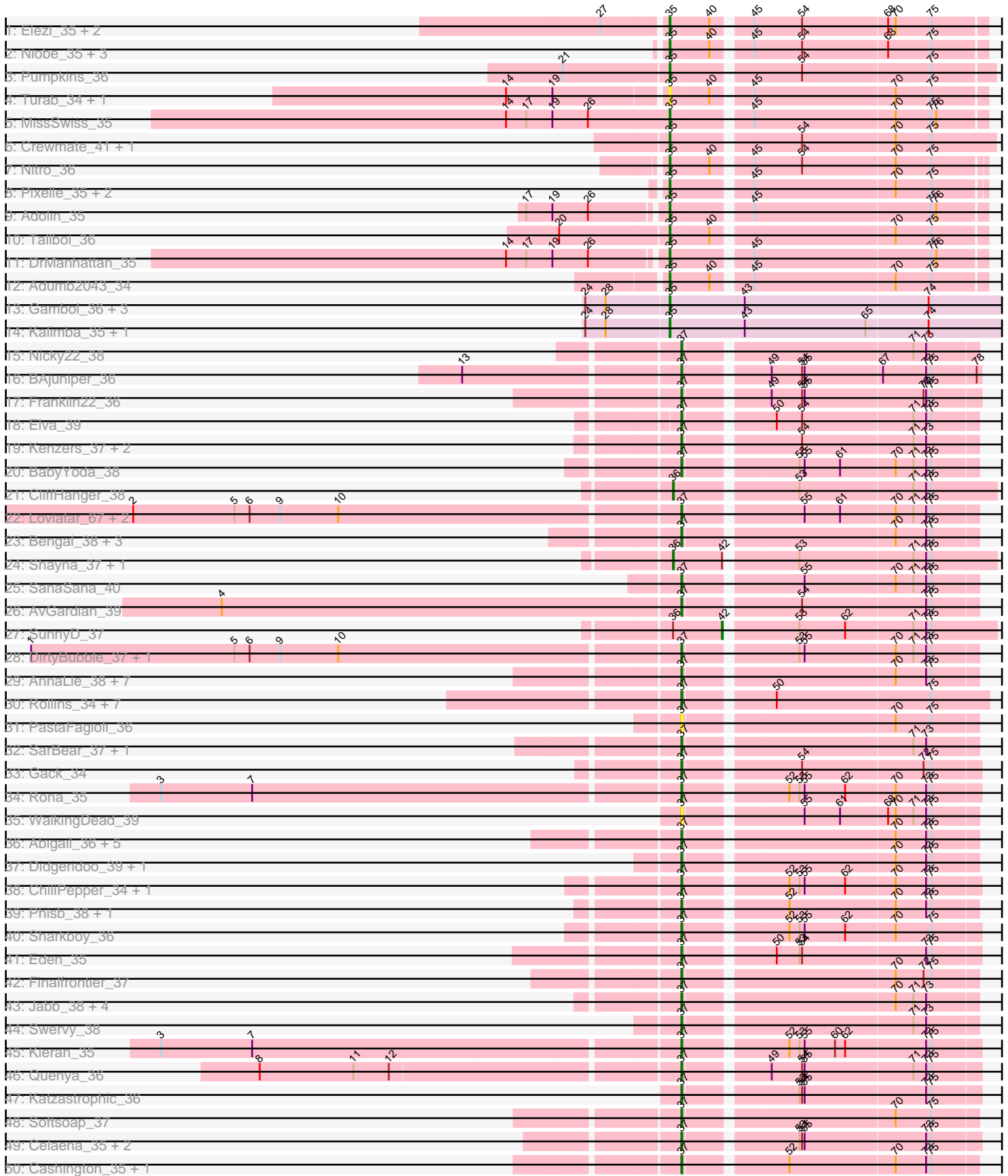
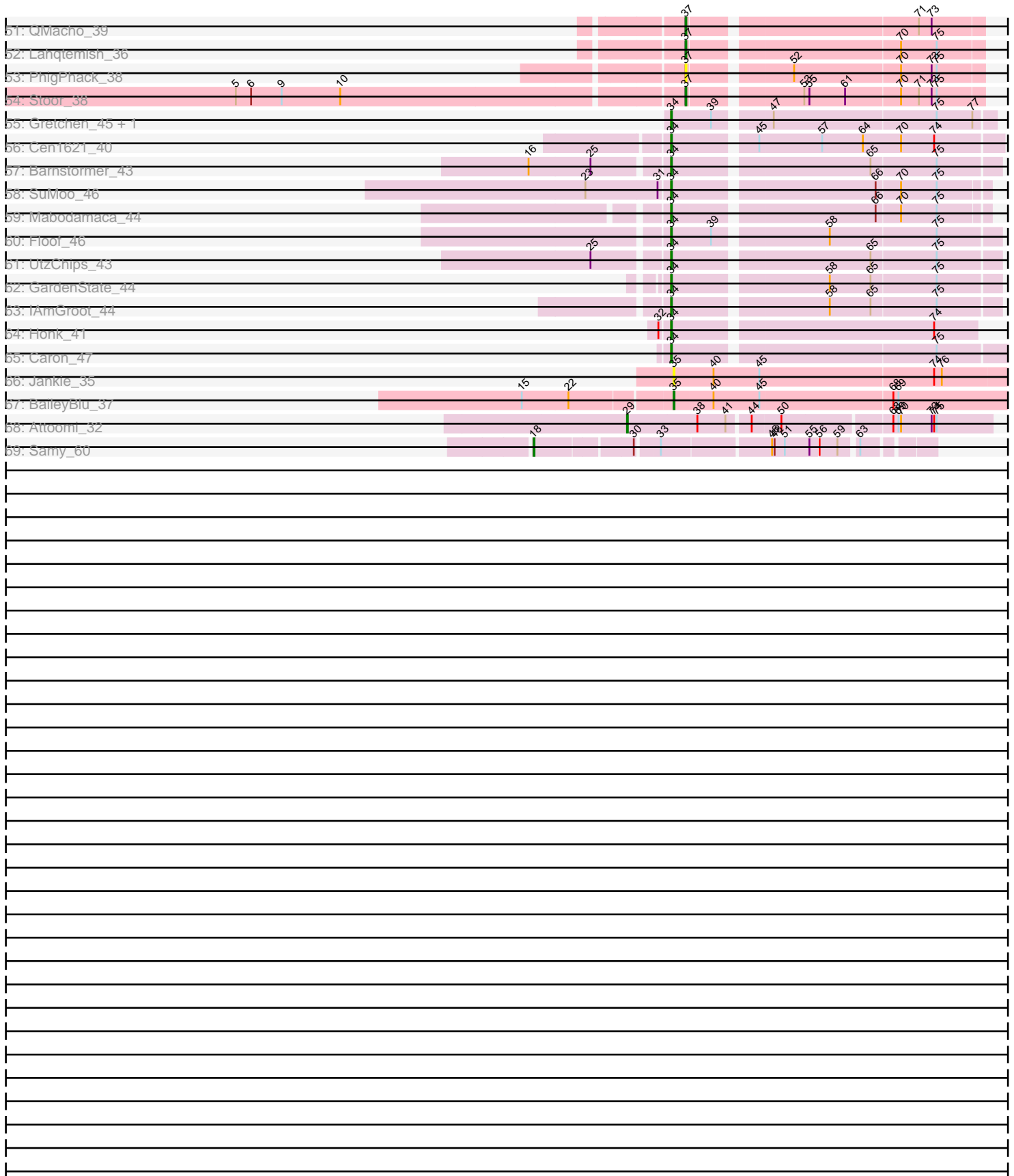


