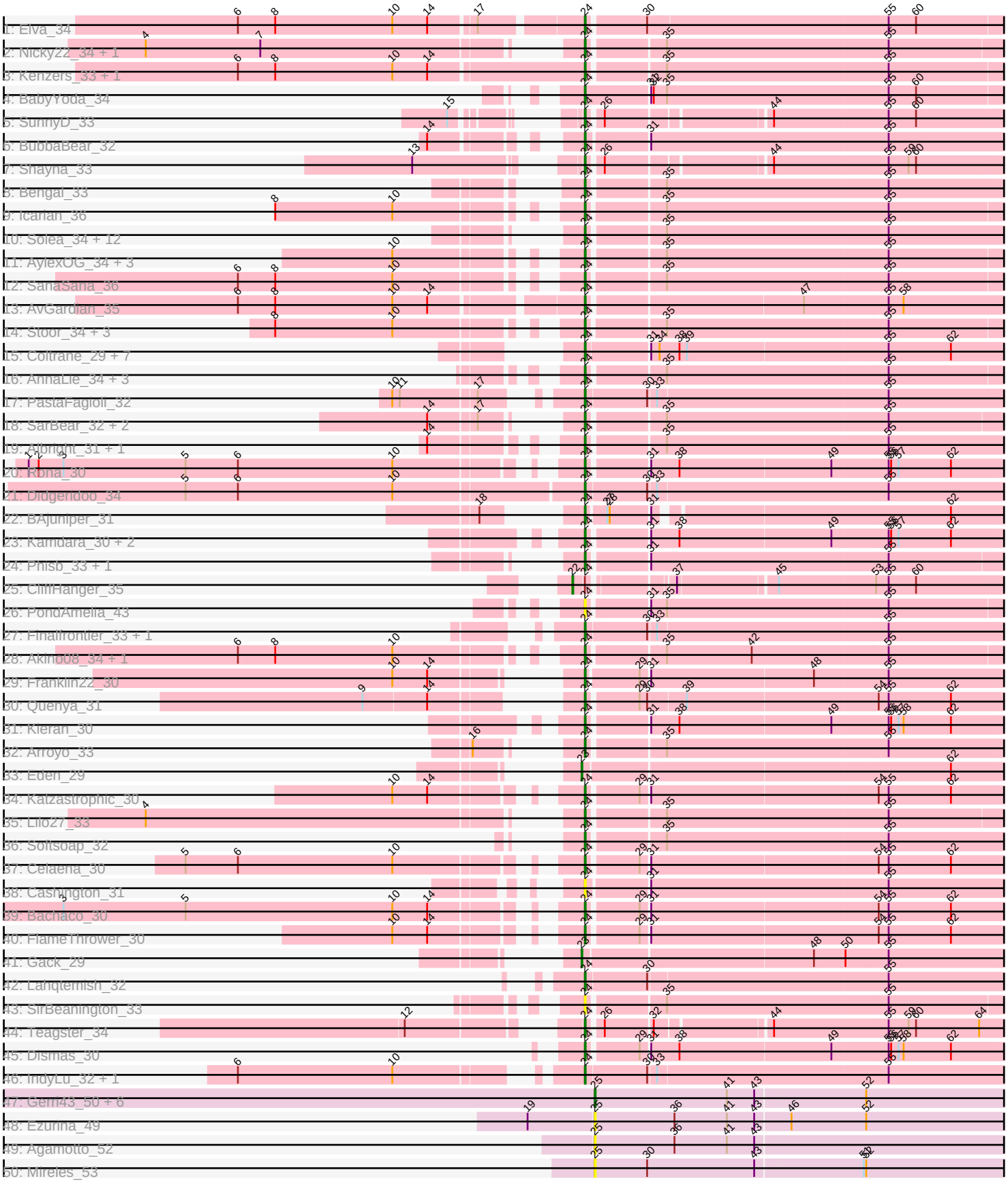
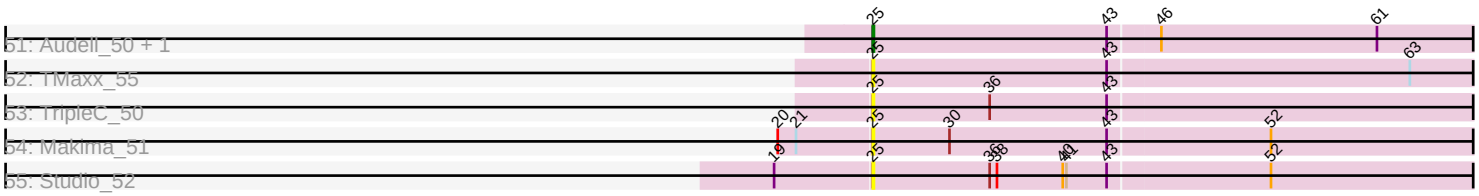
Pham 283666


