Pham 1061


1: Herb_29 + 5
2: Joann_31 + 1
3: Preamble_28 + 3
4: Wayne_32 + 4
5: Lasagna_28 + 14
6: Lakshmi_31
7: Aledel_29 + 8
8: PinkFriday_28
9: Korra_32
10: Fluke_32 + 3
11: GreenHearts_31
12: Immaculata_32 + 6
13: AppleCider_32
14: Jumboset_32 + 3
15: MeganNoll_31
16: Nubia_31
17: HeadNerd_28 + 1
18: Kalizol_33
19: Zorro_32 + 1
20: Moki_28 + 1
21: Oxynirius_31
22: Uria_29
23: EstebanJulior_29 + 1
24: Wawa_32
25: Beethoven_32
26: Pumancara_28
27: BigMack_28
28: Misaeng_31 + 2
29: BrotherBLo_32
30: Greenhouse_31
31: Theresita_35
32: Cicada_37
33: Jera_36
34: Hitur_35
35: Rasovi_35
36: Johann_36 + 1
37: FireCastle_35
38: TurboVicky_35
39: Benry_34
40: Sucha_32
41: Typher_37
42: Milani_35
43: PermaG_36
44: SBlackberry_35
45: Zanella_35

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 1061 Report

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

Pham number 1061 has 99 members, 5 are drafts.

Phages represented in each track:
• Track 1 : Herb_29, Maria1952_29, Daiboju_29, Temper16_29, KingBob_29, Sergei_29
• Track 2 : Joann_31, Albanese_31
• Track 3 : Preamble_28, DreamTeam_28, Gisselle_28, Kittykat_28
• Track 4 : Wayne_32, Canowicakte_32, Suppi_32, CallieOMalley_32, Litotes_32
• Track 5 : Lasagna_28, DrRobert_28, Lucy_28, Christian_28, PitaDog_28, WonderBoy_27, OurGirlNessie_28, Bodacious_28, Nancia_28, CristinaYang_28, Pterodactyl_28, LilStuart_28, Makoto_28, Lennox_28, ChewChew_28
• Track 6 : Lakshmi_31
• Track 7 : Aledel_29, AustinPowers_29, Supakev_29, HunterDalle_29, Riovina_29, Eunoia_29, Vulture_29, OMalley_29, Chridison_28
• Track 8 : PinkFriday_28
• Track 9 : Korra_32
• Track 10 : Fluke_32, Carpal_32, Scuttle_32, TattModd_32
• Track 11 : GreenHearts_31
• Track 12 : Immaculata_32, Glenn_32, Rozby_32, Potatoes_32, Riverdale_32, Cholula_32, Vallejo_32
• Track 13 : AppleCider_32
• Track 14 : Jumboset_32, MrGloopy_32, Savage2526_32, RAP15_32
• Track 15 : MeganNoll_31
• Track 16 : Nubia_31
• Track 17 : HeadNerd_28, Bennie_28
• Track 18 : Kalizoi_33
• Track 19 : Zorro_32, Dino_32
• Track 20 : Moki_28, Huckleberry_28
• Track 21 : Oxynfrius_31
• Track 22 : Urla_29
• Track 23 : EstebanJulior_29, MamaPearl_29
• Track 24 : Wawa_32
• Track 25 : Beethoven_32
• Track 26 : Pumancara_28
• Track 27 : BigMack_28
• Track 28 : Misaeng_31, RcigaStruga_31, Huntingdon_31
• Track 29 : BrotherBLo_32
• Track 30 : Greenhouse_31
• Track 31 : Theresita_35
• Track 32 : Cicada_37

• Track 33 : Jera_36
• Track 34 : Htur_35
• Track 35 : Rasovi_35
• Track 36 : Johann_36, Goodman_36
• Track 37 : FireCastle_35
• Track 38 : TurboVicky_35
• Track 39 : Benry_34
• Track 40 : Sucha_32
• Track 41 : Typher_37
• Track 42 : Milani_35
• Track 43 : PermaG_36
• Track 44 : SBlackberry_35
• Track 45 : Zanella_35