Pham 224406



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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 224406 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224406 has 122 members, 20 are drafts.

Phages represented in each track:

- Track 1 : Elezi_35, London_35, Subaru_36
- Track 2 : Niobe_35, Asa16_35, Eraser_35, Jstan_37
- Track 3 : Pumpkins_36
- Track 4 : Turab_34, AEgle_34
- Track 5 : MissSwiss_35
- Track 6 : Crewmate_41, ObiToo_40
- Track 7 : Nitro_36
- Track 8 : Pixelle_35, Amyev_35, Tian_35
- Track 9 : Adolin_35
- Track 10 : Tallboi_36
- Track 11 : DrManhattan_35
- Track 12 : Adumb2043_34
- Track 13 : Gambol_36, Sooty_35, Cappuccino_35, Sabourin_38
- Track 14 : Kalimba_35, Donkey_35
- Track 15 : Nicky22_38
- Track 16 : BAjuniper_36
- Track 17 : Franklin22_36
- Track 18 : Elva_39
- Track 19 : Kenzers_37, Lynlen_37, Albedo_37
- Track 20 : BabyYoda_38
- Track 21 : CliffHanger_38
- Track 22 : Loviatar_67, Icarian_40, Akino08_69
- Track 23 : Bengal_38, Albright_35, Doobus_36, Avocadoman_36
- Track 24 : Shayna_37, Teagster_38
- Track 25 : SanaSana_40
- Track 26 : AvGardian_39
- Track 27 : SunnyD_37
- Track 28 : DirtyBubble_37, Stromboli_38
- Track 29 : AnnaLie_38, Burritobowl_37, CroZenni_37, BelmontSKP_38, Arroyo_38, Johnathan_36, DickRichards_36, IndyLu_36
- Track 30 : Rollins_34, Coltrane_34, Skylord_34, Brahms_34, Bernstein_34, Armstrong_34, Vitas_34, Clayda5_35
- Track 31 : PastaFagioli_36
- Track 32 : SarBear_37, Slay_38
- Track 33 : Gack_34
- Track 34 : Rona_35
- Track 35 : WalkingDead_39

- Track 36 : Abigail_36, SansAfet_38, BubbaBear_36, LimaBean_36, Milomuff_38, Solea_38
- Track 37 : Didgeridoo_39, Kate33_36
- Track 38 : ChiliPepper_34, Dismas_35
- Track 39 : Phisb_38, TukTuk_38
- Track 40 : Sharkboy_36
- Track 41 : Eden_35
- Track 42 : Finalfrontier_37
- Track 43 : Jabb_38, Eula_38, CupcakePrincess_38, Jovita_38, MsUbiquitous_38
- Track 44 : Swervy_38
- Track 45 : Kieran_35
- Track 46 : Quenya_36
- Track 47 : Katzastrophic_36
- Track 48 : Softsoap_37
- Track 49 : Celaena_35, FlameThrower_35, Bachaco_35
- Track 50 : Cashington_35, BabyDaisy_36
- Track 51 : QMacho_39
- Track 52 : Lahqtemish_36
- Track 53 : PhigPhack_38
- Track 54 : Stoor_38
- Track 55 : Gretchen_45, Percival_46
- Track 56 : Cen1621_40
- Track 57 : Barnstormer_43
- Track 58 : SuMoo_46
- Track 59 : Mabodamaca_44
- Track 60 : Floof_46
- Track 61 : UtzChips_43
- Track 62 : GardenState_44
- Track 63 : IAmGroot_44
- Track 64 : Honk_41
- Track 65 : Caron_47
- Track 66 : Jankie_35
- Track 67 : BaileyBlu_37
- Track 68 : Attoomi_32
- Track 69 : Samy_60

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

The start number called the most often in the published annotations is 37, it was called in 62 of the 102 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abigail_36, Akino08_69, Albedo_37, Albright_35, AnnaLie_38, Armstrong_34, Arroyo_38, AvGuardian_39, Avocadoman_36, BAjuniper_36, BabyDaisy_36, BabyYoda_38, Bachaco_35, BelmontSKP_38, Bengal_38, Bernstein_34, Brahms_34, BubbaBear_36, Burritobowl_37, Cashington_35, Celaena_35, ChiliPepper_34, Clayda5_35, Coltrane_34, CroZenni_37, CupcakePrincess_38, DickRichards_36, Didgeridoo_39, DirtyBubble_37, Dismas_35, Doobus_36, Eden_35, Elva_39, Eula_38, Finalfrontier_37, FlameThrower_35, Franklin22_36, Gack_34, Icarian_40, IndyLu_36, Jabb_38, Johnathan_36, Jovita_38, Kate33_36, Katzastrophic_36,

Kenzers_37, Kieran_35, Lahqtemish_36, LimaBean_36, Loviatar_67, Lynlen_37, Milomuff_38, MsUbiquitous_38, Nicky22_38, PastaFagioli_36, PhigPhack_38, Phisb_38, QMacho_39, Quenya_36, Rollins_34, Rona_35, SanaSana_40, SansAfet_38, SarBear_37, Sharkboy_36, Skylord_34, Slay_38, Softsoap_37, Solea_38, Stoor_38, Stromboli_38, Swervy_38, TukTuk_38, Vitas_34, WalkingDead_39,

