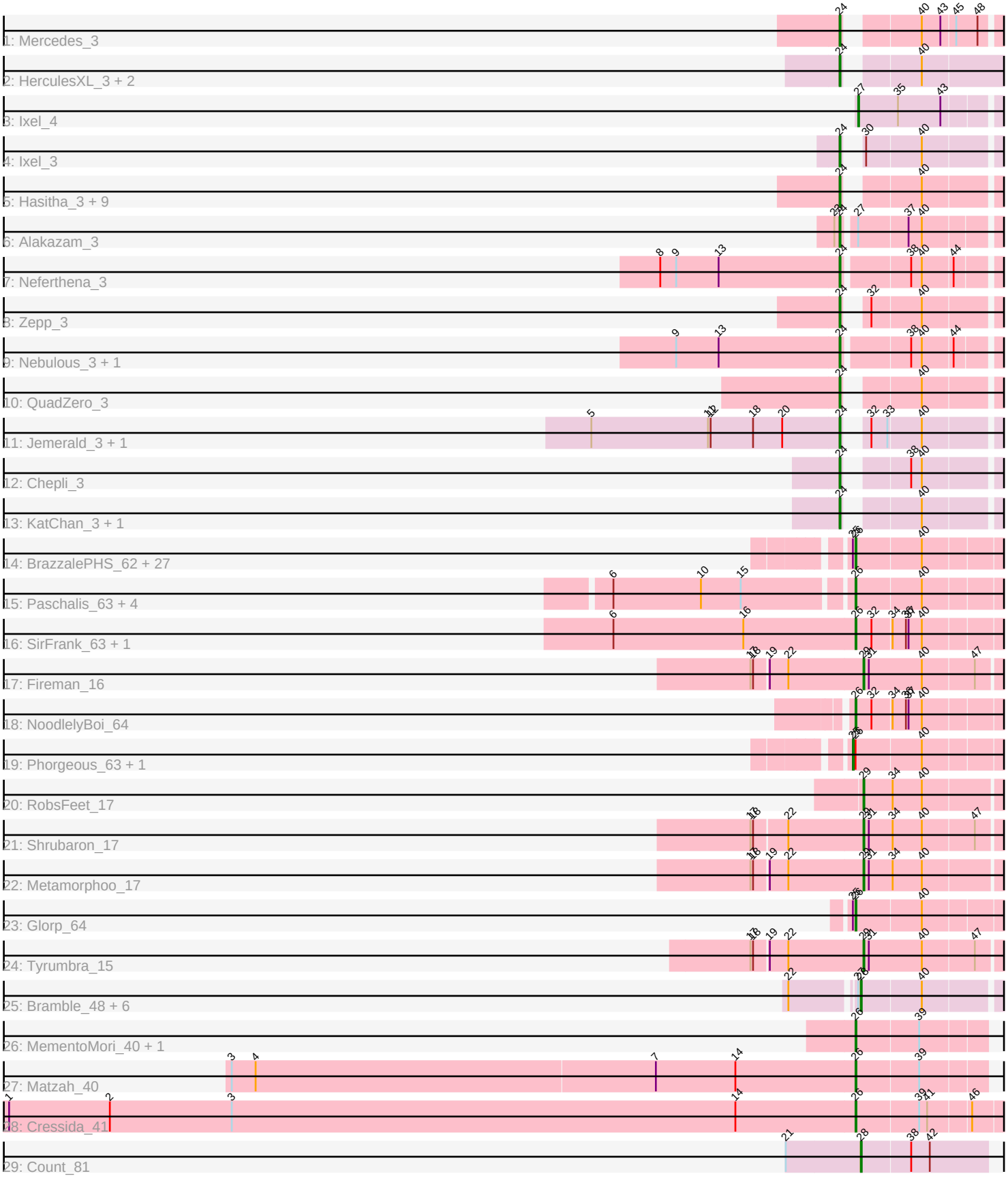
Pham 347516


1: Mercedes_3
2: HerculesXL_3 + 2
3: Ixel_4
4: Ixel_3
5: Hasitha_3 + 9
6: Alakazam_3
7: Neferthena_3
8: Zepp_3
9: Nebulous_3 + 1
10: QuadZero_3
11: Jemerald_3 + 1
12: Chepli_3
13: KatChan_3 + 1
14: BrazzalePHS_62 + 27
15: Paschalis_63 + 4
16: SirFrank_63 + 1
17: Fireman_16
18: NoodlelyBoi_64
19: Phorgeous_63 + 1
20: RobsFeet_17
21: Shrubaron_17
22: Metamorphoo_17
23: Glorp_64
24: Tyrumbra_15
25: Bramble_48 + 6
26: MementoMori_40 + 1
27: Matzah_40
28: Cressida_41
29: Count_81