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

The start number called the most often in the published annotations is 9, it was called in 78 of the 94 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Albanese_31, Aledel_29, AppleCider_32, AustinPowers_29, Beethoven_32, Bennie_28, BigMack_28, Bodacious_28, BrotherBLo_32, CallieOMalley_32, Canowicakte_32, Carpal_32, ChewChew_28, Cholula_32, Chridison_28, Christian_28, CristinaYang_28, Daiboju_29, Dino_32, DrRobert_28, DreamTeam_28, EstebanJulior_29, Eunoia_29, Fluke_32, Gisselle_28, Glenn_32, GreenHearts_31, Greenhouse_31, HeadNerd_28, Herb_29, Huckleberry_28, HunterDalle_29, Huntingdon_31, Immaculata_32, Joann_31, Jumboset_32, Kalizoi_33, KingBob_29, Kittykat_28, Lakshmi_31, Lasagna_28, Lennox_28, LilStuart_28, Litotes_32, Lucy_28, Makoto_28, MamaPearl_29, Maria1952_29, Misaeng_31, Moki_28, MrGloopy_32, Nancia_28, Nubia_31, OMalley_29, OurGirlNessie_28, Oxynfrius_31, PinkFriday_28, PitaDog_28, Potatoes_32, Preamble_28, Pterodactyl_28, Pumancara_28, RAP15_32, RcigaStruga_31, Riovina_29, Riverdale_32, Rozby_32, Savage2526_32, Scuttle_32, Sergei_29, Supakev_29, Suppi_32, TattModd_32, Temper16_29, Urla_29, Vallejo_32, Vulture_29, Wawa_32, Wayne_32, WonderBoy_27, Zorro_32,

Genes that have the "Most Annotated" start but do not call it:
• Korra_32, MeganNoll_31,

Genes that do not have the "Most Annotated" start:
• Benry_34, Cicada_37, FireCastle_35, Goodman_36, Htur_35, Jera_36, Johann_36, Milani_35, PermaG_36, Rasovi_35, SBlackberry_35, Sucha_32, Theresita_35, TurboVicky_35, Typher_37, Zanella_35,

Summary by start number:

Start 2:
• Found in 22 of 99 (22.2%) of genes in pham
• Manual Annotations of this start: 2 of 94
• Called 9.1% of time when present

• Phage (with cluster) where this start called: Korra_32 (AK), MeganNoll_31 (AK),

Start 9:
• Found in 83 of 99 (83.8%) of genes in pham
• Manual Annotations of this start: 78 of 94
• Called 97.6% of time when present
• Phage (with cluster) where this start called: Albanese_31 (AK), Aledel_29 (AK), AppleCider_32 (AK), AustinPowers_29 (AK), Beethoven_32 (AK), Bennie_28 (AK), BigMack_28 (AK), Bodacious_28 (AK), BrotherBLo_32 (AK), CallieOMalley_32 (AK), Canowicakte_32 (AK), Carpal_32 (AK), ChewChew_28 (AK), Cholula_32 (AK), Chridison_28 (AK), Christian_28 (AK), CristinaYang_28 (AK), Daiboju_29 (AK), Dino_32 (AK), DrRobert_28 (AK), DreamTeam_28 (AK), EstebanJulior_29 (AK), Eunoia_29 (AK), Fluke_32 (AK), Gisselle_28 (AK), Glenn_32 (AK), GreenHearts_31 (AK), Greenhouse_31 (AK), HeadNerd_28 (AK), Herb_29 (AK), Huckleberry_28 (AK), HunterDalle_29 (AK), Huntingdon_31 (AK), Immaculata_32 (AK), Joann_31 (AK), Jumboset_32 (AK), Kalizoi_33 (AK), KingBob_29 (AK), Kittykat_28 (AK), Lakshmi_31 (AK), Lasagna_28 (AK), Lennox_28 (AK), LilStuart_28 (AK), Litotes_32 (AK), Lucy_28 (AK), Makoto_28 (AK), MamaPearl_29 (AK), Maria1952_29 (AK), Misaeng_31 (AK), Moki_28 (AK), MrGloopy_32 (AK), Nancia_28 (AK), Nubia_31 (AK), OMalley_29 (AK), OurGirlNessie_28 (AK), Oxynfrius_31 (AK), PinkFriday_28 (AK), PitaDog_28 (AK), Potatoes_32 (AK), Preamble_28 (AK), Pterodactyl_28 (AK), Pumancara_28 (AK), RAP15_32 (AK), RcigaStruga_31 (AK), Riovina_29 (AK), Riverdale_32 (AK), Rozby_32 (AK), Savage2526_32 (AK), Scuttle_32 (AK), Sergei_29 (AK), Supakev_29 (AK), Suppi_32 (AK), TattModd_32 (AK), Temper16_29 (AK), Urla_29 (AK), Vallejo_32 (AK), Vulture_29 (AK), Wawa_32 (AK), Wayne_32 (AK), WonderBoy_27 (AK), Zorro_32 (AK),

