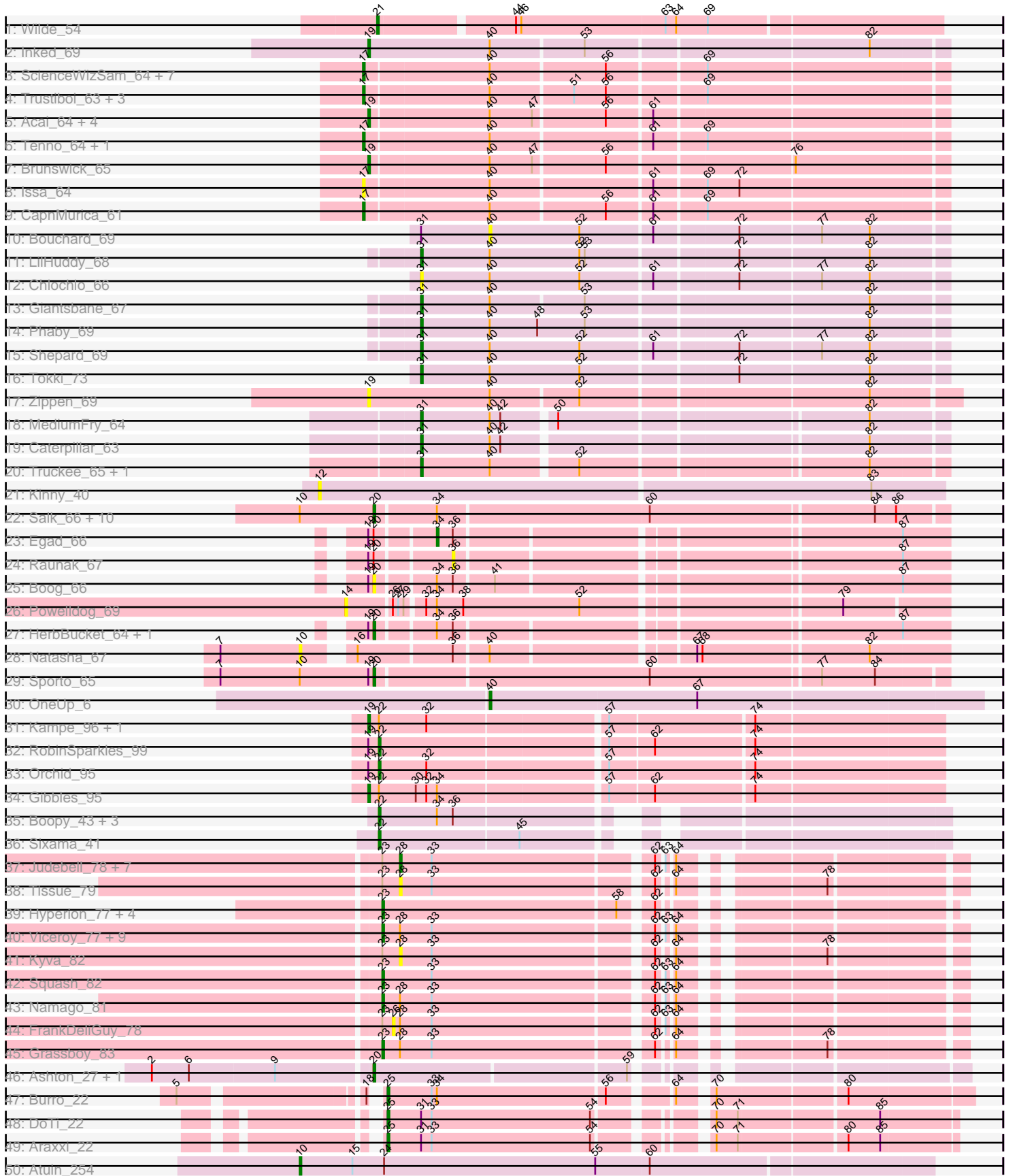
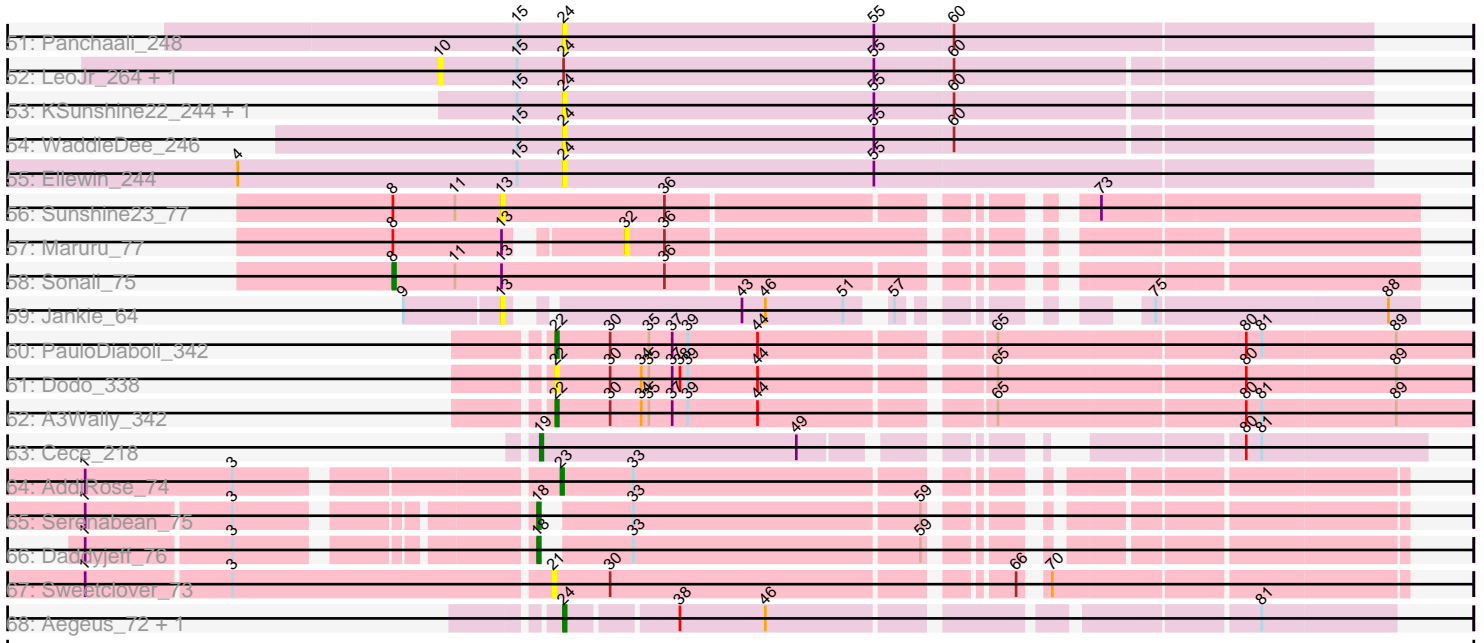


Pham 215970



Pham 215970



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 215970 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215970 has 123 members, 34 are drafts.