1: Elva_34
2: Nicky22_34 + 1
3: Kenzers_33 + 1
4: BabyYoda_34
5: SunnyD_33
6: BubbaBear_32
7: Shayna_33
8: Bengal_33
9: Icarian_36
10: Solea_34 + 12
11: AylexOG_34 + 3
12: SanaSana_36
13: AvGardian_35
14: Stoor_34 + 3
15: Coltrane_29 + 7
16: AnnaLie_34 + 3
17: PastaFagioli_32
18: SarBear_32 + 2
19: Albright_31 + 1
20: Rbna_30
21: Didgeridoo_34
22: BAjuniper_31
23: Kamdara_30 + 2
24: Phisb_33 + 1
25: CliffHanger_35
26: PondAmelia_43
27: FinalFrontier_33 + 1
28: Akino08_34 + 1
29: Franklin22_30
30: Quenya_31
31: Kieran_30
32: Arroyo_33
33: Eden_29
34: Katzastrophic_30
35: Lilo27_33
36: Softsoap_32
37: Celaena_30
38: Cashington_31
39: Bachaco_30
40: FlameThrower_30
41: Gack_29
42: Lahqtemish_32
43: SirBeanington_33
44: Teagster_34
45: Dismas_30
46: IndyLu_32 + 1
47: Gem43_50 + 6
48: Ezurina_49
49: Agamotto_52
50: Mireles_53

Pham 283666


51: Audell_50 + 1
52: TMaxx_55
53: TripleC_50
54: Makima_51
55: Studio_52
25
43
46
61
63
36
20
21
30
52
19
38
40
41

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 283666 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283666 has 101 members, 23 are drafts.

Phages represented in each track:
- Track 1 : Elva_34
- Track 2 : Nicky22_34, Jovita_33
- Track 3 : Kenzers_33, Lynlen_33
- Track 4 : BabyYoda_34
- Track 5 : SunnyD_33
- Track 6 : BubbaBear_32
- Track 7 : Shayna_33
- Track 8 : Bengal_33
- Track 9 : Icarian_36
- Track 10 : Solea_34, Doobus_32, Abigail_32, SansAfet_33, Eula_33, Milomuff_33, Johnathan_32, QMacho_34, Burritobowl_32, DickRichards_32, LimaBean_32, Pecas_33, Avocadoman_32
- Track 11 : AylexOG_34, Jabb_33, CupcakePrincess_33, MsUbiquitous_33
- Track 12 : SanaSana_36
- Track 13 : AvGardian_35
- Track 14 : Stoor_34, WalkingDead_34, Stromboli_34, DirtyBubble_33
- Track 15 : Coltrane_29, Armstrong_29, Rollins_29, Skylord_29, Bernstein_29, Brahms_29, Clayda5_30, Vitas_29
- Track 16 : AnnaLie_34, BelmontSKP_34, TukTuk_33, Albedo_33
- Track 17 : PastaFagioli_32
- Track 18 : SarBear_32, Slay_33, Swervy_33
- Track 19 : Albright_31, CroZenni_32
- Track 20 : Rona_30
- Track 21 : Didgeridoo_34
- Track 22 : BAjuniper_31
- Track 23 : Kamdara_30, Sharkboy_31, ChiliPepper_29
- Track 24 : Phisb_33, PhigPhack_33
- Track 25 : CliffHanger_35
- Track 26 : PondAmelia_43
- Track 27 : Finalfrontier_33, Kate33_31
- Track 28 : Akino08_34, Loviatar_35
- Track 29 : Franklin22_30
- Track 30 : Quenya_31
- Track 31 : Kieran_30
- Track 32 : Arroyo_33
- Track 33 : Eden_29
- Track 34 : Katzastrophic_30

• Track 35 : Lilo27_33
• Track 36 : Softsoap_32
• Track 37 : Celaena_30
• Track 38 : Cashington_31
• Track 39 : Bachaco_30
• Track 40 : FlameThrower_30
• Track 41 : Gack_29
• Track 42 : Lahqtemish_32
• Track 43 : SirBeanington_33
• Track 44 : Teagster_34
• Track 45 : Dismas_30
• Track 46 : IndyLu_32, BabyDaisy_32
• Track 47 : Gerri43_50, ChipsNGuac_50, CardboardBox_50, Neuvillette_49, ChamoyPickle_51, AnnabelLee_51, Roberts_49
• Track 48 : Ezurina_49
• Track 49 : Agamotto_52
• Track 50 : Mireles_53
• Track 51 : Audell_50, LastNadiia_50
• Track 52 : TMaxx_55
• Track 53 : TripleC_50
• Track 54 : Makima_51
• Track 55 : Studio_52

