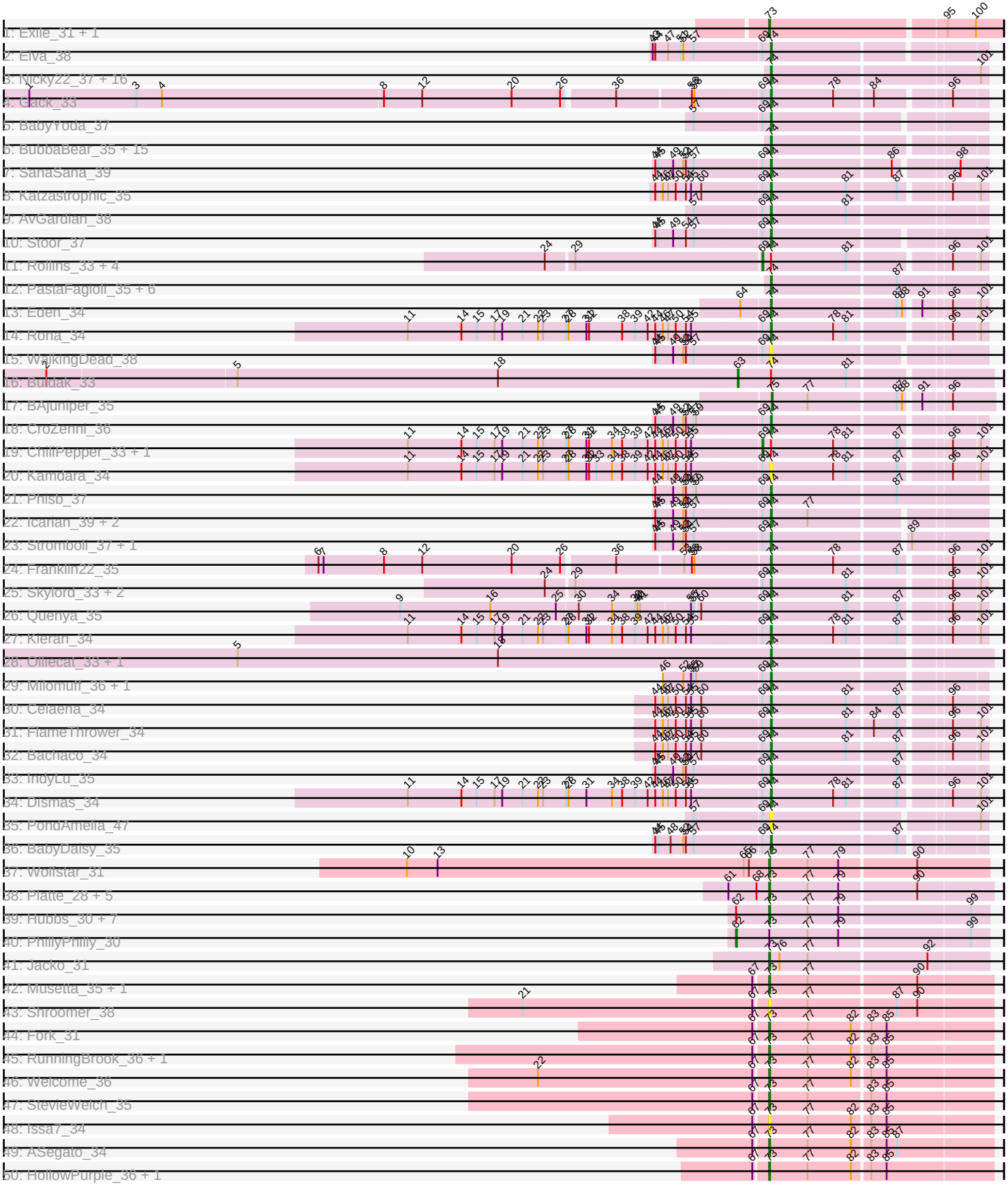
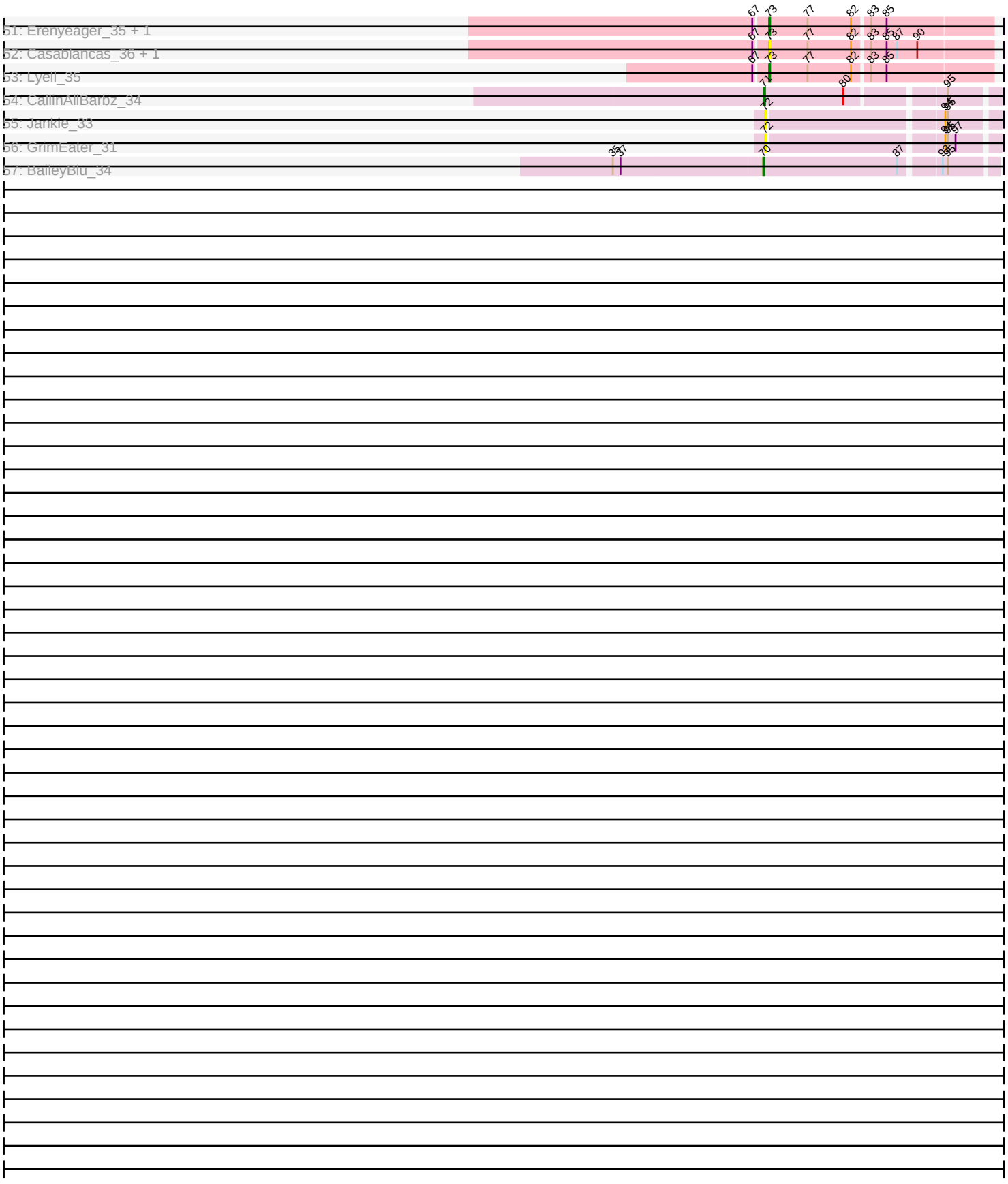
Pham 283613