Phages represented in each track:

- Track 1 : Wilde_54
- Track 2 : Inked_69
- Track 3 : ScienceWizSam_64, Gordon_61, Darby_62, Nivinsha_66, DevitoJr_63, Tatanka_59, Synepsis_62, AreFloNak_66
- Track 4 : Trustiboi_63, Breylor17_63, Nightmare_65, CastorTray_67
- Track 5 : Acai_64, ElephantMan_64, LucySwiss_65, Niktson_64, Teacup_65
- Track 6 : Tenno_64, MiniBagel_63
- Track 7 : Brunswick_65
- Track 8 : Issa_64
- Track 9 : CapnMurica_61
- Track 10 : Bouchard_69
- Track 11 : LilHuddy_68
- Track 12 : Chlochlo_66
- Track 13 : Giantsbane_67
- Track 14 : Phaby_69
- Track 15 : Shepard_69
- Track 16 : Tokki_73
- Track 17 : Zippen_69
- Track 18 : MediumFry_64
- Track 19 : Caterpillar_63
- Track 20 : Truckee_65, Makai_67
- Track 21 : Kinny_40
- Track 22 : Salk_66, BronxBay_66, Shiba_65, MrAaronian_66, DoctorPepper_65, Sloopyjoe_66, Linda_66, Michelle_66, Djungelskog_65, Stayer_66, StarLord_66
- Track 23 : Egad_66
- Track 24 : Raunak_67
- Track 25 : Boog_66
- Track 26 : PowellDog_69
- Track 27 : HerbBucket_64, ProfFrink_66
- Track 28 : Natasha_67
- Track 29 : Sporto_65
- Track 30 : OneUp_6
- Track 31 : Kampe_96, PatrickStar_96
- Track 32 : RobinSparkles_99
- Track 33 : Orchid_95
- Track 34 : Gibbles_95
- Track 35 : Boopy_43, Mareelih_41, Forza_42, BlueNGold_41

- Track 36 : Sixama_41
- Track 37 : Judebell_78, DonaldDuck_80, Mentos_82, Wayne3_80, Rudy_76, BabyDotz_77, Zagie_80, Sillytadpoles_81
- Track 38 : Tissue_79
- Track 39 : Hyperion_77, Blab_75, Mashley_79, AluminumJesus_75, Gazebo_79
- Track 40 : Viceroy_77, Phabia_78, Teehee_79, Jehoshaphat_80, StrawberryJamm_84, Lonelysoil_76, Llemily_80, Quammi_77, Wheelie_78, Casend_79
- Track 41 : Kyva_82
- Track 42 : Squash_82
- Track 43 : Namago_81
- Track 44 : FrankDeliGuy_78
- Track 45 : Grassboy_83
- Track 46 : Ashton_27, ShyRosie_26
- Track 47 : Burro_22
- Track 48 : DoTi_22
- Track 49 : Araxxi_22
- Track 50 : Atuin_254
- Track 51 : Panchaali_248
- Track 52 : LeoJr_264, ReginaGlobina_266
- Track 53 : KSunshine22_244, DunneganBoMo_245
- Track 54 : WaddleDee_246
- Track 55 : Ellewin_244
- Track 56 : Sunshine23_77
- Track 57 : Maruru_77
- Track 58 : Sonali_75
- Track 59 : Jankie_64
- Track 60 : PauloDiaboli_342
- Track 61 : Dodo_338
- Track 62 : A3Wally_342
- Track 63 : Cece_218
- Track 64 : AddiRose_74
- Track 65 : Serenabean_75
- Track 66 : Daddyjeff_76
- Track 67 : Sweetclover_73
- Track 68 : Aegeus_72, Baudelaire_72

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

The start number called the most often in the published annotations is 23, it was called in 18 of the 89 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AddiRose_74, AluminumJesus_75, Blab_75, Casend_79, Gazebo_79, Grassboy_83, Hyperion_77, Jehoshaphat_80, Llemily_80, Lonelysoil_76, Mashley_79, Namago_81, Phabia_78, Quammi_77, Squash_82, StrawberryJamm_84, Teehee_79, Viceroy_77, Wheelie_78,

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

- BabyDotz_77, DonaldDuck_80, FrankDeliGuy_78, Judebell_78, Kyva_82, Mentos_82, Rudy_76, Sillytadpoles_81, Tissue_79, Wayne3_80, Zagie_80,

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

- A3Wally_342, Acai_64, Aegeus_72, Araxxi_22, AreFloNak_66, Ashton_27, Atuin_254, Baudelaire_72, BlueNGold_41, Boog_66, Boopy_43, Bouchard_69, Breylor17_63, BronxBay_66, Brunswick_65, Burro_22, CapnMurica_61, CastorTray_67, Caterpillar_63, Cece_218, Chlochlo_66, Daddyjeff_76, Darby_62, DevitoJr_63, Djungelskog_65, DoTi_22, DoctorPepper_65, Dodo_338, DunneganBoMo_245, Egad_66, ElephantMan_64, Ellewin_244, Forza_42, Giantsbane_67, Gibbles_95, Gordon_61, HerbBucket_64, Inked_69, Issa_64, Jankie_64, KSunshine22_244, Kampe_96, Kinny_40, LeoJr_264, LilHuddy_68, Linda_66, LucySwiss_65, Makai_67, Mareelih_41, Maruru_77, MediumFry_64, Michelle_66, MiniBagel_63, MrAaronian_66, Natasha_67, Nightmare_65, Niktson_64, Nivinsha_66, OneUp_6, Orchid_95, Panchaali_248, PatrickStar_96, PauloDiaboli_342, Phaby_69, PowellDog_69, ProfFrink_66, Raunak_67, ReginaGlobina_266, RobinSparkles_99, Salk_66, ScienceWizSam_64, Serenabean_75, Shepard_69, Shiba_65, ShyRosie_26, Sixama_41, Sloopyjoe_66, Sonali_75, Sporto_65, StarLord_66, Stayer_66, Sunshine23_77, Sweetclover_73, Synepsis_62, Tatanka_59, Teacup_65, Tenno_64, Tokki_73, Truckee_65, Trustiboi_63, WaddleDee_246, Wilde_54, Zippen_69,

Summary by start number:

Start 8:

- Found in 3 of 123 (2.4%) of genes in pham
- Manual Annotations of this start: 1 of 89
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Sonali_75 (FG),

Start 10:

- Found in 16 of 123 (13.0%) of genes in pham
- Manual Annotations of this start: 1 of 89
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Atuin_254 (FC), LeoJr_264 (FC), Natasha_67 (AW), ReginaGlobina_266 (FC),

Start 12:

- Found in 1 of 123 (0.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kinny_40 (AU6),

Start 13:

- Found in 4 of 123 (3.3%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Jankie_64 (FP), Sunshine23_77 (FG),

Start 14:

- Found in 1 of 123 (0.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present

- Phage (with cluster) where this start called: PowellDog_69 (AW),

Start 17:

- Found in 16 of 123 (13.0%) of genes in pham
- Manual Annotations of this start: 13 of 89
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AreFloNak_66 (AU1), Breylor17_63 (AU1), CapnMurica_61 (AU1), CastorTray_67 (AU1), Darby_62 (AU1), DevitoJr_63 (AU1), Gordon_61 (AU1), Issa_64 (AU1), MiniBagel_63 (AU1), Nightmare_65 (AU1), Nivinsha_66 (AU1), ScienceWizSam_64 (AU1), Synopsis_62 (AU1), Tatanka_59 (AU1), Tenno_64 (AU1), Trustiboi_63 (AU1),

Start 18:

- Found in 3 of 123 (2.4%) of genes in pham
- Manual Annotations of this start: 2 of 89
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Daddyjeff_76 (JA), Serenabean_75 (JA),

Start 19:

- Found in 20 of 123 (16.3%) of genes in pham
- Manual Annotations of this start: 9 of 89
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Acai_64 (AU1), Brunswick_65 (AU1), Cece_218 (GD3), ElephantMan_64 (AU1), Gibbles_95 (CX), Inked_69 (AU), Kampe_96 (CX), LucySwiss_65 (AU1), Niktson_64 (AU1), PatrickStar_96 (CX), Teacup_65 (AU1), Zippen_69 (AU3),

Start 20:

- Found in 19 of 123 (15.4%) of genes in pham
- Manual Annotations of this start: 14 of 89
- Called 89.5% of time when present
- Phage (with cluster) where this start called: Ashton_27 (EK2), Boog_66 (AW), BronxBay_66 (AW), Djungelskog_65 (AW), DoctorPepper_65 (AW), HerbBucket_64 (AW), Linda_66 (AW), Michelle_66 (AW), MrAaronian_66 (AW), ProfFrink_66 (AW), Salk_66 (AW), Shiba_65 (AW), ShyRosie_26 (EK2), Sloopyjoe_66 (AW), Sporto_65 (AW), StarLord_66 (AW), Stayer_66 (AW),

Start 21:

- Found in 2 of 123 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 89
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sweetclover_73 (JA), Wilde_54 (AP1),

Start 22:

- Found in 13 of 123 (10.6%) of genes in pham
- Manual Annotations of this start: 9 of 89
- Called 76.9% of time when present
- Phage (with cluster) where this start called: A3Wally_342 (GD1), BlueNGold_41 (DS), Boopy_43 (DS), Dodo_338 (GD1), Forza_42 (DS), Mareelih_41 (DS), Orchid_95 (CX), PauloDiaboli_342 (GD1), RobinSparkles_99 (CX), Sixama_41 (DS),

Start 23:

- Found in 30 of 123 (24.4%) of genes in pham

- Manual Annotations of this start: 18 of 89
- Called 63.3% of time when present
- Phage (with cluster) where this start called: AddiRose_74 (JA), AluminumJesus_75 (EG), Blab_75 (EG), Casend_79 (EG), Gazebo_79 (EG), Grassboy_83 (EG), Hyperion_77 (EG), Jehoshaphat_80 (EG), Llemily_80 (EG), Lonelysoil_76 (EG), Mashley_79 (EG), Namago_81 (EG), Phabia_78 (EG), Quammi_77 (EG), Squash_82 (EG), StrawberryJamm_84 (EG), Teehee_79 (EG), Viceroy_77 (EG), Wheelie_78 (EG),

Start 24:

- Found in 10 of 123 (8.1%) of genes in pham
- Manual Annotations of this start: 2 of 89
- Called 70.0% of time when present
- Phage (with cluster) where this start called: Aegeus_72 (L5), Baudelaire_72 (L5), DunneganBoMo_245 (FC), Ellewin_244 (FC), KSunshine22_244 (FC), Panchaali_248 (FC), WaddleDee_246 (FC),

Start 25:

- Found in 3 of 123 (2.4%) of genes in pham
- Manual Annotations of this start: 3 of 89
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Araxxi_22 (EM1), Burro_22 (EM1), DoTi_22 (EM1),

Start 26:

- Found in 2 of 123 (1.6%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: FrankDeliGuy_78 (EG),

Start 28:

- Found in 23 of 123 (18.7%) of genes in pham
- Manual Annotations of this start: 5 of 89
- Called 43.5% of time when present
- Phage (with cluster) where this start called: BabyDotz_77 (EG), DonaldDuck_80 (EG), Judebell_78 (EG), Kyva_82 (EG), Mentos_82 (EG), Rudy_76 (EG), Sillytadpoles_81 (EG), Tissue_79 (EG), Wayne3_80 (EG), Zagie_80 (EG),

Start 31:

- Found in 13 of 123 (10.6%) of genes in pham
- Manual Annotations of this start: 9 of 89
- Called 76.9% of time when present
- Phage (with cluster) where this start called: Caterpillar_63 (AU4), Chlochlo_66 (AU2), Giantsbane_67 (AU2), LilHuddy_68 (AU2), Makai_67 (AU5), MediumFry_64 (AU4), Phaby_69 (AU2), Shepard_69 (AU2), Tokki_73 (AU2), Truckee_65 (AU5),

Start 32:

- Found in 6 of 123 (4.9%) of genes in pham
- No Manual Annotations of this start.
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Maruru_77 (FG),

Start 34:

- Found in 24 of 123 (19.5%) of genes in pham
- Manual Annotations of this start: 1 of 89
- Called 4.2% of time when present
- Phage (with cluster) where this start called: Egad_66 (AW),

Start 36:

- Found in 13 of 123 (10.6%) of genes in pham
- No Manual Annotations of this start.
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Raunak_67 (AW),

Start 40:

- Found in 37 of 123 (30.1%) of genes in pham
- Manual Annotations of this start: 1 of 89
- Called 5.4% of time when present
- Phage (with cluster) where this start called: Bouchard_69 (AU2), OneUp_6 (CQ2),

Summary by clusters:

There are 22 clusters represented in this pham: FP, GD1, GD3, AP1, FC, FG, DS, JA, AU1, AU3, AU2, AU5, AU4, AU6, CQ2, EG, CX, AU, AW, L5, EM1, EK2,

Info for manual annotations of cluster AP1:

- Start number 21 was manually annotated 1 time for cluster AP1.

Info for manual annotations of cluster AU:

- Start number 19 was manually annotated 1 time for cluster AU.

Info for manual annotations of cluster AU1:

- Start number 17 was manually annotated 13 times for cluster AU1.
- Start number 19 was manually annotated 4 times for cluster AU1.

Info for manual annotations of cluster AU2:

- Start number 31 was manually annotated 5 times for cluster AU2.

Info for manual annotations of cluster AU4:

- Start number 31 was manually annotated 2 times for cluster AU4.

Info for manual annotations of cluster AU5:

- Start number 31 was manually annotated 2 times for cluster AU5.

Info for manual annotations of cluster AW:

- Start number 20 was manually annotated 13 times for cluster AW.
- Start number 34 was manually annotated 1 time for cluster AW.

Info for manual annotations of cluster CQ2:

- Start number 40 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster CX:

- Start number 19 was manually annotated 3 times for cluster CX.
- Start number 22 was manually annotated 2 times for cluster CX.