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

-

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

- AEgle_34, Adolin_35, Adumb2043_34, Amyev_35, Asa16_35, Attoomi_32, BaileyBlu_37, Barnstormer_43, Cappuccino_35, Caron_47, Cen1621_40, CliffHanger_38, Crewmate_41, Donkey_35, DrManhattan_35, Elezi_35, Eraser_35, Floof_46, Gambol_36, GardenState_44, Gretchen_45, Honk_41, IAmGroot_44, Jankie_35, Jstan_37, Kalimba_35, London_35, Mabodamaca_44, MissSwiss_35, Niobe_35, Nitro_36, ObiToo_40, Percival_46, Pixelle_35, Pumpkins_36, Sabourin_38, Samy_60, Shayna_37, Sooty_35, SuMoo_46, Subaru_36, SunnyD_37, Tallboi_36, Teagster_38, Tian_35, Turab_34, UtzChips_43,

Summary by start number:

Start 18:

- Found in 1 of 122 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 102
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Samy_60 (singleton),

Start 29:

- Found in 1 of 122 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 102
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Attoomi_32 (singleton),

Start 34:

- Found in 12 of 122 (9.8%) of genes in pham
- Manual Annotations of this start: 12 of 102
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnstormer_43 (EH), Caron_47 (EH), Cen1621_40 (EH), Floof_46 (EH), GardenState_44 (EH), Gretchen_45 (EH), Honk_41 (EH), IAmGroot_44 (EH), Mabodamaca_44 (EH), Percival_46 (EH), SuMoo_46 (EH), UtzChips_43 (EH),

Start 35:

- Found in 29 of 122 (23.8%) of genes in pham
- Manual Annotations of this start: 22 of 102
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle_34 (AZ1), Adolin_35 (AZ1), Adumb2043_34 (AZ1), Amyev_35 (AZ1), Asa16_35 (AZ1), BaileyBlu_37 (FP), Cappuccino_35 (AZ5), Crewmate_41 (AZ1), Donkey_35 (AZ5), DrManhattan_35 (AZ1), Elezi_35 (AZ1), Eraser_35 (AZ1), Gambol_36 (AZ5), Jankie_35 (FP), Jstan_37 (AZ1), Kalimba_35 (AZ5), London_35 (AZ1), MissSwiss_35 (AZ1), Niobe_35 (AZ1), Nitro_36 (AZ1), ObiToo_40 (AZ1), Pixelle_35 (AZ1), Pumpkins_36 (AZ1),

Sabourin_38 (AZ5), Sooty_35 (AZ5), Subaru_36 (AZ1), Tallboi_36 (AZ1), Tian_35 (AZ1), Turab_34 (AZ1),

Start 36:

- Found in 4 of 122 (3.3%) of genes in pham
- Manual Annotations of this start: 3 of 102
- Called 75.0% of time when present
- Phage (with cluster) where this start called: CliffHanger_38 (EB), Shayna_37 (EB), Teagster_38 (EB),

Start 37:

- Found in 75 of 122 (61.5%) of genes in pham
- Manual Annotations of this start: 62 of 102
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abigail_36 (EB), Akino08_69 (EB), Albedo_37 (EB), Albright_35 (EB), AnnaLie_38 (EB), Armstrong_34 (EB), Arroyo_38 (EB), AvGardian_39 (EB), Avocadoman_36 (EB), BAjuniper_36 (EB), BabyDaisy_36 (EB), BabyYoda_38 (EB), Bachaco_35 (EB), BelmontSKP_38 (EB), Bengal_38 (EB), Bernstein_34 (EB), Brahms_34 (EB), BubbaBear_36 (EB), Burritobowl_37 (EB), Cashington_35 (EB), Celaena_35 (EB), ChiliPepper_34 (EB), Clayda5_35 (EB), Coltrane_34 (EB), CroZenni_37 (EB), CupcakePrincess_38 (EB), DickRichards_36 (EB), Didgeridoo_39 (EB), DirtyBubble_37 (EB), Dismas_35 (EB), Doobus_36 (EB), Eden_35 (EB), Elva_39 (EB), Eula_38 (EB), Finalfrontier_37 (EB), FlameThrower_35 (EB), Franklin22_36 (EB), Gack_34 (EB), Icarian_40 (EB), IndyLu_36 (EB), Jabb_38 (EB), Johnathan_36 (EB), Jovita_38 (EB), Kate33_36 (EB), Katzastrophic_36 (EB), Kenzers_37 (EB), Kieran_35 (EB), Lahqtemish_36 (EB), LimaBean_36 (EB), Loviatar_67 (EB), Lynlen_37 (EB), Milomuff_38 (EB), MsUbiquitous_38 (EB), Nicky22_38 (EB), PastaFagioli_36 (EB), PhigPhack_38 (EB), Phisb_38 (EB), QMacho_39 (EB), Quenya_36 (EB), Rollins_34 (EB), Rona_35 (EB), SanaSana_40 (EB), SansAfet_38 (EB), SarBear_37 (EB), Sharkboy_36 (EB), Skylord_34 (EB), Slay_38 (EB), Softsoap_37 (EB), Solea_38 (EB), Stoor_38 (EB), Stromboli_38 (EB), Swervy_38 (EB), TukTuk_38 (EB), Vitas_34 (EB), WalkingDead_39 (EB),

Start 42:

- Found in 3 of 122 (2.5%) of genes in pham
- Manual Annotations of this start: 1 of 102
- Called 33.3% of time when present
- Phage (with cluster) where this start called: SunnyD_37 (EB),

Summary by clusters:

There are 6 clusters represented in this pham: FP, singleton, EH, EB, AZ1, AZ5,

Info for manual annotations of cluster AZ1:

- Start number 35 was manually annotated 16 times for cluster AZ1.

Info for manual annotations of cluster AZ5:

- Start number 35 was manually annotated 5 times for cluster AZ5.

Info for manual annotations of cluster EB:

- Start number 36 was manually annotated 3 times for cluster EB.
- Start number 37 was manually annotated 62 times for cluster EB.
- Start number 42 was manually annotated 1 time for cluster EB.