Start 10:
• Found in 16 of 99 (16.2%) of genes in pham
• Manual Annotations of this start: 14 of 94
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Benry_34 (EJ), Cicada_37 (EJ), FireCastle_35 (EJ), Goodman_36 (EJ), Htur_35 (EJ), Jera_36 (EJ), Johann_36 (EJ), Milani_35 (EJ), PermaG_36 (EJ), Rasovi_35 (EJ), SBlackberry_35 (EJ), Sucha_32 (EJ), Theresita_35 (EA7), TurboVicky_35 (EJ), Typher_37 (EJ), Zanella_35 (EJ),

Summary by clusters:

There are 3 clusters represented in this pham: AK, EA7, EJ,

Info for manual annotations of cluster AK:
•Start number 2 was manually annotated 2 times for cluster AK.
•Start number 9 was manually annotated 78 times for cluster AK.

Info for manual annotations of cluster EA7:
•Start number 10 was manually annotated 1 time for cluster EA7.

Info for manual annotations of cluster EJ:
•Start number 10 was manually annotated 13 times for cluster EJ.

Gene Information:

Gene: Albanese_31 Start: 24070, Stop: 24675, Start Num: 9
Candidate Starts for Albanese_31:
(Start: 2 @23878 has 2 MA's), (4, 23944), (Start: 9 @24070 has 78 MA's), (12, 24109), (14, 24139), (25, 24361),

Gene: Aledel_29 Start: 23671, Stop: 24288, Start Num: 9
Candidate Starts for Aledel_29:
(7, 23596), (Start: 9 @23671 has 78 MA's), (13, 23755),

Gene: AppleCider_32 Start: 24065, Stop: 24688, Start Num: 9
Candidate Starts for AppleCider_32:
(Start: 9 @24065 has 78 MA's), (13, 24152), (14, 24155), (23, 24350), (33, 24578),

Gene: AustinPowers_29 Start: 23669, Stop: 24286, Start Num: 9
Candidate Starts for AustinPowers_29:
(7, 23594), (Start: 9 @23669 has 78 MA's), (13, 23753),

Gene: Beethoven_32 Start: 24069, Stop: 24686, Start Num: 9
Candidate Starts for Beethoven_32:
(Start: 2 @23880 has 2 MA's), (3, 23889), (Start: 9 @24069 has 78 MA's), (12, 24123), (13, 24150), (14, 24153), (26, 24405), (33, 24573),

Gene: Bennie_28 Start: 22502, Stop: 23128, Start Num: 9
Candidate Starts for Bennie_28:
(Start: 2 @22295 has 2 MA's), (5, 22397), (Start: 9 @22502 has 78 MA's), (13, 22595), (17, 22649), (26, 22850),

Gene: Benry_34 Start: 23284, Stop: 23847, Start Num: 10
Candidate Starts for Benry_34:
(Start: 10 @23284 has 14 MA's), (20, 23428), (24, 23548), (38, 23836),

Gene: BigMack_28 Start: 22539, Stop: 23165, Start Num: 9
Candidate Starts for BigMack_28:
(Start: 9 @22539 has 78 MA's), (13, 22626), (22, 22785), (23, 22824),

Gene: Bodacious_28 Start: 22552, Stop: 23151, Start Num: 9
Candidate Starts for Bodacious_28:
(Start: 9 @22552 has 78 MA's), (12, 22585), (13, 22612), (33, 23038),

Gene: BrotherBLo_32 Start: 24075, Stop: 24695, Start Num: 9
Candidate Starts for BrotherBLo_32:
(Start: 9 @24075 has 78 MA's), (12, 24129), (13, 24156), (14, 24159), (23, 24354), (33, 24582),

Gene: CallieOMalley_32 Start: 24065, Stop: 24688, Start Num: 9
Candidate Starts for CallieOMalley_32:
(Start: 9 @24065 has 78 MA's), (13, 24152), (14, 24155), (23, 24350),

Gene: Canowicakte_32 Start: 24100, Stop: 24723, Start Num: 9
Candidate Starts for Canowicakte_32:
(Start: 9 @24100 has 78 MA's), (13, 24187), (14, 24190), (23, 24385),

Gene: Carpal_32 Start: 24076, Stop: 24693, Start Num: 9
Candidate Starts for Carpal_32:

(Start: 2 @23887 has 2 MA's), (3, 23896), (Start: 9 @24076 has 78 MA's), (12, 24130), (13, 24157), (14, 24160), (26, 24412), (33, 24580),