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

The start number called the most often in the published annotations is 24, it was called in 73 of the 78 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Abigail_32, Akino08_34, Albedo_33, Albright_31, AnnaLie_34, Armstrong_29, Arroyo_33, AvGardian_35, Avocadoman_32, AylexOG_34, BAjuniper_31, BabyDaisy_32, BabyYoda_34, Bachaco_30, BelmontSKP_34, Bengal_33, Bernstein_29, Brahms_29, BubbaBear_32, Burritobowl_32, Cashington_31, Celaena_30, ChiliPepper_29, Clayda5_30, Coltrane_29, CroZenni_32, CupcakePrincess_33, DickRichards_32, Didgeridoo_34, DirtyBubble_33, Dismas_30, Doobus_32, Elva_34, Eula_33, Finalfrontier_33, FlameThrower_30, Franklin22_30, Icarian_36, IndyLu_32, Jabb_33, Johnathan_32, Jovita_33, Kamdara_30, Kate33_31, Katzastrophic_30, Kenzers_33, Kieran_30, Lahqtemish_32, Lilo27_33, LimaBean_32, Loviatar_35, Lynlen_33, Milomuff_33, MsUbiquitous_33, Nicky22_34, PastaFagioli_32, Pecas_33, PhigPhack_33, Phisb_33, PondAmelia_43, QMacho_34, Quenya_31, Rollins_29, Rona_30, SanaSana_36, SansAfet_33, SarBear_32, Sharkboy_31, Shayna_33, SirBeanington_33, Skylord_29, Slay_33, Softsoap_32, Solea_34, Stoor_34, Stromboli_34, SunnyD_33, Swervy_33, Teagster_34, TukTuk_33, Vitas_29, WalkingDead_34,

Genes that have the "Most Annotated" start but do not call it:
• CliffHanger_35,

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

• Agamotto_52, AnnabelLee_51, Audell_50, CardboardBox_50, ChamoyPickle_51, ChipsNGuac_50, Eden_29, Ezurina_49, Gack_29, Gerri43_50, LastNadiia_50, Makima_51, Mireles_53, Neuvillette_49, Roberts_49, Studio_52, TMaxx_55, TripleC_50,

Summary by start number:

Start 22:
• Found in 1 of 101 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CliffHanger_35 (EB),

Start 23:
• Found in 2 of 101 (2.0%) of genes in pham
• Manual Annotations of this start: 2 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Eden_29 (EB), Gack_29 (EB),

Start 24:
• Found in 83 of 101 (82.2%) of genes in pham
• Manual Annotations of this start: 73 of 78
• Called 98.8% of time when present
• Phage (with cluster) where this start called: Abigail_32 (EB), Akino08_34 (EB), Albedo_33 (EB), Albright_31 (EB), AnnaLie_34 (EB), Armstrong_29 (EB), Arroyo_33 (EB), AvGardian_35 (EB), Avocadoman_32 (EB), AylexOG_34 (EB), BAjuniper_31 (EB), BabyDaisy_32 (EB), BabyYoda_34 (EB), Bachaco_30 (EB), BelmontSKP_34 (EB), Bengal_33 (EB), Bernstein_29 (EB), Brahms_29 (EB), BubbaBear_32 (EB), Burritobowl_32 (EB), Cashington_31 (EB), Celaena_30 (EB), ChiliPepper_29 (EB), Clayda5_30 (EB), Coltrane_29 (EB), CroZenni_32 (EB), CupcakePrincess_33 (EB), DickRichards_32 (EB), Didgeridoo_34 (EB), DirtyBubble_33 (EB), Dismas_30 (EB), Doobus_32 (EB), Elva_34 (EB), Eula_33 (EB), Finalfrontier_33 (EB), FlameThrower_30 (EB), Franklin22_30 (EB), Icarian_36 (EB), IndyLu_32 (EB), Jabb_33 (EB), Johnathan_32 (EB), Jovita_33 (EB), Kamdara_30 (EB), Kate33_31 (EB), Katzastrophic_30 (EB), Kenzers_33 (EB), Kieran_30 (EB), Lahqtemish_32 (EB), Lilo27_33 (EB), LimaBean_32 (EB), Loviatar_35 (EB), Lynlen_33 (EB), Milomuff_33 (EB), MsUbiquitous_33 (EB), Nicky22_34 (EB), PastaFagioli_32 (EB), Pecas_33 (EB), PhigPhack_33 (EB), Phisb_33 (EB), PondAmelia_43 (EB), QMacho_34 (EB), Quenya_31 (EB), Rollins_29 (EB), Rona_30 (EB), SanaSana_36 (EB), SansAfet_33 (EB), SarBear_32 (EB), Sharkboy_31 (EB), Shayna_33 (EB), SirBeanington_33 (EB), Skylord_29 (EB), Slay_33 (EB), Softsoap_32 (EB), Solea_34 (EB), Stoor_34 (EB), Stromboli_34 (EB), SunnyD_33 (EB), Swervy_33 (EB), Teagster_34 (EB), TukTuk_33 (EB), Vitas_29 (EB), WalkingDead_34 (EB),

Start 25:
• Found in 16 of 101 (15.8%) of genes in pham
• Manual Annotations of this start: 2 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Agamotto_52 (FR), AnnabelLee_51 (FR), Audell_50 (FR), CardboardBox_50 (FR), ChamoyPickle_51 (FR), ChipsNGuac_50 (FR), Ezurina_49 (FR), Gerri43_50 (FR), LastNadiia_50 (FR), Makima_51 (FR), Mireles_53 (FR), Neuvillette_49 (FR), Roberts_49 (FR), Studio_52 (FR), TMaxx_55 (FR), TripleC_50 (FR),

Summary by clusters:

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

Info for manual annotations of cluster EB:
•Start number 22 was manually annotated 1 time for cluster EB.
•Start number 23 was manually annotated 2 times for cluster EB.
•Start number 24 was manually annotated 73 times for cluster EB.