Info for manual annotations of cluster EH:

- Start number 34 was manually annotated 12 times for cluster EH.

Info for manual annotations of cluster FP:

- Start number 35 was manually annotated 1 time for cluster FP.

Gene Information:

Gene: AEgle_34 Start: 25272, Stop: 25622, Start Num: 35

Candidate Starts for AEgle_34:

(14, 25092), (19, 25146), (Start: 35 @25272 has 22 MA's), (40, 25317), (45, 25356), (70, 25518), (75, 25560),

Gene: Abigail_36 Start: 25222, Stop: 25548, Start Num: 37

Candidate Starts for Abigail_36:

(Start: 37 @25222 has 62 MA's), (70, 25453), (73, 25489), (75, 25495),

Gene: Adolin_35 Start: 24126, Stop: 24476, Start Num: 35

Candidate Starts for Adolin_35:

(17, 23973), (19, 24003), (26, 24045), (Start: 35 @24126 has 22 MA's), (45, 24210), (75, 24414), (76, 24420),

Gene: Adumb2043_34 Start: 25291, Stop: 25641, Start Num: 35

Candidate Starts for Adumb2043_34:

(Start: 35 @25291 has 22 MA's), (40, 25336), (45, 25375), (70, 25537), (75, 25579),

Gene: Akino08_69 Start: 27649, Stop: 27975, Start Num: 37

Candidate Starts for Akino08_69:

(2, 27016), (5, 27136), (6, 27154), (9, 27190), (10, 27259), (Start: 37 @27649 has 62 MA's), (55, 27775), (61, 27817), (70, 27880), (71, 27901), (73, 27916), (75, 27922),

Gene: Albedo_37 Start: 25772, Stop: 26098, Start Num: 37

Candidate Starts for Albedo_37:

(Start: 37 @25772 has 62 MA's), (54, 25895), (71, 26024), (73, 26039),

Gene: Albright_35 Start: 24924, Stop: 25250, Start Num: 37

Candidate Starts for Albright_35:

(Start: 37 @24924 has 62 MA's), (70, 25155), (73, 25191), (75, 25197),

Gene: Amyev_35 Start: 26817, Stop: 27164, Start Num: 35

Candidate Starts for Amyev_35:

(Start: 35 @26817 has 22 MA's), (45, 26901), (70, 27063), (75, 27105),

Gene: AnnaLie_38 Start: 26045, Stop: 26371, Start Num: 37

Candidate Starts for AnnaLie_38:

(Start: 37 @26045 has 62 MA's), (70, 26276), (73, 26312), (75, 26318),

Gene: Armstrong_34 Start: 23647, Stop: 23988, Start Num: 37

Candidate Starts for Armstrong_34:

(Start: 37 @23647 has 62 MA's), (50, 23740), (75, 23920),

Gene: Arroyo_38 Start: 26083, Stop: 26409, Start Num: 37
Candidate Starts for Arroyo_38:
(Start: 37 @26083 has 62 MA's), (70, 26314), (73, 26350), (75, 26356),

Gene: Asa16_35 Start: 26861, Stop: 27211, Start Num: 35
Candidate Starts for Asa16_35:
(Start: 35 @26861 has 22 MA's), (40, 26906), (45, 26945), (54, 26999), (68, 27098), (75, 27149),

Gene: Attoomi_32 Start: 23857, Stop: 24264, Start Num: 29
Candidate Starts for Attoomi_32:
(Start: 29 @23857 has 1 MA's), (38, 23938), (41, 23971), (44, 23995), (50, 24028), (68, 24148), (69, 24154), (70, 24157), (73, 24193), (74, 24196), (75, 24199),

Gene: AvGardian_39 Start: 26215, Stop: 26541, Start Num: 37
Candidate Starts for AvGardian_39:
(4, 25681), (Start: 37 @26215 has 62 MA's), (54, 26338), (73, 26482), (75, 26488),

Gene: Avocadoman_36 Start: 25161, Stop: 25487, Start Num: 37
Candidate Starts for Avocadoman_36:
(Start: 37 @25161 has 62 MA's), (70, 25392), (73, 25428), (75, 25434),

Gene: BAjuniper_36 Start: 26884, Stop: 27216, Start Num: 37
Candidate Starts for BAjuniper_36:
(13, 26641), (Start: 37 @26884 has 62 MA's), (49, 26974), (54, 27010), (55, 27013), (67, 27103), (73, 27154), (75, 27160), (78, 27211),

Gene: BabyDaisy_36 Start: 25684, Stop: 26010, Start Num: 37
Candidate Starts for BabyDaisy_36:
(Start: 37 @25684 has 62 MA's), (52, 25792), (70, 25915), (73, 25951), (75, 25957),

Gene: BabyYoda_38 Start: 26829, Stop: 27155, Start Num: 37
Candidate Starts for BabyYoda_38:
(Start: 37 @26829 has 62 MA's), (53, 26949), (55, 26955), (61, 26997), (70, 27060), (71, 27081), (73, 27096), (75, 27102),

Gene: Bachaco_35 Start: 26844, Stop: 27173, Start Num: 37
Candidate Starts for Bachaco_35:
(Start: 37 @26844 has 62 MA's), (53, 26964), (54, 26967), (55, 26970), (73, 27111), (75, 27117),

Gene: BaileyBlu_37 Start: 25414, Stop: 25836, Start Num: 35
Candidate Starts for BaileyBlu_37:
(15, 25246), (22, 25300), (Start: 35 @25414 has 22 MA's), (40, 25459), (45, 25513), (68, 25666), (69, 25672),

Gene: Barnstormer_43 Start: 27456, Stop: 27818, Start Num: 34
Candidate Starts for Barnstormer_43:
(16, 27303), (25, 27375), (Start: 34 @27456 has 12 MA's), (65, 27672), (75, 27747),

Gene: BelmontSKP_38 Start: 26045, Stop: 26371, Start Num: 37
Candidate Starts for BelmontSKP_38:
(Start: 37 @26045 has 62 MA's), (70, 26276), (73, 26312), (75, 26318),

Gene: Bengal_38 Start: 25673, Stop: 25999, Start Num: 37
Candidate Starts for Bengal_38:
(Start: 37 @25673 has 62 MA's), (70, 25904), (73, 25940), (75, 25946),