1: Exile_31 + 1
2: Elva_38
3: Nicky22_37 + 16
4: Gack_33
5: BabyYoda_37
6: BubbaBear_35 + 15
7: SanaSana_39
8: Katzastrophic_35
9: AvGardian_38
10: Stoor_37
11: Rollins_33 + 4
12: PastaFagioli_35 + 6
13: Eden_34
14: Rona_34
15: WalkingDead_38
16: Buldak_33
17: BAjuniper_35
18: CroZenni_36
19: ChiliPepper_33 + 1
20: Kamdara_34
21: Phisb_37
22: Icarian_39 + 2
23: Stromboli_37 + 1
24: Franklin22_35
25: Skylord_33 + 2
26: Quenya_35
27: Kieran_34
28: Ollecat_33 + 1
29: Mllomuff_36 + 1
30: Celaena_34
31: FlameThrower_34
32: Bachaco_34
33: IndyLu_35
34: Dismas_34
35: PondAmelia_47
36: BabyDaisy_35
37: Wolfstar_31
38: Platte_28 + 5
39: Hubbs_30 + 7
40: PhillyPhilly_30
41: Jacko_31
42: Musetta_35 + 1
43: Shroomer_38
44: Fork_31
45: RunningBrook_36 + 1
46: Welcome_36
47: StevieWelch_35
48: Issa7_34
49: ASegato_34
50: HollowPurple_36 + 1

Pham 283613


51: Erenyeager_35 + 1
52: Casablancas_36 + 1
53: Lyell_35
54: CallinAllBarbz_34
55: Jankie_33
56: GrimEater_31
57: BaileyBlu_34

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 283613 Report

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

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 283613 has 124 members, 20 are drafts.

Phages represented in each track:
• Track 1 : Exile_31, Soondubu_31
• Track 2 : Elva_38
• Track 3 : Nicky22_37, Kenzers_36, AylexOG_38, SarBear_36, Slay_37, Jabb_37, SirBeanington_36, Eula_37, Lynlen_36, Lilo27_37, CupcakePrincess_37, Jovita_37, MsUbiquitous_37, QMacho_38, Pecas_36, Swervy_37, Albedo_36
• Track 4 : Gack_33
• Track 5 : BabyYoda_37
• Track 6 : BubbaBear_35, Bengal_37, AnnaLie_37, Albright_34, Abigail_35, SansAfet_37, Finalfrontier_36, BelmontSKP_37, Arroyo_37, Doobus_35, Softsoap_36, Johnathan_35, Burritobowl_36, DickRichards_35, LimaBean_35, Avocadoman_35
• Track 7 : SanaSana_39
• Track 8 : Katzastrophic_35
• Track 9 : AvGardian_38
• Track 10 : Stoor_37
• Track 11 : Rollins_33, Coltrane_33, Brahms_33, Bernstein_33, Armstrong_33
• Track 12 : PastaFagioli_35, Didgeridoo_38, Kate33_36, PhigPhack_37, Cashington_34, TukTuk_37, Lahqtemish_35
• Track 13 : Eden_34
• Track 14 : Rona_34
• Track 15 : WalkingDead_38
• Track 16 : Buldak_33
• Track 17 : BAjuniper_35
• Track 18 : CroZenni_36
• Track 19 : ChiliPepper_33, Sharkboy_35
• Track 20 : Kamdara_34
• Track 21 : Phisb_37
• Track 22 : Icarian_39, Akino08_37, Loviatar_37
• Track 23 : Stromboli_37, DirtyBubble_36
• Track 24 : Franklin22_35
• Track 25 : Skylord_33, Vitas_33, Clayda5_34
• Track 26 : Quenya_35
• Track 27 : Kieran_34

• Track 28 : Olliecat_33, Squircle_33
• Track 29 : Milomuff_36, Solea_37
• Track 30 : Celaena_34
• Track 31 : FlameThrower_34
• Track 32 : Bachaco_34
• Track 33 : IndyLu_35
• Track 34 : Dismas_34
• Track 35 : PondAmelia_47
• Track 36 : BabyDaisy_35
• Track 37 : Wolfstar_31
• Track 38 : Platte_28, Hortus1_28, OlinDD_28, Alleb_29, Tandem_28, Pioneer3_28
• Track 39 : Hubbs_30, Saradis_31, Roman_30, Solimine_31, DejaVu_31, Lupine_29, Pavlo_29, Uterion_32
• Track 40 : PhillyPhilly_30
• Track 41 : Jacko_31
• Track 42 : Musetta_35, Yuma_34
• Track 43 : Shroomer_38
• Track 44 : Fork_31
• Track 45 : RunningBrook_36, DustyDino_38
• Track 46 : Welcome_36
• Track 47 : StevieWelch_35
• Track 48 : Issa7_34
• Track 49 : ASegato_34
• Track 50 : HollowPurple_36, SteakFry_34
• Track 51 : Erenyeager_35, Necrophoxinus_37
• Track 52 : Casablancas_36, Deschain_35
• Track 53 : Lyell_35
• Track 54 : CallinAllBarbz_34
• Track 55 : Jankie_33
• Track 56 : GrimEater_31
• Track 57 : BaileyBlu_34

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

The start number called the most often in the published annotations is 74, it was called in 66 of the 104 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Abigail_35, Akino08_37, Albedo_36, Albright_34, AnnaLie_37, Arroyo_37, AvGardian_38, Avocadoman_35, AylexOG_38, BabyDaisy_35, BabyYoda_37, Bachaco_34, BelmontSKP_37, Bengal_37, BubbaBear_35, Burritobowl_36, Cashington_34, Celaena_34, Clayda5_34, CroZenni_36, CupcakePrincess_37, DickRichards_35, Didgeridoo_38, DirtyBubble_36, Dismas_34, Doobus_35, Eden_34, Elva_38, Eula_37, Finalfrontier_36, FlameThrower_34, Franklin22_35, Gack_33, Icarian_39, IndyLu_35, Jabb_37, Johnathan_35, Jovita_37, Kamdara_34, Kate33_36, Katzastrophic_35, Kenzers_36, Kieran_34, Lahqtemish_35, Lilo27_37, LimaBean_35, Loviatar_37, Lynlen_36, Milomuff_36, MsUbiquitous_37, Nicky22_37, Olliecat_33, PastaFagioli_35, Pecas_36, PhigPhack_37, Phisb_37, PondAmelia_47, QMacho_38, Quenya_35, Rona_34, SanaSana_39, SansAfet_37, SarBear_36, SirBeanington_36, Skylord_33, Slay_37, Softsoap_36, Solea_37, Squircle_33,