Gene: ChewChew_28 Start: 22547, Stop: 23146, Start Num: 9
Candidate Starts for ChewChew_28:
(Start: 9 @22547 has 78 MA's), (12, 22580), (13, 22607), (33, 23033),

Gene: Cholula_32 Start: 24122, Stop: 24739, Start Num: 9
Candidate Starts for Cholula_32:
(Start: 9 @24122 has 78 MA's), (12, 24176), (13, 24203), (14, 24206), (26, 24458), (33, 24626),

Gene: Chridison_28 Start: 23669, Stop: 24286, Start Num: 9
Candidate Starts for Chridison_28:
(7, 23594), (Start: 9 @23669 has 78 MA's), (13, 23753),

Gene: Christian_28 Start: 22548, Stop: 23147, Start Num: 9
Candidate Starts for Christian_28:
(Start: 9 @22548 has 78 MA's), (12, 22581), (13, 22608), (33, 23034),

Gene: Cicada_37 Start: 25153, Stop: 25707, Start Num: 10
Candidate Starts for Cicada_37:
(Start: 10 @25153 has 14 MA's), (17, 25267), (21, 25342), (24, 25420), (32, 25594), (38, 25696),

Gene: CristinaYang_28 Start: 22552, Stop: 23151, Start Num: 9
Candidate Starts for CristinaYang_28:
(Start: 9 @22552 has 78 MA's), (12, 22585), (13, 22612), (33, 23038),

Gene: Daiboju_29 Start: 23661, Stop: 24290, Start Num: 9
Candidate Starts for Daiboju_29:
(Start: 9 @23661 has 78 MA's), (12, 23727), (13, 23754), (14, 23757), (33, 24180),

Gene: Dino_32 Start: 24074, Stop: 24691, Start Num: 9
Candidate Starts for Dino_32:
(6, 24011), (Start: 9 @24074 has 78 MA's), (12, 24128), (13, 24155), (14, 24158), (23, 24353), (26, 24410), (33, 24578),

Gene: DrRobert_28 Start: 22548, Stop: 23147, Start Num: 9
Candidate Starts for DrRobert_28:
(Start: 9 @22548 has 78 MA's), (12, 22581), (13, 22608), (33, 23034),

Gene: DreamTeam_28 Start: 22603, Stop: 23226, Start Num: 9
Candidate Starts for DreamTeam_28:
(Start: 9 @22603 has 78 MA's), (13, 22690), (22, 22849), (27, 22948),

Gene: EstebanJulior_29 Start: 23719, Stop: 24348, Start Num: 9
Candidate Starts for EstebanJulior_29:
(Start: 9 @23719 has 78 MA's), (13, 23812), (26, 24067),

Gene: Eunoia_29 Start: 23671, Stop: 24288, Start Num: 9
Candidate Starts for Eunoia_29:
(7, 23596), (Start: 9 @23671 has 78 MA's), (13, 23755),

Gene: FireCastle_35 Start: 24907, Stop: 25467, Start Num: 10

Candidate Starts for FireCastle_35:
(Start: 10 @24907 has 14 MA's), (16, 25009),

Gene: Fluke_32 Start: 24117, Stop: 24728, Start Num: 9
Candidate Starts for Fluke_32:
(Start: 2 @23928 has 2 MA's), (3, 23937), (Start: 9 @24117 has 78 MA's), (12, 24171), (13, 24198), (14, 24201), (26, 24453), (33, 24621),

Gene: Gisselle_28 Start: 22603, Stop: 23226, Start Num: 9
Candidate Starts for Gisselle_28:
(Start: 9 @22603 has 78 MA's), (13, 22690), (22, 22849), (27, 22948),

Gene: Glenn_32 Start: 24126, Stop: 24743, Start Num: 9
Candidate Starts for Glenn_32:
(Start: 9 @24126 has 78 MA's), (12, 24180), (13, 24207), (14, 24210), (26, 24462), (33, 24630),

Gene: Goodman_36 Start: 25066, Stop: 25620, Start Num: 10
Candidate Starts for Goodman_36:
(Start: 10 @25066 has 14 MA's), (17, 25180), (21, 25255), (24, 25333), (32, 25507), (35, 25546), (38, 25609),

Gene: GreenHearts_31 Start: 24162, Stop: 24767, Start Num: 9
Candidate Starts for GreenHearts_31:
(4, 24036), (Start: 9 @24162 has 78 MA's), (12, 24201), (14, 24231), (25, 24453),