Info for manual annotations of cluster DS:

- Start number 22 was manually annotated 5 times for cluster DS.

Info for manual annotations of cluster EG:

- Start number 23 was manually annotated 17 times for cluster EG.
- Start number 28 was manually annotated 5 times for cluster EG.

Info for manual annotations of cluster EK2:

- Start number 20 was manually annotated 1 time for cluster EK2.

Info for manual annotations of cluster EM1:

- Start number 25 was manually annotated 3 times for cluster EM1.

Info for manual annotations of cluster FC:

- Start number 10 was manually annotated 1 time for cluster FC.

Info for manual annotations of cluster FG:

- Start number 8 was manually annotated 1 time for cluster FG.

Info for manual annotations of cluster GD1:

- Start number 22 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD3:

- Start number 19 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster JA:

- Start number 18 was manually annotated 2 times for cluster JA.
- Start number 23 was manually annotated 1 time for cluster JA.

Info for manual annotations of cluster L5:

- Start number 24 was manually annotated 2 times for cluster L5.

Gene Information:

Gene: A3Wally_342 Start: 176311, Stop: 176649, Start Num: 22

Candidate Starts for A3Wally_342:

(Start: 22 @176311 has 9 MA's), (30, 176332), (Start: 34 @176344 has 1 MA's), (35, 176347), (37, 176356), (39, 176362), (44, 176389), (65, 176470), (80, 176563), (81, 176569), (89, 176620),

Gene: Acai_64 Start: 44756, Stop: 45067, Start Num: 19

Candidate Starts for Acai_64:

(Start: 19 @44756 has 9 MA's), (Start: 40 @44822 has 1 MA's), (47, 44846), (56, 44885), (61, 44909),

Gene: AddiRose_74 Start: 47344, Stop: 47628, Start Num: 23

Candidate Starts for AddiRose_74:

(1, 47176), (3, 47233), (Start: 23 @47344 has 18 MA's), (33, 47371),

Gene: Aegeus_72 Start: 46824, Stop: 47111, Start Num: 24

Candidate Starts for Aegeus_72:

(Start: 24 @46824 has 2 MA's), (38, 46863), (46, 46896), (81, 47061),

Gene: AluminumJesus_75 Start: 51316, Stop: 51035, Start Num: 23

Candidate Starts for AluminumJesus_75:

(Start: 23 @51316 has 18 MA's), (58, 51187), (62, 51172),

Gene: Araxxi_22 Start: 16801, Stop: 16511, Start Num: 25

Candidate Starts for Araxxi_22:

(Start: 25 @16801 has 3 MA's), (Start: 31 @16783 has 9 MA's), (33, 16777), (54, 16687), (70, 16639), (71, 16627), (80, 16570), (85, 16552),

Gene: AreFloNak_66 Start: 44576, Stop: 44890, Start Num: 17

Candidate Starts for AreFloNak_66:

(Start: 17 @44576 has 13 MA's), (Start: 40 @44645 has 1 MA's), (56, 44708), (69, 44759),

Gene: Ashton_27 Start: 15701, Stop: 15408, Start Num: 20

Candidate Starts for Ashton_27:

(2, 15821), (6, 15800), (9, 15752), (Start: 20 @15701 has 14 MA's), (59, 15563),

Gene: Atuin_254 Start: 161281, Stop: 161634, Start Num: 10

Candidate Starts for Atuin_254:

(Start: 10 @161281 has 1 MA's), (15, 161311), (Start: 24 @161329 has 2 MA's), (55, 161449), (60, 161479),

Gene: BabyDotz_77 Start: 52957, Stop: 52679, Start Num: 28

Candidate Starts for BabyDotz_77:

(Start: 23 @52966 has 18 MA's), (Start: 28 @52957 has 5 MA's), (33, 52939), (62, 52822), (63, 52819), (64, 52816),

Gene: Baudelaire_72 Start: 46824, Stop: 47111, Start Num: 24

Candidate Starts for Baudelaire_72:

(Start: 24 @46824 has 2 MA's), (38, 46863), (46, 46896), (81, 47061),

Gene: Blab_75 Start: 51607, Stop: 51326, Start Num: 23

Candidate Starts for Blab_75:

(Start: 23 @51607 has 18 MA's), (58, 51478), (62, 51463),

Gene: BlueNGold_41 Start: 14735, Stop: 14454, Start Num: 22

Candidate Starts for BlueNGold_41:

(Start: 22 @14735 has 9 MA's), (Start: 34 @14702 has 1 MA's), (36, 14693),

Gene: Boog_66 Start: 42487, Stop: 42786, Start Num: 20

Candidate Starts for Boog_66:

(Start: 19 @42484 has 9 MA's), (Start: 20 @42487 has 14 MA's), (Start: 34 @42517 has 1 MA's), (36, 42526), (41, 42547), (87, 42760),

Gene: Boopy_43 Start: 14747, Stop: 14466, Start Num: 22

Candidate Starts for Boopy_43:

(Start: 22 @14747 has 9 MA's), (Start: 34 @14714 has 1 MA's), (36, 14705),

Gene: Bouchard_69 Start: 45490, Stop: 45738, Start Num: 40

Candidate Starts for Bouchard_69:

(Start: 31 @45451 has 9 MA's), (Start: 40 @45490 has 1 MA's), (52, 45541), (61, 45580), (72, 45625), (77, 45670), (82, 45697),

Gene: Breylor17_63 Start: 45151, Stop: 45465, Start Num: 17

Candidate Starts for Breylor17_63:

(Start: 17 @45151 has 13 MA's), (Start: 40 @45220 has 1 MA's), (51, 45265), (56, 45283), (69, 45334),

Gene: BronxBay_66 Start: 42743, Stop: 43054, Start Num: 20

Candidate Starts for BronxBay_66:

(Start: 10 @42701 has 1 MA's), (Start: 20 @42743 has 14 MA's), (Start: 34 @42776 has 1 MA's), (60, 42893), (84, 43016), (86, 43028),

Gene: Brunswick_65 Start: 44599, Stop: 44910, Start Num: 19

Candidate Starts for Brunswick_65:

(Start: 19 @44599 has 9 MA's), (Start: 40 @44665 has 1 MA's), (47, 44689), (56, 44728), (76, 44827),

Gene: Burro_22 Start: 15917, Stop: 15615, Start Num: 25

Candidate Starts for Burro_22:

(5, 16013), (Start: 18 @15920 has 2 MA's), (Start: 25 @15917 has 3 MA's), (33, 15893), (Start: 34 @15890 has 1 MA's), (56, 15797), (64, 15767), (70, 15752), (80, 15683),

Gene: CapnMurica_61 Start: 45337, Stop: 45651, Start Num: 17

Candidate Starts for CapnMurica_61:

(Start: 17 @45337 has 13 MA's), (Start: 40 @45406 has 1 MA's), (56, 45469), (61, 45493), (69, 45520),

Gene: Casend_79 Start: 52248, Stop: 51961, Start Num: 23

Candidate Starts for Casend_79:

(Start: 23 @52248 has 18 MA's), (Start: 28 @52239 has 5 MA's), (33, 52221), (62, 52104), (63, 52101), (64, 52098),