Stoor_37, Stromboli_37, Swervy_37, TukTuk_37, Vitas_33, WalkingDead_38,

Genes that have the "Most Annotated" start but do not call it:
• Armstrong_33, Bernstein_33, Brahms_33, Buldak_33, ChiliPepper_33, Coltrane_33, Rollins_33, Sharkboy_35,

Genes that do not have the "Most Annotated" start:
• ASegato_34, Alleb_29, BAjuniper_35, BaileyBlu_34, CallinAllBarbz_34, Casablancas_36, DejaVu_31, Deschain_35, DustyDino_38, Erenyeager_35, Exile_31, Fork_31, GrimEater_31, HollowPurple_36, Hortus1_28, Hubbs_30, Issa7_34, Jacko_31, Jankie_33, Lupine_29, Lyell_35, Musetta_35, Necrophoxinus_37, OlinDD_28, Pavlo_29, PhillyPhilly_30, Pioneer3_28, Platte_28, Roman_30, RunningBrook_36, Saradis_31, Shroomer_38, Solimine_31, Soondubu_31, SteakFry_34, StevieWelch_35, Tandem_28, Uterion_32, Welcome_36, Wolfstar_31, Yuma_34,

Summary by start number:

Start 62:
• Found in 9 of 124 (7.3%) of genes in pham
• Manual Annotations of this start: 1 of 104
• Called 11.1% of time when present
• Phage (with cluster) where this start called: PhillyPhilly_30 (ED1),

Start 63:
• Found in 1 of 124 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 104
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Buldak_33 (EB),

Start 69:
• Found in 38 of 124 (30.6%) of genes in pham
• Manual Annotations of this start: 7 of 104
• Called 18.4% of time when present
• Phage (with cluster) where this start called: Armstrong_33 (EB), Bernstein_33 (EB), Brahms_33 (EB), ChiliPepper_33 (EB), Coltrane_33 (EB), Rollins_33 (EB), Sharkboy_35 (EB),

Start 70:
• Found in 1 of 124 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 104
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BaileyBlu_34 (FP),

Start 71:
• Found in 1 of 124 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 104
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CallinAllBarbz_34 (FP),

Start 72:
• Found in 2 of 124 (1.6%) of genes in pham
• No Manual Annotations of this start.

• Called 100.0% of time when present
• Phage (with cluster) where this start called: GrimEater_31 (FP), Jankie_33 (FP),

Start 73:
• Found in 36 of 124 (29.0%) of genes in pham
• Manual Annotations of this start: 26 of 104
• Called 97.2% of time when present
• Phage (with cluster) where this start called: ASegato_34 (ED2), Alleb_29 (ED1), Casablancas_36 (ED2), DejaVu_31 (ED1), Deschain_35 (ED2), DustyDino_38 (ED2), Erenyeager_35 (ED2), Exile_31 (AZ6), Fork_31 (ED2), HollowPurple_36 (ED2), Hortus1_28 (ED1), Hubbs_30 (ED1), Issa7_34 (ED2), Jacko_31 (ED1), Lupine_29 (ED1), Lyell_35 (ED2), Musetta_35 (ED2), Necrophoxinus_37 (ED2), OlinDD_28 (ED1), Pavlo_29 (ED1), Pioneer3_28 (ED1), Platte_28 (ED1), Roman_30 (ED1), RunningBrook_36 (ED2), Saradis_31 (ED1), Shroomer_38 (ED2), Solimine_31 (ED1), Soondubu_31 (AZ6), SteakFry_34 (ED2), StevieWelch_35 (ED2), Tandem_28 (ED1), Uterion_32 (ED1), Welcome_36 (ED2), Wolfstar_31 (ED), Yuma_34 (ED2),

Start 74:
• Found in 83 of 124 (66.9%) of genes in pham
• Manual Annotations of this start: 66 of 104
• Called 90.4% of time when present
• Phage (with cluster) where this start called: Abigail_35 (EB), Akino08_37 (EB), Albedo_36 (EB), Albright_34 (EB), AnnaLie_37 (EB), Arroyo_37 (EB), AvGardian_38 (EB), Avocadoman_35 (EB), AylexOG_38 (EB), BabyDaisy_35 (EB), BabyYoda_37 (EB), Bachaco_34 (EB), BelmontSKP_37 (EB), Bengal_37 (EB), BubbaBear_35 (EB), Burritobowl_36 (EB), Cashington_34 (EB), Celaena_34 (EB), Clayda5_34 (EB), CroZenni_36 (EB), CupcakePrincess_37 (EB), DickRichards_35 (EB), Didgeridoo_38 (EB), DirtyBubble_36 (EB), Dismas_34 (EB), Doobus_35 (EB), Eden_34 (EB), Elva_38 (EB), Eula_37 (EB), Finalfrontier_36 (EB), FlameThrower_34 (EB), Franklin22_35 (EB), Gack_33 (EB), Icarian_39 (EB), IndyLu_35 (EB), Jabb_37 (EB), Johnathan_35 (EB), Jovita_37 (EB), Kamdara_34 (EB), Kate33_36 (EB), Katzastrophic_35 (EB), Kenzers_36 (EB), Kieran_34 (EB), Lahqtemish_35 (EB), Lilo27_37 (EB), LimaBean_35 (EB), Loviatar_37 (EB), Lynlen_36 (EB), Milomuff_36 (EB), MsUbiquitous_37 (EB), Nicky22_37 (EB), Olliecat_33 (EB), PastaFagioli_35 (EB), Pecas_36 (EB), PhigPhack_37 (EB), Phisb_37 (EB), PondAmelia_47 (EB), QMacho_38 (EB), Quenya_35 (EB), Rona_34 (EB), SanaSana_39 (EB), SansAfet_37 (EB), SarBear_36 (EB), SirBeanington_36 (EB), Skylord_33 (EB), Slay_37 (EB), Softsoap_36 (EB), Solea_37 (EB), Squircle_33 (EB), Stoor_37 (EB), Stromboli_37 (EB), Swervy_37 (EB), TukTuk_37 (EB), Vitas_33 (EB), WalkingDead_38 (EB),

Start 75:
• Found in 1 of 124 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 104
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BAjuniper_35 (EB),

Summary by clusters:

There are 6 clusters represented in this pham: FP, ED, EB, ED2, ED1, AZ6,

Info for manual annotations of cluster AZ6:
•Start number 73 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster EB:
•Start number 63 was manually annotated 1 time for cluster EB.
•Start number 69 was manually annotated 7 times for cluster EB.
•Start number 74 was manually annotated 66 times for cluster EB.
•Start number 75 was manually annotated 1 time for cluster EB.

Info for manual annotations of cluster ED:
•Start number 73 was manually annotated 1 time for cluster ED.

Info for manual annotations of cluster ED1:
•Start number 62 was manually annotated 1 time for cluster ED1.
•Start number 73 was manually annotated 12 times for cluster ED1.

