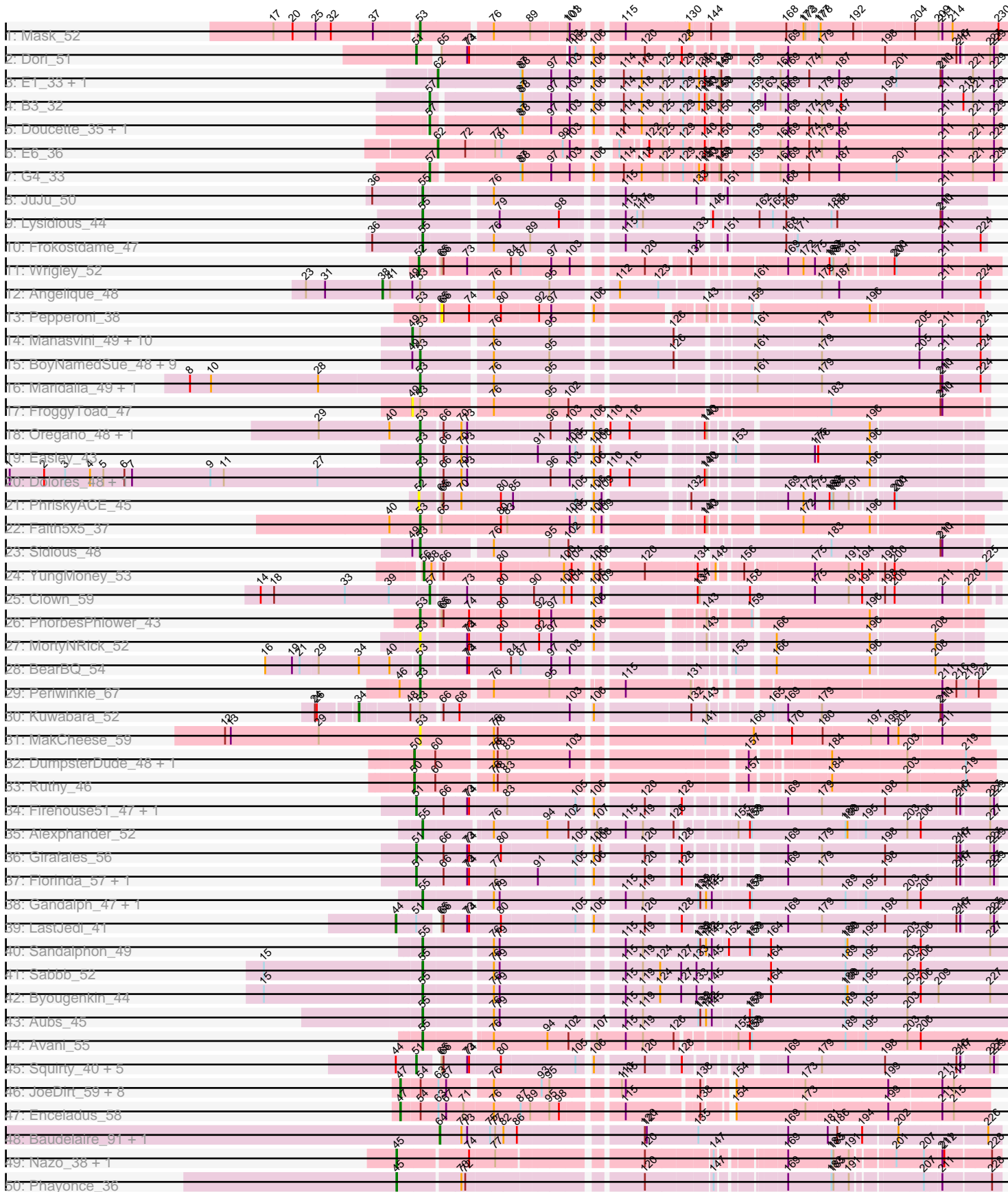
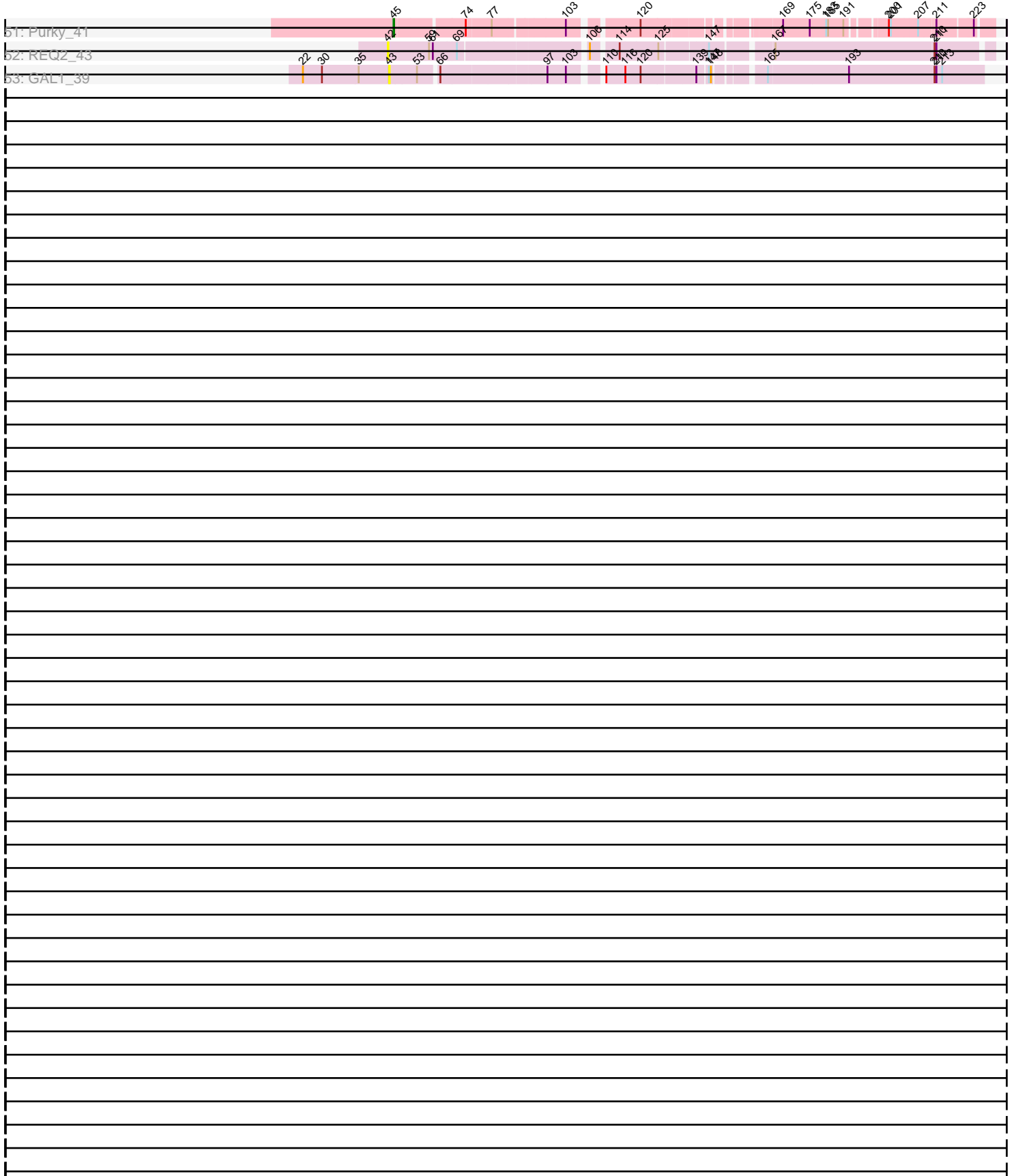