Gene: CastorTray_67 Start: 45340, Stop: 45654, Start Num: 17

Candidate Starts for CastorTray_67:

(Start: 17 @45340 has 13 MA's), (Start: 40 @45409 has 1 MA's), (51, 45454), (56, 45472), (69, 45523),

Gene: Caterpillar_63 Start: 44268, Stop: 44546, Start Num: 31

Candidate Starts for Caterpillar_63:

(Start: 31 @44268 has 9 MA's), (Start: 40 @44307 has 1 MA's), (42, 44313), (82, 44505),

Gene: Cece_218 Start: 133451, Stop: 133741, Start Num: 19

Candidate Starts for Cece_218:

(Start: 19 @133451 has 9 MA's), (49, 133550), (80, 133673), (81, 133679),

Gene: Chlochlo_66 Start: 44978, Stop: 45265, Start Num: 31

Candidate Starts for Chlochlo_66:

(Start: 31 @44978 has 9 MA's), (Start: 40 @45017 has 1 MA's), (52, 45068), (61, 45107), (72, 45152), (77, 45197), (82, 45224),

Gene: Daddyjeff_76 Start: 47745, Stop: 48029, Start Num: 18

Candidate Starts for Daddyjeff_76:

(1, 47595), (3, 47649), (Start: 18 @47745 has 2 MA's), (33, 47772), (59, 47880),

Gene: Darby_62 Start: 44386, Stop: 44700, Start Num: 17

Candidate Starts for Darby_62:

(Start: 17 @44386 has 13 MA's), (Start: 40 @44455 has 1 MA's), (56, 44518), (69, 44569),

Gene: DevitoJr_63 Start: 44772, Stop: 45086, Start Num: 17

Candidate Starts for DevitoJr_63:

(Start: 17 @44772 has 13 MA's), (Start: 40 @44841 has 1 MA's), (56, 44904), (69, 44955),

Gene: Djungelskog_65 Start: 42742, Stop: 43056, Start Num: 20

Candidate Starts for Djungelskog_65:

(Start: 10 @42700 has 1 MA's), (Start: 20 @42742 has 14 MA's), (Start: 34 @42775 has 1 MA's), (60, 42895), (84, 43018), (86, 43030),

Gene: DoTi_22 Start: 16882, Stop: 16592, Start Num: 25

Candidate Starts for DoTi_22:

(Start: 25 @16882 has 3 MA's), (Start: 31 @16864 has 9 MA's), (33, 16858), (54, 16768), (70, 16720), (71, 16708), (85, 16633),

Gene: DoctorPepper_65 Start: 42447, Stop: 42758, Start Num: 20

Candidate Starts for DoctorPepper_65:

(Start: 10 @42405 has 1 MA's), (Start: 20 @42447 has 14 MA's), (Start: 34 @42480 has 1 MA's), (60, 42597), (84, 42720), (86, 42732),

Gene: Dodo_338 Start: 175376, Stop: 175714, Start Num: 22

Candidate Starts for Dodo_338:

(Start: 22 @175376 has 9 MA's), (30, 175397), (Start: 34 @175409 has 1 MA's), (35, 175412), (37, 175421), (38, 175424), (39, 175427), (44, 175454), (65, 175535), (80, 175628), (89, 175685),

Gene: DonaldDuck_80 Start: 51591, Stop: 51313, Start Num: 28

Candidate Starts for DonaldDuck_80:

(Start: 23 @51600 has 18 MA's), (Start: 28 @51591 has 5 MA's), (33, 51573), (62, 51456), (63, 51453), (64, 51450),

Gene: DunneganBoMo_245 Start: 159407, Stop: 159712, Start Num: 24

Candidate Starts for DunneganBoMo_245:

(15, 159389), (Start: 24 @159407 has 2 MA's), (55, 159527), (60, 159557),

Gene: Egad_66 Start: 42768, Stop: 43037, Start Num: 34

Candidate Starts for Egad_66:

(Start: 19 @42735 has 9 MA's), (Start: 20 @42738 has 14 MA's), (Start: 34 @42768 has 1 MA's), (36, 42777), (87, 43011),

Gene: ElephantMan_64 Start: 45229, Stop: 45540, Start Num: 19

Candidate Starts for ElephantMan_64:

(Start: 19 @45229 has 9 MA's), (Start: 40 @45295 has 1 MA's), (47, 45319), (56, 45358), (61, 45382),

Gene: Ellewin_244 Start: 158948, Stop: 159256, Start Num: 24

Candidate Starts for Ellewin_244:

(4, 158822), (15, 158930), (Start: 24 @158948 has 2 MA's), (55, 159068),

Gene: Forza_42 Start: 14663, Stop: 14382, Start Num: 22

Candidate Starts for Forza_42:

(Start: 22 @14663 has 9 MA's), (Start: 34 @14630 has 1 MA's), (36, 14621),

Gene: FrankDeliGuy_78 Start: 51962, Stop: 51681, Start Num: 26

Candidate Starts for FrankDeliGuy_78:

(Start: 23 @51968 has 18 MA's), (26, 51962), (Start: 28 @51959 has 5 MA's), (33, 51941), (62, 51824), (63, 51821), (64, 51818),

Gene: Gazebo_79 Start: 52534, Stop: 52253, Start Num: 23

Candidate Starts for Gazebo_79:

(Start: 23 @52534 has 18 MA's), (58, 52405), (62, 52390),

Gene: Giantsbane_67 Start: 43961, Stop: 44245, Start Num: 31

Candidate Starts for Giantsbane_67:

(Start: 31 @43961 has 9 MA's), (Start: 40 @44000 has 1 MA's), (53, 44051), (82, 44204),

Gene: Gibbles_95 Start: 69566, Stop: 69255, Start Num: 19

Candidate Starts for Gibbles_95:

(Start: 19 @69566 has 9 MA's), (Start: 22 @69560 has 9 MA's), (30, 69539), (32, 69533), (Start: 34 @69527 has 1 MA's), (57, 69437), (62, 69413), (74, 69359),

Gene: Gordon_61 Start: 45264, Stop: 45578, Start Num: 17

Candidate Starts for Gordon_61:

(Start: 17 @45264 has 13 MA's), (Start: 40 @45333 has 1 MA's), (56, 45396), (69, 45447),

Gene: Grassboy_83 Start: 52649, Stop: 52362, Start Num: 23

Candidate Starts for Grassboy_83:

(Start: 23 @52649 has 18 MA's), (Start: 28 @52640 has 5 MA's), (33, 52622), (62, 52505), (64, 52499), (78, 52433),

Gene: HerbBucket_64 Start: 42469, Stop: 42768, Start Num: 20

Candidate Starts for HerbBucket_64:

(Start: 19 @42466 has 9 MA's), (Start: 20 @42469 has 14 MA's), (Start: 34 @42499 has 1 MA's), (36, 42508), (87, 42742),

Gene: Hyperion_77 Start: 51797, Stop: 51516, Start Num: 23

Candidate Starts for Hyperion_77:

(Start: 23 @51797 has 18 MA's), (58, 51668), (62, 51653),

Gene: Inked_69 Start: 45815, Stop: 46129, Start Num: 19

Candidate Starts for Inked_69:

(Start: 19 @45815 has 9 MA's), (Start: 40 @45884 has 1 MA's), (53, 45935), (82, 46088),

Gene: Issa_64 Start: 44432, Stop: 44746, Start Num: 17

Candidate Starts for Issa_64:

(Start: 17 @44432 has 13 MA's), (Start: 40 @44501 has 1 MA's), (61, 44588), (69, 44615), (72, 44633),

Gene: Jankie_64 Start: 40246, Stop: 40524, Start Num: 13

Candidate Starts for Jankie_64:

(9, 40210), (13, 40246), (43, 40324), (46, 40333), (51, 40363), (57, 40372), (75, 40426), (88, 40513),

Gene: Jehoshaphat_80 Start: 52516, Stop: 52229, Start Num: 23

Candidate Starts for Jehoshaphat_80:

(Start: 23 @52516 has 18 MA's), (Start: 28 @52507 has 5 MA's), (33, 52489), (62, 52372), (63, 52369), (64, 52366),

Gene: Judebell_78 Start: 51731, Stop: 51453, Start Num: 28

Candidate Starts for Judebell_78:

(Start: 23 @51740 has 18 MA's), (Start: 28 @51731 has 5 MA's), (33, 51713), (62, 51596), (63, 51593), (64, 51590),

Gene: KSunshine22_244 Start: 158806, Stop: 159111, Start Num: 24

Candidate Starts for KSunshine22_244:

(15, 158788), (Start: 24 @158806 has 2 MA's), (55, 158926), (60, 158956),

Gene: Kampe_96 Start: 69516, Stop: 69205, Start Num: 19

Candidate Starts for Kampe_96:

(Start: 19 @69516 has 9 MA's), (Start: 22 @69510 has 9 MA's), (32, 69483), (57, 69387), (74, 69309),

Gene: Kinny_40 Start: 30437, Stop: 30787, Start Num: 12

Candidate Starts for Kinny_40:

(12, 30437), (83, 30746),

Gene: Kyva_82 Start: 52664, Stop: 52386, Start Num: 28

Candidate Starts for Kyva_82:

(Start: 23 @52673 has 18 MA's), (Start: 28 @52664 has 5 MA's), (33, 52646), (62, 52529), (64, 52523), (78, 52457),

Gene: LeoJr_264 Start: 160668, Stop: 161021, Start Num: 10

Candidate Starts for LeoJr_264:

(Start: 10 @160668 has 1 MA's), (15, 160698), (Start: 24 @160716 has 2 MA's), (55, 160836), (60, 160866),

Gene: LilHuddy_68 Start: 45074, Stop: 45361, Start Num: 31

Candidate Starts for LilHuddy_68:

(Start: 31 @45074 has 9 MA's), (Start: 40 @45113 has 1 MA's), (52, 45164), (53, 45167), (72, 45248), (82, 45320),

Gene: Linda_66 Start: 42740, Stop: 43051, Start Num: 20

Candidate Starts for Linda_66:

(Start: 10 @42698 has 1 MA's), (Start: 20 @42740 has 14 MA's), (Start: 34 @42773 has 1 MA's), (60, 42890), (84, 43013), (86, 43025),

Gene: Llemily_80 Start: 51295, Stop: 51008, Start Num: 23

Candidate Starts for Llemily_80:

(Start: 23 @51295 has 18 MA's), (Start: 28 @51286 has 5 MA's), (33, 51268), (62, 51151), (63, 51148), (64, 51145),

Gene: Lonelysoil_76 Start: 51052, Stop: 50765, Start Num: 23

Candidate Starts for Lonelysoil_76:

(Start: 23 @51052 has 18 MA's), (Start: 28 @51043 has 5 MA's), (33, 51025), (62, 50908), (63, 50905), (64, 50902),

Gene: LucySwiss_65 Start: 44380, Stop: 44691, Start Num: 19

Candidate Starts for LucySwiss_65:

(Start: 19 @44380 has 9 MA's), (Start: 40 @44446 has 1 MA's), (47, 44470), (56, 44509), (61, 44533),

Gene: Makai_67 Start: 45228, Stop: 45506, Start Num: 31

Candidate Starts for Makai_67:

(Start: 31 @45228 has 9 MA's), (Start: 40 @45267 has 1 MA's), (52, 45312), (82, 45465),

Gene: Mareelih_41 Start: 14165, Stop: 13884, Start Num: 22
Candidate Starts for Mareelih_41:
(Start: 22 @14165 has 9 MA's), (Start: 34 @14132 has 1 MA's), (36, 14123),

Gene: Maruru_77 Start: 48413, Stop: 48679, Start Num: 32
Candidate Starts for Maruru_77:
(Start: 8 @48335 has 1 MA's), (13, 48377), (32, 48413), (36, 48428),

Gene: Mashley_79 Start: 52319, Stop: 52038, Start Num: 23
Candidate Starts for Mashley_79:
(Start: 23 @52319 has 18 MA's), (58, 52190), (62, 52175),

Gene: MediumFry_64 Start: 44564, Stop: 44842, Start Num: 31
Candidate Starts for MediumFry_64:
(Start: 31 @44564 has 9 MA's), (Start: 40 @44603 has 1 MA's), (42, 44609), (50, 44636), (82, 44801),

Gene: Mentos_82 Start: 52962, Stop: 52684, Start Num: 28
Candidate Starts for Mentos_82:
(Start: 23 @52971 has 18 MA's), (Start: 28 @52962 has 5 MA's), (33, 52944), (62, 52827), (63, 52824),
(64, 52821),

Gene: Michelle_66 Start: 42742, Stop: 43053, Start Num: 20
Candidate Starts for Michelle_66:
(Start: 10 @42700 has 1 MA's), (Start: 20 @42742 has 14 MA's), (Start: 34 @42775 has 1 MA's), (60,
42892), (84, 43015), (86, 43027),

Gene: MiniBagel_63 Start: 45328, Stop: 45642, Start Num: 17
Candidate Starts for MiniBagel_63:
(Start: 17 @45328 has 13 MA's), (Start: 40 @45397 has 1 MA's), (61, 45484), (69, 45511),

Gene: MrAaronian_66 Start: 42742, Stop: 43053, Start Num: 20
Candidate Starts for MrAaronian_66:
(Start: 10 @42700 has 1 MA's), (Start: 20 @42742 has 14 MA's), (Start: 34 @42775 has 1 MA's), (60,
42892), (84, 43015), (86, 43027),

Gene: Namago_81 Start: 52020, Stop: 51733, Start Num: 23
Candidate Starts for Namago_81:
(Start: 23 @52020 has 18 MA's), (Start: 28 @52011 has 5 MA's), (33, 51993), (62, 51876), (63, 51873),
(64, 51870),

Gene: Natasha_67 Start: 42650, Stop: 42982, Start Num: 10
Candidate Starts for Natasha_67:
(7, 42605), (Start: 10 @42650 has 1 MA's), (16, 42671), (36, 42722), (Start: 40 @42740 has 1 MA's),
(67, 42845), (68, 42848), (82, 42938),