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 347516 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347516 has 83 members, 6 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 : Hasitha_3, Vafari_3, Wardwill_3, BaronJohn_3, Zayuliv_3, GreenIvy_3, CaptainRex_3, LilTerminator_3, Fulton_3, Librie_3
• Track 6 : Alakazam_3
• Track 7 : Neferthena_3
• Track 8 : Zepp_3
• Track 9 : Nebulous_3, Clock_3
• Track 10 : QuadZero_3
• Track 11 : Jemerald_3, Juicer_3
• Track 12 : Chepli_3
• Track 13 : KatChan_3, Luna18_3
• Track 14 : BrazzalePHS_62, Shotgun_63, Hermeonysus_63, Rockwell_62, Germa_65, PhedwardCullen_62, Kowalski_62, Busephilis_62, Savannah_62, Piperis_64, Phrancesco_63, Jefe_63, Cranjis_64, Ganandorf_62, Quhwah_67, Selwyn23_64, Scumberland_65, Onika_62, Honeyfin_64, BeagleBug_62, Pulchra_65, Yeti_65, LittleFortune_65, Ramiel05_62, Lucretia_63, Jollipop_64, PiperSansNom_64, Antares_63
• Track 15 : Paschalis_63, EarickHC_64, Crisis_64, KaiHaiDragon_64, PierreOrion_63
• Track 16 : SirFrank_63, ClearAsMud_67
• Track 17 : Fireman_16
• Track 18 : NoodlelyBoi_64
• Track 19 : Phorgeous_63, CrazyRich_62
• Track 20 : RobsFeet_17
• Track 21 : Shrubaron_17
• Track 22 : Metamorphoo_17
• Track 23 : Glorp_64
• Track 24 : Tyrumbra_15
• Track 25 : Bramble_48, LordBart_48, RikSengupta_48, TinyMiny_48, Sparcetus_48, Ajin_48, Kors_48
• Track 26 : MementoMori_40, Cinna_39
• Track 27 : Matzah_40
• Track 28 : Cressida_41
• Track 29 : 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 26, it was called in 37 of the 77 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Antares_63, BeagleBug_62, BrazzalePHS_62, Busephilis_62, Cinna_39, ClearAsMud_67, Cranjis_64, Cressida_41, Crisis_64, EarickHC_64, Ganandorf_62, Germa_65, Glorp_64, Hermeonysus_63, Honeyfin_64, Jefe_63, Jollipop_64, KaiHaiDragon_64, Kowalski_62, LittleFortune_65, Lucretia_63, Matzah_40, MementoMori_40, NoodlelyBoi_64, Onika_62, Paschalis_63, PhedwardCullen_62, Phrancesco_63, PierreOrion_63, PiperSansNom_64, Piperis_64, Pulchra_65, Quhwah_67, Ramiel05_62, Rockwell_62, Savannah_62, Scumberland_65, Selwyn23_64, Shotgun_63, SirFrank_63, Yeti_65,

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:
• Ajin_48, Alakazam_3, BaronJohn_3, Bramble_48, CaptainRex_3, Chepli_3, Clock_3, Count_81, Fireman_16, Fulton_3, GreenIvy_3, Hasitha_3, HerculesXL_3, Ixel_3, Ixel_4, Jemerald_3, Juicer_3, KatChan_3, Kors_48, Librie_3, LilTerminator_3, LordBart_48, Luna18_3, Mercedes_3, Metamorphoo_17, Nebulous_3, Neferthena_3, QuadZero_3, RikSengupta_48, RobsFeet_17, Scissor2024_3, Shrubaron_17, Sparcetus_48, TinyMiny_48, Tinyman4_3, Tyrumbra_15, Vafari_3, Wardwill_3, Zayuliv_3, Zepp_3,