Pham 202836



Pham 202836



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 202836 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202836 has 96 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Mask_52
- Track 2 : Dori_51
- Track 3 : E1_33, Anatole_33
- Track 4 : B3_32
- Track 5 : Doucette_35, B22_33
- Track 6 : E6_36
- Track 7 : G4_33
- Track 8 : JuJu_50
- Track 9 : Lysidious_44
- Track 10 : Frokostdame_47
- Track 11 : Wrigley_52
- Track 12 : Angelique_48
- Track 13 : Pepperoni_38
- Track 14 : Manasvini_49, Pickett_41, Kita_49, Yeet412_43, LordFarquaad_45, Zirinka_45, EdnaMode_42, SoilAssassin_43, Attis_43, Antonio_48, Bialota_46
- Track 15 : BoyNamedSue_48, Polly_45, Zameen_48, AlumE_48, Agueybana_50, Eudoria_48, Trumpet_48, Suscepit_48, Tayonia_48, Neobush_48
- Track 16 : Maridalia_49, Bunnybear_41
- Track 17 : FroggyToad_47
- Track 18 : Oregano_48, Annalisa_46
- Track 19 : Easley_43
- Track 20 : Dolores_48, WinkNick_49
- Track 21 : PhriskyACE_45
- Track 22 : Faith5x5_37
- Track 23 : Sidious_48
- Track 24 : YungMoney_53
- Track 25 : Clown_59
- Track 26 : PhorbesPhlower_43
- Track 27 : MortyNRick_52
- Track 28 : BearBQ_54
- Track 29 : Periwinkle_67
- Track 30 : Kuwabara_52
- Track 31 : MakCheese_59
- Track 32 : DumpsterDude_48, ArchiDore_47
- Track 33 : Ruthy_46
- Track 34 : Firehouse51_47, DosHalletts_47
- Track 35 : Alexphander_52

- Track 36 : Girafales_56
- Track 37 : Florinda_57, Quico_55
- Track 38 : Gandalph_47, OwlsT2W_45
- Track 39 : LastJedi_41
- Track 40 : Sandalphon_49
- Track 41 : Sabbb_52
- Track 42 : Byougenkin_44
- Track 43 : Aubs_45
- Track 44 : Avani_55
- Track 45 : Squirty_40, Donkeykong_46, Zizzle_51, Brocalys_43, Pippy_45, Clifton_42
- Track 46 : JoeDirt_59, CicholasNage_59, Wyatt2_61, Acquire49_60, Silverleaf_60, AvadaKedavra_60, Tyson_60, Poochiewood_60, Rose5_60
- Track 47 : Enceladus_58
- Track 48 : Baudelaire_91, Aegeus_91
- Track 49 : Nazo_38, BigNuz_37
- Track 50 : Phayonce_36
- Track 51 : Purky_41
- Track 52 : REQ2_43
- Track 53 : GAL1_39

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

The start number called the most often in the published annotations is 53, it was called in 22 of the 86 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agueybana_50, AlumE_48, Annalisa_46, BearBQ_54, BoyNamedSue_48, Bunnybear_41, Dolores_48, Easley_43, Eudoria_48, Faith5x5_37, MakCheese_59, Maridalia_49, Mask_52, MortyNRick_52, Neobush_48, Oregano_48, Periwinkle_67, PhorbesPhlower_43, Polly_45, Sidious_48, Suscepit_48, Tayonia_48, Trumpet_48, WinkNick_49, Zameen_48,

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

- Angelique_48, Antonio_48, Attis_43, Bialota_46, EdnaMode_42, FroggyToad_47, GAL1_39, Kita_49, Kuwabara_52, LordFarquaad_45, Manasvini_49, Pepperoni_38, Pickett_41, SoilAssassin_43, Yeet412_43, Zirinka_45,

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

- Acquire49_60, Aegeus_91, Alexphander_52, Anatole_33, ArchiDore_47, Aubs_45, AvadaKedavra_60, Avani_55, B22_33, B3_32, Baudelaire_91, BigNuz_37, Brocalys_43, Byougenkin_44, CicholasNage_59, Clifton_42, Clown_59, Donkeykong_46, Dori_51, DosHalletts_47, Doucette_35, DumpsterDude_48, E1_33, E6_36, Enceladus_58, Firehouse51_47, Florinda_57, Frokostdame_47, G4_33, Gandalph_47, Girafales_56, JoeDirt_59, JuJu_50, LastJedi_41, Lysidious_44, Nazo_38, OwlsT2W_45, Phayonce_36, PhriskyACE_45, Pippy_45, Poochiewood_60, Purky_41, Quico_55, REQ2_43, Rose5_60, Ruthy_46, Sabbb_52, Sandalphon_49, Silverleaf_60, Squirty_40, Tyson_60, Wrigley_52, Wyatt2_61, YungMoney_53, Zizzle_51,

Summary by start number:

Start 34:

- Found in 2 of 96 (2.1%) of genes in pham
- Manual Annotations of this start: 1 of 86
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Kuwabara_52 (DN4),

Start 38:

- Found in 1 of 96 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Angelique_48 (CY1),

Start 42:

- Found in 1 of 96 (1.0%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: REQ2_43 (singleton),

Start 43:

- Found in 1 of 96 (1.0%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GAL1_39 (singleton),

Start 44:

- Found in 7 of 96 (7.3%) of genes in pham
- Manual Annotations of this start: 1 of 86
- Called 14.3% of time when present
- Phage (with cluster) where this start called: LastJedi_41 (F1),

Start 45:

- Found in 4 of 96 (4.2%) of genes in pham
- Manual Annotations of this start: 4 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigNuz_37 (P4), Nazo_38 (P4), Phayonce_36 (P5), Purky_41 (P6),

Start 47:

- Found in 10 of 96 (10.4%) of genes in pham
- Manual Annotations of this start: 9 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acquire49_60 (L1), AvadaKedavra_60 (L1), CicholasNage_59 (L1), Enceladus_58 (L1), JoeDirt_59 (L1), Poochiewood_60 (L1), Rose5_60 (L1), Silverleaf_60 (L1), Tyson_60 (L1), Wyatt2_61 (L1),

Start 49:

- Found in 24 of 96 (25.0%) of genes in pham
- Manual Annotations of this start: 11 of 86
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Antonio_48 (CZ1), Attis_43 (CZ2), Bialota_46 (CZ1), EdnaMode_42 (CZ2), FroggyToad_47 (CZ2), Kita_49 (CZ1),

LordFarquaad_45 (CZ2), Manasvini_49 (CZ1), Pickett_41 (CZ2), SoilAssassin_43 (CZ2), Yeet412_43 (CZ2), Zirinka_45 (CZ1),

Start 50:

- Found in 3 of 96 (3.1%) of genes in pham
- Manual Annotations of this start: 2 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArchiDore_47 (DW), DumpsterDude_48 (DW), Ruthy_46 (DW),

Start 51:

- Found in 13 of 96 (13.5%) of genes in pham
- Manual Annotations of this start: 12 of 86
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Brocalys_43 (F1), Clifton_42 (F1), Donkeykong_46 (F1), Dori_51 (AD), DosHalletts_47 (F1), Firehouse51_47 (F1), Florinda_57 (F1), Girafales_56 (F1), Pippy_45 (F1), Quico_55 (F1), Squirty_40 (F3), Zizzle_51 (F1),

Start 52:

- Found in 2 of 96 (2.1%) of genes in pham
- Manual Annotations of this start: 1 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PhriskyACE_45 (CZ4), Wrigley_52 (CY),

Start 53:

- Found in 41 of 96 (42.7%) of genes in pham
- Manual Annotations of this start: 22 of 86
- Called 61.0% of time when present
- Phage (with cluster) where this start called: Agueybana_50 (CZ1), AlumE_48 (CZ1), Annalisa_46 (CZ4), BearBQ_54 (DN), BoyNamedSue_48 (CZ1), Bunnybear_41 (CZ), Dolores_48 (CZ4), Easley_43 (CZ4), Eudoria_48 (CZ1), Faith5x5_37 (CZ6), MakCheese_59 (DW), Maridalia_49 (CZ1), Mask_52 (AD), MortyNRick_52 (DN), Neobush_48 (CZ1), Oregano_48 (CZ4), Periwinkle_67 (DN1), PhorbesPhlower_43 (DH), Polly_45 (CZ1), Sidious_48 (CZ7), Suscepit_48 (CZ1), Tayonia_48 (CZ1), Trumpet_48 (CZ1), WinkNick_49 (CZ4), Zameen_48 (CZ1),

Start 55:

- Found in 11 of 96 (11.5%) of genes in pham
- Manual Annotations of this start: 11 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alexphander_52 (F1), Aubs_45 (F1), Avani_55 (F2), Byougenkin_44 (F1), Frokostdame_47 (CV), Gandalph_47 (F1), JuJu_50 (CV), Lysidious_44 (CV), OwlsT2W_45 (F1), Sabbb_52 (F1), Sandalphon_49 (F1),

Start 56:

- Found in 1 of 96 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: YungMoney_53 (DC1),

Start 57:

- Found in 5 of 96 (5.2%) of genes in pham
- Manual Annotations of this start: 5 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: B22_33 (BW), B3_32 (BV), Clown_59 (DC2), Doucette_35 (BW), G4_33 (BW),

Start 62:

- Found in 3 of 96 (3.1%) of genes in pham
- Manual Annotations of this start: 3 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anatole_33 (BV), E1_33 (BV), E6_36 (BW),

Start 64:

- Found in 2 of 96 (2.1%) of genes in pham
- Manual Annotations of this start: 2 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aegeus_91 (L5), Baudelaire_91 (L5),

Start 65:

- Found in 13 of 96 (13.5%) of genes in pham
- No Manual Annotations of this start.
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Pepperoni_38 (CZ),

Summary by clusters:

There are 28 clusters represented in this pham: DN, singleton, DH, CZ2, CZ1, CZ6, CZ7, CZ4, BV, BW, DW, DN4, DN1, CY1, P6, AD, P4, P5, CZ, CY, L5, L1, DC2, CV, DC1, F1, F2, F3,

Info for manual annotations of cluster AD:

- Start number 51 was manually annotated 1 time for cluster AD.
- Start number 53 was manually annotated 1 time for cluster AD.

Info for manual annotations of cluster BV:

- Start number 57 was manually annotated 1 time for cluster BV.
- Start number 62 was manually annotated 2 times for cluster BV.

Info for manual annotations of cluster BW:

- Start number 57 was manually annotated 3 times for cluster BW.
- Start number 62 was manually annotated 1 time for cluster BW.

Info for manual annotations of cluster CV:

- Start number 55 was manually annotated 3 times for cluster CV.

Info for manual annotations of cluster CY:

- Start number 52 was manually annotated 1 time for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 38 was manually annotated 1 time for cluster CY1.

Info for manual annotations of cluster CZ:

- Start number 53 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 49 was manually annotated 5 times for cluster CZ1.
- Start number 53 was manually annotated 11 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 49 was manually annotated 6 times for cluster CZ2.

Info for manual annotations of cluster CZ4:

- Start number 53 was manually annotated 4 times for cluster CZ4.

Info for manual annotations of cluster CZ6:

- Start number 53 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster CZ7:

- Start number 53 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DC1:

- Start number 56 was manually annotated 1 time for cluster DC1.

Info for manual annotations of cluster DC2:

- Start number 57 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DH:

- Start number 53 was manually annotated 1 time for cluster DH.

Info for manual annotations of cluster DN:

- Start number 53 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 53 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster DN4:

- Start number 34 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DW:

- Start number 50 was manually annotated 2 times for cluster DW.

Info for manual annotations of cluster F1:

- Start number 44 was manually annotated 1 time for cluster F1.
- Start number 51 was manually annotated 10 times for cluster F1.
- Start number 55 was manually annotated 7 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 55 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F3:

- Start number 51 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster L1:

- Start number 47 was manually annotated 9 times for cluster L1.

Info for manual annotations of cluster L5:

- Start number 64 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster P4:

- Start number 45 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 45 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:

- Start number 45 was manually annotated 1 time for cluster P6.

Gene Information:

Gene: Acquire49_60 Start: 42360, Stop: 43178, Start Num: 47

Candidate Starts for Acquire49_60:

(Start: 47 @42360 has 9 MA's), (54, 42387), (63, 42414), (67, 42426), (76, 42486), (93, 42561), (95, 42573), (113, 42663), (115, 42669), (138, 42774), (154, 42804), (173, 42909), (199, 43032), (211, 43107), (215, 43122),

Gene: Aegeus_91 Start: 56094, Stop: 56897, Start Num: 64

Candidate Starts for Aegeus_91:

(Start: 64 @56094 has 2 MA's), (70, 56127), (73, 56136), (75, 56169), (77, 56175), (82, 56187), (86, 56208), (120, 56373), (121, 56376), (135, 56457), (169, 56595), (181, 56655), (186, 56670), (194, 56709), (202, 56757), (226, 56877),

Gene: Agueybana_50 Start: 37589, Stop: 38413, Start Num: 53

Candidate Starts for Agueybana_50:

(Start: 49 @37577 has 11 MA's), (Start: 53 @37589 has 22 MA's), (76, 37691), (95, 37778), (126, 37949), (161, 38054), (179, 38150), (205, 38303), (211, 38339), (224, 38399),

Gene: Alexphander_52 Start: 35997, Stop: 36857, Start Num: 55

Candidate Starts for Alexphander_52:

(Start: 55 @35997 has 11 MA's), (76, 36093), (94, 36177), (102, 36210), (107, 36243), (115, 36288), (119, 36315), (126, 36363), (155, 36435), (158, 36453), (159, 36456), (189, 36603), (190, 36606), (195, 36630), (203, 36693), (206, 36714), (227, 36822),

Gene: AlumE_48 Start: 36089, Stop: 36913, Start Num: 53

Candidate Starts for AlumE_48:

(Start: 49 @36077 has 11 MA's), (Start: 53 @36089 has 22 MA's), (76, 36191), (95, 36278), (126, 36449), (161, 36554), (179, 36650), (205, 36803), (211, 36839), (224, 36899),

Gene: Anatole_33 Start: 24569, Stop: 25372, Start Num: 62

Candidate Starts for Anatole_33:

(Start: 62 @24569 has 3 MA's), (87, 24692), (88, 24695), (97, 24734), (103, 24761), (106, 24785), (114, 24821), (118, 24848), (125, 24881), (129, 24908), (136, 24929), (140, 24938), (149, 24956), (150, 24959), (159, 25001), (167, 25031), (169, 25043), (174, 25076), (187, 25121), (201, 25211), (210, 25277), (211, 25280), (221, 25328), (229, 25361),

Gene: Angelique_48 Start: 37247, Stop: 38128, Start Num: 38

Candidate Starts for Angelique_48:

(23, 37127), (31, 37157), (Start: 38 @37247 has 1 MA's), (41, 37259), (Start: 49 @37292 has 11 MA's), (Start: 53 @37304 has 22 MA's), (76, 37406), (95, 37493), (112, 37580), (123, 37640), (161, 37769), (179, 37865), (187, 37892), (211, 38054), (224, 38114),

Gene: Annalisa_46 Start: 33306, Stop: 34055, Start Num: 53

Candidate Starts for Annalisa_46:

(29, 33153), (40, 33261), (Start: 53 @33306 has 22 MA's), (66, 33336), (70, 33363), (73, 33372), (96, 33489), (103, 33516), (106, 33540), (110, 33555), (116, 33585), (140, 33675), (143, 33678), (196, 33900),

Gene: Antonio_48 Start: 35350, Stop: 36186, Start Num: 49

Candidate Starts for Antonio_48:

(Start: 49 @35350 has 11 MA's), (Start: 53 @35362 has 22 MA's), (76, 35464), (95, 35551), (126, 35722), (161, 35827), (179, 35923), (205, 36076), (211, 36112), (224, 36172),

Gene: ArchiDore_47 Start: 36606, Stop: 37415, Start Num: 50

Candidate Starts for ArchiDore_47:

(Start: 50 @36606 has 2 MA's), (60, 36636), (76, 36714), (78, 36720), (83, 36735), (103, 36831), (157, 37068), (184, 37170), (203, 37284), (219, 37371),

Gene: Attis_43 Start: 32483, Stop: 33319, Start Num: 49

Candidate Starts for Attis_43:

(Start: 49 @32483 has 11 MA's), (Start: 53 @32495 has 22 MA's), (76, 32597), (95, 32684), (126, 32855), (161, 32960), (179, 33056), (205, 33209), (211, 33245), (224, 33305),

Gene: Aubs_45 Start: 34886, Stop: 35752, Start Num: 55

Candidate Starts for Aubs_45:

(Start: 55 @34886 has 11 MA's), (76, 34985), (79, 34994), (115, 35165), (119, 35192), (135, 35279), (138, 35282), (142, 35288), (145, 35297), (158, 35348), (159, 35351), (189, 35498), (195, 35525), (203, 35588),

Gene: AvadaKedavra_60 Start: 42433, Stop: 43251, Start Num: 47

Candidate Starts for AvadaKedavra_60:

(Start: 47 @42433 has 9 MA's), (54, 42460), (63, 42487), (67, 42499), (76, 42559), (93, 42634), (95, 42646), (113, 42736), (115, 42742), (138, 42847), (154, 42877), (173, 42982), (199, 43105), (211, 43180), (215, 43195),

Gene: Avani_55 Start: 35200, Stop: 36060, Start Num: 55

Candidate Starts for Avani_55:

(Start: 55 @35200 has 11 MA's), (76, 35296), (94, 35380), (102, 35413), (107, 35446), (115, 35491), (119, 35518), (126, 35566), (155, 35638), (158, 35656), (159, 35659), (189, 35806), (195, 35833), (203, 35896), (206, 35917),

Gene: B22_33 Start: 23699, Stop: 24502, Start Num: 57

Candidate Starts for B22_33:

(Start: 57 @23699 has 5 MA's), (87, 23822), (88, 23825), (97, 23864), (103, 23891), (106, 23915), (114, 23951), (118, 23978), (125, 24011), (129, 24038), (140, 24068), (150, 24089), (159, 24131), (169, 24173), (174, 24206), (179, 24224), (187, 24251), (211, 24410), (221, 24458), (229, 24491),

Gene: B3_32 Start: 23829, Stop: 24632, Start Num: 57

Candidate Starts for B3_32:

(Start: 57 @23829 has 5 MA's), (87, 23952), (88, 23955), (97, 23994), (103, 24021), (106, 24045), (114, 24081), (118, 24108), (125, 24141), (129, 24168), (136, 24189), (140, 24198), (143, 24201),

(149, 24216), (150, 24219), (159, 24261), (163, 24270), (167, 24291), (169, 24303), (179, 24354), (188, 24384), (198, 24453), (211, 24540), (218, 24573), (221, 24588), (229, 24621),

Gene: Baudelaire_91 Start: 56094, Stop: 56897, Start Num: 64

Candidate Starts for Baudelaire_91:

(Start: 64 @56094 has 2 MA's), (70, 56127), (73, 56136), (75, 56169), (77, 56175), (82, 56187), (86, 56208), (120, 56373), (121, 56376), (135, 56457), (169, 56595), (181, 56655), (186, 56670), (194, 56709), (202, 56757), (226, 56877),

Gene: BearBQ_54 Start: 38297, Stop: 39052, Start Num: 53

Candidate Starts for BearBQ_54:

(16, 38063), (19, 38105), (21, 38117), (29, 38144), (Start: 34 @38207 has 1 MA's), (40, 38255), (Start: 53 @38297 has 22 MA's), (73, 38363), (74, 38366), (84, 38426), (87, 38438), (97, 38480), (103, 38507), (153, 38702), (166, 38753), (196, 38897), (208, 38990),

Gene: Bialota_46 Start: 35982, Stop: 36818, Start Num: 49

Candidate Starts for Bialota_46:

(Start: 49 @35982 has 11 MA's), (Start: 53 @35994 has 22 MA's), (76, 36096), (95, 36183), (126, 36354), (161, 36459), (179, 36555), (205, 36708), (211, 36744), (224, 36804),

Gene: BigNuz_37 Start: 30064, Stop: 30867, Start Num: 45

Candidate Starts for BigNuz_37:

(Start: 45 @30064 has 4 MA's), (74, 30166), (77, 30202), (120, 30394), (147, 30490), (169, 30574), (183, 30640), (185, 30643), (191, 30667), (201, 30721), (207, 30760), (211, 30781), (212, 30784), (228, 30853),

Gene: BoyNamedSue_48 Start: 36089, Stop: 36913, Start Num: 53

Candidate Starts for BoyNamedSue_48:

(Start: 49 @36077 has 11 MA's), (Start: 53 @36089 has 22 MA's), (76, 36191), (95, 36278), (126, 36449), (161, 36554), (179, 36650), (205, 36803), (211, 36839), (224, 36899),

Gene: Brocalys_43 Start: 31207, Stop: 31986, Start Num: 51

Candidate Starts for Brocalys_43:

(Start: 44 @31177 has 1 MA's), (Start: 51 @31207 has 12 MA's), (65, 31231), (66, 31234), (73, 31270), (74, 31273), (80, 31318), (105, 31426), (106, 31441), (120, 31510), (128, 31558), (169, 31675), (179, 31726), (198, 31822), (216, 31927), (217, 31933), (227, 31975), (229, 31981),

Gene: Bunnybear_41 Start: 33762, Stop: 34586, Start Num: 53

Candidate Starts for Bunnybear_41:

(8, 33405), (10, 33438), (28, 33606), (Start: 53 @33762 has 22 MA's), (76, 33864), (95, 33951), (161, 34227), (179, 34323), (210, 34509), (211, 34512), (224, 34572),

Gene: Byougenkin_44 Start: 34980, Stop: 35858, Start Num: 55

Candidate Starts for Byougenkin_44:

(15, 34740), (Start: 55 @34980 has 11 MA's), (76, 35079), (79, 35088), (115, 35259), (119, 35286), (124, 35313), (127, 35346), (133, 35370), (145, 35394), (164, 35487), (189, 35604), (190, 35607), (195, 35631), (203, 35694), (206, 35715), (209, 35742), (227, 35823),