Gene: Greenhouse_31 Start: 24076, Stop: 24681, Start Num: 9
Candidate Starts for Greenhouse_31:
(Start: 2 @23890 has 2 MA's), (3, 23899), (4, 23956), (8, 24022), (Start: 9 @24076 has 78 MA's), (12, 24115), (14, 24145), (25, 24367),

Gene: HeadNerd_28 Start: 22502, Stop: 23128, Start Num: 9
Candidate Starts for HeadNerd_28:
(Start: 2 @22295 has 2 MA's), (5, 22397), (Start: 9 @22502 has 78 MA's), (13, 22595), (17, 22649), (26, 22850),

Gene: Herb_29 Start: 23661, Stop: 24290, Start Num: 9
Candidate Starts for Herb_29:
(Start: 9 @23661 has 78 MA's), (12, 23727), (13, 23754), (14, 23757), (33, 24180),

Gene: Htur_35 Start: 25147, Stop: 25710, Start Num: 10
Candidate Starts for Htur_35:
(Start: 10 @25147 has 14 MA's), (24, 25423), (32, 25597), (35, 25636), (38, 25699),

Gene: Huckleberry_28 Start: 22502, Stop: 23131, Start Num: 9
Candidate Starts for Huckleberry_28:
(1, 22223), (Start: 2 @22295 has 2 MA's), (5, 22397), (Start: 9 @22502 has 78 MA's), (13, 22595), (17, 22649), (26, 22850),

Gene: HunterDalle_29 Start: 23668, Stop: 24285, Start Num: 9
Candidate Starts for HunterDalle_29:
(7, 23593), (Start: 9 @23668 has 78 MA's), (13, 23752),

Gene: Huntingdon_31 Start: 24054, Stop: 24659, Start Num: 9

Candidate Starts for Huntingdon_31:
(Start: 9 @24054 has 78 MA's), (12, 24093), (25, 24345),

Gene: Immaculata_32 Start: 24121, Stop: 24738, Start Num: 9
Candidate Starts for Immaculata_32:
(Start: 9 @24121 has 78 MA's), (12, 24175), (13, 24202), (14, 24205), (26, 24457), (33, 24625),

Gene: Jera_36 Start: 24210, Stop: 24764, Start Num: 10
Candidate Starts for Jera_36:
(Start: 10 @24210 has 14 MA's), (20, 24357), (24, 24477), (28, 24567), (32, 24651), (38, 24753),

Gene: Joann_31 Start: 24020, Stop: 24625, Start Num: 9
Candidate Starts for Joann_31:
(Start: 2 @23828 has 2 MA's), (4, 23894), (Start: 9 @24020 has 78 MA's), (12, 24059), (14, 24089), (25, 24311),

Gene: Johann_36 Start: 25066, Stop: 25620, Start Num: 10
Candidate Starts for Johann_36:
(Start: 10 @25066 has 14 MA's), (17, 25180), (21, 25255), (24, 25333), (32, 25507), (35, 25546), (38, 25609),

Gene: Jumboset_32 Start: 24069, Stop: 24686, Start Num: 9
Candidate Starts for Jumboset_32:
(Start: 2 @23880 has 2 MA's), (3, 23889), (Start: 9 @24069 has 78 MA's), (12, 24123), (13, 24150), (14, 24153), (23, 24348), (26, 24405), (33, 24573),

Gene: Kalizoi_33 Start: 24068, Stop: 24685, Start Num: 9
Candidate Starts for Kalizoi_33:
(Start: 9 @24068 has 78 MA's), (12, 24122), (13, 24149), (14, 24152), (26, 24404), (33, 24572),

Gene: KingBob_29 Start: 23661, Stop: 24290, Start Num: 9
Candidate Starts for KingBob_29:
(Start: 9 @23661 has 78 MA's), (12, 23727), (13, 23754), (14, 23757), (33, 24180),

Gene: Kittykat_28 Start: 22585, Stop: 23205, Start Num: 9
Candidate Starts for Kittykat_28:
(Start: 9 @22585 has 78 MA's), (13, 22672), (22, 22831), (27, 22930),

Gene: Korra_32 Start: 23885, Stop: 24691, Start Num: 2
Candidate Starts for Korra_32:
(Start: 2 @23885 has 2 MA's), (3, 23894), (6, 24011), (Start: 9 @24074 has 78 MA's), (12, 24128), (13, 24155), (14, 24158), (23, 24353), (26, 24410), (33, 24578),