Summary by start number:

Start 24:
• Found in 26 of 83 (31.3%) of genes in pham
• Manual Annotations of this start: 24 of 77
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alakazam_3 (EA5), BaronJohn_3 (EA5), CaptainRex_3 (EA5), Chepli_3 (EA6), Clock_3 (EA5), Fulton_3 (EA5), GreenIvy_3 (EA5), Hasitha_3 (EA5), HerculesXL_3 (EA11), Ixel_3 (EA11), Jemerald_3 (EA6), Juicer_3 (EA6), KatChan_3 (EA6), Librie_3 (EA5), LilTerminator_3 (EA5), Luna18_3 (EA6), Mercedes_3 (EA), Nebulous_3 (EA5), Neferthena_3 (EA5), QuadZero_3 (EA5), Scissor2024_3 (EA11), Tinyman4_3 (EA11), Vafari_3 (EA5), Wardwill_3 (EA5), Zayuliv_3 (EA5), Zepp_3 (EA5),

Start 25:
• Found in 31 of 83 (37.3%) of genes in pham
• Manual Annotations of this start: 2 of 77
• Called 6.5% of time when present
• Phage (with cluster) where this start called: CrazyRich_62 (EC), Phorgeous_63 (EC),

Start 26:

• Found in 43 of 83 (51.8%) of genes in pham
• Manual Annotations of this start: 37 of 77
• Called 95.3% of time when present
• Phage (with cluster) where this start called: Antares_63 (EC), BeagleBug_62 (EC), BrazzalePHS_62 (EC), Busephilis_62 (EC), Cinna_39 (EI), ClearAsMud_67 (EC), Cranjis_64 (EC), Cressida_41 (EI), Crisis_64 (EC), EarickHC_64 (EC), Ganandorf_62 (EC), Germa_65 (EC), Glorp_64 (EC), Hermeonysus_63 (EC), Honeyfin_64 (EC), Jefe_63 (EC), Jollipop_64 (EC), KaiHaiDragon_64 (EC), Kowalski_62 (EC), LittleFortune_65 (EC), Lucretia_63 (EC), Matzah_40 (EI), MementoMori_40 (EI), NoodlelyBoi_64 (EC), Onika_62 (EC), Paschalis_63 (EC), PhedwardCullen_62 (EC), Phrancesco_63 (EC), PierreOrion_63 (EC), PiperSansNom_64 (EC), Piperis_64 (EC), Pulchra_65 (EC), Quhwah_67 (EC), Ramiel05_62 (EC), Rockwell_62 (EC), Savannah_62 (EC), Scumberland_65 (EC), Selwyn23_64 (EC), Shotgun_63 (EC), SirFrank_63 (EC), Yeti_65 (EC),

Start 27:
• Found in 9 of 83 (10.8%) of genes in pham
• Manual Annotations of this start: 1 of 77
• Called 11.1% of time when present
• Phage (with cluster) where this start called: Ixel_4 (EA11),

Start 28:
• Found in 8 of 83 (9.6%) of genes in pham
• Manual Annotations of this start: 8 of 77
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ajin_48 (EF), Bramble_48 (EF), Count_81 (EL), Kors_48 (EF), LordBart_48 (EF), RikSengupta_48 (EF), Sparcetus_48 (EF), TinyMiny_48 (EF),

Start 29:
• Found in 5 of 83 (6.0%) of genes in pham
• Manual Annotations of this start: 5 of 77
• 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), Tyrumbra_15 (EC),

Summary by clusters:

There are 8 clusters represented in this pham: EL, EA11, EF, EA, EC, EI, EA5, EA6,

Info for manual annotations of cluster EA:
•Start number 24 was manually annotated 1 time for cluster EA.

Info for manual annotations of cluster EA11:
•Start number 24 was manually annotated 3 times for cluster EA11.
•Start number 27 was manually annotated 1 time for cluster EA11.

Info for manual annotations of cluster EA5:
•Start number 24 was manually annotated 15 times for cluster EA5.

Info for manual annotations of cluster EA6:
•Start number 24 was manually annotated 5 times for cluster EA6.