Gene: CicholasNage_59 Start: 42396, Stop: 43214, Start Num: 47

Candidate Starts for CicholasNage_59:

(Start: 47 @42396 has 9 MA's), (54, 42423), (63, 42450), (67, 42462), (76, 42522), (93, 42597), (95, 42609), (113, 42699), (115, 42705), (138, 42810), (154, 42840), (173, 42945), (199, 43068), (211, 43143), (215, 43158),

Gene: Clifton_42 Start: 31558, Stop: 32337, Start Num: 51

Candidate Starts for Clifton_42:

(Start: 44 @31528 has 1 MA's), (Start: 51 @31558 has 12 MA's), (65, 31582), (66, 31585), (73, 31621), (74, 31624), (80, 31669), (105, 31777), (106, 31792), (120, 31861), (128, 31909), (169, 32026), (179, 32077), (198, 32173), (216, 32278), (217, 32284), (227, 32326), (229, 32332),

Gene: Clown_59 Start: 43467, Stop: 44249, Start Num: 57

Candidate Starts for Clown_59:

(14, 43209), (18, 43230), (33, 43341), (39, 43410), (Start: 57 @43467 has 5 MA's), (73, 43518), (80, 43566), (90, 43611), (100, 43656), (104, 43668), (106, 43689), (109, 43701), (134, 43833), (137, 43836), (158, 43908), (175, 44004), (191, 44055), (194, 44076), (198, 44103), (200, 44118), (211, 44178), (220, 44214),

Gene: Dolores_48 Start: 34386, Stop: 35135, Start Num: 53

Candidate Starts for Dolores_48:

(1, 33747), (2, 33801), (3, 33834), (4, 33873), (5, 33894), (6, 33927), (7, 33939), (9, 34062), (11, 34083), (27, 34230), (Start: 53 @34386 has 22 MA's), (66, 34416), (70, 34443), (73, 34452), (96, 34569), (103, 34596), (106, 34620), (110, 34635), (116, 34665), (140, 34755), (143, 34758), (196, 34980),

Gene: Donkeykong_46 Start: 35576, Stop: 36355, Start Num: 51

Candidate Starts for Donkeykong_46:

(Start: 44 @35546 has 1 MA's), (Start: 51 @35576 has 12 MA's), (65, 35600), (66, 35603), (73, 35639), (74, 35642), (80, 35687), (105, 35795), (106, 35810), (120, 35879), (128, 35927), (169, 36044), (179, 36095), (198, 36191), (216, 36296), (217, 36302), (227, 36344), (229, 36350),

Gene: Dori_51 Start: 44920, Stop: 45693, Start Num: 51

Candidate Starts for Dori_51:

(Start: 51 @44920 has 12 MA's), (65, 44941), (73, 44980), (74, 44983), (103, 45124), (105, 45133), (106, 45148), (120, 45217), (128, 45265), (169, 45382), (179, 45433), (198, 45529), (216, 45634), (217, 45640), (227, 45682), (229, 45688),

Gene: DosHalletts_47 Start: 34853, Stop: 35650, Start Num: 51

Candidate Starts for DosHalletts_47:

(Start: 51 @34853 has 12 MA's), (66, 34895), (73, 34931), (74, 34934), (83, 34988), (105, 35090), (106, 35105), (120, 35174), (128, 35222), (169, 35339), (179, 35390), (198, 35486), (216, 35591), (217, 35597), (227, 35639), (229, 35645),

Gene: Doucette_35 Start: 25113, Stop: 25916, Start Num: 57

Candidate Starts for Doucette_35:

(Start: 57 @25113 has 5 MA's), (87, 25236), (88, 25239), (97, 25278), (103, 25305), (106, 25329), (114, 25365), (118, 25392), (125, 25425), (129, 25452), (140, 25482), (150, 25503), (159, 25545), (169, 25587), (174, 25620), (179, 25638), (187, 25665), (211, 25824), (221, 25872), (229, 25905),

Gene: DumpsterDude_48 Start: 38831, Stop: 39640, Start Num: 50

Candidate Starts for DumpsterDude_48:

(Start: 50 @38831 has 2 MA's), (60, 38861), (76, 38939), (78, 38945), (83, 38960), (103, 39056), (157, 39293), (184, 39395), (203, 39509), (219, 39596),

Gene: E1_33 Start: 24569, Stop: 25372, Start Num: 62

Candidate Starts for E1_33:

(Start: 62 @24569 has 3 MA's), (87, 24692), (88, 24695), (97, 24734), (103, 24761), (106, 24785), (114, 24821), (118, 24848), (125, 24881), (129, 24908), (136, 24929), (140, 24938), (149, 24956), (150, 24959), (159, 25001), (167, 25031), (169, 25043), (174, 25076), (187, 25121), (201, 25211), (210, 25277), (211, 25280), (221, 25328), (229, 25361),

Gene: E6_36 Start: 26500, Stop: 27273, Start Num: 62

Candidate Starts for E6_36:

(Start: 62 @26500 has 3 MA's), (72, 26542), (77, 26584), (81, 26593), (99, 26680), (103, 26689), (111, 26728), (122, 26761), (125, 26782), (129, 26809), (140, 26839), (150, 26860), (159, 26902), (167, 26932), (169, 26944), (174, 26977), (179, 26995), (187, 27022), (211, 27181), (221, 27229), (229, 27262),

Gene: Easley_43 Start: 32655, Stop: 33410, Start Num: 53

Candidate Starts for Easley_43:

(Start: 53 @32655 has 22 MA's), (66, 32685), (70, 32712), (73, 32721), (91, 32820), (103, 32865), (105, 32874), (106, 32889), (108, 32898), (153, 33060), (175, 33171), (176, 33174), (196, 33255),

Gene: EdnaMode_42 Start: 31171, Stop: 32007, Start Num: 49

Candidate Starts for EdnaMode_42:

(Start: 49 @31171 has 11 MA's), (Start: 53 @31183 has 22 MA's), (76, 31285), (95, 31372), (126, 31543), (161, 31648), (179, 31744), (205, 31897), (211, 31933), (224, 31993),

Gene: Enceladus_58 Start: 42233, Stop: 43060, Start Num: 47

Candidate Starts for Enceladus_58:

(Start: 47 @42233 has 9 MA's), (54, 42260), (63, 42287), (67, 42299), (71, 42326), (76, 42371), (87, 42413), (89, 42428), (95, 42458), (98, 42473), (115, 42551), (138, 42656), (154, 42686), (173, 42791), (199, 42914), (211, 42989), (215, 43004),

Gene: Eudoria_48 Start: 35362, Stop: 36186, Start Num: 53

Candidate Starts for Eudoria_48:

(Start: 49 @35350 has 11 MA's), (Start: 53 @35362 has 22 MA's), (76, 35464), (95, 35551), (126, 35722), (161, 35827), (179, 35923), (205, 36076), (211, 36112), (224, 36172),

Gene: Faith5x5_37 Start: 28702, Stop: 29454, Start Num: 53

Candidate Starts for Faith5x5_37:

(40, 28657), (Start: 53 @28702 has 22 MA's), (65, 28729), (80, 28816), (83, 28825), (103, 28915), (105, 28924), (106, 28939), (109, 28951), (140, 29074), (143, 29077), (172, 29197), (196, 29299),

Gene: Firehouse51_47 Start: 36491, Stop: 37288, Start Num: 51

Candidate Starts for Firehouse51_47:

(Start: 51 @36491 has 12 MA's), (66, 36533), (73, 36569), (74, 36572), (83, 36626), (105, 36728), (106, 36743), (120, 36812), (128, 36860), (169, 36977), (179, 37028), (198, 37124), (216, 37229), (217, 37235), (227, 37277), (229, 37283),