Info for manual annotations of cluster FR:
•Start number 25 was manually annotated 2 times for cluster FR.

Gene Information:

Gene: Abigail_32 Start: 23161, Stop: 23670, Start Num: 24
Candidate Starts for Abigail_32:
(Start: 24 @23161 has 73 MA's), (35, 23245), (55, 23509),

Gene: Agamotto_52 Start: 35339, Stop: 34827, Start Num: 25
Candidate Starts for Agamotto_52:
(Start: 25 @35339 has 2 MA's), (36, 35243), (41, 35180), (43, 35147),

Gene: Akino08_34 Start: 25518, Stop: 26024, Start Num: 24
Candidate Starts for Akino08_34:
(6, 25161), (8, 25206), (10, 25347), (Start: 24 @25518 has 73 MA's), (35, 25602), (42, 25704), (55, 25866),

Gene: Albedo_33 Start: 23639, Stop: 24145, Start Num: 24
Candidate Starts for Albedo_33:
(Start: 24 @23639 has 73 MA's), (35, 23723), (55, 23987),

Gene: Albright_31 Start: 22800, Stop: 23309, Start Num: 24
Candidate Starts for Albright_31:
(14, 22668), (Start: 24 @22800 has 73 MA's), (35, 22884), (55, 23148),

Gene: AnnaLie_34 Start: 23922, Stop: 24428, Start Num: 24
Candidate Starts for AnnaLie_34:
(Start: 24 @23922 has 73 MA's), (35, 24006), (55, 24270),

Gene: AnnabelLee_51 Start: 32285, Stop: 31773, Start Num: 25
Candidate Starts for AnnabelLee_51:
(Start: 25 @32285 has 2 MA's), (41, 32126), (43, 32093), (52, 31964),

Gene: Armstrong_29 Start: 21497, Stop: 22009, Start Num: 24
Candidate Starts for Armstrong_29:
(Start: 24 @21497 has 73 MA's), (31, 21569), (34, 21578), (38, 21602), (39, 21611), (55, 21848), (62, 21923),

Gene: Arroyo_33 Start: 23938, Stop: 24447, Start Num: 24
Candidate Starts for Arroyo_33:

(16, 23875), (Start: 24 @23938 has 73 MA's), (35, 24022), (55, 24286),

Gene: Audell_50 Start: 34887, Stop: 34360, Start Num: 25
Candidate Starts for Audell_50:
(Start: 25 @34887 has 2 MA's), (43, 34695), (46, 34656), (61, 34479),

Gene: AvGardian_35 Start: 24185, Stop: 24688, Start Num: 24
Candidate Starts for AvGardian_35:
(6, 23792), (8, 23837), (10, 23978), (14, 24020), (Start: 24 @24185 has 73 MA's), (47, 24431), (55, 24530), (58, 24548),

Gene: Avocadoman_32 Start: 23103, Stop: 23609, Start Num: 24
Candidate Starts for Avocadoman_32:
(Start: 24 @23103 has 73 MA's), (35, 23187), (55, 23451),

Gene: AylexOG_34 Start: 23986, Stop: 24492, Start Num: 24
Candidate Starts for AylexOG_34:
(10, 23815), (Start: 24 @23986 has 73 MA's), (35, 24070), (55, 24334),

Gene: BAjuniper_31 Start: 24389, Stop: 24874, Start Num: 24
Candidate Starts for BAjuniper_31:
(18, 24335), (Start: 24 @24389 has 73 MA's), (27, 24410), (28, 24413), (31, 24458), (62, 24791),

Gene: BabyDaisy_32 Start: 23550, Stop: 24065, Start Num: 24
Candidate Starts for BabyDaisy_32:
(6, 23190), (10, 23376), (Start: 24 @23550 has 73 MA's), (30, 23622), (33, 23631), (55, 23904),

Gene: BabyYoda_34 Start: 24663, Stop: 25178, Start Num: 24
Candidate Starts for BabyYoda_34:
(Start: 24 @24663 has 73 MA's), (31, 24738), (32, 24741), (35, 24756), (55, 25020), (60, 25053),

Gene: Bachaco_30 Start: 24605, Stop: 25111, Start Num: 24
Candidate Starts for Bachaco_30:
(3, 24041), (5, 24188), (10, 24437), (14, 24479), (Start: 24 @24605 has 73 MA's), (29, 24662), (31, 24671), (54, 24938), (55, 24950), (62, 25025),

Gene: BelmontSKP_34 Start: 23922, Stop: 24428, Start Num: 24
Candidate Starts for BelmontSKP_34:
(Start: 24 @23922 has 73 MA's), (35, 24006), (55, 24270),

Gene: Bengal_33 Start: 23550, Stop: 24059, Start Num: 24
Candidate Starts for Bengal_33:
(Start: 24 @23550 has 73 MA's), (35, 23634), (55, 23898),

Gene: Bernstein_29 Start: 21552, Stop: 22064, Start Num: 24
Candidate Starts for Bernstein_29:
(Start: 24 @21552 has 73 MA's), (31, 21624), (34, 21633), (38, 21657), (39, 21666), (55, 21903), (62, 21978),