Info for manual annotations of cluster EC:
•Start number 25 was manually annotated 2 times for cluster EC.
•Start number 26 was manually annotated 33 times for cluster EC.
•Start number 29 was manually annotated 5 times for cluster EC.

Info for manual annotations of cluster EF:
•Start number 28 was manually annotated 7 times for cluster EF.

Info for manual annotations of cluster EI:
•Start number 26 was manually annotated 4 times for cluster EI.

Info for manual annotations of cluster EL:
•Start number 28 was manually annotated 1 time for cluster EL.

Gene Information:

Gene: Ajin_48 Start: 30967, Stop: 31113, Start Num: 28
Candidate Starts for Ajin_48:
(22, 30898), (Start: 27 @30964 has 1 MA's), (Start: 28 @30967 has 8 MA's), (40, 31033),

Gene: Alakazam_3 Start: 2071, Stop: 2229, Start Num: 24
Candidate Starts for Alakazam_3:
(23, 2065), (Start: 24 @2071 has 24 MA's), (Start: 27 @2083 has 1 MA's), (37, 2137), (40, 2152),

Gene: Antares_63 Start: 40647, Stop: 40802, Start Num: 26
Candidate Starts for Antares_63:
(Start: 25 @40644 has 2 MA's), (Start: 26 @40647 has 37 MA's), (40, 40719),

Gene: BaronJohn_3 Start: 1963, Stop: 2109, Start Num: 24
Candidate Starts for BaronJohn_3:
(Start: 24 @1963 has 24 MA's), (40, 2029),

Gene: BeagleBug_62 Start: 40427, Stop: 40582, Start Num: 26
Candidate Starts for BeagleBug_62:
(Start: 25 @40424 has 2 MA's), (Start: 26 @40427 has 37 MA's), (40, 40499),

Gene: Bramble_48 Start: 31016, Stop: 31162, Start Num: 28
Candidate Starts for Bramble_48:
(22, 30947), (Start: 27 @31013 has 1 MA's), (Start: 28 @31016 has 8 MA's), (40, 31082),

Gene: BrazzalePHS_62 Start: 40409, Stop: 40564, Start Num: 26
Candidate Starts for BrazzalePHS_62:
(Start: 25 @40406 has 2 MA's), (Start: 26 @40409 has 37 MA's), (40, 40481),

Gene: Busephilis_62 Start: 40354, Stop: 40509, Start Num: 26
Candidate Starts for Busephilis_62:
(Start: 25 @40351 has 2 MA's), (Start: 26 @40354 has 37 MA's), (40, 40426),

Gene: CaptainRex_3 Start: 1963, Stop: 2109, Start Num: 24
Candidate Starts for CaptainRex_3:
(Start: 24 @1963 has 24 MA's), (40, 2029),

Gene: Chepli_3 Start: 2101, Stop: 2247, Start Num: 24
Candidate Starts for Chepli_3:
(Start: 24 @2101 has 24 MA's), (38, 2155), (40, 2167),

Gene: Cinna_39 Start: 31034, Stop: 31174, Start Num: 26
Candidate Starts for Cinna_39:
(Start: 26 @31034 has 37 MA's), (39, 31103),

Gene: ClearAsMud_67 Start: 40937, Stop: 41092, Start Num: 26
Candidate Starts for ClearAsMud_67:
(6, 40664), (16, 40811), (Start: 26 @40937 has 37 MA's), (32, 40955), (34, 40976), (36, 40991), (37, 40994), (40, 41009),

Gene: Clock_3 Start: 2104, Stop: 2262, Start Num: 24
Candidate Starts for Clock_3:
(9, 1921), (13, 1969), (Start: 24 @2104 has 24 MA's), (38, 2173), (40, 2185), (44, 2218),

Gene: Count_81 Start: 55860, Stop: 56000, Start Num: 28
Candidate Starts for Count_81:
(21, 55776), (Start: 28 @55860 has 8 MA's), (38, 55914), (42, 55935),

Gene: Cranjis_64 Start: 40602, Stop: 40757, Start Num: 26
Candidate Starts for Cranjis_64:
(Start: 25 @40599 has 2 MA's), (Start: 26 @40602 has 37 MA's), (40, 40674),