Gene: Bernstein_34 Start: 23702, Stop: 24043, Start Num: 37
Candidate Starts for Bernstein_34:
(Start: 37 @23702 has 62 MA's), (50, 23795), (75, 23975),

Gene: Brahms_34 Start: 23649, Stop: 23990, Start Num: 37
Candidate Starts for Brahms_34:
(Start: 37 @23649 has 62 MA's), (50, 23742), (75, 23922),

Gene: BubbaBear_36 Start: 25617, Stop: 25943, Start Num: 37
Candidate Starts for BubbaBear_36:
(Start: 37 @25617 has 62 MA's), (70, 25848), (73, 25884), (75, 25890),

Gene: Burritobowl_37 Start: 25618, Stop: 25944, Start Num: 37
Candidate Starts for Burritobowl_37:
(Start: 37 @25618 has 62 MA's), (70, 25849), (73, 25885), (75, 25891),

Gene: Cappuccino_35 Start: 24079, Stop: 24513, Start Num: 35
Candidate Starts for Cappuccino_35:
(24, 23983), (28, 24007), (Start: 35 @24079 has 22 MA's), (43, 24166), (74, 24379),

Gene: Caron_47 Start: 28859, Stop: 29239, Start Num: 34
Candidate Starts for Caron_47:
(Start: 34 @28859 has 12 MA's), (75, 29150),

Gene: Cashington_35 Start: 24964, Stop: 25290, Start Num: 37
Candidate Starts for Cashington_35:
(Start: 37 @24964 has 62 MA's), (52, 25072), (70, 25195), (73, 25231), (75, 25237),

Gene: Celaena_35 Start: 26594, Stop: 26923, Start Num: 37
Candidate Starts for Celaena_35:
(Start: 37 @26594 has 62 MA's), (53, 26714), (54, 26717), (55, 26720), (73, 26861), (75, 26867),

Gene: Cen1621_40 Start: 25799, Stop: 26167, Start Num: 34
Candidate Starts for Cen1621_40:
(Start: 34 @25799 has 12 MA's), (45, 25886), (57, 25958), (64, 26006), (70, 26051), (74, 26090),

Gene: ChiliPepper_34 Start: 26048, Stop: 26380, Start Num: 37
Candidate Starts for ChiliPepper_34:
(Start: 37 @26048 has 62 MA's), (52, 26159), (53, 26171), (55, 26177), (62, 26225), (70, 26282), (73, 26318), (75, 26324),

Gene: Clayda5_35 Start: 23636, Stop: 23977, Start Num: 37
Candidate Starts for Clayda5_35:
(Start: 37 @23636 has 62 MA's), (50, 23729), (75, 23909),

Gene: CliffHanger_38 Start: 24541, Stop: 24900, Start Num: 36
Candidate Starts for CliffHanger_38:
(Start: 36 @24541 has 3 MA's), (53, 24670), (71, 24802), (73, 24817), (75, 24823),

Gene: Coltrane_34 Start: 23649, Stop: 23990, Start Num: 37

Candidate Starts for Coltrane_34:

(Start: 37 @23649 has 62 MA's), (50, 23742), (75, 23922),

Gene: Crewmate_41 Start: 26389, Stop: 26751, Start Num: 35

Candidate Starts for Crewmate_41:

(Start: 35 @26389 has 22 MA's), (54, 26527), (70, 26635), (75, 26677),

Gene: CroZenni_37 Start: 25508, Stop: 25834, Start Num: 37

Candidate Starts for CroZenni_37:

(Start: 37 @25508 has 62 MA's), (70, 25739), (73, 25775), (75, 25781),

Gene: CupcakePrincess_38 Start: 25806, Stop: 26132, Start Num: 37

Candidate Starts for CupcakePrincess_38:

(Start: 37 @25806 has 62 MA's), (70, 26037), (71, 26058), (73, 26073),

Gene: DickRichards_36 Start: 25947, Stop: 26273, Start Num: 37

Candidate Starts for DickRichards_36:

(Start: 37 @25947 has 62 MA's), (70, 26178), (73, 26214), (75, 26220),

Gene: Didgeridoo_39 Start: 26093, Stop: 26419, Start Num: 37

Candidate Starts for Didgeridoo_39:

(Start: 37 @26093 has 62 MA's), (70, 26324), (73, 26360), (75, 26366),

Gene: DirtyBubble_37 Start: 26477, Stop: 26803, Start Num: 37

Candidate Starts for DirtyBubble_37:

(1, 25724), (5, 25964), (6, 25982), (9, 26018), (10, 26087), (Start: 37 @26477 has 62 MA's), (53, 26597), (55, 26603), (70, 26708), (71, 26729), (73, 26744), (75, 26750),

Gene: Dismas_35 Start: 26219, Stop: 26551, Start Num: 37

Candidate Starts for Dismas_35:

(Start: 37 @26219 has 62 MA's), (52, 26330), (53, 26342), (55, 26348), (62, 26396), (70, 26453), (73, 26489), (75, 26495),

Gene: Donkey_35 Start: 24069, Stop: 24503, Start Num: 35

Candidate Starts for Donkey_35:

(24, 23973), (28, 23997), (Start: 35 @24069 has 22 MA's), (43, 24156), (65, 24297), (74, 24369),

Gene: Doobus_36 Start: 25328, Stop: 25654, Start Num: 37

Candidate Starts for Doobus_36:

(Start: 37 @25328 has 62 MA's), (70, 25559), (73, 25595), (75, 25601),

Gene: DrManhattan_35 Start: 24117, Stop: 24467, Start Num: 35

Candidate Starts for DrManhattan_35:

(14, 23940), (17, 23964), (19, 23994), (26, 24036), (Start: 35 @24117 has 22 MA's), (45, 24201), (75, 24405), (76, 24411),

Gene: Eden_35 Start: 24432, Stop: 24761, Start Num: 37

Candidate Starts for Eden_35:

(Start: 37 @24432 has 62 MA's), (50, 24525), (53, 24552), (54, 24555), (73, 24699), (75, 24705),

Gene: Elezi_35 Start: 26877, Stop: 27227, Start Num: 35

Candidate Starts for Elezi_35:

(27, 26808), (Start: 35 @26877 has 22 MA's), (40, 26922), (45, 26961), (54, 27015), (68, 27114), (70, 27123), (75, 27165),