Gene: Lakshmi_31 Start: 24046, Stop: 24651, Start Num: 9
Candidate Starts for Lakshmi_31:
(Start: 2 @23854 has 2 MA's), (4, 23920), (Start: 9 @24046 has 78 MA's), (12, 24085), (14, 24115), (25, 24337),

Gene: Lasagna_28 Start: 22548, Stop: 23147, Start Num: 9
Candidate Starts for Lasagna_28:
(Start: 9 @22548 has 78 MA's), (12, 22581), (13, 22608), (33, 23034),

Gene: Lennox_28 Start: 22536, Stop: 23135, Start Num: 9

Candidate Starts for Lennox_28:
(Start: 9 @22536 has 78 MA's), (12, 22569), (13, 22596), (33, 23022),

Gene: LilStuart_28 Start: 22540, Stop: 23139, Start Num: 9
Candidate Starts for LilStuart_28:
(Start: 9 @22540 has 78 MA's), (12, 22573), (13, 22600), (33, 23026),

Gene: Litotes_32 Start: 24050, Stop: 24673, Start Num: 9
Candidate Starts for Litotes_32:
(Start: 9 @24050 has 78 MA's), (13, 24137), (14, 24140), (23, 24335),

Gene: Lucy_28 Start: 22528, Stop: 23127, Start Num: 9
Candidate Starts for Lucy_28:
(Start: 9 @22528 has 78 MA's), (12, 22561), (13, 22588), (33, 23014),

Gene: Makoto_28 Start: 22548, Stop: 23147, Start Num: 9
Candidate Starts for Makoto_28:
(Start: 9 @22548 has 78 MA's), (12, 22581), (13, 22608), (33, 23034),

Gene: MamaPearl_29 Start: 23719, Stop: 24348, Start Num: 9
Candidate Starts for MamaPearl_29:
(Start: 9 @23719 has 78 MA's), (13, 23812), (26, 24067),

Gene: Maria1952_29 Start: 23661, Stop: 24290, Start Num: 9
Candidate Starts for Maria1952_29:
(Start: 9 @23661 has 78 MA's), (12, 23727), (13, 23754), (14, 23757), (33, 24180),

Gene: MeganNoll_31 Start: 23937, Stop: 24743, Start Num: 2
Candidate Starts for MeganNoll_31:
(Start: 2 @23937 has 2 MA's), (3, 23946), (Start: 9 @24126 has 78 MA's), (12, 24180), (13, 24207), (14, 24210), (23, 24405), (26, 24462), (33, 24630),

Gene: Milani_35 Start: 23908, Stop: 24465, Start Num: 10
Candidate Starts for Milani_35:
(Start: 10 @23908 has 14 MA's), (18, 24022), (20, 24052), (24, 24172), (31, 24346), (34, 24379), (38, 24457),

Gene: Misaeng_31 Start: 24181, Stop: 24780, Start Num: 9
Candidate Starts for Misaeng_31:
(Start: 9 @24181 has 78 MA's), (12, 24220), (25, 24472),

Gene: Moki_28 Start: 22502, Stop: 23131, Start Num: 9
Candidate Starts for Moki_28:
(1, 22223), (Start: 2 @22295 has 2 MA's), (5, 22397), (Start: 9 @22502 has 78 MA's), (13, 22595), (17, 22649), (26, 22850),

Gene: MrGloopy_32 Start: 24060, Stop: 24677, Start Num: 9
Candidate Starts for MrGloopy_32:
(Start: 2 @23871 has 2 MA's), (3, 23880), (Start: 9 @24060 has 78 MA's), (12, 24114), (13, 24141), (14, 24144), (23, 24339), (26, 24396), (33, 24564),

Gene: Nancia_28 Start: 22552, Stop: 23151, Start Num: 9
Candidate Starts for Nancia_28:

(Start: 9 @22552 has 78 MA's), (12, 22585), (13, 22612), (33, 23038),

Gene: Nubia_31 Start: 23995, Stop: 24600, Start Num: 9
Candidate Starts for Nubia_31:
(Start: 2 @23809 has 2 MA's), (3, 23818), (4, 23875), (8, 23941), (Start: 9 @23995 has 78 MA's), (12, 24034), (14, 24064), (25, 24286),

Gene: OMalley_29 Start: 23671, Stop: 24288, Start Num: 9
Candidate Starts for OMalley_29:
(7, 23596), (Start: 9 @23671 has 78 MA's), (13, 23755),

Gene: OurGirlNessie_28 Start: 22529, Stop: 23128, Start Num: 9
Candidate Starts for OurGirlNessie_28:
(Start: 9 @22529 has 78 MA's), (12, 22562), (13, 22589), (33, 23015),