Info for manual annotations of cluster ED2:
•Start number 73 was manually annotated 12 times for cluster ED2.

Info for manual annotations of cluster FP:
•Start number 70 was manually annotated 1 time for cluster FP.
•Start number 71 was manually annotated 1 time for cluster FP.

Gene Information:

Gene: ASegato_34 Start: 9990, Stop: 10244, Start Num: 73
Candidate Starts for ASegato_34:
(67, 9975), (Start: 73 @9990 has 26 MA's), (77, 10035), (82, 10086), (83, 10104), (85, 10122), (87, 10134),

Gene: Abigail_35 Start: 24992, Stop: 25222, Start Num: 74
Candidate Starts for Abigail_35:
(Start: 74 @24992 has 66 MA's),

Gene: Akino08_37 Start: 27416, Stop: 27649, Start Num: 74
Candidate Starts for Akino08_37:
(44, 27287), (45, 27290), (49, 27308), (52, 27320), (54, 27323), (57, 27332), (Start: 69 @27407 has 7 MA's), (Start: 74 @27416 has 66 MA's), (77, 27458),

Gene: Albedo_36 Start: 25530, Stop: 25772, Start Num: 74
Candidate Starts for Albedo_36:
(Start: 74 @25530 has 66 MA's), (101, 25764),

Gene: Albright_34 Start: 24694, Stop: 24924, Start Num: 74
Candidate Starts for Albright_34:
(Start: 74 @24694 has 66 MA's),

Gene: Alleb_29 Start: 9182, Stop: 9436, Start Num: 73
Candidate Starts for Alleb_29:
(61, 9134), (68, 9167), (Start: 73 @9182 has 26 MA's), (77, 9227), (79, 9263), (90, 9350),

Gene: AnnaLie_37 Start: 25815, Stop: 26045, Start Num: 74
Candidate Starts for AnnaLie_37:
(Start: 74 @25815 has 66 MA's),

Gene: Armstrong_33 Start: 23408, Stop: 23647, Start Num: 69
Candidate Starts for Armstrong_33:
(24, 23165), (29, 23195), (Start: 69 @23408 has 7 MA's), (Start: 74 @23417 has 66 MA's), (81, 23504), (96, 23609), (101, 23639),

Gene: Arroyo_37 Start: 25853, Stop: 26083, Start Num: 74
Candidate Starts for Arroyo_37:
(Start: 74 @25853 has 66 MA's),

Gene: AvGardian_38 Start: 25976, Stop: 26215, Start Num: 74
Candidate Starts for AvGardian_38:
(57, 25892), (Start: 69 @25967 has 7 MA's), (Start: 74 @25976 has 66 MA's), (81, 26063),

Gene: Avocadoman_35 Start: 24931, Stop: 25161, Start Num: 74
Candidate Starts for Avocadoman_35:
(Start: 74 @24931 has 66 MA's),

Gene: AylexOG_38 Start: 25876, Stop: 26118, Start Num: 74
Candidate Starts for AylexOG_38:
(Start: 74 @25876 has 66 MA's), (101, 26110),

Gene: BAjuniper_35 Start: 26652, Stop: 26891, Start Num: 75
Candidate Starts for BAjuniper_35:
(Start: 75 @26652 has 1 MA's), (77, 26694), (87, 26793), (88, 26799), (91, 26814), (96, 26844),

Gene: BabyDaisy_35 Start: 25454, Stop: 25684, Start Num: 74
Candidate Starts for BabyDaisy_35:
(44, 25325), (45, 25328), (48, 25343), (52, 25358), (54, 25361), (57, 25370), (Start: 69 @25445 has 7 MA's), (Start: 74 @25454 has 66 MA's), (87, 25595),

Gene: BabyYoda_37 Start: 26596, Stop: 26829, Start Num: 74
Candidate Starts for BabyYoda_37:
(57, 26512), (Start: 69 @26587 has 7 MA's), (Start: 74 @26596 has 66 MA's),

Gene: Bachaco_34 Start: 26614, Stop: 26844, Start Num: 74
Candidate Starts for Bachaco_34:
(44, 26485), (46, 26494), (47, 26500), (50, 26509), (54, 26521), (55, 26527), (60, 26539), (Start: 69 @26605 has 7 MA's), (Start: 74 @26614 has 66 MA's), (81, 26701), (87, 26755), (96, 26806), (101, 26836),

Gene: BaileyBlu_34 Start: 24331, Stop: 24588, Start Num: 70
Candidate Starts for BaileyBlu_34:
(35, 24157), (37, 24166), (Start: 70 @24331 has 1 MA's), (87, 24487), (93, 24529), (95, 24535),

Gene: BelmontSKP_37 Start: 25815, Stop: 26045, Start Num: 74
Candidate Starts for BelmontSKP_37:
(Start: 74 @25815 has 66 MA's),

Gene: Bengal_37 Start: 25443, Stop: 25673, Start Num: 74
Candidate Starts for Bengal_37:
(Start: 74 @25443 has 66 MA's),

Gene: Bernstein_33 Start: 23463, Stop: 23702, Start Num: 69
Candidate Starts for Bernstein_33:
(24, 23220), (29, 23250), (Start: 69 @23463 has 7 MA's), (Start: 74 @23472 has 66 MA's), (81, 23559), (96, 23664), (101, 23694),

Gene: Brahms_33 Start: 23410, Stop: 23649, Start Num: 69
Candidate Starts for Brahms_33:
(24, 23167), (29, 23197), (Start: 69 @23410 has 7 MA's), (Start: 74 @23419 has 66 MA's), (81, 23506), (96, 23611), (101, 23641),

Gene: BubbaBear_35 Start: 25387, Stop: 25617, Start Num: 74
Candidate Starts for BubbaBear_35:
(Start: 74 @25387 has 66 MA's),

Gene: Buldak_33 Start: 24218, Stop: 24493, Start Num: 63
Candidate Starts for Buldak_33:
(2, 23414), (5, 23633), (18, 23939), (Start: 63 @24218 has 1 MA's), (Start: 74 @24254 has 66 MA's), (81, 24341),

Gene: Burritobowl_36 Start: 25388, Stop: 25618, Start Num: 74
Candidate Starts for Burritobowl_36:
(Start: 74 @25388 has 66 MA's),

Gene: CallinAllBarbz_34 Start: 24734, Stop: 24985, Start Num: 71
Candidate Starts for CallinAllBarbz_34:
(Start: 71 @24734 has 1 MA's), (80, 24827), (95, 24932),

Gene: Casablancas_36 Start: 10074, Stop: 10328, Start Num: 73
Candidate Starts for Casablancas_36:
(67, 10059), (Start: 73 @10074 has 26 MA's), (77, 10119), (82, 10170), (83, 10188), (85, 10206), (87, 10218), (90, 10242),

Gene: Cashington_34 Start: 24734, Stop: 24964, Start Num: 74
Candidate Starts for Cashington_34:
(Start: 74 @24734 has 66 MA's), (87, 24875),

