, Start Num: 35
Candidate Starts for Stromboli_62:
(Start: 35 @39721 has 41 MA's), (42, 39739), (57, 39829), (61, 39856),

Gene: Swervy_65 Start: 39648, Stop: 39830, Start Num: 35
Candidate Starts for Swervy_65:
(Start: 35 @39648 has 41 MA's), (47, 39693), (61, 39783),

Gene: TinyMiny_48 Start: 30979, Stop: 31125, Start Num: 39
Candidate Starts for TinyMiny_48:
(30, 30910), (38, 30976), (Start: 39 @30979 has 5 MA's), (53, 31045),

Gene: Tinyman4_3 Start: 1952, Stop: 2107, Start Num: 36
Candidate Starts for Tinyman4_3:
(Start: 36 @1952 has 59 MA's), (53, 2018),

Gene: TukTuk_66 Start: 40156, Stop: 40338, Start Num: 35
Candidate Starts for TukTuk_66:
(32, 40144), (Start: 35 @40156 has 41 MA's), (47, 40201), (61, 40291),

Gene: Tyrumbra_15 Start: 6388, Stop: 6537, Start Num: 40
Candidate Starts for Tyrumbra_15:
(22, 6265), (24, 6268), (26, 6283), (28, 6304), (Start: 40 @6388 has 4 MA's), (42, 6394), (53, 6454),
(60, 6511),

Gene: WalkingDead_65 Start: 40899, Stop: 41084, Start Num: 35
Candidate Starts for WalkingDead_65:
(Start: 35 @40899 has 41 MA's), (42, 40917), (57, 41007), (61, 41034),

Gene: Wardwill_3 Start: 1963, Stop: 2109, Start Num: 36
Candidate Starts for Wardwill_3:
(Start: 36 @1963 has 59 MA's), (53, 2029),

Gene: Yeti_65 Start: 40378, Stop: 40533, Start Num: 36
Candidate Starts for Yeti_65:
(Start: 35 @40375 has 41 MA's), (Start: 36 @40378 has 59 MA's), (53, 40450),

Gene: Zayuliv_3 Start: 1963, Stop: 2109, Start Num: 36
Candidate Starts for Zayuliv_3:
(Start: 36 @1963 has 59 MA's), (53, 2029),

Gene: Zepp_3 Start: 1963, Stop: 2109, Start Num: 36
Candidate Starts for Zepp_3:
(Start: 36 @1963 has 59 MA's), (43, 1975), (53, 2029),