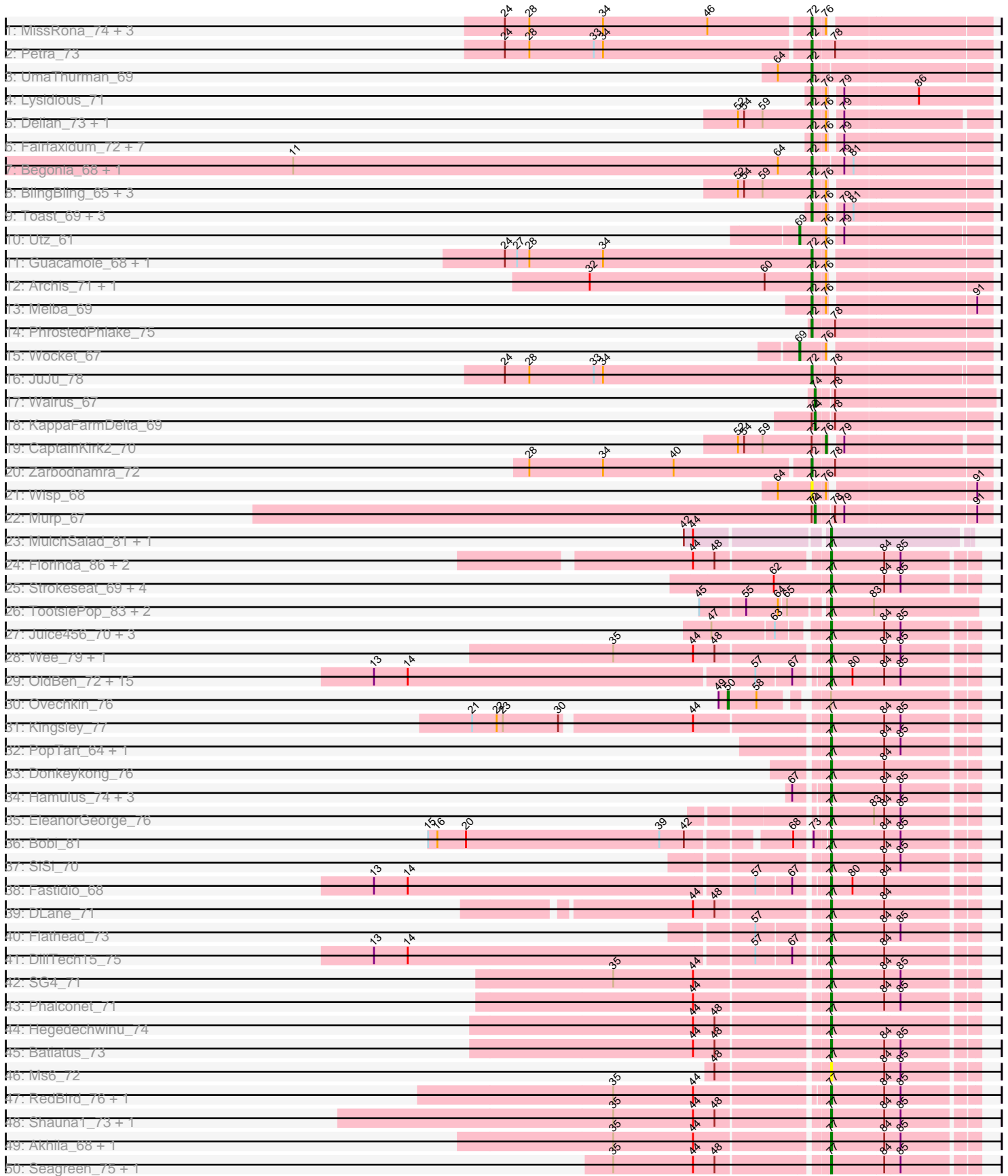
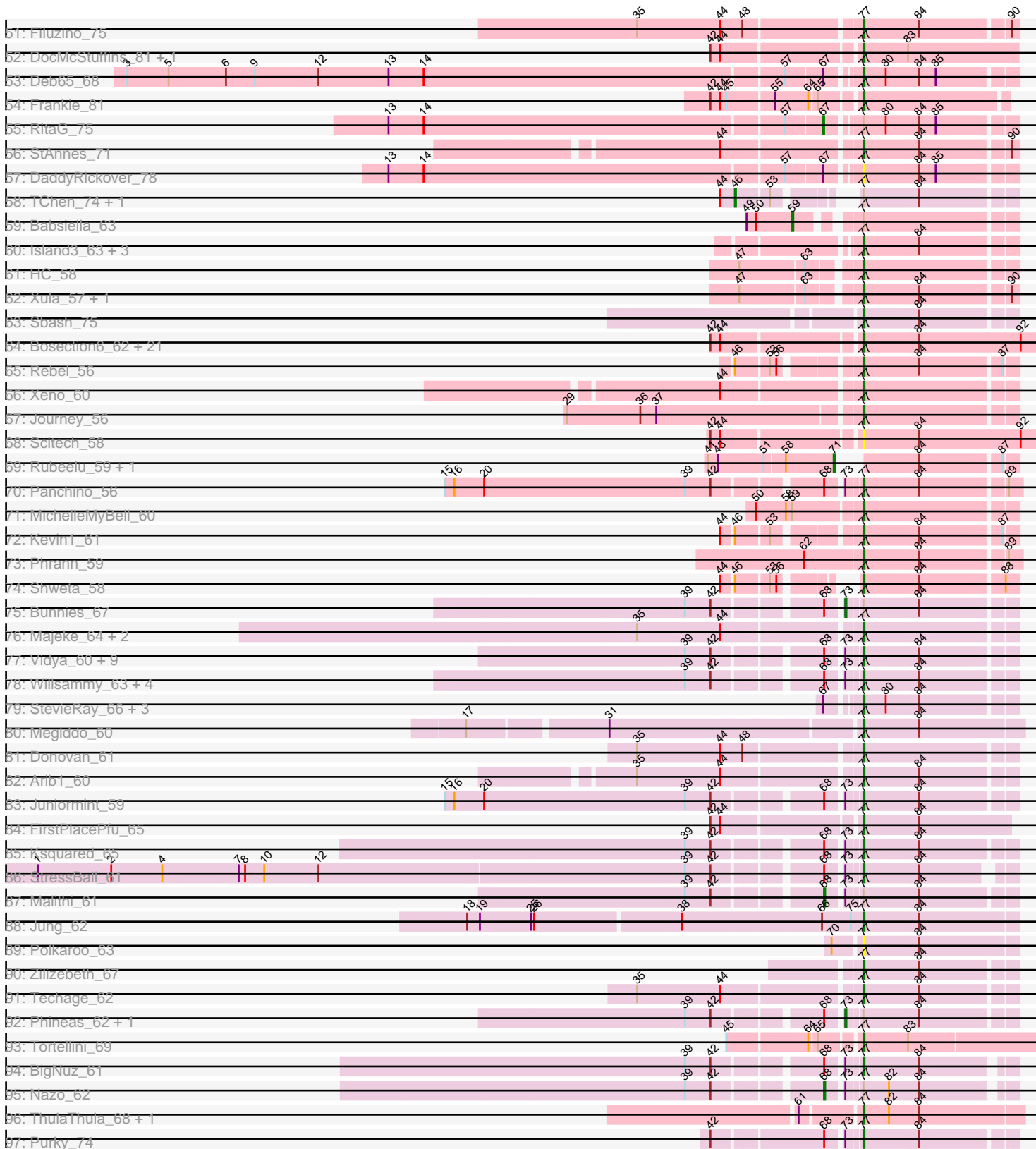


Pham 193739



Pham 193739



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 193739 Report

This analysis was run 11/02/24 on database version 579.

Pham number 193739 has 201 members, 10 are drafts.

Phages represented in each track:

- Track 1 : MissRona_74, Blueberry_73, Gambino_76, Azula_74
- Track 2 : Petra_73
- Track 3 : UmaThurman_69
- Track 4 : Lysidious_71
- Track 5 : Delian_73, MintFen_70
- Track 6 : Fairfaxidum_72, Hitter_69, Samba_69, Blino_71, Mellie_66, Jalammah_72, CarolAnn_70, Fenry_68
- Track 7 : Begonia_68, Malachai_68
- Track 8 : BlingBling_65, Obliviate_68, Barco_66, Pipp_73
- Track 9 : Toast_69, PCoral7_69, PrincePatrick_70, William_72
- Track 10 : Utz_61
- Track 11 : Guacamole_68, JasperJr_68
- Track 12 : Archis_71, ZiggyZoo_70
- Track 13 : Melba_69
- Track 14 : PhrostedPhlake_75
- Track 15 : Wocket_67
- Track 16 : JuJu_78
- Track 17 : Walrus_67
- Track 18 : KappaFarmDelta_69
- Track 19 : CaptainKirk2_70
- Track 20 : Zarbodnamra_72
- Track 21 : Wisp_68
- Track 22 : Murp_67
- Track 23 : MulchSalad_81, Piper2020_87
- Track 24 : Florinda_86, Quico_83, Girafales_83
- Track 25 : Strokeseat_69, Minnie_71, Sandalphon_69, Hlubikazi_69, Mandlovu_69
- Track 26 : TootsiePop_83, Misha28_83, Awesomesauce_84
- Track 27 : Juice456_70, JalFarm20_82, DeadP_75, KristaRAM_72
- Track 28 : Wee_79, Taj_80
- Track 29 : OldBen_72, JoeyJr_75, Ogopogo_79, Nimbo_67, Doomphist_78, KingMidas_74, PHappiness_75, Poenanya_78, Geralt_68, Daenerys_74, Inventum_73, Polka14_79, Empress_73, Leperchaun_73, Scottish_73, Sassafras_76
- Track 30 : Ovechkin_76
- Track 31 : Kingsley_77
- Track 32 : PopTart_64, SassyB_64
- Track 33 : Donkeykong_76
- Track 34 : Hamulus_74, PhesterPhotato_77, IMpilo_64, LittleShirley_74