Gene: Celaena_34 Start: 26364, Stop: 26594, Start Num: 74
Candidate Starts for Celaena_34:
(44, 26235), (46, 26244), (47, 26250), (50, 26259), (54, 26271), (55, 26277), (60, 26289), (Start: 69 @26355 has 7 MA's), (Start: 74 @26364 has 66 MA's), (81, 26451), (87, 26505), (96, 26556),

Gene: ChiliPepper_33 Start: 25809, Stop: 26048, Start Num: 69
Candidate Starts for ChiliPepper_33:
(11, 25398), (14, 25461), (15, 25479), (17, 25500), (19, 25509), (21, 25533), (22, 25551), (23, 25557), (27, 25584), (28, 25587), (31, 25608), (32, 25611), (34, 25638), (38, 25650), (39, 25665), (42, 25680), (44, 25689), (46, 25698), (47, 25704), (50, 25713), (54, 25725), (55, 25731), (Start: 69 @25809 has 7 MA's), (Start: 74 @25818 has 66 MA's), (78, 25890), (81, 25905), (87, 25959), (96, 26010), (101, 26040),

Gene: Clayda5_34 Start: 23406, Stop: 23636, Start Num: 74
Candidate Starts for Clayda5_34:
(24, 23154), (29, 23184), (Start: 69 @23397 has 7 MA's), (Start: 74 @23406 has 66 MA's), (81, 23493), (96, 23598), (101, 23628),

Gene: Coltrane_33 Start: 23410, Stop: 23649, Start Num: 69
Candidate Starts for Coltrane_33:
(24, 23167), (29, 23197), (Start: 69 @23410 has 7 MA's), (Start: 74 @23419 has 66 MA's), (81, 23506), (96, 23611), (101, 23641),

Gene: CroZenni_36 Start: 25278, Stop: 25508, Start Num: 74
Candidate Starts for CroZenni_36:
(44, 25149), (45, 25152), (49, 25170), (52, 25182), (54, 25185), (57, 25194), (59, 25197), (Start: 69 @25269 has 7 MA's), (Start: 74 @25278 has 66 MA's),

Gene: CupcakePrincess_37 Start: 25564, Stop: 25806, Start Num: 74
Candidate Starts for CupcakePrincess_37:
(Start: 74 @25564 has 66 MA's), (101, 25798),

Gene: DejaVu_31 Start: 9377, Stop: 9625, Start Num: 73
Candidate Starts for DejaVu_31:
(Start: 62 @9338 has 1 MA's), (Start: 73 @9377 has 26 MA's), (77, 9422), (79, 9458), (99, 9605),

Gene: Deschain_35 Start: 10738, Stop: 10992, Start Num: 73
Candidate Starts for Deschain_35:
(67, 10723), (Start: 73 @10738 has 26 MA's), (77, 10783), (82, 10834), (83, 10852), (85, 10870), (87, 10882), (90, 10906),

Gene: DickRichards_35 Start: 25717, Stop: 25947, Start Num: 74
Candidate Starts for DickRichards_35:
(Start: 74 @25717 has 66 MA's),

Gene: Didgeridoo_38 Start: 25851, Stop: 26093, Start Num: 74
Candidate Starts for Didgeridoo_38:
(Start: 74 @25851 has 66 MA's), (87, 25992),

Gene: DirtyBubble_36 Start: 26244, Stop: 26477, Start Num: 74
Candidate Starts for DirtyBubble_36:
(44, 26115), (45, 26118), (49, 26136), (52, 26148), (54, 26151), (57, 26160), (Start: 69 @26235 has 7 MA's), (Start: 74 @26244 has 66 MA's), (89, 26394),

Gene: Dismas_34 Start: 25989, Stop: 26219, Start Num: 74
Candidate Starts for Dismas_34:
(11, 25569), (14, 25632), (15, 25650), (17, 25671), (19, 25680), (21, 25704), (22, 25722), (23, 25728), (27, 25755), (28, 25758), (31, 25779), (34, 25809), (38, 25821), (39, 25836), (42, 25851), (44, 25860), (46, 25869), (47, 25875), (50, 25884), (54, 25896), (55, 25902), (Start: 69 @25980 has 7 MA's), (Start: 74 @25989 has 66 MA's), (78, 26061), (81, 26076), (87, 26130), (96, 26181), (101, 26211),

Gene: Doobus_35 Start: 25098, Stop: 25328, Start Num: 74
Candidate Starts for Doobus_35:
(Start: 74 @25098 has 66 MA's),

Gene: DustyDino_38 Start: 10938, Stop: 11192, Start Num: 73
Candidate Starts for DustyDino_38:
(67, 10923), (Start: 73 @10938 has 26 MA's), (77, 10983), (82, 11034), (83, 11052), (85, 11070),

Gene: Eden_34 Start: 24202, Stop: 24432, Start Num: 74

Candidate Starts for Eden_34:
(64, 24169), (Start: 74 @24202 has 66 MA's), (87, 24343), (88, 24349), (91, 24364), (96, 24394), (101, 24424),

Gene: Elva_38 Start: 26309, Stop: 26539, Start Num: 74
Candidate Starts for Elva_38:
(43, 26177), (44, 26180), (47, 26195), (51, 26210), (52, 26213), (57, 26225), (Start: 69 @26300 has 7 MA's), (Start: 74 @26309 has 66 MA's),

Gene: Erenyeager_35 Start: 10332, Stop: 10586, Start Num: 73
Candidate Starts for Erenyeager_35:
(67, 10317), (Start: 73 @10332 has 26 MA's), (77, 10377), (82, 10428), (83, 10446), (85, 10464),

Gene: Eula_37 Start: 25477, Stop: 25719, Start Num: 74
Candidate Starts for Eula_37:
(Start: 74 @25477 has 66 MA's), (101, 25711),

Gene: Exile_31 Start: 26521, Stop: 26784, Start Num: 73
Candidate Starts for Exile_31:
(Start: 73 @26521 has 26 MA's), (95, 26719), (100, 26752),

Gene: Finalfrontier_36 Start: 26101, Stop: 26331, Start Num: 74
Candidate Starts for Finalfrontier_36:
(Start: 74 @26101 has 66 MA's),

Gene: FlameThrower_34 Start: 25814, Stop: 26044, Start Num: 74
Candidate Starts for FlameThrower_34:
(44, 25685), (46, 25694), (47, 25700), (50, 25709), (54, 25721), (55, 25727), (60, 25739), (Start: 69 @25805 has 7 MA's), (Start: 74 @25814 has 66 MA's), (81, 25901), (84, 25928), (87, 25955), (96, 26006), (101, 26036),

Gene: Fork_31 Start: 9648, Stop: 9902, Start Num: 73
Candidate Starts for Fork_31:
(67, 9633), (Start: 73 @9648 has 26 MA's), (77, 9693), (82, 9744), (83, 9762), (85, 9780),