Gene: CrazyRich_62 Start: 40408, Stop: 40566, Start Num: 25
Candidate Starts for CrazyRich_62:
(Start: 25 @40408 has 2 MA's), (Start: 26 @40411 has 37 MA's), (40, 40483),

Gene: Cressida_41 Start: 30483, Stop: 30641, Start Num: 26
Candidate Starts for Cressida_41:
(1, 29526), (2, 29640), (3, 29778), (14, 30348), (Start: 26 @30483 has 37 MA's), (39, 30552), (41, 30561), (46, 30606),

Gene: Crisis_64 Start: 40417, Stop: 40572, Start Num: 26
Candidate Starts for Crisis_64:
(6, 40159), (10, 40258), (15, 40303), (Start: 26 @40417 has 37 MA's), (40, 40489),

Gene: EarickHC_64 Start: 40339, Stop: 40494, Start Num: 26
Candidate Starts for EarickHC_64:
(6, 40081), (10, 40180), (15, 40225), (Start: 26 @40339 has 37 MA's), (40, 40411),

Gene: Fireman_16 Start: 6897, Stop: 7046, Start Num: 29
Candidate Starts for Fireman_16:
(17, 6774), (18, 6777), (19, 6792), (22, 6813), (Start: 29 @6897 has 5 MA's), (31, 6903), (40, 6963), (47, 7020),

Gene: Fulton_3 Start: 1963, Stop: 2109, Start Num: 24
Candidate Starts for Fulton_3:
(Start: 24 @1963 has 24 MA's), (40, 2029),

Gene: Ganandorf_62 Start: 40435, Stop: 40590, Start Num: 26

Candidate Starts for Ganandorf_62:
(Start: 25 @40432 has 2 MA's), (Start: 26 @40435 has 37 MA's), (40, 40507),

Gene: Germa_65 Start: 40265, Stop: 40420, Start Num: 26
Candidate Starts for Germa_65:
(Start: 25 @40262 has 2 MA's), (Start: 26 @40265 has 37 MA's), (40, 40337),

Gene: Glorp_64 Start: 40402, Stop: 40557, Start Num: 26
Candidate Starts for Glorp_64:
(Start: 25 @40399 has 2 MA's), (Start: 26 @40402 has 37 MA's), (40, 40474),

Gene: GreenIvy_3 Start: 1963, Stop: 2109, Start Num: 24
Candidate Starts for GreenIvy_3:
(Start: 24 @1963 has 24 MA's), (40, 2029),

Gene: Hasitha_3 Start: 1963, Stop: 2109, Start Num: 24
Candidate Starts for Hasitha_3:
(Start: 24 @1963 has 24 MA's), (40, 2029),

Gene: HerculesXL_3 Start: 1952, Stop: 2107, Start Num: 24
Candidate Starts for HerculesXL_3:
(Start: 24 @1952 has 24 MA's), (40, 2018),

Gene: Hermeonysus_63 Start: 40330, Stop: 40485, Start Num: 26
Candidate Starts for Hermeonysus_63:
(Start: 25 @40327 has 2 MA's), (Start: 26 @40330 has 37 MA's), (40, 40402),

Gene: Honeyfin_64 Start: 40590, Stop: 40745, Start Num: 26
Candidate Starts for Honeyfin_64:
(Start: 25 @40587 has 2 MA's), (Start: 26 @40590 has 37 MA's), (40, 40662),

Gene: Ixel_4 Start: 2216, Stop: 2365, Start Num: 27
Candidate Starts for Ixel_4:
(Start: 27 @2216 has 1 MA's), (35, 2261), (43, 2309),

Gene: Ixel_3 Start: 2066, Stop: 2212, Start Num: 24
Candidate Starts for Ixel_3:
(Start: 24 @2066 has 24 MA's), (30, 2072), (40, 2132),

Gene: Jefe_63 Start: 40388, Stop: 40543, Start Num: 26
Candidate Starts for Jefe_63:
(Start: 25 @40385 has 2 MA's), (Start: 26 @40388 has 37 MA's), (40, 40460),

