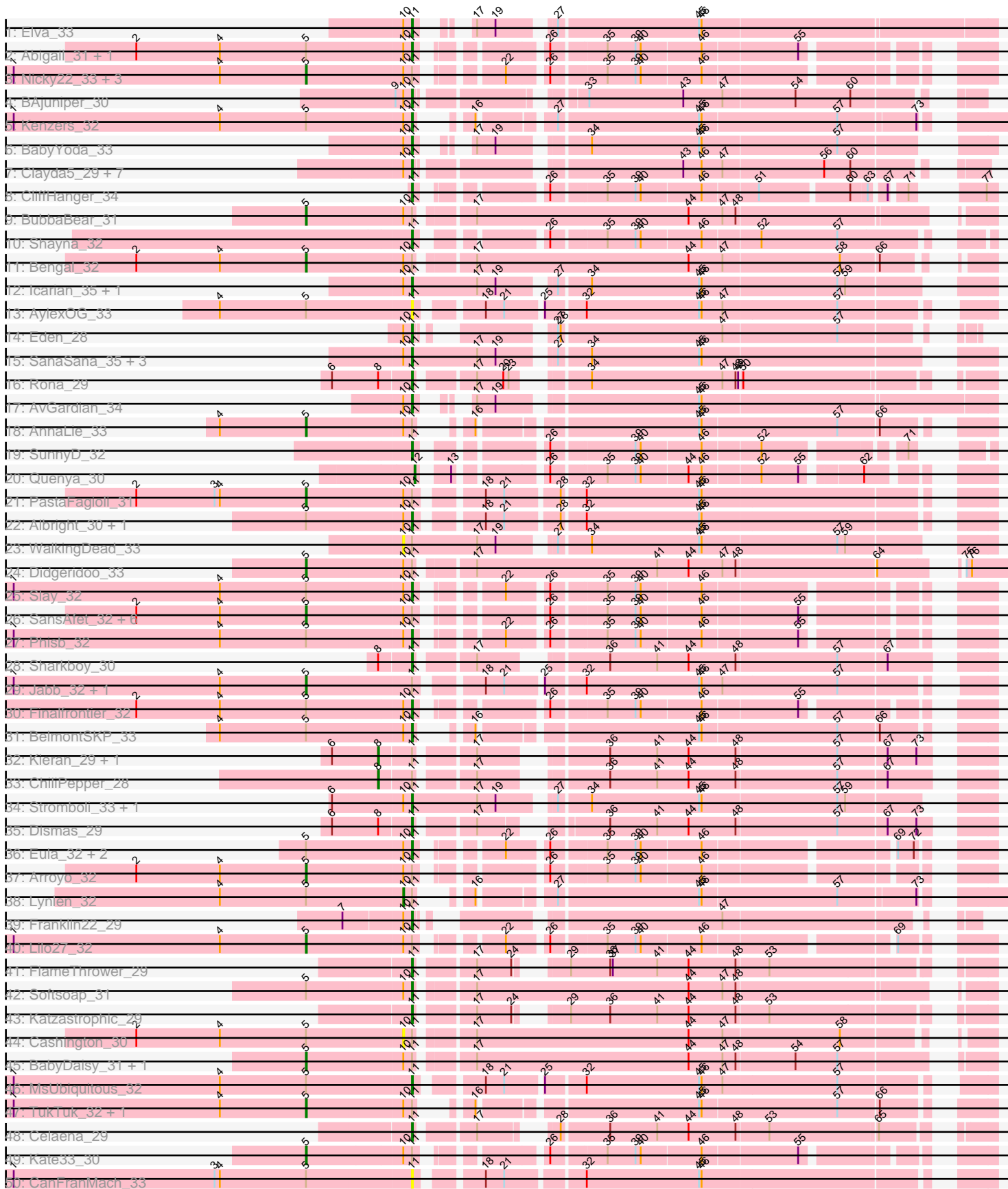


Pham 311470



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 311470 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311470 has 88 members, 8 are drafts.

Phages represented in each track:

- Track 1 : Elva_33
- Track 2 : Abigail_31, Johnathan_31
- Track 3 : Nicky22_33, SarBear_31, Jovita_32, Swervy_32
- Track 4 : BAjuniper_30
- Track 5 : Kenzers_32
- Track 6 : BabyYoda_33
- Track 7 : Clayda5_29, Coltrane_28, Rollins_28, Skylord_28, Bernstein_28, Brahms_28, Armstrong_28, Vitas_28
- Track 8 : CliffHanger_34
- Track 9 : BubbaBear_31
- Track 10 : Shayna_32
- Track 11 : Bengal_32
- Track 12 : Icarian_35, Stoor_33
- Track 13 : AylexOG_33
- Track 14 : Eden_28
- Track 15 : SanaSana_35, Akino08_33, Loviatar_34, PondAmelia_42
- Track 16 : Rona_29
- Track 17 : AvGardian_34
- Track 18 : AnnaLie_33
- Track 19 : SunnyD_32
- Track 20 : Quenya_30
- Track 21 : PastaFagioli_31
- Track 22 : Albright_30, CroZenni_31
- Track 23 : WalkingDead_33
- Track 24 : Didgeridoo_33
- Track 25 : Slay_32
- Track 26 : SansAfet_32, Milomuff_32, Doobus_31, Burritobowl_31, DickRichards_31, LimaBean_31, Avocadoman_31
- Track 27 : Phisb_32
- Track 28 : Sharkboy_30
- Track 29 : Jabb_32, CupcakePrincess_32
- Track 30 : Finalfrontier_32
- Track 31 : BelmontSKP_33
- Track 32 : Kieran_29, Kamdara_29
- Track 33 : ChiliPepper_28
- Track 34 : Stromboli_33, DirtyBubble_32
- Track 35 : Dismas_29