Gene: Franklin22_35 Start: 24188, Stop: 24418, Start Num: 74
Candidate Starts for Franklin22_35:
(6, 23681), (7, 23687), (8, 23756), (12, 23801), (20, 23906), (26, 23963), (36, 24020), (53, 24095), (56, 24104), (58, 24107), (Start: 74 @24188 has 66 MA's), (78, 24260), (87, 24329), (96, 24380), (101, 24410),

Gene: Gack_33 Start: 23939, Stop: 24169, Start Num: 74
Candidate Starts for Gack_33:
(1, 23093), (3, 23219), (4, 23249), (8, 23507), (12, 23552), (20, 23657), (26, 23714), (36, 23771), (56, 23855), (58, 23858), (Start: 69 @23930 has 7 MA's), (Start: 74 @23939 has 66 MA's), (78, 24011), (84, 24053), (96, 24131),

Gene: GrimEater_31 Start: 23740, Stop: 23991, Start Num: 72
Candidate Starts for GrimEater_31:
(72, 23740), (94, 23935), (95, 23938), (97, 23947),

Gene: HollowPurple_36 Start: 10186, Stop: 10440, Start Num: 73
Candidate Starts for HollowPurple_36:

(67, 10171), (Start: 73 @10186 has 26 MA's), (77, 10231), (82, 10282), (83, 10300), (85, 10318),

Gene: Hortus1_28 Start: 9181, Stop: 9435, Start Num: 73
Candidate Starts for Hortus1_28:
(61, 9133), (68, 9166), (Start: 73 @9181 has 26 MA's), (77, 9226), (79, 9262), (90, 9349),

Gene: Hubbs_30 Start: 9589, Stop: 9837, Start Num: 73
Candidate Starts for Hubbs_30:
(Start: 62 @9550 has 1 MA's), (Start: 73 @9589 has 26 MA's), (77, 9634), (79, 9670), (99, 9817),

Gene: Icarian_39 Start: 26879, Stop: 27112, Start Num: 74
Candidate Starts for Icarian_39:
(44, 26750), (45, 26753), (49, 26771), (52, 26783), (54, 26786), (57, 26795), (Start: 69 @26870 has 7 MA's), (Start: 74 @26879 has 66 MA's), (77, 26921),

Gene: IndyLu_35 Start: 25415, Stop: 25645, Start Num: 74
Candidate Starts for IndyLu_35:
(44, 25286), (45, 25289), (49, 25307), (52, 25319), (54, 25322), (57, 25331), (Start: 69 @25406 has 7 MA's), (Start: 74 @25415 has 66 MA's), (87, 25556),

Gene: Issa7_34 Start: 9642, Stop: 9896, Start Num: 73
Candidate Starts for Issa7_34:
(67, 9627), (Start: 73 @9642 has 26 MA's), (77, 9687), (82, 9738), (83, 9756), (85, 9774),

Gene: Jabb_37 Start: 25564, Stop: 25806, Start Num: 74
Candidate Starts for Jabb_37:
(Start: 74 @25564 has 66 MA's), (101, 25798),

Gene: Jacko_31 Start: 9673, Stop: 9921, Start Num: 73
Candidate Starts for Jacko_31:
(Start: 73 @9673 has 26 MA's), (76, 9685), (77, 9718), (92, 9853),

Gene: Jankie_33 Start: 23923, Stop: 24174, Start Num: 72
Candidate Starts for Jankie_33:
(72, 23923), (94, 24118), (95, 24121),

Gene: Johnathan_35 Start: 24821, Stop: 25051, Start Num: 74
Candidate Starts for Johnathan_35:
(Start: 74 @24821 has 66 MA's),

Gene: Jovita_37 Start: 25579, Stop: 25821, Start Num: 74
Candidate Starts for Jovita_37:
(Start: 74 @25579 has 66 MA's), (101, 25813),

Gene: Kamdara_34 Start: 25994, Stop: 26224, Start Num: 74
Candidate Starts for Kamdara_34:
(11, 25574), (14, 25637), (15, 25655), (17, 25676), (19, 25685), (21, 25709), (22, 25727), (23, 25733), (27, 25760), (28, 25763), (31, 25784), (32, 25787), (33, 25796), (34, 25814), (38, 25826), (39, 25841), (42, 25856), (44, 25865), (46, 25874), (47, 25880), (50, 25889), (54, 25901), (55, 25907), (Start: 69 @25985 has 7 MA's), (Start: 74 @25994 has 66 MA's), (78, 26066), (81, 26081), (87, 26135), (96, 26186), (101, 26216),

Gene: Kate33_36 Start: 25175, Stop: 25417, Start Num: 74

Candidate Starts for Kate33_36:
(Start: 74 @25175 has 66 MA's), (87, 25316),

Gene: Katzastrophic_35 Start: 25943, Stop: 26173, Start Num: 74
Candidate Starts for Katzastrophic_35:
(44, 25814), (46, 25823), (47, 25829), (50, 25838), (54, 25850), (55, 25856), (60, 25868), (Start: 69 @25934 has 7 MA's), (Start: 74 @25943 has 66 MA's), (81, 26030), (87, 26084), (96, 26135), (101, 26165),

Gene: Kenzers_36 Start: 25402, Stop: 25644, Start Num: 74
Candidate Starts for Kenzers_36:
(Start: 74 @25402 has 66 MA's), (101, 25636),

Gene: Kieran_34 Start: 25998, Stop: 26228, Start Num: 74
Candidate Starts for Kieran_34:
(11, 25578), (14, 25641), (15, 25659), (17, 25680), (19, 25689), (21, 25713), (22, 25731), (23, 25737), (27, 25764), (28, 25767), (31, 25788), (32, 25791), (34, 25818), (38, 25830), (39, 25845), (42, 25860), (44, 25869), (46, 25878), (47, 25884), (50, 25893), (54, 25905), (55, 25911), (Start: 69 @25989 has 7 MA's), (Start: 74 @25998 has 66 MA's), (78, 26070), (81, 26085), (87, 26139), (96, 26190), (101, 26220),

Gene: Lahqtemish_35 Start: 25448, Stop: 25690, Start Num: 74
Candidate Starts for Lahqtemish_35:
(Start: 74 @25448 has 66 MA's), (87, 25589),

Gene: Lilo27_37 Start: 25387, Stop: 25629, Start Num: 74
Candidate Starts for Lilo27_37:
(Start: 74 @25387 has 66 MA's), (101, 25621),

Gene: LimaBean_35 Start: 24870, Stop: 25100, Start Num: 74
Candidate Starts for LimaBean_35:
(Start: 74 @24870 has 66 MA's),

Gene: Loviatar_37 Start: 27431, Stop: 27664, Start Num: 74
Candidate Starts for Loviatar_37:
(44, 27302), (45, 27305), (49, 27323), (52, 27335), (54, 27338), (57, 27347), (Start: 69 @27422 has 7 MA's), (Start: 74 @27431 has 66 MA's), (77, 27473),

Gene: Lupine_29 Start: 9261, Stop: 9509, Start Num: 73
Candidate Starts for Lupine_29:
(Start: 62 @9222 has 1 MA's), (Start: 73 @9261 has 26 MA's), (77, 9306), (79, 9342), (99, 9489),