Gene: Jemerald_3 Start: 2077, Stop: 2223, Start Num: 24
Candidate Starts for Jemerald_3:
(5, 1798), (11, 1930), (12, 1933), (18, 1981), (20, 2014), (Start: 24 @2077 has 24 MA's), (32, 2089), (33, 2107), (40, 2143),

Gene: Jollipop_64 Start: 40770, Stop: 40925, Start Num: 26
Candidate Starts for Jollipop_64:
(Start: 25 @40767 has 2 MA's), (Start: 26 @40770 has 37 MA's), (40, 40842),

Gene: Juicer_3 Start: 2077, Stop: 2223, Start Num: 24

Candidate Starts for Juicer_3:
(5, 1798), (11, 1930), (12, 1933), (18, 1981), (20, 2014), (Start: 24 @2077 has 24 MA's), (32, 2089), (33, 2107), (40, 2143),

Gene: KaiHaiDragon_64 Start: 40339, Stop: 40494, Start Num: 26
Candidate Starts for KaiHaiDragon_64:
(6, 40081), (10, 40180), (15, 40225), (Start: 26 @40339 has 37 MA's), (40, 40411),

Gene: KatChan_3 Start: 2101, Stop: 2247, Start Num: 24
Candidate Starts for KatChan_3:
(Start: 24 @2101 has 24 MA's), (40, 2167),

Gene: Kors_48 Start: 31044, Stop: 31190, Start Num: 28
Candidate Starts for Kors_48:
(22, 30975), (Start: 27 @31041 has 1 MA's), (Start: 28 @31044 has 8 MA's), (40, 31110),

Gene: Kowalski_62 Start: 40404, Stop: 40559, Start Num: 26
Candidate Starts for Kowalski_62:
(Start: 25 @40401 has 2 MA's), (Start: 26 @40404 has 37 MA's), (40, 40476),

Gene: Librie_3 Start: 1963, Stop: 2109, Start Num: 24
Candidate Starts for Librie_3:
(Start: 24 @1963 has 24 MA's), (40, 2029),

Gene: LilTerminator_3 Start: 1963, Stop: 2109, Start Num: 24
Candidate Starts for LilTerminator_3:
(Start: 24 @1963 has 24 MA's), (40, 2029),

Gene: LittleFortune_65 Start: 40695, Stop: 40850, Start Num: 26
Candidate Starts for LittleFortune_65:
(Start: 25 @40692 has 2 MA's), (Start: 26 @40695 has 37 MA's), (40, 40767),

Gene: LordBart_48 Start: 30953, Stop: 31099, Start Num: 28
Candidate Starts for LordBart_48:
(22, 30884), (Start: 27 @30950 has 1 MA's), (Start: 28 @30953 has 8 MA's), (40, 31019),

Gene: Lucretia_63 Start: 40320, Stop: 40475, Start Num: 26
Candidate Starts for Lucretia_63:
(Start: 25 @40317 has 2 MA's), (Start: 26 @40320 has 37 MA's), (40, 40392),

Gene: Luna18_3 Start: 2101, Stop: 2247, Start Num: 24
Candidate Starts for Luna18_3:
(Start: 24 @2101 has 24 MA's), (40, 2167),

Gene: Matzah_40 Start: 30974, Stop: 31114, Start Num: 26
Candidate Starts for Matzah_40:
(3, 30272), (4, 30299), (7, 30749), (14, 30839), (Start: 26 @30974 has 37 MA's), (39, 31043),

Gene: MementoMori_40 Start: 30722, Stop: 30862, Start Num: 26
Candidate Starts for MementoMori_40:
(Start: 26 @30722 has 37 MA's), (39, 30791),

Gene: Mercedes_3 Start: 1955, Stop: 2101, Start Num: 24

Candidate Starts for Mercedes_3:
(Start: 24 @1955 has 24 MA's), (40, 2021), (43, 2042), (45, 2057), (48, 2081),

Gene: Metamorphoo_17 Start: 7070, Stop: 7219, Start Num: 29
Candidate Starts for Metamorphoo_17:
(17, 6947), (18, 6950), (19, 6965), (22, 6986), (Start: 29 @7070 has 5 MA's), (31, 7076), (34, 7103), (40, 7136),