- Track 35 : EleanorGeorge_76
- Track 36 : Bobi_81
- Track 37 : SiSi_70
- Track 38 : Fastidio_68
- Track 39 : DLane_71
- Track 40 : Flathead_73
- Track 41 : DillTech15_75
- Track 42 : SG4_71
- Track 43 : Phalconet_71
- Track 44 : Hegedechwinu_74
- Track 45 : Batiatus_73
- Track 46 : Ms6_72
- Track 47 : RedBird_76, Dorothy_76
- Track 48 : Shauna1_73, Phanphagia_72
- Track 49 : Akhila_68, MilanaBonita_67
- Track 50 : Seagreen_75, Bipolar_77
- Track 51 : Filuzino_75
- Track 52 : DocMcStuffins_81, ChickenDinner_87
- Track 53 : Deb65_68
- Track 54 : Frankie_81
- Track 55 : RitaG_75
- Track 56 : StAnnes_71
- Track 57 : DaddyRickover_78
- Track 58 : TChen_74, LunaStella_72
- Track 59 : Babsiella_63
- Track 60 : Island3_63, Che9c_71, Brujita_62, Xavia_63
- Track 61 : HC_58
- Track 62 : Xula_57, QueenHazel_58
- Track 63 : Sbash_75
- Track 64 : Bosection6_62, Pipsqueaks_64, SkinnyPete_60, Andies_57, Carcharodon_63, Magsby_62, Chewbacca_66, Schnauzer_64, Philonius_63, Silvy_59, Fulbright_61, Xerxes_63, Parmesanjohn_63, Phloss_61, Gex_64, Smurph_63, Tapioca_61, Duplicity_61, Charlie_60, Melville_68, Aggie_59, Silvafighter_65
- Track 65 : Rebel_56
- Track 66 : Xeno_60
- Track 67 : Journey_56
- Track 68 : Scitech_58
- Track 69 : Rubeelu_59, Butters_59
- Track 70 : Panchino_56
- Track 71 : MichelleMyBell_60
- Track 72 : Kevin1_61
- Track 73 : Phrann_59
- Track 74 : Shweta_58
- Track 75 : Bunnies_67
- Track 76 : Majeke_64, Phegasus_64, Mangethe_64
- Track 77 : Vidya_60, Jebeks_62, Bogie_64, HUHilltop_64, Camster_62, Sonah_62, Necropolis_59, Shipwreck_64, Dynamo_61, Pygmy_65
- Track 78 : Willsammy_63, CactusJack_62, Glaske_61, KilKor_62, Phalm_62
- Track 79 : StevieRay_66, Atcoo_63, Brusacoram_63, Thespis_63
- Track 80 : Megiddo_60
- Track 81 : Donovan_61
- Track 82 : Arib1_60

- Track 83 : Juniormint_59
- Track 84 : FirstPlacePfu_65
- Track 85 : Ksquared_65
- Track 86 : StressBall_61
- Track 87 : Malithi_61
- Track 88 : Jung_62
- Track 89 : Polkaroo_63
- Track 90 : Zilizebeth_67
- Track 91 : Techage_62
- Track 92 : Phineas_62, GreaseLightnin_66
- Track 93 : Tortellini_69
- Track 94 : BigNuz_61
- Track 95 : Nazo_62
- Track 96 : ThulaThula_68, Phayonce_64
- Track 97 : Purky_74

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

The start number called the most often in the published annotations is 77, it was called in 138 of the 191 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aggie_59, Akhila_68, Andies_57, Arib1_60, Atcoo_63, Awesomesauce_84, Batiatus_73, BigNuz_61, Bipolar_77, Bobi_81, Bogie_64, Bosection6_62, Brujita_62, Brusacoram_63, CactusJack_62, Camster_62, Carcharodon_63, Charlie_60, Che9c_71, Chewbacca_66, ChickenDinner_87, DLane_71, DaddyRickover_78, Daenerys_74, DeadP_75, Deb65_68, DillTech15_75, DocMcStuffins_81, Donkeykong_76, Donovan_61, Doomphist_78, Dorothy_76, Duplicity_61, Dynamo_61, EleanorGeorge_76, Empress_73, Fastidio_68, Filuzino_75, FirstPlacePfu_65, Flathead_73, Florinda_86, Frankie_81, Fulbright_61, Geralt_68, Gex_64, Girafales_83, Glaske_61, HC_58, HUHilltop_64, Hamulus_74, Hegedechwinu_74, Hlubikazi_69, IMpilo_64, Inventum_73, Island3_63, JalFarm20_82, Jebeks_62, JoeyJr_75, Journey_56, Juice456_70, Jung_62, Juniormint_59, Kevin1_61, KilKor_62, KingMidas_74, Kingsley_77, KristaRAM_72, Ksquared_65, Leperchaun_73, LittleShirley_74, Magsby_62, Majeke_64, Mandlovu_69, Mangethe_64, Megiddo_60, Melville_68, MichelleMyBell_60, MilanaBonita_67, Minnie_71, Misha28_83, Ms6_72, MulchSalad_81, Necropolis_59, Nimbo_67, Ogopogo_79, OldBen_72, PHappiness_75, Panchino_56, Parmesanjohn_63, Phalconet_71, Phalm_62, Phanphagia_72, Phayonce_64, Phegasus_64, PhesterPhotato_77, Philonius_63, Phloss_61, Phrann_59, Piper2020_87, Pipsqueaks_64, Poenanya_78, Polka14_79, Polkaroo_63, PopTart_64, Purky_74, Pygmy_65, QueenHazel_58, Quico_83, Rebel_56, RedBird_76, SG4_71, Sandalphon_69, Sassafras_76, SassyB_64, Sbash_75, Schnauzer_64, Scitech_58, Scottish_73, Seagreen_75, Shauna1_73, Shipwreck_64, Shweta_58, SiSi_70, Silvafighter_65, Silvy_59, SkinnyPete_60, Smurph_63, Sonah_62, StAnnes_71, StevieRay_66, StressBall_61, Strokeseat_69, Taj_80, Tapioca_61, Techage_62, Thespis_63, ThulaThula_68, TootsiePop_83, Tortellini_69, Vidya_60, Wee_79, Willsammy_63, Xavia_63, Xeno_60, Xerxes_63, Xula_57, Zilizebeth_67,

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

- Babsiella_63, Bunnies_67, GreaseLightnin_66, LunaStella_72, Malithi_61, Nazo_62, Ovechkin_76, Phineas_62, RitaG_75, TChen_74,

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

- Archis_71, Azula_74, Barco_66, Begonia_68, BlingBling_65, Blino_71, Blueberry_73, Butters_59, CaptainKirk2_70, CarolAnn_70, Delian_73, Fairfaxidum_72, Fenry_68, Gambino_76, Guacamole_68, Hitter_69, Jalammah_72, JasperJr_68, JuJu_78, KappaFarmDelta_69, Lysidious_71, Malachai_68, Melba_69, Mellie_66, MintFen_70, MissRona_74, Murp_67, Obliviate_68, PCoral7_69, Petra_73, PhrostedPhlake_75, Pipp_73, PrincePatrick_70, Rubeelu_59, Samba_69, Toast_69, UmaThurman_69, Utz_61, Walrus_67, William_72, Wisp_68, Wocket_67, Zarbodnamra_72, ZiggyZoo_70,

Summary by start number:

Start 46:

- Found in 9 of 201 (4.5%) of genes in pham
- Manual Annotations of this start: 2 of 191
- Called 22.2% of time when present
- Phage (with cluster) where this start called: LunaStella_72 (F4), TChen_74 (F4),

Start 50:

- Found in 3 of 201 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 191
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Ovechkin_76 (F1),

Start 59:

- Found in 9 of 201 (4.5%) of genes in pham
- Manual Annotations of this start: 1 of 191
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Babsiella_63 (I1),

Start 67:

- Found in 29 of 201 (14.4%) of genes in pham
- Manual Annotations of this start: 1 of 191
- Called 3.4% of time when present
- Phage (with cluster) where this start called: RitaG_75 (F1),

Start 68:

- Found in 27 of 201 (13.4%) of genes in pham
- Manual Annotations of this start: 2 of 191
- Called 7.4% of time when present
- Phage (with cluster) where this start called: Malithi_61 (P1), Nazo_62 (P4),

Start 69:

- Found in 2 of 201 (1.0%) of genes in pham
- Manual Annotations of this start: 2 of 191
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Utz_61 (CV), Wocket_67 (CV),

Start 71:

- Found in 2 of 201 (1.0%) of genes in pham
- Manual Annotations of this start: 2 of 191
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Butters_59 (N), Rubeelu_59 (N),

Start 72:

- Found in 39 of 201 (19.4%) of genes in pham
- Manual Annotations of this start: 35 of 191
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Archis_71 (CV), Azula_74 (CV), Barco_66 (CV), Begonia_68 (CV), BlingBling_65 (CV), Blino_71 (CV), Blueberry_73 (CV), CarolAnn_70 (CV), Delian_73 (CV), Fairfaxidum_72 (CV), Ferry_68 (CV), Gambino_76 (CV), Guacamole_68 (CV), Hitter_69 (CV), Jalammah_72 (CV), JasperJr_68 (CV), JuJu_78 (CV), Lysidious_71 (CV), Malachai_68 (CV), Melba_69 (CV), Mellie_66 (CV), MintFen_70 (CV), MissRona_74 (CV), Obliviate_68 (CV), PCoral7_69 (CV), Petra_73 (CV), PhrostedPhlake_75 (CV), Pipp_73 (CV), PrincePatrick_70 (CV), Samba_69 (CV), Toast_69 (CV), UmaThurman_69 (CV), William_72 (CV), Wisp_68 (CV), Zarbodnamra_72 (CV), ZiggyZoo_70 (CV),

Start 73:

- Found in 27 of 201 (13.4%) of genes in pham
- Manual Annotations of this start: 3 of 191
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Bunnies_67 (P1), GreaseLightnin_66 (P1), Phineas_62 (P1),

Start 74:

- Found in 3 of 201 (1.5%) of genes in pham
- Manual Annotations of this start: 3 of 191
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KappaFarmDelta_69 (CV), Murp_67 (CV), Walrus_67 (CV),