Gene: Brahms_29 Start: 21499, Stop: 22011, Start Num: 24
Candidate Starts for Brahms_29:
(Start: 24 @21499 has 73 MA's), (31, 21571), (34, 21580), (38, 21604), (39, 21613), (55, 21850), (62, 21925),

Gene: BubbaBear_32 Start: 23491, Stop: 24003, Start Num: 24
Candidate Starts for BubbaBear_32:
(14, 23365), (Start: 24 @23491 has 73 MA's), (31, 23560), (55, 23842),

Gene: Burritobowl_32 Start: 23495, Stop: 24004, Start Num: 24
Candidate Starts for Burritobowl_32:
(Start: 24 @23495 has 73 MA's), (35, 23579), (55, 23843),

Gene: CardboardBox_50 Start: 32288, Stop: 31776, Start Num: 25
Candidate Starts for CardboardBox_50:
(Start: 25 @32288 has 2 MA's), (41, 32129), (43, 32096), (52, 31967),

Gene: Cashington_31 Start: 22838, Stop: 23350, Start Num: 24
Candidate Starts for Cashington_31:
(Start: 24 @22838 has 73 MA's), (31, 22907), (55, 23189),

Gene: Celaena_30 Start: 24287, Stop: 24793, Start Num: 24
Candidate Starts for Celaena_30:
(5, 23870), (6, 23933), (10, 24119), (Start: 24 @24287 has 73 MA's), (29, 24344), (31, 24353), (54, 24620), (55, 24632), (62, 24707),

Gene: ChamoyPickle_51 Start: 32828, Stop: 32316, Start Num: 25
Candidate Starts for ChamoyPickle_51:
(Start: 25 @32828 has 2 MA's), (41, 32669), (43, 32636), (52, 32507),

Gene: ChiliPepper_29 Start: 23783, Stop: 24289, Start Num: 24
Candidate Starts for ChiliPepper_29:
(Start: 24 @23783 has 73 MA's), (31, 23849), (38, 23882), (49, 24062), (55, 24128), (56, 24131), (57, 24140), (62, 24203),

Gene: ChipsNGuac_50 Start: 32288, Stop: 31776, Start Num: 25
Candidate Starts for ChipsNGuac_50:
(Start: 25 @32288 has 2 MA's), (41, 32129), (43, 32096), (52, 31967),

Gene: Clayda5_30 Start: 21486, Stop: 21998, Start Num: 24
Candidate Starts for Clayda5_30:
(Start: 24 @21486 has 73 MA's), (31, 21558), (34, 21567), (38, 21591), (39, 21600), (55, 21837), (62, 21912),

Gene: CliffHanger_35 Start: 22984, Stop: 23460, Start Num: 22
Candidate Starts for CliffHanger_35:
(Start: 22 @22984 has 1 MA's), (Start: 24 @22996 has 73 MA's), (37, 23083), (45, 23194), (53, 23308), (55, 23323), (60, 23356),

Gene: Coltrane_29 Start: 21499, Stop: 22011, Start Num: 24
Candidate Starts for Coltrane_29:
(Start: 24 @21499 has 73 MA's), (31, 21571), (34, 21580), (38, 21604), (39, 21613), (55, 21850), (62, 21925),

Gene: CroZenni_32 Start: 23384, Stop: 23893, Start Num: 24
Candidate Starts for CroZenni_32:
(14, 23252), (Start: 24 @23384 has 73 MA's), (35, 23468), (55, 23732),

Gene: CupcakePrincess_33 Start: 23673, Stop: 24179, Start Num: 24
Candidate Starts for CupcakePrincess_33:
(10, 23502), (Start: 24 @23673 has 73 MA's), (35, 23757), (55, 24021),

Gene: DickRichards_32 Start: 23824, Stop: 24333, Start Num: 24
Candidate Starts for DickRichards_32:
(Start: 24 @23824 has 73 MA's), (35, 23908), (55, 24172),

Gene: Didgeridoo_34 Start: 23947, Stop: 24462, Start Num: 24
Candidate Starts for Didgeridoo_34:
(5, 23479), (6, 23542), (10, 23728), (Start: 24 @23947 has 73 MA's), (30, 24019), (33, 24028), (55, 24301),

Gene: DirtyBubble_33 Start: 24347, Stop: 24853, Start Num: 24
Candidate Starts for DirtyBubble_33:
(8, 24035), (10, 24176), (Start: 24 @24347 has 73 MA's), (35, 24431), (55, 24695),

Gene: Dismas_30 Start: 23954, Stop: 24460, Start Num: 24
Candidate Starts for Dismas_30:
(Start: 24 @23954 has 73 MA's), (29, 24011), (31, 24020), (38, 24053), (49, 24233), (55, 24299), (56, 24302), (57, 24311), (58, 24317), (62, 24374),

Gene: Doobus_32 Start: 23270, Stop: 23776, Start Num: 24
Candidate Starts for Doobus_32:
(Start: 24 @23270 has 73 MA's), (35, 23354), (55, 23618),

Gene: Eden_29 Start: 21679, Stop: 22194, Start Num: 23
Candidate Starts for Eden_29:
(Start: 23 @21679 has 2 MA's), (62, 22108),