Gene: Nebulous_3 Start: 2113, Stop: 2271, Start Num: 24
Candidate Starts for Nebulous_3:
(9, 1930), (13, 1978), (Start: 24 @2113 has 24 MA's), (38, 2182), (40, 2194), (44, 2227),

Gene: Neferthena_3 Start: 2107, Stop: 2265, Start Num: 24
Candidate Starts for Neferthena_3:
(8, 1906), (9, 1924), (13, 1972), (Start: 24 @2107 has 24 MA's), (38, 2176), (40, 2188), (44, 2221),

Gene: NoodlelyBoi_64 Start: 41186, Stop: 41341, Start Num: 26
Candidate Starts for NoodlelyBoi_64:
(Start: 26 @41186 has 37 MA's), (32, 41204), (34, 41225), (36, 41240), (37, 41243), (40, 41258),

Gene: Onika_62 Start: 40413, Stop: 40568, Start Num: 26
Candidate Starts for Onika_62:
(Start: 25 @40410 has 2 MA's), (Start: 26 @40413 has 37 MA's), (40, 40485),

Gene: Paschalis_63 Start: 40435, Stop: 40590, Start Num: 26
Candidate Starts for Paschalis_63:
(6, 40177), (10, 40276), (15, 40321), (Start: 26 @40435 has 37 MA's), (40, 40507),

Gene: PhedwardCullen_62 Start: 40158, Stop: 40313, Start Num: 26
Candidate Starts for PhedwardCullen_62:
(Start: 25 @40155 has 2 MA's), (Start: 26 @40158 has 37 MA's), (40, 40230),

Gene: Phorgeous_63 Start: 40218, Stop: 40376, Start Num: 25
Candidate Starts for Phorgeous_63:
(Start: 25 @40218 has 2 MA's), (Start: 26 @40221 has 37 MA's), (40, 40293),

Gene: Phrancesco_63 Start: 40544, Stop: 40699, Start Num: 26
Candidate Starts for Phrancesco_63:
(Start: 25 @40541 has 2 MA's), (Start: 26 @40544 has 37 MA's), (40, 40616),

Gene: PierreOrion_63 Start: 40644, Stop: 40799, Start Num: 26
Candidate Starts for PierreOrion_63:
(6, 40386), (10, 40485), (15, 40530), (Start: 26 @40644 has 37 MA's), (40, 40716),

Gene: PiperSansNom_64 Start: 40726, Stop: 40881, Start Num: 26
Candidate Starts for PiperSansNom_64:
(Start: 25 @40723 has 2 MA's), (Start: 26 @40726 has 37 MA's), (40, 40798),

Gene: Piperis_64 Start: 40346, Stop: 40501, Start Num: 26
Candidate Starts for Piperis_64:
(Start: 25 @40343 has 2 MA's), (Start: 26 @40346 has 37 MA's), (40, 40418),

Gene: Pulchra_65 Start: 40742, Stop: 40897, Start Num: 26

Candidate Starts for Pulchra_65:
(Start: 25 @40739 has 2 MA's), (Start: 26 @40742 has 37 MA's), (40, 40814),

Gene: QuadZero_3 Start: 1963, Stop: 2109, Start Num: 24
Candidate Starts for QuadZero_3:
(Start: 24 @1963 has 24 MA's), (40, 2029),

Gene: Quhwah_67 Start: 41034, Stop: 41189, Start Num: 26
Candidate Starts for Quhwah_67:
(Start: 25 @41031 has 2 MA's), (Start: 26 @41034 has 37 MA's), (40, 41106),

Gene: Ramiel05_62 Start: 40404, Stop: 40559, Start Num: 26
Candidate Starts for Ramiel05_62:
(Start: 25 @40401 has 2 MA's), (Start: 26 @40404 has 37 MA's), (40, 40476),

Gene: RikSengupta_48 Start: 31081, Stop: 31227, Start Num: 28
Candidate Starts for RikSengupta_48:
(22, 31012), (Start: 27 @31078 has 1 MA's), (Start: 28 @31081 has 8 MA's), (40, 31147),

Gene: RobsFeet_17 Start: 6912, Stop: 7061, Start Num: 29
Candidate Starts for RobsFeet_17:
(Start: 29 @6912 has 5 MA's), (34, 6945), (40, 6978),