- Track 36 : Eula_32, QMacho_33, Pecas_32
- Track 37 : Arroyo_32
- Track 38 : Lynlen_32
- Track 39 : Franklin22_29
- Track 40 : Lilo27_32
- Track 41 : FlameThrower_29
- Track 42 : Softsoap_31
- Track 43 : Katzastrophic_29
- Track 44 : Cashington_30
- Track 45 : BabyDaisy_31, IndyLu_31
- Track 46 : MsUbiquitous_32
- Track 47 : TukTuk_32, Albedo_32
- Track 48 : Celaena_29
- Track 49 : Kate33_30
- Track 50 : CanFranMach_33
- Track 51 : Gack_28
- Track 52 : SirBeanington_32
- Track 53 : Lahqtemish_31
- Track 54 : Teagster_33
- Track 55 : Bachaco_29
- Track 56 : Solea_33
- Track 57 : PhigPhack_32
- Track 58 : Triscuit_63
- Track 59 : Huwbert_64

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

The start number called the most often in the published annotations is 11, it was called in 50 of the 80 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Abigail_31, Akino08_33, Albright_30, Armstrong_28, AvGardian_34, AylexOG_33, BAjuniper_30, BabyYoda_33, Bachaco_29, BelmontSKP_33, Bernstein_28, Brahms_28, CanFranMach_33, Celaena_29, Clayda5_29, CliffHanger_34, Coltrane_28, CroZenni_31, DirtyBubble_32, Dismas_29, Eden_28, Elva_33, Eula_32, Finalfrontier_32, FlameThrower_29, Franklin22_29, Gack_28, Huwbert_64, Icarian_35, Johnathan_31, Katzastrophic_29, Kenzers_32, Loviatar_34, MsUbiquitous_32, Pecas_32, PhigPhack_32, Phisb_32, PondAmelia_42, QMacho_33, Rollins_28, Rona_29, SanaSana_35, Sharkboy_30, Shayna_32, SirBeanington_32, Skylord_28, Slay_32, Softsoap_31, Stoor_33, Stromboli_33, SunnyD_32, Teagster_33, Triscuit_63, Vitas_28,

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

• Albedo_32, AnnaLie_33, Arroyo_32, Avocadoman_31, BabyDaisy_31, Bengal_32, BubbaBear_31, Burritobowl_31, Cashington_30, ChiliPepper_28, CupcakePrincess_32, DickRichards_31, Didgeridoo_33, Doobus_31, IndyLu_31, Jabb_32, Jovita_32, Kamdara_29, Kate33_30, Kieran_29, Lahqtemish_31, Lilo27_32, LimaBean_31, Lynlen_32, Milomuff_32, Nicky22_33, PastaFagioli_31, SansAfet_32, SarBear_31, Solea_33, Swervy_32, TukTuk_32, WalkingDead_33,

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

- Quenya_30,

Summary by start number:

Start 5:

- Found in 47 of 88 (53.4%) of genes in pham
- Manual Annotations of this start: 26 of 80
- Called 55.3% of time when present
- Phage (with cluster) where this start called: Albedo_32 (EB), AnnaLie_33 (EB), Arroyo_32 (EB), Avocadoman_31 (EB), BabyDaisy_31 (EB), Bengal_32 (EB), BubbaBear_31 (EB), Burritobowl_31 (EB), CupcakePrincess_32 (EB), DickRichards_31 (EB), Didgeridoo_33 (EB), Doobus_31 (EB), IndyLu_31 (EB), Jabb_32 (EB), Jovita_32 (EB), Kate33_30 (EB), Lahqtemish_31 (EB), Lilo27_32 (EB), LimaBean_31 (EB), Milomuff_32 (EB), Nicky22_33 (EB), PastaFagioli_31 (EB), SansAfet_32 (EB), SarBear_31 (EB), Swervy_32 (EB), TukTuk_32 (EB),

Start 8:

- Found in 6 of 88 (6.8%) of genes in pham
- Manual Annotations of this start: 2 of 80
- Called 50.0% of time when present
- Phage (with cluster) where this start called: ChiliPepper_28 (EB), Kamdara_29 (EB), Kieran_29 (EB),

Start 10:

- Found in 64 of 88 (72.7%) of genes in pham
- Manual Annotations of this start: 1 of 80
- Called 6.2% of time when present
- Phage (with cluster) where this start called: Cashington_30 (EB), Lynlen_32 (EB), Solea_33 (EB), WalkingDead_33 (EB),

Start 11:

- Found in 87 of 88 (98.9%) of genes in pham
- Manual Annotations of this start: 50 of 80
- Called 62.1% of time when present
- Phage (with cluster) where this start called: Abigail_31 (EB), Akino08_33 (EB), Albright_30 (EB), Armstrong_28 (EB), AvGardian_34 (EB), AylexOG_33 (EB), BAjuniper_30 (EB), BabyYoda_33 (EB), Bachaco_29 (EB), BelmontSKP_33 (EB), Bernstein_28 (EB), Brahms_28 (EB), CanFranMach_33 (EB), Celaena_29 (EB), Clayda5_29 (EB), CliffHanger_34 (EB), Coltrane_28 (EB), CroZenni_31 (EB), DirtyBubble_32 (EB), Dismas_29 (EB), Eden_28 (EB), Elva_33 (EB), Eula_32 (EB), Finalfrontier_32 (EB), FlameThrower_29 (EB), Franklin22_29 (EB), Gack_28 (EB), Huwbert_64 (GG), Icarian_35 (EB), Johnathan_31 (EB), Katzastrophic_29 (EB), Kenzers_32 (EB), Loviatar_34 (EB), MsUbiquitous_32 (EB), Pecas_32 (EB), PhigPhack_32 (EB), Phisb_32 (EB), PondAmelia_42 (EB), QMacho_33 (EB), Rollins_28 (EB), Rona_29 (EB), SanaSana_35 (EB), Sharkboy_30 (EB), Shayna_32 (EB), SirBeanington_32 (EB), Skylord_28 (EB), Slay_32 (EB), Softsoap_31 (EB), Stoor_33 (EB), Stromboli_33 (EB), SunnyD_32 (EB), Teagster_33 (EB), Triscuit_63 (GG), Vitas_28 (EB),