Gene: Elva_39 Start: 26539, Stop: 26865, Start Num: 37

Candidate Starts for Elva_39:

(Start: 37 @26539 has 62 MA's), (50, 26632), (54, 26662), (71, 26791), (73, 26806), (75, 26812),

Gene: Eraser_35 Start: 26868, Stop: 27218, Start Num: 35

Candidate Starts for Eraser_35:

(Start: 35 @26868 has 22 MA's), (40, 26913), (45, 26952), (54, 27006), (68, 27105), (75, 27156),

Gene: Eula_38 Start: 25719, Stop: 26045, Start Num: 37

Candidate Starts for Eula_38:

(Start: 37 @25719 has 62 MA's), (70, 25950), (71, 25971), (73, 25986),

Gene: Finalfrontier_37 Start: 26331, Stop: 26657, Start Num: 37

Candidate Starts for Finalfrontier_37:

(Start: 37 @26331 has 62 MA's), (70, 26562), (72, 26595), (75, 26604),

Gene: FlameThrower_35 Start: 26044, Stop: 26373, Start Num: 37

Candidate Starts for FlameThrower_35:

(Start: 37 @26044 has 62 MA's), (53, 26164), (54, 26167), (55, 26170), (73, 26311), (75, 26317),

Gene: Floof_46 Start: 28537, Stop: 28899, Start Num: 34

Candidate Starts for Floof_46:

(Start: 34 @28537 has 12 MA's), (39, 28582), (58, 28705), (75, 28828),

Gene: Franklin22_36 Start: 24418, Stop: 24747, Start Num: 37

Candidate Starts for Franklin22_36:

(Start: 37 @24418 has 62 MA's), (49, 24505), (54, 24541), (55, 24544), (72, 24682), (73, 24685), (75, 24691),

Gene: Gack_34 Start: 24169, Stop: 24498, Start Num: 37

Candidate Starts for Gack_34:

(Start: 37 @24169 has 62 MA's), (54, 24292), (72, 24433), (75, 24442),

Gene: Gambol_36 Start: 24088, Stop: 24522, Start Num: 35

Candidate Starts for Gambol_36:

(24, 23992), (28, 24016), (Start: 35 @24088 has 22 MA's), (43, 24175), (74, 24388),

Gene: GardenState_44 Start: 27681, Stop: 28043, Start Num: 34

Candidate Starts for GardenState_44:

(Start: 34 @27681 has 12 MA's), (58, 27849), (65, 27897), (75, 27972),

Gene: Gretchen_45 Start: 29159, Stop: 29515, Start Num: 34

Candidate Starts for Gretchen_45:

(Start: 34 @29159 has 12 MA's), (39, 29204), (47, 29261), (75, 29450), (77, 29492),

Gene: Honk_41 Start: 24866, Stop: 25207, Start Num: 34

Candidate Starts for Honk_41:

(32, 24857), (Start: 34 @24866 has 12 MA's), (74, 25157),

Gene: IAmGroot_44 Start: 28148, Stop: 28510, Start Num: 34

Candidate Starts for IAmGroot_44:

(Start: 34 @28148 has 12 MA's), (58, 28316), (65, 28364), (75, 28439),

Gene: Icarian_40 Start: 27112, Stop: 27438, Start Num: 37

Candidate Starts for Icarian_40:

(2, 26479), (5, 26599), (6, 26617), (9, 26653), (10, 26722), (Start: 37 @27112 has 62 MA's), (55, 27238), (61, 27280), (70, 27343), (71, 27364), (73, 27379), (75, 27385),

Gene: IndyLu_36 Start: 25645, Stop: 25971, Start Num: 37

Candidate Starts for IndyLu_36:

(Start: 37 @25645 has 62 MA's), (70, 25876), (73, 25912), (75, 25918),

Gene: Jabb_38 Start: 25806, Stop: 26132, Start Num: 37

Candidate Starts for Jabb_38:

(Start: 37 @25806 has 62 MA's), (70, 26037), (71, 26058), (73, 26073),

Gene: Jankie_35 Start: 24505, Stop: 24930, Start Num: 35

Candidate Starts for Jankie_35:

(Start: 35 @24505 has 22 MA's), (40, 24550), (45, 24604), (74, 24805), (76, 24814),

Gene: Johnathan_36 Start: 25051, Stop: 25377, Start Num: 37

Candidate Starts for Johnathan_36:

(Start: 37 @25051 has 62 MA's), (70, 25282), (73, 25318), (75, 25324),

Gene: Jovita_38 Start: 25821, Stop: 26147, Start Num: 37

Candidate Starts for Jovita_38:

(Start: 37 @25821 has 62 MA's), (70, 26052), (71, 26073), (73, 26088),

Gene: Jstan_37 Start: 26862, Stop: 27212, Start Num: 35

Candidate Starts for Jstan_37:

(Start: 35 @26862 has 22 MA's), (40, 26907), (45, 26946), (54, 27000), (68, 27099), (75, 27150),

Gene: Kalimba_35 Start: 24066, Stop: 24500, Start Num: 35

Candidate Starts for Kalimba_35:

(24, 23970), (28, 23994), (Start: 35 @24066 has 22 MA's), (43, 24153), (65, 24294), (74, 24366),

Gene: Kate33_36 Start: 25417, Stop: 25743, Start Num: 37

Candidate Starts for Kate33_36:

(Start: 37 @25417 has 62 MA's), (70, 25648), (73, 25684), (75, 25690),

Gene: Katzastrophic_36 Start: 26173, Stop: 26502, Start Num: 37

Candidate Starts for Katzastrophic_36:

(Start: 37 @26173 has 62 MA's), (53, 26293), (54, 26296), (55, 26299), (73, 26440), (75, 26446),

Gene: Kenzers_37 Start: 25644, Stop: 25970, Start Num: 37

Candidate Starts for Kenzers_37:

(Start: 37 @25644 has 62 MA's), (54, 25767), (71, 25896), (73, 25911),

Gene: Kieran_35 Start: 26228, Stop: 26560, Start Num: 37

Candidate Starts for Kieran_35:

(3, 25631), (7, 25739), (Start: 37 @26228 has 62 MA's), (52, 26339), (53, 26351), (55, 26357), (60, 26393), (62, 26405), (73, 26498), (75, 26504),