Gene: Elva_34 Start: 24367, Stop: 24873, Start Num: 24
Candidate Starts for Elva_34:
(6, 23974), (8, 24019), (10, 24160), (14, 24202), (17, 24253), (Start: 24 @24367 has 73 MA's), (30, 24433), (55, 24715), (60, 24748),

Gene: Eula_33 Start: 23586, Stop: 24092, Start Num: 24
Candidate Starts for Eula_33:
(Start: 24 @23586 has 73 MA's), (35, 23670), (55, 23934),

Gene: Ezurina_49 Start: 33255, Stop: 32743, Start Num: 25
Candidate Starts for Ezurina_49:
(19, 33333), (Start: 25 @33255 has 2 MA's), (36, 33159), (41, 33096), (43, 33063), (46, 33024), (52, 32934),

Gene: Finalfrontier_33 Start: 24197, Stop: 24712, Start Num: 24
Candidate Starts for Finalfrontier_33:
(Start: 24 @24197 has 73 MA's), (30, 24269), (33, 24278), (55, 24551),

Gene: FlameThrower_30 Start: 23779, Stop: 24285, Start Num: 24
Candidate Starts for FlameThrower_30:
(10, 23611), (14, 23653), (Start: 24 @23779 has 73 MA's), (29, 23836), (31, 23845), (54, 24112), (55, 24124), (62, 24199),

Gene: Franklin22_30 Start: 21844, Stop: 22353, Start Num: 24
Candidate Starts for Franklin22_30:
(10, 21700), (14, 21742), (Start: 24 @21844 has 73 MA's), (29, 21904), (31, 21913), (48, 22105), (55, 22192),

Gene: Gack_29 Start: 21723, Stop: 22238, Start Num: 23
Candidate Starts for Gack_29:
(Start: 23 @21723 has 2 MA's), (48, 21990), (50, 22026), (55, 22077),

Gene: Gerri43_50 Start: 32288, Stop: 31776, Start Num: 25
Candidate Starts for Gerri43_50:
(Start: 25 @32288 has 2 MA's), (41, 32129), (43, 32096), (52, 31967),

Gene: Icarian_36 Start: 24981, Stop: 25487, Start Num: 24
Candidate Starts for Icarian_36:
(8, 24669), (10, 24810), (Start: 24 @24981 has 73 MA's), (35, 25065), (55, 25329),

Gene: IndyLu_32 Start: 23511, Stop: 24026, Start Num: 24
Candidate Starts for IndyLu_32:
(6, 23151), (10, 23337), (Start: 24 @23511 has 73 MA's), (30, 23583), (33, 23592), (55, 23865),

Gene: Jabb_33 Start: 23673, Stop: 24179, Start Num: 24
Candidate Starts for Jabb_33:
(10, 23502), (Start: 24 @23673 has 73 MA's), (35, 23757), (55, 24021),

Gene: Johnathan_32 Start: 23043, Stop: 23552, Start Num: 24
Candidate Starts for Johnathan_32:
(Start: 24 @23043 has 73 MA's), (35, 23127), (55, 23391),

Gene: Jovita_33 Start: 23689, Stop: 24195, Start Num: 24
Candidate Starts for Jovita_33:
(4, 23239), (7, 23377), (Start: 24 @23689 has 73 MA's), (35, 23773), (55, 24037),

Gene: Kamdara_30 Start: 23959, Stop: 24465, Start Num: 24
Candidate Starts for Kamdara_30:
(Start: 24 @23959 has 73 MA's), (31, 24025), (38, 24058), (49, 24238), (55, 24304), (56, 24307), (57, 24316), (62, 24379),

Gene: Kate33_31 Start: 23304, Stop: 23819, Start Num: 24
Candidate Starts for Kate33_31:
(Start: 24 @23304 has 73 MA's), (30, 23376), (33, 23385), (55, 23658),

Gene: Katzastrophic_30 Start: 23897, Stop: 24403, Start Num: 24
Candidate Starts for Katzastrophic_30:
(10, 23729), (14, 23771), (Start: 24 @23897 has 73 MA's), (29, 23954), (31, 23963), (54, 24230), (55, 24242), (62, 24317),

Gene: Kenzers_33 Start: 23636, Stop: 24142, Start Num: 24
Candidate Starts for Kenzers_33:
(6, 23228), (8, 23273), (10, 23414), (14, 23456), (Start: 24 @23636 has 73 MA's), (35, 23720), (55, 23984),

Gene: Kieran_30 Start: 23963, Stop: 24469, Start Num: 24
Candidate Starts for Kieran_30:
(Start: 24 @23963 has 73 MA's), (31, 24029), (38, 24062), (49, 24242), (55, 24308), (56, 24311), (57, 24320), (58, 24326), (62, 24383),

Gene: Lahqtemish_32 Start: 23544, Stop: 24059, Start Num: 24
Candidate Starts for Lahqtemish_32:
(Start: 24 @23544 has 73 MA's), (30, 23616), (55, 23898),

Gene: LastNadiia_50 Start: 34509, Stop: 33997, Start Num: 25
Candidate Starts for LastNadiia_50:
(Start: 25 @34509 has 2 MA's), (43, 34317), (46, 34278), (61, 34101),