Start 76:

- Found in 32 of 201 (15.9%) of genes in pham
- Manual Annotations of this start: 1 of 191
- Called 3.1% of time when present
- Phage (with cluster) where this start called: CaptainKirk2_70 (CV),

Start 77:

- Found in 157 of 201 (78.1%) of genes in pham
- Manual Annotations of this start: 138 of 191
- Called 93.6% of time when present
- Phage (with cluster) where this start called: Aggie_59 (N), Akhila_68 (F1), Andies_57 (N), Arib1_60 (P1), Atcoo_63 (P1), Awesomesauce_84 (F1), Batiatus_73 (F1), BigNuz_61 (P4), Bipolar_77 (F1), Bobi_81 (F1), Bogie_64 (P1), Bosection6_62 (N), Brujita_62 (I1), Brusacoram_63 (P1), CactusJack_62 (P1), Camster_62 (P1), Carcharodon_63 (N), Charlie_60 (N), Che9c_71 (I2), Chewbacca_66 (N), ChickenDinner_87 (F1), DLane_71 (F1), DaddyRickover_78 (F1), Daenerys_74 (F1), DeadP_75 (F1), Deb65_68 (F1), DillTech15_75 (F1), DocMcStuffins_81 (F1), Donkeykong_76 (F1), Donovan_61 (P1), Doomphist_78 (F1), Dorothy_76 (F1), Duplicity_61 (N), Dynamo_61 (P1), EleanorGeorge_76 (F1), Empress_73 (F1), Fastidio_68 (F1), Filuzino_75 (F1), FirstPlacePfu_65 (P1), Flathead_73 (F1),

Florinda_86 (F1), Frankie_81 (F1), Fulbright_61 (N), Geralt_68 (F1), Gex_64 (N), Girafales_83 (F1), Glaske_61 (P1), HC_58 (I1), HUHilltop_64 (P1), Hamulus_74 (F1), Hegedechwinu_74 (F1), Hlubikazi_69 (F1), IMpilo_64 (F1), Inventum_73 (F1), Island3_63 (I1), JalFarm20_82 (F1), Jebeks_62 (P1), JoeyJr_75 (F1), Journey_56 (N), Juice456_70 (F1), Jung_62 (P1), Juniormint_59 (P1), Kevin1_61 (N), KilKor_62 (P1), KingMidas_74 (F1), Kingsley_77 (F1), KristaRAM_72 (F1), Ksquared_65 (P1), Leperchaun_73 (F1), LittleShirley_74 (F1), Magsby_62 (N), Majeke_64 (P1), Mandlovu_69 (F1), Mangethe_64 (P1), Megiddo_60 (P1), Melville_68 (N), MichelleMyBell_60 (N), MilanaBonita_67 (F1), Minnie_71 (F1), Misha28_83 (F1), Ms6_72 (F1), MulchSalad_81 (F), Necropolis_59 (P1), Nimbo_67 (F1), Ogopogo_79 (F1), OldBen_72 (F1), PHappiness_75 (F1), Panchino_56 (N), Parmesanjohn_63 (N), Phalconet_71 (F1), Phalm_62 (P1), Phanphagia_72 (F1), Phayonce_64 (P5), Phegasus_64 (P1), PhesterPotato_77 (F1), Philonius_63 (N), Phloss_61 (N), Phrann_59 (N), Piper2020_87 (F1), Pipsqueaks_64 (N), Poenanya_78 (F1), Polka14_79 (F1), Polkaroo_63 (P1), PopTart_64 (F1), Purky_74 (P6), Pygmy_65 (P1), QueenHazel_58 (I1), Quico_83 (F1), Rebel_56 (N), RedBird_76 (F1), SG4_71 (F1), Sandalphon_69 (F1), Sassafras_76 (F1), SassyB_64 (F1), Sbash_75 (I2), Schnauzer_64 (N), Scitech_58 (N), Scottish_73 (F1), Seagreen_75 (F1), Shauna1_73 (F1), Shipwreck_64 (P1), Shweta_58 (N), SiSi_70 (F1), Silvafighter_65 (N), Silvy_59 (N), SkinnyPete_60 (N), Smurph_63 (N), Sonah_62 (P1), StAnnes_71 (F1), StevieRay_66 (P1), StressBall_61 (P1), Strokeseat_69 (F1), Taj_80 (F1), Tapioca_61 (N), Techage_62 (P1), Thespis_63 (P1), ThulaThula_68 (P5), TootsiePop_83 (F1), Tortellini_69 (P2), Vidya_60 (P1), Wee_79 (F1), Willsammy_63 (P1), Xavia_63 (P3), Xeno_60 (N), Xerxes_63 (N), Xula_57 (I1), Zilizebeth_67 (P1),

Summary by clusters:

There are 13 clusters represented in this pham: P2, F1, F, P1, P6, P4, P5, I1, P3, I2, N, F4, CV,

Info for manual annotations of cluster CV:

- Start number 69 was manually annotated 2 times for cluster CV.
- Start number 72 was manually annotated 35 times for cluster CV.
- Start number 74 was manually annotated 3 times for cluster CV.
- Start number 76 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster F1:

- Start number 50 was manually annotated 1 time for cluster F1.
- Start number 67 was manually annotated 1 time for cluster F1.
- Start number 77 was manually annotated 65 times for cluster F1.

Info for manual annotations of cluster F4:

- Start number 46 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster I1:

- Start number 59 was manually annotated 1 time for cluster I1.
- Start number 77 was manually annotated 5 times for cluster I1.

Info for manual annotations of cluster I2:

- Start number 77 was manually annotated 2 times for cluster I2.

Info for manual annotations of cluster N:

- Start number 71 was manually annotated 2 times for cluster N.
- Start number 77 was manually annotated 29 times for cluster N.

Info for manual annotations of cluster P1:

- Start number 68 was manually annotated 1 time for cluster P1.
- Start number 73 was manually annotated 3 times for cluster P1.
- Start number 77 was manually annotated 31 times for cluster P1.

Info for manual annotations of cluster P2:

- Start number 77 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

- Start number 77 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:

- Start number 68 was manually annotated 1 time for cluster P4.
- Start number 77 was manually annotated 1 time for cluster P4.

Info for manual annotations of cluster P5:

- Start number 77 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:

- Start number 77 was manually annotated 1 time for cluster P6.

Gene Information:

Gene: Aggie_59 Start: 39996, Stop: 40157, Start Num: 77

Candidate Starts for Aggie_59:

(42, 39867), (44, 39876), (Start: 77 @39996 has 138 MA's), (84, 40047), (92, 40140),

Gene: Akhila_68 Start: 45011, Stop: 45145, Start Num: 77

Candidate Starts for Akhila_68:

(35, 44813), (44, 44891), (Start: 77 @45011 has 138 MA's), (84, 45062), (85, 45077),

Gene: Andies_57 Start: 39441, Stop: 39602, Start Num: 77

Candidate Starts for Andies_57:

(42, 39312), (44, 39321), (Start: 77 @39441 has 138 MA's), (84, 39492), (92, 39585),

Gene: Archis_71 Start: 42723, Stop: 42881, Start Num: 72

Candidate Starts for Archis_71:

(32, 42507), (60, 42678), (Start: 72 @42723 has 35 MA's), (Start: 76 @42735 has 1 MA's),

Gene: Arib1_60 Start: 39157, Stop: 39291, Start Num: 77

Candidate Starts for Arib1_60:

(35, 38959), (44, 39037), (Start: 77 @39157 has 138 MA's), (84, 39208),

Gene: Atcoo_63 Start: 42534, Stop: 42668, Start Num: 77

Candidate Starts for Atcoo_63:

(Start: 67 @42510 has 1 MA's), (Start: 77 @42534 has 138 MA's), (80, 42555), (84, 42585),

Gene: Awesomesauce_84 Start: 50622, Stop: 50762, Start Num: 77

Candidate Starts for Awesomesauce_84:
(45, 50511), (55, 50553), (64, 50583), (65, 50589), (Start: 77 @50622 has 138 MA's), (83, 50664),

Gene: Azula_74 Start: 46615, Stop: 46773, Start Num: 72
Candidate Starts for Azula_74:
(24, 46321), (28, 46345), (34, 46417), (Start: 46 @46519 has 2 MA's), (Start: 72 @46615 has 35 MA's), (Start: 76 @46627 has 1 MA's),

Gene: Babsiella_63 Start: 40488, Stop: 40664, Start Num: 59
Candidate Starts for Babsiella_63:
(49, 40446), (Start: 50 @40455 has 1 MA's), (Start: 59 @40488 has 1 MA's), (Start: 77 @40530 has 138 MA's),

Gene: Barco_66 Start: 42553, Stop: 42711, Start Num: 72
Candidate Starts for Barco_66:
(52, 42481), (54, 42487), (Start: 59 @42505 has 1 MA's), (Start: 72 @42553 has 35 MA's), (Start: 76 @42565 has 1 MA's),

Gene: Batiatus_73 Start: 46749, Stop: 46883, Start Num: 77
Candidate Starts for Batiatus_73:
(44, 46629), (48, 46650), (Start: 77 @46749 has 138 MA's), (84, 46800), (85, 46815),

Gene: Begonia_68 Start: 45480, Stop: 45644, Start Num: 72
Candidate Starts for Begonia_68:
(11, 44973), (64, 45447), (Start: 72 @45480 has 35 MA's), (79, 45507), (81, 45516),

Gene: BigNuz_61 Start: 40925, Stop: 41053, Start Num: 77
Candidate Starts for BigNuz_61:
(39, 40790), (42, 40814), (Start: 68 @40901 has 2 MA's), (Start: 73 @40913 has 3 MA's), (Start: 77 @40925 has 138 MA's), (84, 40976),

Gene: Bipolar_77 Start: 48393, Stop: 48527, Start Num: 77
Candidate Starts for Bipolar_77:
(35, 48195), (44, 48273), (48, 48294), (Start: 77 @48393 has 138 MA's), (84, 48444), (85, 48459),