Gene: Lyell_35 Start: 10250, Stop: 10504, Start Num: 73
Candidate Starts for Lyell_35:
(67, 10235), (Start: 73 @10250 has 26 MA's), (77, 10295), (82, 10346), (83, 10364), (85, 10382),

Gene: Lynlen_36 Start: 25402, Stop: 25644, Start Num: 74
Candidate Starts for Lynlen_36:
(Start: 74 @25402 has 66 MA's), (101, 25636),

Gene: Milomuff_36 Start: 25291, Stop: 25521, Start Num: 74
Candidate Starts for Milomuff_36:

(46, 25171), (52, 25195), (55, 25204), (57, 25207), (59, 25210), (Start: 69 @25282 has 7 MA's), (Start: 74 @25291 has 66 MA's),

Gene: MsUbiquitous_37 Start: 25564, Stop: 25806, Start Num: 74
Candidate Starts for MsUbiquitous_37:
(Start: 74 @25564 has 66 MA's), (101, 25798),

Gene: Musetta_35 Start: 10358, Stop: 10612, Start Num: 73
Candidate Starts for Musetta_35:
(67, 10343), (Start: 73 @10358 has 26 MA's), (77, 10403), (90, 10526),

Gene: Necrophoxinus_37 Start: 10946, Stop: 11200, Start Num: 73
Candidate Starts for Necrophoxinus_37:
(67, 10931), (Start: 73 @10946 has 26 MA's), (77, 10991), (82, 11042), (83, 11060), (85, 11078),

Gene: Nicky22_37 Start: 25941, Stop: 26183, Start Num: 74
Candidate Starts for Nicky22_37:
(Start: 74 @25941 has 66 MA's), (101, 26175),

Gene: OlinDD_28 Start: 9180, Stop: 9434, Start Num: 73
Candidate Starts for OlinDD_28:
(61, 9132), (68, 9165), (Start: 73 @9180 has 26 MA's), (77, 9225), (79, 9261), (90, 9348),

Gene: Olliecat_33 Start: 24245, Stop: 24484, Start Num: 74
Candidate Starts for Olliecat_33:
(5, 23624), (18, 23930), (Start: 74 @24245 has 66 MA's),

Gene: PastaFagioli_35 Start: 25432, Stop: 25674, Start Num: 74
Candidate Starts for PastaFagioli_35:
(Start: 74 @25432 has 66 MA's), (87, 25573),

Gene: Pavlo_29 Start: 9536, Stop: 9784, Start Num: 73
Candidate Starts for Pavlo_29:
(Start: 62 @9497 has 1 MA's), (Start: 73 @9536 has 26 MA's), (77, 9581), (79, 9617), (99, 9764),

Gene: Pecas_36 Start: 25476, Stop: 25718, Start Num: 74
Candidate Starts for Pecas_36:
(Start: 74 @25476 has 66 MA's), (101, 25710),

Gene: PhigPhack_37 Start: 25302, Stop: 25544, Start Num: 74
Candidate Starts for PhigPhack_37:
(Start: 74 @25302 has 66 MA's), (87, 25443),

Gene: PhillyPhilly_30 Start: 9402, Stop: 9689, Start Num: 62
Candidate Starts for PhillyPhilly_30:
(Start: 62 @9402 has 1 MA's), (Start: 73 @9441 has 26 MA's), (77, 9486), (79, 9522), (99, 9669),

Gene: Phisb_37 Start: 25535, Stop: 25777, Start Num: 74
Candidate Starts for Phisb_37:
(44, 25406), (49, 25427), (52, 25439), (54, 25442), (57, 25451), (59, 25454), (Start: 69 @25526 has 7 MA's), (Start: 74 @25535 has 66 MA's), (87, 25676),

Gene: Pioneer3_28 Start: 9179, Stop: 9433, Start Num: 73

Candidate Starts for Pioneer3_28:
(61, 9131), (68, 9164), (Start: 73 @9179 has 26 MA's), (77, 9224), (79, 9260), (90, 9347),

Gene: Platte_28 Start: 8949, Stop: 9203, Start Num: 73
Candidate Starts for Platte_28:
(61, 8901), (68, 8934), (Start: 73 @8949 has 26 MA's), (77, 8994), (79, 9030), (90, 9117),

Gene: PondAmelia_47 Start: 26411, Stop: 26644, Start Num: 74
Candidate Starts for PondAmelia_47:
(57, 26327), (Start: 69 @26402 has 7 MA's), (Start: 74 @26411 has 66 MA's), (101, 26636),

Gene: QMacho_38 Start: 25959, Stop: 26201, Start Num: 74
Candidate Starts for QMacho_38:
(Start: 74 @25959 has 66 MA's), (101, 26193),

Gene: Quenya_35 Start: 25660, Stop: 25890, Start Num: 74
Candidate Starts for Quenya_35:
(9, 25243), (16, 25348), (25, 25423), (30, 25447), (34, 25486), (39, 25513), (40, 25516), (41, 25519), (55, 25576), (57, 25579), (60, 25585), (Start: 69 @25651 has 7 MA's), (Start: 74 @25660 has 66 MA's), (81, 25747), (87, 25801), (96, 25852), (101, 25882),

Gene: Rollins_33 Start: 23463, Stop: 23702, Start Num: 69
Candidate Starts for Rollins_33:
(24, 23220), (29, 23250), (Start: 69 @23463 has 7 MA's), (Start: 74 @23472 has 66 MA's), (81, 23559), (96, 23664), (101, 23694),

Gene: Roman_30 Start: 9436, Stop: 9684, Start Num: 73
Candidate Starts for Roman_30:
(Start: 62 @9397 has 1 MA's), (Start: 73 @9436 has 26 MA's), (77, 9481), (79, 9517), (99, 9664),

Gene: Rona_34 Start: 25980, Stop: 26210, Start Num: 74
Candidate Starts for Rona_34:
(11, 25560), (14, 25623), (15, 25641), (17, 25662), (19, 25671), (21, 25695), (22, 25713), (23, 25719), (27, 25746), (28, 25749), (31, 25770), (32, 25773), (38, 25812), (39, 25827), (42, 25842), (44, 25851), (46, 25860), (47, 25866), (50, 25875), (54, 25887), (55, 25893), (Start: 69 @25971 has 7 MA's), (Start: 74 @25980 has 66 MA's), (78, 26052), (81, 26067), (96, 26172), (101, 26202),

Gene: RunningBrook_36 Start: 10938, Stop: 11192, Start Num: 73
Candidate Starts for RunningBrook_36:
(67, 10923), (Start: 73 @10938 has 26 MA's), (77, 10983), (82, 11034), (83, 11052), (85, 11070),

Gene: SanaSana_39 Start: 27081, Stop: 27314, Start Num: 74
Candidate Starts for SanaSana_39:
(44, 26952), (45, 26955), (49, 26973), (52, 26985), (54, 26988), (57, 26997), (Start: 69 @27072 has 7 MA's), (Start: 74 @27081 has 66 MA's), (86, 27216), (98, 27282),