Gene: Lahqtemish_36 Start: 25690, Stop: 26016, Start Num: 37

Candidate Starts for Lahqtemish_36:

(Start: 37 @25690 has 62 MA's), (70, 25921), (75, 25963),

Gene: LimaBean_36 Start: 25100, Stop: 25426, Start Num: 37

Candidate Starts for LimaBean_36:

(Start: 37 @25100 has 62 MA's), (70, 25331), (73, 25367), (75, 25373),

Gene: London_35 Start: 26877, Stop: 27227, Start Num: 35

Candidate Starts for London_35:

(27, 26808), (Start: 35 @26877 has 22 MA's), (40, 26922), (45, 26961), (54, 27015), (68, 27114), (70, 27123), (75, 27165),

Gene: Loviatar_67 Start: 27664, Stop: 27990, Start Num: 37

Candidate Starts for Loviatar_67:

(2, 27031), (5, 27151), (6, 27169), (9, 27205), (10, 27274), (Start: 37 @27664 has 62 MA's), (55, 27790), (61, 27832), (70, 27895), (71, 27916), (73, 27931), (75, 27937),

Gene: Lynlen_37 Start: 25644, Stop: 25970, Start Num: 37

Candidate Starts for Lynlen_37:

(Start: 37 @25644 has 62 MA's), (54, 25767), (71, 25896), (73, 25911),

Gene: Mabodamaca_44 Start: 28805, Stop: 29152, Start Num: 34

Candidate Starts for Mabodamaca_44:

(Start: 34 @28805 has 12 MA's), (66, 29027), (70, 29054), (75, 29096),

Gene: Milomuff_38 Start: 25521, Stop: 25847, Start Num: 37

Candidate Starts for Milomuff_38:

(Start: 37 @25521 has 62 MA's), (70, 25752), (73, 25788), (75, 25794),

Gene: MissSwiss_35 Start: 24190, Stop: 24540, Start Num: 35

Candidate Starts for MissSwiss_35:

(14, 23998), (17, 24022), (19, 24052), (26, 24094), (Start: 35 @24190 has 22 MA's), (45, 24274), (70, 24436), (75, 24478), (76, 24484),

Gene: MsUbiquitous_38 Start: 25806, Stop: 26132, Start Num: 37

Candidate Starts for MsUbiquitous_38:

(Start: 37 @25806 has 62 MA's), (70, 26037), (71, 26058), (73, 26073),

Gene: Nicky22_38 Start: 26183, Stop: 26509, Start Num: 37

Candidate Starts for Nicky22_38:

(Start: 37 @26183 has 62 MA's), (71, 26435), (73, 26450),

Gene: Niobe_35 Start: 26862, Stop: 27212, Start Num: 35

Candidate Starts for Niobe_35:

(Start: 35 @26862 has 22 MA's), (40, 26907), (45, 26946), (54, 27000), (68, 27099), (75, 27150),

Gene: Nitro_36 Start: 26582, Stop: 26929, Start Num: 35

Candidate Starts for Nitro_36:

(Start: 35 @26582 has 22 MA's), (40, 26627), (45, 26666), (54, 26720), (70, 26828), (75, 26870),

Gene: ObiToo_40 Start: 26129, Stop: 26491, Start Num: 35

Candidate Starts for ObiToo_40:

(Start: 35 @26129 has 22 MA's), (54, 26267), (70, 26375), (75, 26417),

Gene: PastaFagioli_36 Start: 25674, Stop: 26000, Start Num: 37

Candidate Starts for PastaFagioli_36:

(Start: 37 @25674 has 62 MA's), (70, 25905), (75, 25947),

Gene: Percival_46 Start: 28994, Stop: 29350, Start Num: 34

Candidate Starts for Percival_46:

(Start: 34 @28994 has 12 MA's), (39, 29039), (47, 29096), (75, 29285), (77, 29327),

Gene: PhigPhack_38 Start: 25544, Stop: 25870, Start Num: 37

Candidate Starts for PhigPhack_38:

(Start: 37 @25544 has 62 MA's), (52, 25652), (70, 25775), (73, 25811), (75, 25817),

Gene: Phisb_38 Start: 25777, Stop: 26103, Start Num: 37

Candidate Starts for Phisb_38:

(Start: 37 @25777 has 62 MA's), (52, 25885), (70, 26008), (73, 26044), (75, 26050),

Gene: Pixelle_35 Start: 26837, Stop: 27184, Start Num: 35

Candidate Starts for Pixelle_35:

(Start: 35 @26837 has 22 MA's), (45, 26921), (70, 27083), (75, 27125),

Gene: Pumpkins_36 Start: 26180, Stop: 26539, Start Num: 35

Candidate Starts for Pumpkins_36:

(21, 26060), (Start: 35 @26180 has 22 MA's), (54, 26318), (75, 26468),

Gene: QMacho_39 Start: 26201, Stop: 26527, Start Num: 37

Candidate Starts for QMacho_39:

(Start: 37 @26201 has 62 MA's), (71, 26453), (73, 26468),

Gene: Quenya_36 Start: 25890, Stop: 26219, Start Num: 37

Candidate Starts for Quenya_36:

(8, 25413), (11, 25524), (12, 25566), (Start: 37 @25890 has 62 MA's), (49, 25977), (54, 26013), (55, 26016), (71, 26142), (73, 26157), (75, 26163),

Gene: Rollins_34 Start: 23702, Stop: 24043, Start Num: 37

Candidate Starts for Rollins_34:

(Start: 37 @23702 has 62 MA's), (50, 23795), (75, 23975),

Gene: Rona_35 Start: 26210, Stop: 26542, Start Num: 37

Candidate Starts for Rona_35:

(3, 25613), (7, 25721), (Start: 37 @26210 has 62 MA's), (52, 26321), (53, 26333), (55, 26339), (62, 26387), (70, 26444), (73, 26480), (75, 26486),

Gene: Sabourin_38 Start: 24066, Stop: 24500, Start Num: 35

Candidate Starts for Sabourin_38:

(24, 23970), (28, 23994), (Start: 35 @24066 has 22 MA's), (43, 24153), (74, 24366),

Gene: Samy_60 Start: 37282, Stop: 37698, Start Num: 18

Candidate Starts for Samy_60:

(Start: 18 @37282 has 1 MA's), (30, 37390), (33, 37414), (46, 37534), (48, 37537), (51, 37549), (55, 37576), (56, 37585), (59, 37606), (63, 37624),