Start 12:

- Found in 1 of 88 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 80

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Quenya_30 (EB),

Summary by clusters:

There are 2 clusters represented in this pham: GG, EB,

Info for manual annotations of cluster EB:

- Start number 5 was manually annotated 26 times for cluster EB.
- Start number 8 was manually annotated 2 times for cluster EB.
- Start number 10 was manually annotated 1 time for cluster EB.
- Start number 11 was manually annotated 48 times for cluster EB.
- Start number 12 was manually annotated 1 time for cluster EB.

Info for manual annotations of cluster GG:

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

Gene Information:

Gene: Abigail_31 Start: 22628, Stop: 23164, Start Num: 11

Candidate Starts for Abigail_31:

(2, 22316), (4, 22412), (Start: 5 @22511 has 26 MA's), (Start: 10 @22619 has 1 MA's), (Start: 11 @22628 has 50 MA's), (26, 22736), (35, 22793), (39, 22823), (40, 22829), (46, 22895), (55, 23000),

Gene: Akino08_33 Start: 24925, Stop: 25521, Start Num: 11

Candidate Starts for Akino08_33:

(Start: 10 @24916 has 1 MA's), (Start: 11 @24925 has 50 MA's), (17, 25000), (19, 25021), (27, 25072), (34, 25105), (45, 25228), (46, 25231),

Gene: Albedo_32 Start: 22977, Stop: 23642, Start Num: 5

Candidate Starts for Albedo_32:

(1, 22641), (4, 22878), (Start: 5 @22977 has 26 MA's), (Start: 10 @23085 has 1 MA's), (Start: 11 @23094 has 50 MA's), (16, 23118), (45, 23346), (46, 23349), (57, 23502), (66, 23547),

Gene: Albright_30 Start: 22216, Stop: 22803, Start Num: 11

Candidate Starts for Albright_30:

(Start: 5 @22099 has 26 MA's), (Start: 10 @22207 has 1 MA's), (Start: 11 @22216 has 50 MA's), (18, 22276), (21, 22297), (28, 22354), (32, 22378), (45, 22507), (46, 22510),

Gene: AnnaLie_33 Start: 23260, Stop: 23925, Start Num: 5

Candidate Starts for AnnaLie_33:

(4, 23161), (Start: 5 @23260 has 26 MA's), (Start: 10 @23368 has 1 MA's), (Start: 11 @23377 has 50 MA's), (16, 23401), (45, 23629), (46, 23632), (57, 23785), (66, 23830),

Gene: Armstrong_28 Start: 20941, Stop: 21507, Start Num: 11

Candidate Starts for Armstrong_28:

(Start: 10 @20932 has 1 MA's), (Start: 11 @20941 has 50 MA's), (43, 21208), (46, 21229), (47, 21253), (56, 21367), (60, 21397),

Gene: Arroyo_32 Start: 23288, Stop: 23941, Start Num: 5

Candidate Starts for Arroyo_32:

(2, 23093), (4, 23189), (Start: 5 @23288 has 26 MA's), (Start: 10 @23396 has 1 MA's), (Start: 11 @23405 has 50 MA's), (26, 23513), (35, 23570), (39, 23600), (40, 23606), (46, 23672),

Gene: AvGardian_34 Start: 23607, Stop: 24188, Start Num: 11

Candidate Starts for AvGardian_34:

(Start: 10 @23598 has 1 MA's), (Start: 11 @23607 has 50 MA's), (17, 23631), (19, 23652), (45, 23859), (46, 23862),

Gene: Avocadoman_31 Start: 22453, Stop: 23106, Start Num: 5

Candidate Starts for Avocadoman_31:

(2, 22258), (4, 22354), (Start: 5 @22453 has 26 MA's), (Start: 10 @22561 has 1 MA's), (Start: 11 @22570 has 50 MA's), (26, 22678), (35, 22735), (39, 22765), (40, 22771), (46, 22837), (55, 22942),

Gene: AylexOG_33 Start: 23405, Stop: 23989, Start Num: 11

Candidate Starts for AylexOG_33:

(4, 23189), (Start: 5 @23288 has 26 MA's), (Start: 11 @23405 has 50 MA's), (18, 23465), (21, 23486), (25, 23525), (32, 23567), (45, 23696), (46, 23699), (47, 23723), (57, 23852),

Gene: BAjuniper_30 Start: 23839, Stop: 24396, Start Num: 11

Candidate Starts for BAjuniper_30:

(9, 23821), (Start: 10 @23830 has 1 MA's), (Start: 11 @23839 has 50 MA's), (33, 23992), (43, 24100), (47, 24145), (54, 24226), (60, 24289),

Gene: BabyDaisy_31 Start: 22831, Stop: 23553, Start Num: 5

Candidate Starts for BabyDaisy_31:

(Start: 5 @22831 has 26 MA's), (Start: 10 @22939 has 1 MA's), (Start: 11 @22948 has 50 MA's), (17, 23002), (44, 23245), (47, 23284), (48, 23299), (54, 23365), (57, 23413),