Gene: SansAfet_37 Start: 25401, Stop: 25631, Start Num: 74
Candidate Starts for SansAfet_37:
(Start: 74 @25401 has 66 MA's),

Gene: SarBear_36 Start: 25256, Stop: 25498, Start Num: 74
Candidate Starts for SarBear_36:
(Start: 74 @25256 has 66 MA's), (101, 25490),

Gene: Saradis_31 Start: 9499, Stop: 9747, Start Num: 73
Candidate Starts for Saradis_31:
(Start: 62 @9460 has 1 MA's), (Start: 73 @9499 has 26 MA's), (77, 9544), (79, 9580), (99, 9727),

Gene: Sharkboy_35 Start: 26070, Stop: 26309, Start Num: 69
Candidate Starts for Sharkboy_35:
(11, 25659), (14, 25722), (15, 25740), (17, 25761), (19, 25770), (21, 25794), (22, 25812), (23, 25818), (27, 25845), (28, 25848), (31, 25869), (32, 25872), (34, 25899), (38, 25911), (39, 25926), (42, 25941), (44, 25950), (46, 25959), (47, 25965), (50, 25974), (54, 25986), (55, 25992), (Start: 69 @26070 has 7 MA's), (Start: 74 @26079 has 66 MA's), (78, 26151), (81, 26166), (87, 26220), (96, 26271), (101, 26301),

Gene: Shroomer_38 Start: 10466, Stop: 10720, Start Num: 73
Candidate Starts for Shroomer_38:
(21, 10181), (67, 10451), (Start: 73 @10466 has 26 MA's), (77, 10511), (87, 10610), (90, 10634),

Gene: SirBeanington_36 Start: 25577, Stop: 25819, Start Num: 74
Candidate Starts for SirBeanington_36:
(Start: 74 @25577 has 66 MA's), (101, 25811),

Gene: Skylord_33 Start: 23403, Stop: 23633, Start Num: 74
Candidate Starts for Skylord_33:
(24, 23151), (29, 23181), (Start: 69 @23394 has 7 MA's), (Start: 74 @23403 has 66 MA's), (81, 23490), (96, 23595), (101, 23625),

Gene: Slay_37 Start: 25937, Stop: 26179, Start Num: 74
Candidate Starts for Slay_37:
(Start: 74 @25937 has 66 MA's), (101, 26171),

Gene: Softsoap_36 Start: 25312, Stop: 25542, Start Num: 74
Candidate Starts for Softsoap_36:
(Start: 74 @25312 has 66 MA's),

Gene: Solea_37 Start: 25291, Stop: 25521, Start Num: 74
Candidate Starts for Solea_37:
(46, 25171), (52, 25195), (55, 25204), (57, 25207), (59, 25210), (Start: 69 @25282 has 7 MA's), (Start: 74 @25291 has 66 MA's),

Gene: Solimine_31 Start: 9914, Stop: 10162, Start Num: 73
Candidate Starts for Solimine_31:
(Start: 62 @9875 has 1 MA's), (Start: 73 @9914 has 26 MA's), (77, 9959), (79, 9995), (99, 10142),

Gene: Soondubu_31 Start: 26525, Stop: 26788, Start Num: 73
Candidate Starts for Soondubu_31:
(Start: 73 @26525 has 26 MA's), (95, 26723), (100, 26756),

Gene: Squircle_33 Start: 24244, Stop: 24483, Start Num: 74
Candidate Starts for Squircle_33:
(5, 23623), (18, 23929), (Start: 74 @24244 has 66 MA's),

Gene: SteakFry_34 Start: 10186, Stop: 10440, Start Num: 73
Candidate Starts for SteakFry_34:

(67, 10171), (Start: 73 @10186 has 26 MA's), (77, 10231), (82, 10282), (83, 10300), (85, 10318),

Gene: StevieWelch_35 Start: 10338, Stop: 10592, Start Num: 73
Candidate Starts for StevieWelch_35:
(67, 10323), (Start: 73 @10338 has 26 MA's), (77, 10383), (83, 10452), (85, 10470),

Gene: Stoor_37 Start: 26750, Stop: 26983, Start Num: 74
Candidate Starts for Stoor_37:
(44, 26621), (45, 26624), (49, 26642), (54, 26657), (57, 26666), (Start: 69 @26741 has 7 MA's), (Start: 74 @26750 has 66 MA's),

Gene: Stromboli_37 Start: 26614, Stop: 26847, Start Num: 74
Candidate Starts for Stromboli_37:
(44, 26485), (45, 26488), (49, 26506), (52, 26518), (54, 26521), (57, 26530), (Start: 69 @26605 has 7 MA's), (Start: 74 @26614 has 66 MA's), (89, 26764),

Gene: Swervy_37 Start: 25456, Stop: 25698, Start Num: 74
Candidate Starts for Swervy_37:
(Start: 74 @25456 has 66 MA's), (101, 25690),

Gene: Tandem_28 Start: 9118, Stop: 9372, Start Num: 73
Candidate Starts for Tandem_28:
(61, 9070), (68, 9103), (Start: 73 @9118 has 26 MA's), (77, 9163), (79, 9199), (90, 9286),

Gene: TukTuk_37 Start: 25527, Stop: 25769, Start Num: 74
Candidate Starts for TukTuk_37:
(Start: 74 @25527 has 66 MA's), (87, 25668),

Gene: Uterion_32 Start: 10006, Stop: 10254, Start Num: 73
Candidate Starts for Uterion_32:
(Start: 62 @9967 has 1 MA's), (Start: 73 @10006 has 26 MA's), (77, 10051), (79, 10087), (99, 10234),

Gene: Vitas_33 Start: 23412, Stop: 23642, Start Num: 74
Candidate Starts for Vitas_33:
(24, 23160), (29, 23190), (Start: 69 @23403 has 7 MA's), (Start: 74 @23412 has 66 MA's), (81, 23499), (96, 23604), (101, 23634),

Gene: WalkingDead_38 Start: 27005, Stop: 27238, Start Num: 74
Candidate Starts for WalkingDead_38:
(44, 26876), (45, 26879), (49, 26897), (52, 26909), (54, 26912), (57, 26921), (Start: 69 @26996 has 7 MA's), (Start: 74 @27005 has 66 MA's),

Gene: Welcome_36 Start: 10355, Stop: 10609, Start Num: 73
Candidate Starts for Welcome_36:
(22, 10088), (67, 10340), (Start: 73 @10355 has 26 MA's), (77, 10400), (82, 10451), (83, 10469), (85, 10487),

Gene: Wolfstar_31 Start: 9938, Stop: 10189, Start Num: 73
Candidate Starts for Wolfstar_31:
(10, 9515), (13, 9551), (65, 9908), (66, 9914), (Start: 73 @9938 has 26 MA's), (77, 9983), (79, 10019), (90, 10106),

Gene: Yuma_34 Start: 10257, Stop: 10511, Start Num: 73

Candidate Starts for Yuma_34:
(67, 10242), (Start: 73 @10257 has 26 MA's), (77, 10302), (90, 10425),