Gene: SanaSana_40 Start: 27314, Stop: 27640, Start Num: 37
Candidate Starts for SanaSana_40:
(Start: 37 @27314 has 62 MA's), (55, 27440), (70, 27545), (71, 27566), (73, 27581), (75, 27587),

Gene: SansAfet_38 Start: 25631, Stop: 25957, Start Num: 37
Candidate Starts for SansAfet_38:
(Start: 37 @25631 has 62 MA's), (70, 25862), (73, 25898), (75, 25904),

Gene: SarBear_37 Start: 25498, Stop: 25824, Start Num: 37
Candidate Starts for SarBear_37:
(Start: 37 @25498 has 62 MA's), (71, 25750), (73, 25765),

Gene: Sharkboy_36 Start: 26309, Stop: 26641, Start Num: 37
Candidate Starts for Sharkboy_36:
(Start: 37 @26309 has 62 MA's), (52, 26420), (53, 26432), (55, 26438), (62, 26486), (70, 26543), (75, 26585),

Gene: Shayna_37 Start: 24987, Stop: 25346, Start Num: 36
Candidate Starts for Shayna_37:
(Start: 36 @24987 has 3 MA's), (Start: 42 @25041 has 1 MA's), (53, 25116), (71, 25248), (73, 25263), (75, 25269),

Gene: Skylord_34 Start: 23633, Stop: 23974, Start Num: 37
Candidate Starts for Skylord_34:
(Start: 37 @23633 has 62 MA's), (50, 23726), (75, 23906),

Gene: Slay_38 Start: 26179, Stop: 26505, Start Num: 37
Candidate Starts for Slay_38:
(Start: 37 @26179 has 62 MA's), (71, 26431), (73, 26446),

Gene: Softsoap_37 Start: 25542, Stop: 25868, Start Num: 37
Candidate Starts for Softsoap_37:
(Start: 37 @25542 has 62 MA's), (70, 25773), (75, 25815),

Gene: Solea_38 Start: 25521, Stop: 25847, Start Num: 37
Candidate Starts for Solea_38:
(Start: 37 @25521 has 62 MA's), (70, 25752), (73, 25788), (75, 25794),

Gene: Sooty_35 Start: 24081, Stop: 24515, Start Num: 35
Candidate Starts for Sooty_35:
(24, 23985), (28, 24009), (Start: 35 @24081 has 22 MA's), (43, 24168), (74, 24381),

Gene: Stoor_38 Start: 26983, Stop: 27309, Start Num: 37
Candidate Starts for Stoor_38:
(5, 26470), (6, 26488), (9, 26524), (10, 26593), (Start: 37 @26983 has 62 MA's), (53, 27103), (55, 27109), (61, 27151), (70, 27214), (71, 27235), (73, 27250), (75, 27256),

Gene: Stromboli_38 Start: 26847, Stop: 27173, Start Num: 37
Candidate Starts for Stromboli_38:
(1, 26094), (5, 26334), (6, 26352), (9, 26388), (10, 26457), (Start: 37 @26847 has 62 MA's), (53, 26967), (55, 26973), (70, 27078), (71, 27099), (73, 27114), (75, 27120),

Gene: SuMoo_46 Start: 28468, Stop: 28815, Start Num: 34

Candidate Starts for SuMoo_46:
(23, 28372), (31, 28456), (Start: 34 @28468 has 12 MA's), (66, 28690), (70, 28717), (75, 28759),

Gene: Subaru_36 Start: 26877, Stop: 27227, Start Num: 35
Candidate Starts for Subaru_36:
(27, 26808), (Start: 35 @26877 has 22 MA's), (40, 26922), (45, 26961), (54, 27015), (68, 27114), (70, 27123), (75, 27165),

Gene: SunnyD_37 Start: 25043, Stop: 25348, Start Num: 42
Candidate Starts for SunnyD_37:
(Start: 36 @24989 has 3 MA's), (Start: 42 @25043 has 1 MA's), (53, 25118), (62, 25172), (71, 25250), (73, 25265), (75, 25271),

Gene: Swervy_38 Start: 25698, Stop: 26024, Start Num: 37
Candidate Starts for Swervy_38:
(Start: 37 @25698 has 62 MA's), (71, 25950), (73, 25965),

Gene: Tallboi_36 Start: 27029, Stop: 27379, Start Num: 35
Candidate Starts for Tallboi_36:
(20, 26903), (Start: 35 @27029 has 22 MA's), (40, 27074), (70, 27275), (75, 27317),

Gene: Teagster_38 Start: 25820, Stop: 26179, Start Num: 36
Candidate Starts for Teagster_38:
(Start: 36 @25820 has 3 MA's), (Start: 42 @25874 has 1 MA's), (53, 25949), (71, 26081), (73, 26096), (75, 26102),

Gene: Tian_35 Start: 26817, Stop: 27164, Start Num: 35
Candidate Starts for Tian_35:
(Start: 35 @26817 has 22 MA's), (45, 26901), (70, 27063), (75, 27105),

Gene: TukTuk_38 Start: 25769, Stop: 26095, Start Num: 37
Candidate Starts for TukTuk_38:
(Start: 37 @25769 has 62 MA's), (52, 25877), (70, 26000), (73, 26036), (75, 26042),

Gene: Turab_34 Start: 25291, Stop: 25641, Start Num: 35
Candidate Starts for Turab_34:
(14, 25111), (19, 25165), (Start: 35 @25291 has 22 MA's), (40, 25336), (45, 25375), (70, 25537), (75, 25579),

Gene: UtzChips_43 Start: 27442, Stop: 27804, Start Num: 34
Candidate Starts for UtzChips_43:
(25, 27361), (Start: 34 @27442 has 12 MA's), (65, 27658), (75, 27733),

Gene: Vitas_34 Start: 23642, Stop: 23983, Start Num: 37
Candidate Starts for Vitas_34:
(Start: 37 @23642 has 62 MA's), (50, 23735), (75, 23915),

Gene: WalkingDead_39 Start: 27238, Stop: 27564, Start Num: 37
Candidate Starts for WalkingDead_39:
(Start: 37 @27238 has 62 MA's), (55, 27364), (61, 27406), (68, 27460), (70, 27469), (71, 27490), (73, 27505), (75, 27511),