Gene: Oxynfrius_31 Start: 24020, Stop: 24625, Start Num: 9
Candidate Starts for Oxynfrius_31:
(Start: 2 @23828 has 2 MA's), (4, 23894), (Start: 9 @24020 has 78 MA's), (12, 24059), (25, 24311),

Gene: PermaG_36 Start: 25083, Stop: 25649, Start Num: 10
Candidate Starts for PermaG_36:
(Start: 10 @25083 has 14 MA's), (17, 25197), (19, 25227), (21, 25272), (24, 25350), (32, 25524), (38, 25638),

Gene: PinkFriday_28 Start: 22551, Stop: 23180, Start Num: 9
Candidate Starts for PinkFriday_28:
(Start: 9 @22551 has 78 MA's), (33, 23070),

Gene: PitaDog_28 Start: 22539, Stop: 23138, Start Num: 9
Candidate Starts for PitaDog_28:
(Start: 9 @22539 has 78 MA's), (12, 22572), (13, 22599), (33, 23025),

Gene: Potatoes_32 Start: 24122, Stop: 24739, Start Num: 9
Candidate Starts for Potatoes_32:
(Start: 9 @24122 has 78 MA's), (12, 24176), (13, 24203), (14, 24206), (26, 24458), (33, 24626),

Gene: Preamble_28 Start: 22559, Stop: 23182, Start Num: 9
Candidate Starts for Preamble_28:
(Start: 9 @22559 has 78 MA's), (13, 22646), (22, 22805), (27, 22904),

Gene: Pterodactyl_28 Start: 22530, Stop: 23129, Start Num: 9
Candidate Starts for Pterodactyl_28:
(Start: 9 @22530 has 78 MA's), (12, 22563), (13, 22590), (33, 23016),

Gene: Pumancara_28 Start: 22470, Stop: 23099, Start Num: 9
Candidate Starts for Pumancara_28:
(Start: 9 @22470 has 78 MA's), (13, 22563), (33, 22989),

Gene: RAP15_32 Start: 24126, Stop: 24743, Start Num: 9
Candidate Starts for RAP15_32:
(Start: 2 @23937 has 2 MA's), (3, 23946), (Start: 9 @24126 has 78 MA's), (12, 24180), (13, 24207), (14, 24210), (23, 24405), (26, 24462), (33, 24630),

Gene: Rasovi_35 Start: 25147, Stop: 25710, Start Num: 10
Candidate Starts for Rasovi_35:
(Start: 10 @25147 has 14 MA's), (24, 25423), (32, 25597), (35, 25636), (38, 25699),

Gene: RcigaStruga_31 Start: 24054, Stop: 24659, Start Num: 9
Candidate Starts for RcigaStruga_31:
(Start: 9 @24054 has 78 MA's), (12, 24093), (25, 24345),

Gene: Riovina_29 Start: 23671, Stop: 24288, Start Num: 9
Candidate Starts for Riovina_29:
(7, 23596), (Start: 9 @23671 has 78 MA's), (13, 23755),

Gene: Riverdale_32 Start: 24056, Stop: 24673, Start Num: 9
Candidate Starts for Riverdale_32:
(Start: 9 @24056 has 78 MA's), (12, 24110), (13, 24137), (14, 24140), (26, 24392), (33, 24560),

Gene: Rozby_32 Start: 24057, Stop: 24674, Start Num: 9
Candidate Starts for Rozby_32:
(Start: 9 @24057 has 78 MA's), (12, 24111), (13, 24138), (14, 24141), (26, 24393), (33, 24561),

Gene: SBlackberry_35 Start: 24931, Stop: 25485, Start Num: 10
Candidate Starts for SBlackberry_35:
(Start: 10 @24931 has 14 MA's), (17, 25045), (21, 25120), (24, 25198), (29, 25366), (30, 25369), (37, 25423), (38, 25474),

Gene: Savage2526_32 Start: 24120, Stop: 24737, Start Num: 9
Candidate Starts for Savage2526_32:
(Start: 2 @23931 has 2 MA's), (3, 23940), (Start: 9 @24120 has 78 MA's), (12, 24174), (13, 24201), (14, 24204), (23, 24399), (26, 24456), (33, 24624),

Gene: Scuttle_32 Start: 24125, Stop: 24742, Start Num: 9
Candidate Starts for Scuttle_32:
(Start: 2 @23936 has 2 MA's), (3, 23945), (Start: 9 @24125 has 78 MA's), (12, 24179), (13, 24206), (14, 24209), (26, 24461), (33, 24629),