Gene: BlingBling_65 Start: 43435, Stop: 43593, Start Num: 72
Candidate Starts for BlingBling_65:
(52, 43363), (54, 43369), (Start: 59 @43387 has 1 MA's), (Start: 72 @43435 has 35 MA's), (Start: 76 @43447 has 1 MA's),

Gene: Blino_71 Start: 48216, Stop: 48371, Start Num: 72
Candidate Starts for Blino_71:
(Start: 72 @48216 has 35 MA's), (Start: 76 @48228 has 1 MA's), (79, 48237),

Gene: Blueberry_73 Start: 46615, Stop: 46773, Start Num: 72
Candidate Starts for Blueberry_73:
(24, 46321), (28, 46345), (34, 46417), (Start: 46 @46519 has 2 MA's), (Start: 72 @46615 has 35 MA's), (Start: 76 @46627 has 1 MA's),

Gene: Bobi_81 Start: 49048, Stop: 49182, Start Num: 77
Candidate Starts for Bobi_81:
(15, 48688), (16, 48697), (20, 48724), (39, 48913), (42, 48937), (Start: 68 @49024 has 2 MA's), (Start: 73 @49036 has 3 MA's), (Start: 77 @49048 has 138 MA's), (84, 49099), (85, 49114),

Gene: Bogie_64 Start: 41516, Stop: 41650, Start Num: 77

Candidate Starts for Bogie_64:

(39, 41381), (42, 41405), (Start: 68 @41492 has 2 MA's), (Start: 73 @41504 has 3 MA's), (Start: 77 @41516 has 138 MA's), (84, 41567),

Gene: Bosection6_62 Start: 39045, Stop: 39206, Start Num: 77

Candidate Starts for Bosection6_62:

(42, 38916), (44, 38925), (Start: 77 @39045 has 138 MA's), (84, 39096), (92, 39189),

Gene: Brujita_62 Start: 40659, Stop: 40793, Start Num: 77

Candidate Starts for Brujita_62:

(Start: 77 @40659 has 138 MA's), (84, 40710),

Gene: Brusacoram_63 Start: 41077, Stop: 41211, Start Num: 77

Candidate Starts for Brusacoram_63:

(Start: 67 @41053 has 1 MA's), (Start: 77 @41077 has 138 MA's), (80, 41098), (84, 41128),

Gene: Bunnies_67 Start: 42398, Stop: 42544, Start Num: 73

Candidate Starts for Bunnies_67:

(39, 42275), (42, 42299), (Start: 68 @42386 has 2 MA's), (Start: 73 @42398 has 3 MA's), (Start: 77 @42410 has 138 MA's), (84, 42461),

Gene: Butters_59 Start: 37429, Stop: 37563, Start Num: 71

Candidate Starts for Butters_59:

(41, 37315), (43, 37324), (51, 37366), (58, 37384), (Start: 71 @37429 has 2 MA's), (84, 37480), (87, 37552),

Gene: CactusJack_62 Start: 41278, Stop: 41412, Start Num: 77

Candidate Starts for CactusJack_62:

(39, 41143), (42, 41167), (Start: 68 @41254 has 2 MA's), (Start: 73 @41266 has 3 MA's), (Start: 77 @41278 has 138 MA's), (84, 41329),

Gene: Camster_62 Start: 39977, Stop: 40111, Start Num: 77

Candidate Starts for Camster_62:

(39, 39842), (42, 39866), (Start: 68 @39953 has 2 MA's), (Start: 73 @39965 has 3 MA's), (Start: 77 @39977 has 138 MA's), (84, 40028),

Gene: CaptainKirk2_70 Start: 42213, Stop: 42356, Start Num: 76

Candidate Starts for CaptainKirk2_70:

(52, 42129), (54, 42135), (Start: 59 @42153 has 1 MA's), (Start: 72 @42201 has 35 MA's), (Start: 76 @42213 has 1 MA's), (79, 42222),

Gene: Carcharodon_63 Start: 39343, Stop: 39504, Start Num: 77

Candidate Starts for Carcharodon_63:

(42, 39214), (44, 39223), (Start: 77 @39343 has 138 MA's), (84, 39394), (92, 39487),

Gene: CarolAnn_70 Start: 48215, Stop: 48370, Start Num: 72

Candidate Starts for CarolAnn_70:

(Start: 72 @48215 has 35 MA's), (Start: 76 @48227 has 1 MA's), (79, 48236),

Gene: Charlie_60 Start: 38669, Stop: 38830, Start Num: 77

Candidate Starts for Charlie_60:

(42, 38540), (44, 38549), (Start: 77 @38669 has 138 MA's), (84, 38720), (92, 38813),

Gene: Che9c_71 Start: 50371, Stop: 50505, Start Num: 77

Candidate Starts for Che9c_71:

(Start: 77 @50371 has 138 MA's), (84, 50422),

Gene: Chewbacca_66 Start: 39238, Stop: 39399, Start Num: 77

Candidate Starts for Chewbacca_66:

(42, 39109), (44, 39118), (Start: 77 @39238 has 138 MA's), (84, 39289), (92, 39382),

Gene: ChickenDinner_87 Start: 50386, Stop: 50526, Start Num: 77

Candidate Starts for ChickenDinner_87:

(42, 50257), (44, 50266), (Start: 77 @50386 has 138 MA's), (83, 50428),

Gene: DLane_71 Start: 46327, Stop: 46461, Start Num: 77

Candidate Starts for DLane_71:

(44, 46207), (48, 46228), (Start: 77 @46327 has 138 MA's), (84, 46378),

Gene: DaddyRickover_78 Start: 48359, Stop: 48493, Start Num: 77

Candidate Starts for DaddyRickover_78:

(13, 47939), (14, 47972), (57, 48302), (Start: 67 @48335 has 1 MA's), (Start: 77 @48359 has 138 MA's), (84, 48410), (85, 48425),

Gene: Daenerys_74 Start: 47956, Stop: 48090, Start Num: 77

Candidate Starts for Daenerys_74:

(13, 47536), (14, 47569), (57, 47899), (Start: 67 @47932 has 1 MA's), (Start: 77 @47956 has 138 MA's), (80, 47977), (84, 48007), (85, 48022),

Gene: DeadP_75 Start: 45575, Stop: 45709, Start Num: 77

Candidate Starts for DeadP_75:

(47, 45479), (63, 45536), (Start: 77 @45575 has 138 MA's), (84, 45626), (85, 45641),

Gene: Deb65_68 Start: 45678, Stop: 45812, Start Num: 77

Candidate Starts for Deb65_68:

(3, 45012), (5, 45051), (6, 45105), (9, 45132), (12, 45192), (13, 45258), (14, 45291), (57, 45621), (Start: 67 @45654 has 1 MA's), (Start: 77 @45678 has 138 MA's), (80, 45699), (84, 45729), (85, 45744),

Gene: Delian_73 Start: 42199, Stop: 42354, Start Num: 72

Candidate Starts for Delian_73:

(52, 42127), (54, 42133), (Start: 59 @42151 has 1 MA's), (Start: 72 @42199 has 35 MA's), (Start: 76 @42211 has 1 MA's), (79, 42220),

Gene: DillTech15_75 Start: 45272, Stop: 45406, Start Num: 77

Candidate Starts for DillTech15_75:

(13, 44852), (14, 44885), (57, 45215), (Start: 67 @45248 has 1 MA's), (Start: 77 @45272 has 138 MA's), (84, 45323),

Gene: DocMcStuffins_81 Start: 52016, Stop: 52156, Start Num: 77

Candidate Starts for DocMcStuffins_81:

(42, 51887), (44, 51896), (Start: 77 @52016 has 138 MA's), (83, 52058),

Gene: Donkeykong_76 Start: 47467, Stop: 47601, Start Num: 77

Candidate Starts for Donkeykong_76:
(Start: 77 @47467 has 138 MA's), (84, 47518),

Gene: Donovan_61 Start: 40222, Stop: 40356, Start Num: 77
Candidate Starts for Donovan_61:
(35, 40024), (44, 40102), (48, 40123), (Start: 77 @40222 has 138 MA's),

Gene: Doomphist_78 Start: 47769, Stop: 47903, Start Num: 77
Candidate Starts for Doomphist_78:
(13, 47349), (14, 47382), (57, 47712), (Start: 67 @47745 has 1 MA's), (Start: 77 @47769 has 138 MA's), (80, 47790), (84, 47820), (85, 47835),

Gene: Dorothy_76 Start: 48407, Stop: 48541, Start Num: 77
Candidate Starts for Dorothy_76:
(35, 48212), (44, 48290), (Start: 77 @48407 has 138 MA's), (84, 48458), (85, 48473),

Gene: Duplicity_61 Start: 38600, Stop: 38761, Start Num: 77
Candidate Starts for Duplicity_61:
(42, 38471), (44, 38480), (Start: 77 @38600 has 138 MA's), (84, 38651), (92, 38744),

Gene: Dynamo_61 Start: 39550, Stop: 39684, Start Num: 77
Candidate Starts for Dynamo_61:
(39, 39415), (42, 39439), (Start: 68 @39526 has 2 MA's), (Start: 73 @39538 has 3 MA's), (Start: 77 @39550 has 138 MA's), (84, 39601),

Gene: EleanorGeorge_76 Start: 47362, Stop: 47496, Start Num: 77
Candidate Starts for EleanorGeorge_76:
(Start: 77 @47362 has 138 MA's), (83, 47404), (84, 47413), (85, 47428),

Gene: Empress_73 Start: 46580, Stop: 46714, Start Num: 77
Candidate Starts for Empress_73:
(13, 46160), (14, 46193), (57, 46523), (Start: 67 @46556 has 1 MA's), (Start: 77 @46580 has 138 MA's), (80, 46601), (84, 46631), (85, 46646),

Gene: Fairfaxidum_72 Start: 44764, Stop: 44922, Start Num: 72
Candidate Starts for Fairfaxidum_72:
(Start: 72 @44764 has 35 MA's), (Start: 76 @44776 has 1 MA's), (79, 44785),