Gene: BabyYoda_33 Start: 24127, Stop: 24666, Start Num: 11

Candidate Starts for BabyYoda_33:

(Start: 10 @24118 has 1 MA's), (Start: 11 @24127 has 50 MA's), (17, 24151), (19, 24172), (34, 24256), (45, 24379), (46, 24382), (57, 24535),

Gene: Bachaco_29 Start: 24051, Stop: 24608, Start Num: 11

Candidate Starts for Bachaco_29:

(Start: 11 @24051 has 50 MA's), (17, 24105), (36, 24216), (41, 24270), (44, 24306), (49, 24363),

Gene: BelmontSKP_33 Start: 23377, Stop: 23925, Start Num: 11

Candidate Starts for BelmontSKP_33:

(4, 23161), (Start: 5 @23260 has 26 MA's), (Start: 10 @23368 has 1 MA's), (Start: 11 @23377 has 50 MA's), (16, 23401), (45, 23629), (46, 23632), (57, 23785), (66, 23830),

Gene: Bengal_32 Start: 22846, Stop: 23553, Start Num: 5

Candidate Starts for Bengal_32:

(2, 22651), (4, 22747), (Start: 5 @22846 has 26 MA's), (Start: 10 @22954 has 1 MA's), (Start: 11 @22963 has 50 MA's), (17, 23017), (44, 23260), (47, 23299), (58, 23431), (66, 23473),

Gene: Bernstein_28 Start: 20996, Stop: 21562, Start Num: 11

Candidate Starts for Bernstein_28:

(Start: 10 @20987 has 1 MA's), (Start: 11 @20996 has 50 MA's), (43, 21263), (46, 21284), (47, 21308), (56, 21422), (60, 21452),

Gene: Brahms_28 Start: 20943, Stop: 21509, Start Num: 11

Candidate Starts for Brahms_28:

(Start: 10 @20934 has 1 MA's), (Start: 11 @20943 has 50 MA's), (43, 21210), (46, 21231), (47, 21255), (56, 21369), (60, 21399),

Gene: BubbaBear_31 Start: 22778, Stop: 23494, Start Num: 5

Candidate Starts for BubbaBear_31:

(Start: 5 @22778 has 26 MA's), (Start: 10 @22886 has 1 MA's), (Start: 11 @22895 has 50 MA's), (17, 22949), (44, 23192), (47, 23231), (48, 23246),

Gene: Burritobowl_31 Start: 22845, Stop: 23498, Start Num: 5

Candidate Starts for Burritobowl_31:

(2, 22650), (4, 22746), (Start: 5 @22845 has 26 MA's), (Start: 10 @22953 has 1 MA's), (Start: 11 @22962 has 50 MA's), (26, 23070), (35, 23127), (39, 23157), (40, 23163), (46, 23229), (55, 23334),

Gene: CanFranMach_33 Start: 23077, Stop: 23664, Start Num: 11

Candidate Starts for CanFranMach_33:

(1, 22624), (3, 22855), (4, 22861), (Start: 5 @22960 has 26 MA's), (Start: 11 @23077 has 50 MA's), (18, 23137), (21, 23158), (32, 23239), (45, 23368), (46, 23371),

Gene: Cashington_30 Start: 22242, Stop: 22841, Start Num: 10

Candidate Starts for Cashington_30:

(2, 21939), (4, 22035), (Start: 5 @22134 has 26 MA's), (Start: 10 @22242 has 1 MA's), (Start: 11 @22251 has 50 MA's), (17, 22305), (44, 22548), (47, 22587), (58, 22719),

Gene: Celaena_29 Start: 23736, Stop: 24290, Start Num: 11

Candidate Starts for Celaena_29:

(Start: 11 @23736 has 50 MA's), (17, 23790), (28, 23847), (36, 23898), (41, 23952), (44, 23988), (48, 24042), (53, 24078), (65, 24198),

Gene: ChiliPepper_28 Start: 23178, Stop: 23786, Start Num: 8

Candidate Starts for ChiliPepper_28:

(Start: 8 @23178 has 2 MA's), (Start: 11 @23214 has 50 MA's), (17, 23268), (36, 23379), (41, 23433), (44, 23469), (48, 23523), (57, 23637), (67, 23691),

Gene: Clayda5_29 Start: 20930, Stop: 21496, Start Num: 11

Candidate Starts for Clayda5_29:

(Start: 10 @20921 has 1 MA's), (Start: 11 @20930 has 50 MA's), (43, 21197), (46, 21218), (47, 21242), (56, 21356), (60, 21386),

Gene: CliffHanger_34 Start: 22466, Stop: 22987, Start Num: 11

Candidate Starts for CliffHanger_34:

(Start: 11 @22466 has 50 MA's), (26, 22574), (35, 22631), (39, 22661), (40, 22667), (46, 22733), (51, 22793), (60, 22889), (63, 22907), (67, 22922), (71, 22937), (77, 22976),

Gene: Coltrane_28 Start: 20943, Stop: 21509, Start Num: 11

Candidate Starts for Coltrane_28:

(Start: 10 @20934 has 1 MA's), (Start: 11 @20943 has 50 MA's), (43, 21210), (46, 21231), (47, 21255), (56, 21369), (60, 21399),

Gene: CroZenni_31 Start: 22800, Stop: 23387, Start Num: 11

Candidate Starts for CroZenni_31:

(Start: 5 @22683 has 26 MA's), (Start: 10 @22791 has 1 MA's), (Start: 11 @22800 has 50 MA's), (18, 22860), (21, 22881), (28, 22938), (32, 22962), (45, 23091), (46, 23094),