Gene: Nightmare_65 Start: 45626, Stop: 45940, Start Num: 17
Candidate Starts for Nightmare_65:
(Start: 17 @45626 has 13 MA's), (Start: 40 @45695 has 1 MA's), (51, 45740), (56, 45758), (69, 45809),

Gene: Niktson_64 Start: 45229, Stop: 45540, Start Num: 19
Candidate Starts for Niktson_64:
(Start: 19 @45229 has 9 MA's), (Start: 40 @45295 has 1 MA's), (47, 45319), (56, 45358), (61, 45382),

Gene: Nivinsha_66 Start: 44576, Stop: 44890, Start Num: 17

Candidate Starts for Nivinsha_66:

(Start: 17 @44576 has 13 MA's), (Start: 40 @44645 has 1 MA's), (56, 44708), (69, 44759),

Gene: OneUp_6 Start: 1509, Stop: 1234, Start Num: 40

Candidate Starts for OneUp_6:

(Start: 40 @1509 has 1 MA's), (67, 1392),

Gene: Orchid_95 Start: 69511, Stop: 69206, Start Num: 22

Candidate Starts for Orchid_95:

(Start: 19 @69517 has 9 MA's), (Start: 22 @69511 has 9 MA's), (32, 69484), (57, 69388), (74, 69310),

Gene: Panchaali_248 Start: 159103, Stop: 159411, Start Num: 24

Candidate Starts for Panchaali_248:

(15, 159085), (Start: 24 @159103 has 2 MA's), (55, 159223), (60, 159253),

Gene: PatrickStar_96 Start: 69516, Stop: 69205, Start Num: 19

Candidate Starts for PatrickStar_96:

(Start: 19 @69516 has 9 MA's), (Start: 22 @69510 has 9 MA's), (32, 69483), (57, 69387), (74, 69309),

Gene: PauloDiaboli_342 Start: 173467, Stop: 173805, Start Num: 22

Candidate Starts for PauloDiaboli_342:

(Start: 22 @173467 has 9 MA's), (30, 173488), (35, 173503), (37, 173512), (39, 173518), (44, 173545), (65, 173626), (80, 173719), (81, 173725), (89, 173776),

Gene: Phabia_78 Start: 51707, Stop: 51420, Start Num: 23

Candidate Starts for Phabia_78:

(Start: 23 @51707 has 18 MA's), (Start: 28 @51698 has 5 MA's), (33, 51680), (62, 51563), (63, 51560), (64, 51557),

Gene: Phaby_69 Start: 45635, Stop: 45922, Start Num: 31

Candidate Starts for Phaby_69:

(Start: 31 @45635 has 9 MA's), (Start: 40 @45674 has 1 MA's), (48, 45701), (53, 45728), (82, 45881),

Gene: Powelldog_69 Start: 43177, Stop: 43494, Start Num: 14

Candidate Starts for Powelldog_69:

(14, 43177), (26, 43201), (27, 43204), (29, 43207), (32, 43216), (Start: 34 @43222 has 1 MA's), (38, 43237), (52, 43303), (79, 43438),

Gene: ProfFrink_66 Start: 42737, Stop: 43036, Start Num: 20

Candidate Starts for ProfFrink_66:

(Start: 19 @42734 has 9 MA's), (Start: 20 @42737 has 14 MA's), (Start: 34 @42767 has 1 MA's), (36, 42776), (87, 43010),

Gene: Quammi_77 Start: 51407, Stop: 51120, Start Num: 23

Candidate Starts for Quammi_77:

(Start: 23 @51407 has 18 MA's), (Start: 28 @51398 has 5 MA's), (33, 51380), (62, 51263), (63, 51260), (64, 51257),

Gene: Raunak_67 Start: 42437, Stop: 42697, Start Num: 36

Candidate Starts for Raunak_67:

(Start: 19 @42395 has 9 MA's), (Start: 20 @42398 has 14 MA's), (36, 42437), (87, 42671),

Gene: ReginaGlobina_266 Start: 161874, Stop: 162227, Start Num: 10

Candidate Starts for ReginaGlobina_266:

(Start: 10 @161874 has 1 MA's), (15, 161904), (Start: 24 @161922 has 2 MA's), (55, 162042), (60, 162072),

Gene: RobinSparkles_99 Start: 69573, Stop: 69268, Start Num: 22

Candidate Starts for RobinSparkles_99:

(Start: 19 @69579 has 9 MA's), (Start: 22 @69573 has 9 MA's), (57, 69450), (62, 69426), (74, 69372),

Gene: Rudy_76 Start: 51434, Stop: 51156, Start Num: 28

Candidate Starts for Rudy_76:

(Start: 23 @51443 has 18 MA's), (Start: 28 @51434 has 5 MA's), (33, 51416), (62, 51299), (63, 51296), (64, 51293),

Gene: Salk_66 Start: 42740, Stop: 43051, Start Num: 20

Candidate Starts for Salk_66:

(Start: 10 @42698 has 1 MA's), (Start: 20 @42740 has 14 MA's), (Start: 34 @42773 has 1 MA's), (60, 42890), (84, 43013), (86, 43025),

Gene: ScienceWizSam_64 Start: 44738, Stop: 45052, Start Num: 17

Candidate Starts for ScienceWizSam_64:

(Start: 17 @44738 has 13 MA's), (Start: 40 @44807 has 1 MA's), (56, 44870), (69, 44921),

Gene: Serenabean_75 Start: 47658, Stop: 47942, Start Num: 18

Candidate Starts for Serenabean_75:

(1, 47508), (3, 47562), (Start: 18 @47658 has 2 MA's), (33, 47685), (59, 47793),

Gene: Shepard_69 Start: 44933, Stop: 45220, Start Num: 31

Candidate Starts for Shepard_69:

(Start: 31 @44933 has 9 MA's), (Start: 40 @44972 has 1 MA's), (52, 45023), (61, 45062), (72, 45107), (77, 45152), (82, 45179),

Gene: Shiba_65 Start: 42398, Stop: 42709, Start Num: 20

Candidate Starts for Shiba_65:

(Start: 10 @42356 has 1 MA's), (Start: 20 @42398 has 14 MA's), (Start: 34 @42431 has 1 MA's), (60, 42548), (84, 42671), (86, 42683),

Gene: ShyRosie_26 Start: 15707, Stop: 15414, Start Num: 20

Candidate Starts for ShyRosie_26:

(2, 15827), (6, 15806), (9, 15758), (Start: 20 @15707 has 14 MA's), (59, 15569),

Gene: Sillytadpoles_81 Start: 51274, Stop: 50996, Start Num: 28

Candidate Starts for Sillytadpoles_81:

(Start: 23 @51283 has 18 MA's), (Start: 28 @51274 has 5 MA's), (33, 51256), (62, 51139), (63, 51136), (64, 51133),

Gene: Sixama_41 Start: 13852, Stop: 13571, Start Num: 22

Candidate Starts for Sixama_41:

(Start: 22 @13852 has 9 MA's), (45, 13774),

Gene: Sloopyjoe_66 Start: 42744, Stop: 43055, Start Num: 20

Candidate Starts for Sloopyjoe_66:

(Start: 10 @42702 has 1 MA's), (Start: 20 @42744 has 14 MA's), (Start: 34 @42777 has 1 MA's), (60, 42894), (84, 43017), (86, 43029),

Gene: Sonali_75 Start: 48306, Stop: 48659, Start Num: 8

Candidate Starts for Sonali_75:

(Start: 8 @48306 has 1 MA's), (11, 48330), (13, 48348), (36, 48411),

Gene: Sporto_65 Start: 43859, Stop: 44170, Start Num: 20

Candidate Starts for Sporto_65:

(7, 43772), (Start: 10 @43817 has 1 MA's), (Start: 19 @43856 has 9 MA's), (Start: 20 @43859 has 14 MA's), (60, 44009), (77, 44102), (84, 44132),

Gene: Squash_82 Start: 52656, Stop: 52369, Start Num: 23

Candidate Starts for Squash_82:

(Start: 23 @52656 has 18 MA's), (33, 52629), (62, 52512), (63, 52509), (64, 52506),

Gene: StarLord_66 Start: 42737, Stop: 43048, Start Num: 20

Candidate Starts for StarLord_66:

(Start: 10 @42695 has 1 MA's), (Start: 20 @42737 has 14 MA's), (Start: 34 @42770 has 1 MA's), (60, 42887), (84, 43010), (86, 43022),

Gene: Stayer_66 Start: 42740, Stop: 43051, Start Num: 20

Candidate Starts for Stayer_66:

(Start: 10 @42698 has 1 MA's), (Start: 20 @42740 has 14 MA's), (Start: 34 @42773 has 1 MA's), (60, 42890), (84, 43013), (86, 43025),

Gene: StrawberryJamm_84 Start: 51823, Stop: 51536, Start Num: 23

Candidate Starts for StrawberryJamm_84:

(Start: 23 @51823 has 18 MA's), (Start: 28 @51814 has 5 MA's), (33, 51796), (62, 51679), (63, 51676), (64, 51673),

Gene: Sunshine23_77 Start: 48481, Stop: 48795, Start Num: 13

Candidate Starts for Sunshine23_77:

(Start: 8 @48439 has 1 MA's), (11, 48463), (13, 48481), (36, 48544), (73, 48676),

Gene: Sweetclover_73 Start: 46977, Stop: 47273, Start Num: 21

Candidate Starts for Sweetclover_73:

(1, 46803), (3, 46857), (Start: 21 @46977 has 1 MA's), (30, 46998), (66, 47139), (70, 47145),

Gene: Synopsis_62 Start: 44739, Stop: 45053, Start Num: 17

Candidate Starts for Synopsis_62:

(Start: 17 @44739 has 13 MA's), (Start: 40 @44808 has 1 MA's), (56, 44871), (69, 44922),

Gene: Tatanka_59 Start: 44875, Stop: 45189, Start Num: 17

Candidate Starts for Tatanka_59:

(Start: 17 @44875 has 13 MA's), (Start: 40 @44944 has 1 MA's), (56, 45007), (69, 45058),

Gene: Teacup_65 Start: 45308, Stop: 45619, Start Num: 19

Candidate Starts for Teacup_65:

(Start: 19 @45308 has 9 MA's), (Start: 40 @45374 has 1 MA's), (47, 45398), (56, 45437), (61, 45461),

Gene: Teehee_79 Start: 52513, Stop: 52226, Start Num: 23

Candidate Starts for Teehee_79:

(Start: 23 @52513 has 18 MA's), (Start: 28 @52504 has 5 MA's), (33, 52486), (62, 52369), (63, 52366), (64, 52363),

Gene: Tenno_64 Start: 45392, Stop: 45706, Start Num: 17

Candidate Starts for Tenno_64:

(Start: 17 @45392 has 13 MA's), (Start: 40 @45461 has 1 MA's), (61, 45548), (69, 45575),

Gene: Tissue_79 Start: 52271, Stop: 51993, Start Num: 28

Candidate Starts for Tissue_79:

(Start: 23 @52280 has 18 MA's), (Start: 28 @52271 has 5 MA's), (33, 52253), (62, 52136), (64, 52130), (78, 52064),

Gene: Tokki_73 Start: 45503, Stop: 45790, Start Num: 31

Candidate Starts for Tokki_73:

(Start: 31 @45503 has 9 MA's), (Start: 40 @45542 has 1 MA's), (52, 45593), (72, 45677), (82, 45749),

Gene: Truckee_65 Start: 45012, Stop: 45290, Start Num: 31

Candidate Starts for Truckee_65:

(Start: 31 @45012 has 9 MA's), (Start: 40 @45051 has 1 MA's), (52, 45096), (82, 45249),

Gene: Trustiboi_63 Start: 44994, Stop: 45308, Start Num: 17

Candidate Starts for Trustiboi_63:

(Start: 17 @44994 has 13 MA's), (Start: 40 @45063 has 1 MA's), (51, 45108), (56, 45126), (69, 45177),

Gene: Viceroy_77 Start: 51416, Stop: 51129, Start Num: 23

Candidate Starts for Viceroy_77:

(Start: 23 @51416 has 18 MA's), (Start: 28 @51407 has 5 MA's), (33, 51389), (62, 51272), (63, 51269), (64, 51266),

Gene: WaddleDee_246 Start: 158940, Stop: 159245, Start Num: 24

Candidate Starts for WaddleDee_246:

(15, 158922), (Start: 24 @158940 has 2 MA's), (55, 159060), (60, 159090),

Gene: Wayne3_80 Start: 52267, Stop: 51989, Start Num: 28

Candidate Starts for Wayne3_80:

(Start: 23 @52276 has 18 MA's), (Start: 28 @52267 has 5 MA's), (33, 52249), (62, 52132), (63, 52129), (64, 52126),

Gene: Wheelie_78 Start: 51597, Stop: 51310, Start Num: 23

Candidate Starts for Wheelie_78:

(Start: 23 @51597 has 18 MA's), (Start: 28 @51588 has 5 MA's), (33, 51570), (62, 51453), (63, 51450), (64, 51447),

Gene: Wilde_54 Start: 41249, Stop: 40941, Start Num: 21

Candidate Starts for Wilde_54:

(Start: 21 @41249 has 1 MA's), (44, 41177), (46, 41174), (63, 41093), (64, 41087), (69, 41069),

Gene: Zagie_80 Start: 52091, Stop: 51813, Start Num: 28

Candidate Starts for Zagie_80:

(Start: 23 @52100 has 18 MA's), (Start: 28 @52091 has 5 MA's), (33, 52073), (62, 51956), (63, 51953), (64, 51950),

Gene: Zippen_69 Start: 45683, Stop: 46003, Start Num: 19

Candidate Starts for Zippen_69:

(Start: 19 @45683 has 9 MA's), (Start: 40 @45752 has 1 MA's), (52, 45800), (82, 45956),