Gene: Florinda_57 Start: 36157, Stop: 36951, Start Num: 51

Candidate Starts for Florinda_57:

(Start: 51 @36157 has 12 MA's), (66, 36199), (73, 36235), (74, 36238), (77, 36274), (91, 36334), (105, 36391), (106, 36406), (120, 36475), (128, 36523), (169, 36640), (179, 36691), (198, 36787), (216, 36892), (217, 36898), (227, 36940), (229, 36946),

Gene: FroggyToad_47 Start: 33512, Stop: 34357, Start Num: 49

Candidate Starts for FroggyToad_47:

(Start: 49 @33512 has 11 MA's), (Start: 53 @33524 has 22 MA's), (76, 33623), (95, 33710), (102, 33740), (183, 34115), (210, 34286), (211, 34289),

Gene: Frokostdame_47 Start: 34936, Stop: 35751, Start Num: 55

Candidate Starts for Frokostdame_47:

(36, 34861), (Start: 55 @34936 has 11 MA's), (76, 35032), (89, 35089), (115, 35212), (133, 35323), (151, 35356), (168, 35443), (171, 35458), (211, 35683), (224, 35743),

Gene: G4_33 Start: 24732, Stop: 25535, Start Num: 57

Candidate Starts for G4_33:

(Start: 57 @24732 has 5 MA's), (87, 24855), (88, 24858), (97, 24897), (103, 24924), (106, 24948), (114, 24984), (118, 25011), (125, 25044), (129, 25071), (136, 25092), (140, 25101), (143, 25104), (149, 25119), (150, 25122), (159, 25164), (167, 25194), (169, 25206), (174, 25239), (187, 25284), (201, 25374), (211, 25443), (221, 25491), (229, 25524),

Gene: GAL1_39 Start: 32334, Stop: 33173, Start Num: 43

Candidate Starts for GAL1_39:

(22, 32199), (30, 32229), (35, 32286), (43, 32334), (Start: 53 @32376 has 22 MA's), (66, 32403), (97, 32556), (103, 32583), (110, 32622), (116, 32652), (120, 32676), (139, 32757), (147, 32772), (148, 32775), (165, 32838), (193, 32961), (210, 33096), (211, 33099), (213, 33108),

Gene: Gandalph_47 Start: 34842, Stop: 35708, Start Num: 55

Candidate Starts for Gandalph_47:

(Start: 55 @34842 has 11 MA's), (76, 34941), (79, 34950), (115, 35121), (119, 35148), (135, 35235), (138, 35238), (142, 35244), (145, 35253), (158, 35304), (159, 35307), (189, 35454), (195, 35481), (203, 35544), (206, 35565),

Gene: Girafales_56 Start: 35966, Stop: 36760, Start Num: 51

Candidate Starts for Girafales_56:

(Start: 51 @35966 has 12 MA's), (66, 36008), (73, 36044), (74, 36047), (80, 36092), (105, 36200), (106, 36215), (108, 36224), (120, 36284), (128, 36332), (169, 36449), (179, 36500), (198, 36596), (216, 36701), (217, 36707), (227, 36749), (229, 36755),

Gene: JoeDirt_59 Start: 42675, Stop: 43493, Start Num: 47

Candidate Starts for JoeDirt_59:

(Start: 47 @42675 has 9 MA's), (54, 42702), (63, 42729), (67, 42741), (76, 42801), (93, 42876), (95, 42888), (113, 42978), (115, 42984), (138, 43089), (154, 43119), (173, 43224), (199, 43347), (211, 43422), (215, 43437),

Gene: JuJu_50 Start: 36277, Stop: 37092, Start Num: 55

Candidate Starts for JuJu_50:

(36, 36202), (Start: 55 @36277 has 11 MA's), (76, 36373), (115, 36553), (133, 36664), (151, 36697), (168, 36784), (211, 37024),

Gene: Kita_49 Start: 35359, Stop: 36195, Start Num: 49

Candidate Starts for Kita_49:

(Start: 49 @35359 has 11 MA's), (Start: 53 @35371 has 22 MA's), (76, 35473), (95, 35560), (126, 35731), (161, 35836), (179, 35932), (205, 36085), (211, 36121), (224, 36181),

Gene: Kuwabara_52 Start: 36557, Stop: 37444, Start Num: 34

Candidate Starts for Kuwabara_52:

(24, 36500), (26, 36503), (Start: 34 @36557 has 1 MA's), (48, 36629), (Start: 53 @36644 has 22 MA's), (66, 36671), (68, 36695), (103, 36854), (106, 36878), (132, 37013), (143, 37037), (165, 37109), (169,

37130), (179, 37181), (210, 37367), (211, 37370),

Gene: LastJedi_41 Start: 31571, Stop: 32380, Start Num: 44

Candidate Starts for LastJedi_41:

(Start: 44 @31571 has 1 MA's), (Start: 51 @31601 has 12 MA's), (65, 31625), (66, 31628), (73, 31664), (74, 31667), (80, 31712), (105, 31820), (106, 31835), (120, 31904), (128, 31952), (169, 32069), (179, 32120), (198, 32216), (216, 32321), (217, 32327), (227, 32369), (229, 32375),

Gene: LordFarquaad_45 Start: 32464, Stop: 33300, Start Num: 49

Candidate Starts for LordFarquaad_45:

(Start: 49 @32464 has 11 MA's), (Start: 53 @32476 has 22 MA's), (76, 32578), (95, 32665), (126, 32836), (161, 32941), (179, 33037), (205, 33190), (211, 33226), (224, 33286),

Gene: Lysidious_44 Start: 34244, Stop: 35065, Start Num: 55

Candidate Starts for Lysidious_44:

(Start: 55 @34244 has 11 MA's), (79, 34352), (98, 34442), (115, 34520), (117, 34538), (119, 34547), (146, 34646), (162, 34709), (165, 34730), (168, 34751), (183, 34817), (186, 34826), (210, 34988), (211, 34991),

Gene: MakCheese_59 Start: 40021, Stop: 40845, Start Num: 53

Candidate Starts for MakCheese_59:

(12, 39715), (13, 39724), (29, 39862), (Start: 53 @40021 has 22 MA's), (76, 40123), (78, 40129), (141, 40429), (160, 40504), (170, 40558), (180, 40600), (197, 40672), (199, 40699), (202, 40714), (211, 40774),

Gene: Manasvini_49 Start: 35374, Stop: 36210, Start Num: 49

Candidate Starts for Manasvini_49:

(Start: 49 @35374 has 11 MA's), (Start: 53 @35386 has 22 MA's), (76, 35488), (95, 35575), (126, 35746), (161, 35851), (179, 35947), (205, 36100), (211, 36136), (224, 36196),

Gene: Maridalia_49 Start: 35508, Stop: 36332, Start Num: 53

Candidate Starts for Maridalia_49:

(8, 35151), (10, 35184), (28, 35352), (Start: 53 @35508 has 22 MA's), (76, 35610), (95, 35697), (161, 35973), (179, 36069), (210, 36255), (211, 36258), (224, 36318),

Gene: Mask_52 Start: 46012, Stop: 46845, Start Num: 53

Candidate Starts for Mask_52:

(17, 45796), (20, 45826), (25, 45862), (32, 45886), (37, 45952), (Start: 53 @46012 has 22 MA's), (76, 46111), (89, 46168), (101, 46222), (103, 46225), (115, 46291), (130, 46387), (144, 46414), (168, 46519), (172, 46543), (173, 46546), (177, 46564), (178, 46567), (192, 46618), (204, 46705), (209, 46741), (211, 46747), (214, 46762), (230, 46831),