Gene: CupcakePrincess_32 Start: 22975, Stop: 23676, Start Num: 5

Candidate Starts for CupcakePrincess_32:

(1, 22639), (4, 22876), (Start: 5 @22975 has 26 MA's), (Start: 11 @23092 has 50 MA's), (18, 23152), (21, 23173), (25, 23212), (32, 23254), (45, 23383), (46, 23386), (47, 23410), (57, 23539),

Gene: DickRichards_31 Start: 23174, Stop: 23827, Start Num: 5

Candidate Starts for DickRichards_31:

(2, 22979), (4, 23075), (Start: 5 @23174 has 26 MA's), (Start: 10 @23282 has 1 MA's), (Start: 11 @23291 has 50 MA's), (26, 23399), (35, 23456), (39, 23486), (40, 23492), (46, 23558), (55, 23663),

Gene: Didgeridoo_33 Start: 23183, Stop: 23950, Start Num: 5

Candidate Starts for Didgeridoo_33:

(Start: 5 @23183 has 26 MA's), (Start: 10 @23291 has 1 MA's), (Start: 11 @23300 has 50 MA's), (17, 23354), (41, 23561), (44, 23597), (47, 23636), (48, 23651), (64, 23807), (75, 23867), (76, 23873),

Gene: DirtyBubble_32 Start: 23754, Stop: 24350, Start Num: 11

Candidate Starts for DirtyBubble_32:

(6, 23667), (Start: 10 @23745 has 1 MA's), (Start: 11 @23754 has 50 MA's), (17, 23829), (19, 23850), (27, 23901), (34, 23934), (45, 24057), (46, 24060), (57, 24213), (59, 24222),

Gene: Dismas_29 Start: 23391, Stop: 23957, Start Num: 11

Candidate Starts for Dismas_29:

(6, 23304), (Start: 8 @23355 has 2 MA's), (Start: 11 @23391 has 50 MA's), (17, 23445), (36, 23550), (41, 23604), (44, 23640), (48, 23694), (57, 23808), (67, 23862), (73, 23895),

Gene: Doobus_31 Start: 22620, Stop: 23273, Start Num: 5

Candidate Starts for Doobus_31:

(2, 22425), (4, 22521), (Start: 5 @22620 has 26 MA's), (Start: 10 @22728 has 1 MA's), (Start: 11 @22737 has 50 MA's), (26, 22845), (35, 22902), (39, 22932), (40, 22938), (46, 23004), (55, 23109),

Gene: Eden_28 Start: 21161, Stop: 21682, Start Num: 11

Candidate Starts for Eden_28:

(Start: 10 @21152 has 1 MA's), (Start: 11 @21161 has 50 MA's), (27, 21263), (28, 21266), (47, 21446), (57, 21575),

Gene: Elva_33 Start: 23789, Stop: 24370, Start Num: 11

Candidate Starts for Elva_33:

(Start: 10 @23780 has 1 MA's), (Start: 11 @23789 has 50 MA's), (17, 23813), (19, 23834), (27, 23885), (45, 24041), (46, 24044),

Gene: Eula_32 Start: 23053, Stop: 23589, Start Num: 11

Candidate Starts for Eula_32:

(Start: 5 @22936 has 26 MA's), (Start: 10 @23044 has 1 MA's), (Start: 11 @23053 has 50 MA's), (22, 23122), (26, 23161), (35, 23218), (39, 23248), (40, 23254), (46, 23320), (69, 23515), (72, 23533),

Gene: Finalfrontier_32 Start: 23664, Stop: 24200, Start Num: 11

Candidate Starts for Finalfrontier_32:

(2, 23352), (4, 23448), (Start: 5 @23547 has 26 MA's), (Start: 10 @23655 has 1 MA's), (Start: 11 @23664 has 50 MA's), (26, 23772), (35, 23829), (39, 23859), (40, 23865), (46, 23931), (55, 24036),

Gene: FlameThrower_29 Start: 23222, Stop: 23782, Start Num: 11

Candidate Starts for FlameThrower_29:

(Start: 11 @23222 has 50 MA's), (17, 23276), (24, 23315), (29, 23345), (36, 23390), (37, 23393), (41, 23444), (44, 23480), (48, 23534), (53, 23570),

Gene: Franklin22_29 Start: 21323, Stop: 21847, Start Num: 11

Candidate Starts for Franklin22_29:

(7, 21251), (Start: 10 @21314 has 1 MA's), (Start: 11 @21323 has 50 MA's), (47, 21608),

Gene: Gack_28 Start: 21205, Stop: 21726, Start Num: 11

Candidate Starts for Gack_28:

(Start: 10 @21196 has 1 MA's), (Start: 11 @21205 has 50 MA's), (34, 21340), (47, 21490), (57, 21619),

Gene: Huwbert_64 Start: 39565, Stop: 40128, Start Num: 11

Candidate Starts for Huwbert_64:

(Start: 11 @39565 has 50 MA's), (15, 39613), (30, 39721), (31, 39724), (38, 39766), (42, 39817), (44, 39847), (45, 39859), (61, 40030), (68, 40069),

Gene: Icarian_35 Start: 24388, Stop: 24984, Start Num: 11

Candidate Starts for Icarian_35:

(Start: 10 @24379 has 1 MA's), (Start: 11 @24388 has 50 MA's), (17, 24463), (19, 24484), (27, 24535), (34, 24568), (45, 24691), (46, 24694), (57, 24847), (59, 24856),

Gene: IndyLu_31 Start: 22792, Stop: 23514, Start Num: 5

Candidate Starts for IndyLu_31:

(Start: 5 @22792 has 26 MA's), (Start: 10 @22900 has 1 MA's), (Start: 11 @22909 has 50 MA's), (17, 22963), (44, 23206), (47, 23245), (48, 23260), (54, 23326), (57, 23374),

Gene: Jabb_32 Start: 22975, Stop: 23676, Start Num: 5

Candidate Starts for Jabb_32:

(1, 22639), (4, 22876), (Start: 5 @22975 has 26 MA's), (Start: 11 @23092 has 50 MA's), (18, 23152), (21, 23173), (25, 23212), (32, 23254), (45, 23383), (46, 23386), (47, 23410), (57, 23539),

Gene: Johnathan_31 Start: 22510, Stop: 23046, Start Num: 11

Candidate Starts for Johnathan_31:

(2, 22198), (4, 22294), (Start: 5 @22393 has 26 MA's), (Start: 10 @22501 has 1 MA's), (Start: 11 @22510 has 50 MA's), (26, 22618), (35, 22675), (39, 22705), (40, 22711), (46, 22777), (55, 22882),

Gene: Jovita_32 Start: 23039, Stop: 23692, Start Num: 5

Candidate Starts for Jovita_32:

(1, 22703), (4, 22940), (Start: 5 @23039 has 26 MA's), (Start: 10 @23147 has 1 MA's), (Start: 11 @23156 has 50 MA's), (22, 23225), (26, 23264), (35, 23321), (39, 23351), (40, 23357), (46, 23423),

Gene: Kamdara_29 Start: 23354, Stop: 23962, Start Num: 8

Candidate Starts for Kamdara_29:

(6, 23303), (Start: 8 @23354 has 2 MA's), (Start: 11 @23390 has 50 MA's), (17, 23444), (36, 23555), (41, 23609), (44, 23645), (48, 23699), (57, 23813), (67, 23867), (73, 23900),

Gene: Kate33_30 Start: 22654, Stop: 23307, Start Num: 5

Candidate Starts for Kate33_30:

(Start: 5 @22654 has 26 MA's), (Start: 10 @22762 has 1 MA's), (Start: 11 @22771 has 50 MA's), (26, 22879), (35, 22936), (39, 22966), (40, 22972), (46, 23038), (55, 23143),

Gene: Katzastrophic_29 Start: 23340, Stop: 23900, Start Num: 11

Candidate Starts for Katzastrophic_29:

(Start: 11 @23340 has 50 MA's), (17, 23394), (24, 23433), (29, 23463), (36, 23508), (41, 23562), (44, 23598), (48, 23652), (53, 23688),

Gene: Kenzers_32 Start: 23043, Stop: 23639, Start Num: 11

Candidate Starts for Kenzers_32:

(1, 22590), (4, 22827), (Start: 5 @22926 has 26 MA's), (Start: 10 @23034 has 1 MA's), (Start: 11 @23043 has 50 MA's), (16, 23067), (27, 23139), (45, 23295), (46, 23298), (57, 23451), (73, 23535),

Gene: Kieran_29 Start: 23358, Stop: 23966, Start Num: 8

Candidate Starts for Kieran_29:

(6, 23307), (Start: 8 @23358 has 2 MA's), (Start: 11 @23394 has 50 MA's), (17, 23448), (36, 23559), (41, 23613), (44, 23649), (48, 23703), (57, 23817), (67, 23871), (73, 23904),

Gene: Lahqtemish_31 Start: 22843, Stop: 23547, Start Num: 5

Candidate Starts for Lahqtemish_31:

(2, 22648), (4, 22744), (Start: 5 @22843 has 26 MA's), (Start: 11 @22960 has 50 MA's), (18, 23020), (21, 23041), (28, 23098), (32, 23122), (45, 23251), (46, 23254), (57, 23407),

Gene: Lilo27_32 Start: 22847, Stop: 23500, Start Num: 5

Candidate Starts for Lilo27_32:

(1, 22511), (4, 22748), (Start: 5 @22847 has 26 MA's), (Start: 10 @22955 has 1 MA's), (Start: 11 @22964 has 50 MA's), (22, 23033), (26, 23072), (35, 23129), (39, 23159), (40, 23165), (46, 23231), (69, 23426),

Gene: LimaBean_31 Start: 22389, Stop: 23042, Start Num: 5

Candidate Starts for LimaBean_31:

(2, 22194), (4, 22290), (Start: 5 @22389 has 26 MA's), (Start: 10 @22497 has 1 MA's), (Start: 11 @22506 has 50 MA's), (26, 22614), (35, 22671), (39, 22701), (40, 22707), (46, 22773), (55, 22878),

Gene: Loviatar_34 Start: 24940, Stop: 25536, Start Num: 11

Candidate Starts for Loviatar_34:

(Start: 10 @24931 has 1 MA's), (Start: 11 @24940 has 50 MA's), (17, 25015), (19, 25036), (27, 25087), (34, 25120), (45, 25243), (46, 25246),

Gene: Lynlen_32 Start: 23034, Stop: 23639, Start Num: 10

Candidate Starts for Lynlen_32:

(4, 22827), (Start: 5 @22926 has 26 MA's), (Start: 10 @23034 has 1 MA's), (Start: 11 @23043 has 50 MA's), (16, 23067), (27, 23139), (45, 23295), (46, 23298), (57, 23451), (73, 23535),

Gene: Milomuff_32 Start: 22754, Stop: 23407, Start Num: 5

Candidate Starts for Milomuff_32:

(2, 22559), (4, 22655), (Start: 5 @22754 has 26 MA's), (Start: 10 @22862 has 1 MA's), (Start: 11 @22871 has 50 MA's), (26, 22979), (35, 23036), (39, 23066), (40, 23072), (46, 23138), (55, 23243),