Gene: Lilo27_33 Start: 23497, Stop: 24003, Start Num: 24
Candidate Starts for Lilo27_33:
(4, 23047), (Start: 24 @23497 has 73 MA's), (35, 23581), (55, 23845),

Gene: LimaBean_32 Start: 23039, Stop: 23548, Start Num: 24
Candidate Starts for LimaBean_32:
(Start: 24 @23039 has 73 MA's), (35, 23123), (55, 23387),

Gene: Loviatar_35 Start: 25533, Stop: 26039, Start Num: 24
Candidate Starts for Loviatar_35:
(6, 25176), (8, 25221), (10, 25362), (Start: 24 @25533 has 73 MA's), (35, 25617), (42, 25719), (55, 25881),

Gene: Lynlen_33 Start: 23636, Stop: 24142, Start Num: 24
Candidate Starts for Lynlen_33:
(6, 23228), (8, 23273), (10, 23414), (14, 23456), (Start: 24 @23636 has 73 MA's), (35, 23720), (55, 23984),

Gene: Makima_51 Start: 34127, Stop: 33597, Start Num: 25
Candidate Starts for Makima_51:
(20, 34202), (21, 34187), (Start: 25 @34127 has 2 MA's), (30, 34064), (43, 33935), (52, 33806),

Gene: Milomuff_33 Start: 23404, Stop: 23913, Start Num: 24
Candidate Starts for Milomuff_33:
(Start: 24 @23404 has 73 MA's), (35, 23488), (55, 23752),

Gene: Mireles_53 Start: 33784, Stop: 33254, Start Num: 25
Candidate Starts for Mireles_53:
(Start: 25 @33784 has 2 MA's), (30, 33721), (43, 33592), (51, 33466), (52, 33463),

Gene: MsUbiquitous_33 Start: 23673, Stop: 24179, Start Num: 24
Candidate Starts for MsUbiquitous_33:
(10, 23502), (Start: 24 @23673 has 73 MA's), (35, 23757), (55, 24021),

Gene: Neuvillette_49 Start: 32288, Stop: 31776, Start Num: 25
Candidate Starts for Neuvillette_49:
(Start: 25 @32288 has 2 MA's), (41, 32129), (43, 32096), (52, 31967),

Gene: Nicky22_34 Start: 24051, Stop: 24557, Start Num: 24
Candidate Starts for Nicky22_34:

(4, 23601), (7, 23739), (Start: 24 @24051 has 73 MA's), (35, 24135), (55, 24399),

Gene: PastaFagioli_32 Start: 23529, Stop: 24044, Start Num: 24
Candidate Starts for PastaFagioli_32:
(10, 23355), (11, 23364), (17, 23451), (Start: 24 @23529 has 73 MA's), (30, 23601), (33, 23610), (55, 23883),

Gene: Pecas_33 Start: 23586, Stop: 24092, Start Num: 24
Candidate Starts for Pecas_33:
(Start: 24 @23586 has 73 MA's), (35, 23670), (55, 23934),

Gene: PhigPhack_33 Start: 23406, Stop: 23912, Start Num: 24
Candidate Starts for PhigPhack_33:
(Start: 24 @23406 has 73 MA's), (31, 23472), (55, 23754),

Gene: Phisb_33 Start: 23642, Stop: 24127, Start Num: 24
Candidate Starts for Phisb_33:
(Start: 24 @23642 has 73 MA's), (31, 23708), (55, 23990),

Gene: PondAmelia_43 Start: 24532, Stop: 25038, Start Num: 24
Candidate Starts for PondAmelia_43:
(Start: 24 @24532 has 73 MA's), (31, 24598), (35, 24616), (55, 24880),

Gene: QMacho_34 Start: 24069, Stop: 24575, Start Num: 24
Candidate Starts for QMacho_34:
(Start: 24 @24069 has 73 MA's), (35, 24153), (55, 24417),

Gene: Quenya_31 Start: 23759, Stop: 24265, Start Num: 24
Candidate Starts for Quenya_31:
(9, 23576), (14, 23651), (Start: 24 @23759 has 73 MA's), (29, 23816), (30, 23825), (39, 23867), (54, 24092), (55, 24104), (62, 24179),

Gene: Roberts_49 Start: 32288, Stop: 31776, Start Num: 25
Candidate Starts for Roberts_49:
(Start: 25 @32288 has 2 MA's), (41, 32129), (43, 32096), (52, 31967),

Gene: Rollins_29 Start: 21552, Stop: 22064, Start Num: 24
Candidate Starts for Rollins_29:
(Start: 24 @21552 has 73 MA's), (31, 21624), (34, 21633), (38, 21657), (39, 21666), (55, 21903), (62, 21978),

Gene: Rona_30 Start: 23945, Stop: 24451, Start Num: 24
Candidate Starts for Rona_30:
(1, 23339), (2, 23351), (3, 23381), (5, 23528), (6, 23591), (10, 23777), (Start: 24 @23945 has 73 MA's), (31, 24011), (38, 24044), (49, 24224), (55, 24290), (56, 24293), (57, 24302), (62, 24365),