Gene: Fastidio_68 Start: 42078, Stop: 42212, Start Num: 77
Candidate Starts for Fastidio_68:
(13, 41658), (14, 41691), (57, 42021), (Start: 67 @42054 has 1 MA's), (Start: 77 @42078 has 138 MA's), (80, 42099), (84, 42129),

Gene: Fenry_68 Start: 44226, Stop: 44384, Start Num: 72
Candidate Starts for Fenry_68:
(Start: 72 @44226 has 35 MA's), (Start: 76 @44238 has 1 MA's), (79, 44247),

Gene: Filuzino_75 Start: 48306, Stop: 48440, Start Num: 77
Candidate Starts for Filuzino_75:
(35, 48108), (44, 48186), (48, 48207), (Start: 77 @48306 has 138 MA's), (84, 48357), (90, 48435),

Gene: FirstPlacePfu_65 Start: 39143, Stop: 39277, Start Num: 77
Candidate Starts for FirstPlacePfu_65:

(42, 39014), (44, 39023), (Start: 77 @39143 has 138 MA's), (84, 39194),

Gene: Flathead_73 Start: 46020, Stop: 46154, Start Num: 77

Candidate Starts for Flathead_73:

(57, 45960), (Start: 77 @46020 has 138 MA's), (84, 46071), (85, 46086),

Gene: Florinda_86 Start: 49222, Stop: 49356, Start Num: 77

Candidate Starts for Florinda_86:

(44, 49102), (48, 49123), (Start: 77 @49222 has 138 MA's), (84, 49273), (85, 49288),

Gene: Frankie_81 Start: 47698, Stop: 47826, Start Num: 77

Candidate Starts for Frankie_81:

(42, 47572), (44, 47581), (45, 47587), (55, 47629), (64, 47659), (65, 47665), (Start: 77 @47698 has 138 MA's),

Gene: Fulbright_61 Start: 38037, Stop: 38198, Start Num: 77

Candidate Starts for Fulbright_61:

(42, 37908), (44, 37917), (Start: 77 @38037 has 138 MA's), (84, 38088), (92, 38181),

Gene: Gambino_76 Start: 46615, Stop: 46773, Start Num: 72

Candidate Starts for Gambino_76:

(24, 46321), (28, 46345), (34, 46417), (Start: 46 @46519 has 2 MA's), (Start: 72 @46615 has 35 MA's), (Start: 76 @46627 has 1 MA's),

Gene: Geralt_68 Start: 45676, Stop: 45810, Start Num: 77

Candidate Starts for Geralt_68:

(13, 45256), (14, 45289), (57, 45619), (Start: 67 @45652 has 1 MA's), (Start: 77 @45676 has 138 MA's), (80, 45697), (84, 45727), (85, 45742),

Gene: Gex_64 Start: 39359, Stop: 39520, Start Num: 77

Candidate Starts for Gex_64:

(42, 39230), (44, 39239), (Start: 77 @39359 has 138 MA's), (84, 39410), (92, 39503),

Gene: Girafales_83 Start: 48827, Stop: 48961, Start Num: 77

Candidate Starts for Girafales_83:

(44, 48707), (48, 48728), (Start: 77 @48827 has 138 MA's), (84, 48878), (85, 48893),

Gene: Glaske_61 Start: 41278, Stop: 41412, Start Num: 77

Candidate Starts for Glaske_61:

(39, 41143), (42, 41167), (Start: 68 @41254 has 2 MA's), (Start: 73 @41266 has 3 MA's), (Start: 77 @41278 has 138 MA's), (84, 41329),

Gene: GreaseLightnin_66 Start: 41919, Stop: 42065, Start Num: 73

Candidate Starts for GreaseLightnin_66:

(39, 41796), (42, 41820), (Start: 68 @41907 has 2 MA's), (Start: 73 @41919 has 3 MA's), (Start: 77 @41931 has 138 MA's), (84, 41982),

Gene: Guacamole_68 Start: 43616, Stop: 43774, Start Num: 72

Candidate Starts for Guacamole_68:

(24, 43316), (27, 43328), (28, 43340), (34, 43412), (Start: 72 @43616 has 35 MA's), (Start: 76 @43628 has 1 MA's),

Gene: HC_58 Start: 38076, Stop: 38210, Start Num: 77

Candidate Starts for HC_58:
(47, 37980), (63, 38037), (Start: 77 @38076 has 138 MA's),

Gene: HUHilltop_64 Start: 39773, Stop: 39907, Start Num: 77
Candidate Starts for HUHilltop_64:
(39, 39638), (42, 39662), (Start: 68 @39749 has 2 MA's), (Start: 73 @39761 has 3 MA's), (Start: 77 @39773 has 138 MA's), (84, 39824),

Gene: Hamulus_74 Start: 46705, Stop: 46839, Start Num: 77
Candidate Starts for Hamulus_74:
(Start: 67 @46681 has 1 MA's), (Start: 77 @46705 has 138 MA's), (84, 46756), (85, 46771),

Gene: Hegedechwinu_74 Start: 44915, Stop: 45049, Start Num: 77
Candidate Starts for Hegedechwinu_74:
(44, 44795), (48, 44816), (Start: 77 @44915 has 138 MA's),

Gene: Hitter_69 Start: 42159, Stop: 42317, Start Num: 72
Candidate Starts for Hitter_69:
(Start: 72 @42159 has 35 MA's), (Start: 76 @42171 has 1 MA's), (79, 42180),

Gene: Hlubikazi_69 Start: 44290, Stop: 44424, Start Num: 77
Candidate Starts for Hlubikazi_69:
(62, 44236), (Start: 77 @44290 has 138 MA's), (84, 44341), (85, 44356),

Gene: IMPilo_64 Start: 42435, Stop: 42569, Start Num: 77
Candidate Starts for IMPilo_64:
(Start: 67 @42411 has 1 MA's), (Start: 77 @42435 has 138 MA's), (84, 42486), (85, 42501),

Gene: Inventum_73 Start: 46592, Stop: 46726, Start Num: 77
Candidate Starts for Inventum_73:
(13, 46172), (14, 46205), (57, 46535), (Start: 67 @46568 has 1 MA's), (Start: 77 @46592 has 138 MA's), (80, 46613), (84, 46643), (85, 46658),

Gene: Island3_63 Start: 40659, Stop: 40793, Start Num: 77
Candidate Starts for Island3_63:
(Start: 77 @40659 has 138 MA's), (84, 40710),

Gene: JalFarm20_82 Start: 47370, Stop: 47504, Start Num: 77
Candidate Starts for JalFarm20_82:
(47, 47274), (63, 47331), (Start: 77 @47370 has 138 MA's), (84, 47421), (85, 47436),

Gene: Jalammah_72 Start: 45129, Stop: 45290, Start Num: 72
Candidate Starts for Jalammah_72:
(Start: 72 @45129 has 35 MA's), (Start: 76 @45141 has 1 MA's), (79, 45150),

Gene: JasperJr_68 Start: 43616, Stop: 43774, Start Num: 72
Candidate Starts for JasperJr_68:
(24, 43316), (27, 43328), (28, 43340), (34, 43412), (Start: 72 @43616 has 35 MA's), (Start: 76 @43628 has 1 MA's),

Gene: Jebeks_62 Start: 39070, Stop: 39204, Start Num: 77
Candidate Starts for Jebeks_62:

(39, 38935), (42, 38959), (Start: 68 @39046 has 2 MA's), (Start: 73 @39058 has 3 MA's), (Start: 77 @39070 has 138 MA's), (84, 39121),

Gene: JoeyJr_75 Start: 47581, Stop: 47715, Start Num: 77

Candidate Starts for JoeyJr_75:

(13, 47161), (14, 47194), (57, 47524), (Start: 67 @47557 has 1 MA's), (Start: 77 @47581 has 138 MA's), (80, 47602), (84, 47632), (85, 47647),

Gene: Journey_56 Start: 37628, Stop: 37762, Start Num: 77

Candidate Starts for Journey_56:

(29, 37364), (36, 37433), (37, 37448), (Start: 77 @37628 has 138 MA's),

Gene: JuJu_78 Start: 48352, Stop: 48516, Start Num: 72

Candidate Starts for JuJu_78:

(24, 48052), (28, 48076), (33, 48139), (34, 48148), (Start: 72 @48352 has 35 MA's), (78, 48373),

Gene: Juice456_70 Start: 45326, Stop: 45460, Start Num: 77

Candidate Starts for Juice456_70:

(47, 45230), (63, 45287), (Start: 77 @45326 has 138 MA's), (84, 45377), (85, 45392),

Gene: Jung_62 Start: 40067, Stop: 40207, Start Num: 77

Candidate Starts for Jung_62:

(18, 39704), (19, 39716), (25, 39764), (26, 39767), (38, 39899), (66, 40028), (75, 40055), (Start: 77 @40067 has 138 MA's), (84, 40118),

Gene: Juniormint_59 Start: 38526, Stop: 38660, Start Num: 77

Candidate Starts for Juniormint_59:

(15, 38166), (16, 38175), (20, 38202), (39, 38391), (42, 38415), (Start: 68 @38502 has 2 MA's), (Start: 73 @38514 has 3 MA's), (Start: 77 @38526 has 138 MA's), (84, 38577),

Gene: KappaFarmDelta_69 Start: 43192, Stop: 43353, Start Num: 74

Candidate Starts for KappaFarmDelta_69:

(Start: 72 @43189 has 35 MA's), (Start: 74 @43192 has 3 MA's), (78, 43207),

Gene: Kevin1_61 Start: 37537, Stop: 37671, Start Num: 77

Candidate Starts for Kevin1_61:

(44, 37435), (Start: 46 @37444 has 2 MA's), (53, 37471), (Start: 77 @37537 has 138 MA's), (84, 37588), (87, 37660),

Gene: KilKor_62 Start: 41971, Stop: 42105, Start Num: 77

Candidate Starts for KilKor_62:

(39, 41836), (42, 41860), (Start: 68 @41947 has 2 MA's), (Start: 73 @41959 has 3 MA's), (Start: 77 @41971 has 138 MA's), (84, 42022),