Gene: MsUbiquitous_32 Start: 23092, Stop: 23676, Start Num: 11

Candidate Starts for MsUbiquitous_32:

(1, 22639), (4, 22876), (Start: 5 @22975 has 26 MA's), (Start: 11 @23092 has 50 MA's), (18, 23152), (21, 23173), (25, 23212), (32, 23254), (45, 23383), (46, 23386), (47, 23410), (57, 23539),

Gene: Nicky22_33 Start: 23401, Stop: 24054, Start Num: 5

Candidate Starts for Nicky22_33:

(1, 23065), (4, 23302), (Start: 5 @23401 has 26 MA's), (Start: 10 @23509 has 1 MA's), (Start: 11 @23518 has 50 MA's), (22, 23587), (26, 23626), (35, 23683), (39, 23713), (40, 23719), (46, 23785),

Gene: PastaFagioli_31 Start: 22828, Stop: 23532, Start Num: 5

Candidate Starts for PastaFagioli_31:

(2, 22633), (3, 22723), (4, 22729), (Start: 5 @22828 has 26 MA's), (Start: 10 @22936 has 1 MA's), (Start: 11 @22945 has 50 MA's), (18, 23005), (21, 23026), (28, 23083), (32, 23107), (45, 23236), (46, 23239),

Gene: Pecas_32 Start: 23053, Stop: 23589, Start Num: 11

Candidate Starts for Pecas_32:

(Start: 5 @22936 has 26 MA's), (Start: 10 @23044 has 1 MA's), (Start: 11 @23053 has 50 MA's), (22, 23122), (26, 23161), (35, 23218), (39, 23248), (40, 23254), (46, 23320), (69, 23515), (72, 23533),

Gene: PhigPhack_32 Start: 22873, Stop: 23409, Start Num: 11

Candidate Starts for PhigPhack_32:

(4, 22657), (Start: 5 @22756 has 26 MA's), (Start: 10 @22864 has 1 MA's), (Start: 11 @22873 has 50 MA's), (26, 22981), (35, 23038), (39, 23068), (40, 23074), (46, 23140), (55, 23245),

Gene: Phisb_32 Start: 23109, Stop: 23645, Start Num: 11

Candidate Starts for Phisb_32:

(1, 22656), (4, 22893), (Start: 5 @22992 has 26 MA's), (Start: 10 @23100 has 1 MA's), (Start: 11 @23109 has 50 MA's), (22, 23178), (26, 23217), (35, 23274), (39, 23304), (40, 23310), (46, 23376), (55, 23481),

Gene: PondAmelia_42 Start: 23954, Stop: 24535, Start Num: 11

Candidate Starts for PondAmelia_42:

(Start: 10 @23945 has 1 MA's), (Start: 11 @23954 has 50 MA's), (17, 23978), (19, 23999), (27, 24050), (34, 24083), (45, 24206), (46, 24209),

Gene: QMacho_33 Start: 23536, Stop: 24072, Start Num: 11

Candidate Starts for QMacho_33:

(Start: 5 @23419 has 26 MA's), (Start: 10 @23527 has 1 MA's), (Start: 11 @23536 has 50 MA's), (22, 23605), (26, 23644), (35, 23701), (39, 23731), (40, 23737), (46, 23803), (69, 23998), (72, 24016),

Gene: Quenya_30 Start: 23232, Stop: 23762, Start Num: 12

Candidate Starts for Quenya_30:

(Start: 12 @23232 has 1 MA's), (13, 23256), (26, 23340), (35, 23397), (39, 23427), (40, 23433), (44, 23484), (46, 23499), (52, 23562), (55, 23604), (62, 23661),

Gene: Rollins_28 Start: 20996, Stop: 21562, Start Num: 11

Candidate Starts for Rollins_28:

(Start: 10 @20987 has 1 MA's), (Start: 11 @20996 has 50 MA's), (43, 21263), (46, 21284), (47, 21308), (56, 21422), (60, 21452),

Gene: Rona_29 Start: 23391, Stop: 23948, Start Num: 11

Candidate Starts for Rona_29:

(6, 23304), (Start: 8 @23355 has 2 MA's), (Start: 11 @23391 has 50 MA's), (17, 23445), (20, 23475), (23, 23481), (34, 23535), (47, 23685), (48, 23700), (49, 23703), (50, 23706),

Gene: SanaSana_35 Start: 24590, Stop: 25186, Start Num: 11

Candidate Starts for SanaSana_35:

(Start: 10 @24581 has 1 MA's), (Start: 11 @24590 has 50 MA's), (17, 24665), (19, 24686), (27, 24737), (34, 24770), (45, 24893), (46, 24896),

Gene: SansAfet_32 Start: 22861, Stop: 23514, Start Num: 5

Candidate Starts for SansAfet_32:

(2, 22666), (4, 22762), (Start: 5 @22861 has 26 MA's), (Start: 10 @22969 has 1 MA's), (Start: 11 @22978 has 50 MA's), (26, 23086), (35, 23143), (39, 23173), (40, 23179), (46, 23245), (55, 23350),

Gene: SarBear_31 Start: 22749, Stop: 23402, Start Num: 5

Candidate Starts for SarBear_31:

(1, 22413), (4, 22650), (Start: 5 @22749 has 26 MA's), (Start: 10 @22857 has 1 MA's), (Start: 11 @22866 has 50 MA's), (22, 22935), (26, 22974), (35, 23031), (39, 23061), (40, 23067), (46, 23133),