Gene: MortyNRick_52 Start: 37859, Stop: 38608, Start Num: 53

Candidate Starts for MortyNRick_52:

(Start: 53 @37859 has 22 MA's), (73, 37925), (74, 37928), (80, 37973), (92, 38024), (97, 38042), (106, 38093), (143, 38231), (166, 38309), (196, 38453), (208, 38546),

Gene: Nazo_38 Start: 30066, Stop: 30869, Start Num: 45

Candidate Starts for Nazo_38:

(Start: 45 @30066 has 4 MA's), (74, 30168), (77, 30204), (120, 30396), (147, 30492), (169, 30576), (183, 30642), (185, 30645), (191, 30669), (201, 30723), (207, 30762), (211, 30783), (212, 30786), (228, 30855),

Gene: Neobush_48 Start: 35356, Stop: 36180, Start Num: 53

Candidate Starts for Neobush_48:

(Start: 49 @35344 has 11 MA's), (Start: 53 @35356 has 22 MA's), (76, 35458), (95, 35545), (126, 35716), (161, 35821), (179, 35917), (205, 36070), (211, 36106), (224, 36166),

Gene: Oregano_48 Start: 33939, Stop: 34688, Start Num: 53

Candidate Starts for Oregano_48:

(29, 33786), (40, 33894), (Start: 53 @33939 has 22 MA's), (66, 33969), (70, 33996), (73, 34005), (96, 34122), (103, 34149), (106, 34173), (110, 34188), (116, 34218), (140, 34308), (143, 34311), (196, 34533),

Gene: OwlsT2W_45 Start: 35172, Stop: 36038, Start Num: 55

Candidate Starts for OwlsT2W_45:

(Start: 55 @35172 has 11 MA's), (76, 35271), (79, 35280), (115, 35451), (119, 35478), (135, 35565), (138, 35568), (142, 35574), (145, 35583), (158, 35634), (159, 35637), (189, 35784), (195, 35811), (203, 35874), (206, 35895),

Gene: Pepperoni_38 Start: 29786, Stop: 30508, Start Num: 65

Candidate Starts for Pepperoni_38:

(Start: 53 @29759 has 22 MA's), (65, 29786), (66, 29789), (74, 29828), (80, 29873), (92, 29924), (97, 29942), (106, 29993), (143, 30131), (159, 30182), (196, 30353),

Gene: Periwinkle_67 Start: 39705, Stop: 40481, Start Num: 53

Candidate Starts for Periwinkle_67:

(46, 39675), (Start: 53 @39705 has 22 MA's), (76, 39804), (95, 39891), (115, 39984), (131, 40083), (211, 40401), (216, 40422), (219, 40437), (222, 40455),

Gene: Phayonce_36 Start: 29962, Stop: 30771, Start Num: 45

Candidate Starts for Phayonce_36:

(Start: 45 @29962 has 4 MA's), (70, 30052), (72, 30058), (120, 30298), (147, 30394), (169, 30478), (183, 30544), (185, 30547), (191, 30571), (207, 30664), (211, 30685), (228, 30757),

Gene: PhorbesPhlower_43 Start: 29950, Stop: 30699, Start Num: 53

Candidate Starts for PhorbesPhlower_43:

(Start: 53 @29950 has 22 MA's), (65, 29977), (66, 29980), (74, 30019), (80, 30064), (92, 30115), (97, 30133), (106, 30184), (143, 30322), (159, 30373), (196, 30544),

Gene: PhriskyACE_45 Start: 34290, Stop: 35057, Start Num: 52

Candidate Starts for PhriskyACE_45:

(Start: 52 @34290 has 1 MA's), (65, 34317), (66, 34320), (70, 34347), (80, 34404), (85, 34422), (105, 34512), (106, 34527), (109, 34539), (132, 34650), (169, 34764), (172, 34788), (175, 34806), (182, 34827), (183, 34830), (185, 34833), (191, 34857), (200, 34908), (201, 34911),

Gene: Pickett_41 Start: 29647, Stop: 30483, Start Num: 49

Candidate Starts for Pickett_41:

(Start: 49 @29647 has 11 MA's), (Start: 53 @29659 has 22 MA's), (76, 29761), (95, 29848), (126, 30019), (161, 30124), (179, 30220), (205, 30373), (211, 30409), (224, 30469),

Gene: Pippy_45 Start: 33164, Stop: 33943, Start Num: 51

Candidate Starts for Pippy_45:

(Start: 44 @33134 has 1 MA's), (Start: 51 @33164 has 12 MA's), (65, 33188), (66, 33191), (73, 33227), (74, 33230), (80, 33275), (105, 33383), (106, 33398), (120, 33467), (128, 33515), (169, 33632), (179, 33683), (198, 33779), (216, 33884), (217, 33890), (227, 33932), (229, 33938),

Gene: Polly_45 Start: 34805, Stop: 35629, Start Num: 53

Candidate Starts for Polly_45:

(Start: 49 @34793 has 11 MA's), (Start: 53 @34805 has 22 MA's), (76, 34907), (95, 34994), (126, 35165), (161, 35270), (179, 35366), (205, 35519), (211, 35555), (224, 35615),

Gene: Poochiewood_60 Start: 42683, Stop: 43501, Start Num: 47

Candidate Starts for Poochiewood_60:

(Start: 47 @42683 has 9 MA's), (54, 42710), (63, 42737), (67, 42749), (76, 42809), (93, 42884), (95, 42896), (113, 42986), (115, 42992), (138, 43097), (154, 43127), (173, 43232), (199, 43355), (211, 43430), (215, 43445),

Gene: Purky_41 Start: 30689, Stop: 31480, Start Num: 45

Candidate Starts for Purky_41:

(Start: 45 @30689 has 4 MA's), (74, 30788), (77, 30824), (103, 30923), (120, 31016), (169, 31196), (175, 31238), (183, 31262), (185, 31265), (191, 31289), (200, 31340), (201, 31343), (207, 31382), (211, 31403), (223, 31454),

Gene: Quico_55 Start: 35977, Stop: 36771, Start Num: 51

Candidate Starts for Quico_55:

(Start: 51 @35977 has 12 MA's), (66, 36019), (73, 36055), (74, 36058), (77, 36094), (91, 36154), (105, 36211), (106, 36226), (120, 36295), (128, 36343), (169, 36460), (179, 36511), (198, 36607), (216, 36712), (217, 36718), (227, 36760), (229, 36766),

Gene: REQ2_43 Start: 33255, Stop: 34112, Start Num: 42

Candidate Starts for REQ2_43:

(42, 33255), (59, 33318), (61, 33324), (69, 33360), (106, 33540), (114, 33576), (125, 33633), (147, 33699), (167, 33783), (210, 34029), (211, 34032),

Gene: Rose5_60 Start: 42695, Stop: 43513, Start Num: 47

Candidate Starts for Rose5_60:

(Start: 47 @42695 has 9 MA's), (54, 42722), (63, 42749), (67, 42761), (76, 42821), (93, 42896), (95, 42908), (113, 42998), (115, 43004), (138, 43109), (154, 43139), (173, 43244), (199, 43367), (211, 43442), (215, 43457),

Gene: Ruthy_46 Start: 36193, Stop: 37002, Start Num: 50

Candidate Starts for Ruthy_46:

(Start: 50 @36193 has 2 MA's), (60, 36223), (76, 36301), (78, 36307), (83, 36322), (157, 36655), (184, 36757), (203, 36871), (219, 36958),