Gene: Rockwell_62 Start: 40437, Stop: 40592, Start Num: 26
Candidate Starts for Rockwell_62:
(Start: 25 @40434 has 2 MA's), (Start: 26 @40437 has 37 MA's), (40, 40509),

Gene: Savannah_62 Start: 40464, Stop: 40619, Start Num: 26
Candidate Starts for Savannah_62:
(Start: 25 @40461 has 2 MA's), (Start: 26 @40464 has 37 MA's), (40, 40536),

Gene: Scissor2024_3 Start: 1952, Stop: 2107, Start Num: 24
Candidate Starts for Scissor2024_3:
(Start: 24 @1952 has 24 MA's), (40, 2018),

Gene: Scumberland_65 Start: 40659, Stop: 40814, Start Num: 26
Candidate Starts for Scumberland_65:
(Start: 25 @40656 has 2 MA's), (Start: 26 @40659 has 37 MA's), (40, 40731),

Gene: Selwyn23_64 Start: 40576, Stop: 40731, Start Num: 26
Candidate Starts for Selwyn23_64:
(Start: 25 @40573 has 2 MA's), (Start: 26 @40576 has 37 MA's), (40, 40648),

Gene: Shotgun_63 Start: 40340, Stop: 40495, Start Num: 26
Candidate Starts for Shotgun_63:
(Start: 25 @40337 has 2 MA's), (Start: 26 @40340 has 37 MA's), (40, 40412),

Gene: Shrubaron_17 Start: 6959, Stop: 7108, Start Num: 29
Candidate Starts for Shrubaron_17:
(17, 6836), (18, 6839), (22, 6875), (Start: 29 @6959 has 5 MA's), (31, 6965), (34, 6992), (40, 7025), (47, 7082),

Gene: SirFrank_63 Start: 40632, Stop: 40787, Start Num: 26

Candidate Starts for SirFrank_63:
(6, 40359), (16, 40506), (Start: 26 @40632 has 37 MA's), (32, 40650), (34, 40671), (36, 40686), (37, 40689), (40, 40704),

Gene: Sparcetus_48 Start: 30958, Stop: 31104, Start Num: 28
Candidate Starts for Sparcetus_48:
(22, 30889), (Start: 27 @30955 has 1 MA's), (Start: 28 @30958 has 8 MA's), (40, 31024),

Gene: TinyMiny_48 Start: 30979, Stop: 31125, Start Num: 28
Candidate Starts for TinyMiny_48:
(22, 30910), (Start: 27 @30976 has 1 MA's), (Start: 28 @30979 has 8 MA's), (40, 31045),

Gene: Tinyman4_3 Start: 1952, Stop: 2107, Start Num: 24
Candidate Starts for Tinyman4_3:
(Start: 24 @1952 has 24 MA's), (40, 2018),

Gene: Tyrumbra_15 Start: 6388, Stop: 6537, Start Num: 29
Candidate Starts for Tyrumbra_15:
(17, 6265), (18, 6268), (19, 6283), (22, 6304), (Start: 29 @6388 has 5 MA's), (31, 6394), (40, 6454), (47, 6511),

Gene: Vafari_3 Start: 1963, Stop: 2109, Start Num: 24
Candidate Starts for Vafari_3:
(Start: 24 @1963 has 24 MA's), (40, 2029),

Gene: Wardwill_3 Start: 1963, Stop: 2109, Start Num: 24
Candidate Starts for Wardwill_3:
(Start: 24 @1963 has 24 MA's), (40, 2029),

Gene: Yeti_65 Start: 40378, Stop: 40533, Start Num: 26
Candidate Starts for Yeti_65:
(Start: 25 @40375 has 2 MA's), (Start: 26 @40378 has 37 MA's), (40, 40450),

Gene: Zayuliv_3 Start: 1963, Stop: 2109, Start Num: 24
Candidate Starts for Zayuliv_3:
(Start: 24 @1963 has 24 MA's), (40, 2029),

Gene: Zepp_3 Start: 1963, Stop: 2109, Start Num: 24
Candidate Starts for Zepp_3:
(Start: 24 @1963 has 24 MA's), (32, 1975), (40, 2029),