Gene: KingMidas_74 Start: 46995, Stop: 47129, Start Num: 77

Candidate Starts for KingMidas_74:

(13, 46575), (14, 46608), (57, 46938), (Start: 67 @46971 has 1 MA's), (Start: 77 @46995 has 138 MA's), (80, 47016), (84, 47046), (85, 47061),

Gene: Kingsley_77 Start: 48832, Stop: 48966, Start Num: 77

Candidate Starts for Kingsley_77:

(21, 48508), (22, 48532), (23, 48538), (30, 48592), (44, 48712), (Start: 77 @48832 has 138 MA's), (84, 48883), (85, 48898),

Gene: KristaRAM_72 Start: 45695, Stop: 45829, Start Num: 77
Candidate Starts for KristaRAM_72:
(47, 45599), (63, 45656), (Start: 77 @45695 has 138 MA's), (84, 45746), (85, 45761),

Gene: Ksquared_65 Start: 42287, Stop: 42421, Start Num: 77
Candidate Starts for Ksquared_65:
(39, 42152), (42, 42176), (Start: 68 @42263 has 2 MA's), (Start: 73 @42275 has 3 MA's), (Start: 77 @42287 has 138 MA's), (84, 42338),

Gene: Leperchaun_73 Start: 46815, Stop: 46949, Start Num: 77
Candidate Starts for Leperchaun_73:
(13, 46395), (14, 46428), (57, 46758), (Start: 67 @46791 has 1 MA's), (Start: 77 @46815 has 138 MA's), (80, 46836), (84, 46866), (85, 46881),

Gene: LittleShirley_74 Start: 45751, Stop: 45885, Start Num: 77
Candidate Starts for LittleShirley_74:
(Start: 67 @45727 has 1 MA's), (Start: 77 @45751 has 138 MA's), (84, 45802), (85, 45817),

Gene: LunaStella_72 Start: 45804, Stop: 46013, Start Num: 46
Candidate Starts for LunaStella_72:
(44, 45795), (Start: 46 @45804 has 2 MA's), (53, 45831), (Start: 77 @45879 has 138 MA's), (84, 45930),

Gene: Lysidious_71 Start: 44855, Stop: 45016, Start Num: 72
Candidate Starts for Lysidious_71:
(Start: 72 @44855 has 35 MA's), (Start: 76 @44867 has 1 MA's), (79, 44876), (86, 44945),

Gene: Magsby_62 Start: 39305, Stop: 39466, Start Num: 77
Candidate Starts for Magsby_62:
(42, 39176), (44, 39185), (Start: 77 @39305 has 138 MA's), (84, 39356), (92, 39449),

Gene: Majeke_64 Start: 40672, Stop: 40806, Start Num: 77
Candidate Starts for Majeke_64:
(35, 40474), (44, 40552), (Start: 77 @40672 has 138 MA's),

Gene: Malachai_68 Start: 45480, Stop: 45644, Start Num: 72
Candidate Starts for Malachai_68:
(11, 44973), (64, 45447), (Start: 72 @45480 has 35 MA's), (79, 45507), (81, 45516),

Gene: Malithi_61 Start: 39664, Stop: 39822, Start Num: 68
Candidate Starts for Malithi_61:
(39, 39553), (42, 39577), (Start: 68 @39664 has 2 MA's), (Start: 73 @39676 has 3 MA's), (Start: 77 @39688 has 138 MA's), (84, 39739),

Gene: Mandlovu_69 Start: 44232, Stop: 44366, Start Num: 77
Candidate Starts for Mandlovu_69:
(62, 44178), (Start: 77 @44232 has 138 MA's), (84, 44283), (85, 44298),

Gene: Mangethe_64 Start: 40672, Stop: 40806, Start Num: 77
Candidate Starts for Mangethe_64:
(35, 40474), (44, 40552), (Start: 77 @40672 has 138 MA's),

Gene: Megiddo_60 Start: 41056, Stop: 41202, Start Num: 77
Candidate Starts for Megiddo_60:
(17, 40711), (31, 40834), (Start: 77 @41056 has 138 MA's), (84, 41107),

Gene: Melba_69 Start: 42570, Stop: 42728, Start Num: 72
Candidate Starts for Melba_69:
(Start: 72 @42570 has 35 MA's), (Start: 76 @42582 has 1 MA's), (91, 42714),

Gene: Mellie_66 Start: 42417, Stop: 42575, Start Num: 72
Candidate Starts for Mellie_66:
(Start: 72 @42417 has 35 MA's), (Start: 76 @42429 has 1 MA's), (79, 42438),

Gene: Melville_68 Start: 38914, Stop: 39075, Start Num: 77
Candidate Starts for Melville_68:
(42, 38785), (44, 38794), (Start: 77 @38914 has 138 MA's), (84, 38965), (92, 39058),

Gene: MichelleMyBell_60 Start: 37388, Stop: 37522, Start Num: 77
Candidate Starts for MichelleMyBell_60:
(Start: 50 @37295 has 1 MA's), (58, 37322), (Start: 59 @37328 has 1 MA's), (Start: 77 @37388 has 138 MA's),

Gene: MilanaBonita_67 Start: 45011, Stop: 45145, Start Num: 77
Candidate Starts for MilanaBonita_67:
(35, 44813), (44, 44891), (Start: 77 @45011 has 138 MA's), (84, 45062), (85, 45077),

Gene: Minnie_71 Start: 48191, Stop: 48325, Start Num: 77
Candidate Starts for Minnie_71:
(62, 48137), (Start: 77 @48191 has 138 MA's), (84, 48242), (85, 48257),

Gene: MintFen_70 Start: 42815, Stop: 42970, Start Num: 72
Candidate Starts for MintFen_70:
(52, 42743), (54, 42749), (Start: 59 @42767 has 1 MA's), (Start: 72 @42815 has 35 MA's), (Start: 76 @42827 has 1 MA's), (79, 42836),

Gene: Misha28_83 Start: 51321, Stop: 51461, Start Num: 77
Candidate Starts for Misha28_83:
(45, 51210), (55, 51252), (64, 51282), (65, 51288), (Start: 77 @51321 has 138 MA's), (83, 51363),

Gene: MissRona_74 Start: 46616, Stop: 46774, Start Num: 72
Candidate Starts for MissRona_74:
(24, 46322), (28, 46346), (34, 46418), (Start: 46 @46520 has 2 MA's), (Start: 72 @46616 has 35 MA's), (Start: 76 @46628 has 1 MA's),

Gene: Ms6_72 Start: 42574, Stop: 42708, Start Num: 77
Candidate Starts for Ms6_72:
(48, 42475), (Start: 77 @42574 has 138 MA's), (84, 42625), (85, 42640),

Gene: MulchSalad_81 Start: 48362, Stop: 48490, Start Num: 77
Candidate Starts for MulchSalad_81:
(42, 48233), (44, 48242), (Start: 77 @48362 has 138 MA's),

Gene: Murp_67 Start: 45821, Stop: 45982, Start Num: 74
Candidate Starts for Murp_67:

(Start: 72 @45818 has 35 MA's), (Start: 74 @45821 has 3 MA's), (78, 45836), (79, 45845), (91, 45968),

Gene: Nazo_62 Start: 41086, Stop: 41238, Start Num: 68

Candidate Starts for Nazo_62:

(39, 40975), (42, 40999), (Start: 68 @41086 has 2 MA's), (Start: 73 @41098 has 3 MA's), (Start: 77 @41110 has 138 MA's), (82, 41134), (84, 41161),

Gene: Necropolis_59 Start: 39139, Stop: 39273, Start Num: 77

Candidate Starts for Necropolis_59:

(39, 39004), (42, 39028), (Start: 68 @39115 has 2 MA's), (Start: 73 @39127 has 3 MA's), (Start: 77 @39139 has 138 MA's), (84, 39190),

Gene: Nimbo_67 Start: 45679, Stop: 45813, Start Num: 77

Candidate Starts for Nimbo_67:

(13, 45259), (14, 45292), (57, 45622), (Start: 67 @45655 has 1 MA's), (Start: 77 @45679 has 138 MA's), (80, 45700), (84, 45730), (85, 45745),

Gene: Obliviate_68 Start: 42724, Stop: 42882, Start Num: 72

Candidate Starts for Obliviate_68:

(52, 42652), (54, 42658), (Start: 59 @42676 has 1 MA's), (Start: 72 @42724 has 35 MA's), (Start: 76 @42736 has 1 MA's),

Gene: Ogotogo_79 Start: 46196, Stop: 46330, Start Num: 77

Candidate Starts for Ogotogo_79:

(13, 45776), (14, 45809), (57, 46139), (Start: 67 @46172 has 1 MA's), (Start: 77 @46196 has 138 MA's), (80, 46217), (84, 46247), (85, 46262),

Gene: OldBen_72 Start: 47071, Stop: 47205, Start Num: 77

Candidate Starts for OldBen_72:

(13, 46651), (14, 46684), (57, 47014), (Start: 67 @47047 has 1 MA's), (Start: 77 @47071 has 138 MA's), (80, 47092), (84, 47122), (85, 47137),

Gene: Ovechkin_76 Start: 46664, Stop: 46873, Start Num: 50

Candidate Starts for Ovechkin_76:

(49, 46655), (Start: 50 @46664 has 1 MA's), (58, 46691), (Start: 77 @46739 has 138 MA's),

Gene: PCoral7_69 Start: 43537, Stop: 43695, Start Num: 72

Candidate Starts for PCoral7_69:

(Start: 72 @43537 has 35 MA's), (Start: 76 @43549 has 1 MA's), (79, 43558), (81, 43567),

Gene: PHappiness_75 Start: 47900, Stop: 48034, Start Num: 77

Candidate Starts for PHappiness_75:

(13, 47480), (14, 47513), (57, 47843), (Start: 67 @47876 has 1 MA's), (Start: 77 @47900 has 138 MA's), (80, 47921), (84, 47951), (85, 47966),

Gene: Panchino_56 Start: 38919, Stop: 39056, Start Num: 77

Candidate Starts for Panchino_56:

(15, 38559), (16, 38568), (20, 38595), (39, 38784), (42, 38808), (Start: 68 @38895 has 2 MA's), (Start: 73 @38907 has 3 MA's), (Start: 77 @38919 has 138 MA's), (84, 38970), (89, 39045),

Gene: Parmesanjohn_63 Start: 39363, Stop: 39524, Start Num: 77

Candidate Starts for Parmesanjohn_63:

(42, 39234), (44, 39243), (Start: 77 @39363 has 138 MA's), (84, 39414), (92, 39507),

Gene: Petra_73 Start: 44768, Stop: 44935, Start Num: 72

Candidate Starts for Petra_73:

(24, 44474), (28, 44498), (33, 44561), (34, 44570), (Start: 72 @44768 has 35 MA's), (78, 44789),

Gene: Phalconet_71 Start: 45548, Stop: 45682, Start Num: 77

Candidate Starts for Phalconet_71:

(44, 45428), (Start: 77 @45548 has 138 MA's), (84, 45599), (85, 45614),

Gene: Phalm_62 Start: 41278, Stop: 41403, Start Num: 77

Candidate Starts for Phalm_62:

(39, 41143), (42, 41167), (Start: 68 @41254 has 2 MA's), (Start: 73 @41266 has 3 MA's), (Start: 77 @41278 has 138 MA's), (84, 41329),

Gene: Phanphagia_72 Start: 46628, Stop: 46762, Start Num: 77

Candidate Starts for Phanphagia_72:

(35, 46430), (44, 46508), (48, 46529), (Start: 77 @46628 has 138 MA's), (84, 46679), (85, 46694),

Gene: Phayonce_64 Start: 43136, Stop: 43282, Start Num: 77

Candidate Starts for Phayonce_64:

(61, 43085), (Start: 77 @43136 has 138 MA's), (82, 43160), (84, 43187),

Gene: Phegasus_64 Start: 40639, Stop: 40773, Start Num: 77

Candidate Starts for Phegasus_64:

(35, 40441), (44, 40519), (Start: 77 @40639 has 138 MA's),

Gene: PhesterPhotato_77 Start: 46716, Stop: 46850, Start Num: 77

Candidate Starts for PhesterPhotato_77:

(Start: 67 @46692 has 1 MA's), (Start: 77 @46716 has 138 MA's), (84, 46767), (85, 46782),

Gene: Philonius_63 Start: 39528, Stop: 39689, Start Num: 77

Candidate Starts for Philonius_63:

(42, 39399), (44, 39408), (Start: 77 @39528 has 138 MA's), (84, 39579), (92, 39672),

Gene: Phineas_62 Start: 40096, Stop: 40242, Start Num: 73

Candidate Starts for Phineas_62:

(39, 39973), (42, 39997), (Start: 68 @40084 has 2 MA's), (Start: 73 @40096 has 3 MA's), (Start: 77 @40108 has 138 MA's), (84, 40159),

Gene: Phloss_61 Start: 38770, Stop: 38931, Start Num: 77

Candidate Starts for Phloss_61:

(42, 38641), (44, 38650), (Start: 77 @38770 has 138 MA's), (84, 38821), (92, 38914),

Gene: Phrann_59 Start: 40673, Stop: 40810, Start Num: 77

Candidate Starts for Phrann_59:

(62, 40619), (Start: 77 @40673 has 138 MA's), (84, 40724), (89, 40799),

Gene: PhrostedPhlake_75 Start: 45016, Stop: 45183, Start Num: 72

Candidate Starts for PhrostedPhlake_75:

(Start: 72 @45016 has 35 MA's), (78, 45037),

Gene: Piper2020_87 Start: 52127, Stop: 52279, Start Num: 77

Candidate Starts for Piper2020_87:
(42, 51998), (44, 52007), (Start: 77 @52127 has 138 MA's),

Gene: Pipp_73 Start: 44772, Stop: 44930, Start Num: 72
Candidate Starts for Pipp_73:
(52, 44700), (54, 44706), (Start: 59 @44724 has 1 MA's), (Start: 72 @44772 has 35 MA's), (Start: 76 @44784 has 1 MA's),

Gene: Pipsqueaks_64 Start: 39341, Stop: 39502, Start Num: 77
Candidate Starts for Pipsqueaks_64:
(42, 39212), (44, 39221), (Start: 77 @39341 has 138 MA's), (84, 39392), (92, 39485),

Gene: Poenanya_78 Start: 47769, Stop: 47903, Start Num: 77
Candidate Starts for Poenanya_78:
(13, 47349), (14, 47382), (57, 47712), (Start: 67 @47745 has 1 MA's), (Start: 77 @47769 has 138 MA's), (80, 47790), (84, 47820), (85, 47835),

Gene: Polka14_79 Start: 48559, Stop: 48693, Start Num: 77
Candidate Starts for Polka14_79:
(13, 48139), (14, 48172), (57, 48502), (Start: 67 @48535 has 1 MA's), (Start: 77 @48559 has 138 MA's), (80, 48580), (84, 48610), (85, 48625),

Gene: Polkaroo_63 Start: 41848, Stop: 41988, Start Num: 77
Candidate Starts for Polkaroo_63:
(70, 41824), (Start: 77 @41848 has 138 MA's), (84, 41899),

Gene: PopTart_64 Start: 43414, Stop: 43548, Start Num: 77
Candidate Starts for PopTart_64:
(Start: 77 @43414 has 138 MA's), (84, 43465), (85, 43480),

Gene: PrincePatrick_70 Start: 42596, Stop: 42754, Start Num: 72
Candidate Starts for PrincePatrick_70:
(Start: 72 @42596 has 35 MA's), (Start: 76 @42608 has 1 MA's), (79, 42617), (81, 42626),

Gene: Purky_74 Start: 45740, Stop: 45874, Start Num: 77
Candidate Starts for Purky_74:
(42, 45620), (Start: 68 @45716 has 2 MA's), (Start: 73 @45728 has 3 MA's), (Start: 77 @45740 has 138 MA's), (84, 45791),

Gene: Pygmy_65 Start: 41572, Stop: 41706, Start Num: 77
Candidate Starts for Pygmy_65:
(39, 41437), (42, 41461), (Start: 68 @41548 has 2 MA's), (Start: 73 @41560 has 3 MA's), (Start: 77 @41572 has 138 MA's), (84, 41623),

Gene: QueenHazel_58 Start: 39693, Stop: 39827, Start Num: 77
Candidate Starts for QueenHazel_58:
(47, 39597), (63, 39654), (Start: 77 @39693 has 138 MA's), (84, 39744), (90, 39822),

Gene: Quico_83 Start: 49042, Stop: 49176, Start Num: 77
Candidate Starts for Quico_83:
(44, 48922), (48, 48943), (Start: 77 @49042 has 138 MA's), (84, 49093), (85, 49108),

Gene: Rebel_56 Start: 35847, Stop: 35981, Start Num: 77

Candidate Starts for Rebel_56:

(Start: 46 @35754 has 2 MA's), (53, 35781), (56, 35787), (Start: 77 @35847 has 138 MA's), (84, 35898), (87, 35970),

Gene: RedBird_76 Start: 48274, Stop: 48408, Start Num: 77

Candidate Starts for RedBird_76:

(35, 48079), (44, 48157), (Start: 77 @48274 has 138 MA's), (84, 48325), (85, 48340),

Gene: RitaG_75 Start: 47678, Stop: 47836, Start Num: 67

Candidate Starts for RitaG_75:

(13, 47282), (14, 47315), (57, 47645), (Start: 67 @47678 has 1 MA's), (Start: 77 @47702 has 138 MA's), (80, 47723), (84, 47753), (85, 47768),

Gene: Rubeelu_59 Start: 37429, Stop: 37563, Start Num: 71

Candidate Starts for Rubeelu_59:

(41, 37315), (43, 37324), (51, 37366), (58, 37384), (Start: 71 @37429 has 2 MA's), (84, 37480), (87, 37552),

Gene: SG4_71 Start: 45477, Stop: 45611, Start Num: 77

Candidate Starts for SG4_71:

(35, 45279), (44, 45357), (Start: 77 @45477 has 138 MA's), (84, 45528), (85, 45543),

Gene: Samba_69 Start: 45554, Stop: 45712, Start Num: 72

Candidate Starts for Samba_69:

(Start: 72 @45554 has 35 MA's), (Start: 76 @45566 has 1 MA's), (79, 45575),

Gene: Sandalphon_69 Start: 46176, Stop: 46310, Start Num: 77

Candidate Starts for Sandalphon_69:

(62, 46122), (Start: 77 @46176 has 138 MA's), (84, 46227), (85, 46242),

Gene: Sassafras_76 Start: 46591, Stop: 46725, Start Num: 77

Candidate Starts for Sassafras_76:

(13, 46171), (14, 46204), (57, 46534), (Start: 67 @46567 has 1 MA's), (Start: 77 @46591 has 138 MA's), (80, 46612), (84, 46642), (85, 46657),

Gene: SassyB_64 Start: 43414, Stop: 43548, Start Num: 77

Candidate Starts for SassyB_64:

(Start: 77 @43414 has 138 MA's), (84, 43465), (85, 43480),

Gene: Sbash_75 Start: 48069, Stop: 48203, Start Num: 77

Candidate Starts for Sbash_75:

(Start: 77 @48069 has 138 MA's), (84, 48120),

Gene: Schnauzer_64 Start: 39363, Stop: 39524, Start Num: 77

Candidate Starts for Schnauzer_64:

(42, 39234), (44, 39243), (Start: 77 @39363 has 138 MA's), (84, 39414), (92, 39507),

Gene: Scitech_58 Start: 38766, Stop: 38927, Start Num: 77

Candidate Starts for Scitech_58:

(42, 38637), (44, 38646), (Start: 77 @38766 has 138 MA's), (84, 38817), (92, 38910),

Gene: Scottish_73 Start: 46250, Stop: 46384, Start Num: 77

Candidate Starts for Scottish_73:

(13, 45830), (14, 45863), (57, 46193), (Start: 67 @46226 has 1 MA's), (Start: 77 @46250 has 138 MA's), (80, 46271), (84, 46301), (85, 46316),

Gene: Seagreen_75 Start: 47524, Stop: 47658, Start Num: 77

Candidate Starts for Seagreen_75:

(35, 47326), (44, 47404), (48, 47425), (Start: 77 @47524 has 138 MA's), (84, 47575), (85, 47590),

Gene: Shauna1_73 Start: 46878, Stop: 47012, Start Num: 77

Candidate Starts for Shauna1_73:

(35, 46680), (44, 46758), (48, 46779), (Start: 77 @46878 has 138 MA's), (84, 46929), (85, 46944),

Gene: Shipwreck_64 Start: 41547, Stop: 41681, Start Num: 77

Candidate Starts for Shipwreck_64:

(39, 41412), (42, 41436), (Start: 68 @41523 has 2 MA's), (Start: 73 @41535 has 3 MA's), (Start: 77 @41547 has 138 MA's), (84, 41598),

Gene: Shweta_58 Start: 38359, Stop: 38496, Start Num: 77

Candidate Starts for Shweta_58:

(44, 38275), (Start: 46 @38284 has 2 MA's), (53, 38311), (56, 38317), (Start: 77 @38359 has 138 MA's), (84, 38410), (88, 38485),

Gene: SiSi_70 Start: 45708, Stop: 45842, Start Num: 77

Candidate Starts for SiSi_70:

(Start: 77 @45708 has 138 MA's), (84, 45759), (85, 45774),

Gene: Silvafighter_65 Start: 38906, Stop: 39067, Start Num: 77

Candidate Starts for Silvafighter_65:

(42, 38777), (44, 38786), (Start: 77 @38906 has 138 MA's), (84, 38957), (92, 39050),

Gene: Silvy_59 Start: 39996, Stop: 40157, Start Num: 77

Candidate Starts for Silvy_59:

(42, 39867), (44, 39876), (Start: 77 @39996 has 138 MA's), (84, 40047), (92, 40140),

Gene: SkinnyPete_60 Start: 39110, Stop: 39271, Start Num: 77

Candidate Starts for SkinnyPete_60:

(42, 38981), (44, 38990), (Start: 77 @39110 has 138 MA's), (84, 39161), (92, 39254),

Gene: Smurph_63 Start: 39363, Stop: 39524, Start Num: 77

Candidate Starts for Smurph_63:

(42, 39234), (44, 39243), (Start: 77 @39363 has 138 MA's), (84, 39414), (92, 39507),

Gene: Sonah_62 Start: 39244, Stop: 39378, Start Num: 77

Candidate Starts for Sonah_62:

(39, 39109), (42, 39133), (Start: 68 @39220 has 2 MA's), (Start: 73 @39232 has 3 MA's), (Start: 77 @39244 has 138 MA's), (84, 39295),

Gene: StAnnes_71 Start: 46866, Stop: 47000, Start Num: 77

Candidate Starts for StAnnes_71:

(44, 46746), (Start: 77 @46866 has 138 MA's), (84, 46917), (90, 46995),

Gene: StevieRay_66 Start: 42311, Stop: 42445, Start Num: 77

Candidate Starts for StevieRay_66:

(Start: 67 @42287 has 1 MA's), (Start: 77 @42311 has 138 MA's), (80, 42332), (84, 42362),

Gene: StressBall_61 Start: 40980, Stop: 41105, Start Num: 77

Candidate Starts for StressBall_61:

(1, 40242), (2, 40311), (4, 40359), (7, 40431), (8, 40437), (10, 40455), (12, 40506), (39, 40845), (42, 40869), (Start: 68 @40956 has 2 MA's), (Start: 73 @40968 has 3 MA's), (Start: 77 @40980 has 138 MA's), (84, 41031),

Gene: Strokeseat_69 Start: 44289, Stop: 44423, Start Num: 77

Candidate Starts for Strokeseat_69:

(62, 44235), (Start: 77 @44289 has 138 MA's), (84, 44340), (85, 44355),

Gene: TChen_74 Start: 47755, Stop: 47964, Start Num: 46

Candidate Starts for TChen_74:

(44, 47746), (Start: 46 @47755 has 2 MA's), (53, 47782), (Start: 77 @47830 has 138 MA's), (84, 47881),

Gene: Taj_80 Start: 48332, Stop: 48466, Start Num: 77

Candidate Starts for Taj_80:

(35, 48134), (44, 48212), (48, 48233), (Start: 77 @48332 has 138 MA's), (84, 48383), (85, 48398),

Gene: Tapioca_61 Start: 39880, Stop: 40041, Start Num: 77

Candidate Starts for Tapioca_61:

(42, 39751), (44, 39760), (Start: 77 @39880 has 138 MA's), (84, 39931), (92, 40024),

Gene: Techage_62 Start: 40112, Stop: 40246, Start Num: 77

Candidate Starts for Techage_62:

(35, 39914), (44, 39992), (Start: 77 @40112 has 138 MA's), (84, 40163),

Gene: Thespis_63 Start: 41077, Stop: 41211, Start Num: 77

Candidate Starts for Thespis_63:

(Start: 67 @41053 has 1 MA's), (Start: 77 @41077 has 138 MA's), (80, 41098), (84, 41128),

Gene: ThulaThula_68 Start: 44563, Stop: 44709, Start Num: 77

Candidate Starts for ThulaThula_68:

(61, 44512), (Start: 77 @44563 has 138 MA's), (82, 44587), (84, 44614),

Gene: Toast_69 Start: 43537, Stop: 43695, Start Num: 72

Candidate Starts for Toast_69:

(Start: 72 @43537 has 35 MA's), (Start: 76 @43549 has 1 MA's), (79, 43558), (81, 43567),

Gene: TootsiePop_83 Start: 51321, Stop: 51461, Start Num: 77

Candidate Starts for TootsiePop_83:

(45, 51210), (55, 51252), (64, 51282), (65, 51288), (Start: 77 @51321 has 138 MA's), (83, 51363),

Gene: Tortellini_69 Start: 45507, Stop: 45668, Start Num: 77

Candidate Starts for Tortellini_69:

(45, 45396), (64, 45468), (65, 45474), (Start: 77 @45507 has 138 MA's), (83, 45549),

Gene: UmaThurman_69 Start: 43900, Stop: 44064, Start Num: 72

Candidate Starts for UmaThurman_69:

(64, 43867), (Start: 72 @43900 has 35 MA's),

Gene: Utz_61 Start: 43181, Stop: 43348, Start Num: 69

Candidate Starts for Utz_61:

(Start: 69 @43181 has 2 MA's), (Start: 76 @43205 has 1 MA's), (79, 43214),

Gene: Vidya_60 Start: 39365, Stop: 39499, Start Num: 77

Candidate Starts for Vidya_60:

(39, 39230), (42, 39254), (Start: 68 @39341 has 2 MA's), (Start: 73 @39353 has 3 MA's), (Start: 77 @39365 has 138 MA's), (84, 39416),

Gene: Walrus_67 Start: 43261, Stop: 43425, Start Num: 74

Candidate Starts for Walrus_67:

(Start: 74 @43261 has 3 MA's), (78, 43276),

Gene: Wee_79 Start: 48408, Stop: 48542, Start Num: 77

Candidate Starts for Wee_79:

(35, 48210), (44, 48288), (48, 48309), (Start: 77 @48408 has 138 MA's), (84, 48459), (85, 48474),

Gene: William_72 Start: 44944, Stop: 45102, Start Num: 72

Candidate Starts for William_72:

(Start: 72 @44944 has 35 MA's), (Start: 76 @44956 has 1 MA's), (79, 44965), (81, 44974),

Gene: Willsammy_63 Start: 41455, Stop: 41589, Start Num: 77

Candidate Starts for Willsammy_63:

(39, 41320), (42, 41344), (Start: 68 @41431 has 2 MA's), (Start: 73 @41443 has 3 MA's), (Start: 77 @41455 has 138 MA's), (84, 41506),

Gene: Wisp_68 Start: 43598, Stop: 43756, Start Num: 72

Candidate Starts for Wisp_68:

(64, 43565), (Start: 72 @43598 has 35 MA's), (Start: 76 @43610 has 1 MA's), (91, 43742),

Gene: Wocket_67 Start: 43577, Stop: 43747, Start Num: 69

Candidate Starts for Wocket_67:

(Start: 69 @43577 has 2 MA's), (Start: 76 @43601 has 1 MA's),

Gene: Xavia_63 Start: 45540, Stop: 45674, Start Num: 77

Candidate Starts for Xavia_63:

(Start: 77 @45540 has 138 MA's), (84, 45591),

Gene: Xeno_60 Start: 38028, Stop: 38162, Start Num: 77

Candidate Starts for Xeno_60:

(44, 37908), (Start: 77 @38028 has 138 MA's),

Gene: Xerxes_63 Start: 39360, Stop: 39521, Start Num: 77

Candidate Starts for Xerxes_63:

(42, 39231), (44, 39240), (Start: 77 @39360 has 138 MA's), (84, 39411), (92, 39504),

Gene: Xula_57 Start: 39314, Stop: 39448, Start Num: 77

Candidate Starts for Xula_57:

(47, 39218), (63, 39275), (Start: 77 @39314 has 138 MA's), (84, 39365), (90, 39443),

Gene: Zarbodnamra_72 Start: 43709, Stop: 43876, Start Num: 72

Candidate Starts for Zarbodnamra_72:

(28, 43439), (34, 43511), (40, 43580), (Start: 72 @43709 has 35 MA's), (78, 43730),

Gene: ZiggyZoo_70 Start: 45187, Stop: 45345, Start Num: 72

Candidate Starts for ZiggyZoo_70:

(32, 44971), (60, 45142), (Start: 72 @45187 has 35 MA's), (Start: 76 @45199 has 1 MA's),

Gene: Zilizabeth_67 Start: 40886, Stop: 41020, Start Num: 77

Candidate Starts for Zilizabeth_67:

(Start: 77 @40886 has 138 MA's), (84, 40937),