Gene: SanaSana_36 Start: 25183, Stop: 25689, Start Num: 24
Candidate Starts for SanaSana_36:
(6, 24826), (8, 24871), (10, 25012), (Start: 24 @25183 has 73 MA's), (35, 25267), (55, 25531),

Gene: SansAfet_33 Start: 23511, Stop: 24017, Start Num: 24
Candidate Starts for SansAfet_33:
(Start: 24 @23511 has 73 MA's), (35, 23595), (55, 23859),

Gene: SarBear_32 Start: 23399, Stop: 23905, Start Num: 24
Candidate Starts for SarBear_32:
(14, 23288), (17, 23342), (Start: 24 @23399 has 73 MA's), (35, 23483), (55, 23747),

Gene: Sharkboy_31 Start: 24044, Stop: 24550, Start Num: 24
Candidate Starts for Sharkboy_31:
(Start: 24 @24044 has 73 MA's), (31, 24110), (38, 24143), (49, 24323), (55, 24389), (56, 24392), (57, 24401), (62, 24464),

Gene: Shayna_33 Start: 23250, Stop: 23720, Start Num: 24
Candidate Starts for Shayna_33:
(13, 23106), (Start: 24 @23250 has 73 MA's), (26, 23265), (44, 23445), (55, 23580), (59, 23604), (60, 23613),

Gene: SirBeanington_33 Start: 23686, Stop: 24192, Start Num: 24
Candidate Starts for SirBeanington_33:
(Start: 24 @23686 has 73 MA's), (35, 23770), (55, 24034),

Gene: Skylord_29 Start: 21483, Stop: 21995, Start Num: 24
Candidate Starts for Skylord_29:
(Start: 24 @21483 has 73 MA's), (31, 21555), (34, 21564), (38, 21588), (39, 21597), (55, 21834), (62, 21909),

Gene: Slay_33 Start: 24047, Stop: 24553, Start Num: 24
Candidate Starts for Slay_33:
(14, 23936), (17, 23990), (Start: 24 @24047 has 73 MA's), (35, 24131), (55, 24395),

Gene: Softsoap_32 Start: 23397, Stop: 23906, Start Num: 24
Candidate Starts for Softsoap_32:
(Start: 24 @23397 has 73 MA's), (35, 23481), (55, 23745),

Gene: Solea_34 Start: 23404, Stop: 23913, Start Num: 24
Candidate Starts for Solea_34:
(Start: 24 @23404 has 73 MA's), (35, 23488), (55, 23752),

Gene: Stoor_34 Start: 24851, Stop: 25357, Start Num: 24
Candidate Starts for Stoor_34:
(8, 24539), (10, 24680), (Start: 24 @24851 has 73 MA's), (35, 24935), (55, 25199),

Gene: Stromboli_34 Start: 24717, Stop: 25223, Start Num: 24
Candidate Starts for Stromboli_34:
(8, 24405), (10, 24546), (Start: 24 @24717 has 73 MA's), (35, 24801), (55, 25065),

Gene: Studio_52 Start: 33495, Stop: 32983, Start Num: 25
Candidate Starts for Studio_52:
(19, 33573), (Start: 25 @33495 has 2 MA's), (36, 33399), (38, 33393), (40, 33339), (41, 33336), (43, 33303), (52, 33174),

Gene: SunnyD_33 Start: 23253, Stop: 23723, Start Num: 24
Candidate Starts for SunnyD_33:
(15, 23178), (Start: 24 @23253 has 73 MA's), (26, 23268), (44, 23448), (55, 23583), (60, 23616),

Gene: Swervy_33 Start: 23566, Stop: 24072, Start Num: 24
Candidate Starts for Swervy_33:
(14, 23455), (17, 23509), (Start: 24 @23566 has 73 MA's), (35, 23650), (55, 23914),

Gene: TMaxx_55 Start: 33429, Stop: 32917, Start Num: 25
Candidate Starts for TMaxx_55:
(Start: 25 @33429 has 2 MA's), (43, 33237), (63, 32994),

Gene: Teagster_34 Start: 24083, Stop: 24553, Start Num: 24
Candidate Starts for Teagster_34:
(12, 23927), (Start: 24 @24083 has 73 MA's), (26, 24098), (32, 24152), (44, 24278), (55, 24413), (59, 24437), (60, 24446), (64, 24521),

Gene: TripleC_50 Start: 35493, Stop: 34981, Start Num: 25
Candidate Starts for TripleC_50:
(Start: 25 @35493 has 2 MA's), (36, 35397), (43, 35301),

Gene: TukTuk_33 Start: 23637, Stop: 24143, Start Num: 24
Candidate Starts for TukTuk_33:
(Start: 24 @23637 has 73 MA's), (35, 23721), (55, 23985),

Gene: Vitas_29 Start: 21492, Stop: 22004, Start Num: 24
Candidate Starts for Vitas_29:
(Start: 24 @21492 has 73 MA's), (31, 21564), (34, 21573), (38, 21597), (39, 21606), (55, 21843), (62, 21918),

Gene: WalkingDead_34 Start: 24957, Stop: 25463, Start Num: 24
Candidate Starts for WalkingDead_34:
(8, 24645), (10, 24786), (Start: 24 @24957 has 73 MA's), (35, 25041), (55, 25305),