Gene: Sharkboy_30 Start: 23475, Stop: 24047, Start Num: 11

Candidate Starts for Sharkboy_30:

(Start: 8 @23439 has 2 MA's), (Start: 11 @23475 has 50 MA's), (17, 23529), (36, 23640), (41, 23694), (44, 23730), (48, 23784), (57, 23898), (67, 23952),

Gene: Shayna_32 Start: 22699, Stop: 23253, Start Num: 11

Candidate Starts for Shayna_32:

(Start: 11 @22699 has 50 MA's), (26, 22810), (35, 22867), (39, 22897), (40, 22903), (46, 22969), (52, 23032), (57, 23119),

Gene: SirBeanington_32 Start: 23102, Stop: 23689, Start Num: 11

Candidate Starts for SirBeanington_32:

(1, 22649), (4, 22886), (Start: 5 @22985 has 26 MA's), (Start: 11 @23102 has 50 MA's), (18, 23162), (21, 23183), (25, 23222), (32, 23264), (45, 23393), (46, 23396), (47, 23420), (66, 23594),

Gene: Skylord_28 Start: 20927, Stop: 21493, Start Num: 11

Candidate Starts for Skylord_28:

(Start: 10 @20918 has 1 MA's), (Start: 11 @20927 has 50 MA's), (43, 21194), (46, 21215), (47, 21239), (56, 21353), (60, 21383),

Gene: Slay_32 Start: 23514, Stop: 24050, Start Num: 11

Candidate Starts for Slay_32:

(1, 23061), (4, 23298), (Start: 5 @23397 has 26 MA's), (Start: 10 @23505 has 1 MA's), (Start: 11 @23514 has 50 MA's), (22, 23583), (26, 23622), (35, 23679), (39, 23709), (40, 23715), (46, 23781),

Gene: Softsoap_31 Start: 22801, Stop: 23400, Start Num: 11

Candidate Starts for Softsoap_31:

(Start: 5 @22684 has 26 MA's), (Start: 10 @22792 has 1 MA's), (Start: 11 @22801 has 50 MA's), (17, 22855), (44, 23098), (47, 23137), (48, 23152),

Gene: Solea_33 Start: 22862, Stop: 23407, Start Num: 10

Candidate Starts for Solea_33:

(2, 22559), (4, 22655), (Start: 5 @22754 has 26 MA's), (Start: 10 @22862 has 1 MA's), (Start: 11 @22871 has 50 MA's), (26, 22979), (35, 23036), (39, 23066), (40, 23072), (46, 23138), (55, 23243),

Gene: Stoor_33 Start: 24258, Stop: 24854, Start Num: 11

Candidate Starts for Stoor_33:

(Start: 10 @24249 has 1 MA's), (Start: 11 @24258 has 50 MA's), (17, 24333), (19, 24354), (27, 24405), (34, 24438), (45, 24561), (46, 24564), (57, 24717), (59, 24726),

Gene: Stromboli_33 Start: 24124, Stop: 24720, Start Num: 11

Candidate Starts for Stromboli_33:

(6, 24037), (Start: 10 @24115 has 1 MA's), (Start: 11 @24124 has 50 MA's), (17, 24199), (19, 24220), (27, 24271), (34, 24304), (45, 24427), (46, 24430), (57, 24583), (59, 24592),

Gene: SunnyD_32 Start: 22741, Stop: 23256, Start Num: 11

Candidate Starts for SunnyD_32:

(Start: 11 @22741 has 50 MA's), (26, 22852), (39, 22939), (40, 22945), (46, 23011), (52, 23074), (71, 23212),

Gene: Swervy_32 Start: 22916, Stop: 23569, Start Num: 5

Candidate Starts for Swervy_32:

(1, 22580), (4, 22817), (Start: 5 @22916 has 26 MA's), (Start: 10 @23024 has 1 MA's), (Start: 11 @23033 has 50 MA's), (22, 23102), (26, 23141), (35, 23198), (39, 23228), (40, 23234), (46, 23300),

Gene: Teagster_33 Start: 23532, Stop: 24086, Start Num: 11

Candidate Starts for Teagster_33:

(Start: 11 @23532 has 50 MA's), (26, 23643), (35, 23700), (39, 23730), (40, 23736), (46, 23802),

Gene: Triscuit_63 Start: 39489, Stop: 40052, Start Num: 11

Candidate Starts for Triscuit_63:

(Start: 11 @39489 has 50 MA's), (14, 39534), (15, 39537), (30, 39645), (31, 39648), (37, 39684), (38, 39690), (42, 39741), (44, 39771), (45, 39783), (68, 39993), (70, 40005), (74, 40032),

Gene: TukTuk_32 Start: 22975, Stop: 23640, Start Num: 5

Candidate Starts for TukTuk_32:

(1, 22639), (4, 22876), (Start: 5 @22975 has 26 MA's), (Start: 10 @23083 has 1 MA's), (Start: 11 @23092 has 50 MA's), (16, 23116), (45, 23344), (46, 23347), (57, 23500), (66, 23545),

Gene: Vitas_28 Start: 20936, Stop: 21502, Start Num: 11

Candidate Starts for Vitas_28:

(Start: 10 @20927 has 1 MA's), (Start: 11 @20936 has 50 MA's), (43, 21203), (46, 21224), (47, 21248), (56, 21362), (60, 21392),

Gene: WalkingDead_33 Start: 24355, Stop: 24960, Start Num: 10

Candidate Starts for WalkingDead_33:

(Start: 10 @24355 has 1 MA's), (Start: 11 @24364 has 50 MA's), (17, 24439), (19, 24460), (27, 24511), (34, 24544), (45, 24667), (46, 24670), (57, 24823), (59, 24832),