Gene: Sabbb_52 Start: 36611, Stop: 37489, Start Num: 55

Candidate Starts for Sabbb_52:

(15, 36371), (Start: 55 @36611 has 11 MA's), (76, 36710), (79, 36719), (115, 36890), (119, 36917), (124, 36944), (127, 36977), (133, 37001), (145, 37025), (164, 37118), (189, 37235), (195, 37262), (203, 37325), (206, 37346),

Gene: Sandalphon_49 Start: 36106, Stop: 36972, Start Num: 55

Candidate Starts for Sandalphon_49:

(Start: 55 @36106 has 11 MA's), (76, 36205), (79, 36214), (115, 36385), (119, 36412), (135, 36499), (138, 36502), (142, 36508), (145, 36517), (152, 36538), (158, 36568), (159, 36571), (164, 36601), (189, 36718), (190, 36721), (195, 36745), (203, 36808), (206, 36829), (227, 36937),

Gene: Sidious_48 Start: 36674, Stop: 37510, Start Num: 53

Candidate Starts for Sidious_48:

(Start: 49 @36662 has 11 MA's), (Start: 53 @36674 has 22 MA's), (76, 36776), (95, 36863), (102, 36893), (183, 37268), (210, 37439), (211, 37442),

Gene: Silverleaf_60 Start: 42430, Stop: 43248, Start Num: 47

Candidate Starts for Silverleaf_60:

(Start: 47 @42430 has 9 MA's), (54, 42457), (63, 42484), (67, 42496), (76, 42556), (93, 42631), (95, 42643), (113, 42733), (115, 42739), (138, 42844), (154, 42874), (173, 42979), (199, 43102), (211, 43177), (215, 43192),

Gene: SoilAssassin_43 Start: 32482, Stop: 33318, Start Num: 49

Candidate Starts for SoilAssassin_43:

(Start: 49 @32482 has 11 MA's), (Start: 53 @32494 has 22 MA's), (76, 32596), (95, 32683), (126, 32854), (161, 32959), (179, 33055), (205, 33208), (211, 33244), (224, 33304),

Gene: Squirty_40 Start: 32337, Stop: 33116, Start Num: 51

Candidate Starts for Squirty_40:

(Start: 44 @32307 has 1 MA's), (Start: 51 @32337 has 12 MA's), (65, 32361), (66, 32364), (73, 32400), (74, 32403), (80, 32448), (105, 32556), (106, 32571), (120, 32640), (128, 32688), (169, 32805), (179, 32856), (198, 32952), (216, 33057), (217, 33063), (227, 33105), (229, 33111),

Gene: Suscepit_48 Start: 35363, Stop: 36187, Start Num: 53

Candidate Starts for Suscepit_48:

(Start: 49 @35351 has 11 MA's), (Start: 53 @35363 has 22 MA's), (76, 35465), (95, 35552), (126, 35723), (161, 35828), (179, 35924), (205, 36077), (211, 36113), (224, 36173),

Gene: Tayonia_48 Start: 35362, Stop: 36186, Start Num: 53

Candidate Starts for Tayonia_48:

(Start: 49 @35350 has 11 MA's), (Start: 53 @35362 has 22 MA's), (76, 35464), (95, 35551), (126, 35722), (161, 35827), (179, 35923), (205, 36076), (211, 36112), (224, 36172),

Gene: Trumpet_48 Start: 35363, Stop: 36187, Start Num: 53

Candidate Starts for Trumpet_48:

(Start: 49 @35351 has 11 MA's), (Start: 53 @35363 has 22 MA's), (76, 35465), (95, 35552), (126, 35723), (161, 35828), (179, 35924), (205, 36077), (211, 36113), (224, 36173),

Gene: Tyson_60 Start: 42697, Stop: 43515, Start Num: 47

Candidate Starts for Tyson_60:

(Start: 47 @42697 has 9 MA's), (54, 42724), (63, 42751), (67, 42763), (76, 42823), (93, 42898), (95, 42910), (113, 43000), (115, 43006), (138, 43111), (154, 43141), (173, 43246), (199, 43369), (211, 43444), (215, 43459),

Gene: WinkNick_49 Start: 34309, Stop: 35058, Start Num: 53

Candidate Starts for WinkNick_49:

(1, 33670), (2, 33724), (3, 33757), (4, 33796), (5, 33817), (6, 33850), (7, 33862), (9, 33985), (11, 34006), (27, 34153), (Start: 53 @34309 has 22 MA's), (66, 34339), (70, 34366), (73, 34375), (96, 34492), (103, 34519), (106, 34543), (110, 34558), (116, 34588), (140, 34678), (143, 34681), (196, 34903),

Gene: Wrigley_52 Start: 36935, Stop: 37699, Start Num: 52

Candidate Starts for Wrigley_52:

(Start: 52 @36935 has 1 MA's), (65, 36962), (66, 36965), (73, 37001), (84, 37064), (87, 37076), (97, 37118), (103, 37145), (120, 37238), (132, 37292), (169, 37406), (172, 37430), (175, 37448), (182,

37469), (183, 37472), (185, 37475), (191, 37499), (200, 37550), (201, 37553), (211, 37613),

Gene: Wyatt2_61 Start: 42695, Stop: 43513, Start Num: 47

Candidate Starts for Wyatt2_61:

(Start: 47 @42695 has 9 MA's), (54, 42722), (63, 42749), (67, 42761), (76, 42821), (93, 42896), (95, 42908), (113, 42998), (115, 43004), (138, 43109), (154, 43139), (173, 43244), (199, 43367), (211, 43442), (215, 43457),

Gene: Yeet412_43 Start: 32483, Stop: 33319, Start Num: 49

Candidate Starts for Yeet412_43:

(Start: 49 @32483 has 11 MA's), (Start: 53 @32495 has 22 MA's), (76, 32597), (95, 32684), (126, 32855), (161, 32960), (179, 33056), (205, 33209), (211, 33245), (224, 33305),

Gene: YungMoney_53 Start: 42952, Stop: 43722, Start Num: 56

Candidate Starts for YungMoney_53:

(Start: 56 @42952 has 1 MA's), (58, 42964), (66, 42976), (80, 43057), (100, 43147), (104, 43159), (106, 43180), (108, 43189), (120, 43249), (134, 43321), (148, 43342), (156, 43369), (175, 43465), (191, 43516), (194, 43537), (198, 43564), (200, 43579), (225, 43699),

Gene: Zameen_48 Start: 35362, Stop: 36186, Start Num: 53

Candidate Starts for Zameen_48:

(Start: 49 @35350 has 11 MA's), (Start: 53 @35362 has 22 MA's), (76, 35464), (95, 35551), (126, 35722), (161, 35827), (179, 35923), (205, 36076), (211, 36112), (224, 36172),

Gene: Zirinka_45 Start: 35970, Stop: 36806, Start Num: 49

Candidate Starts for Zirinka_45:

(Start: 49 @35970 has 11 MA's), (Start: 53 @35982 has 22 MA's), (76, 36084), (95, 36171), (126, 36342), (161, 36447), (179, 36543), (205, 36696), (211, 36732), (224, 36792),

Gene: Zizzle_51 Start: 36006, Stop: 36785, Start Num: 51

Candidate Starts for Zizzle_51:

(Start: 44 @35976 has 1 MA's), (Start: 51 @36006 has 12 MA's), (65, 36030), (66, 36033), (73, 36069), (74, 36072), (80, 36117), (105, 36225), (106, 36240), (120, 36309), (128, 36357), (169, 36474), (179, 36525), (198, 36621), (216, 36726), (217, 36732), (227, 36774), (229, 36780),