Gene: Sergei_29 Start: 23661, Stop: 24290, Start Num: 9
Candidate Starts for Sergei_29:
(Start: 9 @23661 has 78 MA's), (12, 23727), (13, 23754), (14, 23757), (33, 24180),

Gene: Sucha_32 Start: 22453, Stop: 23013, Start Num: 10
Candidate Starts for Sucha_32:
(Start: 10 @22453 has 14 MA's), (16, 22555), (24, 22714), (38, 23002),

Gene: Supakev_29 Start: 23671, Stop: 24288, Start Num: 9
Candidate Starts for Supakev_29:
(7, 23596), (Start: 9 @23671 has 78 MA's), (13, 23755),

Gene: Suppi_32 Start: 24100, Stop: 24723, Start Num: 9
Candidate Starts for Suppi_32:
(Start: 9 @24100 has 78 MA's), (13, 24187), (14, 24190), (23, 24385),

Gene: TattModd_32 Start: 24119, Stop: 24736, Start Num: 9
Candidate Starts for TattModd_32:

(Start: 2 @23930 has 2 MA's), (3, 23939), (Start: 9 @24119 has 78 MA's), (12, 24173), (13, 24200), (14, 24203), (26, 24455), (33, 24623),

Gene: Temper16_29 Start: 23661, Stop: 24290, Start Num: 9
Candidate Starts for Temper16_29:
(Start: 9 @23661 has 78 MA's), (12, 23727), (13, 23754), (14, 23757), (33, 24180),

Gene: Theresita_35 Start: 24049, Stop: 24615, Start Num: 10
Candidate Starts for Theresita_35:
(Start: 10 @24049 has 14 MA's), (15, 24139), (18, 24166), (35, 24541), (38, 24604),

Gene: TurboVicky_35 Start: 24958, Stop: 25512, Start Num: 10
Candidate Starts for TurboVicky_35:
(Start: 10 @24958 has 14 MA's), (20, 25105), (24, 25225), (28, 25315), (29, 25393), (30, 25396), (36, 25450), (38, 25501),

Gene: Typher_37 Start: 25076, Stop: 25630, Start Num: 10
Candidate Starts for Typher_37:
(Start: 10 @25076 has 14 MA's), (11, 25091), (24, 25343), (28, 25433), (32, 25517), (38, 25619),

Gene: Urla_29 Start: 23729, Stop: 24355, Start Num: 9
Candidate Starts for Urla_29:
(Start: 9 @23729 has 78 MA's), (13, 23822), (26, 24077), (33, 24245),

Gene: Vallejo_32 Start: 24059, Stop: 24676, Start Num: 9
Candidate Starts for Vallejo_32:
(Start: 9 @24059 has 78 MA's), (12, 24113), (13, 24140), (14, 24143), (26, 24395), (33, 24563),

Gene: Vulture_29 Start: 23668, Stop: 24285, Start Num: 9
Candidate Starts for Vulture_29:
(7, 23593), (Start: 9 @23668 has 78 MA's), (13, 23752),

Gene: Wawa_32 Start: 24095, Stop: 24712, Start Num: 9
Candidate Starts for Wawa_32:
(Start: 2 @23906 has 2 MA's), (3, 23915), (6, 24032), (Start: 9 @24095 has 78 MA's), (12, 24149), (13, 24176), (14, 24179), (23, 24374), (26, 24431), (33, 24599),

Gene: Wayne_32 Start: 24146, Stop: 24769, Start Num: 9
Candidate Starts for Wayne_32:
(Start: 9 @24146 has 78 MA's), (13, 24233), (14, 24236), (23, 24431),

Gene: WonderBoy_27 Start: 22520, Stop: 23119, Start Num: 9
Candidate Starts for WonderBoy_27:
(Start: 9 @22520 has 78 MA's), (12, 22553), (13, 22580), (33, 23006),

Gene: Zanella_35 Start: 24956, Stop: 25510, Start Num: 10
Candidate Starts for Zanella_35:
(Start: 10 @24956 has 14 MA's), (20, 25103), (24, 25223), (28, 25313), (29, 25391), (30, 25394), (36, 25448), (38, 25499),

Gene: Zorro_32 Start: 24074, Stop: 24691, Start Num: 9
Candidate Starts for Zorro_32:

(6, 24011), (Start: 9 @24074 has 78 MA's), (12, 24128), (13, 24155), (14, 24158), (23, 24353), (26, 24410), (33, 24578),